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In Introductory Lecture

UPON

THE TYPES OF STUDENTS.

*Delivered at the opening of University College, Session 1863-64,
and Reprinted from THE LANCET of October 3rd, 1863.*

BY SIR J. RUSSELL REYNOLDS, BART.,
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COLLEGE HOSPITAL.

THEN SPECIAL PROFESSOR OF CLINICAL MEDICINE IN UNIVERSITY
COLLEGE; AND PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—The office of "Special Professor of Clinical Medicine," which it is my honour to hold in University College, has furnished me with opportunities for the study, not only of patients, but of students; and I purpose to-day to present you with some of the results of those clinical observations which I have made upon the latter.

The term "clinical lecture" is often applied to a discourse delivered elsewhere than at the bedside of a patient. In like manner a familiar phrase is often used to denote a species of exhortation, or it may be rebuke, administered at other times than in the hush of night, and under circumstances of less privacy than the "curtain" might secure. If, then, I denominate the remarks I am about to make "a clinical lecture upon students," common professional usage of words will be on my side, if strict etymology is not; for those remarks, although delivered in the theatre, are founded upon observations conducted, for the most part, in the wards. And if anything I may say should seem to have the tone of exhortation or rebuke I wish you to think that such message comes to you from the other side of the curtain, where lies the patient, not any individual patient, but the great suffering world, which is at once our study and our care.

It is towards clinical work that all medical study tends; it is at the bedside of the patient that our "science" culminates, and becomes an "art." The "case" with which we come in contact is, as it were, the "medium" through which "correlated forces" become exchanged; or, to alter the figure, the "reflective centre," in which all the "knowledge" we have laboriously gathered from without becomes converted into "power" for the patient's good. It is well, therefore, to keep this end in view, and to regard all our studies in this their high relation. The bedside of the patient is the point from which to value correctly all scientific medicine; and it is from this standpoint that I would now address you. And in delivering a clinical lecture upon students I shall not depart from the plan I usually adopt, but shall commence by giving you a picture of the cases that I wish to bring before you—they are five in number. After having described them, I shall advance to a consideration of their pathology; but, first, let me sketch these cases as you may have seen them, and may again see them, in our wards.

CASE 1.—Cyrus Vane Velox is between nineteen and twenty-four years of age. His last year or two have been nominally spent at the College. It was observed while he was there that his attendance upon lectures often assumed a remittent form; that occasionally prolonged intermissions occurred; that the intervals between his paroxysms of attendance gradually increased in length, and that some curious repulsive influence seemed to become developed, not only between himself and the lecture-room, but between himself and the professor; for it was noticed that upon each period of his return he withdrew himself further and further from the professor's position in the lecture-room or the theatre. At first he sat in the lowermost rows of seats, and occasionally took notes of the lectures that were delivered; but afterwards, having eaten his pens, he was reduced to the necessity of making such notes and illustrations as he could with his penknife on the surface of the benches. A disadvantage attached to this process was that he could not carry these notes away for private use; but he succeeded in taking his notebook away, and it was subsequently ascertained to have passed gradually from the desk to his pocket, from his pocket

to his locker, and he appeared quite devoid of it after a little time, having substituted for it a walking-stick, the proximal extremity of which he usually kept in his mouth as he sat at the top row of the theatre, or removed it from that locality only to make slightly audible rhythmic movements upon the floor. Another fact noticed about him was that the commencement of his attendance upon individual lectures became gradually delayed; so that on one week it was five minutes past the hour before he arrived, the next week ten minutes, and so on until he disappeared altogether. A curious infirmity affected him in the dissecting-room. He was usually seen seated between his "upper" and his "Ellis," as unhappy as if he were about to be dissected himself; and looking abjectly into mid air, as if he expected that anatomical knowledge might by some strange occult projection penetrate his own "head and neck," and perchance remain there. But instead of this happy result he soon verified in his own experience the old anatomical and physiological discovery that there is a passage by which truth that has entered in at one ear may very readily pass out at the other. And so, instead of "cleaning the muscles" he cleaned his scalpels, cut up his "part," or allowed someone to do it for him, and promised to himself to "get up his anatomy" at some time or another by the aid of one of those rotatory machines which must be nameless.

Having thus finished at the College, he came across to the hospital, and was admitted. A delay appeared to attend his admission, and in a chronic form, it affects him still. It takes him generally from ten to twenty minutes to get through the lobby of the hospital, and he has been known sometimes, so great is the obstruction, to get no further. A casual observer might think he was not trying to effect the passage, as he often seems to be standing with his face to the street, conversing with others afflicted like himself, and producing severe "portal congestion" of the institution; or sometimes talking even to the out-patients as they pass the door into their waiting-room; but his conversation has not, so far as I have observed, been directed to the discovery of their diseases, his principle of selection amongst these out-patients, who are rarely if ever of the male sex, appearing to be rather closely associated with the presence of good looks and the not very conspicuous presence of modesty. The stick with which he broke out a year and a half ago is still visible, there is often a want of correspondence between the vertical line of his body and the median line of his hat, and the detrusion of the latter towards one or the other side has of late shown a marked tendency to increase. This little symptom has been observed a great many times, and its exacerbation has been thoroughly established. There can be no doubt of the correctness of the observation, for our patient usually keeps on this appendage of his when others are in the habit of removing theirs. After, however, the considerable delay occasioned in the manner I have described, our case arrives in Ward III., and the "present state," as entered in my notebook, is as follows:—

C. V. V.—, found sitting, with his hat on, upon the corner of the table in the middle of the ward; thus, during the early part of the visit, maintaining as great a distance as he conveniently can between himself and the patient first examined. Moving gradually towards the fireplace, he places his back opposite that calorifying arrangement, so that he can take a comprehensive view of the ward by seeing all the patients it contains at one glance. He yawns frequently, comes into the outermost circle of students around the bed, looks first over the shoulders and then under the axillae of those in front of him, fails to see anything of the case under examination, and so talks and jokes with his nearest neighbour, not loudly, but in a tone which does not materially assist those who are commencing the practice of auscultation. He walks to a distant bed, looks knowingly at the bed-card, sees the patient's name, age, and occupation; makes his diagnosis by reading that which is written on the card; judges of the treatment by smelling the bottle of physic; is thus able to say there is a case of rheumatic fever in Ward III.; and having ascertained that important fact, he seizes an opportunity, when the physician appears to be looking the other way, and rather quietly—out of consideration, let us now hope, for those who are listening to cardiac murmurs—he takes his leave. The periods of his return to the wards are singularly uncertain; but it has been observed that they bear some curious relation to lunar time, and that they are often synchronous with the recurrence of those days on which the names of students have to be entered in the book kept near the door. It was most mercifully arranged that this book should be kept so near the outer door, for the fatigue occasioned by effecting the passage

generally. He competed for honours in the classes of Anatomy and Physiology, but obtained only very low certificates; while of course he gained, as everyone knew he would do, the gold medal in the class of Chemistry, and his papers were such as have seldom been presented by any student of the College.

At length he came over to the hospital for clinical study. His honours at once secured for him the office of clinical clerk, and here he had many opportunities for considerable chemical research. He ingeniously managed always to secure for himself those cases in which some special interest attached to the examination of the secretions, and these he noted with a carefulness that did him the highest credit. But it may be observed, now that his clerkship is completed and he is pursuing his own way in the wards, that he often passes over some of the most important features of a case in order that he may be quite accurate about some, as yet understood, unimportant detail. It is said that C. P. could tell you correctly all the daily changes in the urine of each case of pneumonia, chorea, and gout that has presented itself during the last twelve months; but that he would be puzzled to distinguish a case of pneumonia from one of bronchitis, and that there are many forms of disease of which he scarcely knows the names. A relative of C. P., who was in the hospital some years ago, exhibited a similar affection, but it took another form; and the result in him was that he was thoroughly *an fait* in all chest diseases; his ear was tuned to the detection of the very finest departures from healthy sound; "he knew," as his fellow students used to say, "his Walshe by heart"; but he was sorely perplexed to make a diagnosis when examined for the office of physician's assistant. Indeed, the case was one that baffled him completely. He made out the presence of sonorous chonchi in the chest; he was confident that he heard some fine crepitation at the junction of the middle and lower thirds of the posterior surface of the left lung—the resonance was defective there; and he occasionally caught, as it were, the dubious ghost of some grazing friction. On these points he was as clear as noonday; but he failed to see that the patient was suffering from measles.

The last class of cases that I wish to bring before you is, I am glad to say, far from uncommon in our hospital. Perfect examples we do not expect to find often; it is rare for any case to resemble exactly that which is described in books. Nature does not move in the narrow ruts or lines along which our thought seems, as it were, compelled to travel. But again I say it is useful to consider types; and—

CASE 4.—Orbicularis Goodman is a fair type of the class to which he belongs. His brother—(Case 5) Longitudinalis—is here also. Their family and early history is the same; they are very much alike. I shall point out their differences as I proceed. Both brothers diligently attended to their college duties, having prepared themselves to enter upon these studies by some acquaintance with general physics and with those laws of thought which regulate all forms of scientific inquiry. They studied equally each branch of knowledge; became competent, by their acquaintance with anatomy, physiology, and chemistry, to comprehend the principles of morbid change in both function and structure of the body; they attended lectures, when professing to attend them, with punctuality and regularity; but they did not waste time by going uselessly over the same ground again and again. They did not lose the continuous thread of information which a course of lectures can supply; but having gained that they used other means to confirm and enlarge their knowledge. They asked themselves and others, before commencing the study of a subject, what it was that they were about to learn. They acquired, as it is most important to acquire, some knowledge of the subject to be known; and thus they understood what it was they wanted to learn when they came to the hospital to use their own eyes, hands, and ears in the observation of disease. In their clinical work it may be seen that they follow this general plan. They attend for a time the practice of one physician or surgeon, and then for a time that of another. They pay special attention to four or six cases, endeavouring to select those which are examples of the same or of allied diseases; they compare them with each other; they compare them with written descriptions of such diseases; they endeavour to make out the causes of symptoms and their relations with one another; they hear what is said about them by the physicians and surgeons; they take time in their examinations, and go to see these cases in the morning as well as at the hour of visit; they master each

case, and keep a careful record of it; they do not try too much at once; they endeavour to know thoroughly what they know at all; they are not afraid to ask questions; and they are very successful in the advance, not only of their knowledge, but of their power to know. There is this difference between them: the elder appears satisfied when he finds a case that corresponds exactly with a book; the younger is always trying to show his brother that the book is wrong. The one is disposed sometimes to fit his facts to the ideas he entertains of what facts ought to be and to strain them a little, sometimes this way, sometimes that, in order to make the fit complete and creditable; the other is so averse to believe that facts ever do correspond with statements that he sometimes looks at them through a distorting medium, and imagines that there are exceptions when there are only blank spaces or wrong entries in his own information. The elder sees things that do not exist; the younger as often fails to see those that do. The one is ever trying to verify the wisdom of the past, the other to show that it fails to meet the knowledge of the present; while the former looks somewhat hopelessly at the future of our science, the latter believes that it will witness the solution of every enigma, the unravelling of every tangled skein of truth. The two brothers, while they counteract, yet supplement each other, and help each other onwards in the pursuit of their common end, the acquirement of all that knowledge which, however imperfect it now may be, is yet the best that can at this time be brought to bear upon the sufferings and sorrows of their fellow men.

The outside phenomena of five groups of cases have now been brought before you; and in order to advance to a knowledge of their pathology I wish to point out the primary or essential fact in the departure of each from healthy action. This may often be found in the *absences* of some important principle or quality. Look at the first example, and see how certain defects disqualify him for the work he professes to have undertaken. He fails to see the greatness of that work. By his presence here it is assumed that he wishes to learn the science and art of medicine—i.e., to know all that can be known of the most complicated set of phenomena that can be studied by the human mind. He requires patience and untiring energy, but he exhibits neither. He fails to see the value of his time. He cannot hereafter make up for the opportunities he is now daily allowing to escape unimproved. There is a want of consideration, a want of common sense, in a man's undertaking a work of great magnitude and treating it as if it were mere child's play. Lives have been spent by some of the greatest intelligences of our race in acquiring and arranging the knowledge with which he ought to become familiar; and that man's intellect is defective who professes to study medicine and who takes no pains to do it. To attend lectures with irregularity, and to saunter lazily through wards filled with patients who might teach him what he professes to want to know, proves, I submit, a want of intelligence in the first case I have described; but, further, there is a want of honesty and want of heart. C. V.'s father lives in the country, and leads a laborious life. He is in constant and wearisome attendance upon the sick poor of a large union, or he is hurried from house to house to hear the oft-told tale of suffering and weakness—of miseries made tenfold worse by want. He spends the long hours of a winter's night in some wretched hovel, where the sorrows of a woman, because her hour has come, find no turning into joy that a man is born into a world so dark as hers. He has closed the dim eyes of some old labourer whose day of toil is done. The great mysteries of life and death surround him; he stands alone in his struggle with the sorrow and the suffering that beset him on every side; he has no colleague to cheer him in his work or to help his own wearied brain; all that he does is without the *relat* of public position or the reward of fame. His family is large and his means are small; his wife performs household duties to which some fine servants would object; his daughters have but short school days, and then have to give out to others the little they have learned. It is all hard work in young Vane's home. And why? The father labours that his son may learn: he has placed him here amongst immense advantages; his small savings scarcely meet the hospital and college fees; but yet, while there is stint and toil at home, he saunters lazily about the wards and lecture-rooms, and never lightens, by the effort of one little finger, the great burden some part of which his broad young shoulders should have now learned to bear. There is want of common

honesty in this, and want of heart; and this last he shows quite frightfully sometimes when he makes his visit to our wards. Let him not stare rudely at the patient just come in. Let him, if he will, handle, but handle tenderly, the palsied arm that has done much work when once it was strong as his. Let him not choose the wards for a rendezvous in which to chat idly with his friends about the boat race or the billiard match; but let him come with reverence and with uncovered head into the presence of disease or death, and feel that sorrow and suffering demand a respect which it is his honour and duty, as well as his privilege, to pay.

Leaving now the first case, the prognosis of which is by no means good, I wish to analyse the second much more hopeful specimen of student life represented by Superficialis Hurry, whom you will remember we found always in haste, and most ubiquitous in the distribution of himself. Praiseworthy as his energy is, he makes a vast accumulation of material which is of little use to him by reason of the confusion in which he leaves it. He has seized a fact here and another there, but he has not been able to bind them together. He often so learns the answers to a number of questions that he is "safe to pass an examination" if he is only fortunate enough to get the proper questions; but there are facts which lie between those questions and which throw light upon their answers, and these he has hitherto failed to see. The scraps of knowledge he has gathered are to him something like "cut flowers" standing in damp sand—varied and beautiful to look at, even doing something with the life that lingers in them but is quickly vanishing away; whereas they should be living things, firmly rooted in the earth they spring from; transforming crude into less crude material; raising the lower forms of matter into higher; assimilating much that is heterogeneous, and evolving new products as the result of their own inner life. What D. S. H. fails to perceive is the existence of a deep-seated relation between all the facts that come before him; that they are, as it were, twined together by their roots; that they have a common holding to the earth they spring from, and that he must dig deeply who would learn their meaning; that underneath the surface phenomena he has scanned so slightly there are relations which cannot sometimes be seen or handled, but which may be appreciated if he would fully comprehend the phenomena he has witnessed. The manifold facts he has to learn and use resemble rather a mighty forest, with trees of an age's growth, whose brawny arms have other work to do than to bear upwards their own leaves, and thus nourish their own life; for on them the ivy clings and plays its part, and their bark is stained by the busy lichen or is fringed by moss; while under their shade, and protected by their care, flowers of a thousand hues give forth their scent, for a few hours wave their fragile petals in the air, finish the work that is given them to do, and then pass away: where life in all its forms is moving with restless energy, and moving towards the accomplishment of one great end; where the roar of the beast of the forest not only does his bidding, but, as it shakes the dew-drops from the gossamer, drowns a whole colony in that tiny flood, and so feeds the dawning life we fail to see; where the insect in its search for food scatters the pollen from the anther, and thus helps to renew the form it lived upon; where life in its thousand forms finds its great bonds of union and transformation in the earth and air; the roots deep down in earth seeking and finding in the darkness, amid crumbled rocks and the ruins of past forest life, the very elements they need; the earth drinking in the rain that, as it falls through air, brings back again those seen and unseen fruits of their toil that the great live world above has filled it with; and over all the sky, with its marvellous, mysterious agency of light and heat, returning to all living things the powers that first called them forth or roused them to their toil. In Nature there is a wondrous unity of advancing purpose amid a vast circle of events; no link can be dropped from her mighty chain; nothing can be added thereto, nothing taken away. She is before us for patient and reverent investigation, and he will never learn "her secret meaning in her deeds" who is content with a hasty glance at the first facts that come to hand. No, he must trace each fact into its past and future; he must see how it came where it is, how it lives, and how it grows. He must follow the teaching, which Nature herself is ever ready to afford, that nothing is small, that nothing stands alone, that in darkness and "in silence mighty things are wrought," and that what we see is but the outcome of still greater things and forces as yet

unseen. He must, then, work widely and work hard, but he must work deeply too, and in so doing his progress must be slow. He may, and will, find his knowledge less showy, but more real; it may even be thought less of by some around him, but it will be of far higher value to himself.

There is a caution, with regard to clinical study especially, which I would give to all who are in any degree affected with the malady of Hurry. It is that they should never allow themselves to sacrifice accuracy and thoroughness of information at the shrine of definiteness. There is something very charming, very easy to remember, in broad lines of distinction, and such lines are often highly useful; but they rarely go down to the bottom of a matter, and are often on the barest surface only. It may be enough, in order to enable you to distinguish between two particular individuals, to say that one wears a violent Albert chain and the other a broad-brimmed hat; but such characteristics do not by any means exhaust the differences between a dandy and a Quaker; and if they were taken to do so your generalisation might be broken to pieces by the experience of to-morrow. There are diseases which may sometimes be distinguished from others by the presence of one symptom: value it, but value it correctly; and remember that in every case you have a whole body for your study. And do not rest satisfied with applying some little fragments of your science to the mere fragments of a case; but bring all your knowledge to the interpretation of every case, and depend upon it you will not often find that you have one grain too much.

Now, let us see wherein it is that our *third*, painstaking student—our devotee of chemistry—is at fault. He has worked well at his favourite study; he has partially, but not utterly, neglected other portions of the full curriculum of education. Unlike D. S. H., he recognises the importance of digging deeply in his work, but practically this deep digging is carried out only around his own favoured plant. He will examine its tiniest root-radicles, and the bristles upon its most distant leaves. He knows all its aspects, and has recorded with praiseworthy care every detail of its growth and change. But of other plants he knows but little; and he feels almost an approximation to contempt for those who do not move along the line that he has chosen. He recognises the marvellous interdependence of all Nature's works, and the analogous relation between all branches of science. He sees that "physical" science, to be complete, must embrace those properties of matter which have to do with the "proportion" in which one kind of substance combines with another; that the idea which we form of an "elementary body" is based upon the possession by that body of a certain group of physical qualities differing from those which are presented by another; and thus that physics and chemistry are not distinct sciences, but parts of one comprehensive view of the substances by which we are surrounded. Further, he sees that, in order to understand all these properties of matter, he must trace out their behaviour, not only in the so-called inorganic but in the organic world; and that a full natural history of any element cannot be said to be written until its presence and effects are known in both the vegetable and animal kingdoms; and yet further, that the knowledge of these must embrace not only the processes of health and growth, but those of disease and decay. Thus he is right in holding that all our science is but one great science, and that the lines which we have found it convenient to draw between this branch and that of the great sum of knowledge are always artificial and often wrong; that all systems of classification—whether so-called "natural" or not—are but human systems, tinged by error and dwarfed by ignorance; that the only really natural distinctions are those which Nature herself presents—viz., the distinction of individual from individual and of element from element; but that we are as yet by no means certain that we have absolutely accurate tests for the recognition even of these, as it were, final or primary distinctions. In perceiving them, however, we come face to face with Truth. When we attempt to advance further, all that we do is to gain glimpses of a mighty order that we fail to grasp; the arrangements we adopt follow the leadings of our own but partially instructed minds; and in all the statements that we can frame about them we of necessity introduce the elements of incomplete observation and of imperfect thought. But what C. P. fails to appreciate duly are the greatness and many-sidedness of Nature's works, and also the present imperfection of our means for knowing them. True, an absolutely perfect science of Chemistry must embrace all knowledge; an absolutely perfect Physiology

must do the same. But we are far from having attained to these, and cannot reach our goal by starting from one point and advancing through one avenue alone. Dealing with so complicated a phenomenon as Life, we must approach it from many points: we must start from the side of "Physics," and also from that of "Chemistry"; we must advance also from those, as yet unreduced, "Vital" processes, and again from those of our own "Consciousness" and from the facts of "History." We cannot yet see the point in which all these converging lines may meet; but in the meantime, believing that they do meet, we must work and travel, not on one line alone, but upon each and all, and so approximate the knowledge we may even at the last fall fully to possess. Work, then, as deeply as you can, but look around you also. Do not neglect a fact because it stands, as it would seem, apart, or because it is of some order that differs from your own favourite study; do not think it worthless because you cannot verify it in one particular way, but learn to verify it in another: gain all the knowledge that you can from all sources, and bring it all to the interpretation of any phenomenon or process that you are endeavouring to understand. There are many life-processes that cannot be estimated by the thermometer or the scales; and they have a value of their own. The manner of respiration will often teach you more than the number of inspirations in a minute; the quality of a pulse will often give you more insight into a case than will its frequency; an expression of countenance will, not rarely, teach you more than a chemical examination of secretions.

The last cases (the fourth and fifth) which I brought before you were those in which time and labour were well spent, and would inevitably bring their reward. Before they commenced medical study the two brothers Goodman knew something of physical and mental science. Preliminary education cannot well have its advantages exaggerated, but I am far from thinking that feats of mental gymnastics in respect of classic lore have any direct influence on the success of a student of medicine. He must be "in good condition" mentally, and no man gets into that good condition without some "training." A part of this training is the study of the languages and literature of the past; but for its immediate influence upon his scientific career it is of more importance that the student should be familiar with modern languages, and especially with French and German. It is, however, of essential importance that he should be well versed in the physical sciences. No man can make much of anatomy, chemistry, or physiology unless he knows something definitely and scientifically of the great laws of matter. The fact of having studied these, of having learned the mode in which they are to be investigated, and the nature of the processes by which hypotheses are to be verified or refuted, will place him on vantage-ground in his studies here. He will understand what is the value of a "fact," what is the nature of a "law," and what is necessary in order to regard the one as proved, the other as established. And almost inseparable from a knowledge of physical science is an acquaintance with the nature and order of those processes of mind which are common to all kinds of philosophical investigation, which the child or the savage may apply with instinctive correctness, but which the man of science will use but ineffectively unless he has arranged and analysed them. I do not think that the medical student will be any the better qualified for his work by having his brain filled with metaphysical questionings or ontological speculations; but I am quite sure that a systematically arranged knowledge of the greater and simpler laws of reasoning and of thought will enable him to appreciate much more readily than he could without such knowledge the wide range of phenomena which will come before him here. Thus armed and fortified, the two brothers commenced their attendance upon lectures in this College; and they made, in the manner I described, appropriate use of those great advantages. I cannot but regard them as such, although some in the present day speak of lectures as though they were remnants of an antique species of torture, fit only for exhibition in the Tower of London, with waxwork models of our learned professors, as specimens of a crude state of education now happily extinct. But I think that the lecture has powers for good which nothing yet devised can supplant. The book brings the whole mass of information before you at once; the lecturer gives you day by day the proportion you may take in and assimilate. The book is a dead thing—a moveless, emotionless conglomeration of words, which you may stare at and try to comprehend, but which cannot see or feel your

difficulty, cannot change its phrases, and cannot fill up those gaps in your knowledge which prevent your appreciation of its meaning. In the teacher you come in contact with a living man, who sees whether you do or do not comprehend his teaching; who can use simpler forms of speech, and by some trifling change of words make quite clear to you what before was dark as night; who can see where the links are missing in your chain of thought, and can supply them; and who can thus fit you for the work of self-teaching, which, to those who have learned something, is the most valuable of all.

The two brothers I have described, though agreeing in their earnest and successful work, differ in scientific method. The elder tests "observation" by "authority," and finds it wrong; the younger weighs "statements" against "facts," and finds them wanting. The one regards with all his affection, and seeks for with all his energy, the establishment of the uniformity of Nature's processes; the other as earnestly endeavours in those processes to discover, advance, or progress. What the scientific worker really needs are an appreciation and combination of the two; for in nature they are both present, and we may and do observe them both. Look at individual life, and see that some great processes go on in the same way from hour to hour, from year to year. There is the alternate diastole and systole of heart; the constant play of inspiration and expiration, with their effects on air, and blood, and tissue; there is the daily change from sleep to waking, from activity to rest; there is the daily disintegration of tissue, the excretion of waste material, and also the daily assumption and assimilation of fresh supplies. Further, there are recurrences, with wondrous order, of some physical changes—partly those of health, partly those of disease—at still longer, but yet time-ordered periods, and the seasons of this year have effects like to those of the years that have gone before. But with all this order, and as the result of this order, there is progress: the infant grows into the child, the child into the youth, the youth into the man. The changes of dentition and of puberty lead onwards to the full growth of the adult; and then, in its due time, decay comes surely on. Some diseases may appear, go through their well-known phases; observe periods that we can with certainty predict; but they have not been in that individual before, and they will not visit him again: they have done their work. All that he has passed through makes him what he now is; there have been recurrence and order, but also growth that does not return into itself. Yet look further, and see that this growth has its order also: lose the individual in the many, and then see that those things which occur in him but once, which even constitute his separate life, do recur, but recur in others; and so again we see the circle, but a wider one. But is there no progress of this larger group? Look at families, at races, at nations, and you may see that they, too, have their periods of infancy, of youthful follies, of angry passions, of wise discretion, of luxurious ease, of creeping feebleness, and dusty death; and while the one nation, with its one life, sinks away, another takes its place, and the great world is ever young. But the great world also grows, and—

"I doubt not through the ages one increasing purpose runs.
And the thoughts of men are widened by the process of the suns."

Look at our sciences from another point of view. See how in that of physiology, in its larger aspects, we observe an onward progress amidst the orderly recurrence of events. Not merely individuals but species become extinct; new species take their empty places, and lower give way to higher forms of life. Whatever may be the theory for its explanation, there can be no doubt about the fact that the life upon the world at this present moment has not the form it had; seeming uniformity of process has wrought out change, and that change is one of progress or advance. We do not exhaust the question of how this is, we only move it a few steps further backwards, if we admit the principle as readily as we see the facts of so-called "natural selection." Go back to the simpler types of life; imagine, if you will, that all the variety that now clothes the world has sprung from one common form; you must then admit that there was in it the possibility of divergence from the type, or, in other words, that it contained within itself the germ of all subsequent developments; and thus, in the only conception we can frame of primeval life, we see in its apparently simpler but really more complex order the mainspring of advance. We observe the same combination if we regard at an early period of its development the now living individual or species. It

is easy enough to trace life backwards until we fail to see the differences that lie hidden in some foetal form, common to all kinds of fowl, to the donkey and the dog, to the monkey and the man. But do not let us suppose that differences, though hidden, do not exist. We may not be able to distinguish the one ovum from the other, and yet the difference between them is so great that one becomes the peacock and the other the Cochín-China hen; the one a Skye terrier and the other a learned Doctor of the Law. It is when brought face to face with facts like these that human science, grateful for what it is, should not trumpet forth generalisations to which it has leaped, to conceal its weakness, but should show its real strength in humbling itself before great truths that are as yet past its finding out.

Again, in the yet infant science of geology we may observe the same combination. We argue upon the supposition that the processes of past times were like those of to-day; we believe in the constancy of the operation of Nature's laws. But yet the result of all this is that the world's face has changed, and is changing still; that while the earth lasts, although heat and cold, summer and winter, never fail, they never fail to do their work, and that that work does not, so far as we can see, return into itself, but carries out some mighty plan, the mere alphabet of which we have as yet been able to learn.

Notice once more how both order and progress may be seen combined in the history of scientific systems and of philosophic method. Their movement is onward, but it often appears to return into itself; yet it does not thus return. It is not a circle that is described, but rather, as it has been said, a widening and ascending spiral, whose ultimate course we cannot now compute.

Lastly, see how in human life the one kind of law, by its constant and orderly operation, develops results of another and a higher kind. See how the physical forces are often determined in the direction of their action by the chemical constitution of the bodies in which they are displayed; how chemical actions are co-ordinated to produce results which cannot be expressed by chemistry alone, but require another set of terms, which we denominate the vital; how animal life is determined by mental conditions; how the latter often yield to social and moral obligations; and how marvellously they are all intertwined to produce that complex creation—a living man. How long the apparent conflict of these two elements will last in science we cannot tell. Where is their common point we cannot see; but as the circles of order widen they lose their apparent recurrence, and order and progress become, even in our own minds, one. The infinite circle is identical with the straight line infinitely produced. Our definitions fail, or contradict themselves, when we endeavour to carry them thus far; but we feel confident that there is no contradiction in the things themselves, and our finite minds can feel assured of the existence of some great facts that they have as yet failed to grasp, and may be convinced of the reality of an infinite, abiding, and eternal Truth in which all truths shall centre; in which is no error—no darkness at all, but which can now be only dimly seen or felt after amid the changing and passing shadows of time.

In entering upon our profession, then, you must take high views of its vast demands as a science and of its claims, not only upon your mental, but upon your moral nature. Avoiding carefully the errors I first described, see to it that you have untiring industry, but that your work is deep as well as broad. Strive to learn the inner, often-hidden relations of all branches of your knowledge, but remember that much is yet hidden, and that, therefore, you must approach truth from many sides. And, lastly, in your earnest work to know the laws of life, and in your hereafter daily contact with life—at its beginning, in its troubles, and at its close—do not, in recognising the divinely appointed order of all events, lose sight of that great divine plan of progress which will surely evolve the highest good out of much that now seems deepest evil. You will thus often see a moral purpose in the suffering you try—but try vainly—to assuage; a good in the death you feebly struggle to postpone. Regarding disease as fraught with meaning and purpose other and higher than the mere change of organ you can see and handle and record in your pathological note-book; looking on death as the fulfilling of some greater end than can be represented in the Registrar-General's returns; though often saddened, often baffled in your unequal conflict with these two great foes, you may see that they also have a work to do, perhaps more friendly than your own; and thus

you will be led to feel, and that with a conviction no other profession could urge so strongly upon you, that though—

"Suffering is permanent, obscure, and dark,
And has the nature of Infinity.
Yet through that darkness (infinite though it seem
And irremovable) gracious openings lie,
By which the soul—with patient steps of thought,
Now toiling, waited now on wings of prayer—
May pass in hope, and though from mortal bonds
Yet undelivered, rise with sure ascent
Even to the fountain-head of peace divine."

A Clinical Lecture

OR

CASES OF PHLEGMON AND ABSCESS INVOLVING THE ABDOMINAL WALLS.

*Delivered at the Middlesex Hospital during the Winter
Session, 1893,*

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GENTLEMEN,—The cases to a review of which I invite your attention to-day are instances of phlegmon and abscess involving the abdominal wall. When we consider the large extent of the abdominal parietes, how exposed they are to external violence, and how extensive are their anatomical connexions, the large amount of subcutaneous, paramuscular, and subserous connective substance comprised in them, and the large quantity of fat this usually contains, it may, perhaps, to some of you appear singular that so few instances of these inflammatory disorders implicating the abdominal wall are received into our surgical wards. You will not have been many years engaged in practice before you will have found that these cases fall naturally into two groups—one comprising those cases in which the phlegmon or abscess originates in and usually continues restricted to the abdominal wall, and the other group comprising those cases where the abdominal wall is implicated in the progress of a phlegmon or abscess the focus or starting-point of which lies elsewhere—it may be near or remotely situated. The first is quite a small group, its cases are infrequent; but the second is a wider group and includes the greater number of cases you will meet with. Probably in the first group the most usual cause is mechanical violence—e.g., a blow or a severe squeeze. Such a case was the following not long ago in Bird Ward. In the case-book the patient is described as a woman aged fifty-three, a stout, heavy person with a large, fat, pendulous abdomen. She had fever, and she looked very ill. In the lower part of the front of her abdomen was an extensive red swelling without definite margin; and in the middle of this, nearly midway between the umbilicus and the pubes, was an oval patch of gangrenous integument two inches by three inches across. Along its lower border the detachment of this slough had begun, and from the narrow groove of separation between the living and the dead part oozed a thin puriform discharge, in which floated small shreds of necrosed connective tissue. She said that twelve days previously, whilst standing on a chair to wind up her clock, one leg of the chair broke through a defective place in the floor of her room, causing the chair to tilt, which threw her down, and in falling the front of her abdomen struck violently upon the top edge of the chair-back. This hurt her so much that, when those who went to her aid lifted her up, she found that she could not stand, and she was compelled to lie on her bed during several hours. However, late on the same day, with help, she managed to get to the casualty department, where she was examined and prescribed for. She continued to be seen as an out-patient during several days, when, the consequences of the injury appearing to be more grave than had at first been thought, she was made an in-patient. Here the local disorder was obviously a phlegmon. A violent blow had very severely bruised her big, hanging abdomen, not merely superficially ecchymosing it, but probably also causing an extravasation of blood in some

quantity, occasioning a hæmatoma. The patient being allowed to be up and going about her affairs, the bruised part was unavoidably subjected to pressure and to chafing by her linen, very likely not particularly clean; some minute breach of surface might have occurred, allowing the ingress of septic noxa, and this provoked inflammation of the weakened tissues, ending in their gangrene. At the time the patient was taken into Bird Ward the phlegmonous process was already arrested, the beginning detachment of the slough afforded a sufficient outlet, and all tension had ceased. The parts were lightly dusted with iodoform, and thickly sprinkled with powdered boric acid, over which was placed a compress of cotton-wool dipped in a saturated solution of boric acid and wrung nearly dry. Two days later the slough was completely separated and thrown off, leaving a sore which soon cleaned and began to cicatrize. When the sore had decreased to one-third of its original size granulation appeared to cease, and for a day or two no progress seemed to be made. Three skin grafts were therefore set. Of these, two took, and three weeks later the wound was completely and soundly closed. Had this woman been kept in bed from the time of her accident, had the bruised part been protected from further injury, had ordinary measures for asæpsis been enjoined, and had a rag dipped in Goulard lotion been applied it is likely that the swelling immediately resulting from the injury would have disappeared and the occurrence of a phlegmon have been averted. Here is another case, also one of the first group. A little boy aged four years was admitted into Percy Ward. His flushed cheeks and high temperature told of fever. In the lower part of the front of his abdomen was a conspicuous, large, prominent, red, tender, aching, swelling. This manifestly was an acute abscess. His mother said that nearly two months previously the child had been knocked down by a cab in the street. He seemed soon to recover from the shock, and she hoped that he had not been seriously hurt. He had before had excellent health, but soon after the accident he appeared to be ailing. Then she noticed the swelling, and as it increased she brought him to the hospital. The abscess was opened. About eight ounces of greenish pus with broken-down blood-clot escaped. Three weeks later the abscess cavity had closed, and appearing convalescent he was allowed to be taken home.

Here also, in the absence of symptoms pointing to other than a local origin, and with the distinct statement by the mother of the child's good health before the accident, we appear justified in assuming that the abscess arose from suppurative of a hæmatoma and in causally connecting this latter with a mechanical injury sustained when he was knocked down. Probably the hæmatoma was intermuscular, since had it been subcutaneous, ecchymosis would have soon ensued and have been noticed. If this view of the case is correct it must be regarded as fortunate that the abscess pointed externally. Perhaps this is referable to the hæmatoma having been inter-muscular and not subserous, in which latter instance the path of least resistance might have been through the peritoneum. You had not very long since in Percy Ward an opportunity of watching a case where this last presumably occurred. The patient, a little boy, was admitted with an acute inflammatory swelling in the lower half of the left side of the front of his abdomen, also the sequel of an injury sustained by his having been run over by a cab. This was obviously an acute abscess in the abdominal wall. The child's health had been good, and no symptoms indicating visceral injuries had supervened. It was intended to give him nitrous oxide gas and open the abscess, but before this was done a notable subsidence of the swelling became apparent, and soon afterwards several ounces of pus were voided through the rectum. It is certain that here the abscess in the abdominal wall had opened into the gut, probably into the sigmoid flexure of colon; and that this occurrence had been preceded by the formation of adhesions between the parietal and the visceral peritoneum, so barring off the sac of the peritoneum from contamination by the escaping pus. From the formation of a communication between the abscess cavity and the gut there arose the possibility of the entrance of fecal substances into the former; but this did not happen, and so the ill effects incidental to it were absent. In cases of the second group, which I shall soon proceed to consider, you will, however, see that it is a usual occurrence.

In the three cases I have just related you will have noticed that the injury—a severe blow or squeeze—did not initially

cause any breach of the external surface. Open wounds in the abdominal wall do not usually provoke much spreading inflammation unless complicated by the lodgment of contaminating substances; and, as you would naturally expect, clean incised wounds, even though extensive, are, of all, the least liable to such ill consequences; but severely bruised and badly lacerated wounds of the abdominal wall also often do remarkably well even though the surroundings of the wounded are insanitary and the care and attention that can be given to them are very imperfect, as must often be unavoidable in warfare, particularly when this is carried on in half civilised or barbarous countries. Thus I well remember the circumstances of two wounded men both lying at the same time in one of the huts of the General Hospital in the front before Sebastopol. One, an engineer, had the soft parts over the iliac crest torn and the crest itself bruised by a grazing cannon ball. The sloughing which followed this injury was very restricted, later a fragment of the crest exfoliated, the wound closed, he made a good recovery, and he is still alive. The other, a private in an infantry regiment, was hit on the right haunch by a fragment of an exploding shell which tore out a patch larger than the palm of the hand from his flank, comprising the muscles of the abdominal wall, and leaving behind only the peritoneum with a thin film of subserous fatty tissue, through which the intestines were apparent as if viewed through a piece of wetted tissue paper. I was greatly impressed by this evidence of the tenacity and elasticity possessed by the peritoneum. Strikingly little inflammation ensued in the borders of this ghastly wound. The torn muscular edges cleaned, granulations sprang up upon them, and also covered the peritoneum. The large area of the wound contracted, and after several weeks the wound was so small and the man's general condition so good that he was removed from the front to a base hospital; but where such a wound is complicated by the presence of infective substances, which cannot be completely removed or neutralised, the consequences—as you all, at our present standpoint, now understand—may be widely different. Let me, by way of contrast to the two preceding cases, mention to you a third. Nearly at the same time I received into one of my huts a bombardier whose right haunch had literally been shattered by a shell which burst close to him. The fleshy parts of the buttock, torn from the flank and perineum, hung as a great rug from the back of the upper part of the thigh. The innominate bone was comminuted. Below, the lower end of the rectum, with the prostate and base of the urinary bladder, was extruded, but neither viscus was opened. The immense wound, blackened by powder smoke, was also very soiled with dirt and many little pieces of straw from the bottom of the ambulance waggon on which he had been hurriedly laid with others wounded and brought to the hospital huts. Through the great pressure of circumstances at that moment—for the number of wounded was considerable—no precaution had been possible to guard the wound against soiling. An endeavour was made to remove all extraneous matters, but it was unavoidably imperfect. Diffuse phlegmonous inflammation rapidly supervened; it quickly overspread the trunk and lower limb, and on the third day he succumbed. He was a remarkably fine, muscular man. The immediate shock from this terrible injury was less than might have been expected; he rallied well, and the immediate cause of death appeared to me to be acute septic intoxication. But I find I have been travelling far away, and I will return to the practice of our own hospital, which should be for you a very familiar field. You will, I assume it as granted, readily comprehend that foreign substances are often lodged in a punctured wound and elude immediate detection, especially when the wound is inflicted by a relatively obtuse implement. There was a good example of this some time since in Forbes Ward, at that time occupied by surgical cases. The patient, a youth aged eighteen years employed on a farm, slipped off a stack and became impaled on a stake which, entering at the pubes, passed upwards between the skin and the recti muscles to above the level of the umbilicus. The stake was withdrawn and he was brought in a cart to the hospital. This injury was followed by extensive phlegmonous inflammation of the abdominal wall, necessitating free incisions, through which were extracted pieces of his clothing and of bark.

A large proportion, perhaps the majority, of instances of phlegmon and of abscess originating in the abdominal wall are, then, attributable to mechanical violence.

Of others in the first group proceeding from other causes—e.g., the liquefaction of a gumma—I shall not now speak. As I have already told you, this group is small, whereas the second group is comparatively large, its cases being relatively numerous. In the time that remains I will notice some cases of this latter group. Note, first, that the focus whence the abdominal wall is invaded may be near or distant; it may even be very remote, so distant as for a long time to elude detection. As aptly illustrating invasion of the abdominal wall from a near-lying inflammatory focus I cite the common course of perityphlitic suppuration, of which our wards are seldom long without examples. In most of these the nature of the disorder has been rightly recognised, and this so early that the inflammatory process in the abdominal wall has not passed beyond the phase of oedematous infiltration, when it is cut short by a timely incision into the abscess cavity in relation with the cæcum, its appendix, or the ascending colon. But this practice, now adopted by all surgeons, is of comparatively recent date, and I have thought that an able paper by the late Professor Sands of New York, in which he advocated early incision in cases of this kind, marks the turning point in the history of the treatment of perityphlitis, when expectancy, formerly the rule, began to be replaced by early surgical intervention. His early sudden death from heart disease, in the full possession of mental vigour, at the most active period of his surgical career, was a loss felt not only by his countrymen, but also by many on this side of the Atlantic, who knew and valued his writing, and by none deeper than by those who also knew the man.

Even now the existence of perityphlitis is occasionally overlooked and the significance of its symptoms misread. Not so very long since you might have seen in Bird Ward an example of what such oversight may lead to. On April 2nd, 1890, a very obese woman, of mixed European and Oriental parentage, was admitted into that ward. She had fever, a dry brown tongue, and was extremely feeble; in short, she had the aspect of one very gravely ill. The lower part of the right side of her abdomen was occupied by a large phlegmon, which extended inwards across the corresponding semilunar line, passed outwards over the Crista Ilii to the buttock, which was enormously swollen; and below the groin involved the upper thigh, or rather more, of the thigh. The buttock, centrally, was so elastic as to give the impression of there being deeply placed fluid, and over this area the skin had a dull red colour, its cuticle was blebbed, and in the subcutaneous tissues gaseous crackling was very distinct to the touch. The patient, a highly intelligent person, said that being then, as was supposed, in good health and without previous ailment, her present illness had begun on the 8th of the preceding month with frequent severe rigors and slighter shiverings. Having in earlier life been exposed to malaria, and having some knowledge of the fever such a miasm occasions, the significance of her symptoms was not at first appreciated. Later she was thought to have rheumatic fever, and she was placed in a hospital, where she remained under treatment by drugs until, finding herself becoming steadily worse, her friends removed her to her home and brought her thence to us. At this time she plainly had a very extensive and advanced gangrenous cellulitis or phlegmon of the abdominal wall, buttock, and thigh, with also septic intoxication. The scanty information elicited was insufficient to elucidate the origin of this. However, the treatment instantly required was not doubtful. Free and deep incisions were made into the phlegmon, giving escape to bubbles of fetid gas, to thin, discoloured, very offensive pus, and to large shreds of necrosed connective tissue. An attempt was made to check putrefaction by the free application of a solution of zinc chloride (forty grains to one ounce of water) and a large absorbent antiseptic dressing was put on. Next day other incisions were made and more sloughs were drawn out. Asepsis could not be attained. Fever continued and her prostration increased, notwithstanding the free administration of alcohol. On the following day pneumonia was evidently present, and on the fourth day after she entered our hospital death occurred. At the necropsy Dr. Voelcker found that the focus whence this huge phlegmon had started was an abscess with sloughy walls in the right iliac fossa. From this suppuration had spread upwards behind the ascending colon to the level of the middle of the kidney. Into this abscess cavity projected the vermiform appendix, which had in it one actual perforation and two small gangrenous spots. The front of the cæcum and ascending colon were agglutinated to the

parietal peritoneum along and above the pelvic brim, and the great omentum where lying upon the middle part of the ascending colon was also fixed by adhesions to the abdominal wall. The perityphlitic abscess had crossed the outer edge of the Musculus quadratus lumborum, and it had perforated the abdominal wall just above the Crista Ilii, so invading the buttock, where it had originated the gangrenous cellulitis which had so rapidly overrun this region, the abdominal wall, and the thigh. Can we doubt with our present experience of the good results obtained by early operative intervention in instances of perityphlitis that timely surgical interposition might here have saved a life?

I would ask you to bear in mind that, whilst many abscesses invading the abdominal wall from a focus in the right iliac fossa are primarily perityphlitic, all have not this origin. I will now cite such an instance. Some of you, I know, watched with interest this remarkable case. The patient was in Founder Ward, and was a man aged fifty years; he was admitted into the hospital on Feb. 9th, 1893. He had in the right side of the front of the abdomen, above the outer end of Poupart's ligament, distant two inches and a half from the Spina antica ilii, the external orifice of a sinus which led into the iliac fossa. Below this, in the upper part of the anterior and outer aspect of the thigh, was an oblong, prominent, conspicuous swelling, pressure on which caused the extrusion of pus from the orifice of the abdominal sinus. At the inner end of the groin was the scar of a recently healed incision. Deep in the iliac fossa an abnormal resistant fulness was felt. His complexion was sallow, his gums showed the blue margin characteristic of lead, and his bowels were habitually constive. He considered that he had had fair health until about twelve months previously, when he was laid up by a severe illness attended with great pain in the abdomen. This at first was regarded as a lead colic, but it did not yield to remedies. Later his abdomen was very swollen. Then an abscess pointed at the inner end of the groin and was opened by his surgeon; it closed and left the scar we saw there. Subsequently an abscess pointed and broke in the position of the sinus, persisting above the outer part of Poupart's ligament. His surgeon wrote that he had at one time regarded the case as one of perityphlitic abscess. After allowing him a few days' rest to recover from the exhaustion produced by his journey from the country he was placed under an anæsthetic and the swelling in the thigh, the sinus over Poupart's ligament, and the iliac fossa were explored. They were found filled with a soft myxomatous tissue centrally necrosing and suppurating. This neoplasm had invaded and infiltrated the Iliacus muscle and also the ventral surface of the Ilium, which was roughened by tufts of small crowded osteophytes. Anteriorly, the myxoma infiltrated the posterior wall of the cæcum and ascending colon, forming together with these a mass, in endeavouring to remove which the danger of opening the lumen of the gut was very present to me. It became obvious that although large masses of the neoplasm were removed with the scoop complete eradication was not attainable. The patient bore the operation well. On the third day, when the dressings were being changed, the discharge was found unmistakably fouled by fæces and fetid gases escaped. There could not be any doubt that the wall of the gut had given way. His condition, with occasional slight and very transitory improvement, progressively deteriorated. The iliac fossa again became filled with a large mass of tumour, which also extended upwards into the flank. Then, realising that his end was approaching, he had himself removed to his home, and after reaching it he died within a couple of days. His friends could not be persuaded to allow a necropsy. Here, then, an abscess which invaded the right inguinal region of the abdominal wall had its origin in central necrosis and suppuration of a deeply seated myxomatous tumour. Such a case is very exceptional; but analogous circumstances are not so very rare in connexion with certain intra-abdominal cancers. The following is an example.

A stout, grey-haired woman aged fifty years, but in appearance much older, addicted to taking as large quantities of ale and whisky as she could get, with a sallow complexion, flaccid cheeks, and face expressive of much suffering, was admitted into Bird Ward on July 21st, 1892. Centrally situated below her umbilicus was a conspicuously prominent red, glossy, acutely tender swelling, peripherally ill defined, of oval outline, measuring about four and a half and six inches in its long and short diameters. Peripherally brawny, centrally it was soft and fluctuated. She had a foul, dry

tongue, no appetite, and a high temperature. She told us that her health, which she had previously regarded as good, had been falling for nearly one year, during which time she had lost weight and had often had pains in the abdomen which she "laid to wind." These pains, she said, "came and went," and, she added, "they were sometimes worse than those of labour." As the swelling in the abdominal wall was obviously a phlegmon it was freely incised. Several ounces of very offensive pus and also masses of necrosed connective tissue were removed. The boundaries of the space whence these issued were scraped with a sharp scoop, after which the cavity was flushed with a solution of mercuric chloride, and an absorbent antiseptic dressing was applied. Next day her condition seemed slightly improved; but this amelioration was not sustained; a profuse puriform fetid discharge continued. Asepsis could not be obtained. She lost flesh and her strength continued to fail. In September a considerable intra-abdominal mass under the site of the sinus left after the phlegmon was detected. Obstinate diarrhoea set in and on Sept. 9th, 1892, she died, fifty days after she entered my ward and somewhat more than one year after the date of the first symptoms referable to the intra-abdominal disorder. Dr. Voelcker, by whom the necropsy was made, found below and to the left of the umbilicus a sinus passing through the abdominal wall into an intra-abdominal mass firmly adherent to it. This mass, of the size of a foetal head at term, comprised part of the Omentum majus, of the ascending, transverse, and descending colon, and small intestine infiltrated and agglutinated together by a neoplasm which to the unaided eye had appearances characteristic of cancer. This view of its nature was confirmed by microscopic examination. Here a cancer, perhaps originating in the omentum, had spread to the surrounding parts and increased until it formed with them a large tumour. Centrally necrosing and liquefying a foul abscess formed in it, which invaded and traversed the abdominal wall, inducing in this the phlegmon which brought her into the hospital. I may add that in the central hollow in the tumour a considerable cauliflower-like mass projected from its wall, and that the coats of the duodenum also were much thickened by cancerous infiltration, which had extensively broken down and of which little fungating bunches projected into the lumen of the gut.

Gentlemen, the clock tells me that the hour is spent, and I find that I have done little more than touch the fringe of the subject. Did time allow I would set out before you cases illustrating the invasion of the abdominal wall by abscesses which had their starting-point in an ulcer seated in one or other of the several segments of the digestive canal, or which began in the kidneys, in the liver, and even in the pancreas, or had their origin in the pelvis—of which women supply so many examples, but which are not restricted to their sex; and, these having been dealt with, the subject would still be unexhausted. I hope to return to it at some future time as occasion arises.

In Address

ON

EXPERIMENTAL CRANIOTOMY AND DIAGNOSIS OF CEREBRAL ABSCESS.

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Delivered on Nov. 30th, 1894, before the Lombard Medical Association, and specially reported and translated for THE LANCET.

GENTLEMEN,—When your eminent President conferred on me the honour of an invitation to discuss before you some subject deserving of your attention my wish to comply led me to an assent so ready that it afterwards struck me as almost precipitous. The choice of a subject proved difficult. If I now inform you that I am about to treat of some of the reasons which justify, or at least necessitate the study of, craniotomy it is because I think the subject will be interesting to all. One hardly knows whether the subject is more a medical or a surgical one, but it seems to me that no one who has made a study of the healing art can be indifferent to it. I therefore

hope that none of you will disapprove of it. At this critical moment, when it seems that we are about to gain the mastery over one of the most terrible maladies, the discussion of another disease, which, though serious, is rare, lacks the power to arouse any great enthusiasm or hopes. But the clinic has not the privilege of a laboratory which may follow out a research to its extreme limits; it must cease where facts fail, and therefore the progress is sure but slow. Nevertheless, those among my audience who work in the laboratories will not consider my subject extraneous to them, since the tree from which modern brain surgery has derived such beneficial fruit has many of its roots in the ideas suggested by experimentalists. Before continuing I must confess that I speak as a medical practitioner, not as one of those numerous clinicians who study from the actual cases things which could as well be learned from any chemist, histologist, or bacteriologist who had never entered a hospital. The patient offers facts well known to the anatomist, physiologist, chemist, pathologist, and so on, but also other facts which none but a medical practitioner can perceive, and these constitute the actual wealth of the clinic. This I know is the old-fashioned clinic, but it will be the clinic of ages, though its brilliance may not be dazzling. This modest and useful clinic is also a branch of science; and, indeed, do we not in a great measure owe to the symptoms which medical practitioners have noted in patients all that we know of the brain, which is precisely the organ of which I am about to speak? The clinical student, as the observer and interpreter of the phenomena of the mechanism of the brain, knows, however, that progress in this path is arduous and slow. Like all other scientists, he must resign himself to await the solution of a thousand problems. But the clinical student is not only a scientist, he is also a man called to the aid of his suffering fellow creatures, and if as such he must always work in a sphere free of all incertitude work would no longer be possible to him. Resignation would cease to be a virtue; he must act while still awaiting the solution of those scientific problems. That scientist is most to be commended whose conclusions are most circumspect and precise; he must wait for clearer lights before making assertions. The medical practitioner, on the other hand, is obliged to act either in total darkness or in the faint light of a distant dawn. Science is not only for posterity. A science, however advanced it may be, only constitutes an elementary knowledge, since it suggests more questions to be answered in the future than there are answers in the past. As Goethe used to say: "Every problem that is solved gives rise to hundreds more." Blessed are those scientific deductions which can be safely applied to daily practice, but woe to us if our only means of influencing the vicissitudes of humanity were through fixed scientific deductions. When scarcely emerged from speculation, and entered into one of the active paths of life, man soon becomes aware that the ground is trembling beneath him. A general who is arranging the plan of a campaign, a financier who introduces a new system of taxes, a legislator who promulgates a code, an agriculturist who starts a new method of cultivation—all obey the precepts imposed by their respective sciences; none of these find their practical problems so free of unknown quantities as to render their prevision of the result sure and unailing. Indeed, history is full of examples showing that the most reasonable previsions are often fallacious, because in every work of humanity there is always a want of knowledge of the factors of which the practical problem is composed.

It is no wonder that even a medical man has often to act with an incomplete knowledge of his problem. Some people have a characteristic aversion to anything that is not exact and sure. This gift, I repeat, is excellent in the pure scientist, but in practice it tends to restrict the coöperation of medical art to those cases in which the unknown quantities of the problem are eliminated. Thus, in the subject I have chosen, many hold that the cranium cannot be operated upon unless one is certain that the surgical instrument will find the lesion of the brain in the exact spot and exact conditions foreseen before operating. This numerous party has for its leader the well-known Bergmann. His work on the surgical cure of cerebral diseases¹ guides the hand and the mind of the greater part of surgeons. Clinical practitioners are for the most part of the same opinion. Sahli writes: "I am entirely of von Bergmann's opinion that cerebral surgery must first of all win favour by a choice of absolutely accurate

¹ Die Chirurgische Behandlung der Hirnkrankheiten. Berlin, 1889.

cases." Professor Martius² says: "Bergmann's³ book on the brain, written with a perfect mastery of the subject, constitutes unconditional authority." But, however eminent the author may be, and however admirable his work, I must confess my dissent from the fundamental thought which underlies it. If I am obliged to mention the name of this eminent surgeon too often let it be understood that it is on account of the preponderant importance that his word on the subject has over that of others who profess to hold the same opinions. Professor Bergmann clearly states that "it is evident that he wishes to put the interests of the surgeons in the first place." According to him, or rather to his opinion, it is better to restrict the limits of surgery rather than enlarge them. Nowadays, holding the opinion that an operation is *per se* entirely without danger, one is inclined, notwithstanding the uncertainty of the diagnosis, to use the lancet and the scalpel in order to see whether there is some morbid growth to be removed. In other words, we are inclined to be daring without reflecting what should be the reward and aim of audacity. Bergmann does not intend to detract from the powers of surgery, although in his present studies he is trying to find, above all, the conditions in which an operation has the greatest probability of success, and limits himself to such cases. In doing this he omits many cases which, under more favourable circumstances, might have been operated upon. But he "does not wish to leave to chance that which should be exclusively the result of a critically weighed experience and of a strictly scientific proof."⁴ This fundamental thought runs through the whole work. Thus, on p. 110 he repeats that "only a clinical diagnosis can ensure progress in the efficiency and power of the operating surgeon"; and on p. 176: "I cannot excuse the surgeon who, believing in the slightness of the danger of operations, is inclined to operate without much thought to see whether it will succeed in the case. I shall always be opposed to this aimless proceeding (*planloses Vorgehen*). On the other hand, I think it is not only allowable, but absolutely obligatory, to make use of what has been furnished us in experiments on animals at the bedside of a patient. . . . I expect true progress in cerebral surgery from a wise limitation." There are too many things in Bergmann's opinions that do not seem to me quite fair. The interests of surgery are doubtless to be respected, but morally they are as nothing compared to our duty towards a man who is dying; and when he grants that by following his advice we should be leaving without an operation many cases which might be beneficially treated by the surgeon I begin to doubt whether his advice can be ethically justified. Why should we renounce a possible good? The morbid processes of the brain, which surgery is called upon to heal, are almost all possibly fatal, and a dying man has not only the right to demand of us a certain cure, but also that which for lack of any certain means offers his only hope for relief. Which of us, knowing that some person dear to him is suffering from an abscess or an intracranial tumour of doubtful diagnosis, would watch him slowly, surely, cruelly dying without attempting the only expedient that might save him? It might be an exaggeration to assert that the act of operation in itself is innocuous, but in the face of the most serious suffering and the gravest prognosis I should place little value on the objection. If a man were drowning and begged you to give him a rope, would you dare to reply that *perhaps* the rope might not be strong enough? Unfortunately, none of our remedies are absolutely sure; none have an absolutely beneficial action free from noxious qualities. It is, I allow, a mere difference of degree, and opening of the skull in certain doubtful cases may give more reason for fear than hope of success. But I repeat that intracranial diseases are so serious that the precept of "do no harm" cannot be applied to them since the condition of the patient can scarcely be worse, while the benefits that might accrue are great. I can well understand that, as far as the *amour propre* of the operator is concerned, there would be little temptation to open the cranium if it were only to leave the patient in his former condition.

Modern surgeons have grown accustomed to so many triumphs. I admit, in so far as the interests of the operators are concerned, it would be preferable to follow Bergmann's advice—that is, to operate only in the few cases in which the result would undoubtedly be beneficial; but the interests of the patients oppose this. Science, as I have already remarked,

must serve for our contemporaries, and it is to the medical practitioner that the duty falls of making use of all scientific discoveries and deriving from them the greatest possible use and service. Modern science shows us how to cure chronic cerebral abscess. Now, to deny the advantage to some people of this discovery because it cannot always be strictly applied would be to place the method of proceeding before a love of humanity, and if such a thing were blameworthy in a scientist of a laboratory it would be unpardonable in a medical man who works by means of knowledge, but whose aim in working is and must be charity. It is certainly a fine thing for a master to aspire to give to all surgeons some unfailing rules of conduct, and it is also well for him to severely reprove that blind method of working which is so convenient for ignorant men and quacks. But it would be unfair to deprive the present generation of the benefits which modern knowledge has conferred only because the method of adopting them has not yet been made clear. Here, indeed, there is not a perfect uniformity between scientific and practical aims. That semi-knowledge which in a scientist only serves as a stimulus to research is already a power to the practitioner. Attentive observation, however, assures us that absolute knowledge never comes directly to the practitioner, but little by little, by means of continual corrections. It would no doubt be preferable if practical rules were turned out ready made from the laboratory, but this is impossible, because, as has been frequently said, the conditions of an animal that has been experimented upon are similar to, but not identical with, those of a sick man. Although experimental science has already taught us a great deal in the normal and abnormal action of the brain, it nevertheless is true that the natural history of an abscess, a tumour, or thrombus in the sinuses of the human brain must be told, and has partly been already told, by means of observations of the sick man. Thus, although experimental physiology has taught the surgeon many things, the lessons of most value to him are derived from his observations during operations on a diseased human brain. If by an aimless proceeding (*planloses Vorgehen*) we are to understand the opening of the cranial cavity wherever it may be, or for whatever reason, we should certainly all be of the opinion of the Berlin clinic. If the ignorance is merely individual, to operate for personal enlightenment would be wrong; but if the ignorance is the result of an inability to obtain actual knowledge it is an absolute duty to procure enlightenment even by means of operating, providing the operation be not harmful. There is no doubt that sometimes one operates on the abdomen without absolute need, and this is sometimes undeniably attended with ill results; but is it possible that anyone would open the cranium without expecting to find a morbid growth and without attempting to remove it? True, presumptions may have but a weak foundation; they may be aims not entirely justified, but true experience is gained through the mistakes made. The clinic can teach what the laboratory never will—that is, whether, how, when, and up to what point a brain with a tumour, an abscess, or a thrombus of the venous sinuses with a cicatrix causing epilepsy can be operated upon without danger or with a good result. If this is a *planloses Vorgehen*, then there exists no remedy, not even the best known, which does not partly originate in this very modest beginning. How much digitalis has been used during the last twenty or thirty years in physiological and chemical laboratories? It is certain that the knowledge we have acquired is valuable and precise, but the careful experience of the clinic, the errors of some imprudent practitioner, and chance poisonings become our safest guides when we wish to profit by the wonderfully beneficent action of this plant. So true is it that, even after continual experimental researches, we have not yet succeeded in explaining the reasons for the rules which experience has sanctioned. Not even the happiest clinical applications of experimental knowledge can be entirely exempt from a certain amount of conjecture and practical correction. Bergmann says: "If in experiments on animals the extirpation of a part of the skin has been found useful the same course must be applied to analogous cases otherwise incurable in human disease." I agree with him, but, nevertheless, there is no identity between the dogs of Munk, Heidenhain, and Novi, in which the extirpation of the entire motor zone on one side arrested convulsions, and the patients cured of epilepsy by the removal of a splinter of bone or of a cicatrix on the skin; man's brain is often so much changed by the continual influence of trauma that the immediate action of excitement is not

² Die Hirnchirurgischen Operationen, p. 10. Leipzig, 1891.

³ Beiträge zur Lehre vom Hirnabszess, p. 66. Berlin, 1891.

⁴ Op. cit., p. 3.

only to produce a fit of convulsions, but to slowly modify the brain as regards its nutrition and all its functions. I repeat that it really becomes a different brain from what it was even after the splinter or the cicatrix has been removed. It is, therefore, a different thing to arrest an epileptoid convulsion produced by the experimentalist in a dog and to cure epileptic neurosis produced by trauma in man. There may be some analogy between the two phenomena, but I do not think that "the cases of traumatic cortical epilepsy entirely correspond with the result of the experiments in animals." Bergmann⁵ asserts this, led away perhaps by the natural and universal desire of acting upon scientific deductions; but the truth is that the final and absolute decision as to the efficacy of a surgical cure for traumatic epilepsy appertains to the experience of the clinic, which will certainly not proceed without a pre-established method, but will meet, as it already has met, with many unknown quantities and surprises; thus a certain amount of *planloses Vorgehen* must be encountered even in subjects which, superficially examined, seem the most positive. And can one wonder at it? Human pathology is made up of a number of phenomena peculiar to itself, analogous to, but not identical with, others, and both physicians and surgeons must experiment on them; therefore, they must act as all other experimentalists do. To gain knowledge they must make proof after proof, but always on these same phenomena, not on different ones; therefore, a state of twilight must always precede the light of perfect knowledge, and consequently a period of uncertain action, which it would be unfair to call a *planloses Vorgehen*, is inevitable if we would attain to a possession of safe rules—a true and worthy ideal of practical life, an ideal to which one attains through a direct knowledge of facts, not through deductions more or less like the truth. Do not think from this that I am one who does not respect the knowledge that inspires, guides, and illustrates every clinical experiment, but I hold that they are not the only means of deciding as to the utility of a curative expedient. I have been obliged to prove this to draw the conclusion that we cannot yet assert complete knowledge of all cases in which a surgical operation may serve to cure a cerebral disease. Clinical experience, our best teacher on such subjects, has not yet been sufficiently consulted; it is therefore premature to restrict operation to a few cases in which it will undoubtedly succeed before knowing whether it may not prove beneficial in others. It is not only the humane desire to save a dying patient, but science also demands a more frequent use of surgery in intracranial diseases. If we neglect to profit by the occasions that offer, how shall we ever acquire a knowledge of facts, which aid to form a practical and safe rule? Yet such is the power of a name that the wealth of clinical experience increases but slowly. I assert that whenever a competent examination of the symptoms and course of a cerebral disease brings us to the necessity of a diagnosis of lethal intracranial process operation is justified even though the seat and nature of it render the result uncertain.

From certain of Bergmann's sentences one might say that he is hostile to this idea. Here are some, for example. "If the absence of inflammatory symptoms prevents a precise indication of the seat of a tumour we cannot even speak of an explorative trepanning."⁶ "I do not think trepanning or incision of the brain is justified unless peremptorily demanded by unmistakable and overt symptoms."⁷ "I advise operation in cerebral abscess only in so-called typical cases" (p. 88). "We do not treat of finding out at all costs every cerebral or cerebellar abscess; but it is of importance not to leave unoperated on those which clinical experience permits us to diagnose" (p. 90). In Jacksonian epilepsy "we should never operate except when there is a full reason to admit a palpable cortical lesion, and hence removable" (p. 162). I have intentionally accentuated these words of Bergmann, *precise indication, unmistakable, typical cases, full reason*, because they show that the illustrious clinician starts with the idea that it is possible to arrive at a precise and certain diagnosis. It may seem strange to some, but I hold it true that we may frequently formulate a diagnosis sufficiently precise in an intracranial lesion; but in most cases the judgment is a mere probability. This *certainty* of diagnosis, which would be invaluable to the surgeon, generally does not exist. Well-argued diagnoses, thought out with great precision, are made, and especially are published; but the merit must too often be given to good fortune in the cases, for all equally

sure diagnoses sometimes prove mistaken. The origin of the symptoms in intracranial diseases is so complex that some element caused by them remains unknown to the physician, and therefore the clinical inference can never be utterly certain. Not that the correspondence of the anatomical lesion with the clinical inference is a mere accident; indeed, I affirm that in no other branch is the practical value of the physician more clearly proved. I only maintain that the certainty which seems to be an essential condition, and without which Bergmann will not consent to employ the surgeon, is but rarely attainable. When an anatomist or surgeon opens the cranium he always finds something unforeseen. Even when right as to the fundamental fact, some condition which should have been certain is wanting, and another neither suspected nor thought of is conspicuous. Bergmann has not deceived himself on this point. He says, in one part of his famous work: "I believe it right to assign a limited field to operation, reserving it only to the few cases precisely diagnosed." Yet even for these it has, in the first instance, no other importance than that of an exploration—i.e., an operation made to obtain a more direct investigation. It is only after the aperture is made that the surgeon can judge whether the tumour is within reach, and whether, when found, its size, its relation to the neighbouring parts, and its infiltration into them do not forbid removal. The surgeon should be always ready to interrupt or to abandon the operation either sooner or later. And this happened to the illustrious surgeon himself in a case in which he had occasion to admire the excellent diagnostic directions of his colleague Jastrowitz. Where, then, is the certainty? I know that the interests of surgeons demand that these cases should be eliminated from the limited number admitted by Bergmann; but how are we to recognise them? Those who pass the clinic—and they are many—by means of books on physiology and pathology may pretend to succeed; but those who study real disease and make post-mortem examinations will confess that it is still mostly impossible to distinguish certain circumstances of volume, infiltration, and vicinity. Bergmann entirely appreciates this difficulty. If our object is the good of humanity we must invert thus the sentence of the Berlin clinic: We must not treat only those few cases which are clinically pronounced to be adapted for operation, but must operate in all cases which might possibly be treated by the surgeon. Surgery loses nothing by attempting in some cases without succeeding; it would, I believe, lose more if through fear of attempting in vain we let men die when they might have had the inestimable privilege of life. The choice lies between these two systems—either operate in only a few cases or else resign ourselves to dare non-successes in some in the hope of success in the many. In the first course the surgeon is less likely to find that his work is ineffectual; but he must confess he may have renounced some signal triumphs and has missed that knowledge which repays practical experience. Following the second system he avoids these two evils. True, some mortification to the surgeon may ensue; but what does this matter in the face of a clear conscience and increased experience? You might say that ignorant people, seeing a surgeon's attempts frequently fail, might lose faith in him; but to an invalid blind faith is no longer a guide. The patient only wants to get well, and I wager that if the alternative were clearly placed before him he would refuse no reasonable chance of recovery where it is certain that without this pain, blindness, paralysis, or death must inevitably ensue. Unfortunately I am not qualified to speak to surgeons as a surgeon; but if it may be allowed to an outsider to give his advice I should say it is the interest of the surgeon to increase as far as possible the number of his cures. And if they object that this method is not scientific, I reply that one may respect knowledge when useful or even dangerous, but a science that allows people to die when they might live is neither powerful nor humane.

I have perhaps insisted too much on this moral side of the question, and this may weaken my thesis, for it may be deemed that sentiment rather than reason has inspired it. I will, then, at once begin to demonstrate more fully the assertions I have indicated, which form the basis of my theme. In the first place, we must admit that criteria for determining during life the seat and nature of an intracranial lesion are less reliable than is generally believed. The marvellous experience of Frietsch and Hitzig, the observations of Jackson, Charcot, and others, have in truth revealed an unexplored world, but

⁵ Op. cit., p. 177. ⁶ Op. cit., p. 112. ⁷ Op. cit., p. 83.

the diagnostic importance of these discoveries has been greatly exaggerated. The uncertain and unknown quantities which are enveloped in the cranial covering (not to mention the psychic qualities) are such that, even when the skull is opened and the brain cut into, one or more problems remain unsolved. Proofs abound of the truth of this; yet the nature no less than the seat of these lesions remains difficult to recognise. It lies, therefore, with the unprejudiced clinical professor to moderate too enthusiastic a faith, and to give an example of modesty and fallibility. As I have to enter into a minute analysis of facts I must restrict myself to one single disease—chronic cerebral abscess. Glancing at the history of the intracranial abscess we recognise this singular fact: the treatment of this disease has made great advance of late years, while the diagnosis is still very insufficient. The medical man can treat a chronic cerebral abscess, but he does not know how to recognise it. This is the exact opposite of what happens in other maladies. Macewen⁸ has had 31 cases of intracranial abscess, and has operated on 25; the 6 not operated upon all died; of the 25 operated on, only 2 succumbed, one because during the operation an abscess on the cerebellum remained occult, and the other because the operation was not performed till the patient was already on the point of death.⁹ On the other hand Martius has made a deep study of seventeen cases of cerebral abscess, occurring in the German hospitals during the few past years.¹⁰ Well, not one of these cases was revealed during life, and naturally of the seventeen cases none were operated on, and none recovered. Now, we all know that the training of German medical men is second to none, and we cannot deny that this utter absence of diagnosis is very significant. Probably, if we all wish to be as sincere as the registrars of the German military hospitals we should feel the difficulty or impossibility of recognising a chronic cerebral abscess during life is widely spread, and we should not find in certain text-books precepts which have no similarity to facts. It is true that acute cerebral abscess and traumatic purulent meningitis are generally easily diagnosed, but besides these acute cases there are many chronic or subacute ones, in which the judgment of the medical attendant is often at fault. If you reflect, the greatest argument in chronic cases is in the etiological criterion—trauma, purulent otitis, diseases of the heart or respiratory organs, caries of the skull bones, &c. But the etiological criterion, valuable where it confirms a judgment, is weak where it has to form a basis, because, as has a thousand times been demonstrated, that which we call cause is really but a part of the cause; hence we can never make an *a priori* assertion unless there coöperate with that part all the other elements without which that one would be unable to generate the supposed effect. And this is why not all cases of otitis or affections of the lungs or caries of skull bones are followed by suppuration of the cerebral meninges or by an abscess in the brain; and whereas in all these numerous cases the patient who escapes intracranial suppuration might, like anyone else, be attacked from other causes by tuberculous meningitis, cerebral tumour, or some other brain process, the conclusion drawn from knowing the cause, though it may often touch the truth, is not *de rigueur*, and is thus subject to error.

There is, I admit, the semeiological criterion, but even this is indistinct and often of slight value. Bergmann divides into three groups the symptoms of cerebral abscess: (1) symptoms of suppuration, (2) symptoms of cerebral compression, and (3) local symptoms. But if we analyse these we find little or nothing remains to prove the abscess. Inflammatory symptoms often denote that a part of the brain is excited or paralysed—and nothing more. They tell us nothing of how the nervous tissue is injured. As a general rule these symptoms are either wanting in the chronic abscess or appear at a later date; but, since they might exist, this generic knowledge of their frequency aids us little or nothing in the treatment of the patient, because it always remains to be proved why a patient with inflammatory symptoms should not be suffering from one of those abscesses which are generally accompanied by inflammation, or why a patient without such symptoms should not have rather one of those rare neoplasms, which run a semilient course, or with only ordinary pheno-

mena. General ideas belong to the pathologist and serve also for the clinical student, but the latter must, above all, probe to the foundation of individual phenomena and not apply to them mere general principles. Neither do the phenomena of cerebral compression belong exclusively to the abscess, but also to neoplasms, parasites, aneurysms, meningitis, and even hæmorrhage. Bergmann brings into special relief headaches and congestion of the papillæ; the one because it increases with the access of fever, and the other because it is found in very few cases. However, neither of these things will hold; any headache, however caused, will increase with fever, and a blow on the head, whether in a case of abscess or tumour, may or may not increase the pain; optic neuritis is less uncommon than has been supposed as a concomitant of abscess.

In conclusion, when the physician is enabled to establish that a given part of the brain is altered, and by a process which augments the intracranial pressure, he has no doubt pointed out two attributes of the abscess; but as these same attributes belong equally to other morbid processes he cannot logically draw a final deduction unless aided by some attributes exclusively belonging to the abscess and to no other disease. The symptoms of the third group, those of suppuration, might assist here, but unfortunately these are almost all reduced to fever. Now the beginning of a chronic abscess of the brain is often so obscure and indistinct that the fever might be unnoticed; the development of suppuration in a tissue which, like the brain, is so little disposed to suppurate is so slight and slow that the pyrogenous substances developed by it either do not raise the temperature or raise it very slightly. Besides, the capsule with which the pus in chronic abscesses is surrounded, its biological properties, and the modifications which time perpetrates in the matter enclosed within it all combine to give it an individual existence, and thus to diminish the influence exercised by it upon its surroundings.¹¹ So it is, at least, until some accident or new development supervenes to modify the reciprocal attitude of the abscess and the surrounding tissues. This accident will then determine those ulterior cerebral alterations which constitute the cause of the terminal symptoms of chronic abscess in the brain. If, however, we reflect that meningitis may also cause fever and that many intracranial lesions occasion meningitis the value of these symptoms is lessened even in favourable cases in which they are found. Not to be diffuse, I will be silent as to the inflammatory action which might arise on the affection of certain parts of the brain independently of the nature of the process which causes it.

(To be continued.)

An Address

ON

EVIDENCE AND THE VALUE OF FACTS.

Delivered to the Medical Society, University College, London, on the Annual Public Night, Oct. 17th, 1894.

By J. BLAND SUTTON, F.R.C.S.,

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GENTLEMEN,—Some years ago I heard a distinguished judge in an after-dinner speech remark that if the theories current in the profession of medicine were tried as causes before a judge and jury, and the testimony admitted on the principles prevailing in courts-of-law, the major proportion of them would fail. Few of us who have given serious attention

¹¹ Körner (Die Oertlichen Erkrankungen des Hirns; Frankfurt-am-Main, 1894, p. 93) opposes this idea. He says: "Abgekapselte Hirnabscesse wachsen vielmehr ebenso wie freie, bis sie in einen Ventrikel durchbrechen oder auf andere Art den Tod herbeiführen." This assertion is at best an over-statement of a truth. That encapsulated abscesses increase is true, but they do not, like others, increase to the end of their course. It is inexplicable why for so long they produce no functional disturbance, and why even after many months they preserve their small volume. We cannot certainly establish any absolute relation between the age of the abscess and the denseness of the pseudomembrane, but neither can we deny that the longer an abscess lasts the more frequently it is encapsuled; but it is absolutely incontestable that during the period in which it is entirely enclosed by a pseudomembrane the effect it causes on the cerebrum is less than when it is not so enclosed by a capsule.

⁸ Pyogenic Infective Diseases of the Brain. Glasgow, 1893.

⁹ We are treating of abscesses not wholly chronic or acute, but this need not alter much the result of surgical treatment; at least we have no facts to prove a difference in the efficacy of surgical cure for chronic abscess.

¹⁰ Beiträge zur Lehre vom Hirnabscess. Berlin, 1891.

to the subject can doubt the truth of that statement. It is deplorable how largely imperfect observation, loose and incomplete records, reverence for authority, professional bias, and incompetent witnesses promote error and retard truth. In this address the word "evidence" will be employed in its simple sense, signifying facts apprehended by the mind and made the ground of knowledge and belief. The term "fact" will be used to express what is certain and known by the evidence of the senses (Stephens). It is clear that facts are acquired by observation, hence it is manifest that we must carefully distinguish between what we observe and what we think we observe—not always an easy matter. It is a curious circumstance that the greater proportion of men and women prefer to believe what they think they see, especially in things apparently extraordinary, rather than exert themselves to establish the truth. For example, it seems somewhat strange that a crowd of educated persons could mistake an ostrich for a giraffe. Some years ago the passengers of an Indian steamship were greatly excited by observing on the shore of the Red Sea what they believed to be a number of giraffes. Of the reality of the observation they were convinced. It happened that a very able naturalist and surgeon on board, surprised that giraffes should have wandered so far from their usual district, watched the animals carefully and perseveringly, and at last proved clearly that the supposed giraffes were ostriches magnified by the peculiar atmospheric conditions prevalent over sandy tracts in tropical regions.

As facts are the basis of evidence it is very necessary to establish them beyond dispute. This is not always a simple matter. Remember that repeated reiteration will not turn statements into facts. Le Sage, in his admirable "Gil Blas," a book abounding in parables, tells of one Señor Carlos Alonso de la Ventolera, who "has got a number of good stories by heart, which he has repeated and vouched for so often that at length he actually believes them to be true." I fear we all know such a señor. Many illogical deductions arise from ill-observed facts in common life as well as in what is pompously called science, and have formed the basis of many satirical fables. On the other hand, facts which happen uniformly under the same circumstances not only become useful for the foundation of laws, but enable us to check careless observation and avoid erroneous judgment. It will be useful to illustrate this. Dr. Hedley sent me from Middlesbrough an acardiac foetus. It was headless, with rudimentary arms and ill-formed legs. The mother explained matters in this way: when some months advanced in pregnancy she visited a menagerie and saw a girl put her head into a lion's mouth. The "king of beasts" acted in an undignified manner and bit the foolish performer; this caused great consternation among the audience, and profoundly agitated this pregnant woman. To this event she attributed the disaster to her infant. In acknowledging Dr. Hedley's present I expressed the opinion that the foetus was one of twins and the companion was a girl. This proved to be correct. The mother's belief that the deformation of her child was due to the fright at the menagerie was based on an illogical consideration of the circumstances. Many, very many, headless foetuses (acardiacs) are born, and the mothers who conceived them have never been witnesses of a decapitation during their pregnancies. In the present case the facts are not in accord: the lion bit the girl, but did not bite her head off, yet the foetus was headless, arms rudimentary, legs ill formed, &c. The common-sense (scientific, if you will) side of the case is much more interesting, as it illustrates that facts which happen uniformly under similar circumstances serve as foundations for laws. Prolonged and careful study of the environment of acardiacs has shown that they always occur in twin births with a conjoint placenta, and when it is possible to determine the sex of the acardiac it is always the same as that of its companion. I have assured myself of this so often that on examining the specimen I was quite certain it was one of twins, its companion a girl, and the mother's story a compound of ignorance and superstition. When, after a number of careful observations, certain facts have been found to happen uniformly under similar circumstances, a discordant fact breaks the series, it is necessary to submit it to very critical examination, especially when the previous uniform events have been made the basis of a theory, because "one single fact clearly irreconcilable with a theory involves its rejection" (Jevons). For instance, a friend, possessed of a very large amount of inquisitiveness, once showed me a calculus as large as a

cricket ball which he had found in the colon of a horse. In explaining its nature I mentioned that he would probably find in the centre of the calculus a piece of metal or perhaps a button. Next day he amused himself by dividing the calculus equatorially, but was disappointed at the absence of any trace of a foreign body and had a good laugh at my expense. When his merriment was at full height one of the hemispheres fell to the ground and split in two, displaying a button. In this case my opinion was based on facts obtained from the critical examination of scores of colic calculi obtained from horses. Most of them had a fragment of metal as a nucleus; in a few the nucleus, as in this example, was a button. When an individual possessed of an average intellect makes a series of careful observations with a particular object in view he is said to have acquired experience, and one of the chief outcomes of such experience is a capability over the inexperienced in estimating probabilities. In the case of the colic calculus just considered experience enabled me to be quite sure that a foreign body would be found within it, and enabled me to state with a fair amount of probability that it might be a button.

Many can scarcely be aware of the great difficulty which is sometimes experienced in establishing a fact, especially when it may form the basis of a far-reaching principle. It happens occasionally that facts in favour of a particular theory appear extremely probable, yet fail to convince cautious minds; then by a favourable concatenation of circumstances a fact is observed which absolutely decides the question. To such the term "crucial fact" may be applied without giving it the great importance of Bacon's "experimentum crucis" or Herschell's "crucial instance." Crucial facts are often of great value, and as they are somewhat uncommon it is necessary to be patient and industrious in order to detect them. Their utility is demonstrated in the following example. It has long been known that an ovum may be fertilised and retained in the Fallopian tube. In 1889 I was able to prove that an ovum developing in the tube may, like an ovum in the uterus, be converted into what is technically known as a mole. Careful studies of typical tubal moles show that they are usually ovoid; on section they present an outer limiting membrane—the chorion, beset with villi; the greater part of the mole consists of blood-clot, but towards one pole will be found a cavity lined with delicate membrane—the amnion, which sometimes contains an embryo. (Fig. 1.) In many small

FIG. 1.

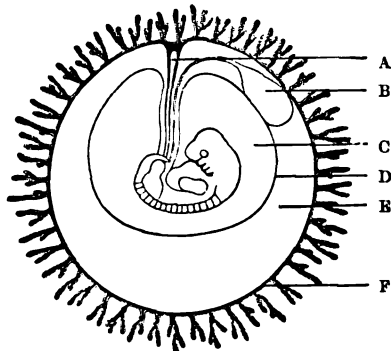


Tubal mole in section (natural size). F, Fetus. A, Amnion. B, Clot. C, Chorion.

tubal moles the amniotic cavity is obliterated. During a period of four years the excentric position of the amniotic cavity in tubal moles puzzled me. At last I obtained and described to the Obstetrical Society of London a tubal ovum with its membranes intact. In the early ovum the disposition of the membranes is different from what pertains at a later period. Soon after the chorion is shaggy with villi the embryo will be found in its amnion. Between the amnion and chorion there exists a space (well known to embryologists), which may be called the "subchorionic space," filled with fluid. (Fig. 2.) As the embryo grows the amnion gradually encroaches on and finally obliterates this space, but for a period a potential space exists between the two membranes, resembling that between the visceral and parietal pleurae. (Fig. 3.)

On examining tubal moles in the light of these facts it is clear that the blood occupies the subchorionic space. This at once offers a satisfactory explanation of the elliptical shape of tubal moles and also convinced me that in these circumstances the blood, in order to occupy this space, should come from within the ovum—probably from the allantoic vessels. When these views were communicated to the Obstetrical Society Dr. Horrocks suggested that, in order to make the evidence complete, it might be possible to demonstrate differences in the microscopical characters of the blood within the mole as compared with adult blood. The next fresh tubal mole which came under my notice was

FIG. 2.



An early embryo, showing the relation of amnion and chorion.
A, Allantois. B, Umbilical vesicle. C, Amniotic cavity.
D, Amnion. E, Subchorionic space. F, Chorion with villi.

submitted to this critical test. The red corpuscles exhibited the nucleated character which distinguish the blood of the early embryo from the adult. This simple fact makes it clear that tubal moles are due to blood extravasated from the ovular vessels into the subchorionic space. As the most convincing piece of evidence is the presence of nucleated red corpuscles it may be called a crucial fact.

Thus far we have mainly been dealing with facts. It will be useful now to consider the way in which they are employed as a foundation for judgment. For this purpose it is necessary not merely to apprehend but to appreciate facts,

FIG. 3.



Tubal ovum (natural size), showing the space between chorion and amnion, and the polar disposition of the villi.

a complex mental process known as reasoning. The appreciation of facts depends in a large measure upon the knowledge of the observer, for as a rule we only appreciate—and, indeed, often only perceive—those things which previous experience teaches us to expect. Individuals capable of perceiving facts previously unrecognised are termed “original observers.” Many are able to detect new facts, yet fail to reason upon them correctly, but when acute powers of observation and great capacity for reasoning are combined in the same person the result is a genius. Many men have distinguished themselves as patient collectors of facts, of these John Hunter and Richard Owen are remarkable examples; but to this exceptional talent for accumulating observations

add an unusual capacity for reasoning upon them—the result is a Newton, a Cuvier, or a Darwin. A combination of the faculty for accurate observation and ability to reason correctly on observed facts is essential in the successful practice of medicine and surgery, where much of the evidence on which judgments (technically called “diagnoses”) are formed is of the kind familiar to lawyers as “circumstantial evidence.” The best legal writers find it impossible to define circumstantial evidence, and I shall adopt their method and illustrate it by examples.

In 1874, when the remains of the intrepid David Livingstone, “brought by faithful hands over land and sea,” reached England, grave doubts were expressed as to the authenticity of the mummified corpse; recognition by means of the face was impossible. It was well known that Livingstone during his last visit to London consulted Fergusson in regard to an ununited fracture of the left humerus, the result of a bite from a lion in 1843. Fergusson, in company with other surgeons, examined the left humerus and found an ununited fracture a little below the insertion of the deltoid. A critical examination of the parts revealed the peculiar changes characteristic of an old ununited fracture: “the ends of the fragments were surrounded by a capsule, an inch shortening compared with its fellow, and marked attenuation of the humerus, especially in its upper half.” These facts coincided with Fergusson’s previous knowledge of the case, and reasoning on the facts he writes “that a specimen of this unusual condition should arrive in London from Central Africa except in Livingstone is beyond human credulity.” A cast of the bone is preserved in the museum of the Royal College of Surgeons of England.

Let me now draw your attention to a tale of painful interest illustrating evidence of the same kind. In 1892 H.M. gunboat *Partridge* was sent by the Commodore to ascertain the truth or otherwise of a statement that some men were marooned on Roncador, a small coral island (300 by 200 feet), or cay, in the Caribbean Sea. On arriving at Roncador it was found occupied by sea birds, especially boobies, in enormous number; some huts were also observed. On landing and entering the largest hut the scene depicted in Fig. 4 met the gaze of the explorers. Half sitting, half reclining on a high trestle bed, and partially supported by a makeshift crutch, was something rigid and angular within a mouldy cotton shirt and canvas trousers. Two rusty pannikins were close at hand and fragments of skeleton on the floor; these consisted of a skull, vertebrae, and some long bones. On the bed were the bones of a hand, and a number of land crabs scuttled about. The floor was covered with sea-birds’ eggs, and many more were found packed and salted in wooden boxes. Some empty cruet bottles were found near the eggs and a box containing papers which showed him to be a Dutchman; he had served in the militia. The medical officer was able to determine from an examination of the skeleton that it belonged to a lad under twenty years of age. In another hut was found the body of an old negro. The story is clear enough. The well-built hut showed that the men had come prepared to stay a while. The empty boxes showed that food had been at one time abundant; then provisions ran short. The men subsisted for a time on sea-birds’ eggs and water was apparently plentiful. Men cannot live long on eggs and brackish water; scurvy must occur. This is the secret of the crutch in the cabin. Disease had crippled before it killed this young man.¹ This explanation rests entirely on circumstantial evidence, but evidence so complete and convincing, the reasoning so sound, yet apparently so simple, as to make one exclaim on reading it, Surely this is the way of Zadig! When circumstantial evidence is very complete we are accustomed to deal with the judgment based on such evidence as if it were absolutely proved. Take for example fertilisation of the ovum. We all believe that the union of at least one spermatozoon with an ovum is necessary for the production of a metazoan, but so far as man is concerned the belief is based on circumstantial evidence; no man has ever witnessed the meeting of these two wonderful cells. Knowledge of the matter is entirely based on evidence furnished by observation on low animal forms. Indeed, so little direct evidence is forthcoming on this point that we are ignorant of the position in the genital canal where the meeting occurs. That it may take place as high as the Fallopian tube is proved by the frequent occurrence of tubal pregnancy, but it is very improbable that this is the usual meeting place. Some

¹ The Graphic, Oct. 15th, 1892

glimmerings of light are appearing in this dark passage, and we all feel thankful that the fable in which the flimble of the tube seize and convey away the ovum, much like Mephistopheles runs away with Faust from the stage of the Lyceum Theatre, is rapidly disappearing from the minds of text-book writers.

It is always useful to remember that circumstantial evidence of apparently overwhelming completeness will sometimes lead to mistaken judgments. Dr. Radcliffe Crocker had a very intelligent dog; as it advanced in years its breathing became stertorous on exertion, especially after a vigorous scamper. Auscultation revealed a mitral murmur which was very audible after the dog ascended or descended a staircase, and at times the dyspnoea was a source of great alarm to the dog's friends. In due course the abdomen began to enlarge, dropsy was

Yet at the necropsy three rare lesions were found: each occurring singly would be considered rare, therefore the more extraordinary that the three should be coincident and absolutely independent. The case of this dog illustrates very well the unexpected combinations which render uniform accuracy in diagnosis unattainable. In perfect knowledge is a very fertile source of error. I appreciated this in 1879 when I began to investigate diseases of wild animals at the Zoological Gardens. My first great difficulty was to distinguish between structures which in one animal would be considered normal, but in another decidedly morbid. In many, very many, instances I have kept specimens, obtained from rare animals, several years in order to control the observation by examining other examples of the same species before deciding that I have had to deal with deviations from the normal condition. It would be very easy for

FIG. 4.



The remains of a man marooned on Roncador, in the Caribbean Sea, found by the officers of H.M. gunboat *Partridge*. From the *Graphic*, 1892. (Reproduced, with some modifications of detail, with the permission of the Editor.)

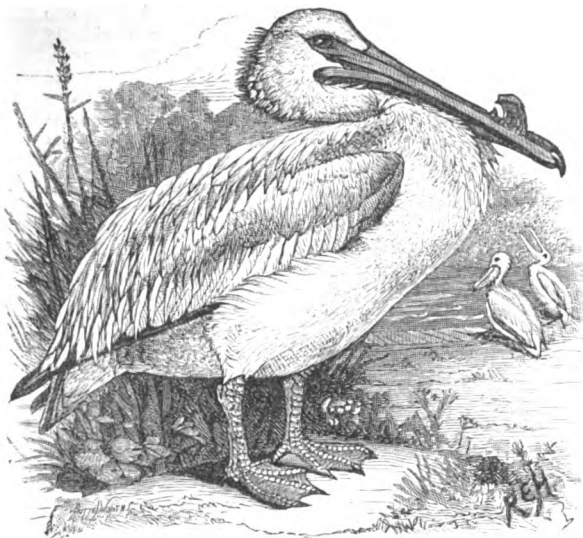
suspected, and at last euthanasia was prescribed and carried out by means of prussic acid. At the necropsy very curious conditions were found. The mediastinum contained a mass of enlarged and partially calcified lymph glands, which pressed upon the left recurrent laryngeal nerve. This explained the stridor and its increase on exertion. The mitral valve was curiously malformed, one cusp being connected with the septal wall by means of thick tendons without papillary muscles. These caused the murmur, for the valve was thoroughly competent. The increase in the size of the abdomen was produced by a large extravasation of blood beneath the capsule of the spleen; this, as ascertained subsequently, was the result of a bite from a neighbour's dog. To the mind of the physician the clinical signs in this case were characteristic of some chronic variety of heart disease.

me to detail instances in which experimenters have fallen into error on account of insufficient acquaintance with the normal anatomy of their subjects.

Let me finish this address by describing an example of a structure normal in one bird, but which would be considered pathological in another of the same kind. The beak of the American pelican (*P. trachyrhynchus*) is surmounted by a horn which is structurally identical with the wart-horn occasionally seen on men and women as well as on birds and beasts. A pathologist, on examining the beak of *P. trachyrhynchus*, would at once conclude that he had to deal with a wart-horn on the bird's beak, and the fact that it is shed in the autumn, when the bird moults, does not disprove the view, because pathological horns in birds are shed during moulting and rapidly reproduced with the feathers. A

close acquaintance with American pelicans shows that this horn on the beak is a constant character, and therefore normal. (Fig. 5.) Another source of much unsound knowledge is the enormous number of incomplete records contained in periodical medical literature. This is particularly obvious when the records rest merely on clinical observation. Lastly, let me advise you, in cases surrounded by great doubt,

FIG. 5.



The American pelican, showing the horn on its beak.

to be careful and to reserve your judgment. What is extremely dubious to-day may be clear and certain to-morrow. In forming a judgment keep to the facts (when inference is concerned there is no certainty), and never let the reasoning outstrip the evidence.

HEART PAIN AND SENSORY DISORDERS ASSOCIATED WITH HEART FAILURE.

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IT is possible to enumerate a great number of symptoms that are induced by failure of the heart. Individual cases may present a greater or less number of these symptoms, and it is rare that two cases present exactly the same features. As the evidence of heart failure may be exhibited in a disturbance of the functions of organs more or less remote from the heart itself, it is frequently difficult to appreciate the relative value of such evidence. By no organ are the symptoms so varied in site and in character as those exhibited by the nervous system; yet when a clue is obtained as to the meaning of the various manifestations, no series of symptoms point more conclusively to the seat of mischief. Heart failure to an extreme degree may be present, and no physical signs may be discovered in pursuing the usual methods of exploration, while, if the sensory phenomena be carefully studied, evidence of great value may be at once forthcoming. While the symptoms of heart failure evoked by the nervous system are not limited to the sensory nerves, it will mainly be the sensory disorders with which this paper will be concerned. The term "heart failure" will be employed in preference to heart disease, inasmuch as the symptoms are sometimes evoked in cases where there is no demonstrable cardiac lesion. The failure of heart power may be, however, the undoubted cause of their appearance, this failure and its accompanying symptoms frequently being evanescent.

Pain.—The sensory disorders vary in different individuals, and occasionally in the same individuals at different times, both in character and situation. I have not made much out of the study of pain in regard to its degree and the other characteristics occasionally employed in describing it, nor do I find its association with the sense of impending death either of universal occurrence or peculiar to affections of the

heart. What I have been careful to note is its mode of onset, its site, and its radiation. In the first examination of the patient one rarely gets a satisfactory account of these points. It has been my custom to request the patient to note carefully these points in subsequent attacks. The account then given is very trustworthy, and can often be verified by the presence of other symptoms.

Hyperæsthesia.—The most important of these other symptoms is a state of exalted sensibility—a hyperæsthesia of the skin and certain subcutaneous tissues. Although the hyperæsthesia when present often occupies the area in which pain is felt, it often happens that there is no hyperæsthesia of any tissue, even when the pain has been of the most violent character. The demonstration of the areas rendered hyperæsthetic can usually be readily effected. The area of cutaneous hyperæsthesia can be determined by stroking with a pin's head, approaching the tender area from the surrounding healthy skin. Sometimes the skin is not found tender by this method of stimulation, and then it can be demonstrated by lightly pressing small folds of skin between the thumb and forefinger. When the skin is hyperæsthetic to the pin-head it is also tender to this latter method of stimulation. The areas mapped out on any individual exhibiting both are not extensive, the area revealed by lightly pinching being somewhat more extensive, but embracing the area revealed by the pin-head method. Nor can the borders be exactly delimited by either method, as the areas are variable in their sensitiveness at the margin. This variability in the areas elicited by these two methods is not peculiar to the hyperæsthesia of visceral disease, but may also be demonstrated in the hyperæsthesia occasionally present in herpes zoster. The subcutaneous fascia, glands, and muscles can be demonstrated to be hyperæsthetic by lightly pinching, first testing that the skin covering them is not hyperæsthetic.

The association of the visceral with the sensory nerves.—When the nerves supplying the areas of skin and the muscles thus demonstrated to be hyperæsthetic are considered, and their root origins determined, it will be found that their nerve centres are in close association with the nerves supplying the organ whose disease has originated the sensory phenomena. It follows, then, that if the centres of the nerves supplying the viscera were known, the organ affected could be recognised by the painful and hyperæsthetic regions in the external body wall. The only conceivable explanation for the presence of these sensory disorders is that a stimulus is conveyed by means of the nerves supplying the organ to the centres of the spinal nerves. This stimulation induces the pain, &c., which is referred to the peripheral distribution of the nerves whose origins are affected. These centres probably being in a state of exalted sensibility stimuli applied to their peripheral distributions produce a sensation of greater intensity, and which we call "hyperæsthesia." This view receives support from the fact that the stimulus transmitted from the organ at fault excites other nerve centres which produce the phenomena characteristic of their function, as an increased secretion in the case of the nerves supplying the salivary glands in Cases 1 and 15.

The nerve-supply of the heart.—The heart receives its nerve-supply (1) from its intrinsic nervous mechanism, (2) by means of the vagus, and (3) by means of the sympathetic. The first of these concerns us here only in a secondary manner. No sensory disorders are evoked by these nerves. It is highly probable that abnormal excitation of these nerves can be recognised by certain characteristic irregularities of the heart's action. In the further course of this paper these will be left out of consideration. The vagus supply at its origin is brought into relationship with certain nerves distributed to the external body wall. The most important of these is the spinal accessory nerve. In the distribution of this nerve to the sterno-mastoid and trapezius muscles a striking and an instructive field of observation is provided for the examination into areas reflexly rendered hyperæsthetic. From this nerve the sensory disturbance may extend to the nerves, associated with the spinal accessory in its supply to these muscles—viz., the second and third cervical,—and may thence extend to their cutaneous distribution in the head and neck. The sympathetic supply of the heart is associated with the spinal nerves from the lower cervical and upper dorsal regions of the cord. It is in the region of distribution of the spinal nerves from the seventh cervical to the fifth dorsal that the sensory abnormalities associated with heart failure are most frequently and most characteristically distributed. As the area involved in this distribution includes

the arm and hand, there is provided a field of observation so peculiar that many inferences can with safety be drawn from the results obtained which would otherwise be impossible if the areas were limited to the trunk.

Cutaneous distribution of the cervical and upper dorsal nerves.—In order more fully to appreciate the significance of the hyperæsthetic fields in heart failure it will be advisable to bear in mind the distribution to the skin of the nerves implicated. The cervical nerves from the second to the fourth supply the skin of the back of the head, the neck, and shoulders. They also descend on the front of the chest at least as low as the third rib, where they overlap with the second dorsal supply (Fig. 7). The fifth and sixth cervical nerves are distributed in the arm in an area roughly described as the outer half of the upper arm, the radial half of the forearm, and part of the thumb (Fig. 8). The seventh cervical is distributed to the hand and fingers, the eighth also to the ring and little fingers, to the ulnar borders of the hand, and with the first dorsal supplying the ulnar half of the forearm. The second and third dorsal are distributed on the inner half of the upper arm, axilla, and chest, meeting and overlapping the fourth cervical, as already stated. (Fig. 1.) The fourth and fifth dorsal are distributed to the chest, the latter descending as low as the upper part of the epigastrium. It must be borne in mind that each spinal nerve practically divides into three parts after the junction of the posterior and anterior nerve roots—viz., a posterior, a lateral, and a ventral. It is the lateral and ventral divisions that are involved in the supply to the arm, the posterior divisions being distributed to the skin of the back. Thus, then, with the exception of these posterior divisions, the nerves from the fourth cervical to the second dorsal are distributed to the arms. The second dorsal nerve (occasionally also the first) does send branches to the front of the chest. There is thus an interesting test provided in considering the distribution of any sensory abnormality—pain or hyperæsthesia—that arises in the chest. If it affects a series of nerve centres in succession it will not pass up the chest and over the clavicle, but will descend on the inner aspect of the arm to the ulnar border of the hand (Figs. 1, 2, and 5). In like manner pain &c. arising in the neck, and produced by stimulation of a descending series of cervical nerve roots, will proceed down the chest for only a short distance, and then be deflected down the outer portion of the upper arm to the radial border of the hand (Fig. 6). In the following study of a series of cases it will be found that this view is exactly carried out.

Herpes zoster and sensory disorders.—Several years ago, while studying these sensory phenomena, I was struck by the resemblance of the situation occupied by the eruption in herpes zoster to the situation of the pain and hyperæsthesia in certain cases of visceral disease. As a rule the eruption in herpes zoster has hitherto been described only in relation to the peripheral nerves; but, inasmuch as these nerves are usually composed of fibres from more than one nerve root, no very satisfactory information has resulted. Recognising the fact that herpes zoster is usually due to an affection of the root of the nerve (probably the ganglion on the posterior root), the areas in which the eruption &c. occur become intelligible and instructive. Frequently there is evidence that more roots than one are affected, but these are generally neighbouring roots. It is difficult to say when one nerve root only is affected. There are other symptoms present besides the herpes zoster that help to complete the picture and to indicate the direction in which neighbouring nerve roots are distributed to the skin. The most important of these other symptoms are pain and hyperæsthesia, and when the eruption is scanty or absent it is difficult to decide whether these phenomena are not due to some visceral disease; indeed, this resemblance is so great as to lend countenance to the view of the possibility of visceral disease causing herpes, and I have collected a few cases which seem to be corroborative. At present I shall merely offer for comparison the similarity of the areas affected. Dr. Head has independently pursued the same line of inquiry with excellent results.

To elucidate the various points involved in the study of the sensory disorders associated with failure of the heart I shall give a brief record of a few of the cases in which I have observed these phenomena. I have collected records of a very large number of cases and several of those here given are quite exceptional, but as they fill up gaps and enable me to complete the picture they are invaluable. For the sake of brevity, only the points that are material to the

subject in hand are included in the records of the cases here given. In most of them I have full, and even voluminous, notes of the condition of the patient at different times. In some respects an apology is necessary for the incompleteness of the post-mortem examinations. As the cases were with one exception those of private patients considerable difficulty was usually experienced in getting permission to have a necropsy. When one was held it was usually conducted under great difficulties. Three of the cases given here have been published in full elsewhere, and I recapitulate them because of their great importance and because of the rarity of post-mortem demonstration as to the nature of the heart lesion.

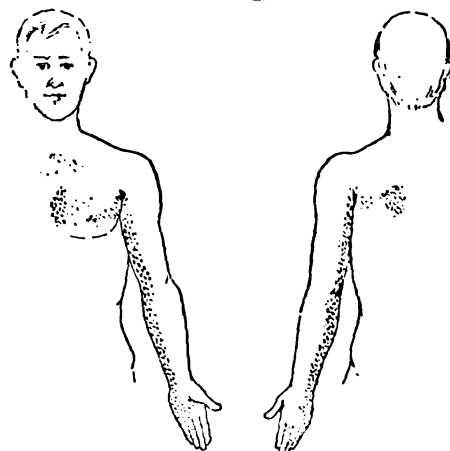
CASES ILLUSTRATIVE OF THE AREAS MOST COMMONLY AFFECTED.

CASE 1.—A man aged fifty-eight years, of gouty diathesis, complained of pain induced often by the slightest exertion, which arose in the left breast, passed up to the armpit, and extended down the inner surface of the left arm to the little finger. During an attack an abundant flow of saliva took place into the left side of the mouth. Careful and repeated physical examination revealed no cardiac abnormality. The left chest in front (skin and subcutaneous tissue), from the middle line to the nipple line, was at times very tender to the slightest pressure. There was excessive tenderness on pressure over the second left rib in the nipple line and over the second dorsal vertebra. The patient died suddenly, and, on post-mortem examination, the heart was found to have ruptured, the pericardial sac being full of blood. There was a small aneurysm the size of a marble in the wall of the left ventricle, where the ventricular cavity was separated from the pericardial sac by a thin wall consisting only of pericardium and endocardium. In this thin wall there was a narrow slit. The coronary artery was very atheromatous. The external anterior thoracic nerve was found to be lying under the place, over the second rib, that had been so tender to pressure during life.

CASE 2.—A man aged fifty-nine years complained of pain and shortness of breath on walking a short distance. The pain arose in the centre of the chest and extended out to the left and down the inner surface of the left arm. There was tenderness to pressure from the second to the fourth ribs on the left side in the nipple line. There was a slight increase in the area of heart dulness; otherwise there was no cardiac abnormality. The patient died with loss of speech, slight paralysis of the right cheek and right side of the tongue, and Cheyne-Stokes respiration. At the post-mortem examination the heart muscle was found to be soft and flabby, and on microscopic examination showed well-marked fatty degeneration. There were slight atheroma of the aorta and slight thickening of the cusps of the mitral valve. As in the previous case, the internal anterior thoracic nerve was found to be lying over the ribs where there had been tenderness to pressure during life.

During the lives of these two patients I made repeated observations of the sensory phenomena above alluded to and I recapitulate them here as they demonstrate the symptom present in a very large number of patients. I could, indeed, recite other cases where the hyperæsthesia was more striking; but I have not been able to obtain such convincing proof of the lesion of the heart as in these two cases. The pain here occupied without doubt the region of distribution of the spinal nerves, from the fourth dorsal to the seventh or eighth cervical. The area of pain was practically that of the pain and hyperæsthesia as mapped out in Fig. 5, and corresponds with wonderful accuracy to the distribution of the eruption I observed in a case of herpes zoster, and which is repre-

FIG. 1.



Distribution of the eruption in a case of herpes zoster, agreeing with the area in which pain was felt in Cases 1 and 2, and with the area of hyperæsthesia in Case 14 (Fig. 5).

mented in Fig. 1. In another case of herpes zoster, in which there was only a scanty eruption on the chest in front, the

pain was wont to radiate with agonising severity down the inner surface of the left arm and the ulnar border of the forearm to the little and ring fingers.

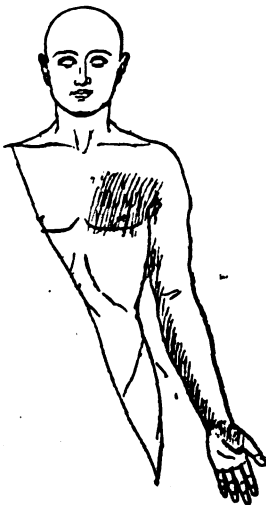
Radiation of pain from the hand to the chest.—In the great majority of cases the pain arises in the chest and radiates into the arm. In rare cases the pain may start in the arm and radiate to the chest. This had been noted by Walsh when he supposed that "the brachial pain played the part of an aura"; but as we now know the relationship of the nervous supply to the parts affected a more reasonable and fitting explanation is supplied.

CASE 3.—A man aged sixty-six years was first seen by me in September, 1893, with Dr. Dickey of Colne, suffering from asthma, an enlarged irregular heart, and albuminuria. I saw the patient again on March 9th, 1894. He had had on that day two uræmic convulsions. His left forearm was wrapped up in flannel because of the severe attacks of pain which kept recurring at intervals. The pain commenced in the arm and radiated to the chest. The pulse was firm and hard, 104 per minute; the respiration was laboured (28). The heart was enlarged to the left, and there was a well-marked triple heart sound. There was a large quantity of albumen in the urine. The patient was asked to note particulars in regard to the pain. I saw him again on the following day. He had had several attacks of pain, which began in the left little finger and extended with great severity up the ulnar border of the forearm and the inner surface of the arm to the front of the chest. He had now developed well-marked Cheyne-Stokes respiration, and the pulse had become very irregular. The patient died two days later.

Irregularity in distribution of the nerves and of the pain.—In the foregoing cases the pain has faithfully followed the course of the distribution of the spinal nerves. There is no doubt that certain variations occur in the distributions of the nerves in different individuals, and cases arise that do not conform to the usual description. In the somewhat schematic description of the distribution given above the order of distribution of the nerves below the fourth cervical was down the outer surface of the arm to the thumb and fingers, and up the inner surface of the arm. In the following case the course pursued by the pain was not altogether in accord with this description.

CASE 4.—A man aged fifty-two years had been under observation at frequent intervals for four years. His chief and almost only complaint during that time had been of a pain induced by exertion. At times the pain had been so easily excited that he had had to keep quiet in bed for several days, and then he would be comparatively free for some time. He was a pale, thin man, whose countenance had the drawn lines expressive of great suffering. I had many times made a careful physical examination of his heart, but could detect no abnormality except the presence of a venous pulse of the auricular type and on two occasions a single intermission in the pulse beat. The pain was described invariably as arising in the left chest and extending to the armpit, down the inside of the arm and the ulnar border of the forearm to the wrist, whence it extended across the palm to the thumb, leaving the fingers unaffected, but causing great aching in the thumb.

FIG. 2.



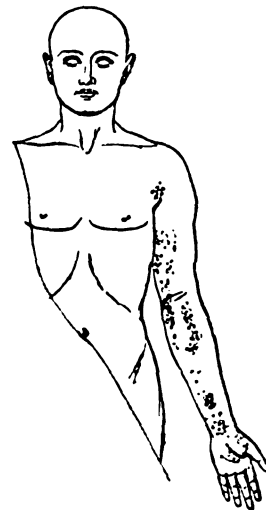
The shaded area represents the situation of pain in Case 4.

On Feb. 8th, 1894, he again consulted me, complaining, in addition to the constant recurrence of the foregoing pain, of a soreness and tenderness of the scalp. The nature and extent of this I could not well determine. In the month of March this soreness of the scalp had developed into severe attacks of headache, readily induced by exertion, but also coming on when quite still. This headache started always at the left eyebrow, and might remain fixed there, but usually spread to the back of the head, including both sides. There was no sensory abnormality of the skin, but there was tenderness on

pressure over the supra-orbital nerve. This headache became so violent that the patient had to keep to his bed, and finally he became comatose, developed Cheyne-Stokes respiration, and died on March 27th. Permission was obtained to examine the heart only at the post-mortem examination. The heart was very flabby, and the walls of both ventricles were soft and friable. There was well-marked atheroma of the coronary arteries. In many places the arteries and their branches were calcified. Microscopic examination of the cardiac muscle (left ventricle) revealed fatty degeneration.

Although there were no other sensory phenomena in the chest and arm except the pain it was so well and repeatedly defined by the patient that there was no difficulty in tracing out its course. Fig. 2 is the sketch I made during one of the many examinations, and its accuracy was corroborated by the patient, who was an educated and intelligent man. I was very much puzzled at this distribution and made on that account the more sure of the facts of the case. Six weeks after his death my friend Dr. Harwood showed me a case of herpes zoster under his care in whom the eruption on the arm exactly corresponded to the distribution of the

FIG. 3.



Distribution of the eruption in a case of herpes zoster, where the eruption corresponded to the pain described in Case 4.

pain in Case 4. Fig. 3 is from a photograph of the patient with the herpes zoster taken by Dr. Harwood.

In the foregoing cases the pain has appeared in an area supplied by nerves from the fourth or fifth dorsal to the seventh cervical nerves. The pain may, however, be limited to an area supplied by a portion of one or at most two of these nerves.

CASE 5.—A man aged thirty-eight years complained of a pain which on the day previous to examination seized him for the first time with excessive violence. The patient indicated the site of pain as across the left chest, under the nipple. A careful examination only revealed a slight enlargement of the heart dulness and a slightly increased area of dulness between the second costal cartilages. While out walking on the day following this examination the patient was again seized with the same pain and died in two hours from the beginning of the attack. On post-mortem examination there were found to be slight enlargement of the heart and a suspicion of dilatation of the first part of the aorta, no other lesion being discernible.

CASE 6.—A woman aged sixty years complained of pain of agonising severity limited to the ulnar border of the left forearm. The pain was induced by exertion. The left side of the chest was tender to pressure, and pressure over the second left rib in the nipple line and over the second dorsal vertebra was very painful. The pulse was full, soft, quick, and regular; the arteries were atheromatous, and there was a slight enlargement of the heart's dulness. The second aortic sound was markedly accentuated. The patient died with symptoms of heart failure, dyspnoea, dropsy, &c. At the post-mortem examination there were found marked atheroma and calcification of the coronary arteries, extensive chronic fibrous myocarditis, and no signs of fatty degeneration.

CASE 7.—A woman aged fifty-two years complained of pain that came on with terrible severity across the upper part of the epigastrium and round under the left breast. While the pain was present perspiration poured from her. These pains had begun a year previously, and at first were not very severe. Three weeks ago they had returned with great severity. They always came on either during or immediately after bodily exertion. The pain lasted from ten minutes to one hour. She was very short of breath and suffered from a severe spasmodic cough. The patient was big, fat, and florid. The feet and legs were swollen. It was impossible to define the limits of the heart's dulness because of her obesity. The second sound was markedly accentuated at the base; otherwise the heart sounds were normal. There was tenderness on pressure over both second ribs in the nipple line. The upper

part of the left sterno-mastoid was tender on pressure, as also a point immediately above the middle of the left scapular spine. There was no albumen in the urine. The patient was requested to inhale a few drops of nitrite of amyl during an attack, and after a time reported that it immediately and invariably relieved her.

In Case 6 the pain was doubtless limited to the highest nerve centre, whose fibres are associated with the sympathetic supply of the heart; while in Case 7 the pain affected the lowest nerve centre, probably the fifth dorsal. In such cases as Case 7 it is somewhat difficult to be absolutely sure that the pain is cardiac in origin and not stomachic. If all the circumstances of the case be taken into consideration—the pain induced by exertion, its association with sensory abnormalities in regions characteristic of heart failure, dropsy, shortness of breath, &c.—I think there is little doubt of the accuracy of the diagnosis. It does happen, however, that one sometimes has great difficulty in differentiating between the two forms of pain, and that this complication is likely to arise will be realised when it is borne in mind that dyspepsia is often induced by failing circulation, as in the following case.

CASE 8.—A woman aged fifty-four years suffered from attacks of pain in the left chest and abdomen. She had had rheumatic fever twenty-eight years previously and had had numerous attacks since. She had five children. The heart was enlarged, the apex beat being in the sixth interspace one and a half inches beyond the nipple line. There was a rough, loud, systolic murmur at the apex propagated into the axilla, and a murmur, also systolic in time, was heard at the base and mid-sternum, but of a softer character. There was no cutaneous hyperæsthesia elicited by stroking with a pinhead, but when the skin was lightly pinched there was distinct tenderness in the front of the left chest (Fig. 4), and the deeper tissues were tender over a somewhat larger area, while pressure over the second, third, and fourth ribs was particularly painful. At times the patient could scarcely move across the floor without inducing a violent attack of palpitation and severe pain. The pain was usually situated about the level of the second and

FIG. 4.



The shaded area on the chest represents the field of hyperæsthesia from heart failure, that on the abdomen the area of hyperæsthesia due to dyspepsia. (Case 8.)

third ribs. It began in the middle line and radiated across the chest, almost reaching the axilla. Occasionally the pain was lower down, arising in the upper part of the epigastrium and radiating round under the left breast. The chest felt as if held in a vice when this pain came on, and she felt as if she was about to die. She suffered much from indigestion and had often severe pain after taking food, which was relieved by eructation of gas. The pain then was lower in the epigastrium, in the region of a tender spot, which she pointed out, and which I found to be distinctly hyperæsthetic, as in Fig. 4.

Pain limited to the right side.—In these cases, so far, the pain and sensory phenomena have been mainly located on the left side. Although extension of the pain to the right side is by no means infrequent, yet its limitation to the right side alone is in my experience very rare. The following is the best example of such limitation.

CASE 9.—The patient was a man aged twenty-four years. I had attended him four years ago for rheumatic fever, in which there was developed endocarditis, leaving him with a damaged mitral valve. He kept fairly well until the autumn of 1893, when he began to get short of breath and suffered from hæmoptysis. He recovered from this attack, and on Feb. 26th, 1894, I saw him again. He was in bed, and suffered from great pain situated over the lower part of the right scapula and the inner surface of the right elbow-joint. There were an irregular pulse, great enlargement of the heart's dulness, a pre-systolic murmur, pulsation of the velus of the ventricular type,

and œdema of the lungs. During the night he expectorated a large quantity of blood, and obtained relief from the pain. He died on March 4th, and on post-mortem examination I found the tricuspid orifice to be widely dilated, the mitral orifice narrowed and its margins hard and calcareous, and the bases of the lungs deeply congested, being in some parts solid. The location of the pain in this case is peculiar, but will be exemplified to some extent in Cases 10 and 11.

Bilateral distribution of pain &c.—The manner in which the pain and other symptoms have spread in the foregoing cases is not at first quite clear. It is unusual that the whole distribution of any given nerve is affected. More commonly neighbouring areas of a portion only of the distribution of a number of nerves are affected. Thus in most of these cases the anterior branches have manifested the sensory abnormalities, while there has been little or no affection of the posterior branches. Symptoms may, however, also spread to the opposite side of the body, but in such cases there is a tendency for the symptoms to be manifested in corresponding areas. The pain itself is not so severe, and areas occupied by the pain and hyperæsthesia are not so extensive on the right side as on the left. This tendency to bilateral distribution of the sensory phenomena in visceral disease finds its counterpart in the tendency to bilateral distribution of the eruption in multiple herpes zoster. In the course of a pretty extensive inquiry into the distribution of the eruption in herpes zoster I was struck by the fact that when the eruption was multiple in the majority of cases there was a distinct tendency to a bilateral distribution of the eruption, one side being usually more affected than the other. This observation has been verified in a number of cases that have come under my own observation, and in one case where a scanty eruption occurred on the face, chest, and thighs the eruption was exactly symmetrical. The following case of the occurrence of pain of heart origin illustrates this tendency to the bilateral distribution of the pain.

CASE 10.—The patient was a man aged fifty years. Ten years previously I had attended him for an attack of fainting. For seven or eight years he had had gouty contractions of the right ring and little fingers and tophi in his ears. Two years ago, while in church, he was seized with severe pain on the inner side of the left forearm, near the elbow. While the pain lasted perspiration poured off him. He consulted me on the following day, but I could detect no cardiac or other abnormality. Some months later I observed a transient irregularity in the pulse during a slight feverish cold from which he was suffering. After this he appeared to be quite well and was able to take active exercise without discomfort. On March 11th, 1894, he was again seized with the pain and noted its exact site. It was situated in exactly identical places on the inner side of both forearms, near the elbow. The pain held him for nearly an hour. Next day he consulted me, and I found that the heart was extremely irregular in its action. The patient also, from being a bright, lively man, had become haggard and careworn, and oppressed with an indefinite sense of discomfort. He remained in this state for ten days, when his pulse again became quite regular and the sense of oppression left him. Since that time he has continued in good health.

CASE 11.—A woman aged fifty-seven years had been under my care eight months previously suffering from heart failure with shortness of breath and palpitation. She improved under treatment, but while I was writing this paper she again consulted me for a violent pain that seized her on the inner surface of the left arm and extended behind over the left shoulder-blade and right shoulder-blade, extending sometimes round over the right breast. The pain came on with exertion. The pulse was full, quick, and regular, and the arteries were atheromatous. The apex beat was in the fifth interspace, two inches outside the nipple line. There was a short tricuspid systolic murmur. The upper four dorsal vertebrae were tender on pressure, and there was a spot tender on pressure above the left scapular spine. After the examination and while dressing, the patient being somewhat excited, the pain struck with extreme severity over the lower part of the right scapula. There was no hyperæsthesia. The pulse was quickened and the face flushed, and she was bathed in perspiration. She lay down and inhaled a few drops of nitrite of amyl, and experienced complete relief in a few minutes. The pain in this attack did not radiate, and she stated that sometimes it was limited to one part. She never experienced such rapid relief in any other attack.

It will be observed that the pain in the attack I observed in Case 11, and the situation of the pain in the right arm in Case 10, are the places where the pain was felt in Case 9. The area in the right arm was also the seat of pain in Case 14, which was found to be hyperæsthetic. The association of these corresponding areas on the two sides of the body is exemplified in a case of herpes zoster I had under observation. A lad fell on his head from a cart and felt stunned for some minutes after. A few days later a herpetic eruption occurred on the back of his neck, affecting both sides almost to the same extent. On the back of each elbow there was also a crop of vesicles identical in situation. This distribution of the phenomena on both sides of the body will be further exemplified in some of the following cases.

Symptoms in the head and neck.—So far the symptoms that have been referred to are those in association with the sympathetic nerve-supply. In carefully examining the patients I became aware of distinct sensory abnormalities in

other fields. The most conspicuous of these was tenderness on lightly pinching the sterno-mastoid and trapezius muscles. That the muscles themselves are tender admits of no doubt. The skin and subcutaneous tissues may be pinched without evincing any abnormal tenderness, but, when the muscle substance is pinched, tenderness, sometimes exquisite, is evoked. Finding the sterno-mastoid and the trapezius so frequently tender, and having regard to the nerve-supply, the spinal accessory, with its known association at its origin with the vagus, led me to consider that the transmission of the irritation to the spinal accessory was from the heart by the vagus. While the abnormal sensitiveness of the sterno-mastoid muscle and of the trapezius are the most constant phenomena, there are frequently sensory disorders in other places. Thus pain may be felt in the neck, in the scalp, and in the jaw. Hyperæsthesia may also be present in these areas. The significance of these areas as demonstrating the connection of the nerves so affected at their centres with the vagus affords an interesting study; but as the anatomical relationship is as yet far from clear the discussion would be somewhat speculative and would be rather extraneous to the conception of this paper, which is intended to be a clinical exposition of the sensory phenomena in heart failure rather than an inquiry into how these occur. As a rule, the sensory phenomena occurring in the head and neck are associated with those occurring in the upper dorsal and lower cervical nerves. As a matter of routine, in many cases it is my custom to press over the second left rib in the nipple line, over the upper dorsal vertebrae, pinch the left sterno-mastoid muscle, and press upon the trapezius immediately above the spine of the scapula. If sensory phenomena are present they are usually manifested in one of, if not in all, these areas. In some cases all are extraordinarily sensitive, and, excepting some obscure pains, no other sensory disorder may be present. The following case had only slight evidences of sensory disturbance, limited to the two muscles.

CASE 12.—A man aged thirty-two years complained of shortness of breath and swelling of the legs. There was marked double pulsation in the veins of the neck, the heart was much enlarged, and there was present a loud diastolic aortic murmur. There was tenderness on pressing the left sterno-mastoid and the trapezius muscles, the latter not being quite so sensitive. After a few days in bed this tenderness quite disappeared. The patient appeared to be progressing favourably when he suddenly died. At the post-mortem examination the aortic valves were found to be thick and shrunken, with a long vegetation attached to one cusp. The mitral and tricuspid orifices were greatly dilated.

The symptoms present in the head and neck are often associated with those affecting the chest and arms. The symptoms are generally more conspicuous in one or other region, but the severity varies in different individuals and even in the same individuals at different times.

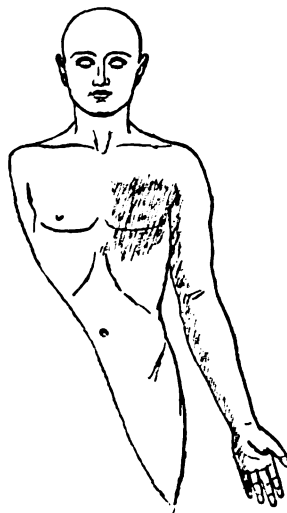
CASE 13.—A man aged sixty-two years complained of great pain striking into his chest and behind his ears when walking. Thus in going to his work he was wont to allow seven or eight minutes to walk to the station, but now it took him over half an hour, as he had to stop on account of the pain every fifty yards. After accurately noting the pain he described it as arising in the left breast, extending across to the right breast, seizing him in the neck, and extending up behind the ears, where it held him with great severity. In showing me the situation he laid the fingers of both hands over the insertion of the sterno-mastoid into the mastoid process. On one occasion the pain extended from the breasts to the armpits and down the inside of each arm to the elbow. The pulse was full and regular and the arteries were tortuous and atheromatous. The lungs were emphysematous and covered the heart. There was tenderness on pressure over the second left rib in the nipple line and over the left sterno-mastoid and trapezius muscles. The right sterno-mastoid was also slightly tender at the upper part.

The manner in which these symptoms first appear in individual cases and the way in which they spread afford a highly instructive view of the various regions allied with the heart in its nerve-supply and give a clue to the unravelling of many obscure phenomena. The next two cases have been under my close observation for several years. As Case 14 presented features of extreme interest apart from the sensory phenomena, I have spent much time in the study of the condition of the patient. In this manner I became acquainted with the first appearance of the sensory phenomena associated with the heart failure in her case, and have watched them gradually develop into the condition in which they are at present.

CASE 14.—A woman aged thirty years had been under almost constant observation for three years, as she presented features of extreme interest. There was distinct evidence of stenosis of the mitral and tricuspid valves, and there was present marked pulsation in the veins and in the liver. I have elsewhere described these phenomena at length. Eighteen months ago she came to me complaining of a disagreeable smarting pain in the left axilla. I examined her, and found the skin in the axilla and adjacent parts of the thorax to be extremely hyperæsthetic. A few days later she began to suffer from slight attacks of pain in the left breast and down the inside of the left arm; and then, on examination, I found that the hyperæsthesia had

extended and occupied an area similar to that shaded on the left side of Fig. 5. These attacks of pain became so severe on the slightest exertion that she was forced to lay up. Since that time she has at different periods suffered from severe attacks of pain, and I have occasionally found, when she was very ill, the hyperæsthesia embrace nearly the whole of the left chest and inside of the left arm, and also a portion of the front of the right chest. The left sterno-mastoid and trapezius also became very sensitive. Latterly she has been better, and when I last examined her on May 25th, 1894, she complained of a disagreeable pain located on the inner side of the right forearm. I examined the place and found it to be extremely hyperæsthetic. There was also present the hyperæsthesia as represented in Fig. 5, which was mapped out on this visit.

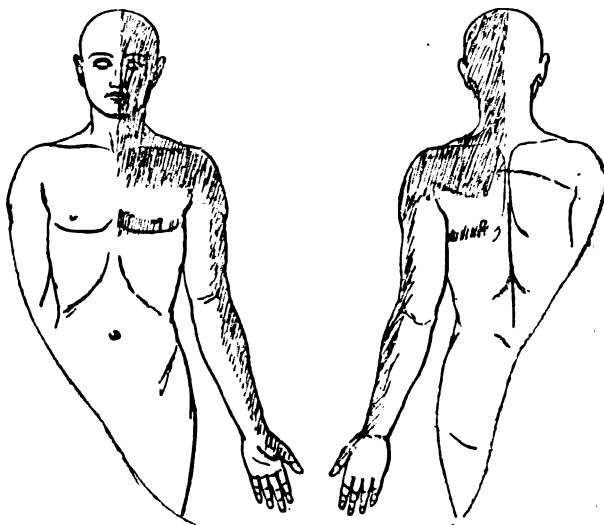
FIG. 5.



The shaded area on the left chest and arm represents the area of cutaneous hyperæsthesia in Case 14.

CASE 15.—A woman aged seventy years had been under my care for over ten years. Seven years previously she had had a long illness of great obscurity, characterised by excessive prostration, with pain under the left breast. Two years ago she consulted me for a pain of much severity that struck her across the chest on the slightest exertion. A note taken at that time described the face as being pale and distressed looking. The pulse was full, soft, and regular. The heart was enlarged to the left, and there was a systolic murmur at the base and over the carotid. When the pain came on it struck her under the left breast and between the shoulder-blades. There was an area of hyperæsthesia of the skin over the left chest from the third to the sixth ribs and from the left

FIG. 6.



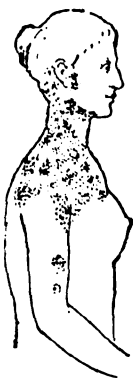
The shaded areas represent the distribution of cutaneous hyperæsthesia in Case 15. The subcutaneous tissues of the whole of the left side were also abnormally tender.

border of the sternum to the anterior axillary line. There was great tenderness on pressing over both second ribs in the nipple line, over the third, fourth, and fifth dorsal vertebrae, and on pinching the left sterno-mastoid and trapezius muscles. After a long period of rest in

bed she improved. A year ago, in addition to these symptoms, there was a large patch of cutaneous hyperæsthesia on the left side of the neck, and when I last examined her (May 27th, 1894) this had extended, affecting the whole left side of the face and neck and the arm in the characteristic manner depicted in Fig. 6, while the subcutaneous tissues of the whole of the left half of the body were abnormally tender. There was also a band of cutaneous hyperæsthesia round the left chest.

The area here hyperæsthetic may be instructively compared with the distribution of the eruption in the two cases of herpes zoster represented in Figs. 7 and 8.

FIG. 7.

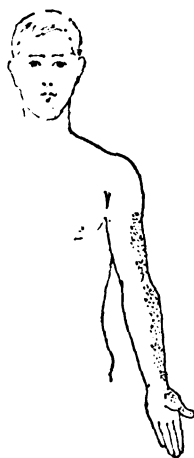


Distribution of the eruption in a case of herpes zoster, affecting, probably, the third and fourth cervical nerves.

The distribution of the hyperæsthesia down the inside of the arm in visceral disease is very common, but its distribution down the outer side, as in Case 15, is in my experience very rare. That this region may exhibit sensory disorders would seem to be possible from the study of the following case.

CASE 16.—A woman aged forty-five years had been under my care at intervals for the last ten years. She suffered from great enlargement and very irregular action of the heart. Seven years ago she was laid

FIG. 8.



Distribution of the eruption in a case of herpes zoster, affecting, probably, the fifth and sixth cervical nerves.

up for a long time with extensive dropsy. For the last few years she had suffered at intervals from great shortness of breath on the slightest exertion. On March 29th, 1894, she complained of a pain of great severity that struck into the right shoulder. I asked her to note carefully its exact site and character, and four days later she told me it always came on with exertion or immediately after, that it began in the middle of the side of the right neck, and extended down over the shoulder and down the outer surface of the arm to the elbow. Once or twice she had felt a slight pain at the same time under the left breast, and, rarely, a sense of pressure just below the left shoulder blade. She feels very helpless when the pain comes on. There is no hyperæsthesia, but she says that after an attack of pain the side of the right neck is very tender to pressure. She is extremely weak and short of breath, and the feet and legs are swollen.

Attacks of depression without pain.—A frequent accompaniment of the pain is the sense of depression, which is sometimes so great as to give the patient the feeling of impending

death. In individual cases the attacks of pain may occur without these sensations, while at other times it is a very distressing feature. Vague sensations of great discomfort are often present, associated with attacks of palpitation and transient irregularities of the pulse. Very rarely there may be met with cases that present typical attacks of intense depression with no symptoms of pain.

CASE 17.—The patient, a thin, spare man, aged forty-eight years, with a faint flush on his cheeks, complained of great weakness and shortness of breath. Since childhood he had suffered much from cold hands—some of the fingers occasionally going quite white and cold. When walking he is suddenly seized with attacks of great weakness, so that he has to clutch for support or he would fall to the ground. A sensation of sinking is then felt at the pit of the stomach, and a sense of depression comes on, which he describes as something fearful, and he feels as if he would die. The first attack occurred when he was twenty-three years of age after a very long period of excessive exertion. He did not have another attack for twelve years. Latterly he had been having as many as four in one week. The pulse is quick, regular, and very small. There is never any pain and there is no hyperæsthesia. The heart is slightly enlarged, and there is a marked diastolic murmur heard over the lower half of the sternum.

The spreading of the pain and hyperæsthesia.—There are a considerable number of other points which I would have liked to have illustrated, but space forbids more than a brief reference to them. Thus when a supposed stimulus reaches the nerve centres it may affect different portions, and then the symptoms may be exhibited in the distribution of the anterior, lateral, and posterior divisions of the nerve, or may spread to the corresponding areas of neighbouring nerves, or even to the corresponding areas on the opposite side of the body. On the other hand, it may affect the whole of one side of the body. According to a recent writer, hyperæsthesia of one half of the body is a rare thing. Were these sensory disturbances more thoroughly studied it would be found to be far from infrequent. It will be observed from the selection of cases that the cutaneous hyperæsthesia is more readily developed in females than in males. The occurrence of hyperæsthesia with visceral disease in hysterical subjects is very confusing, and I had intended to have given some illustrative cases, but as these fully confirm the description given by Dr. Head it is scarcely necessary.

Vaso-motor and pilo motor reflexes.—So far the symptoms on which this method of studying is based are purely subjective. There are, however, some symptoms that we can study independently of the patient. If a pinhead be drawn firmly down over the skin of the trunk of a person whose body is warm a series of changes will result in the skin. Thus the temporary pallor will give rise to a blush extending half an inch on either side of the scratch. In a few seconds this will disappear, and the line of the scratch will become raised. If the pinhead has traversed a hyperæsthetic area these phenomena will be witnessed above and below the hyperæsthetic area, but over the hyperæsthetic area they will frequently not be produced. A localised goose skin often follows in the track of the scratch, but sometimes it may spread and occupy the whole of the hyperæsthetic area. These phenomena do not appear in every case, though I have been able frequently to demonstrate them; but my results, although very interesting and instructive, do not justify me as yet to do more than call attention to them as corroborative of the purely sensory symptoms.

Differential diagnosis.—One of the things that influences me in thus emphasising the sensory phenomena exhibited in heart failure is that the symptoms so produced may be exhibited with affections of other organs, and the dependence of the disease of these organs on the heart failure may be obscured or lost sight of. Thus many cases of chronic bronchitis are undoubtedly due to heart failure; but, unless a valvular murmur or some irregularity is present little regard is paid to it. Now, if these sensory symptoms be studied, very frequently they will be so striking as to leave little doubt as to the primary source of the mischief. But it may be asked, Do not other diseases give rise to sensory phenomena that are supposed to be characteristic of heart failure? I think not. I have made careful examination of typical cases of asthma, bronchitis from tuberculous causes, phthisis, pleurisy, &c., but have not found any difficulty in differentiating them. In phthisis, for instance, the whole chest may become hyperæsthetic, but I have never found it pick out the areas peculiar to the heart. Rarely at menstrual periods the breasts become tender, but then it is both breasts that are affected. On the other hand, respiratory affections induced by heart failure, where the heart ailment was demonstrable by murmur, increased size, and irregularity, have presented sensory phenomena identical with those cases

where the respiratory affections have been induced by heart failure, but where the sensory phenomena were the only reliable guides to the heart affection.

Burnley, Lancs.

A CASE OF ABDOMINAL ANEURYSM TREATED BY LAPAROTOMY AND THE INTRODUCTION OF WIRE INTO THE SAC; DEATH.

[WITH COLOURED ILLUSTRATION.]

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A MAN twenty-five years of age was invalided from India for abdominal aneurysm and arrived at Netley on April 24th, 1894. Previously to enlistment he had been a hard drinker, but he had never had syphilis. He arrived in India in October, 1892, and in the beginning of the following year he first complained of pains in the back and legs. There were no objective symptoms at that time, and he was supposed to be suffering from rheumatism; but in June of that year a small tumour was detected a little to the left of the umbilicus. This tumour gradually increased in size and in September it was said to be the "size of a cricket ball," with a feeble expansile pulsation, accompanied by a thrill and a slight systolic bruit. At this time the pain in the back had quite disappeared, but he suffered a good deal from pain in the abdomen in connexion with the tumour itself. He attributed his complaint to strains received while working with heavy guns. On arrival at Netley he was a healthy looking, well-nourished man. A tumour having all the characteristics of an aneurysm was situated about two inches below the left costal margin and about three inches to the left of the middle line as the man lay on his back. Through the abdominal walls it felt, with the hands placed on either side of it, about the size of a large orange and quite globular in shape. When the patient turned well over to the left side the tumour passed a little further into the left hypochondrium, and when he lay on the right side it passed over to about three inches to the right of the median line; it was, therefore, quite movable from side to side. Judging from its mobility, it was evident that the aneurysm was not on the aorta, and from its situation it was considered probable that it was either on a branch of the coeliac axis or on the superior mesenteric artery. A soft systolic bruit accompanied the expansile pulsation of the tumour, but there were no pressure symptoms; the pulsation of the femorals appeared to be normal. On admission to the Royal Victoria Hospital, Netley, in April, the man was not suffering from pain, though he complained of the discomfort and sleeplessness caused "by the beating of the tumour," but on June 22nd the abdominal pain recommenced and the tumour was noted as "steadily increasing in size." He had at first been admitted into the medical division of the hospital, and whilst there Tufnell's treatment by low diet, restriction in the quantity of fluids taken, exhibition of iodide of potassium, and absolute rest in bed had been tried. He had also been treated (at the suggestion of Professor Wright) with calcium chloride and the inhalation of carbonic acid, with the result of considerably increasing the coagulability of his blood, but with no effect on the size, pulsations, or solidity of the tumour. When medical treatment had failed, and the aneurysm commenced to increase in size, consultations were held on many occasions between the medical officers of both divisions of the hospital with regard to surgical treatment of the case, as to what method of surgical procedure was most advisable or least dangerous. It was decided that proximal pressure was not feasible on account of the situation of the tumour, and that distal pressure should not be attempted for the reason that it had never succeeded when tried in similar cases and on account of the probability of fatally injuring some of the abdominal contents. There, therefore, remained only the immediate treatment of the tumour itself by means of a laparotomy; and the methods rendered possible by this procedure were—(1) the ligation of the vessel leading to the aneurysm, and (2) the

introduction of wire or some similar foreign body into the sac in order to induce the formation of a clot. As regards ligation, the fact that the tumour passed over at least three inches to the right or left of the median line as the man lay on the corresponding side at least warranted a hope that it might be found to be so far forward on one of the branches of the abdominal aorta that sufficient of the healthy vessel might be found on the proximal side of it to enable a ligature to be applied at that situation; whilst, if this were found to be impracticable, then the treatment by wire could be carried out. The patient was an intelligent man; he knew he was suffering from a fatal disease, one, moreover, which could not be of long duration, and he expressed himself as being most anxious that something should be done for him in the way of operative treatment. He was willing that any procedure which offered even the faintest chance of cure should be undertaken; as he very forcibly put it—he "would prefer to die in hospital rather than go out to live for a short time on his friends." Under these circumstances he was transferred to the surgical division, and it was determined, on consultation, to perform laparotomy with a view to carrying out one of the methods above referred to.

On the night previous to the operation the skin surface was thoroughly washed with hot water and soap and afterwards with ether; it was then packed with lint dipped in a 1 in 40 carbolic lotion, which early next morning was changed for lint dipped in a 1 in 20 lotion. On July 23rd, at 10 A.M., chloroform having been administered, an incision was made in the median line from one inch and a half below the ensiform cartilage to within an inch of the umbilicus, but which was afterwards prolonged to the umbilicus. When all bleeding had been stopped the peritoneum was opened. The omentum was found to be firmly adherent to the abdominal walls over the tumour and to the tumour itself, and firm adhesions between the tumour and all the structures in its vicinity quite precluded any attempt being made to reach its base or pedicle; ligation of the vessel was, therefore, set aside as impossible. Preparations were accordingly made for the introduction of the trocar and cannula into the sac for the passage of steel wire. For this purpose it was necessary to make certain that no portion of the intestine overlay the aneurysm. The transverse colon and great omentum were pushed upwards off the tumour, and in doing so many adhesions had to be gently broken down; a very distended vessel came into view, and two small branches coming off from it were torn across and required ligation. Beyond this there was no serious hæmorrhage at this stage of the operation. When the colon and omentum had been pushed upwards off the tumour it still appeared to be covered by more than one layer of peritoneum; these were torn through by means of two pairs of dissecting forceps, and the tumour was laid bare over an area about the size of a shilling, showing a greyish-blue surface. At this point a very fine trocar and cannula were passed in at right angles to the long axis of the tumour for about two inches and a half, when the point appeared to be free within the sac. Hæmorrhage immediately occurred alongside the cannula, and continued very freely during the whole time the wire was being passed in (about five minutes). The wire was the finest steel wire, and it had been tightly coiled on a small reel so as to ensure its coiling up within the sac. It was passed through the cannula by means of a small pair of pliers, the wire being held by the pliers at about an inch from the end of the cannula, and in this way it was introduced inch by inch. Two yards were thus disposed of. When the outer end of the wire came flush with the end of the cannula it was pushed onwards and free into the sac by means of a knitting-needle, which had previously been filed down so as just to fit the cannula. The latter was then withdrawn, and in about a minute, under pressure on the orifice, the hæmorrhage above referred to ceased. No blood had entered the peritoneal cavity, so the latter was not flushed out. The wound was closed by two rows of sutures, one of chromicised gut for the peritoneum and deeper portions of the incision, and one of silver wire for the skin. I had intended to use also a continuous horsehair suture for the skin, but the others brought the surfaces so accurately together that this was unnecessary. Boracic acid powder was dusted over the wound, and an iodoform gauze and alembroth wool dressing was applied. The operation lasted an hour and a half; the patient took the anæsthetic well and recovered from it satisfactorily, shock being at that time

but slightly marked. No food or drink was given during the day, a few pieces of ice only being allowed. At 6 P.M. the temperature was 98.2° F. and the man seemed to be fairly strong and quite comfortable. At 7 P.M. severe hæmorrhage occurred, the dressings and sheet suddenly becoming saturated. The dressings were then removed and the blood was found to be coming from the lower end of the wound, which corresponded with the site of the trocar puncture. The wound was not reopened because I was certain that the hæmorrhage was not from vessels in the abdominal walls and because local treatment for hæmorrhage from the puncture in the sac did not appear feasible. Hæmorrhage again took place at 9 P.M., and also at 2.30 A.M. An ice-bag was then applied over the wound, a four-ply of iodoform gauze intervening, and no more hæmorrhage occurred. At 9 A.M. next day he was in a distinctly low condition, apparently suffering from shock from loss of blood, but not to any marked degree. He had vomited once or twice. The temperature was 99.6°, the pulse was weak (100), but quite perceptible at the wrist, and the respirations were 30 per minute and sometimes of a sighing character. He complained of extreme thirst. The wound was quite dry; the ice-bag was therefore removed and the dressings reapplied. He begged for lemonade, and some was allowed to be given him in small quantities. During the forenoon he vomited two or three times. He said he "wanted to cough, but could not." At 12 noon he was suffering from intense pain in the wound, and a hypodermic injection of morphine was given. At this time there was nothing in his condition to lead me to suppose that he was in any immediate danger of death. At 1 P.M. he was restless and inclined to retch. At 1.35 P.M. he died suddenly, the result, I have no doubt, of syncope, caused probably by his sitting up in bed, or attempting to do so, in order to vomit. He had lived twenty-seven hours after the operation.

At the post-mortem examination the stomach was found to contain an amount of fluid not warranted by the orders given regarding the quantity of drink to be supplied to him, and I have no doubt that the distended condition of the stomach tended to produce the syncope which caused the fatal issue. The aneurysm was found to be on the superior mesenteric artery. It had diminished very considerably in size after death in consequence of the cessation of tension in the sac. It was fusiform in shape, about six inches long, three inches and a half in diameter at the base, and somewhat less at the outer end. The dilatation commenced at the origin of the vessel and included the front wall of the aorta at this point. From the distal end of the sac the artery continued its course slightly dilated for an inch or so, but otherwise apparently healthy. The sac in its contracted condition was quite filled with firm recent clot entangled in the coils of wire, which were themselves entangled in each other, and its walls were lined with old laminated coagulum, this in parts being nearly half an inch in thickness. The adhesions of the tumour to the omentum had been broken down at the operation, but at the necropsy firm adhesions were found between its sides and the small intestines in its vicinity. There was no trace of blood in the abdominal cavity or any sign of commencing peritonitis. The sigmoid flexure and rectum were contracted to the size of the little finger, but they dilated to the normal diameter while being removed from the body, and no explanation of this condition was apparent. Both ventricles of the heart contained dark-coloured clots. The aorta in its whole length showed numerous patches of atheroma.

Mr. C. H. Moore of the Middlesex Hospital was the first surgeon to suggest the introduction of wire into the sacs of aneurysms not amenable to other methods of treatment. From a by no means exhaustive search through the literature of the subject I have collected records of ten cases of aneurysm treated in this way. Of these, two cases were cured, in two cases no definite result was produced, and in six cases death resulted. Mr. T. Holmes¹ has reported a case treated by Dr. Murray of Newcastle; the patient died from suppurative of the sac. Dr. Domville of Chatham² treated two cases with no definite result. Loreta³ introduced two metres of silver-plated copper wire into an abdominal aneurysm, and the patient recovered. Mr. Hulke⁴ introduced forty feet of steel wire into a thoracic aneurysm;

the patient died. Mr. Pearce Gould⁵ treated a thoracic aneurysm by means of thirty-two feet of steel wire; the patient died. Mr. Morse⁶ has reported a case in which he treated an aneurysm of the abdominal aorta by laparotomy and the introduction of one yard and a half of silver-plated copper wire, recovery taking place. Mr. H. Morris⁷ treated a case of abdominal aneurysm, but only one foot of wire could be passed; the patient died. Guido Baccelli of the Italian Paris Academy of Medicine recommended the use of watch springs for the purpose under consideration, and this was done twice unsuccessfully. The two cases above referred to as "cured" are probably the only ones in which this result has been achieved by this means. In considering the question of the propriety of performing this operation, I take it that the surgeon would only be justified in the procedure: (1) when his patient was in imminent danger of death from impending rupture of the sac of an aneurysm which was not open to treatment by other means offering a hope of cure; and (2) when the probable result of the treatment had been clearly explained to the patient, and he expressed himself as anxious that it should be undertaken. Both these conditions existed in the above case. The man's death, no doubt, was due in a secondary way to hæmorrhage. He died from syncope eleven hours after all bleeding had ceased and when he was apparently in a fair way to recover from its effects. A short time before his death his temperature was 99.6°, and his pulse was quite perceptible at the wrist. He was not, therefore, in a condition of collapse from loss of blood; but he was in a sufficiently low state to allow of the effort he made inducing a syncope from which the heart did not recover. As regards the hæmorrhage from the trocar puncture, I have no explanation to offer for its occurrence. The instrument was specially made for the case, and was extremely small, only large enough to pass the smallest steel wire made, and all bleeding from it quite ceased a few seconds after the cannula was withdrawn. In the accounts of other cases similarly treated hæmorrhage from the puncture is not mentioned as one of the dangers to be considered. The mechanical effect of the wire towards the formation of coagulum within the sac was found at the post-mortem examination to have been all that could have been desired so far; the sac was found filled with firm clot entangled in the coils of wire. But, after all, the question arises: Had the man lived long enough for the process of cure of the aneurysm to proceed so far as to block the vessel, what would have been the effect of this state of things on the nutrition and blood-supply of that portion of the intestinal tract supplied by the superior mesenteric artery?

The coloured illustration (painted by Surgeon-Colonel Irving) is an excellent representation of the aorta, the aneurysmal sac, and the wire and coagulum *in situ* soon after removal from the body; the specimen itself is in the museum of the Army Medical School, Netley.

Netley.

A CASE OF DOUBLE POPLITEAL ANEURYSM.

BY WALTER REID, M.D., L.R.C.S. EDIN.,
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A MAN thirty years of age was admitted into Haslar Hospital on Aug. 16th with an aneurysm in each popliteal space. The left one was a large sacculated aneurysm displaying the usual characters of that disease, whilst the right was considerably smaller and more elongated in form. There was nothing definite in the history of the case to account for the occurrence of these two aneurysms except that the man's general health was not good and that he thought he had strained himself whilst standing about on board a rolling ship at sea. Owing to my absence on leave at the date of the patient's admission to hospital, the case was taken in hand by Surgeon Townsend, who began to treat the left (or larger) of the two aneurysms by slow or intermittent pressure, leaving the other alone for the time being. By the application of Carte's tourniquet to the left femoral, according as it could be borne, consolidation gradually took place and at the

¹ THE LANCET, June 8th, 1872.

² THE LANCET, Aug. 26th, 1871.

³ The case was first published in the Memoirs of the Royal Academy of Sciences of the Institute of Bologna, Feb. 8th, 1885.

⁴ THE LANCET, Feb. 27th, 1886.

⁵ Brit. Med. Jour., Oct. 12th, 1889.

⁶ The Pacific Record for 1887.

⁷ THE LANCET, April 16th, 1887.

end of five weeks was completed and the aneurysm cured, a large, hard, non-pulsating mass remaining in the popliteal space. Having now returned to duty I determined to undertake the treatment of the right aneurysm by the method with which my own name is associated in surgical writings, and which consists in locking up the blood in the aneurysmal cavity by means of elastic appliances sufficiently long for its coagulation *en masse*, and not by the deposition of fibrinated laminæ as usually follows treatment by ligature or slow pressure. I began by keeping the patient at rest for a few days on a light non-stimulating diet. Iodide of potassium was also administered with the view of increasing the plasticity of the blood. Carte's tourniquet was occasionally applied to the femoral for the purpose of opening up the collateral circulation preparatory to the occlusion of the vessel by the rapid consolidation of the aneurysm. On Oct. 3rd, the patient consenting to take chloroform if necessary, I carried out the method originally described by myself,¹ using in addition a protector over the aneurysm so as to take the pressure of the elastic bandage. This was made of gutta-percha so as to cover the tumour in the popliteal space with the joint somewhat flexed, and sufficiently strong to protect it effectually from direct pressure. I now applied an elastic bandage firmly and evenly from the toes upwards and over the protected aneurysm to the level of the middle third of the thigh. Here a soft elastic constrictor was secured over several turns of a flannel bandage. The elastic bandage and protector were now removed, whilst the constrictor was kept in position. The blood was thus locked up in the aneurysmal cavity, whilst the rest of the limb below the constrictor remained bloodless. It is important to render the limb bloodless in this way, as otherwise congloba might form in the veins and smaller arteries during the arrest of the circulation by the constrictor. Were they to do so there might be a risk of their interfering seriously with the circulation through the limb after the main vessel has become obstructed by the rapid consolidation of the aneurysm, and the blood-supply has to be passed down by the collateral branches with diminished force. The patient was now covered with warm blankets, the limb being semi-flexed and the elastic constrictor remaining in position. He complained of no pain during the first forty-five minutes; after this he began to feel much distressed, but preferred to do without chloroform. At the end of an hour—the aneurysm being then hard, solid, and decidedly smaller—I carefully adjusted a Carte's tourniquet upon the femoral, and removed the constrictor and flannel bandage; but about five hours afterwards on easing off the tourniquet a pulsation (faint, tremulous, and at times hardly perceptible) was felt in the aneurysm. This symptom occurring at this stage has been noted in other cases treated by the same method, and was referred to by Mr. Pearce Gould in an interesting paper read by him at the International Medical Congress in 1881, when this mode of treating aneurysm was discussed. Mr. Pearce Gould explains its occurrence by the clot contracting more rapidly than the sac upon it, thus leaving a space between the two, which after a time becomes filled either by the deposition of fibrin or by further contraction of the sac. In the present case it ceased after five days, and the vessel became occluded in the lower part of Hunter's canal. It is instructive at the date in which I write to observe the conditions arising from the treatment of these two aneurysms in the same patient by methods differing essentially from each other in principle. In the left one, treated by slow and intermittent pressure, which aims at consolidation by the gradual deposition of fibrinated laminæ in the cavity of the aneurysm, the remains now form a hard, unyielding lump in the popliteal space, causing a good deal of discomfort to the patient and interference with the use of the limb. It must be some time before this mass of fibrin can be absorbed to any extent and cease to trouble the patient. On the other hand, in the right aneurysm, treated by a plan which aims at the rapid formation of an ordinary blood-clot in the aneurysmal cavity, the soft material has contracted as well as the sac which encloses it, so that there is only a small mass left in the floor of the popliteal space, which can hardly be distinguished by the observer and is not felt by the patient in any way. Another point of difference in the results is that in the left limb, treated by the slow method, no pulsation can be felt in the femoral

artery below the origin of its deep branch in the groin, whilst in the right limb the femoral can be felt pulsating in the lower part of Hunter's canal. In my original case, in which the patient died eight months after cure from other causes, I had an opportunity of examining and making a preparation of the parts. This preparation is now in Haslar Museum and shows that the vessel is only occluded for about two and a half inches of its course.² It would appear, then, from these two cases that when this plan of treating popliteal aneurysm is successful the circulation is brought down through the main vessel of the limb and becomes finally arrested only a short distance from the aneurysm, as if, in fact, the latter were cut out and the vessel tied.

Haslar.

THE CONDITION OF THE BLOOD IN THE CYANOSIS OF CONGENITAL HEART DISEASE.¹

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NOTWITHSTANDING the numerous works published within recent years on the state of the blood in disease, we nevertheless not only need information as to the changes which it undergoes in a great variety of different conditions, but we also require explanations to account for many of the alterations which are generally recognised. This is the case even in regard to some of the affections met with in every-day practice; in the disturbances of the circulation produced by valvular diseases, for example, there are some modifications of the blood of common occurrence, but as yet insufficiently known and inadequately explained. More particularly is this true of the state of the blood in the cyanosis of congenital heart disease, which presents changes which have from time to time been recorded, but have not yet received satisfactory elucidation. A most interesting case of congenital disease of the heart has lately been for some time under my observation, and from the clinical features presented by the patient some conclusions have been forced upon me to which attention will in this paper be briefly directed.

A boy aged eight years was admitted to the Deaconess Hospital on Oct. 25th, 1894, complaining of breathlessness on exertion. Both parents were alive and had always been healthy; he was one of a family of eleven, of whose members two sons had died, one from scarlet fever and another from hydrocephalus, but the remaining six sons and two daughters were in good health. At the time of his birth the patient was apparently a healthy infant, but when a few months old he became bluish in colour and had always since been delicate. He had an attack of scarlet fever some years ago from which he recovered perfectly. On admission he was observed to be deeply cyanosed; the skin everywhere was of a bluish tint, the lips were almost black, and the conjunctivæ were dusky. The fingers and toes were markedly clubbed, and the nails, which were much curved, were almost black. The patient was 3ft. 9in. in height, and weighed 2st. 10lb. The temperature was below normal, but has fluctuated between 97° and 99° F. The alimentary system showed no symptoms of disturbance. The second dentition was in progress. The tongue was clean, but of a very dark purple colour. The liver exactly reached the costal margin in the right mammillary line. The hæmopoietic system presented some interesting facts. The spleen reached to the mid-axillary line, and was therefore of the usual size. On examination of the blood with the hæmoglobinometer the hæmoglobin was found to be 110 per cent. With the Thoma-Zeiss hæmocytometer the red corpuscles were seen to be 8,470,000 per cubic millimetre, while the white corpuscles numbered 12,000. The spectroscopic showed the characteristic double band of oxyhæmoglobin. With regard to the circulatory system, the patient on any exertion became much more cyanosed and panted violently, but when lying quietly in bed showed much less cyanosis and almost no breathlessness. On inspection there was no visible pulsation in the neck, and in the precordial region there was no impulse save the apex

¹ THE LANCET, Sept. 25th, 1875.

² THE LANCET, Aug. 5th, 1876.

¹ Read before the Edinburgh Pathological Club on Dec. 19th, 1894.

beat in the fifth left intercostal space. The pulse varied from 64 to 114. The vessel was rather empty, the pressure low, and the pulsation regular. No thrill was felt in the precordia, but an impulse with both systole and diastole, and the apex-beat was determined to be one inch and three-quarters from the mid-sternum. On percussion the borders of the cardiac dulness were found at the level of the fourth costal cartilages to be one inch and a half to the right and two inches and a half to the left of the mid-sternal line. A loud rasping murmur was heard over the entire precordia; its maximum intensity was at the left edge of the sternum at the level of the fourth costal cartilage, and it was propagated upwards as far as the external ends of both clavicles—to the right as far as the mammilla, to the left four inches beyond the mammilla and downwards along each costal margin to the same extent—viz., two inches and a half below the level of the xiphoid cartilage. No murmur could be heard in any vessel. The thorax was distinctly pigeon-breasted. There were numerous rhonchi throughout the chest, but otherwise the respiratory system presented no symptoms requiring notice. The respirations numbered 24 per minute. The urine was pale in colour and acid in reaction; its specific gravity was 1022. It contained no abnormal constituents. The integumentary system was, apart from the high degree of cyanosis, not distinguished by any special characters, and the nervous system was in all respects normal. Although the patient had never been taught, on account of his state of health, he was an intelligent and observant boy, always enjoying high spirits.

The diagnosis of the cardiac lesion was attended by some difficulty. There could be no doubt that the condition was congenital, for although the cyanosis only showed itself after the lapse of some months from the date of birth, the patient had not during the interval suffered from any acute disease capable of causing endocarditis. In this respect the history of the case is in accord with that of most congenital heart lesions. The maximum intensity of the murmur being almost in the tricuspid area might favour the view that there was regurgitation at the right auriculo-ventricular orifice; but such an explanation is negatived by the absence of any venous symptoms in the neck. On the other hand, the murmur might be produced by obstruction at the pulmonary orifice, and heard with greatest intensity over a dilated and hypertrophied right ventricle, such as undeniably is present in the case; or, again, the murmur might be the result of a communication between the two ventricles, caused by a perforate septum ventriculorum, allowing a stream of blood to flow from the left cavity into the right, and thus to produce over the right ventricle a systolic murmur. The lesions probably present, judging not only from the clinical facts of this case, but also from the experience of similar cases, are some obstruction at the pulmonary orifice and an imperfect ventricular septum. Such is the provisional diagnosis of the case.

Attention must now be given to the condition of the blood. As has been stated in the brief abstract of the case, the amount of hæmoglobin was 110 per cent., and the number of the hæmocytes and leucocytes respectively 8,470,000 and 12,000 per cubic millimetre. In another patient, a boy aged two years and four months, suffering from congenital heart disease (for the opportunity of observing whom my thanks are due to Dr. John Thomson), the hæmoglobin was 92 per cent., the red corpuscles numbered 6,700,000 and the white corpuscles 12,000 per c.mm. The number of the blood corpuscles in congenital diseases of the heart appears to have been first observed by Toennessen, who found in a girl aged ten years, with congenital pulmonary stenosis, 7,540,000 hæmocytes, and in a boy aged thirteen years, suffering from the same affection, 8,820,000 per c.mm. Since his observations similar facts have from time to time been placed on record. Carmichael, for example, in publishing a most interesting case of congenital heart disease recently, states that the patient had 8,100,000 red corpuscles and 16,000 white corpuscles per c.mm.

Now, before entering upon the question as to how such an increase can be produced, it may be well to recall the two diverse explanations of cyanosis—the one, that of venous stasis, originating with Morgagni; the other, that of a mixture of the arterial and the venous blood, suggested by Hunter. Both theories have been supported by numerous observers from the time of their inception until the present day, but the preponderance of opinion is in favour of the theory of Morgagni. The view of Hunter may be said to be negatived by the simple facts that in many cases permitting the mixture of arterial and venous blood

there is no cyanosis, and that in many cases of cyanosis there is no possibility of the mingling of venous and arterial blood. Starting with the conception that cyanosis is produced by obstruction to the circulation and venous stasis, the question now arises why this condition should be associated with an increase in the number of the blood-corpuscles. It is not only in the cyanosis of congenital lesions that the increase is found, but in all cases where cyanosis is really present on account of failure of the circulation. To this point Toennessen and Schneider have particularly called attention, and of the accuracy of the observation anyone can convince himself by investigation of the blood. The work of Malassez seems to show that the blood in the superficial parts of the body contains a larger number of red corpuscles than that from the deeper layers, and Perzoldt and Toennessen believe that this increase is caused by the loss of fluid from the surface, while the blood of the interior is constantly receiving fluid from the alimentary canal. Even if this be correct, it cannot be accepted as an explanation of the great increase in the number of the corpuscles found in cyanosis, as it would involve the postulate that in some cases where the number of corpuscles is nearly doubled, the quantity of the fluids of the blood must be reduced nearly to one-half. Cohnheim's celebrated experiment of tying the crural vein of the frog, which is followed by a considerable increase of the corpuscles in the vessels, with the transudation of serum into the surrounding tissues, may be regarded as an explanation of the moderate increase in the cases accompanied by anasarca, but it has no special bearing upon cases of congenital cyanosis in which there is no drain of fluid into the tissues. It may possibly be held that in such cases the lymph vessels are unusually active, and that the fluid constituents of the blood are as rapidly absorbed as they transude. Such an opinion can scarcely be seriously entertained. The backward pressure on the venous system which causes the transudation must tell on both terminations of the absorbents. It may be admitted freely that the increased pressure on the peripheral veins may tend to raise that impelling the fluids into the commencement of the lymphatics, but it must not be forgotten that an elevation of pressure in the great veins will hinder the return of the lymph by pressing upon the openings of the lymph vessels into the veins. It is probable that the increase in the red corpuscles may be to some extent compensatory in cases of cyanosis. To say this, however, is not enough; it affords no rational explanation of the process by which the increase is brought about. Nature does not work by such direct methods as would require to be invoked if the increase of the corpuscles were regarded as a simple compensatory change, balancing the diminished power of oxygenation. Compensation in valvular lesions, for example, is produced by the definite structural changes constituting hypertrophy, caused by increase of work, and compensation in cyanosis must have some reasonable explanation also. It seems to me that such an explanation may be found in a consideration of the functions of the red corpuscles under changed conditions. In venous stasis the corpuscles are insufficiently oxygenated, they cannot perform such an active part as oxygen carriers, and they cannot yield so much oxygen to the tissues. It must further be remembered that in cyanosis there is less metabolism in the tissues, and therefore less waste produced. In a word, the functions of the corpuscles being lessened, the tear and wear which they undergo is reduced, and the duration of their individual existence increased. The number of the corpuscles must in this way be proportionately augmented, and this must lead to the numerical increase, as well as to the high percentage of hæmoglobin, until a balance is struck between the production and the destruction of the blood-corpuscles.

It is a pleasure to express my warm thanks to Dr. J. G. Cattanach, resident medical officer to the Deaconness Hospital, for his unwearied assistance in the investigation of the blood in the cases to which reference has been made and in the examination of their clinical details.

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THE RELATION OF BACTERIA AND THEIR TOXINES.¹

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THE subject to which I would particularly draw your attention this evening is the nature of the activities of pathogenic bacteria. For convenience I shall formulate two propositions, adducing facts in support of each, and then I shall go on to discuss certain considerations having to do with this subject matter.

PROPOSITION 1: *Pathogenic bacteria produce by their growth and multiplication specific poisonous substances which we call toxins.*—These poisons differ one from another according to the species of pathogenic bacteria, and the changes induced in the animal body by different microbes are due to these toxins. Before the existence and nature of these substances were recognised it was held—as, for instance, in the case of anthrax—that the induced illness was due to mechanical action exerted by the bacillus on the body of the affected animal. As the anthrax bacillus is an organism which grows freely, and perhaps more conspicuously, in the presence of oxygen, it was thought that this bacillus consumed all the oxygen in the tissues of the infected animal and in this way deprived it of life. It was soon discovered, however, that this was not a sufficient explanation, for it was found that an animal could be made fatally ill with anthrax and yet antecedent to its death by the disease the bacilli of anthrax could only in small numbers be detected in its blood. Hankin was the first to demonstrate that it is possible to procure by artificial culture of microbes in nutrient media certain toxic substances comparable to toxic albumoses. Fraenkel afforded a like demonstration, and Sidney Martin elucidated the subject to a much larger extent; but before toxins were isolated by their methods evidence existed tending to show that certain bacteria produced toxins. Thus, the microbes of typhoid fever and septicæmia were known, when grown in an albumen mixture, to contribute to such medium a poisonous quality. Roux and Yersin were, however, the first to demonstrate that the broth in which the diphtheria bacillus had been cultivated contained poison in a very concentrated form. A whole series of researches were next made by Kitasato and Brieger on the tetanus bacillus, with the result of demonstrating that injection into the animal body of the pure tetanus toxins obtained in artificial culture produced symptoms identical with those induced if the tetanus bacteria themselves were introduced into the experimental animal and allowed to grow and multiply therein. There can, therefore, be no question whatever as to the proposition that the pathogenic bacteria produce in the animal body toxic substances.

PROPOSITION 2: *Toxins as far as they have been investigated are definite chemical bodies.*—As a result of chemical analysis by Dr. Sidney Martin, it has been found that albumoses and alkaloids are present in the animal body in anthrax; and that in diphtheria there is present in the false membrane a body which behaves in every respect like a ferment, which ferment in turn acting on the tissues produces acid and alkaloidal bodies and albumoses. Similarly it has been found that, in artificial media, the bacilli of diphtheria and tetanus elaborate each a ferment, whereas under like conditions the bacilli of anthrax elaborate albumoses and an alkaloid. What then, it may be asked, is a given toxin? Is it the secretion of a bacterium, like the ferment of diphtheria, for instance; or is it of the nature of a proteid body liberated by metabolism in the medium in which the bacterium has grown; or, again, is it part and parcel of the bacterial body itself? The poisonous substances produced in the animal body by the life processes of bacteria must be carefully distinguished from the poisonous substance or substances present within the protoplasm of the bacteria themselves. All observations tend to show that there is a definite distinction to be drawn between the poisons which may be present in the bacteria themselves and the poisonous substances liberated or elaborated by these organisms. When certain bacteria are introduced in large quantities into the peritoneal cavity of a

rodent these bacteria themselves without any of their metabolic products are capable of producing symptoms of poisoning. For instance, if the growth of a given microbe scraped from the surface of a solid culture medium be distributed in some neutral fluid and then injected into an animal it is the bodies of the bacteria themselves that are introduced thereto, not the toxins, which they have elaborated in the culture medium. And it has been found, as a matter of experiment, that such inoculations produce, in the case of several species of bacteria, a poisonous action quickly causing fatal peritonitis; in two or three hours the animal is ill, and within twenty-four hours the illness is fatal. The typhoid bacillus and several other microbes behave in this way. It matters not whether the bacteria are introduced alive or dead into the peritoneal cavity. If the bacteria are previously killed by exposure to a temperature of 70° C. their bodies produce the same poisonous action, though it must be added that the poisonous action is more pronounced if smaller quantities of the living bodies are used than when larger quantities of the dead bacteria are employed. Evidently when the living bacteria are introduced in small quantities they go on growing and produce their toxins. The bacteria *per se* are in some cases, but not in all, poisonous. Thus, if the anthrax bacillus, or the diphtheria bacillus, or the fowl cholera bacillus, is introduced into the peritoneum of rodents no poisonous action results. The protoplasms of these microbes are not, like the protoplasm of the typhoid bacillus or of the vibrio of cholera, poisonous. Furthermore, as regards microbes whose protoplasms are poisonous, if a non-fatal dose—sufficient to make an animal ill, but not to kill it—is injected into the peritoneal cavity such an animal is protected from further protoplasmic poisoning by the same bacterium; but it is not protected against the toxins elaborated by the same species outside the animal body in artificial media. A very curious observation has been made with reference to these bacterial bodies. They probably contain more than one kind of poison. If, for instance, the enteric bacteria are killed by heat, and the precipitate extracted from their bodies by water, it is possible to wash out a substance which produces a febrile rise of temperature in experimental animals, and substances such as this are called “pyrotoxins” because they are capable of producing fever. These, however, are not the substances which have a permanent protective action when bacteria alone are introduced into an animal; it is some other kind of substance bound up in the protoplasm of the microbe that protects the animal against further inoculation with the bacterium *per se*.

And next as to antitoxins. When an animal has passed through one attack of a given infectious disease—that is, when an animal has served as a host for the growth and multiplication of a particular pathogenic bacterium—it is found that its blood has acquired a peculiar faculty. The blood has become capable, not only of inhibiting further growth of the bacterium, but also of neutralising the toxins produced by the bacterium. Thus, if the cholera vibrio is introduced into the peritoneal cavity of a rodent in quantity just sufficient to produce an illness that does not prove fatal, such rodent ultimately withstands repeated injections of otherwise fatal doses of the vibrio. And further, if now blood of the animal that has thus acquired immunity is taken from it and introduced into the peritoneal cavity of another rodent this second animal will not become ill at all; it is protected. This has been shown in the case of tetanus, diphtheria, and so on. Animals, therefore, which have acquired immunity possess in their blood a something that they had not before, and this something belongs to a group of substances called “antitoxins.” These antitoxins must be very complex bodies because they are capable, not only of inhibiting the life processes of bacteria, but also of neutralising the toxins previously elaborated and that have been dissociated from the bacteria which produced them, and these two functions are, be it observed, utterly different.

How are these complex antitoxin bodies thus possessing dual functions produced? There is a variety of theories as to this. In the first place there is the theory that these antitoxins are produced by the tissues themselves as a sort of defence against the toxins which have gained access to them, the toxins being thought of as stimulating the tissues to the production of certain defensive substances which are therefore called “antitoxins.” In diphtheria the antitoxins produced in this way by the cells of the tissues are considered to comport themselves just like ferments. This is the theory held by the French school. The Munich school says: There is no reason why the toxins themselves should

¹ Abstract of a paper read before the Epidemiological Society on Dec. 14th, 1894.

not become converted into antitoxins. There is, however, little evidence in support of this view; and, indeed, there is some evidence which militates against it. Moreover, it seems to be reasonable to assume that the toxins stimulate the animal body to the production of antitoxin. There is yet another theory, and that is that possibly the bacteria indirectly play a part in the production of these defensive antitoxins. This raises the question, What becomes of the bacteria themselves in the animal that has been made ill by them and has recovered? The theory that bacteria have been in such cases swallowed up by phagocytes is long since dead and buried. It is now perfectly well established that acquired immunity is purely of a chemical nature, and therefore the theory of phagocytes is superfluous. But the bacteria may nevertheless themselves yield some substance which may assist in the production of these antitoxins. For when an animal is recovering from an infectious disease the bacteria which caused it degenerate *pari passu* with the progress of recovery, and their substances become absorbed and pass into the general tissues of the animal, so that the bacterial bodies themselves become part of its tissue juices. In some cases there is an excretion of bacteria, but not very generally; in most cases they are absorbed in the way I have noted. That incorporation of the dead bacteria with the tissues of the recovered animal may have to do with its own immunity and with the antitoxic quality of blood serum withdrawn from it is suggested by the following facts. When dead bacteria are introduced into the peritoneal cavity of a guinea-pig they are capable of protecting that animal's peritoneum against the growth and multiplication there of the living bacteria subsequently introduced. This is the case with the cholera vibrios, the typhoid bacillus, and the colon bacillus. Indeed, it is not very difficult to imagine that other substances superadded to the tissues—as, for instance, dead bacterial protoplasm—may form part of these antitoxins, and I, for my part, incline to this view. In a word, I suspect that antitoxic serum obtains from dead bacterial protoplasm that it has assimilated its power of inhibiting the processes of living bacteria, and that its power of neutralising the already formed metabolic products of bacteria is due to tissue change resulting from contact of the tissues themselves with metabolic poison. But, whatever the nature of these antitoxins, it will no doubt be found that they are not of the simple character that has been assumed—namely, merely secretions of tissue juices—they must needs be of a very much more complex nature.

A CASE OF POST-MORTEM PARTURITION.

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THE following are the particulars in reference to the post-mortem parturition mentioned in an annotation in THE LANCET of Nov. 24th, 1894.

A single woman aged about twenty, and following the occupation of dressmaker, lived with her father and mother in a model dwelling-house in Chesterfield of which the father had the management. For about a week previous to Wednesday, Oct. 24th, she had had headache, but otherwise was quite well. The headache does not appear to have been severe and she took but little notice of it. On the morning of the 24th she had breakfast with the other members of the family and appeared as well as usual. In the middle of the day she was not down to dinner, but remained upstairs complaining of headache. In the evening, about 10 o'clock, her father went to the bedroom and found her in bed; she was still complaining of headache. She told him he might go to bed as "she should be all right in the morning." Later (about 11 P.M.) a friend went up to see her. Except for the headache there seemed to be nothing much the matter with her. She laughed and talked as usual. The friend left some time between 12 midnight and 1 A.M. Between 1 A.M. and 2 A.M. the sister was called to her room. She found her out of bed, sitting on the floor with her back against the wall. She did not speak and appeared unconscious. With assistance she was lifted on to the bed. The witnesses speak of her at times becoming "stiff," of her eyes being fixed, of her legs (though "stiff") trembling, and of the arms and eyelids "working." The father was called and went for a medical man. He

arrived in about half an hour and from the symptoms then observed he expressed an opinion that some alkaloidal poison had been taken. He examined the abdomen and was satisfied that the woman was pregnant and near full time. The "fits" are stated to have each lasted about ten minutes; the tonic nature of the convulsions seems to have been more marked than the clonic. There seems to have been very little struggling. I thought that the long duration of each "fit" might be accounted for by its being made up of a series of "fits." She never regained consciousness till the time of her death, which was between nine and ten in the morning. The "fits" are said to have become less frequent towards the end. At the commencement they are stated to have occurred at the rate of about three or four in an hour. When the medical man (Mr. Bowker) arrived he found that she had bitten her tongue, and a piece of cork was placed between the teeth. Mr. Bowker again visited her about 9 A.M. He found her in a comatose condition and dying. The pupils are said to have been dilated from the first, and the face to have been very pale during the "fits." Until the medical examination none of her family had the slightest idea that she was pregnant. Her figure was short and broad, and she was very corpulent. So much for the symptoms during life.

The inquest, which was held on Friday, Oct. 26th, was adjourned till Tuesday, Oct. 30th, in order that a post-mortem examination might be made and the contents of the stomach, with the other viscera, analysed. By order of the coroner I made the post-mortem examination on Saturday afternoon, Oct. 27th, about fifty-three hours after death. The body had been laid out in the usual way by two women on Thursday morning, about two hours after death. The body was lying on its back on a small bed and was covered with a sheet. The legs were tied together at the ankles. On lifting the sheet I saw a fleshy body lying between the thighs of the mother. This was the back of a full-time or nearly full-time child. The legs were extended at the knees and flexed at the hips, so as to be doubled up underneath the child's body with the feet near its chin. The head, face downwards, was also flexed on the chest. The head was next to the vulva, so evidently it had been a breech presentation. The fundus of the inverted uterus protruded from the vulva, and still attached to this was the placenta. The umbilical cord was much shorter than usual. On separating the placenta and attempting to push back the fundus into position I found that the intra-abdominal pressure immediately forced it back again. The perineum was ruptured to a considerable extent. I was unable to decide by the naked-eye appearances of the laceration as to whether this had been done during life or after death. There were no marks of bleeding on the linen on which the body rested or on the shirt which partly covered it. The edges of the laceration were gaping and the opposing surfaces had a reddish appearance, dotted with yellowish specks. I may here say that the evidence of the women who laid her out proved conclusively that there was no birth, and no signs even of an impending birth, at the time they performed those duties. The vulva was then free from injury of any sort, and so far as they could judge was normal in appearance. Considering the time that had elapsed since death (only fifty-three hours), putrefactive changes were very marked. The face was greatly swollen and quite black. The features were unrecognisable. The front of the chest was covered with large dark-green patches, especially marked about the breasts. The surface of the abdomen was similarly affected, but to a less extent. The abdomen itself was enormously swollen, and on cutting into it gas escaped with great force. The body had been kept since death in a fairly cool room, though the weather for the time of year was warm and damp. The body was very fat. The stomach contained only a few drachms of thick, yellowish fluid. There were many little air vesicles scattered over its mucous membrane, and reddish patches, probably due to post-mortem staining. The liver was so soft as to be almost diffident. There was nothing noticeable about the condition of the kidneys or the brain. The bladder was empty. The stomach and contents, with the duodenum, the liver, kidneys, and spleen, were sent to Mr. Allen of Sheffield for analysis. He satisfied himself as to the absence of any strychnia, but in consequence of the advanced state of putrefaction of the viscera, he stated it would have been a matter of considerable difficulty and would have required a much longer time than had been given him to have searched for the various other alkaloidal poisons. The symptoms during life appeared to point to strychnia as the only one likely. He

was surprised at the number of cadaveric alkaloids that had already been formed, and remarked upon the definite reactions which they gave out in the process of testing.

In conclusion, the interesting features of this case are—(1) the difficulty in the diagnosis of the symptoms during life; (2) the post-mortem birth of the child due probably to post-mortem contraction of the uterus, or to pressure of gases generated by putrefaction in the abdomen, or to both those causes together—no doubt labour had commenced previously to death; (3) the well-marked laceration of the perineum; (4) the inversion of the uterus; and (5) the remarkably rapid putrefactive changes that had occurred. The fact of its having been a breech presentation seems to make this case even more remarkable. In giving evidence at the inquest I expressed an opinion—(1) that the symptoms observed during life did not correspond exactly with those of any known poison; (2) that puerperal convulsions would be sufficient to account for death and probably caused it; and (3) that it was possible for the child to have been expelled from the maternal passages after death if labour had commenced previously. A verdict was returned in accordance with the medical evidence.

Chesterfield.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

MALIGNANT JAUNDICE IN A CHILD TWO YEARS OF AGE.

By H. B. DONKIN, M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

SUCH a case as the following, which has recently occurred in my hospital practice, is sufficiently rare to be worthy of record in the columns of THE LANCET.

A girl two years of age was admitted into the East London Hospital for Children on Nov. 22nd, 1894, with well-marked jaundice of skin and conjunctivæ. She was said to have been always weakly and to have had pneumonia a year previously, but no other definite illness. Her family history was good. Her illness began three weeks before admission with a "cold." The child had a cough and was constipated and sleepy; the appetite failed, but there was no coryza. Jaundice was noticed two weeks before admission; the motions were white and the urine was of deep colour, staining linen. She vomited four days before admission and was restless at night, throwing herself about. On admission jaundice was found to be well marked, and the child appeared to be very ill and rather restless. The lips were of good colour. There was no cough and the temperature was normal. Nothing abnormal was revealed by physical examination of the heart and lungs. The liver was felt one finger's breadth below the costal margin, somewhat hard and smooth. The upper limit of dullness was perhaps a little lowered. No other abnormality could be detected anywhere. She passed a fairly quiet night on the 22nd, though she was somewhat restless. About ten o'clock on the morning of the 23rd she became very restless, and soon after grew apparently unconscious of her surroundings. Delirium set in, soon developing a maniacal character, the child throwing herself about in bed and biting her clothes and hands or anything she could reach with her mouth. The pupils were equal and rather contracted, but reacted to light. The pulse was 120, irregular; the temperature was still normal. The urine and fæces were passed unconsciously. The jaundice had increased in intensity. The child was very thirsty. Petechiæ now appeared on the front of the legs. The child cried very little, but moaned when disturbed; the tongue was covered with a dirty white fur. The patient remained maniacal all day, but during the evening became quieter and drowsy; the pupils were dilated and sluggish at 10 P.M.; the temperature was 100° F.; the pulse was 140 regular. During the night coma gradually set in, the petechiæ became more numerous, and the jaundice more intense. About 5 A.M. on the 24th the child vomited a quantity of blood and died shortly afterwards.

Although a post-mortem examination could not be obtained in this case, and there was no opportunity of examining the

urine for leucin and tyrosin, the diagnosis of malignant jaundice or "acute yellow atrophy" seems amply justified. The case was in all respects clinically similar to two others I have seen in children aged two years and a half and six years respectively, where post-mortem examination proved complete destruction of the cellular liver structure. These cases I have reported elsewhere in some detail. In none of these cases was there evidence during life of any considerable diminution of the liver, and in at least one of those examined after death the liver was not below the average in weight. A practical lesson to be learnt from such cases is to be very guarded in the prognosis of all so-called and apparent cases of "simple" or "congestive" or "catarrhal" jaundice in children when the jaundice does not abate within a week, and still more when it increases.

Harley-street, W.

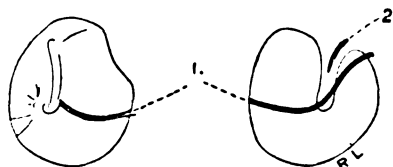
ABNORMALITY OF THE CHORDA TYMPANI.

By RICHARD LAKE, F.R.C.S. ENG., L.R.C.P. LOND.,
PATHOLOGIST AND REGISTRAR TO THE THROAT HOSPITAL,
GOLDEN-SQUARE, W.

FOR the chorda tympani to take an irregular course in its passage across the membrana tympani must be exceedingly rare, so I send drawings of the external and internal surfaces of the left membrane where the following abnormality occurred. The chorda made its exit at the usual level, but

FIG. 1.

FIG. 2.



External surface.

Internal surface.

1. Chorda tympani. 2. Insertion of tensor tympani.

instead of arching upwards it ran almost horizontally forwards to about the junction of the lowest fourth of the handle of the malleus with the remainder; it was clearly visible through the membrane from the meatus. On the inner side, after reaching the malleus, it runs upwards, passing off to leave the tympanus by the canal of Huguier, keeping below the tendon of the tensor tympani. I am inclined to think Fig. 5, Plate xi., in the "Atlas of Diseases of the Membrana Tympani" is a variation of this state of things.

Harley-street, W.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

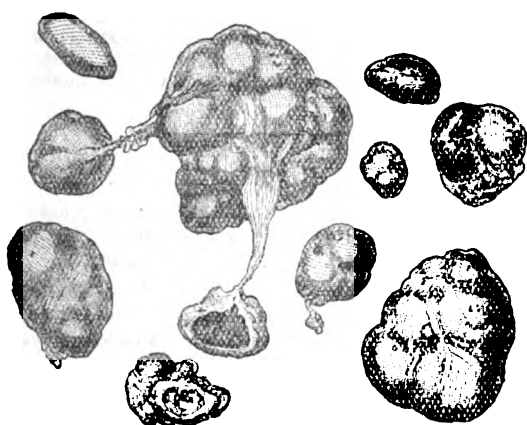
TWO CASES OF OPERATION FOR CYSTIC BRONCHOCELE; REMARKS.

(Under the care of Mr. HENRY MORRIS.)

THESE cases form a contribution of interest to the surgical treatment of cysts of the thyroid gland. The method of excision, or enucleation, is the one which surgeons usually prefer at the present time, and it yields very good results. We published a series of cases last year in the *Mirror of Hospital Practice* which had been under the care of Mr. C. J. Symonds and in which this method was employed with considerable success. The first of the two cases which follow shows how much may be done by enucleation. The multiple cysts were easily removed and nothing but healthy tissue was left.

CASE 1. Multiple adenomata of the thyroid gland (cystic bronchocele); removal of seventeen cysts from the thyroid gland. (For the notes of the case we are indebted to Mr. E. Griffin, the dresser.)—A young woman twenty-one years of age was sent to Mr. Henry Morris by Mr. Daglish of New Romney, Kent, suffering from a very unusual form of bronchocele. She was admitted into Helena Ward of the Middlesex Hospital on March 16th, 1894. She had enjoyed good health and her family history was good except that a sister was beginning to develop a bronchocele. The enlargement commenced about seven years ago, and was treated by the external application of iodine, but without effect, as the swelling continued to increase and her voice became weak. Between four and five years ago her neck became painful, and since then she had been subject to constant headache. She had never had any difficulty in swallowing or breathing; occasionally throbbing had been felt for two or three days continuously, and at these times she said the enlargement had increased and had been more painful. The patient, a short, thickset brunette with a waxen oedematous face much resembling myxœdema, had on admission a symmetrical enlargement in front of the neck having the general outline of the thyroid gland. There were no other signs beside the facial aspect at all suggestive of the myxœdematous state. The isthmus of the thyroid extended upwards above the lower border of the thyroid cartilage. The lateral lobes reached from the upper border of the thyroid cartilage downwards as low as the clavicle, and out-

FIG. 1.



Shows the relative sizes of eleven of the tumours removed.

wards beneath the sterno-mastoid muscles. In the isthmus, slightly to the right of the median line, there was a very hard movable tumour the size of a horse bean; it was painful and tender, and had attached to it by what felt like a cord a second somewhat smaller tumour. A third circumscribed mass connected with the isthmus, separated from the general enlargement, and situated above and behind the left sterno-clavicular joint, could be made out. It was about the size of a walnut, but was less movable and less free than the other two tumours of the isthmus. The enlarged lateral lobes had not a uniform consistence, but for the most part felt soft and were without fluctuation or thrill. The patient suffered much discomfort from the bronchocele, especially when lying down. Her most comfortable position was on her right side, with her head well turned towards the right. On laryngoscopic examination Mr. Leopold Hudson found both vocal cords in all respects normal except that the left was a little more sluggish in its movements than the right. This was probably caused by chronic inflammation of the mucous membrane covering the left arytenoid cartilage, an extension from chronic pharyngitis, of which traces still existed. The weakness of voice was probably due to the failure of the left vocal cord to approximate accurately to the right cord. On March 30th, the patient being anaesthetised, an incision was made near the middle line parallel with the border of the right sterno-mastoid; the skin was then reflected sufficiently to expose the right lobe

and isthmus, and the tumours above described were removed. During the dissection several other tumours of varying sizes were detected in the right lobe and the isthmus, and were enucleated from amidst the glandular tissue. The tumour situated in the middle of the isthmus was calcified, and when removed was of the size and shape of an almond. A large tumour extending for some distance behind the sternum, the outline of which could not be felt before the operation, was also excised; it measured two inches in length, one inch across, and was partly calcified. The rest of the tumours removed varied in size from a pea to a large hazel nut, and were more or less rounded in outline. Thirteen in all were removed. (Fig. 1.) Several tumours in the left lobe could be easily made out, but it was thought better to defer their removal till another time in case the functions of the thyroid should be too far disturbed by further operation. There was not much bleeding during the operation, but several veins and one or two small arteries required ligation.

The microscopic examination of one of the tumours excised showed it to consist of an outer wall of fibrous tissue. At one part this wall was of considerable thickness and was infiltrated with small round cells. The interior of the cyst was composed of a number of spaces of various sizes, filled for the most part with a colloid material. These spaces were lined by cubical epithelium, and between them there was a small quantity of fibrous tissue; at one part there was extravasation of blood.

The after-course of the case needs no remark. A small drainage-tube was retained in the wound for thirty-six

FIG. 2.

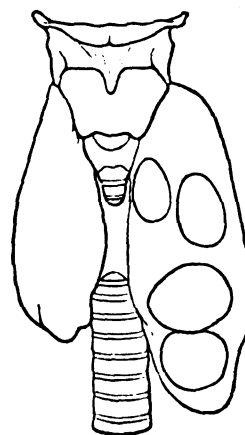


Diagram showing the relative positions of the tumours in the left lobe of the gland.

hours, and the dressings consisted of absorbent cotton-wool covered with a few layers of gauze. The patient made an uninterrupted recovery and left the hospital on April 17th, having been greatly relieved by the operation.

The patient was readmitted on Oct. 23rd for the purpose of having the cysts removed from the left lobe. She had much improved in general health and expressed herself as having been much better able to perform her duties as a domestic servant since the operation. There was no change in the appearance of her face, which remained oedematous and swollen-looking, though it was not really oedematous, did not pit on pressure, and did not vary in size. The right lobe and isthmus of the thyroid were normal in size, the cicatrix was pale and supple, and the left lobe of the thyroid appeared less than six months before. This lobe contained, however, a small mass, not prominent and rather ill defined, and apparently divided into two parts, each part about one-third of an inch in diameter. There was no pain or tenderness. The swellings were elastic and situated at some depth in the gland tissue. On Oct. 30th an incision was made over the left lobe nearly parallel with the edge of the left sterno-mastoid, and four cysts were removed from the left lobe. Two of the cysts occupied the lower part of the lobe and were close together; these were what had been felt through the skin. Two other cysts were detected during the operation; one was opposite the isthmus, and the other and smallest was situated somewhat higher. (Fig. 2.) This latter was reached by cutting through the posterior wall of

the cavity from which one of the other tumours had been removed, and it was found resting on the larynx and separated from it only by a slender layer of thyroid tissue. The lower part of the left lobe was transformed into a cavity bounded by a thin layer of gland tissue. Some venous hæmorrhage was arrested by forceps and hot sponges, and the edges of the wound were retained in position by silk sutures. Dry dressings and a figure-of-eight bandage were applied. She made an uninterrupted recovery and was discharged well on Nov. 13th. The tumours varied in size from a cob nut to a cherry, and were of the same general adenomatous character as those removed at the first operation.

CASE 2. Large cystic bronchocoele; excision of the cyst. (For the notes of the case we are indebted to Mr. Black, the dresser.)—A young woman eighteen years of age was admitted to the Middlesex Hospital, under the care of Dr. Douglas Powell, on Oct. 13th, 1894. Her family history was good; a cousin had a "swelling in the neck." The patient had a slight attack of rheumatism in July last, and had suffered from biliousness, indigestion, and constipation. About three years ago she first noticed a swelling in the front of the neck, which grew in two years to the size it had attained when the patient was admitted into the hospital, and its growth had since been nearly stationary. The patient was subject to palpitation on taking exercise, and had felt pain on taking solid food. She was treated for a month in hospital for anæmia and constipation, and was much improved in both respects; she was then transferred to the surgical ward for operation. The thyroid gland was the seat of an oval-shaped elastic tumour the size and pretty well the shape of a large lemon situated to the left of the median line. The swelling was very elastic and pulsated. The overlying skin was natural and there was neither pain nor tenderness. On deglutition the tumour moved more laterally than vertically. There was no marked prominence of the eyeballs and Græfe's sign was not obtained. The pupils reacted to light. There was occasional dyspnoea, and for this reason as well as because of the unsightly appearance of the swelling the patient desired an operation. On Nov. 14th she was anaesthetised and a vertical incision about three and a half inches long was made in the middle line of the neck, extending to within half an inch of the sternum. The skin and cervical fascia were divided and the muscles drawn aside, when a large globular swelling of the thyroid presented itself through the wound. The capsule of the thyroid and a layer of glandular tissue were divided, and the outer wall of the cyst was then exposed. The complete enucleation of the cyst from within the substance of the gland was effected partly by a blunt raspatory, partly by the finger-nail, and in places, where the connexions were tough and fibrous, by the scalpel. Towards the end of the shelling-out process the cyst wall gave way and several drachms of nearly colourless colloid material escaped. The opening in the sac was closed by forcipressure forceps. There was very little bleeding during the operation. When looking into the wound after the removal of the cyst nothing was seen but a very large recess or bag composed of the left lobe of the thyroid gland, the wall of which in the inner aspect was greyish and purplish in colour and tough and fibrous in texture. In places this wall was very thin, and the trachea and large cervical vessels could be so readily felt through the posterior part that during the operation it seemed that there was really nothing between the back of the tumour and these structures. Such, however, was not the case, as the cyst had a complete investment of thyroid capsule and gland tissue. The thin membranous sac of thyroid tissue was dropped back into the wound and a drainage-tube was inserted into the cavity in the thyroid. The muscles and fascia were then replaced in position and the skin wound closed by silk sutures. The cyst, when laid open, contained some adenoid tissue and a large quantity of mucoid fluid resembling black coffee mixed with coffee-grounds. It was accidentally thrown away before microscopic examination could be made of it. The patient was very sick from the anaesthetic for twenty-four hours, and there was an abundant discharge of thin colloid fluid for the first three days after the operation. On Nov. 17th the pulse rose to 110 and the temperature to 101° F., and she complained of headache. The drainage-tube had been discontinued, so several stitches were removed and the union of part of the wound broken down, when a few drachms of brownish venous-looking fluid and a little thin pus escaped. For the next two days the temperature was between 102°·4° and 100°·4°, then it fell, the discharge diminished, the wound healed, and she was discharged quite well on Dec. 19th last.

Remarks by Mr. HENRY MORRIS.—These cases show the advantage of the treatment by excision. A few years ago the first of the two would have been either left alone, or a part or a whole of the thyroid gland would have been excised; whereas the second case would have been treated either by incision and drainage, or by injection. It would have been impossible by any other means than enucleation to have dealt effectively with the multiple tumours in Case 1. To have excised part of the gland would only have attacked half or less of the disease, the tumours in the remaining portion would still have caused annoyance and deformity, nor would they have stopped growing. To have performed total thyroidectomy would have probably induced myxoedema; whilst to have attempted the destruction of the several tumours by incision and scraping—as has been proposed for some of the larger cysts—would have been tedious and dangerous, from hæmorrhage. Case 2 shows the advisability of dissecting immediately down upon the cyst capsule before attempting removal; by so doing the tumour can be excised without much hæmorrhage and without fear of wounding the recurrent laryngeal nerve, the trachea, pharynx, or œsophagus, or any of the vessels of the neck. There is next to no disturbance of the cellular tissue planes of the region, and the cavity which is left to be closed up is entirely in the substance of the thyroid itself. The wounds after these operations heal very readily, there is not the risk of the severe and dangerous suppuration which sometimes follows the injection treatment, nor is there the inconvenience of a prolonged fistulous opening with discharge going on for months or a year or two, as there has been after the incision and drainage treatment. Some of the serious consequences which have followed excision of large cysts of the thyroid would have been avoided had simply enucleation been adopted. It is a question how far the peculiar œdematous-looking face of the first patient was dependent on the impaired function of the gland owing to the extensive disease.

BRADFORD INFIRMARY.

CASE OF BULLET WOUND OF SMALL INTESTINE; LAPAROTOMY; RECOVERY; REMARKS.

(Under the care of Mr. W. LAKE ROBERTS.)

WITH regard to the subject of gunshot injuries of the abdomen we owe much to American surgeons, who have done a great deal to advance the treatment of bullet wounds of this region. We are not often called upon to treat a case like that recorded below, nor, indeed, are many to be found in surgical literature, the damage done by the bullet being unusually extensive. Early operation, careful suturing, asepsis, and the condition of the bowel are factors which probably conduced to a successful result. The question of interference in gunshot wounds of the abdomen is still discussed, but there is little or no doubt in the minds of those who are engaged in active work, and best able to judge, that operation should be performed. It has been doubted if there is one incontestable instance of recovery from bullet wound of the small intestine without operation; and of all penetrating gunshot wounds of the abdomen nearly 88 per cent. are fatal. There was, therefore, a strong reason for trying some more successful method of treatment, and coliotomy with suture of any intestinal wound will often afford the best prospect of a good result. In 1889 Morton estimated the mortality after operation at 60 per cent.; but this estimate probably includes amongst the number cases in which peritonitis of septic nature was already present, also cases in which there was considerable shock and perhaps loss of blood to diminish the patient's chances of recovery. For the notes of this case we are indebted to Dr. Wood, house surgeon.

A short, slightly built man twenty-six years of age was admitted to the Bradford Infirmary on May 2nd, 1894, with the following history. The patient was struggling with another man in a public-house brawl when his opponent discharged a revolver, wounding him in the abdomen. On admission he was conscious, and there was only a small amount of collapse. The pulse was 88, increasing to 115 at the time of the operation. He complained of nausea. Half an inch below and to the left of the umbilicus was seen a small penetrating wound, the edges of which were bruised.

but not burnt or blackened by powder. There was slight external hemorrhage. Ether having been administered (about four hours after the receipt of the injury), a vertical incision four inches long was made through the wound. As soon as the peritoneal cavity was opened a quantity of blood was seen; this was found to be coming chiefly from a wounded mesenteric vessel, which was secured and ligatured. No fecal extravasation into the peritoneal cavity was found. The intestine was now carefully examined throughout its length, and was found to have been perforated in four places (making eight wounds); there were also three wounds of the mesentery. The wounds were distributed throughout the length of the small bowel. The perforations of the bowel wall were closed by fine silk Lembert's sutures, and the mesenteric wounds were also sutured. The bullet was discovered lodged against the wall of the bowel at its junction with the mesentery; it was cylindrical in shape, 7 mm. in diameter, and weighed 125 gr. The abdominal cavity was irrigated with hot boric acid solution and sponged out as dry as possible. The abdominal wound was closed by catgut sutures into the peritoneum and silkworm gut sutures passing through the whole thickness of the abdominal wall. A small drainage-tube was inserted superficially, but there was none into the peritoneal cavity. The operation lasted 125 minutes; at its close the patient was much collapsed. The pulse was 146. During the first three days after the operation the patient's condition was critical, much anxiety being caused by almost incessant bilious vomiting; this moderated on the fourth day and ceased on the fifth. The pulse-rate was then 74. There was never any distension of the abdomen, and the temperature at no time rose above 99.2° F. Nutrient enemata and suppositories were given regularly from the time of the operation until the eighteenth day, when feeding by the mouth was commenced. The bowels acted slightly on the third day and freely on the fourth day after administration of an enema. The wound in the abdominal wall suppurated, owing doubtless to the contusion, and was not healed until the twenty-eighth day. The bowels were at that time acting naturally every day, and the patient was allowed to get up. He was discharged cured on June 19th. He was seen two months subsequently to this and seemed to be quite well and was free from pain.

Remarks by Dr. WOOD.—There is one point about the case which is, I think, of considerable importance, and that is the empty condition of the bowels at the time the injury was received. The man had been drinking more or less all day, but had taken very little food, and there can be no doubt that this was an important factor in the successful issue of the case, as had the intestines been full of liquid material fecal extravasation would almost inevitably have occurred, which would have greatly increased the gravity of the patient's condition.

EMSWORTH COTTAGE HOSPITAL.

CASE OF ANOREXIA NERVOSA; NECROPSY.

(Under the care of Mr. LOCKHART STEPHENS.)

MANY of our readers will recollect the case of this disease which was published in THE LANCET of March 17th, 1888, and the illustrations here given will recall one of those then depicted. The case to which we refer was one under the care of the late Sir W. Gull, and attracted much attention at the time. In a leading article we summed up the symptoms of the condition, and cannot do better than reproduce what is there written: "The patients are generally young girls from fourteen and upwards, though we have known a striking case at a much earlier age. The disease may, however, occur in males. The great feature of the cases is complete anorexia, leading to extreme emaciation, with slow pulse, subnormal temperature, and very few respirations. Strange to say, there is associated with these depressed functions a remarkable restlessness, a disposition to be moving or walking about, though the patient is an object of remark in the street. There is an entire absence of signs and symptoms of tuberculous or other organic disease." The disease does not often prove fatal; therefore, the following case, which by the way confirms our last remark, is of considerable importance.

A girl sixteen years of age was admitted to the Emsworth Cottage Hospital on March 10th, 1888, on account of extreme emaciation. On admission the patient was a tall

intelligent girl of fair complexion and hair, with a somewhat sad expression, resembling strongly (as in Dr. Stephen Mackenzie's case¹) the diabetic face. She was rather affected in her manner and at times almost childish in her conversation. Her limbs and body, if properly nourished, would have been well developed; the breasts alone took no share in the extreme wasting, but stood out in marked contrast. She weighed 56 lb. Repeated and careful examinations failed to detect any signs of disease in the thoracic or abdominal organs. The bowels acted every other day. The urine, sp. gr. 1018, was acid, without a trace of albumen, sugar, or other abnormal constituent. The teeth were good, the tongue was clean and red, the abdomen markedly retracted (there was no pain on manipulation), and the lips were fissured from a habit of constantly licking them with her tongue. Though there was no marked aversion to any particular kind of food she preferred sweets and dainties, but would not take more than a most minute portion at any time. Up to ten months previously to admission the patient had been a remarkably well-made, plump, and healthy-looking girl, full of spirits and eager to attract the notice of her friends, which she did to a considerable degree, becoming a favourite with her teachers and others. Gradually, and from no apparent cause, she showed a disinclination to take the same food and at the ordinary meal times as the rest of the family. This went on until she reached the very emaciated state in which she was on admission; but even then she persistently maintained that she was quite well and resented being placed under treatment. She was able to help her mother in her household duties, but preferred taking long walks when she had the opportunity, apparently without feeling fatigued even after walking long distances. Her father and mother were living and healthy, though the latter was very excitable and quite under the influence of the patient, who was the only girl out of six children and the spoilt child of the family.

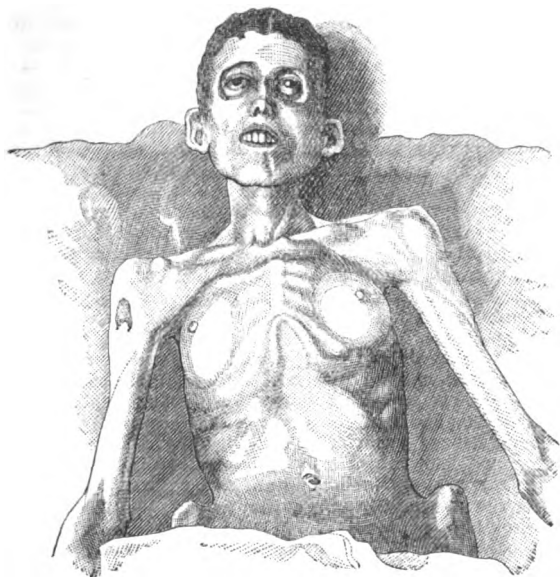
Remarks by Mr. STEPHENS.—My first impression, before examining the urine, was that I had to deal with a case of diabetes, yet of this I was very doubtful, never having seen in diabetes, or in any other disease associated with wasting, so much physical strength in such an ill-nourished body. Finding no symptom but wasting, I came to the conclusion that the case was one of "voluntary starvation" in an otherwise healthy subject. I had not then read the late Sir William Gull's paper,² or his case recorded in THE LANCET of March 17th, 1888. As the girl was under no control whatever at home I advised her parents to allow her to come into the Cottage Hospital on the distinct understanding and promise that whatever treatment was thought necessary should be carried out. She was ordered to be kept in bed with her limbs and body bandaged in cotton wool, to be fed every four hours with peptonised food, and to do nothing in the way of exertion. At first no difficulty was experienced in managing her, but after a few days she resented all treatment, became sullen and fretful, crying out for her mother, who lived only a few doors from the hospital, the result of which was that her mother, in spite of advice to the contrary, persisted in seeing her every day. From this time she began to lose the little ground we had gained; she took very small quantities of food, and resorted to every conceivable trick to avoid swallowing it, although she would take it into her mouth. On April 1st she was able to get out of bed and walk round the room without difficulty. On the 2nd (6 A.M.) the nurse noticed that she was much weaker, and could only with difficulty swallow some egg-and-milk. At 8 A.M. she was rather brighter, but at 8.45 A.M. she became suddenly collapsed, and when visited a few minutes later her condition was as follows. She was in a position of extreme helplessness, the eyes were fixed, the pupils dilated and insensitive, and the conjunctivæ insensitive. The respiration was 12, the temperature 96° F., and the pulse 60, not being perceptible in the radials or the posterior tibials, and very feeble in the axillary and femoral arteries. The extremities were livid, cold, and clammy; the breath was cold and emitted a death-like odour. Hypodermic injections of brandy (fifteen minims) were given every ten minutes; hot flannels were applied to the epigastric region and hot bottles to the feet, hand, axillæ, and trunk were in turn applied. In about twenty minutes the pulse became stronger and could be felt at the wrists. No very marked improvement took

¹ THE LANCET, March 31st, 1888.

² Clinical Society's Transactions, vol. vii., p. 22.

place until 11 A.M., when in order to get more warmth (the extremities and trunk being now warm, but the breath cold) an œsophageal tube was passed and about ten ounces of milk as hot as could be borne in the mouth administered. Almost immediately the respiration became stronger and deeper, and shortly after she showed signs of consciousness, so that at 11.40 A.M. she was able to speak and to understand what was said to her. During the afternoon she

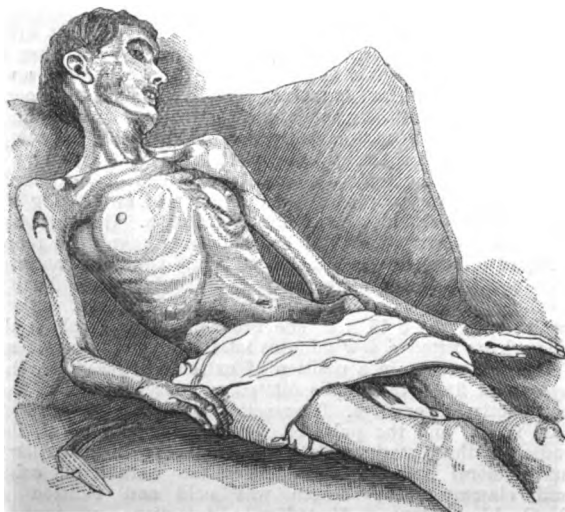
FIG. 1.



was able, unassisted, to raise herself on her shoulders and heels to allow a drawsheet to be removed. Shortly after midnight it was noticed that the respiration was becoming more frequent and more shallow. This continued to increase, and sinking rapidly she died at 2.30 A.M. on April 3rd.

Necropsy, made at 10 a.m. on April 5th, fifty-six hours after death.—The body weighed 49 lb.; the height was 5 ft. 4 in. The circumference of the arm high up at the shoulder was 4½ in.; circumference of the wrist, 4¼ in.; circumference of

FIG. 2.



the waist, 17 in.; circumference of thigh just below the great trochanter, 8 in.; circumference of the neck, 8½ in. The body was extremely emaciated; there was not a trace of fat in the subcutaneous tissue with the exception of the breasts, which stood out boldly. On opening the abdomen there were visible: the lower edge and anterior surface of the right lobe of the liver, measuring three inches and a half vertically; the anterior surface of the stomach for two-thirds

of its extent, starting from the pyloric end, which was below the level of the umbilicus, so that the long axis of the organ was directed almost vertically downwards; three inches of transverse colon just above the pubes, in the great omentum. The bones of the head were thin, the membranes and vessels were normal, and the brain was normal throughout; it weighed 45½ oz. The right lung weighed 19 oz. (it was much congested from hypostasis). The left lung weighed 11½ oz.; it was less congested than the right. Both lungs were otherwise normal. The left pleural sac contained about ¼ oz. of clear serum. The heart weighed 4 oz.; its external appearance was normal. Both auricles contained small decolourised clot. The left ventricle was firmly contracted; the right was thin and flaccid; the valves were healthy. The liver weighed 23½ oz.; it was normal in appearance. The gall-bladder contained one drachm of clear, thin bile. The pancreas (weight 1½ oz.), spleen (weight 1½ oz.), adrenals (weight of each ½ oz.), and kidneys (weight of right 3 oz., of left 2½ oz.) were all normal. The uterus and ovaries together weighed ½ oz.

Medical Societies.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases.—Raynaud's Disease.—Intestinal Obstruction.

A MEETING of this society was held on Dec. 19th, 1894, Dr. CLOUSTON, President, being in the chair.

Mr. CATHCART showed two patients illustrating Ulcerative Forms of Secondary Syphilis. He remarked that, although, according to Mr. Hutchinson, rupee was not confined to the tertiary period, it might be important, medico-legally, to note at what period ulcerative processes might occur. The first case, a lad, had acquired syphilis in July, had a well-developed sore in September, and in December had a most typical rupee, a cast of which was shown. The sores now showed deep ulceration in a healing stage. The hard sore had left no scar. The second case showed severe ulceration of the throat, though there was no history of alcoholism or evidence of specially weak constitution.—Dr. JOHN THOMSON showed a child with Congenital Absence of the Pectoral Muscles on the left side and deficient development of the left forearm.—Dr. W. ALLAN JAMIESON showed a case of Molluscum Contagiosum. On the left side of the face were several mollusca the size of a pea, and there was a patch behind the ear where the tumours had become aggregated. There was at the back of the knee a tumour which had originally been a wart, and had taken a molluscous growth. The case resembled some cases of Darier's disease.

Dr. URQUHART read a paper on two cases of Raynaud's Disease. The first case was that of a man thirty-three years of age with a very rheumatic history. There was no history of syphilis, but for some years previously he had been addicted to intemperance. Some months previously to coming under Dr. Urquhart's care he had had a severe attack of enteritis, after which the mental condition deteriorated. He had very severe headaches, loss of memory, and general mental weakness. The enteritis recurred, and as delusions supervened he was put under Dr. Urquhart's charge in the Perth Asylum. He was then found to be anæmic and constipated. The reflexes were normal except the pupils, which were sluggish. He was very taciturn; when he did speak his utterances were foolish. There was considerable excitement, with resistance. He had delusions. Hæmatoma auris developed. Nourishment was taken badly. Shortly after admission the feet became black up to the ankle, hebetude became marked, and retention of urine developed. The feet improved slightly for a time, but never lost the dusky colour. The improvement only lasted for a short time, when the colour deepened and the features became pinched. No pulsation could be made out in the posterior tibial arteries. Shortly afterwards the patient died. Post mortem the lungs were found congested, with cavity formation at the apices. The right kidney was found to be normal; the left was tuberculous. The brain convolutions were atrophied. The ventricle contained a large amount of fluid. In the feet the vessels of the skin were engorged and in a condition of stasis. There was no neuritis present. The

bone marrow showed diapedesis. The anterior and posterior tibial arteries and nerves were normal. The medulla and pons were normal. There was not the interstitial change in the affected parts found in ordinary gangrene. The second case was that of a woman who had influenza in 1892, after which she became melancholic. As she became subject to delusions she was sent to the asylum. From February, 1892, the mental condition remained much the same. There was retention of urine from time to time, with a transient albuminuria. She developed hæmatoma auris. She was very sensitive to cold. Some time after this the feet became swollen and blue. Patches of a brown colour appeared, and the colour of the feet deepened. The skin roughened and began to peel off. After three months' confinement to bed she began to improve and was able to get up, but in a fortnight the blueness recurred. This had happened several times since. Dr. Urquhart thought in those two cases the malady was central in origin. Both had hæmatoma. Neuritis had been found in some cases, but seemed to be more a complication than an essential factor in the disease. The nerve should be examined above and not at the point where it was implicated in the diseased part.—Mr. JOSEPH BELL said that the paper had been very instructive as an interesting clinical study, but he was no wiser as regarded the question of amputation. He thought from a surgical point of view masterly inactivity was the proper treatment.—Mr. CATHART did not think it possible to exclude vascular obstruction in the first case simply because the tibial arteries were not affected. He had often examined legs showing gangrene low down in the foot, and had found the seat of obstruction at the bifurcation of the popliteal artery.—Dr. BRUCE had examined one case where the toes were amputated for gangrene. There was distinct closure of the arteries, the intima being united, leaving only a longitudinal cicatrix. He quite agreed that neuritis might be the result and not the cause of the disease. He did not think they had yet found a cause adequate to account for the chronicity of the disease.—Mr. ALEXIS THOMSON said in one case he examined he did not think the neuritis could be secondary, though he did not say it was the primary cause. In a second case he had found very little evidence of neuritis. Amputation should only be done to rid the patient of dead tissue.—Dr. Urquhart replied.

Dr. JAMES RITCHIE read a paper on a case of Intestinal Obstruction. The patient had been first seen on Sept. 18th, when he was suffering from diarrhoea and vomiting. The tongue was thickly coated, there was troublesome flatulence, and the abdomen was somewhat distended. Under treatment the sickness and diarrhoea ceased and the appetite returned. At the commencement of the following week there was a return of the gastric catarrh and the bowels became constipated. Some improvement took place, but on the 29th severe hæmatemesis with some fever came on. Efforts were made to empty the bowels, but without effect, and the abdomen became distended. The case being viewed as one of a septic condition of the bowels, with consequent paresis of the intestinal walls, salol and purgatives were given. On Oct. 4th there were several copious pultaceous motions, and the condition improved. Soon, however, the epigastrium became prominent from distension, and a small movable nodule was palpable to the left of the umbilicus. The bowels were again constipated, and inspection revealed peristaltic movements of the bowels. Obstruction due to a malignant tumour was diagnosed. The rectum revealed ballooning, but no tumour or tenderness. Fully three pints of water could be injected; therefore probably the obstruction was not at the sigmoid. From Oct. 4th no satisfactory motion was obtained and the general condition deteriorated. On the 27th Mr. Chiene saw the patient, and decided to operate on the following day if no improvement took place. During the day the patient became suddenly worse and died from heart failure. Post mortem a flattish mass about the size of a dried fig was found in the great omentum to the left of the middle line. The ascending and transverse colon was much distended. At the splenic flexure there was a hard mass, which completely encircled the gut and caused great narrowing of its lumen. Dr. Ritchie then reviewed the literature and interesting features of the case, and advised the use of intestinal antiseptics, combined with enemata, in cases of chronic obstruction.—Mr. JOSEPH BELL said he had met a somewhat similar case last week. A woman between sixty and seventy presented symptoms of chronic obstruction. There was no trace of anything per rectum, except ballooning. The lower bowel

daily admitted three or four pints. She never had vomiting. Three weeks before death she passed what she stated was an excellent, large, firm stool, about which, however, he had some doubt. The abdomen was distended, the colon being visible. Flatus was easily passed, and faecal matter, but not in large quantity. On opening the abdomen no tumour could be felt at the sigmoid, but at the cæcum a very strong band binding it down completely was discovered. This was divided. Great relief followed, but the transverse colon did not quite empty itself. He advised an artificial anus, but the friends objected. After operation flatus was easily passed, but no large stool. The patient died suddenly from heart failure. Post mortem they found a small, tight, cancerous stricture in the sigmoid flexure, which Dr. Boyd reported to be a slowly growing carcinoma with colloid degeneration.—Mr. HODSDON said he had had a very similar case on the previous Friday. The difficulty always was to find the point of obstruction in order to know where to open. He opened on the left side and found a very small stricture. He was led to open on the left side from distension of the intestine and the smallness of the enema which could be admitted. He thought that in chronic obstruction in old people an artificial anus should always be made. It did not cause much inconvenience. He had one patient where this was done who was now working as a labourer.—Dr. RITCHIE replied.

Reviews and Notices of Books.

Clinical Lectures and Essays on Rickets, Tuberculosis, Abdominal Tumours, and Other Subjects. By Sir WILLIAM JENNER, Bart., G.C.B. London: Rivington, Percival, and Co. 1895.

THERE is no doubt that this volume of Sir William Jenner's collected writings will be as heartily welcomed as was the republication last year of his memorable essays upon Fever and Diphtheria, and many will feel indebted to him for the opportunity of possessing them in a permanent form; indeed, we question whether there are many now in practice who have ever read those masterly lectures upon Rickets which appeared in the columns of the *Medical Times and Gazette* thirty-five years ago and are now for the first time reprinted. The same applies to the lectures on Tuberculosis which follow. These two courses of lectures were delivered in the Hospital for Sick Children, Great Ormond-street, and although a generation has passed since their delivery they are still full of instruction, for they were the product of a keenly observant mind and are stamped with the individuality of their distinguished author. The lectures on Rickets stand out pre-eminently as the foremost contribution to our knowledge of this common disease. To Sir William Jenner must be accorded the great merit of clearly seeing the truth that this disease was, as he puts it, "no more a disease of the bones than is typhoid fever a disease of the intestines." He established it as one of the four diatheses to which infantile life is prone, and at the outset of his lectures concisely contrasts the leading characteristics of these four—tuberculosis, scrofulosis, rickets, and syphilis. In reprinting the lecture he has adhered to the distinctions laid down in the text: they were differences which for him were definite and unalterable, types of morbid conditions which could never be confounded. Therefore it is that he says in the brief prefatory words to this volume: "I have not altered the paragraphs relating to the difference between scrofula and tuberculosis. For although recent histological researches have shown the identity of their ultimate pathological products, yet I still hold that the constitutional states which precede the local manifestations are of a different type in these two disorders and deserve separate consideration." Nor does this retention of conceptions which have been to a certain extent swept aside by the pathological investigations of these latter days in any way detract from the value of his testimony. For the fidelity of

his descriptions must remain, and although we can no longer say, as he did, that "syphilis and tuberculosis are undoubtedly not identical because syphilis owes its origin to a specific cause and tuberculosis does not" (p. 8), yet we must all recognise the clinical and pathological distinctions which are here so tersely given. Coming now to the main substance of these lectures on Rickets, the reader cannot fail to be struck with the care and accuracy with which the various morbid states inherent to it are described—the skeletal lesions and the deformities to which they give rise, the stress laid upon the effect of pressure as a potent factor in the production of limb and thoracic deformity, and many other points that are dealt with in strictly scientific method. Sir William Jenner assigns considerable importance to the condition which he terms "albuminoid infiltration" of the viscera, notably the spleen, liver, and lymphatic glands, in this disease. This term, which unfortunately was at one time used synonymously with the totally different condition of amyloid infiltration, has fallen into disuse and in current writings we hear but little of it. Yet that there is enlargement of these organs in rickets, and that it is probably associated with the concomitant anæmia, is undisputed. We could fain wish that histologists would tell us whether the state of the organs in question is more appropriately denominated a hyperplasia than an infiltration, but we are not aware that they have done so. In clinical description there is little in literature to equal that which is given in the lectures on Rickets. What, for instance, can match the following as a piece of word-painting thoroughly true to nature:—

"A child in health delights in movements of every kind. It joys to exercise every muscle. Strip a child of a few months old and see how it throws its limbs in every direction; it will raise its head from the place on which it lies, coil itself round, and grasping a foot with both hands thrust it into its mouth as far as possible, as though the great object of its existence at that moment was to turn itself inside out. The child suffering severely from the general cachexia which precedes and accompanies the progressive stage of the bone disease ceases its gambols, it lies with outstretched limbs as quietly as possible, for voluntary movements produce pain. Its unwillingness to be moved is so great that, as Stiebel has observed, it will cry at the approach of those who have been accustomed to dance it, of those at the sight of whom it previously manifested extreme pleasure. As the disease progresses the child gets a peculiar staid and steady appearance; its natural lively expression is replaced by a pensive, aged, languid aspect; its face grows broad and square; and when placed upright on its mother's arm it sits, as she says, 'all of a heap.' Its spine bends and its muscles are too weak to keep it erect. Its head seems to sink between its shoulders; its face is turned a little upwards. And now the consequences of the bone disease are superadded to the general derangement. It is strange to see a little child sitting placidly on the bed without moving for hours together, its legs placed so as to escape pressure, its spine bowed, its head thrown backwards, the chief weight of its body cast upon its anus; and to know that, notwithstanding the apparent calm, the tiny thing is indeed fighting the battle of life, for it is striving with all the energy it has to keep in constant action every one of its muscles of inspiration, endeavouring so to supply the mechanical defects of its respiratory apparatus due to the softening of the ribs. It wants no toys. It is the best of children if you only leave it alone; move it and you inflict pain on its tender frame; show it the horse or the doll that was once its delight and it turns away its head or stares vacantly; to notice would divert its attention too much from the performance of those respiratory movements which are essential to its existence" (pp. 37-39).

It is when reading passages like these—and there are many such within the covers of this book—that we appreciate the author's keen powers of observation and also his power of imparting to others what he himself observed. We can

understand the better his unique aptitude for clinical teaching, and the enthusiasm, akin to reverence, with which those who were privileged to be his pupils recall the instruction he gave by the bedside. It makes us regret all the more keenly that owing to the imperious demands of practice he should have given us comparatively so little in published form.

The two lectures on Tuberculosis complement those on Rickets and convey the like impression of the author's characteristics. The first lecture opens with a warning against making a specialty of the diseases of children and drives home the lesson by a happy comparison between infancy and age as regards their respective tendencies to morbid lesions. Then follows a striking description of the physiognomy and build of the child who is the subject of inherited tuberculosis, much stress being laid on its small lung capacity. The type is as familiar to-day, when doubts are freely held whether tuberculosis is really inherited *per se*, as it was when these descriptions were penned by one who held that "the germ anterior to the formation of the blood, and even before it has divided into parts, is the subject of tuberculosis" (p. 75). After all, the problem of heredity, and the transmission of a special conformation of body, is unaffected by the alterations in the standpoint of thought as to disease: it is merely a change of idea as to the transmission of the disease itself or, rather, of the proclivity to it. The lecture then goes on to describe the various forms under which acute general tuberculosis affects the child. These forms are enumerated as: (1) the insidious, (2) the active febrile, and (3) the adynamic. The statement that acute tuberculosis is not a necessarily fatal disease, but that "recovery from it is very common," is justified by an appeal to the facts of observation in the post-mortem room, where old obsolescent tubercle is so frequently found side by side with recent lesions. The second lecture deals with tuberculosis of lymphatic glands, especially mesenteric and bronchial. A quotation will best convey the position assumed [on this subject, which involves the vexed question of the nature of scrofula:—

"There are some great facts I desire by all this to impress on the mind of the youngest of my hearers—viz.: 1. That primary inflammation of the lymphatic glands is a very rare disease, even in scrofulous children. 2. That secondary inflammation of the superficial lymphatic glands is a very common disease. 3. That a superficial lymphatic gland being in a state of active congestion, by seeking out and treating the primary lesion, we can in all but every case prevent the occurrence of suppuration of the gland. 4. That when a superficial lymphatic gland inflames and suppurates without there being inflammation of the tissues from which the lymphatics to the gland lead, in almost all, if not in all, cases the gland so inflaming is the seat of the deposit of tubercle. 5. That the lymphatic glands of scrofulous children, and glands which contain tubercle, inflame and suppurate from an amount of irritation which would merely lead to moderate active congestion of the glands in a child of healthy constitution" (p. 91).

The volume also contains the article upon Emphysema of the Lungs which Sir William Jenner contributed to "Reynolds' System of Medicine," an article which is notable for the remarkable clearness of exposition and the force of its argument in support of the expiratory theory of the production of the condition. His paper in which he first set forth this doctrine before the Royal Medical and Chirurgical Society is also given. Many will turn to the lectures upon Extra-pelvic Tumours of the Abdomen in anticipation of most valuable clinical instruction. Nor will they be disappointed. These lectures, delivered at University College Hospital, were reported at the time of delivery by Dr. Gowers and afford a good example of Sir William Jenner's teaching. They do not cover the whole ground of abdominal tumours, but they are full of acute remarks which are of real practical value. We cannot refrain from another quotation, in which, in introducing the subject to his class, he

speaks of the aims and methods of clinical teaching. It runs as follows:—

"Now, clinical teaching should enable the student to start from a higher point of experience than he could attain by his unaided powers. The knowledge which the teacher has acquired by the practice of his profession should be to a considerable extent imparted to the scholar. The clinical scholar should be taught by his master to see with his eyes, to touch with his hands, to hear with his ears, to reason with his brain; he should, in fact, be put into possession of that practical knowledge which in long time the master has acquired for himself, and should be by his master's aid possessed of the method by which practical conclusions from facts observed are to be drawn. At the end of his pupil career, then, you will see, the clinical scholar should start from a vantage ground, and not only should he start from the practical position his teacher has gained, but should also have been trained to use his senses so as to gather real facts for himself, and to use his reason so as to draw sound conclusions, to make every case which he subsequently sees add to his real practical knowledge. When he attends a case, even though it be of the commonest disease, he not only sees the case, but he learns something, adds something to his experience" (p. 216).

In addition to the subjects already mentioned the volume contains papers and extracts from clinical lectures on such matters as Deformities of the Chest, Hysterical Laryngitis, Congestion of the Heart, Sarcina Ventriculi, and the observations on "Burnt to Death" which Sir W. Jenner a few years since contributed to the columns of THE LANCET. The book is dedicated to his old pupils, and they will indeed appreciate its publication. But the profession at large will be glad to have for perusal the writings of one who in his day did so much to advance the science of medicine and to uphold the purity of its practice. It may truthfully be said that in his retirement he bears with him the enduring esteem and gratitude of the large body of men who have profited by his teachings and example.

Fibroid Diseases of the Lung, including Fibroid Phthisis. By Sir ANDREW CLARK, Bart., M.D., LL.D., F.R.S.; W. G. HADLEY, M.D. Durh., M.R.C.P.; and ARNOLD CHAPLIN, M.D. Cantab., M.R.C.P. London: Charles Griffin and Co. 1894.

ONE of the most striking characteristics of the lamented physician whose name stands first on the title-page of this volume was the enthusiasm with which he adopted and the fervour with which he upheld doctrines that seemed to him to be right. It is somewhat difficult now, when, alas, we have him no longer with us, to realise the stir that was made in pathological circles by his enunciation of belief in "fibroid phthisis" as a substantive disease of the lung, having a definite etiology and course distinct from chronic phthisis of tuberculous origin, with which occasionally the former was intermingled. It seems strange that the question should have been so ardently discussed, and that in a matter of this sort there should have been so much room for differences of opinion. In a sense the use of the term "phthisis" was the pivot around which controversy raged; but there can be no doubt that it was largely due to the fervid nature of Sir Andrew Clark himself that the question was raised out of the common level of dry pathological fact. We believe it was on the occasion of his paper on the subject, read at the Clinical Society in 1868, that the controversy in question attained its full development. That paper is reproduced in the present volume, and, reading it anew, we cannot but be impressed by the clinical and pathological zeal of its author and his absolute freedom from the current tendency of the day towards the restriction of the term "phthisis" to tuberculous disease alone. Thus he wrote: "It is plain, then, from what has been said, that to employ the term 'tubercle' in a 'comprehensive sense'—that is, in a sense depriving it of any definite meaning, and to maintain, as so many distinguished persons still strive to do, the unity of phthisis, is to reject the most precious results of pathological research, to ignore the distinctions established

by clinical inquiry, to relinquish the hope of a rational therapeutic, and to resign oneself for ever to the guidance of a blind and capricious empiricism."

And a few lines further on he thus justifies his adoption of the term "fibroid phthisis": "In this term the author proposes to embrace all these cases, whether local or constitutional, which are anatomically characterised by the presence, in a contracted and indurated lung traversed by more or less dilated bronchi, of fibroid tissue, and of a tough fibrogenous substance, together with cheesy deposits or consolidations, and usually small cavities commonly found about the middle and lower parts of the affected organ. Several objections may be justly made to the designation proposed; but in the writer's mind they are all outweighed by this great advantage. The name expresses the leading anatomical fact of the disease, and whilst theories of its nature will change the structural character must remain always the same."

We venture to call attention to these earlier statements of Sir Andrew Clark, if only to show, as the publication of the present volume proves, that he never swerved from the doctrine there laid down. The changed light with which, owing to Koch's discovery, tuberculous disease came to be regarded served only to bring out in stronger relief the characters of the morbid pulmonary conditions which Sir Andrew Clark included under "fibroid phthisis." He had, we believe, for long entertained the hope of bringing to the notice of the profession the substance of his observations on this subject; and the lines of the present volume, in the preparation of which he was aided by his former pupils, Drs. Hadley and Chaplin, were planned some time before his death. It comes now as a kind of legacy to the medical world, embodying the mature conclusions of a gifted mind upon a much debated matter. The historical review with which the volume opens gives with admirable precision the opinions and researches of leading authorities from the time of Bayle; and it is at once a tribute to that pioneer in pulmonary pathology, as well as an instance of the tendency in pathological ideas to come round again to original ideas, that the unity of phthisis is still disputed. And if the term "phthisis" is to be retained in the sense in which Bayle used it there can be no question that Sir Andrew Clark was right, both in logic and in fact, in insisting on the inclusion of other than tuberculous disintegration under that term. Often has he impressed this on his friends and pupils, and the words in which he here defines the term have a familiar sound, recalling vividly the personality of their writer. "By this term," he says, "is meant the assemblage, progression, and relation of signs and symptoms, associated with, or dependent upon, the ulcerative or suppurative disintegration of more or less circumscribed non-malignant consolidation of the lungs" (p. 32). This sentence occurs in Chapter II., "On the term 'Fibroid Phthisis,'" in which is to be found an instructive contrast between the larger group of cases of tuberculous phthisis and the smaller group of fibroid phthisis. Chapter III. deals with the pathological anatomy of the subject, and here it may be remarked that the full and ample descriptions of the gross morbid appearances and histological characters of pulmonary fibrosis have an especial value. They demonstrate the fact that "fibroid disease of the lungs," which to our thinking is a far more appropriate term than "fibroid phthisis," may be met with in various degrees and in varying distribution within the lung itself. Commonly unilateral, it may in certain cases—e.g., those due to dust inhalation—be bilateral; often associated with extensive pleural thickening, there yet are cases in which the pleura is comparatively unchanged; sometimes nodular, and then most simulating "obsolescent tubercle," the lesion is more frequently diffuse; whilst it may have caseous masses, and vomicae resulting from their softening, which are to be distinguished from the deposits of tuberculous

origin. Lastly, bronchiectasis—which, according to the type of the disease, may lead to cavity formation, or be limited to cylindrical enlargement—is a very constant concomitant. It seems to us that the clue to these varieties in scope and character of lesion is to be found in the etiological factors, which are enumerated at the commencement of the next chapter, dealing with the clinical features of fibroid disease. And, further, if criticism be permissible, it would be to the effect that it would have conduced to definite and clear notions of “fibroid disease” had the pathological description—so far as this is possible—been treated under the several heads of these etiological factors. To instance only a few examples. The fibroid lung resulting from broncho-pneumonia (averred to be the most common antecedent) is different in many particulars from the rarer state of fibrosis supervening upon lobar pneumonia; and that, again, from the general fibrosis of chronic bronchitis, or of dust inhalation, or the more limited “pleurogenic” varieties. Their common element of interstitial induration is the only link which binds these various states together pathologically, whilst it may even be questioned whether clinically it is not possible to differentiate many of these forms. This, however, by the way, and with no desire to lessen the value of the masterly clinical picture that is sketched in these pages. It is a description that will bear repeated perusal, for without being redundant it brings out the salient features of the case and of its course in a succinct and at the same time striking manner. The chapter closes with an account of some cases in illustration of the clinical description.

The authors by no means ignore the association of tuberculosis with fibroid disease; but they do not enter into much detail in this part of the subject, which is really that of chronic tuberculous phthisis. In the fifth chapter two varieties are described—the one termed “tuberculo-fibroid,” implying that tuberculosis has undergone fibroid transformation—the most hopeful form of chronic phthisis; and the “fibro-tubercular,” in which tuberculosis secondarily involves a lung already fibroid. The frequency with which in the post-mortem room old fibroid change, sometimes of considerable extent, is encountered side by side with more recent caseating or miliary tubercle makes it difficult to be certain that the latter group is really different from the former. If in the one case the fibrous transformation or obsolescence of tubercle is conceded, why not also in the other? The authors, however, lay stress on the fact that the earlier history of the fibro-tuberculous group is that of a chronic affection; indeed, that of “pure fibroid disease,” to which suddenly the signs and symptoms of a rapidly advancing tuberculosis are superadded. The few pages devoted to treatment, which also form part of the fifth chapter, are perhaps the least satisfactory—or rather satisfying—part of the book; but, seeing that the main purpose of the work was rather the description of the natural history of fibroid disease of the lung, the question of treatment may have been intentionally assigned a subordinate place. Chapter VI. is devoted to an analysis of cases, and in the final chapter is reproduced Sir Andrew Clark’s paper read at the Clinical Society to which we have above referred.

It should be added that the volume contains several striking coloured drawings of specimens of fibroid disease (three of which have been published in *THE LANCET*), drawings which are artistic as well as extremely faithful representations of the lesions described. Their value would have been enhanced by more direct reference to them being made in the text. Lastly, the book, as regards type and paper, has been produced in a style which we are accustomed to meet with at the hands of the publishing firm that is responsible for them.

The Prevention of Epidemics and the Construction and Management of Isolation Hospitals. By ROGER McNEILL, M.D. Edin., D.P.H. Camb., Medical Health Officer for the County of Argyll, formerly Resident Medical Officer to the Infectious Hospitals of the Metropolitan Asylums Board at Homerton and Deptford, London, and H.M.S. *Atlas and Endymion*, Greenwich. London: J. & A. Churchill. 1894.

In commencing our notice of this volume we may say at once that we have formed a very definite opinion in regard to it. It is a good and useful work. Dr. McNeill possesses, in the first place, the necessary knowledge and experience to make what he has to say well worth reading; and, in the second place, he has succeeded in expressing himself clearly and to the point on various subjects, to the consideration of which he has evidently given a good deal of thoughtful care. There is no need to dwell upon the loss and misery that infectious diseases so frequently entail, or upon the importance of the measures that should be adopted to prevent or limit the spread of them. All are theoretically agreed, at any rate, in this respect, but practically all do not realise how necessary it is that we should possess clear notions in regard to the nature of the preventive measures that should be adopted and promptly carried out if our attempts in this direction are to be really effective and not unavailing. It is obvious that our efforts should, as far as possible, be concentrated on the initial stages of such diseases while their manifestations are still limited to a few individuals, and before the infection has had time to spread and give rise to an epidemic. It is easy enough to provide for the accommodation of a small number of patients at the very commencement of a threatened outbreak, but it is often difficult, or even hopeless, to attempt to do so for the larger numbers affected in an epidemic. The author is right in saying that the importance of preventive measures has not been sufficiently practically realised in many small towns and rural districts, and it is easy to understand why this should be so. In the principal towns every endeavour has been, or is being, made to cope with the problem as a recognised measure of public safety. But the less populous are only feeders of the more populous centres, and the prevalence of any infectious diseases in the one necessarily endangers the other. Epidemics of disease which spread solely by infection do not cover the whole area of a province or community in their incidence. They begin in one district and spread slowly or otherwise in various directions, or each little centre acts as so many separate foci or depôts of infection to the rest of the community.

The book consists of nine chapters, with an appendix of hospital plans and accompanying descriptions and index. The illustrations are very good, and the relative merits of the various plans may be compared and considered with much advantage by the reader. It is impossible, within the compass of a review, to deal with all the subjects included in Dr. McNeill’s book, and we must therefore content ourselves with a few of the more salient and practical points.

Passing over the first three chapters dealing with the dissemination of infectious diseases and the influence of effective measures against their spread, we come to the chapter which treats of the nature of infection and its influence on the construction and management of isolation hospitals. The antiseptic method has been singularly successful on the surgical side of our hospitals in preventing the occurrence of infective wound diseases, but there is no similar specific method of preventing the micro-organisms of the ordinary infectious diseases from entering the system by the breath or by food or water. It is all the more necessary, therefore, that isolation hospitals should be so constructed, furnished, and managed as to prevent the retention or absorption of any micro-organisms of infection,

and afford at the same time ample superficial and cubic space with a plentiful supply of fresh air. In large towns it has been stated that about one bed per 1000 of the population is a sufficient provision for the isolation of infectious disease to meet ordinary emergencies; but each case must, after all, be considered on its merits, for the number of beds necessary varies in different localities and under different circumstances, and the same may be said as regards the position of the hospital. The distance that patients suffering from infectious diseases may be safely conveyed is a matter to be considered, and the results of experience are well set forth and summarised in the work under review. According to our observation cases of enteric fever are likely to be prejudicially affected by being transported long distances unless their removal can be undertaken at an early stage. The feeling of the population may also be fairly considered to a certain extent in settling the distance patients are to be conveyed to a hospital. The site of a hospital as regards a safe distance from other buildings and thoroughfares in view of guarding against infection may be inferred from the experience gained in the case of various isolation hospitals. There is really very little risk of infection from well-constructed and thoroughly well-managed hospitals. If we exclude small-pox, the rule of the medical department of the Local Government Board may be followed—viz., that no part of the isolation hospital should be nearer than forty feet at least of the area wall. Here, again, local circumstances and the discipline, internal economy, and management of the hospital are important points. In rural districts where land is plentiful and comparatively cheap the site and the area to be occupied by the hospital may be fairly settled by considerations that would not apply to a town. But we may safely say that there is no necessity, from a purely sanitary standpoint, for the erection of isolation hospitals at such long and inconvenient distances from habitations as is frequently the case. Even in the case of small-pox some think that the spread of the disease is in proportion to facilities of communication rather than to an aerial distribution of the infection. It is unquestionably safer, however, to act on the latter assumption. It is obviously important in connexion with these institutions that, if isolation hospitals are of any size, a probationary room or ward should be provided for the reception of cases under observation until the nature of their disease is established. There are a considerable number of other points of interest which we must pass over. As regards the system of drainage, we quite concur in thinking that all the drains should be subjected to the water test, and the contractor should be clearly told that he will be held responsible for any leakage discovered. As regards the provision of connecting covered corridors between the different blocks for the protection of nurses and others against the effects of weather and wet, it may be said that theoretically the separate blocks should be entirely disconnected, and at Glasgow the nurses are provided with overcoats to protect them against the weather. We imagine that practically, however, covered corridors are commonly provided. Some of the plans in the appendix are, as we have said, very good, and they are all very useful for reference.

NEW OVERLAND ROUTE TO THE ORIENT.—An important addition to the routes to Constantinople and Egypt has been made this week. The International Sleeping Car Company has concluded arrangements with the various Continental railway companies and the Administration des Paquebots Poste Khédivie, by which, on Sunday, Jan. 8th, and every following Sunday, a special service *de luxe* will be run through from Ostend to Constantinople without change of carriage. There the passengers will at once go on board the mail steamer, which will leave immediately and go straight to Alexandria.

Analytical Records

FROM

THE LANCET LABORATORY.

(1) BISMUTH SALICYLATE. (2) EASTON'S SYRUP. (3) PEPSIN, BISMUTH, AND CHARCOAL TABLOIDS.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL BUILDINGS, E.C.)

EVER endeavouring to keep pace with the requirements of medicine as it advances, Messrs. Burroughs, Wellcome, and Co. have recently added some new useful tabloids to their already well-stocked list, specimens of which we have lately examined. The bismuth salicylate tabloid contains 5 grains of the bismuth salt, guaranteed physiologically pure, the dose ranging from one to four tabloids, which is equivalent to from 5 to 20 grains. Their convenience is evident, since bismuth salicylate is insoluble in water or spirit. This drug has been used with benefit (which may be referred to its astringent and anti-fermentative properties) in various forms of diarrhoea due to typhoid fever and pulmonary and intestinal tuberculosis. Easton's syrup tabloids, each equal to one fluid drachm of the syrup, will be accepted at once as a very convenient form in which to administer this excellent tonic. Lastly, the value and convenience of the tabloids of pepsin, bismuth, and charcoal will be obvious to every practitioner. We have submitted all the foregoing tabloids to qualitative analysis, with the result that evidence was obtained in every case that the drugs indicated were contained in them.

BREAD MADE FROM GERM MALT FLOUR.

(W. MARSHALL AND SONS, VICTORIA AND HAVEN MILLS, GREAT GRIMSBY, AND 39, HAMFRITH-ROAD, STRATFORD, ESSEX.)

This is an excellent specimen of malted bread made with the wheat germ, by the use of both of which not only is the proportion of food constituents very materially increased, but they are rendered also all the more digestible. It possesses a pleasant, though somewhat sweet, nutty flavour, and has the distinctly advantageous quality of keeping moist for a reasonable time. Its excellent dietetic properties are well brought out in the following analysis: moisture, 48.00 per cent.; albuminoids, 9.34 per cent.; mineral matter, 1.16 per cent. (of which 1 per cent. is soluble); soluble matters, 10.44 per cent.; unaltered starch, 31.06 per cent. Thus no less than one-fifth part of the solid matter is soluble in water, and is found to contain a valuable quantity of phosphates, while over one-sixth consists of nitrogenous (so-called flesh-forming) substances. A comparison of this bread with ordinary household bread shows at once its superiority in regard to nutritive and digestive value. The biscuits and cake also submitted are made on similar lines. We observe with considerable satisfaction the attention which is now almost universally being bestowed upon the improvement of the commonest, yet most important, article of our daily food. The above specimen, amongst others we have previously reported, fully justifies this remark.

OLD SCOTCH WHISKIES (NOS. 1 AND 2).

(STODDART AND CO., 20, SUFFOLK-STREET, PAUL MALL, S.W.)

Two specimens of whisky submitted by the above firm were characterised by a low proportion of extractives and a comparative freedom from acidity. Analysis gave the following results. No. 1: alcohol by weight 35.00 per cent., by volume 41.84 per cent., being equal to proof spirit 73.33 per cent.; acidity reckoned as acetic acid, 0.004 per cent.; extractives, 0.13 per cent.; ash, 0.04 per cent. No. 2: alcohol by weight 42.00 per cent., by volume 49.50 per cent., being equal to proof spirit, 86.75 per cent.; acidity reckoned as acetic acid, 0.006 per cent.; extractives, 0.130 per cent.; ash, 0.04 per cent. No. 2 is, therefore, superior in regard to its spirit contents; but No. 1 is the maturer specimen (twelve

years), as No. 2 is stated to be seven years old. The impression that both samples convey to the palate is that they are moderately mellow, but both are evidently free from those by-products of whisky distillation which are said to be productive of physiologically bad effects, and which age successfully eliminates.

COCOANA.

(SCOTT AND SCOTT, 24, HIGH-STREET, BIRMINGHAM; AND WESTON, HUNT, AND CO., 34, SEKTHING-LANE, GREAT TOWER-STREET, LONDON, E.C.)

The addition of banana flour to cocoa doubtless improves its digestible character, while it detracts nothing from its agreeable flavour. Cocoaana is compounded on these lines, as is evident from a microscopical examination. We regard this introduction as of some dietetic importance, since it further reduces the proportion of indigestible cocoa fat, while it does not overburden the cocoa with starches that tax the digestive functions.

"EVER-FRESH" BAKING POWDER.

(W. A. DANIEL, 18 AND 20, PARK-LANE, LIVERPOOL.)

The question of the legality of adding alum to baking powder was adversely decided by a recent case, when the Court of Appeal ruled that baking powder, not being an article of food within the meaning of the statute, might have all sorts of objectionable things added to it. This ruling prompted us some time ago¹ to publish the names of makers of powders free from alum, for the guidance of our readers. To this list must now be added the name of the maker of the above specimen, which we found to consist of perfectly pure ingredients. It evolves a desirable amount of carbonic acid gas on moistening, and keeps well, being packed in tight tins provided with lever lids.

(1) CHICKEN JELLY. (2) MUTTON JELLY. (3) CURRIED FOWL. (4) CURRY SAUCE.

(HALFORD, 12, UPPER ST. MARTIN'S-LANE, W.C.)

The value of meat jellies in impaired digestive function is well known, but, amongst other things, it is essential that they should possess a flavour which is acceptable to the fastidious palate of the invalid. It is especially from this standpoint that we regard the mutton and chicken jellies of the above manufacturer as a real success, the flavour of which, while being agreeably delicate, is still distinctive of the meat bases employed. Analyses gave the following results. Chicken jelly: moisture, 80.74 per cent.; mineral matter, 1.33 per cent. (chiefly potassium phosphate); meat extractives, 17.93 per cent. (of which 16.38 per cent. was nitrogenous matter). Mutton jelly: moisture, 85.38 per cent.; mineral matter, 1.51 per cent. (potassium phosphate); meat extractives, 13.11 per cent. (of which 12.78 per cent. consisted of albuminoid substances). They are both clear amber-coloured jellies, free from salt and burnt flavour, and will prove to be convenient restorative and stimulant agents for invalid use.

We have received, also from the same maker, two specimens of his tinned curried provisions—viz., curried fowl and curry sauce—for the excellence of which he has enjoyed a long reputation. They are free from reproach, so far as analysis goes, being evidently made from carefully selected materials, while they possess a delicate piquancy characteristic of the Indian-made dish. For export and for travelling purposes they supply a much felt want.

FACSIMILE HUMAN MILK.

(WELFORD AND SONS, LIMITED, BELGIN-AVENUE, MAIDA VALE, W.)

Although we cannot admit that the composition of this milk is literally a facsimile of human milk, still it approaches more nearly to mother's than it does to cow's milk. Our analysis was as follows: total solids, 13.08 per cent., containing fat 3.30 per cent.; mineral matters, 0.52 per cent.; specific gravity, 1032. It certainly possesses one very dis-

tinct advantage, which is that, being supplied from farms near London, the milk is dealt with when quite fresh, so that contamination and delay during transport are avoided. The specimen submitted to us was a pure and healthy product.

BURNHAM'S CLAM BOUILLON.

(SOLD BY GORDON AND DILWORTH, ST. GEORGE'S HOUSE, EAST-CHEAP, E.C., AND BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, E.C.)

The clam is, of course, a bivalve not found on English shores, but the above broth, we imagine, gives a very good idea of what its taste is like. The bouillon is a murky, opalescent liquid of saline taste, but possessing an agreeable, delicate flavour, calling very much to mind that of lobster. The following is an analysis of the sample submitted to us: total solid matter, 13.48 per cent.; organic matter, 9.12 per cent., containing 2.52 parts proteid matter; mineral matter, 4.36 per cent., of which 3.64 per cent. proved to be common salt. It will thus be seen that it contains a somewhat higher proportion of proteids which are soluble and uncoagulable by heat than does milk. The mineral matter consists largely, of course, of common salt, but phosphates occur in it as well. There is little doubt, therefore, that clam juice possesses distinct nourishing properties. We could trace no objectionable preservatives in the bouillon, or any evidence of metallic impurity, and we are glad to find that the makers recognise the desirability, or rather the necessity, of storing the broth in glass bottles in preference to metal tins.

GINGER BEER.

(HAY, REGENT'S-TERRACE, ANLBY-ROAD, HULL.)

In this well-brewed product the essence of ginger which is prepared by the above maker has been substituted for the ordinary hot-water decoction of the root. The advantage thereby gained is distinct as regards the palate, while, of course, the superfluous and useless extractives of the root which are opposed to the healthy condition of the beer are excluded. On analysis the following results were obtained: absolute alcohol by weight 0.79 per cent., by volume 0.99 per cent., being equal to proof spirit 1.74 per cent.; extractives, 11.26 per cent.; ash, 0.09 per cent. It is a pleasant beverage and free from the pungent principles of ginger substitutes, which are not infrequently met with in preparations of this kind.

AUSONIA NATURAL ITALIAN MINERAL WATER.

(COSENZA AND CO., 95 AND 97, WIGMORE-STREET, CAVENDISH-SQUARE, W.)

This table water possesses pronounced alkaline properties, and is only slightly charged with carbonic acid gas, being bottled in the same condition as it flows from the spring. It is markedly soft to the palate and yields on evaporation 95.20 grains of saline matters per gallon, composed chiefly of alkaline carbonates, with but a trifling quantity of common salt. Like most waters of its class, it possesses distinct diuretic properties, and is further claimed to be an aid to digestion—simply, we infer, on account of its acid neutralising qualities.

New Inventions.

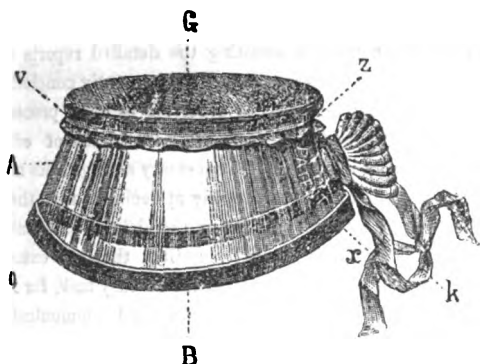
THE NARCOTISING GLASS MASK.

DR. WILLIAM VAJNA of Budapest has invented a simple and clean inhaler for the administration of anaesthetics. The inhaler, which we figure below (Fig. 1 and 2), consists of a cut-glass mask shaped so as to cover the mouth and nose. It is held in position by a glass handle which is easily grasped by the finger and thumb or two fingers. The edge of the glass is carefully trimmed, and is supplied with an indiarubber band, while the upper part of the mask has flannel stretched across it, just as a drumhead is fitted. The chloroform or whatever anaesthetic is to be employed is dropped on to this flannel. The following advantages are claimed for this mask: 1. It is easily and rapidly

¹ THE LANCET Special Analytical Sanitary Commission on Yeast Substitutes, with especial reference to the use of Alum in Baking Powders. THE LANCET, March 3rd, 1894.

cleaned, the flannel and indiarubber band are replaceable, while the glass can be boiled and sterilised with disinfectants. 2. The transparency of the mask permits of the patient's face being watched throughout the administration. 3. The anæsthetic cannot trickle down the glass, as

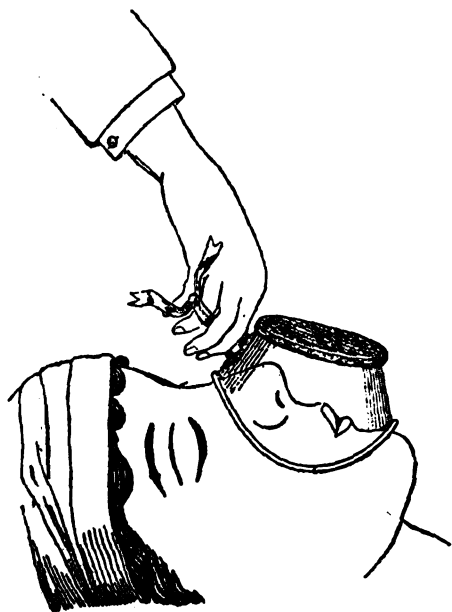
FIG. 1.



Vajna's mask. A, transparent glass mask; B, elastic band; C, flannel covering over top.

it is caught by the rim, and so cannot drop upon the patient's face or be wasted; this ensures economy. 4. It enables the administrator to carry out with accuracy the "drop method" of giving chloroform; Dr. Vajna believes in this method and advocates it in the case of persons

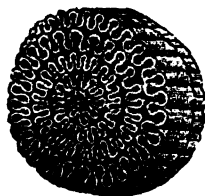
FIG. 2.



Mask held in situ.

in feeble health and for alcoholics. 5. In the event of vomiting or foul expectoration occurring during anæsthesia this mask, being so easily cleaned, possesses obvious advantages. Dr. Vajna has also provided a "rose"

FIG. 3.

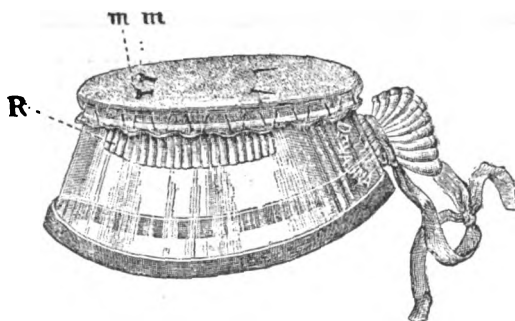


"Rose" for evaporating the anæsthetic.

(Fig. 3), which is placed on the flannel inside the mask. Bromide of ethyl or nitro when used are dropped upon this "rose" and the mask kept closely applied, ten or

fifteen grammes being the quantity of bromethyl used. If more is needed it is added from the outside. For ether the mask is said also to answer well. The "rose" being placed in position (Fig. 4), ten or fifteen grammes of ether are

FIG. 4.



Mask fitted with (R) the "rose" in situ.

poured on it and the mask carefully fitted over the mouth and nose. More may be added as required from the outside. The ether flows to the lower surface of the "rose," where it is held by capillary attraction and evaporates close to the patient's mouth. If the interior of the mask grows moist it can be wiped or the inconvenience obviated by smearing the glass with a thin film of glycerine dissolved in water. The inventor claims for this mask that it answers well for any of the anæsthetics mentioned above, and thinks it superior to most of the appliances used in the Continental hospitals. In the case of chloroform and its congeners we have found it admirably adapted for the purpose for which it is devised. In operations about the face and neck, in which it is necessary to avoid the possibility of septic infection, Dr. Vajna's mask is most valuable. Whether it can be used as successfully for the induction of narcosis by ether must, we think, be assumed with less confidence.

"RELIANCE" CLINICAL THERMOMETERS.

THE accompanying diagram illustrates a new shape of clinical thermometer which has been the outcome of practical experiments made to satisfy the requirements suggested by the authorities of St. Bartholomew's Hospital, they being desirous of having a clinical thermometer provided which would be much stronger in the constricted portion and so obviate the expense of having to replace numerous breakages. Messrs. Arnold and Sons have succeeded in making a clinical thermometer whereby the constriction is the strongest part of the instrument, so that if dropped on the floor it would certainly not break at that part of the stem. In all other ways the new form will be found to be as good as the ordinary pattern, taking a record of temperature with equal rapidity. This seems to be one of those new ideas which ought to have occurred a great deal earlier to a great many people; it is so simple and yet meets so well-known an annoyance. What sum annually is lost to our hospitals in London alone by the breakage of clinical thermometers would make an interesting calculation—the total would certainly be equivalent to a sum sufficient to support two beds, and a large proportion of these fractures take place at the constricted waist. Children also are apt to fit their teeth into the groove, with disastrous results.



THE LANCET.

LONDON: SATURDAY, JANUARY 5, 1895.

It has long been our custom when standing upon the threshold of a new year to pass in review the leading facts which affect the position of THE LANCET in its relations to the Medical Profession. Those relations are, indeed, of such a character as to demand from us from time to time an account of our stewardship. For it is our aim to make THE LANCET in the fullest sense the organ of professional opinion and the just reflection of professional sentiment—not of any mere section, however large, or of any clique, however influential; and to our readers, therefore, we incur a double responsibility. Not only do we propose to ourselves to furnish them from week to week with information and news, but also to utter and record their own feelings upon the various matters which come successively into prominence, and thus to fulfil at once the functions of eyes and ears and speaking-mouth to our constituents. The fulfilment of such an office implies the closest communication between our readers and ourselves.

There is one branch of our work to which this year we desire and intend to devote especial attention—namely, the Mirror of Hospital Practice. The brilliant results which have in recent years been reached in the direction of biological study—particularly of pathology and bacteriology—have tended perhaps to throw somewhat into the shade in what may be called “public estimation” the painstaking labours by the bedside. But those who are actually engaged in the practice of the healing art can never lose sight of the capital importance which attaches, even for purely scientific purposes, to clinical study. Comparisons are never so odious as when they are drawn between two excellent things for the purpose of disparaging one of them. We shall not, therefore, seek to determine the relative importance of research work and bedside observation; but it is perhaps not unfitting to point out here that the work of clinical observation and record is one which makes well-nigh as great a demand upon the time of the observer and upon the space devoted to the record of observations as do the achievements of the laboratory. For this reason such work has a peculiar interest for us to-day, when the rôle of medical journalism in promoting the science and the art of medicine is specially under notice. In the Mirror of Hospital Practice may be found a vast collection of what may be termed medical or surgical achievements, always significant, although removed by their rarity from the opportunity of frequent observation. But what the clinical record must necessarily, from the nature of the facts to be recorded, want in precision is to a large extent supplied by the variety of its instances; while every observation made under those conditions has the advantage of being an exact case in point, so far as its goes. Nor is this all. We make use of the material by quoting parallel cases and giving full references to similar procedures, with bibliography when it is available. Man is to the medical practitioner by far the most interesting

of all possible object of observation and he never feels quite so sure of his ground as when he is building upon this foundation.

Another branch of our work in which the coöperation of our professional brethren bears a principal, though somewhat less formal, part comes naturally to mind at the present moment, when we are awaiting the detailed reports of the Indian Medical Congress, which has recently concluded its sittings at Calcutta. In the reporting of such proceedings there is of necessity a considerable exercise of editorial discretion in the making of necessary abridgments and the choice of opportunities in the way of deciding upon the early publication of a cursory notice or the delayed publication of a full report. It will easily be credited that the exercise of this discretion is at times not at all an easy task, for it may happen that the importance of an original communication is by no means recognised, perhaps by no means recognisable, at the time when it is first made. For example, the earliest notice which THE LANCET contained—and, for that matter, any English journal contained—of the antitoxin treatment of diphtheria was comprised in a very brief notice of a communication on the subject made to us by our special correspondent at Berlin, and serves to show in a very striking way how the routine of publication secures a measure of recognition and an effective publicity for all matters of abiding interest, even although their full significance may not be recognised at the time when they are, so to speak, automatically placed on record. If, on the other hand, it were necessary to draw attention to the admitted importance of many of the addresses which have been reported *verbatim*, and with a minimum of editorial preparation, in our pages it would be easy to draw from the year just closed many striking illustrations. Thus far we have spoken of what has long been an established routine, but the problems which face the medical practitioner of to-day cannot be solved by the use of any universal formula or, indeed, by any number of familiar methods of solution. The growth of science, the spread of civilisation, changes, some for the better, others for the worse, in modes of life; all these things are constantly preparing new problems, new difficulties, new duties for the medical man. The introduction of steam at the beginning of the present century revolutionised the conditions of life, affecting all classes of society in turn and none more profoundly than the medical profession. The introduction of electricity into the arts bids fair at the end of the century to repeat the marvel. To keep the pace new appliances must be brought into use and new energy be constantly infused. Our readers are aware that some two years ago we found it desirable to establish an Analytical Laboratory under editorial supervision, and the evidences of its activity have been continually before our readers in a succession of reports. The important commission upon the Hermite process of sewage treatment—to which we made allusion in our notice of the past year last week—will be within the recollection of most of our readers. That even in this department of our work we depend upon the coöperation of our readers may be illustrated by the inquiry into the value of coffee extracts as anti-narcotics in opiate poisoning. This inquiry was suggested by a discussion which arose in our columns as to the value for this

purpose of the coffee extracts of commerce, and resulted in establishing the very satisfactory conclusion that, although the proportion of caffeine varied within considerable limits in various samples subjected to analysis, this agent was present in effective measure in all articles sold under this description.

Of the more strictly editorial branch of our work it does not become us to speak in detail, but we need not hesitate to repeat, as we have said before upon occasions like the present that it is the knowledge that we possess the confidence of our professional brethren which gives us courage to face the duties of a new year. We are by no means insensible to the responsibilities of the position which it has always been our endeavour and our ambition to fill. We have abundant reason to be aware of the labour and difficulty which it involves. But so long as we receive from the profession a continuance of the support which has been for nearly seventy-two years generously extended to THE LANCET we shall take that to be our sufficient warrant for believing that we have not failed to justify in some measure the claims which we have put forward, or to serve according to our power the generation in which our lot has been cast and our fellow labourers in the great field of medicine.

THE general interest awakened by the introduction of a method of treating diphtheria, which has at least the merit of being based on strictly scientific deductions, illustrates the prevailing familiarity with the disease in the present day and the appreciation of its dangers. Diphtheria occupies, in truth, a notable position amongst the zymotic diseases, and the fact that it shows a tendency to increase its ravages, in spite of advances in sanitation, makes it all the more necessary that the means of combating it should be extended. It has of late years received abundant attention on all hands, but the conditions of its origin have yet to be accurately defined. Thanks to the labours of many epidemiologists, there is much material gathered to frame its history on the large scale, to prove its infectivity, and to suggest the adoption of means to prevent its spread. But there are many lacunae to be filled, as, for instance, its relationship to allied affections of the throat, its possible connexion with animal diseases, its precise association with insanitary conditions of the "pythogenic" class, together with the problems that arise in respect to outbreaks in small communities in rural districts as compared with those arising in densely populated towns. These are questions of high importance; but they concern rather measures of prevention than those of cure. For the latter we must look—as alone we should ever look if medicine is to have a scientific basis—first to the pathological facts that have been slowly garnered concerning the disease. For if we can confidently affirm that we know its nature there is room to hope that means will be found to combat it. And it is mainly because this sero-therapeutic departure claims to be founded on the true conception of the nature of diphtheria that it has been received with so much confidence.

The history of the growth of pathological doctrine regarding diphtheria—in other words, the gradual building up of

a rational explanation of its nature—is one of the most interesting examples of the evolution of ideas that medicine can offer. In the early days of this study diphtheria was regarded, it is true, as a specific disease, but it was ranked with fevers as being primarily a "constitutional" affection, having as its especial local manifestation the membranous inflammation of pharyngeal and laryngeal mucous membrane. It was pointed out that the "membrane" re-formed if it were stripped off, and that any raw surface in a diphtherial patient might become coated by this deposit. The peculiar character and extent of this inflammation were studied and the contrast with "croup" emphasised, so that the terms "croupous" and "diphtheritic" came to be applied to inflammatory conditions of mucous surfaces quite independently of the disease diphtheria, standing merely as pathological terms. We need not here reopen the question, so long and ardently discussed, as to the relationship of croup and diphtheria, but we can only express regret that the terms were introduced into pathology as they were. That the disease diphtheria was one which affected the whole organism was evidenced by its concomitant fever, albuminuria, and the sequential paralysis; but that there were special dangers attending the local inflammation, and in particular from its extension to the air passages, was recognised in treatment long before the alternative conception of its nature was adopted. Thus, side by side with general tonic and restorative remedies, local applications, some of great severity, were made to the throat to arrest if possible that spreading of the inflammatory exudation which was so grave a source of danger. Gradually, however, the alternative and truer idea of the disease arose, and was found to be in harmony with the facts, clinical and pathological, which had accumulated on all sides. This was the view that the throat affection which marked the onset of the disease merely indicated the place at which the virus entered the system. Many years ago the possible source of this virus being fungoid arose; but it was long before any conclusive proofs could be adduced of the real nature of the parasite concerned. Even before the bacillus identified by KLEBS and by LÖFFLER had been admitted as the specific agent minute and careful histological research had shown that the tissue changes in various parts and organs of the body were identical with those present in the submucous layers of the inflamed pharynx; and the hypothesis of a virus formed at the seat of entrance and absorbed thence into the blood was adopted long before bacterial toxins were thought of. The rationale of prompt and early local treatment was thereby established, whilst internal medication and supporting measures were justified as aiming to sustain the organism under the depressing influence of the general intoxication. When, finally, it became clear that the specific microbe could be identified and isolated, and that its metabolic products could reproduce in animals the essential lesions that characterise the human disease, the finishing touch was put to the juster comprehension of its nature. But bacteriology has not stopped here; it has shown that the diphtherial exudate contains other organisms besides the specific bacillus, and we have yet much to learn concerning the part they play in the various manifestations of diphtheria. That they are not essential

to the production of its main phenomena—e.g., the cardiac failure, the albuminuria, and the later-*arising* paralysis—seems clear; but they may, and probably are, responsible for modifying the character of the local inflammation and for the development of septicæmic symptoms, which sometimes complicate the disease. The supervention of laryngeal obstruction has no specific character; it is merely a mechanical effect, due to the accident of the bacillary invasion of the respiratory passage, either in direct extension from the naso-pharynx or independently of any implication of the latter.

It is hardly necessary to dwell on the grounds upon which the new "serum therapeutics" are based. They are so recent and so fresh in memory as to need no recapitulation. Suffice it to point out that the method is strictly in accordance with the prevalent acceptance of the nature of diphtheria and with the facts concerning the antagonism to bacterial poisons that have been established by laboratory research. If the results hitherto obtained are confirmed by extended trials the gain to our power over disease will indeed be great. We may look for even more brilliant results if there be no flaw in the chain of reasoning which has led to the advocacy of the method. For should this be correct, we have in these "antitoxins" the *specific* remedies which have been desired since medicine emerged from pure empiricism. The present methods may be crude, and we may look forward hopefully to a time when they will be more refined; but unless the whole fabric of bacteriology is unsubstantial and visionary there is reason to believe that a path has been opened in treatment which may lead to our mastery over those acute infective diseases whose virulence has wrought more havoc on the human race than can well be estimated.

The time has arrived when the method will be tried on a large scale in this country. That it is not an easy question to determine must be obvious to all. It involves, amongst others, questions of diagnosis, of dosage, of effects due to the remedy *per se*, and of the right estimation of its results as regards the natural course and termination of the disease. An inquiry, to be thorough, must enter as fully as may be into the clinical and pathological history of diphtheria, not only during the period in which the method is being applied, but over a sufficiently long period prior to this. Of the method of study of its effects in individual cases the admirable paper brought before the Clinical Society of London by Drs. WASHBOURN and GOODALL and Mr. CARD¹ offers a good example. Considering the importance of the matter at issue, we can well afford to wait for months, or even years, for a definitive decision on this question. We are not singular in this opinion. It has been expressed by men of authority elsewhere, who have deprecated hasty conclusions both for and against the new treatment, which in this impatient age men are so apt to form.

THE movement in favour of hospitals for poor phthisical patients has made some progress during recent years in this country, and also in Scotland and Ireland. The nation is, however, still far from having grappled courageously or suc-

cessfully with the very difficult questions which arise in this connexion, and which press urgently for solution. When we reflect upon the fact that about one person out of every seven who die succumbs to phthisis, and think of the hundreds of thousands of phthisical patients who must exist in these islands, and of the paltry number of beds available in the different hospitals for the treatment of the disease, we feel that the machinery of charity breaks down hopelessly at one of the most vulnerable points of the body politic. Yet it would be foolish to ignore the palpable fact that hospitals for the treatment of phthisis stand on a very different footing from hospitals devoted to the treatment of disease in general, or to deny that the limited support which they have hitherto obtained is, if not defensible, at least quite intelligible. To begin with, the disease is popularly regarded as incurable, and there is a widespread feeling that money spent in organising hospitals for its treatment brings no adequate return. Then the treatment of phthisical patients, if pursued according to modern ideas, is more than usually expensive, owing to the generous dietary which is a *sine quâ non*, and many people, sufficiently well-disposed, prefer to give their charitable contributions to objects where economical management is more practicable than it is in the direction of hospitals for phthisis. The frequency of relapses in patients discharged from such hospitals is another explanation of the not uncommon prejudice against them. It is, moreover, open to question whether hospital treatment is of much avail in arresting the progress of the disease where climatic conditions are unsuitable; but, compared to the homes they come from, the phthisical poor gain the benefit of attention and comfort. We think it important to inquire what may be fairly expected from such hospitals, and what views regarding them should be impressed by the medical profession upon the charitable public.

First, we think we are quite justified in asserting that in a certain, perhaps small, proportion of cases of phthisis complete recovery may be fairly expected under favourable conditions. Pathological and clinical evidence both favour this view, but, on the other hand, in any given case of developed phthisis the prognosis must be admitted to be bad. Without unduly pressing the evidence in favour of the more hopeful view of this subject, we have ample ground for the assertion that a certain proportion of properly selected incipient cases will be cured by the carefully regulated hygiene and treatment carried out in a hospital for the treatment of the disease. This is the crucial point on which a large amount of difference of opinion will be found to exist both within the ranks of the medical profession and among educated laymen. Without attempting to argue this question in any adequate manner, we may remind those who dissent from the view above enunciated that it is quite common to find evidence of old-standing and obsolescent tuberculous disease of the apex in patients dying as the result of accident or acute affections. On the clinical side, every physician sees numerous cases of patients who had hæmoptysis and were believed to be "in consumption" in youth, but who, nevertheless, completely regained their health. This, then, should be the first line of defence on behalf of these institutions—viz., that as a matter of fact they do effect some permanent cures. In the second place, we may fairly say that there

¹ THE LANCET, Dec. 22nd, 1894.

are many cases of well-developed but quiescent phthisis where complete recovery is, indeed, impossible, but where some weeks or months of careful treatment in a suitable institution may enable the patient to return to his family and his occupation and for a time discharge the duties of a useful member of society. Such cases are not rare, and no one with much special experience in this department will question their existence. Let it be granted that in such cases relapse is the rule and that the period of useful work is generally short, yet in so discouraging a disease we must for the present be content with small results in treatment. It would be bad philosophy to throw away these small results through impatience or discouragement.

Lastly, hospitals for phthisis have a work to do in connexion with obviously hopeless cases. There are none of the numerous complications of advanced phthisis which do not admit of some palliation and relief, and when we think of what these poor patients suffer in their small, ill-ventilated, and uncomfortable homes our appreciation of even the least hopeful phase of the work of these hospitals will probably rise. It is, however, a very serious question whether advanced and moribund cases should be treated in the same institutions as incipient and hopeful cases. Such a conjunction of cases is beset with many disadvantages, and it may be in the probably distant future that hospitals for the treatment of the malady will be confined to incipient cases, and that advanced cases will be relegated to hospitals for incurables.

An argument for the existence of these hospitals that is likely to gather weight as years go on is the necessity for such institutions in order to segregate the patients and prevent the spread of disease by contagion. Here, again, it is most important not to strain the facts or to overstate what is a sufficiently strong case. We think there is evidence for regarding phthisis as a contagious disease, but it is evident that it is only very feebly contagious, and only contagious under special and exceptional conditions. Beyond this we do not feel it possible to go at present, but, even taking this very moderate view, we can find in it substantial ground for strengthening the argument for the existence of hospitals for phthisical patients. The experience at present being gained in Great Britain, on the Continent, and in America regarding the best methods of conducting such institutions is sufficient to afford valuable guidance for the future. These hospitals should, when practicable, be in the country and surrounded by ample grounds. The sites should preferably be either on elevated ground or adjoining the sea or among pine forests. The soil should be dry and porous. There should be ample access of sunlight and adequate shelter from cold winds. Sheltered level walks are very desirable.

In this age of associations it is not surprising that we find a proposal made for the formation of an "Association of Qualified Assistants, Junior Medical Officers, and Locum Tenens." The number of gentlemen comprehended in one or other of these three classes must be considerable, and their interests need to be vindicated like those of any other body of men in a somewhat weak position—weak, firstly,

in the sense of being in an essentially subordinate position, and, secondly, in being isolated and unorganised. The more the employment of unqualified assistants is decried and discouraged the more does the position of the qualified assistant rise in dignity and importance, and the more natural is it that these gentlemen should have some common bond of sympathy and, if need be, some machinery for combined action. The action of the General Medical Council in disapproval of the employment of unqualified assistants in any responsible capacity has tended much to quicken interest in this subject on the part of both principals and qualified assistants. We shall therefore look with interest to the response to our correspondent's letter proposing the formation of an association of qualified assistants. The proposal is not one to be rashly disposed of. It is a subject which should be fully discussed and all the objections to it, as well as the arguments for it, should be fairly stated. Principals need not see in such a proposal anything unfriendly to them. All other means for acquainting them with the views of the General Medical Council on the subject of unqualified assistants have been only very partially successful. There is reason to believe that in many districts this is still the rule. And year after year practitioners have to be removed from the Register who avow that they have never heard or seen anything of the limitations imposed by the Council on the use of unqualified assistants. One effect of an association such as that proposed would be to give accurate information on the subject and on the extent to which the limitations of the Council are observed. It would be an error to promote such an association in any hostile spirit, save in hostility to practice by unqualified persons. The demand is more and more that all attendance shall be by, or under the immediate superintendence of, registered practitioners. It would seem that with the solitary exception of the employment of students in their fifth year of education as pupils of a practitioner recognised by the examining authorities and under his supervision, all unqualified assistance is discouraged by the General Medical Council. Medical principals must therefore conform to this. If it involves more expense on their part they must recoup themselves. The public is to be protected, and the public must pay for the protection and for the better service it involves. We have said enough to show that there is some reason in this proposal; but we are not blind to the difficulties of carrying it out or of creating an association that would deal effectively with the evils which it is designed to meet. Qualified assistants have little time and not much money to promote such a big reform as that contemplated or to bring individual cases before the General Medical Council; but they can contribute their share to the general elucidation of a subject which is now very much to the front, and in any moderate and judicious proposals they would have the concurrence of their principals and of many other principals besides.

THE British Medical Benevolent Fund has received a legacy of £500 under the will of the late Mr. F. M. Stone.

Annotations.

"Ne quid nimis."

THE NEW YEAR'S HONOURS TO THE PROFESSION.

GENERAL satisfaction has been felt throughout the medical profession at the announcement that the Queen has been graciously pleased to create two new medical baronetcies and to select for the honour Dr. J. Russell Reynolds, the President of the Royal College of Physicians of London, and Mr. Erichsen, a past President of the Royal College of Surgeons of England. Names, from an official point of view, more representative of the two great divisions of the healing art could not have been well suggested, and personalities more eminently fitted to worthily grace the honours cannot be well imagined. It is not our intention here to recapitulate the claims either of Sir John Russell Reynolds or Sir John Eric Erichsen to the Royal recognition which they have just received; we only desire to echo what we know is the sentiment of the profession at large by assuring them that Lord Rosebery's recommendation would have been the recommendation of all their professional brethren, and that we are glad to know this fact and to record it. One small reflection occurs to us, and, as medical journalists in an age prolific of writing, we think it will not be out of place to make it. Both the new baronets are men of singular literary capacity. To the lucidity of Erichsen's comprehensive and closely written work on surgery generations of students have owed their theoretical knowledge of their science; while Reynolds's *System of Medicine* was at its issue acclaimed in our columns and universally the standard English text-book of medicine.

"THE STRUGGLE FOR THE LIFE OF OTHERS."

DR. CHRISTOPHER MARTIN recently delivered an interesting address under this title at Birmingham before the Queen's College Medical Society. All who have impartially studied the question are now agreed, he said, that man, in common with the lower animals and with plants, has undergone development in accordance with the laws of evolution. In this developmental process two great influences have been at work: (1) the struggle of each organism for its own life, and (2) its struggle for the life of others. The first of these was recognised by Darwin, Wallace, and Spencer, who formulated the law of natural selection by the survival of the fittest in the struggle for existence. They saw the dark and selfish side of creation and nature's disregard of suffering. But Professor Drummond, in a recent work,¹ has pointed out that from the beginning another and a holier influence has also been in operation—"the struggle for the life of others." In many instances it might be termed "labour for the life of others," the spirit of love in nature. The two fundamental processes of life are nutrition and reproduction. The selfish struggle for existence arose out of the necessity of fighting for food, and is, therefore, directly related to the function of nutrition. The unselfish struggle for the life of others arose out of the necessity for perpetuating the species; it is, therefore, the resultant of the function of reproduction. Throughout all animated nature the process of reproduction involves more or less self-sacrifice on the part of the parent organism. In some of the primitive annelida the mature female dies in liberating the ova. Among the birds the hen laboriously warms her eggs with the heat of her body until the chick comes forth, while the male defends his home from attack and gathers food for his young. These feathered parents do not cease their ministrations till their progeny have

learned to fly and forage for themselves. What a tremendous power this struggle for others has exerted in raising mankind out of the beast. According to Professor Drummond the chief factor in this supreme achievement has been the evolution of the unselfish mother. When savage man lived wild in the woods as the ape does now, suppose that two mothers—one selfish and the other unselfish, each with her helpless offspring—were attacked by some common foe; the former flies and abandons her young; the other, who has learned to love her offspring, stays to fight for its precious life or carries it off to a place of safety. The child of the selfish mother perishes, whilst that of the unselfish one survives. The good qualities of the nobler parent are inherited by the surviving child, and so the spirit of self-sacrifice grows from generation to generation. Compared with the mother the father plays but a secondary part in the struggle for others. The dawn of the paternal instinct appears in fishes, in many species of which the male prepares a retreat or nest for his mate to spawn in and assists her in guarding the ova. Among many species of birds a kind of temporary family life is established during the breeding season, and the male takes part in the duty of rearing the young. Among the mammals there is no trace of family life until the human savage is reached. The males of the subordinate mammalian genera fight for their own life and sustenance and for the satisfaction of their animal desires, but they do nothing on behalf of their progeny. According to Westermarck it is the abolition of the physiological pairing season which has effected this change in the case of the human being. This led to the formation of permanent instead of transient love relationships between man and woman, and, family life having been thus established, the foundations of civilisation were laid. Out of the family rose the tribe, and out of the tribe the nation.

THE HEALTH OF FLORENCE.

WHETHER the Florentines are or are not justified in their confident expectation that the Queen of England will, after her *villeggiatura* in Nice, spend the remainder of the spring in their own beautiful city, we may at least congratulate them on the improved sanitation they have been instituting in that belief. Exceptionally free from zymotic disease as Florence was last winter and spring, her record is even more reassuring for the season now passing. True, the prolonged *tramontana* has levied its tribute on the aged and infirm, and the deaths of prominent citizens among the native and foreign population have once more attested the rapidly fatal course acute pneumonia may run. But excluding that source of disease and death as common to most southern cities at the transition from autumn to winter, we can find as yet in the health returns of Florence nothing but clear and cogent proof that the low mortality of the past year has been more than maintained. A death-rate of from 17 to 18 per 1000, and that, moreover, during months when infectious disease is most diffused and most virulent, is what very few continental cities can boast. The fact, indeed, is one among many which explains the popularity of the Tuscan capital as a winter city for the English-speaking resident. Florence can point to a greater number of such inhabitants than any European centre south of the Alps—indeed, in proportion to native population, she has a more numerous contingent of English-speaking "strangers within her gates" than any other of her continental sisters. Her natural, historical, and artistic attractions, above all, the charm she possesses as Italy's "Modern Athens," might explain her having as large a migratory population as Rome, for example. But only her salubrity, over and above those attractions, accounts for her superior Anglo-American population, whose residence within her urban and suburban bounds extends not to a few weeks,

¹ The Ascent of Man.

but to many months, and that year by year. Fully alive to the advantages she secures by the presence of such a society, she is at pains to uphold the sanitary conditions under which it remains and multiplies. A *communiqué* from her hygienic bureau within the last few days of 1894 has, from this point of view, a significance of its own. "Except the month of January"—so runs the communication—"which owed its slight increase of mortality to a brief and transient visitation of influenza, all the rest of the year now closing showed, if anything, a diminution in the death-rate as compared with the year preceding, which, as regards the public health, was in all respects excellent. The later months of 1894 have registered a marked decrease in the fatal cases usual at that season; while not less notable has been the diminution throughout the whole year in the death-rate specially due to infective maladies. These, in fact, have touched a figure so low as to have fallen short of all expectation or forecast." An inspection of the monthly bulletins issued by the communal board of health will be found to confirm this reassuring statement, and we have only to add our congratulations on the result, and expression of the hope that the sanitary efficiency which explains it will continue unimpaired, even if Florence is, after all, disappointed in her expectation of once more welcoming Queen Victoria as her guest.

DIPHTHERIA IN LONDON.

DIPHTHERIA in London has in the last two weeks shown a disposition to decline both in amount of attack and in severity of type. In the four weeks of November the number of notifications in London was 911; but in the same period in December the notifications fell to some 780. The deaths, however, were not very different in the aggregate in the two periods—namely, 188 and 181; but in the last four weeks a large decline has been witnessed, the numbers having been 57, 53, 36, and last week 35, or 20 per cent. of notified cases. The 71 deaths of the last fortnight of December included 4 in Lambeth, 5 in Battersea, 7 in Greenwich, and 6 in Islington sanitary areas. Of the total, 43 were in children aged from one to five years, and other 23 in young persons under twenty years of age. The deaths of last week were just equal to the 'corrected average. The admissions to hospitals of the Metropolitan Asylums Board were 75, against 104, 111, and 80 in the three weeks preceding; and similarly the patients remaining under treatment last Saturday were 521, against 514, 521, and 510. In Greater London there were 15 deaths from diphtheria in West Ham alone during the latter half of December.

CHARITABLE DONATIONS IN 1894.

ACCORDING to the *Charity Record*, the charitable bequests made during the past year have not been as numerous or large as in 1893. Nevertheless, it is estimated that, for medical and other charities for giving actual relief, something like £3,000,000 has been subscribed or bequeathed during the year. This does not include, of course, what has been given for missionary and educational work. The sums devoted to these latter purposes are much larger, and the claims of education and of religious propaganda contribute undoubtedly to considerably decrease the amount that would otherwise be available for the relief of actual physical suffering. The greater part of the money bequeathed to other than religious and educational institutions has been left to hospital and convalescent homes. Thus, to take only the larger sums, Mr. Barbour, formerly M.P. for Paisley, has given £15,000 to build an infirmary for that town; Baron Hirsch has subscribed £15,000 to the London hospitals; the Earl of Leicester, by giving an additional

£5000 has brought his endowment of the Fletcher Convalescent Home of Norfolk up to £20,000; and Messrs. Heath have subscribed £20,000 to the North Staffordshire Working Men's Convalescent Home. Mr. Samuel Weston of Manchester has left to the charities of that town the munificent sum of £115,000. Of this legacy, the Royal Infirmary will get £50,000, and the Salford Dispensary, the Deaf and Dumb Schools, the Blind Asylum, St. Mary's Hospital, and the Convalescent Hospital will receive £10,000 each. Mr. John Clark gives the Paisley Infirmary and other institutions £28,000. Messrs. Schlizzi leave to London, Athens, Constantinople, and Island of Scio charities £20,000. The trustees of the David Lewis bequest offered £70,000 to some Manchester hospitals so that a maternity hospital might be built. Miss Rolleston left £20,000 to metropolitan charities, and Mr. Matthew Honan of Cork, £48,000 to the charities of that city. Mrs. Elizabeth Allan has bequeathed £60,000 to be distributed among the London hospitals, and Miss Wells has left £12,000 to the Lincoln Hospital. In concluding its long list of donors and benefactors, the *Charity Record* mentions the Metropolitan Hospital Sunday Fund, and estimates the amount obtained as £34,000. This is nearly £10,000 short of the sum actually collected; namely, £43,679.

THE RELATION BETWEEN STERILITY AND UTERINE FIBRO-MYOMATA.

THE influence of fibroid tumours of the uterus on conception, pregnancy, and the puerperal state has been recently considered by Hofmeier in a paper an analysis of which appeared in the *Annales de Gynécologie* towards the end of last year. The question as to whether there is any etiological relation between fibroid tumours of the uterus and sterility, either absolute or relative, is one of considerable interest. The current impression undoubtedly is that the relation between them is causal rather than accidental. As in the case of so many other accepted views, the accuracy of this one is now called in question, and a careful consideration of the statistical evidence adduced by Hofmeier makes it clear that, even if we cannot unreservedly accept his conclusions, there is at least sufficient ground for doubting the views hitherto commonly accepted as correct. Hofmeier's figures are based on a total of 213 cases of women with fibroid tumours of the uterus. A review of the details in this series of cases enables him to say that about 25 per cent. of women affected with uterine fibroids and seeking medical treatment are not married, 75 per cent. are married, and of these from 25 to 30 per cent. are sterile. Now, before drawing any conclusion from these figures, it is necessary to know what the percentage of sterility is among the whole class of married women. Probably further information is needed before we can state this exactly, but in the meantime, if we take the percentage of sterility among married women generally, as given by Matthews Duncan, at about 15 per cent., it will be seen that while there is a difference between this percentage and the percentage of sterility among married women affected with uterine fibroids, it is not so great as one might have expected. Still, at first sight—and we are not prepared to say at present that the conclusion is wrong—these figures would seem to justify the opinion that women with fibroids are about twice as likely to be sterile as other married women. Looking carefully into the matter it appears, however, that there is some reason to doubt whether the sterility should be ascribed to the presence of fibroids, or to some other cause. The duration of the sterility in each case, and the date of the first appearance of the symptoms of the fibroid tumours, are important points requiring consideration. Thus the average age of thirty-eight married sterile women was 41.4 years, and the duration of the sterility about sixteen

years. Here, if the sterility is to be put down to the presence of fibroid tumours, we should have to suppose that when the patients were about twenty-five years old the tumours were already exerting an influence unfavourable to conception; whereas, clinically, we know that uterine fibroids are not commonly met with till later in life. It is, however, conceivable that they might at an early period of their development, before giving rise to symptoms, and before attaining a size that would enable them to be recognised clinically, nevertheless have an effect in rendering conception less likely to occur. It should be mentioned that inquiry showed that in some of the thirty-eight cases referred to the patients had been under gynecological treatment ten or fifteen years before the fibroids appeared. We cannot follow the writer's thoughtful and suggestive paper further in detail, but we may just say that he considers that in most sterile women with fibroids the sterility must not be ascribed to the presence of the fibroids, but to some other cause, chiefly because the sterility almost always dates back to an age when in all probability there were no fibroids present. We have indicated a possible fallacy in this argument above. While the writer does not go so far as to say that fibroid tumours in themselves favour conception, yet in so far as their presence frequently prolongs the period of activity of the whole generative apparatus, and especially of that of the ovaries, they do in that sense increase the chance that pregnancy may occur.

SIR J. RUSSELL REYNOLDS ON THE MEDICAL STUDENT.

MAN changes, but changes slowly. If his "thoughts are widened by the process of the suns" they are only greatly altered where perception changes with increasing knowledge. The change in human nature is too small, since Socrates and Plato lived and saw and thought, to make that which they said less precious than any words that have been uttered in the centuries since they lived. Medical education has progressed with long strides during the last thirty years, but medical students are very much the same. Their tendencies to work or idleness are only altered as far as external forces have been organised to help the one and to repress the other, and any difference that can be discerned is small, and rather one of aspect than reality. As far as we are aware, the characteristics of the medical students who surround the bedside have been once, and once only, made the subject of a bedside lecture. It was not, indeed, given in a hospital ward, but in a theatre, yet its most appropriate title would be "A Clinical Lecture on Medical Students." Thirty-one years have passed since this lecture inaugurated a winter session at University College and was published in THE LANCET. We can do no greater service to the profession, to those who are or have been students, and we believe we can give them no greater pleasure, than by reproducing to-day the address which we printed on Oct. 3rd, 1863—reproducing it when all are recognising the justice of the honour bestowed upon the lecturer. And in going so far out of ordinary routine as to reproduce *verbatim* an address delivered as many as thirty-one years ago, we may be excused if we dwell a little forcibly upon our reasons. They lie in the words of the lecturer. Behind the graceful touch which sketches salient features with such accuracy can be discerned the strength of deep conviction, while confident precision is wedded to the apt use of phrases. Nor is this all. There is a deeper meaning which can escape no teacher and no one whose later experience throws into light or shade the memory of his student life. The types of student here portrayed are types of average aggregates, but the truth to nature of their features is conspicuous. They present the

lineaments known so well to every one who has had to observe the actual specimens. By most, indeed, examples will be remembered which conform almost perfectly to the descriptions. The question they suggest—and this is the deeper meaning to which we refer—is this: Is it not possible to do more to help the student who needs guidance? The need for discernment of personal character and for appropriate influence and direction are great in the case of many varieties of the type of "O. Goodman," and no less so in that of his brother, and of the very different "David." How many men there are who would do well and now do not if only they were observed, discerned, and watched and guided for a few months. The frequent examinations now adopted afford the means to a certain extent, but the work demands a special perseverance not always available. Yet such help should not be hopeless of attainment. With it much that is good would be made better, much that is failure would be changed into success, sometimes into signal excellence. No more forcible and no more eloquent indirect assertion of this need has, perhaps, ever been presented than the lecture we re-present to-day—to readers of wider knowledge and, let us hope, of greater wisdom, who can thereby but feel more keenly alike its force and power and beauty.

THE DUTY OF RAILWAY SURGEONS.

AN interesting paper was read by Mr. Clark Bell before the Section on Medico-Legal Surgery of the Medico-Legal Society of New York on Nov. 15th, 1894. The subject matter was the True Field of Duty of the Railway Surgeon. Mr. Bell incorporated with his propositions the written opinions of several leading American railway surgeons upon the line of action that a railway surgeon should take. In order that there may be no misunderstanding we may premise that Mr. Bell's paper seems chiefly to refer to cases in which the medical officer of the company is charged with the treatment of the injured person, who is in most instances an employé of the company. We entirely agree with Mr. Bell's contention that such officer should under no circumstances take part in the settlement of claims for compensation beyond drawing up an honest report of the condition of the person injured; and in common fairness a written copy of such report should be delivered to both parties. He ought on no account to advise as to the amount of compensation; for, however great his integrity and sense of justice might be, it would always be open to the construction that, to say the least, he was actuated by unconscious bias in favour of the company who employed him. The written report should be made soon after the alleged injury, and should anything further of importance transpire relative to the inquiry a supplementary report should be given. If this course were adopted either party, if dissatisfied, might call in an independent medical man. Moreover, such reports could be used as evidence at the trial of an action, and hence there would be the strongest motive for the railway surgeon not only to act fairly, but with due care. We repeat, that in cases like the above the surgeon should take no part in negotiations for a monetary settlement of a claim. With rare exceptions, railway companies in this country have permanent surgical officers of known repute and ripe experience, whose duty it is, not to attend employés, but to advise in cases of accident to passengers. Here his services are exclusively on behalf of the company. We have on a former occasion, referred to by Mr. Bell, asserted that a railway surgeon should not use his influence to induce a person to settle a claim, and, in fact, should never propose a settlement. We are still of opinion that it is perfectly equitable and consonant with the due discharge of his professional duty to adjudicate an award in conjunction

with the medical man on the other side, provided that both parties to the issue mutually agree upon such reference. If no settlement is arrived at it is understood that the negotiations were without prejudice. In such an event it is advisable that the particulars should not be divulged.

A STORY OF A HALFPENNY.

THE story in *Pickwick* of the boy who swallowed a bead necklace and rattled audibly, even when wrapped in a watchman's coat, is fairly equalled by an account that has just reached us of another boy who swallowed a halfpenny eighteen months ago. In spite of diligent search no trace of the coin could be found, and the boy himself gave no indication of having withdrawn a coin of the realm from circulation. He remained in good health, we are told, until a few days ago, when he had an attack of pneumonia, and during a fit of vomiting the coin reappeared. If the boy had not suffered in the interval the coin had; it was "very green," and the "engraving and date were very much worn." This is unfortunate, as it leaves an element of uncertainty in the case.

THE EVIDENCE OF THE SENSES.

MANY writers have at various times been attracted by the delightful absurdities which are often revealed by a calm and dispassionate investigation into the value of evidence in medical matters. There is a certain satisfaction in laying bare erroneous observations and in tracing the primary mistake which has led to the formation of false doctrines. There may even be pleasure in refusing to shout with the crowd, and in proving later that there was really no cause for excitement. But when there has really been a cause, and it has been misinterpreted by the multitude, how delightful to step in and set the world right, if only one can be sufficiently certain of one's own observations. It is of all things most difficult to distinguish between what we observe and what we think we observe, and this subject has seldom been developed with greater wealth of illustration than in the address by Mr. Bland Sutton, which will be found on another page (p. 12). His accounts of the acardiac fetus, of the button in the calculus, and of the marooned men are sufficiently grim and sufficiently neat to bear reproduction in many medical post-prandial discourses, even though they have a certain family likeness to the masterly deductions of the immortal Sherlock Holmes. To medical journalists it is a little depressing to find Mr. Bland Sutton considers that the "enormous number of incomplete records contained in periodical medical literature" is a source of much unsound knowledge; we venture to hope that in many cases the records are only "incomplete" because the patients recovered and the opportunity of confirming the diagnosis by post-mortem examination did not arise. Still, facts are facts, and even clinical observation, as the term implies, rests on the evidence of the senses.

TWO CASES OF ANEURYSM.

WE publish to-day two cases of aneurysm, each of which in its way is of special interest. Deputy Inspector-General Reid, whose name is associated with a particular method of treating external aneurysm, records a very successful case of popliteal aneurysm rapidly cured by the use of the elastic bandage. The special interest of this case lies in the fact that there was an aneurysm on each popliteal artery, and that they were successfully dealt with by different methods of compression—one by Carte's compressor, the other by Reid's method. He is of opinion that not only was his method more rapidly successful than the other, but that the cure

was obtained with permanent obliteration of a shorter length of the main artery. The fact is indisputable, but it is by no means clear that the responsibility for this rests with the treatment used. It is certainly quite unusual for the cure of a popliteal aneurysm, however brought about, to lead to obliteration of the whole of the superficial femoral artery, and it is to be borne in mind that the right aneurysm was distinctly smaller than the left; its cure would, therefore, take a shorter time to reach its final stage, and the consolidated sac would form a smaller mass than on the left side. Since the great improvement in the method and materials used for ligation of arteries, Reid's treatment and all other forms of compression have been much less employed. This case is an admirable example of the successful use of the elastic bandage, and its success was largely due to the care with which every detail of the treatment was carried out, particularly the protection of the clot. Brigade-Surgeon-Lieutenant-Colonel Stevenson's case was still more important. It was a case of a large aneurysm of the superior mesenteric artery, which was increasing rapidly, and in which surgical interference was thought to be necessary. Moore's method was employed, and about two yards of steel wire were passed into the sac. Unfortunately, considerable hæmorrhage subsequently occurred from the puncture in the sac, and the man died of syncope. This was in all probability a hopeless case. It would have been impossible to obtain cure of the aneurysm without obliteration of the superior mesenteric artery, and this would have caused gangrene of the small intestine. The introduction of steel wire into the sac of an aneurysm has not been a successful plan of treatment, and we think it will soon be abandoned altogether, for when cure is compatible with life, an aneurysm can generally be dealt with by other means.

'THE LANCET' RELIEF FUND.

THE sixth annual report of THE LANCET Relief Fund, together with the balance-sheet for the year 1894, will be found on p. 59. It will be seen that in the course of the year the sum of £344 has been granted in relief, by way of gift or loan (without interest), according to the exigencies of the several cases relieved, which numbered in all twenty-six instances. The Almoners have found it necessary again in their report to draw attention to the objects of the Fund; and the fact that as many as thirty applications proved upon investigation to be founded upon circumstances of a kind which do not fall within the defined objects of the Fund shows that no small degree of misapprehension still exists in reference to this matter. We make no apology, therefore, for referring in this place to the passage in which the Almoners request those readers of THE LANCET who may be asked to endorse applications before complying to peruse the application form and explain the precise object of the Fund to the applicants, especially to those whose cases do not come within the purpose for which the Fund has been established. In pressing this request upon our readers we are not actuated by any wish to avoid the labour and the pain of considering such applications and replying in the sense of refusal to the applicants, but our desire is, as far as possible, not to raise any unfounded hopes with their resulting disappointment. It is our pleasant duty in this connexion to express, in the name of the beneficiaries of the Fund, and in our own behalf, a warm appreciation of the services which have been rendered by the Presidents of the two Royal Colleges and of the General Medical Council in the capacity of Almoners of the Fund, and also to Sir Henry Pitman, who has again acted as its honorary auditor. It is not necessary to add that Sir J. Russell Reynolds, Mr. J. Whitaker Hulke, and Sir Richard Quain are men

upon whose time professional duties make a large demand, and that the performance of their voluntary task is not only valuable for the benefit which it confers upon some of the more unfortunate members of the professional brotherhood, and graceful for the evidence which it affords of a friendly feeling that raises the profession into a fraternity, but is costly to them for the personal sacrifice which it involves and therefore under every point of view worthy to be offered upon the altar of that "goodwill among men" which the season now so swiftly passing away has brought once more to mind.

DEGENERATIONS AFTER CEREBELLAR LESIONS.

A RECENTLY ISSUED volume of the Proceedings of the Royal Society contains an abstract of an important paper on this subject by Dr. Risien Russell. The object of the investigation was to determine which paths degenerate after ablation of one lateral lobe of the cerebellum and after extirpation of its middle lobe. After the former operation degeneration took place in all the peduncles on the side of the lesion and in the superior peduncle of the opposite side, but no degenerated fibres were found in the middle or inferior peduncles of the opposite side. As regards the degenerated fibres in the peduncles on the same side, those in the superior peduncle decussate in the posterior quadrigeminal region and pass to the opposite red nucleus and optic thalamus. None could be traced beyond this point. The degenerated fibres in the middle peduncle were found to pass chiefly to the grey matter on the opposite side of the pons. No support was found to Marchi's observation that degenerated fibres pass from this peduncle in the fillet and posterior longitudinal bundle to the corpora quadrigemina and periphery of the antero-lateral region of the spinal cord, and that some pass to the corpus striatum by the pyramidal tract. Some degenerated fibres, however, were found passing between the pyramidal bundles. Of the fibres which degenerate in the inferior peduncle, the majority occupy the lateral region of the medulla, becoming more and more scattered as they pass downwards. Below the superior pyramidal decussation the degeneration is represented by merely a few scattered fibres occupying the antero-lateral region of the cervical cord. Beyond this none can be traced. Degenerated fibres were found to pass from this peduncle to both inferior olivary bodies, although no well-marked tract to the opposite inferior olivary body, as described by Ferrier and Turner, was found. But Dr. Russell's results are in agreement with those of the above-named observers in affording no corroboration to Marchi's view that degenerated fibres pass from this peduncle to the ascending root of the fifth, the roots of the cranial nerves, and the spinal nerves. In regard to the degeneration in the opposite superior peduncle, the fibres affected represent fibres which degenerate in the cerebellum, passing from the seat of lesion across to the intact half of the organ and leaving it by this peduncle. These fibres occupy a special position in the peduncle, a part which is comparatively free from degenerated fibres on the side of the lesion and a part occupied by degenerated fibres on both sides when the cerebellum is divided into two by a mesial incision. These facts are regarded as a refutation of Marchi's statement that none of the peduncles contain commissural fibres. After extirpation of the middle lobe degenerated fibres were found in all the peduncles, a result which agreed with the observations of Marchi, but controverted those of Ferrier and Turner. Those in the superior peduncle occupied all parts of it, decussated in the region of the posterior corpora quadrigemina, and terminated in the opposite red nucleus. Those in the middle and inferior peduncles have a similar distribution and course to those resulting from ablation of one lateral lobe of the cerebellum. No evidence was found in support of Marchi's contention that degenerated fibres from this source pass to

the cranial nerve roots through the posterior longitudinal bundles and to the antero-lateral columns of the cord by way of the fillet. Dr. Risien Russell, agreeing with Ferrier and Turner, finds no evidence for the further statement made by Marchi that there is a distinct antero-lateral tract of degeneration throughout the spinal cord after lesions limited to the cerebellum.

OPEN SECTION FOR IRREDUCIBLE DISLOCATION AT THE SHOULDER-JOINT.

DR. W. N. KEENER, in a recent number of the *New York Medical Journal*, narrates the case of a man aged twenty-two years, very muscular, who, while attempting to mount an unruly horse, sustained a dislocation of the head of the humerus. Dr. Keener endeavoured to reduce it by manipulation, but failed, and tried all known methods of reduction without success. He decided that if reduction was impossible under an anæsthetic he would make an open section. The patient being anæsthetised another attempt at reduction was made, which proved unsuccessful; so an incision was made over the pectoralis major, which, being drawn downward, revealed the head of the bone deep between the pectoralis major and the pectoralis minor. It is stated that the capsule was not ruptured, but seemed to be pushed before the head of the bone; while closely hugging the anatomical neck, both anteriorly and posteriorly, were large, firm, cordlike bundles of fibres reinforcing the ligament proper. The anterior was the larger of the two. Both their humeral and scapular attachments were so close together that they were drawn very tense, and any attempt at reduction only seemed to draw them tighter. These were both divided with a scalpel and the bone went easily into position. The wound was closed and sealed with collodion, and healed by first intention. The joint appears to be as good as ever.

THE DIFFUSION OF SMALL-POX.

SMALL-POX has continued to be very quiet in London during the last fortnight of December, the fresh cases during that period amounting to only 5 and the fatal attacks to 2—one of a vaccinated and one of an unvaccinated adult—both belonging to the Marylebone sanitary area. Mr. Wynter Blyth, the medical officer of health for that parish, states that the disease still occurs in occasional single cases, but the epidemic prevalence has entirely gone. He has advocated very strongly the provision of such means of disinfection for the parish as will enable the officials to secure the proper treatment of clothing worn by all who have been exposed to infection and possessing only the clothes they stand in. The cases of small-pox remaining in the hospitals of the Metropolitan Asylums Board on Saturday last were 16 in number—a decline from 32 three weeks previously; and only 1 case was last week admitted, the admissions of the preceding week having been *nil*. In the Midlands matters are getting still brighter, the records for the latter half of December showing a falling-off in the number of attacks. Wolverhampton, West Bromwich, Walsall, and a few other towns have had experience of the disease, but only in a very slight degree. At Birmingham the cases in the two weeks were some 30, against 50 in the preceding fortnight, whilst the deaths were only 2, against 6. In Liverpool half a score of attacks and 2 deaths were registered. One death by small-pox was last week registered in Hull. In Edinburgh small-pox last month showed another decided increase, as many as 43 cases being notified in the first fortnight, new cases being also heard of in Leith and North Berwick. Within the space of a month 6000 vaccinations and revaccinations are estimated to have been performed in Edinburgh gratuitously. Similarly, in Dublin much vaccination and revaccination are being performed, the public being alarmed at the immense strides recently

made in the city by small-pox. On one day, Dec. 17th, no less than 40 cases of the disease were reported, bringing the total of a week to over 100 attacks heard of. In the week ended Dec. 15th the number of admissions to hospital was 88, a rise from 31 in the week immediately preceding, whilst in the following week there was a further increase to 116 admissions, with 12 deaths, in hospital in the fortnight, 4 of these deaths being of unvaccinated children and 1 of an unvaccinated adult. The deaths of vaccinated persons were all in adults. Despite the 91 discharges from hospital in the third week of December there yet remained under treatment 131 patients, exclusive of 126 convalescing patients in the South Dublin Union Small-pox Hospital at Kilmmainham. Up to that time the deaths in the city numbered 58 and the admissions to hospital just on 600.

THE CARTOGRAPHY OF MALARIA.

MALARIA in its distribution and intensity of incidence has of late years received much attention in Italy. Its haunts, indeed, constitute that real "Italia Irredenta" (unreclaimed Italy) which is far more deserving of the solicitude of her statesmen than that on which so much political agitation is expended. A glance at the latest accession to the solution of this great sanitary problem—the "Carta della Malaria," recently issued by the Direzione Generale della Statistica—will illustrate our meaning. This is a beautiful map of Italy (1:1,000,000), in which, by gradations of colours, we may realise the death-rate due to the "infezione malarica" and to the "palustral cachexia" throughout every commune in the kingdom in the three years beginning 1890 and ending 1892. In that period the mortality from malarial fever and the "cachexia palustralis" conjointly amounted to 49,407, corresponding on an average to fifty-four deaths yearly per 100,000 inhabitants. This proportion to population, however, varies within greatly extended limits. In the communes indicated on the map by a blue tint the annual mean of deaths from "infezione malarica" is 8 per 1000, such communes, moreover, being most numerous in the south-western tract of the island of Sardinia, in the south-east of Sicily, in the Basilicata (on the main land), and around the Pontine Marshes. As the map was constructed on the statistics of "deaths" from malarial fever, without regard to non-fatal cases from the same cause, we find that the provinces in which the fevers are certainly frequent, but rarely intense enough to cause death, are marked in light-coloured tints. The communes where this set of conditions prevails are considerable in number, and are situated mostly in the valleys watered by the lower reaches of the Po, exception being made, however, of the Veronese territory and of the Cremasco. Again, the Mediterranean littoral presents foci of malarial infection in varying degrees of intensity, the most severely visited being the territory around Grosseto, the Agro Pontino, and in the Salernitan region—the plain of Pæstum, so much frequented by tourists. A yet more interesting tract is that filled by the Eternal City. There we find that cases of death from malaria have, since 1880 to the present day, been rapidly diminishing in number. For instance, in 1881 there were in Rome 650 deaths due to malarial fever, in the following year 505, and in 1892 only 139. Passing from the city to the neighbouring Campagna, we find, of course, the intensity of the incidence of the malaria much higher. On the Adriatic slopes of the Apennines occurs again a severely visited zone, commencing above the promontory of Gargano and descending by Mollise, the Capitanata, and the Basilicata territories to the Ionian Sea, showing a mortality about as heavy as that of the Islands of Sicily and Sardinia. As affecting the general mortality of the Italian people, the figures from 1888 to 1893 maintain a pretty steady average—that is,

from fifteen to sixteen deaths a year. By those of our readers who are specially interested in the malarial problem, clinically as well as hygienically, this excellent map should be studied conjointly with the masterly treatise entitled "La Malaria in Italia, dei Dottori Sforza Claudio e Gigliarelli Raniero, Capitani Medici." These medical officers gained the Riberi prize ("primo premio") for this work, and in its published form have added to it seven large tables in chromo-lithography in illustration of the fully detailed exposition of the letterpress. The therapeutic value of remedies will be found to vary somewhat with the locality in which the fever is endemic—an induction not the least significant among the many in which Drs. Sforza and Gigliarelli's monograph abounds.

THE subject of the next triennial award of the Parkes Memorial Prize is "The Etiology, Prevalence and Prevention of Diphtheria." The prize consists of a bronze medal and a sum of seventy-five guineas. The competition is open to executive officers, on full pay, of the Navy, Army, and Indian Medical Services, except assistant professors at Netley, who are not eligible to compete during their period of office. Essays should reach the secretary, Parkes Memorial Committee, Royal Victoria Hospital, Netley, on or before Dec. 31st, 1897.

THE Secretary-General of the late International Medical Congress at Rome, Dr. Maragliano, informs us that the official proceedings of the Congress will be ready for publication in April next—that is to say, in one year from the termination of the Congress—an unprecedented piece of expedition.

THE Secretary of State for India has appointed Brigade-Surgeon-Lieutenant-Colonel William Roe Hooper, of the Indian Medical Department, to be President of the India Office Medical Board, on the retirement of Sir Joseph Fayrer, K.C.S.I.

WE learn that no fresh symptom of importance has occurred during the last few days in Lord Randolph Churchill's condition.

Pharmacology and Therapeutics.

SULPHANILIC ACID IN ACUTE CATARRH.

ACCORDING to Dr. Valentin,¹ sulphanilic, or paranalino-sulphonic, acid is an excellent remedy in acute catarrh. From thirty to sixty grains may be prescribed with a somewhat smaller quantity of bicarbonate of soda in ten times its weight of distilled water once or twice daily. The effect of a dose becomes apparent in about two hours, and the amelioration it produces may be expected to continue for a whole day or even more. When sulphanilic acid is taken for some weeks it does not appear to disorder the digestion or to produce any unpleasant effect, except, perhaps, slight diarrhoea.

TRIONAL IN SLEEPLESSNESS IN CHILDREN.

Trional, which is, chemically speaking, sulphonal with an additional ethyl group, has of late been used to a considerable extent by German practitioners in insomnia, especially that due to nervous and mental disease.² Its suitability for children has recently been pointed out by Dr. A. Claus of Ghent.³ He finds that it is especially valuable in the nightmares or "night terrors" to which nervous children are so subject, and also where the sleeplessness is associated with chorea or convulsions. It does not disturb the mental, respiratory, or circulatory functions, and acts rather beneficially than otherwise on the digestion. It does

¹ Pharm. Post, quoted in Nouveaux Remèdes, Nov. 24th, 1894.

² THE LANCET, July 28th, 1894.

³ Internationale Klinische Rundschau, No. 45, 1894.

not appear to be so suitable for alcoholic insomnia as chloral, and it has no analgesic action, so that it is of but little use to prescribe it when the sleeplessness results from pain. As to undesirable effects, in one case a child five years old, after a dose of 10 grains, was found the next day to walk unsteadily, the power of coördination being interfered with. The dose was diminished to 7½ grains, and no further trouble was experienced. These smaller doses were continued for a week, when the child was able to sleep in its usual manner. This was the only instance in which any unpleasant action was caused. The doses recommended by Dr. Claus are as follows: For children of less than twelve months of age, 3 to 6 grains; for those between one and two years, 6 to 12 grains; for those between two and six years, 12 to 18 grains; and for older children up to ten years, 18 to 23 grains. The powder can be given in warm milk, or, better still, in jam or honey, half an hour after supper, or at latest a quarter of an hour before bedtime. It may be prescribed nightly for some considerable time if necessary, as it does not appear to lose its effect when given continuously.

URICEDIN IN URIC ACID DIATHESIS.

Dr. Hugo Langstein of Teplitz-Schonau strongly recommends a preparation named "uricedin" in uric acid diathesis. This substance consists of citrate of potash and sulphate of soda, together with chloride of sodium and citrate of lithium. It is white and granular, and it dissolves in water. It was brought under the notice of the Twelfth International Medical Congress by Dr. Mendelsohn of Berlin, who stated that 300 grains might be taken daily without any ill effects and with very marked benefit to patients with uric acid diathesis. Dr. Langstein now writes¹ that he has employed it in fifty cases of gout during the last bath season, with excellent results. He considers that it is much more certain in its effects than the alkaline mixtures that are commonly prescribed or than mineral waters. It may be used in conjunction with the ordinary régime of baths and water-drinking at a German *Bad* such as Teplitz, and it is very useful as an after-treatment for the patient who has been to the baths in the summer to take during the succeeding winter. He was first led to employ this preparation in the treatment of his patients on account of the excellent results he had obtained with it in his own case. He had been suffering from increased uric acid in the urine associated with very severe smarting urethral pain for a long time, and had only been able to obtain temporary improvement from ordinary alkaline treatment and from a variety of mineral waters, and at last decided, with considerable misgiving, to make a trial of uricedin. At first he took 38 gr. per diem. The day after commencing this treatment he excreted more uric acid than usual, but on the third day the reaction was neutral, and no more uric acid was found for another week, after which a glass of beer brought it on. All this time the smarting pain in the urethra had continued, and then, as no calculus could be found to account for it, the daily dose was gradually increased until 150 gr. were taken. The pain then diminished in a very marked degree, and the uric acid secretion was only observed at times when the uricedin was discontinued.

DIPHTHERIA AND SERUM THERAPEUTICS.

EXPERIENCES OF THE TREATMENT.

DR. BAGINSKY, who, we believe, was one of the first to advocate the bacteriological diagnosis of diphtheria, contributes a paper¹ in amplification of his remarks in the recent debate at the Berlin Medical Society. He insists upon the careful study of each individual case subjected to serum treatment as of more value than statistics, which at present can only be based on small numbers. On the diagnostic value of the bacteriological test of the presence of the Löffler bacillus he has no doubt, and confirms the statement of the presence of the organism in cases not showing the symptoms of diphtheria, but none the less liable to transmit infection. He urges that if care be taken in the preparation of portions of membrane for cultivation the bacillus may

be found in a larger proportion of apparently diphtheritic affections than has been averred. As regards the treatment, he says that he did not abandon his previous local and general measures when adopting it, but combined the old and new methods. The amount injected depended on the age of the subject and the duration of the disease prior to commencing the treatment, a larger dose being given to the cases coming later under treatment. He found, however, that no effect was produced in some cases, nor could it be expected; for these were cases in which the intensity of poisoning was so great as to irreparably affect the organs of the body before any antitoxin could operate, however early it was given. They are truly malignant cases, such as most infective diseases present—e.g., scarlet fever. Although he had given doses above the average he had seen no ill-effects produced, with one exception. Many patients had a trivial rash, some had also symptoms of joint inflammation. One of the cases which presented a rash died suddenly fourteen days after discharge from hospital with symptoms suggestive of cerebral embolism—an event which he had known to occur after diphtheria prior to the introduction of the serum treatment. As to nephritis, it was not more marked in these cases than in diphtheria as he had known it before; indeed, there was mostly less albuminuria and fewer casts in the serum-treated cases than he was wont to see. One patient, with cardiac complications, to whom the serum had not been given, had hæmaturia, possibly due to renal embolism, and in the case of another in whom diphtheria supervened in the fourth week of scarlet fever the nephritis abated after injection of serum. At the same time he thought attention should be paid to symptoms of cardiac failure, which seemed to be disproportionately frequent in the recent epidemic, for most of those dying under the treatment died from cardiac asthenia. He concludes by saying that it is too early yet to pronounce definitely upon the value of the treatment.

Dr. Mya (Florence) has treated eighteen cases² with Behring's serum, with an average of two injections each. Of these, two were "pure anginal diphtheria" and recovered; five were "diphtheria with incipient croup," recovered; ten were "diphtheria with developed croup," in all tracheotomy was performed—two died; one of "croup, associated with staphylococci and streptococci," fatal. He admits that the number is too few for statistical inference, but says the treatment is scientific and harmless, that it is antidotal, and not to be expected to remedy the changes already produced in the organs by the toxins.

NEPHRITIS IN DIPHTHERIA.

In the *Deutsche Medicinische Wochenschrift* (1894, No. 51) there are two papers on this subject. The first is by Dr. Troymann of Frankfort-am-Oder, who relates an instance of acute hæmorrhagic nephritis in a subject treated by the serum. This was one of twenty cases so treated in the Frankfort town hospital under Dr. Gläser, and among them albuminuria was frequent. The child was eight years of age. Treatment commenced on the third day of illness, injections being repeated on the two following days. Two days later the membrane had disappeared, but within a week it reappeared and another injection was given. This was followed by a rash and albumen in the urine, which contained blood and casts. But four days later the urine was free from albumen. It is pointed out that the time at which the nephritis appeared seemed to throw doubt on its being due to the diphtherial virus. But it is noteworthy that a fortnight after his discharge from hospital the child came back with well-marked palatal and limb paralysis.

The other paper is by Dr. Schwalbe, one of the editors of the journal, who gives a parallel case in a child, occurring in 1890, at Friedrichshain Hospital, and therefore before the serum treatment was in vogue. He points out the great frequency of albuminuria in diphtheria, the rarer but not unknown occurrence of acute nephritis, and deprecates the tendency to attribute to remedies on their trial the supervention of complications which, though rare, are known occasionally to arise under any treatment.

² *Lo Sperimentale*, Dec. 1st, quoted in *Wiener Medicinische Blätter*, 1894, No. 50.

¹ *Prager Medicinische Wochenschrift*, No. 45, 1894. Quoted, *Allgemeine Medicinische Central-Zeitung*, No. 95, 1894.

² *Berliner Klinische Wochenschrift*, 1894, No. 52.

MEDICAL MAGISTRATE.—Mr. William Bridgett Pritchard, L.R.C.P. Lond., M.R.C.S., has been placed on the Commission of the Peace for the city of Manchester.

THE LANCET

SPECIAL ANALYTICAL AND SANITARY COMMISSION

ON THE

INCANDESCENT SYSTEM OF GAS LIGHTING.

THE idea of utilising coal gas for illuminating purposes was first carried into effect by Murdoch in 1792, but he could not have entertained the slightest conception of the enormous industry which this system of lighting, which was also demonstrated in London at the close of the last century, was destined to become long before the end of the succeeding century. So crude, however, was the gas first employed for this purpose that the evolution of injurious products of combustion from it, due chiefly to foul sulphur compounds, threatened to extinguish the system at its very inception. But the introduction of improved methods of purification and production saved it from so untimely an end, and spared the life of an industry which is now well-nigh indispensable to the existence of the civilised world. It is interesting to reflect how even medicine, if coal-gas lighting had not been established, would have been bereft, possibly to the present day, of many of its valuable agents. What antiseptics, for example, are more largely employed or more highly valued in the treatment of disease than the series of phenols obtained exclusively from coal tar? or what more valuable antipyretics, &c., are at the physician's disposal than those which coal-tar products have furnished? And what study, again, more than that of these interesting derivatives has given greater impetus to pharmacology in adding to our knowledge of the constitution and structure of bodies and so enabling us to make remedial measures more scientific and exact? Again, our eyes would never have beheld the endless series of beautiful colours made from coal-tar products; and how different would have been the complexion of everything connected with fabric had not coal tar provided us with a starting point from which these things have been obtained? To the idea of utilising coal gas as an illuminant, therefore, we owe all these benefits; and just as at one time coal gas was the only product of the destructive distillation of coal upon which any value was set—whereby, in consequence, so many valuable by-products were lost—so now investigators have been led to inquire as to whether, by existing methods of lighting, we realise the full value of coal gas as an illuminating agent, or, in other words, whether we extract by present methods all the radiant energy or light which it is capable of giving.

It is well known that coal gas is luminous when it burns because it contains certain hydrocarbons, but that, in order to get the maximum illuminating power from it, burners of special construction must be employed. It is only, however, within quite recent years that any really serious attention has been devoted to the improved structure of gas burners with the object of utilising to the fullest extent the luminosity which the mere burning of coal gas by itself affords. Types of these are illustrated in the steatite bathing or fishtail burner, the Argand, and regenerative burners, all of which yield a more or less brilliant light, rich in red and yellow rays, which, as is characteristic of coal gas flames, possess a strong diffusive power. These all require, however, a gas of definite illuminating value, which may be referred to the presence of hydrocarbons, chiefly of the paraffin and olefine series. The illuminating value of coal gas varies with a number of conditions, as, for example, the kind of coal employed, the temperature used in distilling it, and so on; but the coal yielding the highest illuminating value is Newcastle Cannel (so called because it gives a gas up to the candle power prescribed by Parliament). Now that the supply of this variety of coal is sensibly diminishing, and

the demand for coal gas steadily increasing, other coals are used, and the purified gas obtained from them is subsequently enriched with water gas, impregnated with highly luminous "oil" gas. This, as we shall presently see, is an important point when we come to consider the principles underlying the working of the incandescent burner, which has recently undergone considerable alteration and improvement. Indeed, so rapidly is the incandescent system of gas lighting being introduced amongst us, so popular is it becoming on the score of its economy and better illuminating power, that the importance of an investigation into its merits from the health point of view cannot be questioned. We propose, therefore, in the present article to deal chiefly with this aspect of the new system, but we may add a concise account of its history, and more especially of the way in which its essential parts are constructed, since there are involved in the various stages of its structural progress several highly scientific processes of a pretty as well as interesting kind.

Curiously enough, the incandescent gas-burner had its origin in the attempts of Auer von Welsbach to discover a substitute for the carbon filament of the incandescent electric lamp, which would incandesce in air without being destroyed or burnt, and thus to obviate the necessity of enclosing the filament in a globe exhausted of air. How far these attempts were successful we do not know, but the "mantle" composed of rare earths, which is the essential feature of the present burner and which incandesces so brightly in the atmospheric gas flame (Bunsen's burner), was, we imagine, not the least fruitful result of the investigation, judging from the satisfactory progress which has lately been made with it. The incandescent gas-burner, when complete, may be said to consist simply of two essential parts (Figs. 1 and 2); the first an ordinary but carefully adjusted burner of

FIG. 1.

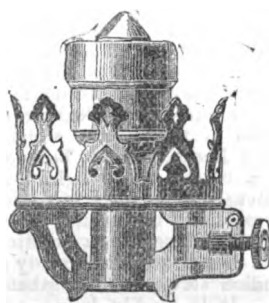


FIG. 2.

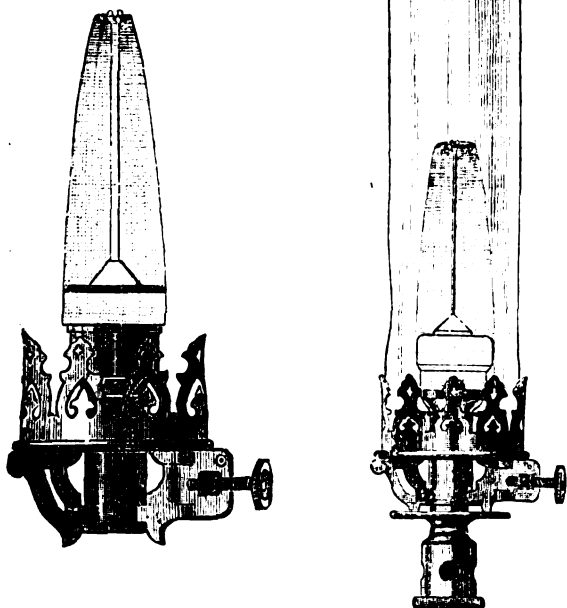


the Bunsen type, in which air is mixed with the gas before it burns—generally in the proportion of 30 of gas to 70 of air—producing a substantially colourless or slightly blue flame; the second a mantle (Fig. 2), composed of certain rare earths prepared with the utmost care and skill, which is suspended in the flame to the best advantage (Fig. 3) by means of a forked support of magnesian silicate, itself luminous when hot. The flame and mantle are enclosed in a chimney of glass or other transparent vehicle, as seen in Fig. 4, which, though not absolutely essential for the production of light,

effectually serves to protect the fragile mantle from accident, while at the same time it keeps the flame perfectly steady. The mantle is prepared by the following very interesting process. A cotton thread is first woven into a tubular shape in network form, washed previously in diluted ammonia, to remove grease, and then in water containing a little hydrochloric acid, and finally in distilled water, and dried. The knitting is next cut up into suitable lengths, a piece of net sewn round one end of it to form the top, and then saturated with a solution containing the nitrates of the rare earths, zirconium, lanthanum, thorium, and cerium, and dried on glass rods. An asbestos thread is then passed through the top of the mantle, forming a loop to attach the mantle to the support. The lanthanum and zirconium contribute whiteness to the light, and the thorium a bluish-white light, and the cerium a red, which adds to the diffusive power of the light. One of the sources from which the oxides employed are obtained is *monazite*, which yields thorium, lanthanum, cerium, and didymium. *Orthite* is another source from which cerium and didymium are obtained. Most of these minerals are said to come from Norway; but they are now found, with the exception of *thorite*,

FIG. 4.

FIG. 3.



in large quantities in America. The mantle is drawn into shape by being pulled over a model of the desired form, and the flame of a Bunsen burner is afterwards applied to the upper portion of the mantle, which, catching fire, burns slowly downwards, shrinking considerably in length as the cotton burns away, leaving a thin network skeleton of the oxides of the metals, which, on being placed in the flame of a Bunsen burner, becomes at once incandescent, emitting a bright steady light. After holding the mantle over the Bunsen flame for a few minutes to get it into shape, it is "seasoned" by burning it over a high-pressure burner, and finally dipped in a solution of collodion, dried, and placed in boxes, when it is ready to be sent out. The film of collodion serves to strengthen the mantle for transit purposes. It is readily burnt off by placing it upon the support on the burner, and lighting it with a somewhat reduced flame before the chimney is put in position. In a few minutes it is completely burnt off, and the chimney may be placed over it.

"Incandescence" is the brilliant glow given out by certain refractory bodies when they are heated up to a definite point. It is the partial conversion of heat into light rays.¹ A platinum wire held in the Bunsen flame becomes first

invisibly hot, then partly visibly hot or red hot, and finally white hot, when it incandesces, or emits powerful white light rays. The luminosity of the coal-gas flame, it may be remarked, is really due to the incandescing particles of carbon which are set free from the acetylene derived from the decomposition of the hydrocarbons of the gas during the stages of combustion. Thus the series of changes taking place in luminous flames are explained by Professor Vivian Lewes in the following interesting, and probably correct, way. In the inner zone of the flame the constituents of the gas undergo various decompositions and interactions, which culminate in the conversion of the heavier hydrocarbons into acetylene, carbon monoxide being also produced; and these, with the products of combustion and residual hydrogen, pass into the next phase of action. Here the acetylene formed in the inner zone becomes decomposed by heat with liberation of carbon, which at the moment of production is heated to incandescence by the combustion of the carbon monoxide and hydrogen and gives luminosity to the flame. Since, then, the luminosity of the coal-gas flame is due to incandescing particles of carbon set free in the flame, and which are subsequently burnt up, and the light of the electric incandescent lamp consists of incandescent rays emitted by the carbon filament which is heated by the electric current, it follows that the nature and character of the light from both are the same. Thus, compared with the electric arc-light both exhibit a reddish-yellow tinge, and both possess a higher degree of diffusive power than the pure white light itself.

In the Welsbach burner, on the other hand, the incandescence is due to the heating of a network of oxides of certain rare earths, which emit at the temperature of the Bunsen flame a bright, steady, and powerful white light. It affords, in fact, an admirable illustration, and is probably the best result ever obtained, of the conversion of heat into light rays. Thus, the Bunsen flame is very hot, possessing no luminous value, but by allowing it to play upon certain refractory and resisting bodies the heat undergoes a metamorphosis into the closely allied phenomenon of light. It is the production of radiant energy at the expense of calorific energy. In considering the Welsbach burner from the health standpoint, and bearing in mind the principles just laid down, we may regard it as consisting simply of an ordinary Bunsen burner over the flame of which is suspended a network of incombustible material that is intensely light-giving when raised to the temperature of the Bunsen flame.

First, then, let us consider the Bunsen burner, or, what is the same thing, the Welsbach burner without its mantle. It is well known that the conditions of combustion in the Bunsen or atmospheric burner are more favourable, and the formation of complete products more certain, than in the luminous flame. The Bunsen flame, for example, is without luminosity because "experiments show that the nitrogen acts in the normal flame by so diluting and protecting the hydrocarbons that a far higher temperature is needed for their decomposition; and this action gives time for the oxygen of the air to consume them, without liberation of carbon, and hence without luminosity" (Lewes). In the luminous gas flame, however, as already explained, the decomposition of acetylene occurs in the outer zone, giving rise to heated and therefore luminous particles of carbon, so that it is extremely probable that traces of this gas, as well as carbon monoxide, are given off from this flame—an anticipation which delicate analyses confirm. The changes in the atmospheric burner are not only more complete by the introduction of air, but they occur at an earlier stage. In Table IV. will be found the results of certain experiments in which various burners, including the luminous and non-luminous, were tested side by side with the view at the outset of deciding this important point. Subsequently we shall deal with this at greater length; suffice it to mention here that the results were decidedly in favour of the atmospheric or Bunsen burner.

The complete combustion of a definite volume of coal gas

descends by an atmospheric burner of peculiar construction, whereby the gas and air are heated before combustion takes place. In the Lewis system, again, a small hood of platinum, or alloy of platinum and iridium, is used, which is brought to incandescence by the Bunsen burner, in which the air is admitted under pressure. In the Sellen system a cone of metal gauze is used, and heated with a Bunsen burner of similar construction to the last. Lastly, there is the system of Fahnehjelm, a Swedish chemist, which is in extensive use, and in which small pencils of magnesia, or a mixture of magnesia and zirconia, are attached to a small frame in the form of a comb, which is suspended over the flame of a water-gas-burner, and is immediately brought to a high state of incandescence.

¹ It should be mentioned that there are other systems in use which depend upon the light emitted by an incandescing body. In the Clamond system of incandescent gas lighting, for example, a basket or hood of magnesia and zirconia is employed, which is heated to incan-

must, of course, on theoretical grounds, give rise to the production of exactly the same amount of burnt gases in whatever burner the gas is burned. Obviously a cubic foot of gas burned completely in a batsawing, Argand, or atmospheric burner would give, as end products, the same amounts of carbonic acid and water. It follows, therefore, that if the consumption of gas be low the evolution of products will be proportionally reduced, so that, apart from the economical point of view, a burner that consumes a relatively small amount of gas, to say nothing of the superior light it may yield, must be preferable on that account from the hygienic point of view. This, therefore, is exactly what is secured in the Welsbach burner by reason of the employment in it of an atmospheric burner which consumes at the most, but generally less than, four cubic feet of gas per hour. The indisputable hygienic advantages thus gained are strikingly illustrated in Table I., the results of which are based upon the varying rates of consumption of different burners. The amount of combustion products yielded by oil lamps in the same time makes an interesting and instructive comparison.

TABLE I.—*Calculated Relative Quantities of Carbonic Acid Gas (CO₂) produced by different Burners, based on 1 cubic ft. of Coal Gas giving 0.52 cubic ft. CO₂.*

Burner.	Consumption in cubic feet.	Cubic ft. of CO ₂ evolved per hour.	Number of human adults producing same amount of CO ₂ per hour.*
Welsbach (atmospheric burner) ...	3.5	1.82	3.03
Argand	6.0	3.12	5.20
Bray, No. 5 batsawing... ..	6.0	3.12	5.20
Belge oil lamp (16 candle power) }	2.08 oz. oil per hr.	2.91	4.85
Hinks' duplex (candle power undetermined) }	2.90 oz. oil per hr.	4.00	6.66

* Based on one human adult exhaling 0.60 cubic foot CO₂ per hour.

Thus, calculating on the quantity of carbonic acid gas expired hourly by the human adult and on the quantity produced on burning a known quantity of coal gas or of oil, we find that while the Welsbach burner, consuming 3½ cubic

feet per hour, would be equal to the exhalation of at least three persons, other forms of burners are equal to over five persons, while an oil lamp of 16 candle power would also be nearly equal to five individuals, and another oil lamp of increased candle power, which is very generally in use, to a number of individuals approaching seven—that is to say, more than double the equivalent given by the Welsbach light. These results are not entirely speculative, and we may proceed to describe some experiments we made with the view of putting them to practical test. The results are contained in Table II., which hardly needs explaining. The experiments were made in a very small room, 10 ft. long, 10 ft. high, and 6 ft. wide only, the usual crevices having first been closed. The amount of carbonic acid and the temperatures at two points—one just beneath the ceiling and the other at breathing level—were ascertained before the experiment, and repeated at intervals of an hour each after the burners had been lighted, the experiment being stopped after three hours. Two burners were fixed on the walls at a height of 6 ft., and were 9 ft. apart in opposite corners—that is, at each end of the diagonal. These conditions represent, of course, a very extreme and exaggerated case, owing to the size of the room and the use of two burners in it, but the trials were strictly comparative, and the errors introduced in the analyses and observations were reduced in proportion as the products were greater and the rise of temperature higher. In the last experiment an oil lamp was placed upon a table 3 ft. high, as this was considered to represent the actual conditions of practice. The lamp was carefully weighed before and after the experiment, the difference in weight giving, of course, the amount of oil (kerosene) consumed.

The results are of extreme interest and importance in regard to the health aspect of the case. The relative vitiating and heating effects of several types of burners are best seen, however, in Table III., which we shall deal with presently. To return to Table II., the chief points calling for notice are as follows: the relative effects of a Welsbach burner with and without a mantle are especially instructive, as affording some information of distinct value as to the chief differences caused by the introduction of a mantle into the flame. The sum total products should of course be the same, since the amount of gas consumed was the same. The mean amount of CO₂, as a matter of fact, was, as the table shows, as nearly as possible identical. But by the introduction of the mantle into the flame it is evident that there occurs a concentration of the CO₂ close to the ceiling, while there is, as we should expect, a corresponding and very decided diminution at the breathing level. We conclude, therefore, that the plain Bunsen flame (enclosed in a chimney) produces a quicker and more decided distribution of the burnt

TABLE II.—*Vitiating and Heating Effect of Various Burners in a Room 10 ft. Long, 10 ft. High, and 6 ft. Wide.*

Burner (6 ft. from floor).	Carbonic acid (CO ₂) contained in 10,000 volumes of air.				Temperature in degrees Fahrenheit.				Consumption of gas in cubic feet per hour.
	Original air.	After one hour.	After two hours.	After three hours.	Original air.	After one hour.	After two hours.	After three hours.	
Two Welsbach—									
(a) At 1 ft. below ceiling	6.0	67.2	77.9	80.5	53.0	68.0	76.0	81.0	7
(b) At breathing level	6.0	10.5	17.0	18.2	53.0	59.0	63.0	65.0	
(c) Mean result	6.0	33.8	47.4	49.3	53.0	63.5	69.5	73.0	
Two Welsbach without mantles—									
(a) At 1 ft. below ceiling	6.0	54.9	56.5	63.1	53.0	75.0	78.0	80.0	7
(b) At breathing level	6.0	23.2	36.8	32.9	53.0	63.0	64.0	65.0	
(c) Mean result	6.0	39.5	46.6	48.0	53.0	69.0	71.0	72.5	
Two Argand—									
(a) At 1 ft. below ceiling	6.0	93.1	117.6	119.0	53.0	79.0	84.0	89.0	12
(b) At breathing level	6.0	38.6	48.6	50.2	53.0	65.0	68.0	72.0	
(c) Mean result	6.0	65.8	83.1	84.6	53.0	72.0	76.0	80.5	
Two Batsawing Bray, No. 5—									
(a) At 1 ft. below ceiling	6.0	84.1	108.2	115.7	53.0	78.0	89.0	96.0	12
(b) At breathing level	6.0	37.6	46.6	47.4	53.0	59.0	65.0	69.0	
(c) Mean result	6.0	60.8	77.4	81.5	53.0	68.5	77.0	82.0	
One Belge oil lamp, 16-candle power (on table 3 ft. above floor)									
(a) At 1 ft. below ceiling	6.0	38.7	48.1	53.6	53.0	62.0	65.0	66.0	2.08 oz. per hr.
(b) At breathing level	6.0	23.7	35.3	44.5	53.0	59.0	61.0	63.0	
(c) Mean result	6.0	31.2	41.7	49.0	53.0	60.5	63.0	64.5	

gases or products in the room, owing, no doubt, to the greater freedom of space around the flame and the consequently increased draught up the glass chimney. On this explanation the introduction of the mantle into the flame would naturally reduce the rate of draught through the chimney. The same is true of the temperature, which after the first hour was raised by the Welsbach burner with its mantle only 6° at breathing level, but in the case of the burner without the mantle it was raised 10°. Indeed, the increase of temperature, as might be expected, appears *pari passu* with the carbonic acid. So far, then, the Welsbach burner is distinctly more satisfactory in its effects upon the air of a room at breathing level than even the plain atmospheric burner. When we look at the effects of the Argand and batswing burners, of course the carbonic acid and temperature increase enormously in accordance with the greater consumption of gas. The Argand vitiates the breathing level somewhat sooner than the batswing, in consequence, no doubt, of the impetus given to circulation by the use of a chimney. This is true also of the increase in temperature. Finally, the oil lamp effects a gradual and general distribution of both the heat and carbonic acid produced, the amount of these being the same both at the ceiling and breathing level. It should be observed in addition, however, that though with the oil lamp, as might be anticipated, the rise of temperature is not so great as two Welsbach lamps (the proportion of hydrogen in oil, the chief heat-producing constituent of coal gas, being relatively small), yet the mean amount of carbonic acid produced was almost exactly the same after three hours; so that the vitiation of air with carbonic acid gas by one Welsbach burner giving over 50 candle power light and consuming 3½ cubic feet of gas is less than one-half that produced by an oil lamp of 16 candle power, and consuming a little over 2 ounces of oil. We have here a striking fulfilment of the requirements of theory in Table I., and therefore some distinct evidence of the accuracy of the experiments.

Looking now at Table III., we see at a glance the merits of

omitted searching for unburnt gases, such as carbon monoxide or acetylene, which, if found, howbeit in small traces, would afford emphatic ground for objection to the general adoption of a burner from which these poisonous products are shown to escape. We preferred to exaggerate the ordinary conditions under which a burner is used still more than before, so as to focus any possible impurities of this sort, and in order to be quite sure that even the smallest traces would not escape our tests. The experimental procedure of this section of the inquiry was as follows. The burners (in the case of the Welsbach two in number, but of the rest only one) were lighted and placed in a small chamber 3 ft. 1 in. x 3 ft. 1 in. x 2 ft. 4 in. (with no provision for any appreciable ventilation or outlet for the gases) for eight hours, during the whole of which time the air taken from above the burners was aspirated first over potash and soda lime to remove carbonic acid and sulphur compounds, then through sulphuric acid to remove ammonia, and, finally, through a dilute solution of blood. At the end of eight hours the experiment was stopped, and the blood examined with a delicate spectroscope. To preclude any doubt whatever as to the presence of carbon monoxide the blood was further treated in the following manner. Fresh air was caused first to pass through a solution of palladium chloride to remove organic or other chance impurities, then through the blood, the temperature of which was gradually raised by means of a water bath, and, finally, through a third tube containing chloride of palladium. Any carbon monoxide absorbed by the blood during the aspiration of the combustion gases would thus be displaced and would cause a darkening in the palladium solution due to separation of the metal. Acetylene was also searched for, the solution of ammoniated silver nitrate being employed for the purpose. The results obtained are given in the following table (IV.), in which two Welsbach burners (total consumption 7 ft.) were compared with one each (consumption 6 ft.) of the other types.

TABLE III.—Increase of Carbonic Acid and of Temperature per Candle Power.

Burner.	Con- sumption.	Candle power.	Mean increase of temperature in one hour.	Increase of tem- perature per candle power.	Mean increase of CO ₂ in one hour, parts per 10,000.	Increase of CO ₂ per candle power.	Increase of CO ₂ per cubic ft. of gas consumed.	Increase of tem- perature per cubic ft. of gas consumed.
Two Welsbach	7	50+40	63·5–53=10·5°	$\frac{10·5}{90·0}=0·116°$	32·8	$\frac{32·8}{93}=0·365$	4·8	1·6°
Two Argand	12	16+16	72–53=19°	$\frac{19}{32}=0·590°$	60·0	$\frac{60·0}{32}=1·900$	5·0	1·5°
Two Batswing, Bray, No. 5.	12	9·6+9·6	68·5–53·0=15·5°	$\frac{15·5}{19·2}=0·807°$	55·0	$\frac{55·0}{19·2}=2·86$	4·6	1·3
One Belge Oil Lamp	2·08 oz. oil per hour	16	60·5–53·0=7·5°	$\frac{7·5}{16}=0·468°$	25·2	$\frac{25·2}{16}=1·56$	—	—

the Welsbach burner contrasted with various other burners from the point of view—i.e., the hygienic—which prompted the present inquiry. We cannot ignore the fact, in the light of the results contained in this table, that, quite apart from economy of gas and the increased light value secured, the Welsbach burner affects the atmosphere far less for evil, judging from the carbonic acid and heat, than any other existing type of burner. Thus, while the increase of carbonic acid per candle power is only 0·365 in the case of the Welsbach light, it is 1·9 in the case of the Argand, 2·86 in the batswing, and 1·56 in the oil lamp; and the increase of temperature with a Welsbach burner per candle power is only 0·116°, compared with the Argand, 0·59°, the batswing, 0·807°, and the oil lamp, 0·468°. (In this estimate the candle power of the Welsbach is taken as low as 45 candles, whereas it reaches frequently as high, as will be seen later, as 60 candles). The figures in the two columns at the right of the table should obviously accord with each other, since the increase of carbonic acid and of temperature should be the same for the same quantity of gas consumed. As a matter of fact, the figures coincide fairly well; at least, they are as close as can be expected, the experiments may be expected to allow.

TABLE IV.—The Results of Tests with various Burners for Carbon Monoxide (CO) and Acetylene (C₂H₂) in the Products of Combustion.

Burner.	Blood test (carbon monoxide).	Palladium chloride for carbon mon- oxide in pro- vious blood.	Ammonia silver nitrate test for acetylene.
Two Welsbach burners without mantles = atmospheric burner, consumption 7 cubic feet per hour	Negative.	Negative.	Negative.
Two Welsbach burners (complete), consumption 7 cubic feet per hour	Negative.	Negative.	Negative.
One Argand burner, consumption 6 cubic feet	Negative.	Negative.	Negative.
One Bray batswing, consumption 6 cubic feet	Slight indica- tion.	Slight indica- tion.	Doubtful.

It will be seen that, except in the case of the batswing, no distinct evidence of undesirable products in the burnt gases

was found. Even when the gases were aspirated for hours straight from the chimney of the Welsbach burners, neither of the poisonous gases carbon monoxide or acetylene could be detected. The Argand burner gave the same satisfactory results.

Finally, Table V. deals with the relative illuminating power of various burners and the loss of light sustained by the use of tinted and other chimneys with the Welsbach burner. The light of the Welsbach burner is intensely white and brilliant, being equal, for only $3\frac{1}{2}$ cubic feet of gas consumed, to a maximum of 60 candles and a certain average of 45 candles. (It should be observed, as is shown in some instances in Table V., that no advantage in light is gained by running the gas at a higher speed; on the contrary, by frequently reducing the gas an increase of luminosity is obtained.) For some purposes it is desirable to reduce this intensity so as to make it less affecting to the muscles of accommodation of the eye. A diminution of light may be produced, and also an alteration in its tone, according, of course, to the kind of chimney used. This loss is given in Table V., and, although it amounts to some considerable extent, yet it still gives a greater luminosity than other burners, and for a much smaller consumption of gas. The ruby chimney gives a light of twenty-seven candles,

TABLE V.—*Relative Illuminating Power of various Burners, and the Loss of Light Sustained by the Use of Tinted and other Chimneys with the Welsbach Burner.*

Burner.	Pressure in inches.	Consumption, cubic feet.	Candle power, pentane units.	Efficiency, candle power per cubic foot per hour.	Loss, candle power, due to chimney.	Loss of efficiency per cubic foot.
Bray, Batswing, No. 3 ...	1.0	5.0	4.7	0.94	—	—
Bray, Batswing, No. 4 ...	1.0	5.3	6.0	1.13	—	—
Bray, Batswing, No. 5 ...	1.0	6.0	9.6	1.60	—	—
Bray, Batswing, No. 6 ...	0.9	7.2	11.0	1.53	—	—
Bray, Batswing, No. 7 ...	0.9	7.2	15.0	2.08	—	—
Bray, Batswing, No. 8 ...	0.9	8.0	19.0	2.37	—	—
Standard Argand ...	0.8	4.5	16.0	3.55	—	—
Ordinary Argand ...	0.8	5.0	15.8	3.16	—	—
Welsbach (new) glass chimney	1.0	4.0	60.0	15.00	—	—
Welsbach (new) glass chimney*	1.0	3.0	60.0	20.00	—	—
Welsbach, three months in use	1.0	4.0	40.0	10.00	—	—
Same ...	1.0	3.0	40.8	13.60	—	—
Welsbach, with mica chimney ...	1.0	3.5	56.0	16.00	4.0	1.01
Same ...	1.0	3.0	50.0	16.60	10.0	3.33
Welsbach, with amber glass chimney ...	1.0	4.0	52.0	13.0	8.0	2.00
Welsbach, with ruby chimney	1.0	4.0	27.0	6.75	33.0	8.25
Same ...	1.0	3.0	30.0	10.0	30.0	10.00
Welsbach, with red chimney	1.0	3.0	50.0	16.66	10.0	3.33
Same ...	1.0	4.0	60.0	15.0	—	—
Oil lamp (Belge) ...	—	2.08 oz. oil	16.8	—	—	—

* This burner was used in the remaining experiments.

which in appearance approaches the Argand gas flame very closely, while the mica chimney, though absorbing a small amount of light, is unbreakable. It may be freely recommended for general adoption, therefore, as likely to prolong the life of the mantle and to dispense with the really serious inconvenience of the breaking of the glass chimney. The glass rod chimney is an excellent device for producing a good dispersive effect. Like the electric arc light, the Welsbach incandescent light is very rich in the violet or active chemical rays of the spectrum, and it has consequently a low diffusive power; but, on the other hand, it serves very effectually as a source of artificial light for photographic purposes. It is also excellently well adapted for the illumination of objects on the microscopic slide and for certain operations in analytical chemistry in which change of colour is taken to indicate chemical change. Owing, again, to its extreme brilliancy it

proves an excellent search-light for the exploration of the larynx, fauces, or nasal cavities. Lastly, the photometric measurement of a mantle that had been three months in constant use is interesting as showing how satisfactorily the illuminating power is maintained.

In considering, in conclusion, the systems of artificial lighting that are in vogue at the present time, the incandescent system of electric lighting must, of course, rank first from the point of view of health, since it affords a soft, agreeable light, without giving rise to any vitiation of the air; there is no combustion, and consequently there are no products of combustion, complete or incomplete. From the same point of view we are bound to place next, in the face of the result of our present inquiry, the incandescent gas light in its improved form. It is even less productive of carbonic acid gas than the average oil lamp, and consumes not quite one half less gas than the existing type of burners, giving rise, therefore, to the evolution of half the heat and half the amount of carbonic acid gas, while its illuminating power expressed in candles is more than three times as great as the best ordinary gas-burners or the incandescent electric lamp, each of which does not generally exceed 16 candle-power, unless a very great expense is no object to the consumer. We are far from saying that the incandescent system of gas-lighting has attained to the highest pitch of perfection; still we are well within bounds when we regard it as the system of gas lighting which utilises most efficiently and most economically the full powers or duty of coal gas as an illuminating agent. Some have expressed fears that the burner is a delicate instrument—much too delicate—for the part it is destined to fulfil; but we have found with ordinary care—and care is well worth a little exercise in view of the enormous advantages the system affords—that these fears need not exist. We understand that in practice the average life of a mantle, taking risk of breakage into consideration, is between three and six months, but the mantles have been frequently known to last over a year, at the end of which time their lighting efficiency was still good. One more important point, already slightly touched upon, is that, in spite of its high illuminating powers, this burner does not require a gas possessing any special illuminating value itself; and as it is the maintenance of a high illuminating value which contributes in a large measure to the cost of coal gas, the general adoption of the incandescent system of gas lighting would probably lead to the production of a cheaper gas—possessing little illuminating power, but adapted equally well for the incandescent gas-burner—which would then contrast more favourably with coal as regards cost for heating purposes. The production of a cheaper gas since the introduction of the incandescent system of lighting has, we believe, engaged the serious attention of engineers, chemists, and others, and we may expect to hear more on this important question before very long. To hygienists this is an extremely important aspect of the incandescent gas system, inasmuch as it is obvious that the introduction of cheaper gas, by its more extensive employment for fuel, would tend to free London from the reproach of being a city which, during the greater part of the winter, is enveloped in vilely suffocating fogs. There is therefore, we think, a future for the new system of far-reaching importance to the community.

THE LANCET LABORATORY.

THE HOUSING OF THE POOR AT BUDAPEST.

WHAT THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY DID NOT SEE.

(FROM OUR SPECIAL CORRESPONDENT.)

AT Budapest, or rather at Pest, there are some magnificent buildings in broad and lengthy streets. In the neighbourhood of the Hungarian capital there are men of great wealth, who possess splendid estates. The members of the International Congress of Hygiene and Demography, who recently met in that town, were shown all the beautiful public monuments, the various institutions, colleges, theatres, &c., and were entertained with princely hospitality at the seats of the nobility living near the capital. This was all very well in its way and very pleasant, but the Congress was supposed to gather together men earnest in the cause of sanitary reform.

The Hungarians are an intensely patriotic people; but unfortunately their patriotism is so exaggerated that it degenerates into Chauvinism. Thus everything that could, even by a stretch of imagination, be construed as creditable to the Hungarian nation was proudly shown to the members of the Congress. This gratifying task was so well accomplished that not a few, even among the most prominent of the foreign delegates, actually went away with the impression that Budapest was a well-administered and healthy town! Certainly statistics were given that prove a very different state of things, but these were lost in the crowd of communications, and nothing was done to bring them home to the delegates. If, however, such congresses meet, not in the most convenient town, but in various towns and countries, it is for the purpose of strengthening the cause of sanitary reform in these different and distant centres. On such occasions the local sanitary reformers have a splendid opportunity of laying bare the sanitary defects which they are seeking to remedy and adding to the force of their own reclamations the opinion of eminent hygienists from all parts of the world. Now Budapest stands out among the capitals of Europe as one of the very worst towns that exist in respect to the housing of the working classes and of the poor. This grievance prevails in all great centres of population, but is especially acute at Budapest; consequently it was natural to imagine that one of the first objects of the organisers of the Congress would be to conduct the members into the cellar dwellings, the overcrowded tenements, and the slum property of Budapest. These visits could have been followed by such a debate and by the adoption of resolutions of so conclusive a character as to thoroughly awaken the conscience of the country and compel the Government and municipality to take action. Thus the holding of the Congress at Budapest might have helped to improve the condition of the homes of the poor, and such a result would have rewarded the effort of travelling so long a distance. Nothing of the sort, however, was done; and though, in one of the numerous Sections, Dr. Josef Schwartz of Budapest formulated a most substantial and conclusive impeachment of the town of Budapest, the Sections for the most part were so poorly attended that many communications read to them found no echo. Even the voice of Dr. Jacques Bertillon was lost in the wilderness of innumerable papers, speeches, and Sections; yet what this most eminent demographer stated was startling enough, and had the facts been generally known to the Congress many members would have suggested the advisability of making investigations while on the spot. Dr. Bertillon stated that in 1891 the population of Paris amounted to 2,424,705 persons, and out of these people 331,976, or 14 per cent., were living in overcrowded houses or lodgings. In 1885 there were 1,315,387 people in Berlin, of whom 363,960, or 28 per cent., were in overcrowded tenements, &c. For Vienna in 1891 the figures of the population were 1,364,548, of whom 387,000, or 28 per cent., were in overcrowded dwellings. At Moscow in 1882 there was a population of 750,867, of whom 236,649, or 31 per cent., were in overcrowded dwellings. At St. Petersburg in 1890 there were 956,226 inhabitants, of whom 442,508, or 46 per cent., were suffering from overcrowding. But what shall we say of Budapest? Will it be believed that this beautiful town, about which such praise was sung at the Congress, is not only more, but much more, overcrowded than the worst of the towns just mentioned? Yet Dr. Bertillon submitted to the Congress figures showing that in 1881 Budapest had 360,551 inhabitants, of whom 250,601 were living in overcrowded houses. This gives the enormous proportion of 71 per cent. of the inhabitants of Budapest as suffering from the effects of overcrowding, and makes out that the capital of Hungary is in a much worse condition than even the two capitals of Russia. Of course there are exceptional circumstances that account for the exceptionally unfavourable position of the inhabitants of Budapest. The town has developed and the population increased so rapidly of late that it has been aptly described as the Chicago of Central Europe. (Fig. 1.) Due to growth by this growing prosperity, vast multitudes of workmen and labourers have thronged to the capital, thus crowding all available dwellings. Not only are the dwellings in a deplorable condition, but the streets are filthy and the air is impure. The average rent of dwellings at Vienna, consisting of one single room, is 50.99 fl. per annum. This is equal to an annual rent of 5.40 fl. per square metre of floor surface, or 1.73 fl. per cubic metre of space. For two-roomed tenements the rent is proportionately cheaper—namely, 97.80 fl., or 4.08 fl. per square metre and 1.47 fl. per cubic metre. For three rooms the rent was still cheaper—namely, 145.75 fl. or 3.71 fl. per square metre and 1.31 fl. per cubic metre. Dr. Schwartz calculates that at Budapest the average rent for one room is 122 fl., or 3.40 fl. per square metre and 3.07 fl. per cubic metre. The two-roomed tenement is set down at 144 fl., or 6.37 fl. per square and 2.35 fl. per cubic metre. Thus it will be seen that the rents charged at Budapest are very much higher than the already extravagant rents of Vienna. The above figures submitted to the Congress, but scarcely noticed by its members, led me to make a personal investigation. I appealed to Dr. Josef Schwartz, as the author of the most remarkable paper on the subject, and he very obligingly devoted two or three days to taking me round some of the worst districts of Budapest. First we went to a place called the New Watch House, on the outskirts of the town, where there need not have been any overcrowding as there was much waste space around and a considerable amount of land was not yet built upon. Here were a series of houses divided into tenements, forming large inner courts and various kinds of buildings, including even an artist's studio. Under the main entrance there was a horrible stench coming up between loose planks that were placed over an open drain. This entrance formed a long archway, and into this passage, right over the foul drain, was the only window of the first lodging we entered. It was a single large room; the rent was 90 fl. per annum. A woman and four children lived here. From this room, with the aid of matches, we found our way along an absolutely dark corridor. There were no windows whatsoever to light this passage, and a cavernous, damp odour prevailed. At the end we penetrated a tenement consisting of two rooms, one of the rooms being nearly filled with a grand piano. Seven persons lived here, most of them musicians, and the rent was 150 fl. per annum. Outside there were stables, a large number of goats and poultry were wandering about, and under a distant archway there were four closets, which were frequented by the inhabitants of three courts. These closets were filthy in the extreme, and being under an archway were dark and had no direct ventilation. Near to these closets we came upon five adult persons sleeping together in a very small room; and in a room upstairs I counted six beds. This latter tenement consisted of two rooms—the larger room with the six beds and a smaller room where an old woman was at work making sacks. By this occupation she said she could earn from 2 fl. to 3 fl. per week. The rent for these two rooms was 150 fl. per annum. Close by a very small private chapel had been divided in two horizontally by building a floor across the middle, thus converting it into two tenements. The upper portion, consisting of one long narrow room under the roof, was occupied by five persons. The atmosphere within was absolutely stifling. Close to this chapel tenement I found a mangle in a dark sort of lumber space at the end of a passage in which there were three closets, so that the foul emanations from the badly constructed drains could be readily absorbed by the damp linen about to be mangled; indeed, there were a great many laundresses in this unwholesome quarter. Another room I found to be below the level of the court; it was damp and had an earthy smell. There was but one very small window, and this was not opened "because the baby was ill."

In the same part of the town and not far from the New Houses of Parliament, now in course of construction, I visited a court inhabited exclusively by Slavs. The Slavs have come in droves to Budapest. They are very cheap, generally live together, and do labourer's or navy's work. On two sides of the court there were small, low houses of the cottage type, and in one of these cottages there were six people inhabiting one small room, for which they paid 180 fl. rent per annum. The third side of the court, or little square, was walled off from the street by a wooden boarding, while on the fourth side there was one of the most remarkable structures it has ever been my fate to see in a large town. (Fig. 1.) It was a wooden hut constructed apparently by amateur builders who had utilised any odd planks and bits of wood that could be picked up. In photographing this shanty

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I persuaded one of the Slavs inhabiting the court to stand close against the hut so as to show how low it was. It will be noted that the door is wider at the bottom than at the top and consequently cannot be properly closed. But the thin planks which constitute the walls do not fit better than the door. In many places the hand can pass between them. In spite of the encumbering lumber and the darkness I managed

FIG. 1.



Wooden Hut at Budapest in the Court tenanted by Slavs.

to photograph the interior. In the small bed there depicted sleep a man and a woman. (Fig. 2.) On the bed is the man's stock-in-trade, a basket loaded with crockery. It will be noticed that the bed stands on the bare earth. There is no flooring whatsoever, and when it rains the earth becomes quite wet with its soakage from the surrounding land. But

FIG. 2.

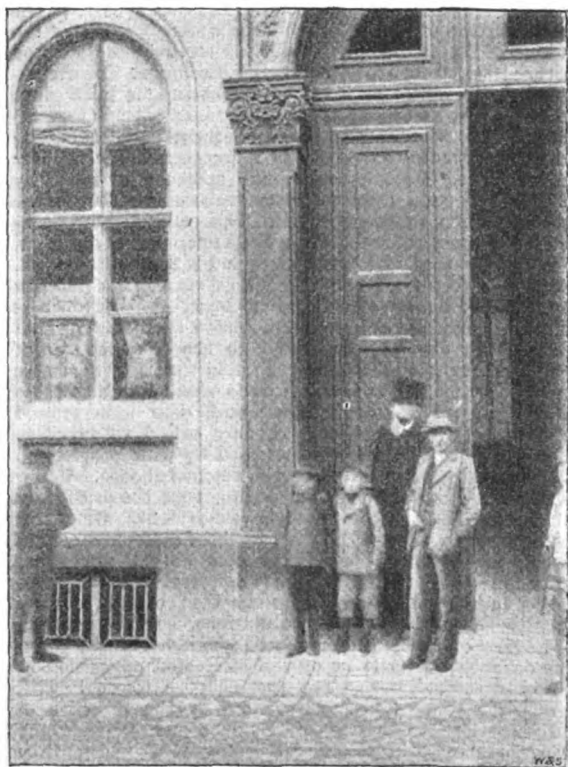


Interior of the same Hut.

a good deal of the rain also enters this habitation through the numerous holes in the roof and walls. The light shining through these holes and the open spaces between the badly fitting planks forms white spots and white lines in the photograph. Some straw for packing the crockery, broken wooden cases, old rags, and tattered clothing filled up much of the

space within the hut, though apart from the bed there was no other article of furniture. The day of my visit was grey and grisly, and everything about was damp, cheerless, and devoid of any trace of comfort. The hut suggested a temporary structure reared by a shipwrecked mariner on the shores of a desert island. That it should be the home of a man and a woman in the great and prosperous commercial and political capital of a civilised European country seemed almost incredible. To sleep in such a place is to risk being frozen to death, for, as is the case with all Central European towns, Budapest suffers from the extremes of heat and cold. This is not, of course, shown by the average temperature. From 1871 to 1890 the annual average temperature was 9.9°C., the warmest month (July) was 21.4°C., and the coldest (January) 1.9°C. below zero; but this is the average for many years. The average temperature for July, 1865, was 24.8°C., and for December, 1879, the cold was equal to 10.5°C. below freezing point. The greatest extremes known were of heat 35°C. in July, 1870, and of cold - 26.6° in December, 1879. Let us imagine what must be the condition of people who are only protected from such extremes of temperature by a few thin planks of wood loosely nailed together. The cutting draughts passing through this hut from all sides certainly provide

FIG. 3.



Entrance to Mansion in the best quarter of Budapest, showing Grated Window of Cellar Tenement below.

plenty of air, but they destroy all sense of comfort, at possibility of warmth or efficient shelter.

It may be argued that this hut was but a temporary makeshift, though it has been in existence a good long time, that it was meant only for cattle or for lumber; but this is no reason for allowing human beings to dwell in it. In any case, there are close at hand large blocks of dwellings recently constructed, and for them there is no excuse for insanitary conditions. There must have been some municipal control over the plans and designs of these vast workmen's dwellings. One of these block buildings which I visited contained sixty-three children belonging to forty different families, each family being located in a separate tenement. The square block has in its centre a square yard, after the fashion of a Spanish *patio*, with balconies all round at each floor. The first of these galleries or balconies is on a level with the pavement of the street, and the court a storey below. Thus the house is built down as well as up, and there is a whole floor divided into numerous tenements below

the level of the street. The only light and air are from the *patis* or inner well-like court, or else from very small skylights on a level with the street causeway. No special provision is made for the ventilation of these underground dwellings; they were dark and damp, and at this low level, where there is little or no circulation of air, there were a number of closets, which, though trapped, were so rarely flushed that the traps were full of solid soil and the pans filthy. Thus, in the most recently constructed artisans' dwellings, tenements are deliberately built that can never receive a direct ray of sunlight, that must ever remain in a state of semi-darkness, that cannot be free from damp, because the outer walls rest against the earth below the street pavement, that cannot be efficiently ventilated, and must evidently and for all these reasons be absolutely unwholesome. According to the official report of the Director of the Statistical Office of Budapest, the well-known demographer, Professor Körösi, the living in underground dwellings shortens human life by from two to three years, and he further declared that at Budapest the prevalence of infectious epidemics in underground dwellings is 60 per cent. more frequent than in other dwellings. Yet in spite of this authoritative statement there were in 1890 in Budapest 104,047 dwellings or tenements of which 5.09 per cent. were underground.

Nor is it only in poor quarters and in artisans' dwellings that cellar tenements will be found. These also exist in the wealthiest parts of the town. Within a stone's throw of the best club of Budapest, in a magnificent street proudly called Magyar-street, there are several cellar dwellings. The accompanying photograph shows the only light and air inlet given from the street to one of these cellar tenements. (Fig. 3.) The handsome window of the ground floor, and the stately entrance door indicate that this is a luxurious and high-class dwelling-house. But there is a small aperture protected by iron bars and on a level with the causeway. This is the only window of a tenement below. This cellar dwelling consists of one room lighted by the little aperture in question. The room measures 4.20 by 4 metres and is 2.20 metres high. At the end furthest from the street there is a kitchen measuring 3 by 3 metres and 2 metres high. This kitchen is absolutely dark. Dr. Schwartz calculated that the rent paid for this cellar dwelling amounted to the fabulous sum of 5.66 fl. per square and 2.66 fl. per cubic metre of space, or in round figures £12 a year. In the same building there were several other equally dark and dear underground tenements. Such places, though only suited to serve as cellars for storing wine, are thronged by poor people who live there and overcrowd even these wretched abodes. Under such circumstances it is not surprising that the death-rate at Budapest is high; the cause is self-evident. Of course overcrowding in a city that is rapidly developing cannot be easily checked, but surely as new houses are being built on all sides the authorities can prevent the construction in them of dwelling rooms that cannot by any possibility become wholesome habitations. If the authorities—in view of the indifference and ignorance of the population on such subjects, or of the interested opposition of building speculators—had not the courage to deal with this question they could have profited by the presence of the International Congress of Hygiene and Demography at Budapest to gain the moral strength of which they seem to be deficient. They might have invited the whole Congress to express its opinion on the necessity of abolishing cellar dwellings. This discussion might have been preceded by a visit to some of the cellar dwellings of Budapest. Such an excursion would not have redounded to the honour of the Hungarian people, but it would have done credit to the sincerity and humanity of all concerned. It would not have supplied the material for flattering comments on the progress accomplished at Budapest, but it would have provided sharp and incisive arguments to force forwards the cause of sanitary reform, which, in respect to the housing of the poor, has been scandalously neglected.

(To be continued.)

Egyptian sanitation are, as in two former reports, very plainly pointed out in trenchant language which admits of no possibility of doubt. While urging the necessity of an increase in the inspectors, and pleading for the appointment of an additional European, which has since been granted to him, Surgeon-Lieutenant-Colonel Rogers writes: "In time of epidemic disease such as cholera the present organisation can only lead to a breakdown, and this I wish to be clearly realised. In dealing with the ordinary epidemics of the country, especially typhus fever, cases are constantly occurring where no inspectors are available, and the inadequate measures taken by incompetent medical officers lead to a loss of life which an inspecting staff would largely diminish." Now that typhus fever has become so rare in England it is interesting to note that in Egypt there were forty-three outbreaks as compared with twenty-two reported in 1892. This increase in the reported numbers may be partly due to greater activity on the part of the native officials. Altogether 1407 cases were notified, including 243 deaths. They were spread all over the various provinces, from the Soudanese frontier to Alexandria, but many of the epidemics were caused by relapsing fever, which the native medical men can hardly yet diagnose from typhus fever. Moreover, at least 108 cases and twenty-six deaths must be deducted from the figures above because they were due to enteric fever among the British troops. Measles was present during the year, chiefly from February to July, and caused 473 deaths out of 1215 cases reported. Small-pox accounted for 191 deaths, out of 746 patients, rather more than half of whom were inhabitants of Lower Egypt. The disease, when it appears, plays great havoc among the blacks, who are never vaccinated in the Soudan. It is very satisfactory to find that in Cairo itself, where civilisation ought to be further advanced, there were only eight cases during the year. To those who are interested in the medical welfare of the Egyptians it is satisfactory that not only do the hospitals to which English medical men are attached grow in popularity, but that also some of the provincial hospitals are now sufficiently filled, though the staff consists entirely of native medical men, most of whom have been recently educated at Tantah, where there is the greatest improvement of this kind: the in-patients for 1892 numbered only 979, while in 1893 there were 1196. At the Kasr-el-Aini Hospital, where the annual overturn is nearly 5000, there were 976 surgical operations, besides 1037 ophthalmic operations. The sum of £22,000 is now being spent upon repairing and partially rebuilding this old hospital, and Surgeon-Lieutenant-Colonel Rogers is more than ever convinced that it would have been true economy to have entirely condemned the old building and built a new hospital on modern plans. A small infectious hospital, consisting of two pavilions for twenty-two beds, has been built in the desert near Cairo, and to this is attached a public disinfecting station. At Alexandria also a new pavilion for twelve beds for infectious diseases has been erected. The lunatic asylum has been provided with new kitchens, baths, and laundry, and it is hoped that permission will now be given for an English psychologist to be appointed in order to study lunacy as seen in Egypt, and also to introduce some form of necessary employment and exercise for the patients. The drainage schemes for Cairo and Alexandria are still being studied without any immediate hope of fulfilment. It is estimated that for Cairo alone the cost will be over a million pounds, and Surgeon-Lieutenant-Colonel Rogers meets the financial difficulty by strongly advising the Egyptian Government to spend half that sum upon the partial drainage of certain quarters of the city. In commenting upon some of the faults of native medical men in the Sanitary Department, the Director-General reminds the Government that no lasting improvement in the officials can take place so long as instruction at the medical school is given only in Arabic. "After leaving the school," as Professor Virchow has put it, "the entire literature of civilised nations is a closed book to the students." The only criticism which we feel tempted to make upon Surgeon-Lieutenant-Colonel Rogers' able report is where he is inclined to recommend that the course of medical education be reduced from six years to five years, on the grounds that students in law and engineering have a course of only four years. The whole tendency of medical studies is to become more expansive every year, and we believe we are right in saying that one year of the enforced term is devoted to those scientific subjects which should properly be studied before the professional course begins.

appears that the only towns in which any attempt is made to distribute filtered water are Cairo, Alexandria, Port Said, Suez, and Assiout. In Cairo the filtration by bacteriological tests is satisfactory, but unfortunately only a small minority of the inhabitants have filtered water laid on to their houses. In Alexandria the absence of proper filtration by the water company has been exposed by the reports of Dr. Bittar, the German sanitary inspector attached to the municipality, and in consequence some new filters are now being constructed there. In the chemical laboratory it is curious to note that rather more than one-fourth of the year's analyses for the various Government departments had reference to the discovery of *cannabis indica* (hasheesh). Attention is called to the existence of nineteen cases of poisoning, mostly by arsenic, which came before the Medico-Legal Commission. It is difficult to say how many other cases there may be which defy detection. The Egyptian, like the native of India, sometimes becomes a professional poisoner and is fond of using datura for his victims, but fortunately not in lethal doses. We are told that there are 3000 villages in Egypt provided with barbers and midwives, but 1000 others have no similar provision. It would be interesting to know how the practice of the medicine men and old women of these thousand villages is carried on, and also who is responsible for the certificates of death. Surgeon-Lieutenant-Colonel Rogers concludes by pressing upon his chiefs the importance of creating a bacteriological laboratory and of providing some day a necessary refuge for the lepers and the incurables of Egypt. There are several appendices to the report, including an interesting one by Mr. Littlewood, the chief veterinary inspector. From it we learn that there were during 1893 six cases of human rabies reported and only one

case in a dog. Two Englishmen and a native underwent treatment in Paris, and so far are quite well. Rabies seems to have been introduced during the last few years into Lower Egypt from Europe; it would seem to be quite time to establish a dog tax, and more stringent control over the ownerless dogs. Eighteen cases of glanders and farcy were reported in Cairo and Alexandria, and an extensive trial of mallein was carried out in doubtful cases. Influenza has been very rife among horses, mules, and donkeys, though in previous epidemics among human beings in Egypt the stables escaped free. At the Cairo slaughter-house 113 cases of tuberculosis were detected, and the camels furnished the very large proportion of 4 per cent. of this number. The slaughter-houses and the animals of Egypt are now better cared for than the incurable paupers who by reason of blindness, lameness, or other infirmity are unable to earn their livelihood. These unfortunates are at the mercy of the Wakfs, or Ecclesiastical Commissioners, and though their condition was fully exposed to the Council of Ministers ten years ago, and again a year ago by Surgeon-Lieutenant-Colonel Rogers, nothing has been done in the way of reform. "The building is in a wretched state of repair and in a most filthy condition, swarming with vermin." Four male and two female attendants are supposed to look after 224 inmates, including 107 lunatics, who are visited by a native medical man twice a week. The condition of this "Te Kia," which is at Tourah, only eight miles from Cairo, is enough to show us what care the Egyptians take of their co-religionists, and we tremble to think what would be the condition of the hospitals of the country if it were not for the handful of English medical men attached to the sanitary service of Egypt.

THE LANCET RELIEF FUND.

SIXTH ANNUAL REPORT OF THE ALMONERS.

THE LANCET Relief Fund, which has for its Almoners the President of the Royal College of Physicians of London (Sir J. RUSSELL REYNOLDS, Bart., M.D., F.R.S.), the President of the Royal College of Surgeons of England (Mr. JOHN WHITAKER HULKE, F.R.S.), the President of the General Medical Council (Sir RICHARD QUAIN, Bart., M.D., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D., F.R.C.P., as Honorary Auditor, came into operation on the 1st of February, 1889.

In presenting the sixth annual report, the Almoners think it well again to direct attention to the objects for which the Fund was established.

The Fund is sustained solely by the Proprietors of THE LANCET, who provide every January the sum of at least £300, and is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners, or to the widows or orphans of members of the profession in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

When the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established; and, as a result, the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. Attention was called to this fact in THE LANCET of Feb. 16th, 1889, in the following words:—

"We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and, if relief had been afforded in the cases of those who suffer from chronic distress, the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established; which is, to afford prompt aid to registered medical practitioners, or to the

widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected exigency, which is not likely to recur, have pressing need of immediate and temporary pecuniary relief," and who, it may once more be pointed out, are likely to be permanently benefited thereby.

The balance in hand at the end of 1893 amounted to the sum of £133 4s. On Jan. 1st, 1894, the Proprietors of THE LANCET placed to the credit of the Fund the sum of £300. During the course of the year repayments of loans to the amount of £21 have been made. The sum of £344 has been granted in relief either by way of loan or of gift, leaving a balance of £110 4s., as per bank pass-book.

There have been considered altogether during the twelve months ending Dec. 31st, 1894, 56 applications for relief (the number the previous year having been 48). In 26 cases assistance was afforded, either as a loan or as a gift, according to the request of the applicant, the amounts of the grants ranging this year from £5 to £30.

The following are extracts from a few letters received from some of the recipients of the Fund:—

186.—"I wish to thank the Almoners for the help their loan has been to me, as it was one of the means which has helped me to resume my work."

217.—"I beg to return you my very best thanks for the generous gift of £— from the above Fund; and I can assure you, gentlemen, that the grant will prove of much service to me in overcoming my difficulties. I enclose a letter of thanks to the Almoners; but, if in order, I would feel it a favour if you could specially convey to the Messrs. Wakley my deep gratitude for the kind gift which emanates from them. I trust in time to be able to report to them a successful issue out of my difficulties."

221.—"The Almoners of THE LANCET Relief Fund.—I beg to offer you my very sincere thanks for the loan granted to me, which will entirely relieve my pressing necessities, and without which I am utterly at a loss to know to what source I could have turned for help."

223.—"I am unable to sufficiently thank you for £— so kindly sent from THE LANCET Relief Fund. You cannot imagine of what use it will be. I enclose receipt with very many thanks."

232.—"I return you my grateful thanks for the donation of £— received last evening. Indeed, it came in an acceptable

moment. Another week's rent due to-day, with old arrears at a standstill—this gift has prevented landlord taking extreme measures; and, secondly, I have a little boy very ill; so, indeed, it seemed a godsend, with but one sixpence in the house. Again thanking you —."

237.—"Be good enough to transmit to the Almoners of THE LANCET Fund the expression of my sincere gratitude, not only for the generous aid granted me, but for the promptitude of their truly kind assistance. It will be a satisfaction to them to know that their benevolent act has materially helped to calm the breakers which threaten to engulf a struggling professional brother."

238.—"I have received your kind note with enclosed cheque for £— from the Almoners of THE LANCET Relief Fund. I feel very grateful for the kindness so promptly attended to in sending me the required relief, and also for the liberality of time given for the repayment of loan; but, should I be fortunate enough in securing a permanent situation, it will be my wish and pleasure to repay the debt long before the time stated. I enclose the agreement signed, also

the receipt for cheque for £—. And again sincerely thanking you for my wife and myself," &c.

246.—"Allow me to thank you very much for your great kindness to me and my little ones. I am truly thankful; I cannot say more. My case is a very hard one, my husband being ill so long that we are sadly reduced, so much so that not one of us had a second change of clothes, so that you may know how truly thankful we all are for your kindness."

248.—"I beg to offer you my most grateful thanks for your generous gift received this morning, as I am absolutely penniless, and only for your goodness in thus so promptly responding to my application should have been in great distress. Again thanking you very much, pray accept my warmest thanks for so promptly submitting my request to the Almoners of THE LANCET Relief Fund, who have so generously responded to the same. I was quite penniless, so you can well imagine my thankfulness."

J. RUSSELL REYNOLDS.

J. W. HULKE.

THOMAS WAKLEY.

RICHARD QUAIN.

THOMAS WAKLEY, JUN.

Statement of Accounts for the Year ending Dec. 31st, 1894.

DR.				£	s.	d.
To Balance at Bank, Jan. 1st, 1894	...	...	...	133	4	0
„ Proprietors of THE LANCET	...	...	...	300	0	0
„ Repayment of Loans:—						
Case No. 136	...	...	£2 10 0			
„ 186	...	...	5 0 0			
„ 194	...	...	5 0 0			
„ 212	...	...	6 0 0			
			2 10 0			
			21 0 0			
				£454	4	0
To Balance at Bank	...	...	...	£110	4	0

				£	s.	d.	CR.	£	s.	d.
By Loans:—										
Case No. 201	...	...	...	20	0	0				
„ 204	...	...	...	10	0	0				
„ 212	...	...	...	5	0	0				
„ 216	...	...	...	24	0	0				
„ 221	...	...	...	30	0	0				
„ 237	...	...	...	20	0	0				
„ 238	...	...	...	10	0	0				
„ 247	...	...	...	25	0	0				
								144	0	0
By Gifts:—										
Case No. 200	...	...	...	10	0	0				
„ 202	...	...	...	5	0	0				
„ 203	...	...	...	10	0	0				
„ 205	...	...	...	10	0	0				
„ 213	...	...	...	10	0	0				
„ 214	...	...	...	5	0	0				
„ 217	...	...	...	10	0	0				
„ 218	...	...	...	15	0	0				
„ 223	...	...	...	10	0	0				
„ 224	...	...	...	10	0	0				
„ 232	...	...	...	5	0	0				
„ 233	...	...	...	15	0	0				
„ 245	...	...	...	25	0	0				
„ 246	...	...	...	10	0	0				
„ 248	...	...	...	10	0	0				
„ 249	...	...	...	10	0	0				
„ 250	...	...	...	10	0	0				
„ 251	...	...	...	20	0	0				
								200	0	0
„ Balance at Bank	...	...	...					110	4	0
								£454	4	0

I find by the Bankers' Book that the actual balance on Jan. 1st, 1894, to the credit of the Fund was £133 4s., to which the sum of £300 was added by the Proprietors of THE LANCET on the same day. The balance at the Bankers' at the present date is the sum of £110 4s. I have also checked the receipts for disbursements and find the above account strictly accurate. December 28th, 1894.

HENRY A. PITMAN, Hon. Auditor.

CHRISTMAS AT THE HOSPITALS.

As far as circumstances permitted high festival has been held in the wards of many of our London hospitals during the Christmas season, and praise is due both to the medical staff and to the institutions concerned for their efforts to lighten the burden of the sufferers, whom

On the locker to each bed... for

plum pudding, &c., with wine, was served in all the wards at 12.30, and from 2 till 4 o'clock in the afternoon the hospital was open to visitors so that the patients could have their friends with them. The Christmas tea was served soon after 4 o'clock, the wards being illuminated. After tea the resident medical officers and the nursing staff, assisted by some friends, gave short concerts in the wards, excepting those wards where any of the patients were thought to be too ill to bear the music. These entertainments were most enthusiastically joined in by the patients, and were very successful. The whole day passed delightfully, resident medical officers, students, sisters, and nurses all successfully endeavouring to make others happy and themselves thoroughly happy in the process.

On Christmas Day the patients of the hospital were all dressed in their best, and the day was spent in the most cheerful manner. The patients were all very happy, and the day was a most successful one.

room, from which all patients who were well enough to come down received a gift, while for those confined to the wards a bran-pie was taken round, and every patient, nurse, and servant of the institution received a present. It has been decided to defer for a few weeks the concert given by the Middlesex Hospital Musical Society, under the leadership of Dr. J. J. Pringle, who is organising a brilliant entertainment of song, recitation, and instrumental music for the amusement of the unfortunate sufferers in the hospital.

St. George's Hospital.—The usual Christmas festivities were indulged in, and those who were well enough to eat them were supplied with roast beef and plum pudding on Christmas Day. On the evening of the 27th an entertainment for the patients was given, and a liberal tea presided over and served to the patients by the lady visitors and their friends provided. A musical entertainment was also held in all the wards where the patients were not too ill to suffer in consequence. Christmas trees were provided for the amusement of the children, and the beautiful presents of toys received from *Truth* were distributed. Everything was done as far as possible to give the patients a happy Christmas season.

St. Thomas's Hospital.—The only festivities which took place this year were carol singing on Boxing evening and the pleasures associated with a Christmas tree, which was decorated in the Victoria Ward on the following day.

London Hospital.—The annual Christmas tree and entertainment were held on New Year's Eve.

Royal Free Hospital.—A very enjoyable day was spent at this hospital on Dec. 25th. The seven wards were decorated by the nurses. As a third of the beds were closed in consequence of alterations there were only 120 patients in the hospital. A dinner consisting of the usual Christmas dishes was served at 12.30, after which a briar pipe and an ounce of tobacco, the gift of Mr. J. M. Grant, a member of the board, were given to each of the men, and fruit was provided for the women and children. A special invitation was sent by the matron to each child who had been an inmate of the hospital during the year and to the friends of the patients, and a large number put in an appearance between two and three o'clock, when as guests they received every consideration. After tea, at which all the visitors were present, several entertainments were given by the nurses in the different wards. Each patient and each of the young guests received a suitable present, those for the children being hung on the Christmas tree.

Great Northern Central Hospital.—Christmas Day and Boxing Day at this hospital were celebrated in the customary manner by the decoration of each ward by the nurses and convalescing patients with holly, ivy, and mistletoe, supplied in abundance by numerous friends of the hospital living in the neighbourhood. The patients, with few exceptions, thoroughly enjoyed a Christmas dinner of turkey and plum pudding, and an extensive distribution of toys made all the children happy. On Boxing Day an impromptu concert was organised in the Henry Quin Ward by the staff, and was much enjoyed by the patients. The annual entertainment for the patients will not, however, take place until Jan. 15th, when a series of *tableaux vivants* and a concert will be given under the direction of Mrs. Herbert Allingham.

The German Hospital.—The wards of this hospital were tastefully decorated, and on Christmas Eve the trees were illuminated, presenting a very pretty spectacle. Carols were sung, and a distribution of suitable presents was made to the patients, nursing staff, and attendants.

Hospital for Consumption, Brompton.—At this institution Christmas was, as usual, kept in exceedingly pleasant fashion. The galleries and wards were beautifully decorated with evergreens by the willing hands of sisters and nurses. The dinner consisted of turkeys and plum puddings and wine. Early on Christmas morning the nurses sang carols on the galleries, and later there were services in the chapel. On Friday evening the usual Christmas tree distribution took place in the entertainment room, every inmate receiving a handsome gift, through the kindness of the Misses Haddy and many other friends of the institution.

National Hospital for the Paralyzed and Epileptic.—At this hospital every effort was made to make Christmastide bright and cheerful. Books and cards were distributed at breakfast time, and after dinner and dessert a round of festivities was begun in the wards, including the performances of a negro troupe organised by the house physicians. Friends were admitted on Boxing Day, and on the Thursday there was a grand entertainment in the large hall, with a distribution of useful gifts arranged by the Lady Superintendent, in which

every patient shared. A Christmas tree will be provided and ward teas and ward concerts take place during the succeeding fortnight, and the festivities will conclude with a display of magic and ventriloquism on Jan. 15th.

Samaritan Free Hospital for Women and Children.—The Christmas festivities at this institution were held on Dec. 27th, and began with a musical and dramatic entertainment provided by the following *artistes*: Mr. John Thomas (the Queen's harper), Mrs. John Thomas, Miss Orgill, Miss Napier, Miss and Master Pelle, Mr. and Mrs. Hugh Bulkeley, Madame L'Estrange, Miss Elsie Macmillan, Mr. W. H. Probert, Dr. Walter Tate, and Mr. Hutchons. They gave a very successful and highly artistic performance, and their efforts were much appreciated by the patients and nurses who were fortunate enough to be able to attend. A carol was sung by the nurses. After the entertainment the annual distribution of Christmas gifts took place, and, thanks to the liberality of a number of kind-hearted friends, a goodly stock of useful and ornamental articles were obtained for the occasion and distributed amongst the patients, nurses, and servants of the hospital.

City of London Hospital for Diseases of the Chest.—On Christmas Day a dinner, consisting of the usual Christmas fare, was provided for the patients at this hospital, at which some of the committee of management and governors were present. Christmas cards, books, periodicals, &c., were distributed, dolls, toys, &c., provided by *Truth* and other friends, being given to the juvenile patients. In the evening a musical entertainment took place which was much appreciated.

East London Hospital for Children.—The Christmas entertainment for the patients of this hospital was held on Dec. 29th.

Victoria Hospital for Children.—Her Royal Highness Princess Louise has signified her intention to be present to-day (Friday) at the Christmas treat to be given at this institution.

Dreadnought Seamen's Hospital.—On Christmas Day service was held in the hospital chapel at 10.30 A.M., and the Christmas dinner, consisting of turkey and plum pudding, was served to the patients at 12.30 P.M. On Dec. 28th there was a concert and dance for the nurses, commencing at 7.30, on which occasion Mr. P. A. Nairne, the deputy chairman, brought his private band. On Jan. 3rd there was a Christmas tree for the children who had been patients during the year or were present in the wards, and on a date early in January Mrs. Freck. Smith of Lewisham Hill will give an entertainment to the patients in the recreation room.

The Cancer Hospital, Brompton.—On Christmas Day the whole of the patients who were well enough to partake of Christmas fare were regaled with turkey, plum pudding, and other such luxuries. On Jan. 2nd high tea was held with the usual Christmas tree amusements. This hospital provides regular entertainments (either dramatic or musical) throughout the winter season about once a fortnight.

Among the provincial institutions the staffs of which ministered to the happiness of the sick inmates were the Bristol Royal Infirmary, the Children's Hospital and the Eye Hospital in the same town, the Nottingham General Hospital and the Children's Hospital, the Fleming Memorial Hospital, Newcastle, and the York County Hospital. Christmas Day at the Royal Berks Hospital was spent in a very happy manner, game, turkeys, and other Christmas fare being supplied in abundance.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Staffordshire County Sanitary District.—Dr. George Reid, in his annual report for 1893, follows his usual practice of dealing with the district reports under subject-headings, instead of, as is done by some county medical officers, giving a synopsis of each report separately. Dr. Reid, however, supplies at the end of his report excellent tables which practically summarise the work done in each sanitary district in the county, and it is easy to obtain at a glance any information that may be required as to any given place. A special

report upon the isolation provision of the county is embodied in the report before us, and Dr. Reid observes, that in any scheme for providing hospital accommodation for the county, it must be laid down as a principle that small-pox cases may not be isolated in the same hospital as other infectious diseases. Dr. Reid also refers to the necessity for making proper provision for trained nurses, and he rightly states that it is not surprising that the public hesitate to submit to isolation under the circumstances existing in many districts. A very full and interesting account is given by Dr. Reid in his report of some experiments which he undertook for the county council with a view to determine the possibility or otherwise of effectually treating the sewage of slop-closets when the rain water is carried off by a separate system. Experiments were made both with polarite and magnetone as a filtration medium, and with ferrioum and superphosphate of lime as a precipitant. Without discussing in detail the experiments, it may be said that Dr. Reid arrived at the conclusion that for undiluted slop-closet sewage precipitation by either of the precipitants referred to, and filtration through either magnetone or polarite, was insufficient to purify the sewage, and that where a slop-closet system is in vogue land filtration will have to be resorted to. In the part of his report dealing with infantile mortality Dr. Reid gives the following tables showing the effect of factory labour upon the death rates:—

Deaths in Children under One Year in Three Classes of Artisan Towns in Staffordshire.

	Class I. Many women engaged in work.	Class II. Fewer women engaged in work.	Class III. Practically no women en- gaged in work.
Ten years, 1881-90 ...	195	166	152
Five years, 1889-93 ...	199	176	167

It will be seen that the figures in regard to the five years 1889-93 are on a par with those from 1881-90. It seems that only in a few of the district reports is the question of the sanitary supervision of dairies, cowsheds, and milkshops noticed, and we trust that Dr. Reid's remarks under this head will produce a good effect.

Gloucester County Sanitary District.—The Medical Officers of Health (Reports) Committee of this county council state that they have examined the reports relating to the several sanitary districts for the year 1893, and as a result they have issued nine small pages of printed matter thereon. We regret that we are unable to say much in favour of the report, as it treats only in the most superficial fashion of sanitation in the county. We learn, however, from it that there are still seven sanitary authorities "so retrograde" as to refuse to those under their care the advantages of notification. The several zymotic diseases other than small-pox are dismissed with but a few lines each, while one page is devoted to small-pox. All the authorities in the county are, we are told, alive to the importance of a pure water-supply, and we are glad to learn that the activity of the sanitary authorities increases year by year. Such important subjects as river pollution, the houses of the working classes, the control of the milk traffic, &c., are passed over in silence; and no serious attempt is made to analyse the vital statistics relative to the county.

Lanark County Sanitary District.—Dr. James McLintock's election as a member of the newly-formed Local Government Board of Scotland renders his third report to the Lanarkshire County Council, the last that he will make in his capacity as county medical officer of health, and he will in the future be in a position to forward in no small degree the necessary reforms of his district. Dealing with the housing of the working classes in the landward areas of Lanarkshire, Dr. McLintock is able to state that considerable progress has been made, particularly in miners' houses, since his last report, and that an experiment being made to house the miners in a new way, it seems, indeed, that the housing of the working classes has been improved.

McLintock expresses the opinion that the praiseworthy resolve of Glasgow to do its part towards the purification of the Clyde must lead in a short time to similar action on the part of other sanitary authorities. He considers that in many cases no very great outlay will be necessary, inasmuch as in his opinion the sewage can be disposed of over suitable land at a small cost. It seems, however, that in many instances extensive trade effluents will have to be dealt with. New water supplies are being rapidly provided in the county, more especially in the middle ward, and, as Dr. McLintock remarks, it may be expected that several severe outbreaks of enteric fever due to polluted drinking-water which occurred in 1893 will not recur. Dr. McLintock states, in advocating a new Public Health Act for Scotland, that the most pressing requirements are powers to frame and enforce building regulations, and to form special cleansing districts. There is contained in the report before us a paper by Dr. Macmartin Cameron on 'Twenty Years' Vital Statistics in Lanarkshire. This paper is lucidly written, and very considerable labour must have been expended in its compilation.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 4921 births and 3615 deaths were registered during the week ending Dec. 29th. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 20.2 to 18.2 per 1000, further fell last week to 18.0. In London the rate was 17.2 per 1000, while it averaged 18.6 in the thirty-two provincial towns. The lowest rates in these towns were 6.5 in Croydon, 13.2 in Leicester, 13.6 in West Ham, 13.8 in Norwich, and 15.1 in Cardiff; the highest rates were 22.7 in Burnley, 23.0 in Sunderland, 23.3 in Brighton, 24.0 in Gateshead, and 26.2 in Preston. The 3615 deaths included 385 which were referred to the principal zymotic diseases, against 426 and 392 in the preceding three weeks; of these, 153 resulted from measles, 64 from diphtheria, 56 from "fever" (principally enteric), 51 from whooping-cough, 34 from scarlet fever, 23 from diarrhoea, and 4 from small-pox. No fatal case of any of these diseases occurred last week in Croydon; in the other towns they caused the lowest death-rates in Bristol, Halifax, Leicester, and Preston, and the highest rates in Portsmouth, Newcastle-upon-Tyne, Burnley, Leeds, and Gateshead. The greatest mortality from measles occurred in Burnley, Newcastle-upon-Tyne, Portsmouth, Leeds, and Gateshead; from whooping-cough in Norwich, Huddersfield, and Swansea; and from "fever" in Derby and Sunderland. The mortality from scarlet fever showed no marked excess in any of the large towns. The 64 deaths from diphtheria included 35 in London, 6 in Manchester, and 3 in Leicester. One fatal case of small-pox was registered in London, 1 in Birmingham, 1 in Liverpool, and 1 in Hull, but not one in any other of the thirty-three large towns. There were 16 cases of small-pox under treatment in the Metropolitan Hospitals on Saturday last, the 29th ult., against 33, 22, and 15 at the end of the preceding three weeks; 1 new case was admitted during the week, against 7, 3, and 0 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 2142, 2034, and 1931 at the end of the preceding three weeks, was 1890 on Saturday last; 116 new cases were admitted during the week, against 187 and 161 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 358 and 325 in the preceding two weeks, were 332 last week, and were as many as 305 below the corrected average. The causes of 75, or 2.1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Oldham, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Leicester, Salford, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the thirty-two Scotch towns, which was 21.2 and 21.7 per 1000 in the preceding two weeks, was 21.0 last week.

the eight Scotch towns ranged from 13·7 in Leith and 17·2 in Edinburgh to 24·5 in Glasgow and 26·9 in Aberdeen. The 629 deaths in these towns included 41 which were referred to measles, 18 to whooping-cough, 12 to diarrhoea, 8 to scarlet fever, 4 to diphtheria, 2 to "fever," and 1 to small-pox. In all, 86 deaths resulted from these principal zymotic diseases, against 90 and 111 in the preceding two weeks. These 86 deaths were equal to an annual rate of 3·0 per 1000, which was 1·1 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 26, 32, and 54 in the preceding three weeks, declined again to 41 last week, of which 24 occurred in Glasgow, 9 in Aberdeen, and 4 in Edinburgh. The 18 deaths referred to whooping-cough showed a slight further increase upon the numbers recorded in recent weeks, and included 14 in Glasgow. The fatal cases of scarlet fever, which had declined from 12 to 9 in the preceding three weeks, further fell to 8 last week, of which 7 occurred in Glasgow. The deaths from diphtheria, which had been 7, 8, and 10 in the preceding three weeks, declined to 4 last week, and included 3 in Glasgow, where the 2 fatal cases of "fever" were also recorded. The death from small-pox was registered in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 157 and 142 in the preceding two weeks, further declined to 138 last week, and were 15 below the number in the corresponding week of last year. The causes of 52, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·1 and 26·5 per 1000 in the preceding two weeks, further declined to 25·4 during the week ending Dec. 29th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 23·5 per 1000, against 18·6 in London and 19·6 in Edinburgh. The 170 deaths registered in Dublin during the week under notice showed a decline of 8 from the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 18 and 22 in the preceding two weeks; of these, 10 resulted from small-pox, 3 from whooping-cough, 3 from "fever," 3 from diarrhoea, 2 from scarlet fever, and not one either from measles or diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 1·8 in London and 1·7 in Edinburgh. The fatal cases of small-pox, which had been 5 and 6 in the preceding two weeks, further rose to 10 last week; during the thirteen weeks of the quarter ending on Saturday last no fewer than 51 deaths have been referred to this disease in Dublin. The fatal cases of whooping-cough, which had increased from 1 to 5 in the preceding three weeks, declined to 3 last week. The deaths referred to different forms of "fever," which had been 2, 4, and 7 in the preceding three weeks, declined again to 3 last week. The 170 deaths in Dublin included 22 of infants under one year of age and 55 of persons aged upwards of sixty years; the deaths of infants showed a marked decline, while those of elderly persons showed an increase upon the numbers recorded in recent weeks. Seven inquest cases and 6 deaths from violence were registered; and 70, or more than a third, of the deaths occurred in public institutions. The causes of 15, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

The following officers have arrived from India on completion of a tour of service:—Surgeon-Lieutenant-Colonel Birrow, Surgeon-Major Jencken, and Surgeon-Captain Green. Surgeon-Major James has been appointed to Shorncliffe; Surgeon-Major Heffernan to Woolwich; Surgeon-Captain Rawnsley to Hounslow; and Surgeon-Captain Macdonald to Belfast. Surgeon-Captain Hayes has embarked for Malta in succession to Surgeon-Captain Forrest, transferred to half-pay. Surgeon-Lieutenant-Colonel Carter and Surgeon-Major Thiele have arrived in Malta; Surgeon-Captain Nannerley at the Straits Settlements; and Surgeon-Captain Marks at Barbadoes. The retired pay appointment

at Newcastle-on-Tyne has been conferred upon Surgeon-Lieutenant-Colonel Hoysted.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel William Henry Bant Clapp, M.D., is placed on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Lieutenant-Colonel F. C. Barker, M.D., F.R.C.S. Irel., to resume Charge of his substantive appointment of Medical Officer to the Kathiawar Political Agency and in Charge of the West Hospital, Rajkot; Surgeon-Captain H. Herbert, F.R.C.S., to resume Charge of his substantive appointment as Civil Surgeon, Kaira. Surgeon-Captain J. L. T. Jones, M.B., on relief, to act as Civil Surgeon, Broach. The services of Surgeon-Lieutenant-Colonel A. S. Reid, M.B., I.M.S. (Bengal), Medical Officer, 2nd Battalion 4th Gurkha Regiment, Officiating Agency Surgeon in Baghelkhand, and Tutor to H.H. the Maharaja of Rewa, are replaced at the disposal of the Military Department. Surgeon-Lieutenant-Colonel Albert Baird Seaman is promoted to Brigade-Surgeon-Lieutenant-Colonel. Surgeon-Lieutenant-Colonel Joseph Wilson, M.D., I.M.S., retires from the service.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel Cornelius S. Hall, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve of Officers. Surgeon-Major James Creagh, to be Surgeon-Lieutenant-Colonel. The undermentioned Surgeon-Captains to be Surgeon-Majors: Samuel B. Mason; George Middlemiss, M.D.; Francis L. Stephenson, M.B.; William S. Symes. Surgeon-Lieutenant Walter K. Loveless to be Surgeon-Captain. Surgeon-Lieutenant Charles Carter Moxon, 2nd Volunteer Battalion, the York and Lancaster Regiment, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Royal Engineers: 2nd Lancashire (the St. Helens): Surgeon-Major E. F. Hall, M.D., to be Surgeon-Lieutenant-Colonel. *Rifle:* 3rd Volunteer Battalion, the Devonshire Regiment: William Langran, Gent., to be Surgeon-Lieutenant.

PRACTICAL THERAPEUTICS.

The experiment of distributing packets of quinine through the post-office for the use of the native population of India has proved so popular and successful in Bengal that the Bombay Government is arranging for the distribution of the drug in the Bombay Presidency. Packets of quinine will soon be procurable at all the district post-offices in the Presidency and in Sind. It is understood that the Surgeon-General and Postmaster-General of Bombay are engaged in settling the details for giving effect to the proposal. The natives of India appear to have a lively faith in the virtues of quinine for the cure of fever, and as a prophylactic remedy against malarial disease.

HORSES FOR MEDICAL OFFICERS.

Adverting to a paragraph under the heading of "The Services" in THE LANCET of Dec. 15th, 1894, regarding a provision in the last edition of the Queen's Regulations for medical officers being mounted when with an infantry unit, an esteemed army correspondent refers us to the Army Orders for November, 1894 (which are a reissue of this portion of the Queen's Regulations), in which this important addition is omitted. The privilege is, as heretofore, restricted to medical officers when serving with a mounted unit, and matters consequently stand where they were.

SIR WILLIAM LOCKHART'S FORCE.

Among the appointments which have been made to the staff of the expeditionary force under General Sir William Lockhart we notice the names of Brigade-Surgeon-Lieutenant-Colonel Spencer as P.M.O. with the headquarters staff; Brigade-Surgeon-Lieutenant-Colonel Davies as Senior Medical Officer of the Wano Brigade; and Surgeon-Major Shearer as Senior Medical Officer of the Jhandola Brigade.

RETIREMENTS AND VACANCIES IN 1895.

Among the retirements and vacancies in the medical staff in the course of the present year there will, we believe, be four in the rank of surgeon-major-general, one in that of surgeon-colonel, and three in the rank of brigade-surgeon-lieutenant-colonel.

The Government of India has sanctioned the introduction of Surgeon-Major Ranking's "Guide to Hindustani" as a text-book for general use in regimental schools.

Correspondence.

"Audi alteram partem."

"CHILD MORTALITY IN ENGLAND."

To the Editors of THE LANCET.

SIRS,—You have honoured me with a second leading article in THE LANCET of Dec. 22nd, and there is much in it with which I agree; yet I cannot but regard your dealing with my argument as incomplete and likely to mislead, which, I am sure, is far from your intention. You refer to the labours of that giant statistician, the late Dr. Wm. Farr, as if he were adverse to my view. I was the first to read a certain presentation copy of Mr. Noel Humphreys' excellent compendium of his works, and my impression is that Dr. Wm. Farr would have encouraged the use of coefficients like mine as the best means of setting forth the relative mortality of the several age groups. I did not arrive at these coefficients in the way you suppose. Had I done so the errors would have been prodigious though concealed. From 1881 to 1891 the estimated population of the age group 0 to 5 went more and more widely wrong in the annual reports and summaries of the Registrar-General owing to circumstances over which he had no control, so that in 1890 there was an error in excess of about 78,000 as regards the population of the said group in London alone. No wonder the death-rate of the group seemed to decline rapidly. Coefficients of incidence are for the purpose of comparing the death-rates of the several age groups with the average for the time being. The exact relation of each group death-rate to the average being given year by year any variation can be noted. Having the average and the coefficient we easily obtain the group death-rate as their product. But I contend that it is advantageous to be able on occasion to study the relative proportion of the group death-rate to the average without having that group death-rate or even the average itself as a disturbing element always before our eyes. We may place ourselves in a fools' paradise if we look at a declining group death-rate only. What I have found is that from 1876 onwards there has been in regard to the age group 0 to 5 a continual increase in the coefficient of incidence of mortality, showing that this group has had an ever-increasing share of the deaths that occur. You yourself admit that "the rate of decrease of child mortality has not been equal to the rate of decrease of mortality at the later age periods." This way of putting it disturbs the conscience of the nation less; but there must be a cause for the difference you concede, and I ask, What can that cause be? You suggest that if some means of eradicating cancer and phthisis were discovered I could not be grieved, and yet as these are destructive to the later age groups the improvement would make the incidence of mortality upon the younger group all the greater in comparison. So far from denying this, I accept it as strengthening my position. If A and B are running level in a race it makes no difference to the result whether A run slower or B run faster—B wins. But in the case before us the younger age group lags far behind, and that is why special attention should be paid to this group first. It is the turn of the children this time. Let us try and discover some means of removing Death's icy hand from them.

I was not, as you suppose, ignorant of the fact that, if the present excessive rate of mortality among children under the age of five years could be reduced to a third of its present figure, the coefficient for this age period would decline much less. It would become about five-elevenths of what it now is, supposing all else to remain the same. In order to reduce the coefficient to unity the death-rate of children under five years of age would have to decline to three-fourteenths of its present proportions, for the death-rate of this unfortunate group is at present nearly five times as great as the average death-rate of the other groups. I am, Sirs, yours faithfully,

diminishing in numbers at the wrong end (those least fit multiplying pretty much as heretofore), and that the actual death-rate of infants under one year of age was increasing, but showed that five of the seven principal zymotic diseases were increasingly fatal to the group 0 to 5 as a whole when compared with the later groups. Thus, in London during the eighteen years 1876-93 the coefficients of incidence of mortality upon this group ran up as follows: scarlet fever from 5.044 to 5.660, diphtheria from 4.618 to 5.723, measles from 7.186 to 7.952, whooping-cough from 7.401 to 8.148, and diarrhoea from 6.849 to 7.505, and the ascent was in each case by fairly regular gradation. Now you cannot account for this fivefold increase by any supposed relief to the other groups as regards cancer, phthisis, &c.; and yet there must be some cause, or combination of causes, to account for it. The increase has occurred in the coefficient irrespectively of the direction in which the average death-rate from the disease has moved; in some this has declined, in others (notably diphtheria) it has risen. You must admit, taking each of these five diseases by itself, that the age group 0 to 5 is not only less able to resist the onslaught than are the other groups (that is patent from the magnitude of the coefficients given above), but that it has become in comparison less and less able since each coefficient has increased. Year by year it has had a greater share of the deaths that occur from each of these five zymotic diseases. Can you account for this on any other hypothesis than that which presented itself to me? Perhaps you will copy your astute contemporary and declare that the result would have been different if the years had been transposed. Such statements win my admiration.

I am, Sirs, your obedient servant,
Kingston-on-Thames, Dec. 27th, 1894.

D. BIDDLE.

CANCELLING OF DEGREES.

To the Editors of THE LANCET.

SIRS,—Referring to the report in THE LANCET of Dec. 1st, 1894, of the proceedings of the General Medical Council, it seems a pity that so much of the time of the Council should have been taken up in discussing the question of the degradation of university graduates, when a little inquiry would have elicited the fact that universities were not so neglectful of their duty in the matter as has been supposed. As regards the University of Aberdeen the subject has recently been brought before the Scottish Universities Commissioners in a memorial addressed to them by the Senators, the initiative having been taken by that body, and not by the University Court, as might perhaps be inferred from your report. If the Commissioners regard the subject as within the scope of their commission, it is to be hoped that they will issue an ordinance prescribing the circumstances and mode in which an offending graduate may be deprived of his degree. If not, it will be necessary to have the sanction of Parliament by legislative enactment. In addition to the difficulties which were spoken of at the discussion in the Council there has also been suggested this one—that as the medical degree confers a Parliamentary franchise, the cancelling of it would result in disfranchisement. But this should be no real difficulty. If some of our politicians have their way all universities will shortly be deprived of their Parliamentary privileges; and, even were it otherwise, the penalty of disfranchisement is not too heavy to pay for such "infamous conduct" as would lead to the removal of a graduate's name from the roll of his university. I am, Sirs, yours faithfully,

Aberdeen, Dec. 17th, 1894.

DAVID W. FINLAY.

"ASSOCIATION OF QUALIFIED ASSISTANTS, JUNIOR MEDICAL OFFICERS, AND LOCUM TENENS."

To the Editors of THE LANCET.

SIRS,—I shall be pleased to receive the names of gentlemen who are favourable to the formation of such a society, stating their views on the subject, also giving their qualifications and addresses, so that I may be enabled to ascertain whether such an association as the above would meet with the approval and cooperation of a sufficient number of qualified medical men. I am, Sirs, yours faithfully,

bearings. Personally I think such an association, rightly managed, might do an immense amount of good and useful work, and would be the most powerful instrument in detecting, and ultimately eradicating, the shameful practice of employing unqualified men as medical assistants, a practice unjust to qualified men, degrading to the best interests of our noble profession (should be), and an imposition on the public at large—I am, Sirs, your obedient servant.

T. HOWARD BROCKLEHURST, M.R.C.S. Eng., &c.

Lichester-villa, Westham, Weymouth, Dec. 26th, 1894.

* * We comment on this proposal in another column, but may note here that the heading of this letter recalls a well-known *rexata questio*. An authoritative statement from a philologist as to the proper and appropriate plural of "*locum tenens*" (used in its technical sense) would be welcome to those who appreciate the "purity" of language.—ED. L.

THE CONTAGION OF CRIME.

To the Editors of THE LANCET.

SIRS—It is not a little remarkable that two lads with excellent moral antecedents should be all but simultaneously arraigned before the criminal courts for the perpetration of heinous crimes. In few quarters should such an occurrence be less expected. Scrutinising the painful incidents more closely they seem to me to involve considerations of not less moment for the medical jurist than for a psychologist and legislator. That crime is spread by imitation and human nature brutalised by familiarity with it, are propositions accepted by the most competent criminologists. This is amply demonstrated, among many others, by Dr. Paul Aubrey in his distressing work "*La Contagion du Meurtre*," a second volume of which appears this year. The question may then be pertinently asked, even while one of the cases is still *sub judice*. To what extent have these unhappy young men, and doubtless many others, not been the victims of a licentious and pernicious press? In the compass of a brief letter it is impossible and perhaps inexpedient to do more than glance at the striking examples of criminal contagion given by Aubrey under the heads of "*Contagion by the Family*," "*Contagion by Community of Life*," "*Contagion by the Spectacle of Public Executions*," "*Contagion by the Press*," "*Contagion by some Special Modes of Murder*," &c. On a case with which the people of this country are too familiar, that of "*Jack the Ripper*," Aubrey deals at some length as illustrative of criminal contagion, and the potency of press publicity as one of its etiological factors. Many similar examples of every manner of crime might be cited, but this one illustrates them all in their various gruesome aspects. It is not without justice that the author sneers at the affected moral superiority of the "*English*" and the "*ignominious*" condition of the streets of London when holding the record for criminal mutilation. The Whitechapel brutalities and their consequences are as follow. On July 17th, 1887, Alice Mackenzie, forty years of age, was found with her throat cut and her abdomen incised up to the umbilicus. On April 3rd, 1888, Emma Smith was violated and killed by a band of men comprising "*Jack the Ripper*." Martha Tabran on Aug. 7th received thirty-nine stabs. Ann Nichols, about Sept. 4th, had her head separated from the trunk and the abdominal cavity opened throughout its entire length. On Sept. 8th Annie Chapman had her head half severed from her body, her abdomen opened, her intestines drawn out of the body, and her heart and liver placed under her head for a pillow. Jane Mary Kelly, aged twenty-two years, had her head separated from the trunk, her nose and ears cut off, and her breasts removed. On Sept. 30th Elidowes was assassinated and the body mutilated. On the same date Elizabeth Stride had her throat cut, but there were no mutilations. On Nov. 11th the liver and intestines of a female were torn out and placed on a table and the limbs carved by knife cuts. On Dec. 26th a female was strangled with a cord. On Sept. 10th, 1889, a female body was found with the head and arms wanting; it presented the usual mutilations and was enveloped in a sack. In February, 1892, Frances Coleman, twenty-five years of age, had her throat cut; and just the other day a mere boy in America "*ripped*" two children of about the same age. After the London atrocities similar crimes were perpetrated all over the world. At Bradford an infant was found eviscerated in 1886 and the extremities and ears strewn round the trunk.

In 1889 two murders with mutilation took place in Hamburg. In 1890 in Moscow the mutilated body of a Sister of Charity was found in a sack. At Berne in December of the same year "*Jack the Ripper*" again appeared. In 1891 at Liverpool an infant was cut up in morsels and thrown into one of the docks. At Brussels in July, 1891, an infant aged thirteen months was found eviscerated. In October of the same year at Berlin the eviscerated body of a female was found. Three days afterwards Vanbourg slew and mutilated Boutry in the Rue de Charonne; in November, at Madrid, a female body was found eviscerated and mutilated. In the month of July, 1892, Madame Leblau was cut into particles and thrown into the Meuse at Tilly-sur-Meuse. In October, in the Rue Bokaris, a body was found cut in particles. Southampton, Glasgow, the United States, and Honduras contributed to this ghastly roll.¹ Can any sane person believe that a fractional portion of these atrocities were the work of one individual? Is it not morally certain that we have here the influence of criminal contagion, and that its inception is chargeable to the apotheosis by the public press of crime and criminals? This has been fully recognised by the Congrès International contre la Littérature Immorale et le Danger de la Publicité des Faits Criminels, held at Lausanne in September of last year; and it is high time an elevated patriotism recognised it here. Thousands—aye, millions—of young people are corrupted by the daily press—are made acquainted with crimes of which but for it they would ever remain in blissful ignorance. It is almost impossible to take a daily paper into the domestic circle without the risk of moral contamination. No sooner is a foul murder, a "*judicial murder*" (the blot *par excellence* of Britain among civilised nations), a detestable incest, or a distressing suicide perpetrated at Land's End then it is flashed to John o' Groats. Columns of newspapers are filled with revolting details, broken up under myriad headings cunningly devised to excite and impress the most morbid pruriency. What conceivable good except a few more filthy coppers to the exchequer of the newspapers is thus accomplished it is hard to conceive; what an amount of crime is thus propagated it is not difficult to comprehend. It is surely the function of a patriotic and philanthropic press to relegate to the background and to obscure the distressing features of human nature and to hold up for imitation its nobler and diviner aspects. I venture, then, to express the conviction that if the low periodical literature—of the metropolis in particular—were strangled by the firm hand of an enlightened and a benevolent legislative enactment, if public moral influence were so brought to bear on all the newspapers in the country as to make them feel that their interests lay (to make them ashamed were a Quixotic attempt) in a pure press, crime of all kinds would *pari passu* disappear, and a condition of society would emerge more in consonance with the blatant philanthropic and religious pretensions of a distracted nation.

I am, Sirs, yours truly,

D. CAMPBELL BLACK, M.D. Glasg.,

Professor of Physiology in Anderson's College
Glasgow, Dec. 25th, 1894. Medical School.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Owens College.

MANCHESTER is proud of its ancient Grammar School, which links it with the past. It is perhaps equally proud of Owens College, its one educational institution of the highest and most advanced type, but the product of the last fifty years. It delights in its purely local origin, for John Owens was a Manchester merchant, and in the fact that its growth and vigorous strength are due to the fostering care of Manchester citizens. On May 31st, 1845, John Owens signed his will, leaving over £52,000 to relatives, friends, charities, and servants, and the residue "for providing or aiding the means of instructing and improving young persons of the male sex (being of an age not less than fourteen years) in such branches of learning and science as now and may be hereafter usually taught in the English universities," coupled, however, with this fundamental condition that no one connected with the proposed institution should be required to submit to any test whatever as to

¹ Vide Cone: Crime et Suicide. Paris, 1891.

his religious opinions, and that nothing should be introduced in the education or instruction "reasonably offensive to the conscience of any student or of his relations, guardians, or friends under whose immediate care he shall be." He died the next year at the age of fifty-five. He was a bachelor, of somewhat delicate health, who had led a quiet and almost secluded life, had taken little or no part in public affairs, and was, therefore, but little known to his fellow townspeople. He had been a manufacturer and shipper, was successful in business, as was also his father before him. Comparatively little is known of his personal life, but evidence exists to show his interest in education, and that he thought much on the collegiate system he hoped to establish in Manchester. The residue of his estate realised £96,654 11s. 6d. None of the money, however, could be used for the purchase of property or for building. An escape from this difficulty was provided by Mr. George Faulkner, the chairman of the trustees, and an old friend of Mr. Owens, for he bought the late Richard Cobden's house in Quay-street, giving £4500 for it, and let it to the College until 1854, when he presented it to the trustees. The premises were extended from time to time at a cost of about £10,000. The institution grew and developed and the students gradually increased in number, so that at length a scheme for extension on a large scale was almost forced on the trustees. But before these trying days had been passed—and, indeed, for many years—the new College had a hard struggle for existence. The first complete session was opened in October, 1851, and the ordinary students numbered sixty-two; but in 1856–57 they had dwindled to thirty-three, and in 1860–61 were only sixty-nine. So far there was no medical department, though the Manchester Medical School was one of the most important in the provinces. It was founded by the late Mr. Thos. Turner in 1824, and in 1836 the prefix "Royal" was allowed on account of its "excellent equipment." In 1856 negotiations with the College took place on the question of amalgamation, but they were unsuccessful, the College authorities thinking the terms proposed too one-sided; so the matter rested for several years. In the meantime the position of the College gradually improved, and in 1867 the extension scheme was set on foot, with the result that the sum of £211,152 12s. 4d. was raised. Since then many large gifts and benefactions have been received for the endowment of special departments, and the College has had many valuable gifts of books, philosophical instruments, and other teaching appliances. The amalgamation of the school and College took place in 1872, and the buildings for the medical department were opened in 1874. The College in Oxford-road is now an extensive collection of buildings, and will be still further enlarged as time goes on. The important additions recently opened by the Duke of Devonshire have already been noticed in the columns of THE LANCET,¹ and it may be said that as regards convenience of arrangement, wealth of scientific appliances, and opportunities for research in all directions pertaining to medicine Owens College is well abreast of all existing schools of medicine. Clinical instruction is chiefly given at the Royal Infirmary, though other special hospitals are associated in this work. The distance between the College and Infirmary has sometimes been thought a drawback, but practically it is not found to be so. It is a little over a mile, and the break between close work at one place and then at the other is a relief and refreshment, and for those who do not care to walk there are tramcars which go from door to door, and cover the distance for a penny. The Infirmary and the College now work in thorough harmony, but for many years more or less friction existed. No doubt there were faults on each side. The Royal Infirmary was venerable, and its reputation high, before the College came into being, and instead of overlooking or excusing what seemed to be a somewhat supercilious assumption of superiority—natural, perhaps, to a young college recently manned by professors imported mainly from our old universities or from beyond the Tweed to bring light into Lancashire—the older institution was too sensitive and a state of chronic irritation was set up. This unfortunate feeling was not lessened by the ill-judged appointment to the chair of Surgery of a gentleman who, though an Englishman, hailed from Edinburgh. He was liked personally, and the feeling towards him was one of kindness and commiseration; but though he was well informed and had done some literary work

he did not possess the qualifications required for admission to the Infirmary staff, so that he could only give clinical teaching by joining the Ancoats Hospital. After a few years this gentleman resigned, and a well-known member of the Infirmary staff is now the Professor of Surgery. All this, however, is a story of the past—the College has outgrown its youthful vanities, the Infirmary has recovered its equanimity, and the relations between the two are better understood. The establishment of the Victoria University, a teaching and examining body whose degrees have already acquired prestige and value, must have a stimulating effect on medical education in the north of England; while the three colleges of Leeds, Liverpool, and Manchester, already affiliated, will exercise a generous rivalry, tending to maintain in each a high standard of efficiency.

Lead Poisoning.

A case of discreditable carelessness—to use a mild term—as to human life was brought to light the other week at an inquest on a girl who died from lead poisoning. She had been employed by a firm of dyers in Newton Heath in "noddling" yarns dyed orange or yellow, presumably by chromate of lead, the handling of which is notoriously dangerous. Three years ago two girls at the same works died from the same cause. Out of thirty-six girls employed the manager admitted that he only knew of three who had never been away ill from lead poisoning. The coroner said it was a most outrageous thing that girls should be allowed to commit suicide merely to supply yellow goods to foreign markets, and the jury returned a verdict to the effect that the deceased had died from lead poisoning caused by the firm neglecting to carry out the promises made by it three years ago.

The Smoke Nuisance.

The war between the smoke producers and those who object to their air passages being made receptacles for particles of carbon, each carrying its little cargo of empyreumatic filth and sulphurous acid or other noxious gas, shows signs of revival. A deputation from the Manchester Chamber of Commerce, representing chemical, iron, and dyeing industries, and brick, tile, and terracotta manufacturers, waited the other day on a committee of the corporation in reference to prosecutions for excessive smoke production. The matter is to be formally considered by the sanitary committee. The arguments used came from the pockets rather than from the minds of the deputation, and were of the usual stock character. Our air is sufficiently polluted as it is, and one wonders what would be the state of things if manufacturers and the users of dangerous lead compounds had all their own way. It will be interesting to see how the sanitary committee deals with this confessedly difficult matter.

Jan. 1st.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Christmas and the New Year.

NOTWITHSTANDING the great depression of trade and commerce which has been prevalent here for so long, it has not prevented the usual flow of charity among the poor at this season. More than the usual number of "hot-pots" were distributed, providing a good dinner for a large number of families. In addition to this a large number of aged persons and children have been treated to substantial meals at St. George's Hall. It is very gratifying to add that the number of persons brought before the magistrates on New Year's Day was only half that of last year, while the city was altogether free from the shocking crimes which disgraced it last year on these festive days. The citizens have evidently found that it is quite possible to be both merry and wise.

Small-pox and Revaccination.

The recent scare caused by the importation of a few cases of small-pox has had an excellent effect in inducing many persons to undergo revaccination who otherwise would not have done so. Liverpool is so peculiarly situated that the importation of small-pox, as well as of other diseases, by sea or land is a contingency which may occur at any moment. For this reason it is of paramount importance that not only

¹ THE LANCET, Nov. 10th, 1894.

should primary vaccination continue to be strictly enforced, but revaccination should be urged upon all persons before the attainment of adult life. It is astonishing to those who have made it their business to inquire to find that while some few persons have been vaccinated twice, thrice, or even four times, the greater number by far have never been vaccinated since infancy. Knowing as we do the almost absolute protection of a second vaccination, this state of things ought not to be. Without resorting to compulsion, much may be done by example and influence.

The Atmosphere of the Police Court.

Our stipendiary magistrate said lately in allusion to the polluted state of the atmosphere in the court over which he presides that it was the vilest hole in the city, a remark which was endorsed by the assistant prosecuting solicitor. It has now become a very old grievance, and as it must in the very nature of things become worse instead of better if not remedied, it is greatly to be hoped that the new year will see something done to rectify what is really a grievous scandal.

Jan. 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Edinburgh in 1894.

WHILE nothing of sensational interest has stirred medical Edinburgh during the past year a good deal has happened which has more than a merely passing interest. Some changes are the beginning of a future, even the possibilities of which can only be matters of surmise and speculation. To begin at the beginning of things it may safely be assumed that the number of medical students in Edinburgh has diminished; at the University this has certainly been the case, and it is almost equally certain that the same may be said of the number of purely extra-mural students, although this latter point is more uncertain, as until within the last year or two there was no attempt to ascertain numbers by any conjoint system of registration. The mere falling off in numbers is not in itself an evil, for all who knew the Edinburgh School saw and felt that it was terribly weighted by its numbers. Only in a great school, where teaching has evolved into an art, and where so much energy, time, and ability are lavished by a large body of teachers upon it, could matters have gone on as satisfactorily as they have done and could results have been as good. It is the character and quality of the teaching which have continued to attract students from all parts of the world, and which impress students who come to Edinburgh after experience of other schools. The preceding generation of teachers in Edinburgh contained men of outstanding eminence and world-wide fame, who by their individual qualities attracted students to the school. Now, it is not so much this as the character of the teaching which continues to attract. The teaching has attained its present standard through the impetus given to it by competition. The extra-mural school has been a strong, vigorous, and robust rival to the University, and has kept it more awake to the interests and needs of students than would otherwise have been the case, while the professoriate has also been kept more active. In the extra-mural school itself the competition of several lecturers on every subject has been amply sufficient to stimulate men to do their best for the students, and to endeavour to attract them to their prelections. While this has been good in its main effects, the system must inevitably have an undesirable side. The pecuniary motive has not been confined to the extra-mural school—the University professoriate has felt it and has been stimulated by it. It is difficult to estimate accurately the exact influence of it; with some men it has assuredly been an impelling influence, while with others it has almost as certainly not been felt as a motive in their work. The changes brought about by the Universities Commission will clear up this question. The individual student is no longer the representative of so many additional guineas to his professor, for the professors are now paid out of a central fee fund, and some of them have made fixed terms with the University Court on an average of preceding years, an average which in some cases has already fallen. The effect will be the complete elimination of the pecuniary motive so far as the individual professor is concerned, and ultimately the filling of professorial chairs by men whose work will be

determined by purely scientific considerations. That this is desirable and the ideal to be aimed at there can be no question. Meanwhile during the period of transition and the occupancy of chairs by their present occupants the University finances are certain to suffer heavily, and we are likely to hear a good deal on this point in the next few years.

The diminution in the number of students is mainly to be attributed to the altered regulations regarding the preliminary or entrance examination made by the Commission. The standard is a new one, and neither schools, tutors, nor candidates know yet what it is. The cry was to raise it, but the result has been so disastrous to the candidates that already influential voices have been raised against the results, if not the standard. Probably the mistake lies in the standard having been too suddenly and abruptly changed. The past year has been the date of another important departure on the side of the University. The Commission put it within the power of the University Court to admit women to the degree in medicine, while at the same time permitting them to make arrangements for their instruction outside the walls of the University. The Court, taking advantage of this, has recognised the two medical schools for women in Edinburgh as providing instruction which will be accepted by the University for examination and graduation. That this will have an important influence upon female medical education in Edinburgh is inevitable, and will doubtless encourage and strengthen it. What the ultimate issue will be, and what the relations of the University may be to it in the future, will depend probably upon its success; meanwhile the tendency and the feeling are, on the whole, against mixed classes, and at present the University could hardly take the women inside its walls on any other terms, and these terms would be too unpopular for the University to adopt. In the extra-mural school the most notable incident has been the opening of a new set of lecture rooms in Bristo-place, which are being run with considerable vigour and perhaps even a certain aggressiveness, and threaten to be a not inconsiderable rival to some of the older places. In the Royal Infirmary matters have gone on quietly and smoothly. The new superintendent is an economist, and has succeeded in restraining expenditure. In ward work abdominal surgery and brain surgery have been prominent, and if there is a long death-roll there have also been brilliant and encouraging successes. At the medical societies there has been some increased activity, and the Medico-Chirurgical Society has during the past two years been unusually active, and has had important discussions on subjects of special interest to the profession at the time they took place. As regards the public health of the city, the year has been characterised by a considerable epidemic of small-pox, which has taxed the resources of the Public Health Department and has demonstrated afresh the value of vaccination to the community. Amongst other zymotic diseases scarlet fever and measles have been epidemic in certain localities. The Royal College of Physicians has made arrangements for the preparation of antitoxin for the treatment of diphtheria, the difficulty of obtaining a sufficient supply of serum being the reason for this novel departure. In the latter part of the year the new buildings for the reception of private patients at the Morningside Royal Asylum were opened, and represent the most forward and ideal arrangements for the lodgment and care of the insane that the century has produced. In this department of medicine the retirement of Sir Arthur Mitchell from the Senior Commissionership in Lunacy dates from the end of the year; and the appointment of a successor is awaited with some anxiety, as it is felt that considerations largely of a political nature may unduly influence the election. The most noteworthy contributions to the more permanent form of medical literature have been Dr. Balfour's "Senile Heart" and Dr. Wyllie's "Disorders of Speech." The former may fairly be considered as its author's masterpiece. He has been for a quarter of a century regarded as an authority on cardiac affections, and this new book will not lessen his reputation. It bears traces of more care and labour devoted to its preparation than characterised his earlier work. It reads like a classic of the earlier part of the century, and while possessing the excellences of these is not devoid of their faults. From the standpoint of modern pathology, many points could be adversely criticised; but it contains much shrewd observation and advice. Dr. Wyllie's work is full of interest and is characterised by the power of intellect, the wealth of idea, and

the faculty of combining facts which those who know Dr. Wyllie recognise him as possessing in quite an exceptional measure, and make him one of the strongest personalities in the Royal Infirmary and the School of Medicine. Two new hospitals have been added during the year to the medical charities in the city—namely, the Victoria Hospital for Consumption and the Deaconesses' Hospital.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Dublin.

THE small-pox epidemic appears to be gaining ground, more especially on the south side of the city, and some of the suburbs are not exempt from the disease; during the week ending Dec. 22nd 113 cases were admitted to hospital, and the number under treatment at the close of that week amounted to 131, exclusive of 126 convalescent patients in the South Dublin Union Small-pox Hospital, Kilmaham. At a recent meeting of the guardians of the North Dublin Union a sealed order was received from the Local Government Board declaring, in view of the threatened small-pox epidemic, that their union should provide such medical aid, nurses, and accommodation as might be requisite for all persons affected by, or threatened with, small-pox, and that they should provide a joint hospital with the South Union, or a separate hospital. Mr. Stafford, Local Government Board inspector, who was present, said that in his opinion the sealed order brought them face to face with rather a serious state of affairs; for they had not yet made any arrangements themselves for treating small-pox patients, and the order threw on them the responsibility of not only making arrangements for the sick poor suffering from small-pox, but for the whole of the inhabitants of the North Dublin Union. The responsibility was rather a large one, and Mr. Stafford was afraid the guardians had not made sufficient provisions for it. He thought they would have to look out for a site for a convalescent hospital for small-pox patients. After some discussion as to possible sites it was agreed that a committee should confer with Mr. Stafford on the subject. It may be mentioned that the Hardwicke Hospital have twenty-six beds always at the disposal of the city for small-pox; but as the hospital authorities have been requested to accommodate more they have offered to place the whole hospital at the disposal of the citizens for small-pox cases, and have withdrawn all their nurses from private cases, and so soon as arrangements as to expenses have been made with the guardians of the North Dublin Union they will admit small-pox patients to all available beds in the hospital. The present epidemic shows the neglect of vaccination that existed among the poorer classes in Dublin, and the absolute necessity for revaccination.

Lunatics in Workhouses.

The Local Government Board have issued a circular on the admission and treatment of lunatics in workhouses in Ireland. The Board state that under existing laws for the relief of the destitute poor the guardians have no power to detain the insane in workhouses. In practice, however, they are detained because the district asylums are usually so overcrowded that applications for admission under the forms prescribed by the Privy Council rules cannot in many cases receive attention; but the fact ought not to be lost sight of that in all cases of alleged unsoundness of mind unaccompanied by destitution a workhouse is not the place for the reception, treatment, or custody of the insane. From a legal point of view the guardians are under no obligation to receive lunatics except when admitted as destitute persons or when discharged from an asylum for transfer to a workhouse, under the provisions of Section 2 of the Lunatic Asylums (Ireland) Act of 1875 (38 and 39 Vic., cap. 67). With reference to persons who have been admitted to a workhouse as destitute and who on admission, or at a subsequent period, are found to be insane, the Local Government Board have always held that if their insanity is of such a character as to call for the use of mechanical restraint immediate steps should be taken to apply for their admission to a properly equipped lunatic asylum.

Eye, Ear, and Throat Hospital, Cork.

The late bazaar, styled "Donnybrook Fair," held for the

purpose of building a new Ophthalmic Institution in Cork, has succeeded beyond the expectations of its promoters, the handsome sum of £4000 having been obtained for the required purpose. This sum, added to the amount previously subscribed, makes a total of £7000. Lady Arnott, who originated the collection of subscriptions and the bazaar, obtained at her stall in the bazaar the large sum of £557.

Presentations.

Mr. J. J. Murphy of Dublin, on the occasion of his recent marriage, has been presented with a purse of sovereigns, and a fruit service and star set with brilliants for Mrs. Murphy.—Mr. Alexander Gordon of Rathmines was last week the chief guest at a complimentary dinner given on his recovery from a severe illness, and was presented with a gold shield pendant. A valuable gold bracelet with diamond settings was also presented to Mrs. Gordon.

Jan. 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Ganglion.

THE means usually resorted to—prolonged pressure, forcible rupture, subcutaneous puncture, seton—for the cure of these troublesome cysts do not always prove satisfactory, the severer methods of treatment being frequently objected to by the patient. Professor Duplay of Paris has cured fifteen cases by having recourse to the classical treatment of hydrocele with iodine injections.¹ The skin over the ganglion having been carefully disinfected, a Pravaz's hypodermic syringe is sterilised and filled with the tincture of iodine of the French codex. The needle is plunged into the most bulging part of the cyst until its point reaches its centre, care having been taken by previous displacement of the skin to secure non-correspondence of the skin and cyst punctures when the cutaneous covering is allowed to resume its natural position. From five to ten drops (average, six or eight) of the tincture are slowly introduced into the cyst, the pressure necessary being often great when the ganglion is tense. The needle is then quickly withdrawn and the displaced skin allowed to retract. A little gentle massage of the tumour is practised, a pad of aseptic wool is placed over the spot, and the joint is immobilised and subjected to pressure by means of several layers of wool and a bandage applied. The injection provokes some pain, irradiating in the case of wrist ganglia to the forearm and hand. This pain may last for a couple of days, when it generally disappears. When, on the third or fourth day, the dressing is removed the cyst is found to have already shrunk. The part, although tender to the touch, is not inflamed. The compressive dressing is renewed, and in five or six days the ganglion has disappeared. Should it still persist—one injection generally suffices—the operation may be renewed. Most of Professor Duplay's cases were treated several months ago, and no relapse has been noted.

The Restoration of the Nose by Martin's Method.

M. Martin of Lyons has invented a metallic substitute for the nasal bones, the absence of which is so often the cause of failure in the Tagliacotian operation. To this bridge is fixed a metallic tripod, whose office it is to support the flaps. Unfortunately the excellent result at first procured is finally discounted by the suppuration excited by the tripod, which is then eliminated. M. Chaput² avoids this *contretemps* by plunging the extremities of the tripod into holes bored in the surrounding bone. This is done in order to place the ends beyond the reach of suppuration germs. In this way the apparatus is tolerated for ten or fifteen months without inconvenience. M. Chaput employs platinum for the fashioning of the tripod support, but he opines that the less costly silver-gilt would do as well. Of two cases operated on by him one was quite satisfactory, the restored organ being aesthetically a good imitation. The second case was a comparative failure, the tripod having been made too large.

Laryngotomy as a Diagnostic Measure in Epithelioma.

M. Manoury of Chartres³ had recently under treatment a man aged thirty-eight, whom he found at his first visit in a state of asphyxia. Tracheotomy was at once performed.

¹ Archives Générales de Médecine, December, 1894.

² Société de Chirurgie, Dec. 26th, 1894.

³ Ibid.

Epithelioma of the larynx was diagnosed, but confirmatory evidence was, under the circumstances, unobtainable. Median laryngotomy was accordingly performed, and the existence and extent of the (epitheliomatous) growth having been thus discovered the entire larynx was, *stance tenante*, removed by Perrier's method. On the thirteenth day the patient was able to drink, and on the sixteenth day he ate as usual. The operation was performed on Nov. 3rd, 1894, and the man was presented to the society quite well. M. Quénu approves of the preliminary laryngotomy in these doubtful cases, and as lately as a week ago he had recourse to the same proceeding.

Antitoxin.

On and after to-day, Jan. 1st, 1895, applications made to the Pasteur Institute in the name of a physician or of the family by the mayor, prefect, sub-prefect, and *bureaux d'hygiène* of any part of France will result in the immediate despatch of a tube of antitoxic serum. This arrangement is only provisional, it being hoped that depôts of antitoxin will at no distant date be established in the provinces. It will thus be seen that M. Roux and his assistants have not been idle. Indeed, both the Institute authorities and the public have worked with a will, the latter having, through the *Figaro* and by means of gifts made directly to the Institute, contributed up to Dec. 31st, 1894, no less a sum than 611,000 francs (£24,440). This does not include 100,000 francs (£4000) just voted by the Chambers, and which will doubtless become an annual subsidy. On Oct. 12th the Pasteur Institute possessed for immunising purposes a stud of twenty horses. This stud has now been increased to 136 horses, a total that will probably be ultimately increased to the maximum of 150. Fifteen of these animals are at the State Veterinary School of Alfort, where they are kept under close observation (with regard to pulse, temperature, &c.) by Professor Nocard and his pupils. Forty-two horses are located in the old abattoirs of Grenoble placed at M. Roux's disposal by the Municipal Council of Paris. Of these, twenty are kept by the municipality at a cost of 20,000 francs (£800) a year for the benefit of the Paris hospitals and poor. At Villeneuve-l'Étang—a property ceded by the State to M. Pasteur in 1886—there are seventy-nine horses cared for by a capable veterinary surgeon and his staff. While the regulation six litres of blood (yielding about half that quantity of serum) are being drawn from the jugular vein the animal's attention is easily distracted by a handful of carrots, which he munches contentedly. On the day following the phlebotomy immunisation is recommenced and continued for five days. A rest of fifteen days follows, and then another bleeding may be practised. That the animals flourish under this régime of good feeding and periodical bleedings is proved by the presence in good health at Alfort of a sturdy Brittany pony which has hitherto supplied no less than 420 litres of blood. Professor Behring spent a few days of last week in Paris in order to visit Dr. Roux and inspected the arrangements now being made to combat diphtheria in this city. During his stay he visited Villeneuve-l'Étang.

Jan. 1st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Antitoxin Treatment of Diphtheria.

At a recent meeting of the Society of Physicians of Lower Austria, certain practitioners reported on the results of the antitoxin treatment of diphtheria as seen in their private practices. All the speakers agreed that the treatment was highly satisfactory. Last week the first preparations of the serum prepared in the Austrian State establishments, under the care of Professor Paltant of Vienna, were administered at the Vienna Hospital for Sick Children; and it is hoped that by the end of next month it will be possible to supply the practitioners of the empire with this remedy. A second discussion will take place at the Vienna Society of Physicians early this month.

Hypnotism in Hungary.

The Hungarian Government is now intending to prohibit by law the practice of hypnotism by all except physicians. In Austria hypnotic proceedings are strictly relegated to physicians who have graduated since 1851.

Cholera in Austria.

Cholera is now gradually decreasing in Galicia, and the number of cases in the past week has been reduced to 177, with 94 deaths; but it is feared that the epidemic may show more activity in the spring. The epidemic at the present moment not being very fierce would, it seems, afford a good opportunity for studying its course and causes; but the Austrian Government, no less than the leading medical lights here, do not apparently take any great interest in what is a chronic question with them. The study of the disease is practically neglected, and the therapeutic measures used are all on the old lines.

The General Hospital Question in Vienna.

The desolate condition of the buildings of the medical department of the celebrated Vienna University is well known to all, medical and lay, who visit Vienna. The Government have promised for years to erect new clinical wards, but it would seem that the consideration of this question is now postponed *ad calendas græcas* by bringing forward a new project. This consists of the erection of a big general hospital outside the town to take the place of the present general hospital which is located centrally. The whole faculty is in opposition to this new scheme, and naturally.

The Resignation of Dr. Wekerle.

All who have visited Hungary during the last two years, and especially the members of the last International Congress of Hygiene and Demography held at Budapest, will learn with the deepest regret that Dr. Wekerle, their amiable host, has resigned his high official position as "minister-president." If it is his eager activity that Hungary has to thank for much of her progress in the fields of public sanitation.

THE INDIAN MEDICAL CONGRESS.

As we announced last week the work of the Indian Medical Congress was begun at Calcutta on Christmas Eve, when Surgeon-Colonel R. Harvey delivered the opening address. From the list of papers we then published it will be seen that the subjects discussed covered a wide field of medical science, and we propose to present these papers to our readers as far as space will permit. The proceedings closed on Dec. 29th, after a most successful session.

THE SECTIONS.

MEDICINE.

Nasha Fever.

Mr. LAWRENCE FERNANDEZ, L.R.C.P. & S. Edin., &c., read a paper on Nasha Fever, the Nakra Fever of the North-West Provinces, otherwise called Nakra Jawhar, which is a type of fever peculiar to India, and is, perhaps, most prevalent in Bengal. Mr. Fernandez explained that the disease is characterised by a sharp attack of fever of a remittent type. It is sometimes intermittent; the temperature is always over 100° F., even when intermittent. Preceding the fever a peculiar characteristic congestion of the bloodvessels of the mucous membrane of the septum narium, as also of the Schneiderian membrane, takes place. This congestion, even after the accession of the fever, is really what attracts attention. The congestion sometimes takes place on one side of the septum, and sometimes both sides are affected. There is very often no pain; the surface of the septum is raised and presents a red appearance. Some practitioners consider this swelling and the accompanying fever to be local manifestations of a slight congestion of the brain—a belief in which the reader of the paper is inclined to concur. Others consider the swelling to be a catarrhal condition of the mucous membrane of the nose. The usual symptoms of fever are present, marked constipation and malaise are very prominent, and the appearance of the patient may be well defined by his being compared to having a "hazy" or "smoky" appearance. The nervous symptoms are peculiar. There is great frontal headache, also severe pain at the back of the neck, shoulders, and small of the back. Sometimes the pain at the back of the neck is very severe, and the accompanying febrile symptoms remind one of tuberculous meningitis. The face appears flushed, with a feeling of heat and fullness in the head and the pupils are contracted.

These symptoms continue from three to five days, when the swelling decreases and the fever subsides without any treatment whatever except the regulation of the bowels by a purgative. The swelling never suppurates. On the sudden subsidence of the swelling, which does occasionally occur, grave symptoms sometimes follow; the fever becomes higher, then delirium, coma, and death, but such a fatal result is rare. Occasionally, with the fever and nasal inflammation, an ill-defined rash appears on the body, rose coloured and in small patches, with which there are generally bronchial symptoms. Neither antipyretics nor antiperiodics have any effect on the disease. One attack predisposes to another, but the prognosis of the individual attacks is favourable. Both sexes are liable; but females are rarely attacked and never before puberty, and males not before the age of thirteen or fourteen. It does not occur after the age of fifty. The disease is prevalent between April and August, and is seldom seen in winter. The attacks occur at intervals of a month, a fortnight, or a week. All classes are liable, but the disease is most often seen in native fishermen, *dhobies*, gardeners, and *dhangurs*. Mahomedans in Bengal are not as prone to it as Bengalees. All occupations necessitating exposure to inclement weather tend to induce the disease. It is believed that the eating of stale cooked rice with cold water—a practice very common among the poor of Bengal—as also the drinking of the water from young cocoanuts, and the eating of the very young palm induce the disease, and anything which lowers the vitality predisposes to an attack. Opinions are divided as to whether Nasha fever is due to malaria, but quinine has no effect. It is prevalent in malarious places, and the fever which accompanies or follows it is preceded by ague. Opium is said to give great relief, whereas arsenic has no effect. There is congestion of the mucous membrane of the nose and frontal sinuses. The mucous membrane is slightly raised, but there is no inflammation. On pressure there is a doughy feeling, but suppuration never occurs. The mucous membrane becomes hypertrophied after repeated attacks. The blood which escapes on puncture of the nasal tumour is of a darkish colour and poor in plasma. Examination of the blood under the microscope shows an increase in the number of colourless corpuscles, the red corpuscles being crenated. Arsenic and quinine have no effect on the disease, but opium relieves the pain in the neck, back, &c. Tartar emetic used as a diaphoretic gives good results. A brisk saline purgative is all that is needed in the simpler cases. The usual method of treatment and that which gives most relief is depletion, which is done either—(1) by two bundles of *dhool* grass introduced into the nostrils, friction and pressure (native method); (2) by pricking with a needle; or (3) by a few punctures with a bleeding lancet. A small quantity of blood escapes and the sufferer is restored in a few hours to perfect health. This plan of treatment, however, is only palliative. The great objection to it is that frequent repetition conduces to hypertrophy of the mucous membrane. The local application of astringents, such as a solution of tannic acid, or a 10 per cent. solution of cocaine, sometimes gives relief. The application of akanda juice (*Calotropis gigantea*) to the mucous membrane also gives relief. The plan which Mr. Fernandez has adopted is a brisk purgative and the injection of cold water or iced water up the nostrils twice or thrice a day, with diaphoretics internally.

A paper on the same subject was read by Mr. NARESH CHANDRA MITRA, M.A., M.B. He said: "Internal remedies are useless. Only local treatment is effectual. This consists in free puncture of the Schneiderian mucosa over the swelling, which is followed by free hæmorrhage and immediate relief. The local application of lunar caustic, or of the milky juice of akanda, is also recommended."

Mycetoma.

Assistant-Surgeon J. E. BOCARRO, L.M. & S. Bombay, Hyderabad, Sindh, discussed the subject of Mycetoma. He said: "The scientific history of mycetoma, or madura disease, dates from the year 1874, when Dr. Vandyke Carter published his invaluable monograph demonstrating its parasitic nature. Dr. Carter's investigations led to the conclusions that both forms, the black and the pale, or the melanoid and ochroid varieties, resulted from the infection of one and the same parasite, the chionophye Carteri. The pale form was supposed to be merely a defaced state of the black. Drs. Lewis and Cunningham admitted the fungoid nature of the black particles, but were disposed

to consider them as accidental growths, and not in any way connected with the causation of the disease. The fungoid nature of the roe-like particles in the white variety they denied *in toto*, regarding them merely as metamorphosed fat. Recent investigations in Europe confirm the parasitic nature of the disease. Bassini in 1888 pointed out the mycelial nature of the tumour in a case of the black variety in Italy. Dr. Kanthack in 1892 likewise demonstrated the fungus origin of the disease, and attempted to identify it (the white variety) with actinomycosis. In 1893 Dr. Boyce and Dr. Surveyor demonstrated both forms of this disease as being essentially fungoid growths, and, more than that, they have been able to indicate differences under the microscope existing between the fungi of the two varieties of the disease. They say: 'We, on the other hand, will bring forward reasons for believing there are at least two distinct fungi—one a very highly organised species, the other a very delicate and lowly organised type, presenting very many of the characters of actinomycetes'; and they further add that, while some of the leading features of the roe-like particles favour a relationship with actinomycetes, from others they cannot, in their present state of knowledge, draw any conclusions. In the course of the past year Dr. Boyce forwarded to the Civil Hospital, Hyderabad, Sindh, a number of glycerine-agar tubes for inoculation, and these Dr. Keith (late civil surgeon, Hyderabad) and myself inoculated with particles from fresh specimens of both black and white varieties. Of these inoculations Drs. Boyce and Surveyor write that they have not yet been able to cultivate the black fungus; but that in the case of the white variety they have met with success. From these cultivations it is seen that the streptothrix from the white variety of mycetoma resembles very closely the streptothrix of actinomycetes. Subcutaneous inoculation of rabbits, guinea-pigs, monkeys, and rats with the artificial culture just referred to gives rise to a local reaction, and following it the production of a tumour of slow growth, which on section is found to bear the characters of the original inoculated matter. I may add that in my hands direct inoculation of rabbits and dogs with fresh particles from either variety has hitherto proved a failure. With regard to the fungus origin of the disease, the fact that the disease begins *ab externo* has an important clinical bearing. Clinical observations made by me in the Civil Hospital, Hyderabad, help to establish this conclusion. All cases of early growths have been cases of superficial growths. Dissection of the growth during operation, or sections of the diseased part after excision or amputation, afford evidence of the disease beginning generally in the loose cellular tissue, often in the subcutaneous cellular tissue, thence subsequently extending along muscular and tendinous sheaths to the other soft structures, and finally invading the hard structures. The observations apply, in all respects, to both forms of the disease, the black and the pale. The clinical points are as follows: 1. The cause assigned—viz., wounds, sores, the prick of thorns, &c. The *babul* (*Acacia arabica*) thorn is frequently mentioned as the primary source of irritation, and I have myself many times detected the points of these thorns embedded in the tumour. 2. The occupation of the patient, the disease being common among tillers of the soil or in those who have at some time or other of their lives exposed themselves to influences such as commonly surround people of the agricultural class—e.g., boatmen, shepherds, pedlars, potters, &c. 3. The common seat of the disease, the feet and hands being generally affected, the former in the majority of cases. In over 90 per cent. of the cases observed in the Hyderabad Civil Hospital these were the usual situations. 4. Lastly, and above all, the fact that the disease could be completely eradicated by excision of the superficial growth. As regards the consideration whether the varieties are simply transitional stages of one and the same fungus, as Dr. Carter holds, or whether the two forms are perfectly independent of each other in their morphological nature, as Drs. Boyce and Surveyor have pointed out, I adduce the following clinical points in evidence of the latter view. (a) The general historical data for either variety are the same, with the important difference that in all cases patients have distinctly stated, with reference to both forms, that from the very earliest indication of the existence of the growth, when one or more mammillated excrescences appeared upon the surface and burst, the sinuses gave exit throughout the course of the disease either to pale or black particles, but never to both kinds at the same time, or to one kind first and at a later date to another. (b) Anent the

idea of defacement of the fungus, while one would naturally expect a period of stasis in the growth of the tumour, there was, on the contrary, following the periodical extension of particles, observed a more or less gradual increase in its size, and in no instance was there noted at any time limitation or retrogression of the growth. (c) Sections and cross-sections have not, in my experience, shown any admixture of the two kinds of fungoid particles in one and the same specimen; on the other hand, there was a curious completeness manifest in the anatomical characters of each individual variety. (d) In the dissection of infiltrated parts, on following up the advancing course of the disease along tendons, fascia, and areolar tissue to its termination, where it must be admitted the disease is to be found in its earliest stage of development, there are invariably discovered pale particles in the pale kind, and black particles in the black kind. So far as the naked-eye appearance goes, there are no transitional stages of growth from one to the other. (e) Careful excision of these terminal sites of the disease effectually cuts off all chances of recurrence; if not, the disease tends to relapse, in which case the pale variety is followed by the pale and the black by the black form of growth."¹

OBSTETRICS, DISEASES OF WOMEN AND CHILDREN.

Biliary Cirrhosis of Children.

Mr. Jogendro Nath Ghosh, L.M.S., dealing with this disease, said: "Its onset is insidious, it usually prevails among infants under the age of one year, and it seldom attacks children after they have passed the third year. The attack generally commences about the seventh or eighth month, chiefly at the period of dentition or at the mother's next conception. The children of some parents are particularly liable to the disease. In one family I have observed fourteen children of the same parents die one after the other. Cases of attack about the third or fourth month, or even a few days immediately after birth, have also been noted. Children in Calcutta, as well as in the districts of Lower Bengal, whether malarious or non-malarious, are equally subject to it. It spares neither the rich nor the poor, though the well-fed children of the wealthy and the middle classes are more liable to it than the ill-fed children of the poorer classes. Mahomedan and Eurasian children suffer less than Hindus. Hardly any cases are seen among Europeans. Children who are never or only for a short time put to the mother's breast, and are fed on cow's, goat's, or ass's milk, or with different kinds of artificial food, enjoy no immunity from this disease. In families where the disease has prevailed I have noticed a few children escape apparently from being nourished by healthy wet-nurses. When the disease was first noticed in Calcutta more cases were found among male than among female children, but of late the proportion seems to be less. The female children mostly attacked are usually the first-born of the parents, and are the objects of great care in a family. It has been observed that a female child escapes the malady after the successive deaths of several males who preceded her, though again the next male child succumbs to it. Children of very healthy parents are not exempt, and the disease appears to be quite unconnected with long-standing purulent discharges, scrofula, syphilis, malarious fever, or any chronic constitutional disease. It has also been noticed that in some cases the later children of some parents escape the disease after the earlier ones have all died from it. The enlargement of the liver is gradual and is unattended with pain. The subsequent contraction is, however, rapid. The termination is generally fatal, death being mostly due to cholæmia. The disease runs its course in from three to twelve months, though one case has been known to end fatally within a fortnight of the attack; but in two other cases the patients had lingered for three years. In my experience, out of about 400 cases only six have recovered. Persistent jaundice, I believe, prognosticates a fatal termination. The disease may be defined as a painless enlargement of the liver, hard and resistant to the touch, beginning with slight fever, occurring in children only, and terminating almost invariably in death. Usually the first symptoms are that the liver has attained a considerable size before anything is suspected. The symptoms which attract the mother's notice are nausea, occa-

sional vomiting, sallow complexion, warmth of hands and feet, and a certain amount of constipation and straining at stool. The child refuses food, gets irritable, wishes to lie on damp ground, and has a little fever towards night or early in the morning. Thirst and an icteric tinge are also noticed. When the child is brought under the physician's observation the liver is usually enlarged, at times so considerably that it extends as far as the umbilicus or even beyond it to the iliac crest. The anterior margin of the liver is well defined, prominent at first, and feels smooth and rounded; gradually it becomes thinner, assuming the shape of a knife-back edge, and at the last stage it can be grasped by the fingers. The enlargement is uniform, hard, and resistant, painless at first, but gradually getting painful when jaundice supervenes. The left lobe generally enlarges first, sometimes reaching as far as the spleen, which also in most cases enlarges simultaneously. Occasionally the right lobe enlarges so much that its anterior border overlaps the left lobe, and the notch between the lobes is so displaced to the left as to be mistaken for the hilum of the spleen. The liver gradually fills the abdomen, which bulges, and the superficial veins become prominent. At first there is no marked change; after a time the features exhibit a dusky appearance; later the skin becomes hard and dry and the complexion slightly yellow; the feet and hands may become puffy. The spleen is generally hard and enlarged, and constipation is a well-marked, obstinate symptom. The stools are yellowish at first, then clayey and muddy, and lastly whitish and devoid of bile. The urine, from being clear, gradually becomes bile-tinged, and lastly deep yellow, saffron-coloured, the stain of which does not disappear on washing. There is very little or no perspiration. Fever is slight at the beginning, but it increases with the progress of the disease, and the maximum is reached when the jaundice is pronounced. The fever is not preceded by any rigor as in ague. In some cases fluid accumulates in the peritoneal cavity, with œdema of the hands and feet. The onset of the intense and persistent jaundice which occurs in the later stage of the disease is a symptom of the gravest import. After the appearance of jaundice the size of the liver diminishes. In a few cases I observed the contraction to be so very rapid that in forty-eight hours it receded from the umbilicus to within the margin of the costal arch. The contraction has often been mistaken for a favourable symptom. The main causes of this serious malady are, I believe, unwholesome food and faulty digestion. The milk either of the mother or of the cow is the principal article of food for our infants. Mahomedans and Eurasians feed their children occasionally with animal broth. The Hindu mother always nourishes her children from her own breast, and it is among the Hindus that the disease is most prevalent. As regards the mother's milk, the practice is not uncommon for a mother in a state of pregnancy to suckle her child. Her system must then be undergoing a change, rendering her milk quite unfit for the child she is nursing. Cow's milk is so much adulterated in large centres of population that it is quite unsuitable for infant food. Besides adulteration of milk, the cows are kept in unhealthy sheds and fed with refuse &c. Great carelessness also prevails in keeping the milk. The vessels are not properly cleaned, and stale milk is often sold as fresh. Irregularity in feeding and over-feeding the infant are common. Whenever it cries milk is poured down its throat in order to pacify it, irrespective of quantity or quality or the time or the interval after which it is fed. The duration of the disease is from three to nine months, death usually occurring from the fifteenth to the eighteenth month of life. The prognosis is extremely unfavourable. In my experience out of about 400 cases only six recovered, but in three of them the diagnosis is open to doubt. Treatment is most unsatisfactory because the parents will not carry out the directions prescribed. I believe the best hope of success lies chiefly in change of diet. I always forbid the mother to suckle the infant, and substitute a healthy wet-nurse or a specified quantity of cow's milk suitably diluted according to the age of the infant. Many medicines have been tried—e.g., mercury, iodide of potassium, hydrochlorate of ammonia, phosphate of soda, &c., but I cannot attribute any benefit to them. Laxatives and cholagogue purgatives are required for the obstinate constipation of the early stage. Recently I have been using the freshly prepared juice of the leaves of *Nyctanthes arbor tristis* or the *sini*, in teaspoonful doses taken in the early morning, and this has usually acted well except in the late stage of marked jaundice. Change of climate is undoubtedly beneficial in the early stage, but later it has no effect."

¹ References to papers &c.: Upon the Existence of More than One Fungus in Madura Disease. Phil. Trans. Royal Society of London, vol. 185 (1894), B, pp. 1-14. Tabular Statement of 100 Cases of Mycetoma, THE LANCET, September 30th, 1893, and Indian Medical Record, vol. v., 1893.

Medical News.

UNIVERSITY OF LONDON.—The following gentlemen have passed the B.S. examination for Honours in Surgery:—

FIRST CLASS.

Fisher, John Herbert (Scholarship and Gold Medal), St. Thomas's Hospital.
 Davies, Hugh (Gold Medal), Guy's Hospital.
 * Wallace, Cuthbert Sidney, St. Thomas's Hospital.
 Richardson, Sidney W. F., B.Sc., St. Thomas's Hospital.

SECOND CLASS.

Smith, William Robert, King's College.
 Cowen, George Hebb, London Hospital.
 * Obtained the number of marks qualifying for a gold medal.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin*: Dr. Loewy has been recognised as *privat-docent* in Physiology, Dr. M. Mendelsobn as *privat-docent* in Medicine, and Dr. Wernicke as *privat-docent* in Hygiene. Professor Kohlrausch of Strasburg has accepted the offer of the charge of the Physico-Technical Institute in succession to Professor Helmholtz.—*Paris*: Dr. Arsonval has been appointed to the chair of Medicine in the Collège de France in succession to M. Brown-Séquard.—*Montpellier*: Professor Mairet has been appointed Dean of the Medical Faculty for three years.—*Lemberg*: Dr. Josef Nusbaum has been appointed Professor of Descriptive Anatomy and Histology, and Dr. Johann Prus Professor of Pathological Anatomy and General and Experimental Pathology.—*St. Petersburg* (Military Medico-Chirurgical Academy): Dr. Skorichenko has been recognised as *privat-docent* in General and Experimental Pathology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Josef Schröter of Breslau, where he ranked as professor; he was a great authority on fungi. His death, which was somewhat sudden, was due to an affection of malarial origin, the foundation of which was laid in his last summer's journey for botanical research to the southern part of Asia Minor.—Professor F. A. Flückiger, a well-known author of pharmaceutical works. Until a year or two ago he was professor at Strasburg, but was then obliged to give up work on account of ill health. He had since been residing in Berne, where he died.—Dr. Studiali, Professor of Physiology in the University of Pisa.—Dr. Yermolayeff, formerly Professor of Anatomy in Kazan.—Dr. L. de Crecchio, Professor of Forensic Medicine in the University of Naples.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Samuel M. Gibbs of The Mount, St. Leonards-on-Sea, has bequeathed £250 each to the Hospital for Women, Soho-square, London, and the Samaritan Free Hospital for Women and Children, Marylebone-road.—Mr. George Hibberd, late of Leyton, has bequeathed £1000 each to the London Hospital and the City of London Hospital for Diseases of the Chest, Victoria-park, and £250 each to the Convalescent Home at Bexhill, the Convalescent Home, Walton-on-Thames, the Children's Hospital, Walthamstow, the Walthamstow Dispensary, and Mrs. Gladstone's Convalescent Home at Woodford.—The late Mr. John P. Kidston of Northaw, Herts, has bequeathed £250 each to the Potter's Bar Hospital and the Herts Convalescent Hospital.—Vice-Admiral C. F. F. Boughie, late of Richmond, Surrey, has bequeathed £100 each to the Hospital for Diseases of the Chest, Brompton, and the Free Cancer Hospital.—The late Mr. James E. B. Stevenson of Clapham-park has bequeathed £100 to the British Home for Incurables, Clapham-rise.—The Corporation of London has voted the following grants—namely, 50 guineas to the Brixton, Streatham-hill, Herne-hill, Tulse-hill, and Angell Town Dispensary (commonly called the Brixton Dispensary); 100 guineas to the Middlesex Hospital; 75 guineas to the West Ham Hospital; 25 guineas to the Livingstone Cottage Hospital for Dartford and District; 100 guineas to the City of London Hospital for Diseases of the Chest; 50 guineas to the Great Northern Central Hospital, Holloway-road, 20 guineas to the Brabazon Home of Comfort for Incurables at Reigate; and 20 guineas to the Women's Convalescent Home Association at Great Woking.—The late Mr. Thomas Dunn of Prince's-gardens, South Kensington, has bequeathed £105 each to the Royal Sea Bathing Infirmary at Margate, St. Thomas's Hospital, London, St. George's Hospital, London, King's College Hospital, London, York County Hospital, the General Infirmary,

Gloucester, and the Cheltenham Hospital.—Mr. George Simpson, late of Wray Park, Reigate, has bequeathed £250 each (free of legacy duty) to the Children's Convalescent Home at St. Leonard's-on-Sea, the Hospital for Women, Soho-square, London, and the Samaritan Free Hospital for Women and Children, Marylebone-road.—An anonymous friend has sent a donation of £100 to Guy's Hospital, London.—The directors of the Dundee Royal Infirmary have received a donation of 400 guineas from Mr. and Mrs. David Carmichael of Dudhope-terrace for naming two cots in the children's ward of the infirmary. Towards the New General Hospital Fund, Birmingham, £100 have been received, being the net proceeds of the recent cycle parade, and a further sum of £100 has also been received from the Muffs and Duffers charity cricket match.—Mr. Henry Whiting has given a donation of £100 to the Chelsea Hospital for Women, and £10 to the Convalescent Home in connexion with it.—The late Rev. George Heron of Moore, honorary Canon of Chester, has bequeathed £300 to the Hospital for Incurables, Putney Heath.—Messrs. Maple of Tottenham-court-road, London, have contributed £100 each to the North-West London Hospital, the Royal Free Hospital, the Temperance Hospital, and the University College Hospital, London.—£100 have been handed over to the St. John's Convalescent Home for Children, Kemp Town, Brighton, being the net proceeds of the ball recently held in aid of that institution.—The honorary treasurer of the Wirral Children's Hospital has received a donation of £150 from Miss Laird in memory of her late brother, Mr. Macgregor Laird.—Miss Mary Smith, late of Watford, Herts, has bequeathed £100 to the Cottage Hospital, Maidenhead.—A lady, under the initials of "H. M. E.," has sent a donation of £500 to the Chelsea Hospital for Women.—The late Mrs. Sophia Fletcher of Pull-court, Tewkesbury, has bequeathed £100 to the British Home for Incurables.—The Goldsmiths' Livery Company has voted £50 to the British Home for Incurables.—The Lord Lieutenant of Cambridgeshire has given another donation of £1000 to Addenbrooke's Hospital, Cambridge.—Under the will of the late Mrs. S. E. Baker of Bromsgrove, the Trustees have decided to apportion the sum of £7000 to the Bridgnorth and South Shropshire Infirmary.—Mr. John Johnson, late of Seacroft, has bequeathed £500 to the Leeds Hospital for Women and Children.

FOOTBALL CASUALTIES.—The following accidents occurred on the 25th, 26th, and 29th ult., and the 1st inst. At Barnsley, in a match between the High School Boys' Club and Barnsley Victoria team, a player fractured his ankle, and was conveyed to the Beckett Hospital.—A Leigh half-back, while playing against the St. Helens team, at St. Helens, sustained a fracture of his breast bone, and was removed to the St. Helen's headquarters.—At West Derby, a youth, while playing a match, fractured his leg and was injured "internally."—During a match at Reading between the London Caledonian Strollers and the Reading Reserves, a player fractured his clavicle.—At Southampton, in a match between the Bournemouth Wanderers and the St. Mary's Reserves, a player fractured his clavicle and was taken to the Royal South Hants Infirmary.—In a match at Yeovil a player fractured his clavicle.—At Crewkerne in a match a player broke his arm.—A youth while playing at the same place also fractured his arm, and was admitted to the hospital in that town.—At Ferrybridge a youth aged twelve years died on Saturday last from an injury received while playing a game on the previous Wednesday.—At Leith, in a match between the Leith Athletic and Sheffield United teams, the centre half-back of the United League team dislocated his knee, and "seriously injured his ankle."

BOOKS ETC. RECEIVED.

- CHURCHILL, J. & A., New Burlington-street, London.
 Syphilis. By A. Cooper, F.R.C.S. Eng. Second Edition. Edited by Edw. Cotterell, F.R.C.S. Illustrated. 1835. pp. 480. Price 18s.
 Methods of Operating for Cataract and Secondary Impairments of Vision. By Surgeon-Captain G. H. Fink. Illustrated. 1894. pp. 77. Price 5s.
 MACDOUGALL, A., Buchanan-street, Glasgow.
 Clinical Records from the Glasgow Royal Infirmary. By Geo. S. Middleton, M.A., M.D. Illustrated. 1894. pp. 82.
 NEWMANN, O., & Co., Newman-street, London, W.
 Manual Training made Serviceable to the School. By Dr. W. Goetze. Translated into English by W. G. Field, M.A. pp. 157. Price 3s.

First Lessons in Hand and Eye Training; or, Manual Work for Boys and Girls. Illustrated. By G. Kalb. Translated and adapted for English use by W. G. Field, M.A. pp. 143. Price 3s.

RUFFET ET CIE., Boulevard Saint Germain, Paris.

Chirurgie Opératoire du Système Nerveux. Par A. Chipault. Tome Premier: Chirurgie Cranio-Cérébrale. Avec 431 figures. 1894. pp. 744.

SIMPKIN, MARSHALL, & Co., London.

Wintering in Egypt. By A. J. M. Bentley, M.D., and Rev. C. J. Griffinboote, M.A. Part I.: Under the Shadow of the Pyramids. Part II.: Hints to Invalids. 1894. pp. 188.

SMITH, ELDER, & Co., Waterloo-place, London.

Dictionary of National Biography. Edited by Sidney Lee. Vol. XLII. Nichols O'Dugan. 1895. pp. 455.

El Ozena Verdadero; por el Dr. Avelino Martin (De Luis Tasso, Barcelona, 1894).—Flies and Cholera Diffusion; by Surgeon-Major R. Macrae, M.B., I.M.S.: reprint from the Indian Medical Gazette, No. 11, November, 1894.—Natural Mineral Waters, their Properties and Uses; by Ingram and Royle, Farringdon-street, London: Tenth Edition, 1895.—A Short Sketch of the New York Medical College, with its Charter; by Edwin H. Davis, A.M., M.D. (The Gilliss Press, New York).—Monatsschrift für Geburtshilfe und Gynäkologie; von Professor Dr. A. Martin und Professor Dr. M. Sanger; January, 1895 (S. Karger, Berlin).—The Teeth of Ten Sioux Indians; by Dr. Willerforce Smith (Harrison & Sons, St. Martin's-lane, London, 1894).—The Strike at Pullman: Statements of the President and M. Pullman and Second Vice-President T. H. Wickes, before the U.S. Strike Commission; also Published Statements of the Company relating to the Strike.—Handbuch der Specielle Therapie innerer Krankheiten: 13. und 14. Lieferung (G. Fischer, Jena, 1894).—The Natural History of Plants, Part IX. (Blackie & Son, London).—Magazines: Illustrated Modern Art and Literature, November–December, 1894.—Night and Day, December, 1894.—For January, 1895: The English Illustrated Magazine.—Knowledge.—Cornhill.—The Phrenological.—The Humanitarian.—Boys' Own Paper.—Girls' Own Paper.—Leisure Hour.—Sunday at Home.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ASHBY, T. H., M.B. Toronto, M.C.P.S. Ont., L.R.C.P. Lond., has been appointed Medical Officer to the Workhouse of the Shardlow Union.

BRACEWELL, W. H., M.B., Ch.B. Melb., has been appointed a Government Medical Officer and Vaccinator for the district of Condobolin, New South Wales.

CHAPMAN, JOHN T., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator at Stratford, Victoria, Australia, vice Matthews, resigned.

FETHERSTONHAUGH, CHAS., M.B., Ch.M. Dubl., L.R.C.S. Irel., has been appointed Health Officer for the Glenlyon Shire, Victoria, Australia.

GRANT, A., M.B., Ch.M. Aberd., has been appointed Health Officer for Oakleigh, Victoria, Australia.

HAWTHORN, W. T., M.R.C.S., has been reappointed Medical Officer for the Northern (No. 1) Sanitary District, and also Medical Officer of Health, of the Wellington Union.

HEWER, H. J., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed Visiting Surgeon to the Blackall Prison, Queensland.

HOSKING, WM. H., M.R.C.S. Eng., L.K.Q.C.P., L.M. Irel., has been appointed a Public Vaccinator for the Masterton District, New Zealand.

HOUSE, S. HERBERT, M.B., Ch.B. Viet., has been appointed Resident Medical Officer to the Grimsby and District Hospital.

HOYLE, J. C., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed *pro tem*, Medical Officer of Health for Holborn.

HUGHES, W. K., L.R.C.P. Lond., M.R.C.S., has been appointed Specialist for Deformities by the Sisters of Charity, in connexion with St. Vincent's Hospital, Melbourne, Victoria, Australia.

KELLYNACK, T. N., M.D. Viet., Ch.B. (Owens College), has been reappointed Pathological Registrar to the Manchester Royal Infirmary.

LAWES, C. H. E., M.B., Ch.M. Syd., has been appointed Resident Medical Officer to the Brisbane General Hospital, Queensland.

LEWIS, ERNEST WOOL, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Anesthetist to the West London Hospital.

LOVEGROVE, CHAS., M.D., Ch.M. Toronto, L.R.C.P. Edin., L.M., L.F.P.S. Glasg., has been appointed Surgeon-Captain to the Western Australia Volunteer Force, Western Australia.

MAHONEY, R. W., M.B., Ch.B. Viet., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Munsell Fever Hospital.

MCALLISTER, J. F., M.D. Melb., Ch.B., has been appointed Honorary Assistant Surgeon to the Prince Alfred Hospital, New South Wales.

MILLIGAN, WM., M.D., M.Ch. Irel., has been appointed Medical Officer for the Cumberland Sanitary District of the Huddersfield Union.

MULLER, H., M.D. Marb., has been appointed Honorary Medical Officer to the Carrington Convalescent Hospital, New South Wales.

PATTON, A. S., M.D. Dubl., Ch.B., has been appointed Visiting Surgeon to the Normanton Prison, Queensland.

PLANCE, CHARLES, jun., M.A. Cantab., L.R.C.P. Lond., M.R.C.S. Eng., late House Surgeon to St. Thomas's Hospital, has been appointed Junior Assistant Medical Officer to the East Sussex County Asylum, Haywards Heath, vice F. D. Bennett, L.R.C.P., M.R.C.S., resigned.

PROPERT, WALTER ARCHIBALD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the West London Hospital.

RENNIE, GEO. E., M.D. Lond., M.R.C.S., has been appointed Honorary Assistant Physician to the Prince Alfred Hospital, New South Wales.

RIORDAN, T. F., M.D., Ch.M. Irel., has been appointed Honorary Physician by the Sisters of Charity, in connexion with St. Vincent's Hospital, Melbourne, Victoria, Australia.

ROBERTS, CHAS. G., M.B., B.C. Camb., has been reappointed Medical Officer of Health to the Halstead Local Board.

SAMSON, H. A., M.B., Ch.B. Melb., has been appointed Acting Medical Superintendent to the Ballarat Lunatic Asylum, Victoria, Australia.

STACPOLE, A. R., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Surgeon to the Victorian Rangers, with the relative rank as Captain, Victoria, Australia.

TIPPETT, S. G., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Physician to the Westminster Hospital.

THACKWELL, J. B., M.B., Ch.M. Edin., has been appointed Medical Officer to the Hospital at Ravenswood, Queensland.

YONGE, EUGENE S., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the Manchester Hospital for Consumption and Diseases of the Chest, vice Dr. Wood, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOLTON UNION.—Medical Officer for the Workhouse at Fishpool, for twelve months. Salary £200 per annum and a furnished house. Applications to the Clerk to the Guardians, 23, Mawdsley-street, Bolton.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-inn-road,—Assistant Registrar for twelve months.

COUNTY ASYLUMS, Prestwich, Manchester.—Phthisicologist. Salary £200 per annum, with furnished apartments, board, attendance, and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon and Dispenser. Salary £50 per year, with board, apartments, and laundress.

FISHERTON ASYLUM.—Assistant Medical Officer, single. Salary £100 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

LONDON HOSPITAL MEDICAL COLLEGE, Turner-street, Mile-end, E.—Lectureship on Organic Chemistry. Salary not less than £175 a year.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon to the In-patients. Honorarium £50 per annum, with board and lodging in the Hospital. Also House Physician to the In-patients. Honorarium £50 per annum, with board and lodging in the Hospital.

Births, Marriages, and Deaths.

BIRTHS.

CRANE, On Dec. 29th, at Sandgate-road, Folkestone, the wife of Andrew J. Crane, L.D.S., of a daughter.

DAY.—On Dec. 23rd, at Baldock, Herts, the wife of F. W. Langston Day, M.R.C.S., &c., of a son.

D'ESTERRE.—On Dec. 27th, at Albion Cottage, Fortis Green-road, East Finchley, the wife of J. Norcott d'Esterre, jun., L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

GRAY.—On Dec. 30th, at Prescott-road, St. Helens, Lancashire, the wife of Andrew Gray, M.D., of a daughter.

O'CALLAGHAN.—On Dec. 28th, at Harley-street, W., the wife of Robert O'Callaghan, F.R.C.S.I., of a son.

MARRIAGES.

CLAYTON—JARVIS.—On Dec. 29th, at St. Luke's, Redcliffe-square, Charles Clayton, M.R.C.S., L.R.C.P., of Broadhurst-gardens, N.W., to Ellen, daughter of the late W. Jarvis, of South Kensington.

HIRSCH—MOREY.—On Oct. 29th, 1894, at the Holy Trinity Church, Suva, Fiji, by the Rev. Francis Jones, M.A., Charles Theodore William Hirsch, M.R.C.S. Eng., L.R.C.P. Lond., F.C.S. Lond., &c., District Medical Officer, Rewa, Colonial Medical Service, Fiji, to Emmeline, fifth daughter of the late James Morey, Esq., of Fiji.

HUTTON—SMITH.—On Dec. 29th, at the Cathedral, Manchester, Henry Richmond Hutton, M.A., M.B. Cantab., of Manchester, to Evelyn Mary, elder daughter of the late G. Fereday Smith, of Grovehurst, Tunbridge Wells.

SMITH—EDMOND.—On Dec. 28th, at Blackford-road, Edinburgh, J. Lorrain Smith, M.D., son of the late Rev. Walter Smith, Half-Morton, to Ella, daughter of E. Edmond, late of the Indian Civil Service.

DEATHS.

DICKSON.—On Dec. 29th, at Royal-circus, Edinburgh, Walter George-Dickson, M.D., aged 73.

HEWITT.—On Dec. 26th, at Catford, Henry Bealey Hewitt, M.B. M.Ch. Cantab., (Clare College).

REITH.—On Dec. 30th, on board ss. *Norham Castle*, Archibald Reith M.D., Aberdeen.

STORY.—On Nov. 27th, at Telepara, near Nagrakata, Bengal, Arthur N. J. Story, M.B., aged 30.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 3rd, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Dec. 28	30.54	W.	35	34	49	47	33	..	Foggy
" 29	29.40	N.W.	41	38	69	45	35	0.08	Cloudy
" 30	29.34	N.W.	35	33	47	40	34	0.02	Cloudy
" 31	29.61	N.	32	Frzn.	51	39	30	...	Cloudy
Jan. 1	29.37	N.W.	32	"	54	39	31	0.03	Fine
" 2	29.89	N.W.	35	"	55	44	31	0.21	Overcast
" 3	29.46	N.E.	35	35	46	36	33	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Mr. John D. Malcolm: Illustrations of some Modes of Death from Ovariotomy.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—4.30 P.M. Annual General Meeting. Election of Officers and Council, &c. Cases, Specimens, &c., by Mr. A. E. Durham, Dr. William Hill, Dr. Alex. Hodgkinson (Manchester), Dr. Middleton Hunt (Liverpool), Dr. Percy Kidd, Dr. Edward Law, the President, Dr. Seanes Spicer, and Mr. W. R. H. Stewart. The Annual Dinner at the Café Royal, Regent-street, at 8 P.M.

HUNTERIAN SOCIETY.—8.30 P.M. The President (Mr. Charters J. Symonds): The Surgical Treatment of Typhilitis.—Dr. Fred. J. Smith: Notes of a case of Typhoid Fever treated by the Continuous Bath.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital, Kentish Town-road).—8.30 P.M. Exhibition of Cases.

THURSDAY.—BRITISH GYNECOLOGICAL SOCIETY.—Specimens. Reports on Specimens. Election of Officers for 1895. President's Valedictory Address.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Dr. Eddowes: Explicative Dermatitis.—Dr. David Walsh: A Note on Antitoxin Rash.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Great Northern Central Hospital).—9 P.M. Dr. A. Morison: The Blood-pressure in Angina Pectoris.—Dr. Archibald K. Christie: Remarks on the Selection of Cardiac Tonics.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Mr. Mayo-Robson: Three cases of Abdominal Section for Unusual Conditions.—(a) Tuberculous Disease of the Liver, (b) Complete Volvulus and Strangulation of Great Omentum, and (c) Traumatic Hemorrhage without External Wound.—Dr. J. W. Browne: A case of Loculated Empyema.—Mr. F. Eve: A case of Acute Intestinal Obstruction from Gall-stone; Laparotomy: removal of stone; suture; recovery.—Dr. S. West: Two cases of Detachment of the Retina in the course of Granular Kidney.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—CENTRAL LONDON THROAT AND EAR HOSPITAL.—Dr. Dundas Grant: The Methodical Diagnosis of Diseases causing Deafness without Pain or Discharge.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

COVER TO THE LANCET.

THE Manager begs to announce that at the request of many advertisers, and to keep pace with the ever-increasing demand for "position" pages, it has been decided to issue a cover to THE LANCET, commencing with the present number. The cover is printed on the same kind of paper as the journal itself, and thus ensures uniformity of appearance with past issues. With this exception of the cover the journal remains exactly as it was before. The Proprietors cannot consent to the insertion of advertisements in the centre of the paper—a position which has frequently been applied for, but which is annoying to the general reader.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our last issue, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

To the Editors of THE LANCET.

SIRS,—I was recently asked by a *confrère* to see two cases of small-pox with him, in order to confirm his diagnosis, which proved to be a correct one, and in due course I forwarded two certificates, as required by the Infectious Diseases (Notification) Act. Our medical officer of health writes to me that "the Act does not provide for the sending of duplicate certificates when a second medical practitioner is called in to see a case in consultation with the medical man in attendance, and I do not think that any fee is payable to you in regard to the two cases in question." Would you kindly in your next issue inform me whether, in your opinion, this is a correct view of the case, and whether a letter addressed to the Secretary of the Local Government Board would be likely to elicit an opinion as to what the law really means on the point in question—if it has not already been decided?

I am, Sirs, yours faithfully,

Birmingham, Dec. 18th, 1894. J. M. WALKER.

* * * The Act requires that every medical practitioner called in to see a case of one of the specified infectious diseases shall notify the same. Nothing is said in the Act either as to a first or second medical practitioner; neither is anything said as to first or subsequent cases of sickness. Consequently, each case has to be notified, and each case has to be paid for. If further difficulty arises, a letter should be addressed to the Secretary of the Local Government Board, specifying the actual fact and putting the question definitely, with request for an answer.—ED. L.

THE DISPOSAL OF DEAD CHILDREN.

SOME very disquieting evidence as to the disposal of deceased infants was elicited at an inquest held by Mr. G. P. Wyatt at the Newington Coroner's Court on Dec. 28th. The child of a single woman, who had been attended in her confinement by a midwife, died twelve days after birth, and on the following day the body was wrapped in brown paper, and left by the midwife at an undertaker's shop in the neighbourhood. The birth was not registered. The explanation of the omission, according to the account of the proceedings published by the *Evening Standard*, was that the midwife undertook to perform this duty, but found herself too busy to attend to it, and the mother was unable to leave the house. The coroner was communicated with and the mother admitted that she had no money to defray the expenses of a funeral, but denied that she had connived at an attempt to have the body buried as still-born; in fact, her expectation was that the midwife who removed it would "throw it over the railings and give it a cheap funeral." The undertaker's wife, to whom the parcel was delivered, was under the impression that the child had been still-born, but she added, curiously enough, that the midwife "promised to bring the certificate on the following Monday." The jury returned a verdict of death from malnutrition and considered the conduct of the midwife very reprehensible.

C. E. P.—A circular to *bond fide* patients on change of tenure in a practice, and where personal introduction is impracticable, is permissible; but the advertisement of low charges is very objectionable. The period of three years seems rather long, and might easily cover the circulation of the document among the patients of other practitioners, which should be avoided.

F. E. C.—No powers exist in this country of "quarantining" healthy persons in the way suggested as desirable at Guernsey, though Leicester has assumed such a power. Compulsory removal to hospital with us is made under Section 124 of the Public Health Act, 1875. Guernsey is, we believe, under the jurisdiction of the Home Office as regards these matters.

A District Medical Officer would be glad to know if there exists a handbook for the guidance of parish doctors in their duties and obligations, and written rather directly from their point of view.

"MUCUS IN THE EVACUATIONS."

To the Editors of THE LANCET.

SIRS,—In reference to a letter under the above heading, which appeared in THE LANCET of Dec. 15th, 1894, p. 1461, I, like "A Reader," should be glad to know the causation, pathology, and proper treatment of this disease. The literature of the subject is limited. Under the heading, "Chronic Mucus Colitis," some twenty years ago or more, the late Sir Andrew Clark and Dr. Habershon wrote separately some articles on this subject, which appeared in THE LANCET of the time. Pseudo-membranous colitis is due, according to some writers, to a lesion of the spinal cord. I believe that chronic mucus colitis is somewhat similar and due to exhaustion of the nerve centres of the lumbar portion of the cord; that when the inješta reaches the colon the glands in this portion of the intestine are unduly excited, the more so if the digestion in the stomach or duodenum be faulty. All astrinents, I believe, are useless either given by the mouth or rectum. Purgatives are harmful. If constipation exists I should recommend an enema to be given once a day, preferably in the morning. Strychnine and so-called spinal tonics over-excite the cord and make matters worse. In my experience the only drug effectual in this disease is dilute hydrocyanic acid $\frac{m\text{ij}}$ after food. The diet should be of the most digestible form. Vegetables, owing to their large residue, should be taken sparingly. A glass of good port wine might be given at dinner, according to the age of the patient. Smoking and alcoholic excess should be interdicted, as also late hours and anything of an exhausting tendency.—I am, Sirs, yours truly,

Dec. 19th, 1894.

S. W. WILSON.

Messrs. Dawson & Sons, of Bream's-buildings, Chancery-lane, have sent us one of their "Ceres" Letter File Boxes, which appears to be an excellent contrivance for keeping in order and ready to hand, at a moment's notice, a maximum of papers, memoranda, &c., with a minimum of trouble. After a trial we shall be the better able to pronounce a more definite opinion upon its value.

J. S. R.—Our correspondent points out a condition of things worse than we had imagined, and we knew the condition to be bad. His communication shall receive our most serious attention.

THE DUTIES OF A VOLUNTEER BRIGADE-SURGEON.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me of a book where I may learn the duties of a volunteer brigade-surgeon when in camp? I have the Regulations for Army Medical Services and Standing Orders of Army Medical Staff, 1894, but it does not mention the duties during encampment.

Dec. 29th, 1894.

I am, Sirs, yours truly,

VOLUNTEER.

AN UNANSWERABLE EXPLANATION.

At page 48 of his book, entitled "The Vaccination Question," Mr. Hutton, a well-known antivaccinationist, writes as follows:—

"Revaccination became the cry a few years ago, and the cry has quite lately been extended to 'frequent' or (what amounts to the same thing) 'recent revaccination,' which we are now assured is the only genuine and absolutely safe defence. Of course, this doctrine drives a coach-and-four through legislation which insists only on vaccination in infancy, and it also renders a little ridiculous the horror which many advocates have professed to feel at the state of unvaccinated infants as 'centres of infection.' Dr. Seaton recommended revaccination at puberty, but objected to a third repetition of the operation. On the other hand, Dr. Collingridge, the active medical officer of health for the port of London, advocates thoroughly efficient annual revaccination."

This argument, deriding the alleged necessity for annual revaccination, has been used by Mr. Milnes as well as by Mr. Hutton, and appears to have been based on a summary of a report made by Dr. Collingridge and published in *The Times* on July 14th, 1881. Unfortunately for Mr. Hutton's fancied triumph, Dr. Collingridge writes in *The Times* of Dec. 27th, 1894, referring to the above-mentioned summary, and points out that "annual vaccination" was by a printer's error substituted for "animal vaccination," which was the very different expression really employed in Dr. Collingridge's report. We are not aware that Mr. Hutton has, as he surely should do, made a courteous and graceful apology to Dr. Collingridge for the mistake into which he was unwittingly led.

G. C.—There is nothing contrary to professional etiquette in sending to the patients whose names are upon the books of the previous owner of the practice a notice that the practice has been transferred. Such circulars should not be sent to the patients of other practitioners, and good taste will prevent them from constituting anything more than a formal announcement.

Surgeon.—The question our correspondent asks is a large one, and the facts as stated are hardly sufficiently detailed to enable us to give an explicit reply.

THE SUPPLY OF STERILISED MILK.

To the Editors of THE LANCET.

SIRS,—We have seen your interesting article with reference to the supply of sterilised milk in New York, and with regard to your concluding remark, that "the question of sterilising milk is well worthy of careful consideration, and the practical experiment made in New York should be watched and perhaps imitated," we beg to inform you that we have for many years supplied sterilised milk with great success not only in London, but to all parts of the United Kingdom, to the Continent, and even to New York, the West Indies, &c.

I remain, Sirs, yours faithfully,

RICHARD S. BOND,

Chairman the Aylesbury Dairy Company, Limited.

St. Petersburg-place, Bayswater, London, W., Dec. 20th, 1894.

"CENTRIFUGAL FORCE IN THE EXAMINATION OF SPUTUM."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 8th, 1894, reference is made to Mr. Metzger's instrument for separating tubercle bacilli by centrifugal force. Can any of your readers tell me if this has been used with typhoid bacilli; and, if so, with what success?

I am, Sirs, yours faithfully,

Jan. 1st, 1895.

SEPARATOR.

THE MEDICAL MANAGEMENT OF WORKHOUSES.

To the Editors of THE LANCET.

SIRS,—Can any of your readers oblige me by telling me what is the best source of information respecting the medical management of workhouses? What competent information is published "up to date"?

I am, Sirs, yours faithfully,

Dec. 19th, 1894.

R. N.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Bungshire Advertiser, Newbury Weekly News, Birmingham Post, Manchester Guardian, Fife Herald, Sheffield Independent, North British Daily Mail, Chester Chronicle, To-Day, Brighton Standard, Cheltenham Mercury, Devon City Standard, Glasgow Herald, Ormskirk Advertiser, Weekly Times and Echo, People's Western Morning News, Cork Examiner, City Press, Stroud News, Morning Leader, Brighton Guardian, Brisbane Telegraph, Building News, Sun, Citizen, Dorset County Chronicle, Walsall Observer, Bristol Times, Annandale Observer, Leigh Chronicle, Yarmouth Gazette, Swansea Journal, Teignmouth Gazette, Courrier de la Presse, Liverpool Courier, Australasian Medical Gazette, Guy's Hospital Gazette, Worcester Chronicle, Leamington Spa Courier, Cape Times, Portsmouth Evening Mail, Dublin Evening Telegraph, Southampton Echo, Gray's Standard, Times of India, Elgin Courier, Pioneer Mail, &c., &c.*

Communications, Letters &c. have been received from—

- A.**—Dr. J. Armstrong, Liverpool; Dr. J. A. Arkwright, Halesowen; Dr. C. C. Aitken, Barnsley; Mr. D. Ainley, Halifax; Mr. H. Abrahams, Lond.; Aberystwyth Infirmary, Sec. of; A. K., Lond.; A. L., Lond.
- B.**—Sir William Broadbent, Lond.; Dr. A. Barber, Harrogate; Mr. E. Berdoo, Lond.; Mr. R. Branthwaite, Twickenham; Mr. W. F. Brook, Swansea; Mr. T. B. Browne, Lond.; Mr. J. Burnet, Edinburgh; Mons. O. Berthier, Paris; Mr. D. Biddle, Kingston-on-Thames; Mr. R. D. Barber, Eastwood; Mr. Lennox Browne, Lond.; Mr. E. Brown, Chalfont; Mr. G. Brown, Greenock; Mr. J. Brown, Lond.; Mr. R. A. Bayliss, Chard; Mr. G. E. Bridge, Bournemouth; Mr. C. Birchall, Liverpool; Messrs. Burroughs, Wellcome and Co., Lond.; Messrs. Bramwell Bros., Liverpool; *British and Colonial Druggist*, Lond., Publisher of; Brompton Hospital, Sec. of; Bolton Union, Clerk of; Bovril, Ltd., Lond.
- C.**—Dr. W. S. Colman, Lond.; Dr. S. B. Coe; Hamgate; Dr. W. J. Clever, Sheffield; Dr. E. Cohn, Berlin; Mr. C. D. Cassidy, Dublin; Mr. H. Collier, Sheffield; Mr. A. E. Clarke, Malmesbury; Mr. W. H. Cope, Birmingham; Mr. H. S. Chavasse, Sutton Coldfield; Mr. H. M. Cummins, Dublin; Messrs. F. C. Culver and Co., Manchester; Chelsea Hosp. for Women, Sec. of; Cent. Lond. Throat and Ear Hosp., Sec. of; Class Rooms, Edinburgh.
- D.**—Dr. J. T. R. Davidson, Buenos Ayres; Dr. W. Dickson, Stirling; Dr. G. W. Davis, Slieup; Mr. T. G. Denton, Lond.; Mr. A. Duncan, Glasgow; Mr. W. G. Dickinson, Lond.; Mons. O. Doin, Paris; Messrs. A. Durant & Co.
- E.**—Mr. W. Edmunds, Chesterfield; *Educational Times*, Editor of; Excellent, Lond.; E. L.
- F.**—Dr. T. Fisher, Clifton; Mr. Fletcher, Warrington; Mr. J. W. Feltwell, Chiswick; Mr. W. C. Finch, Salisbury; Mr. R. H. Fagge, Lond.; Messrs. Fannin and Co., Dublin; Festina, Lond.
- G.**—Dr. J. Gardner, Cliffe; Dr. G. A. Gibson, Edinburgh; Prof. W. S. Greenfield, Edinburgh; Mr. T. H. Gilliam, Bromyard; Mr. C. J. K. Gillespie, Boston; Mr. M. C. Gray, Patna, India; Messrs. C. Griffin and Co., Lond.; Great Northern Central Hospital, Lond., Sec. of; G. P.
- H.**—Sir F. Seymour Haden, Alresford; Dr. J. A. Hutton, Scarborough; Dr. C. Hoar, Robertsbridge; Mr. J. W. Hulke, Lond.; Surg.-Capt. H. Herbert, Bombay; Mr. John Heywood, Manchester; Mr. J. Hart, Lond.; Mr. J. Horsted, Newcastle-on-Tyne; Mr. Hill Hartland, Sheffield; Haydock Lodge, Newton-le-Willows, Med. Supt. of; Halifax Infirmary, Sec. of; Hosp. for Epilepsy and Paralysis, Lond., Sec. of.
- I.**—Messrs. I. Isaacs and Co., Lond.
- J.**—Sir George Johnson, Lond.; Mr. P. B. Jessell, Lond.; Messrs. W. & A. K. Johnstone, Edinburgh.
- K.**—Dr. Norman Kerr, Lond.; Messrs. W. and J. Kennedy, Hawick; Kops Brewery, Lond.; K., Lond.
- L.**—Dr. H. J. Ley, Handsworth; Mr. C. B. Lockwood, Lond.; Mr. H. K. Lewis, Lond.; Mr. A. Leckie, Lond.; Mr. J. Lowe, Brighton; Mr. H. Lane, Bath; Mr. G. B. D. Levick, Pinner; Mrs. C. Leeson, Twickenham; Messrs. Lee and Nightingale, Liverpool; Messrs. Lever Bros., Lond.; London Hospital, House Governor of; Liquor Carnis Co., Aston Clinton.
- M.**—Dr. Norman Moore, Lond.; Dr. J. R. Morison, Newcastle-on-Tyne; Dr. J. Millar, Nottingham; Dr. J. Mackenzie, Burnley; Mr. H. F. Moody, Grimsby; Messrs. Mellin and Co., Lond.; Messrs. J. Maythorn and Son, Biggleswade; Messrs. Morison, Pollexfen, and Blair, Lond.; Messrs. C. E. Mason and Co., Lond.; Messrs. Mawson, Swan, and Weddell, Newcastle-on-Tyne; Messrs. J. and C. Mort, Stafford; Messrs. J. & R. Morley, Lond.
- N.**—Mr. J. A. Neger, Klerksdorp.
- O.**—Dr. E. S. O'Grady, Dublin; Dr. H. L. Ormerod, Bristol; Messrs. Oliver and Boyd, Edinburgh.
- P.**—Dr. W. S. Park, Sydney, N.S.W.; Mr. W. H. Pollard, Oxford; Mr. J. Plummer, Sydney, N.S.W.; Prestwich County Asylum, Manchester, Sec. of.
- R.**—Sir J. Russell Reynolds, Lond.; Dr. A. J. M. Routh, Lond.; Dr. M. A. Ruffer, Lond.; Mr. H. M. Riley, Leicester; Messrs. Richardson Bros. and Co., Liverpool; Messrs. Richardson and Co., Leicester; Messrs. Reynolds and Branson, Leeds; Messrs. J. Raphael and Co., Lond.; Messrs. Reid and Donald, Perth; Messrs. Robinson and Sons, Chesterfield; Roy. Infirmary, Manchester, Sec. of; Roy. Free Hosp., Lond., Sec. of; Roy. Aquarium, Lond., Sec. of; Roy. Academy of Arts, Lond., Sec. of; R. M. L., Lond.; R. C. W.
- S.**—Dr. H. Snow, Lond.; Mr. L. Stephens, Emsworth; Mr. E. Stevens, Brighton; Mrs. R. G. Silverlock, Lond.; Messrs. J. Smith and Co., Lond.; Messrs. W. H. Smith and Son, Lond.; Messrs. Slade, Lewis and Slade, Lond.; "St. Raphael's," Croydon, Sec. of; Sanitas Co., Lond.; Samaritan Free Hosp., Lond., Sec. of; St. Andrew's Hosp., Northampton, Sec. of; Sussex, Lond.; Salus, Lond.
- T.**—Tasma, Lond.
- V.**—Mr. W. Venis, Benares, India; Victoria Med. Society, N.S.W.; Hon. Sec. of; Victoria Hospital, Folkestone, Sec. of; Victoria Infirmary, Northwich, Hon. Sec. of; Volunteer.
- W.**—Dr. J. M. Walker, Birmingham; Dr. D. A. Welsh, Edinburgh; Dr. W. T. Wearing, Kirkby Lonsdale; Mr. C. Wil-

llams, Norwich; Mr. W. Williams, Penarth; Mr. R. Watson, Lond.; Mr. R. M. West, Ealing; Mr. J. Westmorland, Manchester; Mr. S. Wand, Leicester; Mr. R. H.

Letters, each with enclosure, are also acknowledged from—

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A Lecture

ON

SOME POINTS IN THE DIAGNOSIS OF
INSULAR SCLEROSIS.*Delivered in the London Post-graduate Course at the National
Hospital for the Paralysed and Epileptic on
Oct. 25th, 1894.*By THOMAS BUZZARD, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL.

INSULAR or disseminated sclerosis is one of the most frequent chronic diseases of the spinal cord, yet there is probably none in the diagnosis of which errors are so frequently made. I shall show you to-day five patients who, I am disposed to think, are affected with this disease, but it must be admitted that there is only one of them which is a typical example, and we had better see him first. [This patient (A.)—under the care of Dr. Bastian,—who presented characteristic tremors on voluntary movement, loss of power in various limbs, exaggerated knee-jerks, nystagmus, slow and peculiar speech, pallor of both optic discs, besides bulbar symptoms, was then shown and the nature of the disease generally described.] Were this symptom-group usually present in the perfect form just seen there would be little reason for hesitation in diagnosing the affection, but this is very far from being the case. I believe that for one typical example like this there are very many indeed the symptoms of which are so widely divergent that the idea of insular sclerosis may easily fail to present itself to anyone familiar only with the classical form of the disease. Let me show you some examples which have recently come under my care in hospital.

Patient B., a man thirty-six years of age, married, was admitted on Aug. 14th, 1894, with complete loss of voluntary power in the lower and some weakness in the upper extremities. (I am indebted to Dr. Warrington, resident medical officer, for notes of this and the following cases.) It appears that thirteen years ago his right arm felt "numb" and he frequently dropped things from it, and gradually lost power so that he ceased to be able to hold anything. His right leg also became affected; he dragged it in walking and frequently fell. There seems to have been no objective sensory change. The face was not affected. In about six weeks he recovered and was able to go about his work as usual. Very soon after this his left eye "had a fog over it," and he attended at Moorfields Hospital. "It came all right in about nine weeks." Some years after this he had a similar attack in the eye and again recovered, but the sight never seemed quite so good. Three years and a half ago he could not use the left hand, which was weak, not stiff, and the left leg became affected; he found he could not walk well, and then the right leg also became affected. For two years past he has been unable to move his legs. The right hand has also been affected at times. For eighteen months he has had difficulty in holding his urine, not being able to retain it for more than an hour, and then it runs from him. He is conscious of its passage. Nor can he retain the evacuation of the bowel long after a call. (He has had accidents.) There is no history of syphilis and nothing material in the family history. His previous general health had been good, except for a little, not severe, rheumatism. He is a fairly well-nourished man, with a somewhat dusky face and heavy expression; mentally not very bright, but his memory not manifestly impaired, and he has not lost interest in his surroundings. There are no hallucinations. His speech is rather indistinct. There is no voluntary power in the lower extremities, which are kept extended except for frequent flexor spasms. There is slight rigidity of all joints, which is easily overcome. There is no wasting and no tremor; the muscular sense is good. On the left side he is quite unable to extend the arm, but if passively extended he can flex it to a right angle at the elbow. There is no movement at the shoulder-joint. There is slight flexion, but no extension at the elbow. He can flex his fingers, but there is no grasp; he cannot extend them. There is rigidity at all the joints, especially the

No. 3724.

shoulder; this can be overcome without causing pain. The thenar eminence and the first dorsal interosseous are wasted. There are no tremors. On the right side the voluntary movements of the arm are all fairly good, but vary very markedly, especially at the shoulder, which after repeated movements becomes rather feeble. The movements at the elbow, wrist, and fingers are fair, but here again they are weaker after each attempt—especially the extension of the wrist. There is slight rigidity at the shoulder, more than at the other joints. Wasting is seen in the first dorsal interosseous, but less marked than on the left side. There is no tremor, and the muscular sense is not impaired. The patient is unable to sit up in bed. On the sensory side the patient describes a feeling of numbness in all his limbs. Objectively, sensation to touch, pain, and temperature are normal in the legs and arms. The plantar reflex is active and equal on the two sides. The knee-jerks are very active and equal. There is no ankle-clonus. The wrist- and elbow-jerks are obtained on the right side, not on the left. The vision on the left side is $\frac{1}{2}$ and on the right side $\frac{3}{4}$. There is no nystagmus and no diplopia. The field of vision in the left eye is contracted on the nasal side. In the right eye it is normal. Mr. Gunn reports that the left optic disc is "on the pale side of normal." The pupils are equal, and react to light and accommodation. All the other cranial nerves are normal. The patient complains occasionally of frontal headache, but no tender spot has been elicited. There is no irregularity of the spine. All the other functions are normal. The faradaic and galvanic reaction of all the muscles of the arms and legs is normal. Tremor occurring on making an intentional movement and subsiding when this is discontinued is the symptom which, of all others, is considered the most characteristic of insular sclerosis, and I suppose that if it be present in a typical form it is almost conclusive evidence of the disease. Nystagmus, also, is a symptom of great importance, though its frequent occurrence in cerebellar disease, Friedreich's ataxy, and in chronic alcoholism must always be remembered. The laboured articulation observed in Patient A. is also useful for purposes of diagnosis, but in my experience it is not often present. For the moment I will content myself with calling your attention to the fact that in Patient B. there is no tremor on intentional movement, no nystagmus, no scanning articulation—and present to you Patient C.

Patient C., a man thirty years of age, a widower, was admitted on Sept. 17th, 1894, on account of partial paralysis of both lower extremities and of the right arm. Seven years ago the patient was in the out-patient department complaining of numbness in the body and legs. At that time there was no loss of power, and he was able to continue his work. He also complained of numbness and tingling in the tips of his fingers. These symptoms sometimes ceased for weeks together. In August, 1888, the numbness was better but the legs were weak and his gait was unsteady. In June, 1889, it was noted that the right knee-jerk was exaggerated and there was ankle-clonus. The left knee-jerk was obtained with difficulty. The patient gave up his work in July, 1889, owing to the weakness in the right leg. At that time there was "slight anaesthesia of the left hand and foot, especially in the fingers and toes." In January, 1890, he was admitted into hospital with weakness of the right arm and leg. In July of the same year there was more weakness and stiffness. In March, 1891, the symptoms noted were headache, nausea (no actual vomiting), drooping of the right angle of the mouth, and a spastic condition of the right leg. The left optic disc was noted as being pale. In October it was remarked that he was much worse and much upset by the death of his wife. A note made in February, 1894, in the out-patient department shows that he had been slowly getting worse. It adds "There was no clonus. The knee-jerk was exaggerated. The patient cannot walk, but can move the right leg when seated in a chair." In March, 1894 he lost the use of the left leg completely in a day or two. Since then it has been getting stronger. The patient is a temperate man, and has been comfortably off. Previous to the time noted his health had been good, but he had been exposed to venereal disease and had suffered with a bubo at the age of twenty years. There had been no secondary symptoms. The patient's wife died three years ago. She had had no miscarriages. They had been married eight years and were childless. The patient's appearance is healthy, and he is well nourished. Mentally he is intelligent, and seems to be reliable. He is unable to stand. There is marked weakness of both legs, especially in the right. The

B

right leg cannot be lifted off the bed, the only voluntary power consisting in being able to flex the thigh and knee. The muscles of the leg are weaker than those of the thigh, especially the extensors. The foot is in the position of talipes equino-varus, and the toes can hardly be moved at all. There is marked rigidity at the thigh, knee, and ankle-joints. The left leg is also very weak, but shows more power than the right. The heel can be raised off the bed and other movements performed against very slight resistance. The thigh is stronger than the leg, and extension than flexion. Rigidity is present, but less so than in the right. The left upper extremity is strong. On the right side there is rigidity at the shoulder, elbow, and wrist-joints so that the various parts are kept in a position of flexion. All the movements of the forearm are weak, but especially that of the extensor group. The grasp is feeble, flexion of the forearm on the arm weak, and the action of the triceps moderate. The arm cannot be abducted except feebly, nor can it be raised beyond the horizontal position. The trapezius, serratus, and latissimus dorsi appear to act well. Both knee-jerks are exaggerated; the right more than the left. There is ankle-clonus on each side; on the right more than on the left. The triceps and radius jerks are increased on the right side. The cremasteric and plantar reflexes are normal, and the abdominal and epigastric not obtained. On the sensory side no objective disorder is found. Subjectively the patient complains chiefly of a gnawing pain in the right lower limb, starting from the hip, which comes on chiefly at night. It is not of a shooting character. There is no feeling of numbness anywhere, no pins-and-needles, or tingling. There is occasional frontal headache—no vomiting or sickness. He takes a long time to pass his urine and has to strain, with a feeling that some is left behind. He is always conscious of the act; it never passes involuntarily. There is no trouble with the rectum. The pupils, which are equal, act normally. Ophthalmoscopic examination shows that the left disc is slightly paler than the right. In each eye vision equals 3; Jaeger No. 3 at 12 inches. The fields are normal to rough estimation. For a few days, three years ago, he suffered from diplopia. There is none now. Note that in this case, again, there is no tremor, nystagmus, or affection of articulation. On the other hand, in both these cases a subjective sensation of numbness is described.

Patient D., a woman twenty-seven years of age, single, in domestic service, was admitted into hospital on Oct. 9th, 1894, with loss of power in the lower extremities. One day in May, 1893, without any previous warning, the patient noticed that her left leg dragged, and that she tired very soon. If she attempted to run she fell down. At the same time she found herself unable to lift things with the left arm. In spite of these symptoms she continued at her work, but was unable to walk any distance out of doors. The arm gradually recovered in the course of one month, but the leg has never got well, though the dragging has ceased. At the onset the left leg became numb; it felt to the patient like a log of wood; sometimes the whole leg tingled like "pins and needles." Since December, 1893, both legs have been weak, and often give way at the knees. After walking about 100 yards she is quite unable to move one foot in front of the other. After being ill for about three months she was treated by a medical man for "hysteria." Three months ago she noticed that she could not hold her water, the call was so rapid, nor could she check the evacuation of the bowels. A week ago she found that her sight was not good for doing fine work. There has never been any diplopia. Previous to the present illness her health had been always good, and had never been better than on the day when the weakness in the leg suddenly occurred. She had never suffered from influenza, and the catamenia had always been regular. There had, however, been a good deal of mental trouble at the time of her attack. She has always been comfortably off, has not suffered from exposure to weather, or sustained any injury by violence. The family history is excellent. At the present time the patient is a healthy-looking girl, well nourished, bright, and intelligent. There is no affection of speech. She can stand alone with her eyes open, but when these are closed she soon loses her balance, but shows no tendency to fall in any particular direction. She manages to walk alone, but is very unsteady and insecure. One leg is apt to stick in front of the other, and this nearly upsets her. She can cross one thigh over the other and raise herself from a sitting posture, but she cannot mount on a chair with either leg. In bed the movements of the lower limbs seem fairly well

performed, without obvious difference on the two sides. The feet are not dropped and the extensors of the feet and toes are fairly strong. There is slight rigidity in the lower limbs. There are no tremors. The movements of the upper extremities are well performed; no tremors are observed in them, and no rigidity. She can raise a glass of water to her lips without shaking it. On the sensory side there is no objective disorder. She complains of numbness and a tingling sensation over the whole of both her lower limbs. There are no pains, or girdle sensation, or headache. There is very slight ptosis of the right eyelid, not observed on a later examination. The pupils are equal and react to light and accommodation. By a rough estimation with upheld fingers the field of vision is normal. The vision right and left is 3; on the right side Jaeger No. 3 at ten inches; on the left side No. 1 at ten inches. There is distinct pallor of both discs, rather more marked on the right than the left, especially in the lower and temporal portion. There is nystagmus, of fine range, and rather slow in all directions, except downwards. It ceases when the eye is at rest. There is nothing notable in the other special senses, or in the thoracic and abdominal viscera, except that the heart shows a little irregularity of beat. There is no bruit, and there are no signs or history of cardiac failure. On Oct. 16th it is noted that there has been a great increase of weakness in the legs so that the patient is quite unable to stand, and cannot even raise her heels off the bed. In a few days this was recovered from, and she can now walk, though with difficulty. Again we find an absence of tremor or voluntary movement and of any peculiarity of articulation. But in this case there is nystagmus, which was absent in the two male patients.

Patient E., a woman thirty years of age, married, was admitted on Oct. 2nd, 1894, on account of loss of power in one upper and the opposite lower extremity. At the age of sixteen years the patient had an attack of headache and vomiting, and was in bed for a week. On recovering she noticed that at times attacks of powerlessness would come on in the right arm, so that things were dropped. These attacks recurred during a period of a few months, and then entirely ceased. She has never been able to write properly with that hand since then. Within the last few months she has noticed numbness occasionally in the right arm. About three years ago, when out walking, she had a sensation of "pins and needles" in the left foot, and the leg dragged a little. Soon after this weakness in the left lower extremity was observed, so that she had difficulty in going up and down stairs. In walking there was trouble in lifting the foot off the ground, and she often had to grasp objects for support. From that time the weakness has been gradually getting worse, especially after a confinement, but she has never been unable to stand. Since the onset she has often been troubled with numbness in the calf and occasional "pins and needles." There has never been any weakness in the right leg, and never any trouble with the bladder or rectum. The patient since eight years of age has been subject to headache, especially at the back of the left eye, and, according to her account, accompanied with drooping of the eyelid. For the last four years, since marriage, she has sometimes a tearing kind of headache at the back of the head, and a feeling on the vertex as though she had been struck by a hammer. There is no reason to suspect that she has had syphilis, and there is no family history of any nervous disorder. The patient is a fairly healthy looking woman, rather thin. She can only stand alone with difficulty and for a short time; she usually falls to the left. When walking she has to grasp objects to prevent her from falling. The left leg is dragged, and the toes scraped; the heel does not touch the ground until nearly the end of the step. There is a tendency to turn the sole of the foot inwards. As the patient lies in bed her left foot is rigidly in the position of talipes equino-varus; the big toe is hyper-extended and the power of flexing it is weak. All the movements of this limb are retained, but in much weaker form than on the right side. When sitting on a chair the patient cannot lift the left thigh over the right, or get up on to the chair by the left leg, or dorsiflex the left foot. She can raise herself to the standing position easily. The grasp on the right side is distinctly weaker than that of the left. Flexion and extension of the forearm and the movements of the wrist are also weaker. No difference is observed in the power of the deltoid, latissimus, or pectorals. The knee-jerks are brisk, especially the left. There is distinct ankle-clonus on the left side and a tendency to it on the right. The plantar reflexes are present. No

tremor is noticed in any extremity when at rest. No incoördination is to be observed when she attempts to approximate the index fingers or to touch the nose, or in raising a glass of water to the lips. An attempt to write results in the production of a perfectly unintelligible scrawl, the hand being at once seized with quick, small, rhythmical tremor; but when the right hand is supported by the left a legible though feeble signature is accomplished. On the sensory side nothing objective or subjective is to be noted. The functions of the rectum and bladder are normal; there is nystagmus; the special senses are apparently intact. On rough examination the field of vision is normal. There was nothing of importance in the viscera.

If we reflect for a moment on the endless variety of position occupied by the islets of sclerosis in this disease it appears remarkable that anything like a type can be found, and we can feel little difficulty in believing it as at least possible that cases like the last four, which present but few symptoms belonging to the classical form, may yet be examples of the disease. Let me call your attention especially to the last case, because it presents a feature which, in my experience, is perhaps one of the most characteristic of all in this disease, although comparatively little stress has been laid upon it by writers. I refer to the interval which elapsed between this patient's first symptoms at sixteen years of age and the affection of the left leg, when she was twenty-seven years. I do not think that there is any disease of the spinal cord, except insular sclerosis, in which you will find this kind of recurrence of loss of power in the same or another limb after one or more intervals of partial or complete recovery. Note what happened in the other cases. Patient A. two years ago felt a sudden weakness in the left leg and fell down. A feeling of weakness would occasionally be experienced after a long walk; but beyond this he was not inconvenienced for eight months, when weakness of the right leg and arm set in. Patient B. lost power in the right arm and leg, but recovered in six weeks and was able to go about his work as usual, and it was not till nine years later that his left limbs became affected. It was a year or more between Patient C.'s attack of numbness and his loss of power in the legs, and in the meantime he had been constantly at work. Patient D. lost power in her arm, but recovered it in the course of a month and resumed her work. The leg, which was affected at the same time, never completely recovered, although it became so much better that she hardly noticed any difficulty. Seven months after the first attack the other leg lost power. I will content myself with referring to this point in connexion with the five patients before us; but examples could be multiplied to a remarkable extent; indeed, if I am not mistaken, it is quite exceptional to meet with a case of insular sclerosis in which there is not a history of one or more often long-continued remissions.

Looking back I can remember a number of cases in which this recovery from more or less powerlessness for a time, to be followed by a return of trouble in the same or another limb, led me into temporary error of diagnosis, until the sequel, by displaying typical symptoms of insular sclerosis, cleared up the obscurity. When the remissions occurred in young females I used to fancy that the term "hysteria" could be satisfactorily applied to the case, whilst, if the patient belonged to the other sex, not a little suspicion of malingering would sometimes cross my mind. Subsequent experience, extending over many years, has pretty well convinced me that the view still widely held that a shifting of loss of power from one limb to another is characteristic of hysteria is an error which has arisen from cases of insular sclerosis being diagnosed as hysteria. As I said before, I do not think that there is any other disease of the spinal cord in which this feature is to be found, at least in the special circumstances by which it is marked in these cases. I am not forgetting that recurrence of symptoms, either in the same or another part, is very frequent indeed in syphilitic disease of the nervous system, and that in such instances there may be a more or less prolonged interval of exemption. It is necessary, of course, to bear this in mind, and in some cases there may be a certain amount of difficulty in the diagnosis.

There is not time on the present occasion to discuss fully our means of differentiating the two conditions. It must suffice to say that in very many instances of insular sclerosis (occurring, as the disease so frequently does, in young females of good social position) syphilis can be easily

excluded, that in the latter disease more or less complete paralysis rather than paresis is the rule, and that the effects of the remedies afford very great help, the power returning in insular sclerosis independently of any active treatment, whilst in syphilis the paralysis tends to become more and more confirmed until specific remedies are employed, when it usually begins very shortly to show marked amelioration.

I am disposed to think the condition of vision likely to afford much help in the diagnosis. Last year I adduced evidence¹ to show that some degree of optic atrophy was present in the course of forty-three out of a collection of 100 cases of insular (disseminated) sclerosis, and it was remarked besides that even when the discs presented no change some transitory amblyopia was to be found in a considerable number of cases of the disease. You will have observed that out of the five patients whom I have shown you no less than four are affected with amblyopia and present more or less pallor in one or both discs. It is especially to be noted that the amblyopia is very liable to remissions and recurrences in this disease, exactly recalling the peculiar feature already alluded to in reference to loss of power in the limbs. It would not be right to speak very positively on these points pending the opportunity of still more extensive observation; but I am certainly disposed to believe that the occurrence of paresis in one or more limbs, with spontaneous recovery, and recurrence of symptoms in the same or another part, together with amblyopia, accompanied or not by pallor of one or both discs, constitute a symptom-group which should hold a place in the diagnosis of insular sclerosis not second to that at present occupied by tremor on voluntary movement and scanning articulation.

An Address ON EXPERIMENTAL CRANIOTOMY AND DIAGNOSIS OF CEREBRAL ABSCESS.

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*Delivered on Nov. 30th, 1894, before the Lombard Medical
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for THE LANCET.*

(Continued from page 12.)

ABSCESS of the brain, which when clinically considered seems to be an essentially unique morbid process, resolves itself into two varieties which differ utterly in diagnosis—viz., acute abscess and chronic abscess. Writers aiming at the unity of the process lose sight of the clinical side and do not bring into sufficient relief the practical differences which exist between the two varieties. What they say of the abscess applies chiefly to the acute form. Bacterial analysis might throw more light on the causes of the differences which are developed in the process of suppurative inflammation of the brain. At present, what we chiefly know is the intensity of the exciting causes; the duration of the process depends much on these. If a considerable cerebral artery is closed by an embolus; if a wound on the head causes disturbance, contusion, or hemorrhage in a zone of the brain; if a suppurative otitis media violently affects the bony substance and gives rise to a thrombus in the cranial sinuses, or excites inflammation in the adjacent meninges—the nutritive process of the cerebral tissues near cannot avoid deterioration, the pyogenic agents find a field well prepared, and their devastations are in consequence very rapid. But here, besides the rapidity of the disease, there arises another clinical distinction. These occurrences, being more intense, cannot easily happen without being perceived by both the patient and his medical attendant. Moreover, the succession of phenomena aroused by them is not so disconnected as to lose the evidence of their reciprocal relation and the unity of the process they reveal. Finally, even the reaction of the brain provoked by rapid and great intracranial changes is more evident and appreciable to the practitioner. If to all this we add that the rapid diffusion of suppuration causes fever, and even a special fever,

¹ Atrophy of the Optic Nerve as a Symptom of Chronic Disease of the Central Nervous System. Brit. Med. Jour., Oct. 7th, 1893.

as a phenomenon revealing the nature of the morbid process, then it is easy to comprehend how the clinical idea assumes a form so distinct that the diagnosis of acute abscess naturally follows.

When we come to the chronic forms of cerebral abscess the description and opinions of pathologists, inspired by the observation of such facts, no longer correspond to the facts themselves. In these the exciting causes are less intense or less apparent. It is one thing, for example, if an embolus from a pulmonary vein closes the artery of Sylvius, and another if pus penetrates unperceived into the brain by one of those narrow ways which lead there from without. The slowness of the latter is not only marked by the absence of disorders perceptible to the medical man and patient, but it also causes a slower succession of changes around itself; the surrounding tissues, not previously affected and less violently attacked, have time to organise themselves for the defence, and in time circumscribe with a solid barrier (pseudo-membrane) the hostile element (pus) which tends to destroy it. This mysterious faculty which the brain possesses of adapting itself to the most serious lesions as long as they are gradual has full opportunity to act completely. Thus it follows that from ignoring or forgetting the primary cause it seems as though no external cause exists; and here we have the idiopathic abscess, which is almost always chronic. Even where the primary cause is known, if it be not violent the process which succeeds follows with less rapidity, and hence the slight changes of the brain may not arouse perceptible functional disorders. Here we have the latent abscess or the latent period of the chronic abscess. The slowness with which brain alterations proceed proves that a length of time is required for their development, and here we see the abscess become chronic. The perception of these internal processes is often defective, as is frequently seen in the doctrinal works of pathologists and in the reasoning of clinical physicians, who write and think of cerebral abscess as though it existed only in the acute form. But the abscess exists also in the chronic, idiopathic, latent, or semi-latent form, and this, though less frequent than the acute, is by no means as rare as statistics would make us believe.

Acute abscesses caused by a wound or by suppurative otitis abound in the practice of the surgeon and the aural surgeon, and are less frequent in that of the general practitioner than the chronic abscess, which is, perhaps, the reason why this figures so seldom in surgical or aural statistics. This is as yet mere conjecture, but time will decide whether future statistics will prove it. Some clinical observations will, perhaps, serve better than pathological ones to show the most frequent difficulties encountered in the diagnosis of chronic abscess of the brain.

In June, 1892, a man thirty-two years of age entered the clinic. The only event in his life needing mention was a large scald in the arm occurring when he was four years of age. After this he had no other ailment except a lobar pneumonia at the age of twenty-six, and then enjoyed perfect health until 1891, at which date he fell from a height of about twenty-four feet, without, however, hitting his head; he fell on his feet and left side. This accident did not cause insensibility, but it produced a sensation of faintness, which some hours later was succeeded by another phenomenon—viz., certain clonic and rhythmic movements which lasted about two minutes without at all disturbing his consciousness. The phenomenon was repeated four or five times during the day, and was observable even in sleep, which was not disturbed by it. It has never ceased from this time. The patient has been unable to return to his usual work. It was only in the succeeding February that he was attacked by headache, especially in the neighbourhood of the right ear and forehead. He had, whilst perspiring, been exposed to intense cold. The pain was so violent that he was for several days confined to his bed. His medical attendant first ordered cold compresses and afterwards applied leeches to the head. Just as these remedies seemed to be succeeding he was again taken with convulsions, which for the first time caused him to fall and lose his senses. The attack was brief, but it left traces behind it; a most intense headache set in, which lasted a full month. The sight remained permanently dimmed. This attack was not repeated till May, and then another phenomenon ensued—i.e., diminution of power in the right arm. This, however, was not permanent. These two more serious crises, with loss of consciousness, were not preceded by aura, or accompanied by cries, foaming at the mouth, or biting of the tongue; nor were they renewed. Only during May a new disturbance presented itself, returning every day till June 6th. It was an intense tremor, which

began in the right arm and then spread over the whole body, lasting about ten minutes. On entering the clinic the patient complained especially of pain about the right ear and forehead, and of a mucous discharge from the nose. He was a man of finely proportioned frame and was well nourished, and his muscles were fully developed. The objective examination revealed no anomaly in the nervous system. The voluntary movements; the reflex actions, both superficial and deep; sensibility to touch, to pain, to heat and cold, and to electricity; and the psychic functions—were all natural. Only the organs of sense presented any anomaly. Researches into the discharge from the nose showed an atrophic rhinitis. The right ear distinguished sounds at a less distance than the left, and yet the ticking of a watch was perfectly transmitted by the bones of the face and cranium. The direct examination by Dr. Secchi led to the diagnosis of salpingo-tympanitis in the right ear. An ophthalmoscopic examination revealed the presence of a serious bilateral inflammation of the nerves of the retina with hæmorrhages. The patient suffered occasionally from a momentary clouding of consciousness (*absence épileptique*) which lasted for ten or fifteen seconds, and left behind it a confused memory of discomfort and increased headache. He spoke of giddiness and said that if he had been standing up he should have fallen; but this access always chanced when he was seated or lying in bed. The patient walked well and ate, digested, and slept like a person in health; neither pulse nor respiration offered the least sign of alteration, though observations were prolonged through fifty days. His temperature was always below normal. On the morning of June 2nd he went to the water-closet. Finding he did not return the attendant entered and found him with his head falling and his arms supine; his breathing had developed the Cheyne-Stokes rhythm, and a greenish liquid was oozing from his nose and mouth. He remained in a state of coma till his death at 2 P.M. Opening of the skull revealed the ordinary lesions dependent on increased intracranial tension; the convolutions were pressed together, the fissures being almost invisible; and there were numerous bloody stains on the meninges, which were softened in all the zones. The sinuses and veins were turgid, but without sanguineous coagulations. In the middle fossa of the skull, to the right, the dura mater was thickened and covered with pus and reddish-grey granulations; it was, however, easily removable from the osseous tissue, and its under surface had a normal aspect. In the right temporal lobe there was a purulent abscess which rested on part of the diseased dura mater; this, indeed, formed the inferior wall of the cavity of the abscess, which was as large as a walnut and limited by a false-membrane of great resistance. The cerebral tissue surrounding the abscess presented a white, softened aspect. This softened tissue reached the interior of the optic thalamus and extended behind as far as the occipital lobe. The ventricles were over-full of fluid and the cerebral substance was oedematous. There was nothing remarkable in the rest of the cranium, there was no trace of (previous?) fracture in the bones of the base, and no necrosis. The temporal bone, which was especially examined, was in a normal condition. Thus, the post-mortem examination confirmed the clinical judgment, which had been that of cerebral abscess; but we must allow that this correspondence of the clinical hypothesis and the pathological fact could not even now be proved by valid arguments. The symptoms already referred to prove that there was a morbid process going on in the brain, but did not demonstrate an abscess. No wound had directly injured the head, which had received no external lesion. Admitting that we must believe in an internal lesion (due to laceration, hæmorrhage, or otherwise), why may we not have believed that this proceeded from a tumour rather than from an abscess? External lesions being absent, where are we to look for the cause of suppuration? Would not the constant absence of fever, too, point to the diagnosis of tumour? And would not the ever-progressive course of the disease still more favour it? I leaned to the theory of abscess because there were no phenomena of infection, nor was there paralysis of the cranial nerves, but I confess that the argument was more lucky than sound. Therefore I recommend my pupils to doubt—doubt much and doubt often—because my own arguments in favour of abscess were very uncertain. Indeed, I have myself seen many intracranial tumours which, like this abscess, existed without phenomena of infection and unattended by paralysis of the cerebral nerves.

Even in cases where the diagnosis is fortunate the physician

who declines to affirm more than reason concedes must often stop at a diagnosis of greater or less probability, because he finds conjoined some phenomena which indicate one thing and others that assert the contrary. I always inculcate on my students this forced resignation; but the difficult labour of prudence, diffidence, and circumspection which is learned in the schools is quickly frustrated by the reading of books that are deservedly held in great esteem. Even a most prudent master, such as Leube, more studious of the difficulties of diagnosis than any other, continues to teach¹ that the diagnosis of subacute or chronic cerebral abscess is, on the whole, easy, and he gives as the most important indication of abscess intermittent fever associated with rigors, and he also attributes greater value to the absence of the optic neuritis and etiological considerations. In this way we should diagnose a tumour, because there is no fever and the congestion of the papillæ is evident. Certainly I should not merit blame, as I deserve no praise, for giving greater weight to opposing arguments; but, to be sincere, we must own that mistakes may be made in both ways.

Not being able to allow that an injury without external lesion generates a cerebral abscess, especially as the injury (in the case above quoted) was not on the head, the anatomical section favoured the following interpretation. Falling on his feet from a great height, the patient received a cerebral contusion in the region of the temporal lobe. To this may be attributed as indirect phenomena the muscular contractions which succeeded the fall. In fact, the circumstance that suppuration had extended to the meninges confirmed this idea, although it is known that chronic abscesses of the brain, when not caused by wounds, are almost always deep and covered with a stratum of nervous substance which divides them from the meninges. Körner has demonstrated that in abscesses due to caries the stratum of the brain which divides the pus from the solid matter is very thin and altered in structure; in this patient, however, there was absolutely no trace of caries of the bone. Nor could the stimulus to suppuration have been from the injury, without external lesion; this stimulus, which changed a cerebral contusion into a chronic abscess, possibly came from acute otitis which had not suppurated. At first sight this hypothesis seems to be an unlikely one, but if we reflect that excellent conditions exist in the ear for the generation of pus, and that the channels of communication between the ear and the brain are many and easy, it is not impossible to comprehend how a suppressed otitis might emit germs which enter the brain and generate a suppurating process. Oedema due to the abscess, acute venous stasis under the strain of evacuation, or perhaps some convulsive attack caused sudden death by the rapid increase of cerebro-spinal fluid and by the great venous stasis and bleeding of the meninges which followed. Such a genesis is so rare that probably my interpretation will seem to many to be not well demonstrated. But I have chosen precisely this case in order to prove how obscure the etiology of abscess on the brain can be even where the common indications of the causes are not absent. It is clear that in a path so obscure it is easy to err in our interpretation; yet the clinical physician is obliged to anticipate, although unprovided with the knowledge which necroscopy furnishes.

I do not say that we can never predict the succession of events which give rise to some of those cerebral abscesses not caused by wounds; indeed, I should like to submit a case in point, which is admirable for its clearness of interpretation. The diagnosis could be made with perfect security. The case was one of a young peasant from Imola aged twenty-one years. He entered the surgical clinic at Bologna on Aug. 17th for an empyema on the left side. He was treated by aspiration and washing out of the pleura. This youth had never presented symptoms of injury to the cerebral functions when on Aug. 25th he was suddenly seized with vertigo and loss of consciousness and fell. He was standing at the time. He did not recover consciousness for half an hour. After another half-hour the attack was renewed, accompanied by convulsions in the upper limbs. Three hours later a third attack supervened, and he remained insensible till the following day. During the succeeding days all seemed to return to its normal state, but on Aug. 30th he was again attacked by convulsions, no more diffused, but limited to the head and right arm. Another attack, yet more serious, seized him the day after; all the right side of the body was shaken by tonic and clonic contractions, the mouth was filled

with froth, and consciousness was again entirely lost. This also passed off, and it was observed that the lower part of the face and the right limbs were paretic. The attack was renewed in the evening of the same day. His speech began to alter on Sept. 2nd and by the evening of the 5th he could no longer articulate, though the epileptoid convulsions did not return. He had at first a slight irregular fever, but this afterwards ceased. From his entry into the clinic on Sept. 14th till the time of his death on Nov. 10th his temperature varied very slightly above or below normal. It would be useless at present to refer to the data obtained by examination of the thorax. I will only remark that, besides the pleurisy, the organs of the chest and abdomen afforded nothing worthy of note. The nervous system presented paralysis of the jaw and absolute paralysis in the upper limbs and incomplete paralysis in the right leg. The passive movements of the arms were limited by a certain resistance of the muscles; whereas the lower limbs were lax, and even voluntary movement of the leg from the thigh and foot from the leg was possible, though weak. Muscular power was diminished also in the left arm. All the reflexes were normal; but those of the periosteum were deficient, as they only existed in the right ulna. Also the different forms of sensibility were perfect, except the muscular sense on the right side, where the patient could not distinguish weights which were quite perceptible to him on the left. The sense of the position of his fingers was also a little obtuse on the right. The special senses were normal. In the course of October, however, the sense of pain was less acute on the right than on the left side; at a later period, on the contrary, it became more acute. There was distinct aphasia. The patient could pronounce some words, but with difficulty. The tongue deviated to the right. He had no convulsive attack till Nov. 1st, when he had one without losing consciousness. It lasted ten minutes, during which all the muscles of the right half of the body displayed clonic jerks. Headache and vomiting followed during the succeeding days. On Nov. 10th, becoming weaker by degrees, the patient had two attacks of insensibility without convulsions. These were followed by a period of comparative lucidity; but in the evening intermittent tetanic spasms seized him, which lasted till 3.30 A.M. of the 11th, when he died. On that day no movement was evident except a certain degree of contraction in the toes. The ultimate loss of consciousness took place four hours previous to his decease. The pulse and respiration presented nothing remarkable, nor did the urine. Not till the evening of Nov. 10th did the temperature rise for the first time in a marked degree, so much so that at the time of death it reached 42.7° C. (108.8° F.). On the cranium being opened the sinuses and meninges showed nothing striking. The left frontal lobe appeared to be more prominent and rounded than the right, and a sense of fluctuation was observable in the elevation of the first and second frontal convolutions on the left. On introducing a syringe into the second convolution there issued about 50 grammes of purulent matter, greenish, dense, and fetid. A transverse section of the brain showed that the cavity of the abscess reached nearly a centimetre above the roof of the left lateral ventricle. This cavity was roofed in by the subcortical layer, and downwards gradually enlarged to almost a centimetre above the level of the corpus callosum. It began in the anterior portion of the frontal lobe and extended through the centrum ovale to beneath the convolutions of the motor area; the shape was that of an ellipse, of which the greatest diameter parallel to the median fissure was 7 cm. long, the smallest diameter being 3 cm. Its greatest depth was in front; the cerebral substance was softened at the back. The parietes of the abscess were formed by a thin stratum of rosy colour, of greater consistence than the white substance, and covered with a greenish-yellow membrane. This membrane was detachable and was of the capacity of a large hen's-egg. There was nothing in the rest of the brain except three or four branching grooves of a vivid red colour in the caudal nucleus on the left, caused by the congested bloodvessels. Senator² and Drummond³ have made similar observations; but the commencements of the cerebral phenomena were not in their cases as marked and serious as in my patient. In this case the sudden, complete, and prolonged loss of consciousness, followed on the same day by unilateral epileptoid attacks, showed that from one moment to another the conditions of

¹ Specielle Diagnose der Inneren Krankheiten, Band II., p. 235. Leipzig, 1893.

² Berliner Klinische Wochenschrift, 1879, No. 4 et seq.

³ THE LANCET, July 2nd, 1887.

the brain were changing, and this could not happen except through disturbance of the circle of Willis. Now in the case of an empyema one is forced to the supposition of an embolus of the left Sylvian artery, because the absence of all paralysis at first and the return of convulsions on one side in a young man aged twenty-one, whose heart and blood-vessels are healthy, peremptorily exclude suspicion of hæmorrhage and thrombus. In the cases of Senator and Drummond, the commencement of the disease being more gradual, the elimination of the hypothesis of a tumour was less absolute than in mine, where the reason for the elimination was evident. The following symptoms served to demonstrate that we were not treating of a mechanical embolus, but of an infective one. The collateral blood-supply must have sufficiently nourished the organ, because the patient passed four days without convulsions, paralysis, or injury to the senses. Consequently the symptoms which supervened showed that there was being developed in the same cerebral region, from the first violently injured by disturbance in the circle, an irritative and destructive process. This must have been excited by some agent from the embolus which, detached from a pulmonary vein, had lodged itself in an artery of the brain. No possible objection could be made to the logic of this physiological interpretation of the morbid phenomena, and hence the clinical diagnosis was quite exact. But how rare this desirable evidence of facts is in practice. More often the chronic abscess remains unsuspected, or we may suspect without being able to prove it; or else an abscess is believed to be where none exists. Every clinic could give proof of this assertion. Here, however, are the proofs which I have to give. I will begin with the history of a case which I observed in 1879, and which I left with the undecided diagnosis of "cerebral tumour or abscess," so old are my opinions on the subject.

The patient was a foundling five years of age. His short life as given by the nurse contains the important fact that between his sixth and eighth month he had five attacks of eclampsia. He suffered from rickets, and developed slowly; but later he appeared to be healthy and intelligent, although he had in the right leg a sinus which had opened two years before he entered the clinic. Besides this, a cicatrix was found in correspondence with the right parietal protuberance, which two years before had been in a state of suppuration. This wound on the head assumed some importance from the fact that the little patient, after being well for three years, once more had convulsions. During their occurrence the boy preserved consciousness and complained of pain and weakness in the left limbs. The attacks were only repeated a few times and then ceased. But not long after he began to suffer from a constant and severe headache; then, in February, 1879, he had fits of sickness, hesitated in his speech, and showed a deviation in the angles of his mouth, accompanied by a flow of saliva. At this juncture he was brought to the clinic. He had scarcely entered when he had a convulsive fit, which I find thus described in the history of the case: "All the muscles of the right side showed clonic contractions, especially the flexors of the limbs; the head was turned to the right, the eyelids half closed, eyes fixed and immovable; pupils dilated and not sensitive to light; pulse 120, respiration 40 to the minute. There was complete insensibility, and no impression could be made on the sensory nerves or special senses. This state of things lasted ten minutes, when the contractions became weaker and ceased; the breathing calmed down, and consciousness began to return. Then the same contractions returned, lasting the same time as at first, but on the left side instead of the right. This ceased and began again on the right. This alternation of convulsions continued for four hours, after which the child became quiet and slept profoundly. The next day, Feb. 9th a slight paresis of the left side was observed. There were bilateral mydriasis of the pupils and internal strabismus in the left eye. Sensibility was normal and intelligence tolerably preserved. There was nothing remarkable in the physical signs of the organs of the thorax and abdomen. The patient had no headache, but he had fever, which proved to be intermittent, with a minimum of 36° C. (96.8° F.) and a maximum of 39.2° C. (102.5° F.), though it was not often so high." Things went on thus till Feb. 23rd. Then an increased tendency to sleep was noticed. On the 27th another convulsive attack ensued, lasting twenty minutes. It is described in the notes as follows: "First of all the cheek flushed very red, then the breath became slower and deeper, the left arm became rigid in flexion, the right arm was affected, but the hand was still flexed. This lasted more than two minutes,

and then clonic contractions began in the left leg, which afterwards extended to the arms and diaphragm. The eyes were fixed; the pupils at first were dilated, later narrowed, and were insensible to light; there was complete unconsciousness." On touching the left limbs one perceived a slight tremor in the tendons. At length only a tremor in the left arm remained, and then complete stupor set in. In this state the temperature of the left temple was 32° C. (90° F.) that of the right being 33° C. (92° F.). The next day extreme and painful irritability of the whole body was noticed, especially on the right side. It was enough to touch the child ever so slightly, and he complained in spite of a partial state of consciousness; indeed, this lapse of sensibility constantly increased till death ensued on the morning of March 4th. All the functions of the nervous system were diminished, but on the eve of death a convulsion of less intensity took place. The respiration maintained its regularity to the last at 18 to 20 the minute. The pulse during the whole period of our observations varied between 120 and 140, except during the last hours, when it became less frequent. The temperature, which had been that of intermittent fever, gradually fell on Feb. 26th to 35.5° C. (95.5° F.), on Feb. 28th to 34.8° C., on March 1st to 34.5° C., on March 2nd to 32° C., and on March 4th to 25.3° C. (78° F.). The urine was normal throughout. It is not known whether the child had ever suffered from a wound on the head, but it is certain that he had a suppurative process in the parietal region, and, his being a boy and a foundling, we may reasonably suppose the origin of this suppuration to have been a fall or an unperceived blow not revealed to the physician. As, moreover, an intracranial process, especially a cerebral one and of the left hemisphere, cannot be doubted, the hypothesis immediately arises of an abscess in the brain caused by a wound. What arguments can be opposed to this judgment? As far as I see, only this—that the chronic process in the left half of the brain might be a tumour. Usually a collection of encapsuled pus of old date, has less expansive power than a neoplasm, hence the compression, which is resented by the tissue of the brain, is less in the abscess than in the neoplasm. It is equally true that usually cerebral abscess is found in the temporal lobe or in the cerebellum, and hence the indications of injured or diminished functions in the corresponding cerebral zone are either less distinct or absent altogether, for the functions of these two zones of the skull are little perceptible, if at all. These differences in the pathological process ought to bring some diversity into the symptoms provoked by them, for it is not the inner nature of the pathological process, but the physical qualities of its products and their seat which constitute their condition and most influence the genesis of the symptoms. An organ so wonderfully intricate and mysterious as the brain might be compared to a keyboard. Every key ought to produce a particular sound, and no other, whether it is pressed on by an abscess or a neoplasm. Hence the sound produced by one or the other may be—and, in fact, is—precisely the same.

Pathology certainly shows that the mechanical process of chronic abscess is frequently so slow and often so partial as to give no special phenomena. Hence there must always be a certain generic difference between the effects of one process and those of the other. But (excuse me if I insist too much on this point) when we come to facts, of what value are general principles? When a chronic abscess assumes great expansive force, and lies outside the temporal lobe and the cerebellum, where do we find arguments to distinguish it from a tumour? And when a tumour has a weak power of expansion or of compression, and is situated in the cerebellum or the temporal lobe, what reason have we to distinguish it from the commonest chronic abscess? The error is almost fatal. It is true that etiology sometimes assists us, for an injury on the head may favour the development of an intracranial neoplasm; we might find otorrhœa in one who has only tubercles in the brain, but a bronchiectasis or an empyema excludes the idea that a glioma or sarcoma is being developed within the cranium. Jansen has seen a patient who suffered from otitis with a chronic cerebral abscess, but this was not caused by the otitis, but by lesions in the thorax. Hitzig saw a man twenty-nine years of age who for sixteen years had suffered from otorrhœa, and had besides received a severe blow on the head, both being causes of abscess. Yet the patient had a cerebral tumour.

There is only one phenomenon of abscess on the brain

which we know to be connected with the nature of that morbid process and does not belong to the neoplasm—viz., fever; but those who affirm that this symptom of cerebral abscess is very frequent or constant, and this I will prove. I now wish to note the inverse facts, which consist of the existence of fever without the abscess. It happened thus in the little boy of whose case I have still to give the anatomical results. He had an intermittent pyrexia, which was an argument in favour of abscess and not of tumour. Instead, this is what we found: considerable internal hydrocephalus and abundant gelatinous exudation over the cerebellum, the pons, and the chiasm of the optic nerves. In the Sylvian fissures, along the vessels, were several minute grey granules (tubercles). The right hemisphere of the brain seemed to be larger and more consistent than the left. Incision revealed a neoplasm the size of a pigeon's egg, spherical in form, yellowish in colour, fibrous, and of homogeneous aspect. It was situated beneath, outside, and rather behind the optic thalamus, precisely over the inferior horn of the right ventricle, which, from the pressure of the tumour, was reduced in the centre to a mere narrow canal. The histological examination demonstrated that it was a sarcoma. There was nothing remarkable in the rest of the body except the mesenteric glands, which were swollen, hard, and yellow. A very few yellowish nodules were found in the right lung. It was then easy to reconstruct the facts. All the old phenomena and many recent ones depended on the sarcoma; but the principal indications (such as peripheral paralysis of the cranial nerves, slackening of the pulse, and coexistence of tubercles in other parts of the body) being absent, it was impossible to foresee its existence, because vomiting, headache, and coma seemed to be nothing more than an increase of the preceding disease, while fever could only be connected with the pre-existing endocranial process, and, therefore, the diagnosis would point towards abscess and against tumour.

In the same year (1879) there also entered the clinic a lad aged fourteen years. His father had died from tuberculosis; his mother still lived, but she had lost three children in infancy, and only this one remained. Her health was not good; for some years a feverishness, cough, and sanguineous expectoration had given cause to fear that she suffered from the same disease from which her husband died. At four years of age the boy had suffered from typhoid fever, to which was added a purulent discharge from one ear. This discharge was not continuous, but had with intervals lasted till his sixth year. Since then it had never returned, so that his mother had forgotten on which side it was. Excepting this, the patient had never had any other illness beyond a few headaches and bleeding at the nose which from time to time troubled him, especially of late. Fifteen days before he came to us the headache was renewed, and this time, besides being more intense, it did not cease as at other times; in fact, it increased in violence and was accompanied with sickness, intolerance of light, and noises in the ears. It was the first time that need was felt of medical aid, but the treatment which was advised did not prevent the boy from constantly growing worse. The least noise worried him; the headache, sickness, vertigo, and obstinate constipation made such an impression on the mother that she decided to place her son in a hospital. We found him to be a weak-looking lad, with ill-developed bones and muscles, and with every sign of anæmia. He had a suffering aspect and strained eyes. Inspection and sounding and tapping on the skull revealed nothing, nor did the examination of the external organs of hearing. The abdomen was retracted, and the trapezius, sterno-mastoid and pectoral muscles had a slight tonic contraction. Pain was felt on pressure of the back of the neck. The tongue deviated slightly to the right. The phenomenon of the *tache meningitique* was clearly perceived; there was nothing else abnormal in the nervous system. The physical examination brought to light the existence of a pulmonary consolidation in both apices, but without augmentation of bronchial secretions. The patient entered the clinic on Nov. 6th. In the subsequent days it was noted that the boy, although intelligent and possessed of memory and speech, was apathetic, could not sleep, and was troubled by light or the slightest noise. The sickness and contractions of the same muscles continued. Ophthalmic examination revealed a slight double neuro-retinitis. All the cutaneous surfaces became hyperæsthetic and were covered by transient red marks. Although well covered, the patient was very cold. The apathy increased, and by Nov. 9th he passed his evacuations in bed without calling the nurse. All the flexor

muscles of the limbs were a little contracted; the right pupil was less sensitive to light than the left; and the lower part of the face showed less power of movement. The pulse, respiration, and temperature had been normal till now, but on the evening of the 10th the temperature was 38.6° C. (100.50° F.), the pulse 120, and the respiration 30. A falling of the left upper eyelid was also observed. During the following days the patient emitted a continuous moaning cry. The outward movements of the right eyeball were very limited. The head was rigidly retracted. The breathing was irregular, and the temperature then rose above 40° C. (104° F.), but even this was irregular. The pulse, on the contrary, remained regular to the last. Thus, growing worse without any other noticeable symptoms, the patient died on the morning of Nov. 4th. He was the only surviving son of a father who had died from tuberculosis and a mother probably phthisical, and it appears that, with the apices of the lungs consolidated, he must have died from tuberculous meningitis. The paralysis of the facial and of the right abductor branch of the motor oculi nerve and of the hypoglossus, though not intense, pointed to a basal process. The headache, final fever, irregular breathing, and continuous moan, the falling in of the abdomen, the meningitic *tache*, and the rigidity and pain in the nape of the neck—would have all aided the physician if he had chosen to make a diagnosis of tuberculous meningitis; instead of which no tubercles were found even in the lungs, which only showed a chronic process of interstitial fibrosis, especially on the right. On opening the skull the dura mater was found to be swollen and opaque everywhere, and all the meninges were much congested. On the base of the cranium was a gelatinous yellowish exudation of recent date, with no trace of tubercles in any part. All the ventricles were much dilated. Pus was seen issuing from the Sylvian fissure, and was found to proceed from an abscess caused by meningitis. The report is as follows: "The left centrum ovale displays a distinct and diffused white softening; also the anterior two-thirds of the corpus striatum are softened; the posterior third is gone, and is replaced by a collection of dense greenish pus which occupies the anterior horn of the lateral ventricle on the left, and, extending by irregular ways towards the base of the brain, enters the orbital convolution and the fissure of the Sylvian artery. The cavity is lined by a thick, hard, pseudo-membrane, which, however, is wanting in the inferior extensions. The opened skull and dissected brain would seem to indicate that the otorrhœa had determined the abscess to the centrum ovale, the abscess having thus remained latent for many years without injuring the intellectual development of the boy, and perhaps manifesting its noxious action by anæmia and weakness of the organism. After many years of quiescence, without any known cause, pus commenced to make its way towards the base, basilar meningitis ensued, and with it all came the final scene. That the process had been in existence a long time was proved by the chronic hyperplastic pachymeningitis and the thick point of origin of the abscess—although, according to Köner's observations, no abscess from otitis could ever have lasted more than a year and a half. But would it have been possible to foresee everything? There had been a suspicion of otorrhœa, but it had entirely ceased for the space of eight years. If this etiological criterion led to the idea of an abscess, why did the tuberculosis of the father and mother and the death of all his brothers not lead to the diagnosis of basal tubercular meningitis?"

The light furnished by these etiological deductions seems to fail us as soon as we apply it to a solid fact. Thus, one who falls upon his feet or his thigh, but who receives no blow or injury to the head, cannot be supposed to be affected with cerebral abscess; yet, nevertheless, he may die from it; while one who shows traces of a suppuration of the tissues which surround the bones of the cranium would lead to the belief that he was suffering from an intracranial abscess, and yet may die instead from sarcoma and encephalic tuberculosis; and, again, one who for eight years has recovered from otorrhœa, and who seems destined to die from tuberculosis, succumbs to suppuration of the brain. Sometimes the necroscopic examination of these patients offers a real surprise. Fortunately, the latency is seldom complete, or, at any rate, ceases to be so after a certain time. The physician can then hazard a suspicion. He must know that a chronic abscess, as the account of the case just related shows, may present the symptoms of a basal tubercular meningitis, but often proves to be the contrary. No diagnosis, however thorough, is enough to distinguish in

some cases between these two processes, which nevertheless, both in nature and position, differ so widely. As a rule the clinical student must remember that the chronic abscess, of itself, has few or no morbid manifestations; but that it shows them in certain developments, such as meningitis, the penetration of pus into the healthy brain tissue, the breaking of the abscess into the ventricles or under the meninges, extensive softening, &c.; but in the case of meningitis preceded by some sign which denotes the chronic abscess, as happened in the last-mentioned case, the diagnosis of the abscess may be made, as we made it, although the final symptoms may be precisely those of basal meningitis. Sometimes, however, the contrary occurs—that is to say, a tubercular meningitis resembles the abscess so much as to prevent any other conclusion. I know that the pointing out of a difficulty is not so good as showing the way to overcome it; yet it is undeniable that the more we admit the possibility of a diagnostic error, the more keen we become to avoid it.

(To be continued.)

AN ABSTRACT OF

A Lecture

ON

THE CONDITIONS OF CURE IN CANCER, WITH ILLUSTRATIVE CASES.

Delivered at the Cancer Hospital, Brompton, on Feb. 23rd, 1894,

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[THE lecturer began by quoting, as an example of the ideas current even among the more educated classes upon the above topic, a phrase recently uttered at a public function by an eminent bishop of the Established Church: "Every-one knows that who once has cancer always has cancer." Pointing out that the popular sense of this word as synonymous with "malignant disease" coincided with the only plausible scientific theory which accounted for all the phenomena—viz., that of autositic cell reversion—he stated that the operating surgeon of the present day really claimed the power of permanently eradicating the various lesions known as "malignant," provided only that certain easily fulfilled conditions were placed within his grasp; and that when he failed, the causes of ill-success were now clearly understood in a manner impossible to the practitioners of the preceding generations. He showed that cancerous disease nearly always produces death by reason of the auto-infective qualities acquired by its cell elements and their mechanical transmission to distant parts; then discussed the obstacles to surgical cure presented by the different species in the ascending scale of complexity, beginning with rodent ulcer and ending with that form most closely identified with the popular conceptions of "cancer"—viz., carcinoma of the female breast. He continued as follows:]

Rodent cancer or Rodent Ulcer is the "least cancerous of cancers," as showing in its tardiest and mildest degree the "progressive tendency to death," and as being totally devoid of auto-infective phenomena in the shape of metastatic deposits. Though sometimes loosely used, the term correctly denotes only cancer of the short hair follicles, which is generally found in or near the lower eyelid, microscopically consisting in an aberrant reproduction of hair-follicle structure. As there are no secondary offshoots, the lesion is readily extirpated by knife or caustic within the first eighteen months or two years of inception. [The case of an officer thus operated on in 1885, and dying at the age of ninety-six in 1893 without recurrence, was here referred to.] At a later stage cure is impeded by the proximity of numerous bony structures covered by periosteum, a tissue speedily prone to malignant infiltration of any kind. Next ranks Epithelioma, the cancer of the epithelial cells, coating, skin, or mucous membrane, clinically differentiated from Carcinoma, the cancer of secreting

glands, by the important point that the metastatic particles are arrested by the adjacent lymph glands and only very rarely reach the bloodstream. Hence radical extirpation is effected by the removal of all the dangerous glands near simultaneously with that of the primary lesion, provided that this removal takes place before the relatively late stage of enlargement. For practical purposes three stages of growth in secondarily implicated lymph glands must be insisted on: (1) one of insidious deposit not recognisable by any symptom; (2) one of tenderness on pressure without enlargement; (3) one of increase in bulk. Each of these occupies at least a fortnight, often more. The track of infection along lymph glands is always definite and susceptible of accurate prediction; the fact of infection having taken place must always be assumed after the lapse of a certain time, varying with the site. To wait till glands enlarge before proceeding to their excision is usually to sacrifice the patient's life, as by that time still more distant organs of the lymphatic system will have reached the preceding stages. Thus, in epithelioma of the Lips the "infection path" lies through the submaxillary lymph glands situated at the anterior edge of the salivary gland similarly named; and on an average, secondary deposit takes place here within six months, frequently sooner. Hence it is rarely permissible to extirpate a labial cancer without synchronous dissection out of these latter, whether enlarged or not. The 38 per cent. of cures ascribed by a popular author, on the faith of German statistics, to a simple V-incision without attention to these glands is, in my opinion, vitiated by the obvious inclusion of non-malignant cases in the figures cited. On the other hand, in the Tongue the infection extends with far greater rapidity, always within six weeks, often in half that time. The dangerous glands are also the submaxillary in cancer of the anterior two-thirds: in cancer of the posterior regions, the cervical, just behind the angle of the lower jaw. The following cases exemplify the principles of treatment; it is not thought necessary to cite any affecting the lips or integument.

CASE 1. *Epithelioma of the tongue.*—A woman aged sixty years had an ulcer of four months' duration situated far back on the right edge of the tongue and having indurated edges; also lancinating pain shooting into the ear for several weeks together, with slight enlargement and tenderness of the right submaxillary lymph glands. Wide excision of the sore, leaving the bulk of the tongue intact, was done with the thermo-cautery, the glands being dissected out by submental incision. The operation was performed in April, 1886, and the patient was in good health (no recurrence) in January, 1890, when last heard from.

CASE 2. *Epithelioma of the tongue.*—A man forty-six years of age was admitted into the Cancer Hospital, Brompton, with a typical cancerous sore one inch from the tip of the tongue on the right side, which had been present for three months. It had an excavated base, with livid, hard, everted edges, and there was darting pain. Half the tongue was excised, with the corresponding glands in the pre-enlargement stage; the microscope revealed the characteristic features of epithelioma. This was done in June, 1886; the man was not seen again till March, 1891, on which occasion he reappeared on account of an attack of eczema; he was otherwise free from disease.

CASE 3. *Epithelioma of the tongue.*—A man sixty-five years of age had a prominent fungating livid sore half an inch in diameter situated at the posterior margin of the left half of the tongue. It had existed two and a half months; there was neuralgic pain darting up to the ear; no gland enlargement was present, but there was slight tenderness at a spot below the left angle of the jaw. The entire organ was removed, together with the glands at the site indicated. Under the microscope the usual globes *épidermiques* &c. were seen. The operation was performed in April, 1891; there has been no sign of recurrence up to the present time (January, 1895).

CASE 4. *Epithelioma in the floor of the mouth.*—A man forty-four years of age had suffered from a slight ulceration of the frænum for one year caused by a fish bone; he had felt pain for eight weeks only. The sore was very vascular, with indurated base and edges at this spot, involving the gum. On the right there was a cluster of enlarged glands the size of beans; those on the left side were tender, just beginning the enlargement stage. The tongue being threaded and held out of the way, the diseased part was freely excised by the thermo-cautery, the periosteum of the lower gum

being well cauterised at the same time, and the glands on both sides dissected out. This was in October, 1892. In February, 1893, a gland the size of a horse-bean, at the edge of the mylo-hyoids in the middle line, was removed. There has been no recurrence (December, 1894).

In the rectum and uterus operative surgery can, of course, deal only with the primary lesion. Malignant disease of the former organ (Cylindroma) fortunately develops slowly and seldom infects lymph glands or liver for a twelvemonth from inception. Hence free excision within that period should suffice. The patient whose case has been cited,¹ and which was one of special difficulty, still remains in the best of health; here a bleeding pulpy mass, of from one to two years' duration, projected into the gut from a part of the anterior wall so high that its uppermost limit could be touched only under anesthesia; the age at the date of the operation (May, 1890) was seventy-five years. This illustrates a general rule that malignant tumours growing without hindrance from a free surface are less prone to infect the glands than those bound down by dense fibrous tissue, such as the familiar breast scirrhus. Cancer of the uterine cervix (usually carcinoma, less often epithelioma) must be dealt with within eight weeks; otherwise recurrence will quickly ensue by way of the lymphatic plexus in the vaginal submucosa. Supra-vaginal amputation is the treatment; as the disease to the last often advances no higher than the internal os, and as the "infection path" lies in the direction indicated, hysterectomy should be reserved for late cases, and for disease within the uterine cavity. In that of rapidly recurring carcinoma, high up in the cervical canal, diagnosed within six weeks, and extirpated by escharotics,² the patient still remains well. The date of operation was July, 1883.

With malignant developments of the connective tissues (true sarcoma) a distinct series of clinical phenomena is encountered. There is here no infection of adjoining glands, per the lymphatics; if any such not in contact with the tumour are found diseased this is a sign of diffusion by the blood, and is associated with metastases also in the viscera. To eradicate, removal must therefore take place before cell particles have passed into the blood current. Sarcomata of the long bones should be treated by amputation at the proximal articulation; in consequence of the receptive qualities of their marrow, and its intimate association with the circulation current, the operative surgery thereof, which has hitherto generally neglected this precaution, offers far less favourable results than of the short or flat bones. Within the mamma and elsewhere connective tissue growths are commonly intra-cystic or encapsuled, a fact which tends greatly to delay the advent of blood infection.

CASE 5. Recurrent spindle-celled sarcoma of the lower jaw.—A man fifty-one years of age appeared at the Cancer Hospital, Brompton, with the body of the lower jaw at the symphysis greatly thickened by a hard nodular mass projecting inwards under the tongue, and where free of the bone, about one inch in diameter, filling all the front part of the floor of the mouth. The glands on both sides were infiltrated by contiguity and blended with the preceding. A previous operation had taken place three months since. Free removal of the tumour with two-thirds of the bone was effected in November, 1886. The microscopic appearances were as above. No recurrence had taken place in July, 1893, when the patient was last seen.

CASE 6. Spindle-sarcoma of mamma recurrent after two previous operations; cure.—An unmarried woman fifty-three years of age was admitted into the Cancer Hospital, Brompton, on Oct. 10th, 1884. Her medical attendant had previously performed two operations on the right breast, the site of which was occupied by a large scar. Under this there was a prominent tumour as large as a child's head, together with several round bosses, two of which fluctuated, one being of stony hardness. The total duration of the disease was six years, but there was now rapid increase, a dull aching pain present daily becoming more severe. Excision was performed, the axilla being untouched. A mass of cysts was removed, containing abundant embryonic tissue microscopically identical with that of an ordinary spindle-celled sarcoma. In December, 1893, the patient was in good health, and there had been no return.

CASE 7. Spindle sarcoma of the breast.—A married woman fifty-six years of age, with ten children, was admitted into the Cancer Hospital, Brompton, on Nov. 29th, 1886. A hard,

solid tumour the size of a hen's egg was deeply situated in the right breast; there was no glandular enlargement. The patient stated that the duration was five weeks; she had done much hard work, lifting weights, &c. On removal the growth was microscopically shown to be a spindle-sarcoma; the axilla was untouched. No recurrence had taken place up to December, 1893.

CASE 8. Cystic spindle-sarcoma of the breast.—A married woman fifty years of age, with eight children, was admitted to the Cancer Hospital, Brompton, on May 31st, 1886. The patient had a tumour as large as a walnut at the root of the right nipple; this retracted, and there was induration around it; occasional lancinating pain with sensation of heat was experienced; there were no enlarged glands. On removal it was found to be a cyst containing dark-brown fluid with cholesterol crystals; part of the wall was extremely hard and nodular; under the microscope it consisted of embryonic spindle-celled tissue (sarcoma). The patient was well and without further trouble when seen on Dec. 22nd, 1893.

Space permits no more than a passing reference to the less prevalent cancer-species. Of one, however, Melanotic cancer of the skin, it is necessary to remark that, this being now shown to be a product of the Malpighian pigmented epithelium, "anticipatory" removal of the neighbouring lymph glands is demanded exactly as in ordinary epithelioma. We have next to consider that local malady which is most answerable for the quotation cited in the opening sentence, and which for generations has most strongly coloured the universal conceptions of "cancer." Carcinoma of the mamma furnishes all those obstacles to surgical eradication which we meet with in carcinomatous or analogous lesions elsewhere, with one of very grave significance peculiar to itself—viz., *insidious marrow infection*. The disease invariably begins in a minute tissue area, in a single acinus—it may be, in a single cell—following always the operation of some definite exciting cause. In 11.5 per cent. this is mechanical violence; a blow often serves to indicate the precise date of inception. In the remaining 88.5 per cent. mental trouble is the most potent excitant, producing aberrations in the normal devolution of the organ, carcinoma being only one of several lesions due to interference with this process. The mamma undergoes *evolution* between the ages of fourteen and twenty-five; for the next ten years temporary *involution* ensues upon pregnancy, a process of development followed by a resting stage, which is copied in slighter degree by the phenomena of each menstrual period.³ The *devolution* or stage of permanent degeneracy commences about the age of thirty-five, and is the epoch affected by carcinoma almost exclusively. Infection of the lymph glands in the adjacent axilla by the last-named takes place early; it is rarely delayed beyond eight weeks, occasional exceptions being presented by—(1) scirrhus growths within the dense fibrous structures of the nipple, which are exceptionally chronic; (2) "atrophic" cases in withered mamma; (3) carcinomata at the sternal border, which tend first to infect the thymus by lymphatics perforating the chest wall. When enlargement of the axillary glands takes place the normal lymph-current is unable to pursue its ordinary course, and regurgitation takes place in abnormal directions. Thus particles pass, on the one hand, into the marrow of the adjoining humerus (normally this bone is the earliest affected in the majority of instances), and, on the other hand, into the residual thymus, thus producing the condition denominated the "sternal symptom," a progressive prominence of that bone between the second costo-sternal articulations, the most unmistakable evidence of marrow deposit. Implication of the marrow takes place simultaneously with palpable enlargement of the axillary glands, which, as has been pointed out, is a relatively late stage of cell growth therein. Its occurrence must therefore be assumed in every average case of more than eight to twelve weeks' duration, those "atrophic" growths which permit life for from twenty to thirty years constituting an exception. Marrow infection has been shown to occur in at least eight out of every ten instances of mammary scirrhus; it necessarily leads eventually to the passage of cell-particles into the circulation, with metastases in the viscera. After excision of the mamma at a later period than eight to twelve weeks the symptoms become manifest after a variable period of years, rarely exceeding five. In order to surgically eradicate

¹ Brit. Med. Jour., Oct. 11th, 1890.

² Transactions of the Medical Society of London, vol. viii., p. 304.

³ See remarks on this point in the Proclivity of Women to Cancer.

a carcinomatous breast, therefore, an operation must take place within six to twelve weeks of inception, prior to lymph gland enlargement, and before the possible advent of marrow infection. And not only must the tissues be very freely removed, with careful consideration of the exigencies in each individual case, but the axilla at the same time carefully cleared before the lymph glands have had time to enlarge. The old-fashioned text-book operation by two oval incisions passing close to the palpable lesion is necessarily followed by "recurrence" in the cicatrix within a few weeks or months at the outside; the modern methods of procedure rarely fail to secure absence of visible deposit for at least two years, even in what must be considered advanced cases of more than a twelvemonth's duration, complete success being then precluded by the previously established marrow condition. The following instances exemplify the conditions both of success and of relative failure.

CASE 9. *Breast scirrhus excised in February 1887; no recurrence.*—A married woman forty-two years of age, with four children, had a hard "lump" above the right nipple in the breast tissue; the duration was stated to be five weeks. There were intermittent burning sensations; in the axilla tenderness was felt on pressure, but no enlargement; no marrow symptoms were present. Operation was advised on Dec. 20th, 1886, but the patient refused until Feb. 27th, 1887. Free removal of the breast parenchyma, together with the contents of the axilla, was performed; under the microscope the growth exhibited the ordinary phenomena of early carcinoma. The patient has had no reappearance; she was last heard of in good health and with no marrow symptoms in December, 1893.

CASE 10. *Scirrhus excised in May, 1880; no recurrence.*—A married woman fifty-six years of age, with no children, was admitted into the Cancer Hospital, Brompton, on May 21st, 1880. A hard scirrhous "kernel" as large as a walnut was present in the sternal half of the right breast. She stated the duration to be two months. A gland in the axilla was slightly enlarged. There was occasional lancinating pain; no marrow symptoms existed. Excision was performed, with careful dissection of a wide margin of the seemingly healthy tissue around the breast tumour and evacuation of the axilla. The disease on section proved to be a typical carcinoma. The patient came again on July 11th, 1892, for a small ulcer on the gums; there had been no recurrence of cancer in any shape.

CASE 11. *Breast scirrhus excised in October, 1885; two recurrences; subsequent immunity.*—A married woman aged forty-five years, with one child, was admitted to the Cancer Hospital, Brompton, on Oct. 18th, 1885, with nodulated tumour ("hazel nut") deeply situated in a gland tissue at the upper part of the right breast; a gland as large as a horse-bean in the corresponding axilla. She stated the duration to be one year. On removal the microscope revealed a typical acinar carcinoma-structure, with the remarkable and probably unique addition of abundant myeloid corpuscles. In February, 1887, the patient was readmitted to hospital for the excision of a recurrent nodule at the inner end of the scar, with another gland in the axilla. Again, in October of the same year, two deposits as large as beans were dissected out of the pectoralis fibres. All these latter presented the same curious microscopic features as the primary lesion. The patient experienced no further trouble, and was last seen on May 21st, 1894, in good health and without any trace of cancer. From the previous rapidity of the reappearances and the long subsequent immunity, the permanence of the latter may reasonably be inferred.

CASE 12. *Encephaloid carcinoma of the breast; immunity for four and a half years; death from another cause, with no trace of disease at necropsy.*—A married woman aged fifty-two years, with fifteen children, was seen on Feb. 22nd, 1886. The left nipple was retracted. At its root there was a movable tumour, rapidly growing, the size of a small orange, of stated duration seven months. There was slight enlargement of the axillary glands. On removal the appearances were as above. Death took place in August, 1890, and was ascribed to gall-stones. A necropsy was made (in the provinces) by two medical practitioners, who "could detect no trace of cancer." In this and the case following, which were not personally observed until their termination, it is not, however, possible to be certain that marrow deposit was absent.

CASE 13. *Breast scirrhus excised in July, 1888; death from tubercle in 1891.*—A married woman fifty-three years of age, with six children, had to the inner side of the left breast a movable solid tumour ("walnut"); a gland the size of a

bean was in the axilla. There was continuous aching with occasional lancinating pain; she stated that its duration was ten weeks and consecutive to a blow at that period. After excision it proved to be a typical scirrhus. The patient was discharged well on Aug. 24th, and has not been seen subsequently. According to her relatives she died on Feb. 14th, 1891, from "rapid consumption, as shown by the doctor's certificate; she had no symptom whatever of the return of the cancer."

CASE 14. *Breast carcinoma excised; symptoms of marrow infection delayed until ten years afterwards; good health with no palpable cancer deposit fifteen years and a half after operation.*—A married woman fifty-one years of age was admitted into the Cancer Hospital, Brompton, on Oct. 17th, 1879. At the outer aspect of the left breast there was a hard, movable scirrhus as big as an orange, and in the axilla a gland the size of a large bean. She stated the duration to be six months, and attributed it to ill-usage by her drunken husband. After excision of the breast and axillary contents no complaint was made of any bad symptom until February, 1889. Then the lumbar and scapular gnawing "rheumatic" pains pointing to marrow deposit were first mentioned; no deposit in any other tissue was to be found on close examination. The patient (from a distant provincial town) was not seen again until Aug. 3rd, 1891, when a new scar was visible near the axillary end of the old one; and she stated that a "lump" had been removed at the local infirmary a year previously. The note in my out-patient book at this date runs: "Cicatrix healthy; no tumour or gland enlargement anywhere. The 'sternal prominence' very conspicuous; aching pains down left arm, through left scapula, and across front of chest; tenderness on pressure at two points on left scapula just above angle." The patient attended again on Jan. 7th, 1895. She is a florid, robust-looking woman, with a marked protuberance of almost the entire sternum, and complained of aching soreness in that region, but otherwise she was free from any trace of cancerous disease. The long delay in appearance of marrow symptoms here is unprecedented in my experience. The two cases following exhibit the average rule.

CASE 15. *Excision of breast scirrhus; marrow infection not apparent till five years subsequently, followed by nodular deposits.*—A married woman forty years of age, with six children, was admitted into the Cancer Hospital, Brompton, on June 13th, 1887. To the outer side of the left nipple there was a hard scirrhous kernel the size of a walnut and freely movable, and in the axilla a gland as large as a bean. The stated duration was three months, but the real duration, as inferred from the physical condition, was probably from six to twelve months. No marrow symptoms were present. After the usual operation nothing wrong was observed until Dec. 2nd, 1892; then the "sternal symptom" made its appearance, and slowly increased to the ordinary stationary point. A year later (Dec. 4th, 1893) two nodules, each as large as a pin's head, were detected close to the sternum, rather deeply situated in the second intercostal space. On Jan. 1st, 1894, a third minute speck was found in the middle line, with a lymph gland as large as a hazel nut in the right axilla. Excision of all these was performed, and the patient was discharged well. The scar left by operation on the left breast and axilla has remained throughout perfectly sound, and the general health is fairly good. (Now, Jan. 1895, the patient is breaking down.)

CASE 16. *Removal of advanced breast carcinoma; no recurrence in situ, but death seven years subsequently from bone lesions.*—A married woman sixty-one years of age, with six children, was admitted to hospital in July, 1886, for very hard, round scirrhus an inch and a half in diameter at the upper part of the right breast. The stated duration was three months; the real duration was evidently much longer, apparently one or two years.⁴ The disease was of specially chronic appearance; the glands were tender, but not appreciably enlarged; there were no marrow phenomena. The patient was a thin, worn, woman with a disorganised eyeball, which was simultaneously removed with the breast and axillary contents. She was in good health in March and November, 1889, but was then lost sight of until June 19th, 1893, when she reappeared with a cluster of diseased glands in the left axilla, the right remaining perfectly free and the cicatrix healthy. There was a small, livid nodule under the skin covering the xiphoid cartilage.

⁴ Women almost invariably understate the period, the margin of conscious suppression varying from six weeks to two years.

The most noteworthy physical sign was afforded by the sternum, which constituted almost a tumour, the whole bone projecting prominently forwards and being greatly thickened. In July paraplegia supervened, signifying deposit within the vertebrae, and death took place in September, 1893.⁵

CASE 17. *Excision of advanced breast scirrhus; marrow symptoms three years later; no palpable recurrence four years after operation.*—A woman fifty-four years of age had the left breast excised for a chronic scirrhus tumour, of at least eighteen months' duration, in January, 1881, with enlarged glands in the axilla. The health remained good till March 14th, 1884; then first appeared the "sternal prominence," with some dyspnoea and dry cough. In February, 1885, deposit was also found in both axillae, but the patient was still able to do her work as a domestic servant. The scar left by the breast amputation was healthy. There was no subsequent attendance.

CASE 18. *Excision of advanced mammary carcinoma; marrow infection after two years; spontaneous fracture of sternum and tumour formation.*—A married woman fifty-two years of age had the left breast &c. excised in August, 1886. A mass of encephaloid carcinoma as large as an orange occupied the whole area; its stated duration was six months, but a blow one year previously more accurately fixed the inception. The glands were necessarily implicated. No note was made of the marrow condition, the routine occurrence of marrow infection in these cases not having been discovered until 1890. The patient was in good health subsequently until November, 1887; then, after turning in bed, she felt a sudden snap at the upper part of the sternum; she again attended the hospital as an out-patient, when marked thickening of the bone was the only lesion found. On July 23rd, 1888, a livid prominent boss as large as a child's head protruded from the spot indicated. The scar was healthy; there was no sign of axillary or of visceral deposit.⁶

CASE 19. *Ulcerated breast scirrhus of long standing; excision in March, 1892; immunity save for marrow infection to present time.*—A widow sixty-four years of age, stout, applied in August, 1888, with a cyst of twenty years' duration at the root of the left nipple. For the previous eighteen months there had been induration around this and lancinating pain (denoting carcinoma development). Operation was urged, but was declined till four years later (August, 1892); then the nipple was eroded (in its place being a scirrhus ulcer one inch in diameter), there was deep infiltration of the gland tissue at its base, together with deposit in the axilla. The "sternal prominence," as usual in stout patients, was well marked. There has been no recurrence to the present time (Jan., 1895); the woman is in good health and unconscious of any ailment.

CASE 20. *Advanced encephaloid carcinoma excised three years; no recurrence to present date.*—A married woman forty-three years of age, very stout, with large mammae, had in the right breast a movable roundish mass the size of a pigeon's egg; it had been noticed for six months. There were also slight gland enlargement and intermittent darting pain, but no marrow symptoms. Excision was performed in October, 1891, when it was found to be a soft grey carcinoma; there were deposits in several axillary glands, the largest as big as a damson; their size had previously been obscured by the abundant fat. The patient still attends every two months as out-patient, but is without visible disease and is in excellent general health.

CASE 21. *Advanced scirrhus excised two years; no recurrence to present time, but progressive marrow infection.*—A widow sixty-five years of age, with one child, when seen had in the left breast induration and retraction of the nipple, which had been noticed for eight months; probably they were of much longer duration. Slight enlargement and tenderness of the axillary glands were present; the "sternal prominence" was very marked. An operation was performed in November, 1890. To present date the scar is healthy, and there is no trace of recurrent deposit other than of that in the marrow. The patient now begins to complain of severe aching, with sensation of pressure at the spot in question on the sternum; she also complains of rheumatic pains in both scapulae, down the left arm, &c.

⁵ Photographs of the sternum in this and in the case preceding were exhibited at the Nottingham meeting of the British Medical Association in 1892.

⁶ The "sternal prominence" proceeds to actual tumour development in not more than 2 per cent. of the total cases. For original description of these insidious marrow lesions, and their recognition as of routine occurrence, see THE LANCET, March 7th and 14th, 1891; Brit. Med. Jour., vol. i. 1892.

Note.—Continuous opium treatment commencing immediately after convalescence is strictly enjoined upon all my breast-excision cases in which any suspicion of antecedent marrow infection exists, and accounts for the prolonged immunity of some of the preceding cases. It is often, however, difficult to ensure in hospital patients living at considerable distances.

THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD.

By SIR GEORGE JOHNSON, M.D., F.R.S.,

EMERITUS PROFESSOR OF CLINICAL MEDICINE AND CONSULTING PHYSICIAN TO KING'S COLLEGE HOSPITAL; PHYSICIAN EXTRAORDINARY TO HER MAJESTY THE QUEEN.

WHETHER a trace of sugar exists in normal urine is a question of interest to chemists and physiologists, but one of no practical importance. For the clinical observer the presence or absence of glycosuria may be decided in about two minutes by the following simple test. A drachm of urine—or, what is nearly the same amount, 4 c.c.—is placed in a test tube about half an inch in diameter, and to this is added an equal volume of a saturated aqueous solution of picric acid, and half the volume—that is, half a drachm, or 2 c.c.—of liquor potassæ (P.B.).¹ An orange-red colour instantly appears as a result of the incipient reducing action of kreatinine upon picric acid at the ordinary temperature. The colour is deepened by boiling, and if after the liquid has been kept at the boiling point for about a minute a bright red colour appears through the test-tube when held up to the light, the urine for clinical purposes, may be confidently pronounced free from sugar. If an aqueous solution of glucose, in the proportion of not more than two grains to the ounce, be tested in the manner described, the liquid will be rendered so dark that no light is visible through the full diameter of the tube. I confidently assert that, for clinical and life assurance purposes, no other method of testing for glycosuria equals this for the ease and rapidity with which it may be conducted and for the absolute trustworthiness of the result. The presence of sugar having been thus ascertained, the quantitative determination may be speedily and accurately effected by means of the picrosaccharometer. The method of using the saccharometer is described in an appendix to this communication. Since the publication of my paper on Some Common Sources of Error in Testing for Sugar in the Urine,² and the correspondence to which it gave rise, I have obtained additional, and I believe conclusive, evidence that no trace of sugar is to be found in normal urine. The nature of this evidence I now propose to submit to the readers of THE LANCET. It will be remembered that in the paper referred to I attached great importance to my son George Stillingfleet Johnson's discovery that by the action of mercuric chloride the kreatinine, which is a constant constituent of the urine, is precipitated, in combination with mercury, as a definite chemical compound, from which, the kreatinine having been separated in a crystalline form, its ultimate composition and its reducing action upon cupric oxide and picric acid have been accurately determined.³ The kreatinine having thus been separated from the urine, it is found that the filtrate exerts no reducing action upon either the copper or the picric acid test. In other words, there is found no trace of sugar. The picric acid test would detect one-hundredth part. of glucose if so small an amount were present, and that any sugar which might be present is not removed by the mercuric chloride process is proved by the fact that when a known weight of glucose is added to the urine it is found undiminished after the separation of the kreatinine. That by avoiding the application of heat and destructive chemical agents my son has succeeded in separating unchanged the natural kreatinine of the urine, and that this is the sole agent in normal urine which exerts a reducing action

¹ See a letter by the writer on the Value of Picric Acid as a Test, in THE LANCET of Jan. 23rd, 1894.

² THE LANCET, July 7th, 1894.

³ The details of this investigation are published in the forty-third volume of the Proceedings of the Royal Society, and more briefly in the sixty-third volume of the Transactions of the Royal Medical and Chirurgical Society.

upon picric acid,⁴ is proved by the fact that when the amount of picric acid reduction by urine has been accurately determined the corresponding indicated amount of Stillingfleet Johnson's kreatinine in aqueous solution is found to give precisely the same degree of picric acid reduction colour as the urine, when the liquids are undiluted, and in different stages of dilution until the amount of kreatinine is no more than one grain by weight in 200,000 minims of liquid, the comparison being made with a pale yellow solution of picrate of potash. To obtain the complete reduction of picric acid by an aqueous solution of kreatinine containing about a grain to the ounce, more potash is required than in testing normal urine. The amount of liquor potassæ (P.B.) must be one and a half drachms instead of half a drachm, and the liquid should be boiled for ninety seconds. The kreatinine in the urine appears to be associated with some substance which enables it to exert its full reducing action in the presence of a smaller amount of potash than is necessary when uncombined kreatinine is dissolved in water. In testing largely diluted solutions of kreatinine the usual half-drachm of liquor potassæ is sufficient. For comparing the colours resulting from testing diluted urine and an equally diluted solution of kreatinine the simplest plan is to place a drachm of each liquid in two test-tubes of equal diameter, to add to each a drachm of picric acid solution and half a drachm of liquor potassæ, then to boil for a minute, after which, the two tubes being placed side by side, the equality or the difference of colour can be observed. If, as has been asserted, glucose were present in normal urine in the proportion of not less than 0.05 per cent., about one-third of the reducing action upon picric acid would be caused by glucose, and the remaining two-thirds by kreatinine. Now, the extreme delicacy of the picric acid reaction with kreatinine in largely diluted solutions affords a simple and accurate means of detecting a mixture of a small quantity of glucose with kreatinine, whether in the urine or in an aqueous solution. I have ascertained by repeated experiments that a watery solution of glucose ceases to give any colouration with picric acid and potash when the dilution is carried beyond 1 part in 10,000 of liquid. If, therefore, the reduction colour in normal urine were in part due to the presence of a small proportion of glucose, the colour resulting from the analysis of the urine and of an aqueous solution of kreatinine of the same reducing power, which is equal when the two liquids are undiluted, would be unequal when the dilution is carried beyond the point—that is, one grain in 10,000 minims of liquid—at which glucose ceases to exert any reducing action upon picric acid. The urine would be paler than the equally diluted solution of kreatinine in proportion to the amount of sugar which it contains.

I have tested many specimens of normal urine by comparing the colour resulting from the picric acid test with a solution of kreatinine of equal reducing power, and I have invariably found that when the colours in the undiluted specimens have been equal they have remained equal after the two liquids have been diluted beyond the point at which the action of glucose must have been eliminated. It has occasionally happened that the reduction colour of the urine has been slightly under-estimated, and the kreatinine solution has consequently given a somewhat paler colour. In these cases the darker colour of the urine has been visible through every stage of dilution of the two tested liquids. The conclusion is that kreatinine is the only substance in normal urine that exerts a reducing action upon picric acid, and that not a trace of glucose is present.

The assumption that since sugar exists in the blood it must be found in normal urine ignores the fact that sugar, like albumen, is a nutrient material, the separation of either of which by the kidneys is wasteful, while, on the contrary, all the solid constituents of normal urine are excrementitious and their retention in the blood is injurious. The copious excretion of sugar in cases of diabetes is often associated with albuminuria, and in the advanced stages with structural changes in the kidneys. The sugar not being a normal constituent of the urine, its continual passage in large quantities through the kidneys injuriously affects their structure and functions, the result in some cases being a more or less complete suppression of urine. The conclusion derived from the experiments before described, that normal urine contains no sugar, is confirmed by the contrasted results obtained when a small but known quantity of

sugar has been added to the urine. The following experiment is typical of many others that I have performed, with essentially identical results. A sample of urine (sp. gr. 1015) gave with picric acid a depth of colour indicating 0.6 grain per ounce calculated as glucose. To an ounce of this was added 0.3 grain of glucose. By this addition the amount of reduction was of course raised to 0.9 grain per ounce, two-thirds being due to kreatinine and one-third to glucose. The reducing power of kreatinine being less than that of glucose in the proportion of 10 to 12, the amount of kreatinine required to give the same colour as this saccharine urine was 1.08 grain in an ounce of water. The testing of the undiluted urine and the kreatinine solution respectively gave a red colouration of exactly the same tint. When the two liquids were tested after being ten times diluted the diminished reducing action of the glucose was shown by the fact that the colour of the urine was slightly paler than that of the kreatinine solution. The difference was more marked in the twenty times diluted liquids, and it was still more conspicuous when, the dilution having been increased to thirty, the proportion of the reducing material in the liquid was only 1 in 14,400, and the action of glucose was thus entirely eliminated. If it had not been known that one-third of the reducing action of the undiluted urine was caused by the added glucose, the fact might have been ascertained by observing that in order to equalise the colour of the two liquids when tested after dilution had been carried beyond the point at which glucose ceased to exert its reducing influence, one-third of its volume of water had to be added to the kreatinine solution. Here, then, we have a simple method by which not only the absence of sugar from normal urine may be ascertained, but the exceptional presence of a small amount may be quantitatively determined, such exceptional presence being, I believe, very rare indeed.

The following experiment I have repeatedly performed with the same invariable result. A sample of urine gave with the picric acid test a reduction colour indicating 0.8 gr. per ounce, calculated as glucose. A solution of kreatinine, in the proportion of 0.96 of a grain to the ounce, gave the same reduction colour. To an ounce of the urine was added a quarter of a grain of glucose, by which the reduction was increased to 1.05. The saccharine urine, after being diluted thirty times and tested, gave exactly the same colour as the solution of kreatinine and the same as the urine before the addition of glucose on being equally diluted. The reducing action of the glucose was eliminated by the dilution, while that of the kreatinine in the urine and in the aqueous solution still afforded an equal shade of colour. It will be seen that, while the result of these experiments confirms my son's statement that after the removal of kreatinine from normal urine by mercuric chloride the filtrate contains no trace of sugar, the evidence which I have obtained is of an entirely different and independent character. My experiments, however, are so far an outcome of his laborious and accurate investigations that I could not have performed them if he had not supplied me with the pure unchanged urinary kreatinine. The mercuric chloride and the picric acid process, by which the absence of sugar is proved, are free from the source of fallacy which is common to all the methods by which the presence of sugar has been supposed to be shown—namely, that of mistaking the product of chemical operations upon the constituents of the urine for a true pre-existing educt.

It is probable that many members of the medical and chemical professions will repeat the experiments which I have here described. For this purpose they will have to obtain the pure urinary kreatinine, which has hitherto been a difficulty. My son tells me that no specimen of kreatinine which he has purchased has been pure, and I have lately obtained from a German firm a sample labeled and charged as kreatinine which contained a mere trace of that substance, while the bulk of it had all the distinctive characters of kreatine. I have authority for stating that the pure urinary kreatinine will shortly be for sale at the Apothecaries' Hall, the society having made arrangements for its preparation by the process which my son has successfully initiated and described in the two papers before mentioned, one of the main points being that the crystallised kreatinine is obtained by evaporation *in vacuo*, since a boiling temperature alters its characters and often converts it more or less completely into kreatine by the addition of a molecule of water.

I have lately met with an exceptional specimen of

⁴ Uric acid reduces cupric oxide, but not picric acid.

non-saccharine urine of specific gravity 1039. The urine was turbid with urates, cleared by heat, and contained no albumen; with nitric acid in excess the urine became nearly solid with crystals of nitrate of urea. The picric acid reduction was 1·8 gr., calculated as glucose, indicating 1·9 gr. of kreatinine per fluid ounce. The urine and the solution of kreatinine being diluted successively from ten to forty times gave with the picric acid test an equal shade of colour, or if there was any difference the urine was very slightly darker than the kreatinine solution at each successive stage of dilution. Only by this method of testing or by precipitating the kreatinine by the mercuric chloride process could this urine of high specific gravity, containing an excess of normal constituents, have been confidently pronounced to be free from sugar. The amount of kreatinine in this specimen is larger than in any urine that I have hitherto analysed. The average reduction with picric acid in normal urine is about 0·8 per ounce calculated as glucose, indicating practically a grain of kreatinine in each fluid ounce of urine.

Dr. Pavy in his work on "The Physiology of the Carbohydrates" (pp. 186-7) estimates the amount of sugar in normal urine to be "about 0·5 or a little over per 1000," but this estimate is arrived at by assuming that after the removal of uric acid the cupric oxide reduction found to occur is produced entirely by sugar. It will be seen, then, that Dr. Pavy entirely ignores the existence and the reducing action of kreatinine, and it is not a little remarkable that throughout the work in question there is no mention of the two almost ubiquitous cupric oxide reducing agents kreatine and kreatinine. It is certain that a portion at least of the reducing action of various tissues and liquids which Dr. Pavy attributes entirely to sugar is due to one or both of these organic bodies, yet there is no indication throughout his book that, being aware of this source of error in estimating the amount of sugar, he has been careful to guard against it.

It is interesting and practically useful to note that while glucose, kreatine, and kreatinine alike, though in slightly different degrees, reduce cupric oxide and picric acid, when boiled with an alkali there is a significant difference in the action of each upon picric acid at the ordinary temperature. Thus when picric acid and potash are added to a cold solution of kreatinine or to normal urine, of which that substance is a constant constituent, an orange-red colouration, the result of incipient reduction of picric acid, occurs immediately; with kreatine at least an hour elapses before any red colouration occurs, and with glucose there is an interval of at least six hours before any change of colour appears at the ordinary temperature. With each of the three substances the colour is gradually deepened in the course of from twelve to twenty-four hours, but in none of them is the reduction of the yellow picric to the red picramic acid complete until the liquid has been boiled for about a minute. With regard to the loss of reducing action upon picric acid by dilution kreatine is intermediate between glucose and kreatinine. The limit is one grain to about 50,000 mm. of water, being five times more than the limit of glucose, and four times less than that of kreatinine. The difference between kreatine and kreatinine as regards their reducing power in dilute solutions affords a means for the detection of a mixture of the two substances; while another mode of detecting the mixture, such as is found in Liebig's and other meat extracts, consists in precipitating the kreatinine by mercuric chloride, when the kreatine is left in the filtrate and may be detected by the picric acid reaction commencing in from an hour to an hour and a half at the ordinary temperature. It will be seen that the three substances kreatinine, kreatine, and glucose stand to each other in the same relation as regards the time required to develop the incipient picric acid reaction at the ordinary temperature, and also as regards the limit of dilution beyond which no reaction occurs even at the boiling temperature. In both these respects kreatine occupies a position intermediate between kreatinine and glucose, but in its reducing power upon picric acid at the boiling temperature kreatine is at the bottom of the list, being inferior to kreatinine in the proportion of about six to seven.

In conclusion, I may mention a simple test by which crystals of kreatine may be distinguished from those of kreatinine. The former, when placed in a test tube and heated for a few minutes in a water bath, lose water and become opaque, while the latter remain transparent. This easily applied test will enable a purchaser to ascertain whether the material which is sold as kreatinine is what it is declared to be. An aqueous solution of kreatinine gives with

picric acid and potash at the ordinary temperature an instantaneous red colouration; a solution of kreatine gives, when cold, no red colour for at least an hour.

APPENDIX.

DIRECTIONS FOR THE QUANTITATIVE ESTIMATION OF SUGAR IN URINE BY SIR GEORGE JOHNSON'S PICO-SACCHAROMETER. MADE BY MESSRS. C. E. MÜLLER & Co., 148, HIGH HOLBORN, W.C.

The following solutions are required:—

1. Standard solution of ferric acetate, equal in tint to that yielded by a solution of glucose containing 1 grain per fl. oz. This standard solution is prepared as follows:—

℞ Liquor ferri perchloridi fortior (P.B., sp. gr. 1·42) 3j.
Acidi acetici glacialis (P.B., sp. gr. 1·058) ... 3iv.
Liquor ammoniac (P.B., sp. gr. 0·959) ... 3ij.
Aquam destillatam ... ad 5iv.

Mix first the iron and the acid; then add the ammonia, and water up to 4 fl. oz.⁵

2. Saturated solution of picric acid, prepared by boiling the crystals with distilled water in the proportion of 6 grains to 1 fl. oz., and allowing the excess to crystallise out on cooling.

3. Liquor potassæ (P.B., sp. gr. 1·058).

Apparatus required.

1. A tube about 12 inches in length, graduated into 100 cubic centimetres, with longer divisions at each 10 cubic centimetres, accurately stoppered and lipped.

2. A tube, half the above length and of equal diameter, accurately stoppered to hold the standard solution.

3. A boiling tube, 10 inches long, $\frac{1}{2}$ inch in diameter (internal), lipped, and graduated up to 4 fl. drachms.

4. One drachm measure.

Method of performing the Analysis.

Measure 1 fl. drachm of urine into the boiling tube. Add 1 fl. drachm of the saturated picric acid solution, and $\frac{1}{2}$ fl. drachm of liquor potassæ. Make up to the 4 drachm mark on the tube with distilled or rain water. Heat over a spirit or gas lamp, and keep the liquid boiling for about a minute. Cool by dipping the tube after a minute in cold water, and ascertain that the cold liquid measures exactly 4 fl. drachms. If less, make up to the 4 drachm mark with distilled water; if more, evaporate down to the 4 drachm mark. If the colour of the boiled liquid is the same as that of the ferric acetate standard or paler, the urine is either free from sugar or contains less than 1 grain per fl. oz. If the colour is paler than the standard, boil with 2 drachms of urine instead of 1, then divide the indicated reduction by 2. In analysing an undiluted urine the phosphates precipitated by the potash often cause turbidity, which must be removed by filtration before the colour can be accurately estimated. It should be borne in mind that all normal urines reduce picric acid to an extent equivalent to from $\frac{1}{2}$ grain to 1·2 grain of glucose per fl. oz. This reduction is due to kreatinine. This should be allowed for when the quantity of glucose present is very small. If the colour of the boiled liquid is darker than the standard, introduce it into the graduated tube until it stands at 10 divisions, whilst the stoppered tube at the side is filled with the ferric acetate standard. Now dilute the dark-red liquid in the graduated tube with distilled or rain water till the colour is the same as that of the standard. Each division above 10 = 0·1 grain per fl. oz. Thus, 13 div. = 1·3 grains, 30 div. = 3 grains per fl. oz., &c. If more than 6 grains per fl. oz. are indicated,⁶ dilute the urine 10 times by pouring urine up to 10 divisions on the graduated tube, and distilled or rain water up to 100. Then analyse the diluted liquid as before. In this case each division on the saccharometer indicates 1 grain of sugar per fl. oz. Thus, diluting from 10 up to 48 divisions shows that the urine contains 48 grains of sugar per fl. oz. If the urine, when 10 times diluted, gives a colour paler than the standard, it contains less than 10 grains of sugar per fl. oz. Another portion should then be diluted 5 times by filling the graduated tube up to 10 divisions with urine, then up to 50 divisions with distilled or rain water.⁷ The analysis is performed as before. The value of the divisions now will be half that with a 10 times

⁵ The ferric acetate standard may be obtained from any pharmaceutical chemist.

⁶ The reason for this is that 1 fl. drachm of picric acid solution is sufficient for the decomposition of not more than that proportion of sugar.

⁷ The dilution of the urine may be more conveniently made by pouring 5 or 10 c.c. into a 50 c.c. flask and adding water up to the 50 c.c. mark.

diluted sample. Thus, 18 divisions would indicate 9 gr. per fl. oz. If the urine has a specific gravity of 1035 or more it should be at once diluted 5 or 10 times before commencing an analysis.

The percentage weight of sugar to the volume of urine may be ascertained by dividing the number of grains per fl. oz. by 4·8 Savile-row, W.

FRACTURE OF THE NECK OF THE FEMUR IN THE EIGHTY-EIGHTH YEAR OF AGE; RECOVERY, WITH BONY UNION.

By W. PUGIN THORNTON, M.R.C.S. ENG.

FOR anybody in the eighty-eighth year, after fracture of the neck of a thigh bone, to recover sufficiently to be able to walk with the aid of crutches warrants, I think, the publication of the case. A retired colonel, aged eighty-seven years on his last birthday, in vigorous health and accustomed to daily unassisted outdoor walking exercise, had driven on the afternoon of April 2nd, 1894, a one-horse four-wheeled carriage two miles in the country. He was standing before the horse, altering the bit, when it suddenly bolted and knocked him over. He was found shortly after the accident sensible but helpless on the ground. After some delay he was brought into the town in a carriage. I saw the patient two hours after the accident, and helped to carry him into his house. He complained of excruciating pain about the right hip on any movements of the leg, which he did not feel when the limb was at rest. This leg was helpless, slightly everted, and apparently without shortening. When moving him from the carriage to his bed he could, when supported, bear weight on the left leg. On sending a message to Messrs. Preston and Prentice, surgeons in this town, these gentlemen arrived in about an hour's time, very acceptably bringing chloroform, splints, &c. We then put the patient under chloroform and, having first emptied the bladder, the urine being clear, examined the right leg. I immediately found crepitus at the neck of the femur. Mr. Preston then examined and then Mr. Prentice, but neither produced the evidence of fracture. We put up the leg in a splint extending from the axilla to some inches beyond the foot. On the following day, at 12 A.M., the patient's temperature was 101½° F. It reached this height once again in April. Three times between April 3rd and June 3rd it was 100½°, otherwise ranging from 100° to 97°. The pulse during these two months usually kept from 80 to 90, and the respiration from 20 to 24, but at times the patient had severe attacks of sighing, which occasionally ended with breathlessness, and hardly an appreciable pulse. These attacks were relieved by brandy and permanently stopped by citrate of caffeine. As he was delirious for the first few nights after the accident it was necessary to have four nurses. Besides being powerful, he was a heavy man, so that two nurses at night time and two during the day for the first three weeks, until he could help somewhat in being turned on to his side, were a necessity. For the first month he was kept on a water-bed, and after that time on an American wire-braided mattress. When on the water-bed a small sore came on his back, but through the assiduous care of his nurses it only lasted a few days. On the fifth day after the accident pain was felt in the left leg, and a bruise was noticed close above the knee to half-way up the thigh, running inwards, and corresponding to the breadth of the tire of a carriage wheel. From that time this leg, especially at the back of the knee, gave the patient more pain than the right; and when he first attempted to walk it was the most painful of the two. On May 14th the long splint was taken off and sandbags were used for a fortnight. He was measured by Mr. Hawesley for a Durham's steel screw splint, so that I might get him sooner out of bed than I could otherwise have done. His right leg at that time was almost entirely free from swelling and could be flexed without pain. He could also, with a little assistance, turn himself in bed and could sit up with the aid of a bed-rest for some hours; but between the time of measuring and sitting on the splint the patient one day, in the absence of the nurse, assisted by a relative, so exercised his leg that the same evening there was

a rise of temperature, a restless night, and soon a thick swelling under the whole length of the ilio-tibial band of the fascia lata. This swelling remained the same for more than a month. It could be broken up by pressure into portions of any size. At the same time the pain at the hip returned, and the leg and foot were as oedematous as they had been after the accident. Accordingly I had to give up all idea of using Durham's splint, and could only continue keeping the patient in bed. At this time the right leg measured in length half an inch less than the left. On Aug. 16th I had him up for the first time, he having been four and a half months in bed. He went out in a bath-chair in the garden on the 29th, and for a three hours' drive in the country on the 31st. At the present time the patient is very well in health, and daily goes into the garden in a bath-chair and sometimes for a carriage drive. He is only able to walk a short distance with the aid of his crutches. I do not expect that he will improve in this respect on account of his age.

Canterbury.

CHLOROBROM IN SEA-SICKNESS.

By WALTER FREDERICK DALE, M.R.C.S. ENG.,
L.R.C.P. LOND.

ON my outward voyage to the Falkland Islands seven years ago, to take medical charge of the employés upon a tract of country there, I had a very bad experience of sea-sickness. I tried in succession a number of drugs which had been mentioned as useful, and found them all equally useless. In course of time the actual outbreak of sickness passed away, but during the whole voyage I was never really well. I was never able to smoke. In THE LANCET¹ I noticed an article on the effects of chlorobrom in sea-sickness by Professor Charteris of Glasgow, and when I left the colony in May last year I took with me a supply of this solution. As recommended, I took a dose of it a couple of nights before going to bed. We left in the early morning, and when we got out into the sea-way a fairly good sea was running, but I was able to stay on deck all day. At night I had some more chlorobrom and was not sick. At most I felt only an occasional slight nausea. The ship was very full, and the captain very kindly gave up to my wife and myself his cabin, which was fitted with two berths—one parallel, and the other at right angles to the long axis of the steamer. I had thus an opportunity by changing berths of converting pitching into rolling by taking the cross berth. On the third night I was just going to sleep in the parallel berth when I was suddenly aroused by a sensation of sea-sickness. The steamer began to pitch most fearfully, and I scuttled out of my berth to a cross sofa, and there I had a "few mighty mean moments." When the steamer gave an unusually deep dip of her stern I experienced a sensation in my abdomen as though all the intestines were drawn forcibly down about the spinal column, and I believe that by gravitation such was the case. My wife then woke up, and, seeing what a sorry case I was in, gave me the cross berth, and at my request handed me the bottle containing chlorobrom, of which I took about a dessert-spoonful. In about half an hour I repeated that dose. The result was that, although we had an awful night, I not only was not sick, but slept for a fair time during the storm. The next morning the wind had gone down, but the sea was still rather heavy. It was suggested to me that champagne was a very good thing at sea. I exhibited it internally and promptly re-exhibited it, and this was the only time that I was sick during the voyage. Moreover, I was able to smoke during the greater part of the time.

Now there are two possible sources of error in judging of the value of chlorobrom in this case. Firstly, while in the Falkland Islands I had a good deal of cutter work in visiting my patients, which might have made me a better sailor. But I doubt that, for I was never able to stop in the cutter's cabin in heavy weather. Secondly, the cross berth might have had something to do with my comparative immunity; but I am disposed to put down a good deal of my comfort to chlorobrom. The steamer that I came home in carried a German medical man, so that I could not give chlorobrom freely to my fellow-passengers; but I gave some to a lady who was ill and to a man who was having a very bad time of

¹ THE LANCET, April 21st, 1894.

it, and in each case it did good. If ever I go to sea again I shall certainly lay in a stock of chlorobrom. I quite believe, too, in the liver being acted upon before going on board and in cases where the cooking is likely to be bad. I am sure a stock of "comforts," which can be had nowadays in many attractive forms, is a wise investment. Further, I should say where a cross berth does not exist, one might be improvised with a bed-stand chair or a hammock, for I am sure it is the pitching that does the mischief. In support of this it just occurs to me that when I was on board a whaling ship the year before last in the Falkland Islands I asked the captain about the crew's-nest, and he said that when he was up there he did not mind the rolling; but as soon as the ship began to pitch he got sick and had to come down.

There are different views about the causation of sea-sickness; but, in my opinion, it begins in the brain. I noticed a rather curious thing when I was at the Falkland Islands that might, I thought at the time, have some slight bearing upon the view that sea-sickness was due to movement of the cerebro-spinal fluid. The great bulk of my journeys was done on horseback, and in consequence of the roughness of the ground the horse's paces were so irregular that "posting" in the saddle was impossible. We therefore rode military fashion—i.e., sat down and allowed the horse to pitch us up and down in the saddle by his movements. Horses were "rough" or "easy," according to the height of their lift, and there was a vast difference in the fatigue of riding them. But I have noticed repeatedly after riding a long journey (say, thirty miles) on a rough horse (when I had been sitting in my chair for about half an hour) a curious sensation as though somebody had put a hand against the back of my head and suddenly pushed it forwards, and it was always accompanied by a sickening sensation. It only lasted about a second or so, and I might get it twice in the course of the first half hour after getting off horseback, and then no more till after the next long journey on a rough horse. I believe—though, of course, I cannot prove it—that it was caused by cerebro-spinal fluid, which had been drawn down in excess of the normal into the spinal canal by the succussions in the saddle, suddenly escaping back into the fourth ventricle. I think the fact of chlorobrom influencing sea-sickness is a pretty good proof that the latter starts in the brain.

Welling, Kent.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ANURIA IN THE COURSE OF MALIGNANT UTERINE DISEASE.

By J. J. STACK, L.R.C.P. EDIN., L.R.C.S. IREL.

A WOMAN aged sixty-eight years, a widow, consulted me in November, 1893, complaining of uterine hæmorrhage, a sense of weight and "bearing down" feeling, together with being generally "out of sorts." She had previously been under the treatment of a medical man in her neighbourhood, and had also been operated upon for cataract by Mr. Nettleship. On examination per vaginam there was found to be some slight tenderness and bleeding; the cervix was quite hard, and the womb immovable. There was some erosion round the os uteri. There was no perceptible abdominal swelling, but I thought I felt some abnormal hardness and enlargement of the ovaries. My diagnosis was that of carcinoma, but to what extent the tissues were involved I was unable to say positively; the patient being very nervous and irritable, I was restrained from pursuing my examination to the extent that I should wish. Her past history was that of a dyspeptic, and her chief complaint was constipation and piles. She suffered a good deal during her child-bearing days, and was worried also by financial mishaps. I could get no history of cancer in any of her family. Considering all the circumstances, I advised palliative treatment, believing that surgical interference was out of the question. The bleeding ceased after a hypodermic injection of $\frac{1}{16}$ gr. of ergotinine. I ordered vaginal injections of a warm solution of boric acid with a little cherry-laurel water. These were

continued to the last; and under the circumstances she seemed to get on comparatively well, suffering no pain whatever but an occasional bearing down, which nearly always ceased when some slight hæmorrhage took place. She went to the country on a visit in the early part of September, 1894, and returned on the following month. During her visit she suffered from constipation, and an attack of jaundice supervened, which she attributed to the rich food of which she had been partaking. I again saw her on her return to town. She was then jaundiced and seemed to be very weak. She complained of passing very little water, and owing to her anxiety on that point I gave her two powders of symphoric, in conjunction with other diuretics, without any appreciable effect. Very little water, about a dessert-spoonful, passed for two days; then the kidneys refused to act altogether from Nov. 21st to 29th. I introduced male and female catheters frequently without any result, and am confident that the bladder was quite empty. She took powders containing compound powder of jalap and compound powder of elaterium, and also had half a grain of pilocarpine by the mouth. The latter produced violent diaphoresis, and the combination, I believe, averted uræmia, and distinct improvement followed their administration, though she felt very weak and depressed. I had a medical man's assistance on the 27th, who prognosed immediate death. She was taking champagne and brandy as stimulants. On Nov. 29th copious urination took place—a very cataclysm—and with it the patient's condition was completely changed from a semi-comatose state to that of great excitement, irritability, and want of sleep. She remained quite conscious for a few days, after which she lingered on till Dec. 7th. The jaundice, I believe, marked the incidence of metastasis. Her liver was much enlarged when she returned from the country. But what was the cause of the suppression of urine? Was it due to the presence of bile in the blood? The kidneys seemed to be quite normal, being free from sugar and albumen. There was no post-mortem examination. I cannot recall a similar case, either from observation or from medical authorities.

New-cross, S.E.

TWO CASES OF PHENACETIN RASH.

By R. MILBOURNE WEST, L.R.C.P. LOND.

As there still seems some uncertainty about the existence of a "phenacetin rash," the following two cases may help to clear up the doubt.

Case 1.—A man aged twenty-eight years was taken with slight rigor, violent headache of a neuralgic character, and a feeling of nausea. As the headache formed the most prominent and painful symptom two five-grain phenacetin tablets were administered. Three hours later I again saw the patient, who expressed himself as feeling better; his face, chest, and arms were, however, covered by a dense scarlatiniform rash, slightly raised from the skin surface, and causing a tingling, smarting sensation, as though, to use the patient's own words, he had "been exposed to a violent storm of sleet." Two hours after the onset of the rash it had disappeared, and next morning he was well. On several subsequent occasions I have administered phenacetin to him in doses varying from five to fifteen grains, and on each occasion the same rash, more or less pronounced, according to the dose, has made its appearance.

Case 2.—A young woman, subject to attacks of facial neuralgia, was in the habit of taking phenacetin for their relief in doses varying from five to fifteen grains. On each occasion, from between one to two hours after administration of the drug, an urticarial rash, presenting raised wheals, chiefly on the face and neck, and accompanied by a sensation of heat and tingling, appeared, lasting usually a couple of hours. In neither of the above cases were any other unpleasant symptoms caused by the drug.

Ealing.

At the inaugural meeting of the Inverness Medical Society held in December, 1894, Dr. Mackay read a paper on a case of Myxœdema treated with Extract of Thyroid Gland and practically cured. Dr. Wilson Black contributed notes of two cases of Psoriasis in which the same remedy was administered; in one case it was successful, and in the other a temporary improvement resulted. We congratulate our brethren in Inverness on the foundation of a new medical society.

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upon the thenar eminence. On Feb. 8th the bulla burst, discharging a thin, sanious fluid; a large slough, including the small muscles of the thumb, gradually came away, subsequently exposing the deep flexor tendons of the thumb and index-finger and the bare index metacarpal bone. On March 9th sensation was almost in abeyance over the palm and fingers, back and front, but over the dorsum of the hand as far as the metacarpo-phalangeal articulation it was fairly good. The thumb up to the line of demarcation had sensation almost unimpaired. Above the wrist sensation was normal. Flexion at the elbow and wrist was almost unimpaired, although the range of movement was limited owing to the prolonged constrained position. Power of flexion of the index-finger was lost, and of the remaining fingers it was present but modified; the power of extension was also modified. Massage of the arm and forearm, with frequent application of static electricity and the interrupted current, was persevered with. On the 15th the gangrenous process having entirely ceased and free circulation being evidently established, the thumb was amputated through the metacarpo-phalangeal joint, and, the patient being under an anæsthetic, advantage was taken to forcibly flex the elbow and break down adhesions. The amputation flaps maintained a healthy appearance, and the wound gradually healed, the large ulcer at the base of the thumb granulating healthily and quickly. On May 1st the man returned to work and was able to use his hand at his ordinary occupation. He has continued at his work, and, beyond the inconvenience of the stiffened index-finger, is at no disadvantage.

Remarks by Mr. FENNER.—Deligation of the axillary artery for traumatic aneurysm is sufficiently rare to warrant me in publishing this case. The only alternative would have been to open the aneurysm, turn out the contents, and attempt to tie both ends of the artery, an operation fraught with great danger to the limb and to the patient in his then weakened condition.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

TWO CASES OF STONE IN THE BLADDER WHERE PRIMARY UNION OF THE BLADDER WOUND OCCURRED AFTER SUPRA-PUBIC LITHOTOMY; REMARKS.

(Under the care of Mr. F. PAGE.)

It is generally agreed that in the ideal operation for removal of a stone from the bladder by the supra-pubic route primary union of the wound is required. Much attention has therefore been given to plans of suturing which promised success. The suggestions are numerous, embracing the questions as to the best material for sutures, whether they shall be put into the vesical wall or not, whether the abdominal wound shall be sutured or left open, and if sutured, whether the various layers shall be united separately or included in one with the bladder wall. It is said that success has been obtained by these and by other methods whether drainage was employed or not, whilst primary union of the bladder wound without suturing has been obtained more than once. As a matter of experience, it is most important, before using any sutures, to gauge accurately the condition of the bladder wall and urine, and the surgeon who employs the method of wound treatment best adapted to the particular case and follows no rigid rule will obtain the best average of successes. We have seen the most disastrous results follow the use of sutures—cellulitis, peritonitis, septicæmia, and pyæmia,—and are therefore somewhat chary in recommending them unless the bladder and urine are almost or quite natural and the former not bruised by the stone when removed from it. For the notes of these cases we are indebted to Dr. D. N. JACKSON, house surgeon.

CASE 1.—A man aged thirty years was admitted to the infirmary on June 10th, 1894, with symptoms of stone in the bladder of seven years' duration. The urine was thick and offensive and contained pus. The patient micturated with considerable pain every quarter of an hour. On June 12th a uric acid stone weighing two ounces and five drachms was removed supra pubem. No suture was introduced into the bladder wound; but the skin and muscles were sutured with fishing gut, only a small portion of the wound at its lower extremity being unclosed. A

soft catheter was secured in the bladder. Two days after the operation, owing to a slight urethritis, the catheter had to be removed, and the patient was taught to pass it for himself, which he did every two hours at first, and at lengthening periods till the wound was soundly healed. On the 21st urine was passed voluntarily, but the use of the catheter was not wholly discontinued till July 2nd.

CASE 2.—A youth aged eighteen years, who had had symptoms of stone for five years, was operated upon on June 23rd, 1894, and a large mulberry calculus weighing one ounce and seven drachms was removed supra pubem. Similar treatment was adopted in this case as in the last, with similar result, no urine at any time escaping in either case from the wound after the operation.

Remarks by Mr. PAGE.—The point to which I wish particularly to direct attention in these two cases of supra-pubic lithotomy is that, though the bladder wound was not sutured, no urine escaped through the wound during the progress of recovery. It all passed by the urethra. I have succeeded in obtaining the same result in a child on more than one occasion without suture of the bladder, but I have never before quite succeeded in the adult. In the first case the urine was offensive at the time of operation, and the stone was large and of an awkward shape. The second case was a more favourable one, the urine being quite sweet, and I do not see why similar results should not be generally obtained.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Illustrations of some Modes of Death from Ovariectomy.

An ordinary meeting of this society was held on Tuesday, Jan. 8th, the President, Mr. J. HUTCHINSON, F.R.S., being in the chair.

In opening the meeting the PRESIDENT made the following announcement. That with a view to extending the scope of the discussions and the usefulness of the society the Council had arrived at the following resolutions. 1. That papers accepted for reading be thereby accepted for publication either in the Transactions or in the Proceedings, as may be determined by the Council subsequently to the reading. 2. That the Transactions be published in three parts during the year (viz., on Feb. 1st, May 1st, and Aug. 1st, as well as annually), and that it be optional to the Fellows in which form they receive the Transactions. 3. That papers be issued separately (for sale by the society only) as early as possible after the issue of the part, at a price to be affixed to each. 4. That the papers be printed before discussion, and be obtainable (in proof) on application at the society's rooms. 5. That attention be drawn to the fact that the President may direct an author to read his own paper. 6. That some of the ordinary meetings be devoted to discussions and demonstrations on special subjects, to be introduced by a short paper or papers by Fellows of the society or others at the request of the Council, and that a small standing committee be appointed to arrange for these meetings and to draw up regulations respecting them.

Dr. JOHN D. MALCOLM read a paper on *Illustrations of some Modes of Death from Ovariectomy*. After referring to certain instances in which he had not operated on patients having tumours which he believed to have originated in ovarian tissue, Dr. Malcolm read the histories of all the cases of death from ovariectomy that had occurred in his practice to date. These were as follows: 1. A dermoid tumour ruptured into the bowel. At the operation a portion of the tumour inseparable from the sigmoid flexure was left on it, and fixed outside the peritoneum through an opening made for the purpose in the left groin. Symptoms of obstruction of the bowel began on the third day, after which the groin wound became offensive. Death occurred on the sixth day. After death there was no sign of general peritonitis. There was an obstruction formed by an adhesion of the healthy small bowel to the ovarian pedicle. This was on the right side. On the left side there was suppurative round the groin wound, limited by peritoneal adhesions. 2. A ruptured tumour, with papilloma fungating in and on it. About a year before Dr. Malcolm saw the patient her abdomen had

Mr. ALBAN DORAN said that the object of recording fatal cases at the present time was very different from that of thirty years ago, when the operation was then on its trial. Thanks to Sir Spencer Wells and a few others ovariotomy was now firmly established, and the object of investigations like the present was to answer the question, How is it that cases are ever fatal? He divided the causes of a fatal result into preventable and unpreventable. In the former category he

Dr. MALCOLM, in reply, admitted the difficulty of determining whether a heart was strong enough to overcome complications which could not be foreseen, though he recognised the state of the heart as having an important influence on the case. Though he did not see great objections to ovarian cases being put in general wards, he thought a death after operation would have a demoralising effect on others who were waiting their turn.

G. E. HERMAN, President, being in the chair.

Dr. JOHN SHAW read a paper on Peritonitis: its Nature and Treatment. He gave notes of two cases, the one of acute peritonitis of undoubted septic origin, the other presenting the symptoms of obstruction of the bowels following ovariectomy. In the first case death seemed to be hastened by a dose of opium, presumably from its effect in diminishing the elimination of the poison; and in the second case the strong presumption was that death was primarily due to the absorption of poison from the gastric mucous membrane. With this experience, Dr. Shaw, regarding the fatal issue as essentially toxic in origin, determined on a plan of action in any succeeding case which might present itself. Two such cases were briefly described where the treatment was successfully carried out. The course of action indicated was—(1) to limit as far as might be the formation of the poison; (2) to eliminate it when formed as quickly as possible, or at least to destroy it; and (3) to support the patient's strength during these processes. To secure these ends Dr. Shaw advocated the application of warm antiseptic compresses to the abdomen; the provision in suitable cases of drainage from the peritoneal cavity; persistent effort to evacuate the bowels, and pending this, as far as might be, the disinfection of the intestinal contents and the

HARVELAN SOCIETY C

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Shaw directed to the title of the paper. It seems correct to speak of peritonitis as a local inflammation arising from the trivial to the serious. The difference between different cases is due to the nature of the inflammation. Bacteriologic examinations merely set up a mild inflammation, for example. Dr. Shaw thought that death was due to absorption of infective material from the stomach (as Dr. H. Horrocks) thought the cause of death was the occurrence of the nervous system through the spine. Again Dr. Shaw seemed to deprecate the term "peritonitis," but optimism and its derivatives are necessities in certain forms, such as what Dr. Horrocks termed "peritonitis." Dr. Horrocks mentioned the nature of the uterus where opium had been given. Dr. Shaw had noted a statement by Mr. Dorr that the effect of an case of peritonitis was that the effect that in the present would recur, but that the term. This statement was incorrect. It was not an opinion question whether to disturb the uterus. He asked Mr. Dorr that it was very common for him to puncture after abdominal surgery, the wound being liable to be perforated.

Dr. WHITE thought it was clear that the last
was not a case of peritonitis, but of paratyphoid
fever, the result of handling the
the remarkable fact that though the bac-
terium was perfectly harmless in health, it
became virulent when the fever was in any way de-
veloped. The cause of passage out of the bowel into the
blood and of causing septicaemia, including
the disease (typhoid) and others occurred thus
as a result of this "parasitosis." He (Dr.
White) with this, and thought it was possible that
there were some cases from absorption of the pro-
ducts, the patient escaping the more fatal
effects of the bacterium now in the meanwhile successful-
ly killed the bacterium now advocated in many cases
of typhoid and has become established as responsible
for the manner free immunities into the bowels and
the blood stream. He thought that, as certain
cases of fever might be in a state of toxic contraction
of the bowels was exaggerated, it was not wise to give
the dose so that it should always be combined with

the question of arterial tension as
the cause of these operations among "ner-
vous" is the theory that the contraction of
the arteries in the limbs was a result of the
anæsthetic dose and of impure blood. "The view
that the pulse in this case was due to defec-
tion was not consistent with Mr. Macdonald's
theory. The latter believed that the pulse
was very strong, was of course not
the same as the artery increased, during fever, and
that the various comments which he pre-
sented to the law, seemed to be greater
than a simple operation rather than on the
day, when the pulse changes were most

regular washing out of the stomach; and hypodermic injections of strychnia and digitaline, and the inhalation of oxygen.

Mr. DORAN said that none of the cases were simply instances of peritonitis. The first was septicæmia after disturbance of a suppurating focus. There was little evidence that the dose of opium mentioned did much harm. In the second case the main symptom was obstruction; the abdomen had been opened a few hours after operation and the pedicle fixed to the parietes, strain being designedly put on the broad ligament. In the third case the clinical symptoms mainly indicated obstruction. Clear serum escaped in quantities through the tube. The appearance of clear serum was an indication for removing the tube, otherwise the flow might go on indefinitely. The fourth case was very complicated, bronchitis set in, the omentum prolapsed on the fifth day, the next day the wound was opened up and sloughy omentum removed, and a valvular communication between the peritoneum and surface existed. Mr. Doran had found that whenever flatus accumulated and did not come away spontaneously a turpentine enema answered well. After the confined flatus escaped other bad symptoms usually disappeared. He had recently observed that in a case under his care where bronchitis set in, the grave pulmonary symptoms abated and ceased when the flatus came away. Warm water and bicarbonate of potassium acted well in clearing the stomach.

Dr. HORROCKS objected to the title of the paper. He did not think it correct to speak of peritonitis as a toxæmia. Cases of peritonitis varied from the trivial to the rapidly fatal. The difference between different cases depended on the cause of the inflammation. Bacteriology showed that certain microbes set up a mild inflammation, others a virulent one. Dr. Shaw thought that death was due to absorption of putrefactive material from the stomach and bowels. He (Dr. Horrocks) thought the mode of death indicated disturbance of the nervous system through the solar plexus. Again, Dr. Shaw seemed to deprecate the use of opium in peritonitis; but opium and its derivatives were the very best remedies in certain forms, such as what used to be called "traumatic peritonitis." Dr. Horrocks mentioned a case of rupture of the uterus where opium had been of great service. Dr. Shaw had quoted a statement by Mr. Lawson Tait to the effect that if in cases of peritonitis the bowels could be opened the patient would recover, but if not she would die. This statement was incorrect. It was often a most important question whether to disturb the bowels or not. He agreed with Mr. Doran that it was very important to get rid of flatus, particularly after abdominal section, on account of the wound being liable to be burst open.

Dr. AMAND ROUTH thought it was clear that the last three cases were not cases of peritonitis, but of paralysis of the bowels ("pseudo-ileus"), the result of handling. He alluded to the remarkable fact that, though the bacterium coli commune was perfectly harmless in health, it became virulent when the bowel was in any way diseased, and was then capable of passing out of the bowel into the blood and tissues and of causing septicæmia, including septic peritonitis. Olshausen and others believed that this happened as a result of this "pseudo-ileus." He (Dr. Routh) agreed with this, and thought it was possible that a sapremia arose in some cases from absorption of the products of the bacilli, the patient escaping the more fatal septicæmia if treatment were in the meanwhile successful. He mentioned the treatment now advocated in many cases where septicæmia had not become established of reopening the abdomen and making free incisions into the bowels and evacuating their contents. He thought that, as certain lengths of the bowel might be in a state of tonic contraction while the rest was exhausted, it was not wise to give strychnia alone, but that it should always be combined with atropine.

Mr. MALCOLM dealt with the question of arterial tension as a result of operations, abdominal operations among others, and objected to Dr. Shaw's theory that the contraction of the vessels found in the febrile state was a "revolt of the system against the circulation of impure blood." The view that the hardness of pulse in this state was due to deficient kidney secretion was not consistent with Mr. Malcolm's observations. The kidney secretion was of course not diminished, but very greatly increased, during fevers, and the diminution of the watery constituents, which he presumed was referred to by Dr. Shaw, seemed to be greatest immediately after an aseptic operation rather than on the second or third day, when the pulse changes were most

marked. He (Mr. Malcolm) believed that during the healing of a wound contraction began in the peripheral vessels, and that it increased in intensity, and extended from these small vessels to larger ones in proportion to the severity of the inflammatory fever, reaching the maximum of extent and intensity on the second or third day. About this time distension of the bowels might begin, producing by increased mechanical opposition still further reflex contraction of the vessels throughout the body, and thus might altogether deprive the tissues of their blood-supply and be the actual cause of death. He criticised the description of the cases in the paper as peritonitic, and considered that when the patient was constantly sick absorption from the stomach was in abeyance, and that the occurrence of such absorption meant that the patient was getting better. He was of opinion that, where the intestines were distending and the patient was sick, food which was rejected did more harm than good.

Dr. GIBBONS wished to add his testimony to that of Dr. Shaw as to the great value of subcutaneous injections of digitaline and strychnia, and he would also include atropine, in the treatment of peritonitis. He mentioned a case where this method had, he believed, saved the life of a patient. He considered it infinitely superior to extra stimulation by alcohol.

The PRESIDENT agreed with the speakers who had said that the title of Dr. Shaw's paper was too comprehensive. He (the President) thought that some such title as the "Advantage of Washing out the Stomach in cases of Peritonitis" would have better denoted the scope of the paper. He thought it was now established that peritonitis was produced by micro-organisms. The poisoning they brought about was only an effect of the micro-organisms, but not the essential cause of the disease. He was quite prepared to accept Dr. Shaw's statements as to the benefit of washing out the stomach in peritonitis when vomiting was copious. He did not accept Mr. Lawson Tait's statement that peritonitis could be prevented by purging the patient; but he quite believed that if the bowels could be got to act the patients were the better for it. Mr. Treves had shown that in those cases of peritonitis in which diarrhoea was present the mortality was less than in those where there was constipation. The treatment of peritonitis was according to its cause. If it depended on disease of the stomach or bowels it was important that the diseased part should be kept at rest, and therefore opium was indicated to restrain peristaltic movement; but when peritonitis arose from disease of the uterus or its appendages, the alimentary canal being healthy, there was not the same utility in giving opium. It was in such cases beneficial in relieving pain, but in no other way.

Dr. JOHN SHAW, in reply, acknowledged the justice of the criticism on the title of his paper. He explained certain points which he thought had been misunderstood by the speakers.

The following specimens were exhibited:

Dr. CULLINGWORTH: Cystic Enlargement (probably Pyosalpinx) of Tube.

Dr. STEVENS: Fœtus in which the Urethra was absent, with other abnormalities.

Dr. LOTT: Fœtus Papyraceus.

Dr. AMAND ROUTH: Cancerous Uterus and Parovarian Cyst removed together per vaginam.

Dr. DES VŒUX: Circumscribed Clot in Placenta.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Jan. 3rd, the President, Mr. G. EASTES, being in the chair.

Mr. G. C. WILKIN showed a boy aged ten years with a Deflexion of the Nose. There was a history of a blow on the nose two years ago. When he first came under observation there was a marked deflexion of the nose to the right. Grant's septal splint was at first used, but was found to increase rather than reduce the error. A splint was made consisting of a band fitting round the head, from which two metal rods fell, one on either side of the nose, carrying a movable plate, which could be screwed up to any degree of pressure. This effected a considerable amount of improvement.

Mr. EDMUND OWEN showed a girl aged eleven years from whom he had removed the upper third of one Fibula

Dr. CAGNEY showed cases of Raynaud's Disease and Muscular Atrophy and of Tabes.—In reference to Dr. Cagney's case of Raynaud's disease, Dr. JAMES TAYLOR said it was, in his experience, unusual for the symptoms of Raynaud's disease to be aggravated by a higher temperature. This patient did not seem to suffer from the intense pain which in so many cases followed a change of temperature. He ventured to think that in the case mentioned by the President there was present some disease of the spinal cord determining the vaso-motor symptoms and also the peculiarly perverted sensibility. The condition in which cavities were present in the cord—syringomyelia—was accompanied by vaso-motor symptoms, muscular atrophy, and loss of sensibility for pain and temperature. In regard to Dr. Cagney's case of "muscular dystrophy," Dr. Taylor thought it was a pity to apply such a term to this case. The term was now so widely used as descriptive of cases of perverted muscular nutrition without change in the central nervous system—cases of pseudo-hypertrophic or idiopathic muscular atrophy—that its application to cases other than those was apt to be misleading.

Dr. COLMAN read a paper on the Treatment of Epilepsy. After referring shortly to many barbarous methods formerly in vogue in the treatment of the disease, he referred to the importance of preventing fatal accidents during the fits, such as choking from vomiting, and suffocation from the patient

Dr. CHAPMAN read a paper on the *Rôle of Alcohol in the Treatment of Heart Disease*. While recognising the value of alcohol in appropriate cases, and on particular occasions, he protested against its prescription in cardiac cases as a matter of routine. It was shown that in some cases alcohol was absolutely harmful, and in none should the patient be left to decide as to the amount and frequency of the dose. In fact, he considered that some cases of failing heart were more benefited by purging or bleeding than by stimulation. Dr. SYMONS ECCLES referred to the existence of dilatation of the left ventricle in cases of neurasthenia, and in such cases he found that the action of alcohol was advantageous, but of course its use must not be abused.—Dr. C. PORE drew attention to the use of the tincture of *Cactus* in cases where the heart was beating forcibly, and which, therefore, were unsuitable for alcohol. He considered that the drug was of value.—Dr. CHAPMAN replied.

LOVETT, President, being in the chair.

D. T. M. LEGGE read a paper on Some Points of Difference between English and Continental Methods of Municipal Sanitary Administration based on personal observations during several special visits to Copenhagen, Christiania, Stockholm, Brussels, Paris, Berlin, and several other French and German towns. There were, he considered, many things in which we should do well to imitate their more perfect

SHEFFIELD MEDICO-CHIRU

much resembling that most of their shortcomings are owing to the exigencies of military defence, and in fact of special police health legislation, and in restriction of the sanitary to the police service, which was not present in France. In Germany, however, Dr. Pilsner held a position similar to that of medical officer in chief of a large urban or contracted military district here. In Scandinavia the sanitary was very much expanded, on the duties of the medical officer being most for any one man, even with an ample staff of assistants. He was also public analyst, recorder of births and deaths, medical assessor to the law on matters of school hygiene, factories, etc., and had a variety of vaccination, prostitution, etc. Not only did he carry all preventive diseases were notifiable, but cases arising from twenty to twenty-five, and acted as codes of comprehensiveness, giving on a great mass of facts likely to aid in tracing and curbing the spread of the disease. In Norway the contagious diseases acts had been repealed, and notwithstanding every effort intended, but with unsatisfactory results. In Brussels, sprays of walls and ceilings and water closets and furniture with systematic solution of an 10 per cent. mixture, operations which, not occupying much time, rendered provision of temporary accommodations impossible, and to all results had ever been seen. In Berlin, however, should the epidemic be seen in the walls were covered with bread and three times a day 5 per cent. carbolic acid solution. All other measures were conducted by steam, and in Denmark erected in their own towns, lack of Copenhagen supply of a few hundred apartments complete with water and fittings for 10 to 15 families, arrangements to city could compare favourably for the most perfect isolation hospital was that of Berlin. In Germany systematic vaccination had now nearly reached its final point. School hygiene received attention, the children being inspected every fortnight for a medical man and a dentist, and hearts and on matters of sanitation, infectious diseases, and first aid to accidents. Public slaughter-houses, and first aid to contagious diseases, were not possible, were very common, and in the chief German and northern capitals, and in the whole of Stockholm, and in a lake water of the city, the centimetre were condemned, and the discovery that the green algaed film which grew on the surface of a sand filter had alone the water had within twenty-four hours after the removal of the water had been rejected, while all filters were used as a protection against frost. The water of the Sennar was adopted in Brussels, Berlin, and all other towns of Germany. Pails were still used in the collection of the urine, and both systems existed in Paris, and in the Sennar, and of the Sennar near the Sennar was practically. The entire sewage of the city was collected with the highest still and with military engines. What was once a muddy waste with a few stunted trees and public institutions, populations enjoying the health of London (Manchester) then read a paper on the history of infection in Prussia, in which, while freely admitting the communicability and, under certain conditions, the communicability of tuberculosis by inhalation or by contact, he maintained that there was at present a tendency to the view that there was at present a tendency to the view that the more fact of its communicability a disease was oral, sexual, impracticable, and calculated to cause political parties should not only be forbidden to be isolated at home, and in fact, shunned as a social disgrace. The communicability of phthisis had been proved here and elsewhere, but it had received its death blow from the discovery of the bacillus by Koch and the successful researches of Cornet. Dr. Ransome had

methods, remembering that most of their shortcomings were owing to the exigencies of military defence, and the want of special public health legislation, and the subordination of the sanitary to the police service, which was most complete in France. In Germany the *Stadt* or *Kreis Physikus* held a position similar to that of the medical officer of health of a large urban or combined rural sanitary district here. In Scandinavia the sanitary services were highly organised, but the duties of the medical officer were too much for any one man, even with an ample staff of expert assistants. He was also public analyst, registrar of births and deaths, medical assessor to the law courts, inspector of schools, asylums, factories, &c., and had the supervision of vaccination, prostitution, &c. Not only infectious but nearly all preventable diseases were notifiable, the schedules comprising from twenty to twenty-five, and the forms were models of comprehensiveness, giving on a post-card a mass of facts likely to aid in tracing and checking the spread of the disease. In Norway the Contagious Diseases Acts had been repealed, and notification strictly enjoined instead, but with unsatisfactory results. Except in Brussels sulphur fumigation had long been abandoned, spraying of walls and ceilings and washing floors and furniture with sublimate solution (1 in 1000) being substituted, operations which, not occupying more than an hour, rendered provision of temporary accommodation superfluous, and no ill results had ever been observed. In Berlin, however, should the sublimate be objected to, the walls were rubbed with bread and then saturated with a 5 per cent. carbolic acid solution. All clothes and bedding were disinfected by steam, and in Denmark even villages had their steam ovens, Reck of Copenhagen supplying a very efficient apparatus complete with boiler and fittings for £88. For ambulance arrangements no city could compare with London, but the most perfect isolation hospital was that at Stockholm. In Germany systematic revaccination had now practically stamped out small-pox. School hygiene received the fullest attention, the children being inspected every fortnight by a medical man and a dentist, and leaflets &c. on the elements of sanitation, infectious diseases, and first aid freely circulated. Public slaughter-houses, without which a complete inspection of meat was not possible, were very general, those at Berlin being simply perfect. Public water-supplies were in the chief German and northern capitals examined every week, not only chemically, but bacteriologically; and while Stockholm rejoiced in a lake water of almost absolute purity, at Berlin all waters yielding 100 colonies to the cubic centimetre were condemned, and since Koch's discovery that the green algoid film which formed on the surface of a sand filter had alone the power of arresting bacteria, the water that had passed through a bed within twenty-four hours after the renewal of the surface had been rejected, while all filters were vaulted over as a protection against frost. The water carriage of excreta was adopted in Brussels, Berlin, and all the larger towns of Germany. Pails were still used in the Scandinavian capitals, and both systems existed in Paris. The condition of the Seine below Paris and of the Senne near Brussels was inexpressibly foul, but the purity of the Spree at Berlin was remarkable. The entire sewage of that city was treated by irrigation and filtration on 12 000 acres of farms, conducted with the highest skill and with military precision. What was once a sandy waste with a few stunted pines was now a vast garden yielding heavy crops of corn, roots, grass, vegetables, and fruit, and studded with villas, cottages, and public institutions, populations enjoying the best of health.

Dr. RANSOME (Manchester) then read a paper on the Limits of Infection in Phthisis, in which, while freely admitting the inoculability and, under certain conditions, the communicability of tuberculosis by inhalation or by ingestion, he maintained that there was at present a tendency to ignore those conditions which were essential to infection and to raise out of the mere fact of its communicability a scare which was cruel, useless, impracticable, and calculated to disorganise family and social life. A recent writer had demanded that phthisical patients should not only be forbidden to marry, but should be excluded from churches and all places of public resort, be isolated at home, and, in fact, stunned and treated as lepers. The communicability of phthisis had long been a popular belief in Southern Europe, and had had its adherents here and elsewhere, but it had received its greatest impulse from the discovery of the bacillus by Koch and the statistical researches of Cornet. Dr. Ransome had,

however, constantly maintained that it was a grave error to ignore the conditions without which infection was scarcely possible. He had shown that there were in all large towns infected areas, constituted such by dampness, want of air and light, with overcrowding, &c. He had even known persons in whom the disease remained in abeyance so long as they resided as patients or as servants in a Consumption Hospital, but was rekindled soon after their return to their homes in the city. Hirsch had pointed out that in Syria, Egypt, and Algeria the nomad Arabs were exempt, while the inhabitants of towns suffered; and in our own country agriculturists were freer than the town population, while fishermen enjoyed the greatest immunity. He and Dr. Delépine, and subsequently Dr. Heron, had carried out experiments which tended to show that, while dried sputa retained their infectivity for long periods in darkness, exposure to air and light soon rendered them inert. He would, of course, enjoin the careful disposal and destruction of the sputa, but far more would he insist on the freest light and ventilation, remembering that the reduction in the death-rate from phthisis, representing a saving of 30,000 lives per annum, was wholly due to improved sanitary conditions. Drs. Seaton, Whitelegge, and Willoughby, Mr. Shirley Murphy, and others took part in the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Cholecystotomy. — Double Optic Atrophy. — Sarcomatous Tumours. — Removal of the Parotid Gland. — Exhibition of Specimens. — Rectal Etherisation.

A MEETING of this society was held on Dec. 20th, 1894, the President, Mr. MAKEIG JONES, being in the chair.

Dr. SINCLAIR WHITE exhibited and related particulars of: 1. A woman on whom he had performed Cholecystotomy for severe and persistent attacks of Hepatic Colic. Repeated examinations of the fæces failed to show biliary calculi, and the attacks were getting worse. Each attack was followed by jaundice. Twenty-seven stones were removed from the gall-bladder and two were crushed in the common bile-duct. The woman made an excellent recovery, and had been free from pain since the operation. 2. A boy nearly blind from Double Optic Atrophy due to a Subdural Abscess, which discharged itself six weeks after the onset of severe symptoms through the anterior fontanelle. 3 and 4. Sarcomatous Tumours removed from the Coccyx of a woman seventy-two years of age, and the Parotid of a woman twenty-six years of age. The latter tumour had grown very rapidly and had invaded the neighbouring lymphatic glands.

Mr. RICHARD FAVELL showed: 1. A large Multilocular Ovarian Cyst containing fifty-three pints of fluid which he had removed from a woman fifty-five years of age. 2. A Piece of Retained Placenta which had caused recurring attacks of severe hæmorrhage till its removal eight weeks after confinement. — Mr. WEST JONES gave particulars of a large Gall-stone passed per anum, and showed the specimen. — Dr. ARTHUR HALL showed specimens of Cystic Calculi.

Dr. KEELING showed specimens of Tubal Mole, Ovarian Dermoid Cyst, and Substance removed from Uterus four months after incomplete abortion, and gave particulars of the cases.

Mr. BERNARD STEDMAN read a paper on Rectal Etherisation. He said that, though Pirogoff employed this method fifty years ago, it was only quite recently that it had been revived by Dr. Dudley Buxton. Mr. Stedman had lately administered ether by the rectum in about twenty cases of operations about the mouth in the Sheffield Public Hospital, and so far the results had been extremely satisfactory. The method used was that of placing a vessel containing ether in water at 120° F. and conducting the vapour through a piece of indiarubber tubing to the rectum. There was little or no struggling during the administration. The disadvantage was the length of time taken to anaesthetise some patients. For several cases it was over half an hour. This could be overcome by giving ether by the mouth as well as the outset. When this was done the temperature of the water need not be above 110°, this temperature being sufficient to keep the patient under by the rectum alone when once fully anaesthetised. The after-effects in Mr. Stedman's cases were very slight. There was no sickness in half the cases, and in two or three there was a little diarrhoea with a discharge of mucus for several days.

are dealt with in Lectures V. and VI. The Respiratory System, the principles of ventilation, and the main features of diseases of the throat and lungs occupy the two following lectures, and these are succeeded by descriptions of the Functions of the Kidneys, Skin, &c. Three lectures are devoted to the subject of Temperature, Infection, and Fevers, and the final one treats of the Nervous System. No one can peruse the book without being struck with the vast amount of really useful information which Dr. Anderson conveyed within small compass, and also with the methodical manner in which he traversed the large field before him. Such lectures must have been of good service to his audience and cannot have failed to interest them. In their present form they constitute a text-book which will be of service to the probationer and one not wholly to be disregarded by him who undertakes a like duty to that which the author so well performed. For the art of elementary instruction in such a subject as physiology, and of combining this with the application of its truths to the practice of sick-nursing, has seldom been so well manifested as by this valued physician and teacher, whose character and life are faithfully sketched in the memoir affixed to this volume—a memoir extracted from the last presidential address delivered to the Royal College of Physicians of London by Sir Andrew Clark, whose knowledge of James Anderson, as pupil and colleague, was deep and true.

Diseases of the Skin. By W. ALLAN JAMIESON, M.D. Edin. Fourth edition. Edinburgh: Young J. Pentland. 1894.

A WORK which has reached a fourth edition has passed beyond criticism as to its scope and the success of the author in realising the aim he had before him, and it only remains for the critic to point out how the new edition differs from the old and to briefly appraise the new material. The author claims to have made an exhaustive revision and to have almost rewritten some chapters, such as those on Lupus and Ringworm. He has added two new chapters on the Disorders of the Vascular System and the Treatment of Syphilis, and has incorporated sections on the Hygiene of the Hair and Nails, the Agency of Micro-organisms, on Darier's Disease, Hidrocystoma, Erythema Induratum, Lichen Neuroticus, Epidemic Exfoliative Dermatitis, Corns, Elephantiasis, Epithelial Cystadenoma, Sarcoma, Mycosis Fungoides, and Actinomycosis. This enumeration shows that the author is gradually extending the scope of his work in the direction of completeness, the earlier editions having never pretended to be a complete exposition of the subject even within the limits of clinical description. Three new coloured illustrations of Pityriasis Maculata, Xanthoma Diabeticorum, and Mycosis Fungoides replace respectively Lichen Verrucosus, Circumscribed Scleroderma, and Tuberculosis of the Skin, and we may say at once, much to the advantage of the present edition, that the originals of the new illustrations are probably truer to nature, and there is marked improvement in the style of reproduction. We hope that in future editions one or two more plates may be improved out of existence—notably, acne varioliformis as at present depicted. Lichen neuroticus is the name given by Unna and Dühring to the complex of symptoms which they consider represent the lichen ruber of Hebra and not corresponding, they think, to the lichen ruber acuminatus of Kaposi or the pityriasis rubra pilaris of Devergie; it seems a pity to further complicate the subject by inventing a new name.

Epithelial cystadenoma (Besnier) is the name selected by the author out of a host of synonyms for a rare affection which was originally described by Kaposi under the name of lymphangioma tuberosum multiplex, and consists of small epithelial lined cysts containing a colloid material which are embedded in the skin and project slightly.

Hidrocystoma is the name given by Robinson of New

York to a rare and not very important affection of the sweat apparatus in which deep-seated sago-like grains are scattered over the face.

The article on Mycosis Fungoides is a fairly full one, and is illustrated by the description and plate of a good case of the rare form first described by Kaposi as lymphodermia perniciosus. The author, however, is in error in stating that mycosis fungoides was described for the first time in 1832 by Alibert and figured in the following year in the second edition of his Atlas. Alibert gave a plate and description of the case in the first edition of the Atlas in 1814, Plate 36, only he called it there "Pian fungoide," and changed the name in the later edition.

It will thus be apparent that the author no longer contents himself with the exposition of the commoner forms of skin disease, but that in each successive edition he gives his readers the benefit of his widening experience in diagnosis and treatment, and we can therefore predict as much success for the present as for the past editions, on which it is in many respects an advance.

Practical Urinalysis and Urinary Diagnosis. By Dr. CHARLES W. PURDY. Philadelphia: F. A. Davis and Co. London: F. J. Rebman. 1894.

THE class of book of which the present volume is one of the latest additions has enormously increased of late years. Formerly the examination of the urine was only treated of in general text-books on medicine and surgery, and the student had frequently to search several volumes before he discovered the information he desired; but now there are many works on urology, and still more on clinical pathology. Such books are very valuable, but there seems a great tendency to an over-production. In the volume now under consideration there is a large amount of useful information collected together in a readable and convenient form, and a special effort has been made to bring out prominently the relations of the chemistry of the urine to physiological processes and pathological facts. This method is certainly to be highly commended, for it teaches not only how to detect, isolate, and determine the constituents of the urine, normal and abnormal, but also how to determine the presence of disturbed physiological processes, to detect the presence of pathological changes, and to measure the degree of both.

The book is divided into two parts. The first treats of the analysis of urine, including both the normal and abnormal constituents. The various chemical processes are well described, and the author very wisely points out in each case which method has given the most satisfactory results in his hands. The second part "aims at a concise description of the special features of the urine that indicate the presence of special pathological processes in progress in the economy, whether they be local or general, medical or surgical, together with a brief enumeration of the leading clinical symptoms of each disease, and in most cases an epitome of their nature and etiology." Dr. Purdy has accomplished his object in a most satisfactory manner and is to be congratulated on the work produced.

The book is well illustrated, and although the great majority of the illustrations are borrowed they are none the less valuable on that account.

LIBRARY TABLE.

Diagnosis, Differential Diagnosis, and Treatment of Diseases of the Eye. By A. E. ADAMS, M.D., Instructor in Diseases of the Eye in the Post-graduate Medical College, New York. London and New York: G. P. Putnam's Sons. 1894.—Each page of this little book deals with two of the principal disorders of the eye, these pairs being selected on account of their having some points of resemblance. Each

of their names stands at the head of a column consisting of brief enumerations of the leading symptoms, and capital letters are used for those features which distinguish the two morbid conditions from one another. For instance, interstitial keratitis and ulcer of the cornea are grouped together on account of the loss of vision, pain, photophobia, and circumcorneal injection common to both, and are distinguished by the former having the cornea smooth and lustreless with a white-grey opacity, and by the latter having an excavated cornea with a yellow-grey opacity. In the words of the preface, the work is "designed more especially for the active practitioner, who does not claim to be an ophthalmologist." It is, no doubt, a concise and convenient summary of ophthalmic diseases and their treatment.

Spinal Curvature and Ankward Deportment: their Causes and Prevention in Children. By Dr. GEORGE MÜLLER, Professor of Medicine and Orthopedics, Berlin. English edition by RICHARD GREENE, F.R.C.P. Edin. London: The Scientific Press, Limited. 1894.—The majority of parents who are solicitous for their children's success in life have before their minds a mistaken educational ideal, according to which too much is taught at a tender age and an ever-increasing amount of study is compressed into the school period. Dr. Müller utters an emphatic warning against thus overloading a child's mental faculties, and proclaims the need for systematic attention to physical training and the symmetrical development of the bodily form. He points out that many children are predisposed to spinal curvature by hereditary tendency and by constitutional weakness, but that far the most common cause of the deformity is the position in which writing is taught. He recommends that the seats used in school by children should allow the soles of their feet (not the toes only) to rest flat on the floor and should be provided with sloping backs. The writing-table should be well-sloped, and its edge should overhang the front of the seat. Handwriting should be upright and not slanting. The author's precepts are largely directed to the prevention of curvature; for the correction of it he recommends a variety of muscular exercises which are fully described and illustrated by engravings. His remarks and directions are practical and judicious and worthy of careful attention.

An Address on the Cultivation of the Speaking Voice. By Miss D'ORSEY, Lecturer in Elocution, King's College (Ladies' Department). London: J. Masters and Co. 1894.—An easy, distinct style of speaking and an effective delivery are accomplishments of no small value to their possessor in whatever walk of life he may be. On the other hand, an indistinct or too hasty speaker is a source of discomfort, not only to himself, but in even a greater degree to those who have to listen and perhaps may wish to learn. Miss D'Orsey's object is to call public attention to this question and to obtain a general recognition of the excellent results obtained by systematic and methodical "voice training." She is a daughter of the late Rev. Professor D'Orsey, and appears to have inherited some portion of her father's eloquence and educational attainments. The address is a short summary of the work accomplished by her in furtherance of the project.

Wintering in Egypt. By ARTHUR J. M. BENTLEY, M.D., and Rev. C. G. GRIFFENHOOF, M.A. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1894.—This is a record of personal experience which the authors have presented in the form of a brightly written and entertaining narrative. Having arrived at Alexandria they seem to have proceeded with the least possible delay to Mena House Hotel, about eight miles from Cairo, and close to the Great Pyramid. Here their headquarters were fixed and the period of their stay was agreeably passed in excursions and sight-seeing in the neighbourhood, diversified by expeditions to Cairo and Memphis. The work has none of the formality

of a guide-book or a diary, and no disquisitions on Egyptology beyond assigning the Pharaoh of Joseph to the shepherd kings and mentioning Menephtah as the Pharaoh of the Exodus. The proximity of Mena to the Great Pyramid naturally led the travellers to explore its interior, an enterprise which took place on Boxing Day, and provided materials for a picturesque description. The Sphinx was often visited, and there is a graphic account of its appearance. Dr. Bentley, who has for some years been resident at Mena during the winter months, contributes a most instructive supplementary chapter of about thirty pages, containing hints for invalids on the maintenance of health in Egypt. He strongly recommends that the journey should be made by the long sea passage from the Thames to Brindisi, at which port the traveller should go on board a steamer for Alexandria. The book is just such a one as the tourist should peruse before setting out and take with him on the voyage.

The Practical Guide to Algiers. By GEORGE W. HARRIS. London and Liverpool: George Philip and Son. 1895.—Algeria has of late years been increasingly resorted to by English tourists and invalids. There is no probability that it ever will have for us the political and antiquarian interest attaching to Egypt; but it is in point of time almost a week nearer to our shores, and the great extent of the country, together with the mountainous character of the interior, cause it to present some variety of climate and much diversity of natural feature. Public security is guaranteed by the strong military and civil administration which France has conducted for the last sixty years, and which has converted the piratical and turbulent natives into a law-abiding population. Algiers, the capital, is most conveniently reached from Marseilles, steamers passing each way three times a week, and covering the distance in about twenty-four hours. Mr. Harris's Guide, though of a size convenient for carrying in the pocket, contains a vast amount of information judiciously selected and well arranged. It is divided into three sections, treating respectively of Algiers itself, the environs, and the rest of the country. Each of these is elucidated by a map, that of the last section showing the whole country from Tunis to Morocco, and from the Mediterranean to the desert. Oran and Constantine are described, and also Tunis, which may be reached from Algiers either by rail or steamer. Minute directions are supplied for excursions, both by rail and diligence, to many places of interest, particular attention being given to Bliska, far to the southward, and Hammam-Meskoutine, where there are natural baths having a temperature of 203° F. As a preface the author prints a letter to himself from Lady Burton, wife of Sir Richard Burton, the celebrated explorer.

Transactions of the Clinical Society. Vol. xxvii. London: Longmans, Green, and Co. 1894.—This volume comprises the papers read and an abstract of the notes of cases shown before the society during its twenty-seventh session—October, 1893, to May, 1894. Nearly all the papers supply information about subjects (not infrequently of great rarity) of interest to the profession, whilst some suggest new methods of treatment. As might be expected, the number of surgical cases far outweighs the number contributed by the physicians, and shows in some way the progress of the surgeon's art during the year. We have published in the columns of THE LANCET abstracts of the proceedings of the society, and have also supplied notes of the discussions which have been held. In these transactions the discussions are not included; this in a majority of instances is very wise, but sometimes definite facts (not mere opinions) are contributed by members which would be useful if added for reference. The living cases shown and described by card were of uniform excellence, and the notes of them selected for publication are most useful for future reference. The book is judiciously

illustrated with chromo-lithographs and woodcuts which add to its value.
Tanner's *History of England*, *Biography*, and *History of the World*. London: Wm. and A. C. Black and Co.—Books of reference and of an almost indispensable to the general reader, a record of the numerous ramifications of aristocratic families, the changes of title caused by death and marriage, and the additions always being made, more especially in the series of the nobility. This volume, by its arrangement of its arrangement and the free use of small type, contains a large amount of information within reach of the reader, and forms a portable and convenient guide to the history of the nobility. As might be expected, the exterior is a matter of great importance.

John Johnson's.

LIQUID SULPHURETTED HYDROGEN.

In the use of gases nowadays is no more scientific than the use of liquids. Sulphuretted hydrogen has become a commercial undertaking, and is now used in large quantities for the purpose of obtaining in large quantities, but until now sulphuretted hydrogen was not a member of this category. For many years there is no more useful agent in the laboratory than sulphuretted hydrogen, and the use of sulphuretted hydrogen in the laboratory is a constant use for the determination and separation of metals. It is indispensable in the series of tests for the isolation and purification of many well-known bodies, for the separation of various acids, and for the preparation of various salts, and is prior to



the classification. Sulphuretted hydrogen is, in fact, one of the most useful reagents at the disposal of the chemist, and is used in the laboratory for the purpose of obtaining in large quantities, but until now sulphuretted hydrogen was not a member of this category. For many years there is no more useful agent in the laboratory than sulphuretted hydrogen, and the use of sulphuretted hydrogen in the laboratory is a constant use for the determination and separation of metals. It is indispensable in the series of tests for the isolation and purification of many well-known bodies, for the separation of various acids, and for the preparation of various salts, and is prior to

illustrated with chromo-lithographs and woodcuts, which add much to its value.

Whittaker's Windsor Peerage, Baronetage, and Knightage for 1895. London: Whittaker and Co.—Books of reference such as this are almost indispensable to the general reader on account of the numerous ramifications of aristocratic families, the frequent changes of title caused by death and succession, and the additions always being made, more especially to the various orders of knighthood. This volume, by the compactness of its arrangement and the free use of small type, contains a large amount of information within reasonable limits, and forms a portable and convenient guide for occasional use. As might be expected, the exterior is resplendent in scarlet and gilding.

New Inventions.

LIQUID SULPHURETTED HYDROGEN.

THE liquefaction of gases nowadays is no mere scientific possibility; it has become a commercial undertaking. Already we are familiar with liquid carbonic acid, nitrous oxide, and sulphurous acid as commercial commodities which may be obtained in large quantities; but until recently sulphuretted hydrogen was not a member of this useful category. Yet probably there is no more useful agent to the investigating chemist, the toxicologist, and the physiologist than sulphuretted hydrogen in the laboratory. It is in constant use for the determination and separation of metals, it is indispensable in the series of operations for the isolation and purification of many well-defined organic bodies, for the separation of toxins and for the purification of poisons (alkaloids, ptomaines) prior to



their identification. Sulphuretted hydrogen is, in fact, one of the most useful servants at the disposal of the chemist, analyst, and toxicologist. The convenience, therefore, of having at hand the pure gas contained in a cylinder, from which it may be steadily withdrawn, is too obvious to need further remark. Lecturers on chemistry, and especially practical chemistry, know full well the trouble and inconvenience attending the preparation of sulphuretted hydrogen from sulphide of iron by acting upon it with a dilute acid. The pure and dry gas is compressed into specially made steel cylinders, each containing one pound of liquid, equal to about eleven cubic feet of gas at atmospheric pressure. The cylinders have been tested to 1500 lb. per square inch, and the pressure when filled with liquid H_2S never exceeds 300 lb. per square inch. The valve has been especially designed for use in the laboratory. This

enterprise is due to Messrs. Baird and Tatlock, 14, Cross-street, Hatton-garden.

FLETCHER'S NON-LIGHTING-BACK BURNER.

It is evident that the use of non-lighting-back burners in gas fires is rapidly becoming the rule rather than the exception. Prior to the report of THE LANCET Special Analytical Sanitary Commission on Smoke Prevention and Perfect Combustion (III. Gaseous Fuel, Gas-Heating, and Gas-Cooking Appliances)¹ in which was pointed out the pressing need for a remedy for this defect, which is peculiar to atmospheric burners, we believe that such a device did not exist, or if it did its application was neglected in the case of gas fires, or probably it was of little practical use. Since the issue of this report we have noticed two burners, constructed in a special and slightly modified way in order to obviate this drawback. Still another example of the force and importance which makers of gas stoves evidently attached to our remarks on this defect, is afforded in the non-lighting-back burner which has recently been sent to us by Messrs. Fletcher, Russell, and Co., Limited, 115, Cheapside, E.C. In this burner the orifices are bound on either side by projecting cheeks of iron about half an inch high, while the gas itself is delivered through a gallery of slits immediately beneath the orifices and in the body of the burner, which contains the mixture of air and gas. We found on testing that the proportion of air mixed with the gas was rather less than that contained in a mixture which gives a steady, colourless, or slightly blue flame. In consequence of this, the flames exhibited white caps, but doubtless this could be easily corrected by careful adjustment of the injector. The main object, however, is secured, since all manner of attempts to cause it to light back, representing to an exaggerated degree the conditions which might obtain in practice, failed.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 25, Grosvenor-street, W., on Wednesday, Jan. 3rd. In the unavoidable absence of the President, Mr. George Pollock, Mr. T. Holmes, Vice-President, occupied the chair. The minutes of the last meeting were read and confirmed. In reference to the almost identical resolutions sent in to the Secretary of the College on behalf of the Society of Fellows and the Association of Fellows for the meeting of Fellows called for Jan. 3rd, the Chairman stated that one of the members of the Executive Council of the Society of Fellows had called on him and suggested that it would be advisable that only one resolution should be proposed, and that this motion should be proposed by a member of the Society of Fellows and seconded by a member of the Association of Fellows. The committee of the Association approved of this course and requested Mr. T. Holmes to second the resolution of which Mr. Bennett had given notice, and to communicate this determination to Mr. Bennett. Mr. Gant had written to say that the state of his health absolutely prevented him from attending the meeting of the committee and that he could not be at the College meeting on Thursday. It was therefore considered expedient that leave should be obtained to withdraw Mr. Gant's resolution at the meeting.

¹ THE LANCET, Nov. 25th, 1893.

THE Princess Louise (Marchioness of Lorne), accompanied by the Marquess of Lorne and Lady Northesk, visited the Victoria Hospital for Children, Chelsea, last week, and took part in the distribution of toys and presents to the sick children.

THE LANCET.

LONDON: SATURDAY, JANUARY 12, 1895.

WHEN the Council of the Royal College of Surgeons of England fixed the first of the half-yearly meetings of the Fellows of the College for the first Thursday in January we anticipated that there might be some difficulty in securing and maintaining a quorum, especially if the business to be transacted proved to be of an uninteresting or uneventful character. That there were good grounds for these anticipations was shown at the commencement of the meeting of Fellows held on the 3rd inst. at 4 P.M. in the theatre of the College, an account of which appeared in our second edition last week. Some minutes elapsed before the quorum of thirty was obtained and the attendance never rose to fifty. Most of the Fellows who came, however, stayed to the end of the proceedings, the agenda containing topics of considerable interest and importance both to the Fellows and to the profession at large. The first item of the programme was the formal report to the Fellows of the answer of the Council to the resolution adopted at the last meeting of Fellows requesting the Council to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President. Mr. HULKE, the President, who occupied the chair, reported that on July 30th the Council adopted the following resolution: "That the Council are not prepared at the present time to consult the Fellows or solicit their opinion through other means than the meetings of Fellows. They, however, point out that if any Fellow is anxious to test the opinion of the general body as to whether it is desirable to make any change in the present mode of election of the President it is open to him to submit a motion on the question to the meeting of Fellows in January or subsequently." No one rose at the moment to make any comment upon this reply; it was received *sub silentio*. In THE LANCET of Dec. 29th, 1894, we took occasion to demonstrate the fallacy involved in the latter part of this answer to the resolution of the Fellows, and expressed our regret that the Council had not complied with their request and undertaken the canvass of the Fellows in regard to the mode of election of President. Our words found an echo in more than one quarter at the meeting in connexion with the results of the canvass made by the Society of Fellows and reported by Mr. HERBERT PAGE.

This canvass embraced those Fellows only resident in Great Britain. A thousand voting papers were sent out, and 468 papers were returned, but for some cause or other 50 of these proved to be useless. Three alternatives as to the mode of election of the President were submitted to the Fellows—viz.: (1) election of the President by the Fellows, (2) nomination of the President by the Council and election by the Fellows, and (3) election of the President by the Council as now provided for by the Charters of the College. Of the 418 replies, 112 were in favour of election by the Fellows, 156 preferred nomination by the

Council and election by the Fellows, and 150 were satisfied with the present mode of election by the Council. Mr. HERBERT PAGE, who urged the Council at the meeting of the Fellows in July last to canvass the Fellows on the mode of election of the President and to abide by the decision whatever it might be, gave it as his opinion that the poll showed that the great body of Fellows did not desire any alteration in the present mode of election, and that no change ought to be made. It was pointed out, however, by Mr. RIVINGTON, and subsequently by Mr. VINCENT BELL of Rochester and Mr. HOLMES, that, so far as the poll went, it exhibited a considerable majority in favour of election of the President by the Fellows either directly or after previous nomination by the Council, and that if the canvass had been undertaken by the Council the majority would in all probability have been considerably larger. As the numbers at present stand it will be seen that of 418 Fellows 268 are in favour of the Fellows electing the President and 150 in favour of the present mode of election. This may be construed to show a substantial preponderance of opinion in favour of a modification in the present mode of election.

The main argument for the present method is that the Council have the best opportunities of judging of the fitness of their colleagues for the office of President; whilst the upholders of election of the President by the Fellows, aspiring as they do to share in the life of the College, regard the election of the President by the Fellows as a higher honour to the selected candidate than election by the 24 Fellows who constitute the Council. The middle course—nomination by the Council and election by the Fellows—would satisfy the legitimate aspirations of the Fellows and would obviate the objections of some that election directly by the Fellows might result in the elevation of a candidate not well qualified to preside at the Council and the College meetings, and to transact the business devolving upon the President.

At the conclusion of the discussion on the result of the canvass of the Fellows in reference to the mode of election of the President Mr. W. H. BENNETT, on behalf of the Society of Fellows, moved, and Mr. HOLMES, on behalf of the Association of Fellows, seconded, the following resolution: "That the Council be requested to appoint a conjoint committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new Charter together with the details thereof." The reasons given in favour of the resolution by the two speakers were curiously dissimilar. Mr. BENNETT spoke as if he rather courted a decision against the expediency of the Council applying for a new Charter at all; whilst Mr. HOLMES spoke as if there could be no question of the necessity for a new Charter for the advantage alike of the Council, the Fellows, and the Members of the College. Mr. BENNETT rejoices in the thought that the days of antagonism between any number of the Fellows and the Council are gone never to return, and is anxious for finality whatever the issue of the present application of the two societies may be. Mr. HOLMES disclaims the idea altogether that any antagonism has prevailed, and regards the formation of a joint committee of the Council, Fellows, and Members of the College

THE LANCET.]

THE BATTLE OF THE MEDICAL

is an announcement of an act of progressive action in the public and profession of the great corporation of which he is so worthy a member. It may be that in the deeper lines in which the resolution was presented the meeting had some effect upon the division, for 22 were in favour and 14 voted against it. This, however, is at once due to two, and whatever the answer of the Council for up it is plain that the fulfilment of the legitimate aspirations of the Fellows and of the Members of the College cannot be delayed for any lengthened time.

It is a question of the balance between honourable and humane motives in the fighting against the supporters of the abuse of the medical system proceeds. It is pitiable to see a great number driven to assert its rights in this fashion; but it is the lack of the profession. For a long time it has been the unwilling victim of its own willingness to befriend the one it has almost come to be believed that its aid is a not without terms and that others may be assisted in the same way. If it is undignified in a medical man to come for remuneration before answering a call to an emergency or case of disease, it is mean on the part of those who are likely to require his services not to treat him as he deserves, and in doing so to estimate justly his value. It may seem a light matter to ask a medical man to write a prescription, to visit a patient, to set a bone, or to see a woman safely out of the dangers of childbirth. Those who judge so do not think at all. They refer to the elements of character that go to make of a medical practitioner, or the years of study, or the innumerable individual cases and circumstances. The man of high calibre are the elite of the working classes. They are now what good medical attendance is and what it was. Many of them make the best private patients of the medical practitioners of a neighbourhood. If it were not for the medical man less than some of his richer neighbours they are not the less esteemed. This, after all, is the proper form of medical attendance for rich and poor. It is the better both for families and practitioners. Medical men in clinics, and still worse in medical aid associations, are a more or less treatment in the lump and in a way that ought to be restricted severely to classes to whom it is a real accommodation. The more it is so the better will it be for those who remain to be considered. To effect such restriction is the aim of the medical man of Cork at the present crisis, and in their efforts they would have the assistance and co-operation of every member of the medical profession. It is to be said that while there is unanimity in Cork in the medical men, strangers from without are ready to delegating several of the proceedings on Jan. 1st at a meeting of the St. Luke's Mutual Benefit Society. It is and it is to be said that a great deal of good feeling came out of the meeting of a letter to the secretary of the St. Luke's Mutual Benefit Society from its medical officer, Mr. G. L. L. L., intimating that unless the society's labours were to be able to do more for the medical profession, the society would have to be reformed, with great consideration.

as the commencement of an era of progressive usefulness to the public and profession of the great corporation of which he is so worthy a colon. It may be that the divergent lines on which the resolution was presented to the meeting had some effect upon the division, for 22 voted for it and 14 voted against it. This, however, is at least three to two, and whatever the answer of the Council may be, it is plain that the fulfilment of the legitimate aspirations of the Fellows and of the Members of the College cannot be delayed for any lengthened time.

THE contest in Cork between honourable and humane medical men fighting against the supporters of the abuse of the club system proceeds. It is pitiable to see a great profession driven to assert its rights in this fashion; but it is not the fault of the profession. For ages it has been the unrelenting victim of its own willingness to befriend the poor, till it has almost come to be believed that its aid can be had without terms and that others may be assisted in the same way. If it is undignified in a medical man to stipulate for remuneration before answering a call to an emergency or case of disease, it is mean on the part of those who are likely to require his services not to treat with him beforehand, and in doing so to estimate justly his claims. It may seem a light matter to ask a medical man to write a prescription, to visit a patient, to set a limb, or to see a woman safely out of the dangers of childbirth. Those who judge so do not think at all. They fail to remember the elements of character that go to make a good medical practitioner, or the years of study, or the thought for individual cases and circumstances. The members of clubs are the *élite* of the working classes. They know what good medical attendance is and what its value. Many of them make the best private patients of the best medical practitioners of a neighbourhood. If they pay the medical man less than some of his richer patients they are not the less esteemed. This, after all, is the proper form of medical attendance for rich and poor. The more of it the better both for families and practitioners. Treatment in clubs, and still worse in medical aid associations, is more or less treatment in the lump and in a crowd. This ought to be restricted severely to classes to whom it is a real accommodation. The more it is so restricted the better will it be for those who remain to be so attended. To effect such restriction is the aim of the medical men of Cork at the present crisis, and in their efforts they should have the assistance and coöperation of every member of the medical profession.

We regret to say that while there is unanimity in Cork among the medical men, strangers from without are ready to take the vacated places. The *Cork Constitution* gives an interesting account of the proceedings on Jan. 1st at a meeting of the St. Luke's Mutual Benefit Society. It is pleasant to be able to say that a great deal of good feeling and common sense characterised the proceedings, which began with the reading of a letter to the secretary of the St. Luke's Mutual Benefit Society from its medical officer, Mr. PHILIP G. LEE, intimating that unless the society accepted the new rules he would cease to act as their medical officer after Jan. 1st, but agreeing, with great consideration,

to act for a month in order that no member should suffer inconvenience. Nothing could be more satisfactory than the way in which the members spoke of their medical officer, whom they evidently appreciate. One of the members, Mr. HOSKINS, while denouncing the rules as infamous, declared he never knew a medical man for whom he had more regard than he had for their own. Strange that it should not strike Mr. HOSKINS that such a man would be the last to agree to "infamous rules." Sir JOHN SCOTT, in speaking, paid a high tribute to the medical men of Cork, and expressed himself in favour of seizing any chance of an amicable arrangement. Several speakers intimated that the medical men were willing to meet delegates from the club. In the end it was resolved unanimously to advertise for a medical officer, and the secretary was instructed to advertise in Dublin, Cork, and Belfast. But, as we have already said, there is a danger of the medical officers being supplanted by strangers. At this very meeting it was intimated by Mr. PRITCHARD that "there was a medical officer in the town now who was willing to do duty for that society or any other in town free for the present, and if he was not appointed he was willing to give up the society to any medical man that was appointed." Similar intimations were made in several other societies. At the Church of Ireland Young Men's Mutual Benefit Society a medical officer with numerous qualifications was unanimously elected. At St. Finn Barre's Mutual Benefit Society on the same day, Dr. MAGNER having resigned, it was resolved to advertise, the gentleman above referred to to take charge in the meantime. At a meeting of Joe Ronayne's Branch of the Irish National Foresters, in place of Dr. MAGNER, resigned, a medical gentleman, "late of London," was elected to the vacancy. We can only leave these gentlemen to their own reflections. They are acting within their legal rights, but it is acting disloyally to their profession and its best interests. It will never be a consolation to them to reflect that at a great crisis in the medical profession in Cork they took the wrong side. They cannot make an excuse either the hardship of the poor or the unreasonableness of their medical brethren. They are dissociating themselves from men who stand high in the opinion of their patients and who are fighting the true battle of the profession.

We cannot believe that the leaders of the clubs in Cork will think by such offers of temporary help that they are doing the best for the members. A medical man cannot be displaced by the first comer who offers himself. Good mechanics of tried service cannot be disposed of in that way by any good employer, and a medical man is much more than a mechanic. We are glad to learn that the medical men are willing to meet delegates of the clubs and are showing a conciliatory disposition. Any reasonable concessions should be made; but the main demands of the medical men are reasonable and should be pressed. The writer of a letter to the same issue of the *Cork Constitution* signing himself "Often Puzzled" maintains that the ordinary charges of Cork medical men are higher than those of English practitioners. He maintains that if fees are properly tabulated and regulated according to the means of the patient, estimated on rental, many will leave the clubs and become private patients. We fancy there can be little doubt

that in Ireland two causes have contributed to derange the proper relations of medical men to the public. One is the dispensary system, making it too easy to get attendance for nothing; the other is an ideal system, according to which every practitioner is to charge the traditional fee of one guinea per visit. There is room between these extremes for the mass of the people to be attended on terms neither impracticable to the patient nor unjust to the medical practitioner. The present crisis should end in the definition of such terms and strangers should withdraw.

LONDON has now for many years had to consider methods of collection and disposal of its house refuse, questions which have been full of difficulty since the time when this refuse had a distinct monetary value. In former times, when building operations were carried on in the metropolitan area to a much greater extent than they are now, contractors were willing to make terms with parish authorities for the privilege of collecting and disposing of refuse which are impossible under the altered conditions of the present day. In those days the manufacture of bricks gave ample opportunity for the utilisation of the "breeze," and in much greater degree than at present the "soft core" could be used for the fertilisation of the soil, and other components of the refuse could be turned to profitable account. As time went on, and the value of the refuse diminished, the contractors demanded larger and larger sums for its removal from houses, until sanitary authorities have been left to determine the question whether its destruction by fire is not the most economical procedure. The quantity of this material which has to be removed, and the manner in which it may best be burnt, may be learnt from a report issued in 1893 by the medical officer and engineer of the London County Council. This report was evidently prepared with the intention of putting the Council in a better position to insist on the more effectual scavenging of London. Contractors had in some instances become negligent; refuse, at periods when it could least be utilised, was left to create nuisance in houses, and sanitary authorities had only in some districts the enterprise to organise arrangements of their own, which made them independent of the contractor's natural desire for profit.

A report has just been issued by the County Council's medical officer which is a proper sequel to that to which we have referred. It contains a summary of reports by Dr. C. W. F. YOUNG, assistant medical officer of health, on the collection and disposal of refuse by London sanitary authorities. This summary contains much matter of considerable interest, and the London County Council have done a useful piece of work in making the results of their officer's inquiries generally available. Considering first the methods of disposal, the report points out that in twenty-five districts the sanitary authorities themselves collect the refuse without the employment of a contractor. In the case of six only of these authorities is the refuse subsequently manipulated in dust-yards in London—in all other cases it is either destroyed by fire or removed by barge or rail beyond the limits of the county. Evidently, therefore, sanitary authorities are not

disposed to enter upon the precarious business of endeavouring to turn the disposal of the refuse to profitable account in London. If it has any value in their hands, this can be as well or better secured by its immediate removal into country districts, and this is evidently the course which is suggested to any authority desiring to free London from the nuisance which attends the accumulation of large quantities of house refuse in its midst. The refuse of fourteen districts still employing contractors is manipulated in whole or in part at dustyards within the county. This may be due either to the better opportunities which the contractor possesses for the profitable utilisation of the refuse in London, perhaps in connexion with building operations; but it may also in part depend upon insufficient recognition of the disadvantages which attach to the existence of dustyards in a crowded city. It is probable that at no distant time the contractor will feel the weight of the by-laws of the London County Council relating to the carriage and disposal of offensive matter, and that the remaining yards in which house refuse is manipulated will gradually disappear from the metropolis. Dr. YOUNG's report shows that the employment of machinery is in these yards replacing the old system of hand sorting, and certainly no one familiar with the business of hand-screening carried on in the dustyards will regret this change. The spectacle of women standing up to their waists in dust, holding the sieves into which spadeful after spadeful of refuse is thrown is one which is not easily forgotten by the spectator. With the cleaner operations of machinery there has been more regard than formerly for the health and comfort of the workpeople. Waterclosets have generally been provided, and in particular instances, although only exceptionally, lavatory accommodation and rooms for meals.

The subject which most affects the comfort of the householder is the removal of refuse from his premises. Dr. YOUNG's report gives an account of the arrangements adopted in each district, and certainly on paper these arrangements in many districts do not appear open to objection. In the working, however, there is much to be desired. The claim made by sanitary authorities that dust is removed from every house once a week is often found in practice to mean that carts perambulate the street and the householder has the opportunity, if he hears the dustman's cry, to call him to his aid. To test the value of the scavengers' operations an inspector was employed by the Council to make a house-to-house inquiry, and the actual results were learnt by visits to some thousands of houses. Londoners, who know the difficulties they experience, will not be surprised that the Council's medical officer urges that the scavenger should call at every house at least once a week and that nothing short of such a system will effect the much-needed weekly removal of house refuse. We note with satisfaction that the publication of this report is not the only result of Dr. YOUNG's inquiries. The Council have already addressed themselves to sanitary authorities in cases where their administration needs amendment. They will no doubt persevere in the work which they have undertaken, and at no distant time it may be hoped that householders in London will find that their dustbins are emptied with as much regularity and certainty as the report demands.

THE LANCET

For Members of the Medical
and Orphans who

ALMONERS

THE PRESIDENT OF THE ROYAL CO

THE PRESIDENT OF THE ROYAL CO

THE PRESIDENT OF THE GENERAL

THOMAS WAKLEY, F.R.C.S. Eng.

THOMAS WAKLEY, Jun., L.R.C.P. Lond

HON. AUD

SIR HENRY PITMAN,

The FUND will be provided year by year in the
by the Proprietors of THE LANCET, and admini
some pecuniary assistance to Medical Men, or
by the grant of money by way of
the various cases may require.

Applicants must satisfy the Almoners of the F

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qualifications—that is to say: (a) That the applicant
be taken into pressing need of immediate pecuniary
previous to the date of application, legitimately depe
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Secure the utmost despatch, the "Application For
shall be in an envelope superscribed "THE LANCET
THE LANCET Offices, Strand, London, W.C.

The application should be accompanied by two sep
from any other resident Minister of religion, and
that the application addressed to the Almoners
and that they believe the statement to be per
technical inquiry.

THE LANCET RELIEF FUND.

*For Members of the Medical Profession and their Widows
and Orphans when in Distress.*

—:O:—

ALMONERS.

THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE PRESIDENT OF THE GENERAL MEDICAL COUNCIL.

THOMAS WAKLEY, F.R.C.S. Eng.

THOMAS WAKLEY, Jun., L.R.C.P. Lond.

HON. AUDITOR.

SIR HENRY PITMAN, M.D. Camb., F.R.C.P.

—:O:—

THIS FUND will be provided year by year in the month of January to the amount of at least £300 solely by the Proprietors of THE LANCET, and administered free of cost, for the purpose of affording immediate pecuniary assistance to Medical Men, or their Widows and Orphans, *in cases of Distress and Emergency*, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

Applicants must satisfy the Almoners of the Fund that they are qualified under the following regulation:—

- * “The recipients shall be such persons as satisfy the Almoners that they possess one or other of the following qualifications—that is to say: (a) That the applicant holds a registered medical qualification, and that he has fallen into pressing need of immediate pecuniary relief; or (b) That they are persons who have been, previously to the date of application, legitimately dependent upon some person holding a registered medical qualification, and that they have pressing need of immediate pecuniary relief.”

To ensure the utmost despatch, the “Application Form” upon the other side should be filled up and forwarded (in an envelope superscribed “THE LANCET Relief Fund”) to the Secretary, Mr. EDWARD DAVIES, THE LANCET Offices, Strand, London, W.C.

The application should be accompanied by two separate testimonials, one from the Clergyman of the Parish or other resident Minister of religion, and one from a registered Medical Practitioner, stating—that the application addressed to the Almoners has been read, how long they have known the applicant, and that they believe the statement to be perfectly truthful, and such as may be acted upon without further inquiry.

Private and Confidential.

No.

APPLICATION FORM.

To the Almoners of the Lancet Relief Fund.

The applicant should here state shortly :—

1. The nature of the emergency that has arisen.

—

—

2. The circumstances out of which it has arisen.

—

—

3. The amount of the grant desired, and whether by way of loan (free of interest) or of gift.

—

—

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4. If by way of loan, state when the loan will be repaid; and from what source the funds to repay it are expected to be forthcoming.

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1. Whether the applicant is entitled or able in the circumstances to receive the grant; and if so, what is the expected nature and extent of the emergency.

2. Whether the applicant is receiving, or has received, any other assistance from any source.

3. State how the applicant is qualified to receive the grant.

4. Particulars of:

Applicant's age

Number in family

How many are self-supporting

How many are partially dependent

How many wholly dependent

Applicant's Signature

Address

Date

5. Whether the applicant is entitled or able in the circumstances which have arisen to look to any other source assistance ; and if so, what is the expected nature and extent of such assistance.

6. Whether the applicant is receiving, or has received during the past six months, pecuniary aid from any Medical Charity.

7. State how the applicant is qualified to receive assistance ; vide regulation* on first page.

8. Particulars of :

Applicant's age

Number in family

How many are self-supporting

How many are partially dependent

How many wholly dependent

Applicant's Signature

Address

Date _____

Annotations.

"Ne quid nimis."

THE REGIUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF OXFORD.

To most the appointment of Professor Burdon Sanderson, F.R.S., as Regius Professor of Medicine in the University of Oxford will come as a foregone conclusion. His scientific record is not only unparalleled among medical men, but would be hard to parallel in spheres of wider rivalry, while he possesses to an eminent degree the qualities that most aptly pertain to the University professor. Professor Burdon Sanderson's public work has been of the most valuable sort. He has been employed by the Government to make investigations upon such different subjects as cattle plague, cerebro spinal meningitis, and the influence of heat on the health of miners; and twelve years ago he sat on the Royal Commission on Hospitals for Infectious Diseases, and quite recently on that appointed to inquire into the question of a Teaching University for London. But it is as a physiologist that he makes his recognised claim to celebrity, and we may be excused to medical readers from detailing his well-known work. It is as a physiologist also that he has been elected to the new post, and in this sense the appointment is a departure. But it is a departure that can be thoroughly well justified, for by as much as it is the boast of the followers of modern medicine that their practice is founded upon and developed from scientific principles, by so much must the tried worker in pure physiology be the fit person to become the great exponent of practical medicine. We congratulate Professor Burdon Sanderson upon his appointment, laying stress upon the fact that it comes very distinctly as a reward of merit, seeing that he has already served fourteen years as an Oxford professor of less exalted degree; and we congratulate the University upon securing for what is naturally in our eyes one of the most important professorial chairs, a man who is able to fill it.

THE SUPPORT OF HOSPITALS.

CONSIDERABLE attention has been drawn to the unsatisfactory state of the finances of Charing-cross Hospital, and a cursory glance at the seventy-third annual report shows that the debt of the hospital has increased during the preceding twelve months from £5394 1s. 7d. to £11,392 5s. 7d. The governors, in face of this alarming fact, as may be imagined, have been compelled to announce that the time was rapidly approaching when the hospital should not be allowed to exist on the generosity of its bankers. The cost and method of administration of the charity do not explain this serious depreciation, but legacies show the huge deficit of £6000 as compared with the previous year. The general financial depression adds greatly to the embarrassment which Charing-cross Hospital so severely feels, while the new scale of death duties can hardly fail to adversely affect in the future the revenue of all charities; for when a man of means has to provide for the loss of a large sum at his death his charitable subscriptions are usually the first to cease. We use Charing-cross Hospital as a text, but it is well known that many other institutions are in a similar pecuniary plight. The general and colossal apathy of the vast bulk of the public concerning the support of hospitals is due in part to ignorance and in part to the enormous amount of work of national importance done unostentatiously and gratuitously by the medical profession. When we reflect that a hospital, with a medical school attached, is not only a place where disease and suffering are cured and

alleviated, but where disease is studied and knowledge of it improved, where medical men are educated for the good of the nation at large, we can easily see of what vast importance to the nation these institutions are. It has recently been pointed out in our columns that the medical and surgical teachers at the London hospitals alone, by their practically gratuitous work in educating students, present something like £200,000 to an opulent nation annually; but how few of the public know or think about these things? The patient who blesses his medical attendant for saving his life little reflects that his skill was acquired in the wards of a hospital possibly on the point of closing for want of funds. In short, the financial condition, not of Charing-cross Hospital only, but of many other similar institutions, might readily serve as a text to open up the very large subjects—subjects growing in urgency and soon to burst into unrestrainable prominence—the support of our teaching hospitals and the *raison d'être* of so much gratuitous medical work. Charing-cross Hospital is not large, and its beds are comparatively few. The useful work it does is undeniable, and its medical school performs excellent service in the training and education both of medical men and of dental practitioners. It would be little short of a disgrace to the richest city in the world if such an institution had to close its wards for want of funds.

DEATHS IN LAUNDRIES.

THE appalling loss of life through the fire at a French laundry establishment in the Edgware-road afforded both the coroner and the jury who held an inquest on the bodies of the eight victims at Marylebone an opportunity of urging that laundries should be brought under the operation of the Factory Act. It was only the other day that a man died in consequence of an accident and of the weakness resulting from overwork in a Battersea laundry. The coroner's inquest held on that occasion revealed a state of things which, as we remarked at the time, would not have existed had the Factory Act applied to laundries. Now, in the Marylebone district we find a very extensive laundry business carried on in two private houses, 412 and 414, Edgware-road. Between forty and fifty persons were employed on the premises. Surely this was to all intents and purposes, if not a factory, at least a workshop, and as such should have been rigorously inspected. The mistress of the laundry and seven assistants slept on the establishment. These eight persons lost their lives in the fire. It appears that they were in the habit of retiring to rest in the upper part of the house, while below linen was hung out to dry in rooms where four stoves were left burning. That the linen might fall on these stoves and ignite was evidently foreseen, as, with one exception, there was a wire protection over the stoves. Perhaps the one unprotected stove was the cause of the fire; in any case, had the laundry been under the Factory Act more effective precautions would doubtless have been enforced by the factory inspector. At the inquest the coroner, Dr. G. Danford Thomas, said he had held an inquest at Islington only the previous day upon a man who had been decapitated at a steam laundry; and Mr. Cameron, one of Her Majesty's inspectors of factories, who then watched the proceedings on behalf of the Home Office, said that he thought it very desirable that laundries should be included in the Factory Act. In this opinion the coroner thoroughly concurred. The Marylebone jury in their verdict on the Edgware-road fire stated that they were of opinion, and recommended that all laundries should be placed under the provisions of the Factory Act. It has been urged that only laundries where steam power and machinery are employed should be included in the Factory Act. We are glad to note that the jury in their

recommendation wished to see the Act enforced in all laundries. Though forty or more people were employed at the Edgware-road laundry, it appears that there was no machinery, and consequently such establishment would escape inspection if all laundries are not subjected to the proposed extension of the Factory Act. From the above it will be seen that within a month coroners' inquests have been held with respect to the loss of human life in three different London laundries. This is evidence of a sufficiently startling and dramatic character to enforce our contention that laundries must be brought under the Factory Act. Yet this is nothing as compared to the enormous loss of human life which is brought about slowly, without any attending dramatic circumstances and publicity, through the life-wasting, insanitary conditions under which much of the laundry work is done.

CLUB TOWELS.

It is the general practice in the better-class clubs to provide an unlimited supply of towels. Each time a member washes his hands he uses a clean towel. As a rule, in wiping his hands once the towel is barely, if at all, soiled. It cannot be expected that under these circumstances the towel will be properly washed. There is nothing to wash. It suffices to dip the towel in some water, to dry and iron or mangle it, and to all appearances it is again fit for use. Would such a perfunctory performance suffice to cleanse a towel? Indeed, it raises the suggestion whether towels used in restaurants, clubs, &c., should not be disinfected as well as washed. Of course we presume that no one would knowingly go to a club while suffering from an infectious disease; but it sometimes happens that a person is in an infectious condition without being aware of the fact. Moreover, infection of towels may occur, and it would be much more satisfactory to know that they were thoroughly disinfected as well as scalded and scrubbed. Boiling water may be considered an excellent disinfectant. If in the light of modern bacteriology the immersion of linen in boiling water during the process of washing may not always be of sufficient duration to destroy every known germ, the boiling of linen nevertheless does afford a certain degree of protection against the seeds of disease; but the towels of high class clubs are generally so clean when sent to the laundry that they are apt to receive less than the usual amount of scrubbing and boiling. There is a virtue after all in dirt if it ensures a thorough cleansing, and a really dirty towel is likely to be more thoroughly washed and cleansed than a comparatively clean one.

RESPONSIBILITY OF DISTRICT SURVEYORS.

SOME correspondence which has recently passed between Mr. J. Galloway Weir, M.P., on the one side, and the Home Secretary and the President of the Local Government Board, on the other side, goes to show that the district surveyor is in the enviable position—or unenviable, as the case may be—of exercising a jurisdiction from which there is no appeal. To suggest that the control of an appellate court may be an advantage to the authority controlled may at first sight seem to savour of affectation. But a little reflection will show that district surveyors are in a position to be very specially exposed to the attack of improper influences if they are understood to be the depositories of an uncontrolled power. To an upright man nothing is more disagreeable than to have to be constantly repelling improper advances; but that is probably the penalty of such greatness as we have referred to. The sooner, therefore, that an official superior can be found for the district surveyor the better it will be both for him and for the public. Mr. Weir, whose complaint had reference to the deconstruction of some houses in London, addressed first of all to the London County Council, but

his remonstrances led only to a disclaimer on the part of that body of any responsibility for the acts or omissions of the district surveyor. Their correspondent, appealing next to the Home Office, was informed that the Home Secretary had no jurisdiction; and we see from a notice of this correspondence in the pages of our evening contemporary, the *Pall Mall Gazette*, that the Local Government Board is said to have taken a similar attitude. It may be, of course, that Mr. Weir has not yet applied in the right quarter for redress; but, at least, he has given himself no small amount of trouble, and it cannot be doubted that the machinery—which, with all his industry, he has failed to set in motion—is useless for practical purposes. When it is considered how important are the duties which district surveyors undertake, how large the confidence which Parliament and the public repose in their integrity and energy, and how insidious and far-reaching the consequences of their misconduct or mere neglect may be it becomes at once evident that some more effective discipline than is at present available is required for the perfecting that branch of the public service which it is their province to administer. If further legislation be necessary let us have it, and the sooner the better; but in the meanwhile cannot some one of the departments which have satisfied themselves that they do not possess the jurisdiction inform us to whom to go?

KITCHEN BOILER EXPLOSIONS.

IN spite of the occurrence of several catastrophes which were due to the sharp visitation of frost just exactly a year ago there have been no practical official investigations since made into the causes of kitchen boiler explosions, and there will be little reason for surprise, therefore, if any increase in the severity of the weather which we are experiencing at the present time should result in a similar series of disasters. The urgent necessity of amending the Boiler Explosions Act of 1881, so as to bring within its operations the explosions of kitchen boilers, is especially evident when regard is had to the fact that the number of fatalities and cases of personal injury due to such occurrences exceeded considerably the number of those accounted for by all the explosions of ordinary steam boilers throughout the United Kingdom during 1893. There is now no reason why legislation should not be brought to bear immediately upon the management of domestic hot-water appliances, since there is no longer any obscurity surrounding the cause of these explosions. On this point there was a large diversity of opinion, and in the interests of the public safety we ourselves gave some attention to the subject and expressed our views in the columns of *THE LANCET*.¹ Although we freely admit that these views were based in a measure on theoretical considerations, yet it was a source of considerable satisfaction to us to learn, as we have since learned, that the publication of these opinions led to a complete ventilation of the subject in the lay and technical press; but even in the ideas expressed in the latter, we should observe, there was by no means an absolute accordance of opinion. Speculation has at length yielded to the teaching of practical observation in the results of a very interesting and conclusive series of experiments carried out under the evidently able instructions of Mr. R. D. Munro, M.I.M.E., the chief engineer to the Scottish Boiler Insurance and Engine Inspection Company, Limited, Glasgow and Manchester. The highly instructive and practical results of this really important investigation are embodied in a *brochure*, a copy of which has recently reached us.² Mr. Munro's tests were eminently practical³

¹ THE LANCET, Jan. 13th, 1894.

² Kitchen Boiler Explosions: Why they Occur and How to Prevent their Occurrence. By R. D. Munro, M.I.M.E. London: Charles Griffin and Co., Limited, Exeter-street, Strand. 1895.

and every conceivable and possible cause of kitchen boiler explosions was investigated. Briefly, his conclusions are drawn from the fact that the explosion of a domestic boiler is not a mystery about the explosion of a domestic boiler, but that the theory which creates an unknown and highly explosive gas for this purpose is absurd, and that it is equally erroneous to believe that these boilers burst suddenly by the sudden generation of steam consequent upon water being introduced when they are red-hot. Domestic boilers cannot burst disastrously unless they contain a store of highly heated water immediately prior to a rupture occurring, and the damage which they are capable of causing is in proportion to the quantity of hot water. In this respect they resemble ordinary steam-boilers, and their safety can only be secured by being so equipped and treated as such. As to prevention, we maintain "a safety valve is the simplest and most efficient preventive of over-pressure, and if properly constructed and placed it is less liable to stoppage than any other pressure-reducing or relieving device." The valve should be arranged so as to be free from rust and dirt and also quite accessible for examination. It may be placed in a small room at the back of the fireplace. We strongly recommend that the notice of householders. It is simply and clearly written and contains not a single paragraph which will not be read with profit and instruction. As it has been expressed in the disease is now understood and remedy has been found, and it only remains, we may add, to apply the wisdom in the suggestion, which should be presented to the Board of Trade, that just as boiler-makers are made to incur a responsibility under the Boiler Explosions Act, so hot-water engineers should be made responsible when they fail to fit up boilers and their contents in a safe and efficient manner. We trust this notice will receive the serious consideration which it merits.

SERO-THERAPY AND SANITATION.

In the result of a tour through the great cities of England and Scotland Dr. Angelo Celli, Professor of Hygiene in the University of Rome, put on record his opinion that in all cases of sanitary regulation and hospital equipment Italy will have behind the British Isles. The fact is admitted that the Italian Hygienist's companions, and that we are not far to seek. One of them is the necessity of the slow, prosaic methods of sanitary precaution and a belief, almost medieval, in the power of drugs. This superstitious reliance on "pharmaceutical" to health accounts for the fact that even the most experienced agents in the pharmacopoeia have been found to be defective in public hospital or private practice. So defective are these in the elementary control of useful life—viz., prompt and thorough removal of the pure water supply, and fresh air. The recent introduction of the modern treatment of diphtheria illustrates this point. In Italy—and, indeed, to a large extent in France—methods of combating disease. While in Great Britain, as applied to diphtheria, is still the case of careful induction and cautious application to the cases of the "sovereign remedy" or "specific" which with its "antitoxin" is hailed. Let the case dip into any lay journal south of the Alps, and you will find towns and cities and communes, hitherto regarded, mischievously large sums to send young physicians and health officers to Paris or Berlin to study the science of sero-therapy, and to bring home plentiful supplies of serum for immediate use. Populous centres, still, are to take their drinking water from wells sunk in

and every conceivable and possible cause of kitchen boiler explosions was investigated. Briefly, his conclusions are that there is no mystery about the explosion of a domestic heating boiler, that the theory which creates an unknown and highly explosive gas for this purpose is absurd, and that it is equally erroneous to believe that these boilers burst *disastrously* by the sudden generation of steam consequent upon cold water being introduced when they are red-hot. Domestic boilers cannot burst disastrously unless they contain a store of highly heated water immediately prior to rupture occurring, and the damage which they are capable of causing is in proportion to the quantity and heat of the water. In this respect they resemble ordinary steam boilers, and their safety can only be secured when they are equipped and treated as such. As to preventive measures, "a safety valve is the simplest and most effectual preventive of over-pressure, and if properly constructed and placed it is less liable to stoppage than any other provision yet suggested or applied." The valve should be so situated as to be free from soot and dust and also quite accessible for examination. It may be placed in a small case set into the back of the fireplace. We strongly recommend this little book to the notice of householders. It is sensibly and clearly written and contains not a single paragraph which will not bared with profit and instruction. As Mr. Munro expresses it, the disease is now understood and the remedy has been found, and it only remains, we may add, to apply it. There is wisdom in the suggestion, which should be represented to the Board of Trade, that just as boiler-makers are made to incur a responsibility under the Boiler Explosions Act, so hot-water engineers should be made liable to penalties when they fail to fit up boilers and their connexions in a safe and efficient manner. We trust this matter will receive the serious consideration which it demands.

SERO-THERAPY AND SANITATION.

As the result of a tour through the great cities of England and Scotland Dr. Angelo Celli, Professor of Hygiene in the University of Rome, puts on record his opinion that in all aspects of sanitary regulation and hospital equipment Italy is 200 years behind the British Isles. The fact is admitted by others of the Italian hygienist's compatriots, and its causes are not far to seek. One of them is undoubtedly an impatience of the slow, prosaic methods of sanitary precaution and a belief, almost mediæval, in the power of drugs. This superstitious reliance on "royal roads" to health accounts for the fact that even the most unquestioned agents in the pharmacopœia have not a fair chance in Italy, whether in public hospital or private dwelling, so defective are these in the elementary conditions of healthful life—viz., prompt and thorough removal of refuse, pure water-supply, and fresh air. The recent introduction of the antitoxin treatment of diphtheria illustrates this weak side in Italian—and, indeed, to a large extent in Continental—methods of combating disease. While in Great Britain sero-therapy, as applied to diphtheria, is still the subject of careful induction and cautious application to practice, in Italy and other European States it has been welcomed at once as a "sovereign remedy" or "specific," and the causes of the "bane" itself are forgotten in the enthusiasm with which its "antidote" is hailed. Let the reader dip into any lay journal south of the Alps, and he will find towns and cities and communes, hitherto so poor as to leave their drainage and water-supply neglected, subscribing large sums to send young physicians and health officers to Paris or Berlin to study the *rationale* of sero-therapy, and to bring home plentiful supplies of the serum for immediate use. Populous centres, still content to take their drinking water from wells sunk in

the subsoil or to let their sewage stagnate in antiquated drains *en route* to the stream that flows past them, grudge no expense in procuring the "anti-diphtheritic elixir," as it has been called. The same readiness to lose sight of prevention in the eager hunt for cure has, indeed, been witnessed abroad in other diseases besides diphtheria—the discovery of this or that "bacillus" and its putative counter-agent being quite enough to arrest or discourage every effort to check the malady in question at its source. We have in all this an example of the slow progress made by rational medicine in countries that have not yet cast the slough of mediæval tradition—an imperfect realisation of the etiology of disease; a practical ignorance of medicine as a branch of nature study; a hugging of the chains of scholastic "system" in forgetfulness of the lines on which the healing art was laid by the Father of Medicine himself. Sero-therapy has, doubtless, a great future before it, and in other maladies besides diphtheria, but its introduction would be a doubtful blessing if, as in Southern Europe, it caused a neglect of the rudimentary conditions of health summed up 3000 years ago in the Hippocratic *περὶ ἀέρος, ὕδατος, τόπων* (concerning air, water, locality).

THE WANT OF SANITARY ACCOMMODATION IN LIVERPOOL-STREET.

THE planting of two great terminal stations in what was a generation ago the out-of-the-way thoroughfare of Liverpool-street has necessitated great alterations in the condition of that highway and its purlieus, but upon the whole less perhaps than might have been supposed by an old stager who could have foreseen the enormous development of the traffic which was destined to ensue. In one respect, however, he would not have been at all likely to over-estimate the consequences, for he could hardly have guessed that the omnibus traffic would expand to larger proportions than it has in fact assumed. Now, where the traffic brings omnibuses to a halting-place in even a small fraction of the numbers which all day long throng the roadway in front of the Broad-street Station, it is the obvious duty of the local ædiles to provide convenient sanitary accommodation for the 'bus men. That this duty should have remained unperformed to the present day is greatly to the discredit of somebody, and we hope that the responsibility is sufficiently clear to make the somebody in fault uncomfortable in his present neglect. He, or rather they, can hardly plead ignorance in a matter which forces itself so violently and so unpleasantly upon public attention. What excuse is there which can be put forward to palliate this manifest dereliction of duty?

"DENTISTS AND THE PUBLIC."

MUCH as we deprecate the general discussion of questions pertaining to the medical profession in the lay press, we have no hesitation in drawing attention to a pamphlet entitled "Dentists and the Public," a reprint of articles which recently appeared in the *Pull Mall Gazette*. In a sober and practical manner the writer deals with a profession in which, he says, charlatans unfortunately flourish, and advises those seeking aid and not knowing a reliable man to choose one who puts L.D.S., the only dental degree granted in this country, after his name. The Dentists Act, which was passed in 1878, was an attempt to clear an honourable profession from the evils with which it was beset. Up to that time there were a little over 2000 *bonâ-fide* dentists in practice, though few possessed degrees; but after the passing of the Act, which was made retrospective, no less than 480 persons, including chemists and their assistants, barbers, blacksmiths, &c., declared themselves to have been in *bonâ-fide* practice and therefore claimed the right to be on the Register. There are now 1306 registered dentists

who have taken the L.D.S. Of the 4806 who were admitted to the Register by virtue of their being in *bond-fide* practice before the passing of the Act 3489 still remain without any additional qualification. "Covering" is a serious evil and the writer urges that the time is ripe for strong legislative measures in regard to this matter. "American Dentistry," a phrase which has even less significance than "French polish" or "Russian leather," really means, as the writer points out, "Advertising Dentist," and we heartily agree with his closing words: "It cannot be too frequently reiterated that the man who advertises thereby stamps himself as unqualified. The properly qualified dental surgeon is under obligations exactly similar to those of the medical man with respect to advertising."

THE PURIFICATION OF WATER FOR DOMESTIC USE: A SUGGESTION.

SINCE bacteriology was born there has always existed a doubt as to whether the majority of domestic filters could render water free from bacteria or could reduce their number to any practically valuable extent. From time to time bacteriological investigations have been made with a view to set these doubts at rest, and on the whole the results have fully realised these anticipations. Still more complete and thorough probably than any work previously done in this direction is that recently published by Drs. Sims Woodhead and Wood,¹ who, as a result of their experiments, exempt very few domestic filters they have examined from the charge of inefficiency to remove organisms. Results like these, of course, must shake to its very foundation the confidence which the public has hitherto reposed in domestic methods of filtration, and the cry naturally follows, On what method, then, may we rely? As is the case with so many departments of study, in centring our attention on one method we have turned our backs on another, which, however, may possibly be equally good, if, indeed, not better. We have learned some striking lessons in late years of how nature effects the abundant purification of water; but it seems to us that we have imitated on the small scale only one of these processes—namely, the percolation of water through great depths of porous strata by which bacteria originally present are entirely removed. We have overlooked, we think, the equally important, because equally effective, natural process of purification by subsidence of particles during storage; and yet the irreproachable water of Loch Katrine, supplied to Glasgow, as well as the water supplied to most towns in the north of England, is submitted to no purification beyond the storage in reservoirs of vast size. Professor Percy Frankland showed over eight years ago that, if a water containing bacteria is shaken up with finely divided solid particles and allowed to subside for several hours, the large solid particles in falling to the bottom carry with them an astonishingly large proportion of the bacteria. Thus, after agitation with chalk for fifteen minutes of a water containing originally 8000 micro-organisms per cubic centimetre it contained only 270 organisms—a reduction equal to 97 per cent. Coke powder gave even a better result, for in a water containing innumerable organisms before treatment there were found absolutely none at all after subsidence of the coke particles, the reduction effected being therefore equal to 100 per cent. Similarly, animal charcoal effected a reduction of 99 per cent., the original water containing 8000 and after subsidence only sixty organisms per cubic centimetre. Vegetable charcoal, again, reduced the number from 3000 to 120, which is equal to a reduction of 96 per cent. There are strong reasons for believing, then, that, by the simple expedient of agitating water—say, with well-burnt powdered coke—and drawing off the water after

the particles have subsided, it would be freed from its organised and, it may be, its disease-producing inhabitants. This process appears certainly to be as simple as filtration and should give very little trouble in its practical working; moreover, it cannot surely be costly. Coke, unless well burnt, would probably impart a foreign taste to the water, which, however, could be removed by passing the water through a filter containing an oxidising medium, in which case the filter need not be an efficient remover of organisms, since after the subsidence treatment there should be none to remove. Confronted with these facts, we fail to see why this method should not be tried in the place of established methods of purification, which in the light of recent research have been shown to fail. We cannot imagine that it offers much inconvenience, trouble, or expense, while the water so purified would possess many obvious advantages over water that has been boiled. It could be easily adopted in hotels, schools, barracks, and other large buildings. We commend the attention of inventors to this apparently effectual, though simple, means of purifying water for domestic use.

HONOURS AT THE LONDON UNIVERSITY.

THE published list of the results of the recent examinations at the University of London shows a series of remarkable successes for St. Thomas's Hospital Medical School. In the Final M.B. Examination Mr. A. E. Russel obtained the gold medal in Medicine and Mr. C. S. Wallace the gold medal in Obstetric Medicine. In the B.S. Examination Mr. J. H. Fisher, F.R.C.S., took the scholarship and gold medal; Mr. C. S. Wallace, F.R.C.S., qualified for the gold medal; and Mr. S. W. F. Richardson, F.R.C.S., obtained first-class honours. In the M.D. Examination Mr. Seymour G. Toller took the gold medal; Dr. Toller had previously distinguished himself in the M.B. examination, 1892, when he took the scholarship and gold medal for Medicine and also for Obstetric Medicine.

CHARGE OF INDECENT ASSAULT.

AT the Oxford Sessions on Jan. 1st Mr. Samuel Daniel Hine, surgeon, was tried for having indecently assaulted Edith Hutchings, aged thirteen, on Aug. 14th last. From the evidence it appears that Mrs. Hine was away from home, and that Mr. Hine, who had previously employed the prosecutrix in a similar capacity, asked her to get his breakfast. The allegation against the accused was that he went into the kitchen, kissed the girl, and, under the pretence of auscultating her chest, passed the bounds of professional conduct. On the same day the girl complained to her mother and a neighbour. Mr. Hine's account was that, as she was troubled with a chronic cough, for which he had treated her, and as she did not look well, he examined her chest with a stethoscope, and as the girl complained of a pain in her stomach he placed his hand in that region to ascertain what was the matter with her. From some cause or other the prosecutrix cried, whereupon the defendant kissed her. On the one hand, it was contended that she cried in consequence of having been indecently assaulted, whilst Mr. Hine stated that he thought it was because he had hurt her by the pressure of the stethoscope. It was contended that prior to the alleged assault Mr. Hine locked the front door, but this was explained by the fact that the catch did not act properly. For the defence evidence was given that the mother of the prosecutrix had spoken of getting money out of Mr. Hine. The chairman of the sessions, in directing the jury, said how easy it was to make such charges and how difficult to disprove them, especially in the case of a medical man. The jury at once acquitted Mr. Hine. We fully endorse the chairman's charge and the verdict of the jury.

¹ Brit. Med. Jour., Nov. 10th, 1894.

A conviction could not be rightly obtained on the evidence, which tended to show animus on the part of the girl's mother, on the one hand, and, on the other, that of the prosecutrix was clearly open to the interpretation given by Mr. Hine. At the same time, we must confess that Mr. Hine acted very imprudently in making the examination he admitted having done under the circumstances in which he and the prosecutrix were placed. There was clearly nothing urgent in the case, and a wise discretion would have dictated to Mr. Hine to ask the girl's mother or some other person to be present.

THE DEATH OF LADY PAGET.

It is with deep regret that we chronicle the death of Lady Paget, the wife of Sir James Paget, a regret that we know will be shared by the whole of our profession, British and Colonial, English-speaking and foreign. Lady Paget was a daughter of the Rev. Henry North, domestic chaplain to Her Majesty the Queen's father, the late Duke of Kent, and was married to Sir James Paget as far back as 1844, their golden wedding being celebrated last year. We tender our sincere and respectful sympathy to Sir James Paget in the irreparable loss that he has sustained in this severance of a long partnership in affection.

THE PRESIDENCY OF THE INDIA OFFICE MEDICAL BOARD.

We announced last week that the Secretary of State for India had appointed Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, of the Indian Medical Department, to be President of the Medical Board at the India Office, in succession to Sir Joseph Fayrer, K.C.S.I. Brigade-Surgeon-Lieutenant-Colonel Hooper has held several important appointments in India, the last one being that of civil surgeon at Lucknow; and when he was in this country he acted, we believe, as a member of the India Medical Board and of the Army Medical Board. He has had a long and intimate as well as varied acquaintance with professional work in India. His experience as civil surgeon of different stations in that country has necessarily afforded him excellent opportunities for acquiring a practical knowledge of its diseases, and he is a deservedly popular member of the Indian medical service.

NURSES AND SMALL-POX DISSEMINATION.

DR. MONTGOMERY WARD, in presenting his last monthly report as superintendent medical officer of health to the Rathmines commissioners, Dublin, has expressed his conviction that one potent factor in the spread of small-pox and other infectious diseases is the action of nursing sisters from the various nursing institutions. He complains of their indiscriminate mixing with the healthy in the course of their attendance on patients suffering from disease of an infectious nature, as by travelling in public conveyances, frequenting public thoroughfares, places of worship and of amusement, and the like. He strongly recommends that the management of these institutions be asked to frame rules against this sort of thing, while also enacting adequate disinfection of the clothing of the nurses under the supervision of the sanitary authority. This advice is admirable; but is the risk to the public really great? Why not also enforce the wearing of some "infection-proof" dress by the nurses whilst engaged with the sick, one that can be easily disinfected before proceeding to another house, by whatever means of transit? Then such ablutionary exercises as can be secured would no doubt be valuable. With these precautions we fail to see what can be said against the kindly work of these sisters. It will, of course, always be well to keep nurses of one class of disease from attending patients suffering from one of a different nature; but whatever may be

the proof of the spread of disease in this way in the past—and we should deem proof as exceedingly difficult to obtain—there would appear to be a balance of considerations in favour of the use of trained nurses, for those persons who have unfortunately not been removed to hospital, over the indiscriminate going to and fro of ignorant even though kindly disposed neighbours. Indeed, the visiting of the sick by the healthy, except in case of great emergency, is to be deplored, since this has undoubtedly proved in only too many instances a sure method of spreading infection, and has not infrequently filled the hearts of health officers with despair when attempting to stay the spread of disease.

THE INCREASE OF THE PROFESSION.

THE first definite—though not official—information we get in the course of the year in reference to the numbers of the profession is contained in the admirable Medical Directory (Messrs. J. & A. Churchill) which also contains much other useful information. There is still insufficient indication of any adequate abatement in the tendency to overcrowd the profession which has been so apparent of late years and has been undoubtedly injurious to the tone and quality of medical practice. The numbers of the profession as they appear in the Directory for 1895 are 32,590, as against 31,772 in 1894 and 30,759 in 1893. In other words, there was an increase of 818 in 1895 over the previous year, as against an increase of 1013 in 1893 over the numbers in 1892. The 32,590 are thus distributed—we place the numbers of the previous year for comparison between parentheses. In London, 5742 (5590); in the provinces, 15,313 (14,897); in Scotland, 3224 (3107); in Ireland, 2511 (2485); resident abroad, 3321 (3209); the Services, naval, military, and Indian medical, 2452 (2426); too-late list, 27 (58). It is possible that we are about to see a reduction in the number of aspirants to medicine, which, considering the exaction of examining boards and the slight pecuniary rewards which follow, it is remarkable we have not seen sooner.

LONDON FIRES: PREVENTION THE BEST REMEDY.

It is a bitter thing that we have still much to learn from a teacher so unsparing as experience. We are ever ready to class his lessons among our misfortunes. Yet, after all, there is no one who will deny that in an important sense even these deserve our gratitude if, as it ought, reform follows upon their frequent exposures of our faults. Systems, companies, men are at one in this matter. There is no disaster which does not point the finger of blame at someone. Not even the unexplained catastrophe which occurred last week in Edgware-road constitutes an exception. It is true that the fire was accidental, that its precise cause is unknown, that all concerned in its extinction appear to have acted with admirable promptitude in the use of such means as were available, and that perhaps no system or method could have completely triumphed against the difficulties to be combated. Certain incidents connected with it, however, can only be remembered with regret. The fire is believed to have arisen in the drying-room of the laundry, probably from some clothes being hung up over a hot and unprotected stove—a circumstance which assuredly as we elsewhere point out suggests the wisdom, of extending the practice of official inspection to this class of establishments. Another and a far more important matter, however, was touched upon in the coroner's inquiry into this occurrence. This was the question of water-supply available in the metropolis in cases of like emergency, and the most effective means of its employment. In the case quoted fire-engines alone were used, and these after a brief but inevitable interval. This fact is somewhat painfully instructive not only when we consider

the actual loss of life incurred, but also when we reflect that some of our larger cities are able, thanks to a water-supply of constant and high pressure, to affix upon street hydrants suitably placed, hose which can at once and effectually control the beginning of a possible conflagration. To obtain such a supply for London would entail a very great and even a disproportionate outlay. Its realisation, therefore, however desirable, cannot for some time to come be counted on, unless, indeed, a proposed alternative method be adopted. This, which has already been applied in certain cases, as for the protection of New Scotland Yard and the National Gallery, consists in utilising by a combination hydrant the water-power of the Hydraulic Company to supplement that in our ordinary mains. The service available from this source is as yet of limited extension, but it includes in its area such districts as the City, Strand, and the docks. It is in these parts that widely destructive fires are most frequent, and in these, therefore, such a system as we have suggested should prove of the greatest advantage to persons and property. The suggestion is not a novel one. It has already been considered, and for the time being shelved, by the County Council. We should, nevertheless, like to hear more of it, or to learn by what other method it is proposed to endow a city abundantly supplied with water with the means of obtaining such continuous and high pressure in mains as shall render street hydrants in London, as in Liverpool, Glasgow, or even Hull, a general and an immediate means of fire extinction.

THE TENURE OF THE APPOINTMENT OF MEDICAL OFFICER OF HEALTH.

WE learn that the Nottingham Medico-Chirurgical Society has recently had under consideration circumstances connected with the appointment of the medical officer of health of Ilkeston. This appointment had been held for ten years by Dr. Carroll, during seven of which he received £30 per annum, during two years and a half £50, and for the last six months at the rate of £75 per annum. The Ilkeston town council were, therefore, evidently beginning to appreciate Dr. Carroll's work, and were by degrees attaching a better salary to his office; but at the period when he should have been re-elected it is stated that he was informed that his ideas as a sanitarian were too advanced for a place of such modest dimensions as Ilkeston, and another medical man was selected in his stead at a salary of £100, this gentleman being, we are informed, himself a town councillor previously to his election. The society has therefore passed a suitable resolution and communicated it to the local Members of Parliament, to the Parliamentary Secretary of the Local Government Board, and to the Incorporated Society of Medical Officers of Health. The action of the town council of Ilkeston brings into prominence the urgent need of an alteration of the law which renders such conduct possible.

THE COMPETITION OF HOSPITALS AND PRIVATE PRACTICE.

THE Great Northern Central Hospital, as competing with private practitioners for pay patients, has a companion from whom we might have expected better things. The *Evening Standard* gives an account of an entertainment at Guy's Hospital, partly for the pleasure of the patients in the Bright Ward, but "chiefly for making better known the paying ward of that name," where for three guineas a week medical, surgical, and obstetric cases are received. True, they are not treated by the honorary staff, as in the Great Northern Central Hospital. They are under the care of a gentleman "whose treatment has won for him the confidence and regard of all the patients." It is enough to disturb the repose of the illustrious man after whom this ward is named to think that any part

of Guy's Hospital should have come to such uses. Not to go so far back, there is an eminent consulting surgeon of this hospital who occasionally favours the profession with addresses on subjects touching the interest of practitioners who cannot, we think, approve of such arrangements. This is a deliberate attempt to attract a kind of medical practice which there is no excuse for hospitals seeking to attract. The eulogistic notice of the resident medical officer may be permissible in the new code of hospital medical ethics; but if any private practitioner were to be similarly noticed in the local paper of his district he would justly be liable to criticism by our correspondents and by ourselves. We appeal to the staff of Guy's Hospital to protest against this abuse of their great institution, which was founded for the relief of the poor. The evil we describe is a very grave one, and the leaders of the profession will lose all credit for sympathy with their brethren if something is not done to stop it.

DIPHTHERIA IN LONDON.

THE diminution in the fatal cases of diphtheria witnessed in the concluding week of last year has not only not been maintained, but there has been again, as has so often happened in the present prevalence, a marked increase after the very temporary lull. With the close of last week the number of diphtheria patients remaining under treatment in the hospitals of the Metropolitan Asylums Board was, it is true, brought down to a unit below 500, as compared with 521, 510, and 521 in the preceding three weeks, and the admissions from 111, 80, and 75 in the same three weeks to 62 last week; but the gain thus made has to be set against a death roll of 50, or 17 in excess of the corrected average. True, this number was six times exceeded in the previous twelve weeks, but the deaths in the last fortnight of December had only been 36 and 35 respectively. Diphtheria in London was last week fatal to the extent of some 28 per cent. of the fresh cases, but little more than one-third of these were admitted to hospital. Enteric fever, on the other hand, was fatal to some 17 per cent. of cases, 24 per cent. of which found their way to hospital. Of the 50 diphtheria deaths 30 occurred in children aged from one to five years, and included 5 from Hackney, 4 each from Kensington, Hammersmith, Poplar, and Battersea, and 3 each from Fulham, Islington, Mile-end Old Town, and Greenwich. In Greater London there were 18 deaths, including 5 in West Ham, 3 in Kingston, and 3 in Romford, as well as 1 each in Tottenham and Hornsey.

COLLECTIVE INVESTIGATION UPON THE SERUM TREATMENT OF DIPHTHERIA.

THE editors of our enterprising contemporary, the *Deutsche Medicinische Wochenschrift*, Drs. Eulenberg and Schwalbe, have initiated a plan for the collective investigation of the experiences of the medical profession regarding the treatment of diphtheria by antitoxin. They point out that the results so far published from private practitioners, as well as those from hospitals, speak favourably of a method which may prove to be of the highest importance in therapeutics—a method which has impressed even the most critical, as exemplified in Professor Virchow's declaration that it is the duty of every practitioner to employ it in this disease. They say that scepticism is never more legitimate than in respect to the alleged efficacy of treatment, especially of any treatment that claims to be specific, and that diphtheria affords scope for arriving at a correct judgment upon the results of treatment; but the number of points to be determined are exceptionally numerous and involve many considerations such as can only be gathered on a large scale and over a large area. The question must embrace facts from thousands of cases collected from all sources and from all parts of the

country: hence the idea to undertake a collective investigation throughout Germany similar to that pursued in influenza by the Berlin Society of Internal Medicine, on the lines originated by the British Medical Association. In this scheme they have the support of Drs. Leyden, Litten, Renvers, Heubner, Behring, Ehrlich, and Guttstadt. The cards to be filled up by practitioners can be obtained from the office of the journal. It is proposed to close the inquiry on April 1st, 1895. Whilst expecting no final judgment on the serum question from this inquiry, it is hoped that there will result more certain grounds for its therapeutic employment than hitherto, and that it may serve to solve some doubts as to its value.

"THE LANCET" RELIEF FUND.

THE "Application Form" of THE LANCET Relief Fund will be found in our present issue. It can easily be removed, filled up, and forwarded to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London. We take the opportunity of directing the attention of those of our readers who may have occasion to employ the form or to sign one of the required accompanying certificates to the necessity of carefully noticing the conditions on which applicants become entitled to a participation in the benefits of the Fund.

DEATHS OF THE AGED AND LONGEVITY.

THERE is a certain grimness of humour in the persistence with which paragraphists, on the advent of cold or foggy weather, which is invariably fatal to many old people, summarise the deaths of octogenarians and nonagenarians announced in the obituary columns of the daily press and head their paragraphs "Longevity." It is, to say the least, paradoxical that exceptional mortality among the aged should be referred to as evidence of longevity. An industrious correspondent of a contemporary recently reported that the obituary columns of that paper during 1894 announced the deaths of 196 nonagenarians, of whom 89 were males and 107 were females; and, as is usual in these communications, the correspondent adds that their "aggregate ages were 18,203 years." It is such useless figures as these that bring discredit on statistics. They convey no definite idea and do not even suggest whether we should be struck with the number being high or low. Probably not many of these paragraphists and correspondents have the slightest idea of the fact that at the last census in 1891 no fewer than 9185 nonagenarians were enumerated in England and Wales; and that as, according to the English Life Table, rather more than one of every three living nonagenarians dies annually, it follows that more than 3000 nonagenarians die in England and Wales annually. Of what possible interest, therefore, is it to know (that, of the 3000 nonagenarians whose deaths were probably registered in England and Wales in 1894 196 had their deaths announced in any particular obituary column. As evidence, however, of the greater longevity of females it is worth noting that of the 9185 nonagenarians enumerated in 1891 6173 were females and only 3012 were males. The English Life Table, notwithstanding this disparity, shows but slight difference between the rate of mortality of male and of female nonagenarians, although this difference is, of course, in the favour of females.

THE LATE DR. BROWN-SÉQUARD.

THE January number of the *Comptes Rendus de la Société de Biologie* contains an appreciative notice by the President, M. Eugène Dupuy, of the life and work of the remarkable man—certainly one of the most striking figures in the history of experimental physiology and of clinical medicine—whom death a short time ago removed from among us. Born in

Mauritius, the son of an American and a Frenchwoman, he lived, as all our readers know, and practised successively in France, the United States, and in this country, passing the last twenty years of his distinguished career once more in Paris, with which city he had always kept up the closest ties. M. Dupuy does full justice to the work of the subject of his address, cosmopolitan and extensive as it was. Dr. Brown-Séguard, according to him, was characterised by an enthusiasm, an acuteness, and in particular a capacity for seeing the bearing of his own observations on other men's difficulties that are rarely met with in combination. In this country he devoted himself chiefly to elaborate investigation into the physiological and pathological working of the nervous system, being one of the original staff of the National Hospital for the Paralysed and Epileptic, and there receiving the coöperation of Sir J. Russell Reynolds, Dr. Hughlings Jackson, and Dr. Buzzard among others. His lectures at this institution, which has no counterpart, says M. Dupuy, except the Salpêtrière in Paris, were published in THE LANCET, and stimulated the scientific study of epilepsy and of paralysis due to disease of the spinal cord which have led to marked advance in our knowledge of those obscure diseases in the last twenty years. As a physiologist, as a physician, and as a man who, through numerous vicissitudes and much trouble, found time to accomplish as much work as would suffice for several men of great capacity, his name will always be held in honour in the world of science. No one can read the graceful tribute of M. Dupuy to his memory without a feeling of admiration for its subject.

THE Home Secretary has consented to receive a deputation from the United Kingdom Police Surgeons' Association this month, on a day to be fixed later. The deputation will bring before him the following points: (1) the inadequate amount of the fees and allowances to medical witnesses attending distant sessions and assizes; (2) the importance of issuing the instructions given to the metropolitan police for the examination of persons charged with criminal assaults on females to all provincial police authorities; (3) the desirability of having a police surgeon appointed in all counties and towns where none at present exists; and (4) to ask that, in the event of medical certifiers of the cause of death being appointed, the interests of police surgeons may be safeguarded.

ON Thursday, Jan. 3rd, Dr. Patrick Heron Watson, F.R.S. Edin., Surgeon-in-Ordinary to the Queen in Scotland, was entertained at a dinner in Edinburgh by his former house surgeons and presented with his portrait, and an album containing the photographs of the subscribers. The portrait was painted by Sir George Reid.

THE Lettsomian Lectures will be delivered before the Medical Society of London on the evenings of Mondays, Jan. 21st, Feb. 4th, and Feb. 18th, by Dr. F. T. Roberts, the announced subject being the Combinations of Morbid Conditions of the Chest.

MR. F. J. WALDO, M.A., M.D. Cantab., D.P.H., medical officer of health to St. George's, Southwark, and to the Inner and Middle Temples, has been appointed Tutor in Public Health to St. Bartholomew's Hospital Medical School.

A CONFERENCE in connexion with the Matrons' Council will be held on Thursday, Jan. 17th, at 8.30 P.M., in the Medical Society's Rooms, 11, Chandos-street, Cavendish-square, when a paper entitled "Infirmary Matrons under the Poor-law" will be read by Miss Mollett, matron to the Royal South Hants Infirmary, Southampton.

CASES TREATED BY THE TALLERMAN-SHEFFIELD DRY AIR BATH AT THE NORTH-WEST LONDON HOSPITAL.¹

BY J. F. SARJEANT, M.R.C.S. ENG., L.R.C.P. LOND.,
RESIDENT MEDICAL OFFICER.

THE authorities of the North-West London Hospital having at the suggestion of Mr. Mayo Collier kindly consented to submit a series of cases to treatment by the "local and medical dry air bath," the proprietors of that apparatus courteously placed one of their cylinders at the disposal of the medical staff for that purpose, and I give the notes and results obtained during the past two months. It might not be out of place to refer here to the fact that this apparatus was introduced to the medical profession by Mr. Willett at St. Bartholomew's Hospital, in the wards of which institution a variety of cases were treated for two months, after which Mr. Willett detailed the results obtained in a clinical lecture delivered on May 23rd last. Acting upon the suggestions thrown out by the lecturer on that occasion several medical cases were treated. The operation extends over forty minutes at an average temperature of from 240° to 260° F., and may be shortly described as follows. The affected part is placed in the cylinder, which, to save time, has been already heated to a temperature of 150° and is then gradually raised. The system of heating and ventilation admits of the air in the cylinder being kept practically dry throughout the operation, thereby enabling a very high temperature to be borne by the patient, in one instance at St. Bartholomew's Hospital reaching 300°, whilst temperatures from 270° to 280° are by no means unusual. Under treatment patients experience a sense of comfort, probably due to the high temperature exercising an anodyne influence, which relieves the pain, or more often removes it entirely; even when adhesions have been broken down the pain is much modified if the joint is immediately subjected to treatment. Some of the cases can hardly fail to be of interest, being of that chronic character for which so little can be done by ordinary medical treatment; all of them were selected for their severity in order to test to the utmost the value of the apparatus; the majority were cured and the remainder exhibited such marked improvement that it is only fair to state that there was not a single failure. Mr. Lewis A. Tallerman kindly gave his personal attention during the treatment, and Mr. Mayo Collier supervised the selection of the cases.

CASE 1. Sprain.—A child eleven years of age. The right ankle and foot were swollen, tender, and painful, with great pain on movement and inability to put the injured foot to the ground. There was a good deal of effusion, both into the tendon sheaths and into the joint itself.—First operation (Aug. 13th), forty minutes: the pain was found to have almost disappeared, there was considerably less effusion, and the foot could be put to the ground.—Second operation (14th), thirty-five minutes: further improvement, with power to flex and extend the ankle.—Third and last operation (16th), thirty minutes: the effusion was entirely absorbed, the patient could walk well and without pain. He was discharged as cured.

The result of the treatment in this case was very satisfactory, a severe sprain having been cured after three operations given in four days, the temperature of the cylinder varying from 200° to 220° F.

CASE 2. Acute attack of gout following sprain of right ankle.—A man fifty-seven years of age. The patient sprained his right ankle on Aug. 11th by striking it against a stack of iron. On the day after the injury he had a typical attack of gout in the great toe of the injured foot, and stated that he had been unable to sleep for two nights and was in great pain. On examination the right ankle and foot were very much swollen, the ankle-joint was filled with fluid, and the entire surface reddened and shiny. Acute tenderness was present over the whole foot, especially over the tarso-metatarsal joint of the great toe. All movements were painful and the foot could not be put to the ground.—First operation (Aug. 14th), forty minutes: after the bath the pain and tenderness to pressure and movement had gone from the ankle-joint and the

pain and tenderness in the great toe were much modified.—Second operation (15th), thirty minutes: the patient had passed a good night, and after the operation he was able to stand.—Third operation (20th), thirty minutes: on examination there was no pain or tenderness on movement or pressure, and the patient was able to walk; some redness still remained.—Fourth operation (21st), forty minutes: the swelling was almost gone; no pain or tenderness was present.—Fifth operation (23rd), forty-five minutes: the patient reported that he had been able to walk for twenty minutes without pain; all effusion had disappeared and the ankle and great toe were now freely movable and without pain. Being considered in a fit state to resume his ordinary duties he was discharged.

The temperature in this case was maintained at from 230° to 240° F., and the result obtained was most satisfactory. The pain was relieved almost at once, the effusion rapidly disappeared, and the patient was cured of a bad attack of gout with a severe sprain in twelve days.

CASE 3. Chronic rheumatoid arthritis.—A woman sixty-four years of age. Both knees, shoulders, and wrists, and all the finger-joints were affected. The patient had been under hospital treatment for four years without improvement—four months at the University College Hospital and two years under Dr. Sibley at the North-West London Hospital. On examination all the finger-joints were found to be enlarged and painful, and there was great limitation of movement, the patient not being able to flex the fingers on the palm. The movement of both wrists was limited and painful. The right elbow was fixed at a right angle, and any attempt at movement caused great pain. Both knees and shoulders were enlarged and painful, and distinct grating could be felt on movement. This patient was first treated in the hot air cylinder on Aug. 10th. After the first operation it was noticed that the pain was considerably less and the joints showed marked improvement. After the fourth operation the patient, who had been unable to work at her business for eighteen months, was again able to use her needle. After the fifth operation the right arm could be fully extended without pain, and with a little pressure the fingers could be flexed on the palm. The left hand and arm also showed marked improvement, although they had not been treated in the cylinder. After the eighth operation, with the exception of the first finger, in which a little stiffness still remained, all the fingers closed readily. On Aug. 24th, after the ninth operation, the patient reported having resumed her former occupation and her ability to walk up and down stairs without pain. The patient has been kept under treatment up to the present date and shows continued improvement. The average length of each operation was about forty minutes, and the temperature was averaged 240° F.

This case of chronic rheumatoid arthritis had been under continual medical supervision from its onset and the usual remedies were applied. Its history shows that, so far from yielding to treatment, the disease made rapid strides; so much so that whereas eighteen months ago the patient was able with some effort to follow her occupation of dress-maker, twelve months later she was incapacitated from even feeding or dressing herself. The improvement wrought by the hot dry air cylinder was as immediate as it was remarkable; the progress of the disease was arrested, and a curative process was set up at the first operation, which became more manifest with every succeeding one, proving beyond doubt the value of the treatment in cases of this nature.

CASE 4. Old tuberculous knee-joint.—The patient was twelve years of age. In this case the knee-joint had been kept at absolute rest in plaster of Paris for upwards of seven months. On removing the splint the disease was found to have disappeared, leaving little or no movement, any attempt to increase it causing severe pain. After six operations the movement had increased from 45 to 50 degrees, there was no grating in the joint, and the patient could walk freely and well; no forcible movement was used. The temperature in the treatment of this case rose to 220° F.

CASE 5. Chronic ulcer of leg.—A woman forty-five years of age. The patient had suffered from chronic ulcer of the right leg for the last five years. She was treated at the North-West London Hospital as an out-patient without improvement, and was an in-patient at the Temperance Hospital for six weeks, at the end of which time the ulcer was healed. Two years ago the ulcer broke out again after a fall and had been getting worse ever since. On examination a large unhealthy ulcer about the size of the palm of the hand was found on the front of

¹ Inquiries respecting the above-mentioned apparatus should be addressed to the secretary, Mr. M. St. B. Prichard, at the offices of the proprietors, 1 and 2, Chiswell-street, Finsbury-square, London, E.C.

the right leg above the ankle; the edges were unhealthy and the base was covered with thin white slough. There was a loss of tissue of about $\frac{1}{4}$ in. in depth. The patient was treated twice in the hot dry air cylinder, each operation averaging thirty-five minutes, at a temperature up to 245° F. The base of the ulcer was then found to be much cleaner and the margins showed signs of healing. About fourteen days later the patient was seen by Mr. Mayo Collier, who found that the lost tissue was replaced, the ulcer had filled up, the margins showing further unmistakable signs of healing.

CASE 6. Chronic rheumatoid arthritis.—A man seventy-one years of age. The disease was of twelve months' duration. Both elbows and all the joints of the fingers were stiff and painful, so much so that it was with the greatest difficulty that he continued to work at his trade. After five operations the improvement in this case, both as to pain and stiffness, was so marked that he was enabled to go to his work without inconvenience.

CASES 7 AND 8. Sprains.—The first of these cases was that of a man twenty-two years of age and the second that of a man twenty-four years of age suffering from sprained ankles with the usual severe symptoms. Each was treated on five occasions with most satisfactory results. The pain in both cases had disappeared after the second operation and the joints were quite sound after the fifth.

Remarks.—It must be confessed that the results obtained by the usual treatment in cases of chronic stiffness of joints are far from satisfactory, so that one is inclined to welcome all the more cordially a recent therapeutic method which claims, and apparently with justice, to remove, at least in part, this reproach from surgery. The Tallerman-Sheffield local dry hot air bath is an invention by which dry air at temperatures from 250° to 300° F. is applied to a portion of the body, such as hand or foot, knee or elbow, an arm or leg. In May of last year Mr. Alfred Willett delivered a clinical lecture at St. Bartholomew's Hospital on some cases which he had treated by this method; and the present list consists of a series of eight cases in which this bath was employed at the North-West London Hospital, under the care of Mr. Mayo Collier. The bath itself consists of a copper cylinder, varying in size and shape according to the part to be enclosed. At one end the limb enters, surrounded by rubber sheeting, and the other is closed by a movable cap working on a pivot, by the use of which, and outlets at the top and bottom of the cylinder, it is found possible to keep the air in the chamber practically dry throughout the operation, notwithstanding the moisture thrown off by the limb enclosed, and instant relief can be afforded the patient if the temperature causes any discomfort. The cylinder is heated by gas burners placed underneath. Precautions are taken to prevent the skin from coming into contact with the heated metal. Mr. Willett's conclusions are decidedly in favour of the treatment in certain cases, and his results may be summarised as follows. The first effect of the heat is to induce a copious diaphoresis; and the circulation of the blood in the part is enormously increased, as is well shown by the bright redness of the limb when removed from the bath. The anodyne effect is often remarkable; pain is generally not only relieved but entirely removed, so that the patient expresses the great relief he feels and moves the limb with much greater freedom and with much less pain. The cases that appear the most likely to be relieved by the treatment are sprains, stiff joints (where there are no very strong adhesions), flatfoot, gonorrhoeal rheumatism, acute and chronic gout, chronic ulcers, and rheumatism. It deserves also to be employed for its anodyne effect after forcibly breaking down under an anæsthetic adhesions which have formed in or around a joint; if the limb be placed in the cylinder the pain, which is generally severe, is greatly lessened and the secondary stiffness is much diminished. Mr. Willett was of opinion that but little assistance would be afforded by this bath in overcoming firm, fibrous, articular adhesions. Sooner or later the adhesions will have to be forcibly broken down under an anæsthetic, but, such having been done, I think the recovery will in many cases be hastened by the subsequent use of the heated cylinder. In other words, while facility in active movements is immensely increased, the range of movement is not extended to any great amount. The results obtained in the cases treated at the North-West London Hospital endorse the favourable opinion of Mr. Willett, and the benefit to be derived in rheumatic arthritis is shown in two cases, and in gout in one. The general effect of the baths is marked, but

apparently in no way injurious. The entire skin is relaxed and perspires freely, and pain is relieved in joints other than those enclosed in the cylinder.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

[This report appeared in our Second Edition last week.]

A MEETING of the Fellows of the Royal College of Surgeons of England was held on Thursday, Jan. 3rd, the President, Mr. J. W. Hulke, F.R.S., being in the chair.

The Chairman reported that, in reply to the resolution adopted at the last meeting of Fellows requesting the Council to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President, the Council on July 30th last adopted the following resolution—viz.: "That the Council are not prepared at the present time to consult the Fellows, or solicit their opinion through other means than the meetings of Fellows. They, however, point out that if any Fellow is anxious to test the opinion of the general body as to whether it is desirable to make any change in the present mode of election of the President it is open to him to submit a motion on the question to the meeting of Fellows in January or subsequently."

Mr. Herbert W. Page, on behalf of the Society of Fellows, communicated the result of a canvass, made by the Society, of all Fellows resident in Great Britain upon the mode of election to the office of President. Three propositions were suggested:—

1. That the President should be elected by the Fellows.
2. That the President should be nominated by the Council and elected by the Fellows.
3. That the President should be elected by the Council as at present.

A thousand voting papers were sent out and 468 papers were returned, but of these 50 were useless. For the first proposition, 112 voted; for the second, 156; and for the third, 150.

Mr. Page considered that the result of the canvass indicated that no alteration in the present mode of election was desired by the great body of Fellows.

Mr. Craven saw no reason for any change.

Mr. Rivington considered that the canvass was decidedly in favour of a change, as 268 Fellows voted for the first and second propositions; he was decidedly in favour of a similar canvass of the Fellows being taken by the Council.

Mr. Howard Marsh said that the Council were often asked to make changes which were *ultra vires*, and contended that they always worked earnestly for the good of the College.

Mr. Bell of Rochester was in favour of a nomination by the Council and an election by the Fellows.

Mr. Howse saw great difficulties in any form of nomination by the Council and election by the general body of Fellows.

Mr. W. H. Bennett then moved: "That the Council be requested to appoint a Conjoint Committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new Charter, together with the details thereof." He thought that the question whether a new Charter was needed or not should be settled once for all; he contended that the resolution was in no way antagonistic to the Council.

Mr. Holmes seconded the resolution, and said that it was very important that the general body of Fellows should have a voice in determining any vital change in the constitution of the College and its relations to other public bodies.

The President said it appeared to be forgotten that the Council had already pledged itself to bring all important matters before the Fellows before coming to a decision on them.

On being put to the vote, the resolution was carried, 22 voting in its favour and 14 against.

The resolution standing in Mr. F. J. Gant's name was not brought forward, being almost identical with that just voted on.

In a few concluding words the President regretted that the resolutions brought forward at these meetings dealt only with the constitution of the College, and did not deal

with educational matters, which were really of much more pressing importance.

Forty-six Fellows were present altogether, but the meeting had assembled some minutes before the quorum of thirty was obtained.

SANITATION AT THE CAPE OF GOOD HOPE.

THE annual report for 1893 on the public health of the Cape, which Dr. A. J. Gregory has, by command of the Governor, presented to both Houses of the Cape Parliament, contains much interesting matter. It is framed somewhat on the lines of a county medical officer's report in this country—i.e., it consists of a comprehensive digest of the sanitary condition and requirements of the colony as culled from the reports of the district surgeons and other sources, while in the appendix the district reports are given in full. The care of the public health by the Cape Government is, Dr. Gregory remarks, an affair of but very recent development; indeed, it was not until the year 1891 that a separate Local Government and Public Health Department was organised, and only during the session of 1892 did the Cape Parliament vote a sum of money for procuring expert advice and guidance upon sanitary matters. Under circumstances such as these it is hardly to be expected that the public health service of the colony should be other than somewhat embryonic. The department has as yet no power by which it can compel sanitary authorities to carry out their obligations, such as is possessed by the Local Government Board in this country, and the difficulties in the way of obtaining reliable information as to the vital statistics of the several districts are enhanced by the absence of any proper system of registration of births and deaths, and of notification of infectious diseases. The Public Health Department communicates by letter with sanitary authorities in reference to the more urgent requirements of their district, but in some cases the communications are not even acknowledged by the authorities in question; and a comparison of the district reports of 1892 with those of 1893 shows that but very few reforms have been effected in the interval. Only a very small proportion of the sanitary authorities in the colony have provided anything in the shape of isolation accommodation; but we are glad to see that there is a prospect of proper provision being obtained by the several authorities of the Cape peninsula, both in regard to small-pox and other infectious diseases. The provisions of the Contagious Disease Prevention Act, 1835, have, where carried into operation, resulted in diminished venereal disease both among prostitutes and the Imperial forces; it seems, however, that in Capetown itself there exists a large amount of irregular or casual prostitution which is not reached by the Act. In dealing with the communicability of syphilis Dr. Gregory refers to the remarkable manner in which the disease seems to spread from person to person under the conditions in which the native population live, altogether apart from the direct effect of sexual intercourse, and he quotes from several of the district reports cases in which Europeans have contracted the disease from the native servants and children. For instance, the district surgeon of Calitzdorp remarks that, of 36 European cases in his district, only 4 can be said to have contracted the disease through immorality, the remaining 32 having been directly or indirectly inoculated from coloured persons. By way, too, of demonstrating the heavy incidence of the disease upon innocent children Dr. Gregory divides those affected with syphilis into two groups—those above and those below fourteen years of age; and he assumes that in the latter group the disease is always innocently contracted. He found as a result of his analysis that 35 per cent. of the whole number were children under fourteen years of age. Again, the district surgeon of Oudtshoorn remarks that the disease is often conveyed between children using the same spoon or the toy known as a mouth-organ.

In regard to leprosy some interesting tables are furnished in Dr. Gregory's report, and from these he concludes that—(1) leprosy is five or six times more prevalent among natives and coloured persons than among whites; (2) Europeans appear to be less frequently affected in those districts in which the native element is less likely to be intimately associated with the European; and (3) the prevalence of the disease increases in direct ratio to the density of the population.

These conclusions, Dr. Gregory observes, seem to point to the contagiousness of leprosy, and also to the fact of the contagiousness being slight in comparison with other infectious diseases, as otherwise the disease would long ago have disseminated itself fairly evenly throughout the colony.

Small-pox was introduced into the colony during 1893 by several of the mail steamers from England, and quarantine was extensively resorted to in order to check its spread. Much delay, inconvenience, and expense were occasioned, but it is satisfactory to learn that as a result of the alarm produced by the presence of small-pox a decided impetus to sanitation was given throughout the colony. The occurrence has, Dr. Gregory remarks, been very instructive, and it suggests, he says, among many other points, the question as to whether a system of medical inspection, proper disinfection, isolation, &c. might not be substituted for the cumbersome and costly machinery of quarantine.

The Cape Government has ceased to import calf lymph from England owing to the fact that the lymph, on account either of the excessive heat or delay in transit, was often inert when used, and a calf vaccine station has been started at Grahamstown. Epidemic pneumonia occurred in several districts of the colony during 1893, and in Kimberley 365 deaths were attributed to the disease. Puerperal fever seems to have been rife in many districts, and ignorant midwives were frequently instrumental in spreading the disease.

In concluding his report Dr. Gregory urges upon the Government the absolute necessity which exists for legislative measures "investing a central authority with power to supervise and guide the local authority in the exercise of its functions; without such powers I am convinced that the public health of the colony can never be properly conserved."

OBSERVATIONS ON THE MEDICAL DEPARTMENT OF THE BRITISH ARMY BY AN OFFICER OF THE UNITED STATES MEDICAL SERVICE.

WE recently very briefly adverted to Brevet Lieutenant-Colonel Woodhull's Observations on the British Medical Service, abridged from an official report and published by authority of the Secretary of War of the United States. These observations are reprinted from the fourth volume of the Transactions of the Association of Military Surgeons of the United States. The writer of this abridged report is a distinguished officer of the American Medical Service, and he is certainly to be congratulated on the ability and accuracy with which he has discharged the duty committed to him. Whilst in England in 1891 he was ordered by the War Department of the United States to make the utmost use of such facilities as might be granted to study the British military hospitals, the army medical school, the duties of medical officers, the sanitary administration of barracks and camps, the instruction service of the Medical Staff Corps, and the system of physical training in the British army. It will be seen that the scope of his inquiries was sufficiently comprehensive, and he has evidently been indefatigable in his efforts to obtain a good firm grasp of his subject. The results are embodied in the abridged report before us. It is surprising what an amount of well-arranged information Colonel Woodhull has managed to incorporate in a condensed form in this report, which should, and probably will, be extensively read by medical officers of the British service. Sydney Smith humorously traced how taxation shadowed every step and stage in the career of a British subject, and Colonel Woodhull has, it may be said, in a similar manner traced the British soldier from the cradle to the grave; he has described and analysed our army medical regulations, our service customs and practices, as contrasted with those of his own service, and in a running commentary frankly reviewed our methods in an honest, independent spirit, but always in excellent taste.

From what we have said it will be seen that it is impossible, nor indeed is it necessary, to accompany Colonel Woodhull through all his inquiries and comments; we can only attempt to select a few points. Passing over his general remarks on the strength and organisation of the British medical department, the entrance examination and the course

at Netley, and the system of promotion in the various grades and the duties assigned to each of them, he points out, *en passant*, some minor practical differences between the medical service of this country and that of the United States, and adverts to the subject of the roll of married soldiers in the British army, which, judged by any ordinary measure of a combatant force, is, he says, enormous and draws deeply on the medical as well as on the other resources of the establishment. Much consideration is given to the subject of diets in British and American army hospitals and the different systems on which these are based respectively. The dietary of the United States hospitals is, it may be mentioned, very liberal and varied, and it is so different from that of our army that no useful comparison can well be made. Speaking of medical history sheets—which we regard as excellent and most useful documents in our service, with its soldiers serving in all parts of the world—Colonel Woodhull does not, on the whole, and for the reasons he gives, think that their adoption in the American service would be attended with any great advantage. As regards the nursing sisters of our service, he says that he formed a very favourable impression of this trained section of the nursing staff. Alluding to the functions and authority of the director-general, he remarks that these greatly transcend those of the surgeon-general of the United States army, and he goes on to make some judicious remarks on promotion by selection and seniority. “By restraining promotion in the lower and medium grades to seniority, moderate ambition and moderate abilities are satisfied; and opening the higher ranks to choice presents a stimulus for exertion, and relieves the administrative positions from the inertia and indifference that sometimes accompany age.” Colonel Woodhull has a good deal to say about recruiting, and particularly about the Medical Staff Corps. Like anybody else who has any practical knowledge of the subject, he is opposed to the limitations of stature now in force for the men of this corps, unfitting them as they do for the work they will have to perform in war. His comments on the Aldershot system of training of the Medical Staff Corps are very favourable, although he considers that in several particulars the methods pursued in the United States Service are simpler and better adapted to the general end in view, and therefore to be preferred. In connexion with this subject we may say that Colonel Woodhull expresses his surprise that the Army Medical Service and Medical Staff Corps are not more practically utilised at our autumn manoeuvres than they are.

Colonel Woodhull also considers that his army service has nothing to acquire from Great Britain in the system of tentage, whether considered for shelter, artificial warmth, convenience of transport, or adaptability to campaigning purposes.

Speaking of our barrack-rooms, he thinks that the men can hardly be warm enough for comfort, and this is a matter in which they would certainly agree with him, for the insufficient allowance of fuel and the draughty nature of these rooms in cold weather are common complaints with soldiers.

Referring to the subject of medical and sanitary instructions for field service, we are glad to notice that he gives some extracts from those issued in this country for the Suakin Expedition, which he very highly commends for their scope, intrinsic value, and general usefulness, expressing at the same time his regret that he failed to note the name of the officer who prepared these valuable memoranda. We may here incidentally remark that THE LANCET drew special attention to the excellence of these instructions at the time they were issued. Colonel Woodhull devotes much consideration to Netley and to the value of such an institution to the State and the army. Although the courses at Netley and Aldershot overlap in some respects, he holds that, taken as a whole, “they are both admirable, and are strongly commended for our imitation.”

With reference to the various forms of transport for wounded he saw nothing as regards comfort and economy of force and the requirements of the American army to approach the *travois* and the *Baily litter*.

Colonel Woodhull's remarks on gymnasia and the physical training of the British soldier strike us as pertinent and good. The physical development of the soldier, in whom the fighting instinct is naturally strong, gives to the British army, he says, much of the formidableness it possesses, notwithstanding certain deficiencies in the original material and other incidental conditions of the service.

But here we must stop, contenting ourselves with hoping

that we have said enough to show that the report under review is both interesting and instructive, and consequently well worth reading.

THE CLUB SYSTEM IN CORK.

(FROM A CORRESPONDENT.)

FOR a number of years it has been a standing grievance with the profession in Cork that amongst the members of the Odd Fellows and kindred societies are many who are well able to pay ordinary medical fees, amongst them being owners of large business establishments. The secretaries and individual members of these clubs have been privately remonstrated with from time to time, but without effect, the almost invariable reply being: “Those are the very men we wish to get hold of. They give stability to our club. They are not likely to draw sick pay, and that is all the better for our other members.” The obvious inference is that the clubs cared little to what extent the medical men were—I had almost said—swindled out of their legitimate fees, provided the funds of the club at the end of the year were benefited to the extent of a few paltry shillings. But what mainly brought matters to a crisis has been the formation in late years of quite a number of clubs bearing such high-sounding names as “medical aid associations.” These clubs were formed solely to procure the services of some local practitioner, and he generally received the splendid remuneration of £1 per member per annum, which sum included medical attendance, not alone for the member, but also for his family. It is hardly credible, but yet the fact, that amongst the members of these associations are to be found captains of large steamers, managers of banks, and heads of Government departments. When the medical men eventually combined to resist this intolerable state of affairs resistance came mainly from the older benefit clubs; but the probability is that if the general body of the members of those clubs had been left to their own honourable promptings the difficulty would have been got rid of very quickly. However, such was not the case. At the instance of some of the secretaries whose salaries depend on the number of members a meeting of delegates was held, and one of the latter, who has turned thousands a year in business, denounced the audacious attempt of the medical men to deprive him of the privilege of having himself and his family provided with medical attendance and medicines for the very handsome sum of 15s. per annum, or 3½d. per week. The eloquence of such interested gentlemen, I regret to say, prevailed with the working men, who form a large proportion of those clubs. The newly formulated rules of the medical men were contemptuously sent back to them, and surprise was afterwards expressed because this silly impertinence was treated by the medical men with dignified silence. Whilst harmless talking has been done by a section of the club members the medical men have quietly perfected their organisation, and, with a solitary exception, they are united in one solid phalanx. Though they have not the slightest objection to see working men and clerks with small salaries in clubs, yet they are quite determined to put an end to any system which will permit gentlemen in receipt of £600, £800, or £900 a year to claim medical services for 15s. or £1 per annum. It seems to be the merest question of “live and let live.” It must be said that it is highly creditable to the profession in Cork that there is only one of their number who stands aloof from their organisation. This gentleman is, I understand, quite a recent importation, and there is no doubt the spirited representatives of the profession in Cork can well afford to ignore his action, which can hardly be regarded as calculated to improve the status of the profession of which he happens to be a member. The temptations to outsiders to follow his example are not very alluring. It has been calculated that after deducting the cost of medicines less than £500 a year has been received by the profession from twenty of the ordinary benefit clubs, including Foresters, Odd Fellows, &c., though members of those clubs have been deluging the local newspapers with statements that their societies paid thousands a year to the medical practitioners of Cork. Already one of the principal medical aid associations has been voluntarily wound up, without waiting for the advent of the new year, when the rules of the profession are to come into force. Some of the benefit clubs have also taken time by the forelock and intimated their intention of meeting the wishes of the medical men; and now that

the rank-and-file of those clubs realise that the medical men have really no contest with them and merely wish to insist on the well-to do members of those clubs paying for medical services in accordance with their means it is expected that the new year will be yet young when the public opinion of Cork will insist that meanness amongst a certain class of the citizens will be stamped out and that the eminent services of the Cork medical practitioners should be recognised by fair and just remuneration.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THIS society has been formed to continue the work of the late Association of Members of the Royal College of Surgeons of England, and will have the following objects:—

1. To arouse and maintain among the Members a permanent interest in their College by giving them a share in its management.

2. To promote the acquisition of a Charter by the College, which shall permit the Members to take some part in the election of the Council.

3. While seeking primarily to further the interests of the Members, to support and coöperate with the Fellows' Societies in obtaining such reforms in the by-laws as are possible under the present Charter.

4. Generally to promote the welfare of the corporation by bringing its at present somewhat inharmonious constituents of Council, Fellows, and Members into united action.

The committee consists at present of Mr. Joseph Smith (chairman), Dr. Danford Thomas, Dr. F. H. Alderson, Mr. Brindley James, Mr. George Brown, Mr. Nelson Hardy, Mr. Thomas Morton, Mr. J. C. Smith, and Mr. W. G. Dickinson, with power to add to their number. The annual subscription is half-a-crown, and the hon. secretary, Mr. W. G. Dickinson, Southfields, London, S.W., will be glad to receive the names of Members wishing to join the Society.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 7410 births and 3844 deaths were registered during the week ending Jan. 5th. The annual rate of mortality in these towns, which had declined in the preceding four weeks from 20.2 to 18.0 per 1000, rose again last week to 18.9. In London the rate was 17.4 per 1000, while it averaged 20.0 in the thirty-two provincial towns. The lowest rates in these towns were 14.1 in Cardiff, 14.5 in Halifax, 14.6 in Plymouth, 15.2 in Bradford, and 15.5 in Blackburn; the highest rates were 24.0 in Brighton, 24.1 in Leeds, 24.3 in Wolverhampton, 24.5 in Preston, and 25.0 in Gateshead. The 3844 deaths included 399 which were referred to the principal zymotic diseases, against 392 and 385 in the preceding two weeks; of these, 125 resulted from measles, 87 from diphtheria, 63 from whooping-cough, 45 from diarrhoea, 41 from "fever" (principally enteric), 35 from scarlet fever, and 3 from small-pox. No fatal case of any of these diseases occurred in Plymouth; in the other towns they caused the lowest death-rates in Cardiff, Brighton, and Manchester, and the highest rates in Portsmouth, Preston, Leeds, Gateshead, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Derby, Leeds, Newcastle-upon-Tyne, Gateshead, Preston, and Portsmouth; from scarlet fever in Salford; from whooping-cough in Sunderland, Wolverhampton, and Blackburn; and from "fever" in Birkenhead. The 87 deaths from diphtheria included 50 in London, 5 in Birmingham, 4 in Leeds, 4 in Sheffield, and 3 in West Ham. Two fatal cases of small-pox were registered in Birmingham and 1 in Liverpool, but not one in London or in any other of the thirty-three large towns. There were 23 small-pox patients under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 5th inst., against 22, 15, and 16 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 3, 0, and 1 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1779, against 2034, 1931, and 1890 on the preceding three Saturdays; 126 new cases were admitted during the week, against

161 and 116 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 325 and 332 in the preceding two weeks, declined to 319 last week, and were as many as 449 below the corrected average. The causes of 76, or 2.0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Leeds, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Huddersfield, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21.7 and 22.1 per 1000 in the preceding two weeks, declined again to 21.8 during the week ending Jan. 5th, but exceeded by 2.9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13.9 in Paisley and 14.6 in Dundee to 24.0 in Perth and 24.6 in Glasgow. The 630 deaths in these towns included 38 which were referred to measles, 11 to diphtheria, 9 to whooping-cough, 8 to scarlet fever, 8 to diarrhoea, 5 to "fever," and 2 to small-pox. In all, 81 deaths resulted from these principal zymotic diseases, against 111 and 86 in the preceding two weeks. These 81 deaths were equal to an annual rate of 2.3 per 1000, which was 0.8 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 32, 54, and 41 in the preceding three weeks, further declined to 38 last week, of which 18 occurred in Glasgow, 13 in Aberdeen, and 3 in Paisley. The deaths referred to diphtheria, which had been 10 and 4 in the preceding two weeks, rose again to 11 last week, and included 5 in Glasgow, 2 in Aberdeen, and 2 in Perth. The 9 fatal cases of whooping-cough showed a marked decline from the numbers recorded in recent weeks, and included 7 in Glasgow. The deaths from scarlet fever, which had declined from 12 to 8 in the preceding four weeks, were again 8 last week, of which 4 occurred in Glasgow and 2 in Edinburgh. The 2 fatal cases of small-pox were registered in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 142 and 138 in the preceding two weeks, rose again to 154 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 52, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding three weeks from 27.1 to 25.4 per 1000, rose again to 28.3 during the week ending Jan. 5th. During the thirteen weeks of last quarter the death-rate in the city averaged 23.5 per 1000, against 16.6 in London and 19.6 in Edinburgh. The 190 deaths registered in Dublin during the week under notice showed an increase of 20 upon the number in the previous week, and included 10 which were referred to the principal zymotic diseases, against 22 and 21 in the preceding two weeks; of these, 5 resulted from small-pox, 2 from "fever," 2 from diarrhoea, and 1 from whooping-cough, but not one from measles, scarlet fever, or diphtheria. These 10 deaths were equal to an annual rate of 1.5 per 1000, the zymotic death-rate during the same period being 1.8 in London and 1.7 in Edinburgh. The fatal cases of small-pox, which had been 5, 6, and 10 in the preceding three weeks, declined to 5 last week. During last quarter no fewer than 51 deaths resulted from small-pox in Dublin, of which 27 were registered during the last four weeks of the year. The deaths referred to different forms of "fever," which had been 4, 7, and 3 in the preceding three weeks, further declined to 2 last week. The 190 deaths in Dublin last week included 21 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Seven inquest cases and 6 deaths from violence were registered; and 70, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1894.

In the accompanying table will be found summarised

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—DECEMBER, 1894.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1894.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths of infants under one year to 1000 births.				
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Bubonic fever.	Other con- tinued fevers.	Puerperal fever.	Krysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping- cough.	Typhus fever.	Bubonic fever.	Other continued fevers.	Diarrhoea.		Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.
LONDON...	4,349,166	17	1051	789	2	519	16	10	357	—	2791	8.4	2	149	59	176	83	—	94	—	46	614	1.8	5906	177	140
West Districts.																										
Paddington	121,583	—	7	25	—	17	1	—	6	—	56	6.0	—	6	—	7	1	—	—	—	—	—	13	1.4	153	16.4
Kensington	167,350	—	25	24	—	20	—	—	13	—	83	6.5	—	4	—	5	—	—	5	—	—	21	1.6	189	14.7	
Hammersmith	106,696	—	15	16	—	11	—	—	6	—	48	5.9	—	4	—	6	—	—	2	—	—	16	2.0	141	17.4	
Fulham	110,993	—	53	45	—	13	—	—	5	—	132	13.2	—	6	—	6	—	—	2	—	—	23	2.7	143	16.8	
Chelsea	99,052	—	14	24	—	8	—	—	2	—	160	17.9	—	2	—	—	—	—	—	—	—	8	1.1	133	17.5	
St. George Hanover-square	75,033	—	8	7	—	15	—	—	1	—	34	5.9	—	—	—	—	—	—	—	—	—	5	0.9	175	16.9	
Westminster	54,414	—	16	5	—	10	—	—	2	—	32	7.7	—	—	—	—	—	—	—	—	—	8	1.8	82	20.2	
St. James Westminster	23,571	—	11	5	—	6	—	—	—	—	22	12.2	—	—	—	—	—	—	—	—	—	5	2.8	42	23.2	
North Districts.																										
Marylebone	138,554	11	25	18	—	32	—	—	14	—	100	9.4	2	—	3	4	3	—	2	—	—	14	1.3	184	17.3	
Hampstead	75,443	—	17	5	—	8	—	—	1	—	31	5.4	—	1	—	—	—	—	—	—	—	4	0.7	69	10.2	
St. Pancras	233,739	—	77	26	—	25	—	—	23	—	153	8.5	—	1	—	8	4	—	3	—	—	24	1.3	320	17.9	
Islington	331,900	—	98	42	—	39	—	—	19	—	188	7.8	—	1	—	16	12	—	4	—	—	39	1.5	421	16.5	
Stoke Newington	34,172	—	1	2	—	3	—	—	2	—	8	8.3	—	1	—	1	1	—	1	—	—	3	1.1	18	6.9	
Hackney	211,493	—	45	48	—	25	—	—	16	—	134	8.3	—	6	—	8	1	—	8	—	—	25	1.6	261	16.1	
Central Districts.																										
St. Giles	38,144	—	2	3	—	8	—	—	3	—	16	5.5	—	1	—	1	—	—	1	—	—	4	1.4	67	22.9	
St. Martin-in-the-Fields	13,783	—	1	4	—	4	—	—	2	—	8	7.6	—	—	—	—	—	—	—	—	—	1	0.9	16	19.1	
Strand	23,179	—	3	5	—	7	—	—	1	—	15	8.4	—	—	—	—	—	—	—	—	—	5	2.8	200	49	
Holborn	32,438	—	8	13	—	4	—	—	7	—	24	9.6	—	—	—	—	—	—	—	—	—	2	0.8	34	13.7	
Clerkenwell	65,312	—	10	8	—	5	—	—	8	—	34	6.8	—	1	—	3	2	—	1	—	—	7	1.4	85	17.0	
St. Luke	41,158	—	1	5	—	8	—	—	1	—	28	8.9	—	—	—	—	—	—	—	—	—	8	2.5	59	31.3	
City of London	34,832	—	1	5	—	13	—	—	1	—	13	4.9	—	—	—	—	—	—	—	—	—	1	0.4	52	19.5	
East Districts.																										
Shoreditch	123,186	—	33	18	—	9	—	—	20	—	83	8.8	—	4	—	1	7	—	2	—	—	15	1.6	174	18.4	
Bethnal Green	129,840	—	31	34	—	11	—	—	22	—	162	10.2	—	4	—	2	—	—	—	—	—	14	1.4	180	18.1	
Whitechapel	75,498	—	14	20	—	6	—	—	7	—	48	8.3	—	4	—	4	—	—	—	—	—	13	2.2	129	22.3	
St. George-in-the-East	45,760	—	12	13	—	7	—	—	4	—	36	10.3	—	—	—	4	2	—	—	—	—	7	2.0	82	23.6	
Limehouse	57,000	—	13	22	—	5	—	—	2	—	42	9.6	—	2	—	9	1	—	—	—	—	14	3.2	103	23.6	
Mile End Old Town	108,242	—	35	17	—	11	—	—	12	—	75	9.0	—	2	—	7	3	—	3	—	—	14	1.7	163	19.6	
Poplar	170,217	2	70	46	—	15	—	1	21	—	156	11.9	—	23	—	5	1	—	2	—	—	38	2.9	252	19.3	
South Districts.																										
St. Saviour Southwark	26,712	—	4	7	—	—	—	—	3	—	14	6.8	—	—	—	3	—	—	—	—	—	3	1.5	51	24.9	
St. George Southwark	60,040	—	21	7	—	2	—	—	4	—	35	7.6	—	—	—	2	—	—	—	—	—	4	0.9	108	23.7	
Newington	118,512	—	21	21	—	14	—	—	10	—	67	7.4	—	—	—	2	—	—	—	—	—	12	1.3	162	17.8	
St. Olave Southwark	12,884	—	3	3	—	3	—	—	1	—	9	9.0	—	—	—	—	—	—	—	—	—	3	2.0	141	12.0	
Bermondsey	84,053	—	25	8	—	8	—	—	6	—	49	7.6	—	—	—	2	—	—	—	—	—	13	1.0	141	21.9	
Rotherhithe	40,365	—	27	3	—	2	—	—	12	—	47	15.2	—	—	—	2	—	—	—	—	—	3	1.0	57	18.4	
Lambeth	282,574	—	53	37	—	45	—	—	16	—	163	7.5	—	1	—	14	5	—	9	—	5	4.0	362	16.7		
Battersea	161,558	—	53	36	—	28	—	—	23	—	143	11.5	—	1	—	11	8	—	5	—	4	3.2	263	20.4		
Wandsworth	179,518	—	33	19	—	24	—	—	20	—	97	7.0	—	2	—	5	2	—	4	—	6	2.6	183	19.3		
Camden	248,893	—	35	30	—	23	—	—	13	—	167	12.6	—	30	—	3	—	—	7	—	—	25	1.3	318	17.8	
Greenwich	173,128	—	70	67	—	16	—	—	11	—	35	5.7	—	6	—	12	—	—	—	—	—	24	2.4	237	15.8	
Lewisham (excluding Penge)	79,903	—	5	5	—	1	—	—	3	—	17	12.6	—	22	—	2	—	—	—	—	—	15	3.7	318	17.8	
Woolwich	42,309	—	8	5	—	1	—	—	6	—	35	5.2	—	4	—	1	—	—	—	—	—	25	7.7	89	27.4	
Lee	38,172	—	5	5	—	1	—	—	3	—	17	5.2	—	22	—	2	—	—	—	—	—	7	2.4	50	17.1	
Plumstead	68,233	—	30	12	—	1	—	—	5	—	48	10.6	—	8	—	4	—	—	—	—	—	14	3.1	132	12.8	
Port of London	—	1	—	2	—	1	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

* Including 36 cases of membranous croup.

† Including deaths from membranous croup.

complete statistics relating to sickness and mortality during December in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 8·4 per 1000 of the population, estimated at 4,349,166 persons. In the preceding three months the rates had been 9·6, 10·0, and 9·5 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hampstead, Stoke Newington, St. Giles, City of London, Lewisham, Woolwich, and Lee; while they showed the largest excess in Fulham, St. James Westminster, St. George-in-the-East, Poplar, Rotherhithe, Battersea, Greenwich, and Plumstead. The prevalence of small-pox in London showed a further decline during December, only 17 cases being notified during the month, including 11 in Marylebone, 2 in Poplar, and 1 each in St. Pancras, Whitechapel, St. George Southwark, and Port of London sanitary areas. The Metropolitan Asylum Hospitals contained 16 small-pox patients at the end of December, against 93, 45, and 31 at the end of the preceding three months; the weekly admissions averaged 3, against 17, 9, and 6 in the preceding three months. The prevalence of scarlet fever in London showed a marked further decline from that recorded in recent months; this disease was proportionally most prevalent in Fulham, St. Pancras, Mile-end Old Town, Poplar, Rotherhithe, Battersea, Greenwich, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1865 scarlet fever patients at the end of December, against 2058, 2207, and 2114 at the end of the preceding three months; the weekly admissions averaged 171, against 245, 246, and 208 in the preceding three months. The prevalence of diphtheria also showed a slight further decline during December; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Chelsea, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Poplar, and Greenwich. There were 521 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of December, against 496, 537, and 517 at the end of the preceding three months; the weekly admissions averaged 93, against 96, 100, and 90, in the preceding three months. The prevalence of enteric fever in London showed a further increase upon that recorded in recent months; among the various sanitary areas this disease was proportionally most prevalent in St. George Hanover-square, Westminster, St. James Westminster, Marylebone, St. Martin-in-the-Fields, Strand, and City of London. Erysipelas showed the highest proportional prevalence in Holborn, St. Luke, Shoreditch, Bethnal Green, Rotherhithe, and Battersea sanitary areas. Two cases of puerperal fever were notified in Camberwell, and 2 in Greenwich sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Dec. 29th, the deaths of 5906 persons belonging to London were registered, equal to an annual rate of 17·7 per 1000, against 14·4, 15·8, and 15·2 in the preceding three months. The lowest death-rates during December in the various sanitary areas were 6·9 in Stoke Newington, 10·2 in Hampstead, 12·0 in St. Olave Southwark, 12·8 in Plumstead, 13·7 in Holborn, and 14·2 in St. George Hanover-square; the highest rates were 23·6 in St. George-in-the-East and in Limehouse, 23·7 in St. George Southwark, 24·9 in St. Saviour Southwark, 27·4 in Woolwich, 27·6 in Strand, and 31·3 in St. Luke. During the four weeks of December 614 deaths were referred to the principal zymotic diseases in London; of these, 2 resulted from small-pox, 149 from measles, 59 from scarlet fever, 176 from diphtheria, 88 from whooping-cough, 94 from enteric fever, and 46 from diarrhoea. These 614 deaths were equal to an annual rate of 1·8 per 1000, against 1·6 in each of the preceding two months. No fatal case of any of these diseases was recorded last month in St. Olave Southwark; in the other sanitary areas they caused the lowest death-rates in St. George Hanover-square, Hampstead, St. Martin-in-the-Fields, Holborn, City of London, and St. George Southwark; and the highest rates in Fulham, St. James Westminster, Strand, Lime-

house, Battersea, Greenwich, Woolwich, and Plumstead. Only 2 fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the preceding ten years being 17; these two cases belonged to Marylebone sanitary area. The 149 deaths referred to measles were as many as 126 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Poplar, Greenwich, Lewisham, Woolwich, Lee, and Plumstead. The 59 fatal cases of scarlet fever were little more than half the corrected average number; this disease was proportionally most fatal in Fulham, Whitechapel, and Bermondsey sanitary areas. The 176 deaths from diphtheria exceeded by 30 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Westminster, St. George-in-the-East, Limehouse, Mile End Old Town, St. Saviour Southwark, Battersea, and Greenwich. The 88 fatal cases of whooping-cough were as many as 138 below the corrected average number; this disease was proportionally most fatal in St. Luke, Shoreditch, and Battersea sanitary areas. The 94 deaths referred to enteric fever were 31 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Hackney, Strand, Whitechapel, and Lewisham. The 46 fatal cases of diarrhoea were slightly below the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was no less than 30 per cent. below the average.

Infant mortality in London during December, measured by the proportion of deaths under one year of age to births registered, was equal to 140 per 1000, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, Marylebone, Hampstead, Stoke Newington, Holborn, Clerkenwell, and St. Olave Southwark; and the highest rates in Kensington, St. Martin-in-the-Fields, St. Saviour Southwark, St. George Southwark, Battersea, Lewisham, and Woolwich.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN DONSON has been posted to the North-Eastern district. Surgeon-Major O'Sullivan has arrived from Singapore. Surgeon-Major Pike has completed a tour of service in Ceylon and embarked for England. The following officers have embarked in the *Victoria* for a tour of service in India: Surgeon-Lieutenant-Colonel Ring, Surgeon-Captains Donnet and Sparkes, and Surgeon-Lieutenant More.

INDIA AND THE INDIAN MEDICAL SERVICES.

1st Bombay Grenadiers: Surgeon-Captain Street, officiating in medical charge, 7th Bombay Lancers, to the Medical Charge, vice Surgeon-Lieutenant-Colonel Wilkins, D.S.O., transferred. 21st Bombay Infantry: Surgeon-Lieutenant-Colonel Wilkins, in Medical Charge, 1st Bombay Grenadiers, to the Medical Charge, vice Surgeon-Major Burroughs, transferred to general duty at his own request. Surgeon-Major Rowney and Surgeon-Lieutenant Austen, just arrived from England, have been posted to general duty Bombay district temporarily. Surgeon-Lieutenant-Colonel Trevor, A.M.S., on arrival from England, has been appointed to the Medical Charge, Station Hospital, Kurrahee. Surgeon-Major W. G. H. Henderson has relinquished charge of the Hyderabad Prison, Surgeon-Captain J. Jackson assuming Charge of the Hyderabad Central Prison.

NAVAL MEDICAL SERVICES.

Surgeon A. G. Wildey has been appointed to the *Wildfire* (additional).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major William R. Smith to be Surgeon-Lieutenant-Colonel. Surgeon-Lieutenant David Todd, 1st Durham Volunteer Artillery (Western Division, Royal Artillery), to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Fife-shire: Henry William Laing, M.D., to be Surgeon-Lieutenant. The Highland: Surgeon-Lieutenant-Colonel A. Sclanders, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Corps on his retirement. *Rifle*: 1st (Renfrewshire

Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders) : Surgeon-Lieutenant A. Peacock, M.B., resigns his commission.

THE JAPANESE ARMY MEDICAL SERVICE ORGANISATION AND ARRANGEMENTS.

According to the statement of eye witnesses published in the *Times* and the *Standard* there does not seem to be any doubt that the Japanese forces operating at Port Arthur were guilty of terrible atrocities after the capture of the forts and dockyard of that place. The conduct of the Japanese troops on that occasion has aroused a feeling of righteous indignation and disgust amongst even their well-wishers in Europe, which the Government of Japan will find it very difficult to remove. It shows that the civilisation of the Japanese is but veneer after all. Their intelligence, energy, and enterprise, and their remarkable aptitude in acquiring and applying the results of European science and art cannot, however, be denied. Their medical arrangements during the present war with China, and their hospital organisation at Hiroshima and elsewhere, in connexion with their Red Cross Society and the Army Medical Staff and Medical Staff Corps, seem to have been excellent. In the attack and capture of Port Arthur on Nov. 21st the main body of the attacking force of the Japanese army passed through a small hamlet which was afterwards used by the Japanese Red Cross as one of the chief sites of their advanced field hospital work. The wounded, the special correspondent of the *Standard* writes, were rapidly brought in from the front, placed on straw, and promptly attended to by members of the medical service. The equipment of the Japanese Red Cross is stated to have been excellent. There was a plentiful supply of antiseptic agents and dressings, and all the operations were conducted on the recognised principles of antiseptic surgery of Western civilisation. Labels were attached to the wounded briefly stating the nature of the injury and what had been done before the cases were transferred to the hospitals in the rear, and, in fact, everything was done in accordance with the principles and methods followed in modern war in Europe. The resistance offered by the Chinese was small and ineffective, and there was, no doubt, no great strain on the Japanese medical organisation and arrangements; still the work was well done and very creditable to the Japanese service. With the small total of casualties of 29 officers and men killed and 210 wounded, the Japanese managed to capture at Port Arthur sixteen forts and redoubts with all their guns, together with the dockyard with its plant and workshops complete.

THE WAZIRISTAN EXPEDITION.

The latest intelligence regarding the punitive expedition against the Waziris shows that, notwithstanding that the British force has destroyed or dismantled many fortified towers and met with relatively little opposition, the affair is not by any means at an end. The Waziris have fled, no doubt; but they will probably return before very long and again attempt to harass the troops by occasional raids and desultory attacks on positions occupied by the British force. In the meantime, what with the extreme cold and severity of the weather in the Afghan hills at this season and the difficulty of transport, all field operations are very trying to the troops concerned, and the amount of pulmonary disease among the native portion of the force especially will probably be considerable.

THE LATE CHOLERA OUTBREAK AT LUCKNOW.

We are glad to notice that the services rendered by the medical officers on the occasion of the late severe cholera outbreak in the Lucknow garrison have not only been handsomely acknowledged by Sir Robert Low, K.C.B., the general officer commanding the Oudh District, but that Sir George White, the Commander-in-Chief, has desired that his thanks may be conveyed to them, and that this may be noticed in their service sheets. His Excellency also expressed his admiration of the devotion of the wife of Colour-Sergeant Millett, 1st Battalion, East Lancashire Regiment, the corps, it will be remembered, that suffered so severely during the outbreak in question.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on the 8th inst., Inspector-General F. W. Davis in the chair, the sum of £99 was distributed among the several applicants.

DEATH IN THE SERVICE.

Deputy-Inspector-General David Wilson (retired) died suddenly at his residence at Devonport on the 8th inst., in his sixty-seventh year. He was Fleet-Surgeon of the *Himalaya* in South Africa during the Zulu War in 1877-79.

The *Broad Arrow* states that the Secretary of State for India has refused to sanction the extension of the services of Surgeon-Major-General Bradshaw, P.M.O. with Her Majesty's Forces, as proposed by the Government of India. He will consequently be retired in March next on attaining the age of sixty-two.

Surgeon-Major-General William Arthur Thomson, M.B., has been appointed Honorary Physician to the Queen, vice Surgeon-General J. Fraser, M.D., C.B., deceased.

Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, who has been appointed to succeed Sir Joseph Fayrer as President of the Indian Office Medical Board, is the senior of his rank, and has held several important appointments in India. He entered the Indian Medical Service in 1859.

Correspondence.

"Audi alteram partem."

"THE CARE OF THE PHTHISICAL POOR."

To the Editors of THE LANCET.

SIRS,—That the progress of preventive medicine will always remain one of the distinctive features of the Victorian era has been shown by an abler pen than mine and with a mastery of detail to which I can lay no claim. Nevertheless, the leading article which appeared under the above title in the last issue of THE LANCET calls attention to a great question which, as you truly say, urgently presses for solution. It involves no reflection on existing institutions for the treatment of phthisis to point out that, in conformity with the design of their supporters and administrators, their chief use is to minister to the wants of acute and advanced cases. The subjects of pulmonary tuberculosis in its earlier stages are mostly consigned to the out-patient departments, attendance in which involves not only loss of wages and increasing penury, but leaves them to carry on a hopeless struggle against their relentless enemy under domestic conditions which combine to ensure its ultimate victory and enable it to claim fresh victims from among their susceptible offspring. The magnitude of the evil is attested by the fact to which you draw attention—namely, "that about one person out of every seven who die succumbs to phthisis." On the other hand, the evidence that that disease need not, in all cases, lead to a fatal issue is unequivocal. The late Dr. Hughes Bennett placed on record the fact that over 20 per cent. of the necropsies he had performed on patients who had died from non-tuberculous diseases or as the result of accident revealed the cicatrices of old pulmonary vomicae. Other pathologists have made similar and confirmatory observations. What, then, is being done to meet the requirements of such a situation? Having regard to the paucity and the nature of the hospital accommodation which is available for the abounding multitude of phthisical poor, it would not be far from the truth to say that practically nothing is done until in too many instances medical skill and hygienic surroundings can only avail to alleviate suffering and delay the inevitable issue. Provision for the treatment of the subjects of injuries and of acute disease and homes to expedite their convalescence abound. The great blot on our hospital system, the yawning gulf in our charitable and administrative organisations for the relief of disease, is that no effort has as yet been made to check in the early stages the ravages of a disease which claims a holocaust amounting to one-seventh of the total annual mortality. So glaring a defect is a reproach to an age which has witnessed the establishment and maintenance of a national system of vaccination and the devotion of public funds to such purposes as the treatment of the sick poor, the isolation of the contagious and the mentally unsound, and the disinfection of dwellings. The first step should be to provide in each sanitary district a bacteriological laboratory in which the sputa of suspected persons could be examined at the public expense on the request of the medical attendant; the

next, but more difficult because more costly, would be the erection of specially constructed buildings on carefully selected sites, to serve as temporary homes of rest and treatment for those who, in most of the existing institutions, would be treated as out-patients.

Is it too much to hope that the Victorian era will not close before something has been accomplished to meet what is, perhaps, our greatest national want?

I am, Sirs, yours faithfully,

Jan. 5th, 1895.

W. BEZLY THORNE.

"CHILD MORTALITY IN ENGLAND."

To the Editors of THE LANCET.

SIRS,—Mr. Biddle, in his letter on this subject in the last issue of THE LANCET, expresses the opinion that the late Dr. William Farr would have approved the use of his "coefficients" as "the best means of setting forth the relative mortality of the several age groups." Having for more than twenty-five years enjoyed the advantage of daily official intercourse with Dr. Farr, I feel justified in asserting that he would have entirely endorsed your unfavourable criticisms on Mr. Biddle's method and conclusions. It is true that Mr. Biddle's "coefficients" correctly show the relative mortality in any age group to the mean mortality at all ages; and it is also true that the mortality in the age group 0 to 5 now bears a higher proportion to this mean mortality than it did ten or fifteen years ago. Mr. Biddle argues and assumes from this that the power of resistance to disease and death among children at this age must therefore have declined during this period. This assertion is in direct opposition to the evidence afforded by the fairly steady decline in the annual death-rate per 1000 at this age period during the last thirty years, which beyond question implies that an increasing proportion of children born in this country now attain the age of five years. I cannot refrain from expressing surprise that Mr. Biddle, in spite of his long devotion to vital statistics, should fail to see that his "coefficients" are absolutely fallacious as a test of the increase or decrease of mortality in any given age group. Child mortality is, indeed, shown by Mr. Biddle's method to have increased, whereas by the unflinching test of the rate of mortality per 1000 living we know that it has considerably declined; and he has thus been led to make the indefensible assertion that the power of resistance among children to disease and death grows less year by year. It is unnecessary to discuss Mr. Biddle's precise method of obtaining his "coefficient" which has led him to make his unfounded assertion; but, knowing that it is the quotient obtained from the group death-rate and the mean or average death-rate at all ages, it is somewhat amusing to be told that, "having the average and the coefficient, we easily obtain the group death-rate as their product;" or, in other words, that we easily come back to the point whence we started. The true rate of increase or decrease in the mortality at any age group can only be obtained from the recorded death-rates among the persons living at the same ages in a series of years, and the use of the mean death-rate at all ages in Mr. Biddle's method introduces an inevitable source of fallacy. It may be, and indeed is, a matter for serious consideration and effort that child mortality is not decreasing at the same rate as the mortality of persons above the age of five years, but this fact gives no kind of warrant for Mr. Biddle's assertion, to which you were so fully justified in taking exception. Mr. Biddle misses or ignores the main point of the argument when he asserts, with regard to the increased proportion of child mortality to the mean mortality at all ages, that it makes no difference whether this is due to the increase of mortality among children or to the decrease of mortality at ages above five years. Allow me in conclusion to refer briefly to Mr. Biddle's line of argument as to the comparative power of resistance among London children to zymotic disease. Here again his "coefficients" appear to have led him to make fully as untrustworthy conclusions. He finds that the rate of mortality from scarlet fever, diphtheria, measles, whooping-cough, and diarrhoea, at the age group 0 to 5, now bears in each case a higher proportion to the mean death-rate from the same diseases at all ages, than was the case eighteen years ago. This fact is not without interest, but it affords no title of evidence of any increase or decrease of the power of resistance among children to these several diseases. The decline in the death-rate from scarlet fever during this period, for instance, is

one of the most remarkable facts in connexion with recent mortality statistics; and yet, because Mr. Biddle's "coefficient" for this disease shows an increase, he argues a decline in children's power of resistance to this disease. May not the fact upon which he bases this assumption be probably due to a decline in the virulence of the type of recent scarlet fever? We know that in severe epidemics of zymotic disease the deaths include a larger proportion of older children and adults than in non-epidemic periods; and yet Mr. Biddle sees in the decreased proportion of deaths from this disease above the age of five years a decreased power of resistance to the disease under that age. Again, because medical practitioners do not now so often as formerly assign diarrhoea as the cause of death of children and adults aged above five years, a decreased power of resistance to this complaint among children under this age is assumed!

I am, Sirs, yours faithfully,

Surliton, Jan. 7th, 1895.

NOEL A. HUMPHREYS.

. We regret that we can at present give no more space to this question.—ED. L.

"THE BARIUM WATERS OF LLANGAM-MARCH AND THE THERAPEUTICS OF BARIUM SALTS."

To the Editors of THE LANCET.

SIRS,—The use of the salts of barium have lately come under special notice in the columns of THE LANCET, and hence I venture to offer this small contribution to the subject. One of our most eminent physicians in Dublin, the late Dr. Alfred Hudson, fully thirty years ago taught me the value of iodide of barium in strumous glandular affections, and ever since I have used his formula with remarkably good results in suitable cases. Dr. Hudson's favourite prescription was as follows: R—Barii iodidi, gr. ii.; aquæ, 3 ii.; misce et solve. Deni adde: Syrupi ferri iodidi, ext. sarsæ comp. fl. aa 5i.; succi conii, 3vi.; one teaspoonful in half a wine-glassful of water thrice daily after food.

I am, Sirs, yours faithfully,

Dublin, Jan. 7th, 1895.

F. R. CRUISE, M.D. Dub.

THE PLURAL OF LOCUM TENENS.

To the Editors of THE LANCET.

SIRS—I fear that in the matter of the missing plural for locum tenens "purity of language" will ever want its avenging philologist. This technical but time-honoured use of the present participle singular as a substantive is itself a barbarous dog-Latinism, and cannot be purified by pluralisation. In default of any possible authority from philological sources I would suggest "*locum-tenents*" to serve as a practical plural for this singular solecism. This hybrid word should be spelled with an "e" in the fourth syllable instead of an "a" (as in the Anglo-French and familiar form of the word "tenant") in order to avoid confusion with other technical usages.

I am, Sirs, yours truly,

Jan. 4th, 1895.

H. B. DONKIN.

AMINOL AS A GERMICIDE.

To the Editors of THE LANCET.

SIRS,—The interesting remarks and speculations of Dr. Thorne Thorne at the recent meeting at the Examination Hall, in reference to finding "in the bodies of lower animals the medium by which specific contagia may be reduced to comparative or complete impotency" receive no little elucidation and support from what we know of "the amines process of sewage treatment" and the disinfectant aminol. The active principle in both these is a gas derived from herring brine (which contains blood and debris from the pickling of herrings) when acted upon by strong lime water. This gas is a most potent germicide and antitoxin and has by no means received the attention and study which it deserves. The proportion of herring brine used in sewage treatment, three grains to the gallon, is so small that "it would seem highly probable that this process results in the production (perhaps only in a very small amount) of a substance or substances strongly inimical to bacterial life. As a matter of fact, there is no valid chemical reason to be urged against such a conclusion."

¹ Brit. Med. Jour., Nov. 1st, 1890.

That this must be so is evidenced, amongst several other such cases, by the report on the experiments at Salford. For instance, Dr. Klein reports as follows: "Received on July 29th four samples, sealed 'The Amines Syndicate,' labeled—(1) Effluent, filtered, 3 P.M., July 27th, 1891; (2) Effluent, unfiltered, 1.30 P.M., July 27th, 1891; (3) River Irwell, above intake, 11 A.M., July 27th, 1891; (4) Pendleton sewage, 11 A.M., July 27th, 1891. Of each of these samples made two plate cultivations, using for each plate of No. 1 one cubic centimetre, No. 2 one cubic centimetre, No. 3 ten cubic millimetres, No. 4 one-hundred-thousandth of a cubic centimetre."

After one week's incubation the following was found:—Sample 1 (filtered effluent) contained innumerable colonies; except a dozen or so of largish white colonies all the others (uncountable) were of one kind, small, grey, liquefying; compared with Sample 2 I am of opinion that the filter has added to the effluent an uncountable number of bacteria of one and the same species. Sample 2 (unfiltered effluent) contained ten colonies, amongst them two moulds, for one whole cubic centimetre; therefore, only eight bacteria being present, it may justly be said that the effluent was practically sterile. Sample 3 contained on average 80 to 100 thousand bacteria per 1 c.c. Sample 4 contained above 10,000,000 per 1 c.c. Mr. Leo Taylor made daily bacteriological and microscopical examinations, the overflow effluent in all cases being practically sterile, whilst the sewages were teeming with countless organisms.

It would take far too much of your space to multiply examples, but it has been proved that lime alone will not do this; therefore we are driven back to the conclusion that from the refuse of lower animals (herrings) a germicide of great potency is evolved by lime. This sheds light on Dr. Thorne's remarks. Many medical men have used this compound in surgery and medicine during the last five years, and it has been found eminently useful in gonorrhoea, in diphtheria, in offensive discharges of all kinds, in dysentery as an injection, and in diarrhoea arising from animal poisons. In contradistinction, it is inert in diarrhoea arising from unripe fruit or mechanically irritating ingesta, which goes to show that the astringent action of the lime water is not the active agent. It forms a perfectly antiseptic surgical dressing.

Fish feed upon all the impurities which drain from the land into the sea, and if there be truth in the theory that by introducing these specific contagia into the bodies of lower animals we may find developed therein an antitoxin (as they themselves are uninjured) we should naturally look for it in their bodies. That is so, and this extraordinary poison to bacteria is evolved from the nervous system and roes of herrings by the action of lime. This substance, so inimical to bacteria, is perfectly innocent to human beings, and may be drunk, even in the form of sewage effluent, with impunity, though I should not advise this latter proceeding. Two swine were inoculated by Professor Brown with swine fever; one was left alone and died, the other was fed on lime water and herring brine and survived. In the first forty-nine weeks of this year 6932 pigs died from swine fever, 54,405 were killed as diseased, and 1250 slaughtered as suspected. It is more than probable that a few pounds would have saved this costly stock. I might multiply examples indefinitely, but what I wish to arrive at is this—that the remedy be tried by subcutaneous injection, and its results compared with Behring's antitoxin. If it turns out a success numbers of lives may be saved, much irritating and unseemly disputation may be avoided, and the way cleared to a final and convincing analysis of this gas and its employment in a known chemical form. I do not myself doubt the result.

I am, Sirs, your obedient servant,
H. CAMPBELL POPE, M.D. Lond., F.R.C.S.

Goldhawk-road, W., Dec. 17th, 1894.

THE ABUSE OF PROVIDENT DISPENSARIES.

To the Editors of THE LANCET.

SIRS,—Will you please insert in your next issue the following resolution, which was recently passed at a meeting of the medical practitioners of the West Salford Parliamentary division, held at the town hall, Pendleton? We venture to think that the action taken by the medical staff of the Pendleton Provident Dispensary in severing their connexion with the dispensary will meet with your support and the approval of the profession at large. The following

are some of the factors which have brought about the resignation of the medical staff. 1. This dispensary, in common with other provident dispensaries, has not fulfilled the purpose for which it was intended, the bulk of the members being well able to pay ordinary medical fees. 2. The absence of any wage limit or other standard by which the admissions can be regulated and the interests of the profession safeguarded. 3. Practically the whole management of the dispensary is in the hands of a lay committee, who only consider the financial success of the dispensary and who care nothing for the proper remuneration of the medical staff. 4. The remuneration bears no proportion to the labour and responsibility attached to the work. 5. Some of the branches of the Manchester and Salford Provident Dispensary have recently been guilty of a most objectionable form of professional advertising.

I am, Sirs, yours truly,

PHILIP GELL GARRETT,

Hon. Sec. to the meeting held on the 27th ult.

Albany-square, Pendleton, Jan. 1st, 1895.

Resolution.

Resolution carried at a meeting of medical practitioners held at Pendleton town-hall on Dec. 27th, 1894. Proposed by Dr. Fraser, seconded by Mr. Wolstenholme: "That the Manchester and Salford Provident Dispensary system, as at present conducted, is inimical to the interests of the profession, derogatory to its dignity, and unworthy of the countenance and support of medical men. That this meeting of medical practitioners residing in the West Parliamentary division of the borough of Salford desires, therefore, to record its firm conviction that the members of the staff of the Pendleton Provident Dispensary, in unanimously sending in their resignations, have consulted the best interests of the profession and deserve the thanks of all who value its present and future welfare."

POSTAL FACILITIES.

To the Editors of THE LANCET.

SIRS,—I am surprised to find how few of the public are aware of two postal facilities which the neighbours of a district post office enjoy, and for the benefit of my professional brethren I will mention them: (1) the right to hand a telegram, prepaid by stamps or coin, to any telegraph messenger who may pass, and thus save the inconvenience of despatching a servant to the office; (2) the power to post on Sunday up to 6 P.M. with an extra halfpenny stamp letters for the country, which then reach their destination on Monday morning. As I am afraid a good deal of arrears of correspondence is worked off on Sunday this is really a gain.

I am, Sirs, yours faithfully,

Jan. 8th, 1895.

CAVENDISH SQUARE.

A MISSING GUIDE.

To the Editors of THE LANCET.

SIRS,—With reference to the promised appearance of the Transactions of the International Medical Congress in April next, let us hope some sanguine expectations may be realised. What I should like to know is the probable date of issue of an exceptionally beautiful guide to Rome which was to have been issued to members at the opening of the Congress in March last. I was present during the whole of the Congress and I failed to feast my vision on that attractive production. Of all the disappointments of that memorable meeting the non-appearance of the guide-book was the greatest blow of all to

Yours faithfully,

Jan. 5th, 1895.

BIBLIOPHILE.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Magistrates and Prosecutions for Excessive Smoke Production.

ON Friday last a deputation representing the Manchester and Salford Sanitary Association and the Noxious Vapours' Abatement Association presented a memorial to the city justices at their annual meeting, suggesting that cases of prosecution for excessive smoke production should be heard by the stipendiary magistrate. It certainly seems an anomaly that the case of the accused should

be judged by one who is probably just as guilty as he is. Chemical manufacturers are frequent offenders and they are well represented on the magisterial bench. The deputation did not impute to the magistrates any unfairness or any attempt to screen each other. The position is, however, by some at least of them, felt as unpleasant, as it must be to those who are conscious that the judge and the accused might very well play Box and Cox between the bench and the dock.

Juvenile Offenders.

A second deputation waited on the magistrates from the Strangeways Refuge for Children, one of the most useful philanthropic institutions in Manchester, and submitted a resolution which had been passed by the committee suggesting that the time had come when charges against juvenile offenders other than criminal should be separately considered by the magistrates and no longer be included in the general business of the police-court. This proposition would commend itself to almost everyone, for exposure to moral contagion ought to be avoided where possible. A committee of the justices was appointed to consider the matter.

Boys' and Girls' Refuge and Home.

This institution, mentioned in the last paragraph, completed its twenty-fifth year of work last week. It owes its origin to the philanthropic zeal of Mr. Leonard K. Shaw, who is still as earnest as ever in seeking to help the poor waifs of this city. On Jan. 4th, 1870, Mr. Shaw and a few friends met to found the Boys' Refuge and Industrial Brigade, as it was then called, and from a very humble beginning a most important charitable agency has developed. The institution includes the central refuge in Strangeways, near to our Assize Courts, with workshops, six homes for little orphan boys and girls, working lads' institute, brigade boys' home, girls' training homes, seaside home at Lytham, emigration training homes, home for crippled and incurable children, open-all-night shelters, prevention of cruelty to children branches, industrial brigades, day nursery at Ancoats, a refuge depot and book saloon, and prison gate mission. There is a branch at Belleville in Canada, and boys are sent year by year to the training ship *Indefatigable*. During 1894 750 children have been under care and training in the refuge and branch homes; 107 children have been sent out to Canada, making the total number now in the colony over 900: ten boys have been trained on board the *Indefatigable*; 1511 boys have had a week's holiday under canvas at the camp at Birkdale, near Southport; and other good deeds almost innumerable have been done. The annual meeting was attended by the Lord Mayor and by many distinguished citizens of various political and religious views; for the institution and its practical, sensible management have attracted many well-wishers.

Jan. 8th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Medical Faculty at University College.

CIRCUMSTANCES prevented the opening address of Professor Gotch being given at University College at the commencement of the session. The classes have been well attended, and the medical school of Liverpool, which has now existed for more than half a century, is in a most flourishing state. Its success is due to the untiring and self-sacrificing services of present and past lecturers, for it is only of late that any of the chairs have been endowed, and even now only a few have this advantage. Granting all the advantages of metropolitan schools, it must be admitted that Liverpool occupies a very important place in the north of England and has all the material for affording a sound medical education to any student. Moreover, the facilities for acquiring a practical knowledge of any department of medicine or surgery are now so great that at least a part of the curriculum may be spent here with profit by any student.

Jan. 8th.

A MEETING of persons interested in the Midwives Bill was held on the 9th inst. at the Midwives' Institute and Trained Nurses' Club, 12, Buckingham-street, Strand.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

THE annual report of the Edinburgh Royal Infirmary was submitted at a meeting of contributors on Monday last, Lord Provost McDonald occupying the chair. At the beginning of the year there were 663 patients in hospital, and during the year 9190 new cases had been admitted, making a total of 9853 treated during the year. Of this number 641 died in hospital. Over 4000 of the cases were medical, while there were more than 5000 surgical cases. Over 400 additional cases had been treated as compared with the preceding year. The largest number of patients in hospital at any time was 748, and the average time each patient had been in hospital was 22.6 days. Over 4000 of the cases treated were from the country. In the out-patient department 25,500 cases had received attention. The ordinary income had been £29,686, showing a diminution of £1083 compared with the preceding year, most of this being due to a falling off in the legacies and donations under £100. There is also noted a falling off in the amount of the church collections. There had been a diminution of £795 from employes at public works in the country, this being due to the prolonged strike of the workmen at collieries. The ordinary expenditure was £42,074, a decrease of £1857 on the figures of the preceding year. It is pointed out that the cost of maintenance per bed was 15s. 3d. less and the medical expenditure 14s. 1d. less than was the case the preceding year. The cost per annum of each occupied bed is reckoned at £58 10s. 4d. The extraordinary receipts for the year—i.e., of donations and legacies over £100—amounted to £22,376. As regards the convalescent home at Corstorphine, there had been 1450 admissions from the infirmary, the average daily number in the home being 79, and the average period of residence 20 days. The managers express their satisfaction at the work the infirmary is doing, but again draw attention to the need for increased accommodation, and as soon as the financial position of the country improves they propose to bring forward a scheme for its extension.

Annual Report of the University of Edinburgh.

During the past year the total number of matriculated students (including 140 women) was 2949. In the faculty of medicine there were 1494 students; of these, 622 belonged to Scotland, 498 were from England and Wales, 74 from Ireland, 59 from India, 205 from British colonies, and 35 from foreign countries. The report refers to the new lectureships in medicine, but, as we stated on a former occasion, these are simply new titles for the old assistants. A new departure has been made in the admission of women to degrees in medicine, provided they have obtained their medical education in extra-academical schools specially recognised by the University, and the framers of the report expect that many will avail themselves of the privilege. It is anticipated that the McEwan University Hall will be ready for the graduation ceremonial on Aug. 1st.

Health of Edinburgh.

It is satisfactory to note that only 4 fresh cases of small-pox were reported last week. There were 212 cases of measles and 49 of scarlet fever reported. Amongst the deaths are 2 cases of small-pox. No fresh cases of small-pox are reported in Leith.

The Decrease in the Number of Glasgow Medical Students.

The statement of the numbers of matriculated students at Glasgow University for the past six years shows a net diminution during that period of 200 in the candidates for medicine. The figures for Edinburgh University show a net diminution in medical students during the same period of 531. The figures do not, in the case of either university, include students enrolled in single classes or women. Perhaps a part of the above-noted marked falling off in the number of medical students is to be ascribed to the recent copious "ploughings" in the preliminary examinations; but more probably it is simply an indication of the expected ebb in the tide of candidates which was sure to follow the rush to begin study before 1892, when the five years' curriculum became obligatory, while some of it also may be due to the extension of medical schools south of the border.

Small-pox in Glasgow.

Small-pox has reappeared in Glasgow. Four cases have

been removed to hospital, and the family has been taken to the Isolation House and revaccinated. No fresh cases have appeared so far, and the source of infection has not been traced.

Aberdeen City Hospital.

For the past fifteen months alterations have been going on at the Aberdeen City Hospital. Two of the four pavilions have been extended so as to accommodate sixteen additional patients in each, and provision has been made for lavatories, medical officers' rooms, and nurses' rooms. The apparatus for mechanical heating and ventilation is in the basement floor of the administrative block. There are underground ducts from the various pavilions, and the warm air is driven out by Blackman fans. On the ground floor of the extension of the administrative block is a spacious kitchen fitted with the best system of cooking apparatus. Above the kitchen is a suite of nurses' bedrooms. The new block of offices, 145 ft. 6 in. by 96 ft. 6 in., has a large open court in the centre, and contains laundry accommodation with all the latest fittings and machinery. The block also contains stable, coach-house, lavatory, dirty and clean clothes room, disinfected clothes room, and boiler-house. A new mortuary and a second gatekeeper's lodge have also been built. These additions have cost £16,000, and the propriety of erecting a probationary block at an additional expense of £5000 or £6000 is being considered.

The Death-rate in Aberdeen.

The deaths in the city last year numbered 2480 being at the rate per annum of 18.84 per 1000 of estimated population. Whooping-cough was prevalent from February to June, and last month an extensive epidemic of measles commenced. The number of cases of measles reported last week was 246, against 393 for the previous week.

Jan. 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Action against a "Cancer Doctor."

At Waterford quarter sessions last week a man brought proceedings against a person described as a "cancer doctor," for having by unskilled and wrong treatment caused him to suffer great pain for several months, the defendant having promised to cure cancer in the plaintiff's hand. Some three years ago the plaintiff obtained advice from Dr. G. I. Mackesy as to the condition of his hand; cancer was diagnosed, and he was informed that to save his life the hand should be amputated at the wrist. He objected to the operation, and after some time went to Sir P. Dan's Hospital in Dublin, where Dr. Mackesy's opinion was confirmed. He returned to Waterford and placed himself under the treatment of the defendant, who was a pump-maker by trade, and who professed to cure cancer for money. The plaintiff was treated for seventeen weeks with plasters and powders, which caused great torture, and again consulted Dr. Mackesy, who found that the disease was spreading up the arm, and had to amputate above the elbow. Judge Fitzgerald, county court judge, in placing the facts before the jury, spoke strongly on the responsibility incurred by individuals undertaking to cure diseases without the necessary medical qualification, adding that they were liable, both civilly and criminally for their conduct. The jury found a verdict for the plaintiff for 17s. 6d., the money paid to defendant, the judge certifying for costs.

Death of Mr. Frederick Kirkpatrick, M.B., F.R.C.S. Irel., of Dublin

Mr. Kirkpatrick died at his residence, 9, Merrion-square, Dublin, on the 3rd inst., aged eighty-two years. Born in York-street, Dublin, in 1812, he was educated in Wexford and in the University of Dublin. He was apprenticed to Surgeon Byrne of Carlow, and afterwards to Surgeon Wilmot. He obtained the M.B. of the University of Dublin in 1837, and the Fellowship of the Royal College of Surgeons in Ireland in 1844. He was for many years visiting medical officer at the North Dublin Union Hospitals, and retired on superannuation. His contributions to medical literature included papers on Epidemic Ophthalmia and Diseases of the Bones and Joints, published in the *Dublin Journal of Medical Science*. He strongly advocated the use of potassa cum calce in diseased joints. The funeral took place on the 5th inst., and was largely attended. His remains

were interred in St George's burial-ground, Drumcondra. Among those who attended his funeral were the President, Vice-President, Secretary, Registrar, and Council of the Royal College of Surgeons in Ireland, of which he was President in 1872-73.

Health of Dublin.

During 1894 the death-rate was 2.7 below the average, and was the lowest on record. The zymotic death-rate was only 2 per 1000, and was 50 per cent. below the rate in the English towns. During the week ending the 5th inst. five deaths were recorded from small-pox, and one from beri-beri. Fifty-eight cases of small-pox were notified, as against 46 the previous week. There are now in the three small-pox hospitals in Dublin 301 cases of small-pox. A staff of fifty-eight men and women is now engaged in the conveyance of patients to hospital, in the disinfection of clothing and bedding, and in the disinfection, whitewashing, and cleansing of infected houses.

Jan. 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Obesity with Thyroid Extract.

The rapid loss of body weight attending the treatment of myxœdema with thyroid extract very naturally suggested the applicability of the same method of treatment to that *bête noire* of middle-aged men and the fair sex—obesity. Already Drs. Leichtenstern and Wendelstadt of the Augusta Hospital, Cologne, have observed a manifest diminution of *embonpoint* in twenty-two of twenty-five obese subjects after a course of treatment with fresh sheep's thyroid and thyroid tabloids. The good effects observed are ascribed to more active combustion of the accumulated fat rather than to the diuresis which is a marked feature of the initial stages of the treatment. It is said that the process is more rapid during the early part of the cure, the loss of weight diminishing gradually. The actual wasting observed varied in the different cases from 1 to 5 kilogrammes during the first week and from 1 kilo. 0.50 gm. to 9 kilo. 0.50 gm. after several weeks of the treatment. MM. Charrin and Roger¹ have succeeded in procuring notable emaciation in animals subjected to subcutaneous injections of thyroid juice (daily dose 50 centigr. to 75 centigr.). Experimentally employing the same method in Professor Bouchard's wards, M. Charrin gave an average of 1 gm. daily of thyroid juice (both subcutaneously and *par la voie stomacale*) to a woman affected with general adiposis, with more pronounced accumulation of fat at the junction of the limbs with the trunk. In three months her body weight fell from 133 kilo. to 115 kilo. The treatment was afterwards continued at intervals. During the periods of suspension of the treatment the weight remained stationary; but fell at the rate of from 50 gm. to 130 gm. a day when the extract was again administered. A maximum of emaciation appeared, however, to be reached in time. Analogous, although less marked, results were obtained in a second patient, whilst a third (all were women) case remained unaffected. A like disappointment was noted in several other instances. M. Charrin ascribes the inconstancy of results to the different natures of the obesity, to insufficiency of treatment, and in certain instances to the bad quality of the substance employed. It is only right to add that the patients experimented on were one and all free from symptoms of myxœdema.

The Antitoxin Treatment.

In my last letter I informed the readers of THE LANCET that the State had voted to the Institut Pasteur for anti-diphtheritic purposes the sum of 100,000 francs. This credit will be an annual one; only a fifth of the sum will be diverted from the purpose and allotted to the vaccination department of the Academy of Medicine. A stud of 130 or 140 horses is judged sufficient to supply the whole of France with an adequate amount of anti-diphtheritic serum, the entire cost, including preparation and postage of the tubes, being estimated at 180,000 francs (£7200) a year. Towards this the State allows a sum of 80,000 francs in order to secure the gratuitous distribution of serum to charitable institutions. The balance (100,000 francs) will, it is expected, be supplied by that section of the public who are able to buy the serum they require, and by towns and

¹ Société de Biologie, Dec. 29th, 1894.

departments, which will doubtless follow the example of the department of the Bouches-du-Rhône in providing for the maintenance of a certain number of horses (six in the case of the above-mentioned department). The keep of each horse per annum is computed at 1000 francs (£40). A town may then for this sum assure for itself a monthly provision of serum sufficing for 150 injections of 20 c.c. each, one horse supplying an average of three litres of serum *per mensem*. It is anticipated that towards the end of this month all the pharmacies, the hospitals, and official charitable institutions will be supplied with antitoxin by the Institut Pasteur. Notice is given that the most expeditious way to procure serum is for the medical attendant to telegraph to Dr. Roux at the Institute before 3.30 P.M. A tube is then posted before 4 o'clock.

The Health of Paris.

The sanitary condition of Paris is a subject that interests the whole civilised world, for who does not aspire to visit this bright city of pleasure? A honeymoon and a run over to Paris are indissolubly connected in the minds of most of the fairer portion of humanity, and other visits follow later in life. Unfortunately, the idea that this capital is a hotbed of typhoid fever, diphtheria and other horrors is ingrained in the average British mind, and not a glass of water is swallowed without misgivings as to the dire consequences that may result. Well, let my timid compatriots read the following table of the mortality and then take heart of grace:—

1880	...	55,706 deaths	...	25.37 per 1000.
1881	...	55,103	...	23.56
1882	...	56,851	...	25.33
1883	...	54,753	...	24.36
1884	...	55,059	...	24.42
1885	...	52,720	...	24.35
1886	...	55,110	...	24.33
1887	...	52,836	...	22.00
1888	...	51,230	...	22.00
1889	...	54,083	...	22.93
1890	...	54,566	...	22.80
1891	...	52,262	...	21.65
1892	...	54,536	...	22.47
1893	...	52,947	...	21.80
1894	...	48,145	...	(a mortality of probably less than 20 per 1000.)

Thus, there have been nearly 5000 fewer deaths during 1894 than during 1893. Calculating one death in ten cases treated, this means 50,000 patients less than in 1893. In the week ending Dec. 29th, 1894, there were registered 875 deaths, instead of 938 the preceding week, and 1020 the average for that month. There were only 5 deaths from typhoid fever (average 10), 5 from whooping-cough, 2 from scarlet fever (2 is the average), none from small-pox (average 4) or measles (average 9), and last, but not the least important, 5 from diphtheria, instead of 30, the average for December.

Thesis Writing at the Faculty of Medicine.

The number of theses for the M.D. degree "presented and sustained" before the Paris Faculty from Dec. 18th, 1798, to July 31st, 1894, reaches a grand total of 28,793. This gives an average of only 300 M.D.'s a year. Nowadays this average is more than doubled.

Jan. 8th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

A Sydney Professor's Salary.

In reply to questions recently asked in the Legislative Assembly of New South Wales, the Colonial Secretary stated that the total yearly salary received by Dr. T. P. Anderson Stuart amounted to £1777 9s. 6d., made up as follows: annual salary as President of the Board of Health, £489; as Professor of Physiology at the Sydney University, £900; lecture fees from students, £377 15s. 6d.; and examination fees, £10 10s. He received no salary as Medical Adviser to the Government. It was further stated that it was not true that owing to Dr. Stuart's connexion with the Government service a great portion of the work which previously attached to his position at the University has now to be performed by other persons; but it was true that Dr. Manning resigned the position of Medical Adviser

because he could not for want of time faithfully perform the duties attached to that office and to the position of Inspector-General of Insane as well, and that in consequence of such resignation Dr. Manning suffered a considerable loss of salary. In reply to a question as to the propriety of members of the Civil Service holding dual offices of this kind, it was stated that the subject was one requiring serious consideration, and would probably be dealt with after a full inquiry into the general state of the service.

Prevalence of Typhoid Fever and Diphtheria in New South Wales.

Notification of infectious diseases is not compulsory in New South Wales, nor have the health authorities any power to enforce isolation of such cases. The Board of Health only learns in a haphazard way, through the police, or by persons applying for medical aid, and through returns voluntarily furnished by the hospitals, that there are cases of infectious disease in certain districts, and then can only use moral suasion to induce patients to go into the hospitals, attached to which are properly equipped isolation wards. In many cases, however, when hospital accommodation is offered it is declined, and patients are treated in their own homes with no proper surveillance. There are indications that typhoid fever is likely to be prevalent and severe during the coming summer. In twenty-four hours four deaths from this disease occurred at Wyalong, fifteen cases were reported in the Pitt Town division of Wallsend, a great number have occurred at Greta and at Hinton, and the disease has also broken out at Milparinka. Diphtheria also seems to be prevalent in the country. The Government medical officer at Parkes has drawn the attention of the health authorities to the occurrence of the disease in that town, and it is also rife at Deniliquin and at Gulgong.

Medical Notes in Central Australia.

Dr. E. C. Stirling of Adelaide recently accompanied an exploring expedition to Central Australia, and has furnished to the *Intercolonial Quarterly Journal of Medicine and Surgery* some notes on matters of medical interest. Concerning the disease known as "barcos rot," a condition in which the slightest scratches or abrasions of the skin pass speedily into rapidly spreading, freely suppurating, yet superficial and painless ulcers, he says that it is probably due to several causes—infection by flies, the absence of fresh fruit and vegetables, and often of fresh meat, the sudden alternations of temperature, from 20° F. at night to 85° in the day during the winter, while the sores are continually subject to fresh irritation. The disease is popularly ascribed to scratches from the mulga wood (*Acacia aneura*), but, he thinks, without any reason. The best treatment is protection of the sores from irritation and the application of unguentum acidi borici. Dr. Stirling noticed that a large number of the aboriginals, male and female, young and adult, presented a peculiar conformation of the tibia, which were curved anteriorly and were laterally flattened. He did not discover any associated pathological conditions, and is unable to determine whether the abnormality is to be regarded as a racial characteristic or a pathological condition. Circumcision and subincision were performed by all the natives met with, and he could find no support for the view that subincision, or splitting the urethra from the meatus to the scrotum, is done to prevent procreation, and heard of well-authenticated instances of three, four, or even five children in a family who were the offspring of subincised males. Little information could be obtained regarding therapeutic agents employed by the natives. Inunction with grease and red ochre is used in nearly every complaint. In some extreme cases freshly drawn blood is administered internally, and recently passed urine is used as an antidote to strychnine. Dr. Stirling saw several dogs and one woman who had recovered after having swallowed doses of strychnine that usually prove fatal. Probably the remedy acts as an emetic.

Beri-beri in New South Wales.

Dr. R. T. Paton, Government Medical Officer, Sydney, contributes to the *Australasian Medical Gazette* of November a paper with the above title. He mentions several cases of peripheral neuritis in Chinamen which he regards as true beri-beri. One case proved fatal from implication of the cardiac and respiratory branches of the vagus, and a post-mortem examination was obtained. The heart was large and pale, but not fatty, and the limbs, though apparently cedematous, contained no serous effusion. The patient was

one of six living in a cabinet-maker's shop, all affected with the disease. When he was removed to hospital he improved, but he returned to the infected building and again suffered from the disease.

Actinomycosis Hominis.

A case of actinomycosis of the thigh of a male aged thirty-five is reported by Dr. Marten of Adelaide. It caused an ill-defined swelling near the great trochanter, and was associated with weakness, fever, night sweats, and insomnia. The swelling was incised, and "gave exit to bloody fluid in which were hundreds of small, rounded, greyish, yellow-looking bodies, rather smaller than mustard seeds." These were examined and proved to be the ray fungus. Nodules continued to discharge from the wound and swelling occurred lower down. An incision was then made almost the whole length of the thigh, and various sinuses scraped out with Barker's scoop douche and irrigated with iodine solution. A portion of the vastus externus muscle, which was thickly studded with nodules, was excised.

A Case of Enlargement of the Liver and Jaundice, associated with the Passage of Hydatid Cysts by the Bowel.

At the last meeting of the Medical Society of Victoria Mr. J. P. Ryan read notes of a patient attacked with Jaundice, and presenting marked Enlargement of the Liver. After free purging a number of hydatid cysts were passed in the stools, and the jaundice and other symptoms disappeared. Five months afterwards he again became ill with jaundice, emaciation, and fever. The abdomen was opened and the liver examined with the hand, but no cyst discovered. The liver was freely explored with a long trocar, but neither hydatid fluid nor pus was withdrawn. The patient gradually developed chronic septicæmia, and died six weeks after the operation. At the necropsy the liver was found riddled with small abscesses, but no hydatids were found in any of the organs.

Melbourne Hospital Sunday Fund.

The annual meeting of the Hospital Sunday and Saturday Fund was held on Sept. 6th last. The report of the committee stated that the total amount received was £5794 16s. 7d., which is less by £1444 17s. 4d. than the preceding year. It was resolved that the medical charities to be assisted from the fund be the Melbourne Hospital, Alfred Hospital, St. Vincent's Hospital, Women's Hospital, Hospital for Sick Children, Eye and Ear Hospital, Homœopathic Hospital, Austin Hospital for Incurables, Benevolent Asylum, Immigrants' Aid Society, Collingwood Free Dispensary, Richmond Free Dispensary, Convalescent Home for Women, Convalescent Home for Men, Consumptive Sanatorium, and the Melbourne District Nursing Society.

The Bay View Asylum, Sydney.

In consequence of the charges made against the management of the Bay View Asylum, Sydney (to which reference has been made in a former communication), a Royal Commission has been appointed to make investigation, and has commenced taking evidence. The Commission has refused to allow Dr. Vause, the proprietor of the asylum, to be represented by counsel; but he will have the opportunity of questioning witnesses.

Hospital Appointments.

Dr. G. E. Rennie of College-street, Sydney, has been appointed Honorary Assistant Physician, and Mr. J. F. McAllister of Stanmore, Honorary Assistant Surgeon to the Prince Alfred Hospital, Sydney. Dr. E. H. Snibley has been appointed Honorary Anæsthetist to the Melbourne Hospital.

LITERARY INTELLIGENCE.—The publication of Mr. Hutchinson's "Archives of Surgery," which has lapsed for six months, is now being resumed. No. 21 will appear in a few days, with additional letterpress as well as nine plates; and this number, which commences Volume VI., contains a Chronology of Medicine from the Fifteenth to the Nineteenth Century. The publishers will in future be Messrs. West, Newman, and Co., 54, Hatton-garden.—The immediate appearance is announced of a French translation of the excellent work by Professor Zuckerkandl, Professor of Anatomy in the University of Vienna, on the Nose and Nasal Fossæ. The translation has been made by Dr. Lichtwitz of Vienna and Dr. P. Garnault of Paris from the second edition of Professor Zuckerkandl's work, and will be published by M. G. Masson, 120, Boulevard St. Germain, Paris, at the price of 40f.

Obituary.

EDMUND CHARLES JOHNSON, F.R.C.S. ENG., J.P., D.L.

WE regret to announce the death of Mr. Edmund Charles Johnson, which took place on the 3rd inst. at his residence in Eaton-place. The deceased gentleman, who long ago relinquished the practice of his profession, held an almost unique position in connexion with the furtherance of schemes for improving the condition of the blind and the deaf and dumb. He studied medicine at St. George's Hospital, to which his brother, Henry Charles Johnson, was for many years surgeon. After an exceptionally successful student career he qualified as M.R.C.S. in 1843, and then settled in Arlington-street, intending to follow obstetric practice. He had already as a student attracted the attention of Dr. Robert Lee, the celebrated obstetric physician of St. George's Hospital, to whom he was warmly attached, and who publicly acknowledged the value of the services rendered by him in the reporting of lectures and in the cataloguing of the pathological preparations which are now at Cambridge. He had not long been qualified to practise when, at the age of twenty-two, he went to Italy to attend on Viscount Cranborne, who suffered from the misfortune of blindness. In company with this nobleman, who was the eldest brother of the present Marquis of Salisbury, he visited the principal blind schools of Europe, and travelled extensively in Russia before the introduction of railways. On returning to England he definitely retired from practice, and until Lord Cranborne's death he devoted himself entirely to the care of his distinguished patron and friend. Owing to Lord Cranborne's affliction Mr. Johnson was led to take an active interest in all questions affecting the welfare of persons suffering from blindness, and his position with respect to that influential family greatly facilitated the prosecution of his object.

In 1850 the degree of "M.D. Lambeth" was conferred on him by the Archbishop of Canterbury, an honorary (if somewhat anomalous) distinction which does not entitle the graduate to practise medicine, and in 1858 he became a Fellow of the Royal College of Surgeons of England. The governors of the School for the Indigent Blind, Southwark, made him their vice-president and chairman, and in 1855 Her Majesty the Queen appointed him a member of the Royal Commission on the Blind and Deaf and Dumb, in which capacity he visited many of the Continental institutions for the blind. He also wrote a report on the Apparatus and Methods used in the Instruction of the Blind, which was presented to both Houses of Parliament. He was on the managing body of several institutions and associations for promoting the welfare of the blind, as well as the vice-president of the Congress for the Blind held in Paris in 1878. The French Government created him Officier d'Académie Française in 1882. He was the writer of numerous memoirs and official reports connected with his special subject, and a member of various learned societies in France, Italy, and Switzerland. He was made Deputy-Lieutenant for the Tower Hamlets in 1858 and J.P. for Middlesex and London in 1865. He attended actively to the discharge of his duties as a magistrate, and in his public capacity as well as in private life he invariably showed himself to be an intelligent and benevolent gentleman.

ARTHUR SUTHERLAND, M.B., C.M. GLASG.

MUCH regret has been occasioned in Ross-shire by the announcement of the death of Dr. Sutherland of Invergordon in that county. Although he was only in his fifty-second year his health had for a considerable time been seriously impaired; pneumonia ultimately developed, and his sufferings were brought to a close in the last week of 1894. His early studies were arranged on the expectation that he would follow the scholastic profession, as he, in fact, did for a time, but before long his thoughts became fixed on a medical career. Having completed the educational course at Glasgow University, he graduated as M.B., C.M., in 1869, and ultimately settled in practice in Invergordon, his native place. His selection of the medical profession was probably influenced by his fondness for biological science, especially botany and the natural history of marine animals and plants.

These pursuits, together with archæology, were the welcome occupation of his leisure hours, and provided him with subjects for interesting contributions to periodical literature. In addition to his literary and scientific attainments he possessed considerable artistic talent, being a skilful painter and the writer of many poetical pieces which well deserve publication in a collected form. His death is deeply lamented by the numerous friends to whom he was endeared by his genial manner and estimable character.

THE INDIAN MEDICAL CONGRESS.

THE Congress came to a conclusion on Dec. 29th, 1894.

The most practical outcome of its work that has as yet occurred is the answer given to a deputation to the Member of the Indian Council in charge of the Home Department (Sir Anthony Patrick MacDonnell, K.C.S.I.), urging that Government should give practical assistance to scientific research and sanitary development. Sir A. P. MacDonnell consented to advise the Government to accede to the request of the representatives of the Medical Congress.

Calcutta at this season of the year enjoys one of the finest climates in the world, and we make no doubt that, proverbial as that city is for its hospitality and festivities, the members attending the Calcutta Medical Congress have had a most enjoyable time. The gathering from all parts of India has been large, and we may be sure that those representatives of medical science from this kingdom, our colonies, and from the continent of Europe, who have seized the occasion of this Congress as an opportunity for turning their backs for a time on Western civilisation and their faces to that of the East, have been made thoroughly welcome.

THE SECTIONS.

MEDICINE.

The Natural Conditions affecting Cholera Spread in India.

Surgeon-Captain H. HERBERT, F.R.C.S., read a paper on Some of the Natural Conditions affecting Cholera Spread in India. In this paper he said: "I wish to touch on one or two points in the meteorology of cholera which I have imperfectly dealt with elsewhere.

"*Endemic areas.*—I have already published reasons for believing that cholera is very generally endemic in some degree throughout the greater part of India. Allowances must be made for imperfections in the registers both of the weather variations and of cholera intensity. This being granted, a relation between meteorology and the disease, such as I have shown for the Bombay Province, may almost be held to prove general endemicity throughout the province. The proportion between meteorological influence and cholera mortality is very fairly exact, and after complete epidemic subsidence the disease inevitably reappears as soon as the natural conditions become favourable, and in the history of its spread the influence of contagion is very lightly felt. In dealing with provinces as units I have classed the Punjab as non-endemic. This is not absolutely correct, for the disease is undoubtedly very mildly endemic in the eastern districts of the province; but all the severe visitations have been due to imported infection spreading from Hurdwar fairs. With limited time and material at my disposal I am sorry to say I have been able to make nothing of the natural conditions influencing cholera spread through the Gangetic plains; but the constant presence of the disease in some degree throughout the year, and the comparatively slight variation in annual cholera mortality, indicate that the disease is at least as endemic there as in the Bombay Province. It is inevitable that cholera infection must be exported from Lower Bengal more freely through the less endemic Gangetic plains than the perhaps feeble virus can be imported thence into Lower Bengal; but the bulk and extent of this travelling westward from the delta of the Ganges have been exaggerated, largely through the influence of Bryden's teaching. There must

always be the *appearance* of movement westward in the cholera epidemics of Northern India. For the chief cholera season comes early, in the hot weather, in waterlogged Lower Bengal. It is delayed as one goes westward with the diminishing annual rainfall, until in the Punjab ordinary epidemics come 'during and towards the end of the rains.' The monsoon, itself advancing from the east, blotting out the disease over the lower country and bringing the necessary rain for prevalence in the more western tracts, adds slightly to the appearance of travel in epidemics. And there is still another factor, which I have alluded to in treating of cholera in Berar. Suppose there are two consecutive years favourable to cholera prevalence throughout Northern India. In the first year the mortality in the lower Gangetic plains will be much heavier than in the Punjab. In the following year these eastern districts will feel to some extent the effect of exhaustion of material, of susceptible persons, and the mortality will hence be less; but in the west this will not be felt to any appreciable degree, and the fatality will be unchecked. Thus there will result a false appearance of motion in the two cholera epidemics. The so-called epidemic influence will seem to have concentrated itself more to the westward in the second year. In a recent number of THE LANCET there is a reference to two types of cholera outbreak; the one attaining its maximum at once, the other rising gradually. Is not the former typical of an importation from without, under conditions unsuited to the continued development of the organism; and the latter characteristic of multiplication of the indigenous organism under increasingly favourable natural conditions?

"*Rainfall.*—It is now, I suppose, generally accepted that large epidemics of cholera are mainly water-borne, infected individuals, infected clothing, and the like serving chiefly as links of connexion between the various water-supplies. It is even probable that wherever the disease is endemic the organism has a permanent existence in some of the people's water-supplies. Unless this be so, it is difficult to see how a water-borne epidemic can make its appearance in a place during the dry season, after perhaps a long interval of complete absence, without importation. Constantly repeated observation of instances of this led to the old belief in India that the disease must be air-borne, and not due to infection in any way. Thus it may almost be assumed that the weather elements influence cholera prevalence mainly through their effect on the water-supplies. I believe that meteorological influence on cholera is threefold. As might be expected, rainfall comes first in importance, temperature perhaps next, and atmospheric pressure last. The evidence¹ regarding rainfall and its effect on cholera which was brought forward in a paper submitted to the International Congress of Hygiene and Demography at Budapest pointed roughly in the following directions. The provinces of continuously high ground water level have cholera all the year round. Here the rains flood the tanks and wells, and lower the cholera-rate apparently by diluting the specific poison in them; and the heaviest cholera mortality is attained when the tanks are at their lowest. On the other hand, in the provinces of scanty rainfall and low water level it is found that the conditions most favourable to cholera spread are departed from in the other direction. Cholera comes in the rainy season and disappears in the dry seasons. A very low ground water level completely abolishes cholera prevalence. It appears likely that the observation of the Sanitary Commissioner to the Government of India on the cholera at Bellary in the drought of 1877 will be found to apply to other parts of India and at all times. It was noticed that the point at which the want of rain began to lower the cholera-rate was when the tanks and streams began to dry up, driving the people to the use of well water, then at a considerable depth. From all this it would appear that the most dangerous water to use in cholera times is tank or other surface water when the water has run very low. Why should water deep below the surface be unsuited to cholera development? The water is probably purer; but the comma bacillus is said to live longer in pure than in foul water, and deep wells in India are but little less liable to specific contamination than shallow wells are. For there can be little doubt that Indian wells become contaminated by cholera discharges, not so much by soakage through the soil baked hard by the sun in the

¹ The evidence related only to very broad tracts of country. The test of local experience is now required.

dry seasons, but rather directly by the washing of infected clothing on their margins and by the introduction of contaminated vessels into their waters. One obvious explanation of the unsuitability of deep well water for cholera growth is, as I have said elsewhere, to be found in its lower temperature, its removal from the influence of the sun's rays. On the other hand, one cannot help thinking that there is something more than this, and that the habits of the people in connexion with tank and river water have something to do with the development of the cholera organism in it. As already stated, it is not when the tanks are filled and overflowing that they are dangerous, but when their water runs low; when the number of people using them is greatest in proportion to the quantity of water available; when they become foul, not from the introduction of sewage, but from the bathing of men and animals, the washing of clothing, and as a result the constant stirring up of the mud from the bottom. That the number of persons using a water-supply in this way, both as a bathing ground and for drinking purposes, has something to do with the risk of cholera spread from it is borne out by the history of Hardwar fair epidemics.

"*Hardwar fair epidemics.*—Experience has shown that the element of greatest danger at these gatherings is the increase in numbers at Kumbh fairs. Two of the last three

Kumbh fair of 1891 was proclaimed as a triumph of sanitary skill, and due to the very exceptional sanitary arrangements in force. But it is not at all certain that an epidemic would have broken out had there been no special precautions taken. There was no outbreak at the Kumbh fair of 1855, and the assembly in 1891 was scarcely larger than at the Adh Kumbh fair of 1885, when there was no cholera, though no extraordinary precautions seem to have been taken. In both of these years 1885 and 1891 the water in the river was probably above the average (see appended table). On the other hand, at the Kumbh fairs of 1867 and 1879, when cholera did break out, the river was probably lower than the average; in 1879 probably well below it. In 1867 the crowd of pilgrims was so great that it would probably have counterbalanced a moderate excess of water in the river. There was one other feature in the weather of 1892 which may have helped in the spread of cholera. The hot weather was one of the earliest and most intense on record. But there have been other very hot years and no cholera. (1880 was the next hottest year. See column three in the table for reason why there was no cholera.) The practical inference to be drawn from all this is that the one sanitary need at these fairs for the prevention of general cholera outbreak is the adoption of measures to secure a rapid and free current of water past the

Table to show the Relation between Hardwar Fair Epidemics and the State of the River Ganges as it may be judged from the Government of India Weather Reports.

Year.	Attendance of pilgrims at the fairs.	Records of Himalayan snowfall and of cold weather rainfall on the Northern plains.	Result.
1867	Kumbh Fair, 1,250,000 pilgrims.	"In the cold weather (six months) 1865-67 the rainfall of the Punjab was only 44 per cent. of the average, and of the North-West Provinces 67 per cent. of the average" ("Bellew's History of Cholera," pp. 416 and 505). No record of snowfall.	Very severe epidemic. Registered Punjab cholera mortality, 43,146. "Probably greatly underestimated" (Sanitary Report for 1892, p. 141).
1879	Kumbh Fair, 500,000 pilgrims.	"The first striking peculiarity, at the beginning of the year, was the dryness of the atmosphere of Upper India, and the absence of the usual winter rains" (Sanitary Report for 1879, p. 156). "It was probably in consequence of the prevailing absence of rain, not only in January, but also in the two preceding months of 1878, that the temperature of Upper India was excessive and especially at Leb and the other Himalayan hill stations" (Meteorological Report for 1879, p. 160).	Epidemic. Registered Punjab cholera mortality, 26,125.
1880	Ordinary year.	The Commissioner of Kumaon reported with respect to the hills around the Upper Ganges Valley:—"The winter has been an exceedingly severe one. Snow fell at places where it was seldom seen" (Meteorological Report for 1880, p. 166).	Nil.
1885	Adh Kumbh Fair, 262,621 pilgrims.	"The rainfall of the year has furnished a very striking corroborative instance of heavy winter and late spring snowfall on the North-Western and Western mountain tract being followed by" (Meteorological Report for 1885, p. 195).	Nil.
1891	Kumbh Fair, 269,345 pilgrims.	"The cold weather was characterised by excessive snowfall in the Himalayas" ("Weather Review" for 1891, p. 476). "The cold weather rainfall the heaviest on record in many parts of upper India" ("Weather Review" for 1892, p. 529).	Nil.
1892	Ordinary year, 700,000 pilgrims.	"The cold weather was exceptionally dry. The snowfall on the hills was one of the lightest on record" ("Weather Review" for 1892, p. 529).	Severe epidemic. Registered Punjab cholera mortality, 75,959.

epidemics have fallen on Kumbh fairs; and as regards the origin of the third of these epidemics the explanation of the Sanitary Commissioner to the Punjab is of interest here. Comparatively few pilgrims had assembled; but it was one of the hottest and driest years on record in Northern India. The Sanitary Commissioner states: "In the submontane tracts many of the streams were dried up. The sanitary arrangements at the fair were those which proved so successful in 1891; it was impossible, however, to keep the water in the bathing pool so fresh as on the former occasion on account of the smaller volume of water in the river and the direct obstruction to its flow in the sacred pool by recently formed obstacles and foreshores." Thus each of the three epidemics was characterised by one feature—excess in the proportion of bathers to the quantity of water available, due in two instances mainly to increase in the number of pilgrims, and in the third to one of the driest seasons on record. And it may be shown as probable that they had no other effective condition in common, and that the fairs of other years did not possess this characteristic. I have no record of the condition of the river in different years but it may be judged very fairly from the records of Himalayan snowfall and of the cold weather rainfall on the northern plains. The exemption from cholera attack of the

bathing ghāt in dry years. There is not time to inquire whether a cholera outbreak here be due to relatively large specific pollution of the water or to the condition of the water rendering it a good culture medium. For several reasons I believe the latter to be correct.

"*Atmospheric temperature and pressure.*—Only a few words can be added under these heads. These two meteorological elements are, in a sense, antagonistic in their influence on cholera. Both high temperature and high barometric pressure are favourable to cholera prevalence. But a high temperature lowers the barometric pressure, consequently the pressure influence is not seen in the regular seasonal cholera changes, and even the effects of the variations from normal of atmospheric pressure are only well seen in parts of India where the temperature anomalies are small. The effect of temperature on the cholera organism is best judged in places where the water-supply is from wells. In tanks the result is complicated by the effect of shrinkage in volume of the water. As regards atmospheric pressure, it is interesting to notice that Hardie, in Queensland, has found the same relation between pressure and typhoid fever as I have in Bombay between pressure and cholera. He states 'that, although the period of highest barometric pressure—winter—

¹ Government of India Sanitary Report for 1892.

² Hardie's Atmospheric Pathology of Queensland, p. 101.

corresponds fairly with the period of lowest mortality, the higher the barometer during any season of the year the greater will be the death-rate."

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the examiners on Monday, Jan. 7th, 1895:—

Anatomy and Physiology.—Henri Oscar Pomme de Mirimonde, Yorkshire College, Leeds; Nicholas Joseph Kendal, Wilfrid Anthony Legh Jackson, and John Charles Young, Mason College, Birmingham; Frederick Thomas Butler, Robert Hughes, Harry Melville Rees, William Harle Stott, and Fred Schofield Rhodes, Owens College, Manchester; Ernest Symes, and George William Bertram Beverly, University College, Bristol; David Richard Edwards, Charles J. Lintou Palmer, and William Daley, University College, Liverpool; Richard Rothwell Horley, Middlesex Hospital; and James Templeton, St. Mary's Hospital.

Anatomy only.—Langford Newman Lloyd, Charing-cross Hospital; Hubert Richard Rice, Mason College, Birmingham, and London Hospital; Charles Durban Ingle, University College, Bristol; Thomas Preston Yates, Owens College, Manchester; and Sidney Herbert Longhurst, Guy's Hospital.

Physiology only.—Arthur Cubley, Firth College, Sheffield, and Mr. Cooke's School of Anatomy and Physiology; Frederick Charles Torbitt, Owens College, Manchester; Alexander Evans, St. Mungo's College, Glasgow; George Henry Heron, University College, Liverpool; Jeffrey Golt, King's College, London; John Benjamin Augustus Treusch, Guy's Hospital; and Maurice Clare Bielefeld Anderson, St. Mary's Hospital.

Thirteen gentlemen were referred in both subjects, and five in anatomy only.

Tuesday, Jan. 8th:—

Anatomy and Physiology.—William Quinton Brown, William Richard Flint, and Charles Hilton Furnivall, St. Mary's Hospital; Edward Halford Ross, Ernest Lionel Forward, William Somerset Maugham, and Herbert S. Edgecombe Williams, St. Thomas's Hospital; Richard Galway Murray, St. George's Hospital; Josiah Oldfield, George Arthur Whitworth Spear, and Harold John Hutchens, St. Bartholomew's Hospital; Thomas Alexander Dowse, Charing-cross Hospital; George Quintin Richardson, Adelaide Hospital and Royal University, Dublin; Arthur Ernest Gilmore and Stanley Edward Denyer, Cambridge University; Francis John Nicholls and Robert Bidderston, Guy's Hospital.

Passed in Anatomy only.—Donald Ackland and John Herbert Crangle Fegan, Charing-cross Hospital; Frank Voller, St. Thomas's Hospital; Robert Douglas Dobie, King's College, London; and Thomas Hill Bailey, King's College, London, and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only.—Sydney Herbert Mason and Cyril Cecil Poole, Guy's Hospital; George Fernandez Mitchell Clarke, Charing-cross Hospital; Charles Nugent Chadborn, St. George's Hospital; and Emilio Frederico Crabtree, St. Bartholomew's Hospital.

Eleven gentlemen were referred in both subjects, five in anatomy, and five in physiology.

Wednesday, Jan. 9th:—

Passed in Anatomy and Physiology.—Henry Arthur Clifton Harris and Arthur Charles Haslam, St. Thomas's Hospital; Gordon O'Neill, Charing-cross Hospital; Basil Fenton Wingate, St. Mary's Hospital; John Basil Walters, James George Watt, and Charles Clifford Worts, Guy's Hospital; Frank Brickwell, William Beckton, and Ernest George Klunpp, St. Bartholomew's Hospital; Alfred Sigismund Bruzand and Herbert James Bryan, London Hospital; and Hewlett Breton, St. George's Hospital.

Passed in Anatomy only.—Austin Romuald O'Flahertie, Queen's College, Cork, and London Hospital; Charles Arthur Craven Salmon, Guy's Hospital; Francis Augustus Pitts-Tucker, St. Thomas's Hospital; and Colville Smith Agnew, Charing-cross Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only.—Robert Lendon Argles, St. Mary's Hospital; Alfred John Andrew, St. Bartholomew's Hospital; and Arthur Ernest Malaher, St. Thomas's Hospital.

Sixteen gentlemen were referred in both subjects, six in Anatomy only, and four in Physiology only.

SOCIETY OF APOTHECARIES OF LONDON.—At the recent Primary Examination (Part II.) the following candidates passed in the subjects indicated:—

Anatomy and Physiology.—C. S. Agnew, Charing-cross Hospital; W. Amsden, St. Bartholomew's Hospital; E. Brice, Birmingham; E. F. Crabtree, St. Bartholomew's Hospital; E. F. Dowling, St. Thomas's Hospital; W. H. Gale, St. Thomas's Hospital; A. H. Gibson, St. Thomas's Hospital; A. T. Griffiths, Birmingham; H. W. Hues, Birmingham; T. J. Hughes, Middlesex Hospital; W. J. Lindsay, Guy's Hospital; M. Paine, Women's Medical College; C. C. Poole, Guy's Hospital; E. W. W. Pugh, Birmingham; C. B. Salway, St. Thomas's Hospital; H. E. Scowercott, Cambridge; E. Whalley, Leeds; A. M. St. J. Wright, Madras; L. Wright, St. Thomas's Hospital.

Anatomy.—T. H. Bailey, King's College Hospital; P. Cator, St. Bartholomew's Hospital; C. F. W. Dunn, Cambridge; A. H. Fitzgibbon, St. Bartholomew's Hospital; C. F. Eddowes, St. George's Hospital; J. G. Gowlan, St. George's Hospital; M. B. Hebron, King's College Hospital; H. M. Maitland, Women's Medical

College; S. J. Meredith, Birmingham; A. Ross, Guy's Hospital; J. Scarr, Manchester; and A. M. Williams, Women's Medical College.

Physiology.—G. F. M. Clarke, Charing-cross Hospital; J. Freeman, University College, Bristol; J. R. Jeaffreson, St. Bartholomew's Hospital; F. T. Knott, Guy's Hospital; H. M. Waller, St. Bartholomew's Hospital.

The following candidates passed at the recent Primary Examination (Part I.) in the subjects indicated:—

Chemistry, Materia Medica, Botany, and Pharmacy.—H. M. Hardy, South London School of Pharmacy.

Chemistry, Materia Medica, and Pharmacy.—L. Eadstock, Birmingham; C. H. F. Dalton, Charing-cross Hospital; and A. G. Lang, Guy's Hospital.

Materia Medica and Pharmacy.—C. F. Eddowes, St. George's Hospital; and A. C. McLean, King's College.

Materia Medica.—W. O. Piper, Westminster Hospital.

Biology.—S. K. K. Haslam and E. C. Scarlett, Women's Medical College.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:*

Dr. Otto Heubner has been promoted to the rank of Ordinary Professor of Children's Diseases.—*Gratz:* Drs. von Steinbuechel and Rossa have been recognised as *privat-docenten* in Midwifery and Gynecology.—*Lyons:* Dr. Nové Jesserand has been appointed by competition Surgeon to the Hospitals.—*Marburg:* Dr. Finkler of Bonn has declined the chair of Hygiene.—*Odessa:* Dr. Medvedeff of St. Petersburg has been appointed to the chair of Zoology and Comparative Anatomy and Physiology.

LONDON POST-GRADUATE COURSE.—The Vacation Courses in Pathology and Hygiene will commence on Monday, Jan. 21st, and be given daily until Friday, Feb. 1st. This will enable practitioners who can spare twelve days to study those subjects to compress a large amount of useful work into a small space of time. The syllabus can be obtained from Dr. Fletcher Little, 32, Harley-street, W.

FOOTBALL CASUALTIES.—On the 25th ult., at Maidstone, in a game between the Maidstone Invicts and Maidstone Reserves, an Invicta player, a youth aged sixteen years, "fractured his knee," and subsequently received medical treatment at the hospital, but blood poisoning supervened and he died on the 7th inst.—In a recent match at Warmley a player sustained a dislocation of his left jaw and also injury to one eye and the left side of his face.

ADDENBROOKE'S HOSPITAL: MUNIFICENT DONATION FROM MR. PECKOVER.—A quarterly court of the governors and subscribers of Addenbrooke's Hospital, Cambridge, was held at the hospital on Dec. 31st, under the presidency of the lord-lieutenant of the county (Mr. A. Peckover). The Finance Committee reported that the excess of expenditure over income amounted to £650. The deficiency was met in the happiest and handsomest manner by the chairman, who announced his intention of giving the hospital £1000.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—

A meeting of this society was held on Jan. 2nd, Dr. Tew, President, being in the chair. Dr. Bell Taylor showed ten patients, aged from forty-four to seventy-eight years, upon whom he had operated for Cataract, in most cases on both eyes. All had central and movable pupils and showed hardly any trace of the operation. Dr. Taylor also read a paper on the Accidents which are apt to occur during and after the Operation of Cataract Extraction. He described the earlier methods of operating, and pointed out the frequency of accidents resulting from them. The various methods adopted by Beer, Waldau, and von Graefe were mentioned. He preferred, he said, to use a modified Graefe's knife with a narrow blade of his own design, and for many years past had been accustomed to operate without iridectomy. A cataractous lens was sometimes larger than normal, and this condition greatly increased the difficulties of the operation. Escape of vitreous might take place when that medium was abnormally fluid or when the tension of the globe was increased. As a result there might be detachment of the retina or choroid or extreme collapse of the eyeball. In the case of excessive tension a preliminary iridectomy should be done. Prolapse of the iris into the wound should be treated by massage over the closed lids; if the pupil remained much displaced it might be necessary to do an iridectomy downwards. Inflammation and even suppuration of the globe might occur sometimes, but these accidents were not necessarily more frequent in the aged. On the appearance of inflammation leeching, cold, or astringents should be used.—Remarks were made by the President and Dr. Cattle and Mr. Laws.

ROYAL INSTITUTION.—On Tuesday next, Jan. 15th, Professor Charles Stewart, M.R.C.S., will deliver the first of a course of twelve lectures at the Royal Institution on the Internal Framework of Plants and Animals.

THE Italian journals, our Rome correspondent writes, express gratification at the election of Dr. Guido Baccelli as Honorary Fellow of the Harveian Society, recognising in the action of the society a tribute, not only to his therapeutic attainments, but to his high position and scholarly accomplishments.

THE annual report of the Devonshire Hospital and Buxton Bath Charity shows that 2656 in-patients were received during 1894. They included 2357 cases of a gouty or rheumatic character, 467 being complicated with some form of heart disease. The treatment demonstrated in the accustomed manner the remedial value of the Buxton mineral water. The financial position of the hospital is satisfactory, the receipts having exceeded the expenditure by £487.

THE POISON CASES AT WYLDE GREEN.—A series of cases of unexplained accidental poisoning on a large scale has occurred at the village of Wyld Green, near Sutton Coldfield, Warwickshire. On Saturday, Dec. 29th, an hotel proprietor, in accordance with usual custom at this time of the year, commenced the distribution of soup among the customers of the house and the poor of the district. In the course of the day many of those who had partaken of the soup were seized with sickness and diarrhoea, and by Jan. 2nd the number of sufferers amounted to at least 100. The meat used for preparing the soup is alleged to have been perfectly sound, and no irritant poison has been revealed by analysis. We are informed by the medical man in charge of many of the cases that a careful investigation is being made into the matter.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

CAMPBELL, DONALD, M.D., C.M. Glasg., has been appointed Medical Officer of Health for the Calne Rural and Urban Sanitary Authority.
COOK, WM. C., L.R.C.P. Edin., L.M., M.R.C.S., has been reappointed Medical Officer of Health, Bognor.
DUNLOP, J. G., M.B., C.M. Glasg., has been reappointed Medical Officer of Health, Long Sutton.
EDWARDS, G. M., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed House Physician to the North-Eastern Hospital for Children.
FERNIE, EDWARD, M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the parish of Swymerton, of the Stone Union.
FLOYER, W. W., M.B. Lond., M.R.C.S., has been appointed Medical Officer for Thorpe, Surrey.
GRANT, ANDREW, M.D., Ch.M., Aberd., has been appointed Health Officer for the Oakleigh Borough, Victoria, Australia, vice W. H. Cutts.
HARDWICK, ARTHUR, M.D. Durh., D.P.H. Eng., has been reappointed Medical Officer of Health for the Newquay Urban Sanitary District.
INGLIS, DAVID, W., M.D., C.M. Glasg., has been appointed Medical Officer for the Hibernian Sanitary District of the South Shields Union, vice Mitchell.
IVENS, A. S., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Walton-on-the-Naze.
JONES, A. L. D.S., R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the Addenbrooke Hospital, Cambridge.
LATOCHE, A. D., L.R.C.P. Edin., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Southill Nether Sanitary District.
LAW, T. BROCK, M.B., C.M., has been appointed a District Medical Officer in the Colonial Medical Service, at Nicosia, Cyprus.
MACLENNAN, D. V., M.D., M.S. Edin., has been appointed Medical Officer of Health for the borough of Widnes.
PALMER, HOMAGE J., L.R.C.P. Edin., L.R.C.S. Edin., L.M., L.F.P. & S. Glasg., has been appointed Medical Officer of the Heath, Sutton-cum-Duckington, and Temple Normanton District.
PITT, CHAS. W., M.R.C.S., has been reappointed Medical Officer of Health for the Malmebury Rural and Urban Sanitary Districts.
RHODES, W. A., L.D.S., R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the Addenbrooke Hospital, Cambridge.
ROBERICK, SYDNEY J., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the Llanelly Urban Sanitary District and Port.
SHEARS, W., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Scarborough Hospital Dispensary.
UMNEY, WM. F., M.D. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Home and Infirmary for Sick Children, Sydenham, S.E.
WALDO, FRED. J., M.D. Camb., M.R.C.S., D.P.H. Eng., has been appointed Tutor in Public Health to St. Bartholomew's Hospital, Medical School.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

COUNTY ASYLUM, Prestwich, Manchester.—Pathologist. Salary £200 per annum, with furnished apartments, board, attendance, and washing.
DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, to reside and board in the hospital, unmarried. Salary £70.
GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary commencing at £100 per annum, increasing by £10 a year to £120 if services are satisfactory, with board, residence, and washing.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.
HOSPITAL FOR WOMEN (the London School of Gynaecology), Soho-square, W.—Clinical Assistants.
PARISH OF CAMBERWELL.—Clinical Assistant for the Infirmary of the Parish at Havill-street, Camberwell, for six months. Honorarium not exceeding £20, will be given on the termination of that period, if duties satisfactorily performed. Board, lodging, and washing, provided.
ROYAL HOSPITAL, Chelsea, S.W.—Dispenser. Remuneration 10s. a day, with unfurnished quarters, fuel, and light.
SHEFFIELD UNION.—Resident Assistant Medical Officer (single or widower) for the Workhouse and Children's Homes at Fir Vale, Pitsmoor. Salary £100 per annum, with apartments, rations, and the other usual allowances. Applications to the Clerk to the Guardians, Union Offices, Sheffield.
SOUTH-EASTERN FEVER HOSPITAL, Hatfield-street, New Cross, S.E.—Temporary Assistant Medical Officer. Salary £13 6s. 8d. per month, with board, lodging, attendance, and washing. Applications to the Medical Superintendent at the Hospital.
UNIVERSITY OF EDINBURGH.—Additional Examiners, for four years. Salary £75 per annum in each case, with an allowance of £10 per annum for travelling and other expenses in the case of an Additional Examiner not living in Edinburgh or the immediate neighbourhood. Applications to the Interim Secretary, University Court, University of Edinburgh.

Births, Marriages, and Deaths.

BIRTHS.

CRAIG.—On Jan. 5th, at Woodlee, Bridge of Allan, Stirlingshire, the wife of Staff-Surgeon William Maxwell Craig, R.N., H.M.S. *Rapid*, of a son.
ELLIOT.—On Jan. 5th, at Hawkwood, Chislehurst, the wife of Surgeon-Captain W. H. W. Elliot, 4th Punjab Infantry, of a daughter.
HICSON.—On Jan. 4th, at Old Bank House, Millom, Cumberland, the wife of J. Wasdale Hudson, L.R.C.P., L.R.C.S., L.S.A., &c., of a son.
LYNN-THOMAS.—On Jan. 5th, at Greenlawn, Pen-y-Lan, Cardiff, the wife of Mr. J. Lynn-Thomas, F.R.C.S., of a daughter.
MOIR.—On Dec. 12th, 1894, at South-street, Halifax, Nova Scotia, the wife of Surgeon-Captain John Drew Moir, Army Medical Staff, of a son.
MORRICE.—On Jan. 4th, at St. Ann's Lodge, Salisbury, the wife of George Gavin Morrice, M.D., M.R.C.P., prematurely, of a daughter.
NUTTALL.—On Jan. 4th, at 41, Great Bolton-street, Blackburn, the wife of Frank Nuttall, L.R.C.P. & S. Edin., &c., of a son.

MARRIAGES.

FERRARY-ANSFELL.—On Jan. 3rd, at St. Paul's Church, Grove-park, Chislewick, George Arthur Ferrary, L.R.C.P. Lond., M.R.C.S., of Birmingham, to Gertrude Somers, eldest daughter of William Henry Ansfell, surgeon, of Market Rasen, Lincolnshire.
QUILLER-KING.—On Jan. 1st, at the Chapel Royal, Savoy, Charles Turner Quiller, M.R.C.S., of Clapham, to Caroline, widow of James Walton King.

DEATHS.

BLANDY.—On Jan. 6th, at Netherwood-road, Shepherd's-bush, Alfred Addison Blandy, M.D. (late of Brook-street, Grosvenor-square), aged 69.
OPPENHEIM.—On Jan. 7th, at his residence, Orsett-terrace, Hyde-park, Lewis Oppenheim, M.R.C.P. Edin., M.R.C.S. Eng., aged 62.
PAGET.—On Jan. 7th, at Park-square west, Regent's-park, Lydia, the wife of Sir James Paget, Bart., in her 80th year.
PHILIPS.—On Jan. 6th, Philip George Philips of Russell-road, Kensington, M.R.C.S., aged 51, formerly of Queen's-road, Peckham.
SCHMIDT.—On Jan. 5th, at 150, Bethnal-green-road, Alfred Edwin Schmidt, L.R.C.P.E., L.R.C.S.E., L.S.A., aged 56.
SIMPSON.—On Jan. 6th, at the Royal Hospital, Chelsea, deeply regretted by all, Philip John Simpson, M.R.C.S. and L.S.A., in the fifty-sixth year of his age, son of the late George Simpson, F.R.C.S.
WRIGHT.—On Jan. 3rd, 1895, at King-street, Knutsford, William Charles Wright, M.R.C.S. Eng., L.R.C.P. Lond., aged 31 years, of enteric fever.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (9.15 A.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (20, Hanover-square, W.).—7.30 P.M. Ordinary Meeting. 8 P.M. Dr. Porter (Stockport): Preventable Infantile Mortality, especially in connexion with Factory Labour. Discussion.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Paper:—Mr. C. S. Tomes: Some Points upon Amalgams. Casual Communications:—Mr. J. J. Andrews: On a very large Odontome (illustrated with lantern slides).—Mr. J. Mansbridge: A Method of draining the Antrum after Perforation.

SOCIETY OF ARTS.—8 P.M. Prof. Silvanus P. Thompson: The Arc Light. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Sir B. W. Richardson: Cycling and Heart Disease.—Dr. Hector Mackenzie: A case of Hysterical Deafness successfully treated, with some remarks on the Diagnosis and Treatment of this Affection.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. H. D. Rolleston: Diffuse Secondary Growth on Dura Mater.—Dr. W. Collier: Enlarged Spleen.—Mr. Cecil F. Beadles: Five Brains from Insane.—Dr. T. W. Carr: Serous Pachymeningitis from a Syphilitic Child.—Mr. H. Snow: Identity of Duct Cancer of Mamma with ordinary Carcinoma.—Mr. C. P. White: On the Cultivation of the Diphtheria Bacillus in Hydrocele Fluid. Card Specimens.—Dr. F. Parkes Weber: Boar's Tusk forming a Circle.—Mr. Cecil F. Beadles: Ruptured Heart.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Ordinary Meeting. Mr. Charles Harding: The Gale of Dec. 21st–22nd, 1894, over the British Isles. 8.15 P.M. Annual General Meeting. Report of Council; Election of Officers and Council; Address by the President (Mr. R. Inwards).

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Annual Meeting. Address by the President (Mr. A. D. Michael).

SOCIETY OF ARTS.—8 P.M. Prof. Vivian B. Lewes: Commercial Synthesis of Illuminating Hydrocarbons.

THURSDAY.—SOCIETY OF ARTS.—4.30 P.M. Capt. John Shakespear: The Lushais, and the Land they Live in.

HARVEIAN SOCIETY.—8 P.M. Annual General Meeting. President's Address: Smoking and Music.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Dr. Frederic Hewitt: Nitrous Oxide and Oxygen.

THE MATRONS' COUNCIL (Medical Society's Rooms, 11, Chandos-st., Cavendish-sq.).—8.30 P.M. Conference. Miss Mollett: Infirmary Matrons under the Poor-law. Discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (I.).

CENTRAL LONDON THROAT AND EAR HOSPITAL.—4.30 P.M. Mr. Lennox Browne: Diphtheria—the Elements of Prognosis and General Therapeutics.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers. ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Eczema.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. W. S. Lilly: Four English Humourists of the Nineteenth Century (I.).

FRIDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 A.M. Dr. Barratt: Introductory.

ROYAL INSTITUTION (Albemarle-street).—9 P.M. Prof. Dewar: Phosphorescence and Photographic Action at the Temperature of Boiling Liquid Air.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Anatomy of the Skin. 5 P.M. Dr. Morgan Dockrell: Syphilis.

ROYAL INSTITUTION.—3 P.M. Mr. Lewis F. Day: Stained Glass Windows and Painted Glass (I.).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 10th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Jan. 4	29.88	N.E.	37	35	49	40	35	0.06	Overcast
" 5	29.94	N.E.	39	37	44	40	36	...	Overcast
" 6	29.91	N.	30	Frzn.	33	33	30	...	Foggy
" 7	29.65	N.E.	33	...	44	36	30	...	Overcast
" 8	29.81	N.E.	36	35	48	39	33	...	Overcast
" 9	29.86	N.E.	35	34	37	37	34	...	Overcast
" 10	29.94	N.E.	28	Frzn.	38	32	27	...	Overcast

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

COVER TO THE LANCET.

THE Manager begs to announce that at the request of many advertisers, and to keep pace with the ever-increasing demand for "position" pages, it has been decided to issue a cover to THE LANCET, commencing with the present number. The cover is printed on the same kind of paper as the journal itself, and thus ensures uniformity of appearance with past issues. With this exception of the cover the journal remains exactly as it was before. The Proprietors cannot consent to the insertion of advertisements in the centre of the paper—a position which has frequently been applied for, but which is annoying to the general reader.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

QUERIES ON URINE-TESTING AND OTHER TOPICS.

To the Editors of THE LANCET.

SIRS,—I shall be greatly obliged if you will give me answers to the following questions. 1. What is a reliable and convenient method of applying the phenyl-hydrazine test for glucose in urine? 2. What complete book do you recommend on urine testing and urinary deposits? 3. What book would you recommend on diseases of advanced age, with their treatment? 4. What artificial light is the best for ophthalmoscopic and laryngoscopic purposes? Is the incandescent gas light quite suitable? I am, Sirs, yours faithfully,

G. P.
Dec. 30th, 1894.
* 1. The mode of applying the phenyl-hydrazine test is thus described by Schwartz (Pharm. Zeit., xxxiii., p. 435): "The urine is first precipitated completely with lead acetate and filtered; the filtrate is mixed with a solution of phenyl-hydrazine and excess of potassium hydroxide (liquor potasse), and then boiled for a minute. If sugar is

present a yellow colour appears, followed by a yellow precipitate on adding excess of acetic acid. The formation of this precipitate is more significant than the development of colour, for the reason that boiling with potassium hydroxide slightly darkens the colour of normal urine. The object of precipitating with lead acetate is to remove uric acid, which, when acetic acid is added, may form a precipitate which might be mistaken for that indicating sugar."—2. A Guide to the Examination of the Urine, by Dr. J. Wickham Legg (seventh edition, H. K. Lewis); or Clinical Diagnosis, by Dr. von Jaksch, translated by Cagney (Griffin). We review this week favourably a similar work by Dr. Purdy published in Philadelphia.—3. The influence of age as a factor in disease is discussed in most medical text-books. We know of no recent book treating disease from this point only, but may mention the work of Dr. MacLachlan—"Practical Treatise on the Diseases and Deformities of Advanced Life" (London, 1863).—4. The electric light has been found successful. The incandescent gaslight possesses the necessary properties, but we are not aware that it is used yet for laryngoscopic purposes.—ED. L.

J. C. (Hulme).—1. Most "chemicals"—like the heathen in their blindness—bow down to wood and stone, and, for that matter, to vulcanite, in the sense that wood, stone, and vulcanite are very resistant to chemical attack attended with practical results. 2. We fear we must await further long and patient research before we can report the discovery of "a chemical which prevents sulphur from doing its duty." Moreover, to what duty does our correspondent refer? Does he desire to frustrate the effects of sulphur when administered in the form of brimstone paste, in accordance with Mr. Squeers' classic system? Or does he desire to remove its natural properties, in which case it seems to us that it would cease to be sulphur?

Mr. C. D. Cassidy.—The minutes of the Dental Committee and of the Executive Committee on Dental Business are published with the minutes of the General Medical Council and of the Branch Councils, and can be obtained by application to the publishers, Messrs. Spottiswoode. The numbers for 1894 are not yet published.

Struggles.—We have made inquiries for our correspondent, whose letter is not as explicit as it might be. The regulations are different in Scotland and Ireland to those prevailing in England (including Wales) and the Colonies.

"MUCUS IN THE EVACUATIONS."

To the Editors of THE LANCET.

SIRS,—In reference to the letter of "A Reader" under the above heading in THE LANCET of Dec. 15th, 1894 (p. 1461), I beg to offer the opinion that your correspondent's patient is suffering from chronic catarrhal dysentery—a disease which I myself have unfortunately suffered from for some months. The proper method of treatment is by daily evacuation and disinfection, for which purposes one or more teaspoonfuls of castor oil should be taken each night, and a capsule containing ℥ x of oil of turpentine every morning. If after a week or two oil of ricini is found too irritating, try small evacuant doses of sodium sulphate. The diet should consist principally of milk, with puddings, fish, eggs, fowl, rabbit, &c.; vegetables and butcher's meat should be avoided. I am indebted for the above most valuable suggestions to Dr. Ralfe, whose patient I have been for some time, and I am sure that if "A Reader" will persevere with the above method of treatment the same happy result will be attained in his case as in mine.

I am, Sirs, yours faithfully,

Ripley, Derby, Jan. 5th, 1895. F. C. WOOD, L.M. & S., L.S.A.

H. K.—Admission into the Army Medical Service is gained as the result of competitive examination. Under special conditions the admission may take place by nomination of the Secretary of State for War, such qualified candidates being proposed by the governing bodies of public schools of medicine in the United Kingdom or the Colonies. Candidates must, before being admitted to examination, possess the double qualification to practise medicine and surgery, and be registered under the Medical Act. They are also required to produce certificates of having acted as a medical clinical clerk for six months, as surgical dresser for another six months, and of having had not less than three months' instruction at an ophthalmic hospital or the ophthalmic department of a general hospital, including a course on errors of refraction. They must also furnish satisfactory certificates of moral character. Candidates must be between the ages of twenty-one and twenty-eight, in good mental and bodily health, and it should be stated whether they are of pure European descent. The candidate has also to be examined as to physical fitness by a Board of medical officers. These conditions being satisfied, he is admitted to the competitive examination, which is usually held in London twice a year, in the months of February and August. An entrance fee of £1 is payable at the conclusion of the candidate's physical examination if pronounced to be fit. No candidate is allowed to compete on more than two occasions. The subjects of examination are divided into compulsory and voluntary. The former comprise anatomy and physiology, surgery, medicine, including

therapeutics and the diseases of women and children, chemistry and pharmacy, and a practical knowledge of drugs. The eligibility of the candidate for admission into the service is determined by the result of this part of the examination. The voluntary subjects are French, German, comparative anatomy, zoology, natural philosophy, physical geography, and botany, with especial reference to *materia medica*. After having passed this examination the successful candidate is sent to the Army Medical School at Netley as "surgeon on probation," receiving a daily pay of 8s. and certain allowances, to go through a four months' course of instruction in the special duties required of him in the service.

Nemo Nihil.—We cannot insert the letter of our correspondent. It is a long indictment of his brethren, without a word of qualification or commendation. No class of the profession escapes—consultants, general practitioners, principals, all seem alike bad. Parsimony in our prosperous members; unprincipled and infamous use of professional position in ordinary practice; the meanest treatment of useful assistants—are the kind of qualities which he finds in medical practitioners. It is as if he had applied a microscope for the detection of every flaw and was absolutely blind to every virtue. We can be no parties to such one-sided judgment. That there are such persons may be admitted, as there are in every profession and calling. That they represent the profession we deny, and that such a wholesale accusation of the brethren in the name of Christianity is a good sermon for the opening year we altogether doubt.

Mr. G. H. Gabb.—We fail to see any serious or important difference between the two results of analysis. As to the analysis we published being a "chemical and physical impossibility," that is absurd, unless the same remark applies also to hundreds of analyses of milk published in well-known works. The amount of non-fatty solids was 9.25 per cent., but we have not stated how much of this was proteid and how much sugar.

"ON THE TREATMENT OF GLEET BY THE URETHROSCOPE."

To the Editors of THE LANCET.

SIRS,—I noticed in this club, the members of which are chiefly young men, a paper called *The Medical Week* in the library to-night. The paper is not taken in here, nor have I ever seen it here before. An article with the above title was marked on the cover in blue pencil.

I am, Sirs, yours faithfully,

Isthmian Club, Piccadilly, Jan. 6th, 1895.

M.D.

Thirteenth Wrangler.—There are illogical duchesses outside "Alice in Wonderland." We read in the *Lady* that their Graces of Hamilton and Sutherland, having met with accidents in the hunting field, have placed themselves under a bone-setter. There must be something unreasonably fascinating to the lay mind in being treated by the irregular practitioner, for no one who think—no one, in fact, who is logical—can seriously hold that the uneducated man is likely to know more than the educated.

Congratulations.—We are much obliged to our correspondent for his communication, but it is contrary to our practice to reply to articles that have appeared in the pages of a contemporary. Reference has been made to the subject of the appointment in the present number of THE LANCET.

Dr. Gairdner (Grieff, N.B.).—The specimen which our correspondent enclosed in his letter was submitted to our analyst, who reports that he found plenty of iron in it, but no distinct evidence of the presence of other metals could be obtained.

F. P. M.—Our correspondent might refer to the Army Medical Regulations on the subject of the physical examination of recruits, and to Dr. J. E. Pollock's "Medical Handbook of Life Assurance."

During the week marked copies of the following newspapers have been received:

—Levant Herald, Staffordshire Post, Glasgow Evening News, Lincolnshire Echo, City Press, Abingdon Herald, Newcastle Chronicle, Liverpool Courier, Birmingham Gazette, Morning Leader, Isle of Wight Observer, Brighton Argus, Warwickshire Times, Scotsman, Eastern Daily Press, Walsall Observer, Manchester Guardian, Sussex Daily News, Leicester Post, Northern Whig, Liverpool Daily Post, Science Shiftings, Leeds Mercury, Reynolds, Cork Examiner, Bristol Mercury, Mark Lane Express, Lloyds, Yorkshire Post, Courrier de la Presse (Paris), Times of India, Morecambe Times, Pioneer Mail, Coventry Mercury, Senate, Builder, Sanitary Record, Cork Constitution, Architect, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Cape Times, Public Health, Reading Mercury, Hertfordshire Mercury, Oxford Times, Surrey Advertiser, Local Government Journal, Australian Medical Journal, Boston Independent, West Middlesex Standard, Aglaria, Royal Cornwall Gazette, Bambury Guardian, Pembroke Gazette, Burton Chronicle, Nottingham Daily Express, Public Opinion, Gravesend Standard, Madras Times, Oban Times, East Sussex News, Blackpool Gazette, Torquay Times, Cambridge Express, Essex Telegraph, Devon and Exeter Daily Gazette, Walton Gazette, &c., &c.

Communications, Letters &c. have been received from—

A.—Dr. F. H. Alderson, Lond.; Mr. R. B. Anderson, Lond.; An Englishman; Alpha, Lond.
B.—Dr. W. W. Baldwin, Florence, Italy; Dr. J. Brown, Glasgow; Dr. E. A. Bannatyne, Bath; Dr. F. H. Bromhead, Twickenham; Mr. L. A. Bidwell, Lond.; Mr. A. St. Clair Buxton, Lond.; Mr. G. R. Butler, Lond.; Mr. G. G. Barrett, Lond.; Mr. W. Bernard, Londonderry; Mr. W. Brooks, Lond.; Mons. O. Berthier, Paris; Mr. T. B. Browne, Lond.; Mr. E. S. Bishop, Manchester; Mr. G. A. H. Barton, Morchard Bishop; Mr. F. N. W. Brown, Toronto; Mr. S. H. Benson, Lond.; Mr. C. Birchall, Liverpool; Messrs. Black and Co., Lond.; Messrs. J. Beal and Son, Brighton; Messrs. Blondeau et Cie., Lond.; Messrs. Bryce and Rumpff, Lond.; Blackburn and East Lancs. Infirmary, Sec. of; Birmingham Gen. Hosp., Sec. of; Bampton, Ilkley.
C.—Dr. J. J. Cranny, Dublin; Dr. J. J. Carmody, Lond.; Dr. H. M. Cambridge, Illinois, U.S.A.; Dr. R. Crear, Cromarty, N.B.; Dr. L. J. G. Carré, Lond.; Mr. Mayo Collier, Lond.; Mr. J. Carroll, Hulme; Mr. D. J. Carroll, Clonmel; Mr. A. H. Cox, Brighton; Mr. W. S. Crawford, Liverpool; Caledonian Insurance Co., Lond., Sec. of.
D.—Dr. W. Donovan, Birmingham; Mr. W. F. Dale, Welling; Messrs. Duncan, Flokhardt, and Co., Edinburgh; Messrs. Down Bros., Lond.; Messrs. S. Deacon and Co., Lond.; Messrs. Davy, Yates, and Hicks, Lond.
E.—Dr. W. Edmunds, Lond.; Dr. J. R. Earle, Bridgewater; Messrs. Evans, Sons and Co., Lond.; East London Hosp. for Children and Disp. for Women, Sec. of; Exalgine, Lond.
F.—Dr. A. Flint, Westgate-on-Sea; Mr. W. Fletcher, Lond.; Messrs. Foster, Brown, and Co., Montreal; Fine Art Soc., Lond., Sec. of; F. P. M.
G.—Dr. G. A. Gibson, Edinburgh; Mr. G. H. Gaff, Lond.; Sr. Salvatore Di Giorgi, Mazzara del Vallo, Italy; Messrs. H. Gaze and Sons, Lond.; Messrs. Goddard Bros., Peterborough; Messrs. Greaves and Taylor, Bradford; Guest Hosp., Dudley, Sec. of.
H.—Dr. J. A. Hutton, Scarborough; Dr. J. Hamilton, Glasgow; Dr. J. Hawkes, Yardley Hastings; Mr. A. Haviland, Buxton; Mr. O. L. Holst, Eastbourne; Mr. M. Hoff, Lond.; Mr. M. Houghton, Cardiff; Mr. J. Heywood, Man-

chester; Mr. T. Holmes, Lond.; Mrs. Hislop, Prestonpans; Messrs. Haasenstein and Vogler, Geneva; Messrs. Horner and Sons, Lond.; Messrs. Hooper and Batty, Lond.; Hart's Advertisement Offices, Lond.
I.—Dr. W. H. Iddon, Southport; Mrs. Irvine, Lond.; International News Co., Lond.; Incandescent Gas Light Co., Lond.
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A Presidential Address

ON

THE SANITARY NEEDS AND ASPIRATIONS OF INDIA.

Delivered before the Indian Medical Congress in St. Xavier's College, Calcutta, on Dec. 24th, 1894.

By SURGEON-COLONEL R. HARVEY,
M.D. ABERD., F.R.C.P., D.S.O., V.H.S., I.M.S.,
PRESIDENT OF THE CONGRESS.

[SURGEON-COLONEL HARVEY commenced with a few graceful words of thanks to the Viceroy of India, the Earl of Elgin, for presiding and of acknowledgment of the unwearied exertions of the secretaries.]

I will now try to indicate in the briefest way what modern medicine has done, is doing, and may hope in the future to do for India. The subject is so vast that it can be given in outline and no more—a mere scene-painter's sketch, not a finished picture. By modern medicine I of course mean the science introduced from Europe by the earliest medical officers of the Honourable East India Company. From the small beginnings made by them has developed by natural evolution our system of hospitals and dispensaries, sanitation, vaccination, and medical education as they exist to-day, and from which we hope that a further development may take us in time to things unattempted yet. It is a curious fact that it was in gratitude to a medical envoy for professional services that the first firman was granted to the Company by the Emperor of Jehangir. In the earlier days of the Company, and, in fact, up to the evil times of 1857, and to some extent even yet, we find medical officers in the most incongruous and unexpected positions and places—residents and envoys at foreign courts, commissioners and deputy commissioners, superintendents of gunpowder factories, postmasters-general, heads of such departments as the telegraph, masters of mints, and so on. This, I take, was due in great measure to the fact that in the earlier days both civilians and military officers came out so young that they were beaten in the advantages education gives by the older and more scientifically trained medical officers. The medical science of that day we should now look upon as very primitive, but it was the best that was to be had and did yeoman's service to the Company and the people. As the red boundary line of England's influence extended, dispensaries and hospitals sprang up in all the large cities and brought relief to many—specially surgical relief. The idea of preventive medicine had not yet been born even in England, so that no sanitary service was attempted. Vaccination was, however, started within two years of its discovery by Jenner, and a beginning was made with medical education. From a very early time native doctors, as they were then called, were trained at the local dispensaries, beginning as apprentices or even as hospital coolies, picking up what they could at the bedside, aided by informal teaching from the civil surgeon. The results, strange as it may seem, were sometimes surprisingly good. I have seen lithotomy and cataract operations ideally perfect in technique, finish, and result performed by a man who had never attended a medical school and knew next to nothing of anatomy. As a rule, however, the results were not satisfactory, and an enormous advance was made when, in 1832, a vernacular medical school was started in Calcutta. Systematic medical education really began, however, with the opening of the Medical College of Bengal in 1834, followed by that at Madras in 1835 and at Bombay. In all those the instruction was in English. The Vernacular Medical School in Calcutta was followed by one at Hyderabad, founded in 1846; another at Agra, in 1855; and one at Lahore, in 1860. When I came to India, in 1865, these were the only schools.

I tried to get for this address a statistical statement showing the chief medical and surgical results obtained throughout India in 1865. The first year for which complete statistics are available is, however, 1877. If the progress between 1865 and 1877 was at the same rates as between 1877 and 1893, we should have to halve the figures of 1877 to arrive at those of 1865. In 1877, then, 6,142,070 patients were

treated in 1147 hospitals and dispensaries, 4,633,105 vaccinations were performed, 2682 operations for stone, and 2372 for cataract. These were great results, and reflect the utmost credit on the officers who attained them; but they were nothing in relation to the population and true needs of the country. Small tentative efforts had been made to introduce sanitary improvements—I am now speaking of 1865,—but systematic sanitation, as we know it, had not begun. The Sanitary Department, though its formation was under consideration, had not been constituted, and the death-rate of the European troops had from the beginning of the century reached the appalling annual average of 69 per mille. A Royal Commission sitting in 1864 ventured to express a hope that the introduction of scientific sanitation might reduce this to 20 per mille, and the creation of the Sanitary Department, as a result of their recommendations, may be taken as a boundary line dividing the past from the present of medical work in India. My period of service, now close on thirty years, coincides with this. It has been marked by enormous progress in all directions. Medical colleges, in which a complete education is given in English, have been opened at Lahore, Allahabad, Tanjor, and Nellore and affiliated to the universities. At Hyderabad the classes have been taught in English since 1882. Additional vernacular medical schools for the education of civil hospital assistants and civil medical practitioners are now working at Sealdah, Patna, Dacca, Katak, Poonah, and Ahmadabad.

The medical education of women has also been recently introduced, and girls are now trained for the purposes of the Dufferin Fund at most of the medical schools. The number of hospitals and dispensaries open last year was 2025, in which were treated 16,973,468 patients, increases of 76 and 178 per cent. over 1877. There were 4476 operations for stone and 20,279 for cataract. Vaccination has been enormously extended and put on a much more systematic footing, 7,502,024 operations were done, an increase of 62 per cent. These figures indicate great activity and afford ground for congratulation, yet, compared with the wants of the country, indicate that they still touch but the fringe of the population. In Bengal, for instance, only one-fifteenth of the people are within five miles of a dispensary, and a considerable percentage of the children born escape vaccination, so that bad epidemics of small-pox are still possible. Of recent years an entirely new development has taken place in the organisation of special hospitals for women, officered by medical women, under the fostering care of the noble Lady Dufferin, whose name, like Milton's, should resound for ages among the zenanas of India. Still in its infancy, it is doing enormous good to a class whose needs are of the sorest, and it is, I believe, destined to flourish and increase till every important town in India has its Dufferin Hospital side by side with its hospital for males. Sanitary progress, however, is the chief feature of the last thirty years, and more especially of the last decade. I have told you how the death-rate of British soldiers up to 1857 averaged 69 per mille, and that the Sanitary Commission ventured to hope it might be reduced to 20. This estimate was too modest, for since 1882 it has never exceeded 15, except in 1889, when it was 16.6, less than a quarter of the previous rate. The reduction has been effected by hygienic reforms of all kinds, but especially by the gradual improvement of the water-supply in cantonments—first, by cleaning and protecting wells and tanks and setting them aside for drinking purposes only—a plan which has been followed for many years; and of recent years by scientifically devised water works provided with all the latest improvements. A glance at the two maps on the wall will give a better idea than any words can of the great recent advances in this direction. The first, representing the India of 1865, is like the chart of the shark-hunters, "a perfect and absolute blank." The second shows the cities, towns, and cantonments now properly supplied, or in course of being supplied, with pure water. In those with dotted lines the works are in hand, but not yet in operation. The Cawnpore works are complete in the town, but have not yet been extended to the cantonment. The Marri water scheme supplies Dunga Gali, Kyra Gali, Bawan, Kuldanna, Clifden, Gbrial, and Thopia, as well as the Marri Bazaar, cantonment, and civil station. It cost 720,000 reils. The whole of the troops in the hills near Marri, numbering some 5000, are thus supplied with pure water. Many additional schemes are under consideration. It has long been the fashion to poke fun at the Sanitary Department, to denounce it as a sham and a pretence, [producing reports which lead to nothing—*not et*

præterea nihil,—and sanitary officers themselves have sometimes felt that much of their labour was of the Sisyphean sort in the absence of any means to enforce and carry out their recommendations. The map seems to me to point to encouragement instead of despair. Even in England modern sanitation is a thing of the present century—mainly of the last half-century; finality has not been reached, and popular ignorance and prejudice and vested interests still block many possible improvements. In India, where *stare super vias antiquas* (what was good enough for our fathers is good enough for us) is a sentiment deep-rooted in the hearts of the people and is almost a part of their religion, it is small wonder that the progress has been slow. Still, the progress is there, and in India, as elsewhere, tends to acquire continually increasing force and volume as it proceeds. Municipal Acts containing provision, *inter alia*, for sanitary measures, village sanitation Acts specially designed *ad hoc*, have been embodied in our laws, and, though mainly permissive, can be extended by notification to such places as seem sufficiently advanced to accept them. Sanitary boards on which is a sanitary engineer are now established in most provinces. Various schemes are on foot for extension of waterworks, drainage, and other improvements. Sam Slick has warned us not to prophesy unless we know. I will not prophesy, but will now try to indicate a little more fully in what directions progress is likely and desirable, the difficulties in the way, and the means of overcoming them. No one is more thoroughly aware than I how little the great deal that has been done is, compared with what is left to do, and no one can recognise more fully the difficulties in the way of affecting such a general reform as shall satisfy Europe. When asked what India wants from medical and sanitary science, I am tempted to use the words of the ragged urchin in *Punch*, who replied to a similar question, "I think I want most everything." Let me enumerate the needs: first medical, then sanitary. We will take the question as to the means of providing for them later. The first and greatest is like Cerberus—three-headed. To bring the advantages of modern medicine within reach of all, we require a great extension of hospitals and dispensaries, officered by a class of locally-trained practitioners of higher professional attainments than the average of those educated at existing schools. Another need felt greatly by the profession is that of some such Acts as the Medical Acts of England, by which properly educated and duly qualified men may be distinguished from the hosts of quacks, charlatans, and impostors who everywhere abound. Another great and crying need both for the profession and the public is the extension to India of those modern discoveries which are so fruitful for good in Europe, and which have such splendid potentialities of future development. It is not creditable that India, whose crowded millions are as interested as any in the solution of the problems of disease and the provision of remedies, should be doing nothing to bring about such desirable results. It is not to the credit of England that when the plague breaks out in a Crown colony she should be dependent on a country like Japan for a demonstration of the cause of it. This need will be met and India take her proper place among those countries which are trying to advance science for the benefit alike of men and animals when the Pasteur Institute of India is established. That institute we mean to have, and to have mainly as the result of private enterprise. Our success has been so far hampered by the well-meaning efforts of kind-hearted persons who have let their imaginations run away with them. This is not the place to discuss the question of vivisection. I am about to deal with it elsewhere, and hope to be able to convince all but a few irreconcilables that the institute is entirely justifiable, and that sensitive and humane men may freely subscribe to it, as I again ask them to do. I must be allowed, however, to protest publicly against baseless charges of abominable cruelty levied against the medical profession as a body. I claim, and I believe public opinion will support me, that no profession is more full of sympathy for suffering or more prompt and eager to relieve it. It is these same irreconcilables or others of a like kidney who, ignoring the alcoholic beam in the eye of England, wish to remove the opium mote from the eye of India regardless of the wishes and interests of her people. It is they, too, who prevent us from preventing preventable disease, and thus make themselves individually instrumental in causing the conveyance of a horrible malady to numbers of innocent women and children, and in allowing the admissions from these diseases to rise from 15,006 in 1883 to 32,663, or 466

per mille per annum, in 1893, figures which represent three regiments permanently in hospital and useless to the taxpayer. It is time that the common-sense of mankind should refuse to be dictated to by a minority of imperfectly informed and unscientific persons whose zeal is in inverse ratio to their knowledge. These then are the chief medical, I now pass on to the sanitary, needs of India.

[Surgeon-Colonel Harvey here pointed out the difficulties to be encountered in any attempt at State-regulated sanitation in countries like India, and continued.]

Praise is constantly lavished on England on account of what she does for sanitation, and the praise is thoroughly deserved. But England is relatively a small country and enormously rich. India is, on the other hand, one of the largest, most populous, and poorest of countries. The standard of comfort as measured in terms of European economics is low, though, as the wants are few, it is really higher than it seems. The population of Great Britain and Ireland is under 38 millions, that of India over 222 millions, excluding nearly 67 millions in native States. The revenue of England is in round numbers and excluding local items £91,000,000 in pounds sterling, that of India 64 millions in tens of rupees, and so terribly has that poor coin, like Lucifer, fallen from his high estate that, in spite of equalling or exceeding, as was the case thirty years ago, the pound sterling, ten rupees, is at present exchange only worth eleven shillings. The income of India is thus represented in sterling by £36,000,000. The revenue per head in England works out £2 8s., in India three shillings and threepence, or in the proportion of fourteen to one. Sanitary works also are probably more expensive in India than in England, for though labour is cheaper and engineering difficulties less, the trained staff is much more expensive, and much of the material has to be imported. The people are unwilling and the Government is unable to provide means for efficient sanitation *per saltum*. Are we, then, to conclude that the problem is insoluble, a conundrum to be given up, and that we should sit down with folded hands and do nothing? I have many times heard the note of despair; I know that many men consider our efforts to be hopeless and our views the dreams of visionaries, blind to facts and deaf to the voice of experience. I confess, gentlemen, that I take a more cheerful view than this; and while fully recognising the difficulties I have pointed out refuse to impale myself on either horn of the dilemma. I hold that it becomes no man to brook despair, that by sitting still in face of a recognised evil instead of contending against it we make ourselves responsible for it, and that it is only by "pegging away" that progress is possible. Our friends, the Fathers, will tell you that a "counsel of perfection" is the highest ideal of excellence, to be kept in view and striven for, although hardly to be attained by frail mortals. A model India with all the latest sanitary improvements is such an ideal. The man of little faith says: "It is high, you cannot attain unto it." We can at least seek after it, and toiling hard against the stream of prejudice and difficulty see distant slopes of a sanitary Eden gleaming in the distance. As George Herbert says—

"Who aimeth at the sky
Shoots higher far than he that means a tree."

An Address

ON

HEMIPLEGIA.

Delivered to the Medical Book Society of Leamington at the
Warneford and South Warwickshire General
Hospital on Dec. 1st, 1894,

By NORMAN MOORE, M.D. CANTAB.,
F.R.C.P. LOND.,

ASSISTANT PHYSICIAN AND LECTURER ON MEDICINE TO
ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—I propose this evening to consider some of the steps by which our present knowledge of hemiplegia has been attained and to point out some directions in which additions to it may be made; and in discussing this single chapter of the vast subject of nervous disease I shall venture to begin by trying to determine the earliest connexion of this

branch of medicine with our island. The inquiry will carry us to the very beginning of our written history. Quintus Cicero, brother of the great orator, was an officer in the army of Julius Caesar in Britain in 54 B.C., and in a letter which he wrote from this country to his brother he asks about the poems of Lucretius, and his brother answers: "Lucretii poemata ut scribis ita sunt: non multis luminibus ingenii, multæ tamen artis."¹ They were both interested in their contemporary the poet, whose poems were probably edited soon after by the orator. In the famous poem, "De Rerum Natura," in which Lucretius sets forth the Epicurean philosophy, is a description² of a nervous disease of which we have all seen examples. In reading it we must remember that the poet dwells upon the symptoms as illustrations of his argument that the soul is inseparable from the body, is a mere part or function of it, and lives or dies with it. I shall quote the translation of Munro, the greatest modern student of Lucretius:—"Moreover, it often happens that someone constrained by the violence of disease suddenly drops down before our eyes as by a stroke of lightning, and foams at the mouth, moans and shivers through his frame, loses his reason, stiffens his muscles, is racked, gasps for breath fitfully, and wearies his limbs with tossing. Sure enough because the violence of the disease spreads itself through his frame and disorders him, he foams as he tries to eject his soul, just as in the salt sea the waters boil with mastering might of the winds. A moan, too, is forced out because the limbs are seized with pain, and moans because seeds of voice are driven forth and are carried in a close mass out by the mouth, the road which they are accustomed to take, and where they have a well-paved way. Loss of reason follows, because the powers of the mind and soul are disordered, and, as I have shown, are riven and forced asunder, torn to pieces by the same baneful malady. Then, after the cause of the disease has bent its course back and the acrid humours of the disordered body return to their hiding-places, then he first gets up like one reeling, and by little and little comes back into full possession of his senses and regains his soul." Munro thinks that this passage is based upon one in some medical text-book of the time, and both Hippocrates and Galen give abundant evidence that the epileptic convulsion had been carefully observed by them; but, whether verified from a treatise on medicine or drawn from life, this description of epilepsy in Lucretius has an especial interest for us, since we may justly regard it as the first account of a nervous disease read by a resident in England. It is impossible not to inquire at the same time whether Quintus Cicero's commanding officer was the first patient connected with Britain of whose nervous disease we have a record. It is often stated that Julius Caesar had epilepsy. The assertion is based on a passage in Suetonius which relates that on two public occasions he had epilepsy.³ No authority is given for this statement, and though Suetonius was a writer careful as to fact and who probably had good authority for most of his statements, it must be remembered that he wrote more than 150 years after the death of Caesar, and that the current accounts of the appearances of ill-health of public men on public occasions are very inaccurate even in their own time and tend to become much more so after the lapse of years. That Caesar's health was breaking before his assassination seems probable from another passage in Suetonius.⁴ It is certain that he was subject to tremendous anxiety, and he may easily have exhibited some of its results. The attacks of loss of consciousness, if they took place, may have been fainting fits due to cardiac or cerebral weakness. Had Antistius, the physician, whom Suetonius quotes as stating from his own observation that but one of the twenty-three wounds of Caesar was a fatal one, also asserted that his two seizures were true epilepsy there would have been no room for discussion. In the absence of such evidence I can only say that the wonderful head, bearing, and countenance of Caesar as shown in antique sculpture

show a mental power and force of character wholly unlike anything which I have ever seen in an epileptic patient.

To return to Lucretius. If his account of epilepsy is based on a medical treatise extant in his day, can we add much to the knowledge of that time? Let us examine that knowledge once more in another author: Aurelius Cornelius Celsus, who wrote nearly a hundred years later, but whose general learning entitles us to assume that he had read all the books on medicine belonging to the period of Lucretius. Celsus⁵ says: "Inter notissimos morbos est etiam is qui comitialis vel major nominatur. Homo subito concidit, ex ore spumæ moventur; deinde interposito tempore ad se redit et per seipsum concurrit. Ac solet quidem etiam longum esse usque ad mortis diem et vitæ non periculosum." His descriptions of disease, concise but not lifelike, and his infrequent mention of some slight common observations incline me to the view held by some authorities on other grounds that Celsus was not a working physician; but though there are few details in this account he tells enough to show that the fit was well known and carefully observed in his time. What can we add as a result of the observations of eighteen centuries on epilepsy? Chiefly the discovery of Dr. Hughlings Jackson about the local anatomical cause of some epileptic fits and the method of treatment with bromide of potassium. Yet in no branch of medicine has greater advance been made in this century than in the subject of nervous diseases, and the existing knowledge of hemiplegia is an encouraging example of this progress. Hippocrates had noticed that one side of the body was often paralysed, that this condition sometimes followed an apoplectic fit, that after an injury to one side of the head paralysis of the other side of the body sometimes took place, and that wasting of the paralysed muscles was a sequel to the loss of power.⁶ In the books of the Middle Ages the assertion that an injury on one side of the head may be followed by paralysis on the other side of the body is often repeated, whether as matter of compilation or from observation of the fact it is often difficult to know. John Mirfield the first medical writer connected with St. Bartholomew's Hospital, who wrote in the reign of Richard II., observes that an injury on the right side of the head is likely to lead to paralysis on the left side of the body, and he relates the case of one of the canons regular of St. Austin resident in the Priory of St. Bartholomew in Smithfield.⁷ The canon was about to mount his horse, and when he wished to seat himself in the saddle the horse rose on his two hind legs and the canon fell head downwards over the crupper of the horse to earth, and fell so heavily upon his head that straightway he lost the sensation and movement of his whole body. Mirfield's master, having been called by the friends of the patient, made them shave his head, and then rubbed in oil of roses with a quart of warm vinegar, and sprinkled it with a powder and put over it a fine cloth soaked in oil and vinegar, and over that fastened bandages, and over all the skin of a lamb. Ointment was also rubbed into the patient's neck. On the second day the patient opened his mouth a little. On the third day, when a question was put to him, he made a stammering attempt at an answer, but could not form the words. On the fourth day he spoke stammeringly, and then they handed him a thin warm drink, which he saw and swallowed. The fifth day he took a thin tisane, and on the sixth they gave him chicken broth. He then began to grow stronger and to be able to move, but it was many days before he could walk. He was recommended to eat the brains of birds and kids, and thus doing he was cured. But he was never after of such subtle wit and good memory as before.⁸

The first great addition to the knowledge current in the medical world in relation to hemiplegia was made seven months after the death of Harvey; but, before proceeding to consider it, it is impossible to go on without asking whether the great discoverer of the circulation had thought over the structure and functions of the nervous system and their disorders. In the original manuscript notes of his lecture "De Musculis," which has on two pages the date 1627, the year before the publication of his "De Motu Cordis et Sanguinis," and which is scarcely less worthy of publication than those notes of his lectures of 1616 which were edited in 1886 by a committee of the Royal

¹ Epist. ad Fratrem, Book II., cap. II.

² Quin etiam subito vi morbi sæpe coactus Ante oculos aliquis nostrorum ut fulminis ictu Concidit, &c.—(Book III.)

³ valetudine prospera; nisi quod tempore extremo repente animo linqui, atque etiam per somnum exterreri solebat. Comitialis quoque morbo bis inter res agendas correptus est. Suetonius: Julius, cap. xlv.

⁴ Suspicionem Cesar quibusdam suorum reliquit, neque voluisse se diutius vivere, neque curasse, quod valetudine minus prospera uteretur. Julius, cap. lxxvii.

⁵ Book III., cap. xxiii.

⁶ Epidemics, Book vii., 35.

⁷ Manuscript of Breviarium Bartholomei, written in 14th century, now in library of Pembroke College, Oxford, fol. 191a.

⁸ Ibid., fol. 192. De Morione Cerebri ex Casu vel Percussione.

College of Physicians of London, there are some indications of his views on the nervous system. The manuscript of 1627 is written in the curious mixture of Latin and English which Harvey used in all his memoranda. The following notes show that he discussed the functional relation of the several parts of the nervous system.

An Cerebrum, rex;
Nervi, magistratus;
Ramuli nervorum, officiales;
Musculi, cives, populus?

An Cerebrum, master; Spina, his mate;
Nervi, huteswayne;
Musculi, sailors?

On the opposite page he inclines to another view of the chief command in the human body.

An WH⁹ potius—
Cor, Imperator-rex;
Cerebrum, judex, sergeant-major, prepositus;
Nervi, duces, magistratus;
Ramuli, decuriones, constabiles;
Musculi, milites?

An Cor, captain, factor, owner;
Cerebrum, master of the ship;
Nervi, masters' mates, boys, officers;
Musculi, nautae?

And in a long note, of which I have had a photograph taken, he lucidly distinguishes several morbid conditions of the nervous system. As the reproduction gives the full text, I have not tried to do more than make the headings clear.

De passionibus Muscularum
Sive quodammodo 100

1. Resolutio. Id. palsy
Tremor shaking palsy

3. Contractio: epistaxis. Hysteria. palsy
Shaking palsy. Hysteria. palsy

4. Contractio: epistaxis. Hysteria. palsy
Shaking palsy. Hysteria. palsy

5. Contractio: epistaxis. Hysteria. palsy
Shaking palsy. Hysteria. palsy

6. Contractio: epistaxis. Hysteria. palsy
Shaking palsy. Hysteria. palsy

7. Contractio: epistaxis. Hysteria. palsy
Shaking palsy. Hysteria. palsy

8. Pigrities. Nullo dolore
adversus, rigore, dolo & holo
9. Lassitudo. Holo. dolo
adversus, rigore, dolo & holo

10. Crick. Holo. dolo
adversus, rigore, dolo & holo

11. Pandiculus. opisthotonus

12. Horror. rigor. dolo
adversus, rigore, dolo & holo

13. Tremor. dolo
adversus, rigore, dolo & holo

De Passionibus Muscularum.

- | | |
|---|--|
| 1. Resolutio, ded palsy. | 8. Pigrities cum nullo dolore sed impotentia. |
| 2. Tremor, shaking palsy. | 9. Lassitudo. |
| 3. Convulsio, epilept. histeric; pueris strabismus, oculorum. Ritus sardonius; Uucle Will Halse dying. | 10. Crick, distinct from lassitudo and cramp. |
| 4. Contractio membrorum ut crurum a vulneribus combustione item, opisthotonos, emprosthotonos, tetanos. | 11. Pandiculus, oscillatio. |
| 5. Cramp. | 12. Horror, rigor. |
| 6. Twinges, palpitatio convulsiva; twitches. | 13. Inquietudo; obambulatorio somno, decubitus vitiosus; mania. Vite saltus. |
| 7. Pulsus palpitatio fatulenta. | |

Harvey died on June 3rd, 1657, and on Feb. 2nd, 1668, Dr. John James Wepfer finished his "Observationes Anatomicæ ex Cadaveribus eorum quos sustulit Apoplexia, cum Exercitatione de ejus loco affecto," published at Schaffhausen in that year. He was an enthusiastic morbid anatomist, and says in his preface: "To soil the hands with blood and gore seems to some a mean and low occupation, but a little water can wash away this disgrace. Ignorance of things anatomical is far more shameful which ensures discredit to ignorant physicians and surgeons which neither the Rhine nor the Ocean can wash away." He describes four cases of apoplexy, and proves that it may be due to cerebral hæmorrhage, which is not caused by external injury, but by internal morbid change, a notion familiar to us but quite new in his time. He afterwards added more histories, and the candour with which he states cases which he cannot explain and which may tell against his argument shows his scientific merit. His prolixity of style has, perhaps, made him less read than he deserves. English medical writers of his time allude to him so little that I was pleased to find a copy of his book in an old library in the Highlands of Scotland, bought when new by the chief of the clan as worthy a place in the family collection of books. In a later edition of this excellent book (Amsterdam, 1724) cases observed by other physicians are appended, and among them one which must be interesting to everyone who has studied medicine—that of the physician whose memory is daily celebrated in schools of medicine in relation to the skin, the spleen, and the kidney, Malpighi. In the colleges at Cambridge it is customary in each to set apart one day in the year to the commemoration of benefactors.

* WH is his usual indication that he regards a statement as especially significant.

The members of the college meet in the chapel, the roll of benefactors is read and a sermon delivered on their merits, and a feast in the college hall concludes the observances of the day. The commemoration of benefactors to our study, if less ceremonial, is more frequent. In what school of medicine is the name of Glisson not mentioned daily? His capsule is a mantle of fame. Lower is prominent by his tubercle; the circle of Willis keeps him in touch with his profession, though he has been dead more than two centuries; the antrum which Highmore explored is a refuge for him from forgetfulness; nor is Tulp more set forth to future ages by the brush of Rembrandt than by his daily mentioned valve; Wharton along his duct, the second Monro through his foramen, pass to scientific immortality. Malpighi was aged sixty-six, and had had gout as well as the cardiac signs of chronic interstitial nephritis and of renal calculus when, on July 25th, 1694, he was attacked by apoplexy followed in four days by right hemiplegia. He lingered till Nov. 29th, and then died with a fresh access. Post mortem the left ventricle was found two fingers thick, the right kidney with dilated pelvis, a small calculus in the bladder, two pounds of black blood in the right cerebral ventricle, and yellow fluid in the left. The bloodvessels of the brain were dilated. The post-mortem examination was made by the well-known Dr. George Baglivi.

In 1684—six years after Wepfer's book—the "*Cerebri Anatome*" of Dr. Thomas Willis was published in St. Paul's Churchyard, a frequent place of publication for books at that time, but one especially appropriate to this anatomy, in which several of the drawings were from the hand of Christopher Wren. Eager for all kinds of knowledge, Wren had made both dissections and drawings for Willis. This book thoroughly investigates, as a result of original dissection, the anatomy of the nervous system, but adds nothing to its morbid anatomy. Thenceforward the anatomy of the brain was well known to all students of medicine through Willis's book. Dr. Richard Lower is thanked by Willis in his preface, who acknowledges "*et cultelli et ingenii aciem*" (the sharpness both of his scalpel and his mind). Wepfer had demonstrated the anatomy of apoplexy in 1658; Lower in 1664 knew thoroughly the normal anatomy of the brain. Yet so little had the importance of Wepfer's discovery been recognised in England that when Charles II. in 1685 died with the symptoms of apoplexy, cerebral hæmorrhage was not mentioned as its cause; nor when at the necropsy the brain was found "in great disorder," so that "no judgment could be made concerning it,"¹⁰ and with actual hæmorrhage visible, did Lower or any of the other physicians present point out that the hæmorrhage had caused the disorder of the brain, and that both were the cause of the apoplectic symptoms. The king was aged fifty-three. Bishop Burnet,¹¹ who had conversed with many of the eye-witnesses of the facts, states that he had been out of sorts on Feb. 1st, 1685, and had eaten little. He had a restless night. Sir Edmund King, one of his physicians, came in the morning and, Burnet's account shows, found him in a condition of partial aphasia. "The doctor concluded," says Burnet, "he was under some great disorder either in his mind or in his body. The doctor, amazed at this, went out, and meeting with Lord Peterborough, he said the king was in a strange humour, for he did not speak one word of sense." When he went back with Lord Peterborough "the king, who seemed all the while to be in great confusion, fell down all of a sudden in a fit like an apoplexy." Sir Edmund King knew a good deal about the brain, for he had dissected a hundred human brains.¹² He bled the king, who became conscious, but when put to bed seemed oppressed and on the verge of another fit. On Feb. 5th he had another fit. The physicians said he would not live, and he died on the next day at 11 A.M. The exhortations of Sancroft and of Ken, the questions of James, the offices of Huddleston, and the numerous set remarks the king is reported to have made were occurrences of the period between the second seizure and his death. In the extended reading on which Lord Macaulay's account of Charles II.'s death is based there is one obvious omission. The great historian seems never to have considered the medical aspects of the case or the probability of a man dying from cerebral hæmorrhage, of which the first indication was partial aphasia, making neat or thoughtful replies during the last twenty-four hours of his life. Much of the evidence as to the king's state of mind and sayings is open to the objection that, though it was that

of eye-witnesses, it was written down long after the event. No witness had better opportunities of observation than James II., who was at the King's bedside when he died and for many hours of his illness. His "*Récit de la Mort du feu Roi d'Angleterre Charles II.*"¹³ was made to the nuns of Chaillot on Sept. 10th, 1692. He had no doubt as to the apoplexy. He is anxious to make clear his brother's rejection of the ministrations of the Anglican divines and his explicit acceptance of those of Father Huddleston. Reading the account in the light of our ordinary experience of such cases it seems probable that Charles could express assent and dissent, that a murmur and a nod were the actual indications which are represented in the account of James by the words "I would give all I have in the world to have a priest"; and that the drawing aside of the bed-curtains, of which James says "*pour voir, dit-il, lever le soleil pour la dernière fois*," was not asked for in this form but suggested by some murmur and restless gesticulation of the left arm. The "*Récit*" itself contains evidence that James had varied in the details of his account. The reason most likely was that it was an interpretation of Charles II.'s movements and expressions and not a precise report of words, which were probably few, disjointed, and inappropriate to the meaning obviously intended. The chief interest of the King's case is that its history throughout shows how little knowledge was prevalent on the subject at the time in spite of the discoveries of Wepfer and the careful dissections of Willis and Lower.

It is interesting to note Burnet's account of another case of aphasia in the same period, that of Archbishop Tillotson, "who was taken ill," says Burnet, "of a fit of a dead palsy" in November while he was in the chapel at Whitehall on a Sunday. He died the fifth day after he was taken ill. His distemper did so oppress him and speaking was so uneasy to him that though it appeared, by signs and other indications, that his understanding remained long clear, yet he was not able to express himself so as to edify others."¹⁴

The case of Dr. Samuel Johnson in June, 1783, is an interesting example of aphasia without any hemiplegia and with slight agraphia. He describes the attack in a letter to Mrs. Thrale written two days after it, and less fully in two letters, one to Mr. Edmund Allen, the other to the Rev. John Taylor, both written on the day of the attack.

"I went to bed," he says in the letter to Mrs. Thrale, "and in a short time waked and sat up, as has been long my custom, when I felt a confusion and indistinctness in my head, which lasted, I suppose, about half a minute. I was alarmed and prayed God that however he might afflict my body he would spare my understanding. This prayer, that I might try the integrity of my faculties, I made in Latin verse. The lines were not very good, but I knew them not to be very good. I made them easily and concluded myself to be unimpaired in my faculties. Soon after I perceived that I had suffered a paralytick stroke and that my speech was taken from me. I had no pain and so little dejection in this dreadful state that I wondered at my own apathy, and considered that perhaps death itself when it should come would excite less horror than now seems to attend it. In order to arouse the vocal organs I took two drams. Wine has been celebrated for the production of eloquence. I put myself into violent motion and, I think, repeated it; but all was vain. I then went to bed and, strange as it may seem, I think, slept. When I saw light it was time to contrive what I should do. Though God stopped my speech he left me my hand; I enjoyed a mercy which was not granted to my dear friend Lawrence, who now, perhaps, overlooks me as I am writing and rejoices that I have what he wanted. My first note was necessarily to my servant, who came in talking, and could not immediately comprehend why he should read what I put into his hands. I then wrote a card to Mr. Allen that I might have a discreet friend at hand to act as occasion should require. In penning this note I had some difficulty; my hand, I knew not how nor why, made wrong letters. I then wrote to Dr. Taylor to come to me and bring Dr. Heberden, and I sent to Dr. Brocklesby, who is my neighbour. My physicians are very friendly and give me great hopes; but you may imagine my situation. I have so far recovered my vocal powers as to repeat the Lord's Prayer with no very imperfect articulation. My memory, I hope, yet remains as it was; but such an attack produces solicitude for the safety of every faculty."¹⁵ In a letter written a fortnight later to

¹⁰ Burnet: History of his own Time, vol. i., p. 610. London, 1724.

¹¹ Ibid., pp. 608-10.

¹² Philosophical Transactions, 1686.

¹³ Manuscript copy in British Museum (Additional, 34,541), p. 15.

¹⁴ Loc. cit., vol. ii.

¹⁵ Boswell: Life of Johnson, vol. iii., p. 459. London, 1791.

Boswell he mentions that he "could say *no*, but could scarcely say *yes*"—a peculiarity which, as far as my experience goes, is commoner than the converse condition in cases of aphasia. When Dr. John Cooke, physician to the London Hospital, in 1820 published his "Treatise on Nervous Diseases," no further advance had been made, although, of course, the great discovery of Sir Charles Bell already worked out, though not yet fully set before the world, was the first step towards a future rapid advance. How rapid and how great that advance has been a comparison of the two volumes of the treatise of Dr. Cooke and the two volumes of Dr. Gowers' "Manual of Diseases of the Nervous System" will clearly show. In the earlier book the minute structure of the nerves, cord, and brain are all unknown, and nothing clear is stated of their functions. The advances on the anatomy of Willis of 1664 are few and insignificant, and his views of the functions of the brain, if not accepted, are certainly not replaced by any other opinion. No trace of the careful distinction of diseases and of their localisation in the brain is to be found. Aretæus¹⁶ had noticed in the second century that the pupils in paralysis were sometimes contracted and sometimes dilated, and Dr. Cooke can say nothing further on the point. In the seventy years between Dr. Cooke and Dr. Gowers the whole minute anatomy of the nervous system has been described, its gross anatomy revised throughout, and the subject of cerebral topography created, besides numerous other conversions of absence of knowledge or of doubt into certainty by the general advance of pathological science.

The discoveries of Bouillaud, of Dax, and of Broca in relation to aphasia are among the most important in direct relation to hemiplegia; but having brought you to the time when apoplexy and hemiplegia have ceased to be names of diseases and are regarded as symptoms of some morbid condition which remains to be investigated, I propose to offer to you a few disconnected observations on subjects which seem to me at present deserving of further investigation in relation to varieties of hemiplegia.

I. *Aphasia*.—1. In the past year in St. Bartholomew's Hospital I had under my care a man aged sixty-three years who had an attack of fainting, followed by left hemiplegia. He was completely aphasic, but in two days had nearly recovered the power of speech and in a week had no defect either of speech or motion. When convalescent he amused himself as he sat up in bed by drawing portraits and caricatures of some merit, and always with his left hand. Sir George Paget published a case of aphasia with left hemiplegia in a left-handed man; but as such cases are sometimes open to the interpretation of multiple lesions, which mine, I think, was not, it seems desirable that more should be recorded. 2. Another point in relation to aphasia which seems to call for a careful collection of facts is the correlation of the patient's previous linguistic attainments with the degree of his loss of speech, and after death with the precise nature and extent of the lesion. In a family well known to me medically, and all of whom had an ability of expression considerably above the average, one member, a man nearly sixty, had an attack of right hemiplegia (undoubtedly due to embolus). He recovered so as to be able to walk and to use his right hand well, but continued aphasic to the end of his days. He had no verbal deafness. Before his attack he could speak and write four languages besides English—viz., French, Spanish, Portuguese, and Dutch. He knew all of them well—French, for he had resided for some years in an out-of-the-way part of France and had married a French lady; Spanish and Portuguese, for he had served in the Peninsula under Wellington, and had there commanded a Portuguese force; Dutch, for he had held an important office which took him into many parts of Cape Colony, and required him to be in constant communication with the Dutch residents there. Of all these tongues he was only, after his attack, able to use three words—*exactly*, which he used for assent (he shook his head for "no" and never used "yes"); *sea*, which he used to express or rather to suggest to his hearer any idea in relation to the numerous foreign countries in which much of his life had been spent; and *God*, which he used in relation to every kind of religious idea. He was able to write his name, but was otherwise agaphic. Once when he had in vain endeavoured to make some of his family understand what was in his mind he went down (in illustration of his thoughts) on his hands and knees and plucked some grass with his mouth. "You mean," said a clever sister, "that you feel like Nebuchadnezzar." "*Exactly*," he

replied, rose, and continued his walk with her. He had with his sisters learnt to dance in childhood in Portugal with a family—natives of Lisbon. One day while out walking with his two sisters, one of them said, forgetting his aphasia, "Do you remember the name of the family with whom we learned dancing in Portugal?" He smiled and shook his head. His sister affectionately apologised. They went on and his sisters talked together. They had been walking for some time when they passed, near a farmyard, an old iron pot lying on its side. He stopped them, and struck it with his stick. They did not understand. He waited and struck it again. Then he walked a few steps of a minute, and struck the iron pot again. His elder sister said, "You mean that Caldero (a cauldron in Portuguese) was the name of the family with whom we learned that dance." "*Exactly*," he replied. 3. It is a general and, I think, a well-grounded opinion that if some improvement does not take place early as regards aphasia there is unlikely ever to be much restoration of speech. John Locke, the philosopher, who was a Bachelor of Medicine of Oxford and who had given much thought to medicine, had observed this, as is clear from a passage in one of his letters in which he says that his experience is that if bleeding does not produce an improvement soon as regards speech it seldom does so at all. Precise observations as to the rate and degree of improvement in aphasia are much needed. 4. The close observation of the slight degree of verbal failure which sometimes follows fatigue, even in the young, is also a desideratum, as is the record of verbal habit. 5. Was the "Est-il possible?" of Prince George of Denmark, Queen Anne's husband, a mere reflex? If not, what was its remote connexion with any true idea? 6. Everyone knows how a boy, warned not to make a particular verbal error such as a false quantity, is liable from mere anxiety to avoid it (as it seems) to fall into it a second or even a third time. A series of precise notes on this subject would be valuable. 7. Finally, as regards speech, is it not worth the careful attention of the learned whether the regular variations included under the term of "Grimm's law" may not better be accounted for in relation to the third frontal convolution than as has hitherto been proposed in relation to the formation and muscular peculiarities of the larynx? In the same relation perhaps may lie the explanation of the varieties of syntax in the speeches of different nations. In English the verb usually follows its subject, in Gaelic it generally precedes it, in Latin it stands at the end of the sentence, and in German, when a full stop is at last reached, a preposition is often found to be the last word of all. Every family, every individual, has a peculiar language under the direction of a peculiar third frontal convolution. May not a constant variation and grouping of similar variations in that part of the brain be at least one factor of the idiom of expression of a race?

II. *Hemiplegia of children*.—This affection is no doubt sometimes not cerebral, but due to anterior poliomyelitis; but apart from cases due to cerebral tumour some examples are undoubtedly due to the same causes as adult hemiplegia—at any rate, to embolus, hæmorrhage, or gumma. I have never met with an example of the last post mortem in a child; but since I have found well-marked large gummata in the liver of a child, a condition of which several examples are recorded, there seems no improbability in a similar condition occurring in the brain of a child as it does in that of an adult. I once saw a child who had become hemiplegic (on the right side) about an hour before, after a violent fit of whooping-cough. I suspected the onset of tuberculous meningitis. The child was aphasic, but in a day or two some improvement appeared, and the patient ultimately lost all signs of paralysis, not rapidly, but in course of years, and the slight aphasia, which remained for some months, ultimately disappeared too. Was this condition due to superficial or capsular hæmorrhage or to embolus? I suspect the former from the extreme engorgement of the face during the cough. Cortical injuries during birth leading to hemiplegia are often spoken of, but both in this case and in that of the spastic paraplegia of children sometimes also attributed to such injuries I am inclined to doubt whether bruising of the cortex is likely to be an explanation of the symptoms. The children with spastic paraplegia are generally more or less mentally defective, and as regards the hemiplegia what an extensive and severe cortical injury would be required to produce it. Post-mortem evidence as to such cases is much needed. Some are perhaps due to arrested cerebral development: a hæmorrhage due to a scorbutic condition may account for others, embolus of course for some.

III. *Transient hemiplegia*.—This is an interesting symptom.

¹⁶ Aretæus (ed. F. Adams): Chronic Diseases, book i.

Hysterical cases are not very common, but I once saw a woman aged about twenty-six years who believed that she had just become hemiplegic. There were no facial or lingual symptoms, but her arm and leg seemed powerless. They were of unaltered temperature and reaction, soon recovered, and never became paralysed again. A child aged five years with a solid lung became hemiplegic, being at the time nearly unconscious and roused with great difficulty. Tuberculosis seemed imminent, but after a fortnight consciousness returned and the child slowly recovered. Was this due to a meningitis associated with the pneumonia? Whatever the cause its effects passed off completely.

IV. *Hemiplegia in tubercular meningitis.*—This does not necessarily indicate tumour. A man aged twenty-one years became suddenly delirious, having been in a febrile condition for a few days. He was admitted to St. Bartholomew's Hospital and in a few days more became hemiplegic on the left side, and continued so till his death. I examined him post mortem. He had no tumour, but tubercular meningitis with general tuberculosis throughout his body.

V. *Post-hemiplegic state.*—Lastly, how much room for interesting study is there of the state of patients after hemiplegia. "Nunquam tamen fuit ita subtilis ingenii et bone memorie sicut prius," says Mirfeld of the Canon after his cerebral injury. Let us recall, too, the Archbishop of Granada in "Gil Blas." Le Sage certainly described him from the life. The Archbishop, a famous preacher, desired Gil Blas, his secretary, to let him know if he ever noticed in him any signs of intellectual failure. The secretary almost doubted the possibility of such a thing, but the prelate insisted. "Je te le répète, Gil Blas, dès que tu jugera que ma tête s'affaiblira, donne m'en aussitôt avis." "Two months later he had a fit of apoplexy, from which he recovered in a few days "mais son esprit en reçut une rude atteinte." Gil Blas noticed the marked inferiority of the very first sermon the Archbishop preached after his recovery. Subsequent sermons were diffuse and wordy, quite unlike his former dignified oratory. Everybody noticed it. Gil Blas told him of it and was dismissed, for the Archbishop himself was sure that he was as great a preacher as ever and that it was his secretary whose ability was failing. Not only the failure of power of the patient after apoplexy, but his vanity—more obvious after than before the attack—are true to nature. In this period of the disease how great is sometimes the difference between the condition after hæmorrhage in the latter half of life and that after embolus in the earlier half of life. It is often the difference between a general disease and a local injury. The cerebral softening or hæmorrhage is merely the end of a series of degenerative changes, and when its immediate effect is over they remain. Sometimes a man whose daily work is intellectual struggles on after he has recovered, as we say, from a cerebral hæmorrhage. He may do some work, but in the cases which I have seen the work was never again of the best kind, never more than a reflection, more or less indistinct, of his past work. Uneducated men seem to bear such attacks better than educated ones, and I have seen cheerful and fairly vigorous out-patients who had a partially recovered hemiplegia, such as in an educated man would probably be associated with a seeming loss of all the sunshine of life. My own observation is that the weakness following hemiplegia, while it diminishes the creative and working power of all minds, has a much less deteriorating influence on patients of fixed principles and opinions than on those whose virtues are chiefly dependent on their surroundings and who have lived without ever considering or determining the problems of life.

In the prevention of such illnesses as hemiplegia due to softening or to hæmorrhage we have to impress upon our patients that, whatever the kind of toll exacted from the mind and body, most may be done by avoiding the doing in any day more than that day's strength is equal to, and that overstrain means diminished efficiency, sometimes at the moment, always if the whole working period of life be considered. I am thinking of useful work, but we must remember that the work with which men fatigue and wear out their tissues is not always useful work: feasts and deep potations, these are tolls which break down the blood-vessels and the brain, and of which we can at least advise our patients to consider the cost. Real work of mind and body, even if severe, takes less out of the frame than what may be called forced tissue change;

but if its limits are made clear to each man we shall do much to save him from hemiplegia.

The ancients had no clocks with hands, and their hours, which they named by the successive letters of the alphabet, were merely divisions, varying with the solstice, of the time between sunrise and sunset. ΖΗΘΙ were therefore afternoon hours, and hence the saying:

Ἐξ ὥραι μὲν θοοὶς ἰκανώταται: αἱ δὲ μετ' αὐτὰς γράμμασι δεικνύμεναι ΖΗΘΙ λέγουσι βροτοῖς.

(Six hours are enough for work: those that are marked by the letters ΖΗΘΙ say to mortals "LIVE.") With our advanced, if yet incomplete, knowledge of the functions and disorders of the nervous system and of the whole body, to maintain the doctrine of cheerful relaxation expressed in this proverb is one of our first duties as medical advisers. I hope that this address has not been so severe as to prevent your Medical Book Society's evening from being a relaxation, nor so light as to be undeserving of its attention.

THE SPOROZOA OF VARIOLA AND VACCINIA.¹

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It has been found that if a scratch is made in the cornea of a rabbit or a guinea-pig with the point of a sterilised knife, and then a little active vaccine lymph is laid on the scratch, cell infection occurs.² I have made the experiment seven times with a positive result in each case. What is understood by the term "cell infection" will be best conveyed by a detailed account of the histological changes which follow the inoculation. If the animal is killed forty-eight hours after vaccination and the cornea is at once excised and placed for twenty-four hours in a saturated solution of corrosive sublimate, and then prepared in the usual way, vertical sections show cell inclusions lying close to the nuclei of the deeper epithelial cells at and in the vicinity of the seat of inoculation. These cell inclusions are minute highly refracting bodies, which stain deeply with acid hæmatoxylin, but show a preference for such stains as carmine, eosine, and acid fuchsin. The appearance of one of the epithelial cells in a section stained with hæmatoxylin is shown in Fig. 1. Most of the cell inclusions are homogeneous, but some have in their dense substance a central denser spot. Many of the bodies give evidence of subdivision into two similar parts. Some of the cells contain two such bodies. There is nothing in the above-mentioned bodies which would exclude the possibility of their being due to some form of degeneration.³ The facts, however, that amoeboid movement has been observed in these bodies and that their presence is dependent upon previous vaccination point to their being intra-cellular parasites, and their peculiar density and high refractive index also agree with what I have described as features of certain sporozoa. If they are parasitic it is necessary to inquire to what group of organisms they may belong. The chief groups of unicellular parasites which pass part of their existence within the cells of their host are the chytridiaceæ, the synchytriaceæ, some of the suctoria, and the sporozoa. The chytridiaceæ are regarded as fungi devoid of mycelium. They occur in some algae and other plants. The synchytriaceæ, hitherto regarded as vegetable organisms belonging to the chytridiæ, are now considered by Zopf⁴ as

¹ The literature relating to this subject is given fully by L. Pfeiffer in *Behandlung und Prophylaxe der Blattern*, Jena, 1893; reprinted from the *Handbuch der Specieellen Therapie*, edited by Penzoldt and Stintzing. It should be added that Lionel Beale described the amoebæ of Van der Loeff in the *Quarterly Journal of Medical Science*, vol. iv. (old series), but without suspecting their parasitic nature.

² Guarnieri, led by the observations of Van der Loeff and L. Pfeiffer, was the first to test and demonstrate this fact, and at the same time to confirm the earlier descriptions of L. Pfeiffer, who soon confirmed Guarnieri's observations, and added a detailed description of the movements exhibited by the intra-cellular parasites in the presence of weak methyl-blue solution.

³ Cohn (1872), Weigert (1874), Pohl-Pincus (1882), Planth (1883), Leloir (1880), Unna and Burri (1892), L. Pfeiffer points out, have previously described these bodies under various names in variola and vaccinia, sheep-pox, varicella, and herpes zoster.

⁴ W. Zopf: *Beiträge zur Physiologie und Morphologie niederer Organismen*, Heft 3. Leipzig, 1893.

¹⁷ *Histoire de Gil Blas*, vol. iii., p. 140. London, 1782. (This volume was first published in 1724.)

probably belonging to the protozoa. This view would approximate them to the two remaining groups. They are parasitic in many plants. Some of them have flagellate swarm spores. The common acinetæ may be given as an example of the suctoria, some species of which enter the bodies of other protozoa and there subdivide into ciliated spores. It may prove that they are linked to the sporozoa by intermediate forms. As far as is known they are confined to other protozoa as hosts. The sporozoa are probably most nearly related to the ciliata, and are necessary parasites. They are met with in the metazoa from the tapeworm upwards. The name of the group was derived from the

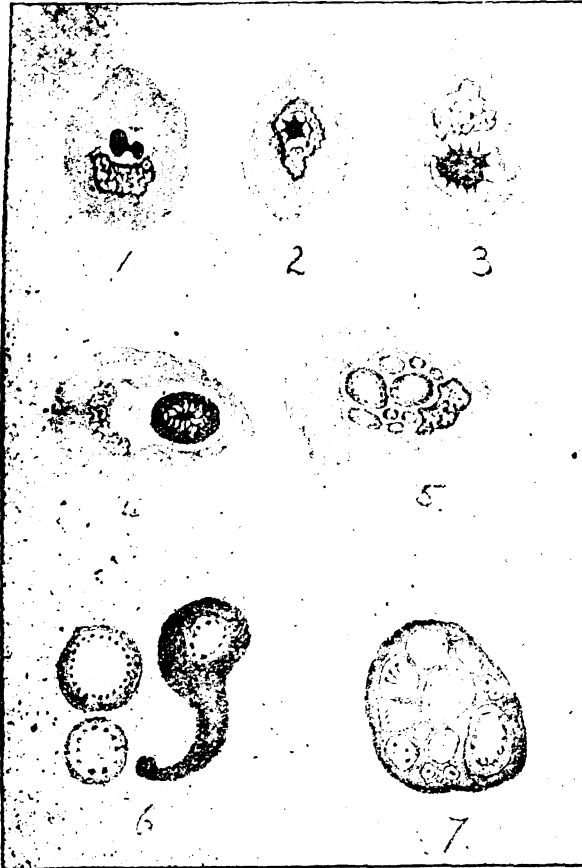


FIG. 1.—Epithelial cell containing a parasite, which is undergoing fission. Rabbit's cornea forty-eight hours after vaccination.

FIG. 2.—Epithelial cell containing a parasite with radial processes. The parasite appears to be intranuclear. Guinea-pig's cornea, seventy-second hour.

FIG. 3.—Larger intra-cellular parasite. Same source.

FIG. 4.—Intra-cellular parasite with central reticulated zone. Same source.

FIG. 5.—Epithelial cell containing a group of small bodies resulting from the subdivision of an intra-cellular parasite.

FIG. 6.—Three free parasites. Two have a well-marked "peripheral granule layer," the third is club-shaped. Same source.

FIG. 7.—A large free parasite undergoing subdivision into spores. Same source.

Acid hæmatoxylin and eosine staining. The bodies were drawn with a Zeiss's $\frac{1}{2}$ in. immersion lens, for the loan of which I am indebted to the Scientific Grants Committee of the British Medical Association. I also wish to thank my friend Mr. A. F. Bill for the loan of a Zeiss's stand and lenses.

hard-shelled bodies known as pseudo-navicellæ, the sporocysts of certain gregarines. In some of the sporozoa, for instance, the sarcosporidia and the so-called psorosperms of the human urinary tract,⁵ hard-shelled spores (sporo-cysts) have not been met with, and thus the name of the group is no longer completely applicable. Similarly, sickle-shaped spores are not a necessary phase. They are absent in the myxosporidia, the microsporidia, &c.

The decision of the position in classification to be assigned to any newly described organism must ultimately rest with

biologists; but since for the past three years I have devoted most of my leisure to the study of the comparative morphology of intra-cellular parasites I may perhaps be permitted to express my view of the bodies I am now considering and to give the basis on which that view rests. The few features already sketched would certainly not suffice to refer the bodies either to the protophyta or the protozoa. The vaccinated cornea at the end of the third day is admirably suited to afford additional evidence, which consists in the presence of a variety of organised structures constituting an extension of the series shown in Fig. 1. Thus, besides the small parasites, such as are represented in Figs. 2 and 3, others similar to that shown in Fig. 4 appear with a central reticulated zone.⁶ There is also evidence that these cell inclusions break up into highly refracting segments. An instance of this is shown in Fig. 5. This intra cellular group of bodies I regard as the result of subdivision rather than of multiple infection on account of their arrangement, staining reactions, &c.⁷ The gradation of forms already portrayed not only favours the supposition that the bodies are parasitic but that they belong to the sporozoa. If this is the case there should be present, besides the intra-cellular bodies, ripe or adult parasites which have escaped from their host cells and lie free on the surface or in the interstices of the epithelium, for all the known sporozoa without any exception when infesting epithelium present such free bodies. Free parasites, as I may now justly term them, abound in the vaccinated cornea on the third day. Some are in the form of large round, oval, or pear-shaped (Fig. 6 to the right) cells of the same general characters as the bodies I have described as free sporozoa in cysts of the ureter and various cancers and sarcomata; they have a central granular portion surrounded by a dense ectosarc.⁸ Others of the free parasites present an appearance characteristic of sporozoa—namely, a clear central part bounded by a distinct zone of granules.⁹ Two parasites with this peripheral granule layer are shown in Fig. 6 to the left. Lastly, I will mention large free parasites which have evidently undergone subdivision into segments some of which are granular, others possess nuclear matter either in the form of fragments or radiating bars. Such a body is shown in Fig. 7.¹⁰ After the most careful consideration I have come to the conclusion that the larger segments of such bodies may be taken to represent sporogonia, and the smallest spores.

Such an extended series of forms fully warrants the conclusion that the bodies are parasitic and justifies our placing them, at least provisionally, among the sporozoa. The bodies described above as sporozoa present the most complete homology with bodies I have described also as sporozoa in cancer¹¹ and sarcoma. The invasion of leucocytes in the vaccinated cornea begins on the third day. There is nowhere the least ambiguity between leucocytes and parasites. Appearances which may be construed as phagocytosis are present, but not very abundant.

Dr. T. F. Ricketts kindly afforded me an opportunity of examining the contents of variola vesicles and the skin of persons who had died from small-pox. In both situations I was able to find bodies identical in structure with those I have described above in the vaccinated cornea. Until the nature of these structures is settled, and the minds of pathologists are familiar with their presence and meaning, it would be premature, perhaps, to discuss the question of the relation of the parasites to variola and vaccinia. I may, however, refer to the importance of the observations made

⁵ This figure may be compared with the cell inclusions figured by me in squamous epithelioma (Morbid Growths and Sporozoa, Figs. 6 and 7), and in cancer of the breast (Ibid., Fig. 27).

⁷ With this may be compared the condition I have shown in squamous epithelioma (Ibid., Fig. 8).

⁸ These are the bodies I referred to as probably free sporozoa in vaccine lymph (Medical Press and Circular, Sept. 6th, 1893). L. Pfeiffer has pointed out that these large free bodies show amoeboid movement on the warm stage; thus they are distinguished from degenerated cells.

⁹ I was the first in this country to describe such bodies as cell inclusions in cancer, and to point out their significance (Medical Press and Circular, Sept. 28th, 1893).

¹⁰ This body is to be compared with that figured by me in squamous epithelioma (Brit. Med. Jour., Dec. 24th, 1892).

¹¹ My conclusions with regard to squamous epithelioma have been confirmed in certain particulars by Koromeff (Centralblatt für Bakteriologie, March, 1893) and Kurloff (Ibid., March, 1894). Shron of Naples, like the author, regards certain bodies in mammary cancer as parasites (International Congress, Rome, 1893). Miller (Congress of Physicians, St. Petersburg, noticed in Centralblatt für Bakteriologie, April 7th, 1894) confirmed my view of certain bodies in uterine cancer. Pawlovsky (Virchow's Archiv, September, 1893) and Vedeler (Centralblatt für Bakteriologie, 1894) have fully confirmed my work on Sarcoma.

⁶ Jackson Clarke: Transactions of the Pathological Society, 1892.

by Van der Loeff and L. Pfeiffer as to the motile flagellate bodies in the blood of persons suffering from these diseases. I will close these brief remarks by stating that in my opinion the processes which take place in the vaccinated cornea and in other lesions of vaccinia and variola are comparable in a remarkable degree to those which I have observed in cancer. The parasites in the latter condition present a more extended series of forms than those of variola; yet in both cases the fundamental characters of the parasites are the same—namely: "At certain stages they resemble recognised sporozoa, the intra-cellular phases being of especial importance. They tend to assume a round or oval form. Their protoplasm is dense and highly refracting and stains deeply with carmine, acid fuchsin, &c. Their nucleus often does not give the reaction of chromatin to acid hæmatoxylin. All stages of swarm-sporing can be observed."¹² Moreover, the same hypertrophy of cell protoplasm and cell nuclei is seen in the vaccinated cornea and in various cancers and sarcomata.

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NOTE ON THE LOCALISATION OF TACTILE IMPRESSIONS IN THE BRAIN.

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THE careful deductions of Exner have, in great measure, bridged over the chasm existing between the radical "localisationists" and the so-called "anti-localisationists." On the one hand, the general principle of localisation has been shown to be correct by the Vienna observer; on the other hand, that narrow limitation of numerous centres to areas not exceeding a few millimetres in diameter, which has constituted such a vulnerable position for the onslaughts of Goltz and Brown-Séquard, must now be considered untenable. Just as the fibre masses of the corona radiata are seen to spread out fan-shaped, and while terminating chiefly in some special cortical districts, yet detach scattered fibres to neighbouring areas, so the fields of cortical function delineated by Exner in his great work¹ are shown to consist of "absolute" and "relative" fields. The former have a constant relation to a given function; the destruction of the "absolute" field for the muscles of the arm is always followed by paralysis of those muscles. The latter have an inconstant relation; the destruction of the "relative" field of the arm muscles which surrounds the absolute field in zones of gradually diminishing intensity sometimes leads to such paralysis and sometimes does not. The various fields of motor and sensory function are also noticed to overlap considerably; the field for the arm dies out within the visual area, and encroaches considerably on the speech field. But a most interesting result of Exner's laborious compilation and comparison of the numerous cases of limited cortical lesion scattered through modern neurological literature is his conclusion that, as a rule, the sensory fields are nearly identical with the motor fields for the same periphery, and he cites this as a remarkable confirmation of the experimental results of Munk, who found his tactile areas in the dog's brain to correspond with the motor areas of Hitzig and Fritsch. Not only do the tactile fields correspond very closely to the motor fields of the same body regions, thus sustaining the anticipation of Meynert that the rôle of the cortex is not so much the liberation of an explosive motor force as the mediation of sensations of innervation (*Innervationsgeföhle*), but all determinable function areas which on physiological grounds must be considered to require a bond of association in the cerebral mechanism are found to have a regional contact. Thus the symbolic field, that devoted to the registration and liberation of spoken and written symbols, is found to approach the fields of the upper extremity and of the lingual and auditory peripheries.

While our knowledge of the sensory cortical area is daily becoming more satisfactory, that of the course of the sensory tracts connected with the cortical areas in question is very

imperfect. We know partly from Veyssièr's experiments, and partly from confirmatory pathological observation, that the fibres conveying tactile impressions are chiefly concentrated in the posterior division of the internal capsule. Meynert,² whose anatomically based presumptions have in many respects anticipated the results of actual observation, entertained the belief that this portion of the internal capsule was continued in the outer third of the pes pedunculi, the descending pyramidal tract, and reached the posterior columns of the cord through his so-called "upper fine-bundled decussation of the pyramids." On Meynert's hypothesis, then, the connexion between the posterior and "sensory" columns of the cord and the posterior part of the internal capsule was clear. Flechsig,³ however, showed that the true pyramidal tract has no connexion with the so-called upper decussation, and the conclusion was somewhat hastily drawn that Meynert's theory of a connexion between the posterior columns and the cerebral hemispheres was to be abandoned. In reality, Meynert's hypothetical tract requires but two topographical modifications to accommodate it to what is to-day demonstrable in any series of transverse and longitudinal sections of the brain isthmus.⁴ In a transverse section of the medulla oblongata, immediately above the level of the decussation of the crossed pyramidal tract, the raphe of the oblongata is seen to be very much thickened and to consist of fasciculi crossing at a rather acute angle. From the resemblance of the swollen part of the raphe to a fir-cone, whose knobs are represented by the entering fasciculi, I have proposed to designate this—which is identical with Meynert's so-called upper or sensory decussation—the piniform decussation.⁵ (Fig. 1)

FIG. 1.

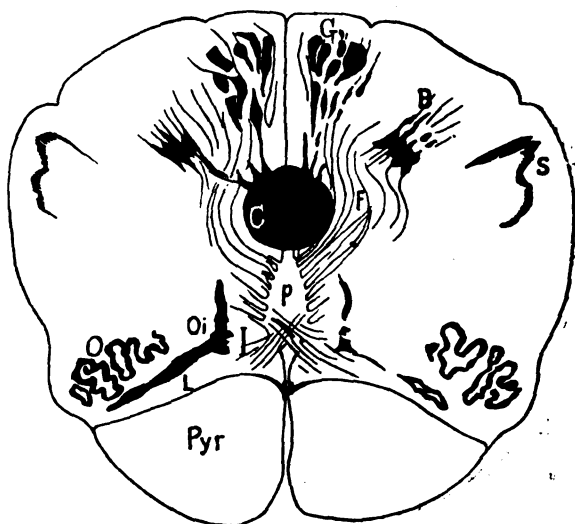


Diagram of section transversely to axis of human oblongata at the level of the inferior end of the olive. O, Olive. Oi, Inner accessory olive. Pyr, True pyramidal tract. I, Stratum intermedium. L, Lemniscus layer receiving crossed fibres from posterior column through P, the piniform decussation. C, Central tubular grey around central canal. G, Nucleus of column of Goll. B, Same of column of Burdach. S, Gelatinous nucleus of ascending trigemini root. F, Fibres from posterior column and its nuclei to piniform decussation.

Its fibres can be distinctly traced from the posterior columns, fielding off the grey masses of the nuclei of Goll's and Burdach's columns; they cross in the decussation and enter the internal division of the reticular field, dorsad⁶ of the pyramids, laterad of the raphe and mesad of the olive. Other of these fibres run into the hilus of the olive and in between the latter and the inner accessory olive constituting the lemniscus tract. I am not able to differentiate between the fibres which have these different destinations, though it

² Vom Gehirn der Säugethiere (Stricker's Handbook, II.).

³ Leitungsbahnen &c.

⁴ Under this term I include the axial parts of the brain; in other words, everything not comprised in the cerebral hemispheres and the cerebellum.

⁵ Architecture and Mechanism of the Brain, Journal of Mental and Nervous Diseases, 1881.

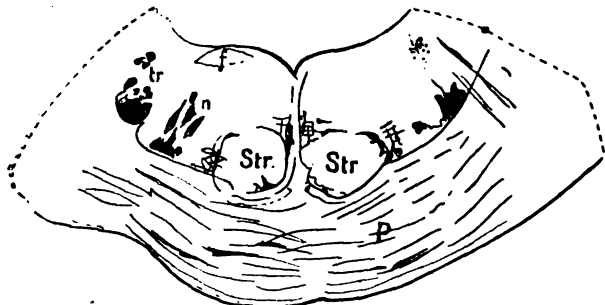
⁶ Professor Burt G. Wilder's toponomical terms are used in this paper.

¹² Jackson Clarke: Morbid Growths and Sporozoa, p. 23.

¹ Untersuchungen über die Localisation der Functionen in der Grosshirnrinde des Menschen. Braumüller, Wien, 1881.

seems that the fibres from the column of Goll mainly go to the field situated between the raphe and olive and dorsad of the pyramid, which is continuous with the stratum intermedium of the pons levels. The stratum intermedium, thus named by Meynert because it lies between the derivative tracts of the pes pedunculi and tegmentum and described by Henle as the "Bündel vom Fuss zur Haube," has been much neglected by anatomists. A careful embryological and comparative anatomical study of this tract cannot fail to throw much light on the cerebral architecture and we would refer provisionally to its enormous preponderance in the elephant, in which animal it appears to have different

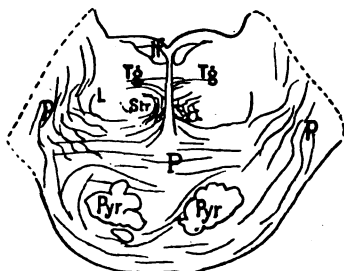
FIG. 2.



Transverse section of pons of elephant two years old, natural size. Str., Stratum intermedium, P., Pons exclusively composed of ganglionic matter and transverse fibres. f, Curved part of facial root.

attributes than in man, evidently taking the place of the pyramidal tract, which in this animal is not present, at least in its typical relations, though the pes pedunculi is well developed. The fibres of the stratum intermedium enter the pes pedunculi in its inner third, and constitute one of the deeper fields of the pes described by Flechsig subjacent to the ganglion of Soemmering (substantia nigra). In the course of the imperfect spiral twist of all the pes fibres this field gradually moves to the outer part of the pes, and consequently becomes the most posterior portion of the internal capsule. Meynert's hypothetical tract may be thus re-established by

FIG. 3.



Transverse section through human pons. Pyr., Pyramidal fibres. P., Transverse fibres of pons. Str., Stratum intermedium, not distinguishable from L., The Lemniscus. Tg., Tegmentum. li, posterior longitudinal fasciculus (oculomotor tract).

changing the nomenclature of the sensory decussation and substituting "stratum intermedium" for "outer part of the pyramidal and peduncular tracts." No uncomplicated lesion of this tract is recorded in the literature of focal brain lesions. I have been fortunate to observe one case since I first proposed the rehabilitation of Meynert's theory with the modifications here laid down,⁷ and as far as it goes the deductions to be drawn from it coincide remarkably with the anatomical theory. As I propose to publish the case in full when the microscopical analysis shall have been completed, I will here mention only the salient points. A man with moderate indications of atheromatous degeneration of the vascular system had had a sudden "seizure" while straining at stool, accompanied by complete right hemianæsthesia. I examined him two years after the attack, and found that the tactile sense had improved, but not to such an extent as to permit the man to resume his vocation; he had lost the faculty of

mechanical coördination without losing the sense of equilibrium or resistance. As there was contra-lateral facial palsy and marked difficulty of speech, approaching anarthria in its character, I diagnosed a hæmorrhage of the pons. Two years before his death he had another seizure of a transient nature, and several lesser ones followed at irregular intervals, the patient dying with terminal symptoms of paraplegia and amblyopia. A number of recent necrotic and cicatrised foci, with several very small hæmorrhages, were found in various portions of the brain; an old pigmented cicatrix was found replacing the right stratum intermedium, and involving the facial nucleus, ending at the raphe.

When it is borne in mind that those centripetal fibres which partly derived from Flechsig's direct myelo-cerebellar tract, and partly from the posterior columns through the olivary decussation, run into the cerebellar hemispheres, and that from the latter the transverse pons fibres originate, to apply themselves to the pyramidal tract and ascend to the brain through the pes pedunculi, it must be apparent that the great sensory tract united or nearly so in the cord, and widely separated in the oblongata and pons, becomes reunited in the pes pedunculi. This relation is best expressed in the diagram Fig. 4. Inasmuch as the sensory tract separates into two

FIG. 4.

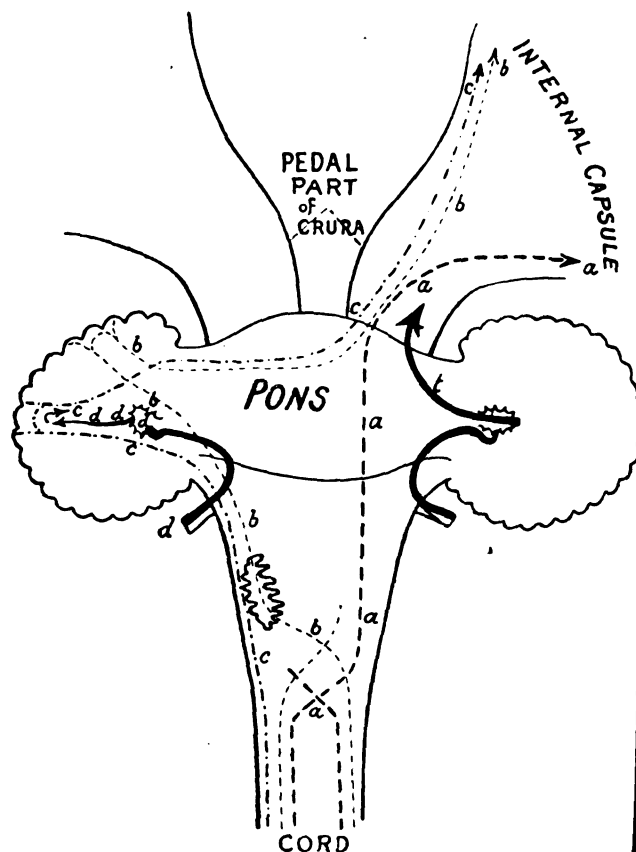


Diagram of the tactile and equilibrium tracts. a, Tract from posterior column through piniform decussation to posterior part of internal capsule. b, Tract from posterior columns through decussation of olivary fibres to cerebellum, thence through pons to frontal lobes and great ganglia. c, Direct myelo-cerebellar tract. d, Auditory fibres to dentated nucleus and connexions. t, Its continuation to tegmentum.

divisions—one running directly through the brain axis to the posterior capsule, the other deviating from the direct course to enter the cerebellum, which ganglion mediates as a connexion of auditory and posterior column fibre—it seems legitimate to assume that the former division is the tactile and the latter the equilibrium sensation tract. Many doubtful points in the study of ataxic phenomena become clear in the light of this conclusion, particularly the common observation that there is no essential relation between tactile insensibility and ataxia. Another interesting point to

⁷ Chicago Medical Review and New York Medical Record, 1891.

determine is the anatomical connexion between the posterior columns and the trineural fasciculus.⁸ The trineural fasciculus originates in the plexiform decussation; whether its fibres are ultimately derived from the opposite posterior column, and hence connect the posterior columns and the great visceral cranial nerves, or whether they run up into the opposite stratum intermedium, it is difficult to determine. While I am inclined to believe that the latter is the case, the possibility of the former disposition must not be lost sight of. If it becomes established it will explain the remarkable effect which progressing disease of the posterior columns has on the production of gastric, bronchial, and cardiac crises.

TEN CASES OF DIPHTHERIA TREATED WITH ANTITOXIN.

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THE following cases of diphtheria have been under our care at the Evelina Hospital for Sick Children, where we were able to set apart a small isolation ward for their reception, and were fortunate in having a supply of Behring's antitoxin for their treatment. After our third case the supply failed us for a time, and it will be seen that the fourth case was treated with Aronson's antitoxin. A fresh supply of Behring's antitoxin was then received, and the remaining six cases were treated with it. In all the patients the treatment was commenced directly after admission and after a diagnosis had been made, partly on the appearance of the membrane and partly on the amount of depression, and in six of the ten on the small amount of albumen found in the urine. In some of them bacteriological investigations were also made. Two of our cases necessitated tracheotomy. In the first case tracheotomy was performed immediately after admission owing to the urgency of the symptoms; in the other case respiration stopped suddenly while some membrane was being obtained for examination and prolonged artificial respiration was necessary after the trachea had been opened. In the single fatal case death ensued after vomiting a quantity of blood, and the post-mortem examination revealed erosion of a branch of the tonsillar artery. With regard to the symptoms following the employment of antitoxin we noted rapid detachment of membrane and great improvement in the pulse and also in the general condition of the patients. In the fatal case the pulse was weak throughout, and in another case convalescence was marked by an abnormally slow pulse, which, however, improved after the administration of stimulants. This child also exhibited a rash somewhat resembling urticaria, but it was only present for a few hours. The last case treated developed urticaria, which gradually faded after three days. The albumen in the urine was not due to the antitoxin; it was detected in five cases before the treatment was commenced, and in a sixth (Case 1) it was found as soon as a specimen could be procured after tracheotomy. The amount of albumen was small in most of the cases, and it disappeared entirely before the patients left the hospital. It is too soon yet to say much about other sequelæ. So far as our present information goes, in none of our cases have any forms of post-diphtheritic paralysis appeared. Our cases have received the utmost care from our resident medical officers, Mr. W. L. Wainwright and Mr. T. Waddelow Smith, to whom we are indebted for the following abstracts of the notes:—

CASE 1. Tracheotomy; recovery.—A badly nourished boy five years of age was admitted to hospital on Nov. 3rd, 1894, in an apparently moribund condition, with extreme dyspnoea

and only occasional attempts at respiration. Tracheotomy was performed at once, followed by artificial respiration. The respiration became in a short time fairly good, but large quantities of foul-smelling mucus poured from the trachea. Both tonsils were covered with whitish membrane, and there was much offensive nasal discharge. The glands were much enlarged and there was one-tenth albumen in the urine. The disease was of ten days' duration according to the mother's account. The pulse after operation was 144, the respiration 48, and the temperature 102° F. Behring's No. 2 solution (10 c.c.) was injected at once. The pulse remained about 140 for two days and the respiration from about 36 to 40, but there was rapid and marked improvement in the heart sounds. On the afternoon of Nov. 4th the child was well enough to look at a picture book of his own accord. Large quantities of mucus and several pieces of membrane continued to be coughed up, and the temperature remained between 99° and 100°. On Nov. 6th the throat was quite clean, though still oedematous, the pulse was 120 and full, the respiration 28, and the temperature normal. The tracheotomy tube was removed on the same day, and recovery was quite uneventful, except that a fine trace of albumen remained until the 13th. On the 27th the patient was discharged in excellent condition.

CASE 2. Death.—A girl aged eight years was admitted on Nov. 7th, 1894, with diphtheria of two days' history. The tonsils were much enlarged and covered with membrane, as also were the soft palate and uvula. There were great pain on swallowing, profuse sanious nasal discharge, and much swelling on both sides of the neck. The pulse was 140 and very feeble, the temperature 101° F., and the respiration 36. Ten cubic centimetres of Behring's No. 2 antitoxin were injected. The urine contained one-twelfth of albumen. The pulse improved a little and fell to 120. The respiration was 23, and the temperature 98°, but the throat did not improve and the glands increased in size. On Nov. 9th, 10 c.c. of Behring's No. 1 serum were injected. The pulse remained about 120 to 130, but became more feeble, and the first sound could scarcely be heard at the apex. The nasal discharge increased, and though the temperature remained normal, the patient became very cold and the skin clammy. On the 10th she three times vomited a quantity of laminated clot, which appeared to have been lying in the œsophagus for some time and was of a greyish colour. On the afternoon of that day the patient gave a sudden convulsive start and died suddenly, a quantity of black coffee-ground material pouring from the mouth.

Necropsy.—There was very deep ulceration of the tonsils, and the right tonsillar artery was found to be laid open at the base of an ulcer for a distance of one-twelfth of an inch. There was a good deal of blood in the stomach, and the tissues in the submaxillary region were full of extravasated blood.

CASE 3. Large patch on tonsil; recovery.—A boy aged six years was admitted on Nov. 10th, 1894, with diphtheria of five days' duration. He was a well-nourished boy with a good family history. There was slight congestion of the tonsils and soft palate, and on the right tonsil there was a large grey patch of membrane. The uvula was clean, but slightly oedematous, and there were enlarged glands in the submaxillary region. The pulse was good, full, and strong, and 96 per minute; the respiration was 32 and not impeded; and the temperature was 104° F. There was no albumen in the urine. Two hours after admission 10 c.c. of Behring's antitoxin were injected into the muscles of the thigh. Three hours later the pulse was 108, the respiration 26 and the temperature 102°, the patient feeling very well. Six hours later the membrane had become almost detached, the patient still feeling very well. Next morning the pulse was 100, the respiration 24, and the temperature 98°. The patient took a hearty meal and did not complain of any pain in the throat. There was no albumen in the urine and the throat had completely cleared. The patient was discharged on the sixth day, being practically well.

CASE 4. Naso-pharynx; recovery.—This patient aged ten years was admitted on Nov. 16th, 1894, suffering from a moderately severe attack of diphtheria. The history was of seven days' illness, with sore-throat and general malaise. On admission the pulse was 120, the respiration 28, and the temperature 101° F. There was no albumen in the urine, and the general condition of the child was good. The throat was congested, both tonsils were enlarged and there was on each a small whitish patch of diphtheritic membrane, but none on the uvula or soft palate. There was considerable

⁸ "Solitary bundle" of Lenhossek and Stilling, *fasciculus lœres* of Lockhart Clark, "Respirationshindel" of Krause; I term it "trineural fasciculus" on account of its established connexions with the eleventh, tenth, and ninth (and that aberrant branch of the ninth pair, the *nervus inter-actius*) cranial pairs.

sanious discharge from the nose. Two hours after admission twenty minims of Aronson's antitoxin were injected into the subcutaneous tissue of the abdomen. Six hours later the pulse was 120, the respiration 36, and the temperature normal. The general condition was excellent. The next morning the pulse was 108, the respiration 24, and the temperature 97°; but there was still a slight patch on the tonsil, with soreness of the throat. After this the patient made a rapid recovery, and was discharged on the sixteenth day after admission practically cured. Besides the antitoxin treatment, a gargle of chlorine was applied locally in this case.

CASE 5. Severe; naso-pharynx; recovery.—The patient aged seven years, a well-nourished child, was admitted on Dec. 6th, 1894, suffering from a severe attack of diphtheria. The symptoms had been noticed for about three days. On admission the pulse was 140, small, weak, compressible, and very irregular; the respiration was 38, greatly embarrassed; and the temperature was 103° F. The throat was greatly swollen and the patient complained bitterly of pain on swallowing. There was a trace of albumen in the urine and a well-marked fetid discharge from the nasal cavity. On the right tonsil there was a complete layer of a whitish-grey membrane, which did not reach to the uvula or soft palate. On the left tonsil there was a smaller patch. The glands at the angle of the jaw were also enlarged. Soon after admission 5 c.c. of Behring's No. 1 solution were injected into the abdominal wall, but with slight effect, the pulse being 140, the respiration 34, the temperature remaining elevated, and the general symptoms increasing in severity. On the following day, the throat symptoms having become much worse, with great dyspnoea and marked signs of laryngeal obstruction, and the pulse also being very weak, compressible, and irregular, 10 c.c. of No. 2 Behring's solution were injected; this produced marked improvement, the pulse being reduced in four hours to 108 and becoming more regular, the respiration to 32, with less dyspnoea, and the temperature to 99.4°. The next morning the membrane on the throat, which had greatly spread, was nearly detached, the pulse being 120 and much stronger, and the respiration 32, easy, and quiet. The child became quite convalescent and developed no bad symptoms. A chlorine gargle was also used in this case, but antitoxin was the only medicine given.

CASE 6. Tonsil and uvula, recovery.—The patient aged three years and nine months was admitted on Dec. 10th, 1894, with sore-throat of five days' duration, which was rapidly getting worse. The throat was congested, the uvula cedematous, and there was a patch of whitish membrane on the left tonsil. There was a faint trace of albumen in the urine. The temperature was 104° F., the respiration 28, and the pulse good (134). On the patient's admission 10 c.c. of Behring's No. 1 solution were injected, and six hours later the pulse was 120, the respiration 18, and the temperature 98°. Next morning the throat was quite clean and the general condition excellent. Since then there has been uninterrupted recovery.

CASE 7. Both tonsils; recovery.—The patient, aged two years and eight months, was admitted on Dec. 17th, 1894, suffering from an attack of diphtheria of twenty-four hours' duration. On examination he was found to be a well-nourished child. The pulse was 144, small, and compressible, but quite regular; the respiration was 44, deep and easy, with no adventitious sounds in the chest; and the temperature was 104° F. A faint trace of albumen was found in the urine. Both fauces showed well-marked congestion, with, on the right tonsil, a mass of thick, tough, greyish-white membrane about the size of a sixpenny piece, and on the left tonsil there was a smaller but well-defined patch of the same character. Ten cubic centimetres of Behring's No. 1 solution were injected on the patient's admission, and the throat was swabbed and sprayed with a chlorine water gargle. Three hours afterwards the pulse was 132, fuller, and less compressible, the respiration 32, and the temperature 100°. He slept well during the night and did not complain of any tenderness when swallowing. The following morning the pulse was 120, the respiration 26, and the temperature 99°. The child was looking bright and happy. The membrane on the throat had not spread, and was becoming detached on the edges and of a greyish colour. The same night the pulse had fallen to 100, being good and full. The temperature was normal and the respiration 24, the general condition being excellent. The albumen had disappeared from the urine. Patches were still to be seen on the tonsils, but were rapidly disappearing. Twenty-four hours later the

pulse was good, varying between 100 and 110, the respiration 24, and the temperature still normal. There were no patches to be seen on the throat. The child was apparently quite convalescent and taking with relish full diet. The bacteriological cultivations from the throat showed a large number of streptococci and staphylococci, with a few well-defined diphtheritic bacilli.

CASE 8. Soft palate and tonsil; tracheotomy; recovery.—The patient aged five years was admitted on Dec. 19th, 1894, and was said to have been ill for nine days. At the time of admission the child was very cold and cyanosed, with scarcely perceptible pulse and much dyspnoea. The pulse was 144, the respiration 36, and the temperature 97.6° F. The lower ribs were being sucked in violently. The soft palate, uvula, and right tonsil were covered with membrane, and the cervical glands were much enlarged. Ten cubic centimetres of Behring's No. 3 antitoxin serum were injected at once. While taking a cultivation from the throat the breathing became suddenly absolutely obstructed, and the child in a moment was flaccid and made no attempt at respiration. Tracheotomy was performed with a single incision, and after several minutes' artificial respiration some attempt at breathing became manifest, and in about fifteen minutes full respiration was restored. An hour later the pulse was 120, the respiration 28, and the colour good. The urine contained about one-thirtieth albumen, the heart dilated moderately, and the lungs were healthy. There was profuse discharge from the nose. The child slept well all night, the breathing being easy and quiet, with little coughing. In the morning the pulse was 144, being fairly good, the respiration 36, and the temperature rose to 101°. Food was well taken. The membrane had cleared off the tonsil, but remained on the uvula and edge of the soft palate. At 9 A.M. the pulse was 120, the respiration 26, and the temperature 100°. The colour was good. The child was well enough to play with toys and look at a picture book. At 9 P.M. the pulse was 124 and the respiration 28. The discharge from the nose had almost ceased. A good deal of tenacious mucus was being coughed up, but no membrane, and the throat looked less swollen and showed less membrane. The cervical glands were much less swollen. The child slept well. The heart sounds were good and the patient was apparently quite comfortable. The cultivations showed Löffler's bacillus and a few cocci. The child subsequently convalesced rapidly with no bad symptoms.

CASE 9. Diphtheria with pertussis.—A child aged six and a half years, suffering from pertussis, on Dec. 21st developed feverish symptoms with soreness of the throat. The pulse rose from 120 to 140, respiration from 20 to 40, and the temperature from normal to 104° F. There were vomiting and general malaise, and on examination of the throat it was found to be covered with diphtheritic membrane. The glands were enlarged, but there was no albumen in the urine. Ten cubic centimetres of No. 1 Behring's solution were injected, with the result that the temperature fell to normal in six hours and the feverish symptoms subsided, the child making a rapid and uninterrupted recovery. Bacteriological examination showed diphtheritic bacilli in large numbers, but few cocci.

CASE 10. Tonsils; soft palate; rash.—A child aged four years was quite well and attending school the day before admission, but that same night complained of pain in the throat, vomited, and seemed generally feverish. When seen on the day of admission, Dec. 24th, 1894, the patient was a well-nourished child with marked dyspnoea and slight cyanosis, enlarged glands at the angle of the jaw, and some cellulitis of the neck. The tonsils were enlarged and covered with typical diphtheritic membrane, which also extended to the uvula and soft palate. There was no nasal discharge. The temperature was 101.4° F., the respiration was 20, and the pulse was 120, weak, and very compressible; the urine (sp. gr. 1015) contained no albumen, and no urates in excess. Ten cubic centimetres of No. 1 Behring's solution were injected deep into the muscles of the thigh, and three hours afterwards the temperature had fallen to normal, the respiration was 24, and the pulse 120, but fuller. The next morning the patient's dyspnoea had quite disappeared, and the membrane was rapidly becoming detached from the throat; there were no bad symptoms. The following day an urticaria was noticed extending from the site of puncture rapidly over the body, but giving apparently no discomfort to the patient, whose general condition was excellent. Bacteriological examination showed a large number of diphtheritic bacilli.

SOME CASES OF GRAVES' DISEASE, SUCCEEDED BY THYROID ATROPHY.

By W. W. BALDWIN, M.D.

In reporting the following cases I desire simply to record the doubts and perplexities of a busy general practitioner in the presence of strange disease processes. I shall be quite content to have succeeded in relating the facts briefly and clearly, exactly as they occurred, without generalisation. I anxiously realise how difficult and ambitious a task it is to accomplish, but I venture to hope that I have not utterly failed to eliminate the deceptive note of personality and prejudice.

The case which I will first report seems unique, considering the youth of the patient and the comparatively rapid cycle of pathological change. The mother, a very poor but intelligent mountain peasant, brought her lad to me on July 26th, 1893, "not on account of illness, but because he was good for nothing, and perhaps the doctor might be able to rouse him." The lad was one of the heaviest, dullest overgrown boys of ten years of age imaginable, mostly half asleep. He would doze off sitting or standing, like the fat boy in the "Pickwick Papers." His skin was pale, dry, and inelastic, the connective tissue under the eyes loose and baggy, the face broad and flattened, and the hands big and puffy. He had a large, pendulous double chin, his great mass of coarse coal-black hair was dry and brittle, and the cheeks were notably scarlet, as though painted. The temperature was 97° F., the heart's action slow and lagging (55), its sounds were normal although its apex beat was displaced downwards and outwards about half an inch (the probable cause of this hypertrophy of the left ventricle will appear later), and the respiration was slow and deliberate. The liver and spleen were not enlarged, nor were any enlarged lymphatic glands discovered, although the boy was stripped and carefully examined from head to foot. The urine was normal. The appetite was moderate, there was no indigestion, and the bowels were regular. The mother related that several years previously he had suffered from palpitation and breathlessness, swelling of the neck, and prominence of the eyes, that he had also been extremely nervous and sleepless at that time, and it was thought he had heart disease. She "knew that he had been perfectly well until six years of age, and that he first began to swell and resemble the ox about two years ago." My friend, Dr. Milani, an experienced local practitioner of the neighbouring commune, who had referred this boy to me, had never seen a case of cretinism in the region of La Traversa, a primitive mountain resort in the Tuscan Apennines, where I was spending my summer vacation. He had seen this patient from time to time during the heart attack, and assured me that it had been a typical case of Graves' disease. It must be confessed that we were both puzzled as to where the pendulum had swung in this particular pathological clock. An extemporaneous examination of the blood showed a certain diminution of red corpuscles, and acting upon this hint the treatment adopted was regulation of diet and hygiene, with appropriate doses of iron and arsenic. I might add that the patient had been living upon vegetable soup, now, and then a bit of cheese, sparingly of sour bread and potatoes, but chiefly upon polenta or ill-cooked maize-meal porridge, without wine. An experimental repast of this inhuman mush had given me a woful indigestion, with such heaviness and mental inhibition as influenced me, no doubt, in forming an opinion of this boy's condition. I seemed to feel just as he appeared. I would say that we furnished him chicken, eggs, milk, a little meat, certain green vegetables and fruit, rice and macaroni, with a moderate allowance of good red wine. The above treatment was continued until Aug. 17th, but without the slightest appreciable effect. At this time a generous provision of various medicaments and drugs arrived from London. Among these was a stock of five-grain tablets of dry thyroid gland powder. It then first occurred to me that our youthful patient had played the gamut of thyroid change in four years, and was now suffering from atrophy and consequent myxœdema. These tablets were now administered. It was found that four daily were well borne, but a larger dose caused palpitation and breathlessness. Strangely enough, the mother remarked when this occurred, "My boy

acts just as he did when he had heart disease." The effect of this treatment was markedly favourable from the first, although the improvement was neither so rapid nor so brilliant as in some cases of uncomplicated myxœdema for which I had prescribed the same preparation. The patient came to see me every second day until Sept. 18th, when I returned to Florence. At this time he was more eager and alert, the general puffiness had almost disappeared, the pulse was 70, and the temperature 98°. The boy actually seemed a size smaller. My friend, Dr. Milani, one of the Good Samaritans of the Apennines, then gladly undertook the case, and in his last line of news, March, 1894, he said: "Our patient is perfectly well, and his cure is considered miraculous by all the mountain folk." I would add that the tablets were continued, as Dr. Milani expressed it, "in sufficient doses to keep the boy upon the human pathway."

On May 22nd, 1894, I was called to attend a tall, growing English schoolgirl fourteen years of age. I found her suffering from an acute attack of follicular tonsillitis, with great pain and difficulty in deglutition. This attack lasted until June 1st, happily without suppuration, and the patient made a satisfactory recovery. I observed with surprise and anxiety that while the temperature never rose above 103° F. the pulse varied between 140 and 160 until the febrile disturbance had subsided. From this time until June 12th the pulse varied between 100 and 120. It was then noted that the thyroid gland was moderately and symmetrically enlarged and the eyes rather prominent, but the upper lids could be voluntarily closed over the eyeballs in any position. There was no muscular tremor, but increased pulsation of the carotids was remarked. The diagnosis of Graves' disease presented no difficulty, and a course of galvanism to the cervical sympathetic was proposed in addition to other treatment, but the patient left Florence, and I did not see her again for some time. The mother, a lady noted for her cleverness and capacity in affairs, whom I saw frequently, gave me accounts of the case which I noted down at the time. The daughter grew much worse in England, and seems to have passed through a period of great danger, coincident with the first climacteric, which lasted two years. Under skilful treatment, including galvanism, however, she gradually recovered, and in January, 1890, it was noted that all the symptoms of Graves' disease had finally disappeared. From this time until December, 1891, the patient gradually drifted into a condition which a leading London authority then pronounced to be true myxœdema. In January, 1893, treatment with fresh thyroid gland was undertaken, which has been brilliantly successful in relieving the symptoms, and the patient, by continuing to take an appropriate quantity of the above preparation, has remained comparatively well.

In June, 1887, I attended another schoolgirl fifteen years of age, a short, rather thick-set Italian of the upper class. She had menstruated irregularly for about six months, and previously to this period had always been well and strong. The family history upon both sides was notably neurotic. The thyroid gland was more enlarged and the eyes more prominent than in the case just mentioned, but the pulse was less frequent (90 to 100) and the nervous excitability not nearly so great. A certain coarse muscular tremor of the extremities was noted, and the patient complained of being unable to close the eyes when lying down, so that they were often very dry in the morning. It was found that she could not completely close the upper lids over the eyeballs looking down except by pushing them with the fingers. In this case of Graves' disease it was decided to prescribe galvanism of the cervical sympathetic every other day. The patient was instructed to lead a quiet, restful life and to avoid all excesses. This treatment was continued, with short intermissions, until October, 1888, when menstruation had become regularly established, and recovery from all the symptoms of Graves' disease had occurred. From this time, with the exception of an attack of peripheral facial paralysis (right) due to a chill, from which she also recovered, the patient's general health was remarkably good until November, 1893, when various anomalous symptoms were first noticed, but chiefly of sluggish circulation, mental hebetude, and intolerance of cold. There is no doubt that the thyroid gland had also been growing smaller. No treatment was then undertaken, as the patient left Florence for the winter. She consulted me again in October, 1894, and decided to undertake systematic treatment. There had been no rapid change during the year's absence, but all the symptoms were a shade more accentuated. The temperature,

which had been normal in November, 1893, was now 97.4° F., the pulse had changed from 78 to 65, the skin was paler, drier, and less active, and the patient's whole appearance was indescribably different. If I may be allowed the comparison, she seemed to have merged her former personality into that of a more placid, apathetic, and slightly larger twin sister. As the patient could not be persuaded to continue the fresh sheep's thyroid gland, first prescribed, however prepared, the five-grain tablets already mentioned, of which a fresh supply had arrived, were prescribed. At first three tablets daily were given, cautiously increased to six, which dose it has not been necessary to increase. The effect was satisfactory from the very first, and the patient now (Dec. 10th, 1894) declares herself—and, indeed, appears in all respects—to be perfectly well. She is taking three tablets daily at present, and will remain under careful observation in future. I would add that either the fresh sheep's thyroid or the five-grain tablets have proved so satisfactory in every case thus far that I have not found it necessary to try later and perhaps more elegant preparations. Our present Italian Custom laws also render the importation of pharmaceutical novelties vexatious and difficult.

In June, 1892, a Swiss woman forty-four years of age consulted me. Her history, as noted down at the time, is as follows. She had married young and had borne several children, but the relation had proved a very unhappy one. Until 1888, however, she had enjoyed robust health. At that time she suffered from a great mental shock, succeeded by grievous family complications, which had continued to distress her ever since. In 1889 menstruation became irregular and after a twelvemonth finally ceased. Shortly after the shock mentioned she began to suffer from palpitation, breathlessness, swelling of the neck, prominence of the eyes, great nervousness, and insomnia. These symptoms continued for some months after the final menstruation (May, 1890), but gradually disappeared. She had never submitted to regular systematic treatment, but had taken medicine for hysteria from time to time. She had remarked that both before and after the climacteric all the symptoms were invariably aggravated for the first four or five days of the regular monthly time. Since then she had gradually lost control of her voice, which was sometimes fairly strong and clear, at other times muffled and indistinct, but always losing force. What chiefly distressed her, however, was inhibition of brain power and a sense of overpowering fatigue and melancholy. She slept fairly well, but was never refreshed thereby. There was lack of appetite, but digestion, although sluggish, was fairly good, and the bowels were always constipated. She suffered very much from the cold, and was invariably worse in cold weather. No organic lesions were discovered. The skin was pale, dry, and harsh; the hair was unusually thick, long, and lustrous, but latterly it had been falling out. She complained that the hands and feet were swollen at times, but this I did not observe. The tissue about the eyes was slightly swollen and the cheeks were pale. Her facial expression was notably anxious. The treatment prescribed consisted in attention to diet, regulation of the bowels, and the administration of hypophosphites of iron, strychnine, and quinine with arsenic. This treatment was continued, with intermissions, in Switzerland, where she spent the summer. She was distinctly better when I saw her again in the following November. During the winter, however, in spite of treatment, all her symptoms became aggravated, and in June, 1893, she was distinctly worse than the year before, when I first saw her. Her appearance did not suggest myxœdema, and I could not satisfy myself that atrophy of the thyroid was present, but it was decided to make a cautious trial of the same tablets of compressed dry thyroid gland powder. At first three were given daily, being then increased one at a time to six tablets daily. The effect was simply amazing, and after a few weeks the patient expressed herself, and, indeed, seemed to be, perfectly well. One or two tablets daily have been taken since, and she remains in good health.

Florence.

FOOTBALL CASUALTY.—During a recent match a Notts Forest left wing forward sustained an injury, which on medical examination was found to be a muscular adhesion in the vicinity of the sciatic nerve, and he will probably not recover the full use of one leg for some time.

AN OCCURRENCE OF MILK INFECTION.

BY JAMES NIVEN, M.A., M.B. CANTAB.,
MEDICAL OFFICER OF HEALTH, MANCHESTER.

ON Nov. 7th, 1894, Dr. Henry Ashby sent me a note in reference to a number of cases of illness which had occurred in Victoria-park, Manchester, some of them having come under his professional observation. The symptoms he described were diarrhoea, sickness, and abdominal pain. Those attacked were all supplied by one milk dealer, and he was of opinion that circumstances pointed to the milk as being the cause of the attacks. On that day and the following day I called at a few houses in Victoria-park, the addresses of which I had received from Dr. Ashby, and inquired into the circumstances under which their illnesses had occurred. All the families visited had received their milk from one dealer, and, so far as I was able subsequently to ascertain, all the families attacked in a similar manner at that time received the same supply, and other individuals not so supplied were found to have partaken of that milk. The chief points which I ascertained in the preliminary inquiry were that the attacks in the great majority of instances occurred on the night of Nov. 5th and in the early part of Nov. 6th. As a rule the persons attacked had partaken of unboiled milk. The milk supplied on the morning of Nov. 5th first produced the symptoms. It did not seem to make much difference in the result whether a small amount of milk in tea or coffee, or a large amount, was used. One woman was positive that all milk brought into the house was boiled, and in a number of instances the milk had been warmed. One occurrence of illness after the use of boiled milk is, however, scarcely sufficient to found a conclusion upon, as an oversight might have been made. Thus, at the first house I went to I was told that the children attacked always had their milk boiled, except on that particular morning. In the second house four persons escaped. One had had boiled milk, two others never used it, and the fourth only took a little in tea. The three attacked had had unboiled milk. In a third house ten were attacked and three escaped. Two of these did not have milk at all. Those attacked all took milk freely. At a fourth house a girl who came to clean the steps received a glass of milk, and was subsequently ill with the same symptoms as those attacked in the household. At another house, not in Victoria-park, five members of the family were taken ill—one on the night of Nov. 4th, one on the night of the 5th, and three others on the 7th. This household was the only one in the street supplied by the milk dealer whose milk was concerned. A considerable time elapsed—at least eight or nine hours—between taking the incriminated milk and the occurrence of symptoms of illness.

The conclusion drawn from these preliminary visits was that the phenomenon was probably one of bacterial growth in the body—i.e., of infection—from the use of this particular milk-supply. On Nov. 8th I obtained a sample of the milk supplied on Monday evening from a patient of Dr. Ashby, and took it to Professor Delépine, who very kindly undertook to make plate cultivations from it and otherwise to examine it bacteriologically. This milk had an unpleasant odour. Another sample of the milk supplied on Wednesday, Nov. 7th, which I obtained on a visit to Victoria-park on Nov. 8th, also had a disagreeable odour, which I seemed to recognise at the time but could not locate. On subsequently learning what had happened at the farm I seemed to recollect the odour as resembling that of "sweet pus." On Nov. 8th I also saw Dr. Waddell, of Rusholme, who had visited a large number of cases. On the previous day he called at the farmhouse from which the incriminated milk came, but beyond general insanitary conditions he ascertained nothing, and he was assured that there was nothing the matter with any of the cows. He informed me that the farmer had two supplies, one from his farm and another from Derbyshire, and that those attacked in Victoria-park had received their milk only from the farm, this special supply being retained for their use. Those who were supplied with the Derbyshire milk had escaped.

On Nov. 9th I called at the farm along with Mr. King, the veterinary surgeon of the Corporation. Mr. King made a careful examination of the cows, and found nothing in their condition which suggested that any of them could have

produced milk so toxic as that sent out from this farm. I asked the farmer a good many questions, interrogating him closely about the health of the cows and the health of the milkers, and of those who had to do with the milk otherwise. He informed us that a milkman had recently left him. We discovered nothing in reference to either man or cow. I also inspected the farm premises along with Mr. Martin, medical officer of health for Gorton, in whose district the farm is, and his Inspector. Close to the farmhouse is a tip of midden-privy refuse belonging to the Gorton Local Board, which Mr. Martin informed us might contain 40,000 tons of material of that kind. The farm is bordered on two sides by streams which meet below, one coming from this tip, and very foul, the other comparatively clear, but also contaminated with sewage and with matter from a tripe-boiling place. The water used to wash the pails was tepid. Mr. Martin took the temperature of this water, which was 92° F. A3 was subsequently ascertained by Inspector Lord, the water used in cleansing the milk pails was kept in a foul cistern. The cows also drank from a pool in the yard which received drainage from the cowshed midden. The storage of the milk overnight was such as to expose it to warmth and contamination from the cowshed. It is needless to multiply particulars. The conditions were thoroughly insanitary and were such as to lend point to the bacteriological report of Professor Delépine on Nov. 12th, which is as follows:—

The Owens College, Manchester, Nov. 12th, 1894.
REPORT ON A SAMPLE OF MILK RECEIVED FROM DR. NIVEN ON
NOVEMBER 8TH.

The milk was coagulated, the coagula being pure white and opaque. The smell was sour, and reaction strongly acid. Microscopical examination revealed fat globules in part confluent; there was no cell visible, and no extraneous matter, with the exception of micro-organisms distributed uniformly through and between the coagula. These bacteria were mostly short, plump bacilli, and large coils of variable size, here and there forming chains (streptococci). Abundant growth was obtained in milk and bouillon, both aerobically and anaerobically at the temperature of the body, the growth being accompanied by the production of gases having a very offensive smell. Abundant growths are also obtained on agar at 37° C., and on gelatine at 21° C. By plate cultivations various organisms were separated, two of which were more abundant than the others. These were a streptococcus with large segment, and a microbe having the characters of the bacillus coli communis. (These organisms are under investigation.) A virulent form of the bacillus coli communis has been found associated with severe gastro-enteritis. It is probable that, by accident, some contaminated water found its way into some of the vessels used for collecting or distributing the milk. Two tame young rats and two guinea-pigs were given large doses of the milk (varying in amount from one-tenth to half of the weight of the animal) without any unpleasant effect. The animals showed no dislike to it, and in one case a second dose was taken as readily as the first. It is therefore evident that the illness produced by the milk was not the result of a simple poisoning.

SHERIDAN DELÉPINE.

Nevertheless, there seemed something unexplained, and in any case it was desirable to ascertain more about the extent of the mischief done. I had already, on Nov. 7th, sent an inspector to the farm for a list of the customers supplied with milk from the cows on the farm. He brought me back a few names of people who had not been ill. On visiting the farm on Nov. 9th I insisted on having a complete list of the customers—those supplied in the morning being discriminated from those supplied in the evening. Such a list was subsequently sent, but I may say that I put no great value on any statements made with regard to the exact allocation of the milks respectively from the farm and from the supplemental supply in Derbyshire. In any case no distinction in the number of attacks is observed between those said to have been supplied respectively in the morning and in the evening. So far as it goes this would seem to exclude the fouling of one particular pail or of one particular supply as the cause of the disease. The list of customers was divided on Nov. 12th among the respective district inspectors, who made an inquiry into the occurrences in the different families on the list. It was possible from the same list to ascertain approximately the names of the medical men who attended the families attacked, and a letter was sent requesting them to be kind enough to give a brief account of their cases. The account thus obtained has not been completed, but showed conclusively, if further proof were necessary, the dependence of the illness on a particular milk-supply. It is intended to publish the accounts given by different medical men, of course without names and addresses. On Nov. 15th Inspector Lord found the milkman who had left the farm, who informed him that a cow had been removed about Nov. 2nd. He also visited the farm in Derbyshire from which the supplemental milk-supply came, and on Nov. 17th he proceeded to trace the cow which had

been removed. On Nov. 19th the farmer came and stated that on Nov. 8th his attention was called to a cow with "gargil"—i.e., inflamed udder—the milk of which had been at that time, and was also on Nov. 7th, mixed with the milk of the other twelve cows on the farm. This cow was removed from the farm on Nov. 8th, and on Nov. 10th was slaughtered and sold for food.

"Gargil" or "garget," I am informed, is an acute inflammation of the udder, which often leads to extensive sloughing. In an article in the *Medical News* for Aug. 8th, 1891, Dr. Tower, of Milwaukee, gives a drawing of the microscopic appearances of a sample of milk from such an udder, showing streptococci and collections of micrococci. I am not aware of any similar outbreaks which have been ascribed to a case of gargil.

Altogether, 160 cases of illness have come to my knowledge in forty-seven families, but none of them were fatal. In forty-nine families amongst those given in the list of consumers no illness was experienced. It is probable, however, that many of these had not partaken of the milk. The total yield of the cows was given to me by the farmer on Nov. 9th as seven gallons at one milking—i.e., 112 pints in the day. Now a number of the households were very large and this would not have sufficed for them. Moreover, at the same visit I was assured that the families in Victoria-park were exclusively supplied with milk from the farm. These nearly all suffered from the use of the milk, and therefore I consider it likely that a number of the other families had other milk.

In endeavouring to form a judgment as to what was the element in the milk producing the mischief one had to consider the nature of the occurrence. The great majority of the illnesses began on the night of Nov. 5th and early on Nov. 6th. Evidently something new was imported into the situation. It is true that there was plenty of material round the farm to cause disease, and the abundant presence of bacterium coli commune in the sample examined by Professor Delépine was quite in accord with the conditions to which the milk had been subjected on the farm. But, then, it had been for years subjected to similar conditions, and nothing had taken place. Moreover, with so many members of the family suffering from diarrhoea it is possible that some contamination might have occurred in the house where the milk was obtained. The teats of the cows were far from clean at my visit, and the bacterium coli commune might have entered in that way, or it might have been introduced by contaminated water, and, as I have mentioned, the water with which the pails were washed could not be regarded as other than contaminated. But it is felt that there was something altogether new, and probably arising from something fresh imported into the situation, and that this something was probably disease in man or cow. Hence our persistence of inquiry. As it turned out, one out of thirteen cows was acutely ill, and the period of its acutest illness covered the period of the outbreak. The farmer says that he became aware of the illness of the cow on Nov. 6th, and it may be assumed that it had begun to be ill a day or two before then. It does not go for much, but he himself felt it necessary to remove the cow. The weight of probability is, I think, otherwise, greatly in favour of this cow having been the origin of the outbreak. We have thought it advisable to investigate this subject further. Mr. King has undertaken to get some udders from cows suffering from "gargil," and Professor Delépine has undertaken to investigate the bacteriology and pathology of milk from them. A detailed account of a number of the cases has been sent me by the medical men in attendance. It shows the time of attack, and, when ascertained, how much milk was used. Taken along with Professor Delépine's report it appears to point to bacterial growth as against the action of toxins. I have not been able to find an account of any outbreak similar to the above, although it seems likely that such must have taken place. An interesting account is, however, given by Professor Gaffky¹ of an illness characterised by rigor, diarrhoea, and fever (up to 105°-8° F.), with very severe general symptoms, and followed by prolonged convalescence, occurring on the same day in the assistant, chemist, and servant at the Institute at Giessen, in consequence of partaking of milk. The source of the infection was found in a cow suffering from hæmorrhagic enteritis. The same bacilli, short, very motile, and pathogenic for mice and guinea-pigs, were found in the dejecta of the cow and of the patients.

¹ Deutsche Medicinische Wochenschrift, vol. xviii., No. 14, 1892; see also Schmidt's Jahrbuch.

They were, however, absent from the milk. It is inferred that the milk of the cow must have become contaminated with dejecta. A matter of some consequence in the Manchester outbreak is the strong belief entertained at one household affected that the milk used had always been boiled. In other families this seemed to have prevented the illness. But there is no doubt whatever that the bacteria concerned in the outbreak were capable of resisting tolerably high temperatures, since, in some instances, the milk, the use of which had been followed by attacks, was warmed, and in other cases mixed with hot tea or coffee. Professor Flügge² discusses the effect of heat on the sterilisation of milk. He finds that the anaerobic bacteria which are to be found in almost every milk do in part resist boiling for a period of an hour and a half. "Of much more consequence, however, are the peptonising bacteria, which are frequently present in enormous quantities, grow best at a high temperature, possess a dangerous tenacity of life, not altering the milk perceptibly for a considerable time, though gradually imparting to it a bitter taste. Amongst the twelve species encountered were three which were found on several occasions in the ordinary milk of commerce, and which appear to have a special importance, inasmuch as their pure culture in milk evoked severe toxic effects in different experimental animals, and in young dogs especially produced violent diarrhoea, often leading to death. The spores of these peptonising bacteria stand heating in water or steam up to 100° C. for two, and in part even up to six, hours; the ordinary heating up to 100° for about three-quarters of an hour does not destroy them." Professor Flügge concludes that the ordinary process of sterilising milk by boiling is insufficient. In spite of that, a very large proportion of the infectious germs present in milk will be destroyed by boiling, sufficient to prevent many of them from reproducing disease. But it would certainly seem that we cannot afford to neglect other precautions in the conservation of milk, even if we do have it boiled before use.

In the course of this inquiry several questions of general moment have risen. If we are to assume that the infection in this case was due to disease in the cow, yet how far was this disease ascribable to the insanitary conditions to which the cows were subjected? In order to elucidate this question I inquired into the previous history of cows on the farm, and was informed that there had been no disease among the cows for seven years. Seven years ago nine cows were said to have died one after another of a disease characterised by rapid onset, weakness, and staggering. The exact nature of this disease, apparently, no attempt was made to clear up. Several of the cows at our visit had a temperature of 101° F. and one had a temperature of 102°. In regard to this one Mr. King was inclined to think that it was tuberculous. I can scarcely believe that animals placed under such conditions as existed on this farm would escape disease for seven years.

Then, again, how far are such conditions limited to individual farms and how far are they general? From my previous experience of dairy farms in a neighbouring district I should say that they are far below any standard of sanitation which should be tolerated; and from what I have heard of the keeping of cows in and around Manchester the whole trade must require investigation and amendment. But it would scarcely be possible to establish a high standard in one district and allow surrounding districts to retain their old conditions. To obtain the maximum of advantage from an improvement in the method of dairy farming this must be made general. For that purpose I would venture to suggest that a uniform code should be applied to all cowsheds, both in and outside our large towns, and that this should not be too stringent in regard to the size of existing cowsheds. Also that veterinary surgeons, at an adequate salary, should be appointed to districts to make periodical examinations of the farm premises and of the stock. They would be required at once to report any insanitary conditions on the farms, or any disease in the cows, to the sanitary authority in whose district the farm or cowshed lay, so that adequate measures of prevention might at once be taken. I cannot help thinking that many such occurrences as the above must take place, though on a more limited scale, and that a large amount of bad health, especially in infants, must be produced by an impure milk supply. It is the more necessary to exert ourselves in

improving the state of the farms and the conditions of milk storage, if, as Flügge's results indicate, boiling affords an insufficient protection against impurities in milk. The directions in which amendment are most urgently called for are these:—

1. The removal from the milk-supply of all milk from diseased cows, or from cows in an abnormal condition, and the prompt removal from the cowshed of diseased cows.
2. The supply of pure drinking water to the cows.
3. Cleanliness about the farm. The teats and udders of the cows should be carefully cleaned before milking, and milked with washed hands. They are, as a rule, merely stripped, often with dirty hands.
4. Adequate space, lighting, and ventilation should be provided.
5. The milk pails and vessels should be scalded after each milk round and carefully cleansed.
6. The milk should be stored on the farm in a dry, well ventilated, and clean place.
7. When retailed in shops it should be protected from dust.
8. It should be sterilised before distribution if possible.

ABDOMINAL SECTION DURING PREGNANCY.

By JAMES MURPHY, M.D. DURH.,
SURGEON TO THE SUNDERLAND INFIRMARY.

DURING the year 1893 I had occasion to perform abdominal section on four patients who were pregnant. Their histories, briefly, were as follows.

CASE 1.—The patient, a lady aged twenty-two years, the mother of one child aged eighteen months, was sent by Dr. Norie. She was quite well up to two days before my seeing her, when she was suddenly taken with intense abdominal pain and tenderness, severe prostration, and constant vomiting. She had not menstruated for three months and believed herself to be pregnant. On vaginal examination the uterus was found to be enlarged and pushed forwards by a hard mass in Douglas's pouch. It looked very like a case of extra-uterine gestation after rupture, but there was no hæmorrhage from the uterus, and extra-uterine gestation is very rare with patients who have recently been pregnant. She was at once (Feb. 10th) removed to the Sunderland Infirmary and her abdomen opened immediately after her arrival, when she was found to be three months pregnant. The tumour in Douglas's pouch was a parovarian cyst, being quite black owing to a twisted pedicle. The tumour was removed and the abdomen washed out and closed. The case was perfectly aseptic throughout, and the patient was attended in her confinement on Sept. 4th by Mr. Stobo of Southwick, who informs me that she had an easy labour and gave birth to a boy. Both mother and child did well.

CASE 2.—A young lady thirty-two years of age was sent into the Sunderland Nursing Institute under my care by Dr. Beveridge of Hendon, to have an ovarian tumour removed, she being about six months pregnant. The operation was performed on April 20th, at 12 noon. The tumour proved to be a solid round-celled sarcoma weighing about two pounds, with somewhat numerous adhesions. The labour pains commenced twenty-four hours after the operation; they were slight for the first few hours, but towards 10 P.M. they became very much worse, and the patient soon gave birth to a boy, who lived for about twelve hours. The convalescence was uneventful, and the patient left the institute in three weeks, her highest temperature being 99.5° F.

CASE 3.—The patient, a woman twenty-two years of age, was sent to the Sunderland Infirmary by Dr. Houseman of Houghton-le-Spring. She was two months pregnant, and on the left side of her uterus there was apparently an adherent ovary in which she felt considerable pain. I did not consider there was any occasion to open the abdomen until Oct. 23rd, when to my surprise she became very collapsed, and fluid appeared in the abdomen. I at once put her under chloroform, and on cutting down to the peritoneum discovered that this fluid was blood. Opening the peritoneum by a small incision I removed about twenty ounces of blood and washed out the abdomen with boracic acid lotion. The uterus was enlarged, both tubes and ovaries were healthy, and from the

² In an article in the *Zeitschrift für Hygiene und Infectious-Krankheiten*, vol. xvii., No. 2, p. 272, 1894, quoted in Schmidt's *Jahrbuch*.

right ovary there was a bleeding point from a small adhesion, which had apparently held the ovary down to Douglas's pouch until the growing uterus had stretched it, and it then got torn some hours before the operation. I secured this adhesion with a ligature, and, there being no further bleeding point, the abdomen was closed. She made an uninterrupted good recovery, and her pregnancy continued till the ninth month, when it was terminated by Dr. Houseman owing to accidental hæmorrhage. The child was born alive.

CASE 4.—On Aug. 29th Dr. Limont of Newcastle asked me to see with him a lady twenty-seven years of age, two months pregnant for the first time, who was suffering intense pain from a small ovarian tumour on her right side. I removed the tumour (about the size of a hen's egg), and the patient made an excellent recovery. At the end of a month she went for a fortnight to Bournemouth, where she unfortunately contracted a very severe attack of bronchitis, after which she suffered from albuminuria with considerable œdema of the legs, and on Feb. 15th she gave birth to a dead child. Since then the albumen has disappeared, and she is now quite well.

The above cases, being recent ones, are recorded to show that abdominal section can be safely done during pregnancy, a question which has been a good deal discussed in this country and in Germany during the past year. My own experience in a large number of cases of abdominal surgery and general surgery, such as amputations, removal of breasts, &c., is that it is very unusual for an operation to terminate pregnancy.

Sunderland.

NOTE ON THE TREATMENT OF DIPHTHERIA.

By G. HUNTER MACKENZIE, M.D. EDIN.,

SURGEON FOR DISEASES OF THE THROAT AND NOSE TO THE EYE, EAR, AND THROAT INFIRMARY, EDINBURGH.

THE marked success which apparently follows the treatment of diphtheria by antitoxin raises the question whether the action of this remedy can be expedited or assisted by any auxiliary treatment, and, if so, what are the means which can so assist? In cases in which the disease has extended to the larynx, with consequent more or less obstruction to the respiration, it appears to be essential to recovery that some mechanical means should be adopted to maintain the integrity of the respiratory passage until the antitoxin has had time, possibly by repeated injections, to act. Roux¹ affirms that under the influence of antitoxin the false membrane ceases to grow within twenty-four hours from the first injection, and detaches itself in from thirty-six to forty-eight hours, at the latest by the third day. The thesis I now wish to maintain is that in intubation or tubage the medical man has a safe, easy, and effective means of combating the conditions attendant upon impeded respiration, which the new system of treatment occasionally requires. In fifteen cases of intubation in diphtheria reported in detail by me² the average length of time during which the tube lay in the larynx was twenty-six hours, and several of the patients who died succumbed to other causes than respiratory impediment. If the patient can be tided over twenty-four hours by means of an operation which does not require the administration of an anæsthetic and is not accompanied or followed by hæmorrhage or shock, and if antitoxin be simultaneously administered, the remedy is allowed time to commence to act under the most favourable conditions. If, on the other hand, marked obstruction of the larynx has developed before the commencement of administration of the antitoxin, and if no special means be adopted to combat it, the patient may die, and, judging from some reports of cases which have appeared in the medical press, has died before he could be thoroughly brought under the influence of the remedy. From a fairly extensive experience of both tracheotomy and intubation in diphtheria I feel warranted in agreeing with Roux in the following expression of opinion. He says in the article previously referred to: "How many children may be spared tracheotomy if the serum were administered sooner? We can even say that with the use of serum

tracheotomy should, in the great majority of cases, be replaced by tubage. It is now no longer a question of leaving a tube in the larynx for days; it will suffice more frequently to retain it during twenty-four or forty-eight hours to prevent imminent asphyxia, and to gain time until the false membranes detach themselves. *Tubage is the complement of the serum treatment of the future*, tracheotomy will be the exception, and greatly to the benefit of the children." (The italics are mine.) But even if a longer period than from twenty-four to forty-eight hours be necessary to allow the therapeutic effect of the antitoxin to develop it can be afforded by intubation, as the following cases show.

CASE 1.—On April 19th, 1894, I was asked by Dr. Thynne of Edinburgh to meet him in consultation in the case of a boy aged six years, the subject of diphtheria. Membrane had been seen on the tonsils and adjoining parts of the pharynx, and had subsequently extended to the larynx. We found him *in extremis*, and as the boy's father positively refused to permit of tracheotomy being performed, it was suggested that intubation might be tried. This was accordingly done. The auxiliary treatment consisted in the administration of small hourly doses of mercury, and of a mixture of strophanthus and strychnine, with free alcoholic stimulation. The tube was permanently withdrawn on the fifteenth day. The patient recovered after a tedious convalescence.

CASE 2.—On June 15th, 1894, I was called by Dr. Hamilton Wylie of Pirrig to see a girl aged seven years, reported to be suffering from diphtheria, with great difficulty in breathing. Intubation was performed. The auxiliary treatment was on similar lines to that of Case 1. The tube was withdrawn on the tenth day. The patient recovered, with post diphtheritic manifestations during convalescence.

I may observe that I have never witnessed a patient in a worse plight than the child was in Case 1 before the performance of intubation. What struck the attendant physicians and myself in regard to the results of intubation in these cases were: (1) the great and instantaneous relief which followed insertion, and in Case 1 re-insertion, of the tube; (2) the easy manner in which it was borne by the little patients, and the absence of annoyance to them from its use; (3) no difficulty in swallowing whilst the tube was *in situ* in the larynx; and (4) the tube in each instance could easily have been retained for a longer period if such had been considered necessary. There seem to be good grounds for believing that intubation or tubage is a valuable auxiliary in the antitoxin treatment of diphtheria, and that the day is fast approaching when it will supersede tracheotomy—"greatly," as Roux observes, "to the benefit of the children."

Edinburgh.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A FATAL CASE OF ANOREXIA NERVOSA.

By C. F. MARSHALL, M.D. VICT., F.R.C.S. ENG.,

LATE SURGICAL REGISTRAR AND ANÆSTHETIST TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, W.C.

IN connexion with fatal cases of anorexia nervosa, an interesting example of which appeared in THE LANCET of Jan. 5th, 1895, it may be of interest to record another case of this affection which was under my care in 1890. The history is briefly as follows:—

A girl, said to be eleven years of age, but who looked nearly fourteen years old, was admitted to the North Eastern Children's Hospital on May 10th, 1890. The history was only of one week's loss of flesh, anorexia, and vomiting. Four years previously she was said to have had similar attacks. On examination she was found to be extremely emaciated, but there were no signs of organic disease. She had a wild, hysterical appearance, was very restless, and refused all food; her bodily strength, however, was greater than would be supposed from her extreme emaciation. (The abdomen was so sunken that the vertebral column and sacrum could be easily felt.) As she refused all food she was fed on enemata of peptonised milk, beef tea, and brandy. In

¹ THE LANCET, Sept. 22nd, 1894.

² Edin. Med. Jour., Jan.-May, 1892.

two or three days peptonised milk and beef tea were taken by the mouth in small and frequent doses. In ten days she could take a moderate diet by the mouth, but suffered from diarrhoea. On the thirteenth day after admission she rapidly became worse, the temperature rose to 102° F., and on the fifteenth day she died. At the necropsy some old caseous foci were found at the base of the left lung; the stomach was congested with scattered ecchymoses; the other organs were normal. The case was diagnosed as probably one of anorexia nervosa, but in spite of the great emaciation no fatal issue was apprehended till two days before death. This diagnosis was, in the absence of any lesion to account for death and in the absence of diabetes, supported by the post-mortem examination. The presence of the old tuberculous foci in the lungs is of interest, in that this disease was supposed to originate from latent tuberculosis; but in the above case the tubercle was too small in extent and too localized to have been a factor in the cause of death, which was presumably due to the inanition having proceeded too far for recovery before systematic and regular treatment was begun. Dr. Laségue, writing on this disease in 1873,¹ states that death in such cases is never due primarily to the anorexia, but to some secondary disease such as tubercle occurring while the patient is in a lowered condition. Sir William Gull,² on the other hand, records a fatal case with no organic changes except thrombosis of the femoral veins.

London, W.C.

OBLITERATIVE ARTERITIS IN A BOY FOURTEEN YEARS OF AGE.

BY BERTRAM W. BOND, M.B., B.S. DURH., M.R.C.S.,
L.R.C.P. LOND., L.S.A.

WHILE acting as locum tenens to Dr. Easby of Peterborough a boy fourteen years of age came to me suffering from a sharp attack of "shingles" extending round the left side of the chest and back. He was evidently in bad health, and on taking his left wrist to feel his pulse I discovered that none could be felt. No pulse could be felt anywhere in the left upper extremity until the subclavian was reached. Here the beat was synchronous with that of the right subclavian, but much feebler. The radial and brachial arteries could be felt as cord-like bodies. On questioning the boy he said that beyond occasionally having "pins and needles" in the left arm and fingers he had felt no inconvenience whatever, and in fact he was unaware of the condition. He usually suffered from chilblains during the winter months, especially on the feet. The collateral circulation was evidently good, for beyond a slight blueness of the fingers there was no other visible sign of deficient nutrition. The temperature of the fingers was practically the same on both sides, and there was no anaesthesia. As regards cause, there was no sign of cervical rib or other pressure on vessels, the heart sounds were normal, and no specific or rheumatic history could be obtained. There were no signs of congenital syphilis elsewhere. The pulse in the right radial was normal, and no undue thickening of arterial walls could be felt. The interest of the case lies in the early age of the patient. I have seen a similar condition at the age of twenty-three and twenty-four years, but believe it to be rarely seen in a patient as young as fourteen years.

Englefield Green.

CASE OF POISONING BY NUTMEGS.

BY T. G. SIMPSON, L.R.C.P. EDIN.

HAVING been in practice a great number of years without seeing, or even hearing, of a similar case, I think the following particulars of a case I had recently under my care may possibly interest some of the readers of THE LANCET.

On Sunday morning, Dec. 9th, 1894, during my absence, my assistant, Mr. E. Gibbs Smith, was called to see a woman twenty-six years of age. His report was as follows:—"I found the patient lying upon the bed in a drowsy condition and very delirious, the delirium taking the form of confusion and mistaking one person for another. There were fairly lucid intervals. She complained of a sensation of great tightness across the chest, of vertigo and faintness upon

attempting to stand. She had vomited several times, but unfortunately I was unable to see the vomited matter. The pulse was 75 per minute and rather feeble, as was also the heart's action. The pupils were normal. Inquiries of a person in the house elucidated the fact that the patient, a strong, healthy woman, had, being a week over her menstrual period, taken two nutmegs, bruised, in a small quantity of gin. I ordered her to be kept in bed and to be given a little strong coffee with a dessert-spoonful of brandy in it every half-hour. I also prescribed the following mixture every four hours: bromide of potassium, carbonate of ammonia, bicarbonate of soda, spirit of cajuput, and chloroform water." I saw the patient myself in the afternoon, and found her condition considerably improved, but still showing the symptoms described. I continued the same treatment, and the next day she was very much better, but still had some vertigo and was very weak. I discontinued the coffee and brandy, but kept on with the medicine, and by the following day she was able to get up, though still weak. The case has gone on favourably since. I may add that the nutmegs had no effect whatever in producing miscarriage.

Hackney-road, N.E.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

SLOUGHING OF URETHRA FROM PRESSURE BY A METALLIC RING; PLASTIC OPERATION; RECOVERY; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

THIS case is an example of an injury by no means rare in children, usually in consequence of some act of their own in tying or twisting a ligature of some kind round the penis. A case, however, has been recently recorded in which the constriction was produced in an infant by a human hair, there being no evidence as to the manner in which it had been applied. The injury resulting does not often extend so far as it did in this patient, for, as Mr. Owen remarks, there is a probability that a traumatic stricture will yet develop, although the urinary fistula is closed by operation. Urinary fistulae in the penile portion of the urethra are difficult to close, and none of the recognised methods of operation introduced by Ricord, Nélaton, or Le Gros Clark were available here. Mr. Owen therefore performed a novel operation, as described below, with a successful result. For the notes of the case we are indebted to Mr. C. F. Marshall, surgical registrar.

On March 30th, 1894, a boy nearly twelve years of age was admitted to the Hospital for Sick Children for incontinence of urine. The boy's mother said that she first noticed a swelling of the penis about a month previously and applied fomentations to it. Latterly the boy had lost control over his urine. She knew nothing more. The prepuce and glans penis were greatly swollen. Behind the swelling there was a constriction caused by a metallic ring five-eighths of an inch in diameter. The ring, which originally surrounded the penis, had now ulcerated through for a considerable distance so as almost to amputate the organ, and there was a large urethral fistula at the seat of constriction, the result of an extensive sloughing. Chloroform was at once administered and the ring was cut through with bone forceps and removed. At the same time a large portion of the œdematous prepuce was taken away, and a catheter was passed down to the fistula, but it could not be got into the bladder. On May 2nd the œdema of the penis had gone down considerably, but there was still a great deal of swelling in front of the constriction. All urine was passed by the fistula. Ether having been administered, Mr. Owen cut down on the strictured part of the urethra and passed a grooved staff into the bladder; he then cut down upon the staff in the perineum and introduced a permanent drainage-tube into the bladder through the middle line. On June 13th, under ether, Mr. Owen dissected away all scar

¹ Archives Générales de Médecine.
² Journal of the Clinical Society, vol. vii., 1873.

tissue and a certain amount of skin from around the fistula, and having raised an oblong flap of skin on the pubes (leaving it attached at both ends) drew up the penis beneath it and stitched the edges of the flap to the margins of the skin around the fistula. He then made vertical cuts near the ends of the flap so as to take off the tension of the flap, which, to a slight extent, occurred when the penis had been slipped beneath the bridge. On the 20th the flap appeared to have united by primary union. On the 27th the boy was examined under chloroform. There was a minute opening at both the upper and lower edge of the flap, through which urine oozed; these spots were touched with solid nitrate of silver. The perineal tube was still kept in. On July 4th, under the influence of chloroform, the ends of the flap were cut free, and the perineal tube was removed. A week later there remained one minute fistulous spot at the upper margin of the flap; it was freshened up and sutured by Mr. Owen. On the 27th similar treatment was adopted. On Sept. 1st the fistula was entirely healed; most of the urine passed by the natural way, but there was a considerable stricture, a No. 6 English bougie being passed with difficulty. On the 25th the patient was discharged. The perineal opening had now quite healed. A No. 7 catheter was passed. He has been going on quite happily, but on Nov. 18th he was readmitted for examination of the urethral canal. The passage admitted a No. 6 catheter, which was passed every alternate day and kept in for about a couple of hours.

Remarks by Mr. OWEN.—From time to time aid is sought on behalf of a boy who has slipped his penis through a metal ring or who has tightly surrounded its root with a string or a horsehair, which is playing the part of the coat of Nessus. The venous and the lymphatic return being thus delayed, the penis and prepuce swell to a great size, and the removal of the metal band by the way in which it was put on is impossible. In some cases, as in that above reported, the ring can be cut with pliers and so removed. On one occasion a boy was brought to me whose swollen penis was encircled by a thick brass ferrule. This could not have been cut or filed off without risk of injury to the parts. Its removal was, however, easily effected by winding a thread around and pricking the swollen tissue to empty it of the œdema. The application of the thread was done as evenly as if one were "whipping" a splice in a fishing rod. When a piece of string or a horsehair has been tied round the penis it quickly embeds itself in the ulceration which its pressure causes, and so it disappears from view, and at the same time the œdematous skin on the distal side bulges over and hides the wound. In every case, therefore, of œdema of the penis in a boy, most careful search should be made, not only for a circumferential linear ulcer, but also for some inconspicuous mechanical obstruction to the return circulation. In the subject of these clinical remarks the brass ring was entirely removed from view; the mother knew nothing of it. The ring must have slowly been embedding itself, but as to when it gave rise to obstruction of micturition, or when to ulceration or sloughing of the urethra, there was nothing to show. Suffice it to say that when I first saw the boy the spongy part of the urethra had lost its floor to a very serious extent. Evidently it was of no use doing anything with him then, that part of the penis being girt with a deep ulcer and the tissues beyond it being swollen with an almost solid œdema. We contented ourselves, therefore, with keeping the penis bandaged and raised, all the urine escaping by the wound. When the swelling had a good deal subsided we established the perineal drain; and soon afterwards we denuded the under aspect of the penis and carried out the plastic operation. The urethra is now perfectly water-tight, but I am afraid that the unfortunate boy will have trouble at the seat of inevitable traumatic narrowing; such trouble, however, will not be due to the bridge of new skin, for it remains soft and full, but to the inevitable contraction of the new material which was developed from the granulation tissue at the seat of injury.

BURTON-ON-TRENT INFIRMARY.

A CASE OF ABDOMINAL SECTION FOR SARCOMA OF OVARY,
AND ONE FOR RUPTURE OF EXTRA-UTERINE
PREGNATION; REMARKS.

(Under the care of Mr. PHILIP MASON.)

SARCOMA of the ovary is a comparatively rare disease, is apt to show itself in early life rather than at a later age, and usually runs its course quickly, whether an operation be

performed or not. In these circumstances it has been questioned whether it is worth while to perform abdominal section and remove the diseased part. Freund¹ advises on this subject that, as we are unable to diagnose with certainty the presence of malignant disease before operation even in cases of extensive metastasis, an incision, with clearing of the peritoneum, is justified, and might produce a better general state of health; he considers that secondary tumours in the ante- or intra-uterine space should not contra-indicate operation. Schröder² found sarcomata in 10 out of 600 ovarian growths; and Olshausen noticed them 21 times in 293 cases. Amongst the cases of solid ovarian tumour collected by Leopold³ there were 12 of sarcoma, in 7 of which the tumour was on both sides; all those reported by Olshausen were similarly placed. It has been suggested by Anger⁴ that extra-uterine pregnancy should be regarded and treated as a malignant growth. There is no doubt that the life of the patient is in constant danger, the greatest danger being that of hæmorrhage, and the woman is fortunate who is so placed as to permit of abdominal section, as in the following case, otherwise a fatal ending must be expected. Schauta⁵ analyses 626 cases of ectopic gestation, the collective mortality of which exceeded 41 per cent. In a spontaneous course it reached a mortality of 68.8 per cent. The most common form is that of tubal pregnancy. For the notes of these cases we are indebted to the house surgeon, Mr. Charles Thompson.

CASE 1. Sarcoma of ovary.—A single woman aged twenty-one years was admitted into the Burton-on-Trent Infirmary on Oct. 2nd, 1893, complaining of pain and tenderness in the abdomen, with some swelling, obstinate sickness and diarrhoea, and a profuse irregular menstrual discharge of some weeks' standing. On examination the abdomen was found to be somewhat prominent, especially to the right of the median line, about an inch and a half below the umbilicus, where a distinct tumour could be felt, pyriform in shape, and about the size of a foetal head at full term. The tumour, which appeared to be fixed centrally, inclined somewhat to the right side and had two or three bosses on its surface, each about the size of a horse chestnut, the one on the right being more prominent, tender, and more inclined to point. A catheter could not be passed. On vaginal examination a hard mass was felt in Douglas's pouch, the uterus was not movable, and was displaced forwards; a sound passed two inches and a half. After being under observation with little change for about a month the patient became rapidly worse, the temperature rising in the evening to 104° F. and rarely falling below 101° during the day; there was considerable peritonitis, the tumour commenced to soften, and fluctuation was distinct over the spot which had been the most prominent and most tender. On Nov. 7th she was placed under an anæsthetic and a median incision made about four inches long. On opening the peritoneal cavity a large tumour was seen which appeared to spring from the right broad ligament, to which it was united by a pedicle and did not involve the uterus. In consistence it was partly hard and partly composed of cysts, one of which contained pus and appeared to be on the point of breaking, and ruptured during manipulation. The whole mass was removed with the right ovary and broad ligament, the cavity washed out, a drainage-tube inserted, and the wound stitched up. On the evening following the operation the temperature was 105.2°, the patient was very restless, and she complained of abdominal pain on deep inspiration. The temperature on the following morning fell to 99°. The greater part of the wound healed by first intention, but a small deep sinus remained when the tube was removed, and did not heal for about a month. During this time the patient gained weight rapidly and appeared to be doing well until Dec. 1st, when sickness and diarrhoea returned, with mucus in the stools. The temperature rose to 103°, and she sank into a typhoid condition. In four or five days she rallied, and on the 5th the temperature again fell to subnormal and remained so until the 13th, when she was allowed to sit up. After a day or two there was some return of pain, but no tumour could be felt. Thrombosis of deep veins appeared in the left leg on the 15th, and she complained of a deal of pain in the left knee, which subsided in about a fortnight. There was no further rise of temperature after the

¹ Annals of Surgery, St. Louis, vol. i., 1890.

² Sajous' Annual of the Universal Medical Sciences, vol. ii., G 6, 1890.

³ Ibid.

⁴ Ibid., 1892, vol. ii., G 54.

⁵ Ibid., and Centralblatt für die Medicinischen Wissenschaften, Berlin, 1890.

23rd, and the patient was discharged on Jan. 4th, 1894, apparently well. About a week after her discharge she was attended outside the infirmary, and complained of pain and tenderness in the left iliac region; a small growth was there felt, which grew with such rapidity that it almost filled the abdominal cavity within a month. Distinct lobulated masses could be felt, and the peritoneal pain was intense. She died from exhaustion on Feb. 10th.

CASE 2. Extra-uterine foetation.—A woman aged twenty-eight years was admitted into the Burton-on-Trent Infirmary on June 13th, 1894, in a state of collapse. There was a history of three months' irregular menstruation with pain and swelling in the left ovarian region; the patient had become suddenly collapsed a few hours before admission. On opening the abdomen the left Fallopian tube was found to be distended by a tumour which had ruptured into the peritoneal cavity and was bleeding freely; there was a large amount of blood in the abdomen. The left ovary and tube were removed, the peritoneal cavity washed out, and the incision in the abdominal wall closed. The patient made a good recovery.

Remarks by Mr. MASON.—The tumour removed in Case 1 was sarcomatous in structure, and contained not only several fair-sized cysts, but also an unmistakable abscess with rugged walls. This was evidently on the point of bursting when the operation was performed. This is the second occasion on which I have found a similar condition to exist, my other patient being an elderly woman with a large tumour which, on removal, was found to be solid except for two large abscesses at some distance apart. In this case the tumour was universally adherent and had no pedicle, the abdominal-wall wound healed by first intention, but the patient became suddenly ill at the end of a fortnight and died from the effects of fecal extravasation, probably due to the injury of the bowel during the separation of the adhesions.

ROYAL VICTORIA HOSPITAL, NETLEY.

BONY ANKYLOSIS OF HIP-JOINT; MALPOSITION; OSTEOTOMY; RECOVERY WITH USEFUL LIMB; REMARKS.

(Under the care of Surgeon-Major H. R. WHITEHEAD, Assistant Professor, Military Surgery.)

THE operation described as the subcutaneous section of the femur below the trochanters was first performed by Mr. Gant in December, 1872, and we published an account of the operation in THE LANCET of the 21st of that month. There is little doubt that it is the operation which is best adapted for the correction of bony ankylosis of the femur in a bad position after disease of the hip-joint of a tuberculous nature. The principles of the operation described below were the same as guide the surgeon in Gant's operation; but there are one or two details which differ. For instance, Gant writes that the knife was "passed down to and over the femur, so as to make a transverse line across the bone; then the knife is withdrawn and, still keeping the thumb in position not to lose the track of the narrow subcutaneous incision, a thin, narrow-bladed saw is entered at the same point and passed along the track of the wound across the femur, which is then readily sawn through." Macewen's osteotome is such a useful implement that many surgeons now prefer it to the saw.

A trumpeter in the Royal Artillery, eighteen years of age, was invalided home from Egypt, and was admitted to the Royal Victoria Hospital, Netley, in November, 1893, suffering from hip-joint disease of nine months' duration. He enlisted at the age of fourteen years, and had enjoyed good health till March, 1893, when he began to feel acute pain in the right hip-joint, which was much increased by any movement or by pressure on the sole of the foot, and he was unable to walk. There was no history of a fall or any injury to account for the origin of the disease. He was admitted into hospital at Cairo. An abscess formed and pointed anteriorly; this was opened, and discharged for some months, ultimately healing in February, 1894. For some months he suffered from a hectic temperature. Extension was applied to the leg in June, 1893, which diminished the "starting pain" in the joint. On his admission to the Royal Victoria Hospital, Netley, in November, 1893, the patient was in a very feeble and emaciated condition. He had bedsores on his back, and a sinus existed in the right groin, discharging a purulent fluid; the track,

however, did not lead down to dead bone. The right thigh was flexed on the abdomen, the knee was semiflexed, the foot was everted, and the leg and thigh rotated outwards. Lordosis was present even when no attempt was made to straighten the limb, and this condition was greatly exaggerated on any attempt being made to do so. As soon as the bedsores had healed sufficiently extension was applied, but failed to bring the limb into a better position. There was hardly any pain about the hip, and the discharge lessened daily, till in February the sinus had completely healed. No movement could be obtained in the hip-joint. In April, as all pain had ceased and the sinus had completely healed, the efforts to improve the position of the leg by extension having also failed, it was decided to place the patient under the influence of an anæsthetic, to decide definitely the nature of the ankylosis, and if possible to straighten the limb. After complete anæsthesia had been produced it was found that absolutely no movement could be procured in the hip-joint. The knee, which was semiflexed, was, however, straightened. The next day the hip-joint was entirely free from pain, and no doubt now existed that the ankylosis was of a true bony nature. It was, therefore, decided to divide the femur in its upper part, with the view of giving the patient a straight and useful limb. On May 1st, after the limb had been carefully prepared by washing and the skin rendered aseptic, the patient was placed under the influence of chloroform. He was then placed on his left side and the right thigh laid on and supported by a large sand pillow. An incision was made in the line of the shaft of the femur, commencing three inches below the tip of the great trochanter, about an inch and a half long, and carried down to the bone. The periosteum was divided and the soft parts were held aside by retractors. A Macewen's osteotome was introduced and the shaft of the femur was divided just below the small trochanter, as suggested by Gant. On attempting to straighten the limb some bands of fascia on the anterior aspect of the limb, attached to the anterior superior iliac spine, were found to be tense, and were divided subcutaneously by a tenotome; the limb could then be brought into a straight and good position. The operation wound was closed by two silver sutures and a continuous horsehair suture, and the part was dressed with an aseptic gauze dressing. An interrupted long splint was applied to the side, and extension by a 7-lb. weight was also employed. The patient made a complete recovery after the operation. His temperature did not rise above 99° 2' F.; it reached this on the evening of the day of operation and afterwards remained uninterruptedly normal. The wound was dressed on the sixth and twentieth days, and healed at once. Seven weeks after the operation the long splint and extension were removed; the leg and thigh were in excellent position, and complete consolidation of the shaft of the femur had taken place. On measurement the right leg was found to be a shade under half an inch shorter than the left. Excellent movement existed in the right knee-joint. A Thomas's hip-splint was applied for a few days and the patient allowed to get about. He gained strength rapidly, and at the end of nine weeks was able to walk with comfort with the aid of a stick and a slightly raised sole. The pelvis allowed of much motion. He was discharged from hospital on July 9th, ten weeks after the operation, and although unfit for military service he had a very useful leg and was quite capable of earning his living in civil life.

Remarks by Surgeon-Major WHITEHEAD.—In this case the choice of operation seemed the only difficulty. Adams' operation for division of the neck of the bone did not seem applicable in this case, as suppuration had evidently taken place in the joint, and probably absorption of the neck of the bone had taken place to some extent. Barton's method of dividing the bone by a chain saw was thought of, but in experiments on the bones of animals the saw invariably jammed and became useless. Macewen's osteotome seems in every respect a very suitable and satisfactory instrument. Some little trouble was caused in getting the metal to the right temper to avoid chipping of the edge, and as a matter of fact a piece of the edge did chip off at the operation; it was left in the bone, but it produced no discomfort.

ROYAL INSTITUTION.—The Friday evening meetings of the members commenced on Jan 18th, when a lecture was delivered by Professor Dewar on Phosphorescence and Photographic Action at the Temperature of Boiling Liquid Air.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Cycling and Heart Disease.

AN ordinary meeting of this society was held on Jan. 14th, the President, Sir WILLIAM DALBY, being in the chair.

Sir BENJAMIN WARD RICHARDSON read a paper on *Cycling and Heart Disease*. He commenced by saying that a few months ago Dr. Petit of Paris had read a paper before the French Academy of Medicine bearing on disease and cycling,¹ in which several sudden deaths from heart disease during cycling were referred to, and the possible dangers attending cycling exercise were commented upon. Sir B. W. Richardson, who had been a practical cyclist since 1877 (over sixteen years), and who had ridden with numberless riders of different ages and sexes and under the most varied conditions, ventured, therefore, to detail from his experience certain of the effects he had observed. He divided his paper into the following heads: (1) the immediate effect of the exercise on the rider; (2) the after-effects, as observed in the consulting-room, and the conditions in regard to the heart and circulation under which riding was favourable or unfavourable; and (3) a summary of the more salient medical considerations. With regard to cycling and its effects upon the body at large, Sir B. W. Richardson said that the exercise told primarily and most distinctively on the heart, in which it differed from other exercises. In all riders at all ages it produced at once a quickened circulation, though riders themselves might not be conscious of the phenomenon. The effort might be so extreme as to cause the pulse to rise from 65 or 75 to 200 beats per minute, and although after a longer time it sovered down it was always a quickened action which continued so long as the rider was at work. This act of quickened movement accounted, the speaker observed, for the astounding journeys a fully trained cyclist could undertake, journeys lasting two or three days and nights when the cyclist was in his prime. The same probably accounted for his endurance as against sleep, the circulation through the brain being one continued series of waves by which the molecular change of the brain occurring during natural sleep was suspended. The sounds of the heart and the readings of the pulse were then described, and the conditions under which the heart increased in action, and sometimes underwent enlargement. He had, however, never once seen a rider embarrassed by cardiac overstrain, faintness, breathlessness, angina, or vertigo so as to be obliged to dismount. Indeed, he had known a practical rider who could climb a hill on his machine, but could not mount a flight of stairs on his feet without breathlessness and slight palpitation; also he had never seen a sudden death from cycling. Under thesecond head Sir B. W. Richardson remarked that he had met with instances in which after some years of cycling there was evidence of cardiac disease, with general languor and inability to sustain fatigue if exercise were again tried on the machine. On the other hand, he had known examples in which even an octogenarian had kept up the exercise in a moderate degree, apparently with benefit to the circulation, and who in one journey had ridden from London to Bedford. In certain instances he had seen what appeared to be benefit arising from cycling, even when there was an indication of some disease affecting the circulation. He had known good arise from it in cases of varicose veins, in examples of fatty degenerations, and unquestionably in conditions of anæmia. After discussing opposite conditions, in which excessive cycling had become a definite cause of injury to the circulation, he passed to his third head in the following summary. "First, cycling, when carried on with moderation, may, in so far as the healthy heart is concerned, be permitted or even recommended by practitioners of the healing art. Secondly, in all cases of heart disease it is not necessary to exclude cycling. It may even be useful in certain instances where the action of the heart is feeble and where signs of fatty degeneration are found, since increased muscular exercise often improves the condition of muscle, and of no muscle

more than the heart itself. Thirdly, as the action of cycling tells directly upon the motion of the heart the effect it produces on that organ is phenomenally and unexpectedly great in regard to the work it gets out of it. Fourthly, the ultimate action of severe cycling is to increase the size of the heart, to render it irritable and hyper-sensitive to motion, the cycling acting upon it like a stimulant. Fifthly, the over-development of the heart under the continued over-action and extreme over-action affects in turn the arterial resilience, modifies the natural blood pressure, and favours degenerative structural change in the organs of the body generally. Sixthly, a fact that has only been incidentally noticed in this paper is worthy of notice—namely, that in persons of timid and nervous natures ('neurotics') the fear incidental to cycling, especially in crowded thoroughfares, is often creative of disturbance and palpitation of the heart, and ought to be taken account of as a piece of preventive advice. Seventhly, in advising patients on the subject of cycling it is often more important to consider the peripheral condition of the circulation than the central. Enfeebled or worn-out arteries may be more dangerous than the feeble heart, and, when connected with a heart that is over-active, are seats of danger. This same remark would, of course, apply to cases where there is local arterial injury, as in aneurysm. Eighthly, venous enlargement seems rather to be benefited than injured by cycling, and conditions marked by sluggish circulation through veins are often greatly relieved by the exercise. Ninthly, there are three things which are most injurious in cycling—(a) straining to climb hills and to meet head winds; (b) excessive fatigue; and (c) the process of exciting the heart and wearing it out sooner by alcoholic stimulants, and the omission of light, frequently repeated, and judiciously selected foods. Lastly, the time has arrived when practitioners of medicine everywhere should make observations for themselves that confirm or confute these observations and add to them so much more that I of necessity have omitted."

The PRESIDENT, in thanking Sir B. W. Richardson for his paper, referred to the influence which remarks from him exerted on the public mind, and rejoiced that from him should come words of reassurance and caution in the use of the cycle. It was apparent that cycling exerted nothing like the strain upon the heart which was entailed by other forms of athletic exercise, such as rowing or sparring.

Dr. SANSON congratulated Sir B. W. Richardson on having made a substantial addition to our knowledge on a subject of growing importance. A practitioner, he thought, should be something of a cyclist to be able to appreciate and advise upon the disturbances incidental to riding. He deprecated the absurd resolutions of the French Academy of Medicine with regard to the dangers of cycling, and regarded the recommendation to adopt searching anthropomorphic measurements in those intending to ride as bordering upon the ridiculous. Referring to his oration on Rapid Heart, delivered before the society, he could only recall one instance in a cyclist, and he had met with no instance of irregular heart among riders. He thought the worst form of exertion was the running to catch a train, which produced both irregularity and rapidity of heart beat. The influence of cycling was decidedly more in the direction of good than in that of evil. As a therapeutic agent in the treatment of actually existing heart disease it was quite in accord with the recommendations of Professor Hirtl of Munich, who prescribed physical exercise, but he thought cycling had many advantages over climbing, which Professor Hirtl extolled. He looked upon the cycle as an important hygienic and therapeutic agent, and thought it was responsible indirectly for the immense moral improvement noticeable in the track and the era of the cycle.

Dr. MACFAGH said it was a very important point in cycling to avoid pushing against one's inclination up steep gradients. He felt the exertion much less than that of other forms of athletic exercise, and found that under it he maintained a perfectly even body weight. The chief strain, he thought, fell upon the nervous system, and was liable at first to induce sleeplessness; this, however, soon wore off.

Dr. ROUTH inquired as to Sir B. W. Richardson's experience of ladies cycling.

Dr. WASHINGTON ISAAC referred to Mr. Bridgman of Berkley developing heart disease while he was a cyclist and to his making the discovery himself with a binaural stethoscope.

Dr. FLETCHER LITTLE said that the tremulousness so often complained of formerly had diminished greatly since the improvement in saddles and tyres. He thought there was

¹ THE LANCET, Sept. 15th, 1894.

no better treatment for mitral disease and dilated heart than the cycle, which was quite in accord with the system adopted by Schott of Neuenheim. The danger and anxiety of riding through crowded thoroughfares should be avoided, especially by nervous persons and those suffering from heart disease, who should also eschew hills. The exercise and facility for inhaling fresh air were of immense importance to both men and women, especially those following sedentary occupations.

Dr. BLACK mentioned a patient with gout who had been recommended the cycle, and asked if it could be looked upon as a remedy for gouty heart.

Mr. SOLOMON SMITH thought the tendency of geared wheels was to bring back the exertion of cycling to that of climbing. He considered the best feature in this form of exercise was the predominance of motion over exertion, especially in the treatment of cardiac disease, and should recommend the avoidance of geared wheels.

Sir B. W. RICHARDSON, in reply, said Mr. Bridgman was not oppressed with any fear of riding after he found he had cardiac disease, but continued his exercise. He was not prepared yet to say how actual disease of the circulation might best be cured by the use of the cycle. He recognised the occurrence of sleeplessness and sometimes twitching as of the effect of vibration after riding, but he could not agree that the principal effect was on the nervous system. The rise of the pulse from 75 to 200 beats indicated that the circulation was first affected. He did not pretend to prescribe the fall and exact measure of utility of the cycle in therapeutics, he came rather as one who had collected a few flowers by the way and offered them for consideration and arrangement by his audience.

PATHOLOGICAL SOCIETY OF LONDON.

Enlarged Spleen.—Five Brains from Insane Patients.—Serous Pachymeningitis in a Syphilitic Child.—Cancer of Mamma.

An ordinary meeting of this society was held on Jan. 15th, Dr. PAVY, the President, being in the chair.

Dr. COLLIER exhibited the Spleen of a female child aged six. Enlargement was first noticed at the age of two, and gradually and steadily increased up to the time of death. The mesenteric glands were also enlarged. No change in the blood was observed. On removal the spleen weighed 4lb. 2oz., the total body weight being 23lb., so that it represented more than one-sixth of the total body weight. A sister aged four had died four years previously with enlarged spleen. On microscopic examination the splenic reticulum was seen to be replaced by very large endothelioid cells, in places packed closely together, and filling the whole splenic sinuses. In these places the blood-supply was almost nil, and the large cells showed a tendency to degenerate. In these places, also, there was a slight increase in the thickness of the trabeculae. The Malpighian corpuscles could not be distinguished. Small arterioles were seen closely surrounded by the large cells. In some of the retro-peritoneal glands examined the adenoid tissue was seen to be largely replaced, especially at the periphery, by large cells similar to those in the spleen. Some small grey points like tubercles occurred on the small omentum, and were found to be young lymphoid glands.—Mr. WALTER SPENCER suggested the possibility of tubercle or syphilis having some influence in the production of the enlargement, and proposed that the specimen be submitted to the Morbid Growths Committee.—Dr. ROLLESTON, who seconded this proposition, added that either lymphadenoma or leukaemia might account for it.—Dr. WALTER CARR said the case much resembled those occurring in infancy associated with simple anaemia and rickets. Haemorrhage only occurred in extreme conditions of the sort. He thought either syphilis or rickets was probably the cause.—Dr. HERRINGHAM thought it was difficult to make a genuine disease of splenic anaemia. The term did not explain much.—Dr. COLLIER, in reply, said the signs of rickets were very slight, and no mention was made of them in the post-mortem report, there was no evidence of syphilis, and the anaemia was not intense.

Mr. C. F. BEADLES exhibited Five Brains from patients who had died insane. The first showed the right lobe of the

cerebellum ploughed up by an extensive haemorrhage which had made an opening into the subdural space. The vessels were atheromatous and the brain softer than natural. The patient was a man sixty-five years of age who had been insane four years, suffering from delusions and great depression. The second exhibited a large collection of fluid occupying the site of the right lobe of the cerebellum, which was much shrunken. The basal arteries were diseased and the right internal carotid occluded by a calcareous mass at its entrance to the cranium. There was also atrophy of some of the cerebral convolutions, with dilatation of the ventricles. The patient was a woman aged fifty-six who had suffered four months from wild excitement and delusions of persecution, with epileptiform convulsions and left hemiplegia. The third, from a female aged eighty-two, showed enormous dilatation of the ventricles, with disappearance of the central grey ganglia. It was removed from a patient who had been imbecile and dumb from birth, and more actively insane for thirty-four years. The fourth showed great deficiency of brain substance in the left cerebral hemisphere, the central part being occupied by a large collection of fluid. There were also dilatation of the ventricles and signs of old haemorrhage; it was from a female aged seventy-seven, with insanity of thirty-one years' duration, maniacal and violent. The fifth exhibited great atrophy of the left cerebral hemisphere and of the right side of the cerebellum, and was from an insane patient aged sixty-six who had been demented and epileptic fourteen years.

Dr. WALTER CARR showed a specimen of Serous Pachymeningitis with Atrophy of some of the Cerebral Convolutions. The patient was a child aged nineteen months who had suffered from a severe form of congenital syphilis, for which she first came under treatment at the Children's Hospital, Chelsea, when seven weeks old. She was the first living child after four miscarriages, suffered almost constantly from nasal discharge, and only a few weeks before death had slight epiphysitis at the lower end of each femur. The birth was easy and natural, and no history of any head injury could be obtained. General convulsive attacks were frequent from two weeks old, but there was no permanent rigidity. The mother stated that at the time of death the child was like an infant of three months, never sitting up alone, and taking very little notice. Death occurred rather suddenly from a low form of pneumonia. At the necropsy the head was not enlarged and the fontanelle was nearly closed. The dura mater was lined on its inner side by a thin membrane, thickest over the vertex, and having a peculiar gelatinous appearance and consistence on its inner aspect. There was a good deal of thick gelatinous material over the convolutions and at the base of the brain, with slight excess of rather sticky fluid. Microscopically there was no evidence of recent haemorrhage. The brain only weighed eighteen ounces, and presented large, not quite symmetrical, areas of marked pallor, depression, and hardening round each posterior limb of the fissure of Sylvius. The thoracic and abdominal organs except the lungs were healthy. The case seemed to correspond to the very rare condition described by Dr. Gowers as serous pachymeningitis. Reference was made to a somewhat similar case described by Dr. Wheaton, in which, however, there were sixteen ounces of fluid under the dura mater and the hemispheres were uniformly shrunken; also to a general sclerosis of the external surface of the brain in a syphilitic child aged twenty months, recorded by Ashby and Wright. It was concluded that the meningitis was probably syphilitic, and had led to the cerebral atrophy and sclerosis. The case also illustrated one way in which congenital syphilis may cause idiocy.

Dr. HERBERT SNOW exhibited slides of two cases of Mammary Cancer, which at one end presented the phenomena of so-called "Columnar Epithelioma" or "Duct Cancer," and at the other the Acini typical of Scirrhus Carcinoma. He contended that both the above terms embodied an erroneous principle, and that no classification of epithelial morbid growths could be based on morphological attributes *per se*. The shape of an epithelial cell was an extremely variable and inconstant quality—that of the bladder, for example, changing with its relative distension. How readily columnar cells passed on slight modifications of the environment into squamous, or *vice versa*, had been amply proved by Bland Sutton, Shattock, Haycraft and Carlier, Roedel, &c. The columnar shape was a common attribute of cells coating vegetations within cysts or cyst-like cavities with fluid contents, such as the bladder, ovary, and thyroid gland. The rarity of the so-called "columnar epithelioma" in the larynx showed that

columnar cells when malignant developed a lesion indistinguishable from that of squamous. "Duct cancers" of the mamma were intra-cystic carcinomatous vegetations; the cysts were much more often dilated acini than dilated ducts; the cells from which they sprung were those of the gland parenchyma, therefore identical with the parent cells of scirrhus; and any clinical differences, such as tardiness in infecting the glands, were due to the cyst wall, which constituted a rigid envelope or "capsule."—Mr. JACKSON CLARKE said that there was good clinical ground for separating such cases from cancer; it was well to retain the distinguishing term "duct cancer."—Mr. C. F. BEADLES mentioned one case in which the condition of duct cancer was combined with well-marked scirrhus of the gland.—Dr. KANTHACK said that cancer beginning in epithelial structures retained the character of the epithelium. With regard to the apparent exception of squamous cancer commencing in the larynx he stated that the lining membrane was mostly transformed into squamous epithelium soon after or during childhood, affording a good example of metaplasia. Columnar carcinoma occurring in the larynx usually arose from the lining membrane of the ventricle, which retained its columnar character throughout life. In the rectum the epithelium of surface and ducts was alike columnar, as it was in the ducts of the breast, all carcinomata in these regions being columnar unless penetrating from the skin surface. He thought the specimens exhibited were not conclusive.—Mr. BOWLEY said there might be a superficial resemblance between the two, but no real identity. He would limit the term "duct cancer" to a columnar growth having a villous arrangement, and the specimens exhibited did not correspond to this. The clinical course and naked-eye appearances were very different in the two growths. He had collected thirteen cases of "duct cancer" of the breast, the first fifteen years ago, and they were all living at the present time.—Mr. SHATTOCK adhered to the principle that squamous epithelium gave rise only to squamous-celled carcinoma, never columnar. He thought Mr. Bowley was too exclusive in his limitation of "duct cancer." It rested with Dr. SNOW to prove his contention. Referring to Mr. Beadles' case of associated "duct cancer" and scirrhus, he alluded to the evidence of metaplasia in extruded polypus of the uterus, where the columnar epithelium assumed the squamous type, and he drew attention to the fact that during development there were no fixed varieties of epithelium, pointing out that the transitional phase might continue later.—Mr. BOWLEY explained that he recognised two forms of cancer in ducts, one the villous kind, of which he had been speaking, the other a columnar form, which might be identical with scirrhus.—Dr. SNOW, in reply, said some words in pathological language were used in quite different senses, and he thought it would be a very useful step to institute a representative committee to revise the nomenclature of morbid growths. He drew attention to the variation in shape of the bladder epithelium in different states of distension of that organ.

At the conclusion of the meeting the PRESIDENT announced that on Feb. 5th Dr. Washbourn would open a discussion on Pneumococci, especially in connexion with Immunity.

CLINICAL SOCIETY OF LONDON.

Abdominal Section for Unusual Conditions.—Acute Intestinal Obstruction from Gall-stone.—Loculated Empyema.—The Antitoxin Committee.

AN ordinary meeting of this society was held on Jan. 11th, the President, Mr. J. W. HULKE, F.R.S., being in the chair.

Mr. A. W. MAYO ROBSON read accounts of Three Cases of Abdominal Section for Unusual Conditions: (1) Tuberculous Disease of the Liver; (2) Complete Volvulus and Strangulation of the Great Omentum; and (3) Traumatic Hæmorrhage without External Wound. He pointed out that his cases resembled one another only in the treatment and its results, but he hoped the cases might prove of interest individually. The first case related was one of tuberculous abscess of the liver which was treated by incision, rubbing in of

iodoform, and drainage. The patient, whose illness had extended over twelve months and who was reduced to an extreme degree of weakness, had completely recovered his health. Attention was drawn to the literature of the subject, and the case as well as the treatment adopted were shown to be extremely uncommon. The second case was one of volvulus and strangulation of the omentum following the reduction of a large inguinal hernia. Peritonitis led to the suspicion of reduction *en masse*. Abdominal section revealed the whole of the omentum in a state of deep congestion verging on gangrene, connected by two twisted cords with the stomach above and the left inguinal canal below. Recovery followed removal. So far as Mr. Robson knew the case was unique. The third case was one of traumatic intra-peritoneal hæmorrhage without external wound, in which the patient was in so serious a condition that exploration to reveal the actual site of the hæmorrhage would probably have led to death on the table, but where incision, washing out with hot saline solution, and drainage had been efficient in arresting the bleeding and bringing about recovery.—The PRESIDENT said that in his experience in the post-mortem room he had never met with a large solitary caseating tuberculous mass in the liver unaccompanied by tuberculous manifestations elsewhere, and he thought it impossible to positively exclude it in the present instance. He had also never seen or read of such rotation of the omentum as was present in the second case. There was scarcely any abdominal viscus except the liver in connexion with which the circumstance of rotation had not been observed. He cited the spleen, kidney, and uterus as instances. Mr. Sutton, at the Middlesex Hospital, last year removed a spleen which had such a long stalk that it reached the left inguinal region. The stalk was twisted on itself several times. In an instance recorded in Billroth's publication the uterus had been lifted out of the pelvis by a large fibroid, and had contracted adhesions to the ascending colon, its cervical part being lengthened and formed like a strand twisted several times, around which the Fallopian tubes were twined.—Mr. EVE asked on what evidence Mr. Robson described his first case as one of tuberculous abscess of the liver. In reference to the possibility of its being actinomycosis he observed that the absence of clubs did not prove the disease not to be actinomycosis.—Mr. MAYO ROBSON explained that tubercle bacilli were found in the abscess contents, and microscopical examination showed the absence of any appearances resembling the ray fungus.—Mr. MAKINS said he did not see how Mr. Robson excluded the possibility of tuberculosis of the peritoneum in the first case. With regard to the third it struck him that when the abdomen was opened and a ruptured viscus found the operation was often too long. When a rupture of the liver was found very little could be done for it.—Mr. CROFT mentioned that on one occasion he had removed a spleen in order to arrest hæmorrhage from that organ, the abdomen at the time being full of blood. The patient was in a very marked condition of collapse and was apparently on the point of dying. As it was, she lived for some hours. He thought it was a mistake to delay ascertaining the exact source of the hæmorrhage. If it proceeded from such an organ as the spleen the chances were small of the hæmorrhage spontaneously ceasing. In all such cases an exploratory operation should be performed at the earliest possible moment.—Mr. W. H. BATTLE said there did not appear to have been any signs of rupture of a viscus, and it was quite impossible to say where the hæmorrhage came from. Such cases were always very obscure. Only last autumn he had under his care at St. Thomas's Hospital a boy who fell on his face while playing at leap-frog, and was brought in with symptoms of intra-peritoneal hæmorrhage, manifested by intense shock. There was a dull area on the left side, extending as far as the left linea semilunaris. He had been and was then vomiting, but there was no rigidity of the abdominal muscles. The dullness in the abdomen gradually extended until it reached the right linea semilunaris. The boy ultimately recovered. He had no idea where the blood came from, but he thought it might be from a torn mesentery. He raised the question as to what symptoms are to be held to justify the performance of laparotomy forthwith: would tympanites, for example, be such a sign?—Mr. BENHAM asked whether any examination was made of the chest in Mr. Robson's first case. According to Louis's law the presence of tubercle anywhere in the body was always associated with tubercle in the lung.—Mr. MAYO ROBSON, in reply, said he did not think there could be any doubt as to the tuberculous nature of the disease in the first

case. The patient was ultimately discharged as cured, and there was no trace of disease anywhere. With regard to the second case, he thought it was very difficult to account for the rotation. If in his third case he had tried to find the source of the bleeding he felt sure he would have lost his patient; even flushing the abdomen was sometimes followed by shock.

Mr. FREDERICK EVE described a case of Acute Intestinal Obstruction from Gall-stone, with Laparotomy, Removal of Stone, and Recovery. A man forty-two years of age was admitted to the London Hospital on March 19th, 1894. Four days previously he had been attacked with pain in the abdomen, vomiting, and absolute constipation. The vomiting was continuous. Nothing was ascertained by palpation. He denied having had previous abdominal trouble. Belladonna was prescribed and a large enema given, after which he passed a small fluid motion and felt easier. The next morning he was worse and the abdomen more distended. On March 20th laparotomy was performed. When the abdominal muscles were relaxed under ether a hard body feeling like a rifle bullet could be felt in the right iliac fossa; this was evidently an impacted gall-stone. It was exposed and was found to occupy the ileum two or three inches from the ileo-cæcal valve. The small intestine above the obstruction was considerably distended. The large intestine was completely empty. The ileo-cæcal orifice was brought into view and an attempt made to push the calculus through it, but unsuccessfully. The calculus was then worked up the ileum into a free loop which could readily be brought outside the abdomen, and after applying elastic ligatures above and below it was extracted through a longitudinal incision. This was closed with Lembert sutures of fine silk, a graft of omentum was attached, and the intestine replaced in the abdomen. Rectal alimentation was maintained for four days. The further progress of the case was uneventful, and the patient left the hospital after being in it about four weeks. After the operation it was elicited that eighteen years previously the patient had been subject to severe attacks of pain in the epigastrium, sometimes accompanied with vomiting. For seven or eight years he was never entirely free from pain, but about once a week had a severe attack. Ultimately the pain and attacks of vomiting ceased quite suddenly. He had never passed a gall-stone. This trouble might be referred to the presence of a biliary calculus in the gall-bladder and the sudden cessation to its passage into the duodenum; so that it might be inferred that the calculus had occupied the intestine for some ten years—a circumstance not without precedent. The calculus was cylindrical in shape and its circumference was three inches and a quarter. Mr. EVE remarked that at first the result of laparotomy for this apparently simple form of obstruction was by no means encouraging. Writing in 1889, Dufourt collected nine cases, all of which proved fatal except one in which the stone was slipped into the large intestine. Mr. EVE had collected eighteen cases occurring subsequently to this period, of which (after incision and suture of the intestine) nine recovered. This advance might be attributed to improved surgical technique, for operative interference was not longer delayed in the earlier than the later group of cases. In conclusion, the following suggestions were made with regard to treatment:—1. When a diagnosis was possible expectant treatment should be tried, as one-third of the cases of marked obstruction from gall-stone recovered without operation. 2. But operative interference should not be long delayed, as the patients were nearly all aged, the mean age being sixty-four years. 3. After opening the abdomen the calculus should, if possible, be forced through the ileo-cæcal valve. 4. If the calculus be immovable or at a distance from the valve, and the intestine healthy, the stone should be excised. 5. When the intestine was inflamed, and the stone immovable and adherent to it, an attempt might be made to break the calculus up with needles. This failing, it should be extracted, the intestine fixed to the abdominal wall near the wound, and surrounded with iodoform gauze. 6. In only one case out of twenty-seven was it found necessary to resect the intestine on account of ulceration.—The PRESIDENT observed that all would probably agree with the conclusions formulated by Mr. EVE.—Mr. MAYO ROBSON fully concurred in the utter impossibility of making any diagnosis in cases of obstruction by gall-stone.—Mr. EVE replied.

Mr. J. W. BROWNE recounted a case of Empyema associated with Hydatids of the Liver.

NORTH-WEST LONDON CLINICAL SOCIETY.

Erythematous Ulceration of the Extremities.—*Hereditary Congenital Spastic Paralysis.*—*Nævi cured spontaneously and by Electrolysis.*—*Malformation of Chest.*—*Multiple Osteotomy for Deformity.*—*Exophthalmos.*—*Myelitis.*—*Hæmatoma of the Pinna.*—*Hallux Rigidus.*—*Polypus of the Frontal Sinus.*

A MEETING of this society was held on Jan. 9th, Mr. F. DURHAM being in the chair.

Mr. JACKSON CLARKE exhibited a boy suffering from Ulcers on the Hands and Legs, pain in the knee, and coldness of the extremities. Bazin's and Raynaud's diseases were discussed, and Mr. Clarke distinguished the present as an unusual form of erythema iris.

Dr. GUTHRIE showed two of three children in a family affected with Hereditary Congenital Spastic Paralysis. He also showed the father, who had exaggerated knee-jerks, ankle-clonus, and a spastic gait. The mother and two other children were healthy. This disease in early infancy was thought to be rare.—Dr. CAGNEY believed the disease to be more common in very young children than was supposed.—Dr. GILL spoke of similar cases under his care.

Mr. NATHAN showed the remains of a Congenital Nævus of the Scalp. There was left a patch of atrophic skin nearly bald. The case had been mistaken for ringworm. He also showed a Nævus of the Pinna which had been electrolysed.—Mr. CLARKE thought that the first case was unique and of exceptional interest.—The CHAIRMAN discussed the treatment of nævi.

Dr. HARRY CAMPBELL showed an extreme instance of Barrel Chest in a man with Emphysema, and pointed out the manner in which this deformity affected the circulation.

Mr. JACKSON CLARKE exhibited a girl in whom both the Femur and the Tibia had been submitted to Macewen's Osteotomy Process. The result was good, and as the muscles developed there would be a satisfactory cure.—Mr. BRODIE commented on the case.

Mr. GORDON BRODIE showed a boy with Exophthalmos. The cranial bones were enlarged and the chest misshapen. The upper part of the sternum projected backwards and pressed on the trachea. The child had adenoids.—Dr. CAMPBELL indicated the high palate and the facial expression, which clearly indicated nasal obstruction. He had no doubt the latter had influenced the development of the entire cranium.—Mr. JACKSON CLARKE believed that the shape of the head was due to mechanical causes in utero.—Mr. COALL thought that the efficacy of nasal obstruction in causing remote changes was overrated.—Dr. CAGNEY regarded the deformity both of the head and of the chest as typical of rickets, and he referred to the constant association of adenoids with that disease.

Dr. HARRY CAMPBELL showed a case of recovery from Myelitis, and he advocated the use of blisters in this and other acute spinal diseases.—Mr. COALL spoke also of the efficiency of blisters combined with ergot in acute spinal diseases.

Mr. JACKSON CLARKE showed a case of Hæmatoma of the Pinna. There was no associated psychosis. The tumour grew and pain increased. He, therefore, proposed to operate.—Mr. BRODIE and Mr. RIDLEY commented on the case.

Dr. ATKINSON (for Mr. MAYO COLLIER) showed a case of Hallux Rigidus and also one of Polypus of the Frontal Sinus.

CAMBRIDGE MEDICAL SOCIETY.

Fibroid Tumour of the Uterus removed per Vaginam.—*Gun-shot Wound.*—*Salicylates in Acute Rheumatism.*

A MEETING of this society was held on Dec. 7th, 1894, Mr. HYDE HILLS, President, being in the chair.

The PRESIDENT exhibited a specimen of a portion of a Large Fibroid Tumour which he had removed per vaginam with the écraseur. The notes of this case he had brought before the society on a previous occasion.

Mr. WHEBBY showed a young man who shot himself accidentally seven weeks previously. Holding a gun by the muzzle in the right hand, a charge of small shot entered the arm at the level of the axillary fold and shattered the humerus into many fragments, not injuring the artery or trunk nerves.

The bone fragments removed made up two inches and a half of the entire shaft of the humerus. These were extracted through the large aperture of entrance very slightly touched with a knife for convenience of delivery. The exit wound was made free for removal of shot. No splints or bandages were used for five weeks, but Stromeyer's cushion and shawl wrappings. When healthy granulation appeared the drainage-tube was removed and light splints applied, so that good bone union resulted. The slight congestion produced by the splints used at the later stage of treatment was probably useful in gaining union. Mr. Midelton of Harston, who brought him to the hospital, had so managed to treat the shock of this great injury that the patient was able to give answers to questions, especially as to skin sensitiveness in the injured limb. Mr. Wherry had reported a similar case many years ago in which Stromeyer's cushion was used; recovery ensued with a useful limb, but not with so little suppuration as in this case treated with modern methods of antiseptics and irrigations.

Dr. P. W. LATHAM read a paper on the Administration of Salicylates in Acute Rheumatism. He said: "We have now become so familiar with the successful treatment of acute rheumatism by means of salicylic acid and salicylates that it may seem somewhat superfluous for me to address you on the subject. But cases have come under my observation in which objections have been taken to the use of the remedies, on the ground either that they disagreed with the patient, producing nausea, vomiting, &c., or that notwithstanding fairly large doses of the drug the pains have not been relieved, the temperature has not been reduced, or most serious of all, cardiac or other complications have arisen during the time the patient was taking the remedy and when apparently he was under its influence. Now it is in preventing the development of these complications that, when properly administered, the remedy so strikingly shows its power, truly acting as a distinct specific. What are the conditions to ensure success? In 1885 I formulated the following seven rules:—First, the true salicylic acid obtained from the vegetable kingdom must alone be employed. Secondly, give the acid without any alkali or base. Thirdly, place the patient fully under the influence of the drug. Fourthly, give the patient from forty to eighty grains daily, for ten days, after all pain and pyrexia have passed away. Fifthly, let the patient's diet consist entirely of milk and farinaceous food for at least a week after the evening temperature has been normal. Sixthly, take care to maintain a daily and complete action of the bowels. Seventhly, let the patient be enveloped in a light blanket and with no more bedclothes than are sufficient to keep him from feeling cold. The object of the treatment now is to cool the patient—not, as in former times, to sweat the poison out of him; and the cooler he is kept the sooner will the temperature be lowered.¹ The causes of failure with this remedy, as far as I have been able to judge, are: (1) insufficient doses at the commencement, (2) the non-administration of purgatives such as calomel, and (3) feeding with substances other than milk, such as beef-tea, broths, &c., especially in the earlier stages. I have seen cases where the temperature had remained at from 100° to 102° F. for several days under the administration of moderately large doses and the remedy seemed ineffectual, but on giving five grains of calomel at night, repeating it if necessary the following night, and feeding the patient exclusively on milk, the disease has at once declined and run a favourable course. The administration of calomel (followed if necessary by purgatives) is the best adjuvant to the use of the salicylates. And here I am only calling to our aid a plan of treatment which half a century ago was found to be of signal service. Referring to the three modes of treatment—by venesection, by opium, and by purgatives—which were in vogue at the time, Dr. P. M. Latham says, with regard to the last: 'As this plan of treatment works prosperously day after day in its immediate effects, so day after day it gives an earnest of the remedial impression it is exercising upon the whole disease. It abates the fever, it softens the pulse, it reduces the swelling, and it lessens the pain. In short, it subdues the vascular system like a bleeding, and pacifies the nervous system like an opiate; and often in the course of a week the acute rheumatism is gone. In three days there is often a signal mitigation of all the symptoms; and in a week I have often seen patients who have been carried helpless into the hospital, and shrieking at the least jar or touch or

movement of their limbs, risen from their beds and walking about the ward quite free from pain.' Of this plan, often so striking in its operation and often so satisfactory in its results, I have some further remarks to make. It is called the purgative plan; yet its purpose is achieved by calomel and purgatives conjointly. The purgatives would not answer the end without the calomel; of that I am quite certain; neither would the calomel answer without the purgatives, unless it produced of itself ample evacuations from the bowels. It is probable, in short, that the remedial efficacy of the plan resides essentially in the calomel; in calomel, however, not as mercury, but as itself—calomel. If the specific effect of mercury—salivation—arise, it is not only beside our purpose, and against our wish, but it begets a serious hindrance to the use of calomel in sufficient quantity for the end in view. Thus the whole plan is frustrated. Having begun one plan of treatment we are obliged to take up with another. Time is lost, the case is perplexed, the disease is prolonged, and the patient perhaps injured. Now, if in the treatment of acute rheumatism you were to choose one indication and abide by it, and to trust one class of remedies, and to it only, you will find more cases that admit of a readier cure by the method now described than by either of the two former. You would find the aggregate of morbid actions and sufferings, which constitute the disease, more surely reached and counteracted and more quickly abolished by medicines operating upon the abdominal viscera only than by those which influence either the bloodvessels only or the nerves only. You would find in calomel and purgatives a better remedy than either venesection or in opium.² Again, there are cases in which the salicylates cause nausea or sickness; this is more marked if the salt of the artificial acid has been employed, but it does sometimes occur even after the use of the salt of the true acid. How is this to be avoided? A common form of administration is: sodii salicylatis, gr. xx; aq. cinnamomi, unciam; to which, if necessary, five grains of carbonate of ammonia may be added. Or it may be given in the effervescent form, as, sodii salicylatis, gr. xx; sodii bicarbonatis, gr. xx; syrupi aurantii, drachmam; aq. chloroformi, ad unciam cum semisse; cum acid citric, gr. xvii. Or instead of the citric acid give three drachms of lemon juice, replacing the syrup of orange by half a drachm of simple syrup. It must, however, be borne in mind that in some constitutions repeated doses of lemon juice may induce sudden prostration, as was observed many years ago when the remedy was employed in the treatment of rheumatism. Administered in any of these forms, however, the salicylate may give rise to some nausea, and a certain feeling of repugnance may be induced in the patient to the medicine. This may be avoided entirely by giving the salicylic acid itself, made up into pills, in the way I have previously mentioned. I have never seen the remedy in this form cause nausea unless it was in individuals who have a difficulty in swallowing pills. And there is good reason for it. Made up in this form the pills do not readily undergo solution in the stomach. The acid is insoluble in the acid juices there, and the pills pass on into the duodenum before solution takes place. In fact, when the bowels are acting very freely and the pills have been freely administered, I have occasionally seen them unchanged in the evacuations.³

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Rupture of Intestine.—Uterine Fibroids.—Exhibition of Fibroids.—Abdominal Tumour.—Cirrhosis of Liver.—Cholecystotomy.—Trophic Changes following Nerve Irritation.—Thiersch's Method of Skin Grafting.—Tumour of Omentum.

A MEETING of this society was held on Jan. 10th, Mr. F. PAGE, President, being in the chair.

Mr. WILLIAMSON showed a man after operation for Rupture of Intestine. Just after dinner the man fell, striking the abdomen on a chair. Two hours later hæmatemesis occurred. The patient was admitted to hospital thirty hours after the

¹ Dr. P. M. Latham's Works. New Sydenham Society, vol. i., pp. 123-124.

² In acute rheumatism complicated with albuminuria the use of the drug is contraindicated. Dr. Noel Paton's experiments show "that this drug has really an irritating action on the kidneys." Journal of Anatomy and Physiology, January, 1886, p. 25.

accident. The abdomen was distended, the pulse 130, and there was still hæmatemesis. The intestines were found covered with firm lymph. At the junction of the duodenum and jejunum there was found a protrusion of mucous membrane about the size of the thumbnail. The wound was enfolded and sutured, and the abdomen washed out with a saline fluid. No drainage was employed. Recovery was interrupted.

Mr. WILLIAMSON also showed a patient after operation for Uterine Fibroids. She was forty-seven years of age, married, nulliparous, and had suffered from hæmorrhage for two years. The uterine and ovarian arteries were ligatured, the tumour excised, the opened cavity of the uterus disinfected by the thermo-cautery, and two flaps of uterine tissue and peritoneum made and sutured together. Two weeks after operation a fibroid the size of a walnut escaped by the vagina.

Mr. RUTHERFORD MORISON exhibited a series of Fibroids treated by different methods—viz., vaginal hysterectomy; extra peritoneal treatment of pedicle; intra-peritoneal treatment of pedicle—(a) leaving uterus and ovaries intact, (b) removing tubes, body of uterus, and tumour; and total hysterectomy.

Dr. HUME showed a patient aged fifty years with a Tumour of moderate size. There was no hæmorrhage, but very severe pain. There were extensive adhesions between the tumour, the bowel, and the omentum. On separating these both tubes were found distended with pus and were removed. The tumour was drawn forwards, surrounded by a permanent elastic ligature, and the stump treated extra-peritoneally. This he regarded as the safest though not the ideal method.—Mr. PAGE referred to two cases he had shown at the last meeting, the extra-peritoneal method being employed in one of the two.—Dr. G. MURRAY said fibroids in women approaching the menopause should not be operated on. Apostoli's treatment checked the hæmorrhage and might get the woman over the menopause.—Dr. HUME, in reply, said that he had had little success from Apostoli's treatment. He still believed in removal of the ovaries, and gave details of successful cases recently treated in this way.

Dr. D. DRUMMOND showed: 1. A patient who up to fifteen years ago was a heavy drinker. He had been left with a Cirrhotic Liver, which was practically cured. The liver and spleen were both very large and were adherent to the abdominal wall, so that the anastomotic circulation was established in the abdominal wall and the portal circulation relieved. 2. A man twenty-eight years of age, who was admitted to hospital in May last with a heart beating 200 per minute; he was nervous and breathless; the symptoms came on after a fright. There were no murmurs. He had now aortic and mitral insufficiency and pericardial thrill. There had been no rheumatism until Dec. 27th, 1894.

Dr. HUME also showed: (1) Woman after Cholecystotomy; the gall-bladder was distended and contained calculi, and a large one was removed from the cystic duct by incision. 2. A patient with Trophic Changes following Nerve Injury. In April the patient received an incised wound on the inner aspect of the upper arm, and in December was admitted with the tips of the three outer fingers gangrenous, and wasting of muscles of the forearm, thumb, and interossei. The median and ulnar nerves were found divided and were sutured.—Dr. A. E. MORISON had recently met with a case of injury to the external popliteal nerve caused by a blow on the head of the fibula. There was complete paralysis of all the muscles supplied by the torn nerve and sensation was also absent. He cut down on the nerve and found a clot of blood in the sheath, but no division of the nerve itself as was expected. In a short time recovery was complete.

Mr. RUTHERFORD MORISON showed two cases illustrating Thiersch's Method of Skin Grafting.

The PRESIDENT exhibited a Tumour of the Omentum removed from the abdomen of a man. It was the size of an adult head and consisted chiefly of clotted blood.

EDINBURGH OBSTETRICAL SOCIETY.

Pseudo-hysteria in Pregnancy.—Clinical Aspects of Utero-sacral Cellulitis.—Ante-natal Pathology and Heredity in the Hippocratic Writings.

A MEETING of this society was held on Jan. 9th, Dr. BARBOUR, President, being in the chair.

The PRESIDENT read notes on a case with symptoms of Pseudo-hysteria in Pregnancy, going on to apparent dementia. Death occurred shortly after labour. The child was born dead, with contractions. The patient, who was six months pregnant, became feverish and fretful, and showed different hysterical symptoms. She afterwards had fugitive rigidity of the limbs and ultimately contractions and paralysis; she was subject to flushings and the reflexes were increased. There was great difficulty in swallowing, and as the disease developed she passed urine and faeces involuntarily. Her face acquired an imbecile aspect, and her general appearance and condition were similar to that of dementia. It was decided to induce labour, but this occurred spontaneously. With each pain the patient had an epileptiform convulsion. After two hours and a half a more severe fit occurred, evidently causing the death of the child, as no foetal movements could be felt or the heart heard after its onset. As the patient's pulse failed the labour was completed with the application of the forceps. After delivery all paralysis disappeared, only a little contraction remaining. On the third day the temperature rose to 105° F. and the patient died. At the necropsy there was no evidence of syphilis found in any organ. The kidneys showed some small cortical abscesses. There was no other evident pathological condition found except in the brain. The pia arachnoid was thickened and opalescent over the hemispheres and vertex. The arteries had local thickenings of the walls, and a thrombus had formed in part of the basilar artery. Recent softening of the brain was found, affecting part of the convolute nucleus and extending to the base. The arteries showed endarteritis, and the capillaries had their nuclei multiplied. The whole condition was one similar to that usually found in dementia, the paralytic symptoms being due to commencing changes in the vessels. The foetus, which died during labour, showed contractions of all the limbs, with flexure of the fingers. It, strangely, had contractions affecting its limbs exactly similar to the mother. These persisted for eighteen hours after birth, and were evidently not due to rigor mortis.

Dr. WILLIAM FORDYCE read a paper on the Clinical Aspects of Utero-sacral Cellulitis, giving the results of cases where the disease was present as a pure disease without complication. It was found in nulliparæ and multiparæ, most frequently in the latter. The cause was found in septic infection from the endometrium or cervix, constipation, or fissure of anus. The symptoms usually complained of were pain in the back, sterility, dyspareunia, frequent micturition, pain on defecation, and dysmenorrhœa. He considered the form of dysmenorrhœa pathognomonic of pathological ante-flexion. The pain occurred during the flow and in inverse ratio to the amount of the flow. As the flow diminished the pain increased.—An interesting discussion followed, in which Professor Simpson, the President, Drs. Ballantyne and Haultain, and others took part.

Dr. J. W. BALLANTYNE read a paper on Ante-natal Pathology and Heredity in the Hippocratic Writings. These works were evidently the collected observations of different writers of the time of Hippocrates. They were well acquainted with the luxation of joints in infants and described fully the appearances of club-foot. Their view of heredity was based on the theory that the generative material was derived in certain proportions from the different humours of the body. Maternal impressions were noticed by them, and ante-natal diseases and injuries were described.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on Wednesday, Jan. 9th, at 11, Chandos-street, Cavendish-square, Mr. Christopher Heath, vice-president, in the chair. Mr. Heath moved, from the chair, a resolution expressing sincere sympathy and condolence with the president, Sir J. Paget, on the bereavement he had sustained through the lamented death of Lady Paget. Two new members were elected, and the deaths of three reported. There were no fresh applications for assistance. A sum of £1193 10s. was voted for distribution among the fifty-three widows, nine orphans, and four orphans on the Copeland Fund. The expenses of the quarter amounted to £77 17s. 6d. The Christmas present (£303) had been given on Dec. 19th to the widows and orphans in receipt of grants, £5 to each widow, £2 to each orphan, and £5 to the orphans on the Copeland Fund.

Reviews and Notices of Books.

The Life of Richard Owen. By his Grandson, the Rev. RICHARD OWEN, M.A. Two Vols. London: John Murray. 1894.

THESE entertaining volumes depict the life of our great palæontologist mainly from its social and domestic side. Notwithstanding the engrossing nature of his scientific labours, he went much into society, played chess and the violoncello with some skill, ardently admired the drama, and was altogether a man who had many friends and some opponents as well. Prime Ministers, Church dignitaries, and peers figure largely in these pages, and there are more than occasional glimpses of exalted personages such as members of our own Royal Family, the Emperor of Brazil, the Queen of Holland, and some others. A very large number of the letters written and received by Owen have been preserved, and both he and his wife were indefatigable diarists. The wealth of material thus provided has been skilfully manipulated by the biographer so as to produce a smooth and almost continuous narrative, consisting in no small degree of the actual phraseology employed by the Owens and their correspondents. The interest of the story is maintained from first to last. There are no abstruse technical disquisitions likely to be tedious or unintelligible to the general reader, nor is there any trace of the learned polemics in which Owen was involved; but the scientific references and details with which the books abound are introduced incidentally, as it were, in the order of their occurrence and in the parts of the biography with which they are naturally connected. Owen's home life seems to have been singularly untroubled and happy. Deprived in infancy of his father, who was a West India merchant, he and his sisters were brought up in Lancaster by their mother, a woman evidently well fitted in every way for her charge, and constantly regarded with the warmest affection by her son. As soon as he presented himself at St. Bartholomew's Hospital in 1825, after quitting Edinburgh University, he had the good fortune to secure the patronage of Abernethy and to be made his prosector. In the following year he became a Member of the Royal College of Surgeons of England, and, through Abernethy's instrumentality, was appointed assistant to the conservator of the somewhat neglected museum which had been purchased by the Government from John Hunter's representatives and handed over to the Royal College of Surgeons. The connexion with the Hunterian Museum thus begun was continued for thirty years, being terminated only in 1856, on his appointment to be superintendent of the Natural History Departments of the British Museum. In 1830 he became a life member of the Zoological Society, and in the following year contributed to their proceedings eight papers on the anatomy of various animals. In 1830 he made the acquaintance of Baron Cuvier, in whose department of research he was destined to labour so successfully. Cuvier died in 1832; Owen was occupied solely with the Hunterian Museum Catalogue and with zootomy until 1837, when he produced his first palæontological paper, a Description of the Cranium of the *Trodon Platensis*, but he had already attracted the attention of scientific men by his Memoir on the Pearly Nautilus, published in 1832. In 1834 he was elected a Fellow of the Royal Society. In 1835 he married Caroline Clift, daughter of the Conservator of the Hunterian Museum; they had one son, who died in 1866, leaving a widow and family. In 1837 Owen was appointed to the newly-created office of Hunterian Professor to the Royal College of Surgeons. An incident which illustrated his sagacity, and moreover took an unusually firm hold of the public mind, occurred in 1839. A seafaring man had brought from New Zealand a solitary fragment of a long

bone, and wishing to find a purchaser he submitted it to Owen, who published a description of it, with the announcement that it had belonged to a gigantic bird allied to the ostrich family, but hitherto unknown to ornithologists. This surprising inference was at first received with some incredulity, but was amply verified in 1843 and subsequent years by the arrival in this country of complete skeletons of the extinct bird called "moa" by the natives of New Zealand and named *Dinornis* by Owen. In after years many strange anatomical queries were in all seriousness addressed to him, of which whimsical instances are recorded in the biography, perhaps the most remarkable being a personal inquiry made by the Chief Spoon and Ladle-maker to the Commander of the Faithful. This official brought from the Sultan's jewel-house to the Museum a most beautiful ladle, the bowl of which was of a fine horny material supposed to be the beak of the phoenix, and he explained that the object of his mission was to obtain accurate scientific information regarding this bird. Owen, however, after some research discovered that the bowl of the ladle was made from the beak of *Buceros galeatus*, a rare bird found in Ceylon.

Owen's great triumph in his later years was the creation of the magnificent Museum of Natural History at South Kensington. The space available for zoological specimens in the British Museum being altogether inadequate, he in 1859 "submitted a strong report to the trustees setting forth his views as to a National Museum of Natural History, accompanied with a plan." The scheme was considered by a committee of the House of Commons and was ultimately rejected, its foremost opponent being an Irish member, the representative of county Galway. In 1862 the scheme was again brought before Parliament, being introduced by Mr. Gladstone, as Chancellor of the Exchequer, but it was defeated. In 1863 Mr. Gladstone obtained leave from the House of Commons to purchase land for the building, and eventually eight acres of ground were acquired at South Kensington. The removal of the specimens from Bloomsbury to the new building at South Kensington was commenced about 1880 and occupied some years. In the end of 1883, being advanced in his eightieth year, and in the possession of almost all the honorary scientific distinctions which could be conferred on him, the enumeration of which occupies more than three pages of the second volume, Owen retired from his official duties in relation to the national collections of natural history. He had witnessed the complete success of his efforts in their behalf, and, as he himself wrote, felt that he could now depart in peace. Professor Flower was appointed to the vacancy, and Owen withdrew into private life with the dignity of K.C.B. and a pension, which was augmented at the instance of Mr. Gladstone. His declining years thereafter glided serenely away, until the peaceful arrival of the closing scene in December, 1892.

Three photogravure portraits of Owen at different periods of life are a material addition to the value of the narrative, two of them forming frontispieces to each of the volumes. The author has naturally found his theme congenial, and there need be no hesitation in predicting for his work a permanent place in the literature of biography and personal anecdote.

Pulse Gauging: a Clinical Study of Radial Measurement and Pulse Pressure. By GEORGE OLIVER, M.D. Lond., F.R.C.P. London: H. K. Lewis. 1895.

ANY means of increasing our reliable information concerning the indications for diagnosis and treatment afforded by the pulse ought to be, and no doubt will be, welcomed by the profession. In pulse gauging by the arteriometer and the pulse pressure gauge Dr. Oliver has at present a practical monopoly, for, although we believe instruments for gradually compressing the pulse to obliteration have been in use before,

the more elaborate and accurate instruments to which we have referred are of his own invention. Unlike the sphygmograph, which affords us information of a kind difficult to obtain by tactile methods, the instruments with which we are at present concerned are intended to afford more precise information concerning conditions which are often very fairly estimated by the time-honoured means of "feeling the pulse." Into feeling the pulse the personal equation no doubt enters very largely; the sensitiveness and intelligence of the individual are variable quantities. Mechanical instruments, on the other hand, ought to be more alike; but all such should, we think, before being sold to the profession, be tested, like thermometers, by comparison with a reliable standard. Otherwise the variation of man is introduced into the automatic machine. In the use of instruments, moreover, as in observation generally, there are sources of fallacy—many, no doubt, avoidable—which require to be well known to be eliminated. A knowledge of these only comes by experience and usually by the discovery of error. How *not* to do anything frequently precedes a knowledge of how to do it. The only justification for the multiplication of our means of observation, and for the substitution for our naked senses of mechanical aids, is the inadequacy of our present means and of our unaided senses to investigate the conditions for which such increased aid is introduced. In estimating the practical value of the work before us these appear to us to be considerations which must be borne in mind. They are not ignored by the author. While by the finger we can form a general idea of the size of the radial pulse, it must be admitted that its calibre can be more exactly measured by means of such an instrument as Dr. Oliver's arteriometer, and, this once exactly noted, an increase or diminution may be ascertained more certainly than if we trust to the memory of our impressions. This is important, as it has been found that the same vessel may under different circumstances vary in this respect, and evince peculiarities in disease which distinguish conditions of health from those accompanying a morbid state. Such peculiarities may be, and have been, determined without instrumental aid, but precision may be imparted to our conclusions by employing the arteriometer and pulse gauge. Whether such precision is of sufficiently great importance for practical purposes to bring this instrument into even such general use as the sphygmograph may be questioned; but that it may be of great value in scientific investigation and education is, we think, highly probable. Not only, however, as an instrument of precision in scientific investigation, but also as an instrument of practical utility in "selecting and adjusting remedial measures," has Dr. Oliver found his instruments serviceable. "The pulse instruments have specially demonstrated the great restorative value of such physiological agencies as recumbent rest, exercise, diet, massage, baths, and mineral waters." Such data could no doubt be attained by the experienced physician by tactile methods sufficiently well, but it is also probable that the less experienced observer could by instrumental aid gain truer criteria than by the use of the unaided finger. Just as the pleximeter and hammer of the student usually give place to the more convenient fingers when the examiner has learned to trust them, so, also, will the latter from their very convenience tend to supplant the ingenious and accurate instruments Dr. Oliver describes. As an aid to the education of the hand we believe they may be of great value, and as such the author acknowledges their utility. For fuller particulars as to the construction of these instruments and the general results of pulse gauging obtained by their aid we must refer our readers to the very handy little volume before us. The labour which has been bestowed in collecting data, the care taken in checking known sources of fallacy, and the intelligence and caution evinced by the author in stating his conclusions cannot be too warmly acknowledged. Dr. Oliver's

work, carried out largely, we understand, in the midst of the duties of active professional life, also demonstrates an improved truth—namely, that the harvest to be garnered by members of our profession in every sphere is truly great, and that well-equipped labourers cannot be too numerous to contribute each a fruitful sheaf towards the common store of useful material. Dr. Oliver's excellent work is such a sheaf, and we cordially commend it to our readers.

Lehmann's Medicin. Hand-Atlanten, Band vii. Atlas und Grundriss der Ophthalmoscopie und Ophthalmoscopischen Diagnostik. Mit 5 Text- und 102 farbigen Abbildungen auf 64 Tafeln. Von Dr. O. HAAB, Professor an der Universität und Direktor der Augenklinik in Zürich. (*Lehmann's Medicine.* Hand Atlases, vol. vii. Atlas and Outline of Ophthalmoscopy and Ophthalmoscopic Diagnosis. With 5 Illustrations in the Text and 64 Coloured Plates containing 102 Illustrations. By Dr. O. Haab, Professor at the University of, and Director of the Ophthalmic Clinic at, Zürich.) München: Lehmann. 1895.

THIS manual, which fully deserves its name, presents, in a cheap and compact form, a series of plates in which the characteristic features of the principal diseases of the fundus of the eye are very well given. Though perhaps not quite equal in finish to the plates illustrating the larger works on ophthalmoscopy, they are still so satisfactorily printed that the student may feel sure, if he is well acquainted with the aspects of disease as here presented, there will be very few forms of retinal lesion that will give him any difficulty to diagnose. Some of the plates, as those of optic neuritis with retinal hæmorrhage consequent on the growth of an orbital tumour and those of the changes of the fundus in pernicious anæmia, in albuminuria, diabetes, and pregnancy are very good. Every figure is preceded by a short descriptive account, and we append a translation of one of these that their length and character may be understood by our readers: "Fig. 39: Retinal trouble from a blow on the eye; Bertin's cloud; commotio retinæ; erect image, somewhat diminished. This disturbance of the retina, frequently observed after blows inflicted on the eyes with blunt instruments, was first studied and described by Bertin. The lesion is transitory, so that it is more distinctly visible the earlier the eye is examined after the accident. It is most frequently occasioned by blows with the fist or stick, or from stones or snowballs. In many instances, two quite distinct, milk-white spots may be seen on the retina, one of which is at the point where the eye was struck whilst the other is at the region of the macula lutea. The former is usually the larger, more pronounced, and more persistent of the two. The macula and the vision may be unaffected. The peripheric opacity does not, as a rule, conceal the retinal vessels. The appearances presented were formerly often mistaken for detachment of the retina from the choroid. The nature of the opacity has not as yet been satisfactorily made out. Our illustration was taken from an eye which a few hours previously had been injured by a blow with a snowball." We may add that eight of these hand-atlases have been published and that nine more are to follow.

Traité Pratique des Maladies du Système Nerveux. Par J. GRASSET et G. BAUZIER. 4me Edition. Montpellier: Camille Coulet. Paris: G. Masson. 1894.

THE two immense volumes, each containing over 1000 pages, which compose the latest form in which Grasset's classical work has appeared, really constitute a fresh work, and they are characterised by the great care in research, the graphic presentation of facts, and the firm grasp of clinical characteristics and details which have been a feature of all the previous editions. The work has been subjected to the most thorough revision, and much fresh material has been added so as to make it, as we

have indicated above, almost a new book. The scheme is a very comprehensive one. There are six parts in all, the first being devoted to Diseases of the Brain, the second to Diseases of the Spinal Cord, the third to Diseases of the Medulla Oblongata, the fourth to Diseases of the Membranes, the fifth to Diseases of the Nerves and Neuroses, and the sixth to an account of the Nervous Manifestations of General Diseases. Each part is divided into a series of articles, and each article is subdivided into chapters. Thus, in the third part, dealing with diseases of the bulb, the first article or division is devoted to an account of localised lesions, and of its two chapters, the first deals with hæmorrhage and the second with softening. The second article or division is concerned with inflammation of the bulb, and its two chapters have as their respective headings Labio-glosso-laryngeal Paralysis—the ordinary bulbar palsy—and Acute Bulbar Paralysis.

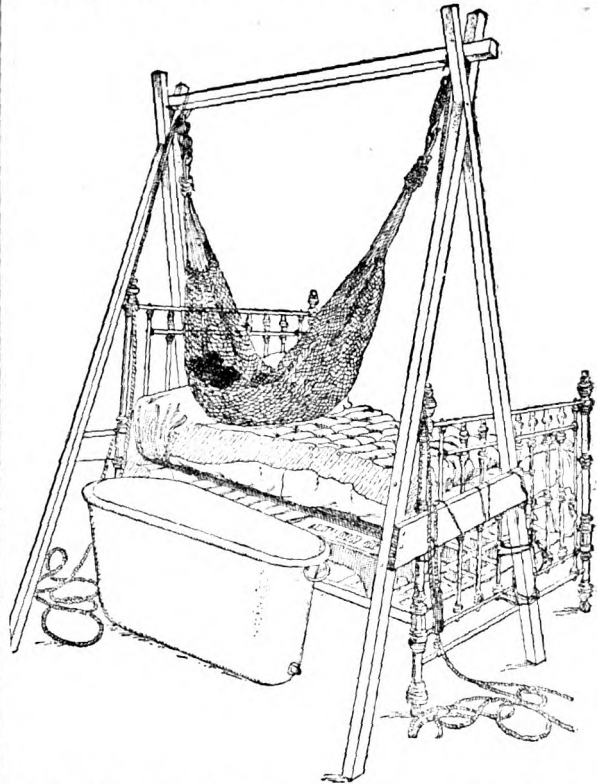
It is almost needless, and indeed it would be impossible in such an article as this, to do more than merely indicate the aim and scope of such a work as that under review. Anything like a detailed examination of its varied excellence would be out of place and unnecessary. It is sufficient to say that it more than maintains the high standard arrived at in its predecessors; that every chapter is a perfect mine full of the richest ore, and can be regarded not only as itself furnishing the views and experiences of the two eminent neurologists who are responsible for the book, but as also indicating to the reader the various other sources from which knowledge of the particular condition has been derived. The only subject to which we should have expected more space to be devoted is that of epilepsy, and it is, we venture to think, a pity that a fuller account of epilepsy and Jacksonian epilepsy should not have been furnished, and that the two diseases should have been separated, apparently through the exigencies of the classification adopted, and not placed together in the book. The pleasant and clear, if somewhat discursive, style in which it is written, the varied and striking figures and diagrams with which the text is illustrated, and the excellent tables and indices which are added to it, all combine with the matter itself to form a book which is at once a monument of industry and ability, and a valuable and reliable guide to all whose work leads them to the study of nervous cases and neurological problems.

New Inventions.

AN APPARATUS TO ASSIST IN THE ADMINISTRATION OF THE BATH.

In the report of a clinical lecture on the method of using the cold bath in typhoid fever, by Dr. William Osler,¹ he draws attention to the difficulties of lifting the patient out of the bath. In the case he describes the patient was given thirty-six baths. I recently had under my care a strong, heavily built man suffering from typhoid fever, and even with the aid of two nurses I experienced the greatest difficulty in lifting him into and out of his bath. I therefore had fitted to the bed an apparatus which answered my purpose. The legs of the sheers were tied to the foot of the bed, where they remained firmly in position. I attached a "luff tackle purchase" to either end of the crossbeam, and from the lower block of each purchase hooked the end of a common Indian hammock. By placing a sheet over the hammock and spreading both out flat on the bed the patient was able to roll on to them without inconvenience. Now, by the multiplication of power effected by the combination of pulleys the patient is raised off the bed with the greatest ease to the position shown in the illustration, and when suspended is readily pulled over the edge of the bed and lowered gently into the bath. In taking the patient out of the bath the pulleys are of great use. The hammock containing the sheet and patient

are raised clear of the surface of the water and retained in this position for a few seconds, to allow the sheet and hammock to drip into the bath until fairly dry. The patient is then raised to the level of the bed and gently pushed over the edge on to a rubber sheet, whence, after drying, he rolls to his original place at the further side of the bed, and the mackintosh, wet hammock, and sheet are removed. As the bath may have to be given frequently—i.e., in typhoid fever perhaps whenever the temperature is above 103° F.—it is very important to have some such means in private



practice by which two nurses, or even one, can give the baths without much trouble. I therefore trust that in bringing this apparatus before the members of the profession a valuable therapeutic measure may be rendered easy in those details of its application which so often mean the difference between success and failure. Any carpenter can fix together the beams necessary for the two pairs of sheers, and the whole can be placed in position within a couple of hours.

G. CALDWELL STEPHEN, M.D.

Evelyn-gardens, South Kensington.

"THE SENSITIVE FINGER COVER."

WE have received from the Manchester Novelty Manufacturing Company a little appliance which we can conceive may be of considerable practical value to surgeons and dentists. It consists of an indiarubber membrane fashioned into a finger cover, and so thin that for all practical purposes the sensitiveness of touch is retained. Many circumstances arise in practical surgery where examination by the finger is an absolute necessity, and in some of these circumstances, if the finger can be covered and yet no loss of "erudite touch" follow on the protection, considerable gain in personal comfort will accrue to the medical attendant, a fact which holds good to a marked extent in the practice of dentists. As a rule, and within certain limits, the fewer of such adventitious aids introduced into surgical practice the better, for their multiplication must always mean the multiplication of the sources of infection against which aseptic measures have to be taken; but the exploring finger is so frequently required in places where protection against the ills that might follow upon a tiny wound or of a crack in the skin would be very necessary that we have no hesitation in recommending these little finger-caps to the medical profession. We may add that we have tested them practically, and can report that the sense of touch is not perceptibly impaired by their use.

¹ The Medical News, Dec. 3rd, 1893.

THE LANCET.

LONDON: SATURDAY, JANUARY 19, 1895.

WE have already, through the promptness of our correspondents, been enabled to place before our readers, not only the programme of the proceedings taking place in Calcutta during the Indian Medical Congress, together with an official list of the communications received at headquarters which would be read or taken as read before the different Sections, but also a few assorted papers. This week we give an abstract of the presidential address delivered by Surgeon-Colonel ROBERT HARVEY at the inauguration of the Congress, and commence a full account of the proceedings in the various Sections, choosing for earliest issue the papers delivered before the Section of Medicine. As an eloquent exposition of the practical use of such a Congress as that which has just come to a conclusion, Surgeon-Colonel HARVEY'S words need no reinforcement. We commend them to our readers that they may see in them, as we do, unmistakable proof that the pioneers of sanitation in India form remarkable examples of our national energy, taking upon itself to act under circumstances where action would seem to a less resolute and less enthusiastic spirit absolutely hopeless.

There are many side issues, any of which, considered singly, might be considered to justify the holding of an Indian Medical Congress. From the purely scientific point of view a congress of medical men whose life work has been largely done in the East should result in the dissemination of knowledge of disease well-nigh invaluable—whether for what it is or for what it might lead to—to their Western brethren. There are questions constantly arising in scientific medicine—practical, clinical, and of the laboratory alike—which the discussions at such a congress might be expected to assist us to answer. Some are questions of fact. As an example: Who should and who should not, in view of his medical history, follow an occupation that would necessarily take him to India? Some are questions of theory. As an example: Do telluric and atmospheric conditions change the type of a disease, the cause remaining the same, and the differences being only due to the environment? And between these two typical questions fall numberless others, no less obvious and important, to which the deliberations of an Indian Medical Congress might help us to reply. To serve this purpose alone would be doing inestimably useful work. Again, from what we may term the medico-social point of view, the holding of an Indian Medical Congress is of the highest importance to us all. A large number of our countrymen, as well as a large number of Her Majesty's faithful subjects who are bound to us by the tie that they own a common rule with us, pursue their medical careers and live the whole of their medical lives in India practically separated from personal touch with all our work. They read of us a little and we read of them a little, but the little only serves to reveal to both how real the separation is. We know of the work they do, and we know

how splendidly it is done, but we only obtain such knowledge in an abbreviated and desultory form. It is good, then, that we should be able to gather from the proceedings at a congress holden in the capital of our Eastern Empire, in carefully prepared papers sent from all quarters of the realm, a bird's-eye view of the position of medicine in India at the present day—good from the point of view of fellowship as much as of learning. And again we may say that if the Congress served this purpose alone it would be doing inestimable work.

But Surgeon-Colonel HARVEY placed the whole matter on higher grounds than any of these when he chose as the subject of his presidential address the sanitary needs and aspirations of India. The diffusion of knowledge counts for much, the establishment and maintenance of a wide professional sympathy counts for more, but the public health of our enormous Indian Empire counts for most. The progress that has recently been made in this direction serves only to show and to bring into a more prominent position the acute need for further work. Thirty years ago sanitary work was undreamt of in India. None of the means that now exist for grappling with the periodic visitations of famine and epidemic disease had been discovered; while the distinct caste systems and the common fatalism made the inhabitants of the country positively averse to taking any steps towards the amelioration of their unhygienic conditions. Thirty years have seen immense changes in every direction, in the face of difficulties which no one who has not sojourned in India would be able to appreciate; yet the Indian wants, in the words of Surgeon-Colonel HARVEY'S apt quotation, "most everything" sanitary. His hut village is built regardless of all hygienic rules as to its site or ventilation; he lives with his live stock and drinks from the pond in which they wallow; and if he should chance to have a well he places his dung-pit in juxtaposition to it. It is in a country more than half as large as Europe where such general conditions prevail that Surgeon-Colonel ROBERT HARVEY cheerily pleads the cause of sanitation. And, before all things, this is the cause the Congress should most advance, and a better one no congress could have. In spite of the almost insuperable difficulties progress has been made, and we know that it will be made. But let us in England give some measure of thought to what the task has meant and will mean to those who are carrying it out.

We heartily congratulate Dr. W. J. SIMPSON and Surgeon-Captain D. M. MOIR on the successful termination of their arduous labours as secretaries of the Congress.

THE question as to what is the best treatment in cases of fibroid tumours of the uterus is one of considerable and very general interest, for such tumours are among the commonest morbid conditions met with in the class of diseases peculiar to women. It will be as well, in order to avoid misapprehension, to define a little more clearly the group of cases the treatment for which we especially propose to consider. To begin with, we may at once dismiss cases of fibroid polypi and cases where the interior of the uterus is occupied by a fibroid so far projecting into it that but little of the growth remains embedded in the uterine wall—where, that is to say,

although there is not actually a polypus, yet the attachment of the fibroid is very limited and superficial. In such cases all competent authorities are agreed that removal of the polypus or tumour is the proper treatment, and at the present day the operation, skilfully performed with all antiseptic precautions, is almost free from risk. It is not with cases of this kind that we are at present concerned, but rather with all the others, these only excepted. Let us take, for example, a case of fibroids where the uterus is enlarged, so that it reaches as high as the level of the umbilicus, or higher; where, after dilatation of the cervix, it has been ascertained that there is no submucous fibroid capable of being safely removed per vaginam; where the symptoms commonly met with in such cases are well marked, more especially menorrhagia, dysmenorrhœa, and pressure symptoms, varying in severity with the size or position of the growth; and where, besides, the usual medical treatment of a palliative nature has proved to be unsatisfactory. What is the proper treatment? The answer to this question will become apparent if we sketch briefly the history of the operative treatment of uterine fibroids since the year 1855. We believe that the first hysterectomy for fibroid tumour of the uterus which was deliberately undertaken was successfully performed in that year by KIMBALL in America. After tying the broad ligaments he transfixed the cervix and tied on each side, leaving the ligatures long and hanging out of the lower angle of the wound. A glass drainage-tube was used. Although this case did well, two other patients on whom he operated died. Then came the era of the extra-peritoneal method, in which the stump was clamped and fixed outside in the abdominal wound, an era especially associated with the names of KOEBERLE, PÉAN, and KEITH. The general adoption of the intra-peritoneal method of treating the pedicle in ovariectomy soon led to many ingenious attempts to apply the same principle to the stump after supra-vaginal hysterectomy. The very multiplicity of these methods goes to show that no one of them proved to be really satisfactory, and in fact none of these earlier methods were found to provide adequate security against secondary hæmorrhage occurring from the stump. Meanwhile the removal of the uterine appendages in cases of fibroid tumour was introduced with the object of bringing about as a result of the operation those retrogressive and beneficial changes that occur in a certain number of patients with fibroid tumours after the natural menopause. This operation, which is not possible in many cases, and which in many others is not entirely satisfactory in its results, has yet, and as it were under protest, held its place up to the present time. Quite recently Dr. CULLINGWORTH published an important contribution to the literature of this operation in the St. Thomas's Hospital Reports, in which an account is given of twenty cases of fibroid tumour in which he removed the uterine appendages. The conclusions at which Dr. CULLINGWORTH arrives as regards the operation are, among others, that it affords an almost certain means of relieving all the more dangerous pressure symptoms in cases in which active treatment is necessary and where the removal of the tumour is either impracticable or very dangerous. He considers it to be unsuitable in cases where the tumours have attained

a very large size, or have become cedematous, or have undergone cystic or other changes. He also thinks that the field for this operation will become still further restricted in proportion as the technique of abdominal hysterectomy improves, and its mortality in consequence diminishes. In fact, we may say with a recent American writer (Dr. BALDY) that the removal of the appendages for fibroid tumour must be considered "an incomplete operation with a limited application." We may undertake it when we do not feel justified in performing the operation that promises more complete and immediate relief—that is, supra-vaginal hysterectomy. Many prominent operators in America and on the Continent have gone a step further, and now practise total extirpation of the uterus in cases of uterine fibroid, in this way avoiding any question of the extra-peritoneal or intra-peritoneal treatment of the stump. CHROBAK reported seventeen successful cases of total extirpation for fibroids. His operation consisted of two steps—first the supra-vaginal amputation of the uterus, and then the removal of the cervix. Since then he has, we believe, given up the latter step, and now only removes the supra-vaginal portion of the uterus after ligature of the uterine arteries. We should be disposed to regard this as the ideal operation, and to look upon total extirpation as unnecessarily radical, especially as the operative procedures involved in removing the cervix are by many considered as more difficult than those needed for the other and more essential part of the operation. There can, at all events, be no doubt that total extirpation weakens the pelvic floor and produces a greater disturbance of the natural relations of the vaginal fornices, besides which there is the additional risk involved in placing the vagina in communication with the peritoneal cavity. The truth really is that total extirpation for fibroids was introduced with the view of avoiding the risks—especially of secondary hæmorrhage and sloughing—believed to be inseparable from leaving the stump of the cervix when treated by the intra-peritoneal method of SCHROEDER and his followers, and ligaturing it *en masse*. It has now been shown that, by tying the uterine arteries before amputating the body of the uterus, the danger of secondary hæmorrhage may be avoided, and, further, that so long as no sutures or ligatures are passed into the tissues of the cervix itself, and no dilatation, scraping, or cauterising, or, indeed, any interference, is employed as regards the cervical canal, and also provided that the peritoneal flaps are sutured over the stump, there is little or no risk of infection to be feared from that direction. To Dr. BAER of Philadelphia largely belongs the credit of perfecting this method and describing the details of the technique in such a manner that the operation by his method may be clearly understood and practised by others; though Mr. MILTON of Cairo reported in the columns of THE LANCET¹ cases operated on by a method very similar to that employed by Dr. BAER. Last year Dr. BAER was able to report that he had performed thirty-four abdominal hysterectomies by his method of intra-peritoneal treatment of the pedicle, with only two deaths. As such a series of successful cases is sufficiently extensive to eliminate the influence of mere good fortune

¹ THE LANCET, Nov. 29th, 1890.

we cannot do otherwise than conclude that the method by which such a result has been obtained must be based on sound principles. A mortality of less than 6 per cent. in a series of thirty-four cases speaks for itself. We have little doubt that Dr. BAKER's method of abdominal hysterectomy for fibroids will eventually be much more frequently undertaken in this country. Though no series of cases such as his own has yet been published from among the cases of operators in England, we understand, nevertheless, that several operations according to this method have been performed in London with good results, and no doubt we may expect before long that an account of them will come before the profession.

THE determination shown by the Cork medical men in the matter of clubs is far more than a local matter. We are not always accustomed to regard Irishmen as examples of cohesion and organisation. The sharp differences of race and religion in Ireland and the warmth of the national temperament readily lend themselves to differences and even to discord in action; but here is a body of men, numbering nearer seventy than sixty, practically unanimous and acting as one man. Besides their unanimity there is another secret of the strength of their position—viz., the reasonableness of their demands. They ask that the club system shall be restricted to those for whose convenience it was originally created. If the profession in Cork were insisting on terms which would embarrass the decent poor they would have no sympathy from either the public or the profession. Medicine is not a luxury as law is in a certain sense; it is essential and indispensable. The poor man and the poor man's wife and children need it as much, and in some respects more, than the rich man. Medicine has to do for the poor what comfortable circumstances and pleasant holidays will sometimes do for the rich. Its aid is so indispensable that if it cannot be paid for it must be given gratuitously or provided by the State. So true is this that the poor run to the medical man as to a kind of providence at all hours of the day and night, and have so regularly been met by him in a spirit of kindness and humanity that it has come to be almost forgotten that he is a man with many wants, whose education is costly and whose work is more so. This mistake is to some extent corrected by the club system. The wage-earning classes have many members who employ their own private medical man with great advantage to themselves. They pay him fees proportionate to their means rather than to the value of his services; and he is pleased to have such patients. But, obviously, it is right in this indispensable profession to make arrangements with the wage-earning classes for attendance on terms of accommodation. This is done everywhere. And everywhere it is found liable to abuse. Persons, and whole classes of persons, who are perfectly able to pay the ordinary charges for medical attendance, join the clubs and take advantage of terms which were meant for others. The very fact that one of the new rules objected to in Cork is that the wage limit for medical attendance in clubs shall be £200 is significant of the enormous abuse—we had almost said demoralisation—to which the system has led. We should have thought that any family whose joint income was £200

or over would have made it a point of honour to have a private medical man and to pay him adequate fees. That bankers, vintners, shipbuilders, and merchants of all sorts should have taken the services of a club medical man on club terms, and think it consistent with Irish honour, could not have been anticipated. The wonder is, not that the medical men of Cork are now resisting such arrangements, but that they have borne with them so long. They may feel assured that they have the sympathy of the whole profession in the stand which they are at present making. It would be wrong to doubt that many of the comfortable and well-to-do classes who have abused the club system of Cork have done so thoughtlessly and without intending to be shabby to a great profession. But the present crisis in Cork removes this excuse. They now know that they are in a false position and that they have duties and debts to medical men which cannot be discharged on club terms. They will find medical men entirely reasonable, not expecting the impossible or the impracticable, but expecting, on the other hand, that which is their due.

The encouragement of medical practice is the duty of every citizen who has it in his power. In encouraging medical practice he is encouraging medical science, and this is a duty binding on every member of a civilised community. We are unwilling to believe that any intelligent citizen will refuse to admit this, or will deny our right as medical journalists to hold high the claims of medical men to be treated with individually and on terms corresponding to the special education they bring to the service of a community. And our right is also indisputable to point out to all members of the medical profession that this movement in Cork has a claim to their help and sympathy. It is said that the younger members of the profession there are working with perfect faithfulness to the principle involved and with much self-sacrifice. It is a temptation to them to profit by the faithfulness of others; but they have shown themselves above all such temptations. All honour to them. The duty of outsiders in such circumstances is obvious. Is the medical profession to be the only one in which there is to be no *esprit de corps*? May men come from Dublin and London and Belfast and take the places of those who are making a stand for the most reasonable rules? To put such questions is to answer them. Let no man who does so imagine that he is doing a good or a noble thing. This is a domestic quarrel in Cork between those who perfectly respect each other, and nothing in medical ethics is more clear than that the stranger who interferes is disloyal to his profession.

THE agitation in favour of the new scheme proposed by the Royal Commissioners for a reconstitution of the University of London, so that it may become a local Teaching University for London as well as an Imperial Examining Board, has again come to the front. On Tuesday next, the 22nd inst., at noon, a deputation from the various bodies which have expressed a general approval of the scheme will wait upon the Premier and urge upon him the desirability of appointing a statutory commission to frame statutes and ordinances in general conformity with the report of the Gresham Commission. Later another deputation,

consisting of graduates who think that if a local Teaching University for London be desirable it ought to be constituted apart from the existing University of London, will also be received by the Premier. He will thus have the great advantage of hearing both sides of the question in virtual simultaneity: that of the teachers anxious to enlarge the scope of the existing University, and that of the graduates who are naturally anxious that the prestige of their degrees should not be lowered, as is possible by the proposed changes. By a curious coincidence the next meeting of Convocation of the University is appointed for the same day at 4 P.M., and the members thereof will be occupied with the same business.

On May 8th, 1894, it will be remembered, Convocation adjourned after the whole question of the constitution of the University had been referred to the Annual Committee, with power to nominate members of a joint consultative committee of the Senate and Convocation. But owing to a technicality it was afterwards found that any nominations made by the new Annual Committee might be objected to as invalid, and so the resolution was not acted on. Four delegates, however, attended the meeting at the Royal College of Physicians of London on June 30th, 1894, and agreed with almost all the delegates representing the various institutions affected by the scheme in strongly advocating the appointment of a statutory commission at an early date. And there the matter stopped. It is clear that a statutory commission might be either a purely ministerial one, and would then only deal with the scheme as it stands, or one invested with wider powers, and these might be so large as even to reopen the whole question. Considerable difference of opinion exists among the various bodies interested as to what the extent of these powers should be, and we shall wait with some anxiety to see if Lord ROSEBERRY gives any clue as to his own views on this material point. If these are forthcoming for the meeting of Convocation in the afternoon they will undoubtedly greatly affect the attitude of Convocation towards Dr. SYLVANUS THOMPSON'S first resolution, which reads thus: "That Convocation is of opinion that there should be one University in London and not two; and that the interests of higher education will be best served by such an enlargement and reconstruction of the existing University as will (while retaining its existing powers and privileges and without interfering with the efficient discharge of its present duties as an examining body for students from all parts of the British Empire) enable it to promote learning, scholarship, and research as a Teaching University for London." But the scheme of the Royal Commissioners involves such a reconstitution of the present University of London that its existing powers and privileges must be largely destroyed should their recommendations be acted on by a statutory commission; whereas if full latitude is given by Parliament to such a commission a very different scheme might be the outcome of its deliberations and decisions.

MISS L. B. ALDRICH-BLAKE, M.B., B.S. Lond., has been appointed anaesthetist to the Royal Free Hospital by the weekly board of that institution, in succession to Dr. Silk, who has resigned.

Annotations.

"Ne quid nimis."

INQUESTS WITHOUT MEDICAL WITNESSES.

AN example of the injudicious practice of dispensing with medical evidence at inquests has just occurred at West Hartlepool. The inquiry was as to the cause of the totally unexpected and painfully sudden death of a gentleman in a club. Having risen from his chair in order to get a newspaper, he, without any warning, fell heavily on the floor, whereby his right cheek was very severely cut and bruised. The other members rendered what assistance they could, and a medical man who was summoned arrived in a few minutes; death had, however, already resulted. An inquest was held on the following day, at which it would seem that the only witnesses called were the deceased's brother-in-law, and two members of the club who witnessed the event. According to the *Northern Guardian* the jury asked if it was necessary to have the medical attendant's evidence, to which the coroner replied, "Certainly not, unless you want to spend the ratepayers' money." The jury thereupon returned a verdict of "Death from natural causes." The proceedings appear to have been of an altogether formal character, and to have contributed nothing towards that explanation of the cause of death which is the chief aim and object of an inquest. Of course, there was in this case a complete absence of foul play, but the anxiety of many coroners to dispense with the expression of medical opinion at their inquiries, except under the pressure of obvious necessity, distinctly tends to diminish the value of an inquest as an institution designed for the information and protection of the public. In THE LANCET of Nov. 24th, 1894, mention is made of an inquest on the body of an epileptic in which the principal witness seems to have been a police constable, who deposed that death was due to epilepsy. As the body of the deceased had been found lying face downwards on some manure it is clear that suffocation during a fit was at least a more probable cause of death than epilepsy itself. Inquests conducted in such a fashion obviously can serve no useful purpose, and are not likely to secure either the confidence or the respect of the general public.

GROCERS' LICENCES.

MR. DAVID A. THOMAS is about to again introduce a Bill into Parliament for the abolition of grocers' licences. This has reopened, notably in the columns of the *Times*, the vexed question involved by the sale of intoxicants at grocers' shops. From the first THE LANCET pointed out that the sale of wines, spirits, &c., by grocers would encourage, facilitate, and sometimes even engender secret drinking. Mr. John Hilton, of the Alliance London Office, quotes our report of July 7th, 1877, when, in answer to questions we had addressed to the medical profession on the subject, 917 physicians and surgeons signed a statement declaring their "strong persuasion that the facilities for obtaining spirits, wines, stout, and ale in bottles provided by the grocers' licences have a most injurious tendency," and that "women, servants, and children of respectable households who could not or would not procure intoxicating drinks at public-houses are encouraged to purchase and use these liquors by the opportunity offered when visiting the grocer's shop for other purposes." To these well-known facts Mr. John Hilton, in his letter to the *Times*, adds a new and hopeful feature to the controversy. It appears that grocers' licences are not so profitable as they were naturally expected to be. Indeed in some cases they have been the cause of

absolute failure. If so, the chief obstacle to their abolition will disappear. One grocer is mentioned as being ruined after he took out a wine and spirit licence. His customers contracted drunken habits, opened quarterly accounts, which they often failed to pay, while his shop assistants drank his wine and neglected their work. Another shop with two large windows—one devoted to groceries, the other to wine and spirits—had ruined two successive proprietors. A third purchaser presented himself, but only on the condition that the liquor was removed. This was done, though thought to be an act of madness; but the result has been the creation of a prosperous and profitable business. At a third grocer's shop, where the liquor traffic had also been abandoned, the net profits had considerably increased. It would seem that among customers who buy liquors with their groceries the proportion of bad debts is much higher. If this experience is confirmed in other quarters a great step towards the abolishing of grocers' licences will have been taken. Such questions should be settled purely on moral grounds; but if it so happens that the material interests of the trade will not be as disadvantageously affected as was generally imagined, we shall be all the better pleased. We have no reason and no desire to attack the interests of the grocery trade, but it is our duty to denounce all that encourages or facilitates alcoholism and thus endangers public health.

GEORGE RAINEY.

ALL St. Thomas's men whose recollection of the hospital extends back for fifteen or twenty years preserve kindly memories of Mr. George Rainey, the veteran demonstrator of anatomy. Unconventional in exterior, he was largely endowed with sterling qualities of head and heart, acknowledged even by the light-hearted young men who learned from him to trace out and understand the intricacies of their "parts." Most teachers know how arduous a duty is the unrelaxing effort to awaken and sustain a student's interest in his work, and to lead him to an intelligent comprehension and recollection of it, especially in a field so wide and so full of details as anatomy. Rainey's success in this direction was recognised by all who came in contact with him, including the dignified seniors who uphold the high position of St. Thomas's Hospital among schools of medicine. In addition to his work as an instructor Rainey carried out much original investigation. THE LANCET in 1851 contained an elaborate and thoughtful paper¹ written by him on the adjustment of vision effected by the ciliary processes and the pecten. Many other original memoirs by him appeared in the Annual Reports of St. Thomas's Hospital, the Transactions of the Royal Medical and Chirurgical Society, the Transactions of the Royal Society, &c. His first important paper was on a botanical subject—the Ascent and Descent of the Sap. It was read before the Royal Society in 1842 and appeared in book form with some additions in 1847. Botany and physics were combined in an investigation on the Formation of Starch Granules, the results of which were read before the British Association in 1859. In conjunction with his duties as demonstrator of anatomy he held a position as a practical microscopist which was at that time almost unique. Fifty years ago the microscope was in the hands of trained specialists only, and was far from being reckoned, as it now is, one of the ordinary accessories of a medical education. Rainey was an adept in microscopical manipulation and demonstration as then practised. Transparent injections were not at that time in use, but his specimens of tissues injected with opaque materials were a marvel to his contemporaries, and are

valuable even now. By means of them he discovered the nature of those structures in the synovial fringes which have been called "Rainey's bodies," and which are now known to be the starting point of loose cartilages in joints. The *Quarterly Journal of Microscopical Science* and the Transactions of the Microscopical Society contain papers by him on the Cutaneous Follicles of the Toad and on Methods of Illumination in Microscope Work. His laborious life was prolonged far beyond the usual term. Born in 1801 in Spilsby, Lincolnshire, he came to London in 1824, and became a student at St. Thomas's Hospital. In 1827 he qualified as M.R.C.S., and obtained great success as a private teacher of anatomy. His tutorial connexion with St. Thomas's Hospital commenced about 1844, and continued for about forty years, being terminated only by his death in November, 1884, in the eighty-fourth year of his age. For this sketch of his career of active usefulness we are indebted mainly to an appreciative article contributed to the St. Thomas's Hospital Reports by his friend Mr. Wagstaffe, late senior assistant surgeon and lecturer on anatomy at the hospital.

PRESENTATION TO LORD SANDHURST.

THE important services rendered by the Right Hon. Lord Sandhurst to the Middlesex Hospital as chairman of the weekly board for the last six years have been gracefully acknowledged by his colleagues in the governing body, in conjunction with the medical staff and the resident officials. His lordship, who has been appointed Governor of Bombay, necessarily vacates his official position at the hospital, and was on the 12th inst. presented with an address together with a bowl and four goblets in silver. An influential gathering of the subscribers to the testimonial assembled to meet his lordship, the presentation being made by Mr. J. Bell Sedgwick, deputy-chairman of the board, supported by Mr. J. W. Hulke, President of the Royal College of Surgeons of England and senior surgeon of the hospital. Mr. Sedgwick delivered a very complimentary speech, to which Lord Sandhurst replied in appropriate terms, assuring the company of the regret with which he retired from his congenial duties at the hospital.

INFANT NEGLECT, INSURANCE, AND MORTALITY.

THE more closely we examine the practice of child insurance the less there appears to commend it. Notwithstanding the fact that disease is much more prevalent during the early years of life than later, it by no means follows that death is an equally certain factor in the table of probabilities. Well tended, well nourished, and within reach of prompt and skilful medical service qualified by no exorbitant fee, the prospects of infant life even among the poor, if they be careful also, are hopeful in a high degree. Life, not death, is the natural outlook, and the necessity for insurance is proportionately less. The social status of so young a child, moreover, as a rule is absolutely trivial. Compensation for its death argues a loss which is incalculably small. We cannot, therefore, find in such reasons as these facts afford any real justification of the system of insurance. Nor is the position of those who would advocate this system greatly improved when we pass to the question of ways and means as connected with the event of an infant's death. Simple in the extreme are all the needful arrangements for a funeral. Their cost would not overtax the slender means of almost any family which is maintained by honest work and thrift, so that even from this point of view insurance has somewhat the aspect of a superfluity. It is to be noted also that very many of those parents who pay their weekly contributions in token of their prudent fears are at the same time distinguished by a neglect of their offspring and a self-indulgence which are not less than criminal. Among 4629

¹ THE LANCET, July 26th, 1851. On the Function performed by the Ciliary Processes and by the Pecten in the Adjustment of the Eye to Distinct Vision at Different Distances.

children subjected to cruel treatment during the past month it is reported by the organ of the National Society for their protection that 1237 were known to be insured. So, too, was an unfortunate infant whose death was recently investigated by the coroner for the West Middlesex district. The parent could not afford medical aid (which he might have had for a mere pittance), but he did not neglect to pay his insurance premiums. Facts like these tend to sicken the public conscience. They strongly suggest a necessity for drastic reforms in a system of somewhat doubtful and limited advantage. Among such reforms we should, for our own part, insist upon two at least—namely, that the sum insured should no more than discharge the bare cost of funeral arrangements, and that evidence of such criminal neglect or mismanagement as might account for a child's death should disqualify for the receipt of the sum insured. Medical practitioners have a special duty in this connexion, and ought to be scrupulous in refusing to grant the customary death certificates in cases where they believe that such mismanagement has occurred.

CONSERVANCY AND WATER CARRIAGE SYSTEMS FOR THE REMOVAL OF EXCREMENT.

DR. BOOBBYER has presented to the health committee of the town council of Nottingham a valuable contribution to the literature bearing on the important subject of excrement disposal in large urban centres. The report is primarily intended to aid the committee in considering their future attitude towards the existing pail system in the borough; but it seems to be suited to the necessities of many towns where a like system obtains and where the sanitary authority are desirous of securing for their town competent advice given as the result of knowledge of the methods in vogue in a wide variety of places and circumstances. Dr. Boobyer's report covers a wide area, being based on information obtained from seventy-eight towns (including the "great towns") of Great Britain and Ireland, a comprehensive tabular statement making his deductions all the more useful. Briefly stated, there is a general discontent with the conservancy system—the midden privy, pail closet, cesspool, and so on—only four towns openly advocating it—namely, Darwen, Hull, Warrington, and Rochdale—the latter for many years famous for the "system" to which it has given its name; but the opinion of these towns is far outweighed by the general condemnation resulting from experience in the other towns where the air, soil, and water-polluting conservancy methods find tolerance. One interesting fact given is that the nightsoil from the 40,000 pail closets and the 500 privies in Nottingham amounts annually to 500 tons, these figures permitting of an estimate for other places in like circumstances. Replies from forty-two large towns were strongly in favour of waterclosets both for in-door and out-door use; but the question of frost is not overlooked in regard to the latter use of waterclosets, though the damage so caused seems to be less than is popularly supposed. Dr. Boobyer treats also of slop-water and trough closets, in favour of which Dr. Parsons has already some time back reported to the Medical Department of the Local Government Board, although the advantages of these forms of closet are not without some counter drawbacks, choking and difficulty of cleansing being among the latter. But, again, slop-water closets admit of being readily converted into waterclosets. At any rate, twenty-three towns look upon these forms of excrement removal very favourably, extended adoption leading to more pronounced views in their behalf, the tipping basin being the most generally adopted form of flush, and a three-gallon flush being regarded as a desirable minimum. One important point touched upon is that several towns offer a subsidy in aid of the conversion of dry to water carriage systems,

Stafford proposing to offer as much as £3 in regard to each obsolete closet so converted. There is satisfaction in learning that in only three towns is the objectionable cesspool in wide use; but what is of very serious moment is the fact elicited that no fewer than fifteen of the larger towns—excluding London—with an aggregate population of some 2,750,000 inhabitants, discharge the bulk of their sewage in a practically crude state into inland waterways. Truly the Rivers Pollution Prevention Acts have been anything but that which their name implies, in so far as only too many of our populous towns are concerned. The matter calls for the earnest attention of county and parish councils and for the formation and sustained action of joint committees for the suppression of the pollution of our rivers. For the rest, Dr. Boobyer shows the superiority of the watercloset for general indoor use and the desirability of automatic slop- or waste-water closets in poorer neighbourhoods and for outside use, though these latter, equally with trough closets (which, by the way, are liable to injury by frost), call for supervision by a staff of men attached to the Health Department. Trough closets, however, require a special (clean) water-supply, unlike the slop closet, which is self-feeding from the liquid waste of houses. We commend Dr. Boobyer's report to all sanitary bodies interested in the question of excrement disposal. It is written in a lucid style and contains valuable standing matter for reference in its tables and summary.

THE NATURE AND TREATMENT OF LEPROSY.

AN interesting article on the above subject appears in the *American Journal of the Medical Sciences*, by Dr. R. H. L. Bibb, who has examined thirty cases of tuberculous and five cases of macular leprosy with reference to the presence of bacilli, and has never failed to find them in sections of tubercles, in blood drawn directly therefrom, in discharges from leprosy ulcers, and occasionally in the sputum and the secretions from the nose; but he has never found them in the faeces, urine, or blood, except when the latter was taken directly from a tubercle, although other investigators—Kübner, according to Thoma and Cantlie—claim to have found them in the blood current. After referring at some length to the opinions of different writers as regards the nature of the bacillus and the question of heredity and mode of spread of the disease, Dr. Bibb discusses the treatment of leprosy. He has during the past ten years employed a great many drugs in treating a great many lepers; and while he has seen some truly marvellous results—results he was in nowise prepared to witness—follow the use of certain measures, he is not prepared to assert positively that he has brought about a radical cure of a single case of leprosy in either of its stages. Preparations of arsenic, mercury, and iodine when the disease was not associated with syphilis—it is often thus associated—he has found to be worse than useless; but he has seen very marked improvement in all three stages of leprosy follow the systematic use of Chaulmoogra oil internally and locally (associated with an improved dietary and personal hygiene), and this in a sufficient number of cases to induce the belief that while in no sense a specific, as regarded by Bergé, if commenced early in the disease and continued long enough and unintermittingly and associated with proper food and hygiene, it will cure the patient in many instances. Of course, there are many cases it will not benefit, probably a large majority, but Dr. Bibb has never seen it properly used without notable improvement ensuing, especially in the tuberculous stage. He has seen tubercles absorbed, anaesthesia removed, eruptions disappear, ulcers heal, pains quieted, suppleness and elasticity of the skin restored, and hope take the place of despair under its use. He begins treatment with ten drops of the

oil in gelatine capsules after each meal, to be taken with a glass of milk, the quantity to be gradually increased until from one to two drachms of the oil are taken daily, but few patients can take as much as two drachms daily without suffering from diarrhoea. At the same time the patient is bathed every second day with warm water and soap, and the oil is warmed and well rubbed into the skin over the entire body, including the ulcers and maculae.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

IN view of the constant requests we receive for advice as to difficulties under the Infectious Disease (Notification) Act—and the number of cases where difficulties have arisen has become considerable and shows no sign of abatement—we have prepared a statement embodying the decisions and published opinions of the Local Government Board on this subject, a first instalment of which will be found on p. 171 of our present issue.

DEATH UNDER NITROUS OXIDE GAS DUE TO TIGHT-LACING.

MORE than one fatality from tight-lacing has recently been noticed in our columns. In all conditions in which free respiration becomes a necessity if the vital processes are to be carried on tight-lacing means death. Of all states that in which a patient takes an anæsthetic is the one when absolute freedom of breathing is a necessity. Unhappily, but few know this elementary fact in physiology, and hence the sad death of a girl who had taken nitrous oxide gas at a dentist's rooms, and while recovering from its influence had a fatal attack of syncope. The statement is made that her stays were five inches too small for her natural body, a disparity of shape which we imagine the dentist might have seen and acted upon before he ventured to give the unfortunate girl nitrous oxide gas.

THE METROPOLITAN WATER SUPPLY DURING DECEMBER, 1894.

DR. FRANKLAND, in his December report on the condition of the London water supplies, states that on Dec. 10th the Thames at Hampton was turbid and pale yellow in colour, but otherwise it was chemically in excellent condition. Bacterially the same water was of very inferior quality. As delivered by the five companies drawing their supplies from the Thames the water was in every case efficiently filtered, though owing to the previous impounding of flood water it was, on the whole, less pure organically than the untreated river water passing the intakes at the time the samples were taken for analysis. The bacterial improvements effected by the various Thames companies ranged from 99.21 per cent. in the case of the Grand Junction to 99.96 in the case of the West Middlesex. The water as delivered both by the New River and the East London companies was efficiently filtered, but it was slightly inferior to the unfiltered water in respect of organic purity. The bacterial improvement averaged 99.39 per cent.

THE DIFFUSION OF SMALL-POX.

IN London there was a slight increase in the number of small-pox attacks last week, these being 11, whilst 8 were admitted to the institutions of the Metropolitan Asylums Board, leaving 28 patients under treatment. Birmingham was free from fatal cases last week, but experienced fresh attacks to nearly a score, 13 cases being admitted to hospital, leaving 67 therein at the close of the week, some neighbouring districts also having suffered invasion. There were 3 registered deaths in Liverpool, where small-pox has shown a slight disposition to increase, some score of attacks occurring, and the adjacent borough

of Bootle would seem to have had cases also last week, several being reported towards the close. In Edinburgh there were 15 registered deaths last month, with a serious recrudescence of the disease, which was fatal to the extent of 3.4 per cent. of the total mortality. Glasgow has during the present month had experience of the malady, but prompt removal of the patients to hospital has, it is hoped, stayed the disease. Dublin, after a heavy fall in the number of admissions to hospital from 113 to 32 in the concluding fortnight of December, had again an alarming increase in the first week of this month, no less than 71 admissions being chronicled, with 16 deaths. Of the 5 registered deaths 2 of adults were in vaccinated persons, and the remaining 3 in young persons all unvaccinated, aged respectively five weeks and twelve and sixteen years. The close of the week found 170 patients under treatment, exclusive of 121 convalescents.

DR. THOMAS GORDON HAKE.

THE connexion between medicine and letters—a connexion which an abstract of an interesting paper¹ by Mr. Simeon Snell printed in our columns recently showed to be not so rare as is generally supposed—was not much exemplified in the work of the late Dr. Thomas Gordon Hake, the poet, for, roughly speaking, Dr. Hake never practised at all, and, unlike Dr. Oliver Wendell Holmes, he made no use of his medical knowledge in his beautiful and imaginative verse. Dr. Hake was a personal friend of the late Dante Gabriel Rossetti and Mr. Algernon Charles Swinburne, and for these reasons, if no other, will always be classed in the popular mind as a pre-Raphaelite; but he took no active part in the promulgation of the tenets of that remarkable band of successful revolutionaries. Yet the titles alone of some of his poems, "The Serpent Play: a Divine Pastoral," and "Maiden Ecstasy," for example, show that he derived his inspiration from similar sources. Dr. Hake was considerably older than Rossetti, having reached the age of eighty-six when he died on Friday last (Jan. 11th), and was in enjoyment of a Civil List pension in recognition of his merit as a poet.

HOSPITALS AND PORT DUES IN THE EAST.

THE Chamber of Commerce of Liverpool has petitioned the Foreign Office for British shipping to be relieved of the hospital dues paid at the ports of Constantinople and Smyrna. It appears that Her Majesty's Consul-General at Constantinople levies dues on British ships at the rate of about one-third of a penny for every registered ton, so as to defray the cost of the British Seamen's Hospital in that city. This brings in about £5000 a year, but the hospital does not cost more than £3000 annually; consequently, since 1888 a surplus of about £14,000 has accumulated. At Smyrna the hospital tax is equal to 1½d. per ton, bringing in an average of £1414, and the Smyrna hospital costs an annual average of £1079, so it is reckoned that a surplus of £1900 is in hand, thus making, for the two ports in the space of five years, a saving of £18,000. Under these circumstances, and considering the very severe competition from which British shipping interests suffer, it is urged that the hospital dues actually levied in these two ports should be reduced or abolished. In this matter we have at present before us only one side of the question. We are very pleased indeed to hear that so large a reserve fund has been accumulated. This speaks well for the management of these hospitals, and it suggests that there is some useful scheme to which these sums will be ultimately applied. Galata is one of the most unhealthy quarters of Constantinople, and we know that at Smyrna it is proposed to remove the

¹ THE LANCET, Dec. 8th and 15th, 1894.

hospital to a healthier position outside the town. Undoubtedly, when we consider how totally devoid both Constantinople and Smyrna are of anything approaching to a drainage system and proper sanitation, it becomes more than ever necessary to carry patients out into the open and away from the foul emanations of undrained Eastern towns. Of course, there should be near to the port a small ambulance or receiving hospital for emergencies, accidents, and perhaps for the convenience of out-patients; but the majority of the cases undergoing anything like a lengthy treatment would derive great benefit from the purer air outside the town. The Turks themselves have given us an example in this respect by building their vast Hasseki hospital for Mahomedan women on a distant height well away from the crowded quarters of Stamboul. Of course, we are fully conscious of the advantage of relieving British shipping from unnecessary burdens; but we imagine that the improvement of the hospital accommodation in such insanitary towns as Constantinople and Smyrna is not an unnecessary expenditure.

THE LEPROSY FUND PRIZE ESSAYS.

We are glad to hear that no fewer than ten essays have been received in response to the questions on subjects connected with leprosy which were advertised in the columns of *THE LANCET* about a year ago. The number of questions proposed was ten, and they chiefly concern the prevalence of leprosy and its supposed causes in different parts of the world. Three of the subjects have elicited no reports, whilst one, the causes of the decline and extinction of leprosy in Britain, has produced three. The adjudicators are Sir Joseph Fayrer, Sir Guyer Hunter, and Mr. Hutchinson; and we believe that their decision will be announced very shortly. It is intended that the selected essays shall be immediately published, so far as the funds at the disposal of the committee will meet the cost. The adjudicators express themselves as highly gratified at the success which has attended this attempt at obtaining information. Many, indeed almost all, of the essays are, we understand, of great merit.

RAILWAY ACCIDENTS AND AMBULANCE ARRANGEMENTS.

THE Chelford disaster presents the almost unique spectacle of a railway accident arising from causes which did not imply neglect or mismanagement on the part of any individual. This fact, at least, in connexion with it is satisfactory. As much cannot be said with regard to some other associated circumstances. It is certainly remarkable, and not very creditable either to the prudence or the practical energy of mankind, that we have for more than half a century been in possession of a railway system, and are only now feeling our way to the formation of an ambulance department for service in emergencies like that above mentioned. And yet when the project is looked into there does not appear to be any real difficulty in the way of its realisation. Every station on every line could at no great cost of money, time, or trouble be provided with the means of coping with the sudden and urgent necessities arising out of an accident. Local practitioners might be confidently relied upon to render aid in such a case, and railway employés everywhere ought certainly to be so trained as to be of service as first aids to the injured. Such measures would avail as a temporary stopgap. A few ambulance waggons—equipped after the manner described by us in a recent issue,¹ as already illustrated on the Austrian lines of rail—could be despatched from headquarters with the breakdown train. Thus every necessity might be met promptly and effectually, life and health might be preserved, and much suffering obviated.

¹ *THE LANCET*, Nov. 24th, 1894.

As a mere commercial investment the suggested reform is not without some value, since medical aid thus early rendered might go far to prevent some of those consequences of accident which from time to time bring together passengers and railway companies in courts of law.

DIPHTHERIA IN LONDON.

FATAL diphtheria in London last week again showed decline after the serious increase of the preceding week, 34 deaths being registered, against 36, 35, and 50 in the three previous weeks. The average was exceeded by 4 only, but the admissions were 74 cases to hospital, against 80, 75, and 64 in previous weeks; and last Saturday found 517 patients still under treatment. Of the 34 deaths, 70 per cent. were in children aged from one to five years; and 4 belonged to Lambeth, 3 each to Bethnal-green and Mile-end Old Town, and 2 each to Fulham, St. Pancras, Shoreditch, Limehouse, Poplar, Newington, Camberwell, and Greenwich. In Greater London there were 13 deaths registered from diphtheria, including 9 in West Ham.

THE EPILEPTIC COLONY AT CHALFONT.

THE executive committee of the National Society for the Employment of Epileptics have just issued their first report. The aims of the society and the successful working of the colony that has been established at Chalfont in Buckinghamshire¹ have been several times referred to in the columns of *THE LANCET*. The land acquired by the society is sufficiently extensive for a settlement of several hundred epileptics, but the necessary building operations absorb a large amount of capital, and we learn with much regret that the funds in the hands of the society will be almost exhausted by the cost of erection of the first permanent building for eighteen men, leaving women and children, whose requirements are equally pressing, quite unprovided for. It is to be hoped that the next report will be able to announce a generous response on the part of the public, so that the society may be able to extend its usefulness. The movement has the cordial approval of the medical profession, as expressed by its leading members and by the medical press, and the names of the members of the executive committee and of the honorary medical staff are sufficient guarantee that subscriptions and donations entrusted to the society will be employed wisely and efficiently for the relief of the unhappy class of sufferers for whose benefit it has been instituted.

THE CALIBRE OF THE HUMAN INTESTINE.

IN communicating to the Société de Chirurgie the results of some experiments he had carried out on dogs with Murphy's anastomosis button, M. Chaput made a statement² which seems to us to open up a field for speculation, if not for inquiry. Basing his opinion on numerous measurements of the human intestines, the distinguished French surgeon informed his audience that the 27 millimetre button is far too bulky for the small gut in general, and especially for the lower end of the ileum. Of the three sizes he prefers that which is about equal to 21 millimetres in diameter; it is the smallest and adapts itself to the situation more readily than the others. Now the questions suggested by M. Chaput's remarks are these: Do American citizens, as a rule, possess more voluminous intestinal tracts than their French congeners, and, if so, how far is cookery responsible for the difference? It is, of course, notorious that French cooking is the best in the world: has this fact any bearing upon the presumably small calibre of the French bowel? Digestion being made easy, so to speak, is it the case that a partial

¹ *THE LANCET*, Nov. 17th, 1894.

² *Gazette Hebdomadaire des Sciences Médicales de Bordeaux*, No. 47, Nov. 25th, 1894.

arrest of development has been the consequence? Is there also discrepancy as regards length between the *prima vie* of the two nationalities? Savages are endowed with magnificent mouth furniture, and dental decay is sometimes said to be a product of civilisation dependent to a great extent upon knives and forks! Has the human race any reason to dread analogous deterioration as a corollary to elaborate cookery? Finally, and by way of closure to these *obiter dicta*, are dainty dishes a physiological mistake?

THE ILLNESS OF THE DUKE OF ARGYLL.

THE Duke of Argyll was seized by sudden illness while addressing a large and most enthusiastic meeting in St. Andrew's Hall, the largest hall in Glasgow, on Wednesday evening last. Some months ago the Duke's promised visit had to be postponed on account of illness, and on Wednesday night when he stepped on to the platform his appearance was that of a man who was barely convalescent. With admirable pluck, however, the Duke persisted in an endeavour to redeem his pledge, but unfortunately the task was beyond his power. The magnificent reception given him by the audience seemed to stimulate him, and his speech at first went well, but after speaking about a quarter of an hour his face became deadly pale, and he sank back unconscious into the arms of his friend Lord Kelvin. He was at once removed to an anteroom, and attended by Professor McCall Anderson, who had been on the platform, and by Drs. S. Sloan and G. R. Mather. His Grace's condition was one of most profound syncope; the pulse had almost disappeared, and difficulty was experienced in keeping up warmth in the limbs. After an hour or two of rest he was carefully removed, in the recumbent posture, to the house of Lord Kelvin, at the College, where he now lies, surrounded by friends, and in a part of the city where the requisite quiet and freedom from disturbance can be obtained. According to latest advices the Duke spent a somewhat restless night on Wednesday, but was conscious, and in other respects is reported to be progressing well. The attack of syncope was of a very profound nature, but now that he has rallied he is free from the severe epigastric pain which he had complained of before his seizure, though some abdominal tenderness remains. His illness was no doubt partly a manifestation of dyspepsia of a gouty character, though it must not be lost sight of that the Duke of Argyll is no longer a young man to whom journeys and the excitements attendant upon political affray can be considered unimportant.

"PITHECANTHROPUS": THE MISSING LINK (?).

AT the meeting of the Paris Society of Anthropology held on the 3rd inst. M. Manouvrier gave an account of the discovery by M. Eugene Dubois, surgeon in the Dutch Army at Batavia, of a cranium and femur with characters partly pithecoïd, partly anthropoid. The remains were found in the lower quaternary strata in Sumatra, and M. Dubois has published a very complete monograph upon them. The cranium of "pithecanthropus" is described as being intermediate in character between the anthropoid apes and the aboriginal Australian. It exhibits an exaggeration of the Neanderthal skull, with its enormous superciliary eminences. The cranial capacity is much greater than that of the largest gorilla, but it is less than in primitive man, and does not exceed that of advanced imbecility. A molar tooth that was found near the skull more resembles in its great size that of a monkey than of a man. The position of the occipital foramen shows that this was seated upon the vertebral column more directly than in any anthropoid ape. It most approximates to the gibbon, but the differences between the human skull and that of the

gibbon are greater than between this specimen and that of man. The femur, which was the only other part of the skeleton found (although as the site of this bone was at some distance from the cranium it may not belong to the same individual), shows that the pithecanthropus could walk erect. The femur, indeed, approximated more to the human type than the cranium. In the course of the discussion M. Duval remarked that the communication was perhaps the most important that had ever been made to the society, and thought the Netherlands Government should be asked to have casts made for presentation to the museum. He considered that the more markedly human type of the femur than of the cranium suggested that the pithecanthropus had learnt to walk in human fashion before it had developed human intelligence.

NURSING IN RURAL DISTRICTS.

MUCH has to be endured by the poor inhabitants of country villages and isolated cottages when sickness has made its appearance in the humble home. Under such circumstances the neighbours generally render willing aid to those members of the family who have to attend upon the patients, and amateur advice prompted by good intentions is abundantly forthcoming. The advantages which would follow if a better system of nursing could be introduced have long been apparent, and about five years ago some benevolent ladies of position inaugurated the Rural Nursing Association founded for the purpose of supplying this want. The council of the Queen's Jubilee Institute, recognising the usefulness of the project, affiliated the new association to their own society, and there is already a great demand for the services of their nurses, who receive their training in London and other large towns. The expense of qualifying the probationers for this charitable work is considerable, and the association's need of funds for carrying on the scheme has found expression in a letter written from St. Katherine's Royal Hospital, Regent's-park, W., and inserted in the *Times* of the 5th inst. Country practitioners will fully recognise the utility of this movement, which will directly benefit the patients and ultimately tend to improve the quality of domestic nursing.

LORD RANDOLPH CHURCHILL.

LORD RANDOLPH CHURCHILL'S condition during the last few days has been generally marked by an increase of cardiac weakness, with tendency to coma, interrupted by such occasional intervals of rallying and return to consciousness as are common in the advanced stage of general paralysis.

AFTER the dinner of the staff of St. Thomas's Hospital on the 12th inst. Dr. Ord expressed the sympathy of his colleagues with Dr. Cullingworth in the recent vexatious action unsuccessfully brought against him by a patient and presented him with a cheque for the sum which they had individually and collectively subscribed as a token of their appreciation of his conduct as a physician and regard for him as a colleague. Dr. Cullingworth, who gracefully replied, thanked those present for the unexpected expression of their kindness to him, and assured them that the knowledge of their support was a great help to him during the worries of the trial.

AN urgent appeal for public help is about to be made on behalf of St. Thomas's Hospital by the President, H.R.H. the Duke of Connaught and Strathearn.

WE understand that the Duke of Cambridge, President of the German Hospital, will take the chair at the fiftieth anniversary dinner to be held in April.

DIFFICULTIES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

I.

We are so frequently asked to advise correspondents as to difficulties which have been met with under the system of compulsory notification inaugurated by the passing of the Infectious Disease (Notification) Act, 1889, that we think it well to collect together in one set of articles the principal points as to which doubt and difficulty have arisen, and to place on record the various decisions and official interpretations which have been given with regard to them. Some of these have already been referred to at intervals in the columns of THE LANCET in answer to correspondents; others, again, have not been published in any form which is available for the purposes either of the medical practitioner or of the medical officer of health; and as regards both there will be advantage in putting them together in a form that will admit of easy reference. In doing so we would at the outset observe that, except when otherwise stated, all our comments apply to proceedings under the general Act of 1889, and not to the special Acts and codes of regulations under Provisional Orders which came into operation before 1889.

1. *Duties of the Medical Officer of Health under the Act.*

We refer here to the question whether the duties of the medical officer of health have in any way become changed in consequence of the passing of the Infectious Disease (Notification) Act of 1889. This question often arises in consequence of complaints made by local authorities to the effect that medical officers of health have failed to visit houses where infectious disease has occurred, although they have received notification to that effect. On this point the answer is perfectly clear. The Notification Act does not add to the duties which medical officers of health were required to perform before the passing of that Act. Those duties were defined under an Order of the Local Government Board, and they were not altered when the Act was passed. Whatever duty attached to a medical officer of health on receiving information as to the occurrence of infectious disease in his district antecedent to the passing of the Act still holds good; but no new duty has been assigned to him in this respect. The character of his work and the performance of any special duties remain the same; the only change that has taken place is that under the system of compulsory notification he hears of many more occurrences of infectious disease than he formerly did, and in this way duties which have always devolved upon him have undergone considerable increase. This is a point that deserves serious consideration in connexion with the revision of salaries; but when the question is asked whether a medical officer of health is bound to visit every case of infectious disease, simply because he now receives his information through the agency of a compulsory instead of a voluntary system, the answer is "Certainly not." Just as formerly, the responsibility of paying a personal visit in consequence of information received, or of not paying such a visit, devolves on him and on no one else. He alone is the judge as to the necessity or not of such a visit, and he alone will bear the responsibility of any failure to estimate aright the import of the information he receives, whether by the aid of a notification certificate or otherwise. The difference following the adoption of the system of notification is that if a certain percentage of attacks—whether 10 per cent. or 50 per cent.—calls for a personal visit the large increase in the number of cases heard of under the notification system necessarily results in this percentage being calculated on a much greater number of cases than formerly. When, therefore, local authorities ask a medical officer of health to undertake to visit every case of notified infectious disease they

make a demand upon him which is altogether beyond his duties as officially laid down. It is for the performance of those specified duties that the salary of a medical officer is paid; and if he ties himself in advance to the performance of additional ones it is to those alone who have pressed this further duty upon him that he can look for a corresponding increase in his remuneration.

Writing on this point to the chairman of the Milford urban sanitary authority on Nov. 23rd, 1889, the Local Government Board stated as follows: "The Infectious Disease (Notification) Act, 1889, where adopted, confers no new powers upon the medical officer of health, but is designed to afford him such immediate information of the outbreak of infectious disease as will enable him promptly to take such measures as are prescribed by the instructions (see Art. 18 (6) of the Order of March 8th, 1880) and authorised by the existing law (see Section 120 of the Public Health Act, 1875)."

Again, on Aug. 8th, 1890, the Local Government Board addressed a letter to the medical officer of health of South Molton to the following effect: "I am to state that the Infectious Disease (Notification) Act, 1889, does not impose fresh duties on a medical officer of health, but merely increases the sources of information upon which he acts in the discharge of his existing duty in relation to infectious disease. When that duty is determined, as in the South Molton urban sanitary district, by the Board's Order of March 8th, 1880, the medical officer of health has to take the steps indicated in Article 18 (6)—viz.: where the information points to an 'outbreak of any contagious, infectious, or epidemic disease of a dangerous character,' to 'visit the spot without delay and inquire into the causes and circumstances of such outbreak,' and to take such further action as may be necessary within his powers." [We may here state that the words quoted in this letter remain unaltered in the last issue of the Order in question.]

By some this has been interpreted to imply that each notified case of infectious disease is to be regarded as "an outbreak" of a contagious, infectious, or epidemic disease of a dangerous character, and that a visit from the medical officer of health is in consequence requisite. But the letter in no way implies that knowledge of disease under the Act as to notification calls for different action from knowledge acquired antecedently to, or otherwise than under the Act. Indeed, it is obvious that many cases of notified disease call for no visit whatever on the part of the medical officer of health. When, for example, scarlet fever is prevalent in a district, and when the medical officer of health has already visited the locality and arranged with the local medical practitioners and the sanitary inspector as to all measures of disinfection &c., it would be waste of time for him to pay a visit when each further case is reported, especially when the report comes from a medical practitioner who adds to his information that the case is well housed and isolated, and that all due precautions are being taken. The utmost that could be wanted in such a case would be a visit from the sanitary inspector with regard to the supply or use of disinfectants and the control of school attendances.

Indeed, where an effort has been made by sanitary authorities to define "an outbreak" under the Order as including all cases of infectious disease coming to the notice of a medical officer of health, the Local Government Board have declined to accept such interpretation, and they have explained that the responsibility for regarding one and another occurrence of infectious disease as constituting "an outbreak of a dangerous character" rests, not with the local authority, but with the medical officer of health. Even before the passing of the Act as to compulsory notification this attitude was adopted. Thus, writing as to this question in the case of the East Molesey urban sanitary district as far back as Feb. 22nd, 1884, the Local

Government Board stated: "With respect to the interpretation to be placed on the words 'outbreak of any contagious, infectious, or epidemic disease of a dangerous character' for the purposes (of the Section in question) I am to state that the Board are in the habit of holding the medical officer of health responsible for the judgment which he forms on the question whether any case or cases of contagious, infectious, or epidemic disease constitute an outbreak for the purposes of this Section, and have thought it undesirable to lay down minute rules in the matter."

Whilst, therefore, we should advise the medical officer of health to err on the side of paying unnecessary visits, rather than in omitting visits where there is any doubt as to their necessity, yet it should be remembered that no fresh duty as to such visits devolves on him because of the adoption of the Act as to notification, and that since he alone has to bear the responsibility for the results of any failure to pay a personal visit it is for him, and him alone, to decide whether the information he has received, whether as the result of notification or otherwise, brings the occurrence within the scope of the section of the Order which requires him to pay that visit. The section defines the object of the visit. It is that the medical officer of health shall inquire into the causes and circumstances of the occurrence with a view to advising whether, and what, measures are required to prevent the extension of the disease. It is for him to judge how far a personal visit by himself is in each case necessary to secure those ends, or how far those ends can be secured without a personal visit to the locality.

THE HOUSING OF THE POOR AT BUDAPEST.

WHAT THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY DID NOT SEE.

(FROM OUR SPECIAL CORRESPONDENT.)

No. II.¹

To the description of the unwholesome dwellings I was able to visit at Budapest I would now add some quotations from official documents. These are of double importance: first, they give a fuller conception of the state of things that has been allowed to prevail; and, secondly, they prove that the authorities cannot plead ignorance of these grievances. So far back as the summer of 1883 Dr. Nemenyi, member of the Budapest town council, raised the question, and a committee was appointed to inquire into the cause of the scarcity of dwellings, and an official report was issued entitled "Yelentés a Budapesti lakás ügy tárgyában, 1883." Among other significant details given in this report I find that at that time 27·37 per cent. of the habitations in Budapest had no kitchens; thus in these places cooking and washing were done in the living and sleeping room. Ten years later Dr. Gustav Thirrnig, Vice-Director of the Statistical Office, published another report on overcrowding. In this report it is stated that the number of inhabited rooms and cabinets without windows is so large that they cannot be considered as exceptions. Even stables are used as dwellings, and thirty-seven stables were found to be overcrowded by human beings. Nor were they inhabited only by stablemen, but by market gardeners, labourers, porters, and even domestic servants. Then fifteen poor labourers were discovered sleeping in the engine-house of the Royal Hungarian State Railway. In the riding school of the Franz Josef Barracks the tailor of a regiment, his family of eight, and two assistants were located. In the Soroksár-road eleven gardeners lived in wooden huts meant to be used as places for storing refuse. In the Jászberéng-road there were several tent dwellings, some containing as many as twenty labourers. In the kiln of a brick factory twenty-four men and four women lived together. In Steinbruch nineteen holes and natural caves in

the rocks were discovered not only to be inhabited but overcrowded by 182 persons. In the open fields by the outer Jászberéng-road and in the woods of Bächerwald people were sleeping. A whole family of labourers had made their home in a ditch at Bakosfalva, while a family of five persons was living in a railway waggon at Pulverturmried. Altogether I find that 2000 persons are described as living in places defined in the official statistics as "non-dwellings." On p. 890 are the following remarks: "The lodgings are in general damp, dark, and unhealthy. In some of them there are not even ten cubic metres of space per tenant. Indeed, in some tenements there are only seven or six, and here and there only two or three cubic metres of air per head. One-third of the inhabitants in these overcrowded tenements have no beds to sleep upon, and must content themselves with some other kind of resting-place or must sleep on the floor. Of those who have beds only one-tenth have beds all to themselves; the others are forced to sleep two, three, and even more than three persons in one bed."

Nor are the workers in factories, who have something like regular employment, much better off. In a pamphlet published in 1891 by Dr. Emanuel Somogyi, entitled "Die Lage der Arbeiter in Ungarn," the writer says: "That the wretchedness of the dwellings causes the economical and moral ruin of workmen's families cannot be disputed. This question has often been dwelt upon by writers on economics. Social statisticians have frequently given objective descriptions of circumstances concerning such dwellings of the working classes that would make the readers shudder, and such scenes are unveiled as would frighten even a novel writer of the naturalist school." At Budapest thirty-one factory owners have built dwellings for their workpeople, which they let out at weekly rents, and here the workers obtain cheaper lodgings. One hundred and thirty other establishments give their workpeople lodgings *gratis*, or rather include the rent in their wages. The number of workmen thus lodged was estimated at a little over 6,000. In these rent-free lodgings the most distressing overcrowding prevails. There are 120 rooms filled by people who for the most part are occupied as brick-makers. In each room three or four families are huddled together without regard to the numbers composing each family. The unmarried workmen sleep in sheds. In the distilleries sleeping-halls are erected; straw or mattresses are spread out on the floor. There is no indication that the bedding is ever washed, nor is there any ventilation provided. The official inspector of manufactories remarks in his report of the year 1887, p. 61, that "the people had an existence unworthy of men."

What is perhaps even more disheartening than all these details is the fact that so far as the overcrowding is concerned there is no improvement. On the contrary, matters are becoming worse and worse. According to the official figures there were in 1880 as many as 43,815 persons living at Budapest in dwellings where four or more persons inhabited a single room; but in 1890 the number of persons thus overcrowded is set down as 64,106. Nor is this merely due to the general increase of population. Ten years ago the proportion of persons living four and more in one room was equal to 12 per cent. of the entire population, while to-day the proportion is equal to 13·2 per cent. One improvement has, however, been accomplished: the number of cellar dwellings has decreased. Ten years ago there were 5217 underground tenements with 31,137 inhabitants, while in 1890 there were 4641 such cellar dwellings with 26,140 inhabitants.

The prevalence of cholera at Budapest in 1893 cannot have surprised the authorities. The documents from which I have made the above quotations were familiar to the administrators of the town. These terrible statistics were again brought forward at the International Congress of Hygiene and Demography by Dr. Josef Schwartz in the remarkable paper to which I have already alluded, and I was naturally anxious to see what had been done. I found that the municipality, under the stress of the cholera scare, had built on the outskirts of the town some wooden barracks which, though at first intended as cholera hospitals, are now used as cheap lodgings to relieve the overcrowding of the central portions of Budapest. I visited one of these wooden cholera isolation barracks. They consist of wooden pavilions. With the exception of the caretakers, the tenants are driven out during the daytime. The first pavilion I entered is inhabited by twenty-four women and several children. Another one has sixty occupants. The scarcity of furniture was very apparent. There are no

¹ The first part was published in THE LANCET of Jan. 5th, 1895.

chairs and no separate beds. The tenants must lie down, side by side, on bench beds which hold twelve or more persons. On these broad planks there are small, narrow mattresses and some blankets. At the foot of the bench beds there is a long board, which serves as an immovable seat. Then there is a rough wooden table, which has to be carried up to the seats. This and a little shelf above the beds are the only accommodation given. There is no sanitary convenience whatsoever within these dormitories, and it is necessary for the inmates to go out in the open. Outside there are closets, which consist simply of a board placed over a huge open cesspool. There is no pan, trough, or pail, but in each closet a partition some twenty inches high prevents those who enter from walking into the cesspool, and also serves as a sort of seat. This aperture, subdivided into closets, is some six yards long and perhaps half a yard wide, and below are the faecal matter and urine of some 400 people. There is absolutely nothing else. No water, no sand, no ashes, nothing to reduce the odour, to dilute the foul matter, and absolutely no covering to prevent the emanations reaching the outer air. The stench is, therefore, perceptible at a great distance. There are altogether six pavilions inhabited by 436 persons, each paying about a penny per day for the privilege of sleeping here. Though this charge is small, the municipality is realising a large profit on the undertaking. There are no sewers and no drains here. The slop water is simply thrown on to the bare earth, and it either sinks into the subsoil or flows into a neighbouring field where there is much stagnant water. Close by the wooden pavilions there are small cottages which have rooms let to married couples for 1-50 fl. per week. The maximum number of inhabitants in one room was two parents and six children. The room measured 3-70 by 4-21 metres and was 3 metres high. In these cottages there was a general aspect of equalor. No attempt seems to have been made to inculcate principles of hygiene; and when I was attempting to resist the nauseating effects of the open cesspool, which is only emptied three times a year, and treading slop-sodden earth in front of these wretched municipal dwellings, I could not help thinking of the model common lodging-house built in Parker-street by the London County Council. If municipal intervention cannot produce anything better than the penny plank beds provided by the Budapest municipality in its wooden cholera barracks the less of such intervention the better. The very sight of this place, especially the open cesspool and the absence of drains, is enough to convince anyone that the Budapest authorities have not yet any idea of what their duties should be in respect of the housing of the poor. How can the municipality, as the sanitary authority, call upon landlords to build sanitary dwellings, to lay proper drains, and to trap, flush, and ventilate every soil and waste-water pipe if that authority itself lodges on its own premises several hundred poor people without providing them with any of these sanitary requisites? The one great use of a municipal lodging-house or municipal tenement is that they should serve as an example to private owners and thus raise the standard all round. This is what the tenement cottages of the Huddersfield municipality, what the common lodging-houses of the Glasgow municipality, have already accomplished, and this good example is now being followed by the London County Council. The municipality of Budapest, by building and letting out as habitations wooden pavilions where there is no decent separation of beds, no chamber utensils, no semblance of comfort, no drainage, and no sanitary closets, is setting, not a good, but a very bad example.

In conclusion, a few words are necessary concerning the increase of population in Budapest and the vital statistics of that town, for these very clearly demonstrate the life-wasting results of the inefficient housing of the poor. At the beginning of this century, when there were already 55,000 inhabitants at Berlin, 300,000 at Naples, and 720,000 at Paris, Pest was but a small district with a population scarcely exceeding 2000. In 1870, shortly after the recognition of Hungarian autonomy, there were 70,000 inhabitants at Buda and 200,476 at Pest. In 1891 there were 92,465 inhabitants at Buda and 399,772 at Pest, and 14,147 soldiers. It is calculated that from 1801 to 1891 the proportion of augmentation of population has been equal per annum and per 1000 to 37-7 in London, 38-1 in Paris, 53-9 in Vienna, 70-7 in Glasgow, and 90-7 in Budapest. The birth rate at Budapest, though still very high, has decreased considerably. Towards 1870 it was about 44 or 45 per 1000, and it is now 35 or 36 per 1000. The great increase of popu-

lation is due to migration into the town rather than to the birth-rate. This has a very important bearing on the death-rate, for the people who come to Budapest in search of work are in the prime of life. They increase the total of the population, but decrease the proportion of deaths. In Hungary young persons under fifteen years constitute 37-48 per cent. of the rural population and 32-99 per cent. of the population in the towns, but at Budapest they only amount to 26-11 per cent. of the population; therefore the death-rate ought to be very low, as so small a proportion of the population are of the age when most deaths occur. Actually the deaths of children under five years are equal to 44 or 45 per cent. of the total deaths; but the insanitary conditions tell on the adults also; for, whereas the proportion of persons who die between the ages of fifteen and forty years amounts in 100 deaths to 39-92 among the rural population and to 40-47 in the towns, it is equal to 50-73 per cent. at Budapest. Nevertheless, the death-rate of Budapest has shown some signs of improvement during the last ten years, though it is difficult to say how far this is due to the greater influx of adult immigrants and to the reduction in the birth-rate. In any case the death-rate is still very high. The average for the last ten years would exceed 30 per 1000 per annum, and if, in respect to age, the population of Budapest was like that of most other towns the death-rate would be much higher still. Thus the vital statistics confirm all that has been said as to the insanitary state of the town. These unwholesome conditions, resulting in this great and preventable loss of human life, are in the main caused by the overcrowding and unsuitable dwellings. A good Building Act and a stringent law against overcrowding, with a well-organised staff of inspectors to enforce the same, are most urgently needed at Budapest. Till reforms of this description are energetically carried out, Budapest, in spite of its beautiful buildings, palaces, squares, and broad thoroughfares, will remain but a whited sepulchre.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of subscribers to the British Medical Benevolent Fund was held at 84, Brook-street, Grosvenor-square, W., the residence of the treasurer, at 4 P.M. on Thursday, Jan. 10th. The chair was taken by Dr. C. J. Hare, in the absence of the President, Sir James Paget, Bart., F.R.S. Amongst those present besides the officials were: Drs. Holman, Baines, Lowe, Brett, Milson, Eastes, and Sidney Phillips; and Messrs. Mould, Roche, Lynch, Kiallmark, Morgan, Parker, Young, and Churchill. Before proceeding to business the subscribers present desired the secretary to convey to the President an expression of their sympathy with him in the loss of Lady Paget, and regret for the sad reason of his inability to preside as usual.

The treasurer's financial statement and the report of the committee were presented by the honorary financial secretary, Dr. Samuel West, who had succeeded Dr. Sidney Phillips in the course of the year, and from them it appeared that, in the grant or immediate relief department, the receipts had been as follows: subscriptions, £1083 14s. 5d.; donations, £707 8s. 4d.—together, £1791 2s. 9d.; while £1759 had been expended in grants to 169 applicants. At the close of the year there were 104 annuitants of £20 each, absorbing £2053, and the income from investments to meet these annuities had been £1938 11s. 3d. Two legacies had been received—one of £100 from the estate of the late Mr. E. Newton, F.R.C.S., formerly a member of the committee; and one of £500 from that of the late Mr. T. Madden Stone, but the latter had been received too late for inclusion in the balance sheet. The expenses, including the collection and distribution of £3812, the printing, postage, and stationery, the collector's commission, and sundry incidental expenses, had amounted to £161 13s. 10d. The report of the committee mentioned the objects of the society and the various methods of applying the funds at disposal; and while they felt able to speak well of the annuity department they were persuaded there was room for a great deal of improvement in the contributions given for grants, which were wholly inadequate to meet the requirements of applicants; so much so that it had been necessary to use the whole of the large donations, instead of investing one-half according to the usual custom.

The committee were re-elected, and to fill the vacancies in the number Mr. Howard Marsh, Mr. John Tweedy, and Dr. Wm. Travers were elected. Messrs. Mould, Bartrum, Hodgson, John Terry, and Henry Terry were elected vice-presidents.

A feature of the fund is the selection of gentlemen as local secretaries, whose functions are to collect subscriptions in their locality, to advocate the claims of the charity generally, and to assist the committee by investigating claims upon the spot and administering the relief granted when it can be more beneficially done than by the usual method of monthly instalments through the Cheque Bank. The services of three gentlemen, Mr. G. F. Hodgson of Brighton, Mr. Bartrum of Bath, and Dr. Cooper Rose of Hampstead, all old and valued friends of the fund, have been lost by resignation, and in the two former instances successors have been appointed. The work done by all these gentlemen is worthy of the highest praise, and it is earnestly hoped that others in various parts of the kingdom will be found willing to undertake similar duties, and so add materially to the utility of the charity.

The usual votes of thanks were proffered to the chairman of committees, the treasurer, and secretaries, and the auditors, and the customary honorarium to the hon. secs. for clerical assistance was recommended. The medical press was duly thanked for the invaluable assistance invariably rendered, and the proceedings terminated with a cordial vote of thanks to the chairman.

The utility of the fund, its quiet unobtrusive help, and the excellence of its methods of applying assistance after careful investigation were eloquently insisted upon by the Chairman, Dr. Hare, in returning thanks, and he most warmly advocated the claims of the charity upon the profession.

Subscriptions and donations are urgently needed, and will be gladly received and thankfully acknowledged by any of the officers of the fund, especially the treasurer and secretaries, and particularly by the hon. financial secretary, Dr. Samuel West.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY MEETING of the Council was held on the 10th inst., the President, Mr. J. W. Hulke, F.R.S., being in the chair.

Mr. Edmund Owen was readmitted as a member of the Court of Examiners, and Mr. William Anderson and Mr. Herbert W. Page were introduced and made declarations in the terms of the oath prescribed by the Charter of 1800 on their admission as members of the Court of Examiners.

A resolution was adopted congratulating Sir John Eric Erichsen, past President of the College, on his receiving the honour of baronetcy.

The recommendation from the Committee of Management that University College, Nottingham, be added to the list of recognised places of instruction in chemistry, physics, practical chemistry, and biology was adopted.

The formulae for the alteration of Sections 4, 16, and 25 of the by-laws were approved and ordained by the Council, and the solicitor of the College was instructed to take the necessary steps for submitting the formulae to the Secretary of State for Home Affairs for sanction and ratification.

The President reported the proceedings at the half-yearly meeting of Fellows on the 4th inst., and stated that there were fifty Fellows present, including fifteen members of Council. The resolution passed at that meeting, requesting the Council to appoint a conjoint committee of members of the Council and other Fellows to consider the desirability of obtaining a new Charter, together with the details thereof, was read, but the full consideration of the resolution was deferred to a subsequent meeting.

Mr. Bryant, on behalf of himself and Sir James Paget, reported the presentation to the College, by Mr. William Hunter Baillie, of portraits of John Hunter and William Hunter, John Hunter's clock, and two volumes of autographs. The autographs contained in these volumes are of great interest and very valuable. The Council passed a resolution thanking the donor for his gift.

A letter was read from the honorary secretaries to the annual meeting of the British Medical Association, to be held in London from July 30th to Aug. 2nd, 1895, and it was

decided that a conversazione should be given by the College to the Association.

The next meeting of the Council is to be held on Feb. 7th, as the Hunterian Oration is to be delivered on the 14th of that month.

MATTEI REMEDIES IN COURT.

ON Wednesday, at the Worksope (Notts) County-court, his Honour Judge Masterman, M.A., D.C.L., had before him a number of cases which should not be without some interest to the medical profession generally.

Mrs. Blakeley, agent for Count Mattei, and who lives at what is known as the "Mattei Depot," Greenlea, Newcastle-avenue, Worksope, sought to recover payment from a number of her customers. The sums claimed were small, ranging from a few shillings to a little over £2 each, and were for "Mattei remedies" supplied. The claims had previously been, in the ordinary course, before the Registrar (Mr. J. Snow Whall), who, not feeling justified in making the desired orders, referred the whole of the cases to his Honour. There were about a dozen defendants altogether, and nearly all of them answered to their names when the cases were called on. The plaintiff, Mrs. Blakeley, did not appear in person, but was represented by a young woman named Nellie Pinder, who was examined by the judge. In reply to his Honour she said the medicine in the bottles did not come from Italy already made up, but was made up by the plaintiff at Worksope. His Honour: Is it poisonous? No, sir.—Is there no poison in it? No, sir.—Have you got the prescription? Yes, sir; it is Dr. Johnson's prescription. The witness handed up the prescription, from which his Honour read the formula Ac. 31, p. 1. which the girl said applied to Count Mattei's drugs. His Honour remarked that he could not tell from this whether there was poison in the medicine or not. But surely the law did not allow unlicensed persons to go about dispensing medicine of this sort without knowing what was in it—it was a dangerous thing if it did. The defendants—mostly women—were then called up before his Honour, and many of them made voluntary statements. One said the plaintiff promised to cure her husband in three weeks, but he had never been able to do anything since, and he had been at home fifteen weeks. Then, she added, the plaintiff sent the same medicine for all complaints. Six pills were 2s. 6d., and they were put into a bottle of water.—His Honour: I do not see that it has done much harm. All the defendants said it had done no good, and one said she was worse after she took the medicine. Still another brought up a bottle containing a transparent colourless fluid, which she said was some of the medicine, but it was "nothing but water." His Honour: You will have to pay if it is. Another brought some of the pills enclosed in the stamped wrapper, and another said there were two bottles of the medicine, "one for night and the other for morning." His Honour took possession of two bottles and said he would have the contents analysed by the Public Analyst. If they contained poison the defendants would not have to pay, but if they did not judgment must be given against them. Meanwhile, he adjourned the cases for a month. At Wednesday's court, when the cases should have again come on, it transpired that they had all been withdrawn by the plaintiff, but one of the defendants attended to claim his expenses. The application was opposed by Mr. W. A. Charles of Retford, solicitor, who now appeared for the plaintiff and gave as his grounds for opposing the application that the plaintiff brought the actions in ignorance, but upon being advised saw that she was wrong entirely. Further, she had already lost the entry fees, and she gave notice to the defendants of the discontinuance of the proceedings. He admitted that the plaintiff had no cause of action.—His Honour: Then you must pay the defendants for coming. The costs of the applicant were accordingly allowed. His Honour then stated that the report of the county analyst stated that he failed to find anything in the bottle except tap water, and he was satisfied that there was *no appreciable medicinally active ingredient present*. His Honour added that it must be remembered that it was not proved on oath before him that the bottles contained the medicine; they were simply handed to him by one of the defendants.

THE HEALTH OF THE NAVY IN 1893.

A COPY of the Statistical Report of the Health of the Navy for 1893, presented to the Lords Commissioners of the Admiralty by the Director-General of the Navy, and ordered to be printed by the House of Commons, is before us. It first of all deals with the health statistics of the total force, and this is followed by the statistics of the home station and the various foreign stations at which the different squadrons of Her Majesty's fleet are employed, and the irregular force, with an appendix of tables &c. The various sections dealing with the fleet at commands and stations abroad are illustrated by many useful small maps. The naval health reports differ from those of the army and the various medical reports of the Sanitary Commissioner with the Government of India in that the former are entirely statistical, the latter simply setting forth the results embodied in the tables, with very brief references to the assigned causes of the diseases and mortality. It follows that these naval health reports mainly consist of facts and figures which, from their nature and from the fact that they relate to a past year, are somewhat dry reading, and present little scope for commentary, criticism, or speculation. There are no papers of professional, geographical, or topographical importance or interest to be discussed.

The total force in the service afloat in 1893 was 60,120 officers and men, of whom 56.45 per cent were between the ages of fifteen and twenty-five, and 30.65 per cent. between the ages of twenty-five and thirty-five; only 1.54 per cent. were above forty-five years of age. We learn that the returns of the total force for 1893 are of a satisfactory nature. The entire number of cases of disease and injury give a ratio of 954.42 per 1000 of the mean force, which, with the exception of the preceding two years, when the ratios were slightly less, is the lowest recorded since 1856, when the publication of the present system of statistical reports commenced. Owing to the disastrous loss of the *Victoria*, when 358 deaths by drowning occurred, the death-rate is high. The number of deaths in 1893 was 679, which gives a ratio of 11.20 per 1000, an increase of 5.71 per 1000 in comparison with 1892, and of 4.69 on the average of the last six years. There is an increase in the ratio per 1000 of cases of constitutional syphilis in 1893 in comparison with that of the last six years; indeed, the report tells us that at certain stations the cases of secondary forms of the disease numerically exceed those of the primary—a matter of rare occurrence. The lowest sick-rate was on the South-East Coast of America station and the highest on the China station. The ratio per 1000 of men sick daily on the home station was 41.41; Mediterranean, 37.26; North American and West Indian, 30.66; South-East Coast of America, 27.94; Pacific, 48.38; West Coast of Africa and Cape of Good Hope, 38.58; East Indies, 47.21; China, 52.01; Australia, 36.85; and in the irregular force, 46.46. The average ratio of sickness for the total force was 41.32 per 1000, which is a decrease of 0.37 when compared with the preceding year. The ratio of invaliding for disease was 25.38 per 1000 and for injury 1.66 per 1000, the total invaliding rate for disease and injury being 27.04 per 1000.

There were 190 entries for enteric fever in 1893, of which 62 were on the home station; the remainder were mainly on the Mediterranean and North American and West Indian stations, and other stations abroad. The entire number of deaths from this disease was 37, and the invalidings 20. A solitary instance of yellow fever, which was fatal, occurs in the records of the South-East Coast of America station. Only 7 cases of small-pox are recorded.

Among the causes of inefficiency in the fleet venereal diseases occupy as usual, and seemingly as a matter of course, a very high place. There were 9321 cases; 3106 being of primary syphilis, 1593 of secondary syphilis, and 4622 of gonorrhoea and its sequelae. The number invalided for these diseases was 198, and there were 5 deaths. The loss to the nation from the number of naval seamen and from the loss of time during which they remain incapacitated for duty, to say nothing of the immediate and remote con-

sequences of this class of disease, is a matter for serious consideration. The subject is confessedly a very difficult one to deal with, and in the present state of political feeling with regard to it there does not seem to be much chance of doing so effectively. But the increasing prevalence of these diseases in the Services, and especially in the army in India, must sooner or later force itself upon the attention of our legislators.

SANITARY DISTRICTS AND REGISTRATION AREAS.

MEDICAL officers of health and others interested in the construction of health and mortality statistics have long had reason to deplore the want of uniformity and the constant overlapping between the boundaries of sanitary districts and of registration areas. There is ground for much satisfaction in the fact that the Local Government Act of 1894 has removed the main difficulty which stood in the way of more general uniformity in the boundaries of these two classes of areas, without which the construction of thoroughly trustworthy vital statistics for sanitary districts is rendered exceedingly difficult, if not impossible. For many local reasons it is obviously desirable that the subdistrict, which is the unit of registration areas, with a resident registrar, should include one or more entire civil parishes. Urban districts, however, until recently, included in many, if not in most, cases parts of civil parishes, and, therefore, registration subdistricts were in very few cases entirely situated within one sanitary district. By the operation, however, of the Local Government Act of 1894 every parish partly situated in two sanitary districts necessarily become two separate parishes. It is, therefore, now possible, as vacancies occur in the office of registrar of births and deaths for the various subdistricts, so to vary the grouping of the parishes as very materially to simplify the construction of vital statistics and to consolidate the registration arrangements for many of the towns which have hitherto suffered much inconvenience from these overlapping boundaries. To take only one town as an example: the Lancashire municipal borough of Middleton, with a population of little more than 20,000, was until recently partly situated in the three Poor-law unions of Oldham, Bury, and Prestwich; and in order to ascertain the death-rate within the borough it has been necessary to obtain, from no less than five registrars, returns relating to parts only of their respective subdistricts. The residents of this borough, moreover, have had to ascertain which of these five registrars it would be necessary for them to visit in order to register births and deaths. It may be hoped that in the near future it will be possible very considerably to simplify these arrangements. It is, however, unfortunately the fact that Poor-law guardians frequently attach more weight to the value of the patronage which they exercise in appointing the local registrars of births and deaths, in case of vacancies, than to the question of simplification of boundaries or the facilities for the construction of vital statistics. It appears that there is at present a vacancy in the office of registrar for one of the suburban subdistricts of Bolton, which includes a small part of the county borough and a few rural parishes. The Registrar-General, with a view to simplify boundaries and to carry out the spirit of the Local Government Act of 1894, proposes to add the part of this subdistrict which is within the borough to another subdistrict which is entirely within the borough, in order eventually to consolidate the whole borough in two subdistricts, instead of, as at present, small parts of the borough being situated in three outlying subdistricts. The Bolton guardians have, however, memorialised the Local Government Board to withhold their sanction to the simplification of boundaries proposed by the Registrar-General. It is, however, to be hoped and expected that the Local Government Board, which fortunately has Sir Walter Foster, M.D., for its Parliamentary Secretary, will recognise the importance of encouraging, rather than checking, the gradual process of introducing greater uniformity between sanitary districts and registration areas. It is not easy to over-estimate the importance of simplifying the construction of trustworthy mortality statistics for urban and rural sanitary districts in connexion with general health progress.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Pancras Urban Sanitary District.—The general and infantile mortality in the several subdistricts in St. Pancras is well shown in the accompanying table :—

Subdistrict.	Number of deaths.	Death-rate per 1000.	Infantile mortality.
Regent's-park	761	20·3	147·5
Tottenham-court... ..	577	21·8	199·7
Gray's-inn-lane	749	26·7	236·2
Somers-town	829	24·7	213·0
Camden-town	352	24·5	170·5
Kentish-town	1895	19·7	150·4
St. Pancras	5163	21·8	176·0
London	91536	21·3	164·3

Dr. Sykes gives in his report a very interesting and concise account of an outbreak of scarlet fever which occurred in October, 1893, amongst the consumers of milk from a certain farm at Hendon. The milk in question was supplied to the customers by a milk vendor at Highgate, who obtained his milk from two sources other than the Hendon farm. It was possible, however, by a careful inquiry as to the distribution of the several supplies, to exonerate all but the Hendon milk from blame; and it appears that before Dr. Sykes's visit to the farm the county veterinary inspector had ordered the milk of five cows with sore teats to be withdrawn from the common supply, and the cows themselves to be isolated. The story which Dr. Sykes tells gives a good idea of the great difficulty and delay occasioned by having to procure a magistrate's order prior to inspecting the suspected dairies. Before being able to obtain an order to inspect the Hendon dairy Dr. Sykes called on no less than five magistrates in the district in which the dairy was situated, and he also experienced considerable delay before being able to legally enter the Highgate dairy. It seems that antecedently to the outbreak there had been at the Hendon farm one, if not two, cases of scarlet fever among those having to do with the cows, so that in this instance there was apparently illness both of cows and milkman.

Dublin Urban Sanitary District.—The corrected general death-rate of Dublin for 1893 was 28·2 per 1000, a rate which, as Sir Charles Cameron points out, is 4·88 above the mean rate for the thirty-three large towns of England and Wales for the same period. The rate is, however, slightly below that of Manchester and Preston and considerably lower than that of Liverpool. The high death-rate of Dublin is attributed by Sir Charles Cameron chiefly to the poverty and environment of a large portion of the population; and in illustration of this point he observes that one-third of the population live in single room tenements, and that in 1893 no less than 33·2 per cent. of the total deaths in Dublin occurred in public institutions frequented by the poor, a percentage considerably in excess of that observed in London and other English towns. There were eleven deaths from typhus fever in Dublin during 1893, a disease which, Sir Charles Cameron remarks, was once very prevalent in that city. Diphtheria caused in the city a very small mortality, there being but 12 deaths. On the other hand, phthisis, a disease always prevalent in Dublin, caused a death-rate of 3·9 per 1000. The deaths, too, from typhoid fever were in excess of those during any previous year, prolonged drought and heat being, Sir Charles Cameron thinks, chiefly responsible for the excess. The report upon the prevalence of typhoid fever in Dublin, which was drawn up by a committee under the auspices of the Dublin Sanitary Association, is referred to at some length by Sir Charles Cameron. After pointing out that the death-rate from typhoid fever is higher in Dublin than in any other town in the United Kingdom save Belfast, the committee consider in detail the causes instrumental in maintaining this high rate. The disease seems to prevail not only in the city of Dublin itself, but also in the suburbs, although

presumably many of those dying in the suburbs may have contracted the disease in the city. The Vartry water is practically exonerated by the committee, though they draw attention to the manner in which contamination of the water may occur in polluted cisterns. The committee, after considering all the usual methods of the spread of typhoid fever, were led to regard the contamination of the subsoil by polluted subsoil water as the chief agent in the origin and dissemination of the disease; they look, in fact, upon the polluted subsoil water as forming a suitable medium for the growth of typhoid bacilli, and they insist upon the importance of efficient subsoil drainage. In order to ascertain the levels and fluctuations of the subsoil water in several parts of the city wells were made and the levels observed. The result, in so far as the limited observations made went, was to show that the subsoil water was highest in the more elevated parts of the city and lowest in the low-lying portions near the river, this unexpected result being due, it appears, to the fact that the upper portions of the city are on clay and the lower on gravel. The fluctuations of the subsoil water in the trial wells varied from two inches and a half to three feet ten inches. It will be extremely interesting to observe the effect of the subsoil drainage, not only upon the prevalence of typhoid fever, but also upon that of phthisis. Whooping-cough and measles were added to the list of notifiable diseases in May, 1893, but in regard to the former disease Sir Charles Cameron observes that, the uselessness of its notification having been experimentally demonstrated, it has now been removed from the list.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 7072 births and 4901 deaths were registered during the week ending Jan. 12th. The annual rate of mortality in these towns, which had been 18·0 and 18·9 per 1000 in the preceding two weeks, further rose last week to 20·1. In London the rate was 19·3 per 1000, while it averaged 20·8 in the thirty-two provincial towns. The lowest rates in these towns were 14·6 in Derby, 16·8 in Bradford and in Croydon, 16·9 in Leicester, and 17·4 in Cardiff; the highest rates were 22·7 in Newcastle-upon-Tyne, 23·9 in Manchester, 24·1 in Blackburn, 25·7 in Huddersfield, and 28·9 in Liverpool. The 4091 deaths included 363 which were referred to the principal zymotic diseases, against 385 and 399 in the preceding two weeks; of these, 109 resulted from measles, 68 from whooping-cough, 66 from diphtheria, 45 from diarrhoea, 39 from "fever" (principally enteric), 33 from scarlet fever, and 3 from small-pox. No fatal case of any of these diseases occurred last week in Swansea or in Norwich; in the other towns they caused the lowest death-rates in Brighton, Leicester, Burnley, and Nottingham, and the highest rates in Manchester, Salford, Portsmouth, Wolverhampton, and Gateshead. The greatest mortality from measles occurred in Portsmouth, Derby, Halifax, Leeds, Sheffield, and Gateshead; from scarlet fever in Wolverhampton; from whooping-cough in Birkenhead, Huddersfield, and Sunderland; and from diarrhoea in Gateshead. The mortality from "fever" showed no marked excess in the other large towns. The 68 deaths from diphtheria included 34 in London, 6 in West Ham, and 3 each in Bristol, Wolverhampton, Birmingham, and Sheffield. Three fatal cases of small-pox were registered in Liverpool, but not one in London or in any other of the thirty-three great towns. There were 28 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 12th inst., against 15, 16, and 23 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 1 and 8 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1713, against 1931, 1890, and 1779 on the preceding three Saturdays; 130 new cases were admitted during the week, against 116 and 126 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 332 and 319 in the preceding two weeks, rose again last week to 389, but were as many as 454 below the corrected average. The causes of 82, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol,

Oldham, Leeds, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Blackburn, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22.1 and 21.8 per 1000 in the preceding two weeks, rose again to 25.5 during the week ending Jan. 12th, but exceeded by 5.4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10.2 in Perth and 14.2 in Leith to 28.7 in Glasgow and 31.1 in Aberdeen. The 738 deaths in these towns included 58 which were referred to measles, 19 to whooping-cough, 14 to diphtheria, 11 to diarrhoea, 6 to scarlet fever, 3 to "fever," and 2 to small-pox. In all, 113 deaths resulted from these principal zymotic diseases, against 86 and 81 in the preceding two weeks. These 113 deaths were equal to an annual rate of 3.9 per 1000, which was 2.1 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had declined from 54 to 38 in the preceding three weeks, rose again to 58 last week, of which 28 occurred in Glasgow, 19 in Aberdeen, and 5 in Edinburgh. The deaths referred to whooping-cough, which had been 18 and 9 in the preceding two weeks, rose again to 19 last week, and included 15 in Glasgow. The fatal cases of diphtheria, which had been 10, 4, and 11 in the preceding three weeks, further increased to 14 last week, of which 7 occurred in Edinburgh, 3 in Glasgow, 2 in Dundee, and 2 in Leith. The 6 deaths from scarlet fever showed a slight decline from the numbers recorded in recent weeks, and included 3 in Glasgow and 2 in Edinburgh. The 2 fatal cases of small-pox were registered in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 138 and 154 in the preceding two weeks, further rose to 215 last week, and exceeded by 58 the number in the corresponding week of last year. The causes of 50, or nearly 7 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25.4 and 28.3 per 1000 in the preceding two weeks, further rose to 31.0 during the week ending Jan. 12th, a higher rate than in any week since the end of March last. During the thirteen weeks of last quarter the death-rate in the city averaged 23.5 per 1000, against 16.6 in London and 19.6 in Edinburgh. The 208 deaths registered in Dublin during the week under notice included 19 which were referred to the principal zymotic diseases, against numbers declining from 22 to 10 in the preceding three weeks; of these, 11 resulted from small-pox, 3 from "fever," 2 from scarlet fever, 2 from whooping-cough, 1 from diarrhoea, and not one either from measles or diphtheria. These 19 deaths were equal to an annual rate of 2.8 per 1000, the zymotic death-rate during the same period being 1.7 in London and 3.8 in Edinburgh. The fatal cases of small-pox, which had been 6, 10, and 5 in the preceding three weeks, rose again to 11 last week, a higher number than in any week during the present epidemic. The deaths referred to different forms of "fever," which had been 7, 3, and 2 in the preceding three weeks, were 3 last week. The 208 deaths registered in Dublin last week included 31 of infants under one year of age and 61 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in recent weeks. Five inquest cases and 3 deaths from violence were registered; and 69, or nearly a third, of the deaths occurred in public institutions. The city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel John Hoysted retires on retired pay. Surgeon-Captain Edward D. Bringham-Farmar, F.R.C.S. Edin., to be Surgeon-Major.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—5th Regi-

ment, Madras Infantry: Surgeon-Major J. Scott, M.B., I.M.S., to the Medical Charge of the Regiment. 8th Regiment, Madras Infantry: Surgeon-Lieutenant P. C. Gabbett, I.M.S., to the Officiating Medical Charge of the Wing of the Regiment at Cuttack. 16th Regiment, Madras Infantry: Surgeon-Major E. R. DaCosta, I.M.S., to the Medical Charge of the Regiment. Surgeon-Major G. J. Kellie (Bengal), Medical Officer, 4th Lancers, to be Medical Officer of the 2nd Lancers, vice Brigade-Surgeon-Lieutenant-Colonel J. F. Sargent, who exchanges. Surgeon-Lieutenant-Colonel C. J. W. Meadows, Civil Surgeon of Murshidabad, is appointed to act as Civil Surgeon of Burdwan until further orders. Surgeon-Captain G. Jameson, Officiating Civil Surgeon of Rajshahi, is appointed to act as Civil Surgeon of Malada. Surgeon-Captain W. J. Buchanan is appointed, until further orders, to do general duty at the Presidency. Surgeon-Captain T. Grainger, Civil Surgeon of Khulna, is appointed to act as Civil Surgeon of Noakhali until further orders. Surgeon-Lieutenant Johnston has been transferred from general duty, Poona district, to general duty, Sind district. Surgeon-Colonel Robert Harvey, Inspector-General of Civil Hospitals in Bengal, has been granted eight months' leave to England. Surgeon-Colonel Raye will act as Inspector-General of Civil Hospitals in Bengal. Surgeon-Lieutenant-Colonel Patrick Murphy, M.D., retires from the Indian Medical Service.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel T. W. S. Locke, 3rd Battalion, the Suffolk Regiment, is retired under the provisions of Paragraph 82 of the Militia Regulations 1894, with permission to retain his rank and to wear the prescribed uniform on his retirement.

VOLUNTEER CORPS.

Artillery: 1st Worcestershire and Warwickshire: John Henry Blakeney, Gent., to be Surgeon-Lieutenant. 1st Devonshire (Western Division, Royal Artillery): Lieutenant Arthur Lloyd MacLeroy is appointed Surgeon-Lieutenant. *Royal Engineers*: 2nd Cheshire (Railway): Surgeon-Major J. Atkinson to be Surgeon-Lieutenant-Colonel. *Rifle*: 3rd (Dumfries) Volunteer Battalion, the King's Own Scottish Borderers: Surgeon-Lieutenant P. M. Kerr, M.B., resigns his commission; Peter Murray Kerr, Gent., late Surgeon-Lieutenant, to be Lieutenant. 1st Surrey (South London): Surgeon-Lieutenant T. A. Daggs to be Surgeon-Captain. 2nd Volunteer Battalion, the King's (Shropshire Light Infantry): Surgeon-Captain R. de la P. Beresford to be Surgeon-Major. 2nd London: William Arthur Bond, Gent., to be Surgeon-Lieutenant.

THE LATE SURGEON ELLINGTON FRANCIS SIMEON MCKAY, R.N.

The *British Central Africa Gazette* relates the circumstances under which the late Mr. McKay, surgeon on board H.M.S. *Pioneer*, met with his death. It says: "It appears that Dr. McKay was left by H.M.S. *Pioneer* on Oct. 20th for a few days' shooting at a village near the south-west corner of Nyassa. Two days later he started with three boys to shoot elephants. After walking some hours they came to a pool of water, and seeing a lion and lioness a few yards distant Dr. McKay fired twice at the lion and wounded it. Both animals then made off for the jungle. Most of the native attendants then ran away or climbed trees, but the doctor and his Zanzibari boy, Mussa, went in search of the wounded lion. They espied the beast crouching down fifteen yards away, and the doctor fired at the lion's head. At that instant the lion sprang upon the doctor with a terrific roar, and a deadly struggle took place. Dr. McKay lost his rifle in endeavouring to keep the lion off his throat. The beast seized his left arm in its jaws, and clawed his right. Dr. McKay kicked at the lion, which threw him down and began to tear his flesh. Dr. McKay then called to Mussa, who brought the rifle, and Dr. McKay, unable to hold it up, made then made and the lion was shot. A rough stretcher was on Oct. 26th. On the same day, a little later, H.M.S. *Pioneer* returned to find him dead. He was taken to the Universities Mission Station at Likoma and buried in the cemetery there."

BRIGADE-SURGEON-LIEUTENANT-COLONEL HOOPER.

The Lieutenant-Governor of the North-West Provinces of Bengal has taken the occasion of the departure from India of this officer, who was the civil surgeon of Lucknow and is now the President of the Medical Board of the India Office,

in succession to Sir Joseph Fayrer, to place on record his appreciation of the excellent and devoted services which Brigade-Surgeon-Lieutenant-Colonel Hooper has rendered to the Government of those provinces from June, 1861, up to the present time. After eleven years' good service in the Gaol Department as Superintendent of the Central Prisons of Allahabad and Benares he was in 1874 placed in medical charge of the important station and district of Benares. In August, 1891, as a reward for long and approved service, he was transferred to the civil surgeoncy of Lucknow, where he not only earned the approval of the Government, but gained the confidence and affection of all classes of the European and native communities. "In 1881 he received the thanks of his Excellency the Viceroy and Governor-General of India, and between 1878 and 1893, on eight separate occasions, those of the Government of these provinces for the working of the hospitals and other medical institutions under his charge, and throughout a long career he has well upheld the high character of the service to which he belongs."

THE WAZIRI EXPEDITION

Some of the military columns which have taken part in sweeping the enemy's country have had a very trying time owing to the severity of the weather in Afghanistan. At Jandola, which is at an altitude of some 7600 feet, there was much snow and a severe frost, but the health of the force was reported to be good. Much greater care seems to have been taken in the present expedition than on previous occasions of campaigning in that country in providing the troops—and the native army especially, the men of which suffer from cold and exposure more than those of the British army—with plenty of warm clothing.

INCINERATORS FOR INDIAN CANTONMENTS.

The military authorities have had under consideration the extension of the incinerating system in military cantonments of stations in the hills and plains of India, with the view of preventing the pollution of the subsoil and securing surface cleanliness. The main difficulty is the cost of the necessary fuel. The object in view is a very desirable one, for many medical officers and others are of opinion that the pollution of the subsoil is not improbably at the bottom of many of the outbreaks of enteric fever in our Indian stations.

The *Pioneer Mail* states that Surgeon-Colonel Cleghorn, Inspector-General of Civil Hospitals, Punjab, is on his way out to India, and that he will presumably be offered the post of Surgeon-General and Sanitary Commissioner with the Government of India, in succession to Surgeon-Major-General Rice, who will vacate that appointment on March 29th next.

A telegram to the *Times* through Reuter's Agency says: "The stations of Naini Tal and Murree have been selected as the headquarters of the new Bengal and Punjab armies formed under the army organisation scheme which comes into operation on April 1st next."

Correspondence.

"Audi alteram partem."

THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY.

To the Editors of *THE LANCET*.

SIRS,—For many years the Obstetrical Society of London has laboured in the cause of the education and registration of midwives. Meanwhile, until this object be attained by legal means the society has, at great trouble, examined women who have passed through a certain training, and given certificates to the successful candidates. The council of the society, being anxious that its certificate should not in any way offend against the Medical Acts or the ethics of the profession, when drawing it up sought the help of a solicitor intimately acquainted with the Medical Acts. The certificate does not purport to be a legal qualification, and is as much like a legal qualification as the certificates of honour granted by the medical schools to successful students in their classes, or the diploma granted to the successful brewer in a beer exhibition. The certificate, in its present form, has been used by the society for many years without complaint of any kind having been made. During the last two years the society has

received two notices from the General Medical Council pointing out to institutions granting such certificates that the certificate should be expressed in such a form as not to lead to the impression that it is a legal qualification to act as a medical practitioner; but no fault was found with the certificate of the Obstetrical Society. The society, in acknowledging the communication, mentioned the care which had been taken to draw up the certificate in accordance with the views expressed by the General Medical Council. No further communication took place between the two bodies until the society received the resolution of the General Medical Council of Dec. 3rd, 1894, and until then the Obstetrical Society was ignorant of any objection to its certificate on the part of the General Medical Council. I can hardly think that the Council can be fully aware of the full significance of its resolution, for should the society grant its certificate again the following persons will be regarded as guilty of infamous conduct by the General Medical Council—viz., all the past presidents of the society, its trustees, and other officers, most of the examiners in midwifery in the Universities of London, Oxford, and Cambridge, and the Royal Colleges of Physicians and Surgeons—in fact, all the obstetric physicians of note in London. These men, contingently branded with infamy, are well acquainted with the provisions of the Medical Acts, and many or all of them well versed in the ethics of the profession and punctilious in their observance, many of them having held high positions in the colleges and schools, and are held in honour by their professional brethren. None are better informed of the needs of the poor in their travail; none are better able to train and examine midwives; and from their learning, culture, and experience none are fitter to form correct views of what is and what is not professionally infamous. Yet these are the men who have for years been guilty of what is declared to be infamous conduct after Dec. 3rd, 1894, by the General Medical Council. Had the Council conferred with the President of the Obstetrical Society the two bodies could have easily come to an understanding on the matter (for the society has shown every desire that its certificate should be inoffensive) and avoided the ill-feeling which the resolution must inevitably cause.

I am, Sirs, yours faithfully,

JOHN WILLIAMS.

Brook-street, Grosvenor-square, W., Jan. 16th, 1895.

COLLES' LAW.

To the Editors of *THE LANCET*.

SIRS—Dr. George Ogilvie has written in *THE LANCET*¹ on Colles' law a thorough study, in which, entering again upon the discussion about the right or wrong naming of that law, he utterly attacks the Continental writers who contested Colles' titles, and me particularly. The meaning of Colles' statement appeared to Dr. Ogilvie "to be quite clear and definite"; if it were so, no debate would have probably taken place on the point, but in any case Dr. Ogilvie does not seem to have a right to say that our heresy takes its rise from the ground that "some of Colles' statements have been either misconstrued or misrepresented." And, indeed, when he confesses himself that "it may be doubted whether Colles fully realised the theoretical bearing of his law" I dare say we may be allowed to state—finding his text insufficiently clear and poorly definite—that, if Colles has forwarded a true assertion (which proves him to have been endowed with good clinical observation) he did not at all construe it. At least, nothing shows he understood so far clearly, since "not one of his cases is given to demonstrate his law," and avow the theoretical bearing of his law seems to fly very far away when he tells us how, in the case of a respectable mechanic and his wife, he noted that the servant girl received the infection from the infant, whilst the mother [who had about two years before been under his care on account of secondary venereal symptoms, of which he supposed her to have been cured] had not in a degree or in any way suffered from the disease of the child; she had not received any infection from her own child (!), yet the disease was capable of infecting the servant girl? And, however, Colles had seen cases in which the mother remained free from venereal symptoms; but I say the above case shows

¹ Is Colles' Law a Misnomer? *THE LANCET*, Dec. 1st, 1894.

² See Colles, pp. 231, 232, 233.

that he wondered as much in both cases at the mother's immunity had that one been previously free from or afflicted with syphilitic symptoms. "Of these three different ways of stating Colles' law," says Dr. Ogilvie, "that which I designate No. 1 is by far the most definite." Perhaps, had it not been slightly weakened by the case mentioned above, and, more, it is really peculiar that No. 1 precisely has not been quoted by Diday and M. Doyon, "the best advocates of Colles"; but where I can no more follow Dr. Ogilvie is when he does not hesitate to write: "I am not aware that it has been formulated in a better or more concise manner by any subsequent writer." On that point let the English readers be judges themselves:

COLLES' STATEMENT, No. 1.

I have never seen or heard of a single instance in which a syphilitic infant (although its mouth be ulcerated) suckled by its own mother had produced ulcerations of her breasts, whereas very few instances have occurred where a syphilitic infant had not infected a strange hired wet-nurse, and who had been previously in good health.

Colles, anno 1837.

BAUMÈS' STATEMENT.

Observation shows that a mother, having borne in her breast a syphilitic child who DERIVES THE INFECTION FROM THE FATHER'S SPERMIA, does not contract generally when suckling her own child the syphilitic complaint as could a strange hired wet-nurse contract it.

Baumès, anno 1840. (Précis sur les Maladies Vénériennes, Lyon, page 180.)

I am bound to state, in my turn, that, with a philologist declaring he considers the two preceding statements as being equivalent, no more discussion is henceforth to take place. And so perfect is Baumès' statement that A. Fournier, contemporaneously formulating the same idea, uses almost the same terms: "A mother never receives syphilis from her infant, even while it has contagious ulcers, when this infant hereditarily derives syphilis from its father." Besides, there is no cause to prolong the debate; certainly Colles did not catch the bearing of his observation, but he took notice of a clinical fact. He pointed it out, and therefore is worth giving his name, or half its name, to the medical law which we proposed to call Colles-Baumès' law. Moreover, let my honoured opposer be no more afraid. Use is our sovereign master; it has already consecrated the name of Colles' law, which will probably persist in spite of equity. Before concluding, let me state that I should not like to be charged with seriously looking upon a scientific contest from a national point of view. The matter which Dr. Ogilvie alluded to was a light jest that I was allowed to turn with my friends, the late Professor Diday and M. Doyon, à propos of Lyons and Paris schools' scientific rivalry; but I should not wish to be misrepresented as commonly using such ways of discussing. I hope, consequently, this debate will now come to its end, and I should not have answered Dr. Ogilvie's dissertation had not his criticisms been presented in such a paper as THE LANCET, which, being widely read, could, if not refuted, have given wrong ideas about Continental writers' erudition, ways of argumentation, and courteousness.

I am, Sirs, yours truly,

DR. A. MOREL LAVALLÉE,

Ex Chef de Clinique à l'Hôpital St. Louis.

Rue Taitbout, Paris, Dec. 25th, 1894.

"CASE OF DOUBLE POPLITEAL ANEURYSM."

To the Editors of THE LANCET.

SIRS,—I feel honoured by your reference to my case of double popliteal aneurysm published in THE LANCET of the 5th inst. Your criticisms are quite just, but the importance of the points which they raise almost demand one or two observations from me. There can be little question as to the small extent of artery obliterated in cases which have been successfully treated by my method. The recorded experience of others, as well as my own, places this point beyond dispute. As to the obliteration of the artery from the groin down to the aneurysm in the limb treated by Carte's compression, I think it right to say that it may be that the compressor was kept applied too long after consolidation had taken place, thus giving rise to coagulation in the vessel and to its final occlusion upwards from the aneurysm. But as to the comparison of my plan with that of ligature, everyone knows that in the latter the artery is generally obliterated

in at least two places—viz, at the point of the ligature and at the aneurysm—and also more or less above, below, and between these two points. Further, I hardly think that there can be any question that bad results sometimes ultimately come to the patient from this lengthened obliteration of the artery in ligature for popliteal aneurysm and consequent interference with the adequate nutrition of the limb. Such cases I have seen in which the ultimate results could not be accounted for in any other way. In other words, a patient may leave hospital with a cured popliteal aneurysm, but with the limb more or less disabled for the rest of his life. This, at all events, cannot be said of my case.

I am, Sirs, yours faithfully,

WALTER REID.

Jan. 14th, 1895.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—Sir George Johnson has reopened the discussion of the question regarding the existence of sugar in healthy urine. He now brings forward other evidence in support of its alleged absence, but in doing so his position remains unchanged. He seeks to disprove a positive by means of a negative. Sir George Johnson does not seem to see that as long as he remains confronted with the positive evidence afforded by fermentation and by the crystalline osazone production, which is with the greatest facility obtainable (what I have said upon this point is confirmed by German authority), all the evidence of a negative nature that he may bring forward goes for nothing.

I am, Sirs, yours faithfully,

Grosvenor-street, W., Jan. 16th, 1895.

F. W. PAVY.

THE DEBATE ON THE NATURE AND TREATMENT OF PERITONITIS AT THE OBSTETRICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—In the recorded discussion of Dr. Shaw's paper at the Obstetrical Society it seems to me that my views and teaching in this important subject have not been understood as I wish they had been, and that I am thereby submitted to an amount of misrepresentation and denunciation which is not merited. It may be, however, that I am at fault to the extent that I have not plainly expressed myself, but I can hardly put this forward, seeing that Mr. Frederick Treves in his recent address on this subject has most fully expounded my views in a very few sentences, and has given me praise for my advance, which I esteem very highly. In the necessarily abbreviated report of such a debate it is difficult to assert that the misrepresentation must arise from a misunderstanding on the part of the speakers. Thus the President says that he cannot accept my statement that peritonitis could be prevented by purging the patient. I cannot accept his statement that it is now established that peritonitis was produced by micro-organisms. Probably if we were to discuss each of those statements quietly we should find some truth in both, yet in each a large amount of error. Certainly, if I have ever said anything which has been taken to mean that peritonitis is to be prevented by purging I shall withdraw it when I revise my writings, but at present I cannot find it.

Let me briefly restate my position, which has not altered materially since 1885. Now that we have got quit of the rough mechanical and poisonous causes of peritonitis, as by the displacement of the "murderous clamp," by the ligature, and the substitution of gentle washing instead of rough sponging, the great bulk of our operations get well without even a threat of peritonitis, or whatever the condition which caused our heavy mortality may be named. Permit me here now, in intimate connexion with this part of the argument, to correct misstatements which I have lately seen in wide circulation in America, doubtless made by the incredulous for the purpose of reconciling their theories with my facts. The statements are to the effect that I always use boiled sponges and boiled water. To boil a sponge is to ruin it, and I have never made use of any effort, by boiling or otherwise, to sterilise the water I use for surgical purposes. Those who use the word *peritonitis* to signify the

* Union Médicale, March 16th, 1889, p. 412.

usual process of death, or, at least, serious progress towards it, after abdominal operations have got into a way of dividing the disease into "septic" and "non-septic," the natural outcome of which is that the former term is applied to the fatal cases and the latter to those which recover. This may be convenient, but it is neither convincing nor free from a risk of blinding us to the actual facts of the case. From my study of clinical facts and post-mortem appearances I cannot discriminate between "septic" and "non-septic" peritonitis. That there is such a thing as septic peritonitis is made clear beyond dispute by the facts of puerperal deaths, but it is in the history alone that the septic element can be revealed. I have said that the great bulk of our operations now recover without trouble or treatment of any kind. For convenience let us assume that it is 85 per cent.; the other fifteen cases give us troubles of various kinds, and some end in death. Excluding the very few cases of eccentric damage, such as secondary hæmorrhage, injury of ureter or intestine, the troublesome cases have a singular uniformity in their downward progress. Of course they are not all alike; but their resemblance is about as close as are individual instances of any ordinary disease, and their course is about as follows: the first change is one of facial expression, quite indescribable in character, but easily caught by the experienced eye, and a sign which gives warning long before danger is indicated either by pulse or temperature, guides which are by no means infallible; in fact, whilst I rigidly keep to the fashion of recording the curves of pulse and body heat I have long since abandoned reliance on them save as confirmations of what I knew before.

The next indication of downward progress is distension of the epigastrium by collection of gas in the transverse colon. If unrelieved this steadily passes into general distension. Slight occasional beef-tea vomiting comes on speedily after the disturbance is well established, and is rapidly developed into vomiting of bilious matter—at first green, then brown, then coffee-ground, and then—silence. Two points I have long ago and persistently insisted on. The first is the immediate relief of distension by purgatives, by mouth and rectum, so that I have roughly described the process as one of a race between the distension and the treatment. If the distension is not, or cannot be, overcome the patient usually dies. Usually the treatment is effective, for my nurses are drilled in the utmost vigilance in the matter of distension, and engage in its treatment at once, so that in my practice the old-fashioned death from progressive distension has become a rarity. The nurses are, of course, cautioned against the treatment in certain special cases, where it is clearly contraindicated by the nature of the operation. When such cases do succumb the post-mortem reveals the old-fashioned appearances of peritonitis. In the other cases, have I stopped peritonitis in its early stages? or have I prevented it, as suggested by Dr. Herman's denial? or have I cured it? or was there ever peritonitis present in the cases that got well? a question answered by vehement denial by a recent writer. These are very interesting subtleties for some minds—I don't trouble mine about them at all. The success of the purgative treatment of these cases, well enough defined as they must be in the practice of everyone, has now secured a world-wide recognition, and I don't care a fig about pathologico-metaphysical conundra. The second point on which I lay stress is that of time—and here I have not been so successful in securing the ear of the profession. But it is simply this, that after a completed abdominal section symptoms and conditions may occur harmlessly on the ninth day which would be fatal on the fourth. I earnestly ask those practising abdominal surgery to watch for illustrations of this curious fact, and I apologise for its further repetition.

I am, Sirs, yours truly,

LAWSON TAIT.

The Crescent, Birmingham, Jan. 14th, 1895.

PERNICIOUS ANÆMIA.

To the Editors of THE LANCET.

SIRS,—With reference to the report on Pernicious Anæmia in Fiji, by Mr. C. T. W. Hirsch, in THE LANCET of Dec. 1st, 1894, having been myself for nearly three years medical officer in the district from which he writes, I should like to make a few additional remarks. The first notes I found of pernicious anæmia in that district were in 1884 or 1885 in which attention was called to the slight influence drugs

(iron, arsenic, &c.) had on its progress. From 1890-92 it was in my experience very common amongst the East Indian immigrants. Natives and Polynesian immigrants, though working under similar conditions, but feeding more on solid root foods—e.g., yams—and being more cleanly, both in general habits and feeding, were rarely affected. The symptoms and course of the disease, as described by Mr. Hirsch, were much as I observed them, with the exception that out of 100 consecutive cases I found no retinal hæmorrhages. In about 50 cases examined post mortem, without exception I found numerous ankylostoma, and associated with them the same series of changes as described by Mr. Hirsch. Since leaving Fiji I have been pathologist to the Public Hospital, Georgetown, British Guiana, and in the course of some 1400 post-mortem examinations and numerous clinical observations have had ample opportunity of studying the changes associated with the presence of the ankylostoma. I find them in most respects identical with the so-called pernicious anæmia. The blood is thin and has little tendency to coagulate, the red corpuscles are reduced in number (frequently less than 18 per cent. of normal), whilst the hæmoglobin is only proportionately reduced; and the organs—in particular, the heart, kidneys, and the liver—are in an extreme state of fatty degeneration. In marked contrast with the latter is the highly coloured bile; there is almost invariably a deposit of hæmatoidin in the hepatic—and frequently in the renal—cells, with occasionally colourless granules, which give the iron reaction with acid ferrocyanide. The only difference noted is the absence of other than intestinal hæmorrhages. My recollections of the post-mortem examinations and cases I saw on the Rewa are so closely comparable to these that I have now, as I had then, no doubt that the disease is really ankylostomiasis. The non-observance of the ankylostomum by Mr. Hirsch in some of his cases was possibly due to the fact that ankylostoma, even before putrefaction has commenced (less than twelve hours in Fiji), cease to attach themselves to the intestines and, if a current of water is used to wash the intestines, will be washed away, or, if the fæces be wiped off with the finger, will be found in them, and not on the intestine. If either method be adopted, and the fæces or washings be not examined separately, even very numerous ankylostoma will readily escape detection.

In conclusion, the oil of male fern is not to be compared for efficacy with thymol, but even the latter, unless great care is taken in administration, will frequently be disappointing. The simple fact that thymol has been ordered and possibly given proves little. Unless care is taken to prove that considerable numbers of worms have been expelled, and by frequent examinations of the stools after the administration to show that few or no ova are found, little reliance can be placed on the results. Of course, the resemblance of the disease to pernicious anæmia is greatly in favour of a toxic action of the ankylostomum rather than the old theory of numerous minute hæmorrhages. The frequent presence of ankylostoma, even in numbers, without any obvious symptoms resulting, is not easily explicable, though in some of these cases I have found a slight illness, from which the patient apparently recovered, to serve as a starting-point for the progressive pernicious anæmia, checked only by removal of the ankylostoma.

I am, Sirs, yours truly,

C. W. DANIELS, M.B. Cantab.,

British Guiana Medical Service; late District Medical Officer, Rewa, Fiji.

British Guiana, Dec. 24th, 1894.

SEIZURE OF TINNED FOOD.

To the Editors of THE LANCET.

SIRS,—When sanitary officers are about to seize unsound food, more especially that which is tinned, I should like to point out a legal technicality which has arisen through the decision recently given in the case of *Regina v. Dennis*. This decision, it will be remembered, is the result of the appeal decided by eleven judges. The case is reported at some length in the *Justice of the Peace*, Sept. 29th. The conviction against Dennis was quashed, ten judges assenting. Mr. Justice Mathew, the only dissenting judge, in giving his opinion stated: "I do not see why, if the notice in question should be held to exonerate the seller, a notice to the same effect set up in the shop or on the barrow of the buyer should not be equally available to him as an answer to proceedings for seizure, condemnation, or punishment

under the statutes." I will now explain how this statement has bearing upon a seizure recently made in my district. On the night of Nov. 30th 392 tins containing lobster were seized in Christ-street, Poplar. At the time of seizure 15 tins were opened on the barrow, 156 tins were also opened but placed under the barrow, and the remainder were unopened on the barrow. On the barrow was exhibited a good-sized card stating, "Fresh lobster, 1½d. a tin; all bad ones changed." The 392 tins were taken next day (Dec. 1st) before Mr. Dickenson, the magistrate sitting at the Thames Police-court, who requested that all the unopened ones should be opened, and then he made the order for the contents of the whole number seized to be destroyed. The owner was summoned on Dec. 7th for the exposure of the lobster. The defendant's solicitor pleaded that the contents of the tins under the barrow were not exposed for sale, but were placed there in order to be destroyed, and that the contents of the only tins exposed for sale were those of the fifteen opened ones on the barrow; and he argued that so far as the unopened tins on the barrow were concerned the defendant covered himself by exhibiting the notice, "All bad ones changed." When I was giving my evidence I was asked, "Did I see these fifteen tins apart from all the other opened tins?" My answer was in the negative, for when the sanitary inspector sent for me to go to Poplar Police-station the fifteen opened tins were mixed with the other opened ones taken from under the barrow; but I explained that these fifteen opened tins could not have been good because there was not one good tin among the whole number seized. The defendant was fined £5 and 30s. costs. Now, Sirs, as I was unable to pick out the fifteen tins, I feel certain that a conviction would not have been obtained if the whole number of opened tins had not been bad. This shows from the recent decision, in order to obtain a conviction for exposure, the importance of keeping separate at the time of seizure of tinned food any tins exposed on a barrow or stall. This may seem a trivial point to write about, but I have had some little experience in seizing tinned food in the streets, and I may say the duty is not a pleasant one, especially in a crowded market street late at night, when one is liable to be hustled and the tins mixed.

I am, Sirs, your obedient servant,

FREDK WM ALEXANDER,

Medical Officer of Health, Poplar and Bromley.

Wellington-road, Bromley-by-Bow.

ISOLATION OF CASES OF OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—In your account of the proceedings of the last meeting of the Royal Medical and Chirurgical Society I am reported to have said that I "did not see great objections to ovarian cases being put in general wards." May I ask you kindly to allow me space to explain that I said it seemed to me most undesirable to put these cases with other patients until convalescence was so far advanced that a satisfactory termination of the case was assured? Septic peritonitis is the great danger of these cases, and septicæmia is more apt to occur when a patient is put in a ward beside others suffering from various diseases than when she has a room for her own use, and the risk of infection is especially increased in drainage cases. It should be remembered that with a wounded peritoneum mischief of an irreparable nature may be done in a moment, and that a degree of septic infection which would only cause a temporary rise of temperature and irritation of tissue, with perhaps an abscess formation, in a superficial wound such as that of an amputation of the breast might kill with great rapidity if it came into contact with the peritoneum. Many cases of ovariectomy require constant attention from the nurses for three or four days, and sometimes much longer, after the operation, although they may eventually make complete recoveries. It cannot be good for the patient herself to lie in a general ward when she is very ill, or for other patients to see her in that condition; and as it is quite impossible to tell beforehand whether a patient will require drainage of the peritoneum, and whether she will make an easy or a difficult convalescence, it seems to me that the plan of isolating these cases has all the advantages that can be claimed for their treatment in a general ward and many recommendations besides. Ovariectomy could hardly have been brought to its present state of excellence without isolation of the patients, and this excellence is not likely to be maintained and increased if less care and

attention are devoted to the patients than formerly. I am strongly of opinion that it will be found to conduce to the safety of patients, after abdominal section has been performed, to treat them in private wards as long as they are acutely ill.—I am, Sirs, your obedient servant,

Portman-street, Jan. 12th, 1895.

JOHN D. MALCOLM.

"THE BARIUM WATERS OF LLANGAM-MARCH AND THE THERAPEUTICS OF BARIUM SALTS."

To the Editors of THE LANCET.

SIRS,—Dr. Cruise's letter in THE LANCET of the 12th inst. on the use of barium salts appears to me especially valuable as indicating the smallness of the dose (one-sixth of a grain of the iodide three times a day) required to produce "remarkably good results," his experience extending over a period of thirty years. Whether the iodide is a more active or more desirable form for administration than the chloride I will not now discuss; but from my personal knowledge of the favourable results experienced from the use of the Llangam-march water I should prefer to prescribe it in the form in which it exists in that spring. It is to be hoped that neither medical men nor their patients in their anxiety to try a new remedy will be led into the error of adopting any but the most moderate doses, for I feel convinced that experience will demonstrate that all the beneficial results are to be obtained from doses considerably less than a grain of the barium salt—that is to say, in tumbler doses of the Llangammarch waters. Judging from the similarity to arsenic in some of its effects as an alterative, together with what I have learnt of the remarkable benefit that has accrued from the use of the Llangammarch waters in some cases of *anæmia*, some of which are mentioned by Dr. Bezly Thorne in THE LANCET of Dec. 1st, 1894, I am strongly impressed with the probability of its proving beneficial in cases of pernicious *anæmia*. It certainly merits a trial in that direction. Another class of cases in which I have known it to prove serviceable is in chronic gastric catarrh and in flatulent dyspepsia.—I am, Sirs, yours faithfully,

FREDERICK GEORGE, M.D.

Albemarle-street, W., Jan. 15th, 1895.

CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—The question whether, in these days of improved medical science and the daily paper, it is necessary to maintain the obligation upon coroners and their juries to view dead bodies upon which inquisitions have to be taken is one that is constantly cropping up, and every session of Parliament sees a Bill introduced by a different group of members, having for its object the relief either of the coroner or the jury, or both, from the duty, or leaving it to the coroner to determine whether the jury shall view or not in any particular case. Attention having been drawn to the subject by a resolution of the council of the Coroners' Society, expressing the opinion of the council "that no alteration in the existing law is required or is desirable, and, further, that an attempt to do away by law with the view of the body by the coroner and jury would be prejudicial to public interest and policy and detrimental to public confidence in the court," which appeared in THE LANCET of Nov. 17th, 1894, I venture as a provincial coroner to submit that there are two sides to this as to most other questions, and that even among coroners there is a difference of opinion on the subject. May I beg space to discuss it in some detail? Those coroners who support the maintenance of the *status quo* assert that the whole of the coroner's jurisdiction is based on the existence of a dead body, that though a person be lost the coroner has no function to inquire after him unless and until his dead body is found, and that the inquisition can only be taken *super visum corporis*, and that the dead body itself is a material part of the evidence upon which the jury must ground their verdict; that if coroners lose the right to view the body they will weaken their right to take possession of and deal with it as they think necessary by way of post-mortem examination or otherwise, so as to ascertain the true cause of death; that the view is an ancient and desirable part of the proceedings of an inquest, and ought not to be lightly given up.

Those coroners, on the other hand, who consider that a

change is desirable argue that, however necessary it may have been in ruder ages for the body to be viewed, when deaths by violence or exposure were more common than happily they are to-day, and medical skill and science were not so readily procurable as evidence to lay before the jury, still, in these days of glaring publicity by means of the daily papers and the ubiquitous pressman, the view answers no useful purpose; that the view may be of any other use than to demonstrate the existence of a dead body, the body must be examined by the jury, back, front, and sides, involving an indecent exposure of it that is most unbecoming, and in all cases of natural death the proceeding gives no information to the jury whatever. If death has been due to violence, as by accident in machinery or running over by a locomotive, and the body is much mangled, a medical man or a butcher may view it without abhorrence, but the ordinary jurymen can learn nothing from the spectacle. Neither can he tell whether a person with a cut throat has been murdered or has committed suicide; he has to rely on medical evidence as to the extent and direction of the wounds to enable him to form a judgment. So on the question of establishing identity. The view may have been useful in early days when people did not move far from home in a general way and the whole of the inhabitants of the locality above twelve years of age were required to attend the inquest. But now how are things changed. A jury is summoned to inquire into the death of a miser in a county hospital. He has been brought in from a colliery miles away; the jury live within a radius of half a mile from the hospital. How can the view help them? It would seem reasonable, if a man has been killed by machinery, a fly wheel, or a revolving shaft, or what not, that the jury should view the scene of the accident, for then they could judge of the degree of responsibility of the owner of the premises, but what can they learn from the body except its existence? And still stronger is the argument against the view when death is due to natural causes and a post-mortem examination has to be made to ascertain the precise cause. Of course, the conditions under which inquests are held in different parts of the country may, and probably do, affect the opinion of coroners. In London, if I am not misinformed, the coroners hold their inquests in a suitably equipped court, and the bodies lie in a mortuary conveniently near to the court, so that they may be viewed by both coroner and jury without trouble or loss of time. In Liverpool and Birmingham, and possibly other large towns, the coroner has a central court where the jury assemble and are taken thence in a coach from house to house where the bodies lie, in order that they may see them before hearing the verbal evidence. Imagine what this must mean in loss of time to a dozen or more jurymen, who, if they receive any remuneration at all, receive only an honorarium varying from 8*d.* to 1*s.*

In most smaller towns no coroner's court is provided, and the mortuary accommodation is usually of a very limited description. Consequently, in order that the view may be performed, inquests are held in the public-house nearest to the house where the body is lying, and the jury and coroner have to parade in a body through the streets, followed by a crowd of curious children, or, maybe, in a pouring rain or driving snowstorm, oftentimes into a tiny cottage, up a dark and crooked staircase, to a small back room lighted with a tallow candle or small paraffin lamp, and with a floor which it is by no means certain will bear the weight of the party; then back, wet and ill-tempered, to the public-house, where the witnesses will be found either taking advantage of the hospitality of the house or huddled together on the stairhead outside the club-room, because there is no ante-room available wherein they can sit. But in the country districts how are things managed? I prefer that some county coroner should, if he will, describe them. Country jurymen, I believe, usually have some remuneration paid to them for their time and service, but how far it exceeds an honorarium or is worth carrying away as cash from the inn where the inquest is held I cannot say. My position, therefore, is: relieve the jury from the obligation to view, except in cases where the coroner feels that they can gather some useful information from it, or where, after hearing the evidence, they themselves express a desire to see the body. A simple enactment, "It shall not henceforth be compulsory upon the jury except, &c.," is sufficient. But because I believe that the general public attach great value to the duty of the coroner, and would feel greater security and satisfaction if he remained under the obligation to view,

I submit that this obligation should be retained. The coroner is more or less adequately paid for his services, and must be content to take the disagreeables of the office with its sweets—he need not take either unless he likes; but the jury are pressed into the service whether they will or not, and usually without anything but a nominal acknowledgment for their time, and therefore ought not to be required to undergo a disagreeable and practically useless ordeal, but for which they might be summoned to a suitable court, where the inquiry would be conducted with some show of decency and dignity instead of under such conditions as I do not care to describe in further detail. By such a course no possible advantage, so far as I can see, would be surrendered by the coroner, while a duty which at no time is a particularly pleasant one would be rendered less irksome to a multitude of people, and the office, therefore, would become more popular and secure.

I am, Sirs, yours faithfully,

CHAS. L. ROTHERA.

Nottingham.

*** There are good arguments for and against the abolition of the procedure. It is clear that if the jury view the body, such view should take place under the most favourable circumstances; say through a window, and certainly not under conditions likely to be of personal danger to them. It is possible that the view may be required for purposes of identification, and the dispensing with the ceremony might complicate very much the position, for example, of the surgeon making the necropsy. A sudden death attended with no suspicious circumstances might, upon post-mortem examination, be found to be due to poisoning, and a charge of murder ensue. If the body has been viewed by the jury no difficulty can arise, as the necropsy has been performed upon a corpse which has been seen by the jury, and has been identified on sworn evidence before them to be the particular body. In the absence of the ceremony of viewing, the examining surgeon might be placed in a serious difficulty. But proofs of identity by trustworthy witnesses are generally forthcoming, and no one can desire to thrust upon the jurymen without adequate motive, and with possible risk to his health, the presence of death in a repulsive form.—ED. L.

SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS—May I enter a slight protest against the universally enthusiastic reports which have hitherto appeared on the action of chlorobrom in sea-sickness? After some months' trial of it I found the results quite as unsatisfactory as those from any of the other so-called specifics. Its action is certainly too depressant for use in very severe cases, especially in debilitated subjects, such as are sometimes met with returning from the East. I have found acetate of morphia give very fair results in most cases, administered in minute doses frequently repeated, care being taken that only the stimulant effect is produced. Minim or two-minim doses of dilute hydrocyanic acid may be added with advantage. Of more importance, however, I think, are other palliative measures, such as the removal of a patient to a well-ventilated midship cabin, with the berth running fore and aft, and the removal of any articles which can swing or roll about with the motion of the vessel. In connexion with the latter precaution it is interesting to note that since fixed electric lamps have superseded the old-fashioned swinging oil-lamps in ships' saloons much less discomfort is felt by indifferent sailors and fewer cases of sudden retreat from the table occur.

I am, Sirs, yours faithfully,

Dec. 12th, 1894.

A. M. C.

THE ABUSE OF HOSPITALS, DISPENSARIES, AND CLUBS.

To the Editors of THE LANCET.

SIRS—With the abuse of hospitals, dispensaries, and clubs existing, is it not time that a table should be drawn up by some authoritative body and a minimum fee fixed? The struggle for existence is so severe that anything which takes

away many hundred pounds from the younger members of our profession should be closely criticised. I know one public charity where it is gravely contended and practised that the families of policemen and fire brigade men should be attended free. I venture to suggest two points. Firstly, that all applicants for hospital, dispensary, or club treatment should state the total income of their families, which should be entered on the usual card or letter. In this way we should be able to get at the income of those using our charities, if nothing else. If applicants make false statements would it not be possible to prosecute (one or two for an example) for obtaining charity and medical treatment under false pretences? If charities refused to carry out these rules it should be a bar to any participation in hospital funds &c. (Sunday, Saturday, &c.). If medical men should so far forget themselves as to support such a charity, ought they not to be blackballed? Secondly, the following table is suggested for the purpose of discussion: 1. To be eligible to all free charities—(a) single applicants earning less than 18s. a week; (b) married applicants earning less than 25s. a week. 2. Applicants with family earning less than 30s. a week to pay up to 3d. a week in any club or public dispensary. 3. Applicants with family earning less than 33s. a week to pay up to 6d. a week in any club or public dispensary. 4. Applicants with a family earning less than 36s. a week to pay up to 9d. a week in any club or public dispensary. 5. Applicants with a family earning less than 40s. a week to pay up to 1s. a week in any club or public dispensary, and so on.

A public dispensary in each district, especially towns, to which all medical men residing in the district should be eligible, would be beneficial both to the public and the younger members of the profession. One medical man might be appointed to the dispensary for each ward of the district. The public dispensary to be controlled by an equal number of medical men and members of the dispensary &c., the chairman to be a medical man. Details such as number of wards in district and election of medical men and committee are minor details. I am, Sirs, yours faithfully,

Jan. 14th, 1895.

PHYSICIAN C.

To the Editors of THE LANCET.

SIRS,—I consider that the letter appearing in your issue of last week does not appear too soon, and I hope not too late, to put intending candidates for the Pendleton Dispensary in Manchester upon their guard. There is an advertisement in one of the daily papers to-day (Tuesday), which, of course, gives no information to candidates of the conditions of the appointments. The gentlemen who have resigned have for the most part been engaged upon the staff during several years, have acquired large private practices, and are well known, who will oppose the dispensary to the utmost degree on its own lines, and who have been positively driven to this course; by their action at various times in the interests of the profession at large, and as a protest against unprincipled interference on the part of lay committee men. I am not, nor ever have been, in practice where these medical men have resigned, so that I can write with more freedom. I am reluctant to trespass upon your space too far at present, for the indictment against the provident dispensary system is a long one, but wish to point out to those who desire to try their fortune the following points: (1) to insist upon a guaranteed minimum salary, otherwise they may be told at the end of a quarter that they are entitled to half the subscriptions of a dozen members; (2) not to bind themselves not to practise in the district; and (3) to see that the rules are strictly carried out in their favour.

I am, Sirs, yours truly,

M.D.

Jan. 15th, 1895.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Twenty-fifth Anniversary of Hospital Sunday.

ON Jan. 8th, 1871, Hospital Sunday was first observed in Liverpool, after a somewhat perilous launch, in which its promoters were much assisted by THE LANCET, which had for some time previously warmly advocated the cause as worthy of adoption throughout the length and breadth of the kingdom. Those who urged its adoption gave £4000 as a probable result, instead of the paltry sum (less than £1000) which

a few favoured medical charities had previously received, while other institutions had received nothing at all from church or chapel collections. The total of the first Hospital Sunday collections reached £4765, the total for 1872 being £6923; this upward tendency was maintained in the two following years, which produced £8124 and £8848 respectively. Since then the tide of charity has ebbed and flowed. The average amount of the Sunday collections for the twenty-four years which have passed since Hospital Sunday was first established in Liverpool has been £6979, a sum which has fully realised the wishes of those who promoted this means of raising money for the local medical charities. With the aid of Hospital Saturday a sum of nearly a quarter of a million has been raised in twenty-four years. Last Sunday was the twenty-fifth anniversary, or "silver wedding," of Hospital Sunday. A bitter north-east wind and a heavy mantle of snow, though appropriate in one sense to a silver wedding, was hardly conducive to large congregations. Still, the date being always the same—the second Sunday of the New Year—there have been inclement Sundays before, and when such a magnificent average can be shown one feels the full significance of the old saying, "Leave well alone." Perhaps, however, the change of date from January to February may be practicable and profitable.

New Medical Magistrates.

Dr. William Carter and Mr. Richard Williams have been placed upon the Commission of the Peace for this city. Both of these gentlemen are well known and are highly respected by their professional brethren and by the public generally.

Jan. 13th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Wholesale Poisoning.

WHAT is now known as the "Wylde Green poisoning mystery," to which reference was made in the columns of THE LANCET last week, has been the subject of much discussion. The actual cause does not even yet appear to be clear, in spite of the light brought to bear upon it. It seems that over 100 people partook of some soup prepared by the landlady of a public house. Nearly all these persons were subsequently seized with sickness, diarrhoea, and collapse in varying degrees of intensity. One woman aged forty-seven died. With regard to her case it is but fair to state that she had been an invalid for some length of time, but that her immediate end was brought about by this particular soup. At the inquest held upon her body it was shown that the meat from which the soup was made was what is known in the trade as "stickings," and that along with a number of other pieces of the same kind it was kept at the butcher's in a tub of brine. The composition of this was stated, and it was proved that other pieces from the same tub were sold without injury following. Dr. Hill, the borough analyst, had examined the soup, but found no poison. His opinion was that the death and illness resulted from septic charge in the brine. The inquiry was adjourned for a post-mortem examination to be made, the coroner adding that an expert should be sent to assist the medical man in charge.

Another Form of Poisoning.

The coroner for West Bromwich on the 7th inst. held an inquest on a boy five years of age who had been eating tobacco. The medical man who made the necropsy attributed his death to this poison, and a verdict was given accordingly. There is no accounting for perversion of tastes, but in an instance of this kind it can hardly be thought that a small boy would eat tobacco from choice—certainly not if anything more acceptable was at hand.

Lectures on Diphtheria.

The health committee having instituted a series of lectures on the Laws of Health, the subject of Diphtheria was discussed by Dr. Line on the 11th inst., Alderman Cook, the chairman of the committee, presiding. Mr. Cook contrasted the death-rate of Birmingham with other towns from this cause and dwelt upon the precautions necessary to avoid this disease, such as cleanliness, isolation, ventilation, and dry houses. Dr. Line's address was listened to with much interest and attention.

The Weather, Sickness, and Work.

In spite of the severe weather in various forms of intensity

thick fogs, acute winds, and deep snow, there is a prevailing impression that the health of the district is unusually good. From conversations with several medical men in different districts it has been gathered that they have never had so little to do at this time of the year. No doubt some of this may be due to the more active competition in the profession, and the readiness with which work is seized by newcomers. Apart from this unfortunate cause the complaint is one of general slackness and inactivity.

Jan. 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Education of Women in Edinburgh.

THE annual report of the Scottish Association for the Medical Education of Women has been published. It is noted with satisfaction that for the first time since the formation of the association income and expenditure have nearly balanced each other. There has been a continued steady increase in the number of students attending the college of the association in Chambers-street. Reference is also made to the fact that by reasonably pushing the claims of the association their college has been recognised by the University of Edinburgh as a medical school whose course of instruction should qualify for graduation in medicine, and the court of the association hopes that this will increase the interest taken in the association and the work it is doing, for it increases the responsibility for having the college fully equipped. The court further draws attention to the fact that the University retains the right to withdraw the leave granted to extra-mural teachers of providing a complete course of instruction for graduation in medicine for women. If the intra-mural classes be opened to women they will be put on the same footing as the male students, and will require to take at least one-half of their medical course within the walls of the University. A school for female students only, affiliated to the University, would put the thorough medical education of women on a permanent basis, do away with the necessity of disturbing university arrangements for the instruction of male students, and be a fitting complement to the other educational facilities provided in Edinburgh. The report makes an appeal for endowment, which is considered to be an essential to the successful application for affiliation.

Annual Report of Queensberry House, Edinburgh.

As has been noted on previous occasions in THE LANCET, this institution is a home for inebriates, and also for aged and infirm persons who can pay a small sum for board or are paid for by their friends or relatives. The report shows that the daily average number of inmates was 271. Dr. William Russell, the visiting physician to the institution, says in his report that the past year was characterised by an exceptionally low rate of sickness. Twenty-three deaths had occurred during the year, and of these 60 per cent. were of persons over seventy years of age, while only four were not above sixty years; eight deaths occurred between seventy and eighty years, four between eighty and ninety, and two were in persons of ninety years or more. Dr. Russell attributes the prolongation of life in a large measure to the physical comforts with which the inmates are surrounded and the simplicity of their diet. In regard to the deaths it is noted that in nearly every instance death was due, not to the exhaustion and debility of old age, but to a distinct lesion of some special organ.

Small-pox in Edinburgh and Leith.

Ten fresh cases of small-pox were reported in Edinburgh and two in Leith during last week; in this period there were two fatal cases of small-pox in Edinburgh.

Royal Lunatic Asylum, Glasgow.

During the past year 149 patients were admitted to this asylum; 113 were discharged (47 of these being recoveries) and 31 died. The year had begun with 490 resident patients, and it closed with 495, the private patients numbering 374, and those chargeable to parish authorities 121. Sundry changes have been made recently in the asylum, all contributing to its efficiency. Among these may be mentioned arrangements for a more copious water-supply (to ensure the safety of the building in possible emergency) and the fitting

of a smoke-consuming apparatus to the boiler furnaces—the latter a step which the other hospitals of the city should take without delay, were it only for the sake of example to the smoke producers.

Glasgow Convalescent Home.

This home, now in its thirty-first year of existence, has sheltered no fewer than 1747 patients, whose average stay had been sixteen days and one-seventh, at a cost of £1 6s. 1½d. per patient. Unfortunately, like so many other medical charities, its income fell short of its expenditure by about £300.

Suffocation by Gas.

Last week an entire family, consisting of husband, wife, and five children, living in a sunk flat in one of the poorer districts of Glasgow, were suffocated by gas which leaked from a broken gas-main in the roadway. The breaking of the pipe is attributed to the recent severe frost. Six months ago another family, also living in a poor part of the city, and numbering five members, were similarly killed, the gas in this case coming from the open end of an abandoned pipe. Both accidents point to a certain degree of carelessness in workmanship, and emphasise the terrible risks run by those who live in such half-underground hovels (which should not be allowed to exist in our midst), while the importance of even a little ventilation, especially in crowded apartments, is abundantly demonstrated.

The Illness of the Duke of Argyll.

The fainting fit into which the Duke of Argyll fell when addressing a political meeting on Wednesday evening last produced a profound sensation in Glasgow, which rapidly spread over the United Kingdom. His Grace soon rallied, and all alarming symptoms had subsided by Thursday morning.

Jan. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Outbreak of Small-pox in Dublin.

DURING the week ending the 12th inst. 88 cases of small-pox were admitted to hospital, being 17 in excess of the admissions for the previous week. Eleven deaths were recorded from small-pox, and 194 remained under treatment on the 12th inst., being 24 over the number in hospital at the close of the preceding week. Since the appearance of the disease in July last 84 deaths have occurred, all of which, with one exception, took place in hospital.

Accident to Mr. E. S. Bricknell of Queenstown.

As Mr. Bricknell was walking last week in Queenstown he slipped and fell on the footpath, which was very slippery from the frost, and sustained a fracture of the right arm a little above the elbow. He is progressing satisfactorily.

An Unfounded Rumour.

It was rumoured last week that the President of the Royal College of Surgeons in Ireland and a physician in Dublin had been offered the honour of knighthood, but the statement was without foundation.

The Position in Cork.

The attitude of the medical men in Cork remains exactly the same, and as this attitude has been unanimously adopted it must result in victory. The medical men so obviously demand only what is fair—viz., that they should be paid by those who can afford to pay them—that no other issue was to be expected.

Proposed Presentation to Dr. H. St. J. Brooks.

A number of friends of Dr. H. St. J. Brooks have decided to make a presentation to him on the occasion of his leaving this country for Australia. A committee has been formed, consisting of the present staff of demonstrators in the School of Anatomy, Trinity College, Dublin, to communicate with those past students who have had the benefit of his teaching and with those who have known him during the thirteen years that he has been associated with the school as Chief Demonstrator and University Anatomist. Subscriptions to the presentation will be received by either of the following gentlemen (addressed Medical School, Trinity College, Dublin): Dr. A. F. Dixon, Dr. H. C. Drury, Dr. E. H. Taylor, Dr. T. E. Gordon, and Dr. G. Jameson Johnston.

High Death-rate of Children in Belfast.

At an inquest recently held in Belfast, where a child died from being overlain in bed, the coroner animadverted on the high death-rate of children in that city. This was the fourth inquest on children he had already held in the present month, and he was surprised at the parents not taking even the trouble to get medical relief. The jury in their verdict said there was neglect on the part of the parents. The coroner administered a severe caution to the parents. He said Belfast was no exception to the rule in the matter of the high death-rate of children, for in Liverpool, Leeds, Manchester, and other large towns the death-rate was also very large. On examination he had found that a large number of those deaths occurred on either Saturday night or Sunday morning, and that it was to be attributed to persons getting their wages on Saturdays and becoming drunk, and so the children were overlain in bed. He hoped that that case would be a warning to other parents.

Jan. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Sero-Therapy.

It frequently happens that a discovery ridiculed at the time is subsequently applied practically by other persons and the credit transferred from the original discoverer to these latter individuals. In France sero-therapy is believed to date from the experiments of MM. Richet and Héricourt, already reported by me in the columns of THE LANCET. These savants, relying on the immunity of the dog to tuberculosis, employed the blood of this animal as a prophylactic. It was only in 1890 that they made use of dogs previously immunised artificially. The earliest communications of MM. Behring and Kitasato are dated 1890. There now comes forward M. Babès of Bucharest, who, through his friend Professor Cornil,¹ claims precedence in the discovery, alleging that his researches, conducted in collaboration with M. Lepp, were published in the *Annales de l'Institut Pasteur* in July, 1889, and that, further, they applied the method to human beings in the following year. M. Babès therefore claims the paternity of the following laws, wrongly denominated Behring's laws: 1. Immunity against an infectious disease may be conferred on animals by injections of the blood of another animal already strongly protected (artificially) against that disease. 2. The application of that method prevents the development of the disease in animals previously inoculated with the virus of that disease. Honour to whom honour is due; but suffering humanity will not be parsimonious in its thanks to both early and late workers in a field that bids fair to revolutionise the healing art and render the latter years of the present century famous in the annals of medicine.

A New Sign of Diabetes and Albuminuria.

M. Garel of Lyon² claims to have discovered a hitherto unrecorded physical sign which is almost pathognomonic of either diabetes or albuminuria. He states that many patients complain of a slight irritation of the throat—some difficulty of deglutition, a sensation of swelling, and constriction of the fauces. The soft palate, its pillars, and the posterior wall of the pharynx are found to be red and swollen, and frequently covered with a more or less viscid layer of mucus. In the majority of such cases examination of the urine reveals the presence of either glucose or albumen. Most of these patients present only quite insignificant general symptoms, so that M. Garel's discovery, if it be confirmed, is of considerable value. Of twenty-one individuals affected with this particular form of pharyngitis, ten had diabetes and eleven albuminuria, and in three of the cases sugar and albumen alternated in the urine. I would, however, ask if it be not the wiser plan to analyse, as a matter of routine, the urine of every new patient, more especially when middle age has been reached? In my own practice I make it a rule to do so, and I have thus avoided many a *fausse piste*.

Blood Changes in Myxœdema.

M. Lebreton³ has recently studied the urine and blood of a myxœdematous child both before and after treatment with

thyroid gland. In forty days the treatment had determined considerable improvement in the physical and mental condition of the child. The only modification in the urine noted during treatment was slight and transient albuminuria. As regards the blood before treatment it contained 1,750,000 red and 4500 white corpuscles, as against 2,450,000 and 9600 after treatment, the hæmoglobin being also increased in the proportion of 68 to 65. Before treatment the average diameter of the red discs was 0.1 mm, that of some giant elements reaching 0.57 mm. Treatment reduced the diameter of the coloured corpuscles to 0.57 mm. In preparations dyed with hæmatoxylic eosine there were seen some red discs provided with nuclei, which disappeared after treatment. The proportion of mono-nucleated to poly-nucleated leucocytes was raised by treatment from 15 to 25 per cent. to 30 and even 40 per cent., the latter proportion exceeding the normal. A considerable number of small lymphocytes present before had almost disappeared after treatment. Mucin, said to have been discovered by certain authorities in the blood of these patients, was conspicuous by its absence both before and after treatment. It would thus appear that myxœdematous blood differs from the normal fluid in the persistence of the foetal hæmopoietic process, characterised by the presence in it of nucleated corpuscles and by the large diameter of the red elements. M. Lebreton's researches also show that the cure of myxœdema is synchronous with a leucocytic process of a particular kind, the increase in the white corpuscles involving exclusively the large mono-nucleated variety.

Prophylaxis of Malaria: the Best Forms of Quinine to administer.

The Société de Thérapeutique recently appointed a committee (MM. Adrian, Bârdet, Berlioz, and Boymond) to report on the above question. The commission concludes that the employment of solutions of salts of quinine should be reserved for active attacks of malaria. The best prophylactic salt of quinine to use is the basic hydrochlorate, it being the richest in alkaloid and sufficiently soluble. It has a less irritating action on the stomach than the sulphate. The hydrobromate should be used only in cases rebellious to the hydrochlorate. As to the pharmaceutical form in which the hydrochlorate should be administered, compressed preparations are condemned, and pills made up with a soluble excipient or *perles* provided with a gelatinous envelope are recommended. Pills or *perles* containing each fifteen centigrammes of the chlorhydrate and given one in the morning and one at night, or else before meals, suffice to keep the system under the influence of quinine so as to ward off attacks of fever. In the course of the discussion following the reading of the report it was suggested that the War Office should be urged to desist from its attempt to manufacture on a large scale compressed tablets of quinine for the use of the troops, seeing that the report was unfavourable to that method.

Arrow Poisons.

From a work by Dr. Lewin of Berlin, which work was analysed by Professor Brouardel at the Académie de Médecine (Jan. 8th), it results that the Semalis dip their arrows in a black substance called *waba*, extracted from a plant of the family Apocynaceæ. The Walaita employ crystallised wabaine, a product already studied by Fraser; other tribes of Central Africa use either amorphous wabaine or strophanthus, or a mixture of several other poisons. In Asia the poison employed for the purpose is generally aconite. In Tonkin several French soldiers were wounded with arrows dipped in the juice of *antiaris toxicaria*. M. Berthelot mentioned that certain tribes employed animal toxins as arrow-poisons, whilst others covered their arrow-tips with the excrement of certain animals.

Up-to-date Medical Advertising.

Visitors to Paris will be familiar with the advertisements with which the walls of the *chalets de nécessité* and such like useful structures are liberally supplied. From a perusal of these they learn that certain diseases can be cured by Dr. N. (dr. Speaks english, *sic*) in a surprisingly short time and with the greatest ease. But it has been reserved for the present year to show us the length to which such effrontery can go. On the drop-curtain of a certain theatre there may now be read, between two other advertisements relating to beer and pinces-nez, the following: "Docteur-Médecin Spécialiste, 25 années de pratique, de midi à neuf heures du soir." Then follows the address.

Jan. 15th.

¹ Académie de Médecine, Jan. 8th.

² Congrès Français de Médecine Interne, held at Lyons.

³ Société Médicale des Hôpitaux, Jan. 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Debate on the Antitoxin Treatment at the Berlin Medical Society.

THE most important event in Berlin medical life has undoubtedly been during the last few weeks the debate on the antitoxin question, which has already been alluded to in the pages of THE LANCET; but its importance warrants my returning to the subject. The paper read by Professor Behring at the Vienna meeting of the German Association, which was immediately afterwards telegraphed to all parts of Germany, excited public opinion to something the pitch evoked by the publication of Professor Koch's results with tuberculin. Wherever a child was taken with diphtheria the medical man was compelled by the parents to use the new remedy they had read of in the newspapers. The public attention was more awakened by an article Professor Behring had published in a widely read political journal entitled "Die Zukunft," in which he attacked Professor Virchow very severely. In this article he declared Virchow's pathological doctrine obsolete and prejudicial to further progress of medical science. Virchow, he suggested, did not consider a disease a distinct entity due to one specific cause, and thus to be treated by a specific remedy, but as a conglomeration of symptoms which were each to be cured separately. As it is, of course, quite unusual for medical men to dispute in political journals the astonishment at Professor Behring's proceeding was very great and general here. When a few weeks later an assistant of Professor Virchow, Dr. Hansemann, was announced to read a paper on antitoxin at the Berliner Medicinische Gesellschaft, everybody expected this would be an answer to Professor Behring's attack, and it is no wonder that the hall and the galleries were overcrowded. Dr. Hansemann first criticised the importance of Löffler's bacillus. He mentioned that it was not yet proved that this bacillus was the only cause of diphtheria as clinically recognised. There were many cases where the Löffler bacillus was missing; in the great majority of cases it has been found together with other bacilli; finally, it has been recognised in diseases like rhinitis fibrinosa, which were not to be confounded with diphtheria. Even in healthy persons its presence has been demonstrated. Concerning antitoxin Dr. Hansemann remarked that nobody had yet seen it. We only know that animals can be immunised by weakened cultures of Löffler's bacillus and that the blood of these can cure other animals attacked by the disease due to that bacillus. Professor Behring had, in his opinion, committed the error of transferring to men results obtained with animals in proclaiming that his remedy immunised, cured, and was harmless. As every practitioner knows, very often only one child in a family is attacked with diphtheria, whilst the others remain healthy. Thus it is impossible to say for certain if the immunity has been the effect of the antitoxin or not. On the other hand, several cases have been reported where patients have acquired diphtheria although injected very early with antitoxin. The remedial effect of the antitoxin was very doubtful, Dr. Hansemann considered, on the following grounds: the diminution of mortality in some of the hospitals might have been caused by the minor gravity of this year's epidemic; the presence of Löffler's bacillus being regarded as sufficient for diagnosis, many cases formerly denoted as simple tonsillitis, from which the patients would have recovered without treatment, are now classed as diphtheria; and cases where, notwithstanding an early injection, the patients have died are not very rare. All, he thought, still agreed that the cases of septic diphtheria remained hopeless, while finally the remedy cannot be regarded as harmless, as severe symptoms have been remarked to ensue upon its injection. The discussion which followed Dr. Hansemann's paper lasted not less than three sittings. Professor Bergmann, who spoke first after Dr. Hansemann, declared that he was contented with his results obtained by the treatment, although he had begun it with a certain scepticism, natural after his bad experiences with tuberculin and tetanin. He had no doubt that Löffler's bacillus, found by him in 450 out of 470 cases, was the cause of diphtheria. Professor Virchow, who rose next, defended with great warmth the new method. The surprise at this was very great, because it was generally believed—and natural to believe—that Dr. Hansemann had been more or less commissioned by Professor Virchow to proclaim his

(Professor Virchow's) opinion on Professor Behring's work. Professor Virchow, though he did not agree with the theoretical views concerning the specificity of Löffler's bacillus, drew the attention of the society to the fact that the mortality in the Friedrich Hospital, of which he himself is a warden, diminished as soon as the new remedy was used. Each time the supply of antitoxin failed the mortality rose again until a new quantity could be procured. Professor Hahn said that he could see no difference in the mortality between those who had been injected and those who had not, but he kept an open mind on the point because in the hospital to which he was attached, which is situated in a very poor quarter, children are usually brought in too late to be treated with any success. Dr. Baginski said that he had very satisfactory statistical records. Professor Liebrich, the pharmacologist of the University, who is known to be opposed to bacteriology in general and to antitoxins in particular, invited the society to try injections of pure serum without cultures of bacilli, a method which he believed would be successful. Dr. Aronson suggested that in many cases where the method failed the quantity of the antitoxin injected must have been too little. To sum up the whole debate, the feeling generally was that the time has not yet come to pronounce a final judgment on this important question, as it could not be clearly proved that the lowering of mortality was due to the treatment or to the milder character of this year's cases. But all were agreed that the complications reported by Dr. Hansemann as following upon the treatment were of no importance, and that no patient had come to any harm by the injections. It was a subject of general remark that none of Professor Koch's or Professor Behring's assistants said a word in the debate.

The Reform of Medical Service in Berlin Municipal Hospitals.

In German hospitals the number of patients treated by one medical attendant is usually far greater than in other countries. Especially has that been the case in the Berlin municipal hospitals. There were until last year only one staff surgeon and one staff physician in these hospitals, and they, with the assistance of their resident medical officers, had each the care of 300 patients. They could, of course, not personally see so great a number every day, and were thus compelled to confine their ministrations to the graver or more interesting cases. Last year this arrangement was modified, and twice the number of surgeons and physicians were appointed to the staffs. At a meeting of the Municipal Council, where this question has been ardently discussed, some members wished to have a larger staff, with subdivisions in treatment—i.e., special wards for the eye, the throat, gynaecological purposes, &c.—but the expense was considered too high. It is remarkable that all there, and for that matter other hospitals in Berlin are not used for purposes of teaching, which is confined to the Royal Charité and the University clinics. As the number of students in Berlin increases every year practical study of disease becomes more and more difficult, and it is hoped that all the hospitals will be opened to students.

Jan. 16th.

ROYAL METEOROLOGICAL SOCIETY.—The annual meeting of this society was held on Wednesday evening, the 16th inst., at the Institution of Civil Engineers, Great George-street, S.W., Mr. R. Inwards, F.R.A.S., President, in the chair. Mr. Inwards, in his presidential address, dealt with the subject of Weather Fallacies, which he treated under the heads of Saints' Day fallacies, sun and moon fallacies, and those concerning animals and plants. He also referred to the almanac makers, weather prophets, and impostors who have from time to time furnished the world with fit materials for its credence or its ridicule.

At a special meeting of the board of management of the Chelsea Hospital for Women held on Wednesday, the 16th inst., the following appointments were unanimously made to the medical staff:—Physicians to in-patients: Wm. Duncan, F.R.C.S., M.R.C.P., M.D.; and W. H. Fenton, M.D., M.A. Surgeon to in-patients: Robert O'Callaghan, F.R.C.S.I. Physicians to out-patients: J. Inglis Parsons, M.D., M.R.C.P., M.R.C.S.; A. E. Giles, M.D., B.Sc., M.R.C.P.; and T. W. Eden, M.D., C.M., M.R.C.P. Pathologist: E. J. Maclean, M.D., C.M. Registrar: G. H. A. C. Berkeley, M.B., B.C., M.R.C.S.

THE INDIAN MEDICAL CONGRESS.

THE SECTIONS.

MEDICINE AND PATHOLOGY.

DEC. 24TH, 1894.

Presidential Address on the Fevers of India.

SURGEON-LIEUTENANT-COLONEL ALEXANDER CROMBIE, M.D., delivered his presidential address on the Fevers of India. He said:—"The fevers of India divide themselves into two great classes or groups. In the first of these are those fevers whose course is interrupted by more or less perfect periods of apyrexia, and are, roughly speaking, amenable to treatment by quinine. These are the malarial fevers. In the second group are the continued fevers, in which quinine is of no avail. With regard to the first our knowledge is precise and almost complete; with regard to the second it is still hazy and to a large extent conjectural, and yet it is in this second group that are found the fevers the fatal character of which goes so far to swell the death-rate of India to its huge proportions. I will speak first of the fevers in which periodicity is the distinguishing character—namely, the malarial fevers. With regard to intermittent fevers we are all of one mind, and there is no question, and can be no question, as to their position; but of late years there has arisen a good deal of doubt as to whether there is any specific fever which can be called remittent, and, if so, whether it should be included among malarial fevers. I confess myself among the sceptics.

"Beginning, then, with those fevers which in their normal or typical manifestations have distinct periods of perfect apyrexia—namely, the intermittent fevers—I would point out in the first place that they do not in India follow the same order of frequency as they do in other malarial countries. In those parts of India in which I have had opportunities of observation quotidian ague takes the first place in order of frequency. At most seasons I would not probably be wrong in saying that 90 per cent. of the cases of ague we have to treat have daily paroxysms of fever, and not more than 10 per cent. are tertian in type, while quartan ague is so rare that it may be practically left out of account. I have only had to treat one case of quartan ague in the whole of my twenty-two years' service in India, though I heard of another case a few weeks ago, but was unable to see it. In other malarial countries the order of frequency is quite different. In the Roman Campagna, for instance, the majority of the cases are tertian, then come quartan, and last of all quotidian agues. To this fact, the comparative infrequency of tertian and quartan ague, I attribute the reluctance which is still shown in some quarters in India to accept the amoeba of Laveran as the true pathological cause of the symptoms of malarial fever, because in quotidian ague the amoeba is often difficult to find, for the reason of its small size, its often indistinct form, and because it does not go through all the phases of its cyclical life in the blood of the general circulation. In tertian, and specially in quartan, ague it is of large size, well pigmented, and generally requires no great search to find it, and in quartan ague its whole life history can be followed in blood taken at intervals from the finger. To study the most critical part of the cyclical life of the parasite in tertian and quotidian ague—namely, the periods of segmentation and sporulation—blood must be taken from the internal organs. From these remarks you will guess, and I may as well at once confess, that I am a convert to the amoebic theory of malarial fever. It seems to me that it is impossible to offer any longer a reasonable resistance to this theory. Malarial fever is found to exist in widely different parts of the world—in America, Africa, Asia, and Europe—and in localities differing from each other in every particular of climate. Yet under all these varying conditions the phenomena of malarial fever are identical and point to an identical pathological cause. In all these places an examination of the blood of patients exhibiting these symptoms discloses the presence of a living organism which is the same in each place, the same in Africa and America as in Bombay and Calcutta; furthermore, the cyclical growth and development of the parasite are found to correspond with the cyclical periodicity of the fever, the apyrexia corresponding with the appearance of the young amoebae in the corpuscles and the accession of fever with their sporulation and the discharge of their presumed toxins into the blood. If it is to Laveran we owe the discovery of the relation of the amoeba to malarial

fever, it is to Italian physicians—and especially to Golgi, Marchiafava, and Bignami—that we owe the working out of its life history, and it seems to me impossible to resist their conclusions. Golgi has made quartan ague his special study, and the ease with which the life of the amoeba of that form of ague can be studied in the blood of the finger makes it very enticing. Its cycle of life is shortly as follows, and I am glad to have this opportunity of saying that I was able, even with my very imperfect observations, here in Calcutta, to confirm those of Golgi and Marchiafava, as far as I could do so in the single case of quartan ague which came under my observation last year. On the first day of the apyrexia the amoeba will be found, perhaps, two or even three in a single field of the microscope as in my case, occupying about three-quarters or one-fifth of the invaded red blood corpuscles and exhibiting active amoebic movements. On the second day of apyrexia it will be found that it has grown so as to occupy half of the blood corpuscle, to have become pigmented at the periphery, and to have all but lost its motility. On the third day of apyrexia it will be found to occupy nearly the whole of the corpuscle, and that the pigment has collected towards the centre preparatory to segmentation. The next and last stage of the cycle of life is that of sporulation, and with the discharge of the spores, and the toxins which the amoeba is supposed to form, comes the sudden accession of fever on the fourth day. When this happens over and over again, the same relationship being repeated between the growth maturation of the amoeba and the periods of apyrexia and pyrexia in the patient, it becomes irresistibly borne in on one that they bear an intimate and, indeed, causal relationship to each other. The study is more difficult in tertian and most difficult in quotidian ague, because the amoebae of these forms of ague cannot always be found in the blood of the finger, retiring as they do to the spleen, brain, and bone marrow to undergo their final stages of segmentation and sporulation prior to a renewed accession of fever, and indeed it is sometimes only on post-mortem examination that the important part they played in the phenomena can be understood, the number of amoebae in the general circulation not being always proportionate to the severity of the symptoms. All that is wanted to satisfy the most exacting demand for complete evidence that the amoeba of Laveran is the very cause of intermittent fever is that it should be cultivated outside the body in some suitable medium, and that when a pure culture so obtained is injected into the body of an animal susceptible to the disease it should give rise to the symptoms and pathological changes of intermittent fever. Hitherto the amoeba of malarial fever have baffled every attempt of this kind if it be not true, as was reported a few months ago, that Celli of Rome has succeeded in growing them in some alkaline medium. It would require a much more prolonged and continuous study than it has been in my power to give to this subject before I could say or ask you to believe, with Marchiafava, that each form of malarial fever has its own variety of the parasite, and that you can tell by its microscopic characters which variety is present and that the specimen of blood is taken from the finger of a patient suffering from quotidian, tertian, or quartan ague as the case may be; but it is my firm belief that there is little difficulty in doing so, and my own observations here in Calcutta, as far as they go, entirely confirm the observations of the great Italian observers, as may be gathered from the phrases I have used in speaking of the parasites of the different forms of intermittent fever, as if they were distinct. I have now seen every form of the amoeba, both the endoglobular and the ectoglobular bodies belonging to the semilunar group, with the exception of the flagellate forms in patients in the General Hospital in Calcutta, and they exactly correspond with what I saw in Rome and is described and pictured in Marchiafava and Bignami's book; and not only so, but the variety described as that of quartan ague was found existing alone in my case of quartan ague I have alluded to. Here the commonest variety is the annular form found in our cases of quotidian ague, exactly like that found in cases of quotidian ague from the Roman Campagna, and the same correspondence will be found also, I believe, in the tertian ague of the two countries.

"I now pass to those cases of malarial fever in which there is no distinct intermission. These form an important proportion of the cases of fever treated under the name of remittent fever, and allow me to say at once that we all recognise two kinds of remittent fever—a malarial and a non-malarial form, which latter I, however, regard as a continued fever, and will consider later as one of the group of

continued fevers. But at a certain season of the year—that is, from the middle of September to the end of December—in Lower Bengal, at least, a very large percentage of cases of remittent fever partake of a different character—that is to say, they are clearly of a malarial nature, and are equally with the varieties of intermittent fevers mentioned before amenable to treatment with quinine. There is little room for doubt that this group of fevers, the malarial remittents, is also produced by the same amœba forms as produce the intermittent fevers, and that they are, in fact, intermittent fevers in which either the pyrexial stage is unduly prolonged, owing to the excessively toxic qualities of the organism, so that a new accession of fever comes on before the previous attack has entirely subsided, giving time only for a small remission of the pyrexia previous to the next accession; or they are cases in which there are at one and the same time two sets of organisms in the blood whose cycles of life are parallel but not synchronous, one maturing, sporulating, and discharging its toxins some eight, ten, or twelve hours after the other, thus keeping up a continuous condition of pyrexia. Just as there is a double certian, so there may be, and in certain of the cases I refer to there is, a double quotidian, producing the phenomena which constitute what is described as malarial remittent fever. I have not made a sufficient number of observations to verify those of Marchiafava, who has found corroboration of this theory of malarial remittent fever in the existence of amœbæ in different stages of cyclical growth in the same drop of blood; but I have found the annular forms of the amœba present in cases of remittent fever in no way to be distinguished from those so constantly found in the quotidian form of intermittent. I confess, however, that these are most trying cases to investigate microscopically, at least in the time usually at my disposal for these purposes; and I have in many cases been obliged to form my diagnosis on general clinical symptoms. We must, therefore, in many cases fall back on general symptoms in differentiating the malarial from the non-malarial form of remittent fever, and the clinical features on which we must depend to justify the diagnosis of an element essentially malarial in these cases are the following: (a) the history of a distinctly intermittent character of the symptoms at an earlier stage before they become remittent in type; (b) the existence of a more or less distinct remission of the pyrexia at a fairly regular time of the day or night; or (c) the occurrence of two remissions, however slight, and two exacerbations in each period of twenty-four hours, suggesting the existence of two sets of organisms maturing separately. Observations of this nature require the most intelligent care and record, but when one or other or all of these phenomena are present you know that you are dealing with a case of malarial poisoning and you must exhibit the antidote even though no malarial organisms can be found in the blood of the finger. If when the time of my leaving India comes I were to leave a message to my professional brethren here it would be this—treat your cases of malarial remittent with quinine early, in full doses, with a free and fearless hand, and regardless of the temperature. But while I yield to no one in my advocacy of the freest use of quinine in malaria, at the same time I deprecate and deplore that indiscriminate use of it in unsuitable cases which has brought this invaluable drug into so great disrepute among the natives of this country, and has given rise to a dread of it, both on the part of patient and practitioner, which effectually prevents its effective employment in cases where it is the only hope of salvation. In this instance, as in every other, a careful diagnosis is essential. If after a painstaking inquiry the case appears to be one of the second group of which I am about to speak, the group of continued fevers, withhold quinine or give it sparingly and tentatively; but if you come to the conclusion that the case is malarial you cannot give it too freely or fearlessly, or with too lavish a hand.

"I now come to the second group of fevers, our knowledge of which, with perhaps one exception, is unfortunately still vague and conjectural, and in which quinine is not only of no avail, but is sometimes distinctly harmful. I refer to the continued fevers, of which I recognise with certainty three, and probably five, as specifically distinct. The three whose differentiation I regard as indisputable are simple continued fever, typhoid fever, and non-malarial remittent, so called; of the other two, whose title to a distinctive name you may be disposed to doubt, one is a fever especially of towns, known locally as 'Calcutta fever,' 'Bombay fever,' &c., which runs a course very similar to that of typhoid fever without

any of the symptoms of that disease; and, lastly, there is a low continued elevation of temperature of indefinite duration and without any distinctive symptomatic features, and known simply as 'low fever.'

"Many cases wrongly returned as 'ague' are really cases of 'simple continued fever.' If, instead of determining within a week, the fever, as is not very unusual, especially during the cold season and early summer, continues for a longer time, we look for defervescence about the fourteenth, twenty-first, or twenty-eighth day. These cases are particularly common in towns and are known as 'Calcutta fever,' 'Bombay fever,' &c., and it is open to anyone to assert that they are cases of mild typhoid fever, and that those which recover early are merely abortive cases of that disease. But I am one of those who are unable to admit that the whole philosophy of continued fever in India can be epitomised in the word 'typhoid.' I cannot admit that the bacillus of Eberth is the only organism capable of giving rise to a febrile curve of three or four weeks' duration."

[Here Surgeon-Lieutenant-Colonel Crombie went carefully into the diagnostic points of enteric fever. He continued:]

"I maintain that we are not justified in designating as typhoid fever cases which have neither the gradual initial rise, nor the eruption, nor the characteristic stools, whether loose and like pea-soup or constipated and like yellow coach paint, cases in which the tongue continues clean and moist or simply coated as in any febrile condition, and in which the mind is clear throughout unless you give quinine. I say we are not justified in calling such cases, in which all the symptoms of typhoid fever are absent, enteric fever simply because they have a duration of three or four weeks. I demand that some one or more of the ordinary symptoms of typhoid fever should also be presented. Neither will I admit that even hæmorrhage from the bowel necessarily removes them to that category if it be true that other febrile infections besides that of typhoid fever may also give rise to intestinal ulceration. I believe that the cases which I am now describing, and which are so sharply differentiated from typhoid fever by the whole clinical picture which they present, constitute a specific disease and must have a specific and separate cause distinct from the bacillus of Eberth.

"A very few words will suffice to dispose of the next form of continued fever. It is one which is only occasionally met with among Europeans, and I do not think I have met with it in natives of India; but if it does occur among them it would hardly be brought under my notice. I refer to a persistent low elevation of temperature unaccompanied by any constant symptoms, of indefinite duration, and uninfluenced either by quinine or arsenic. The temperature never falls below 99° and rarely rises above 101.5° F. It may continue for several weeks without complication, except perhaps a tendency to diarrhoea of a bilious character, with loss of appetite and gradual loss of strength and flesh. Some of these cases are distinctly aggravated by quinine, and I have known them to cease abruptly on withdrawing the drug, which had been persistently given in the belief that the condition was malarial in its essential nature. These cases are spoken of as 'low fever,' and are generally cured by a 'change' of any kind, but especially by a trip to the sea; and it is especially this form of fever which in Calcutta is benefited by a visit to the Sandheads. Though very ill defined, these cases contain a distinct type of fever at once recognised when met with.

"Widely different from this 'low fever' is the last form of continued fever of which I have to speak—namely, the non-malarial remittent (so called). It is a pity we have no better name for this fever, which is of very frequent occurrence, and is one of the most fatal of our fevers. The designation 'remittent' is a misnomer. It is no more remittent—and, indeed, is often less so—than typhoid fever. The temperature is generally very high, touching 104° and 105° for a long part of its course, the daily fluctuation not exceeding 2° or 2.5°. It begins in a way not unlike the cases I have described under the names of 'Calcutta fever,' 'Bombay fever,' &c., and is by some considered to be a variety of typhoid fever notwithstanding its divergence from all the symptoms of that disease. Hepatic enlargement and congestion are early and constant conditions, but the spleen as a rule continues impalpable below the ribs. Bilious diarrhoea, in no respect resembling the diarrhoea of typhoid fever, is also a very frequent symptom. Quinine often given in large and repeated doses in these cases is not only not useful, but so obviously adds to the distress of the patient, without in any way producing an improvement

in the progress of the symptoms, that it is very soon abandoned. Meanwhile, the temperature continuing persistently high, marked head symptoms, especially delirium of a muttering and irritable kind, comes on, and the patient may even, and often does, pass into a condition of coma from which he can hardly be roused. This condition, one of persistent high temperature without any marked remission, a distinctly enlarged and congested liver with bilious diarrhoea, congestion of the back of both lungs, and a low muttering delirium, is generally reached by the eighteenth to the twenty-fourth day. If coma supervenes the patient frequently dies about this period. In more favourable cases where the symptoms are less severe they continue for a week or two more, and the average duration of the case is six weeks. None of our drugs seem to be of any use in shortening it, certainly not quinine, the inadequacy of which in these cases has now become fully recognised, though the disease has not yet found a name or place in our nomenclature."

[Surgeon-Lieutenant-Colonel Crombie concluded with an eloquent appeal to his medical hearers not to allow France and Germany to remain in the van of bacteriological research, but to make a more careful clinical study of the cases which came daily under their observation in India, the enormous field for clinical study in which he had worked.]

PROCEEDINGS IN SECTION.

DEC. 28TH, 1894.

THE following are abstracts of papers read at the Congress:—

A Case of Lymphadenoma (Hodgkin's Disease) in a Native.

Dr. J. CHAYTOR WHITE read a paper under the above title. He said: "The comparative rarity of this disease in the native of India is my apology for bringing a case before the Congress, it being the first I have seen in this country. The patient, a man aged thirty-six years, a native of this district, was admitted into the Mozuffarnagar Dispensary on July 19th, 1894, suffering from a series of multiple enlargements of all the superficial lymphatic glands of the body. He first noticed a swelling in his armpits a year ago, and in the following October the inguinal glands on both sides became affected. About three weeks ago he noticed swellings under the jaw and around the neck, when deglutition became difficult and his health bad. He had not suffered from syphilis. On examination it was evident that every palpable group of lymphatic glands was affected. The cervical chains were all enlarged, but had not become aggregated. The submaxillary, sublingual, and parotid glands of both sides were greatly enlarged and conglomerate. The adenoid tissue of the pharynx and fauces was involved, and the tonsils when palpated felt like almonds. The voice was hoarse and there was difficulty in deglutition, but the recurrent laryngeal was not paralysed by pressure. The thyroid was much enlarged, and the mediastinal glands were also manifestly involved. The mesenteric glands were easily felt on palpation, and from the enlarged retroperitoneal and lumbar glands of the left side there was a copious discharge of lymph, which found exit at the bottom of the abdomen above Poupart's ligament. There was no evidence of change in the thymus, nor was there any caseation or suppuration in any one of the enlarged glands. The spleen was considerably increased in size, smooth on the surface, and could be felt well below the ribs. The urine was normal. The blood was found to be distinctly deficient in red cells, which were only about 53 per cent. of the normal. Leukæmia was marked, there being an excess of white cells in the proportion of about 1 white to 75 red. Thered cells were also poor in hæmoglobin, it being estimated at about 45 per cent. of the normal. On staining a specimen after Ehrlich's method with eosine and logwood the eosinophile corpuscle was not found to be present. The temperature throughout the case under notice was of the curiously characteristic hectic type. It never exceeded 102° F. and never quite touched the normal curve. No febrifuges were administered for its control. I gave thyroid gland tabloids a trial, but with absolutely negative results."

The Possible Antagonism between Malaria and Phthisis.

Mr. ARDASHEER DOSSABHOY COOPER, M.R.C.S. Eng., &c., read a paper on the Possible Antagonism between Malaria and Phthisis. He commenced with a reference to the small amount of attention that had been given to this subject, notwithstanding its importance, and then continued: "As late as 1811 it was put forth by Wells that malaria and phthisis were opposed to each other, and he cited many

authorities in support of his views. In 1841 Harrison of Horncastle remarked on the infrequency of phthisis in the fens. These views were revived in 1856 by M. Bedouine, who held that malaria and phthisis were opposed to each other. He formulated his views under three heads: '(a) that where malarial endemic fevers are prevalent phthisis is rare, and that the frequency of one class of cases is inversely proportionate to that of the other; (b) that where malaria decreases phthisis increases; and (c) that phthisis is more curable in malarious regions than in others.' Writing on this subject, the late Dr. Peacock instanced six cases in which phthisical patients under his treatment were found to be suffering from ague, thus leading him to reject the idea of there being any material antagonism between the two maladies; but he was careful to add that 'the facts do not, however, warrant the denial of the supposition altogether, and there are probably few popular ideas which have not some foundation in truth.' It has been observed by Professor Virchow that fever prevailed to a frightful extent in Silesia, where nearly everyone had enlarged spleen, but he hardly ever saw a case of phthisis, and he was borne out in this observation by all the medical practitioners in the country. Numerous American observers, as Dr. Green and others, advance views supporting the antagonism. Dr. Green has remarked that not a single case of phthisis was to be seen in his district, where paludal fevers were very common, and he observes that phthisical patients coming to the locality were much benefited and found 'relief as decided as it was permanent.' He mentions that when a morass near Rutland was converted into a pool fevers were replaced by phthisis, and on the reconversion of the pool into a morass intermitter fevers reappeared. A French writer, M. Jurdanet, in a book published in 1861, mentioned two provinces, Yucatan and Tabasco. In Tabasco fevers are very common and phthisis is rare, whereas in Yucatan the reverse holds good, and the fact is so well known and appreciated that persons suffering from phthisis are ordered to Tabasco by their medical advisers. Dr. R. W. Felkin, Lecturer on the Diseases of the Tropics in the Edinburgh School of Medicine, in his travels through Central Africa, where he had exceptional and varied opportunities of observing the prevalence of malaria and phthisis, seems to have come across very few cases of phthisis, and even these corresponded in a very remarkable manner with the absence of malaria. In the swampy districts of Unyoro and Uganda he met with but few cases of phthisis. The same was his experience in his journey from Khartoum to the Albert Lake along the Valley of the Nile. However, while returning he saw a large number of cases in the district of Shuli at an altitude of from 3000 to 4000 feet, where malaria is rare. Throughout this paper no mention whatever has been made of India, where both the diseases are found. I will not venture to determine whether the malarious parts of India are absolutely or comparatively free from phthisis, and whether the malarious localities are more favourable residences for phthisical patients."

The Prophylaxis of Malarial Fevers.

Surgeon-Major N. DUNCAN, M.D., B.S., F.R.C.S., read a paper on the Prophylaxis of Malarial Fevers, in which he said: "I propose, with regard to the prophylaxis of malarial fevers, to offer, first, a short *résumé* of the opinions of medical officers of our own and other countries; and, secondly, to narrate the results of my own experience, restricting myself to the question of preventive drugs. Amongst the French physicians, M. Corré holds it still unproved that the practice of keeping the system under the influence of drugs intended to kill the malarial organism is beneficial. M. Kelsch and M. Kiener state that the officers of the French marine favour the exhibition of quinine. Coming now to the Italian physicians notable results have been obtained by Tommasi Crudeli. This physician experimented with other drugs than quinine. In 1880 he began to try the effect of arsenic with encouraging results. Dr. Ricchi in 1883 tested its action in the case of 78 persons in the district of Borino, where malaria is very rife: of the 39 who took it 36 escaped entirely, while the 3 remaining had only slight attacks; of the 39 who did not take it the great majority had severe attacks of fever. Again, in 1885 657 persons were experimented upon. Of these, 402 gave good results, 119 pretty good, whilst the effect was indifferent in 138. Tommasi Crudeli also speaks highly of a decoction of lemon. Such, therefore, have been the results obtained by our Continental brethren. With regard to America, we have the experience derived from the War of the Secession. Surgeon Bryan

found quinine and cinchona to be sure prophylactics; but in all cases the experience of this war did not show that the indiscriminate use of quinine as a prophylactic was necessary. Coming now to our own countrymen, Bryson reported excellently on the prophylactic effects of quinine. On the West Coast of Africa, on the Gambia, Harvey found, however, no good results to occur. The blue-jackets who took quinine daily had as much fever as the men who did not. The late Surgeon-Major Parke, ten days before entering the mouth of the Congo, gave the officers four grains of quinine three times a day. There were only two cases of slight intermittent fever, although 350 miles of the most unhealthy region were passed through. No other white man had previously travelled the same country with the same immunity. My late friend, Dr. Ralph Leslie, whilst acting as Government medical officer in the Congo Free State, gave a protracted administration of arsenic by interrupting it during fifteen days every six weeks. Everyone who had gone regularly through the treatment was preserved from severe attacks of fever. Dr. Crosse of the Niger Company has again had favourable results from the exhibition of quinine. At Peshawur, in 1866, during the autumn the different corps were divided into wings, the men in one wing having five grains every evening, the men in the other having none. From Sept. 1st to Nov. 30th 1203 men took quinine, the admissions into hospital for malarial fever being 10.22 per cent.; 1202 men who took no quinine had an admission rate of 27.28 per cent. for fever. There is, however, evidence of a contrary kind. Sir Anthony Home did not consider quinine thus given to have any value. In the Malay War, again, a daily issue of three grains was ordered. The Goorkhas did not receive the ration, and yet they suffered only very slightly more than the Buffs, who took it; but among the Buffs the malarial fever which did attack the corps appeared one month at least after they had been regularly taking it. I will conclude my paper with a brief *résumé* of my own experience. The men from whom my results have been obtained are Sikhs and Goorkhas. The drugs I have given have been quinine, quinetum, cinchona febrifuge, cinchonidine, sulphur, arsenic, and atees. Atees, I found on inquiry from my hospital assistant, was a favourite drug among the native community for ague. With regard to arsenic, I have found no benefit to follow its use. During 1836 and 1837 I placed the men of the regiment I was serving with on a prophylactic ration of arsenic during the months most liable to malarial fever. In 1836 four companies of the 23rd Pioneers were ordered arsenic, commencing with five minims twice a day, finally taking ten minims of the liquor three times a day. From August to December there were fifty-four cases of malarial fever in all. In the companies taking arsenic twenty-eight cases occurred; in the companies not taking it twenty-six. In 1837 the men of the 14th Sikhs were subjected to a similar treatment from Sept. 20th to Nov. 16th. The right wing took six minims of the liquor twice daily, the left none; the right wing had eight cases of ague, the left nine. In 1839, whilst in charge of the 14th Sikhs at Peshawur, the regiment having suffered to an unusual extent from malarial fever during the preceding year at Jhelum, I again tried the prophylactic effect of arsenious acid from Aug. 16th to Oct. 30th. Here, again, arsenic had no prophylactic effect; if anything, the companies not taking it were rather freer from malarial fever. Thus the malarial fevers in India are either not so amenable to prophylaxis by arsenic as those of Italy, or else the form in which the preparation was given was the cause. Tommasi Crudeli does not recommend the liquid preparation of arsenic, but gives the drug in the solid form in gelatine tablets. With regard to quinetum, the results are not sufficient to draw any conclusion from. Turning now to the effects of quinine and cinchona febrifuge, A and B Companies from Aug. 2nd to Oct. 31st took respectively three grains, increasing in the last week to five grains, of quinine and cinchona febrifuge. Up to the week ending Oct. 10th, when E, F, G, and H Companies took quinetum, the results were:—

A Company,	taking quinine,	10 cases of malarial fever.
B Company,	taking cinchona febrifuge,	11 " "
E Company,	" "	24 " "
F Company,	taking no drug,	18 " "
G Company,	" "	21 " "
H Company,	" "	13 " "

Here we see, therefore, a decided prophylactic effect was exercised. Finally, coming to the results obtained during the year 1894 amongst the 1-3rd Goorkha Rifles with quinine, cinchonidine, sulphur, arsenic, and atees, I regret to say that I have none of any value to offer. The result of my

experience is, then, that of all the drugs named quinine and cinchona febrifuge are the only ones that have exercised any influence."

The Macro-Pathology of Constitutional Malaria, with Special Reference to its Treatment by Alkaline Saline Mineral Waters.

Surgeon-Major L. T. YOUNG, M.D., I.M.S., in his paper under the above title, said: "Before discussing the use of alkaline salines in the treatment of malaria it will be necessary to very briefly consider the pathological condition produced by malaria and their functional effects. Even a rather casual inspection at numerous necropsies will, I think, lead to the adoption of the opinion that malaria congests the internal organs and causes catarrh of the mucous membranes. A proper recognition of these two facts and their results may be considered the key to the successful treatment of the constitutional effects of malaria. Is it not rare at an Indian necropsy to find a liver free from congestion of some form or other? In many instances the appearances are distinctly those of incipient 'nutmeg' congestion, whilst in advanced malarial cases there is distinct cirrhosis of a hypertrophic kind, following to some extent as the result of long-standing congestion, according to the well-known pathological law. This cirrhosis is not the ordinary 'hob-nailed,' contracted surface form, but the enlarged, hypertrophic, morocco-leather surface form, which commences in and around the bile-ducts, and which, I venture to suggest, begins as a catarrh of these channels in a manner similar to that in which catarrhal malarial enteritis supervenes on tropical intestinal catarrh. Tropical hepatic congestion is always associated with more or less fatty infiltration of the liver cells. The acute results comprise hepatitis, abscess, perihepatitis, dysentery, catarrh of the bile-ducts, &c. The chronic results embrace the various forms of imperfect proteid metabolism or liver indigestion, also gout, rheumatism, and possible diabetes, &c. The early congested and the late cirrhotic stages of the spleen are only too well known. The organ or its capsule sometimes becomes inflamed; the enlargement of the organ may reach an enormous size, sufficient to almost fill the entire abdomen. In the later stages ascites supervenes, anæmia and debility, with a tendency to sudden death from pulmonary thrombosis, as so ably described by Sir Joseph Fayrer. These kidneys are nearly always found congested, often intensely so. Of the later stages, the large white kidney has been the most frequent result of my own observations, not the cirrhotic form as one would have expected. Acute desquamative nephritis is not a rare complication of severe malarial fevers, and it is often in the slightest degrees overlooked, and gradually assumes the fatal chronic form. The dietetic errors to which Anglo-Indians as a class are so much addicted are also largely to blame for many cases of Bright's disease. All the mucous membranes of the body become sooner or later affected by catarrh from malaria and residence in a tropical climate. Pharyngeal and laryngeal catarrhs are generally the earliest to occur. The latter spreads with great frequency up the Eustachian tube, giving rise to otitis media, which often goes on to suppuration with loss of the membrana tympani and ossicles, or to plastic inflammation sealing up the ossicles into the fenestræ and so causing deafness. The Schneiderian membrane shares the same fate, and hyperplasia of it over the turbinated bones is a common result. Slight chronic ophthalmia attacks the conjunctivæ. The lining of the uterus becomes endometritic. The most important catarrh, however, is that of the stomach and intestines. Under the influence of repeated 'long drinks,' large meals, and hot weather the stomach becomes dilated, its glandular structures degenerate and atrophy, leading to the secretion of gastric juice imperfect in quality. You may, perhaps, have observed that an ague patient who has had a drink of milk half an hour previously brings it up perfectly uncurdled, showing the complete absence of acid from his stomach. The thickly loaded, large, flabby, indented 'tropical tongue' is a frequent sign of tropical gastric catarrh. The intestinal catarrh often causes, not alone obstructive jaundice, but ramifies and extends along the bile passages in its more chronic forms. This, as I have already suggested, may act as the starting point of biliary cirrhosis. Catarrhal enteritis is a common and extremely fatal consequence of extension of intestinal catarrh to the substance of the intestine from its mucous membrane, and its occurrence is favoured by the mechanical obstruction to the return of blood from the chylipoietic viscera by a chronically congested liver. This enteritis is not a sthenic form of

inflammation accompanied by the exudation of lymph, nor does it usually excite the overlying peritoneum to effusive inflammation. The bowel—usually found pale, thinned, and anæmic from malarial atrophy—is, when enteric, found darkly congested, thickened, and its mucous membrane soft and vividly injected. The peritoneal side of the bowel is also red and injected. Long tracts of the bowel are not affected in this intense manner, but only patches of a foot or two. The spaces between these present all the signs of chronic congestion or of incipient inflammation, with signs of vascular dilatation and blood stasis. The congestion is usually most marked about the ileum. There is no trace of any ulceration of Peyer's patches or of the mucous membrane. A patient who recently died at the Umbala Hospital from this affection had grass-green diarrhoea, just like a child with irritative diarrhoea. The colour of the motions in diarrhoea is mostly either pale or dark. I have not often seen it green in adults. Malarial degeneration or atrophy of the heart also occurs in advanced cases. This organ is found pale, thin, small, and flabby. The ventricular walls are reduced to about half their normal thickness. There are atrophy and fatty degeneration of the muscular tissue. Severe and long-continued malarial fevers often produce paresis or paralysis, motor or sensory, or both, of the lower limbs. This was found to be due to spinal pachymeningitis. We next come to the question of how the above conditions may be ameliorated, removed, or prevented by alkaline saline mineral waters. Of these the chief are those of Neuenahar, Carlsbad, and Marienbad."

[Surgeon-Major Young here described the composition and action of Carlsbad water, both natural and artificial. He then continued:]

"Patients must be prepared to devote two hours each morning to drinking the water in the proper manner. On getting up in the morning a dose of six ounces and a half of the natural or artificial water made from the salts and warmed to a temperature of 120° F. should be slowly sipped as it cools down. After this a walk of twenty minutes in the open air is taken, and then another six-ounces-and-a-half dose; a second walk of twenty minutes, and a third similar dose are next indulged in. This is followed by a walk of one hour, after which the patient can have a simple breakfast. Some patients are given an extra dose of the water at 11 A.M. and another on going to bed at night. This latter has a great effect in cleaning the thickly furred 'tropical tongue.' During the course the following articles of diet are strictly excluded: fresh fruit, salads, acids, cheese, tinned, dried or smoked fish, and butter. Sweets, greasy dishes, and strong wines or short drinks are also to be avoided."

Typhus Fever in Hoti Mardan and in Beluchistan.

SALVATOR ALOYSIUS PISANI, M.D. Edin., Chief Government Medical Officer, Valetta, Malta, read a paper on the above subject, in which he said: "Typhus fever is no new disease in India. Anybody who has had occasion to refer to Dr. Bryden's Statistical Report, published in 1878, will, I think, feel convinced that some, at any rate, of the outbreaks described by him were instances of true typhus fever. The improved sanitary condition of our gaols in recent years has led to the disease being less frequently observed, to our forgetting the work of our predecessors, and to our doubting even the prevalence of typhus fever in India. I think that we have accumulated evidence to show that this disease is endemic in certain parts of India, where climatic conditions in some seasons of the year approach to those of European countries. In fact, we might call this an endemic area, and include in it the trans-Indus districts from Beluchistan to Kusufzai, the Hazara, and Rawalpindi districts, and the Himalayan hill tracts. The first of the two outbreaks which I will bring to your notice occurred in the magistrate's lock-up at Hoti Mardan in the Peshawur district during the months of April, May, and June, 1888. During the month of May and in June I had an opportunity of observing seven cases of typhus fever among the prisoners, and two cases among the constables who had formed part of the guard over the sick prisoners at the Mardan Dispensary.

"Case 1: The patient was admitted to hospital on the seventh day of illness. When seen on the morning of the eighth day there was commencing rash over abdomen, delirious; eleventh day, rash extensive over side of chest and abdomen, semi-conscious; fourteenth day, temperature normal, rash dark purple; fifteenth day, rash still present; I have no note when rash disappeared; eighteenth day, conscious for first time; twentieth day of illness appeared deaf; twenty-third, still deaf; constipation throughout.—Case 2: Seen on eighth day, was then delirious, semi-comatose; slight commencing rash; eleventh day, rash evident, but scanty on side of abdomen and chest of purple colour;

fourteenth day, temperature normal; fifteenth day, rash disappeared; seventeenth to twentieth day, troubled by vomiting; twenty-second day, apparently deaf; constipation throughout.—Case 3: Seen sixth day; seventh day, two suspicious spots on abdomen, no delirium; thirteenth day, evidence of pneumonia; fourteenth day, spots petechial; sixteenth, delirium, abdomen distended, hicough; seventeenth, temperature normal.—Case 4: Seen fifth day; eleventh day, slight delirium; twelfth day more delirious, semi-conscious; thirteenth day, purple mottling over abdomen and chest; fourteenth day, temperature normal, offensive black stool; fifteenth day, delirious; sixteenth day, no delirium; eighteenth day, some petechiae visible; twenty-first day, deaf.—Case 5: Seen on second day; rash commenced on sixth day; was well marked by tenth day, slightly delirious; on thirteenth day, unconscious; on fifteenth day, temperature normal; on eighteenth day, deaf.—Case 6: Seen first day; rash commenced on ninth day; eleventh day, delirious, semi-conscious, macular purple rash, extensive over side of abdomen, over chest, and extending over the arms; fourteenth day, pneumonia, rash still present; nineteenth day, temperature normal.—Case 7: Police constable on guard over sick; seen first day, suspicious-looking spots; on fourth day, soon disappeared; sixth day, epistaxis; no note of delirium; temperature normal fourteenth day.—Case 8: Seen first day, signs of rash; on fifth day, still present; on eighth day, scanty; no note of delirium; temperature normal fourteenth day.—Case 9: Police constable seen sixth day; had been on duty over sick and been relieved; when first seen he was covered with a macular purple rash; this rash was so extensive that it extended pretty nearly all over the body, except his face; at first of a bright purple, it became gradually darker; he was delirious, semi-conscious; this man died on the tenth day of his illness.

"In the brief notes that I have given the pyrexia in the non-fatal cases lasted from the fourteenth to the nineteenth day; it was of a continued type throughout; the fever was accompanied by a distinct measly purple rash, very extensive in Cases 6 and 9, evident in Cases 1 and 5, and in Case 3 when the mottling subsided, scanty in Cases 2 and 3, and practically absent in Case 7. The rash commenced in one case on the fifth day, in one on the sixth day, in one on the seventh day, and in one on the ninth day. In all these cases there was an opportunity of observing the patients previously to the days mentioned. In three cases the rash was present when the patients were first seen—one on the sixth and two on the eighth day. In the case where mottling was noted it appears to have occurred unusually late—namely, thirteenth day; at any rate, I have no notes of its being visible before this date. Delirium of a low kind was present in seven out of the nine cases, accompanied in many of the cases by great prostration and more or less unconsciousness. In two cases there was pneumonia, occurring on the thirteenth or fourteenth day of the disease, and in every other case there were more or less signs of bronchitis. Sir George Buchanan, in his article on Typhus Fever in 'Reynolds' System of Medicine,' says that 'symptoms referable to the respiratory system are so common and so important that they must be regarded as essential parts of the disease.' In every case, both in this outbreak and in the cases I shall relate presently, the frequency of these respiratory complications constituted an additional danger to the disease. Constipation was a prominent feature in most cases; marked tympanites was present in three cases; troublesome vomiting during convalescence in one case. In four cases there was marked deafness, lasting for some time during convalescence; and in the case of the constable, where there was no rash, there was epistaxis on the sixth day, about the period a rash would be expected. To prove the contagiousness of this fever we have (1) the evidence that two constables on guard over the prisoners contracted the disease, one dying; (2) the importation of the disease to the Peshawur Gaol. It was due to some prisoners suffering from fever having been transferred from the Mardan lock-up on April 28th to Peshawur that led the civil authorities, at the request of the Inspector-General of Prisons, Punjab, to ask me to inquire into the sickness prevailing at the lock-up. I reported the disease to be typhus fever on June 2nd, 1888. At the time that the sickness commenced in the lock-up, and for some time before, there had been considerable overcrowding; the barracks were very badly ventilated, the only means of ventilation being through the grated doors; in addition, the barracks themselves were in a very insanitary condition. As typhus fever is endemic in the Peshawur district and the history of the earlier cases is not obtainable, the origin of the outbreak could not be traced. The second group of cases that I will notice occurred among the coolies working in the Khojak tunnel in Beluchistan. Evidence of a very fatal contagious disease was obtainable from the excessive mortality among the hospital establishment. In 1890, out of a strength of nine seven died. In the first seven months of 1891, out of a strength of ten four died. The cases which I found prevailing after my arrival on April 19th were cases of relapsing fever, a few cases of typhus fever, and some which

did not present any characteristic features. The seven cases of typhus fever which I saw occurred, like the Hoti Mardan cases, in the months of April, May, and June.

"Case 1: Admitted April 23rd; sixth day seen; on seventh day lying on back groaning and prostrate. Sordes on lips, purple rash not raised over abdomen and lower and front part of chest; bronchitis both lungs, spleen tender; eighth day delirious; tenth delirium, now of active character; thirteenth delirium, active signs of pneumonia; sixteenth day temperature normal, complained of cardiac pain, getting more prostrate; died seventeenth day. Post-mortem examination, rash still faintly marked, signs of double pneumonia, pericarditis and meningitis, enlarged spleen and liver, temperature irregular.—Case 2: Hospital dresser taken ill; admitted April 21st; 23rd kept in his room, informed of his illness; ninth day he was covered with a very copious and a very marked measles rash, present over chest and sides of abdomen, and some on thighs and arms; on eleventh day crepitant rales, both lungs resonance, impaired; thirteenth day delirious, tongue protruded with difficulty, rash getting darker; fifteenth day, prostrate, during the night had epileptic convulsion and died; rash present after death.—Case 3: Assistant Surgeon taken ill; April 23rd, irregular temperature, rash appeared; eighth day, slightly raised at first, signs of bronchitis; on eleventh day the following note of the rash was made—it is dark purple, situated at sides of abdomen, the lower part of the sides and a few in front of chest; a few spots on flexor surface of the forearms, delirium began late; on eighteenth day had lobular pneumonia and laryngitis, temperature normal; twenty-second day, delirious up to twenty-fifth day; rash practically disappeared on eighteenth day.—Case 4: Admitted twelfth day of illness; seen on thirteenth day, very prostrate, breath foul, can scarcely protrude his tongue, intellect dull, passing motions in bed, purple rash over chest and abdomen accompanied by mottling, bronchial rales back of both lungs, resonance not clear; temperature normal fifteenth day; sixteenth day, rash and mottling disappeared.—Case 5: Admitted sixth day of illness, rash present, purplish red; eighth day rash darker, disappearing on pressure, cough; tenth day, very drowsy, sordes on teeth, cannot protrude tongue; eleventh, passing watery motions in bed, prostration marked, bronchial rales; twelfth day, delirious, temperature normal; sixteenth day, convalescent, rash faintly seen.—Case 6: A recent arrival at Khojah seen from first day; fourth day, sign of spots of reddish colour over front and sides of chest, abdomen, and back not elevated; fifth day, bronchitis; sixth day, rash, now well marked and of a purple colour, disappearing on pressure; eighth, rash does not disappear on pressure; fourteenth day, temperature normal, rash hazy; twenty-sixth day, rash very faintly visible, no delirium.—Case 7: No clear history of illness; admitted June 12th, very dull; tongue dry, brown, and black, in centre reddish-purple, rash and mottling over chest and sides of abdomen, and flexor surface of forearms; June 13th, vomited; June 14th, vomited six times; 15th, delirious at times, rash dark purple, does not disappear on pressure; June 18th, temperature normal, rash disappearing; 19th, rash nearly gone.

"Some of these cases were not typical; but I think there was no doubt of the nature of the disease."

DEC. 27TH, 1894.

On the Prevalence of the Ankylostomum Duodenale in Madras.

Surgeon-Captain C. H. WILLIAMS, M.D., in a paper under the above title, remarked:—"Of the last fifty post-mortem examinations I have made in the General Hospital, Madras (that is, since March last), in which the small intestine has been examined, this parasite has been found in twenty-six, or 52 per cent. The diseases of which the twenty-six hosts died were as follows:—Diseases of the abdomen: cirrhosis of the liver, 4; dysentery, 3; perforation of stomach, 2; cancer of stomach, 1; pancreatic abscess, 1; diarrhoea with ulcers in large intestine, 1; tuberculous peritonitis, 1; suppurative nephritis, 1; cystitis and pyelitis, 1. Diseases of the chest: lobular pneumonia, 2; pyo-pneumothorax, 1; mitral stenosis, 1. Diseases of the head: cerebral thrombosis, 1. General diseases: traumatic tetanus, 2; malarial fever, 2; starvation, 1; ankylostomiasis, 1. Besides these twenty-six cases eight were returned as ankylostomiasis by the physicians in charge of the wards, one being the case included above; and of these six were discharged cured and one relieved. As regards the nationality of the twenty-six hosts, twenty-three returned themselves as Hindus, one each as Eurasian, Native Christian, and Pariah. Two of the Hindus were Nayers from the West Coast, the rest were the ordinary Tamil coolie class, drawn chiefly from the neighbourhood of Madras, but partly from the whole Presidency, many coming long distances. The actual figures are: five born and bred in Madras, nine who had been from some weeks to a few years there, eleven who came from other parts of the Presidency direct to the hospital, and one (a beggar) who had probably been all over the district. This shows that the parasite exists both in the Presidency town and widely throughout the Presidency. The ages of these patients varied from sixteen to seventy, the average being thirty-six. The hospital admits as in-patients only males over twelve years of age, and no statistics are therefore available for women and children. The cases are returned as ankylostomiasis in which the eggs of the worm are found in the *feces* in great abundance, and no other cause is evident for the very marked anemia

from which they suffer. Usually they give a history of an anemia increasing for one or two years, with, in some cases, but not in all, a febrile onset of a few days, and usually some discomfort, doubtless duodenal, referred to the epigastrium. Of organic changes produced by this parasite I have found none certain, but in two cases changes which I was inclined to attribute to them. One was in a case which died from perforation of the small intestine high up. The perforation had taken place through a cicatricial mass, not much indurated, encircling the bowel; and the duodenum and first few feet of the ileum were found to be the seat of eleven circular cicatrices, some as much as two inches long, and most unusual in appearance. I thought, and still think, these were due to the bites of ankylostomata at some previous time which had ulcerated and cicatrised. If not, I do not know to what they were due. The case is recorded in the Transactions of the Madras and South Indian Branch of the British Medical Association for this year, a plate accompanying it. The man was not markedly anæmic at the time of death, but a few ankylostoma were present. No good history could be obtained, as he was moribund on admission. The other supposedly organic changes were a considerable cirrhosis of the pancreas, a certain amount of interstitial nephritis, and a doubtful interstitial change in the liver found post mortem in the case of ankylostomiasis. This might possibly have been produced by long-continued reflex irritation, though I am far from asserting that it was. As to the members in which these parasites are found, they are as a rule not many; but usually where they are present some bites are visible on the duodenal mucosa. Females, as usual, much predominate. The conclusion to be drawn from this is that, whereas the parasite is very commonly present among the poor natives who come to this hospital, any actual disease worthy the name of ankylostomiasis and produced by them is rare."

Radical Cure of Chronic Dysentery in its Recurrent Form.

Dr. HENRY GALLAY took the above title as his subject, and said:—"These cases show that it is possible, without much difficulty by setting aside all the therapeutic substances which are to be absorbed by the stomach, and, notwithstanding, allowing the sick persons to feed themselves as they like, to cure old chronic dysenteries, especially when this disease is assuming the form which is called 'repeating form'; and this result can be obtained simply by performing a daily and continuous series of washings of the large intestine with a solution, of which the following is the formula: nitrate of silver crystallised, 1 scruple; distilled water, 1 litre.

"Case 1: Dr. G—, a medical officer, in 1883, while residing in Tonquin, contracted acute dysentery, and during four years he had fourteen relapses of the same disease, in spite of all our known suitable treatment. After the eleventh relapse Dr. G— tried the washing of the large intestine with the above solution. Several series of ten washings each resulted at each time in a period of apparent recovery, lasting from forty to fifty days, and finally Dr. G— decided to begin an indefinite series of washings, which resulted in a definite cure in August, 1892, maintained in September, 1894.—Case 2: Mr. X—, revenue officer at Saigon, had suffered for two years from dysentery in repeating form. He had tried every sort of treatment. At Bordeaux, in June, 1892, he underwent a series of twenty washings, and then wrote to me saying that he had never been so well. In reply, I advised him to repeat the series. Since I left France I have not heard from him; but what I have learnt from experience permits me to conclude that he did not require any more aid from me.—Case 3: Miss D—, fourteen years of age, an Indian Eurasian, had dysentery in April, 1892, and was relieved in fifteen days, but afterwards suffered from constant uncontrollable stools in the morning and frequent indigestion, which gave rise to ejection of mucus and bloody matter, with tenesmus. September, 1892: series of twenty washings, complete amelioration. The series was kept up by way of precaution to the fiftieth washing. September, 1894: the cure has been confirmed since.—Case 4: Mr. D—, colonial functionary, had contracted dysentery at Hué in May, 1889. Notwithstanding twice returning to France and the use of the waters of Bassang he was always suffering and was subject every moment to relapses. He lost 24 lb. in weight. In January, 1893, he began a series of sixty washings—result, complete amelioration. In July, 1894, two years later, Mr. D— left Pondicherry, always progressing and having regained his weight.—Case 5: Miss X—, eighteen years of age, Eurasian, had in 1891 dysentery at Hyderabad, after which period she never passed two months without a relapse. In May, 1891, series of washings up to fifty only. Perfect amelioration. I heard of her a year later and the cure was maintained.—Case 6: Rev. Father —, missionary in Tanjore, contracted dysentery in 1890. Afterwards he constantly had constipation, alternating with mucous diarrhoea and tenesmus. A series of sixty washings resulted in a complete cure. He was able to resume his hard work in 1892, and to-day (September, 1894) he came to show himself to me, and he was stout, fresh and vigorous.—Case 7: Mr. —, Controller of the Revenue Accounts at Pondicherry, had acute dysentery in 1888, followed by constant relapses. In July and August, 1893, he underwent a series of fifty-six washings, with immediate relief, maintained now in September, 1894.—Case 8: Mrs. E—, twenty-one years, Eurasian, had dysentery in repeating form at the age of fifteen, was very weak and chlorotic. In October, 1893, she began a series of

fifty washings, and complete cure followed ten. In June, 1894, she went away to Europe strong and fat, bearing without difficulty the commencement of pregnancy.

"I have, on my own account, shortened the clinical description of the above cases, the details being the same for each of them. I must now indicate the way of proceeding methodically with the antiseptic washings of the large intestine, as this is important, and the final success or failure may depend exclusively on good and rational application. A first enema of tepid water washes as completely as possible the large intestine. After evacuating this the antiseptic washing should be applied, adding to it 20 or 30 minims of laudanum. This ought to be retained for two or three minutes, five being the maximum. One litre at least of liquid is indispensable when the treatment is for an adult. I always advise patients to use the washing in the morning, as soon as they awake, as, if they feel any cramps, they can go back again at once to the pleasant warmth of the bed they have just left, for cramps sometimes make this treatment difficult. I always recommend the treatment to be continued till the sixtieth washing, and that has on every occasion been enough. I have been guided in these remarks throughout by the personal result of a long series of washings which I myself took, which were interrupted only by my departure to India. My full recovery has been an unexpected result to myself, and remains the inciting example I can always offer to those suffering from chronic dysentery, who, more or less, are disheartened and sceptical regarding new modes of treatment. He who has followed my example has never been deceived; and, guided by a hope of being of service to a large number of sufferers, I have made this attempt to inform colonial medical men the results I have obtained in so tenacious an affection as repeating dysentery by a method of treatment which, in my hands, has shown itself to be as easily bearable as it is quickly effective."

Note on the Influence of Railways on the Dissemination of Cholera.

Surgeon-Major J. T. LEWIS, M.D., read a paper on this subject. He said: "Any influence which railways may have in promoting the spread of cholera would be expected to show itself in one or both of the following ways: (1) by a more rapid extension of epidemics, as compared with those which occurred before railways were opened, the extension taking place especially along lines of the railway which pass through centres of the disease; and (2) by disproportionate prevalence of the disease in places lying on or near lines of railway. Do railways disseminate epidemics of cholera more rapidly? An examination of the history of epidemics of cholera both in India and Europe shows that railways have had little, if any, effect upon their progress. Obviously individual cases have been carried further than would have been possible before the introduction of railways; for example, a man may have imbibed cholera poison just before taking his seat in a train, and may travel 200 miles or more before symptoms are developed, whereas before the days of railways he would not have gone further than ten or fifteen miles in a bullock cart. But such cases as this do not appear to affect the subsequent course of the epidemic; they neither accelerate its progress nor determine its direction. During recent epidemics of cholera in Europe it frequently happened that individuals travelled considerable distances by rail from the place at which they had received the infection before the disease showed itself in them, but that no other case occurred in the towns or villages where they eventually either died or recovered. To quote an instance in India: At Meerut, in 1869, a sepoy was removed moribund from a railway carriage and was carried to the lines of the 36th Native Infantry Regiment before he died. But no other case occurred amongst the native troops at Meerut until a fortnight later, when the advancing epidemic reached that place.¹ Again, on April 14th, 1893, five men attacked with cholera were removed from a train at Saharanpur. Three of these died, but no epidemic ensued in Saharanpur. Does epidemic cholera in its advance specially follow lines of railway? The history of epidemic cholera in India does not show that the disease advances along lines of railway rather than by other roads. Sometimes, on the contrary, a line of railway remains outside although close to an epidemic area. The map of the epidemic of 1869 is a very striking illustration of this. The disease that year attacked Allahabad on March 21st, advanced slowly to Delhi, keeping almost exclusively to the south and west of

the railroad, until at Delhi it left the line altogether and travelled to Lahore by way of Hansi and Hissar, parallel to, but distant 100 miles from, the line. The country between Meerut and Amritsar, 250 miles in length, although traversed daily by trains, remained absolutely exempt from the disease. It is a fact, be the explanation what it may, that during the epidemic of 1869 there existed a large area of country extending from Shahjahanpur to Amritsar, 400 miles in length, traversed by every means of communication, and in which Hurdwar itself is included, which, nevertheless, was free from cholera, which was prevalent in adjoining districts. Other similar instances are to be found in the bewildering pile of literature which has grown up regarding cholera in India, and in voluminous reports in the United States. I have arrived at the following conclusions. 1. Railways convey patients suffering from cholera to places which they would not have reached in the days before railways were opened, but such cases do not by themselves determine, or even appreciably influence, the course of the epidemic. 2. Railways are a great safeguard to those who use them in order to escape from an infected locality; and as they constitute the quickest means of removing a large collection of people from any place in which cholera has appeared their influence, so far as these people are concerned, is eminently salutary, and the consequent introduction of some cases of cholera to previously non-infected places is dangerous only in so far as the sanitation of these may be defective. This statement is based not only upon the records of Indian experience, but also upon those of the European epidemics of 1884 and 1885. In a supplement to the Fifteenth Annual Report of the Local Government Board, p. 107, the following passages occur. 'The experience of cholera in England justifies a belief that the presence of imported cases of the disease at various spots in the country will not be capable of causing much injury to the population if the places receiving infection have had the advantage of proper sanitary administration.' Again: 'Cholera in England shows itself so little contagious that if reasonable care be taken where it is present, there is almost no risk that it will spread to persons who nurse and otherwise closely attend upon the sick.' One more extract from the same report: 'Thus, when a case of cholera is imported into any place the disease is not likely to spread, unless in proportion as it finds locally open to it certain facilities for spreading by indirect infection.' These and other references in this paper to European and American experience are not, I venture to think, irrelevant, because they show that those who have had especially favourable opportunities of observing cholera there have arrived at conclusions which agree with our experience of the disease in India."

Infectious Pneumonia.

Surgeon-Major DUNCAN, M.D., in his paper on Infectious Pneumonia, considered the nature of an epidemic of pneumonia which fell under his observation ten years ago. He said: "On Nov. 25th, 1885, the 23rd Pioneers arrived at Umballa from the Pishin Valley. From Nov. 25th, 1885, to April 26th, 1886, thirty-three cases of pneumonia occurred. By months they were thus distributed: four in November, nine in December, five in January, five in February, five in March, and five in April. Many surmises as to the cause of the affection were made: 1. That the regiment was inadequately clothed and that the men caught cold. Now the regiment was, in fact, one of the best clothed in the Native Army. In addition to their ordinary dress each man had been provided with a thick sailor's jersey. 2. It was held that the regiment had returned from Pishin broken down in health. The following was the daily admission rate for the regiment from 1881 to 1886: in 1881, 39.65 per 1000; in 1882, 37.29 per 1000; in 1883, 22.53 per 1000; in 1884, 18.55 per 1000; in 1885, 31.41 per 1000; and in 1886, 19.62 per 1000. At first sight the admission rate for 1885 seems greatly in excess of that for 1883 and 1884, but a more minute examination showed the following facts; the great bulk of the regiment was in the Hurnai Pass up to April 18th; from April 18th to Nov. 16th the regiment was in the Pishin Valley; and from the latter date it travelled to Umballa, reaching this place on Nov. 26th. Now the rate of the headquarters admission from Jan. 1st to April 18th was 25.74; from April 18th to Nov. 26th, 19.21; and from Nov. 27th to Dec. 31st, 39.40. Hence the large bulk of admissions occurred after the regiment had returned from Pishin, whilst in Pishin the admissions were only slightly in advance of those of the preceding year. Thirdly, a white fog that prevailed in the lines in January was held in some way to

¹ See Dr. Bryden's report upon the cholera epidemic of 1869, page 53.

have caused the disease, much in the same way as a yellow fog was evoked to account for the cholera by some authorities in Egypt in 1883. Unfortunately, however, for this idea, the pneumonia continued when the white fog had disappeared, much in the same way as cholera has appeared when there has been no yellow fog. Fourthly, it might have been due to the cold from December to February. Cold, however, could not have caused the cases later. The temperature was taken in my hospital three times daily. Not to prove wearisome with the tables I will merely state the temperature found at noon. In March it rose from 71° to 80°; in April from 75° to 94°. As cases still continued to come into hospital, I determined to treat them as infectious. Under my advice the lines were evacuated and the men placed under canvas. The lines were then disinfected with sulphurous acid gas for six hours, every aperture being closed up, and on the day following the fumigation they were freely ventilated. On the third day the lines were reoccupied. By April 14th all the lines with the exception of those of the band had been disinfected. On April 14th case thirty-one, that of a musician, occurred. On the 15th the band went into tents. Two cases subsequently occurred on April 18th in the married lines; one on April 26th in the band lines. Both these cases occurred nine days after the lines were reoccupied, or eleven days after they had been evacuated for disinfection. But if pneumonia be a specific infectious fever it will have a period of incubation. This period, it may be not too much to assume, may be as long as eleven days, and thus the disease may have been contracted before the lines were disinfected. This theory receives support from the fact that during the same months measles had been present in the married lines. Now, subsequent to the disinfection three cases of measles occurred—two on April 17th in lines disinfected on the 13th and the third within a week from the disinfection. The incubation period of measles is stated to range from seven to twenty-one days; hence it is probable that all these cases were beginning as regards incubation before the lines were disinfected."

Surgeon-Major DUNCAN then briefly put forward his detailed reasons for considering the cases to have been epidemic and infectious in their nature, and not merely of local inflammation. He pointed out that if the affection had been merely a local one, on the return of the normal temperature the lungs would have been found to have quickly cleared up. He considered that the idea that cold especially predisposed to pneumonia was conclusively proved to be erroneous by Dr. Sanders of America. In a paper published in the *American Journal of the Medical Sciences* for July, 1882, he showed the disease to be more frequently met with and more common in warm than in cold climates, and in hot than in warm climates, showing a gradually increasing ratio from the Poles to the Equator, and that pneumonia, other things being equal, increases uniformly in frequency the nearer we approach the tropics.

Carlsbad and its Thermal Waters for Anglo-Indians.

Surgeon-General Sir J. FAYRE, M.D., F.R.S., contributed a paper on this subject. After exhaustively reviewing it from all the ordinary points of view, telluric, geographical, thermometrical and hygienic (we regret that space prevents us from printing the paper in full), Sir Joseph Fayre noticed the conditions for which Carlsbad is likely to be useful to Anglo-Indians. He said: "The waters are indicated in the following disorders. In congestion and functional derangement of the liver, in catarrhal jaundice, in gall-stones or inspissated bile, and in chronic hepatic enlargement in which serious structural change of the amyloid or other degenerative processes have not taken place; in chronic engorgement of the portal system, in catarrhal conditions of the mucous membrane of the intestines and congestion of the hæmorrhoidal vessels; also in habitual constipation, incipient hæmorrhoids, and even in the earlier stages of tropical diarrhoea; in diseases of the spleen, such as chronic hyperæmia and enlargement, resulting from malarial poisoning; in chronic gastric catarrh, in cardialgia or gastralgia, dyspepsia, dilatation of the stomach; in those forms of albuminuria which take place as the result of abdominal plethora and changes in the blood due to malarial poisoning; in renal and vesical gravel; in lithiasis; also in chronic catarrh of the bladder and in hyperæmia of the prostate gland, and in some hyperæmic conditions of the uterus and its appendages; in all conditions in which the gouty diathesis manifests itself,

and in general abdominal plethora and in obesity, whether of the abdomen or of the body generally. In the earlier forms of diabetes there seems little doubt, from the testimony of eminent authorities, that benefit may be derived. But Carlsbad is to be especially recommended to those who, after protracted residence in India or other malarial climate, suffer from occasional recurrences of malarial fever, with consequent derangement of function and even alteration in the normal condition of the liver, spleen, and other abdominal viscera, who, without suffering from any positive disease, are failing in health, have impaired digestion, a distended condition of the abdomen, increasing fatty deposit in the omentum, and a tendency to fatty degeneration of the muscular system generally; who find themselves languid and depressed, unequal to much physical or mental exertion, show indications of incipient æmia, suffer from dyspœa, from rheumatic or gouty pains, irregular action of the bowels, congestion of the portal system, and distended hæmorrhoidal vessels—a state of things perhaps in some cases aggravated by excesses or irregularities of diet or the neglect of due precautions as to the quantity or kind of alcoholic stimulants. Such are the conditions in which an early recourse to Carlsbad and a judicious selection of some intermediate health resort before returning to the ordinary mode of life are likely to confer benefit. Indeed, almost every European not the subject of organic disease who has spent many years in India would do well to avail himself of the resources of Carlsbad before he enters upon the new course of life which lies before him, whether he be returning to India from furlough or retiring to spend the remainder of his life at home."

THE GRIEVANCES OF POLICE SURGEONS.

ON Thursday morning last a deputation from the United Kingdom Police Surgeons' Association was received by the Home Secretary, Mr. Asquith, having for its object to urge upon him the necessity for some reform (1) in regard to the inadequacy of the remuneration allowed to medical witnesses attending sessions from a distance; (2) in regard to the rules for the examination of accused persons in cases of criminal assault; (3) in regard to the suitability of appointing police surgeons throughout the country where none exist; and (4) in regard to the examination of cases where death may have been due to poison, violence, or criminal neglect.

The following gentlemen formed the deputation:—Mr. Holmes, London; Mr. Bond, London; Mr. Lowndes, Liverpool; Mr. H. Nelson Hardy, London; Mr. Heslop, Manchester; Mr. Hopkins, Bath; Dr. Brown, Bristol; Mr. Stephens, Brighton; Dr. Maybury, Portsmouth; Mr. Houchin, London; Mr. Roberts, London; Dr. Grosvenor, London; Mr. Scatliff, Margate; and Mr. Mitchell Roocroft, Wigan.

Mr. H. NELSON HARDY introduced the deputation, referring to the many letters which had appeared in THE LANCET and other medical journals on the subject, and the following gentlemen addressed the Home Secretary: Mr. Bond, Mr. Lowndes, Mr. Holmes, Mr. Hopkins, Mr. Heslop, Dr. Brown, Dr. Maybury, and Mr. Roocroft.

Mr. ASQUITH, in reply, said: With reference to the question of examination in cases of criminal assault it would be desirable that a circular should be issued from the Home Office calling attention to the rules already in force for the guidance of the Metropolitan Police, and pointing out to the various Watch Committees the expediency of issuing the same or similar regulations to their own courts. With regard to the fourth point, he thought police surgeons were the proper persons, and likely to be more competent than medical officers of health, to carry out these duties, but the matter did not quite come within the jurisdiction of the Home Office. The question of remuneration was no doubt an important one. The scale for remuneration of witnesses was fixed in 1858. He did not wish to say that this was a just scale, but the fact that it substantially remained the same as when first fixed showed that the various Home Secretaries since that time had not cared to burn their fingers by altering it. He entirely agreed that the scale of one guinea was inadequate, but the same might be said for every single item of the whole scale as applied to most witnesses. He did not say that the case of medical witnesses was not a harder one, but each individual should require his

own employers (such as the Watch Committee, &c.) to make some provision to supplement the inadequate payment. He would be very glad to see the police authorities of the country recognise this. As to the lack in some important counties and boroughs of recognised, accessible, and generally known practitioners, not only for attendance on the force, but for cases where expert services were required, he would consider whether it was not desirable to call attention in a circular to the need of attaching to every police force some recognised police surgeon.

Mr. BOND having thanked Mr. Asquith, the deputation withdrew.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board, in the subjects indicated, at the quarterly meeting of the Examiners under the four years' regulations:—

Part I., Chemistry and Physics:

Battiscombe, Eric George, London Hospital.
Boulton, Thomas, Owens College, Manchester.
Broughton, Louis Charles Southall, Mason College, Birmingham.
Griffiths, David Roger Thomas, Guy's Hospital.
Hiffe, Caris William, Owens College, Manchester.
Oldham, Sam Drayton, Owens College, Manchester.
Rooth, James Augustus, St. George's Hospital.
Watkins, Alan Percival, Cambridge University and University College Hospital.

Part II., Materia Medica and Pharmacy:

Bascombe, Edwin Cecil Dare, Middlesex Hospital.
Betts, Edward Hetley, St. Bartholomew's Hospital.
Broughton, Louis Charles Southall, Mason College, Birmingham.
Chambers, John Miles, St. Thomas's Hospital.
Cheese, John William, University College, London.
Chevallier, Claude Lionel, St. Thomas's Hospital.
Clements, John Hall, Mason College, Birmingham.
Collyer, Bertram Joseph, St. Bartholomew's Hospital.
Cooper, Edward Harold, London Hospital.
Curtis, Percy James, Guy's Hospital.
Davies, Thomas Stanley, St. George's Hospital.
Distin, Ernest John, King's College, London.
Eastman, Julius Daniel, Owens College, Manchester.
Eastment, Alan Grant, Middlesex Hospital.
Ellery, Henry George, Queen's College, Cork, and Middlesex Hospital.
Evans, Alexander, St. Mungo's College, Glasgow.
Evans, Charles Robert, Guy's Hospital.
French, Louis Alex. Weatherhead, University College, London.
Goodridge, Walter Lisle Taylor, Guy's Hospital, Durham, and University College, London.
Hair, Alan, University College, London.
Hodges, George William Cecil, St. George's Hospital.
Johnson, Edward Stanley, St. Mary's Hospital.
Knox, Robert George, King's College, London.
MacWatters, John Courtenay, University College, Bristol.
Mason, Sydney Herbert, Mason College, Birmingham, and Guy's Hospital.
Mellish, John Stafford, St. George's Hospital.
Newman, Herbert Robert Cambridge, University College, Bristol.
Owen, John Griffith, Charing-cross Hospital.
Owen, Lanyon Edward, University College, London.
Parlett, Frank, private study.
Rivers, Walter Courtenay, Charing-cross Hospital.
Rogers, Reginald James, University College, Bristol.
Shaw, Kenneth Rodas Devaigues, Owens College, Manchester.
Smith, Julius Hodgetts, St. Thomas's Hospital.
Smith, Montague, Middlesex Hospital.
Stevenson, Walter Brodie, St. Mary's Hospital.
Sykes, John Lewis, London Hospital.
Thorpe, Robert Smith, Owens College, Manchester, and Guy's Hospital.
Tomkins, Arthur Kenelm Digby, Mason College, Birmingham.
Vines, Sidney Kendrick, Mason College, Birmingham.
Watton, Sydney Herbert, Owens College, Manchester.
Wills, Edward Channing, University College, Bristol.
Woodman, William James, St. Mary's Hospital.

Part III., Elementary Anatomy and Elementary Physiology:

Allan, Herbert William, Cambridge University.
Anderson, Lewis Pemberton, University College, Liverpool, and Owens College, Manchester.
Atkinson, Frederick Cecil Edgar, St. George's Hospital.
Charlesworth, Edward Adams, Middlesex Hospital.
Denyer, Stanley Edward, Cambridge University.
Duncan, James Simpson, Westminster Hospital.
Garman, Joseph Marcus, London Hospital.
Gillmore, Arthur Ernest, Cambridge University.
Micklethwaite, John, Firth College, Sheffield.
Richardson, Joseph James Daly, Guy's Hospital.
Simms, Clifford Greville, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology.
Spencer, William Northey, University College, Bristol.
Whittingham, Arthur Herbert, Cambridge University and St. Mary's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations, and having now attained the legal age of twenty-five years, was, at the quarterly meeting of the Council on Thursday, the 10th inst., admitted a Fellow of the College:—

Beidloe, David Morgan, L.R.C.P. Lond., Guy's Hospital; diploma of Member dated May 11th, 1893.

FOREIGN UNIVERSITY INTELLIGENCE.—*Göttingen*: The rank of Professor has been granted to Dr. Hildebrand, *privat-docent* in Surgery, to Dr. Droyren, *privat-docent* in Midwifery, and to Dr. Nicolaler, *privat-docent* in Medicine.—*Innsbruck*: Dr. Carl Mayer of Vienna has been appointed Extraordinary Professor of Neurology and Psychiatry.—*Munich*: Dr. Buengner has been appointed Extraordinary Professor of Surgery.—*Vienna*: Professor Schnabel of Prague has been appointed Professor of Ophthalmology in succession to Professor Stellwag von Carion, retired. Dr. Emil Schütz of Prague has been recognised as *privat-docent* in Medicine. Great disappointment has been occasioned by the announcement that the Government have abandoned the plan of acquiring the Alser Barracks for the purpose of enlarging the General Hospital.

DINNER OF THE LARYNGOLOGICAL SOCIETY OF LONDON.—This society held its third annual meeting on Wednesday, 9th inst., and in the evening the members dined together at the Café Royal, Dr. Felix Semon, the President, being in the chair. Among the guests were Sir J. Russell Reynolds (President of the Royal College of Physicians of London), Sir William MacCormac, Sir George Johnson, Signor Manuel Garcia, and others. The toast of "The Guests" was acknowledged by Sir J. Russell Reynolds and Dr. Ord, who in return proposed "Success to the Laryngological Society," coupled with the name of its president. Sir George Johnson responded for "The Honorary Members." The health of Signor Manuel Garcia, the inventor of the laryngoscope, was drunk with the greatest enthusiasm, and Signor Garcia, now in his ninety-first year, replied in appropriate terms.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At the ordinary monthly meeting of this society held on Jan. 8th, Dr. Samuel Johnston, President, in the chair, Dr. T. W. Hime introduced a discussion on Precautionary Measures for the Prevention of Tuberculosis. The importance of tuberculosis was insisted on because of its always being present, because of its great death-rate, and the number of persons it attacks, giving rise to prolonged illness and attacking adults. It has been estimated that one-seventh of the human race die from tuberculosis. In 1890 there were 68 000 deaths in England from tuberculosis, the mortality not being known owing to the actual number of cases being uncertain. That recovery from tuberculosis does take place is proved by the presence of cicatrices in the apices of lungs. The pathology of tuberculosis was briefly glanced at, its bacillary origin and its local origin being alluded to. The mortality from tuberculosis since 1854 has been steadily falling from 34 per 1000 to 24 per 1000 in 1890, although no special crusade has been directed against it beyond general sanitary improvements. In cases of phthisis the great danger arises from the expectoration becoming dry and being blown about as dust. To prevent this Dr. Hime advocated the use of portable spittoons. Handkerchiefs should be avoided, and if used should not be washed with other clothes. Public spittoons should be provided at railway stations and in concert-rooms. Cases of phthisis should not be treated in the wards of general hospitals; special hospitals for tuberculous cases should be provided. The public should be educated with regard to the importance of using spittoons, especially in schools, workshops, hotels, lodging houses, prisons, and barracks. Other measures which Dr. Hime recommended were the notification of cases of tuberculosis, the disinfection of infected houses, and the watering of streets before they were swept. In Belgium there was compulsory notification of tuberculosis in animals, and in Denmark £3000 a year were voted for carrying out experiments on animals affected with tuberculosis. In conclusion, Dr. Hime emphasised the fact that tuberculosis was not spread by vaccination. The paper was discussed by Drs. Johnston, Major, Goyder, Kerr, Mr. Horrocks, Drs. H. Bronner, Drury (Halifax), Bell, and T. C. Denby, and Dr. Hime replied.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting of the institution held on Jan. 10th the following list of office-bearers, council, and pathological and microscopical committee was adopted; those marked (*) did not hold the same office last year. President: Chauncy Puzey, F.R.C.S. Vice-Presidents: C. G. Lee, M.R.C.S., J. W. Warburton, M.D., *W. Macfie Campbell, M.D., *G. G. Hamilton, F.R.C.S. Edin. Hon. Treasurer: A. Bernard, M.B. Hon. General Secretary: *R. S. Archer, M.D. Hon. Secretary to Ordinary Meetings: Charles H. Shears, M.R.C.S. Hon. Librarian: K. Grossmann, M.D. Council: T. R. Bradshaw, M.D., J. E. Gemmell, M.B., J. Middlemass Hunt, M.B., Rushton Parker, F.R.C.S., G. S. Stansfield, M.R.C.S., *H. G. Rawdon, F.R.C.S. Edin., *R. W. Murray, F.R.C.S., *W. T. Thomas, F.R.C.S., *A. H. Wilson, M.R.C.S., *Richard Williams, M.R.C.S., J.P., *R. J. Hamilton, M.R.C.S., and *F. C. Larkin, F.R.C.S. Auditors: *G. S. Stansfield, M.R.C.S., *William Crozier, M.R.C.P. Irel. Pathological and Microscopical Committee: J. H. Abram, M.D., F. H. Barendt, M.D., F.R.C.S., A. Barron, M.B., *Rubert Boyce, M.B., A. W. Campbell, M.D., T. B. Grimsdale, M.B., G. G. Hamilton, F.R.C.S. Ed., F. C. Larkin, F.R.C.S., J. R. Logan, M.B., R. W. Murray, F.R.C.S., Frank T. Paul, F.R.C.S., W. T. Thomas, F.R.C.S., and Joseph Wiglesworth, M.D.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Abeles, formerly a physician in Carlsbad and a writer on many chemical subjects of clinical interest, especially on the occurrence of sugar in the urine. He died in Vienna, where he was a recognised Lecturer in Internal Medicine.—Dr. Spitzer, who soon after graduating in Vienna was appointed Professor of Anatomy in Constantinople, where he had to organise the medical school, an undertaking which was fraught with numerous difficulties. He, however, succeeded in establishing the school and was appointed Director. He gained the confidence of the Sultan Abdul Medjid by curing him of a severe illness, and was appointed His Majesty's body physician. Of course, the Imperial favour brought with it a great deal of opposition and misrepresentation from his rivals, and he found matters becoming so unpleasant that he requested leave to retire from Constantinople, which he did in 1850. Some years later the Sultan appointed him Ottoman Agent in Naples, which post he held until His Majesty's death in 1861. Since that time he had occupied himself with literary and scientific work, living sometimes in Paris and sometimes in Vienna, where he died at the age of eighty-one.—Dr. Cuzzi, Professor of Clinical Midwifery in the University of Pavia.—Dr. E. Bailly, formerly *professeur agrégé* in the Paris faculty of medicine.—Dr. Sim, Professor of Medicine, Memphis Hospital College.—Dr. Otton Marsh-novich Dannenberg, the oldest surgeon in the Russian army. He was born in 1807, and took his diploma as Medical Practitioner at Dorpat in 1831.

MANCHESTER MEDICAL SOCIETY.—The annual meeting was held on the 9th inst. in the society's reading-room at Owens College, Dr. Dixon Mann, the retiring president, being in the chair. The officers for the ensuing year were appointed, and Mr. F. A. Southam was elected president. His name is well known in Manchester, for his father was for many years a distinguished surgeon to the Royal Infirmary, and the son worthily holds a similar appointment. The report stated that the society had completed its sixtieth year and was in a satisfactory condition. "The number of members had increased, the finances were sound, the library was richer in medical literature and more patronised, and increasing interest was taken in the meetings." There are now 280 members, as compared with 268 at the end of 1893. Some changes were made in the laws, which have undergone revision, the most important being the reduction of the annual subscription from two guineas to one guinea. This will be a popular change, and extend the benefits of the society to a larger medical circle. It may be that the competition of the youthful but very prosperous Clinical Society has been felt as a stimulus, but the fact remains that membership of the two societies will now cost two guineas instead of three, and many will be glad to join both. The library now contains 31,230 volumes, in addition to a large number of pamphlets. Facilities are granted for the use of books to the students of medicine, and last year the number of volumes issued to them was 5851. The ordinary members have also made increased use of the library during the past year.

LITERARY INTELLIGENCE.—We have received the first number of a new medical monthly magazine, entitled *Clinical Sketches Illustrative of Medicine and Surgery*. The contents, if not quite fulfilling the promise of the title, are of an interesting and varied kind, prominent among them being four papers on Diphtheria, comprising an account of its bacteriological diagnosis and directions for the use of antitoxin serum. Illustrations of a finished and pictorial character are a special feature. Among these we may mention two views of Sidmouth and a full-page reproduction of Harvey's portrait preserved in the Royal College of Physicians, London. The paper is edited by Mr. Noble Smith, F.R.C.S. Edin., who is to be congratulated on his opening number. The publishers are Smith, Elder, and Co., 15, Waterloo-place, W.

BOURNEMOUTH MEDICAL SOCIETY.—At a meeting of this society held on Dec. 21st, 1894, Mr. Parkinson, President, in the chair, a resolution was passed expressing regret at the death of Dr. Bisset Hawkins, one of the honorary members. Dr. Andrew and Mr. Hale were elected honorary members, and Dr. Ringer and Dr. Fosbery ordinary members. Dr. Muspratt showed a case of Peculiar Skin Affection. On the radial side of the second phalanx of the left forefinger was a raised ring about as large as a sixpence. The history was that it had begun as a slight wart and had extended at the periphery, while the natural skin became restored in the centre. The patient was a healthy girl aged about twenty. It was not tender, and there was nothing in her occupation to account for it. Mr. F. Fred. Gardner showed a case of Deformity of the Scapula. Mr. Bernard Scott showed a patient in whom he had removed the internal semilunar cartilage from the knee. Mr. Mahomed read notes of a post-mortem examination in a case of Acute Dilatation of the Stomach, with short notes of the history. The affection arose during convalescence from pleuro-pneumonia and was rapidly fatal; the patient was a man twenty years of age. Mr. Mahomed gave a *résumé* of the literature on the subject and argued that excessive secretion was a factor in the disease besides the loss of muscular power in the stomach walls. He found that in all the recorded cases the history showed the existence of some primary disease in the vagus tract. Mr. Kemble read notes of a case of Convulsions occurring at four months and a half of pregnancy and accompanied by hemiplegia. There was no renal incompetency. The fits had been very persistent. Trinitrine was very efficacious in the first instance, but the fits recurred three weeks later and it then proved of no value. Bromides were then attended with success. The hemiplegia was transitory. Gestation was now proceeding without disturbance of health and had advanced to seven months. An adjourned discussion followed the presidential address on the Wants of the General Practitioner.

BOOKS ETC. RECEIVED.

- BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
A manual of Veterinary Therapeutics and Pharmacology. By E. Wallis Hume, F.R.C.V.S. 1895. pp. 560. Price 10s. 6d.
CHATTO & WINDUS, Piccadilly, London.
Herbert Pry's Royal Guide to the London Charities. Edited by John Lane. Thirty-first Annual Edition. 1894. Price 1s. 6d.
KINGSTON, H.Y., High Holborn, London, and HIRSCHFELD, Bros, Fetter-lane, London.
The Rearing and Feeding of Children: a Practical Mother's Guide. By Thomas Dutton, M.D. Darh. 1895. pp. 198. Price 2s.
LANE, JOHN, Vigo-street, London, W.
Imagination in Dreams and their Study. By Fred. Greenwood. 1894. pp. 198.
LONGMANS, GREEN, & CO., London.
Essays on Rural Hygiene. By Geo. Vivian Poore, M.D., F.R.C.P. Second Edition. Illustrated. 1894. pp. 372. Price 6s. 6d.
Tables and Directions for the Qualitative Chemical Analysis of Moderately Complex Mixtures of Salts. By M. M. Pattison Muir, M.A. 1895. pp. 44. Price 1s. 6d.
RIVINGTON, PERCIVAL, & CO., King-street, Covent Garden, W.C.
Clinical Lectures and Essays on Rickets, Tuberculosis, Abdominal Tumours, and other Subjects. By Sir Wm. Jenner, Bart., G.C.B. 1895. pp. 329. Price 14s. net.
SCIENTIFIC PRESS, Strand, London, W.C.
Infant Feeding by Artificial Means. By S. H. Sadler. Illustrated. 1894. pp. 243. Price 6s.
Spinal Curvature and Awkward Deportment: their Causes and Prevention in Children. By Dr. G. Müller, Berlin. English edition edited by R. Greene, F.R.C.P. Edin. Illustrated. 1894. pp. 88. Price 2s. 6d.
TREKAT, E. B., Cooper Union, New York.
A System of Legal Medicine. By A. McLane Hamilton, M.D., L. Godkin, and others. Illustrated. Vol. ii. 1894. pp. 738.

WILLIAMS & NORGATE, Henrietta-street, Covent Garden, London.
 Leitfaden der Gerichtlichen Medicin. Von Dr. K. S. Seydel. 1895.
 pp. 286.
 Monatschrift für Geburtshülfe und Gynäkologie. Von Professor
 Dr. A. Martin und Professor Dr. M. Sänger. Januar. 1895.
 pp. 96.

Fires in London: printed by the Eastern Morning News Company, Whitefriargate, Hull.—Intestinal Anastomosis, with the report of a Case; by F. H. Wiggan, M.D.: reprint from New York Medical Journal, December, 1894 (D. Appleton & Co., New York).—The Report of the Committee of the Finsbury Dispensary for the Year 1893.—Cystic Gout, with Cases in Practice; by A. B. Deynard, M.D., New York: reprint from the Medical and Surgical Reporter, June, 1893.—Surgical Treatment of Tumours of the Neck; by T. H. Manley, M.D., New York: reprint from the Medical Brief, St. Louis, N.B.—The Relation of Static Disturbances of the Abdominal Viscera to Displacements of the Pelvic Organs; by J. H. Kellogg, M.D. (Modern Medicine Publishing Company, Battle Creek, Michigan, 1894).—Diary for 1895: Sanitary Record (Rider & Son, Bartholomew-close, London). The Castle Line Atlas of South Africa (Donald Currie & Co., Fenchurch-street, London, E.C.)—On the Eccentricity of Youth Leading to Crime; by L. Forbes Winslow, M.B. Camb., M.R.C.P. Lond. (John Bale & Sons, Great Titchfield-street, London, W.); price 1s., 1895.—Abdominal Surgery on the Battle-field; by N. Senn, M.D.: reprint from St. Louis Clinique, June, 1894.—Medical Officers of Schools Association: The Treatment of the Exanthemata by so-called Antiseptic Inunction; by H. G. Armstrong, M.R.C.S. (J. & A. Churchill, London, 1894); price 1s.—Revue des Sciences Médicales en France et à l'Étranger, No. 89; 15 Janvier, 1895 (G. Masson, Paris).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BOGER, WM. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Liskeard Union.
BUTTS, STANLEY DE, M.D., has been appointed Anaesthetist to the Royal Bar Hospital.
DAIN, H. G., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Surgical Officer to the Children's Hospital, Birmingham, vice Hickinbotham, resigned.
DAY, W.A., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Kirkcaldy Sanitary District of the Guisborough Union.
FAIRFAX, H., L.S.A., has been appointed Medical Officer for the Thirteenth Sanitary District of the West Ham Union.
HAMMOND, WM., L.R.C.P., L.M., M.R.C.S., has been reappointed Medical Officer for the Sixth Sanitary District of the Liskeard Union.
HAYMAN, H. L., L.D.S., R.C.S., has been reappointed Honorary Dental Surgeon of the Clevedon Convalescent Home.
HICKINBOTHAM, J. R., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Children's Hospital, Birmingham, vice Whitehouse, resigned.
ILIFFE, W., F.R.C.S. Edin., L.F.P.S., L.M. Glasg., has been reappointed Honorary Medical Officer of the Kendal Provident Dispensary.
JACKSON, E. S., M.B., C.M. Edin., has been appointed, *pro tem.*, Medical Officer for the North Sanitary District of the Lancaster Union, vice Brownlow, deceased.
JACOB, E. L., M.R.C.S., has been appointed Medical Officer to the Chertsey Urban District Council.
MACNAUL, ROBERT, M.D. Glasg., F.R.C.S. Edin., has been appointed Honorary Consulting Physician to the Suffolk General Hospital.
MACTIER, H. CARTER, M.B. B.Ch., B.A.O. Dublin, has been elected House Surgeon to the Eye Infirmary, Wolverhampton.
MARTIN, ROBERT, L.R.C.P. and S. Edin., L.S.P. and S. Edin., L.M., has been appointed Medical Assistant to the Royal Irish Constabulary, Giltford, vice J. M. Brown, resigned.
MATHISON, J. COLIN, M.B., C.M., has been appointed House Surgeon to the Royal Ear Hospital.
NIX, HERBERT W., B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., late House Surgeon to St. Thomas's Hospital, London, has been appointed Government Resident Medical Officer, Marble Bar, Pilbarra Gold Field, Western Australia.
PARKER, W. R., M.D. Camb., M.R.C.S., L.M.R.C.P., L.M. Irel., has been reappointed Honorary Surgeon of the Kendal Provident Dispensary.
PARSONS, J., L.R.C.P., L.M., F.R.C.S. Edin., has been appointed Medical Officer for the Fourth Sanitary District of the Alton Union.
PATERSON, H. J., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Junior Assistant Anaesthetist to St. Bartholomew's Hospital, London, vice Buttar, resigned.
POOLE, W., M.B., B.C. Cantab., has been appointed Medical Officer to the British Central African Administration at Zomba, in the Shire Highlands, south of Lake Nyasa.
REES, D. V., L.R.C.P. Lond., M.R.C.S., has been appointed *pro tem.* Medical Officer for the Borough of Brecon.
RICHARDSON, W. G., M.B., B.S., F.R.C.S., has been appointed Surgical Registrar to the Royal Infirmary, Newcastle-upon-Tyne.
SHEPPARD, AMY, M.B. Lond., has been appointed Assistant Physician to the New Hospital for Women.
SKINNER, S. M.B., C.M. Aberd., M.R.C.S., has been reappointed Honorary Medical Officer of the Clevedon Convalescent Home.
STEPHENS, E., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer for the Chard Rural Sanitary District.
STURRIDGE, P. F., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Surgeon of the Kendal Provident Dispensary.
TAYLOR, B. E. A., M.R.C.S., has been reappointed Surgeon of the Kendal Provident Dispensary.

TUBBY, ALFRED HERBERT, M.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Westminster Hospital.
TURNER, GEO., M.B. Camb., D.P.H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Hoddesdon Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CANCER HOSPITAL (Free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.
CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and light provided.
GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary commencing at £100 per annum, increasing by £10 a year to £120 if services are satisfactory, with board, residence, and washing.
HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Registrar and Pathologist for six months. An honorarium at the rate of 25 guineas a year.
NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Board and lodging (including washing) provided.
PARISH OF RONSAV AND EIGLSHAY, Orkney—Resident Medical Officer. Salary £51 sterling per annum. Applications to Inspector of Poor, Ronsay, Orkney.
ROYAL SOUTH LONDON DISPENSARY—Surgeon in Ordinary to visit patients at their own homes in the Waterloo District. Honorarium £20 per annum. Applications at the Dispensary, St. George's-cross, S.E.
SALFORD ROYAL HOSPITAL—House Surgeon. Salary £100 per annum, with board and residence.
SUFFOLK GENERAL HOSPITAL—Honorary Assistant Medical Officer. Applications to the Secretary, Bury St. Edmunds.
UNIVERSITY OF EDINBURGH—Additional Examiners for four years. Salary £75 per annum in each case, with an allowance of £10 per annum for travelling and other expenses in the case of an Additional Examiner not living in Edinburgh or the immediate neighbourhood. Applications to the Interim Secretary, University Court, University of Edinburgh.
WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—Resident House Surgeon (lady or gentleman). Salary £50 per annum, with board, lodging on the premises, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On Jan. 10th, at Church-street, Slough, the wife of K. Weaver Adams, F.R.C.S., D.P.H., of a son.
BRIND.—On Jan. 13th, at Warrenbayne, Baling, W., the wife of H. Hanslow Brind, M.R.C.S., L.R.C.P., of a son.
BRYSON.—On Jan. 8th, at Osmaston-road, Derby, the wife of Leonard H. Bryson, M.B., of a son.
RICHARDS.—On Jan. 10th, at 47, Churnet-street, Collyhurst, Manchester, the wife of Arthur J. Richards, M.R.C.S., L.S.A., of a daughter.
STOCKEN.—On Jan. 16th, at Connaught-road, Harlesden, the wife of Arthur P. Stocken, L.D.S., of Endsleigh-gardens, N.W., of a son.

MARRIAGES.

CAIGER—ORR.—On Jan. 9th, at All Saints' Church, Notting-hill, by the Rev. C. E. Eckett, Rector of Woolwich, assisted by the Rev. Canon Trench, Vicar of All Saints', Frederick Forri Caiger, M.D. Lond., only son of F. H. Caiger, of 31, Arundel-gardens, W., to Madeline, youngest daughter of the late Alexander Orr, of Melbourne, Australia.
HEATON—BARNES.—On Jan. 15th, at St. Mary's, Harrow-on-the-Hill, Charles J. Heaton, M.D., M.R.C.S., L.R.C.P., second son of the late Mr. Clement Heaton, of Watford, to Mary Florence Barnes, second daughter of the late Mr. William Barnes, of Birkenhead.
HEDSON—VAUGHAN MORGAN.—On Jan. 9th, at St. Mary's, The Boltons, South Kensington, Charles Elliott Leopold Barton Hedson, F.R.C.S., of Harley-street, W., to Ethel Vaughan, daughter of Septimus Vaughan Morgan, of Harrington-gardens.
RENDLE—DARLEY.—On Jan. 16th, at St. Peter's, Belsize-park, C. R. Russel Rendle, B.A. Oxon., M.R.C.S., L.R.C.P., to Edith Mary, second daughter of J. J. Darley, 3, Lancaster-road, Belsize-park.

DEATHS.

HAKK.—On Jan. 11th, at the house of his brother, Acacia-road, N.W., Thomas Gordon Hake, M.D., in his 86th year.
HARMER.—On Jan. 14th, at Redlands, Tonbridge, William Milsted Harmer, F.R.C.P.E., aged 56.
MURRAY THOMSON.—On Jan. 13th, at Victoria-road, Gipsy-hill, Murray Thomson, M.D., F.R.S.E., Fell. Univ. Calcutta, late Professor, Experimental Science, Thomason C.B. College, Roorkhee, India, aged 60.
RAWDON.—On Jan. 4th, at Sunnyside, Clifton, York, William Frederick Rawdon, M.D. Edin., of York, aged 91.
SMITH.—On Jan. 13th, at Blackfriars-road, Septimus William Smith, L.F.P.S. Glasg., of Sussex-square, Brighton, in his 63rd year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 17th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia- tion in Vacuo	Maxi- mum Temp in Shade	Min Temp	Rain- fall.	Remarks at 8.30 a.m.
Jan. 11	29.87	N.E.	30	Frzn.	31	31	23	...	Overcast
" 12	29.66	S.E.	27	Frzn.	45	37	26	...	Overcast
" 13	28.95	S.W.	37	37	54	42	27	...	Cloudy
" 14	28.94	S.	40	39	50	45	34	0.18	Raining
" 15	29.09	S.E.	41	41	46	44	40	0.07	Raining
" 16	29.03	S.W.	42	41	50	47	41	0.01	Cloudy
" 17	29.07	S.W.	43	42	47	45	41	0.11	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (20, Hanover-square, W.).—7.30 P.M. Ordinary Meeting. 8 P.M. Dr. Porter (Stockport): Preventable Infantile Mortality, especially in connexion with Factory Labour. Discussion.

SOCIETY OF ARTS.—8 P.M. Prof. Silvanus P. Thompson: The Arc Light. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Frederick T. Roberts: The Combinations of Morbid Conditions of the Chest. (First Lettsomian Lecture.)

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Mr. A. W. Mayo Robson: Varieties of Intestinal Obstruction dependent on Gall-stones, with a series of cases.

SOCIETY OF ARTS.—4.30 P.M. Dr. A. Markoff: Russian Armenia and the Prospects for British Trade.

WEDNESDAY.—HUNTERIAN SOCIETY (London Institution).—8.30 P.M. Clinical Evening. Dr. F. J. Smith: Typhoid Fever treated by the Continuous Bath (Notes).—Sir Hugh R. Beevor: Pyo-nephrosis.—Mr. J. F. Woods: Chorea treated by Hypnotism (two cases).—Mr. J. Poland: (1) Excision of Isthmus of Thyroid Gland; (2) Intracapsular Fracture of Neck of Femur in a Boy.—Dr. Hingston Fox: A Tumour for Diagnosis.—Mr. Openshaw: (1) Congenital Sacral Tumour; (2) Congenital Defect in Clavicles.

SOCIETY OF ARTS.—8 P.M. Mr. A. G. Stanton: Tea.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. West: Two cases of Detachment of the Retina in the course of Granular Kidney. Dr. Felix Semon: A Novel Form of Malingering—Chronic Self-inflicted Ulceration of the Throat.—Dr. Pasteur: Cases illustrating the Association of Respiratory Paralysis with grave Cardio-pulmonary Symptoms in Diphtheritic Multiple Paralysis.—Dr. E. W. Goodall: An Unusual Form of Tracheal Diphtheria.—Dr. Lee Dickinson: A case of Malformation of the Heart with Hemophilia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (II.).

CENTRAL LONDON THROAT AND EAR HOSPITAL.—4.30 P.M. Dr. Dundas Grant: The Treatment of cases of Deafness without Pain or Discharge.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Eczema.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. W. S. Lilly: Four English Humourists of the Nineteenth Century (II.).

FRIDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 A.M. Dr. Barratt: The Pathology of the Skin.

ROYAL INSTITUTION.—9 P.M. Sir Colin Scott-Moncrieff: The Nile.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Pathology of the Skin. 5 P.M. Dr. Morgan Dockrell: Syphilis.

ROYAL INSTITUTION.—3 P.M. Mr. Lewis F. Day: Stained Glass Windows and Painted Glass (II.).

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

TESTIMONIALS TO TRADESMEN.

Edward C. Anderson, M.A., M.D. Cantab.—Our correspondent agrees with us as to the objectionableness of a testimonial he gave to a miller as to the quality of a certain kind of oatmeal, and explains to us that it was meant to be used only among others, and not separately. This condition has been disregarded by the miller, and Dr. Anderson has very properly withdrawn his permission for use of the testimonial in any form. He is to be commended for doing so.

Struggles.—Applications for the appointment of prison surgeon should be made to the Prison Commissioners at the Home Office, Whitehall, S.W. (the Secretary is Col. M. Clare Garsia), for English appointments, and candidates are selected on their merits. Medical officers in Scotland and Ireland are, we believe, appointed by the same department, but are under separate regulations. The Secretary for the Colonies, the Marquis of Ripon, appoints the surgeons and assistant surgeons to the convict prisons abroad. The secretaries of the different Government bodies will probably answer all inquiries.

Mr. B. was entitled to more consideration than he received. He should state his grievance to Mr. T. If possible he should see him and talk the subject over. Professional relations with a brother in a neighbouring village should not be broken off without first giving him an opportunity of answering any complaint.

Dartos.—If our correspondent will ask us particular questions we may be able to furnish him with the help he requires. We are not aware of any book containing the information.

Mrs. R. (Dulwich) is informed that we do not recommend individual practitioners or any general use of the practice to which she refers.

A QUERY.

To the Editors of THE LANCET.

SIRS,—A lady aged forty-six has consulted me for an alleged fibroid in the posterior wall of the uterus. She was seen ten months ago by two medical practitioners (one of whom is an M.D. and M.R.C.P. of London and the other a F.R.C.S. of London), who examined her per rectum and pronounced that she had a fibroid tumour of the size of a chestnut. I have made a careful vaginal examination and can find no such growth. She has had irregular hamorrhages since she was forty, which have been absent during the last eight months. She has pressed me for my opinion of the case, and I have reluctantly had to tell her that her two medical attendants were mistaken in their diagnosis. I based my decision on the fact that the hamorrhages came on irrespectively of menstruation and on the impossibility of a fibroid completely disappearing in so short a time. Is this decision correct?

Is it not more probable that the hæmorrhages were due to the onset of the climacteric? An expression of opinion on this case will greatly oblige.

I am, Sirs, yours truly,

CONSULTANT.

Jan. 12th, 1895.

* As regards the hæmorrhage, it seems most probable that it was due, as our correspondent suggests, to the approach of the menopause. As to the question whether the two gentlemen who examined and found a fibroid the size of a chestnut were mistaken, or whether, on the other hand, our correspondent, who failed to find it ten months later, was mistaken, it is impossible for us to decide. Many good men not in special practice frequently make mistakes about physical signs concerning the uterus where there is something much more definite than a growth the size of a chestnut. We would remind our correspondent that it not rarely happens, even when the uterus is sufficiently enlarged by fibroids to form a tumour in the hypogastric region, that there is no unusual hæmorrhage.—*Ed. L.*

AN INQUIRY.

To the Editors of THE LANCET.

Sirs,—On the night of the 7th inst. I was called to see a child which had a sore throat and a slight rash, but presented no symptoms of malignant scarlet fever. It suffered from incessant vomiting and purging all night, and died suddenly next morning, after an illness lasting only twenty-four hours. A post-mortem examination revealed only gastro-enteritis. It was later found that sewer air could make its way through a hole in one corner of the room where the child lay. Was the death due to scarlet fever or to poisoning by sewer air? In death caused by sewer air are there any pathognomonic post-mortem signs? and, if so, where are they described? Would bacteriological examination be decisive?

I am, Sirs, yours truly,

REGULAR SUBSCRIBER.

Jan. 17th, 1895.

Enquirer.—It is courteous and proper, when a patient changes his medical man, to intimate the same to his previous adviser. If he fails to do so, or refuses, the practitioner called in is not under obligation to communicate the fact, but it might easily be a friendly and neighbourly thing to do so. A patient changing his adviser, and known to be doing so, should be informed by the new adviser of his duty.

C. W. L. is informed that his letter is receiving every attention. When we decide whether we can do anything practical and what we shall do we will communicate with our correspondent. In the meantime nothing would be gained by printing our correspondent's letter.

H. E. B. (Cricklewood).—We never recommend individual practitioners; but our correspondent's medical man would be able to inform him where he can obtain the best practical advice.

A QUESTION OF ETIQUETTE.

To the Editors of THE LANCET.

Sirs,—D. was out shooting with B., when he was accidentally shot in the foot. C. (the nearest surgeon) was sent for; also M. (B.'s medical attendant); also X. (D.'s medical attendant), the latter fifteen miles off. C. waited, and after consultation M. left, having an appointment. C. remained, and assisted at a Syme's amputation. X. carried on the case, but accepted C.'s offer to act in emergency. C. heard nothing more of the case for seven days, when B. wrote and asked him to sit up all night, as D. was very ill, and X. had left for home, and M. was not able to come. C. then found that reamputation had been carried out; so at first refused, but at B.'s request stayed in the house all night, but did not see D. 1. Was C. correct in refusing to see D. under the circumstances? 2. Was X. correct in reamputating without asking C. to be present?

I am, Sirs, yours faithfully,

DOUBTFUL.

Jan. 14th, 1895.

* The facts are too imperfectly stated to enable us to express a very confident judgment. It would have been courteous for X. to have consulted C. before reamputating, seeing that C. had been associated with him in the treatment of the case. C. acted kindly in staying in the house of the patient in place of M., and doubtless would have risen to the magnanimity of seeing the patient had need arisen.—*Ed. L.*

QUALIFICATIONS AND TITLES.

To the Editors of THE LANCET.

Sirs,—I should be much obliged if you would kindly inform me through the columns of THE LANCET if there is any advantage in an L.R.C.P.I. possessing the L.M. as well. The latter diploma states that the candidate is "fully qualified" to practise therein. He is examined in midwifery for the L.R.C.P.; and does not this examination "fully" qualify him for the practice of midwifery? Would you also kindly suggest a suitable inscription for the doorplate of a practitioner who is L.R.C.P., L.M. (Irel.)?

I am, Sirs, yours faithfully,

OBSTETRICS.

Jan. 7th, 1895.

* A practitioner already registered would not derive any advantage from the additional degree. The proper style for our correspondent's doorplate is "Mr."—*Ed. L.*

THE HYDERABAD METHOD OF ADMINISTERING CHLOROFORM.

To the Editors of THE LANCET.

Sirs,—During a recent visit to Hyderabad, Deccan, I had the pleasure of seeing chloroform administered on several occasions according to the method adopted by Surgeon-Lieutenant-Colonel Lawrie, the inhalations being conducted under his personal supervision. The routine of administration is briefly as follows:—The patient walks, if possible, or is carried into the operating theatre and lies down on the table with the chest uncovered. Four students then undertake the management of the patient. The first student announces so that every one present may hear all the phenomena and the exact time of occurrence from the beginning of the administration until the patient recovers consciousness, the amount of chloroform given, the variations of pulse respiration, &c., all being noted. The second student writes down the same on specially arranged forms. The third student stands on the administrator's right with a drachm measure-glass and a bottle of chloroform, and measures it out as required. The fourth student is the administrator. He takes a cone made of canvas, stiffened on either side with a thin piece of cane. In the apex of the cone is placed a piece of clean cotton-wool, on which is poured one drachm of chloroform. The cone is then held over the nose and mouth, but not in close apposition. Drachm doses are poured on the wool every minute until struggling commences, the dose is then reduced to half a drachm every forty-five seconds. Anaesthesia being complete, the smallest amount possible to keep the patient under is administered. If signs of irregular breathing appear after the patient has become unconscious the inhalation of chloroform is withheld until it becomes regular, artificial respiration being performed if necessary. Respiration is what they look to for a warning of approaching danger, and not the pulse. Dr. Lawrie is present during the whole time, correcting any inaccuracies in recording phenomena. The patient is not removed from the operating table until he shows signs of return to consciousness.

As a large number of your readers had not an opportunity of seeing chloroform administered by some of Dr. Lawrie's pupils in London last summer, I thought this brief account might be interesting to them.

I am, Sirs, yours truly,

CLARENCE READ.

Jan. 4th, 1895.

"ON THE TREATMENT OF GLEET BY THE URETHROSCOPE."

To the Editors of THE LANCET.

Sirs,—In reference to the distribution of marked copies of the *Medical Week* to various clubs, to which your correspondent of last week calls attention, I am requested by Dr. de Maurans, the editor-in-chief, to state that no copies were sent from the office to other than subscribers, the Isthmian Club not being among the number.

I am, Sirs, yours faithfully,

ALFRED S. GUBB, M.D. Paris.

Rue de l'Abbé-de-l'Épée, Paris, Jan. 15th, 1895.

E. T. J.—The only institutions which receive male epileptics are the Home for Epileptics, Maghull, Lancashire, and the Colony at Chalfont founded by the National Society for the Employment of Epileptics, whose offices are at 12, Buckingham-street, Strand. Our correspondent should address the secretaries of those institutions; but neither receives patients if there is any marked mental defect.

A Correspondent writing from Tremont-terrace, Leeds, is informed that we never give medical advice. His annoying ailment is generally susceptible of relief or cure, and we advise him to consult his regular medical practitioner, who will, if the condition remains obstinate, recommend him how to obtain further advice.

Mr. W. L. Jones.—The physical examination for the different medical services is much the same. It will greatly depend upon the number of teeth lost or decayed, the age of the individual, his present state of nutrition, and the estimated effect which this defect would probably have upon mastication and digestion.

Nursing Sister.—The India Office.

During the week marked copies of the following newspapers

have been received:—Derbyshire Times, Leicester Post, United Service Gazette, Whitehall Review, La Presse (Paris), Sussex Daily News, Bristol Times, Manchester Guardian, Windsor Gazette, Newcastle Chronicle, St. Austel Star, Swansea Journal, Glasgow Evening News, Birmingham Post, Huddersfield Daily Chronicle, Scarborough Post, Cape Times, Liverpool Mercury, Dunstable Borough Gazette, Somerset County Mail, Pullman's Weekly News, Witney Gazette, Eccle Government Chronicle, Sanitary Record, West Middlesex Standard, Brixton Free Press, Hertfordshire Mercury, Grimsby News, Weekly Free Press and Aberdeen Herald, City Press, Reading Mercury, Midland Weekly Herald, Builder, Pioneer Mail, Scotsman, Architect, Swindon Advertiser, Leeds Mercury, Times of India, Barnsley Independent, Grays Standard, Surrey Advertiser, West Middlesex Advertiser, Local Government Journal, Havick Express, Alloa Advertiser, Guy's Hospital Gazette, Burton Chronicle, Hertford Times, Loughborough Examiner, Bristol Mercury, Building News, Yorkshire Post, Kent and Sussex Courier, Tunbridge Wells Gazette, Runcorn Guardian, Brecon and Radnor Express, Berwick Recorder, Grantham Journal, Jockmontwyke Reporter, St. Bartholomew's Journal, The Porcupine, Preston Herald, &c., &c.

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Letters, each with enclosure, are also acknowledged from—

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Lettsomian Lectures

ON THE

COMBINATIONS OF MORBID CONDITIONS OF THE CHEST.

*Delivered at the Medical Society of London on Jan. 21st, 1895,*By FREDERICK T. ROBERTS, M.D.,
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LECTURE I.

MR. PRESIDENT AND GENTLEMEN, — When, having accepted the honourable and responsible position of Lettsomian lecturer, I had to face the trying question of my subject, the one which I have chosen kept forcing itself upon my attention, until at last an irresistible impulse took hold of me to attempt to grapple with it. I am afraid that to many here present the title "Combinations of Morbid Conditions of the Chest" suggests a very uninteresting discussion. The subject certainly does not appeal to that craving for novelty which is so characteristic of the age, and from which even the medical profession is by no means free. I therefore feel it necessary to give two or three reasons for my selection. I take it for granted that the frequency and gravity of cases of chest disease, in every kind of practice and in every grade of social life, must be familiar to all. Not only do they contribute to an appalling extent to the general mortality, but the sufferings and miseries which they inflict upon humanity are beyond all calculation. I have had opportunities of observing and studying these cases on a somewhat large scale, and with increasing experience I have become more and more impressed with the importance of studying the combinations in which morbid conditions of the chest present themselves in individual instances in actual practice. Of course, such combinations are well known to those who have had a similar experience, but my observation has forced me to the conclusion that they are by no means so generally recognised and appreciated as they ought to be, while certain conditions which in my opinion are of real consequence are often entirely ignored. It is too much the custom to look upon thoracic cases as if they were cut-and-dried examples of individual diseases, as described in text-books and lectures, with which we associate distinctive names; to apply to them terms and expressions which have in reality no definite significance; or to fix upon some one prominent physical change or condition, to the exclusion and neglect of all others which may happen to be present. Even special treatises on chest diseases discuss the various affections in the main as if they were entirely separate and independent. Another reason which has influenced me in the choice of my subject is that it gives me the opportunity of uttering an emphatic protest against the absurd development of specialism in relation to this region which at the present day is working so much mischief, as well as against the narrow conceptions so widely entertained with regard to certain prominent modern theories and doctrines, in themselves of the highest importance, and the vagaries in so-called "scientific therapeutics" resulting therefrom. Chest specialism certainly deserves recognition quite as much as the majority of specialities, but only within due and rational limits. Anyone who knows anything about the important structures which occupy this cavity must recognise the necessity of being always prepared to study them, from a pathological and clinical point of view, not only in their more immediate connexions, but also in their relations to associated structures outside the thorax, and to other organs and systems of the body. And, further, the practice of dealing with each thoracic organ as if it were entirely separate and distinct, or, still more, of making a speciality of particular complaints, is both dangerous and absurd.

Permit me now to offer a few words of explanation in relation to the title which I have adopted for these lectures. In the first place, the word "chest" is used in a comprehensive sense, and is intended to include all structures which are directly associated with this region. These may be conveniently arranged in the following way: (1) the chest

walls, including the superficial and muscular tissues, as well as the bony and cartilaginous framework; (2) the diaphragm, a structure as a rule entirely forgotten and ignored; (3) the lungs and pleura, with the trachea and its primary bronchial divisions; (4) the heart and pericardium, with the great vessels, both arteries and veins; (5) the less prominent contents of the mediastinum, including chiefly the oesophagus, absorbent glands, thoracic duct, and certain important nerves, but not forgetting also the thymus gland, and the mediastinal cellular tissue; and (6) the abdominal viscera which are contiguous to the diaphragm, and which, though not actually contained in the thoracic cavity, come normally more or less within the area covered by the ribs, especially the liver, stomach, and spleen.

Under the expression "morbid conditions" I include both functional disorders and organic changes. I am well aware that not a few object to the word "functional" as applied to any morbid state whatsoever, but I must pass over this question, and will only say that, in relation to the subject with which we are now concerned, disturbances affecting the important functions immediately connected with the thoracic structures, usually of a temporary nature, not uncommonly occupy a prominent place. With regard to organic changes, these are of various kinds, but, speaking generally, they may be conveniently grouped as follows: (1) those which are not injurious in themselves, but are important on account of the physical effects which they produce (and this class of lesions are often the remains of some previous acute or active disease); (2) permanent structural changes impairing the functions of organs; (3) more or less acute diseases or morbid conditions which are temporary, inasmuch as if they do not prove fatal within a limited period they as a rule clear up or disappear when their determining causes are removed; (4) changes which are grave in themselves, either from the immediate danger due to some serious lesion or from their essentially fatal tendency, or being of a destructive type or of a septic and infectious nature, or because they become the occasion of, or predispose to, dangerous secondary lesions; and (5) morbid conditions, often obvious enough and persistent, but which in reality are of a curative or compensatory character—these may be quite harmless, or even beneficial and helpful, but not uncommonly they are accompanied with impairment of function, owing to the permanent damage done to the affected organ. I have next to deal with the title of my subject as a whole, and to speak of the combinations of morbid conditions of the chest in the comprehensive sense just referred to. A large proportion of chest cases, as they come under our notice in living patients, to say nothing of undetected changes which we find post mortem, present various combinations of morbid conditions, for which, as medical practitioners, we have to be constantly on the look-out, otherwise we are ever in danger of going astray in our diagnosis. Many of these associated conditions can be readily and fully appreciated and understood by any properly trained clinical observer; but sometimes they become so numerous and complicated that it may be very difficult or even impossible to determine the exact state of things. A point which calls for notice here is that some cases become important, or even serious, simply because they present a number of conditions in combination, not one of which would in itself be of any material consequence.

I have classified under certain groups the chest conditions and their combinations which are likely to be met with, in the hope that such an arrangement may be practically useful for future reference, and as a basis for the study of individual cases; but I do not pretend in the time at my command to enter into details, or to describe the numerous combinations of chest conditions which I have personally observed. My object is merely to generalise, illustrating my remarks by the occasional mention of some specially instructive case. I have no intention whatever of giving a lengthy description of any case, nor do I propose to inflict upon you any statistics. Having completed this—the most important—part of my subject, I desire afterwards to indicate briefly some clinical lessons which its consideration suggests, especially in relation to the investigation of chest cases; and, in conclusion, to submit a few general remarks as to its bearing upon their diagnosis, prognosis, and treatment.

SYNOPSIS

General Classification of Morbid Conditions of the Chest and their Combinations.

- I. Conditions of the chest walls and diaphragm.
- II. Slight or indefinite intra-thoracic changes.

D

- III. Combinations of changes belonging to Nos. I. and II.
- IV. Secondary effects of certain intra-thoracic physical conditions.
- V. Combinations of chronic diseases or their remainrs.
- VI. Combinations in acute cases.
- VII. Combinations due to accidental lesions or complications, usually sudden.
- VIII. Combinations associated with sudden or acute disorders of function, temporary or paroxysmal.
- IX. Combined conditions originating from the abdomen.

In the first instance I submit for your consideration a table which presents a general outline or sketch of the course which I propose to take in discussing the part of my subject with which we are now concerned, and this may afford some comprehensive idea as to the classes of chest cases in which we are likely to meet with various combinations of morbid conditions. Without further comment I proceed to discuss the several groups mentioned.

I.—CONDITIONS OF THE CHEST WALLS AND DIAPHRAGM.

That great clinical teacher, Sir William Jenner, used to impress upon us as students some important facts about the chest walls; but my observation compels me to say that nowadays they are not regarded as of much account. I suppose that anyone who makes the slightest pretension to being a clinical observer could scarcely fail to be attracted by such striking and prominent conditions as subcutaneous oedema or emphysema, the presence of a growth, or an extreme deformity; but I fear that other less attractive changes are seldom thought of, though in reality they not uncommonly add seriously to the sufferings and difficulties of the patient. It would be altogether beyond the province of my subject to attempt to discuss in detail the numerous morbid conditions of the chest walls and diaphragm; but I wish to point out emphatically that these structures, and the former especially, are always well worthy of consideration when dealing with thoracic cases. The skin of the chest sometimes, less commonly now than formerly, shows the marks of some energetic local treatment by cupping, leeching, &c., which suggest that the patient had an acute intra-thoracic inflammatory attack at some time or other, likely to leave behind permanent changes, of the existence of which in the particular case it is desirable for us to be aware, but which we cannot definitely detect. Further, a scar may draw attention to a former operation for pleural effusion or an empyema. As illustrations of the association of superficial conditions with those within the chest the following may be mentioned. Painful sensations in many cases of internal disease of different kinds are certainly connected with the superficial structures, whether neuralgic, neuritic, myalgic, "referred," or by whatever other name they may be called. Cutaneous hyperæsthesia is also sometimes very pronounced. Spasm of the muscles of the chest walls may likewise be associated with some internal disorders. It is well known that pleurisy may be associated with herpes zoster, or with an extensive burn or scald of the thorax, as well as with injury, and the results remain in the form of adhesions. Certain states of the chest walls may occasion a disturbance of the normal internal arrangements, as in the case of a cleft sternum, or when a ruptured muscle allows a hernia of the lung to take place. Having given these general illustrations, I cannot resist making a few remarks upon certain individual conditions connected with the chest walls, simple enough in themselves, and of very frequent occurrence in association with internal diseases, but which, from their very frequency and simplicity, are constantly overlooked and neglected in practice.

Wasting of the superficial tissues and muscles.—Wasting of the soft structures of the chest walls, and especially of the muscles, is a very common factor in diseases of this region, being noticed most conspicuously, but by no means solely, in cases of phthisis. Its local effects ought always to be fully taken into consideration, and it must not be merely regarded as a part of the general wasting. I do not suppose that in its minor degrees it contributes appreciably to the troubles of the patient, but marked emaciation may add materially to the difficulties of the acts of breathing, coughing, and expectoration, contributing but too obviously to the distress and inefficiency of these acts, while under certain circumstances it may become an immediate source of danger.

Softness of the ribs.—This condition is natural during early life, but its association with different affections involving the lungs must always be kept in mind. Any obstruction to

the passage of air through the main air tube, or even a slight bronchial catarrh, and still more a serious bronchitis or pneumonia, becomes under the circumstances unusually important, and its possible effects must be estimated accordingly. Softness of the ribs as a morbid state is very often met with in children as a consequence of rickets; in adults the condition is only of very rare occurrence in connexion with osteomalacia.

Rigidity of the chest walls.—The changes which take place in the framework of the thorax, leading to undue firmness or rigidity, with consequent interference with its mobility, amounting in extreme cases to absolute fixation, are of common occurrence under a variety of circumstances, and are not infrequently of decided consequence. I make it an invariable rule to look for them when dealing with any chest case, at any rate in subjects approaching or beyond adult life, and to endeavour to estimate their effects in relation to certain physical signs and symptoms, and yet my experience compels me to say that they seldom attract the notice they deserve, even when of a very pronounced character. The changes which produce the rigidity are well known, consisting of undue calcification of the ribs and sternum, with incomplete ossification or calcification of the costal cartilages; while changes also take place in the joints, which ultimately lead to their more or less complete ankylosis. Of course, these changes develop naturally with advancing age, and there is at any rate no excuse for overlooking them in old people. But the more or less "rigid chest" is quite frequently met with in individuals who have not yet reached middle life; and in the ordinary run of practice it is astonishing how often it is revealed in the examination of even young subjects. Under these circumstances it is generally, but not always, obviously traceable to the effects of hard physical work, excessive indulgence in athletic and allied exercises, injudicious training for the public services, and like causes. The changes which lead to rigidity of the chest walls may be but a part of the entire case, developing along with other morbid processes which are taking place within the thorax, or being in some instances probably the secondary result of these processes. The effects of a rigid chest are easily understood, and it is readily detected by physical examination. Speaking generally, its most obvious consequences are that it interferes more or less seriously with the respiratory movements—expiratory as well as inspiratory—the thoracic walls becoming in extreme cases absolutely fixed and immobile; and that it prevents their expansion under certain circumstances. Now in itself this condition may not lead to any obvious disturbance; but let it be associated with internal thoracic diseases of different kinds, and its effects become at once apparent, especially if the thorax happens to be of small capacity. It is remarkable, for instance, how it adds to the severity of the symptoms of, it may be, only a slight bronchial catarrh; while it becomes in itself a real source of danger when any pronounced acute inflammatory affection develops within the chest, and especially if it should lead to some definite physical condition which encroaches upon the thoracic cavity, such as pleuritic or pericardial effusion. Again, rigidity of the walls may greatly limit or actually prevent the distension or expansion of the chest, which should be the natural result of certain intra-thoracic conditions, and may thus be of serious consequence. The most striking illustration of this statement is afforded by a certain class of emphysematous cases. I need scarcely say that extensive vesicular pulmonary emphysema tends to cause general enlargement of the thorax, which up to a certain point may be regarded as a tendency in this region to accommodate itself to circumstances. But when this condition develops for the first time late in life, or in a person whose thorax has become prematurely rigid, such enlargement is either entirely prevented, or it is so much curtailed and modified in its details, that it in no respect falls in with the ordinary description of an emphysematous chest. Moreover, under these circumstances the symptoms are obviously likely to be much more pronounced and troublesome than they otherwise would be. I have also met with cases of greatly enlarged heart in which the rigid chest walls would not yield, and consequently no cardiac bulging could be produced, so that the organ was obliged to encroach upon the thoracic space and to interfere with the other contents of the thorax, as well as with the diaphragm, the symptoms being accordingly much more severe than they would otherwise have been.

Abnormalities in shape and capacity: chest deformities.—The conditions which come under this heading are important in themselves, as well as extremely interesting in relation to

chest affections. A chest of contracted dimensions and small capacity ought to be regarded as a "morbidity condition," whether it is the outcome of a natural delicacy of frame or of a want of proper development in early life, or is the result of internal disease. When primary, it is necessarily associated with a state of things within the thorax which undoubtedly predisposes to a certain class of diseases, and in course of time we are confronted with the manifestations of the combined conditions in many of the cases of phthisis which we meet with. In the opposite direction, a chest that is over-distended from any cause is in itself actually morbid, and is not merely an indication of some internal disease, a fact of which the athletes of the present day may well take note. The different unilateral and local changes in the shape and size of the thorax that so frequently come before us must also not be regarded as mere "physical signs" of various conditions, inasmuch as they themselves frequently constitute a part of the entire group of morbid changes with which we are concerned. It is, however, possible to attach an undue importance to slight changes of this kind. It is well not to jump to the conclusion that an intra-clavicular depression necessarily means phthisis, or that the bending forwards of a rib cartilage is the prominent sign of an aneurysm. Pronounced deformities of the chest, especially those resulting from spinal disease, are often very sad and trying, if only on account of the immediate effects of the deformity upon the contents of the thorax; when, in addition, the walls become rigid, while various acute or chronic intra-thoracic diseases supervene, which are by no means necessarily the direct outcome of the deformity, the entire complication is often very perplexing, while the symptoms are proportionately grave, and sooner or later the termination must inevitably be fatal.

Conditions affecting the diaphragm.—Different conditions of the diaphragm may follow upon—

- (a) Functional disorders; spasm; paralysis.
- (b) Mechanical embarrassment or displacement.
- (c) Acute inflammation; diaphragmatic pleurisy.
- (d) Adhesion to neighbouring structures.
- (e) Chronic structural changes: atrophy; fatty degeneration; fibroid changes.
- (f) Rupture, perforation, or congenital deficiency.

I now only indicate in a general way the morbid conditions which may affect the diaphragm, and remind you that one or other of these conditions is in not a few instances an important factor in connexion with intra-thoracic diseases, of which I may give some illustrations later, and your own experience will probably bring to your remembrance individual cases exemplifying this point.

II.—SLIGHT OR INDEFINITE INTRA-THORACIC CHANGES.

Under this head I wish to draw attention very briefly to certain changes which take place within the chest, and I term them "indefinite" because, though of very common occurrence, and in many instances easily made out by skilled investigation, they give rise to no evident symptoms, and, indeed, can often only be detected by methodical and careful physical examination. In some cases, moreover, their presence, though it may be reasonably suspected, is rather a matter of inference or guesswork than of actual demonstration. The conditions to which I allude are: 1. Localised pleuritic or possibly pericardial adhesions. 2. Ill-defined changes in the pulmonary structures, such as senile atrophy, lesser degrees of over-distension of the lungs or even of true vesicular emphysema, commencing degeneration, impairing the pulmonary elasticity and expiratory force, and limited fibrotic changes, the remains of a cured phthisis or other past lesion. 3. The lesser degrees of atheromatous degeneration of the thoracic aorta and its main branches. 4. Atrophy or early degenerative changes affecting the heart walls, or infiltration of its muscular tissue with fat. I may note, by the way, that the viscera and other structures are in exceptional instances congenitally transposed, and this is a condition of an indefinite nature to be borne in mind as a possible accompaniment of pronounced intra-thoracic disease, especially in relation to the heart. Most of the changes to which I have referred usually come on gradually and imperceptibly as the natural result of the wear and tear of life, or of other causes to which I have alluded when speaking of the chest walls. Some of them, however, may be the remains of a past illness, of which the patient may be aware or of which he has no distinct remembrance. Intra-thoracic adhesions, even of considerable extent, are, it is well known, not uncommonly found post mortem, the origin of which cannot be traced and the existence of which was not

recognised during life. At the same time, I venture to assert that many such adhesions can be easily detected by proper examination, if there has been an opportunity for carrying it out in the living patient.

III.—COMBINATIONS OF CHANGES BELONGING TO I. AND II.

Although I have dwelt so long upon conditions which may appear to be of minor importance, I must still ask your attention for a moment to a distinct group of cases, of which I have seen numerous examples, and which are characterised by the presence of certain of these conditions in combination, affecting both the walls and the contents of the thorax, and therefore assuming a degree of importance which they would not otherwise possess. In these cases the superficial structures are more or less wasted—it may be considerably; the chest walls are obviously rigid; localised pleuritic adhesions can be made out—it may be in several spots; there are no gross lesions to be detected in the lungs, but these organs are evidently wanting in normal elasticity and tending towards degeneration, perhaps also exhibiting limited areas of emphysema, or there is a suspicion of a fibrotic change here and there; sometimes there are indications of commencing atheroma of the aorta, or the heart is feeble in its action and is probably of actually small size. Now I maintain that cases of this kind ought to be definitely recognised, though it is difficult or even impossible to apply to them any particular designation. They do not exactly belong to the chronic emphysematous or the phthisical group, and they can only be included under that somewhat vague category known as a "weak chest." The patients who suffer from this combination of changes are fully aware of their existence, for at any rate they affect their breathing powers considerably, while they render them extremely susceptible to the effects of even a slight cause likely to act injuriously upon the respiratory organs. Still, so long as they keep quiet and consent, and are able, to remain in a comfortable house or room during the colder seasons of the year, or to reside in some more genial and suitable climate than ours, they get on very well. Let them, however, have even the slightest bronchial catarrh, or, still more, a pronounced acute bronchitis or a pneumonic attack, and their troubles increase at once in a marked degree, while the danger to life also becomes for obvious reasons very serious, quite out of proportion to the acute illness in itself, and I know of few more anxious combinations of conditions to deal with in practice.

IV.—SECONDARY EFFECTS OF CERTAIN INTRA-THORACIC PHYSICAL CONDITIONS.

Here I merely wish to point out that given a particular physical condition within the chest, others are likely, or in many instances certain, to be produced by it as secondary consequences, varying in their nature and degree within well-known limits. Hence it happens that the case presents itself as a more or less complex one, there being a combination of morbid conditions which it is incumbent upon us to recognise, at the same time endeavouring to determine and estimate how far each contributes to the sum total of the clinical phenomena observed. It is too much the custom to look upon these secondary effects as mere "physical signs" of the primary condition, their real importance in themselves being overlooked, or at any rate not adequately appreciated. As illustrations of the more prominent conditions which originate this more or less complicated state of things—to some of which I shall have again to refer—I may mention a large fluid or gaseous accumulation in the pleural cavity, or a much thickened and extensively adherent pleura; pericardial effusion; marked general emphysema, and an intra-thoracic tumour of any description, whether aneurysmal, solid, or of other kinds. I may draw attention to one special point in this connexion—namely, that when from any cause the action of either lung is extensively interfered with, the opposite one almost necessarily undergoes compensatory enlargement, and the combination may be easily misunderstood unless due care be exercised.

V.—COMBINATIONS OF CHRONIC DISEASES OR THEIR REMAINS.

In speaking of the remains of chronic diseases I refer to what are truly morbid changes, not active, and often the manifestations of the arrest of destructive or other injurious processes, and of an attempt at repair of the damage. It will be observed that in some groups the changes are practically confined to one particular structure or class of

structures; in others two or more are involved, but in a large proportion of these cases the connexion between the several lesions is sufficiently obvious and intelligible, if properly studied. Sometimes, however, the morbid changes are quite independent of each other, or they become so complicated that it is very difficult or even impossible to trace any distinct relation between them. It would obviously be impossible in the time at my command to discuss the several conditions at any length, and my observations are meant to be merely of a general character.

A.—Respiratory Apparatus.

There are many chronic chest cases in which the morbid conditions, though more or less complex, are practically confined to the respiratory apparatus, and these cases I now proceed to consider.

Pleuritis.—There is a definite class of chronic chest cases in which we have practically to deal with prominent morbid states of the pleura and their immediate consequences. They have either started in a well marked attack of pleurisy with effusion or have followed an empyema which has opened into the lung or been operated upon, or they have sometimes developed slowly and imperceptibly. In exceptional instances they appear to have originated in a limited pneumothorax, which has probably been associated with phthisis, the progress of this disease having been checked by the pleural lesions. The large majority of chronic pleuritic cases are simple enough, but in some instances the conditions are decidedly complicated, and we may meet with various combinations of adhesions, great thickening, localised collections of fluid, or possibly even the remains of a pneumothorax or pyo-pneumothorax. Nor must I forget to note here that the pleura may be the special seat of an extensive tuberculous or malignant infiltration, which still further complicates matters. The important practical lesson for us is, that when brought into contact with what is obviously a chronic pleuritic case, we must not jump to the conclusion that we have to deal simply with an effusion.

Pulmonary and air tubes.—Of course, there is no definite line of demarcation between the bronchial ramifications and the other tissues which enter into the construction of the lungs, and it is a familiar fact that they are all more or less implicated in a large number of cases. Under this head, however, it will be convenient to notice also certain lesions affecting the main air passage or its primary bronchial divisions which are liable to be met with in connexion with some lung diseases. The following subdivisions indicate fairly clearly the aspects under which the large majority of chronic pulmonary cases come before us in practice, and I propose to say a few words about each.

(a) **Phthisical.**—Many of the laity talk glibly about microbes, tubercle bacilli, tuberculous granulations, and the like, and are ever on the look-out for the latest "cure" for this disease without seeming to realise in the least that there are any actual lesions, pulmonary or other, and even when the chest and its contents have become a total wreck their eyes are not opened to the absurdity of their notions, and they will fly to any quack who promises a cure. Of course, I do not suggest that these ideas are held by any medical man of average education, but I must say that what one reads and hears indicates rather an undue fondness for bacilli, and often reveals a want of due appreciation of the actual morbid changes which ordinarily characterise phthisical cases, especially as regards their extent and combinations. It is not my business on the present occasion to discuss the pathology of phthisis or to describe its lesions; nor do I wish to minimise in the smallest degree the importance of the bacillary doctrine in relation to this complaint. My subject, however, compels me to point out that the changes in the lungs themselves, setting aside other thoracic structures, are definite enough and well understood, are often of a pronounced nature, and in cases of some duration are sure to be more or less combined, ultimately not uncommonly culminating in a highly complicated state of things. As the evidence and results of the phthisical process in these organs we have to deal with distinct areas or masses of consolidation—tuberculous, inflammatory, caseous, or mixed; miliary tubercles, diffused or in groups; softening of these structures and breaking down, leading to destruction of the pulmonary tissues; cavities in all varieties of size, shape, characters of walls and surroundings, and contents, more or less suppurative usually taking place in them; as well as with changes indicating a tendency to arrest of the disease in places, and to a reparative process, especially

the formation of a fibroid tissue, which leads to induration and contraction of the affected portion of lung, with narrowing, and it may be even ultimate closure of cavities. Then we have to recognise also, in many cases, an associated bronchitis, which contributes more or less to the expectoration; while in some instances there are definite tuberculous ulcers in the larger bronchi or the trachea. The more pronounced laryngeal complications of phthisis hardly come within the scope of my subject, as the larynx is outside the thoracic cavity, but I may point out that laryngeal symptoms are occasionally produced by the effect of phthisical changes upon intra-thoracic nerves, and these also must not be overlooked. Again, in parts of the lungs not actually phthisical, compensatory distension, or so-called emphysema, is often met with; and, further, there are vascular changes, but the only one I need specially mention is the possible development of an aneurysm on a branch of the pulmonary artery within a cavity. In that special group of cases known as "mechanical phthisis" there is the additional element of the solid foreign particles infiltrating the lung tissues. It is very important to recognise the pathological nature of the different solid materials met with in phthisical lungs, and it is quite incorrect, as well as misleading, to sum them all up under the general term "consolidation."

(b) **Emphysematous and Bronchitic.**—The term "emphysema" is used not uncommonly in a very loose fashion, to signify any abnormal pulmonary distension or accumulation of air in the lungs, whether general, unilateral, or local. I am at present concerned, however, with the real disease, in which not only are both these organs more or less enlarged and distended, but their tissues have also undergone certain structural changes, chiefly evidenced by impairment or loss of elasticity. Now this condition is very likely to be associated with a chronic bronchial catarrh or bronchitis of some kind, though there are times when the patient may be practically free from any such trouble, while it is liable to periodical exacerbations from the action of well known causes. In many instances, of course, it is the bronchitis which has been the primary disease, and it may be affirmed as a general statement that this complaint cannot persist for any length of time without producing more or less emphysema—even in early life. I have often been distressed by the pitiful sight of young subjects suffering in this way, evidently as the consequence of ignorance or neglect. In whatever manner they may have commenced a large number of the cases designated "emphysema and bronchitis" are comparatively simple; but even then we ought to try to determine certain details, as, for example, the degree of distension of the lungs, the amount and nature of the changes in their tissues, and how far their elasticity is impaired, the kind of bronchitis, with its amount and mode of distribution, and the state of the chest walls. I have already referred to the importance of rigidity of the thorax in relation to the emphysematous condition. In emphysematous and bronchitic cases the lungs occasionally become more distended than usual, owing to the escape of air from them being obstructed by the conditions of the bronchi. Under such circumstances the emphysema appears to be greater in degree and extent than it actually is, and when the obstruction is removed the lungs diminish in bulk—it may be considerably,—as evidenced by the size of the chest, while its movements also improve in proportion. With regard to the changes affecting the bronchi in the cases now under consideration, we have to bear in mind not only that there are different varieties of bronchitis, but also that the walls of these tubes are in time likely to undergo serious permanent changes, their mucous lining becoming disorganised and more or less extensive bronchial dilatation being often finally established. Bronchiectasis should more especially be remembered as a possible condition, because extensive emphysema will often completely obscure the physical signs which may be expected to reveal the presence of the dilated tubes. Plastic bronchitis is a rare variety which may be associated with a more or less emphysematous state of the lungs.

(c) **Chronic Pneumonic.**—I can only very briefly refer to the conditions which come under this heading. There are the well-known cases of chronic interstitial pneumonia, which are described under the terms "cirrhotic or fibroid lung," "fibroid phthisis," &c. These in time assume a decidedly complex character, in whatever way they may have originated. The fibroid change is limited in most cases mainly or entirely to one lung, or a portion of it, which is thus hardened and contracted, the involved structures being rendered quite useless; it is also often accompanied with the remains of

phthical cavities, and still more frequently with dilated bronchi; while unaffected areas of the same lung, as well as the opposite one, become the seat of compensatory distension, which may ultimately terminate in true emphysema. Sometimes both lungs are involved in unequal degree, or if one is not fibrotic it is frequently the seat of bronchitis. There is an exceptional class of chronic pneumonic cases which may prove very puzzling. In these one lung is absolutely solid, either throughout or over a large extent, but instead of being contracted it is more or less enlarged. The opposite lung becomes greatly distended, and also in some instances the seat of dry bronchial catarrh; so that the general aspect of the patient, as well as the prominent symptoms, may resemble closely at first sight those of an extreme case of emphysema and bronchitis, with an asthmatic tendency.

(d) Syphilitic.—Time forbids my doing more than allude to these cases. They are somewhat indefinite from a clinical point of view, though they occasionally present distinct combinations of different morbid conditions, which it may be possible to recognise during life.

(e) Mixed.—I have already given illustrations of mixed conditions in the lungs in my discussion of the specially named groups; but I have thought it desirable to designate by this term a particular class of cases in order to emphasise the fact that any of the pulmonary lesions which I have been thus far considering may be met with together in almost every conceivable variety of combination. There are two points to which I more especially wish to draw your attention in this connexion. I have heard it often stated—and it seems to be rather a prevalent idea—that emphysema and tuberculosis are antagonistic and are rarely observed together. Now, as a matter of fact, phthical changes are not at all uncommon even in markedly emphysematous lungs, while it is quite usual to find the two conditions associated together in different parts of the same organs. Under these circumstances the physical signs of the tuberculous lesions are very likely to be obscured, and we may have to rely very much on the symptoms in their diagnosis. The other point to which I must refer is the relation between phthisis and chronic bronchitis. There is a distinct class of cases in which, chronic bronchitis having existed in a more or less pronounced form for a variable period, tuberculous changes ultimately supervene, which are easily explained on the bacillary theory, and the clinical phenomena reveal definitely enough a combination of the two diseases. The danger is lest the development of the tuberculous lesion under such circumstances is not recognised; and my observations have led me to the conclusion that not a few cases regarded as bronchitic are in reality phthical, and that they are so recorded in death certificates—a most important matter in relation to life assurance and to the question of the heredity of phthisis. This oversight is especially liable to happen in the case of patients advanced in years, a statement in support of which I could mention many examples from personal knowledge.

(f) Pleuritic and Pulmonary.—These combinations frequently present themselves under different aspects in practice, but I can only give a few of the more prominent illustrations. Firstly, we have the fairly simple cases, in which, as the result of a definite attack of pleurisy with effusion, or perhaps an empyema, the effects produced by these conditions on the lungs remain persistent, though there is no further active mischief in these organs. That is to say, the lung on the affected side continues in a more or less condensed or collapsed state, being bound down by pleural adhesions, probably becoming also in course of time somewhat fibroid; while the opposite one presents various degrees of distension or compensatory hypertrophy. This combination may remain quiescent for an indefinite period. Secondly, it must be borne in mind that pleural adhesions are most important factors in a large number of cases belonging to the pulmonary groups considered under the previous heading. In chronic phthisis, for instance, it is quite common to find one lung universally adherent, the change often extending much beyond the limits of the actual pulmonary disease, while the opposite organ may be also partially fixed in a similar way. Of course, in some of these cases the phthisis is secondary to the pleuritic condition, but the lesions as they come before us are practically the same. It is at the present time a favourite doctrine that most cases of pleurisy are originally tuberculous; although I do not agree with this doctrine as a general statement, I fully recognise the great importance of pleuritic conditions in relation to phthisis. Local adhesions

are very frequent in association with emphysema and bronchitis. A somewhat complicated class of cases occasionally present themselves which, without due care, are very liable to be regarded as merely "emphysematous and bronchitic." Their history is that the patient has had a distinct attack of pleurisy which has left one lung universally adherent and probably somewhat compressed, while the opposite lung has undergone compensatory hypertrophy. In course of time, however, the enlarged organ becomes truly emphysematous, and ultimately greatly distended, while the compressed lung may also expand under certain circumstances, and subsequently become emphysematous. Thirdly, there are definite cases of a chronic phthical nature in which pulmonary and pleuritic lesions exist together in a pronounced form, including, perhaps, the remains of a pneumothorax, and the combination may be very perplexing. Occasionally one meets with phthisis at one apex and an effusion on the opposite side, which returns again and again after removal by paracentesis, being evidently of a tuberculous nature. Lastly, an important class of cases, where the pleura and lung are involved together, are those in which an empyema has burst into the lung, and the discharge of pus in this direction has persisted as a chronic state, the matter being usually coughed up at intervals. In short, we have then to deal with a pyo-pneumothorax which is periodically emptied, partially or entirely, by way of the air passages.

B.—Pericardial, Cardiac, and Vascular.

A systematic and comprehensive knowledge of the various chronic morbid conditions which may affect the pericardium, heart, and great vessels is particularly helpful to a clinical observer. Of course, it is quite out of the question to give in these lectures any classification of the several ways in which these morbid conditions may be associated, and without further comment I can only submit the following propositions:—

(a) That a large proportion of cases of cardiac disease are, in relation to the structures immediately concerned, by no means so simple as they are often thought to be, and that most of them must inevitably at some period or other of their history present various combinations of morbid changes.

(b) That pericardial adhesion or agglutination is a most important element in not a few chronic heart cases, and should therefore always be borne in remembrance, especially as it can frequently be easily recognised.

(c) That in every individual case it is essential to think of all the conditions associated with the heart itself, and to study them intelligently, being guided by an adequate general knowledge of the probable combinations which may be anticipated under particular circumstances. I may allude here to the fact that it is quite common to find two or more orifices and their valves affected in the same case, and the well-known consequences of these lesions will be modified accordingly.

(d) That functional disorder of the action of the heart does often modify from time to time, or even persistently, in a remarkable way and degree, the phenomena associated with organic cardiac affections, both symptoms and physical signs, and it should therefore be made a rule to study systematically in every case the mode in which the heart is performing its functions, in relation to the organic changes that happen to be present. In short, we have frequently to deal with a combination of organic diseases and functional derangement of this organ, which it is most important to recognise.

(e) That it is also of the highest importance always to attend to the great vessels within the chest and those of the neck, as these are commonly affected in various ways along with the heart, or may reveal conditions of this organ which cannot otherwise be definitely determined. The frequency of extensive atheroma or calcification of the aorta and its large branches in cases of cardiac disease ought never to be forgotten, or there may even be dilatation or an aneurysm.

C.—Respiratory and Circulatory.

The next group of chronic chest cases of a combined nature is that in which the respiratory and circulatory apparatus are involved more or less at the same time. We often meet with combinations exemplifying, on the one hand, the effects of mitral disease on the lungs, and, on the other, those of prolonged emphysema and bronchitis upon the right heart. Again, when the lungs are highly emphysematous the heart and pericardium become more or less completely covered, while at the same time the right side of the heart seems to be pushed down towards the epigastrium. On the other hand, as the result of contractile changes in connexion

with chronic phthisis or pleurisy, the pericardium and its enclosed structures become unduly exposed, or the large vessels may be also uncovered. A very large heart compresses the left lung more or less, and I have known the organ to be completely collapsed and airless from this cause. Another class of cases in which the respiratory and circulatory apparatus present combinations of chronic morbid conditions are those where the changes are the effects of the same cause or causes, which have operated upon both sets of structures. As I shall show in the next lecture, they may be involved in a acute inflammatory process at the same time, and the remains are likely to come before us under a more or less complex aspect.

D.—Special Diseases.

Under this heading I allude to certain classes of chest cases, each of which demands independent study and consideration, including especially aneurysm, glandular enlargements and other solid tumours, hydatids, actinomycosis, and œsophageal pouching. These severally give rise to various combined morbid conditions, but I can only offer two or three general remarks about aneurysm and glandular enlargements, or other kinds of intra thoracic tumour. It is necessary to be constantly on the look-out for these kinds of cases, and especially aneurysm, for, although they are of comparatively infrequent occurrence, we never know when they may come under our notice. Enlarged bronchial or other glands within the chest is another condition to be remembered, especially in children. In relation to a thoracic aneurysm or solid tumour, we have not only to think of these conditions in themselves, but also of their effects upon adjoining structures. An aneurysm of the aorta may come before us under the guise of what appears to be a mere case of "emphysema and bronchitis," the result of pressure on the trachea the aneurysm itself being entirely obscured by the distended lungs, and out of reach.

E.—Independent Diseases.

Under this head I only wish to say that there are cases of chronic chest disease in which morbid conditions are associated together, having no direct connexion with each other, and being in reality quite independent. For instance, I have met with not a few cases of phthisis and cardiac disease which would come under this category, as well as exceptional instances of aneurysm and phthisis. Another illustration is the association of right pleurisy with cardiac disease, and if time permitted I could give from my own experience numerous other examples.

F.—Highly Complicated Conditions.

I have already given examples of combined chest conditions of a complicated nature, and I merely remark further that exceptionally they present such a degree of complexity, that it becomes practically impossible to unravel them, apparently every structure connected with the thorax, both internally and externally, being more or less implicated in the morbid changes, and ultimately becoming either agglutinated and matted together into one mass or involved in a common ruin. Some highly complicated cases, however, can be fairly understood, even when several structures are affected.

Permit me, before bringing this lecture to a close, to submit the following general conclusions: (1) That chronic diseases of the chest, even of individual structures or organs, to which we apply particular names, are in reality usually made up of different morbid conditions in various combinations; (2) that two or more directly related structures are frequently implicated, and present well-recognised associated lesions in cases which are thus designated; (3) that definite and well-understood pathological relations exist between the important organs occupying the thoracic cavity, which explain many of the combinations of morbid conditions met with in medical practice, but also that these, and the structures associated with them, may be implicated together, apart from the effects of any such obvious relations; (4) that certain classes of cases must be dealt with specially and individually, as regards the morbid combinations which they are likely to produce; (5) that we must be prepared for cases in which separate and independent diseases exist together, as well as for those in which the changes are of a highly complicated nature, and which may tax our knowledge and skill to the utmost in our attempts to unravel them; and (6) that in all cases of chronic thoracic disease due attention and consideration must be given to the chest walls, and that in not a few instances, at any rate, the diaphragm ought not to be forgotten or overlooked.

An Address

ON

EXPERIMENTAL CRANIOTOMY AND DIAGNOSIS OF CEREBRAL ABSCESS.

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Delivered on Nov. 36th, 1894, before the Lombard Medical Association, and specially reported and translated for THE LANCET.

(Continued from page 84.)

LAST April a man aged thirty-three years, who for five months had been suffering horribly from headache, was admitted to the medical clinic. The pain was so great as to prevent sleep, forcing him to rise at night and even to throw himself upon the ground with agony. These phenomena had increased, but for nearly five months had not led to the slightest anomaly in the function of the brain. Only twelve days before admission the patient had one evening been seized with an attack of vomiting, which was repeated four consecutive days, always after a meal. Notwithstanding all this, he was still able to rise from his bed; but for about a week this, too, had become impossible. At the same time his family noticed that when left alone he fell into a slight delirium, and that for four days his face flushed suddenly every now and again. In spite of this, the physician who attended him at the time found no fever. Consciousness grew less and less acute, till at last the patient could no longer speak, in spite of his efforts to do so. His right eye remained half closed; at times attacks of coughing and hiccuping seized him; and finally, on sinking into coma, the patient was removed to the clinic, where he survived only one day. In this case slight ptosis on the right side was noticed, deviation of the eyeballs towards the right, and occasionally horizontal nystagmus. There were no contractions of the muscles of the neck, but those of the trunk, and especially of the chest, were contracted, and the muscles of the upper limbs were in a state of increased tonic spasm. The mental condition, which was very serious, did not allow any really voluntary movements or permit any control over the different senses; only in the upper limbs a few spontaneous movements were to be seen; there were fibrillary twitchings and occasional clonic spasms everywhere. The plantar reflexes were very difficult to get, those of the cremasters and of the abdomen were altogether absent; the tendon reflexes were everywhere slightly exaggerated; there was increased mechanical excitability of the muscles; the reflex action of the conjunctive and pupils was wanting. There was pronounced exophthalmos in both eyes, especially in the right. An ophthalmoscopic examination showed perfectly normal conditions. The breathing was a little irregular; rhythmic pulse; the temperature was 37.6 C.; the respiration was 20, and the pulse 120 to the minute; the urine was normal; slight râles were audible in the lower and hinder parts of the thorax; there was nothing abnormal in the other viscera. What was the cause of these serious symptoms? The patient showed signs of tuberculous disease of bone, a cicatrix adhering to the bone of the right leg, the remains of a sinus which had lasted several years; another sinus was still open in the right forearm, which, having opened spontaneously, maintained a continual flow of pus; all round was diffused swelling, due to periostitis. Certainly, therefore, the idea of tuberculous meningitis appeared in sufficient accord with the preceding and coexisting facts; but other facts did not so easily agree with it. There are morbid processes which will ever be the despair of writers on disease; one of these is tuberculous meningitis. Imagine a complicated organ like the brain, a variable disease like that produced by Koch's bacillus, and tell me if it is possible to lay down any rules sufficiently probable for the infinite ways in which these two agents acting together may give shape to their results. Naturally they will be varied by the duration, situation, and extent of the tuberculous deposit, by meningitis and reactive encephalitis, by the previous constitution of the patient, by the excitability of his nervous system, and by the absence or coexistence of similar or different conditions in other organs. But one of the most assured facts is fever. The presence of tubercles in the choroid is very important, but although

diligently and repeatedly searched for in this patient they were not discovered. Another fact of less importance but not of slight value is the length of the illness. All who have observed this disease have seen it take its whole course in a few weeks; it is exceptional if the patient does not die in a month. Nor is this difficult to understand; it is enough to recall the devastating action of Koch's bacillus and the importance of the organ affected. Now in the case under discussion there was no fever—at least, the physician never discovered it,—although the beginning of the illness could be traced back five months. Kraemer¹ refers to a case which lasted four months, and speaks of those of Seitz of forty-two and fifty-four days' duration; Gatti of Milan observed one lasting seventy-nine days; Dickinson noted one of eight months' duration. I myself have seen a case lasting even longer than this, but in it between the beginning and end of the disease there intervened a long period of apparent recovery. The patient was a girl aged seventeen years, whom I, having made the diagnosis of tuberculous meningitis, did not permit to leave the clinic notwithstanding her evident return to health. She remained there for several months, willingly occupying herself in various little duties belonging to the nurses, but was once more seized with serious cerebral symptoms, and finally died. The post-mortem examination entirely confirmed the diagnosis of tuberculous meningitis. In the patient, however, whose history I gave above it was difficult to explain so long a duration, seeing that there had been no interval of apparent recovery; but that, on the contrary, the symptoms had been continuous and progressive. Persuaded of the infinite variety in the disease, I did not exclude the possibility of tuberculous meningitis in that case, but declared, nevertheless, that I inclined rather to the following diagnosis: caries of the base of the skull; pachymeningitis, with an extra-dural abscess compressing the posterior part of the right cerebral peduncle and the anterior part of the right side of the pons. The pain, which had been so great and continuous without any other phenomena, seemed to me to be best explained by this affection of bone and by pachymeningitis: the sudden nature of the final symptoms were signs of the spreading of the meningitis; the right ptosis, the very evident deviation of the eye, the nystagmus, &c. all justified the diagnosis of lesion of the peduncle and pons, occasioned by compression from below. The post-mortem examination showed that this diagnosis was right as regarded the seat of the disease but wrong as regarded its nature. The skull bones were perfectly normal and the dura mater scarcely thickened. There had been tuberculous meningitis, not an abscess. The convolutions were sunken and the fissures nearly obliterated. In the posterior cranial fossa was found a turbid yellowish liquid. The pia mater was everywhere injected, thickened, and opaque; there were evidences of grey and yellow tubercles in the left motor area and in the parietal lobe of the same side. The sides of the fissure of Sylvius were very adherent, and the middle cerebral arteries—especially the right one—were buried in false membrane and yellow tubercles. The great longitudinal fissure was also obliterated in its anterior part. On the base, from the posterior part of the chiasma to the front of the pons, was found abundant exudation, and the corresponding parts of the brain were covered by pseudo-membrane lying more to the right than the left. The third and fourth ventricles were dilated and full of a turbid liquid, but not the lateral ventricles. The brain tissue was softened in the posterior part of the corpus callosum and in the posterior and anterior parts of the left optic thalamus. The right cerebral peduncle was also softened, while the left had remained normal; the locus niger was more marked on the left. In the pons the base was inclined obliquely from the right to the left from above downwards; the upper right half of the pons had shrunk as though crushed, and presented on its lower side a dark clot as large as a small lentil. On cutting through the pons it was found that the tissue on the right was of a dark colour, while on the left it was of a pale red; the consistence was less on the right, although the softening appeared less general here than in the posterior part of the right peduncle.

In some cases it becomes impossible to distinguish between tuberculous meningitis and cerebral abscess, for if the observations of Fränkel and Rendu be accurate it would seem that Koch's bacillus is enough to generate a cerebral abscess. A man thirty-four years of age died in my clinic in whom three cerebral abscesses of quite recent date were

found, one in the genu of the corpus callosum, the other two in the white masses of the two hemispheres. Neither by post-mortem examination nor by the past history could any reason be found for them; but the cerebral meninges of the pia mater gave evidence of a quantity of recent tubercles. But beyond this it is well known that the usual tuberculous deposit in the brain is seldom found surrounded by suppurating brain substance. I therefore firmly believe that between caries of the cranial bones and cerebral abscess there exists a decided causal relation, and that there is the same relation between the suppuration of the tissues which surround the cranium and cerebral abscess. But I admit that between this theoretical decision and the clinical proof which may have verified it in an actual case there is a great gulf. In practice it is often difficult, not to say impossible, to decide whether there has been a cause or not; but even after having ascertained this it is not fair to argue the existence of the effect, seeing that the same causes may lead to so many different effects; caries of the bone may cause either an abscess, meningitis, thrombosis of a sinus or tuberculous, or, on the other hand, none of these; an injury may produce abscess, tumour, traumatic neurosis, or, again, none of these. Those who write on pathology, therefore, delude themselves; etiological criticism is, without doubt, very important in the diagnosis of an abscess, but one must confess that it is also very dangerous. What symptomatic difference of importance can be found between the case I have narrated and the one I am about to give? I leave you to judge.

On Aug. 16th, 1890, a man thirty-five years of age was admitted to the clinic. He was in a state of half-delirium, half-stupor, so that little could be taken for granted in the answers he made; but his wife when pressed assured us that the man had never suffered from ill health. It was only in the beginning of that month that he complained of headache, which soon became so intense that after Aug. 7th he could no longer leave his bed. When he tried to do so he found that he had not the strength. His mental condition, which from the beginning had been abnormally irritable, rapidly grew duller. The night before his admission into the clinic slight delirium and a very slight stupor had appeared for the first time. The man was well nourished, and showed, besides the delirium and somnolence, a few muscular spasms, and gave vent occasionally to cries of pain caused by the headache, but he had little fever. At the physical examination the next day his mental condition impeded any accurate study of the eyes. The pupils were equal, but reacted slowly. The tongue deviated towards the left. Sensation was dull everywhere. Spasms and contractions occurred in all the limbs. The pulse was 66 and the respiration 20 to the minute. The stupor did not, however, remain always the same; in the following days he sometimes answered promptly. The spasms continued even during sleep. On Aug. 22nd dilatation of the left pupil was noticed; on the 23rd there were contractions of the muscles at the back of the neck, ptosis of the right side, and deviation of the eyes and head to the right. Reflex action was normal everywhere, general sensation was obtuse and the sense of smell quite gone. On the 25th convergent strabismus on the left from paresis of the external rectus set in; the left eyeball was painful, and there were dilatation of both pupils, paresis of the facial muscles on the left, and inability to protrude the tongue. On the 27th paresis of the left side set in; the perception of pain was very slow, but the muscular sense of the position of the limbs was fairly good. The pulse remained regular. Nystagmus of the left eye and a tonic spasm of the right arm, with flexion of the forearm upon the arm and of the hand upon the forearm, were present. Reflex action of the cornea and conjunctiva of the left eye was slow and weak, while the right continued normal; the movements of the left eye were very weak, those of the right eye were very quick. The abdomen was sunken, with an occasional loose motion; deglutition grew gradually more difficult owing to defect of the reflex action in the pharynx. The headache continued intense, while, on the other hand, the stupor grew daily deeper, until by Sept. 12th it had reached the degree of absolute coma. The pulse rose to 120-130 beats to the minute, the breathing to 24-28; the temperature reached and went above 39° C. several times. He was almost always feverish, with the exception of two periods (from Aug. 25th to 29th and from Sept. 3rd to 11th) in which he remained at 37°. The facts given with regard to the nervous system persisted steadily, until on Sept. 14th the man died.

Whoever in this case had chosen to make a diagnosis of basal meningitis would certainly have had no less reason than

¹ Ueber Meningitis Tuberculosa. Inaugurale Dissertation. Zürich, 1894.

one who made the same diagnosis in the preceding case; indeed, in the last the case had been shorter and the difficulty of the long duration was less; besides, there was fever, alternated with periods of apyrexia, which are frequent in cases of tuberculous meningitis. It is true there existed no disease of the bone, as had existed in the preceding case, but who can deem himself free from any old caseous process of the mesenteric or intra-thoracic glands? As in the preceding case, there was no tuberculosis of any organ here; in this case, as in the other, a number of nervous symptoms existed which coincided very decidedly with an extensive process at the base of the cranium—paresis in the left limbs, spasms, starting and contractions in the right limbs, ptosis in the right eye, paresis of the left external rectus, anaesthesia of the olfactory nerves, diminished sensation of the trigeminal and pain in its branches, nystagmus, permanent deviation of the eyes and head, paresis of the hypoglossal, beginning on the left, and symptoms of cerebral compression increasing hourly. Nevertheless, all the meninges were everywhere normal. The origin of the symptoms was one, no, three, cerebral abscesses, one as small as a pin's head on the anterior right side of the pons, in the vicinity of the nucleus of the sixth nerve; another, also small and easily enucleable, as large as a nut, in the anterior part of the left temporal lobe. The largest of them occupied part of the optic thalamus, the internal capsule, and the lenticular nucleus of the right hemisphere, but without breaking through the ventricular surface. This abscess was coated with a pseudo-membrane of considerable resistance, was of a winding form, as large as a fowl's egg, and contained an incoherent, greenish pus of the consistence of syrup. It had caused great compression beneath; indeed, an examination of the corpus callosum showed at the junction of the anterior and the median third a roundish prominence, which penetrated the right hemisphere and fluctuated. Studying the lower surface of the brain, the hippocampal gyrus was noticeably displaced by a marked prominence, something like a bud, of the interpeduncular space and the right cerebral peduncle. The right optic tract was compressed and presented the appearance of a ribbon, as also were the third, fourth, and sixth nerves of the right side; the chiasma and the left cerebral peduncle were compressed and displaced to the left; the right anterior half of the pons was also compressed, and the third ventricle and the right lateral ventricle crushed and almost obliterated. What had been the cause of these abscesses? Just as the past history had yielded no explanation, neither did the necropsy. An examination of the viscera showed nothing abnormal in them. The bones of the cranium seemed to be sound, and the questions which had been asked during the life of the patient had allowed of no suspicion of trauma in the head. The temporal bones, with their contained auditory apparatus, were removed, but the most diligent search showed no alteration in them. Were these, perhaps, idiopathic abscesses? The question may be attractive in theory, although, even thus considered, it appears difficult. Who in these days can declare that the brain suppurates without any sepsis having set in? And who will deny that Martius was right in holding that these provocations to suppuration arise in the depths of the encephalic mass, running through the most delicate paths of the circulation? But for the purposes of diagnosis this solution is not sufficient; it is a certain fact that abscesses of the brain are often found of which the sources and causes cannot be discovered during life, or even after death; so that the principal foundation of diagnosis is entirely lacking in these cases, which nevertheless, according to Gowers' statistics, represent the sixth part of the whole. If in such cases, as often occurs, even fever is absent, what is practically left to prove the nature of the disease? Sometimes the course of the illness, but even this criterion, although the best, is often dangerous. Twice I myself have erred in following it: once I made the diagnosis of tumour and found an abscess; another time I imagined an abscess and there was none. I know that the description of so many cases is annoying, but facts are always more satisfactory than precepts, so you must permit me to recount them as briefly as I can.

One day I was called to a consultation near Bologna, and found a patient already under the care of two young and extremely clever colleagues of mine. At first they had suspected the illness to be sciatica, but had not been able to decide whether it was peripheral or central. The patient was a strong man twenty-nine years of age, in the habit of

travelling from fair to fair on matters of business. It was during a fair, to which he had gone on foot, that he declared he had been taken ill; that suddenly the left leg had grown so weak that he was obliged to cling to something firm for support, after which the lower limb had become painful both in itself and to the touch. But the patient, intent upon his sale, did not take much notice of his health. When I visited him I soon observed that the muscles of the lower part of the left side of the face were slightly weak, and neither I nor my colleagues felt much doubt that the pain and weakness of the left limb did not arise from the peripheral nerves or from the spinal cord, but from the brain. Until now, however, this last appeared in a perfectly normal state. I hazarded the possibility of cerebral tumour, and it was decided that the man should be removed to the Bologna clinic. I have recalled these particulars in order to demonstrate how misleading the beginning of cerebral disease may be. On Dec. 15th, 1892 he was admitted to the clinic. There his past life was thoroughly inquired into, but nothing could be learned beyond that he had once suffered from gonorrhoea, from an intermittent fever, which had long left him, and from an attack of influenza which had some years previously troubled him, but which had been cured some time ago. Of actual disease nothing, absolutely nothing, could be noticed. But patient and oft-repeated interrogations at last elicited the fact that during the last three days in November he had experienced a pain in the right side of his head and a certain sense of fatigue. These symptoms continued until, on the morning of Dec. 6th, he noticed that his legs were weak. Nevertheless, he left the house and went to the market on foot, and it was there that suddenly an indefinable discomfort came over him and he felt his legs giving way beneath him. Being, however, in full possession of his senses, he sought support against the shoulder of an ox and made signs to the first cabman who passed to take him home. He said that when he had reached home and sat down he felt his left leg become straight and rigid, and he noticed certain movements in the toes of the foot. Having called in a physician, he was ordered a plaster upon the thigh, probably on account of the pain of which he complained. All the movements of the left lower limb seemed weakened. This painful paresis of the left lower limb grew so much worse that the patient could scarcely leave his bed, and some days after the left upper limb began to show signs of weakness. The slight headache continued and became for the most part frontal. Consciousness was still intact, although the man appeared to be a little apathetic. An examination showed a flaccid hemiplegia on the left. The loss of voluntary motion was complete. The patient rested constantly upon the right leg, and the eyes and head evinced a slight deviation to the right, which lasted to the end. The arch of the left eyebrow was higher than the right, and the skin of the right eyelid was more drawn than that of the left. There was weakening of sensation and of sensibility to pain on the whole of the left side, while the muscular power was also weakened. On the left there was loss of cremasteric and abdominal reflexes, the plantar reflex was weaker than on the right, and the knee-jerk and tendo Achillis reflex were stronger. The pupils were of ordinary size, but reaction was slow; the sight was almost normal, but the motion of the eyeballs less free, especially on the left. The optic papillae were red, turbid, slightly raised, with indistinct outlines. In the retina around the disc was a greyish turbidity, which extended also to the papillae and obstructed the view of the course of their vessels. The veins were swollen and tortuous and the arteries thin. These alterations were more marked on the left than on the right. Acuteness of sight was well preserved, but the sense of taste was confused all over the tongue. Hearing and smell appeared normal; normal also were the urine, pulse, respiration, and temperature. An examination of all the viscera was negative. The condition of the patient grew rapidly worse, and a certain degree of stupor and apathy, which had existed from the very first, became so much more marked that several times he passed his motions in bed either from not being in time to call or from a desire not to be disturbed. He ate little and never had any attacks of vomiting. His only complaint was the headache. On the morning of Dec. 21st he sank into coma and towards the evening died. The temperature, which had been normal until that morning, rose rapidly to 39.9° C. (103.8° F.) at the moment of death, and the pulse and respiration became at the same time very frequent. Beyond this no new symptom preceded death.

I had confirmed my former suspicion of cerebral tumour since he had been in the clinic, and had localised it in the right centrum ovale, with successive invasion of the optic thalamus and corpus striatum and compression of the internal capsule. The absence of any signs of irritation had excluded the idea of its location being in the cortex, and the absence of all paralysis during a certain period of the illness did not lead me to suspect the internal capsule as the original seat of the morbid process. The rapid and complete implication of the fibres in the internal capsule obliged me to believe that this morbid process, not having originated with them, could not be far off, since it had so quickly reached and invaded them. The sciatic pain in the beginning and the succeeding persistent diminution of sensation made me fix upon the optic thalamus and its surroundings as the seat of it. And in point of fact these diagnostic indications led me comparatively right with regard to the seat of the disease, but the diagnosis of its nature was wrong. In the right hemisphere of the brain a considerable softening, corresponding with the upper parietal convolution, was noticed. On separating the hemispheres the inner surface of the convolution of the corpus callosum of the right side was remarked to protrude like a sac, which was yellowish green in colour and contained a large quantity of very fetid, yellowish-green pus. Making an incision into this convolution an abscess cavity was found of the length of from 5 to 6 centimetres and width of from 2 to 3 centimetres, which included the grey substance of the convolution. This cavity was lined with a dark, hard, easily enucleated membrane, and the layer around it was softened and showed upon its surface innumerable minute red spots. This cavity communicated with another abscess, of the same size and aspect, situated nearer to the centrum ovale, but not involving the grey substance. This one ran underneath and behind the fibres coming from the upper parietal convolution, and passed beneath those coming from the paracentral lobule, terminating at the foot of the first frontal convolution. The right corpus striatum was softened and a little compressed from above downwards, as was also the corresponding optic thalamus, the upper side of which was concave, while the inner was perpendicular, so that the two sides formed a right angle. Looked at from above it had a triangular form, and its substance was very vascular. The grey layer of the right hemisphere was so faded as scarcely to be distinguishable from the white. The left hemisphere appeared to be normal, as were also the vessels, the meninges, and the bones of the cranium, including the petro-mastoid of the right temporal, which was particularly examined. Every sign or symptom had been lacking during life which might have led to the discovery of this great cerebral abscess; there had never been fever, and none of the well-known causes of suppuration of the brain had preceded it. Even after the necropsy had been made the doubt as to the origin still remained; it was certainly not a traumatic abscess, nor a carious one, nor one arising from suppurative otitis. Could the influenza be blamed? The position of the abscess and the fact of its being double were characters favourable to the hypothesis of a pulmonary origin, but even so, what explanation could be given in the clinic of these diseases which are to be met with every day and every moment and which are not followed by abscess? The explanation at the best might serve the purpose of the pathologist after the examination of the body, but for the physician who must diagnose before the necropsy the idea is utterly worthless. Certain it is that death intervened sooner than is usual in the case of tumours, but there are tumours, especially infiltrating sarcomata, which rapidly cause such intense compression that death comes through excess of intra-cranial tension. In fact, the cause of the patient's death was none other than a rapid increase of this tension. The abscesses had been there for some time, as was shown by their thick, hard capsules. In less than twenty-five days, during which the patient had complained of pain, the pseudo-membrane might have been formed, but the capsule could scarcely have attained such thickness or such resistance. Before that time the patient had never noticed that anything was wrong with his head. Perhaps a slow extension had at last caused the communication of the two abscesses, after which the growing activity of the membrane had brought about an increase of the liquid contained in the two cavities, until the right hemisphere, and especially the optic thalamus, had been violently compressed. A sarcoma or glioma of rapid growth might easily have caused the same physical effect. Therefore I ask, What signs could the physician bring to the

solution? The causes? they were not known. Fever? there had never been any. Optic neuritis? it had been verified, but if its presence were not unfavourable to the abscess it is certain that it was not favourable, since it seemed to have arisen very quickly. And still this helplessness of diagnosis before the post-mortem examination, which showed that a surgeon's work might have saved a young and vigorous life, does not suffice to bring to a physician the calmness of resignation. But so long as surgeons, ignorant of the real conditions of diagnosis, deluded by the few and hazardous diagnostic successes related in contemporary literature, presume to act alone, or insist that an accurate diagnosis be given them before they will offer their help to sufferers from cerebral abscess, many lives must be sacrificed before their time, seeing that physicians and surgeons not deluded by scientific appearances, but severely instructed by facts in the clinic, can rarely feel sure of a diagnosis of chronic abscess of the brain, and may not propose or accept the intervention of the surgeon until all adverse signs and symptoms have been overcome. Decidedly the position of exploratory craniotomy is far more unfortunate than that of exploratory laparotomy once was. The cases are much rarer, the teaching of experience therefore much slower, the victories less apparent, and the mistakes serious and endless. I am the first to recognise that he who makes a diagnosis and he who operates lose much in the esteem of the public when the faulty judgment has led to a useless operation; but no man of worth, upheld by the feeling of duty, will be alarmed at consequences which the want of practical knowledge fully excuses.

In the meantime, in order to learn more we must lay to mind our mistakes. To gain knowledge by so thorny a path (who will not admit it?) is unpleasant, but how shall we evade it? Every mistaken diagnosis is a beneficent correction. It would be well if each of us would in charity give the results of his individual experience. This clinical art of ours, which looks so easy to him who surveys it from within the walls of a laboratory, becomes instead very difficult when one enters the hospital. I have spoken above of the deficiency of etiological criterion for the diagnosis of cerebral abscess. I have also remarked that often fever means little to the physician, but without these two things a reasonable foundation for suspecting abscess becomes impossible. Such was the case in the present instance, the cause (probably of long standing) of the formation of the two abscesses had been unsuspected by the patient and undeveloped by the past history—only the last phenomena of the deepening and increase of tension of the two abscesses had produced any impression on the consciousness of the patient. In similar cases, when of all the drama enacted nothing but the last scene is represented, how will it be possible to realise all the long and serious processes taking place before it? Will it be possible to infer from the final solution, not only the existence, but the kind of changes that in latent form were preparing this last and only change which was observable? It is certain that the rapid course of the symptoms observed in this case might as well have been attributed to sarcoma or infiltrating glio-sarcoma, but at the same time it did not exclude the possibility of an entirely latent abscess, seeing that science is able to show a few such cases. Hirt ascribes to the abscess the property of causing hemiplegia little by little and not all at once, and so it happened here. But a large tumour of the temporal lobe of the centrum ovale may compromise and paralyse the crural, brachial, or facial tract successively and produce the same hemiparesis or hemiplegia. Granted that on account of these symptoms one has harboured the idea of an abscess, only exploratory craniotomy could possibly verify it. The probability of diagnostic error is not limited only to the confusing of these cases with a tumour of rapid growth; it can extend even to meningitis and cerebral hæmorrhage. What is more, this confusion does not only occur when the last stage is not preceded by some absolute sign, but is incurred even when the end has been preceded by some suspicious symptom. These causes have often lasted a long while, till suddenly some softening, some inflammation in the surrounding parts, or more probably the breaking of the abscess into the ventricles or on the surface of the brain, causes a tempestuous onset of symptoms, followed by death.

On Dec. 3rd, 1892, a girl seventeen years of age was admitted to the clinic. She was a peasant who for four years had been in the service of a family in Bologna. She was born of healthy parents and had a tolerably strong constitution. She spoke little and with reluctance, but her relatives and employers furnished us with the following facts:

As a child she had suffered from measles, and once, when about three years of age, she had a fall which had caused a scalp wound, the precise nature and position of which were not remembered; but neither the measles nor this wound had left any lasting effects. The girl had enjoyed good health until about a year back, when she had an attack of diphtheria which left her weak and pale. A visit to the country and sea baths had taken away all signs of this affection. Nevertheless, she continued to be pale, suffered a little from the stomach, and was subject to a headache which for some years had been slight and infrequent, but which after the diphtheria had grown so intense as to burden the life of the poor girl. She had only had fever once, the cause and length of which could no longer be remembered, but which the patient declared to have been very high; but everyone agreed in affirming that for a month the troubles of head and stomach had increased and that the girl was weaker. Fifteen days before entering the clinic she had consulted a medical man, who noted gastric disorders with frequent eructations, sweats, coated tongue, and bad headache. He prescribed Carlsbad water, and four days later saw the patient and confirmed his first opinion of gastric catarrh, but the treatment did no good. Six days before her entrance into the clinic she, while mounting the stairs, had been taken with a giddiness which made her feel as though she would drop the baby she was carrying. The next evening, while carrying some bread to be baked, she suddenly felt so ill that she was obliged to return home and go to bed. The headache persisted, two days later vomiting began, and the evening before entering the clinic those in attendance on the girl noticed that her skin was dry and burning. The next morning fever had ceased; the medical man came and was much struck by her deathly paleness. He advised her removal to the hospital. The most salient points noticed by us were: extreme pallor of the skin and mucous membranes, much subcutaneous adipose tissue, and extraordinary frequency of breathing, equal to the pulse, 100 or 110 to the minute. This, however, ceased and went down to 18-20 to the minute during sleep or when the patient was left long alone and tranquil. Nothing abnormal was noticed in the thoracic and abdominal organs. The patient was taciturn, seemed determined to be silent, and lay almost always with her eyes shut or with the bedclothes drawn up so as to keep out the light and screen herself from inquisitive eyes. She complained of violent pain all over her. All movements were possible to her, but were slow and wanting in energy. The superficial reflexes were weak. Those of the tendons of the knee and arm were, however, normal. The pupils were equal and reacted to light, but were slightly contracted. The vasomotor reflexes were normal. An examination of the different senses revealed nothing, as the patient refused to coöperate, but what could be seen of them was normal, as also was the sense of touch and heat. The patient appeared to understand even whispered words; her sight was good and in the retina nothing was noticeable but great pallor; the outlines of the papillæ were distinct. From the way in which the patient behaved towards her relatives it was evident that she was fully conscious, while her words showed that she understood well and could answer clearly. The examination of the blood showed red corpuscles 2,808,000, and white corpuscles 446 in the cubic millimetre. An analysis of the urine presented no anomaly. For two days the girl lay quiet, slept well, and ate without vomiting or delirium; but on Dec. 5th she was seized with clonic movements of the arms and part of the face; the lower limbs were not convulsed and consciousness was lost. The convulsive movements lasted only a few minutes, but she did not recover consciousness for nearly an hour. The following days were without incident. She was taciturn, drowsy, tormented with bad headache, and had a temperature always between 37.8° C. (100° F.) and 38.2° C. (100.8° F.); pulse and breathing very abnormal, as had been observed at first. She was tolerably conscious. On the evening of Dec. 9th the patient, as usual, had had her supper, had sat up in the bed, and had exchanged a few perfectly connected words with the nurse. But less than an hour later she was seized with an attack of convulsions, which began with a cry, then clonic distortions of the right side of the face, whence the convulsion extended to the right upper limb, to the left side of the face, and lastly to the left upper limb and to the lower limbs. The eyes deviated to the right. The convulsion, once become general, assumed the form of tonic and clonic contractions. The head was turned alternately to the right and left. The mouth was full

of froth, the lips became blue, and the skin was covered with perspiration. After a few minutes the convulsion ceased, but very soon began again. Between two attacks there was an interval of ten minutes, and this state of things lasted from eight in the evening till midnight. During the intervals tracheal râles began to be heard. Consciousness, which had still been present during the first attacks, grew slowly dimmer, until at last it was entirely lost. At midnight the attacks grew yet more frequent, but later diminished again, with intervals of fifteen minutes, until 3.45 A.M. on Dec. 10th, at which hour the patient died. In this last phase of convulsions the pulse never rose higher than 116 during the minute and the breathing stopped now and then during the convulsion, while in the intervals it was 28 to the minute. An ophthalmoscopic examination being made during one of these intervals showed no change, with the exception of a little inflammation of the centre of the papillæ. Five hours before death the temperature marked 37.6° C. (99.8° F.). This strange series of facts was decidedly not easy of explanation. Nevertheless, the violent headache which had lasted a year, the giddiness and sudden falling experienced a week before, and the stormy scene which had so tragically closed her life did not allow of any suspicion of a common vascular lesion (hæmorrhage, embolus, thrombosis). Even for meningitis there was no valid argument; nothing in the pulse, no delirium, no contraction of muscles, not even a sign of peripheral invasion of the cranial nerves; on the one hand, some insignificant premonitory symptoms of remote date, on the other, an incomprehensibly rapid and stormy end. It seemed more probable to imagine a tumour almost latent for an indefinite period, which had suddenly been followed by a period of rapid vascular overgrowth, and finally internal hæmorrhage within the new growth. Yet the slight fever which had been noticed, the absence of every intimation of the locality, and above all the absolute integrity and indeed pallor of the papillæ rendered such an hypothesis improbable. The idea most in accordance with facts was that of a chronic abscess. The reason for this probably lies in the fact that there is no limit to the course taken by an abscess—from one or two days to twenty years, from absolute latency to the most serious and decided manifestation. The violent headache dated from the diphtheria; had the wound of the head made during childhood perhaps left one of those encapsuled abscesses which seem to be healed? And even if this hypothesis is not accepted, why should we not have recourse to another process, certainly rare, but nevertheless ascertained as possible—a process of infection by the nasal mucous membrane? The headache, the anæmia, might be due to some febrile abscess of unknown origin which had for a year produced the symptoms of a semi-latent abscess; after which a period of renewed activity had come, and the giddiness, vomiting, increased anæmia, loss of strength, increase of headache, slight fever, the first access of convulsions, stupor, and diminution of mental powers were all explained by inflammatory œdema, and the softening of the cerebral tissue around the abscess. Then at last the work of expansion, conquering the weakened resistance of the surrounding tissues, overcame the last barrier and the pus flooded the ventricles; from this had arisen the uninterrupted epileptoid fits, followed by coma and death. Keeping in mind the constant lack of phenomena from a central infection and the frequency with which the latent or semi-latent chronic abscess is found in the temporal lobe, and remembering also the fact of the convulsions being on the right, I made this diagnosis: "chronic abscess of the left temporal lobe." On opening the cranium nothing was noticed in the bones, nothing in the dura mater; the pia mater was moist and transparent, and the veins injected. The superior longitudinal sinus contained two soft clots. The hemispheres were normal in size, in depths of sulci, and in convolutions; but in the left hemisphere, behind the first and second temporal convolutions—that is to say, in the convolutions leading to the second and third occipital convolutions—there was discovered a prominence of reddish hue, soft, and covered with dark spots. Cutting open the brain this zone appeared larger than a nut; it had a yellowish-green colour, and was marked with innumerable dark-red spots of various sizes, surrounded by a paler greyish-red substance. The delimitation of this zone from the rest of the cerebral matter was not well marked, but died off by degrees with the progressive diminution of the spots; the œdema, hyperæmia, and the swelling of the cerebral matter extended very noticeably to the surrounding tissues, but

there was no hydrocephalus. On the surface of the temporal lobe was a large vein quite thrombosed, into which there entered two other veins, also with clots, one in the front, coming from the limiting convolutions of the Sylvian fissure, and the other coming from the occipital lobe. All the smaller branches in these veins also showed signs of thrombus. The thrombi were red, without any sign of organisation. The examination of the walls of the veins and of the sinus showed nothing unusual. Of the numberless hemorrhages the most noticeable scarcely reached the size of a millet seed. They were very close to one another, oval or round in shape, of recent growth, and spread over all the grey layer. The lymphatic perivascular spaces were as a rule larger than usual, and no sign of leucocytes could be found in them. The nerve cells, with nuclei of good colour, seemed atrophied. This atrophy was very noticeable, especially in places, yet nowhere were the cells quite obliterated. The neuroglia presented a granular aspect, and here and there a certain cracking was noticed in the cells, a tendency to form vacuoles. There was no sign of small-celled infiltration either in the grey or the white matter. The rest of the brain was normal. It was not possible to open the cavity of the thorax and abdomen, but examination made during life had shown tolerably well that there could be no important lesion. Pathologically, therefore, the case stood thus—grave chlorosis with chlorotic thrombus of the left lateral sinus and of the cerebral veins. It was utterly impossible to decide which had been the first to coagulate, the blood of the sinus or of the veins, since the thrombus everywhere appeared to be of recent date and with no appreciable differences.

That the blood of chlorotic persons has a tendency to coagulate is well known from many observations; but, as a rule, the thrombosis shows itself in the lower limbs. Skeritt, in a discussion held in 1885 at the Clinical Society of London, affirmed that he had also seen chlorotic thrombus in the cerebral arteries. The first detailed statement made with regard to the chlorotic thrombus in a sinus² was Professor Bollinger's. His publication was more anatomical than clinical, since the girl he studied had apparently not attracted much attention during life. I learned later, from a kind personal communication from my cultured colleague at Monaco, that after this case he had been able to observe others which he will later publish. Bollinger's hypothesis, which attributes the coagulation of the blood to the fatty degeneration of the endothelium of the sinus, we could not ourselves confirm, notwithstanding the fact that we directed our attention to it. Not long ago Kochel was able to gather about half a dozen cases of chlorotic thrombosis of the cerebral sinuses.³ Looking over the history of my patient, one can affirm that the change from a country life to that of a city life was for her, as it is for many like her, who have to go into service, the first cause of a slight chlorosis, which after the diphtheria grew worse. Notwithstanding the transitory benefit gained by the life in the country and at the seaside during the summer season the illness grew worse again, and owing to the fatigue and deficiency of sleep which these poor girls often have to undergo the chlorosis became serious, was followed by giddiness, faintness, loss of strength, increased headache, and finally by clotting, and with it cedema, turgescence, and the softening of the cerebral substance; after which ensued stupor, slight fever, difficult breathing, slow cerebration, convulsions, coma, and death. Yet before the necropsy how probable had seemed that suspicion of semi-latent abscess which broke at last into the left lateral ventricle; and after the necropsy how easy it is to conceive how those two unusually large abscesses in the previous case arose, and how they grew and existed in spite of the brain being apparently completely unaffected.

² Münchener Klinische Wochenschrift, 1887, p. 19.

³ Deutsches Archiv für Klinische Medizin, 1894, vol. lv., p. 557. Kochel has gathered together in his treatise also a few of the cases recently published by Furbinger, Königsdorf, Bucklers, and Leichtenstein, under the name "primary cerebral hemorrhage," a denomination first used by Strumpell. But even these cases also have great clinical and anatomical analogies to those which should be designated chlorotic thrombosis of the cerebral sinuses. A decision with regard to this is as yet immature. The above-mentioned observation is important, as no infectious disease preceded it. As a rule it is influenza which seems to give rise to primary cerebral hemorrhage. Our microscopic observations showed no irritative phenomena, no infiltration of the vascular walls or emigration of leucocytes; the histological report corresponded completely with that of ischemic softening. So far as I know, no other microscopic observations but those of Kochel have been made, but although he found the aspect of the nervous matter in the chlorotic thrombus very like that of primary cerebral hemorrhage; our case, on the other hand, differs very considerably.

Here we have a phenomenon by no means new in nature—that which is, appears not to be, and what is false has the appearance of truth. This phenomenon reveals the state of ignorance under which we still labour with respect to the determining conditions of symptoms of cerebral disease. It is not enough, in picturing the brain to ourselves, to compare it to a keyboard as I have done above, the keys of which give out the same sound whatever the blow be which they receive; it must be added that the instrument is of so delicate a nature that the striking of a key not only produces its own sound—direct phenomena,—but can also put the other keys into vibration—indirect phenomena,—just as happens in a harp when given a sharp blow. Indeed this resonating vibration occurs even when the only key touched corresponds with a cord which has no sound (cerebral area of unknown function). From which fact it results that the vibrations of all the strings are often repeated, are very much alike, and are often the most important phenomena, not to say the only ones. Now, since from any key sufficient impulse can come to put all the other cords in vibration, the inference as to which key was struck is very difficult and not rarely impossible. I admit that this is not scientific language, but the simile is useful in such an argument to avert controversy, into which we might be led by the desire to establish the mechanism which determines the uniformity of clinical manifestations in different endocranial processes, or the diversity of these same manifestations in identical processes. Certainly one of the most important elements for the generation of cerebral symptoms is the mechanical process of compression, which may be caused in one part of the intracranial contents by a collection of pus or accumulations of blood or lymph, and in another by the growth in number and volume of cells and fibres, or the development of aneurysms or parasites. There is always one consequence, and it is this: In the limited space within the bones of the skull the pressure must be increased, a fact which will be felt all through the brain, but especially in the adjacent area and less resistant parts, such as the lymphatic sheaths and the cerebral ventricles. Consequently the blood will be at greater tension in the capillaries of the brain, the veins will become turgid and tortuous, and the lymph will break through its walls and distend the cavities of the brain. It is enough to remember the fine sensibility which distinguishes the cerebral tissue with regard to circulatory changes, to understand how this mechanical process must bring with it many analogous disorders of the brain notwithstanding the difference of the morbid processes. But it is enough also to compare the enormous compression observed in the patient's brain in the previous case with the slight degree noticed in the present one, to be convinced that the mechanical element is by no means the only cause of indirect symptoms. And as the other elements are more doubtful I have preferred to use the allegory to show the synthetic fact of the very frequent and uniform participation of the whole brain in lesions evidently limited to only a part of it. Such an elucidation of facts is calculated to represent how true it is that a certain diagnosis of chronic abscess of the brain, in the present defective state of our science, is only very rarely possible.

(To be continued.)

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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ON April 9th, 1889, I had the honour to read before the Royal Medical and Chirurgical Society an account of my first twenty-five cases of extirpation of the kidney by abdominal section,¹ and an abstract of my paper will be found in THE LANCET.² I now propose to continue the record of my cases of nephrectomy and also to give brief notes of other interesting cases of renal surgery. I shall give a short reference to every case I have operated upon since No. 25 in the table accompanying the above paper,³ and record at greater

¹ Transactions of the Medical and Chirurgical Society, vol. lxxii., 1889.

² THE LANCET, April 13th, 1889.

³ Transactions of the Medical and Chirurgical Society, vol. lxxii., pp. 312-315.

length the cases possessing special features of surgical or pathological interest.

CASE 26.—The patient was a young woman twenty-five years of age, suffering from advanced tubercular disease of the left kidney, with a large perinephric abscess. Dr. Broadbent kindly saw her with me, and agreed that nephrectomy offered the only chance of life, though her condition rendered the operation more than usually grave. There was no distinct history of tubercle on either side. Her father had died of Bright's disease. The mother said the patient had always been a delicate and nervous child. The urine, examined for me on three separate occasions by Mr. Malcolm, was of good specific gravity and colour and deposited urates, contained rather more albumen than the pus would account for, only about half the proper quantity of urea (she was entirely confined to bed and taking very little food), and was scanty in quantity. I thought, however, that we might fairly hope that the other kidney was capable of doing its work well. She had been really ill for two and a half years, the first symptom being frequency of micturition, six months later pain in the renal region, and pus in the urine. In the summer before I saw her she had got a chill during menstruation, and after this became rapidly worse; and in the autumn a specialist was called in and aspirated the kidney through the loin, only obtaining a very small quantity of very thick matter. The immediate result of this operation was great increase of pain and fever, with a diffuse tender swelling behind the kidney (perinephric suppuration). I operated on March 25th, and the operation was prolonged and difficult, owing to the extent and denseness of the adhesions. She did not rally well from it, but at first the kidney acted remarkably well. The day after the operation the urine was loaded with pink urates. There was some sickness on the first day and more on the second; the temperature fell quietly to 98.6° F.; but the pulse was quick and weak, and during the day the urine gradually decreased in quantity till 4 P.M., when complete suppression set in; at 5.45 P.M. she had a severe convulsion, became comatose, and died at 7.17 P.M. The temperature was 97.0°, and the pulse shortly before death was 108.

Surgically all went well. I drained the sac with a glass tube, and before death there was nothing but a little clear sweet serum from it, and in a well-doing case the tube would have been removed. I am at a loss to account for the sudden failure of the kidney, but, considering all the symptoms, I think it was a form of septicæmic poisoning, and I firmly believe that the death should be attributed rather to the aspiration and its unfortunate results than to the nephrectomy, which failed because it had not a clean field and came too late. There can be no doubt that perinephric suppuration adds enormously to the risk in these cases. The only patient in the paper referred to above (No. 20) in which this condition was present also died in about forty-eight hours, exhausted with the profuse discharge. Of course, the large cavity round the kidney, with its burrowing sinuses and ragged pus-discharging walls, must, after the operation, add greatly to the work of the remaining kidney, but I regard suppression as usually indicative of some septic element. The one kidney, already burdened with extra work, quickly fails altogether when the elimination of septic organisms and their product also falls upon it.

CASE 27.—The patient was a young married woman aged thirty years, sent to me at the Samaritan Hospital by Dr. Lawrie of Weymouth. The right kidney was much enlarged; it weighed fourteen ounces after removal and after four and a half pints of fluid had been evacuated from its interior. The fluid was dark turbid urine, which became solid on boiling with nitric acid, contained pus, renal cells, and urates, 0.972 per cent. of urea, and was of sp. gr. 1024, and faintly acid. There was nothing worthy of note in the operation or recovery, which was rapid and uninterrupted. The interest lies in the pathology of the condition. The distended kidney was first discovered in the abdomen after the birth of the first child. She had been very large, and suffered much pain in her right side during the last five weeks of gestation, and the urine was thick and albuminous. The swelling gradually disappeared, and in her next two pregnancies gave her no trouble; in her fourth pregnancy she became very large in the fourth month, and again suffered great pain in the right side; the kidney was aspirated through the loin and seven quarts of matter (*sic*) were removed. Eleven weeks later twelve quarts were removed; six weeks later another six quarts; a fortnight later the child was born, and then the tumour, which was large after the birth, gradually disappeared. The urine passed was quite clear

before the birth and very thick for a long time after. When she came into hospital she was passing about 30 oz. in the twenty-four hours. The specific gravity was high. It was thick with urates. There were no albumen, no pus, no casts, and there was a considerable tender swelling in the right loin and abdomen. At the operation the ureter was so small that I could not make it out, and it was cut and tied with the vessels. After removal the opening was found to be very minute and the tube somewhat twisted on itself. Doubtless these two conditions were at the root of all the trouble, and the case was from the first a congenital hydronephrosis, which became accentuated during the first pregnancy, and in this last pregnancy became a pyonephrosis. There was nothing in her family or personal history to throw any further light upon the case.

Most cases of hydronephrosis (not due to calculus) which I have seen appear to me to be congenital, and due to some malformation or malposition of the ureter; they are only intermittently troublesome till the distension becomes so great that the ureter is altogether blocked, or till some other disease or accident causes the formation of pus, when all the symptoms become aggravated. The condition is, however, often one of great discomfort or positive suffering to the patients from youth upwards, and is one in which they receive little sympathy, as so often the swelling disappears, and on examination there is nothing to be found to account for the patient's symptoms. The health often suffers greatly, and I am sure an earlier removal of the hydronephrotic kidney would be the proper treatment in most cases. Three patients in whom I have tried opening and draining are going about with loin fistulae, and with no prospect of cure unless they submit to a further operation.

CASE 28.—This case has been fully recorded in a paper read before the Clinical Society.

CASE 29.—The patient was in the Indian Civil Service, aged thirty-one years, and had suffered from symptoms of renal calculus for many years, and been frequently invalided home. Calculus had been diagnosed, among others, by Sir William Jenner. I first saw him in January, 1886, and, after consultation with Dr. Paul, advised him to return to India and to try once more whether he could work, as he was then in excellent health and free from any serious symptoms. His urine at that time was of normal specific gravity and colour; it had a very faint trace of albumen and pus cells, but no blood discs, no crystalline deposits, and 2.45 per cent. of urea. There was absolutely nothing to be made out by physical examination, not even any marked renal tenderness. The history began in 1873 with dull pain over the left kidney, sometimes he could neither lie, sit, nor stand with comfort. These attacks of pain recurred from time to time till 1879, when they ceased, and he began to pass urine like coffee, always after excessive eating or drinking. Travelling never brought on any attack. In 1881 he had a sharp attack of Indian fever, followed by gout in both hands and feet, and in 1883 he had another attack of fever, and in 1885 a very severe attack with hæmorrhage from the bowels and pus in the urine. The latter, he remarked, "was probably due to the stone in my kidney." I found the right kidney distinctly large and free from all tenderness; the left I could not define, and no amount of pressure over its situation or along the course of the ureter caused any discomfort. My examination produced a good deal of pus in his urine, and a few days after some specimens contained a large quantity of oxalates, some very large. He returned to India, but was very soon again out of health, and eventually in 1889 came again under my care for exploration of the kidney. I operated on June 1st, 1889, Mr. Murray giving chloroform and Mr. Malcolm assisting, Dr. Walker, who had attended him, being also present. I made a small abdominal incision over the left kidney, and found the right kidney to be large and healthy, the left sacculated and soft; there was no trace of a stone either in the kidney or the ureter, but the lower two-thirds of the latter was distended with urine to the size of a large sausage. No amount of manipulation would make this pass into the bladder. I removed the kidney, dealing separately with the vessels and ureter, and then found that a large pair of forceps ran easily through the ureter into the bladder. Evidently the obstruction to the escape of the urine was due to a curious valved and sacculated condition, which became more marked on fluid pressure from above. This condition was the only pathological one found, and must have been the cause of the gradual destruction of the

kidney, which was converted into a mere shell. The patient made a perfect and uninterrupted recovery, was shooting partridges in September before his return to India, has enjoyed the best of health since, and plays cricket and endures severe fatigue in big game hunting in India—in fact, can do everything that a strong man can do.

This case appears to belong to the same class as the preceding one—malformation of ureter, hydronephrosis, pyonephrosis, and gradual destruction of the kidney.

CASE 30.—The patient was a young man aged twenty-two, whom I first saw in consultation with Dr. Heron in June, 1889. He had also been supposed to be suffering from calculus till Sir Joseph Lister diagnosed renal tumour and suggested that I should be consulted. The history was as follows. In 1884 he had connexion with a prostitute, and had as a result some matter under the prepuce, and redness and irritation of the glans, but no urethral trouble. I mention this because a question of syphilis arose later, and he was treated for it in consequence of the condition of the glands in his groins, but I do not myself believe that he ever had syphilis. In 1886 he first noticed blood in his urine, and had pain in his left loin, never any pain in passing urine or after the act, but occasional ache in the penis, which he attributed to small clots sticking in the urethra. He had two or three attacks of very severe pain and had been laid up with one of them in an infirmary. The pain was agonising and extended down the course of the ureter and into the left testicle, and there was on one occasion almost complete suppression of urine. These attacks ended by the passage of long, red, worm-like bodies, which from his description were evidently blood casts of the ureter. He was one of a large and fairly healthy family, but his mother died from phthisis; his father, a strong old man, was alive and well. There was no history of malignant disease. Examination showed a very considerable smooth enlargement of the left kidney, with the colon crossing its lower and inner border. It was tender to touch, but not very markedly so. The patient was thin and sallow and had an anxious expression, and his face indicated a good deal of suffering. The passage of blood casts of the ureter is a very important symptom of malignant growth in the interior of the kidney, and I feared that this would prove to be the nature of the disease in this case. The diagnosis entered in my case-book was "malignant disease of the left kidney, probably intra-pelvic." I operated on June 20th, 1889, Dr. Heron being present, Mr. Murray giving chloroform, and Mr. Malcolm assisting. I made the usual Langenbuch incision over the kidney and first examined the right kidney, which was large and healthy. The left kidney was much enlarged and lobulated, and in the pelvis close to the renal vessels was a hard substance which I at first thought was a stone. I accordingly incised from the loin, and the knife plunged into a large cavity from which very free dark hæmorrhage took place. On introducing my finger I found it was a dilated calyx full of soft growth; the mass I had felt from the peritoneum was a harder mass of growth projecting into the pelvis. I now decided to remove the kidney. Enucleation was very difficult owing to the dense nature of the adhesions, and several times my finger passed through the soft outer wall into calyces full of growth, and considerable quantities of brain-like matter escaped into the capsule. I was obliged to put a pair of large Wells's forceps on to the vessels and a smaller pair on to the ureter and divide both before I could get the mass drawn down and get at the extensive and dense adhesions in the upper part of the abdomen. During the separation I suddenly heard a curious whistling noise and felt air rushing over my fingers, and knew that I had wounded the pleura. I tied the vessels and ureter separately, and pinned the latter into the lower angle of the abdominal incision. Though I could hear and feel the rush of air I could not find the wound in the pleura, which must have been a small slit. I passed a rubber drainage-tube through the loin wound into the upper part of the sac, and a glass tube into the lower part through the abdomen. The operation lasted two hours and three-quarters. The chloroform being very badly taken, owing to the patient evidently having a bad cold and cough, was a cause of much loss of time. He bore the operation well and was in very fair condition when I dressed him in the evening, but during the night the temperature rose rapidly to 103° F. and the nurse applied ice to the head. Early next morning dark brown sickness began, and in the middle of the day I washed out the stomach. There was some trouble

with the breathing during the day, and the chest was jacketed in linseed meal poultices. On the second day the expectoration was rusty, and the dark vomit began again. The patient was very restless. The temperature was 102° and the pulse 116. I again thoroughly washed out the stomach and reapplied the poultices. He passed fifty-four ounces of urine in the first twenty-four hours, with much blood in it at first; but it soon cleared. He took wine and beef-jelly freely, and the rectal injections were well absorbed. Dr. Heron examined the chest on the fourth day, and found very little action in the left lung and the heart displaced to the right side. The bowels acted well after an enema on the fifth day. Dr. Heron again examined the chest and found the heart in a better place, cardiac dulness being normal. In the evening the patient had an attack of acute pain in the left chest, and poultices were reapplied. From this time recovery was rapid and only interrupted on the twelfth day by a violent attack of pain in the abdomen from eating a lot of strawberries without my permission. There was never at any time polyuria, which is so common after nephrectomy from about the tenth day onwards. He was out driving on the twenty-eighth day and is quite well at the present time.

The growth was a soft, brain-like sarcoma (large round cells chiefly), and sprang from the lining membrane of the calyces and pelvis. The escape of much of this into the capsule during the enucleation made me anxious as to recurrence, but it is now over five years and there has been no sign of it, so I hope that he is safe. He has never been very strong, either before or since the operation, but can play cricket and lawn tennis, boat and swim, and walk well. In the early days after the operation he suffered much from flatulent distension of the colon, but this has practically ceased with care in regulating the bowels and the occasional use of a little atropia and morphia. The wound of the pleura never gave any serious trouble, and must, I think, have closed pretty quickly. There has been no flattening, and there is nothing different to be detected between the two sides with the most careful auscultation and percussion.

(To be continued.)

CONDITIONS OF THE DWELLING AS AFFECTING RECOVERY FROM MEASLES.¹

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GIVEN a greater or smaller prevalence of measles, the question as to which of the sufferers shall die and which shall recover will depend largely upon their comparative resisting power. This resisting power is doubtless dependent upon idiosyncrasy, upon age, and upon other factors. Amongst the latter the sanitary environment is probably not the least important. "Poverty, hunger, and dirt" are likely to retard, if not prevent, the recovery of those attacked, and are amongst the most potent of the causes making for death. Everyone in practice knows how much less likely a half-fed infant, brought up in a dirty house, is to recover; but it is interesting, where possible, to ascertain, and if maybe statistically, what influence house conditions themselves have in this matter. During the three years 1891, 1892, and 1893 the dwellings of some 1770 patients who suffered from measles have been examined by the ward inspectors in Leeds. Our information in the first instance was generally obtained from the death returns, but where an outbreak occurred in any district the inspector would sometimes inquire from house to house in the neighbourhood of its prevalence and ascertain what other cases existed and the conditions of the dwellings. Frequently he would obtain information from the teachers at the neighbouring schools as to absentees and visit their homes. In one or other of these ways most of the 1770 cases came upon our books. Naturally, our information having been thus gathered, it included a large number of fatal cases, 657 in all. In the same houses in which these patients

¹ Read at a meeting of the Leeds and West Riding Medical-Chirurgical Society, Jan. 11th, 1895.

died we heard of 229 who recovered. These 886 cases occurred in 627 actual dwellings—that is, an average of 1·4 per house. The remaining 884 cases, all of which, so far as is known, recovered, occurred in 547 houses—that is, again, 1·6 per house. Although these numbers are not very large, they yet afford a certain amount of material for comparison. In order to make the comparison more striking it will be convenient to regard the houses in which the 884 patients recovered as if they had been 884 houses instead of 547. Each patient lived in a house, and the condition of such house has been recorded. In this way many conditions, favourable or otherwise, which may have affected the recovery, are repeated for every measles patient exposed to their influence. The information is regarded as dealing with what has been elsewhere called “recovery houses.” In the same way the 657 deaths, which occurred in 627 actual houses, are dealt with as if there were 657 “death houses,” the 229 recoveries in these houses being for this purpose ignored. There is, however, one exception to this mode of dealing with the figures—that is, in regard to the actual density of population in the houses themselves. In obtaining the relation of houses to inmates, houses to rooms, and rooms to inmates, it has been thought better to deal only with actual houses in both cases. I will deal with this exceptional matter first.

Density of population.—In the 627 actual houses in which one or more deaths occurred there was an average of 5·98 inmates per dwelling, while in the 547 actual houses in which the 884 cases of measles recovered, without a death, the average number of inmates was 5·93. There were, therefore, rather more persons per house where death occurred than where recovery was the rule. The number of persons per house, or rather per tenement, in the whole of Leeds at the 1891 census was 4·66. The density of population in these measles houses, both where death occurred and where death did not occur, was therefore considerably in excess of the average house population of Leeds. The excess is probably even greater than the figures show, for wherever we have been able to compare the number of inhabitants enumerated in any group of houses by the census officials, and by our own private inquiry, it has always been greater in the former. The difference between 5·98 and 5·93 does not look very much, but it is close upon 1 per cent. In the actual houses in which death occurred there was an average of 3·18 rooms per house. In the 547 in which all the patients recovered the rooms averaged 3·80. When we come, therefore, to examine into the ratio between the rooms and occupants it is not surprising to find that in the 627 actual houses in which death occurred the number of persons per room was 1·88, while in the 547 in which measles did not prove fatal it was 1·56—that is to say, there were about 20 per cent. more persons per room in the former than in the latter. If we deduct a living-room from each house the number of rooms in the 627 houses in which death occurred becomes 1368, and the inmates per room become 2·7. Similarly the rooms in the 547 houses with no death become 1534, and the inmates per room 2·1, or as 9 is to 7.

Back-to-back dwellings.—I will now quit the actual houses for the death houses and recovery houses, as explained before. The 657 death houses comprised 542 which were either back to back, “salt pie,” or single houses without opening in the rear, and they included 115 death houses which had a through draught. These numbers represent 82·5 per cent. of death houses without, and 17·5 per cent. of death houses with, a through draught. The corresponding percentages for the recovery houses were 78·5 without, and 21·5 with, a through draught. These figures are altogether irrespective of other surroundings, such as, for instance, where a through house might have its back yard largely occupied by a midden privy, or where a back-to-back house might stand in a thinly populated district. Generally the larger houses in which measles occurred would be through houses. Our inspectors, however, would naturally investigate chiefly the outbreaks in populous parts, although the death houses, whether large or small, would all be visited. That is to say, while all death houses are in the list, the recovery houses would naturally be chosen from those most easily reached along with other work.

Disconnection of drains.—Of the 657 death houses 24·4 per cent. had drains which were severed entirely from the sewer, 71·2 per cent. were not severed from the sewer, and 4·4 had no drain at all. The corresponding figures for the 884 recovery houses were 27·5 disconnected, 70·2 not, and 2·3

without any sort of drain. Measles would, therefore, seem to have been more fatal in houses not properly severed from the sewer and in those which had no drain.

Closet arrangements.—In regard to the arrangement of closets I propose to divide the houses into three groups—viz., (1) those which had inside or outside waterclosets; (2) those which had the use of latrines (or trough waterclosets); and (3) those which had closets on the midden or pail system. Amongst the death-houses the watercloset system was found in 17·2 per cent., the latrine system in 38·8, and the dry—that is, the midden or pail—system in 44·0 per cent. Amongst the recovery houses those using waterclosets jumped up to 33·6 per cent., those with latrines were only 24·7 per cent., and those with one of the dry systems of refuse removal were 41·7 per cent. Measles was therefore less fatal amongst the houses with waterclosets and more fatal amongst those with latrines and middens or pails. There are of course certain fallacies about this method of computation. It has been necessary, for instance, to reduce the number of conveniences of this kind to one for each house, and a slight variation might occur with regard to the waterclosets if the computation were otherwise made, but as the difference in this respect between the death houses and the recovery houses is nearly as 17 to 34, it is probable that the possible fallacy may be safely disregarded.

In conclusion, dealing with sanitary conditions other than the question of back-to-back houses, and air space or latrine accommodation, the houses in each group may be divided as follows. First, taking all the houses to which there is a drain, in which every drain is severed from the sewer, and in which (if a watercloset exists within) the soilpipe is properly ventilated, and deducting from these all such as were found by the inspectors in a dirty condition, overcrowded (that is, having not less than three inmates per room), and all such as had drainage or other serious nuisance (such as a midden within three yards of the house), the remaining houses which might be regarded as sanitary in regard to drainage, cleanliness, &c., made up in the first, or death, group 19 (19·03) per cent. of the whole. Those having some or other of these sanitary defects (exclusive of want of through draught or existence of a midden if such were remote from the house) formed 81 per cent. (80·97). Amongst the recovery houses the corresponding percentages were as follows: in a sanitary condition 24 (24·43) per cent., and in an insanitary condition 76 (75·57) per cent. On the whole, the conclusion seems to be warranted that the fresh air provided by a through draught tended to produce recovery where measles had attacked the family, while overcrowding, dirt, and structural or other insanitary conditions assisted in bringing about a fatal result.

Leeds.

SEVEN CASES OF AMPUTATION AT THE HIP-JOINT.

By F. T. PAUL, F.R.C.S. ENG.,

SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

THE following seven cases constitute my series of secondary amputations at the hip-joint. The patients all recovered, and none of them suffered more shock than they would have done from any other major operation. This amputation would, I imagine, be more frequently put in practice in hopeless cases of hip disease were it not for its bad reputation in the way of mortality. The high death-rate is due to shock, and it is by correctly appreciating the conditions which create shock that we may hope to obtain better success. Statistics show that the mortality after amputations increases as they approach the trunk; yet after an experience of a considerable number of amputations of all kinds I have arrived at the conclusion that the severity of the shock is not at all regulated by the number of inches removed. On the other hand, it has appeared to me that when a limb has been a great source of pain and exhaustion to a child, its rapid and comparatively bloodless removal may be followed by an almost immediate improvement in the general condition. In my judgment, hæmorrhage is commonly the first factor in the causation of shock following amputation, and the second is the combined effect of the extent and duration of the tissue injury. Of course, these are often in proportion to the height of the amputation, but they are

not necessarily so. The wound is, or need be, very little larger in hip than in middle-thigh amputation, and as the latter involves division of a large bone, whilst the former can be completed without, any little inequality in the size of the wound is thus neutralised. Then, as regards duration, a hip-joint amputation may be performed in about the same time as any major amputation. If, therefore, it were conceded that neither the extent of the wound, nor the time necessary to complete the operation satisfactorily, contributed materially to the production of an undue amount of shock, there remain only the two factors of inches and hæmorrhage. The former, as I have said, seems to me to have *per se* very little effect; and if this is true the higher mortality of amputations at the hip-joint must be attributed to the greater difficulty which has been experienced in controlling the hæmorrhage. That the want of a good method has been severely felt is evidenced by the number of suggestions which have been made with a view to overcome this difficulty, and it is only because no method is so satisfactory as to be universally adopted that I mention the simple plan of fixing an Esmarch's tourniquet adopted in my cases. It has proved reliable and effectual, and in no case was there any more troublesome bleeding than in an ordinary amputation through the thigh. The operation employed was a large anterior flap cut from without inwards, disarticulation, and a shorter posterior flap cut from within outwards. The femoral artery was always tied as soon as the anterior flap had been cut, from fear of accidents, and I think this should be the rule, as half a minute's

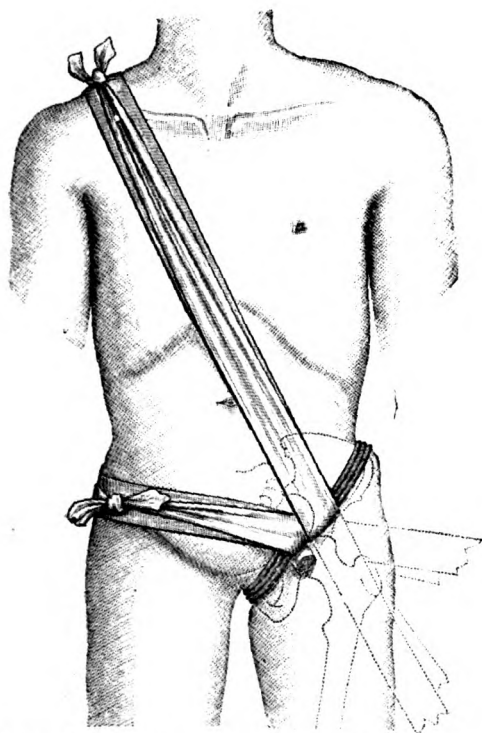


Diagram showing simple mode of applying Esmarch's tourniquet in operations on the hip-joint.

free bleeding from the femoral artery would probably be fatal in one of these exhausted children. The mode of fixing the elastic tourniquet is almost childishly simple. Two pieces of calico bandage are placed in position, as shown in the engraving, one crossing the opposite shoulder and the other the opposite hip. The tourniquet is applied over these pieces of bandage round the innominate bone, being hitched above the crest of the ilium in front and the tuberosity of the ischium behind. Then the free ends of the bandages are carried back to the shoulder and hip and tied sufficiently tight to prevent slipping when the limb is removed. This takes off some of the elastic strain over the external iliac artery, so a roller bandage is pushed under the tourniquet at this spot to increase the pressure on the vessel. The plan described is certainly less severe than Wyeth's method with steel mattress needles, and is, I believe, equally secure; at

any rate, I have used it in all my cases and feel that I can recommend it with confidence, for I attribute the success obtained almost entirely to the absence of any appreciable loss of blood, due to the satisfactory manner in which the tourniquet controlled the vessels.

CASE 1.—A boy aged eight years was admitted in 1882 suffering from chronic hip-joint disease, for which excision had been performed in 1831. There was continued discharge and commencing lardaceous disease. He recovered well from the amputation, but when last seen, a few months subsequently, still had discharging sinuses.

CASE 2.—A girl aged eleven years was admitted with hip-joint disease in December, 1882. Excision was performed. There was extension of caries to the femur, with copious discharge and rapid emaciation, as well as marked lardaceous disease; the liver was very large, extending to the umbilicus. Amputation at the hip-joint was performed on Oct. 24th, 1883. The patient was collapsed for a short time, but soon rallied and had the usual temperature of 101° F. the same evening. She made a splendid recovery, and became very fat and strong before she left the hospital. The lardaceous disease retrogressed day by day, and at the end of three months there was not a trace of it. The reason of the better recovery in this case was that the disease was limited to the femur, for the patient was more exhausted at the time of operation than any of the others.

CASE 3.—The patient was a girl aged twelve years, who had spent most of her life in hospital on account of chronic disease of the hip-joint. She was for years in the Royal Infirmary, and then went to the Home for Incurables. From the latter institution she was sent to me by Mr. Hopper for amputation. The operation was performed on Jan. 12th, 1887, and in the course of a few months she was sufficiently well to return to the Home for Incurables, where, I am informed, she was subsequently "cured." Although she had been so long ill, the liver and spleen were only slightly enlarged.

CASE 4.—The patient, a woman aged twenty years, had a sarcoma of the knee, for which I amputated through the middle of the thigh on Jan. 29th, 1890. She returned with recurrence in the stump on June 2nd, for which she was amputated at the hip-joint on the 3rd. The temperature the same evening was 98° F. There was no shock. The temperature next evening was 98° 2". She made a rapid recovery, and was discharged well on July 9th, but ultimately died from recurrence in the lungs and other parts.

CASE 5.—The patient, a girl aged twelve years, was another old case of hip joint disease with exhaustion. After sending her to the country for three months to try to put a little fresh life into her I amputated the limb on Sept. 27th, 1892. There was very little shock. The temperature the same evening was 98° 6' F., and the next night 99° 4', whereupon it continued as before, between 98° and 100°. She was discharged in March, 1893, being able to get about, but still with some sinuses unhealed.

CASE 6.—The patient, a man aged forty years, was admitted on March 24th, 1893, for a sarcoma of the inter-muscular fascia of the thigh, the size of a small cocoanut. Amputation at the hip-joint was performed on the 25th. There was no appreciable shock. The temperature the same night was 100° F., and continued slightly above normal for several days. The wound suppurated, but he was able to go home on May 8th, and subsequently gained flesh, becoming stronger than he had been for a long time. He is still (January, 1895) free from recurrence.

CASE 7.—The patient, a boy aged eleven years, had hip and knee disease on the same side. The knee was quiet and firmly ankylosed at a right angle. The hip was discharging freely through long sinuses. He was admitted on March 21st. Amputation at the hip-joint took place on the 29th. The axillary temperature for the same evening is recorded as 96° 4' F., but he certainly did not suffer acutely from shock, as I cannot remember feeling any anxiety about him, and the subsequent progress was good. The temperature only once reached 100°—viz., on the fourth evening—and after the seventh day it was normal. On May 10th he began to get about on crutches, and on the 17th he was discharged.

Rodney-street, Liverpool.

MR. W. G. EVANS, public vaccinator to the second district of the Frome Union, has been awarded the Government grant for successful vaccination for the fifth time.

ON A MORE FREQUENT USE OF FORCEPS IN MIDWIFERY PRACTICE.¹

By WILLIAM BERRY, F.R.C.S. IREL.,

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THE idea of this paper was conceived in Liverpool at a meeting of the North of England Gynæcological Society, when a paper was read by Dr. Macfie Campbell on "A Plea for the More Frequent Use of Forceps." I thought when I went to the meeting that I had, as an ordinary general medical practitioner, kept up with the times, and had noted every advance in the obstetric art. I went prepared to criticise and be criticised, armed with statistics of twenty years' practice; but found, to my surprise, from the reader of the paper and the remarks of younger men, that I was, to use the homely phrase, "licked into a cocked hat." It is no intention of mine to argue as to why forceps should be used. The indications and rules for the application of forceps are rigidly laid down in every text-book on midwifery. Before giving the opinions of others on the use of forceps I will furnish statistics as to their use in my own practice.

First ten years, 1875-1884. No. of cases, 1246: forceps, 203; tedious (not forceps), 96; or 1 forceps case in 6.133, about 16 per cent. Now, if we add the tedious cases, which perhaps ought to have been forceps cases, we have 1 in 4.166, or about 24 per cent.

Second ten years, 1885-1894. No. of cases, 829: forceps, 133; tedious, 50; or 1 in 6.233; with tedious, 1 in 4.475.

Dr. Macfie Campbell says that he has used forceps in 29 per cent. of his total cases, and of these 50 per cent. were in primiparæ and 20 per cent. in multiparæ; that is to say, in every other primipara he found it advisable to terminate labour instrumentally, while in multiparæ he used forceps, one in five cases. Of these cases taken together one in four were long forceps cases, in the others Braithwaite's short forceps were used. The *New Zealand Medical Journal*² states that Dr. Alexander of Wellington had attended between January, 1892, and May, 1894, 170 labours. In 65 cases chloroform was given and the forceps were applied. This is a little over 39 per cent. of cases. He says the patients were saved a great deal of pain, and as they were not exhausted they made good recoveries. Dr. Macfie Campbell had stillbirths 1 in 31, or 3¼ per cent. over all his cases. He had no maternal deaths in 180 cases—that is, his last 180 cases. His maternal mortality was 1 in 177, including a labour during typhoid fever and a case of hydatids, in neither of which were forceps used. In his recent cases he finds that the proportion of forceps cases is greater than in his earlier time—namely, 37 per cent., or nearly so. His course of proceeding, as stated by himself, is as follows: "If I find on arrival that the os is undilating or not larger than a shilling I go away; if the os is larger, dilating, and the pains regular I remain, but never, or hardly ever, give chloroform at this stage. When the os is fully dilated or the membranes have given way I give chloroform. If the labour goes on regularly, well and good; but if delayed I never allow a patient to be longer than one hour and a half under chloroform without delivery. Excluding cases of disproportion, the delay in these cases is below the brim or on the perineum, and the short forceps soon terminates them and conserves the maternal strength. I have never regretted early interference, but often have delay, and have frequently felt sure that I have saved children which otherwise would have been stillborn. That, of course, is belief, not fact, which admits of proof. I have never had a perineal rupture which would have required operation. As a routine I put in a catgut stitch immediately if the fourchette, which always, or nearly always, gives way in first labours, is torn beyond the commissure." He says also: "I never use ergot before delivery, and hardly ever after, which was once my routine practice." Dr. Alexander believes that the questions how soon the forceps should be used and whether chloroform is needed when they are applied remain unsettled. He says the custom of the country has much influence, so that the medical attendant is not altogether responsible for the frequency of the employment of the forceps. Thus in Wellington, New Zealand, the patient insists on complete narcosis, so that the

pains generally disappear; after the loss of consciousness the forceps are required. Mr. Rumboll of Leeds attended 102 confinements from 1892 to October, 1894; of these, 71 were multiparæ and 31 primiparæ. Chloroform was used in 91 cases, 68 times to the surgical extent, in 23 sufficiently to deaden pain. Forceps were used 68 times, in 28 out of the 31 cases of primiparæ. Of these cases 7 had split perineum, which was stitched at the time with three sutures of silk-worm gut. All healed by first intention. In the multiparæ one case of split perineum occurred, which did not heal by first intention, and a secondary operation was performed. In five cases the child was born before his arrival. Out of the 102 cases six had a temperature above 100° F.; in three of those cases the child was born before his arrival, one was stillborn, and two cases were breech presentations. Perchloride of mercury was used for the hands of the operator and the external genitals of the patient were bathed with it; forceps were dipped in a 1 in 20 carbolic lotion, and carbolic vaseline was used as a lubricant. In most of the cases the uterus was washed out with water which had been boiled, but with no antiseptic. Out of 600 cases Mr. Rumboll had no maternal death. Dr. F. Churchill estimated the frequency of forceps cases to be among British practitioners about 1 in 171; French, 1 in 140; and German, 1 in 106; or, in a total of 985,446 cases of labour, about 1 in 115. Somewhere about 1866 Dr. Hardie of Manchester wrote a paper³ in which he advocated that after the second stage had occupied two hours labour should be terminated in the interests of mother and child by the application of forceps, as by such a procedure we prevented the mother becoming exhausted, and prevented the child in many cases from being stillborn. Since I commenced practice here I have tried to follow this plan, but have not always been successful in having my own way, the aversion of the patient to the use of instruments having to be considered. Only in a small proportion of my forceps cases have I given chloroform. Unless a good and sensible nurse is present it is not easy for one man to give chloroform and apply forceps; if a reliable nurse is at hand, no doubt she can see to the chloroform after the patient has been anaesthetised, whilst delivery with forceps takes place. When I was a student we were told a great deal about meddlesome midwifery being bad, and how dangerous it was to interfere with a natural physiological process; then we were given rules which should guide us in the application of forceps, such as os fully or almost fully dilated, membranes ruptured, and certain obstructions to the head coming down, either from fault of the mother's pelvis or the too large size of the child's head; the fault of the uterus itself getting overtired and exhausted and unable to rid itself of its burden. Roughly speaking, these were the chief indications for the use of the forceps; the sufferings of the mother were never considered, nor the time of the medical practitioner, and at the period I speak of he was supposed to watch and wait, "forsooth for labour pains," and not use any instrument to aid delivery unless the indications I have mentioned existed. The curse put on the daughters of Eve that she should bring forth in suffering and sorrow may have had something to do with the reluctance of accoucheurs to interfere, but probably the chief cause was the danger to the mother and child from the use of instruments. I have an impression—which, however, may be wrong, and it certainly cannot be proved—that a tedious case of labour terminated without artificial aid recovers sooner than a difficult forceps case. The dilatation of the soft parts never seems to be taken into consideration nowadays. The rigid perineum seems either not to exist or be forgotten. I remember when I was undergoing my final examination being asked by an old obstetrician what I would do if I had a case of rigid perineum. If I had said I would give chloroform and put on the forceps I fancy I should have got three months to do it in, but knowing that he was a gentleman with a grandmotherly feeling I told him I should foment the perineum and apply lubricants. I need not say that I have not followed this practice since, although I obtained my diploma and a certificate in midwifery.

Now have we not progressed with the progressives and gone to the other extreme? Is it correct practice, now that we have such faith in antiseptics and confidence in ourselves, to make labour as easy as this, and as soon as we can after being called to a case to give chloroform and apply forceps and deliver the child, then express the placenta, syringe out the uterus with sterilised water, swab the vagina and vulva with perchloride of mercury solution, put on a binder, straighten the

¹ A paper read before the Wigan Medical Society on Dec. 6th, 1894.

² Extract in Brit. Med. Jour., Oct. 6th, 1894.

³ Braithwaite's Retrospect.

bed, sprinkle the patient with eau de Cologne, put on our hat, take our bag, and depart? If it is so, then we have attained the some of perfection in midwifery, and we have "labour made easy" with a vengeance. The "new woman"—I mean the new midwifery woman—will have no chance of competing with us, and the "new woman" need have no dread of maternity. If this is admitted my professional brethren will endorse a line of treatment which will enable me to spend as little time as possible in the lying-in room, and I shall be in a position to defy nature's waywardness in her maintenance of our race. But first let me be just to the men who advocate this plan, and, by way of conclusion, quote the advice of Dr. Macfie Campbell—advice as well as a note of warning. He says: "In advocating this free employment of instrumental help I speak to men of experience and manipulative skill, and do not mean this for students or very young practitioners. For a young practitioner to have a mishap with a forceps case, especially as all teachers do not think alike, might be fatal to his reputation. He had better delay or get assistance until he can afford complete independence. Finally, meddling midwifery, as we were taught of old, is bad, but a policy of leaving things to nature is often one of leaving them in very bad hands." Now, if it had not been for this note of warning I should have gone on my way rejoicing that we had found at last our El Dorado in midwifery practice, that we could advertise "labour made easy," perform the work at our own time and in our own way, and give a promise to the "new woman" that maternity could be purchased without risk and without suffering.

BILATERAL FACIAL PALSY AS A SEQUENCE OF INFLUENZA.

By W. J. BARKAS, M.R.C.S. ENG., L.R.C.P. LOND.

CASES of bilateral facial palsy are very rare even when caused by injuries or in connexion with diseases of the brain or the temporal bone, or from syphilitic, gouty, &c. diatheses; but when purely uncomplicated they are very uncommon. The case I now record is one of simple neuritis of both facial nerves after their exit from the stylo-mastoid foramen unless it can be considered that influenza acts directly as an animal poison to the nerve tissues, as has been suggested by Drs. Gowers, Althaus, Ross, Bury, Sansom, and others. That the influenza may have been a direct factor in its causation I am very much inclined to believe, as my patient's brother had an attack of Bell's paralysis after influenza about a month previously. It may also be incidentally noticed here that in this case the heart's action (which previously had been slow) remained persistently somewhat rapid—a fact that further points to some of the cardiac nerves having also been affected by the influenzal poison.

The patient, a medical man thirty-six years of age, married, resides in a district nearly one hundred miles from Sydney, which is bitterly cold and bleak in winter. There is no personal history of syphilis, alcoholism, or any other diathesis, and he has always enjoyed good health. His brother had an attack of right Bell's paralysis after having been ill with influenza, as also his father twenty years ago. As the patient did not come under my observation until four days after the seizure I shall append his personal statement concerning that period: "The attack of influenza commenced about the end of June with slight pyrexia during two or three nights (nearly 100° F.), but normal in the morning, and there was no further pyrexia afterwards. There were rapid pulse, persistent pains in the head and back, and also all over the body occasionally, and total loss of appetite. All of these symptoms subsided very slowly, leaving great debility, anorexia, and heart rapidity for about four weeks. At the end of that time the appetite increased, and the night sweats during sleep, which had been very troublesome all through, began to disappear, the influenza not being sufficiently bad during this time to prevent me seeing my out-door patients. At the end of July we had some extremely severe weather, with snow and persistent gales with sleet, and the driving against these winds caused considerable discomfort to my face. On the morning of July 28th I noticed on waking stiffness and swelling of the left side of the face, and on attempting to shave found I had no power over the labial muscles. I could still whistle, and the closure of the eyelids was not complete. On the following morning I found complete facial paralysis on both sides, the face felt

stiff, and the lips hung down, the face generally being flaccid and the forehead smooth; the nerves of sensation were not affected at any time; all voluntary movements of the eyelids, lips, nostrils, cheeks, and forehead were impossible; the nostrils had fallen in; the eyes were open and exposed to dust or water when washing; eating was difficult and very slow, as the food got between the gums and the cheeks, and liquids nearly always escaped from the sides of the mouth. I thought there was an absence of taste two days before the paralysis appeared, but I am doubtful whether this was not due to the condition of the surface of the tongue, and about the same time I noticed some difficulty at the maxillary joints in mastication. There was a total absence of pain about the head or ears at any time, except what seemed like rheumatism of the muscles at the back of the head, but which was neither persistent nor severe." On the 30th he came to Sydney, when I first saw the patient. His symptoms then were similar to those mentioned in his statement, but there had been some slight improvement, as he could now lower the eyelids sufficiently to cover half the eyeball; he could also faintly twitch the lips and cheeks, and by pressing his fingers on the upper and lower lips he could speak fairly well, pronouncing even some of the labial sounds, but without that pressure he could not enunciate any words having b, f, p, m, v, u, w, y in their formation, nor could he whistle; there were no apparent movements of the facial muscles even under emotional influences, so that when one would expect to see the face wrinkle with smiles or laughter it remained an immovable mask. There was complete sensation everywhere. On firm pressure over each nerve at its exit from the foramen there was slight tenderness. Otherwise he was apparently well; he slept fairly, the appetite was good, and the tongue clean, but the bowels were rather sluggish. The heart's action, however, still remained somewhat rapid, averaging 96; but there were no marked symptoms of any cardiac lesion or any rise of temperature. He had been taking a mixture of salicylate of soda, strychnine, and digitalis. This I stopped, and ordered the following: five grains of iodide of sodium, ten grains of bromide of sodium, five minims of tincture of digitalis, fifteen minims of syrup of orange peel, to half an ounce of water—every four hours; also a smart purge and blisters behind each ear every other day. In four days there was very rapid progress towards recovery, but more so on the left side than on the right, and I then ordered the following: twenty minims of dilute hydrobromic acid, half a grain of sulphate of quinia, ten minims of tincture of strophanthus, infusion of orange peel to one ounce—every four hours; and blister on right side only. On July 11th (seventeen days after seizure) the left side of the face had almost completely recovered, and consequently the face had not now the expressionless appearance of double palsy, but resembled that of unilateral or Bell's paralysis. He could whistle fairly well, and talk without compressing the lips with his fingers. As quinine mixture caused acute gastric disturbance I returned to the iodide of sodium mixture. On Aug. 17th the patient felt drowsy; there were pains in the lumbar regions and marked supra-orbital headache. The temperature was 99° 6', the heart's action 98, and the nerves on both sides of the face near the foramen were very tender on pressure. The gastric disturbance still continuing I changed the medicine to the following: five grains of iodide of potassium, eight grains of bromide of potassium, five minims of tincture of nux vomica, ten minims of tincture of strophanthus, to half an ounce of glycerine and water—every four hours, and repeated blister on right side. The feverish symptoms disappeared by the 19th, and the right side of the face seemed to be improving, but slowly. I used a weak galvanic current, but only for a minute or two, as the right facial nerve became very tender and painful. The muscles did not respond to the current on the right side. On the 26th (thirty-one days after the attack) the patient was progressing favourably; the face when at rest appeared in a normal condition, except that the right eye was rather more staring than the left. When talking or smiling the muscles showed deficiency of action, and produced the appearance of slight right Bell's paralysis; otherwise he was well and able to go out, having the ears and adjacent parts of the face covered by thick pads. The rapid heart action still continued, but did not cause any marked disturbance. From this time he continued to progress very well. On Sept. 6th the action of the muscles on the right side was not quite perfect, but unless special attention was drawn to the fact the loss of motion would not be noticed.

Paddington, Sydney, New South Wales.

Clinical Notes :

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A WELL-MARKED CASE OF AINHUM.

By A. E. BARRATT HINE, M.R.C.S. ENG., L.R.C.P. LOND.,
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NAVIGATION COMPANY.

A LASCAR twenty-two years of age came to the surgery of the ss. *Pekin* complaining of shooting pains in his legs and of the discomfort arising from the state of two of his toes. On examination the fourth toe of the right foot and the fifth toe of the left foot showed a well-marked constricting sulcus surrounding them, presenting the appearance shown in the accompanying sketches. (Figs. 1 and 2.) (The fifth toe of the right foot had been amputated some seven years ago, the result of an accident.) The sulcus was in each case deeper on the inner and upper surfaces than on the outer and lower.

FIG. 1.



The right foot, showing the sulcus on the fourth toe. The fifth toe had been amputated previously for injury following upon accident.

The patient could give no cause for the condition, and said it had been gradually developing for the past four or five years, but it had not troubled him until recently. Having read Dr. Manson's article on "Ainhum" in "Davidson's Tropical Diseases," I at once recognised it as a case of that disease. The distal portion of each of the affected toes was quite healthy in appearance, excepting a marked hypertrophy in the case of the fifth toe, and at the constricting rings there were no signs of any ulceration. Sensation in the affected toes was diminished, but the patient suffered severe pain at times from knocking them against anything, evidently from the nerves being gripped in the constriction. Treatment for some time was palliative,

FIG. 2.



The left foot, showing sulcus on the fifth toe.

but as the man said the pains in his legs prevented his sleeping, and the state of his toes interfered with his work (these men use their toes almost as a second set of fingers), I amputated both well behind the seat of the disease, and in a fortnight he returned to his work. I had

ventured to promise him that the pains in his legs would disappear when the toes were cut off and fortunately for my reputation among the Lascars on board such has proved to be entirely the case. These pains were evidently due to irritation of the terminal branches of the posterior tibial and muscular cutaneous nerves at the seat of constriction. On section the epidermis was seen to be dipping down quite to the bottom of the sulcus, which at its deepest parts was firmly adhesive to the tendon sheaths. The cause or nature of ainhum seems to be very obscure, and I certainly would not venture to suggest any. Dr. Manson speaks of the cases being most often found in Central Africa; it is certainly rare among the natives of India. Several medical men of long residence there who saw this case stated it to be the first they had seen. I am indebted to Mr. Owen Jones, an officer in this company, for the accompanying sketches of the case. SS. *Pekin*.

ACUTE GASTRIC PARALYSIS.

By E. GERALD MARCH, M.D. BRUX., F.R.C.S. EDIN., &c.

DEEMING the following details of a post-mortem examination I recently had the opportunity of making interesting and instructive from the point of view of diagnosis and treatment, I have ventured to put them on record in the columns of THE LANCET. The body was that of a girl twenty years of age, who had suffered all her life from epilepsy, in addition to having a strong epileptic family history.

The history of the case is as follows. I was called in one evening to see the patient after she had had a fit, which her friends described as similar to those she had had before. There was no reason to doubt that it was epileptic. She was in a state of apparent collapse, screaming with pain, which she referred to the abdomen, and incessantly retching, though she brought nothing up. There was not much to guide me about the abdomen save that it was tender. She continued in great agony and died in two hours. On opening the abdomen I found the stomach enormously distended, occupying quite half of the whole abdomen and burrowing behind the heart, which was displaced markedly forwards. Except shape it reminded me of a volvulus of the sigmoid; it contained about two pints of dark liquid almost without odour; the mucous coat was covered with tough mucus, but otherwise it was not much changed and did not suggest a history of long catarrh. The other organs were healthy.

This case seems to me to illustrate the importance of opening the abdomen in all sudden cases of collapse, obviously abdominal (the patient would, I think, have been able to withstand the effects of an anæsthetic when I first saw her), and had this been done her life would probably have been saved.

Muswell-hill.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo nocendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF TRAUMATIC INTRA-PERITONEAL HÆMORRHAGE
WITHOUT EXTERNAL WOUND; HÆMATOTHORAX;
RECOVERY; REMARKS.

(Under the care of Mr. W. H. BATTLE.)

CASES such as the following are rare even in the wards of our large hospitals, and we consider the publication of the one given here, although it was mentioned in the discussion at the last meeting of the Clinical Society of London, will prove of interest to a large circle of our readers. Sir Spencer Wells once said: "Abdominal surgery, though not without claims to the credit of having done good service to humanity, must still be looked upon as a branch of our science and art which,

still important, calls for continued search for truth and for constant efforts to improve methods of practice from every surgical standpoint." There are, perhaps, few departments in which we require more knowledge than in that of abdominal injury, especially when there has been no wound of the soft parts and life is threatened by "internal hæmorrhage." It is, however, one in which there is but little to guide us, and a perusal of much of the literature on the subject causes surprise that the clinical notes of most of the cases are so incomplete. In by far the larger number, even of recent date, the state of the abdomen as to the presence or absence of dullness on percussion, or other signs which might give an estimate of the amount of free fluid in the peritoneal cavity, is not given. The general symptoms of hæmorrhage are mentioned, and then we are told that a large quantity of blood was found at the operation, and occasionally surprise is expressed at the large amount discovered. In Mr. Robson's case,¹ recently brought to the notice of the Clinical Society of London, where recovery followed operation, the presence and extent of dullness as indicating the amount of effused blood are noted, but only about two pints were removed at the operation. His patient was a boy, so also was Dr. McBurney's patient.² In the latter the injury was caused by a fall across a railway line; this was followed by profound shock and pain in the back. Eight hours later, when operation was performed, there was also flatulent distension of the abdomen with dullness in the flanks, but the shock was lessening. About a quart of blood was removed from the peritoneum, extravasation had occurred in the colon and omentum, and a branch of the pancreatico-duodenal artery was found to have been ruptured; it was still bleeding and was secured by a ligature. In the case of a boy twelve years of age, published by Mr. Page,³ the injury was also caused by a fall across a line of rails. No source for the large loss of blood which followed could be found at the operation; the symptoms, however, pointed to the spleen, and at the necropsy it was found to have been lacerated. Doubt has been expressed regarding the possibility of the onset of a peritonitis as a result of hæmorrhage into the peritoneum. From his experiments on peritonitis, related to the sixty-second Congress of German Naturalists, Orth⁴ came to the conclusion that pure blood in considerable quantities was sufficient to set up peritonitis, not so much from the presence of bacteria as from the development of some fibrin ferment. The subject is too large, however, for us to deal with it in this department of THE LANCET. We give references below to which those who wish to do so can refer.⁵ The following account is taken from the notes of Mr. Dickson, the house surgeon, and Mr. Warner, dresser to the case.

A schoolboy aged twelve was admitted to St. Thomas's Hospital on Sept. 21st, 1894, suffering from shock and pain in the abdomen. After leaving school in the morning he was playing leap-frog when he missed the boy over whom he was jumping and fell on his face on the asphalt pavement of the school-ground. He walked home with assistance, but was sick after getting there. The bowels acted soon, and he passed a good quantity of urine. He was admitted to hospital about four hours after the accident. When examined in the casualty department he was found to be in a collapsed condition, and was very pale and cold, the pulse being slow and weak. A little brandy was given him, and when he rallied he complained of pain in the abdomen, but nothing abnormal could be felt. One of the incisor teeth of the upper jaw had been broken, and the boy was bleeding from his nose. When examined soon afterwards in bed the abdomen offered some resistance to palpation, and there was dullness on percussion in the left flank and hypochondriac region. The temperature was 97.2° F. Hot bottles and hot blankets were applied. Mr. Battle saw him at 6 P.M. He was then lying on his left side; he presented a white face and had dilated pupils, but no expression of pain or anxiety; he kept very quiet. The lips were paler than natural, but not blanched; the surface of the arms and face was cold. The tongue was moist, but somewhat pale. He made no

complaint of pain, but when asked he said that his stomach hurt him. The abdomen moved with respiration and the walls were flaccid, rather "sagging" towards the bed; there was no tenderness anywhere. The dullness of the liver was not increased; there was dullness extending from the left flank up to the left linea semilunaris, changing with position. The pulse was feeble and at times could hardly be felt. He was very thirsty. He had vomited since admission, but there was no special tendency to vomit. At 10 P.M. a catheter had been passed into the bladder, but no urine was drawn off; later about half an ounce was passed, but it contained neither blood nor albumen. The pulse was a little stronger, the collapse had improved but very slightly, and the extremities were still very cold. At 11 P.M. there had been some increase in the amount of dullness, which reached the right linea semilunaris. At 12 midnight the general aspect of pallor continued with thirst, but the amount of fluid in the abdomen was apparently not increasing, or was doing so very slowly. The general condition had improved; his arms and face were warm. The temperature was 98° and the pulse 96. On Sept. 22nd it was noted that during the night he had passed about ten ounces of urine loaded with urates. His extremities were warm and the cheeks slightly flushed. He complained of a little pain in the abdomen, but was unable to localise it. During the night he had taken small quantities of water. At 8 A.M. the temperature was 97.6° and at 12 midnight 100.2°. The condition of the abdomen remained as before. On the 23rd there was less evidence of fluid in the abdomen. The pulse was 100. He complained of pain in the left shoulder and clavicular region on breathing. The morning temperature was 99.2° and in the evening it was 100.2°; the pulse was 110. On the 24th he was still complaining of pain in the left side of the chest and was suffering much from dyspnoea, the *alae nasi* working rapidly. The respirations were 40 and the pulse 120. Dr. Box examined him and reported that there was apparently consolidation of the lower lobe of the left lung with fluid in the pleura. Albumose was present in large quantity in the urine. The evening temperature was 101.8°. On the 25th it was reported that the signs were as before, but there was no albumose in the urine. The pulse was 120, the respiration was 40, and the temperature was in the morning 101.2° and in the evening 102.2°; the pulse was 125. He was complaining of headache. The bowels acted after a simple enema. On the 26th, when lying on his back, there was slight dullness in the right flank, and the dullness on the left side reached to a line drawn vertically upwards from the anterior superior iliac spine. The respirations were 40, whilst the temperature was in the morning 101.4° and in the evening 102.2°. On the 28th the patient was feeling much better; the temperature was 99.4° and the pulse 120. The left pleura was aspirated and fourteen ounces of fluid of dark-red colour were withdrawn, being alkaline in reaction and containing red and white blood corpuscles. On the 29th he was without pain. The temperature was 98.4° and the pulse 80. There was dullness over the lower part of the thorax on the left side and slight dullness in the left flank. He went to the Swanley Convalescent Home on Oct. 10th. He was still pallid, but otherwise gave no evidence of anything abnormal. The temperature was normal or subnormal after the 29th.

Remarks by Mr. BATTLE.—When I first saw the patient he was suffering from severe shock, and it was not possible to gauge the exact extent to which the fall alone was responsible for this. In hospital practice cases of severe shock are frequently seen after abdominal injury even when the local evidence of damage is comparatively slight. There was here a complication—namely, that of effusion into the peritoneum—which suggested that much of the patient's serious condition might be dependent on internal bleeding, and it was difficult at once to estimate the gravity of this symptom. When first examined by me at 6 P.M. the condition was one to cause anxiety, but the more important symptoms of hæmorrhage were not combined with those of shock; he had vomited but little, was very thirsty, and complained of a dry mouth, but was lying quietly on his left side, and was in no way excitable or restless. The fluid in the peritoneum slowly increased, but without addition to the general symptoms, until about 12 midnight, when there was no longer necessity for immediate interference as the effusion was not increasing. The presence of free fluid in the peritoneal cavity within a few hours after an injury suggests either escape of urine, the result of a ruptured bladder, or hæmorrhage. It was necessary to exclude the former in this case, for at the time of the accident the patient's bladder had not

¹ THE LANCET, Jan. 19th, 1895.

² New York Medical Journal, 1889, vol. 1, p. 106.

³ Transactions of the Clinical Society of London, 1892, p. 172.

⁴ Ibid. p. 177; also Centraltblatt für Klinik, 1889, p. 849.

⁵ James: Australasian Medical Journal, p. 357, 1887. Carson: Boston Medical and Surgical Journal, 1887, p. 445. Morton: Journal of American Medical Association, 1890, 1-16. Vautrin: Revue Médicale de l'Est, Nancy, 1894, p. 87. Dorange: Archives de Médecine et Pharmacologie Militaires, Paris, 1894, p. 223. Boffin: Association Française de Chirurgie, 1893, p. 323. Du Bourg: Gazette des Hôpitaux de Toulouse, 1894, viii., p. 149.

been emptied for some hours, and was probably distended. He could not tell us if he had passed urine since, nor was there anyone who knew; however, the introduction of a catheter showed that the bladder was intact. Free hæmorrhage into the peritoneum without external wound after traumatism is most likely dependent upon laceration of the liver, and such lacerations, especially if of small size, are very difficult to diagnose, sometimes indeed impossible. Rupture of a healthy spleen is almost unknown at this age. Laceration of the mesentery suggested itself, or laceration of the omentum, and of these the former is the more likely to tear. There was a complete absence of symptoms of ruptured liver or spleen, and the small amount of abdominal pain, the slight vomiting, and the absence of rigidity of the abdominal wall made me regard the case as probably one of slight rupture of the mesentery without injury to the intestine. Abdominal section should, I think, be performed if the shock from which the patient is suffering is considerable and the amount of blood in the peritoneum large, or if the shock, whatever its degree, is increasing in spite of the employment of the usual remedies, and continued escape of blood into the peritoneum is taking place. When there is no evidence that the source of the blood is a rupture of one of the viscera, it is permissible to make a longer delay. Here, also, there should be distinct evidence of increasing effusion, and it is not always necessary to search for the bleeding point, although it is desirable that such should be secured if found easily. It is not easy to measure the amount of fluid in the peritoneal cavity and its rate of increase unless the patient be examined always on the side. In this position the pelvis is emptied to a great extent, and it is easy to mark the line of advancing dullness due to the effusion on the abdominal wall and estimate the rapidity of its escape from the lesion. It has on former occasions been pointed out that excessive shock should not be considered as contraindicating operation, as by means of saline infusion the patient may be brought into a condition for the necessary procedures when it is a question of vital importance that the hæmorrhage should be arrested by surgical means. I do not think that the question of operation is settled when the hæmorrhage has stopped, though there is generally rapid absorption of the effusion, for a quantity of blood in the peritoneum may cause inflammation from the changes which ensue. One of the first signs which may be called unfavourable will then be a commencing distension of the abdomen, and this should be regarded as an important indication for interference. The constant desire of the boy to lie on the left side was difficult of explanation, until the onset of the pneumonia made it evident that there had been injury to the left side of the chest in addition to the injury of the abdomen. There were no symptoms of laceration of the lung when he was admitted, but the presence of the hæmatothorax and the later inflammatory attack make it evident that such must have occurred, although probably of limited extent.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Varieties of Intestinal Obstruction dependent on Gall-stones, with a series of cases.

AN ordinary meeting of this society was held on Jan. 22nd, the President, Mr. HUTCHINSON, F.R.S., being in the chair.

Mr. MAYO ROBSON read a paper on the Varieties of Intestinal Obstruction dependent on Gall-stones. He remarked that the usually accepted form of obstruction was only one of four varieties of intestinal obstruction depending on gall-stones, which he proposed to classify as follows:—1. The form dependent on local peritonitis in the region of the gall-bladder, leading to paralysis of the bowel. Two illustrative cases were related, both of which yielded to general treatment without operation. 2. Volvulus of the small intestine dependent either on the violence of the colic caused by an attack of cholelithiasis or on the contortions induced by the passage of a large concretion through the small intestine. Two cases were related in which Mr. Robson performed laparotomy and untwisted the volvulus, recovery following in each case. 3. Mechanical obstruction due to the

passage of a large concretion through the small intestine. Two instances were given in which enterotomy with removal of the concretion was followed by recovery. 4. Obstruction depending on adhesions or on stricture, the result of past gall-stone attacks, or of healing fistulae. As this form was specific only in the antecedent cause instances were only referred to and not related, since cases of this kind could be more fully discussed in a paper dealing with the subject generally. Mr. ROBSON, in answer to questions addressed to members of the staff or to the registrars of a number of large metropolitan and provincial hospitals, had received communications from institutions representing about 80,000 patients, and out of this number only four cases of intestinal obstruction from gall-stones had been recorded during the past twelve months, proving that this form of obstruction is far from common, and all the four cases coming under the third form described in his paper seem to prove that it is the commonest.

Mr. ARBUTHNOT LANE, in connexion with the first class of cases, quoted an instance in which he had operated for acute intestinal obstruction in which he found the distended gall-bladder pressing upon the colon and duodenum.

Mr. ARTHUR BARKER cited a case seen by him post mortem in which copious diarrhoea preceded for some time the vomiting which ushered in the fatal termination. The obstruction was in the lower part of the ileum, and the case was recorded in the Transactions of the Clinical Society about sixteen years ago. The only other case with which he was familiar was one operated upon by Mr. Thomas Smith, who cut into the bowel and removed the stone, the patient making an excellent recovery. He did not approve of needling the stone through the bowel wall, and considered that shyness about opening either the large or small bowel was carried a great deal too far. He then recounted a case of volvulus, the cause of which was obscure, upon which he had operated with a good result. He had thought since that this might be due to gall-stones, and asked Mr. Robson whether in these cases he had met with effusion into the peritoneal cavity, it being a point of great practical and pathological importance whether the bowel might be so long twisted as to allow the passage of septic matter through its walls.

Mr. EDGAR WILLETT said that in the St. Bartholomew's Hospital Museum there was preserved a gall-stone four inches in circumference impacted in intestine; also the sutured portion from which a stone had been removed in a patient who subsequently died from a second obstruction. The specimen showed excellent union along the line of suture.

Mr. J. JACKSON CLARK said that out of 800 post-mortem examinations he could recall only one in which he had seen a gall-stone impacted in the small intestine. It was two inches long and half an inch across.

Mr. F. S. EVE referred to one case of gall-stone impacted in the large intestine in the Museum of the Royal College of Surgeons of England, and suggested that some of the cases cited might have recovered if left alone. He quoted 20 cases collected by Mr. Treves which had not been operated upon, of which 6 recovered and 14 died. Of 26 cases which had been operated on 10 recovered and 16 died. Up to 1889, of 8 cases operated upon 7 died; whereas subsequently to that date, of 18 cases operated upon 9 recovered, showing a very great improvement in recent years.

Mr. CROFT said cases of obstruction from gall stone were very rare. His own observations had not led him to differ from the opinion expressed.

The PRESIDENT said he was disappointed that no attempt had been made by Mr. Robson to collate the successful cases in recent years. For himself he would say that up to the present time one half the cases died after operation, and he did not think the subject had advanced to the point at which it could be said that "delay in such a case is criminal." Even in cases where death was threatening he thought the chances of recovery were about equal to those of a fatal issue if operation was decided against. In his own experience of obstruction a large number of cases exhibiting very severe symptoms improved spontaneously, and large gall-stones could be shown which had passed the bowel without assistance. He quoted one case which on the ninth day when apparently in *extremis* was relieved by the passage of the stone; while one operated on under similar conditions died. Another objection to the rule in favour of operating in these cases was that in the hands of less experienced surgeons the mortality would probably be greatly in excess of what it was at present. The third class of cases

he thought did not support the contention in favour of operating. There was one important class which had not been alluded to—viz., cases in which a gall-stone remained for months in the intestine, giving rise to repeated attacks of obstruction. He mentioned two cases of this kind, both of which recovered, passing the stone without assistance. He further stated that he had never yet in the post-mortem room seen a case where an impacted stone had caused death.

Mr. MAYO ROBSON, in reply, said that the statement to which the President had taken exception only applied to a particular instance, and was not intended for a general rule. That desperate cases of impaction did recover he freely admitted, but thought that some cases which died might have been saved if operated upon before tympanites appeared. With regard to the second class, in which volvulus occurred, recovery was scarcely possible without operation. He thought that statistics prior to the last two years could not be accepted as giving any idea of results as they might be obtained now, and still less as representing what he anticipated in the near future. He quite agreed that were the operation performed by all surgeons as a routine treatment there might be an increased mortality. In answer to Mr. Lane, he thought volvulus was due to the violence of intestinal contraction when a large stone was passing or obstructing the bowel. He had operated on four cases, in two of which a stone was obstructing the small intestine and was associated with some peritoneal effusion.

HUNTERIAN SOCIETY.

The Operative Treatment of Perityphlitis.

AN ordinary meeting of this society was held at the London Institution on Jan. 9th, Mr. CHARTERS J. SYMONDS, President, being in the chair.

Mr. SYMONDS read a paper entitled "The Operative Treatment of Perityphlitis." The paper was founded upon twenty-three cases which had come under his care for surgical treatment. Questions of surgical import only were dealt with, and the important question, When should operation be undertaken? Mr. Symonds stated that the cases were necessarily divided into two groups: (1) those in which operation had been performed in the quiescent stage for relapsing typhlitis, and (2) those in the acute suppurating condition. The first group included six cases. The following are briefly the notes of each. Case A is reported in full in the Clinical Society's Transactions for 1885. The patient had had several attacks of colic during the six months before the removal by operation of a calculus from a cavity outside the appendix. The peritoneal cavity was not opened. Mr. Symonds now exhibited the calculus removed in July, 1883, and stated his belief that this was the first case of perityphlitis operated upon in the quiescent stage. The calculus was composed of calcium phosphate and fecal matter, and the question was whether such a calculus could have formed in six months. In two other of the six cases a calculus was also found on operation. In one, Case B, there had been symptoms of colic for two years. The calculus rested in a cavity outside the appendix and presented a laminated appearance similar to that of Case A. In Case C a calculus of similar size and form was removed from a cavity in the iliac fossa. In this case the cecum was adherent to the abdominal walls, and a fecal fistula resulted from sloughing of the intestinal walls and still persisted. The patient had suffered from typhoid fever one year and enteritis three months before admission. Before operation there was a small area of exquisite tenderness in the lower part of the right rectus muscle. The symptoms in these three cases were of three, six, and twenty-four months' duration respectively from the first attack. Case D, a female, had had two attacks, the first twelve and the second two months before admission, with an ill-defined right iliac swelling and pain on walking. The abdomen was opened, the appendix removed, and perfect recovery resulted. Case E, a girl aged eight, had had a first attack five years ago, when three years of age. With quiet and care she had no second attack till 1893. The patient came under Mr. Symonds' care during a third attack, when a tumour could be felt at the brim of the pelvis. The appendix at the operation was found to be hanging down into the pelvis and adherent to the rectum. It was removed, and the patient did well. Case F was a student who had had two attacks and in whom at operation a mass of white lymph was found adherent to the

iliac muscle and to two coils of ileum. The appendix and omentum were removed, and recovery resulted. Thus in these six cases four had had two attacks, one had had great pain and inability to work after a first attack, and in one the attacks had been frequent. Mr. Symonds would ask the questions—Ought we to operate after one attack, even if severe? Ought we to advise operation after a second attack? And, thirdly, if in suppurating cases the appendix could not be found, should the peritoneal cavity be opened if necessary in order to find and remove the appendix? He next detailed the method of closure of the divided appendix. Operation had been performed in seventeen acute cases. He stated it was important to estimate the initial severity. He considered that if the attack was not very severe or very sudden the prognosis was good so long as the swelling continued firm. Many cases recovered from the first and from the second attack. Mr. Symonds drew attention to the fact that the quantity of pus was in no way proportionate to the amount of swelling, and narrated one of his cases where the swelling was enormous, reaching above the umbilicus, and contained only one drachm of foul pus. The usual symptoms were sudden onset of pain, with or without sickness, or diarrhoea, with or without pain, with or without sickness, and with subsequent development of tumour. Case G, a female, experienced sudden pain in the right hypochondriac and inguinal regions one month after confinement. The temperature varied between 99° and 102° F. On the tenth day there was a well-defined swelling in the right inguinal region, with hectic symptoms. An incision yielded one ounce of pus, and an entire detached appendix, contained in a large cavity. Mr. Symonds said that five out of the twenty-three cases presented hectic temperature with anorexia and gradual development of the swelling. Of these five cases all but one recovered, and in that case the abscess ruptured on the thirteenth day. This patient was at first not very acutely ill, but was suddenly taken with severe pain and diarrhoea and collapse. Mr. Symonds advised operation where a tumour existed which continued to increase in spite of rest, and where the temperature rose and the tumour continued to increase in size. In another group of cases there might be an abscess in an abnormal position. The notes were read of a case where, with violent abdominal pain and tenderness, there appeared on the fifth day a small tender swelling in the cæcal region, which was demonstrated by operation to be an abscess between the ileum and cæcum. He next referred to a fourth group of cases where, with abdominal distension and septic pyrexia, no tumour was palpable. He pointed out the great value of the presence of slight œdema over the loin as an indication of the presence of deep-seated suppuration. In two cases a large abscess had been completely masked by the abdominal tympanites. He therefore advised operation where the symptoms were severe and persisted if the abdomen was tympanitic. As to the justifiability of operation during the early stages of the disease, Mr. Symonds pointed out that in two of his cases operation had been performed twenty-two and twenty-nine hours after the onset of symptoms. In one purulent peritonitis was found and death resulted. The other was admitted into hospital in a state of collapse, and operation revealed a localised abscess, which was drained with good result. Mr. Symonds considered that the danger of operation was much increased by the removal of the appendix when an abscess existed. In none of his cases of abscess was the appendix searched for.

Mr. COTMAN asked the President to what extent he was in the habit of pre-circling opium in these cases, and stated his opinion that opium merely masked the symptoms.

Dr. FORTESCUE FOX asked whether Mr. Symonds considered it possible that a distended appendix might discharge itself into the cæcum and so the abscess be discharged per anum, and narrated a case which supported this hypothesis.

Dr. F. J. SMITH said he had never yet seen a calculus in an appendix vermiformis at all resembling the one shown. He considered that the sudden onset of abdominal pain with vomiting and iliac tumour was an absolutely certain sign of pus and compelled operation.

Sir HUGH BEEVOY said he had seen six cases where sudden pain, vomiting, and tumour had all been present and the patients were all living although no operation had been performed.

Mr. SYMONDS said that in his opinion the less opium given the better. In a few cases he advised five grains of Dover's powder to be taken three times daily. He could not explain

the rapid subsidence of the tumour in Dr. Fortescue Fox's case. He firmly believed that every case which supplicated never recurred.

HARVEIAN SOCIETY OF LONDON.

Presidential Address: Evolution in Treatment from 1831 to 1895. (A Sketch.)

A MEETING of this society was held on Jan. 17th, when Mr. G. EASTES delivered the following address.

[After alluding to the vast changes that had taken place in the metropolis since the year of the foundation of the Harveian Society (1831), Mr. Eastes continued:]

"All branches of medicine have participated in our recent strides in knowledge, but it is impossible for me to survey more than a minute part of so wide a domain, and I select the division of prevention and treatment of disease for two reasons. It is perhaps the department of medical work that most nearly concerns the world in general; it is also the goal whither the studies and researches of all departments of medicine lead. But even here I must restrict myself to a portion only of the subject—viz., the evolution in some of the opinions held as to treatment which has occurred within the life-time of our society. In 1831 preventive medicine, except in the case of vaccination, was non-existent. Anyone ill of an infectious disease remained at home; neighbours ran in promiscuously to visit the sick person, and the disease was spread broadcast. Nurses and medical practitioners went from case to case without attempt to avoid the spread of infection. But to-day notification, isolation, and disinfection are rigidly enforced, and the sanitary defects of an infected house are remedied. Everyone knows, too, that preventable diseases may be spread by infected water or milk, every food or drink is judged, and filters themselves are not above suspicion. 'Quis custodiet ipsos custodes?' As a practical policy, too, personal cleanliness is displacing the vexatious quarantine of the past in other lands besides our own, which in sanitary matters has pioneered humanity; though it was not until after the horrors of cholera in England in 1849, and those of the Crimean winter campaign in 1855, that much progress was made even here. One consequence of all this preventive activity has been the well-known decrease in the zymotic death-rate of England and Wales, which from an average of 3.46 in the twenty years 1846–66 fell to 2.43 in the following twenty years. This is a decrease of 30 per cent., though the general death-rate fell only 3 per cent. in the same period. Since 1886, too, the decline in the zymotic death-rate has been accentuated; but a similar result obtains wherever preventive measures are adopted. In India, for example, 'whereas in 1865 not one single town had a supply of pure water, in 1894 nearly all the largest cities and cantonments had well-planned waterworks, completed or in progress,' with the result 'that the death-rate among the British troops has been reduced from 69 to 15 per 1000.' This beneficial change may be partly 'attributed to more rational methods of medical treatment and to improved nursing,' but doubtless is chiefly due to lessened prevalence of epidemic diseases brought about by better sanitation. Treatment has undergone a development since 1831 so vast that it may almost be described as a revolution. 'Fas est et ab hoste doceri'; practitioners saw that patients recovered under treatment by infinitesimal doses, and therefore naturally concluded that recovery would equally ensue with no medication at all, but with simple nursing and careful dieting. This view reached its climax when Gull and Sutton, before the days of salicin and its derivatives, treated acute rheumatism with strict nursing and dieting and the administration of peppermint-water as a placebo. The pendulum of treatment for this particular disease thus swung from over-medication to no medication at all; since then I believe it has reverted to the happy mean between the two extremes. There is, however, another side to the question: Do we now unduly neglect the heroic remedies of the past—venesection, for example? I fear that my esteemed friend Dr. Hare—who with Sir John Erichsen¹ was our president

in 1847–48, and both of whom we may congratulate on their present vigour, as well as the latter on his recently-acquired honours,—I fear that Dr. Hare considers *laissez faire* is too much the order of the day. In 'good remedies out of fashion' he graphically describes the care of a gentleman who, with commencing general bronchitis and overtaxed and distended right heart—clearly an extreme case—dies without any attempt at relief by venesection. But this is just the case in which all modern books of treatment urge the 'letting of blood,' and against such treatment there is no law. There was, too, fifty or sixty years ago, less recognition than in the present day of the immense control exerted by mind over matter, of the intellectual and other powers of the brain over the body. This view has been constantly insisted upon in this society; never more happily or thoroughly than by Dr. Goodhart in his Harveian Lectures on 'Modern Neuroses,' or by Mr. Herbert Page in his recent admirable lectures on 'Some Disorders of Nervous Function due to Injury and Shock.' Some patients may be, as it were, coaxed, but cannot be driven to health. He is a wise practitioner who acts upon that principle. Another distinguishing feature of modern treatment is its definiteness in aim and precision of application, qualities that have grown slowly but surely as knowledge generally has advanced, but which, in the case of surgery, have been fostered by the introduction and adoption of anaesthetics and antiseptics. On the wonderful rôle played by these two nineteenth-century developments I need not dilate; their efficacy and far-reaching effects are seen on every side, their praise is in all mouths. They have completely revolutionised our practice, especially in the direction of transferring to the domain of surgery cases that thirty years ago were never seen in surgical wards. The serous cavities are opened and their contents examined; diseased parts or even entire organs, such as kidney, ovaries, and uterus, are removed; calculi and tumours taken from the deepest organs or cavities and ulcerated patches of stomach or intestines excised; whilst ligation of the carotid artery for ingravescent apoplexy has lately been practised with success. Truly the physicians must look to their laurels, since that 'hinterland' of disease always hitherto recognised as being within their 'sphere of influence' is undergoing appropriation by an advancing victorious power. One chief element of success, especially in many of these severe abdominal operations, is a point which seems sometimes to be overlooked, but was much emphasised by Mr. Bryant a few years since in his Harveian Lectures—viz., to operate directly the operation is recognised as necessary, and not allow the case to drift and thereby become irremediable."

[After discussing the effects of such discoveries as the anæsthetic power of chloroform and the antiseptic influences of certain drugs, Mr. Eastes continued:]

"But not even to anaesthetics and antiseptics combined is due all the precision of modern treatment. I believe a very large part of its progress may be traced to the teachings of Mr. John Hilton. It is a delight to me to make this statement here, because to Mr. Hilton's philosophical instruction and common-sense views of disease I, in common with other Guy's men of my day, have been indebted for much of any insight into illness that may have accompanied us through life, and for much of the pleasure which our work has in consequence brought to us. And we feel deeply indebted to Mr. Jacobson for the charming biographical notice of our great teacher which he has lately published. Mr. Hilton, I believe, first taught systematically the true significance of pain and its interpretation, and placed the principle of treatment of diseased parts by physiological rest on a basis which, since it is founded on the general laws of physiology in health and disease, will be as enduring as treatment itself. The only valid objection I ever heard made to this principle has been when it had been continued too long, and adhesions (as in the case of joints that had been inflamed) had formed. Of its immense use in many cases, surgical or medical, all of us might doubtless quote instances. I have here notes of a surgical case, but have not time to read it. For a medical instance of the value of physiological rest in the treatment of suitable cases, one might cite a case of pericarditis, where lessening of the rate of cardiac beats is essential. As Dr. Sibson pointed out, a reduction of the heart's action by 14 beats in the minute (a reduction attainable in many cases by change from the sitting to the recumbent posture) is equal in twenty-four hours to a diminution of fully 20,000 beats of the heart, and is itself a wonderful relief to the overburdened organ. I now pass to the final stage of my theme, and propose to indicate briefly the effects to the public and to the

¹ Mr. Eastes read a letter from Sir J. E. Erichsen containing the following paragraph: "I remember perfectly well having been President of the society in conjunction with Dr. Hare about the year 1847–48—I may state that there were always two presidents in those days: one medical, one surgical—and bringing to one of the meetings of the society a bottle of chloroform, which had then just been introduced into surgical practice as an anæsthetic, and was then, I believe, called the 'terchloride of formyle,' or by some equally barbarous name."

profession respectively of the progress that treatment has undergone. To the public it has been advantageous in every way, in consequence of the incidence of illness being less frequent, its accompanying pain and sorrow mitigated, duration shortened, and results less disastrous. Amongst these results is a lowered death-rate, especially from infectious diseases, which notoriously cut off in their youth or prime those who, with life before them, are amongst the most valuable items of a population. Upon the profession, in this country at any rate, the effects of the steady progress have been many and far-reaching, and are divisible into three classes, affecting us—(1) in our preparation for the conflict with disease, (2) whilst engaged in that conflict, and (3) in the results thus accruing to us. With more to learn and examinations ever increasing in severity, the intellectual status of members of the profession generally has arisen and is rising. The unskilled 'tinker of deteriorated human pots and pans' of past days has become the cultured 'wise physician skilled our wounds to heal' of to-day. The widening sphere of science and art has, however, become too extensive for any single mind to grasp it thoroughly in all directions, and is largely accountable for the division of labour, the specialising that now flourishes everywhere. The rapid growth of this tendency is well shown by the fact that when the British Medical Association met in 1833 in Bristol in the second year of its existence its whole business was transacted in one general meeting. But last year, at the meeting in the same city, the papers and discussions were divided amongst ten sections, whilst for the scientific work of the approaching meeting in London fourteen sections have been provided, and there are, I know, those who desire even that number to be increased.

"One point in reference to modern progress I would much emphasise—viz., that our increasing mastery over disease gives added zest to work, and the more frequent recovery of patients augments much our 'pleasures of life.' And although there is on one side a lessened number of cases of illness and lessened average length of illness—which remark applies both to medicine and surgery—yet other cases that formerly died at an early stage of disease, or after accident, now pass through an illness to health, so that our work is possibly not diminished, but merely displaced. It is not, I opine, from improvements in treatment, but from other causes, especially overcrowding of our ranks and consequent over-competition for practice, from which the profession as a body suffers. But, even were it otherwise, were our means of livelihood actually restricted by the very advances in our art that we ourselves have made, yet we must remember that the self-sacrificing 'struggle for the life of others' has in no branch of human labour been more apparent than in the ranks of medicine, nor here has it ever shone more brightly than at the present moment. May the same generous spirit continue through all time to animate those who practise the divine art of healing."

The new President, Sir JOHN WILLIAMS, Bart., was then inducted into the chair by Mr. Eastes and he declared the conversazione opened. The rooms were most tastefully decorated and Mr. Oppenheimer's valuable collection of Roman and Etruscan antiquities, including Pompeian surgical instruments, was on view. There were also several hundred medical and surgical books published previously to the present century and a great number of exquisite photographs of British and foreign health resorts, all kindly lent by members and friends of the society, of whom about 300 were present during the evening.

The following are the officers for the ensuing year: President: Sir John Williams, Bart. Vice-Presidents: Mr. Rayley Owen, Mr. D'Arcy Power. Dr. W. Hull, Dr. E. Clifford Beale. Treasurer: Mr. H. Cripps Lawrence. Hon. secretaries: Mr. Peyton Beale, Dr. Cagney. Council: Dr. Boxall, Mr. Henry Davis, Mr. G. Eastes, Dr. Charles Gross, Mr. W. F. Hazel, Mr. S. Harbutt, Mr. Henry Juler, Mr. Howard Marsh, Mr. Malcolm Morris, Mr. E. W. Roughton, Dr. J. E. Squire, and Dr. Samuel West.

PLYMOUTH MEDICAL SOCIETY.

Glaucoma.

A MEETING of this society was held on Dec. 29th, 1894.

Mr. J. ELLIOT SQUARE (hon. treasurer) read a paper on Glaucoma. He pointed out the serious nature of this disease, which frequently went unrecognised until treatment was of

little avail, often under the impression that the disease was cataract, and, therefore, not requiring immediate operation. He urged the necessity of every practitioner receiving some training in ophthalmology so as to recognise this disease early. He paid a tribute to von Helmholtz and von Graefe, and cited the latter's views on the subject, more especially as to the cupping of the disc. Paracentesis of the anterior chamber (Mackenzie) and iridectomy (von Graefe) were discussed and the pathology of the disease gone into, three varieties of cupping of the disc being described. Three forms of the disease were mentioned: primary or acute, simple or chronic, and secondary glaucoma. Eserine with or without cocaine to relieve the prodromal symptoms and an early and ample iridectomy were strongly urged, if possible in an upward direction to obtain a cosmetic result. In eyes blind from chronic glaucoma in elderly people Mr. Square recommended excision of the globe. To illustrate his remarks he demonstrated two cases of glaucoma on which he had performed iridectomy with excellent results.

Charcot's Disease.—Hydrocephalic Brain.—Radical Cure of Left Inguinal Hernia.—Malignant Disease of the Oesophagus.—Exhibition of Specimens.

A clinical evening was held in the library on Jan. 16th, Mr. SQUARE (President) being in the chair.

Mr. WOOLLCOMBE showed a man forty-two years of age with well-marked Charcot's Disease of the Right Knee-joint. Fourteen years ago he fell and developed synovitis, which got well and remained so until six months ago, when the right knee began to slowly enlarge, accompanied by anasarca of the same leg. The tibia was partially dislocated backwards on the femoral condyles, and so accounting for the oedema of the leg. Many of the symptoms of tabes dorsalis were well marked, but there were no crises. Suggestions for treatment were invited.

Mr. WOOLLCOMBE also exhibited the Brain of a Hydrocephalic Child three months old. The child was born with a spina bifida, which was tapped, injected, and disappeared within a few days of birth, followed a month later by enlargement of the head; the lower limbs remained contracted and undeveloped. The occipital bone was trephined three weeks ago to the right of the external protuberance, and thirteen ounces of fluid were drawn off and a small drain introduced. Continuous drainage was kept up, but the child died suddenly at the end of the third week. Post mortem there was no meningitis, and the posterior horn of the right lateral ventricle was found to have been tapped.

Mr. LUCY brought forward a case of Radical Cure of a Left Inguinal Hernia in a man sixty-seven years of age. The operation was performed a year ago at the close of herniotomy for strangulation, and an excellent result was obtained by Mitchell Banks' method. Six weeks' rest in bed were enforced, and the patient now wore a light double truss, chiefly to keep up a reducible rupture on the opposite side.

Mr. BULTEEL exhibited a Malignant Growth—probably a Scirrhous arising from a Bartholin's gland—which he had removed from the vulva of a multipara forty-eight years of age. There were no enlarged glands.

Mr. WHITEFORD mentioned a case of Malignant Disease of the Oesophagus opposite the cricoid cartilage, with enlarged glands along the greater curvature of the stomach, and asked if this sequence were usual.

Mr. BRENTON showed a Salivary Calculus, the size of a large pea, which he had removed from the duct of the left sublingual gland of a man fifty-four years of age.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Pathological Changes in Chronic Rheumatism and Chronic Gout in the Hands.—Exhibition of Specimens.

A MEETING of this society was held on Wednesday, Jan. 16th, Professor SHERIDAN DELÉPINE, M.B., President, being in the chair.

Dr. E. S. REYNOLDS mentioned some points of difference in the Pathological Changes found in the hands in cases of Chronic Rheumatism and Chronic Rheumatoid Arthritis (classed together), as compared with those found in the hands in Chronic Gout. In chronic rheumatic conditions, as a rule, the lesions are found in symmetrical joints to an equal extent, and the deformities produced are similar, though the last

is not always the case. In chronic gout, on the contrary, the changes in the hands are found in asymmetrical joints to an extent differing much on the two sides, the resulting deformities being totally different. These points were illustrated by a series of lantern slides.

Mr. J. B. WOLSTENHOLME showed microscopic specimens from a case of Biliary Cirrhosis in a horse, the condition having presented no symptoms during life. He also showed a horse's stomach studded with the larvæ of *Oestrus equi*.—Dr. A. T. WILKINSON showed a specimen of Epithelial Carcinoma taken from the bladder of a man aged sixty-two years, who died from independent cardiac disease. There were pain and hæmorrhage for sixteen days before death, but prior to this no symptoms were present. The growth infiltrated the bladder walls, especially at the fundus, and there was also a large tuberos growth projecting into the organ. There were no secondary growths in any other part. The points of interest in the case were the wide extent of the growth consistent with clinical latency; the fact that infiltrating and non-ulcerating primary carcinoma in hollow organs not normally sensitive often fails to produce pain; the sudden and serious hæmorrhage owing to the superficial vascularity, which appeared to be a superadded element; and the absence of any decided cachexia, the disease occurring in an organ in which absorption is at a minimum, and diffusion of the growth rarely occurs at an early age.—Dr. SOUTHAM showed a specimen of Perforating Ulcer of the Cecum from a man aged sixty-seven years who for some months had suffered from symptoms of incomplete intestinal obstruction. Shortly after admission into hospital death took place very suddenly, and at the necropsy a stercoral ulcer was found on the posterior wall of the cæcum, with a small perforation at its centre. The appendix was healthy, but the cæcum and colon were distended with hardened feces, apparently due to atony of the bowel, for no cause of obstruction was present below.—Professor SHERIDAN DELAFINE showed a culture of a Chromogenic Bacillus (non-pathogenic) isolated from the Manchester water.—Dr. HELME showed an Ovarian Cyst.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Relation between Death from Measles and House Conditions.—The Disruption of Impacted Biliary Calculi.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 11th, Dr. A. G. BARRS being in the chair.

Dr. SPOTTISWOODE CAMERON read a paper on the Relation between Death from Measles and House Conditions, which is printed in our present issue.—Dr. CHURTON, in discussing the paper, remarked that he had for many years been observing the influence of insanitary conditions on the course of diseases, and referred to notes of fifty instances where houses demonstrated to be in an insanitary condition had contributed cases of various ailments to the different charitable institutions of the town, and in which such contributions had ceased on the houses being put in a satisfactory condition.—Mr. TEALE referred to the influence of insanitary conditions on puerperal and scarlet fevers, which in his opinion were formerly much more fatal.—Mr. WOODCOCK expressed his opinion very strongly, and from personal experience, that the sanitary conditions prevailing in back-to-back houses were much more satisfactory than those prevailing in "through" houses occupied by people of the same social scale, largely on the ground that in the latter the front door was habitually kept shut and the front room used only on very special occasions.—Dr. CHADWICK gave Mr. Woodcock his cordial support, and stated that hitherto the comparisons between the sanitary conditions of back-to-back and through houses had been stultified by the relative poverty of those who lived in the former.—Dr. HELLIER and Dr. BARRS also took part in the discussion.

Mr. T. PRIDGIN TEALE read a paper on the Disruption of Impacted Biliary Calculi, including three cases in which a gall-stone in the common duct was broken up by the needle. After speaking of various methods adopted by himself and others in dealing with calculi in the cystic duct three cases were related in which a gall-stone of firm consistence, obstructing the common duct and causing jaundice, was

broken up by means of an acupuncture needle. The first case was that of a man aged sixty-two who had been jaundiced for several months, and with some intermission for twelve months. At the end of six weeks jaundice had disappeared and he was well. The second case was that of a woman aged thirty-eight who had been deeply jaundiced for two months and with absence of bile from the evacuations for three months. An extremely hard calculus was broken up by the needle with great difficulty. She died on the third day. In the third case a calculus broken up by the needle did not pass down into the bowel but upwards into the gall-bladder, whence the fragments were washed out by the syringe over a period of three weeks. Jaundice persisted and yet about three ounces of bile escaped daily through the opening in the gall-bladder. The patient recovered her health and nutrition although the jaundice persisted.—Dr. BARRS spoke of the difficulty of making a diagnosis in some cases and referred to the case of a man he had seen with jaundice due to a distended gall-bladder. The patient was operated on and died soon after. At the necropsy no definite cause was found for the symptoms.—Dr. CHURTON thought severe pain was more often associated with calculus in the cystic duct than in the common duct. He spoke of the value of small doses of pilocarpine for the relief of the irritation of the skin associated with jaundice; this had been a prominent symptom in Mr. Teale's third case before the operation.—Mr. LITTLEWOOD thought the methods of crushing a stone with the fingers or the forceps outside the ducts would be easier and not more risky than needling. He showed a case under the care of Dr. Churton, in which he had done this a month ago for an impacted stone in the cystic duct.—Mr. CANT (Lincoln) spoke of the great density of some biliary calculi, and related a case in which he had attempted to break up a biliary calculus in the intestine by means of a needle and had failed. It was removed by incising the bowel. The patient did well for a week and then died rather suddenly. No necropsy could be obtained. He thought probably the peritoneal adhesions had given way, and referred to Mr. Greig Smith's recent paper on the weakness of some of these adhesions. He had operated in cases with well-marked symptoms in which he could find nothing to account for the biliary obstruction. The patients had, however, been relieved since the operation. He thought Mr. Teale's method of needling was a safer and better procedure than crushing from outside the ducts with forceps.—Mr. TEALE replied.

The following cases, pathological specimens, &c., were shown:—

Mr. WARD: Case of Actinomycosis after one month's treatment with Potassium Iodide.

Dr. BARRS: Case of Locomotor Ataxia due to Peripheral Neuritis.

Dr. CHADWICK and Mr. LITTLEWOOD: Malignant Disease of Oesophagus which perforated into the Trachea a few hours after Gastrostomy.

Mr. LITTLEWOOD: (1) Tongue removed for Epithelioma (patient and specimen shown); (2) Lower End of Femur from a case of Acute Infective Osteo-myelitis.

Dr. GORDON SHARP: Ununited Fracture of the Femur (specimen).

Dr. CHURTON: Sections of Normal Kidney from a case of Acute Anasarca and Oedema of Lungs (child).

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases.—Aortic Aneurysm.—Resection of the Intestine.

THE fourth meeting of the society was held on Jan. 16th, Dr. CLOUSTON, President, being in the chair.

Dr. LUNDIE showed a patient after operation for Perforating Gastric Ulcer.—Mr. CAIRD showed a patient after removal of the Vermiform Appendix.—Dr. BYROM BRAMWELL showed two boys suffering from Progressive Pseudo-hypertrophic Muscular Paralysis. Two girls in the same family had been shown last year.—Dr. MACGILLIVRAY showed a patient after operation for Empyema of the Antrum of Highmore and a case of Partial Excision of the Elbow-joint by Subperiosteal removal of the Condyles.—Dr. NORMAN WALKER showed a woman with typical Lichen of the Forearm.—Mr. CATHCART showed three Gelatine Casts of Warts

in Female Genitals which he believed to be due to a special contagious form of poison not necessarily associated with gonorrhoea. A well-marked Copaliba Rash was also illustrated with photographs and drawings.—Dr. BRAMWELL showed a man presenting the typical physiognomy of Congenital Syphilis.

Dr. ALEXANDER BRUCE read notes on an Aneurysm which had perforated into the Superior Vena Cava. The patient had been admitted to the Royal Infirmary suffering from cyanosis and breathlessness. He had suffered from a cough for some time, and a month before admission "caught cold" and one morning he noticed a blueness of the face and difficulty in breathing. On admission his face was found to be swollen and greatly cyanosed; the neck was cedematous on both sides. The jugulars were full, but did not pulsate. The skin of the thorax was of a leaden colour with distended venules and cedematous. The left side of the thorax was free from lividity, but was cedematous. The abdominal wall seemed quite normal. The upper extremities were cedematous. Dyspnoea was marked. The respiration was 32 and the pulse 104. The area of impaired percussion sound over the precordia extended from the mammary line on the right side at the level of the third rib to the mammary line on the left at the level of the fourth rib. Over the heart a peculiar continuous murmur, with a somewhat musical "swishing" sound, was heard most intense during the systole and dying away during the diastole, and heard best at the level of the third costal cartilage. At the apex both first and second sounds appeared to be normal. There was a slight impairment of the percussion sound below the spine of the scapula on the right side. After admission the patient had a very severe attack of dyspnoea. The oedema and lividity of the chest increased, though the legs remained free from oedema. The point of maximum intensity of the murmur shifted a rib higher. The patient gradually became worse. Edema of the glottis supervened, and in spite of treatment he died eighteen days after admission. Post mortem there was marked oedema of the chest wall. The aorta showed an aneurysmal dilatation extending from the valves to the origin of the innominate artery. The aneurysm projected forward and to the right, pushing the vena cava backwards. Its size was about half that of the average closed fist. On the right and posterior aspects were two small perforations into the superior vena cava. The superior vena cava and left innominate vein were firmly bound down to the aneurysm. The superior vena cava was narrowed, partly from pressure of the aneurysm and partly from organisation in the walls over about a fourth of the circumference, the walls being adherent. The heart was almost normal. From the first there had been little doubt about the diagnosis. The localised oedema suggested at once obstruction to the superior vena cava. The nature of the obstruction was rendered evident by the existence of the murmur, with its peculiar continuous character and its limitation to the sternum and right side of thorax. The perforations into the vena cava probably took place, the one before admission and the other immediately before the alteration in the point of differential maximum intensity and the murmur.—Dr. BYROM BRAMWELL and Dr. G. A. GIBSON having spoken, Dr. BRUCE replied.

Mr. CAIRD read notes on Resection of the Intestine. He drew attention to the conditions under which the surgeon had to deal with obstruction and tumours of the intestine, dividing them into a series in which the symptoms were urgent from tendency to gangrene, and those in which there was no urgency. In the first series he advocated generally, when tumours were encountered, the formation of an artificial anus, and a secondary operation within ten days to deal with the growth. In strangulated hernia, when the elongated necrotic area lay opposite the mesentery and did not involve more than one-third of the circumference of the gut even when perforation existed, he advised the invagination of the dead area. He had treated four cases successfully by this method. Were half or the whole of the gut involved then resection and end to end continuous suturing was the best plan. He advised a free removal especially of the congested central extremity of the gut, and described the method employed in two successful cases. In obstruction by gall-stone he advocated longitudinal incision, removal, and suture. He had had two such cases, which, however, proved fatal apart from the local condition and operation. In the second series of cases he strongly advocated early diagnostic incision when doubtful, and described a case where ten years ago he had removed an extensive epithelial tumour of the

ileo-caecal valve, with three inches of ileum and six inches of colon, the patient still enjoying perfect health.—Mr. CATHCART congratulated Mr. CAIRD on the success of his abdominal cases. In gangrenous hernia he thought resection far more satisfactory than artificial anus.—Mr. STILES described the procedure at Professor Kocher's clinic.—Mr. WALLACE spoke, and Mr. CAIRD replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Series of 100 Cataract Extractions.—Method of Restoring the Lower Lip after Excision for Cancer.

A MEETING of this section was held on Jan. 4th, Mr. W. THORNLEY STOKER, President, being in the chair.

Mr. J. B. STORY read a paper upon a series of 100 operations for Senile Cataract, including both complicated and uncomplicated cases. Only two eyes out of the 100 were lost—both by wound infection. In 8 cases the vision obtained was less than $\frac{1}{2}$, and 3 cases, though surgically successful, remained with only perception of light owing to pre-existing disease of other portions of the eye. In 42 cases simple extraction was done (without iridectomy). Forty-six combined extractions were done, and 12 extractions after preliminary iridectomy. Mr. Story dwelt upon the importance of thorough asepsis as the principal factor in determining the result of a cataract extraction, and stated that his experience as yet was not sufficient to enable him to decide upon the comparative merits of the simple operation and the extraction combined with iridectomy. The section advocated by Mr. Story was the 3 mm. flap as proposed by De Wecker, and first performed in this country by Mr. Story in 1879.—Mr. SWANZY thanked Mr. Story for his paper. He had done 270 operations, not taking into account traumatic cataracts, and had only had two cases of suppuration, both of which had occurred in the first 100 cases. The method of antiseptics employed was as follows. The eyelids were everted and the eyes thoroughly washed with 1 in 10,000 corrosive sublimate. Any solutions, as those of atropine or eserine, were made up with the same solution. The instruments were sterilised by boiling and then put into a bath of weak carbolic lotion, from which they were taken. The dressings were also dipped in corrosive sublimate solution and oil silk put over them to prevent them drying.—Mr. STORY, in reply, said that the antiseptics employed by Mr. Swanzy were much the same as his except that corrosive sublimate solution was used instead of boiled boric acid solution.

Mr. JOHN LENTAIGNE read a paper describing a method of restoring the Lower Lip and the Soft Parts covering the Chin which he had employed in four cases of advanced Cancer of these parts, with exceptionally satisfactory results from an aesthetic point of view, and, so far as he had been able to learn, without any recurrence of disease. The operation consisted in removing the diseased tissues in a square piece between vertical incisions—one on each side and a horizontal incision below parallel to the free border of the lip. These three incisions must be carried through perfectly sound tissues only, and at least a quarter of an inch of apparently sound tissue should everywhere lie between them and the nearest margin of the diseased mass. In this way the position of the incisions would vary with the extent of the disease. The flap which was to form the new lip was then taken from the tissues under the chin and on the upper part of the front of the neck by prolonging the two vertical incisions downwards as far as might be necessary and dissecting off the quadrilateral flap between them. This was then drawn upwards to form the new lip and front of the chin and was fixed *in situ* by wire sutures, a drainage-tube having first been inserted in the middle line at the centre of the lowest part of the flap so as to allow of free drainage from the pouch under the chin. The head should be bent towards the sternum and fixed in that position until the flap became firmly adherent in its new position. When preparing his paper he had learned for the first time that the principle of the operation was not new; it had been long before introduced by the great French surgeon Chopart, and was described in many French text-books on operative surgery as the "procédé de Chopart," but there was no mention of it, or anything like it, in any English work that he had seen.—

The PRESIDENT said that he had never seen a better restoration of the lip than the one exhibited, which was done by Mr. Lentaigne by this method. He would, however, hardly accept it as a universal method.—Mr. LENTAIGNE said he did not mean that this operation should supersede all others. It was only required where the whole lower lip was diseased. The material used for dressing was gauze and wood wool, which was changed as soon as it was soaked, and then a flannel bandage with starch, which fixed the part.

SECTION OF MEDICINE.

Case of Locomotor Ataxia due to Injury.—Small-pox.—Small-pox Temperatures.

A meeting of this section was held on Friday, Jan. 11th, Dr. WALTER G. SMITH, President, being in the chair.

Dr. CRAIG exhibited a patient and read a short paper on Locomotor Ataxia due to Injury.

Dr. O'CARROLL read a paper on the Diagnosis and Prognosis of Small-pox, based upon the experience of cases treated in the Hardwicke Hospital during the present epidemic in Dublin and the much smaller epidemic of 1887-8.

Dr. H. C. DRURY, in his contribution on Some Small-pox Temperatures, exhibited a series of temperature charts of variola cases. He divided them into three classes—1. Those with primary and distinct secondary fever. 2. Those in which the initial fever was continued into a period of febrile state, of longer or shorter duration, but without any distinctive character. 3. Those in which the high initial temperature, lasting three or four days, was the only one seen. He pointed out that, from a large number of observations, he was unable to draw any conclusions from the temperature as to the severity of the rash, general symptoms, or length of time till convalescence was complete, as all three classes of temperature were seen in unvaccinated as well as vaccinated cases, mild and exceedingly severe or even fatal cases, or cases in which the rash was confluent or discrete, copious or slight in amount, also in cases that could be considered free from infection in three weeks, or in others that would require from two to three months.—Dr. TWEEDY said he thought that a good many cases of small-pox were passed off as chicken-pox. He had seen a child aged seven years covered with a discrete vesicular eruption, most of the vesicles being umbilicated. He was told that there were several children in a neighbouring house who had been similarly affected, and had run about all the time. He was in doubt as to whether it was a case of variola or varicella, but concluded that it was the former, and sent the case to hospital.—Mr. BURGESS said that in 1887 he was asked to see a case which another medical man first considered to be rheumatic fever and then scarlet fever. When he saw it he could not make up his mind what it was, but he waited for a couple of days, and by that time there was a distinct rash. This was the first case of the epidemic of 1887.—Dr. DAY said that in the early diagnosis between small-pox and chicken-pox the eruption of the throat was an important point. In the former a papule might be present on the soft or hard palate or on the tongue. In chicken-pox it was a vesicle. A woman had been treated in the Fever Hospital, Cork-street, for small-pox who was six months pregnant and yet did not abort. Several children were treated for both scarlet fever and small-pox at the same time. The acute cases of scarlet fever seemed to have escaped. He said he believed that chicken-pox occurred in adults and also that the vesicles were umbilicated.—Mr. Horne, Dr. Parsons, Dr. J. W. Moore, Mr. A. N. Montgomery, Dr. Smith, and Dr. O'Carroll having also spoken, Dr. Drury replied.

HOSPITAL SATURDAY FUND.—The board of delegates of the Hospital Saturday Fund held a special meeting on Jan. 19th, at which it was reported that the total receipts for the past year were rather over £20,000. It was resolved that £17,600 be divided among 165 institutions as follows:—To 30 general hospitals, £6202; to 63 special hospitals, £6392; to 35 dispensaries, £1063; to 17 convalescent homes, £1497; to 18 miscellaneous institutions, £2151. A sum of £95 was awarded to the Chelsea Hospital for Women, but was not to be paid over until the managing body of the Hospital Saturday Fund were satisfied that the reforms specified in the official report had been carried out. In like manner a sum of £63 was awarded to the Queen's Jubilee Hospital, to be paid after the refutation of various charges made against that hospital.

Reviews and Notices of Books.

A Text-book of the Diseases of Women. By HENRY J. GARRIGUES, A.M., M.D., Professor of Obstetrics in the New York Post-graduate Medical School and Hospital, &c. Containing 310 engravings and coloured plates. London: Henry Kimpton. 1894.

THE author has aimed at writing a practical work, and he has therefore endeavoured as far as possible to avoid theoretical discussions, and he has treated the pathology of the subject very briefly. The object kept more especially in view has been to teach the reader how to make a diagnosis and how to treat the different diseases. We cannot see that any apology is needed for devoting special chapters to hæmorrhage and leucorrhœa, though the author expressly anticipates some adverse criticism for doing so. Indeed, in a work of a practical character there is a decided advantage in the arrangement he has adopted. There are so many morbid conditions peculiar to women in which the discharge of blood, other than that occurring normally during menstruation, is a significant symptom, that it is no fault to give considerable space to its discussion; we should rather think that it has here been scarcely as fully treated as it deserves to be. We may observe, by the way, that the extreme shortness of some of the so-called chapters is a remarkable feature of the book. Thus, chapters of half a page or two-thirds of a page occur more than once. The chapter on Metrorrhagia consists of less than seven lines. In the chapter on Dysmenorrhœa we see that the obstructive theory still finds favour, as we read that "the cervical canal may be too narrow, especially at the internal or external os (stenosis)"; and, again, it is stated that "the uterus may be so bent that the crookedness of its canal opposes a barrier to the free outflow of the blood." In speaking of the treatment of menorrhagia it is recommended that if the use of vaginal douches of hot water fail, liquor ferri chloridi may be added to the water. We scarcely see how vaginal douches containing perchloride of iron can be efficacious in the treatment of uterine hæmorrhage. For the repair of the various kinds of laceration of the perineum three operations are described, some one of which the author thinks will be found suited for any case. They are Tait's flap-splitting operation, a modified form of Hegar's colpo-perineorrhaphy, and Emmet's operation. We observe that in one of the figures describing the second of these operations the lettering has been left out, and the description is therefore more or less difficult to understand. The author considers Tait's operation to be by far the most expeditious perineorrhaphy, and that it results in the formation of a thick and broad beam between the anus and vulva. In speaking of the treatment for hæmatometra and hæmatocolpos we find that after making an opening washing out of the uterus is recommended. The general opinion in this country is that it is better to leave the fluid to drain away entirely without assistance. Operative interference for fibroids should, in the author's opinion, only be resorted to in cases where Apostoli's treatment has been tried unsuccessfully. Many would consider that the prognosis of an operation undertaken under these conditions was much graver than if performed without any preliminary disturbance (and possibly infection) of the endometrium. In the description of carcinoma of the cervix we find it stated that "often the mucus membrane of the body [of the uterus] is affected at an early date in cases of carcinoma of the cervix." So far from this "often" being the case, we should say it is so rare that many good English authorities doubt its occurrence. We are, of course, speaking of the disease at an early stage of its progress. It seems a pity to confuse carcinoma of the body of the uterus with carcinoma of the cervix. The natural history of the two diseases is very different; but in speaking of the age at

which carcinoma of the uterus may be expected, the author simply states that "carcinoma of the uterus is a disease of advanced age." We think in a book intended partly for students it would have been advisable to emphasise the fact that cancer of the cervix is not at all uncommon in relatively young women. It is interesting to see that, according to the statistics of Charleston, cancer of the uterus is about as common among the black as among the white population, which is contrary to the general impression. In speaking of the prognosis the author is undoubtedly mistaken in teaching that even the most radical treatment effects only quite exceptionally a permanent cure, and that it is even doubtful if it prolongs life. He does not seem familiar with some of the English statistics on this subject, which go to show that if the disease is treated radically before it has reached too advanced a stage "permanent cure," if by that is meant many years without recurrence, is not in such cases at all exceptional, either in cancer of the body or cancer of the cervix. We suppose that we must take it that Dr. Garrigues' book offers us a fair picture of American gynaecology at the present time. If that is so, while gladly acknowledging the advances made by American workers in various parts of the subject, we think there is a considerable field for reform in the direction of attaching less importance to the presence of slight displacements or to doubtful stenosis at the internal or external os; and it would be something gained if the formidable two-bladed dilator (p. 153) used for dilatation or "divulsion" of the cervix could be relegated to the limbo of obsolete instruments. We wonder if the author has seen a note by Auvarod on perforation of the uterus by the curette, in which he showed that as a rule the curette merely discovered a rent in the uterus caused by the previous use of the dilator in question.

LIBRARY TABLE.

Practical Lectures in Dermatology. By C. W. CUTLER, M.S., M.D., Professor of Dermatology, University of Vermont. New York: G. P. Putnam's Sons. 1894.—The author tells us that he has published these lectures in response to the request of the students to whom they were delivered. There being only fourteen lectures, he has restricted himself to "those diseases of the skin which every physician in general practice should be able to diagnose and to treat in an intelligent manner." He also tells us that they are prepared from stenographic notes, which may account for the style being colloquial, but he also aims at being humorous. While this is doubtless pardonable as a means of attracting the attention of students during the delivery of a lecture, elaborate jokes, such as that on Elisha's baldness and bear's grease, are but poor reading, and take up a good deal of space which might have been better employed. The lectures contain necessarily much that is true without being new, and the information given, though sound on the whole, is rather scanty, even for the 230 pages to which the author has restricted himself. While the lectures may have been useful to the students for whom they were intended, they are too sketchy, we think, to prove of much value to the more experienced reader. The work concludes with a reprint of Jackson's well-known "Dermatological Don'ts," to which Dr. Cutler (still in humorous vein, it is to be hoped) adds the admonition not to omit to purchase his own work on Diagnosis!

Asthma and Chronic Bronchitis. By JOHN C. THOROWGOOD, M.D., F.R.C.P. Lond. London: Baillière, Tindall, and Cox. 1894.—This monograph is practically a revised and much extended edition of the author's Lettsomian Lectures, which gave in concise and practical form his experiences upon asthma. The subject is one which has great interest,

physiological as well as clinical, and, above all, therapeutical. It has been the field of many arguments and hypotheses, but that the cause of the asthmatic paroxysm is bronchiolar spasm, although often contested, is the theory that best accords with the facts of its occurrence, with its known relationships to other affections and with the action of remedies upon it. This view, so ably maintained by Hyde Salter in the monograph which remains to this day the most interesting and the most erudite work on the subject, is that adopted by Dr. Thorowgood, who, however, has not omitted to review other explanations or to refer to some of the relationships of the affection which have been brought into prominence since Hyde Salter wrote. Chief amongst these additions stand the writings of Schmiegelow and others upon the association of asthma with nasal polypi and other nasal affections. That there is a definite relationship between them is certain, but the tendency to magnify it beyond reason has, we fear, been the source of disappointment to many a sufferer, besides leading to much unnecessary local treatment of the nasal mucous membrane. The author of this work does not fall into such an error. He views the subject from the wider standpoint of the general physician, and has succeeded in producing a book which exhibits sound judgment upon the problems of the disease, besides containing much valuable advice upon the management of its different forms.

A Healthy Home. By FRANCIS VACHER, F.R.C.S. Edin., County Medical Officer for Cheshire. London: William Rider and Son, Limited. 1894.—This book will be welcomed by the numerous class who desire to consult some practical and trustworthy guide in matters of house construction and domestic drainage and water-supply. At the outset the author assumes that the reader contemplates the erection of a small house, and accordingly provides plans, sections, elevations, and descriptions of various styles of such a building, ranging from a labourer's cottage to a small villa residence having a rental of about £40 a year. In the opening chapters questions of site, soil, aspect, building materials, and construction are discussed at considerable length. Much of this is, of course, inapplicable to the case of the dweller in a city or of a purchaser of an existing house, and probably some would prefer a curtailment of the early chapters and an extension of those which treat of warming, lighting, ventilation, hot and cold water supply, and sanitary requisites. In like manner one of the chapters ("How to keep the House Clean") condescends to such minutiae as the proper method of washing plates and cleaning knives and forks, instead of which many heads of houses would probably rather have advice in the selection of kitchen ranges and other cooking apparatus, the setting of wash-house boilers, and the clearing of drains which have become choked. Unfortunately there is no reference whatever to the explosions of circulating kitchen boilers, which are such a frequent cause of serious disaster during frosty weather. On p. 131 there is a caution against exposing the pipes to frost, but the reality of the danger deserves more emphatic treatment. The author, however, presents a large amount of information in a convenient form, and the majority of readers will find in the book much that is new to them and of real practical value.

First Lessons in Hand and Eye Training, or Manual Work for Boys and Girls. By GUSTAV KALB, of the Leipzig Lehrerbildungsanstalt (Training College for Teachers). Translated by W. G. FIELD, M.A. London: O. Newmann and Co. 1894.—*Manual Training made serviceable to the School.* By Dr. WOLDEMAR GOETZE, Director of the Leipzig Lehrerbildungsanstalt. Translated by W. G. FIELD, M.A. London: O. Newmann and Co. 1894.—For many years past protests have been made in various quarters that modern popular education is too literary in its methods and aims, and that children whose vocation in life will undoubtedly be manual

labour of some kind or other find themselves on leaving school unnecessarily conversant with grammatical subtleties, essay-writing, algebra, and so forth. Of course, instruction in such subjects is an admirable thing in itself, but the time bestowed and the mental bias temporarily imparted are clearly anomalous in the case of a very large proportion of the pupils at an elementary school. In such learners the development of the practical and mechanical faculties is a prime necessity, and the two volumes under consideration will be found very useful aids by teachers engaged in such work. The "Hand and Eye Training" begins with Fröbel's "building box" of bricks and cubes, suitable for children of six or seven years of age, and continues the instruction by numerous devices in folded and plaited paper, modelling in plastiline or clay, and outlining of geometrical solids, until the method of making simple Christmas-tree ornaments is taught. Cardboard boxes and baskets and small wooden articles come next in order, and the volume concludes with easy examples of work for the fret-saw and chip-carving. "Manual Training" is a more advanced work than the last mentioned. It commences with cardboard as a material, and passes on to articles made of wood, sheet metal, and wire. Most of the objects on which the pupils are employed serve for illustrating elementary physics, and among the concluding ones is a simple electro-motor. The general plan and arrangement of the volumes are excellent.

Précis Iconographique d'Anatomie Normale de l'Œil. ("Globe Oculaire et Nerf Optique.") Par le Dr. ROCHE-DUVIGNEAUD. pp. 136. Paris: Société d'Éditions Scientifiques. 1895.—This brochure is a complement to the ordinary descriptions of the anatomy of the eye contained in the text-books, and is, in fact, a résumé of the author's own researches in little out-of-the-way bits and corners of the eye and its appendages. A drawing is given in each case, from his own preparation, which serves to illustrate the observations he has made. Commencing with transverse and longitudinal sections of the optic nerve, which contain nothing worthy of special notice, he proceeds to give a section and an account of the pupillary region, several sections and an account of the ciliary region, transverse vertical sections of the anterior portion of the ciliary processes, of the angle of the iris, of the choroid, of the iris, of the retina, and of embryonic eyes, which last are perhaps the best in the book. We notice nothing particularly new or striking, but the work is conscientiously done. The author observes, correctly enough, that the ciliary processes are not so much folds as laminae; he accepts a dilator iridis muscle, but observes that the muscle fibres are quite identical with those of unstriated muscle elsewhere. The suspensory ligament of the lens is not a membrane, but a series of fibres. He comments on the extreme thinness of the walls of the choroidal veins. The division of the choroid into layers is inaccurate. He makes no remark upon the glands of Nicti, Collins, and others in the ciliary processes.

JOURNALS AND REVIEWS.

The Journal of Physiology. Edited by MICHAEL FOSTER, F.R.S., and J. N. LANGLEY, F.R.S. Vol. xvii., No. 5. Dec. 15th, 1894.—The memoirs contained in this part are 1. The Time Relations of the Voluntary Tetanus in Man, with a Plate by Dr. David Fraser Harris. 2. On the Response of the Chick Before and After Hatching to Changes of External Temperature, with four Woodcuts, by Dr. Pembrey, Mr. Gordon, and Mr. Warren. 3. Hæmato-Porphyrin in Normal Urine, by Dr. Archibald Garrod. 4. A Simple Form of Gas Pump, with a Woodcut, by Dr. Leonard Hill. 5. On the Action of Certain Substances on the Hearts of Daphnia, by Mr. J. W. Pickering. 6. On the Comparative Antiseptic Action of the Phenyl-substituted Fatty Acids, by Mr. J.

Parry Laws, F.I.C. 8. On the Effects of the Kneading of Muscles upon the Circulation, Local and General, by Dr. T. Lauder Brunton and Dr. F. W. Tanniciffe. 8. Further Researches on Eye Movements, by Dr. J. S. Risien Russell. 9. Note on the Oxidising Powers of Different Regions of the Spectrum in relation to the Bactericidal Action of Light and Air, by Mr. R. F. D'Arcy and Mr. W. B. Hardy. The part also contains the Proceedings of the Physiological Society at the last two meetings.

The Ophthalmic Review. Edited by Mr. J. B. LAWFORD, Dr. N. M. MACLEHOSE, Dr. K. GROSSMAN, Mr. PRIESTLY SMITH, Dr. JOHN STORY, and Dr. JACKSON. Vol. xiii., No. 157, Nov., 1894. London: Messrs. J. & A. Churchill.—Mr. Ernest Clarke communicates in the present number of this journal a paper on the Association of Blepharitis and Ametropia, with analysis of 100 cases, in which he insists on the importance, in the treatment of these cases, of the use of glasses adapted to correct the errors of refraction that are almost invariably present. Dr. Kenneth Scott, of Cairo, recommends, in a paper on a new method of treatment for vascularised cornea, that each minute vessel should be slit up with the point of a Graefe's cataract knife.

The Quarterly Journal of Microscopical Science. Edited by Professors E. RAY LANKESTER, ADAM SEDGWICK, and W. F. R. WELDON. Vol. xxvii., Part 2, No. 146. London: J. & A. Churchill. 1894.—This part contains five essays, all written by Mr. Richard Ascheton. 1. A Re-investigation into the Early Stages of the Development of the Rabbit, with five plates, containing many figures. 2. On the Phenomenon of the Fusion of the Epiblastic Layers in the Rabbit and in the Frog, with one plate. 3. On the Causes which lead to the Attachment of the Mammalian Embryo to the Walls of the Uterus, with one plate. 4. The Primitive Streak of the Rabbit; the Causes which may determine its Shape, and the Part of the Embryo formed by its Activity, with three plates. 5. On the Growth in Length of the Frog Embryo, with ten plates. The essays reflect much credit on Mr. Ascheton's assiduity. He discusses each subject from a thoroughly independent point of view.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society held on Jan. 16th, Dr. J. S. Tew, President, in the chair, Dr. Carroll read a paper on House Sanitation and gave a lantern demonstration. The points dealt with were the following: the site, aspect, and materials used in house building; the necessity for a damp-proof course in house walls and of a layer of concrete under house floors; the sanitary arrangements of dwellings—ventilation, drains, traps, waterclosets, privies, ashpits, cesspools, water-supply, and storage of rain water; the different forms of ventilation, methods of laying house drains, making levels, constructing privies, cesspools, and closets, and sources of pollution of drinking water; effective and defective traps and the necessity of ventilating drains and soil pipes; methods of disconnecting sinks, tanks, and lavatories; pan closets, short hopper and waste-water closets, and the great advantages of the waste-water closet over the ordinary watercloset in cottage property; the right and the wrong way of constructing ashpits and privies; the dangers of pollution of the soil; diarrhoea, enteric fever, and bronchitis; tub closets being condemned as insanitary and expensive, although an improvement on the privy midden. Every dwelling-house should have proper spouting to carry off rain water and prevent it soaking into walls, foundations, and soil; the construction of soft water cisterns and pollution of the water through faulty construction, settlements, &c.; the exclusion of soot, leaves, birds' droppings, &c. by a rain-water separator; the action of different waters on lead and other water-pipes; the construction of wells. There were thirty-nine slides shown of the various defects and remedies in house construction; models of drain-pipes, grease and other traps, short hopper, and slop-water closets were shown. Drs. Tew, Hunter, Watson, Tresidder, and Peshitt spoke, and Dr. Carroll replied. Two specimens of Extra-uterine Fœtation were exhibited by Dr. Watson.

THE LANCET.

LONDON: SATURDAY, JANUARY 26, 1895.

Is the Scripture about to be falsified which says, "Charity never faileth"? All agree in the supreme test of charity—that it is to be found in the sympathy with hospitals. If comfortable men—that is, men of average wealth and health—cannot deny themselves in a sensible degree to help men, women, and children who are both sick and poor there is verily something wrong either with them or with the institutions where such people are accommodated—where a bed is made for them in their sickness and all the resources of modern nursing and medicine are at their disposal. Sir WILLIAM HARCOURT must not be made the sole scapegoat. His Budget may have all the faults attributed to it by its critics; but it will not explain the increasing disproportion between the income of hospitals and their expenditure. We are not going to lose ourselves in the sea of hospital finance in which some swimmers have recently been floundering somewhat curiously. A few facts are patent enough and ought to be noted. Whole wards are closed in some of the oldest, greatest, and best hospitals. In one of the youngest a considerable proportion of the beds has been set apart for pay patients, to the exclusion, of course, of those who cannot pay and for whom this and all other hospitals were primarily built. The newspapers of any given day contain advertisements that are pitiable in their significance. Let us take the *Times* of the day on which we are writing as a specimen. Urgency is the word for the wants of St. Mary's Hospital, University College Hospital, the London Hospital, Queen Charlotte's Hospital, the Royal Free Hospital, the Royal Westminster Ophthalmic Hospital, the Margate Sea Bathing Infirmary, the Metropolitan Hospital, the Royal London Ophthalmic Hospital, St. Peter's Hospital for Stone, the Middlesex Hospital, the London Free Hospital, Guy's Hospital, and St. Thomas's Hospital. In regard to some of these institutions the note of impecuniosity is pitiful. In St. Thomas's Hospital three wards are standing empty, and two others are temporarily devoted to the reception of paying patients. In the Metropolitan Hospital accounts are "overdue" and funds needed for their payment. At the Margate Infirmary 130 beds out of 220 beds are closed for want of funds. At the Middlesex Hospital last year the income from all sources (legacies included) amounted to £20,357 and the expenditure (due to repairs &c.) to £37,184. We need not labour to show that the indebtedness of hospitals is great and unless met by increased liberality of the public likely soon to become intolerable to private persons.

We cannot contemplate the result with pleasure, believing that no hospitals are equal to English hospitals in respect of the humanity and efficiency with which the patients are treated, and being proud of the voluntary and charitable nature of the system by which they have been created and are maintained. The importance of hospitals in respect of

medical education cannot be overstated, and it is insisted on in a letter which we publish to-day. But this is, after all, a secondary function and one which they would still continue to serve even if they came to depend on the State and not on private benevolence. The urgent question is, What are the causes of the declining support of hospitals? We have said that they must be found either in the public itself or in the institutions. We do not believe in any serious decline of charity.

"In faith and hope the world will disagree,
But all mankind's concern is charity."

The age may be luxurious and selfish, or tending towards such undesirable qualities; but we do not believe that this is so to any such extent as to explain the impecuniosity of hospitals. No doubt, too, times have been bad and forms of benevolence other than that represented by hospitals have multiplied, and their promoters are more zealous and importunate than the managers of the hospitals. But the case of the sick poor is so strong and appeals so powerfully to all men that we can only suppose that the failure to meet it depends on some defect in the way in which it is represented or on some error in the selection of fit cases. Our suggestion is that the latter is a principal cause of the decline of hospital support. The promiscuous reception of all sorts and conditions of people, the conversion of wards into hotels for the treatment of those who can pay, the monstrous development of the out-patient department, absorbing half the material that should go to make practice for the men whom the schools educate—these are the evils that chill the ardour of charity. We have long contended that they would operate so, and our contention is being verified. There is charity enough in London and the provinces, we are convinced, to meet the case of those who are overtaken with accident or exceptional disease whose homes have not accommodation for their treatment and whose means are inadequate. But a wide misgiving exists as to the fitness of the recipients—a suspicion that the poor in hospitals are being displaced by those who can pay, and that the resources of hospitals are being frittered away indiscriminately over a great unwieldy mass of people who should have their own medical man as they have their own baker or butcher.

There is one point more painful in this aspect of the hospital problem, and that is that the medical staffs of the various institutions are seriously to blame for allowing such an abuse of the hospitals. We lately referred to the authorities of Guy's Hospital inviting people to come and be treated medically, surgically, and obstetrically for three guineas a week, and advertising a public entertainment for the ventilation of such barefaced competition with medical practitioners. It is no answer to this view that the medical staff is not directly paid in such arrangements. It has the right, and it is under obligation, to protest against them. They cannot be carried out without the consent, if not the assistance, of the staff. In the case of the Great Northern Central Hospital, no doubt, the staff is more to blame for undertaking personally to treat gratuitously the patients of other medical men; but there is something in this bid for large classes of profitable cases made by Guy's Hospital, cases which constitute the very backbone of practice, which is positively startling. These are

not isolated instances. In all hospitals there is an unwarrantable cultivation of the out-patient system and a culpable laxity prevails in the admission of cases that should not be admitted into hospitals for the poor. Our columns testify week by week that the feeling of these evils is becoming intense in the profession. The columns of the newspapers show that it is affecting the flow of subscriptions. In its latter aspect it is a matter for the managers of hospitals to consider very gravely. As regards its bearing on the profession the feeling is ripening fast that something serious will have to be done. It will be unfortunate if the rank and file of the profession are not supported in their protest against these terrible evils by hospital surgeons and physicians. It cannot in the long run be for the interest of consultants to sanction a system which saps at once the very sources of medical practice and the honourable independence of the people.

THOSE members of the newly constituted United Kingdom Police Surgeons' Association who formed the deputation that waited on Mr. ASQUITH on the 17th inst. may be justly congratulated on the success of their labours. They were introduced by Mr. H. NELSON HARDY, who, in a studiously moderate speech, detailed the various grievances which they wished to lay before him. The first was the very inadequate nature of the fees and allowances granted to medical witnesses—a hardship to every medical practitioner in private practice, but specially so to police surgeons, who are, as a rule, gentlemen of experience in the profession as well as in the special duties incidental to their appointment, and whose appearance in the witness-box of all the various criminal courts is necessarily frequent. It is not necessary to give details, as these have so recently appeared in our correspondence columns. It is sufficient to observe that the fee of one guinea per diem does not fairly remunerate even those who live in towns and cities where the assizes and sessions are held, and who, after a long day in court, return home to find some hours of hard work before them before the day's labours are ended. To those living at a distance from the court the hardship is extreme. The remuneration is the same—railway fare, sometimes first-class, sometimes only second, each way, is allowed, and 2s. per night, though this has not always been allowed. One member of the deputation informed Mr. ASQUITH that after deducting all expenses he found himself remunerated to the extent of nine shillings! Other police surgeons less fortunate have found themselves with a balance on the wrong side. A police-surgeon, moreover, may have several cases at the same assizes and on the one day, only receiving the one fee for all. Mr. ASQUITH, while admitting the insufficiency of the fee, observed that other professional witnesses were paid the same; but he was promptly reminded by Mr. T. BOND that the cases were not parallel, medical practitioners having to attend as part of their professional duties, while in the case of a lawyer his appearance in the witness-box was an unfortunate accident. It is a long-established fact that medical practitioners are more frequently called upon as witnesses than members of any other profession. Other members of the deputation, coming from various distant

parts of the country, spoke to the inadequate fees they received as witnesses and the pecuniary sacrifices from which they suffered.

The next point was the very important one of the examination of prisoners accused of criminal assaults on females. For some years past the Metropolitan Police have been furnished by the Home Office with instructions as to how these examinations are to be conducted. The instructions are addressed to the inspector on duty at the stations, and the first is this: "Every prisoner to whom this order applies must be clearly told by the inspector on duty at the station that it is proposed to examine him and that he has the right to object if he so desires, for in the absence of consent any examination would be an assault. The examination is to be made by the divisional surgeon, or in his necessary absence by a duly qualified surgeon. Where consent is given the examination should be made as soon as practicable after the prisoner is in custody and removed to the station and before he is taken before a magistrate." The orders also provide that if a prisoner consents to such examination he is to be told that if he desires the attendance of a qualified medical man on his behalf an opportunity for such attendance with the divisional surgeon will be given, and arrangements are to be made accordingly. Other orders provide for the due recording and verification of the examination and of the compliance with these rules, both by the inspector and by the divisional surgeon. It is obvious that these regulations, which are of the greatest importance, ought to be in the hands of every police surgeon throughout the kingdom. For want of such rules many have been placed in a most difficult position, while some have unwittingly committed the grave error of examining a prisoner without having obtained his consent, both prisoner and surgeon being under the impression that this was not necessary. Even learned judges are not unanimous in their opinions on this point, as was shown to the Home Secretary by one of the deputation (Mr. LOWNDES of Liverpool). Mr. ASQUITH recognised the importance of the request of the deputation that copies of these instructions should be sent to all the police authorities, and said that it would be desirable to issue a circular from the Home Office calling the attention of the various watch and standing committees throughout the country to the existence of those rules.

The third point was this. It had been found by the laborious efforts of Mr. HOPKINS of Bath, one of the honorary secretaries of the association, that there were several large counties and many towns without any regularly appointed police surgeons. Consequently, the nearest surgeon has to be called in, or anyone who may by chance be at hand. Seeing how important and responsible are the duties of police surgeons, it is obviously the duty of each local authority to appoint a surgeon specially qualified for the performance of such duties. The following counties and towns are at present without police surgeons: Anglesea, Carmarthenshire, Denbighshire, Devonshire, Durham, Northumberland, Pembrokeshire, Glamorganshire, Dorking, Echington, Holyhead, Hinckley, Lutterworth, Melton Mowbray, Newcastle-under-Lyme, Pontypridd, Salisbury, Totnes, Whitehaven, Worksop, Glastonbury, Devizes, Haverfordwest, &c.

The fourth point was that in the event of medical certifiers

of the cause of death being appointed, the interests of police surgeons should be safeguarded. In the metropolitan district the divisional surgeon or his deputy is always at hand night and day to attend to any emergency, and it is the practice of the police to call in the aid of the divisional surgeon to any sudden or violent death. A similar practice is observed in many other provincial towns and districts, though the practice is not uniform; but wherever it obtains it is said to work very fairly.

Mr. ASQUITH, in replying to the deputation, said he was glad to have heard their views on points of considerable importance, not only to the medical profession, but to the public. He had already stated what he proposed to do with regard to the very important point of the medical examination of prisoners, and he understood the proposal practically met their views. The main grievance of the deputation appeared to be that affecting the remuneration of witnesses. Now the scale under which medical men and all other professional witnesses were at present paid for attendance at court was fixed so far back as 1858, and in all substantial respects it had remained undisturbed up to the present time. He did not say that this was conclusive evidence of the convenience or justice of the scale, but the facts showed that a number of successive Secretaries of State who had held office had been afraid to burn their fingers by touching it, and he was disposed to imitate their prudent example. Mention had been made that the fee in the Isle of Man was only 15s. 6d. He had made a note of this, and hoped to get it increased to at least a guinea. He agreed with the speakers that the remuneration of a guinea for such duties was altogether inadequate if they looked upon the remuneration paid to witnesses as indemnifying them for the loss in time and money which their attendance at courts of law involved. If it were true that it was a condition of the medical profession to attend courts in a sense which could not be said of other witnesses, then the logical conclusion to his mind was not that this scale of remuneration, which was fixed by the Secretary of State for the whole of the profession, should be altered, but that medical men in their arrangements with their employers—the watch and joint committees—should endeavour to get this circumstance taken into account by these bodies in fixing the remuneration of police surgeons, and they should be asked to make a provision which would supplement the inadequate payment prescribed by the scale. He should be glad to see the police authorities of the country recognise that police surgeons were more liable from the nature of their duties to be called upon as witnesses and to be taken away from the pursuit of their private practice than other professional men. That seemed to him to be the proper way to deal with the subject. With regard to the important point that some counties and boroughs lacked police surgeons altogether, he considered that in the interests of justice and good police administration it was desirable that every police force should have attached to it some recognised accessible and generally known practitioner, not only for the purpose of attending members of the force, but who could be called in to deal with those cases which required special experience. If that course were taken probably the detection of crime would become easier and more effective than it was

at present. He would consider, therefore, whether in the circular to be issued on the other point it was not desirable also to call attention to the desirability of every police force having attached to it some recognised police surgeon with a view to its more efficient administration. Referring to the question of medical certifiers of the cause of death, Mr. ASQUITH intimated that in his judgment, *primæ facie*, police surgeons were the more appropriate and were likely to be more competent persons to discharge that duty than the medical officer of health. It was, however, a matter which did not come within the authority of the Home Office, but he would take care to convey to the Local Government Board, with whom it rested, his opinion that, as a rule, this was the most rational and convenient course that could be adopted.

We fear that the local authorities will hardly appreciate Mr. ASQUITH'S "logical conclusion." His own statement that the scale of remuneration was fixed so far back as 1858, just thirty-seven years ago, is surely ample proof that it is sufficiently ancient to require revising, and if this involves the painful necessity of finger burning on the part of the Home Secretary for the time being, the sooner the painful process is ended the better. Other persons engaged in the administration of justice—learned judges, recorders, clerks of assize, associates, &c.—are reasonably and even liberally remunerated. Why should the economy be all on the side of the witnesses, and especially the medical witnesses? What could have been the intention of offering professional gentlemen 2s. per night, as an allowance presumably for each night's lodging, when absent from home in addition to the one guinea per day and railway fare there and back? If, moreover, a Sunday be included the witness gets no remuneration whatever for this day—an injustice which must occur not infrequently and which has endured quite long enough. Obviously those who summon the medical witness and keep him from his duties and practice for, it may be, some days ought to remunerate him reasonably, and Mr. ASQUITH'S suggestion that the local watch committees should take it into account, though at first plausible, is wholly impracticable; but, on the whole, his reply to the deputation is very satisfactory even on this point, while on the other three points nothing remains to be desired, and we repeat that the members of the deputation may be heartily congratulated. They spoke not only for all duly appointed police surgeons, but for those other members of the profession who perform these duties and are obliged to attend as medical witnesses at a remuneration which we have now official sanction for calling wholly inadequate.

THE question whether, in their selection and purchase of the Stammerham Estate near Horsham as the most appropriate site to which Christ's Hospital should be removed, the Council of this foundation have exercised a wise discretion has been much disputed. It is now some four years since the decision to remove the school from Newgate-street was arrived at in accordance with the scheme of the Charity Commissioners, under which the governors were empowered to dispose of the historic buildings and site that have been one of the most striking features of the City of London.

That the step had become a practical necessity was evidenced by the financial position of the trust, quite as much as by the general considerations of health and sanitation which have led other of the great city schools to be transferred to more open situations. The purchase of the Horsham property was first decided upon, after due consideration and inspection of alternative sites, so long ago as June, 1892. The Council had obtained opinions favourable to its selection from their surveyor and architect; but, having acquired the estate, were impelled by adverse criticism to seek further expert opinions upon the matter. Accordingly, Mr. ROGERS FIELD was commissioned to inquire into the water-supply and drainage of the property, whilst Dr. KELLY was asked to report upon the health of the locality. Their reports, which were received about twelve months ago, have been only lately made public, the Council having in the meanwhile definitely affirmed the acquisition of the site and accepted the plans of the projected buildings sent by the architects, Messrs. ASHE, WEBB, and T. INGRAM BELL. We are fain to confess, after careful perusal of the reports of Mr. ROGERS FIELD and Dr. KELLY, that the site selected is not an ideal one for the erection of a great public school; but we can quite understand that having already acquired it the Council of Christ's Hospital would naturally be loth to reopen the question and seek an alternative site, except on thorough condemnation of the Horsham property by the experts consulted. But neither of these gentlemen do condemn it; indeed, Dr. KELLY considers that the estate possesses advantages in situation and healthiness which render it suitable for the purpose for which it has been acquired. The drawbacks are stated in Mr. ROGERS FIELD'S report, wherein it is shown how they may be overcome. It is clear from his extensive inquiry that the present water-supply is inadequate and liable to contamination; and that to adapt it to the needs of the large school community who will dwell on the estate extensive resort must be had to well-boring. Similarly, as regards drainage and the disposal of sewage he clearly shows—from the analysis of the soil made by Dr. DUPRÉ—that this is mainly strong clay and therefore unsuitable for filtration and irrigation; so that the sewage will have to be subjected to artificial filtration. Moreover, before the land is in a condition suitable for the erection of the buildings it must be thoroughly under-drained. Under these circumstances it seems clear that the site is not an ideal one and also that it is not unlikely that from the health point of view it might have been possible to have found a site which possesses at least as many advantages as those pointed out by Dr. KELLY whilst being free from the drawbacks dwelt on by Mr. ROGERS FIELD. The financial question is another matter, upon which we need not here enter save to remark that Christ's Hospital can ill afford a large outlay for the purpose of remedying the natural defects of the land to which its buildings are to be transferred, and that the scheme is not free from objection on this score. At the same time, if the authorities are mindful of the recommendations that have been made to them, and set about the work in a liberal spirit, there is no sufficient reason—on the side of salubrity—against the estate being adequate for its purpose and the school buildings erected upon it being placed in a good sanitary condition.

That the soil is primarily a clay one does not, on Dr. KELLY'S showing, necessarily mean that it is insalubrious; but in this matter much depends upon the efficiency with which it is drained.

ON Tuesday last the movement for promoting the formation of a Local Teaching University for London passed through one of the most important stages in its career. The creation of a teaching university in and for London is now admitted on all sides, not only to be desirable, but inevitable. The practical question is whether this teaching university should be separate from the present University, or whether the latter should be so reconstituted as to become a local teaching university as well as an Imperial examining board. The proceedings of Tuesday at Downing-street and afterwards at Burlington-gardens will do much to clear up the different views that have been entertained on the question. The scheme of the Royal Commission appointed to consider the Draft Charter for the proposed Gresham University in London was published in THE LANCET of Feb. 10th, 1894, and was absolutely opposed to the formation in London of two universities—one local and teaching; the other Imperial and merely examining—practically being the existing institution. The teaching university was to be grafted on to the examining board, and if the latter suffered it seemed to matter but little, for everyone except the graduates of the University was quite prepared, and some were even anxious, for such a result. A magnificent teaching university, according to the ardent promoters, was to be founded in London, and the "village cobbler," and, may we add, his son (according to Professor SYLVANUS THOMPSON), who is anxious to obtain a degree and improve his position by his force of intellect must stand aside and not spoil such a great conception. Of course, this is a mere idle dream. A federation of colleges, medical schools, and some other institutions will be the only outcome of the report.

There will be no real university in London until the State or the municipality, or both combined, determine to supply the funds that are necessary for such an institution. We should not brook State or municipal supervision or appointment in our British Universities; and without these we can hardly expect any of the public funds to be devoted to the creation or maintenance of a large metropolitan university. Continental comparisons lie quite beyond the discussion. On June 30th, 1894, an attempt was made to force the hands of the Government by asking for a Statutory Commission to be appointed at an early day in order to carry the proposals of the Commissioners into effect. This resolution was passed at a meeting of the delegates from the institutions affected by the scheme, with the exception that the representatives of King's College demurred to the demand for the immediate appointment of a Statutory Commission. The Convocation of the University of London had not then formally expressed any opinion on the scheme. The Government, therefore, not being able to consider the matter as non-contentious, although many of the members were known to view it favourably, took no action last session. During the recess the various bodies concerned have considered the scheme with much fuller consideration, and the result is shown by

the two deputations which waited on Lord ROSEBURY on Tuesday. The first deputation, introduced by Professor HUXLEY, consisting of the representatives of the various institutions affected by the recommendations of the Royal Commission, urged the appointment of a Statutory Commission, but they were all agreed that it should be largely unfettered as to details, that it should be open to hear representations from the various bodies interested, and that, following the lines of the Scottish Universities' Commission, there should be a right of appeal to the Privy Council. The second deputation, consisting of graduates introduced by Mr. FLETCHER MOULTON, Q.C., opposed the union of a teaching university with the existing institution, because it would have a tendency to lower the standard of degrees, damage their impartial character, and injuriously affect provincial and non-collegiate students. Lord ROSEBURY evidently sympathised with the views of the first deputation, and thought but little difficulty was presented by the question of degrees. We think that as the movement progresses more and more difficulty will be found in the adjustment of the standards for the various degrees between the collegiate and non-collegiate students, and we cannot agree for a moment with Sir JULIAN GOLDSMID that these standards will not be lowered. If they are not it is idle to suppose with Dr. ALLCHIN that any much larger proportion of London medical students will obtain the advantages of a London degree than do so at present.

Convocation by a small majority, 203 to 175, passed the resolution moved by Professor S. THOMPSON (p. 244), and by a smaller majority, 157 to 133, a second and consequential resolution. A special committee to prepare a memorandum to lay before the Statutory Commission was then appointed. Although the majority was a small one the fact that the vote in Convocation was in favour of the appointment of a Statutory Commission may determine the Government to take proceedings in the matter in the early part of the session. Lord ROSEBURY says that if a Commission be appointed it will be appointed by statute, which will give every opportunity for discussion in Parliament. Remembering the fate of the Gresham Charter, and the hostility evinced to the present scheme and expressed to the Premier at the graduates' deputation, we should advise our readers not to be too sanguine as to the formation of the local teaching university.

Annotations.

"No quid nimis."

THE NEW DEATH DUTIES.

THE passing of the Finance Act of last year, or, to give it its more familiar name, of Sir William Harcourt's Budget, has made an important change in the position of all persons whose expectations of property are grounded in family settlements or landed estate. The matter is, therefore, one which merits, and is receiving, careful attention at the hands of moneyed people of all classes, and it may be taken for granted that so large an alteration as has been made by it in the incidence of taxation will not take effect without giving rise to many intricate questions and knotty points of law. There will emerge in time and take time for their resolution; but the

main outlines of the new scheme of taxation adopted are clear enough, and it behoves everybody who has the responsibility of making a disposition of property to take effect after his death to consider what its effect will be upon the prospects of those dependent upon him. Broadly speaking, the principle of the measure is to render land and settlements contributory to the revenue in the same manner and to the same extent as personal property. Hence it follows that property in either of these forms, which have hitherto enjoyed a relative immunity from taxation, must stand depreciated in future, and that beneficiaries whose expectations are based upon the devolution of such properties will in future find themselves to some extent disappointed of their hopes. This remark applies, of course, not only to the actual heirs and successors of the present incumbents of the properties, but also to legatees, and to residuary legatees in particular, who are liable to find their benefits cut down by the diminution of an estate in consequence of the operation of the new duties, even when the fresh impost is not directly laid upon the legacy in question. In this way the most carefully adjusted arrangements may be disturbed, and it is precisely those owners of property who have bestowed the greatest care upon their dispositions already made that now need most to reconsider their position, or rather the position of those whom they may expect to leave behind them, in order to satisfy themselves that no injustice can hereafter be done through the action of the new rules as to duty upon the old provisions of the will. There is another way in which the Budget of 1894 affects the estates of deceased persons, and this is of wider application, and even greater importance therefore, than that already glanced at. The new system has not only effected a redistribution of the burdens, but has also increased the total amount of revenue chargeable upon properties of the kind now under consideration. With certain exceptions, which need not be here considered, the new arrangement applies to all estates of upwards of £100, so that few indeed are the numbers, for instance, of our own profession who can be congratulated upon being able to look disinterestedly upon this new departure. From large estates the contribution to revenue will be very large, but even small estates, with scarcely an exception, will not escape scot-free. In some cases we are told on reliable legal authority that very great hardship will be caused to poor legatees by the way in which the rate of duty has now to be assessed. The question is one, therefore, of general interest, and one to which, although it scarcely lies within our sphere to offer advice upon it, we may usefully draw the attention of all our readers. It will be for them to consider for themselves how to act in such cases as those to which we have alluded. In some cases a visit to the lawyer will have to be prescribed; in others some special saving to meet the foreseen emergency. Where a special fund has to be created to bear the burden of the added tax it will in many cases be possible to make provision by means of a small life assurance policy, and we do not doubt that sooner or later the insurance offices, which are alert to anything that has a bearing upon business, will afford facilities for transactions of this kind. But one suggestion certainly cannot be untimely or unsound. The sooner any arrangements of this kind are made the better, for delay in such a matter involves not only the chance of total failure to make the necessary provision, but the certainty that the longer the precautionary measures are deferred the more burdensome they will eventually be.

THE GROCER'S LICENCE.

THE question of the soundness of the policy of granting "off" licences for the sale of alcoholic drinks is one by no means of the least important of the matters which will have

to be dealt with in connexion with that large measure touching the liquor laws to which both Parliament and the Government are committed; but it is hardly a question which can now be disposed of in a separate measure. The difficulty is of course practical rather than theoretical. In the abstract there is no difficulty about isolating this branch of the subject and dealing with it separately in the way either of discussion or of legislation; but in practice the difficulty is so great as to amount to an impossibility. In the first place, the position of the parties to the controversy is such that no advance, however partial, can be made without precipitating a general engagement, and with respect to this particular question of grocers' licences this statement is eminently true. The matter has been treated so essentially as a branch of some more comprehensive scheme of reform of the liquor laws that it would be idle to expect any practical politician to discuss it at the present time as a self-contained proposition. In this sense the discussion which has recently arisen may be called academic; but when the time comes for discussing the whole problem this question of the policy of affording facilities for the purchase of alcoholic liquors, which are so peculiarly liable to abuse, as those which the "off" licence confers, will open up one not only of the most difficult, but one also of the most practically important issues of the whole discussion.

DANGERS IN THE POCKET.

If the reports in several papers last week are to be credited there may exist considerable danger, of which the public should be warned, in the act of carrying in the same pocket certain articles which are in popular request, but which together, as would appear to have been demonstrated, may form a firework ready to "go off" on the slightest provocation. Thus it seems that the simultaneous occurrence of a safety match box and chlorate of potash lozenges in the same pocket led to a series of small explosions, setting fire to the clothes of the unfortunate wearer and severely burning his legs. It is a well-known fact in chemistry, of course, that red phosphorus—one of the constituents of the safety match box rubber—combines with explosive violence with chlorate of potash; but the possibility of such a reaction taking place in a person's pocket has not been foreseen, although, on reflection, we easily see that in these materials there occur two powerful elements—oxygen and phosphorus—which simply yearn, so to speak, to combine. This effected, the lively combustion of the sugar of the lozenge would follow as a logical but very unpleasant sequence. When, therefore, a chlorate of potash lozenge is placed in the same pocket as the safety match box, the pocket is unwittingly converted into a miniature magazine for fireworks, which, if they happen to "go off," cannot certainly be for anybody's "benefit." In any case, a person commits a breach of sanitary law surely when he keeps soothing medicaments in the uncongenial company of a safety match box.

PENNY DINNERS FOR POOR CHILDREN.

SINCE the now classical experiment begun by Sir H. Peek at Rousdon in 1876 the school children's "penny dinner" movement has advanced by strides. The demand for its extension has increased the supply and has also considerably lessened even the small original cost. It will be remembered that as early as 1886 dinners costing a farthing each were provided for the poor children of Birmingham.¹ What is more remarkable, it was found that the nourishment provided at so low a rate was capable of effecting a marked improvement in the physical, mental, and even moral characteristics of the children. It may appear somewhat strange that a difficulty should have arisen at any time in

connexion with the payments, but this is true nevertheless. It is explained by the fact that a large number of poor school children are, so far at least as their teachers know, destitute. To meet their deficiencies more than one plan has been suggested. Some years ago the formation of a Government subsidy for the purpose commended itself to the judgment of certain persons, and the proposal has not yet been entirely abandoned. Hitherto, however, private charity as a rule has come to aid the empty hands of these penniless learners, and accordingly free tickets, given with discrimination to the necessitous, form a part, though not a desired or intended part, of the system. We are pleased to find that this side of the subject has of late been considered with some care. Last week the National Food-supply Association convened a conference of teachers to discuss the feeding of poor children in London schools. The association is founded upon the principle that nothing shall be given away, and so far its efforts have been attended by marked success. It now provides from 14,000 to 15,000 dinners a week, and it has established depôts in the poorest metropolitan districts. Its aim is not merely to provide for want, but also by insisting on the penny, or in some cases halfpenny, payments and by teaching its own simple cookery to show the poor that they can supply themselves with plain, wholesome, and cheap food. Philanthropic persons may purchase tickets for those whom they think deserving, but there are no gratuitous doles. No sensible person will quarrel with such an arrangement. It is not so charitable as to discourage thrift. It does not exclude charity, but it refuses to confound this with business. Its method is thus an eminently rational one and superior in our opinion to any process of merely gratuitous relief. As regards the meals themselves, consisting for the most part of soup and bread, these have met with general acceptance. They are now prepared at one central depôt and issued in insulated vessels. They can thus be kept hot for many hours and supplied at a much less cost than formerly.

DENTISTRY AMONG THE CHINESE.

It would seem that in dentistry as well as in ways that are dark "the heathen Chinese is peculiar," and in the Journal of the British Dental Association for January Mr. C. Robbins has communicated some curious essays on the subject written in English by Chinese students at the Anglo-Chinese College, Foochow. They describe in quaint language the performances of the dentists, who are usually itinerants of the Sequah order. They appear to have three methods of treatment: (1) extraction, the patient's attention being distracted and his lamentations overpowered by the beating of a loud gong; (2) the application of arsenic to kill an exposed pulp; and (3) the extraction of "tooth worms." This latter operation, usually performed by women, is very frequently resorted to, and undoubtedly worms are produced from the tooth, as these amateur dentists adopt the same principle as the lithotomist in the story—who used always to provide for finding his diagnosis had been mistaken by taking a pebble of suitable size in his waistcoat pocket—and themselves introduce these worms, which are usually concealed under their long finger-nails. A Chinese student describes the operation thus; we give his own words: "Now let me advert to the practice of arresting the tooth worms. One of my relatives was once attacked by a severe cold, and after the cold was broken up by restoring activity to his skin he had a neuralgia which gave him such an intense suffering that he could neither eat nor repose, but moaned with a voice so audible and so plaintive that it sent a thrill to the heart of everyone in the house. On the second day his suffering increased to a remarkable degree; indeed, it is impossible even at this distant period to reflect without horror on the miseries of his toothache state.

¹ THE LANCET, Dec. 18th, 1886.

Finally, he submitted to the operation of a woman dentist whose agency was to arrest tooth worms. Her general operation is as follows: a chopstick and a silver pin are the only instruments she requires in her normal act. She is willing to exhibit them to anyone who conceives an inclination of discerning her trickery. She brings the chopstick in contact with the diseased tooth and cautiously pokes it through with a pin in search of the odious worms; after a while scrapes out a lump of yellow minute worms on the chopstick and immerses it in a cup of water. Each lump consists of from ten to fifteen worms, and sometimes two or three hundred worms are scraped if the patient makes an exact bargain at first that the fee should be defrayed according to the number of worms scraped. The general fee is 400 cash (1s. 2d.), and only the poor may take advantage of being in penury to pay 200 cash."

THE MEDICAL SCHOOLS.

SINCE the publication of our table showing in detail the number of students who had entered upon or who were continuing their medical curricula during the session 1894-95,¹ we have received returns from the University of Edinburgh, St. Mungo's College, Glasgow, and Queen's College, Belfast. The new entries at the Edinburgh University show a total of 136, the number of students on the roll, including the fifth year and upwards, being 1213. St. Mungo's College has 21 new entries, with 25 students of the first year, 20 of the second year, 33 of the third year, and 12 of the fourth year. The total number of medical students attending Queen's College, Belfast, is 187, of whom 33 are new entries.

NEED OF NOTIFICATION AT YEOVIL.

THE Yeovil School Board have been in some difficulty owing to the fact that the town council have not adopted the Act relating to the notification of infectious diseases. They observed a falling off in attendances; they knew it was, in part at least, due to infectious sickness, and they sought the advice of the borough medical officer of health as to the significance of the facts and as to the action which they ought to take in them. But Mr. Garland explained that he could not help them. The town council gave him no means of securing accurate information as to the condition of his district as regards disease, or as to the prospects of further spread or of abatement of the current disease. The School Board then did the best they could under the circumstances. They decided to close the infants' school, and then to bring the whole matter under the notice of the town council. It remains to be seen whether the latter body will decide that for the future it is their duty to use the available means for learning what is the true sanitary state of their district, whether suspension of elementary education or other action be in question.

FUNCTIONAL GASTRIC DISORDERS.

IN the *Medical News* of Dec. 15th, 1894, Dr. C. G. Stockton draws attention to gastric disorders dependent upon functional disturbances. We quite agree with him that the question of persistent functional disorders of the stomach is not sufficiently frequently raised. In the treatment of the various forms of indigestion direction is given, as a rule, purely to an attempt to aid the gastric functions to a better performance of their duties, and sufficient attention is not paid to the cause of these disturbances. In the first place, it may be said that the functional gastric disorder is very rarely a primary trouble. In ratio to the ability to hunt down and remove the causal factor will be the success in relieving the neurosis. The stomach, like a mirror, reflects pretty nearly every influence to which the organism is subjected. Irritation of the brain, the spinal cord,

the testicle, the kidney, or the liver results in anorexia, or perhaps vomiting. Grief, joy, worry, and pain lead to similar results. When there is toxæmia from constipation, or renal or cutaneous insufficiency, or other sources, it is the stomach that raises the alarm. In the cerebral anæmia of sea-sickness or of a fainting fit and in the cerebral congestion of sunstroke the gastric are in the tumultuous front of the anarchistic functions. Now, of those suffering from these various irritations—any of which, either through toxæmia or reflex disturbances, may lead to the gastric symptoms—if the stomach contents were examined there would be found no evidence of subacute gastritis, none of the "ropy mucus" which is so much talked and written about, but which those who have largely studied gastric contents usually fail to discover; but there would be found testimony that there had occurred a serious derangement in gastric innervation, exhibiting itself to some extent as excitement, to some extent as depression, and in some instances it is impracticable to say that either of these states predominates. Where will the trouble be found? The nerve irritation may be prone to be some central structural disease or persistent circulatory disturbance, or it may follow excessive mental strain, as seen in actors, school teachers, &c., or it may be, and in fact often is, accounted for by defects in the development of functional disorders. It will also be found that irritation of the spinal cord—either directly, as from pressure in lordosis, scoliosis, and other sources, or interference with innervation, as in tabes and myelitis; or indirectly, as in irritation from hysterical spine—is a common source of gastric disorder. Further than this, the mischief may be lurking in the genito-urinary apparatus. As regards the influence of toxæmia, one of the most common forms results from defects of the kidneys, either dependent upon nephritis or upon renal inadequacy. So alcohol, tobacco, coffee, and other substances may induce digestive disturbance indirectly through the blood and nervous system. Malaria, gout, and tuberculosis often offend in the same manner. Finally, Dr. Stockton lays stress upon the later phases of syphilis being a cause that has apparently passed unnoticed.

THE "NEW STREET DANGER."

THE "new street danger" is losing its novelty. In THE LANCET of Nov. 17th last there appeared comments on the accident connected with electric lighting mains in Cannon-street. Since that time Easton-road and more recently St. James's-street have each been the scene of a similar disaster. Owing to the alarm caused by the frequency and danger of such accidents, it is now proposed to present a petition to the Board of Trade that immediate steps be taken to prevent their recurrence. It is, however, difficult to believe that that Board, aware of the danger and fully informed of the facts, will delay effective action until urged forward under pressure of a public petition. It is not to be doubted—(1) that serious explosions may occur in connexion with electrical leakage in underground mains both on the high-pressure and on the low-pressure systems; (2) that in consequence of leakage from high-pressure mains into the surrounding ground men have been injured and horses killed by electric shock; and (3) that such accidents are to be regarded as "preventable." The causes that lead to them are becoming fairly well known. It is recognised that amongst the measures to avert these occurrences are to be enumerated a due regard to the kind and construction of cables, care and foresight in the laying of mains, a proper "earthing" of the outer conductor of concentric cables, efficient insulation, precautions to secure ventilation and drainage of culverts and junction boxes, and an efficient inspection of the entire system. Such accidents are to be deplored, not only on account of danger to the public, but

¹ THE LANCET, Nov. 3rd, 1894, p. 1061.

also in the interests of electric lighting. The electrical engineer is aware that long before he appeared on the scene with his cables and conduits and junction boxes a notorious gas leakage had long held possession of the ground. It lies with him to meet the difficulty, and he will doubtless prove equal to the occasion. It has been suggested that some gas other than a mixture of coal gas and air—a gas “distilled off the insulating substances” by the heated conductor—may at times be concerned in such explosions. This is possible and in some cases perhaps probable. “The man in the street,” however, is not seriously concerned to know the exact nature of the explosive gas, or the genesis of the spark or arc that ignites it, neither does he claim an opinion as to whether safety is to be found in gastight junction boxes or in a return to the old method of buried mains; but in self-defence he ventures to inquire whether new regulations are needed, whether existing ones are carried out, whether Rule 15, which provides that boxes shall be kept free from water and gas, be a reasonable one, and, if so, has it been duly enforced?

DIPHTHERIA IN LONDON.

DIPHTHERIA showed further decline in its fatal form last week in London, the deaths falling from 35, 50, and 34 in the preceding three weeks to 31 last week, the per case mortality being 20 per cent. The admissions to hospital were 76, some half of the cases newly arising, against 75, 64, and 74 in the preceding three weeks. The patients remaining under treatment last Saturday were 514 in number, as compared with 517 on the Saturday before. Of the 31 deaths, 4 belonged to Chelsea, and 3 each to Fulham, St. Pancras, and Camberwell; and 17 were in children aged from one to five years. In Greater London there were 10 deaths, including 8 in West Ham and district. In 1894 there were notified 18,956 cases in the county of London, this number being at the rate of 45 per 10,000 persons living at the last census. The registered deaths were 3625, and were 1984 above the corrected decennial average. The per case mortality was 19.1 per cent. of notifications.

THE SERUM THERAPEUTICS OF PNEUMONIA.

At the time when the attention of the medical world is directed to the serum therapeutics of diphtheria and tetanus a short review of the same method of treatment as applied to pneumonia, given in *L'Union Médicale* of Dec. 8th, 1894, may prove of interest. Numerous experiments have been made on animals, and several attempts have been made to treat patients in the same manner. Drs. F. and G. Klemperer have treated twelve cases of pneumonia with the serum of rabbits rendered artificially immune. Each dose consisted of from 5 to 10 c.c. injected under the skin of the buttock. Eliminating five of the cases in which crisis resulted as in the ordinary course of the disease, in the remaining seven each time the serum was administered there was a diminution in the height of the temperature and in the frequency of the pulse and respiration, and the patients made a good recovery. They have also injected eight patients with cultures of the pneumococcus which had been heated to 60°C. and so deprived of toxicity. The results were very satisfactory, the temperature falling soon after the injections. They also inoculated patients with the serum of other patients suffering from pneumonia obtained immediately after the crisis. After the inoculations the temperature became lower, and frequently defervescence at once followed. Foa and Carbone reported a case of pneumonia which was arrested on the fourth day after injections of the serum of a vaccinated rabbit. Foa and Scolia injected ten patients suffering from pneumonia with from 5 to 7 c.c. of the serum of rabbits which had been rendered

immune, the injections being given under the skin of the back. In some of the cases as many as three injections were given; in these (four in number) the crisis appeared to be hastened. Jansen also records cases in which this treatment was adopted with success. Lava has treated ten cases of pneumonia with injections of the blood serum products obtained from the viscera of animals suffering from pneumonia. The injections produced no immediate or ulterior local reaction. There was also no immediate influence on the temperature, but the thermometric curve gradually became lower; the frequency of the pulse and respiration was diminished. Convalescence was rapid and no complications followed. Taken as a whole the above series of experiments are satisfactory, and the serum therapeutics of pneumonia deserve further trial and investigation.

“DYSPHEMIA.”

THIS is the name proposed for stammering by Dr. C. F. Coxwell in a recent article in the *Intercolonial Quarterly Journal of Medicine and Surgery*. The article is important as a practical contribution to the elucidation of the cause of this troublesome affection and also its treatment, and is also interesting on account of the theoretical views, which are enunciated. Dr. Coxwell points out that stammering is the result of some interference with the oral or laryngeal mechanism of speech and a consequent want of correspondence between them. He regards it as largely a spasmodic affection, the result of inhibition, which leaves the liberating element temporarily unopposed and so gives rise to spasm. On the other hand, inhibition of the liberating element may cause temporary paralysis. In the next few pages are embodied a description of the relation of the related cerebral centres—speech and auditory—and an account of the gradual development of their functions. He next proceeds to discuss the theoretical question of local control over discharge of energy in nerve centres, and considers the question of the existence of a general inhibitory centre and the nature of neuroses generally. “Dysphemia” is then considered with reference to these theoretical considerations, and an explanation offered of its phenomena. In conclusion, there is a succinct and practical account of the various measures necessary for its successful treatment.

THE CARE OF THE SICK IN WORKHOUSES.

IN spite of repeated practical illustrations the danger of delay where health and illness are in the balance would seem to be still very imperfectly understood either by workhouse officials or by those guardians whose deputies they are. We directed attention to a case bearing upon this subject in our issue of Nov. 24th, 1894. Another example was reported last week. In this instance the sufferer was an aged inmate of Stepney Workhouse. Taken ill on Friday, the 11th inst., he died from syncope on the following Monday. During this interval of three days he received no medical treatment, but was reported by one to another of a succession of employes, till at last within a few hours of his death he saw the assistant of the visiting medical officer. Even then he had to wait another four hours before he could obtain the medicine prescribed. It is curiously suggestive of primitive methods of treatment that the needful remedies in this establishment were “all made up and ready for giving out.” Stock mixtures, we admit, are efficient on occasion, but such absolute faith in their universal suitability argues, to our mind, a dangerous and unwholesome conservatism. Both the coroner and jury who investigated this case agreed in advising that such an institution as this workhouse, which at present contains nearly 800 inmates, ought to be under the supervision of a resident medical officer. Such an arrangement would no doubt prove advantageous in more ways than one. At the same time it

is to be remembered that most of our workhouses have infirmaries attached to them, and that these are usually under the control of two medical men. Thus the wants of workhouse inmates generally are already provided for more or less directly after the manner advised. What, it seems to us, is in the meantime even more urgently needful is the introduction of intelligent energy into the system hitherto employed. It is superfluous to add that any profession of method in arrangement is practically worthless while such neglect is possible as will permit a sick man to suffer unheeded for hours or days, and his treatment, when once begun, to follow the course of a slumberous routine, heedless, apparently, of either symptoms or results. Whether the ideal of actual residence be attained or not, therefore, it is clear that in some parochial unions, at least, the most obvious wants of the sick poor have not yet been provided for.

THE SOCIETY OF PUBLIC ANALYSTS.

THIS comparatively young society, of which the majority of public analysts in this country are members, now occupies a position of unquestionable importance in the public service, in that its aim and work are intimately associated with the supply of pure food and standard drugs. Since its foundation it has evidenced a very healthy activity in all matters pertaining to the Food and Drugs Adulteration Act, and has done most excellent and useful work towards raising the standard of food products, and in publishing through its organ—the *Analyst*—the result of progress in regard to the methods for the more accurate detection of adulteration, which has established it as the standard reference and guide for the analytical practitioner. At the annual meeting of the society, held at Burlington House on Wednesday, Jan. 16th, Sir Charles Cameron referred to the labours of the Parliamentary Committee and to the recommendations drawn up in the form of a Draft Bill by the council, which he hoped the committee would to a large extent be guided by. The society is urging, amongst other important reforms, for a legal provision for the laying down of authoritative standards. On these, as well as other important points, we shall look forward with interest to the evidence which is to be heard from the public analysts before the committee next session. We are glad to see that the society has appointed as president for the ensuing year Dr. Thomas Stevenson, the official analyst at the Home Office, and one of the few analytical representatives of the medical profession.

THE PROPOSED CANTONMENT ACT AMENDMENT BILL.

THE unofficial members of the Indian Medical Congress at their late meeting passed a resolution earnestly representing to the authorities in India and in this country the mischief likely to result from the proposed Cantonment Act Amendment Bill, especially as far as the third clause is concerned, which proposes penal legislation aimed at public medical servants, and implies that they cannot be trusted to loyally carry out the orders of the Government on this subject. From the telegraphic intelligence from India that has since appeared in the public journals of this country it appears that a compromise is likely to be arrived at which will probably involve the abandonment of that clause of the Cantonment Act Amendment Bill when it comes up for discussion. The clause is, in the first place, quite unnecessary, and, in the second place, it conveys a slur on the medical profession. Into the general question of the Contagious Diseases Acts it is needless to enter now. In the present state of political opinion—and until the people of this country realise the vast importance which the prevalence of this class of diseases has upon public health, and the cost and suffering which such diseases entail in the present, and all the

remote consequences by which they are followed—it is not likely that any attempt will be made to deal with the subject by any legislative measures such, for example, as would without hesitation be applied in the case of any dangerous trade or calling. The magnitude of the evil, as far as our army in India is concerned, is undoubted; the facts speak for themselves and need not be exaggerated. There is no room for any difference of opinion in this respect, whatever there may be as to the most efficacious means of dealing with it that may, under the circumstances, be practically open to us to follow in a vast country like India. That something will have to be done in this direction is obvious to most people, and the subject is one for grave consideration. But this clause of the amended Cantonment Act, prohibiting under the penalty of a fine the compulsory examination of any woman by a public servant, is, as we have said, an unnecessary and under the circumstances, as it seems to us, a gratuitously improper proceeding. It is unnecessary because there is already an existing law on the subject, and the Government of India has moreover engaged not to do anything opposed to the resolution of the House of Commons and the orders of the Home Government in the matter. It is improper in that by implication it casts a slur upon the medical profession in India. The medical servants of the Government of that country are not at all more likely to do anything contrary to the laws and regulations of the Government than any other class of its servants. From the nature of their calling, however, they must be more keenly alive to the gravity and extent of the evil than other people can be.

DEATHS UNDER ANÆSTHETICS.

A RECENT death under chloroform which occurred at the Middlesex Hospital exemplifies the grave danger to the patient during that period of chloroformisation called the "struggling stage." The patient, a man of adult age and described as a hard drinker, was to be placed under chloroform in order that one of the surgeons might remove a mass of tuberculous glands in the neck. The man struggled violently during the administration of the chloroform and died suddenly. The heart was dilated and the myocardium fatty. We have no particulars as to the method employed or the phenomena exhibited at the moment when grave symptoms occurred; but it seems likely that, as so often happens, the lethal dose was taken during the deep gasping breaths always present when the patient struggles. There are in such cases two factors at least which tell against the patient—the fixation of the muscles during their spasmodic contraction (the struggling stage), which hinders the output of chloroform by impairing respiratory movements, and by the propulsion of venous blood into the thorax. A very similar case has recently occurred at the Royal Victoria Hospital at Bournemouth. The patient suffered from a fractured patella; he had taken chloroform in November of last year, but except that he struggled in going under he appeared to have done well. On Jan. 4th, however, a second operation being necessary, the man was again chloroformed and again struggled violently. The quantity of chloroform given is stated to have been one drachm, a very small quantity unless given by Junker's inhaler. However, the operation appears to have been commenced and the patient was presumably under the influence of the anæsthetic. Respiration suddenly failed and the circulation quickly ceased before resuscitation could be effected. A death under the A.C.E. mixture occurred recently at the Swansea Hospital. The patient, a young woman twenty years of age, suffering from "housemaid's knee," was anæsthetised by the A.C.E. mixture with a view to "firing" the joint. This was successfully accomplished, and after the anæsthetic had been stopped some three minutes the pulse was observed to grow weak and in a few seconds to stop. The respiration

continued for fully five minutes after this. No loss of colour was seen, although just before the cessation of the pulse the lips became congested. Nothing abnormal about the patient was found before the anæsthetic was given. She was menstruating. This sad occurrence is a very typical one of the usual onset of dangerous symptoms under the A.C.E. mixture. We are not told how it was given in this case; but often it is exhibited from a closed inhaler, regardless of the fact that it contains chloroform and should therefore always be given well diluted with air.

INFLUENCE OF FASTING ON MUSCULAR FORCE.

AN Italian physician, Signor Manea, has recently investigated the influence of fasting for periods of twenty-four and of thirty-six hours on his muscular power, testing this both by voluntary efforts of, and by the application of an electrical current to, the muscles of his forearm. The conclusion at which he has arrived is that fasting within the above limits has no influence on the muscular power. The deviations after longer periods observed by other investigators he thinks are attributable to the effects of the fasting on the nervous system, circulation, and respiration. Signor Manea distinguishes two stages in fasting: one in which a kind of compensation of the injurious effects of fasting is effected through the agency of the nervous system, and a second in which there is deranged compensation, with disturbances of the several organs strongly marked, accompanied by loss of weight and abundant excretion of nitrogen in the urine, after which death occurs. The great powers of resistance possessed by the muscles in regard to their force are, he thinks, due to the glycogen and sugar in the blood, which do not materially alter in quantity even after prolonged abstinence.

THE MEDICAL PROFESSION AND THE STORES SYSTEM.

WE are glad to see indications that our criticisms on this subject in THE LANCET of Aug. 25th last have had some effect. In the price list of June last of one of the Coöperative Societies there were two gentlemen named with whom certain arrangements had been made by the society. We are glad to say that in the December list the number has fallen to one. We must be thankful for a fall of 50 per cent. We shall still treat this matter impersonally in the hope that the solitary member of the profession on this list will soon feel his isolation and the force of our objections. Theoretically it is intelligible how such arrangements should have been hastily consented to; but, on reflection, they will be seen to be objectionable and a clear means of facilitating the taking of the patients of other medical men. The advertisement of names is forbidden by the Stock Exchange, and surely we should not be behind that body in the sense of what is fit. There still remain, we regret to say, the names of four dentists, one of them with a qualification from a medical authority. We appeal to them all to support the principles we advocate—the avoidance of advertising and the refusal to have anything to do with temptations to patients to leave their own medical men, who best know their circumstances and how to adapt charges.

LETHAL AND NON-LETHAL EFFECTS OF STRONG ELECTRICAL CURRENTS.

M. BERNHARDT, in the *Centralblatt für die Medicinischen Wissenschaften*, has collected several instances of death by electricity. In one recorded by Dr. J. Kratter a man aged twenty-six was traversed by a current of high tension—1600 to 2000 volts—and was found breathing stertorously a few steps from the point where he made contact. Death soon took place. The post-mortem examination, after the lapse of twenty-one hours from the time of death, disclosed two

small wounds—one on the left index finger and the other on the back—and there were large extravasations of blood in their vicinity. All the organs of the body showed hyper-venous blood, acute oedema of the lungs was present, and there were extravasations into the sheath common to the carotid and vagus, along all the vertebrae, into the intercostal spaces, around the œsophagus, beneath the peritoneum and elsewhere. The muscles of the body were in an extreme condition of rigor mortis; the heart was partially relaxed. No macroscopic changes could be seen in any part of the nervous system. Kratter thinks that the electrical shock suddenly paralysed the heart, which was the immediate cause of death, accompanied by oedema of the lungs causing hypervenuosity of the blood. There was a marked contusion on the left side of the diaphragm at the point of contact of the heart. Experiments made on animals, showed that in them the respiration was usually primarily arrested, which caused asphyxia and secondary stoppage of the heart's action, though sometimes the heart was first affected. In a second case, reported by M. D'Arsonval, a man was struck with a current of 4500 volts (the ampère meter indicated 750 milliamperes). The current entered at his hand and issued at his back. Half an hour or more elapsed before any attempts at resuscitation were made, but on artificial respiration being practised on Silvester's method recovery took place. Lastly, Dr. Donnellan reports a case of the passage of a current of 1000 volts through a man, which instantly caused coma, dilated pupils, pallor of the face and sweating; delirium, and tonic alternating with clonic spasms followed. The pulse was 80. The respiration, at first stertorous, passed into the Cheyne-Stokes type. After the injection, first of morphia, and then of strychnia the patient fell into a deep sleep, from which he awoke convalescent.

THE HISTORY OF THE ROYAL MICROSCOPICAL SOCIETY.

ON Jan. 16th was held the annual meeting of the Royal Microscopical Society, at which Mr. A. D. Michael, the President, delivered an interesting address on the history of this body. In 1839 a party of seventeen gentlemen assembled at the house of Professor Quekett, 50, Wellclose-square, "to take into consideration the propriety of forming a society for the promotion of microscopical investigation, and for the introduction and improvement of the microscope as a scientific instrument." The outcome of this was a public meeting at the rooms of the Horticultural Society, Richard Owen (afterwards Sir Richard) in the chair, when the Microscopical Society of London was formally started. John Quekett was appointed secretary, an office which he held almost to his death. At his decease certain members of the society subscribed to purchase for the society's collection a curious microscope which Quekett possessed and which had been made by the celebrated Benjamin Martin about 1770, probably for George III., and they extended their subscription so as to provide a medal to be called "the Quekett medal," to be given from time to time to eminent microscopists, and how, difficulties having arisen, it happened that the only Quekett medal ever awarded was given to Sir John Lubbock. The use of the microscope in medicine has become such a routine practice that there is some danger of the younger generations of practitioners forgetting how much they owe to the labours of this society in improving by its influence and assistance an instrument which is now in every student's hands. It is a trite saying that inventions arise according to the need for them, but how much toil and weariness would the older worker have been spared had he possessed the microscope of modern days. With the aid of a frog and a microscope Harvey could have made his immortal discovery in five minutes, and yet perhaps his loss is our gain, for in that case the world would never

have enjoyed his masterly piece of deductive reasoning. Mr. Michael, in considering the future of the microscope, said that he believed there was as much scope for progress in the future as there had been in the past. Perhaps the fantastic ideas of Fitzjames O'Brien will be one day realised, and "from a diamond of 140 carats, submitted to an electro-magnetic bombardment," will be fashioned the perfect lens. Though the modern man of science will probably not see an "Animula" (if he did he would cultivate her in agar-agar), we have little doubt that the improvement of the microscope will still proceed under the ægis of the society, and that with increased powers of definition much that is now necessarily obscure will be revealed.

THE DUKE OF ARGYLL.

THE Duke of Argyll is making very favourable progress. He is regaining his strength steadily, if slowly, the pulse being regular and increasing in force. The fever has now practically left him, as the temperature is usually normal, while an average appetite points to some abatement of the dyspepsia. He has been able to sleep from five to six consecutive hours; and altogether, at the time of going to press, his condition appears to us more favourable than certain disquieting rumours would have led us to expect.

THE SALARY OF THE MEDICAL OFFICER TO THE WIGAN UNION.

THE question of the salary of union medical officers has always been a sore point between members of the profession and the general public, on the one hand, and boards of guardians, on the other. The latter bodies—actuated, no doubt, by a laudable regard for the ratepayer's pocket—have a tendency to behave in a somewhat parsimonious manner towards a hard-working and deserving body of men. At a recent meeting of the Wigan board of guardians a guardian, Mr. J. H. Prescott, drew attention to the fact that the medical officer by means of extras was getting something like £650 a year, and though he had to pay a man £50 out of that it left him with £600 per annum, which he (Mr. Prescott) thought was too much. Extras ought to be abolished and a fixed salary paid, and he considered that the Wigan board ought to apply to the Local Government Board to see if this could not be done. Now let us see what the medical officer does for his £650 per annum, a remuneration which Mr. Prescott finds so disproportionate when compared with the duties. He is absolutely debarred from private practice and devotes his whole time to his public work. The population is 58,000, and Wigan has more out-door paupers than any union in Lancashire. There are 600 permanent order cards, and paupers holding these cards need not trouble the relieving officer for an order, but send in their cards when an order is required. The salary is £130 per annum, with a house, surgery, coals, and gas; £40 are allowed for a dispenser. The extras are midwifery and surgical cases, lunacy and vaccination fees. All these extras come by special order of the relieving officer and are examined by the auditors. The guardians' advertisement stated: "Salary £130. Vaccination fees to Lady Day last £56." These have now, owing to the neglect of the vaccination laws, fallen to £24, but the guardians, we presume, will not make this up to the advertised amount. The extra pay means extra work, and if the relieving officer has given orders with too lavish a hand it is the guardians' duty to inquire into the matter and not stint their medical officer. The principle of a fair day's wage for a fair day's work is an excellent one, and we can imagine no better case for applying it than to that of a union medical officer. Not for him the eight hours day, the Saturday half-holiday, or the weekly rest. At all times he is supposed to be ready to answer any call, to give his time,

his knowledge, and his help to the relief of the poor and suffering, and his reward should be commensurate with his work.

THE DIFFUSION OF SMALL-POX.

IN London there was a death registered last week from small-pox, after the absence of this disease in a fatal form for a fortnight, the death being that of an adult concerning whose vaccination no statement is given. The deceased belonged to Marylebone, in which parish small-pox has lately shown some signs of renewed activity. The fresh cases last week in the metropolis were 10 in number, and the admissions to the institutions of the Asylums Board 6, against 1, 8, and 8 in the preceding three weeks, leaving 32 patients under treatment, an increase from 28 on the previous Saturday. During 1894 the number of notifications of small-pox in the whole of London was 1391, a number equal to 3·3 per 10,000 living in 1891. Among the sanitary areas contributing largely to this total were Marylebone with 417 notifications, Poplar with 124, St. Pancras with 106, Islington with 105, and Bethnal Green with 98, these five districts with less than 25 per cent. of the population contributing upwards of 60 per cent. of the notifications. The registered deaths in the year were 93, as against a corrected decennial average of 312. The per case mortality last year was 6·7 per cent. In the provinces last week the midland towns of the Manor of Aston, Wolverhampton, West Bromwich, and Birmingham had experience of the disease, the three first named lightly and the last named in the form of 2 fatal cases and some dozen or more of fresh attacks. No deaths occurred in Liverpool, but half a dozen cases were heard of there, and also in the adjoining borough of Bootle. In the second week of January matters in Dublin grew worse, the admissions to hospital being 88, as compared with 71 the previous week. The deaths were 11 in number, comprising 5 in vaccinated persons, none of whom were under ten years of age, while of the 6 in unvaccinated individuals 5 were under ten years of age. There were left in hospital 345 patients, including 151 convalescents at Kilmainham.

LORD RANDOLPH CHURCHILL.

IT is not within the scope of THE LANCET to review the political life of Lord Randolph Churchill, or to even attempt to decide concerning his place in and influence upon the history of an empire; we can only in general terms confine ourselves to an expression of deep regret that a man with so brilliant a retrospect, and until two years ago so brilliant a prospect, should have been cut off in mid-career under circumstances of such particular sadness. No one knowing the conditions expressed by the term "general paralysis" could have expected any other than the sad issue to his illness which took place early on Thursday morning last from rapidly increasing congestion of the lungs. All medical readers of the numerous bulletins reporting a most from hour to hour in the daily press the progress of his malady must have seen that the end was coming; and, latterly, despite the lingering course the terrible malady in question is wont to pursue, must have seen that that end was coming quickly. Lord Randolph Churchill's case has throughout been typical of general paralysis. In its history, which we published on Dec. 29th, 1894, it forms a fairly representative picture of the usual symptoms when the disease has well established its hold, while in the story of his life we have many of the elements likely to develop in him latent tendencies towards the malady. High spirited and nervous by constitution, he led an over-full life in every direction. For a considerable time he stood in the van of the Conservative party, and, being distinguished alike by his relentless tactics towards opponents and his irresponsible attitude towards friends, he drained

to the very dregs the heady cup of politics. Official responsibilities were thrust upon him at an early age and at an early stage in his political career, while he continued to double with the life of the statesman—not that of the ordinary statesman, but of the stormy statesman—the life of the great nobleman and the man of pleasure, sport, and fashion. Early success prompted him to over-effort, a great and unexpected check caused him to redouble those efforts, and the result of it all was ruin to his nervous constitution. No political leader of recent times, not even Lord Beaconsfield, has had a more personally affectionate following than Lord Randolph Churchill, and we believe that it will be a solace to his admirers to learn that during the end of his career the hand of sickness was upon him, so that in considering his claims upon their admiration, they must in justice to the sound man neglect the failings of the sick man.

THE spring term of the London Post-graduate Course will commence on Feb. 4th, and will last eight weeks. In addition to courses on General Medicine and Surgery, there will be courses on Diseases of Children, Diseases of the Nervous System, Diseases of the Eye, and Diseases of the Skin, Throat, and Ear, and Bacteriology. The fees are £1 1s. and £2 2s., according to the number of lectures in a course; and we are requested to state that a prospectus can be obtained from the Secretary, Dr. Fletcher Little, 32, Harley-street, W., who particularly desires to hear promptly from gentlemen intending to join the classes.

THE committee which has been appointed by the Clinical Society of London "to investigate the clinical value of the antitoxin treatment of diphtheria" is now definitely fixed upon. It consists of Dr. Church, Dr. Stephen Mackenzie, Dr. Coupland, Dr. Hale White, Dr. Pasteur, Dr. Sidney Martin, Dr. Washbourn, Dr. H. P. Hawkins, and Dr. E. W. Goodall; and we can well believe that the profession will await with interest the joint report of individuals so well fitted to express a practical as well as a scientific opinion. Sir Joseph Lister was invited to join the committee, but was unable to accede to the request of the society.

OWING to pressure on our space we have been compelled to postpone the continuation of our report of the Indian Medical Congress until next week.

DIFFICULTIES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

II.¹

2. *Nature of the Visit by the Medical Officer of Health.*

THE medical officer of health having decided that a personal visit by himself is desirable in a given case of infectious disease of which he has become aware, whether under the Act as to notification or otherwise, the question arises as to what should be the nature of that visit. This question has given rise to much difficulty and at times to misunderstanding and even ill-feeling.

In the first place it should be remembered that a medical officer of health has absolutely no right, in virtue of his office or under the Orders relating to his duties, to enter on any private premises. It is true that under Section 102 of the Public Health Act, 1875, it is enacted that the officers of the sanitary authority "shall be admitted into any premises for the purposes of examining as to the existence of any nuisance therein," but the section contemplates the refusal to admit these officers even for the limited purposes specified, and it is only when a magistrate has, after certain formalities,

granted an order of admission that the actual right of entry is acquired in such form that it can be enforced. For this reason it is always desirable that permission to inspect premises should be asked, and, so far as we know, this permission is rarely or never refused when the inspection in question is limited to what is commonly included under the term "premises." When it becomes a question of entering private apartments, and especially sick chambers, then the matter stands on a somewhat different footing. To this point we shall refer later, but for the moment it may be accepted that the ordinary courtesies of life are nearly always quite sufficient to secure inspection of premises on which infectious disease has occurred with a view to "inquire into the causes and circumstances of such outbreak," and of advising "the persons competent to act" as to what may be required "to prevent the extension of the disease," as also of enabling the medical officer of health to "take such measures for the prevention of the disease as he is legally authorised to take."² The contention that it is necessary to extend such visit to the sick chamber has generally been raised in connexion with a visit by the medical officer of health to the sick person concerned; but there have been cases where the two questions have been dissociated, and we, therefore, deal with them apart. On the question as to a visit to and examination of the sick-chamber itself it has been held by the Local Government Board that, whilst the particular circumstances of the special case must decide whether it is necessary to the performance of the duties quoted above from the Order of March 23rd, 1891, that the medical officer of health should have access to a particular room—namely, the sick-chamber,—"in the majority of instances in which cases of infectious disease are notified there is no need for a medical officer of health to personally inspect the apartment for the treatment of the sick person, and that in the remaining instances where such visit may become necessary it should be remembered that, apart from cases to which Section 102 of the Public Health Act, 1875, may be applicable, this can only be done with the consent of those having charge of the patient and that the co-operation of the medical practitioner in charge of the case should be secured if possible." In other words, unless it is believed that there is "nuisance" in the sick chamber and that the cause of the disease is in some way concerned with that chamber, the medical officer of health has no duty under the Order of the Local Government Board and no right under the statute to inspect that chamber.

There are, of course, cases where such inspection may be desirable or even necessary—as, for example, where the chamber of a person suffering from enteric fever is believed to be in direct communication, by means of a sink or overflow pipe, with some drain. Wherever there are such suspicions inspection may properly be requested, such request being best proffered in consultation with the medical attendant, and, if need be, enforced by application to a magistrate under Section 102. This latter action will, however, be but rarely necessary where the ordinary preliminaries are properly observed; in fact, we hardly know of such an instance having occurred.

It will be observed that in regard to visits to the sick-chamber the Local Government Board urge upon the medical officer of health to secure, if possible, the co-operation of the medical practitioner in attendance on the case. This principle may be extended even to the inspection of premises in certain cases, for there will certainly occur in every district cases of infectious disease on premises which should not, according to the current rules of professional etiquette, be visited by another medical man, though a health officer, except after communication with his colleagues. And in this connexion we cannot but recall the fact that in numbers

¹ Part I. was published in THE LANCET of Jan. 19th, 1895.

² See Order, March 23rd, 1891.

of letters which have emanated from the Local Government Board medical officers of health have been urged not to forget "the customs that usually govern the relations of medical practitioners to each other." This, indeed, is the one means by which, above all others, difficulties arising under the Act as to notification can best be avoided.

It has, however, been asked whether a medical officer of health ought not always to assume that, in the sick chamber of a person notified to be suffering from infectious disease, there is something of the nature of a "nuisance" which demands his entry and inspection. Such a view is an extremely strained one. We doubt if any magistrate would, on evidence limited to the existence of a case of infectious illness only, ever grant an order of entry under the Public Health Act; and it is evident that the Local Government Board take the same view. Thus, in a letter written by them, it is stated "that the Board do not regard the existence of every case of notified infectious disease as necessarily involving reasonable cause to suspect the existence of a nuisance on premises such as is contemplated in Section 102 of the Public Health Act, 1875."

But the point that has caused most discussion and trouble has been the practice of some medical officers of health to visit and examine the sick person. Some seem to have done this as a matter of course in the performance of their regular duties and quite apart from any special reason in the individual cases; others, again, have done it by way of satisfying themselves or the authority whom they serve as to the correctness or otherwise of the certificate of notification. Those who have adopted this course as a matter of habitual practice have in certain instances contended that it was their duty so to do. Such was certainly never the intention of the Act relating to notification, and this is the more obvious because no increase of salary to the health officer was made one of the conditions of the adoption of that Act; although it is evident that if the medical officer of health was expected to visit every person notified to be suffering from infectious disease his duties would become very largely increased. And, in answer to appeals made to the Local Government Board on that point that department has again and again announced that "they do not consider that either the Infectious Disease (Notification) Act or any Order of the Board imposed upon a medical officer of health any obligation to visit each case notified to him under the Act"; and they have further reminded authorities that any such examination can only be made "with the consent of the patient or of those having charge of the patient," and that such a practice is not only no duty of the health officer, but that it is, as a rule, "undesirable."

There may, however, be exceptions which may call for departure from the general rule that it is undesirable that the medical officer of health should in virtue of his office make a personal examination of a patient, and two of these exceptions have been recognised by the central authority. Both of them apply to special cases only. The first exception has to do with certificates that are assumed to be fraudulent. In such cases the medical officer of health doubtless has a duty towards his authority, and however much he may regret to perform an unpleasant task it cannot be held that he acts improperly if he protects his authority against that which is believed to involve a breach of good faith on the part of the certifier. The views of the Local Government Board as to this are set out in several letters, one of which we quote in full because it also explains what are the special precautions which should be adopted in visiting a patient with a view to revise the diagnosis that has been made in the notification certificate. The letter, which was addressed on Oct. 1st, 1890, to the town clerk of Bolton, is as follows: "It appears to the Board to be undesirable that the medical officer of health should in general undertake a personal diagnosis of the

notified cases in order to test the accuracy of the certificates. In some cases, as where there is reason to doubt the good faith of the certifier, or where the disease is one which, in itself or owing to the attendant circumstances, threatens exceptional danger to the community, it may be desirable that the medical officer of health should make a personal diagnosis; but it must be remembered that this can only be done with the consent of the patient, or those having charge of the patient, and that the medical practitioner in charge of the case should always be communicated with and his coöperation secured if possible." But want of good faith is not to be assumed merely because the medical officer of health doubts the accuracy of the diagnosis. Quite the contrary, for as the clerk to the Foleshill rural authority was informed by the Local Government Board on March 12th, 1892, "the certifier's statement of the nature of the disease should be accepted unless there is strong reason to believe that he is not acting in good faith."

We have heard of instances in which the medical officer of health has allowed himself to be habitually used by his sanitary authority as a reviser of notification certificates. Such action is naturally resented by his fellow practitioners, and it distinctly lowers the status of the health officer. If it can be more objectionable in one class of official than in another, it is so in the case of medical officers of health who are themselves in general practice, and who thus lay themselves open to the accusation that they are "competitors" for practice. Happily such action is rare, and we trust it will cease altogether.

The Foleshill letter refers to another class of cases—namely, notifications announcing or indicating the existence of diseases which "threaten exceptional danger to the community." Thus a first notification of cholera or of typhus fever in a district where no such disease has for some time past been known to exist may not only justify but may necessitate a personal inspection of the sick person for the purposes of confirming the diagnosis with a view to the adoption of exceptional measures of prevention. In such a case the object of the visit would solely be to enable the medical officer of health to advise his authority as to the needed administrative action, and not for the mere purpose of testing the accuracy of the diagnosis. Under such circumstances the visit should be paid jointly by the medical officer of health and the medical practitioner in attendance, and the ordinary rules followed in consultations should as far as possible be observed. Similar necessity may arise when a group of notifications under an indefinite heading, such as "continued fever," either gives rise to a suspicion of typhus fever or fails to indicate to the medical officer of health what are the measures of prevention which it is his duty to advise or carry out. If by any chance, in these and similar cases, the medical practitioner should, notwithstanding that the ordinary courtesies of professional life have been observed, decline assent to the health officer's visit, then it may well happen that the latter may properly hold that his duty towards the public requires him to secure, if possible, a personal inspection of the sick person. But even then he cannot demand it; the visit can only be paid with the consent of the sick person or of those in charge of that person; and it will be more than ever desirable that the visit should be paid under such conditions as to avoid all possible complaint on the part of the several persons concerned. As a matter of fact, continuous observance of official courtesies in all branches of the duties of the medical officer of health should in themselves suffice to prevent difficulties from arising in such a case as we have described.

Summarising the points thus far adverted to, it may be laid down: 1. That the question of a personal visit by the medical officer of health is a matter to be decided by the medical officer of health, he being the judge as to what

constitutes an "outbreak" for the purposes of the Order relating to his duties. 2. No duty attaches to a medical officer of health to "visit the spot" in every case of notified disease. 3. When he deems it his duty to pay such a visit he should remember that, apart from a magistrate's order, he cannot claim a right of entry to any premises, and that both as regards the occupier and the medical practitioner in attendance their voluntary coöperation should be sought. 4. That the existence of a case of infectious disease in a given apartment cannot be deemed to mean the probable existence of a nuisance in that apartment; and that a medical officer of health should not therefore claim a right of entry on such grounds. 5. That the medical officer of health has no right to inspect patients, that such inspection is as a rule very undesirable, and that it should not be contemplated, even when it is necessary, except after communication with, and if possible in co-operation with, the medical practitioner in attendance on the case.

(To be continued.)

A TEACHING UNIVERSITY FOR LONDON.

ON Tuesday last the Prime Minister received three deputations, who laid before him their views on the Gresham University scheme. One, the first, was composed of the representatives of the bodies within and without the existing University of London not in favour of the adoption of the scheme, and it will be seen that King's College has come into line with the other important educational bodies of London. The other two deputations represented the graduates of London University "desirous of maintaining the Imperial characters of the University," and the Gresham Scheme Amendment Committee. These two deputations were received together as jointly opposing the Gresham scheme, though upon several grounds.

The Deputation in favour of the Scheme.

The deputation included the Right Hon. T. H. Huxley, Professor Rücker, and Sir Henry Roscoe (representing the Professorial Association); Sir John Russell Reynolds, Bart., and Dr. Allchin (representing the Royal College of Physicians of London); Mr. J. Whitaker Hulke (representing the Royal College of Surgeons of England); Sir John Eric Erichsen, Bart., and Sir George Young, Bart. (representing University College); Rev. Prebendary Wace and Sir William Priestley (representing King's College); Sir Julian Goldsmid, Sir William S. Savory, Bart., and Mr. Anstie, Q.C. (representing the Senate of the University of London); Professor Sylvanus Thompson (representing the Committee of Graduates); and Dr. Frederick Taylor (Guy's Hospital), Dr. Sidney Coupland (Middlesex Hospital), Mr. Hutchinson, jun. (London Hospital), Dr. Payne (St. Thomas's Hospital), Mr. Herbert Page (St. Mary's Hospital), Mr. Spencer (Westminster Hospital), Dr. Isambard Owen (St. George's Hospital), Dr. Shore (St. Bartholomew's Hospital), and Mr. Stanley Boyd (Charing-cross Hospital). Representatives of other educational and scientific institutions of the metropolis were also present.

Professor HUXLEY, in introducing the deputation, said that in a matter of this kind the general feeling on educational matters in London would naturally be led by the University of London. The deputation represented the University, its Senate, Convocation, and graduates; in addition, all the principal London colleges, the great medical corporations, the medical schools, and several important provincial institutions were also represented. Finally, an association including practically all those engaged in science (of which he had the honour to be president) was also represented there in his person. He then referred sympathetically to the domestic reasons which had prevented the Vice-Chancellor of the University, Sir James Paget, from introducing the deputation. The ideal of a university, Professor Huxley considered, could not be subject to more divergent views than must the best practical manner of giving reality to any ideal under the circumstances which obtained among the educational institutions of the metropolis, which had grown up, as it were, spontaneously and without plan. This was not the first time that some attempt had been

made to introduce order into what, without disrespect, he thought he might almost term chaos. Sixty years ago the attempt was made, and although what the projectors of that scheme desired was not eventually granted to them they obtained a something, which had undoubtedly proved to have had an immense influence upon the progress of general and professional education and to have done a vast amount of good work. But it was not what the original proposers wanted, which was to have a teaching and learning corporation; that which was eventually established was a purely examining body—the present University of London. The question of the position of educational affairs in London had been under much discussion. Since 1838 two Royal Commissions had occupied themselves with it. They had devoted an immense amount of labour, time, and acumen to the consideration of enormous masses of evidence, and he thought that it would be probably impossible to devise any opinion upon that topic which had not been before the Commissions. The report of the second Commission was admitted to be thoroughly comprehensive, well matured, and weighty, and their principal business there that day was to say that, in principle, they accepted the recommendations of that Commission, and asked that they might be carried into effect with as little delay as possible. At a full meeting of the University of London, held in July last, it was resolved to be desirable to memorialise Government to take immediate steps for the appointment of a Statutory Commission to frame statutes in accordance with the representation of the Gresham Commission, with power to make such modifications as may seem to them expedient after considering any representations made to them by the Senate, Convocation, or any other bodies affected; and that resolution was not only carried in a very full meeting with only two dissentients, but similar resolutions had been passed by the body of delegates referred to in the report of the Commission and by the association of which he had the honour to be president. Whatever modification a particular body might desire, all were of one mind in desiring two things: (1) the formation of a University of London as an organic whole by the voluntary coöperation of the various institutions for learning, teaching, and examining, and (2) the appointment of a statutory authority as the indispensable instrument for effecting the organisation.

Sir JULIAN GOLDSMID briefly supported Professor Huxley and said that under the Gresham scheme the existing standards would not be lowered.

Dr. ALLCHIN said that the Royal College of Physicians in London cordially concurred in the recommendations of the Gresham Commission, and earnestly hoped that a Statutory Commission would be appointed forthwith to give effect to them. At the same time the College fully sympathised with the desire expressed by the various institutions referred to in the scheme, and who had signified approval of it, that the Statutory Commission should be empowered to make such modifications in detail as might appear desirable after hearing the representations of the bodies concerned. The College was impressed with London's need for a teaching university, in which the teachers should have a direct and considerable share in the management, so that the higher instruction might be coördinated and brought into line with the examinations. The Royal Colleges of Physicians of London, and of Surgeons of England, were not primarily educational bodies, and the success of the new University on the lines proposed would bring them disadvantage in pecuniary position and in influence within the medical profession, for at present they examined and qualified the great bulk of the practitioners of England and Wales, while if the new University were constituted a far larger number of medical students would take University degrees, and consequently fewer would take the diplomas of the Conjoint Board. Nevertheless, so impressed were they with the necessity for the new University that they urged his lordship to consider it pressing. In one other respect the College occupied a peculiar position. In view of their long experience and perfection of arrangements for conducting highly technical examinations they claimed to be associated for examination purposes with the new University. The claim had been recognised by the Senate of the London University and by the late Royal Commission. He was instructed further to submit that if the Government consented to the appointment of a Statutory Commission someone thoroughly conversant with the relations of the Colleges to each other, to the medical schools, and to medical education generally should be appointed to the Statutory

Commission. The Colleges and all the medical examining and teaching bodies in London showed with regard to these a remarkable unanimity.

Mr. HULKE agreed with the foregoing speakers, and briefly stated the grounds upon which the Council of the Royal College of Surgeons of England, endorsed by meetings of the Fellows and Members, had concurred in the scheme.

The Reverend Dr. WAGE, while also supporting on behalf of King's College the appointment of a Statutory Commission, drew attention to the fact that in more than one detail the position of that College was compromised.

Dr. FREDERICK TAYLOR said:—"I am here on behalf of ten medical schools in London, and have to express the general concurrence of those schools in the views expressed by previous speakers. They generally approve the proposals contained in the report of the Royal Commission on the Gresham University, and desire the appointment of a Statutory Commission to carry it into effect, but with full powers to make such modifications in details as may seem to them desirable after hearing the wishes of the various institutions concerned. On that Commission it is desirable from the important position the faculty of medicine holds in the present University that one of the members should belong to the medical profession. I should like to point out to your Lordship that the institutions which we represent, commonly known as medical schools, are practically colleges in the faculty of medicine, that they have been affiliated as teaching institutions to the present University of London, and that in fact they very largely serve the purpose of colleges in medicine to the older universities in England, since by far the greater number of the medical students of these older universities pursue their studies for one, two, or three years at the London medical schools before they take their medical degrees. Further, I would point out that, in respect of their systematic teaching, their equipment, the inevitable influence from constant association of the teachers over the students, the length of that association for a period of five or six years, the fact of residence at least in the case of a small proportion of students, these institutions are as valuable for the purposes of education, in its wider sense, as any other colleges forming part of a university. What is wanting to us is this, that with all these qualifications it is nevertheless only a small proportion of our students who attain to a university degree. Unfortunately, the majority, for various reasons, only study for the diplomas which qualify them to practise their profession, which, valuable as tests of medical knowledge, have not the prestige of a university degree. The establishment of a university according to the scheme of the Royal Commission, in which the medical schools were incorporated as constituent colleges, would not only be an inducement for every student to aspire to a university degree, but would also bring the university degree within reach of a much larger number than now attain to it. The student entering upon a profession like that of medicine would then, as he should, look to a university degree as the end of his studies. Further, the association of the schools together in one university would tend in the medical schools as a whole to raise the teaching to a higher standard even than it has at present."

Lord ROSEBERRY, in reply to the deputation, said:—"Professor Huxley and Gentlemen,—I am not in a position to-day to make you a definite announcement of the position of the Government, but I may say this much—that the Government attaches great importance to the report of the Commission presented last year, and is fully sensible that the present time offers a favourable opportunity for the appointment of a Statutory Commission in the sense in which you wish for it. We have here to-day the representatives of various educational associations announcing to us their earnest wish that a question which has caused much controversy and some ill blood should be put an end to speedily, and that in the interests of the metropolis we should not any longer be subject to the reproach that London is without a teaching university. I have agreed to receive the objectors to the Gresham scheme this afternoon, and it would be disrespectful to them to reply definitely to you. It would be to declare myself to have a preconceived opinion. The Convocation of the University of London also meet this afternoon, and no doubt their decision on the matter will be made the subject of Government representation. But I will later, and without loss of time, inform you of the position of Government in regard to the matter. But the proposed Statutory Commission has one condition which has been unanimously laid down, though insisted upon more in some directions than others—that while it should be guided in its principles by the report

of the Commission, it should be to a large extent unfettered in respect to details. Government will, I think, take full heed of that view. But if the Government is able to announce that it will proceed with the legislation required for the appointment of a Statutory Commission it must make a demand in its turn. It will be absolutely necessary, in view of the work of the session, that legislation on this point should not meet with any long or obstinate Parliamentary resistance. I do not know what emollient faculties this deputation may possess with respect to the Parliamentary powers which may be exercised in respect of any proposals we may make; but I would earnestly beseech them to exercise such powers as they may possess if we are finally to be able to announce that we are able to comply with their prayer."

Professor HUXLEY thanked the Prime Minister for receiving the deputation and for his reply. The deputation then withdrew.

The Deputations against the Scheme.

In the afternoon of the same day Lord Rosebery received two deputations introduced by Mr. Fletcher Moulton, Q.C., M.P., which included Dr. W. J. Collins (representing the Gresham Scheme Amendment Committee), Mr. Bompas, Q.C. (representing 900 graduates of London University), Mr. T. B. Napier, LL.D., Dr. Sansom, Mr. Heber Hart, LL.D., and others.

Mr. FLETCHER MOULTON, in introducing the deputations, said that he had been chosen to say a few words because he had not taken an active part in the special efforts which had been made in this matter although he had a close connexion with London University. The scheme for the Gresham University, with respect to which they had met, was broadly described as a proposed union between a teaching university to be formed in London and the old London University. There was no doubt that the scheme had been mainly supported by the school of educationists who considered the chief value of education consisted in the actual teaching derived from teachers, believing that tests by examination merely testified to successful cramming. He felt strongly that those who urged that a teaching university was a good thing forgot that it was unattainable by the bulk of those who had graduated at the London University in years past, the same class as would, he hoped, go through its examinations in the future. In a teaching university it was necessary that the teachers should be the examiners either personally or constituting the board which directed the examinations. Therefore there must be separate examinations for those who resided and those who did not reside; and in the latter case it would be better to leave the work in the hands of those who had already done so well. For if there were only one examination there would be unfairness observed to the two classes of students, or what was of more importance, the reputation for unfairness, for it was impossible to hold for resident students an examination which turned on what they had been specially taught, and with fairness hold the same examination for non-residents. He maintained that the adoption of the Gresham scheme would cripple the University, and that without addition to its teaching efficiency its cosmopolitan character and reputation would be destroyed.

Mr. BOMPAS said that he represented 900 graduates of London University who had expressed their views by mouth and postcard, saying that if a teaching university were required it should be separate from the existing institutions. Most of those whom he represented were in favour of a teaching university in London, but not of the Gresham scheme, which would detract from the position already enjoyed by the holders of the London University degree. There was no pass degree in the world which could compare with that of London. The new institution would be governed by a senate appointed on different principles, and would have for its object local teaching instead of Imperial examination. It would grant degrees for other considerations than examination. In time the examinations would have characters which would make them more suited to the student at London University than to others. It would also cause great delay; for the opponents of the scheme, many of whom were Members of Parliament, would strive to the last against it. London University had no right to object to the establishment of a teaching university in London, but within the last twenty years the Queen had declared that the degrees of London University should not be interfered with without the consent of those who had taken them, and now it was urged that the Queen ought to take advantage of an

Act of Parliament to break that promise. That would not be a right or an honourable course.

LORD ROSEBURY: How many graduates of the University are there?

MR. BOMPAS: Three thousand, seven hundred. He appeared on behalf of the Imperial character of the University against a scheme which was desired by London only.

DR. W. J. COLLINS said that he represented the Gresham Scheme Amendment Committee and objected to the scheme from no narrow vested-interest point of view, but because it would tend to make the influence of the University more local in character. He said, in answer to the Prime Minister, that he could not tell how many graduates were members of the society, but that his views had procured him election to the senate of the University.

MR. HEBER HART, LL.D., considered that a teaching university in London would be essentially local, just as an examining university was Imperial, and he considered that their functions could be kept as distinct as those of the London County Council from those of Imperial Parliament. Of the 3700 members of Convocation at least 1000 did not trouble to give notice of their addresses and so could not be communicated with and might be considered non-effective members altogether, but he knew that the new institution might be popular in London, but it would be intensely unpopular in the country at large.

DR. SANSOM and **MR. NAPIER, LL.D.**, also spoke.

The Earl of ROSEBURY, in his reply, expressed his obligations to the members of the deputations for their consent to merge the two deputations into one for his convenience. He said: "I quite understand that there are two schools of thought before me. First, that school represented by Dr. Collins, whose objections did not seem to be insurmountable. Dr. Collins felt that the standard of examination might be lowered in the University of London by any association with teaching. But it appears to me that he feels that that objection could be met, if in any way he could obtain some guarantee that the standard would not be lowered. There is nothing in the report of the Commissioners which would prevent the Statutory Commission, if it should ever exist, from founding an examination of a separate kind for those students who are not under the teaching of the University. I can conceive the possibility, which seems inconceivable to the members of this deputation as a whole, that there might be some such separate extension framed for external applicants for degrees to the University of London, which should fully maintain, even if the new University did not itself maintain, the standard of examination on which these deputations set such value. This seems to me the common ground on which the two deputations meet. But the second school of thought, represented by Mr. Bompas, goes a good deal further than this. Mr. Bompas has touched on the essential incompatibility between a teaching and an examining university. I find a difficulty in accepting the doctrine that there is such an incompatibility. Mr. Bompas has shown himself much more antagonistic than Dr. Collins, and attentive consideration will be given to his views. You speak of this as a mere London or local matter, but your contention is based largely on Imperial interests. Well, London is the metropolis of the Empire, and nothing in regard to London can be considered local. If we, by obtaining some standard of examination which shall not lower the standard as hitherto known, and which shall at the same time provide a teaching university for London, we shall, I believe, have done the best for London and the Empire; and I am bound to say, what I did not say to the deputation this morning, that our convictions rather point in the direction of the appointment of a Statutory Commission for framing such a scheme which should at the same time be able to receive full representation from you or from any other interests involved enabling them to arrive at a scheme not unsatisfactory both to the London University as it at present exists and to the empire at large. I have spoken to you quite frankly and have no time to say more. What you have said has interested me very much, and I am only sorry if in what I am saying I am not stating what is wholly satisfactory to you."

The deputations then withdrew.

Extraordinary Meeting of the Convocation of London University.

An extraordinary meeting of Convocation of the University of London, adjourned from May 8th, 1894, was held at Burlington-gardens on the 22nd inst. The proceedings

occupied not much less than four hours, and the discussions were occasionally somewhat heated. Mr. E. H. Busk, Chairman of Convocation, presided.

Before proceeding to business Professor Sylvanus Thompson expressed the condolence of the University with the Vice-Chancellor, Sir James Paget, in his recent bereavement.

The report of the annual committee having been adopted, Professor THOMPSON moved a resolution to the effect: "That Convocation is of opinion that there should be one university in London and not two; and that the interests of higher education will be best served by such an enlargement and reconstruction of the existing University as will (while retaining its existing powers and privileges, and without interfering with the efficient discharge of its present duties as an examining body for students from all parts of the British Empire) enable it to promote learning, scholarship, and research as a Teaching University for London." In support of his motion Professor Thompson said that the matter resolved itself into the question whether there should be in London two universities or one. Most of the authorities concerned, including King's College, had now acceded to the recommendations of the Gresham Committee. The true function of a university was to provide means and opportunities of education, and not to restrict itself to the mere testing of the knowledge possessed by candidates seeking its degrees. Professor Thompson alluded to a certain class of candidates for the London degrees as "village cobblers."

DR. ALLCHIN seconded the resolution.

MR. BOMPAS, Q.C., moved the following amendment: "That in the opinion of Convocation it is essential that in any enlargement or reconstruction of the University of London its existing powers and privileges should be retained unimpaired, the efficient discharge of its present duties should not be interfered with, and the high standard of its degrees should be maintained." He considered that the proposals of the Gresham Committee would destroy the high and almost unique character of the London University degree. He considered that the creation of a second university would be preferable to the scheme of reconstruction.

MR. T. B. NAPIER, LL.D., seconded the amendment. **DR. SISLEY** and **MR. FLETCHER MOULTON, Q.C.**, having spoken in support of it, Convocation divided, with the result that 206 voted for Professor Thompson's resolution and 175 for the amendment. There was, therefore, a majority of 31 in favour of the resolution.

Professor THOMPSON then moved the second resolution: "That Convocation, while desiring to express generally its approval of the proposals contained in the report of the Royal Commission, is of opinion that power ought to be given to the Statutory Commission to vary the details of the scheme, and that it ought to be made an instruction to the Commissioners, before framing the statutes and regulations, to confer with duly accredited representatives of the Senate and of Convocation as to the modifications which may be desirable."

MR. COZENS-HARDY, M.P., seconded the resolution.

MR. MOULTON, Q.C., moved an amendment condemning the Gresham scheme, which was seconded by **DR. COLLINS** and lost, the numbers being 157 to 133.

Professor THOMPSON then moved the third resolution: "That a special committee of nine members, including the Chairman of Convocation, be nominated to prepare for presentation to the Statutory Commission, when appointed, a memorandum of points in the scheme of the Royal Commission in which modification is desirable, and with power to confer with such said Statutory Commission and with any committee of the Senate."

MR. NAPIER, LL.D., seconded the resolution, which was agreed to, and the business of the extraordinary meeting was shortly afterwards completed.

AN ALLEGED "OYSTER EPIDEMIC" OF TYPHOID FEVER.

IN a sense it is to be deplored that side by side with the perfecting of etiological methods the delicacies of our daily lives should be coming one by one beneath strong suspicion as being at times vehicles by which disease may be communicated; and, if these suspicions should ripen into certainties, some of our daintiest morsels must needs suffer sterilisation in the cooking pot before they can be consumed in a spirit of equality. That the process

of cooking renders much of our food more palatable is a proposition which few would deny, but it will hardly be contended that such is the case with, for instance, water-cress, salads, or oysters. To submit these articles to boiling water, or even to a temperature sufficient to destroy the Eberth-Gaffky bacillus, is equivalent to depriving them of the characteristics in which resides their charm. Still, if the circumstantial evidence attaching to a recent outbreak of typhoid fever is to be allowed the weight which is apparently its due, either our oysters must undergo a process of sterilisation or a stringent supervision must be exercised over the conditions under which oysters are "fattened" and stored for the market. The outbreak referred to occurred at the Wesleyan College, Middletown, Connecticut, and it has been ably reported upon by Professor W. N. Conn.

These are the facts. Between Oct. 20th and Nov. 8th there occurred among the students of the college in question—where, by the way, there were seven separate fraternities—an outbreak of typhoid fever, the acme of which was reached on Nov. 1st. Suspicion in the first instance fell upon the water-supply, but there was no evidence to show that the water was specifically polluted, and the limitation in the distribution of the disease was incompatible with a thesis of water-carriage. It was also found that the lady students of the college were exempt from attack, and this fact, coupled with others, was held to exclude the drainage as a cause of the disease. The origin and distribution of the milk and the general food-supply were carefully scrutinised, but only to be absolved from blame, and it was not possible to trace the outbreak to personal infection; moreover, on analysing the incidence of the disease upon the students it was discovered that, with but three exceptions, the attacks were solely confined to three out of the seven fraternities; and it was noted that the date of onset in the several cases pointed strongly to some single source of infection common to all the members of the three fraternities, who were attacked, be it observed, to the extent of no less than 25 per cent. of their total number. A possible source of infection such as that referred to occurred in the evening of Oct. 12th, when all the fraternities held their annual initiation supper, and by a process of exclusion it was found that the only articles of diet common to the three fraternities attacked and not to the other four were the raw oysters obtained from a certain oyster dealer.

Of the four fraternities who remained free from attack two consumed no oysters at all, one had cooked oysters, and the other obtained their oysters from a separate dealer. It was found, too, that on a thesis of oyster infection two out of the three exceptions to which reference has already been made vanished; both of them had partaken of the oysters in question. This, however, is not all. There were at the feast certain old students who did not reside in Middletown, as also five Yale College students; and as a result of inquiries which were set on foot it was ascertained that, out of the twenty old students concerning whom replies were received, two cases of typhoid fever had occurred simultaneously with those which had developed at the Wesleyan College, and there were also three attacks of an anomalous illness. Among the five Yale students there developed, four weeks from the date of the supper, two cases of typhoid fever, and although this is a long incubation period it can hardly be held to put the supper out of court—more especially when considered in conjunction with the fact that an exactly similar incubation period was observed in one of the Wesleyan College cases.

Curiously enough, too, there occurred at Amherst College an outbreak of typhoid fever at the same time as that which occurred at Middletown, and it was ascertained that not only was there an initiation supper at Amherst on the evening of Oct. 12th, but that the oysters eaten at the feast were from the same source as those supplied to the Wesleyan College.

The suspected oysters were, it appears, taken from the deep water of Long Island Sound, but before being eaten they were deposited for a day or two in a fresh-water estuary to "fatten." Within 400 feet of the spot where these oysters were placed was the outlet of a private sewer, coming from a house in which were two cases of typhoid fever; and although a physician was only called in on Oct. 11th, and the oysters were removed from the estuary on Oct. 10th, it is to be inferred, as Professor Conn remarks, that the two patients had been suffering from typhoid fever and their excreta had passed into the sewer prior to this date.

Specimens of oysters taken from the freshening grounds were forwarded to Dr. Foote of Yale College, and he was

able to demonstrate that if typhoid bacilli were introduced between the valves of the oysters the bacilli remained alive a sufficient length of time to enable the oysters to be transferred to Middletown and be consumed at the banquet. This outbreak is certainly of very considerable interest and importance; and when one has regard to what apparently is a fact, that the typhoid germs remain for a long time alive in sea water, and to the belief that oysters are now and again deposited near to sewage outfalls, the fact that we only now hear of oyster enteric fever is somewhat surprising. Obviously, however, all the factors necessary to bring about infection through oysters can be but rarely present, and by the exercise of some foresight and supervision it will surely be possible to reduce the risk of oyster-eating to a minimum. In any case the result of the investigation of our own Local Government Board into the subject will be awaited with much interest.

REPORTS OF THE ASSISTANT MEDICAL OFFICERS OF THE LONDON COUNTY COUNCIL.

MANY persons actively though not officially engaged in the work of bettering the houses of the poor expressed no small dissatisfaction when, by the Public Health Act (London), 1891, the conduct of local inquiries was transferred from the Home Office and Local Government Board to the London County Council; and there can be no doubt that the moral effect of, and the public interest excited by, a quasi-judicial inquiry held in open court and fully reported in the local press were most wholesome. But since the appointment of two assistants to the medical officer of the Council, able to devote the requisite time to house-to-house inspection and personal verification of the representations made to the Council, a series of careful reports have been drawn up and printed in the familiar form of those of the inspectors of the Local Government Board, and we may well hope that, whether as records of past shortcomings, indications of improvement, or as affording guidance for future progress, their effect will be more enduring than that of the more obtrusive public inquiries. We have before us the three last issued: Dr. Young's report on Deptford and Dr. Hamer's reports on Whitechapel and on Mile End, the bodies on whose representations these inquiries were held having been the Mansion House Council on the Dwellings of the Poor and the Jewish Board of Guardians. Of these, Mile End appears in the most favourable aspect, though probably not less from natural and social advantages than from any greater activity on the part of the sanitary administration, for in addition to the usual complaints of tardy action, insufficient staff, prevalence of nuisances, overcrowding, &c., we note that in none has there been any attempt to enforce or even to adopt regulations as to houses let in lodgings, one of the greatest powers for good possessed by our local authorities. Dr. Hamer, who deals with the social conditions of the inhabitants of these districts more fully than his colleague, makes considerable use of the statistics of Mr. Charles Booth's work, "The Labour and Life of the People"; he has, moreover, been able to give the death-rates when corrected by the factor for age and sex correction, so much needed in a rapidly growing industrial population.

Dr. Hamer touches upon a point of considerable interest in his discussion of the constitution of the Whitechapel population. He quotes from the Board of Trade report on Immigration, 1894, that "the total number of the class with whom we are specially concerned [foreign immigrants] who arrived in London without through tickets to other countries, less those subsequently sent away by sanitary agencies, was in 1891 something over 7000, in 1892 about 3000, and in 1893 rather below this latter number. These figures, then, setting off the early part of this year against that of 1891, have to be added to those of the census to arrive approximately at the numbers for the present time." On the last census night, Dr. Hamer tells us, Whitechapel housed 13,538 Russians and Russian Poles, as compared with 26,742 in the whole of London, and he then proceeds to show that, on the assumption that the new arrivals for settlement during 1891-3 were distributed to Whitechapel in a like proportion, the census figures relating to the

number of such persons in Whitechapel would require to be increased by upwards of 6000 in order to make them applicable to the early part of the year 1894. This statement gives a fair insight into the conditions with which the sanitary Council's medical officer that, "under these circumstances, the authority have to contend, and establishes the claim of the need for a strong sanitary staff is obvious"; but, he points out, "compared with other districts which more nearly approach to it in the character of the population and the condition of the houses, the sanitary staff of Whitechapel is, notwithstanding the recent increase, numerically weak." It is to be hoped that the Whitechapel district board, who evidently have in Mr. Loane a capable and zealous medical officer of their own, will respond to the invitation to strengthen their staff so that it may be better able to cope with the exceptional conditions of their district.

The recommendations of the Council's medical officer as to Mild-end depend upon the need of an increased staff to deal with houses let in lodgings to which we have referred. The report will doubtless strengthen the hands of Mr. Taylor, the medical officer of health, in providing him with the assistance which will be necessary to enforce the by-laws which the sanitary authority are preparing.

Dr. Young's report on Deptford gives graphic descriptions of dilapidated premises and overcrowding. In this district overcrowding was frequently found, and but little effort had been made to inspect workshops; and, further, the need for better organisation of the staff of sanitary inspectors was pointed out. Fortunately the London County Council are armed with considerable powers in the event of failure of sanitary authorities to comply with the Council's reasonable demands, and in respect to these districts the Council are now possessed of ample information to guide them to a safe and just conclusion. It may be expected, however, that the cogency of the arguments in the reports will suffice to lead to those changes which are recommended.

THE MEDICAL PROFESSION AND FREEMASONRY.

WE have been favoured by Mr. R. F. Gould with a copy of the paper bearing the above title,¹ which he read before the Quatuor Coronati Lodge towards the end of last year. It is a remarkable and rare circumstance to find a layman not only couching his lance in defence of, but actually riding into the arena and casting down his gauntlet as champion and herald of, the claims of the medical profession. It has sometimes been ungraciously and ungratefully suggested that our profession as a profession is a little prone to sound its own trumpet. This we are not concerned either to allow or very strenuously to deny. But assuredly medical men—always in their collective, and often and notably in their individual, capacity—render more useful service to their country than the members of any other profession or body of men whatsoever. Not less assuredly do they, in this country at any rate, fail to receive in recognition of that service those high honours and rewards which are bestowed freely on the eminent divine, the barrister learned in the law, or even the successful trader or persistent (and useful-to-his-party) politician. What nation should not be proud to welcome as a member of its Upper House of Parliament a Lister or a Paget, a Jenner or a Reynolds? When, therefore, we find Mr. Gould coming forward to break a lance on our behalf we feel disposed in very gratitude to give to his achievements a little more of our space than the purely general interest to our readers of the subject of Freemasonry would in itself warrant. And as it is probable that there is hardly a local lodge of Freemasons in the country which does not include "the doctor" among its members, whilst most London lodges have many medical "brothers" on their roll (there is one lodge in London—the "Æsculapius"—membership of which is restricted to medical practitioners),² we are glad to give the publicity of

our columns to his researches. It may be well to say here that Mr. Gould is well known as a Masonic student, and is the author of a standard work on the History of Freemasonry, and that the task he has set himself is to prove that the medical profession has distinguished itself more than any other in the service of Symbolical Masonry. He says: "I must show you, if I can, that it is by the influence of brethren who have been, or are, practitioners in medicine or surgery, more than to the members of any other single profession, that Freemasonry has been shaped and moulded into the form, or perhaps it would be best to say the system (or set of systems), in which we now possess it."

It is rather startling to find (and Mr. Gould gives it with due caution as "tradition") that "Noah was a distinguished writer on medicine, and the possessor of a library, which he bequeathed to his son Shem. Shem was also celebrated for his knowledge of the medical art, and so was King Solomon (Story of the Jews, 270)."

He then deals with the Alchemists, Cabbalists, Hermetical Philosophers, and Rosicrucians, and mentions amongst others Avicenna, Averroes, Maimonides, Paracelsus, Hermes Trismegistus, J. P. van Helmont, Robert Fludd, and Michael Maier. It is to be observed that he states it "is a remarkable fact that the leading alchemists of the Middle Ages, or hermetical philosophers, if not actually physicians (as occurred in the majority of instances), were medical writers of weight and reputation." Dealing with "the moderns" in Part II., Mr. Gould writes, referring to the erection of Grand Lodges, of which the first was that of—

"England, established A.D. 1717. The Duke of Montague accepted the Grand Mastership in 1721, and the society rose at a single bound into notice and esteem. The first of our 'Noble Grand Masters' was a Fellow of the Royal College of Physicians (as was also the fourth of the series, the Duke of Richmond). The first Deputy Grand Master was Dr. John Beale, 1721; and the first Initiate—after a Masonic torpor of some duration—was Dr. William Stukeley, whose admission took place in the same year."

It is interesting to note that in the foundation of the three great Masonic charities members of the medical (if we include the dental) profession were intimately concerned—Chevalier Bartholomew Ruspini with that of the Royal Masonic Institution for Girls, Surgeon F. C. (afterwards Sir F. C.) Daniel with that of the Royal Masonic Institution for Boys, and Dr. R. T. Crucefix with that of the Royal Masonic Benevolent Institution. Amongst office-bearers of the Grand Lodge of England since 1813 we note the following names:—John Havers (described as "the greatest Masonic statesman of the century"), Thomas Joseph Pettigrew, three past Presidents of the Royal College of Surgeons of England—viz., Henry Hancock, J. Cooper Forster, and Sir Erasmus Wilson,—Alfred Meadows, and W. Rhys Williams, as well as several members of the profession who are happily still alive.

We need offer no excuse for reproducing the following interesting reference to—

"Edward Jenner, the discoverer of vaccination, who was born at Berkeley, Gloucestershire, in 1749, after studying in London under John Hunter, settled at his native place as a medical practitioner. In the Grand Lodge Register, London book, there appears at the No. 449, and under the year 1792, *Country Stewards Lodge* (constituted July 25, 1793). The last entry is dated 1793, and a memo states—'Removed to Berkeley, Gloucester.' In the *Country book*, and at the same number, 449, will be found, '*Lodge of Faith and Friendship, Berkely, Gloc.*' also the words—'Removed from London.' Among the entries are,

"4. Nov. 1802, Wm. Fitzharding Berkeley, Esq. Viscount Dursley, age 17, Berkly Castle, and
"30 Dec. 1802, Ed. Jenner, M.D., Berkly."

"It would seem probable that Dr. Jenner had been initiated in earlier life, and became one of the first joining members of what was virtually a new Lodge established at the place of his abode?"

Then follows a long but necessarily very incomplete list of living medical Masons. Under Scotland we need only allude to the names of Sir William Fergusson and Sir James Young Simpson. In Ireland we note that many distinguished living members of the profession are Masons. Mr. Gould deals at some length with foreign countries, but space forbids our doing more than recording that it was of an American physician and Mason, Dr. Winslow Lewis, that Oliver Wendell Holmes wrote:—

"You hear that man laugh? You think he's all fun,
But the angels laugh too at the good he has done;
The children laugh loud as they troop at his call,
And the poor man that knows him laughs loudest of all."

In the discussion which followed the reading of the paper the rival claims of the profession of divinity and the army were advanced, but Mr. Gould stuck firmly to his text that "the first place of all, from among the professions, in the

¹ Margate: Printed at "Kehle's Gazette" Office. 1894. [Reprinted from "Ars Quatuor Coronatorum."]

² Curiously enough, a letter from Dr. Dutton, the Secretary of the Æsculapius Lodge, is published in our present issue, which likewise contains an appeal from a distinguished medical Mason, Dr. F. E. Clarke, on behalf of the masonic memorial which is being raised to the late Surgeon-Major Parke.

history and expansion of *Symbolical Masonry*, I submit, must be freely conceded to our medical brethren." We have little criticism to make, but must express our regret that Mr. Gould has made any endeavour to estimate the *professional* work of still living medical men—a task which is quite beyond the province of any layman. The result is sometimes almost comical—for example, a distinguished physician of the London Hospital is set down as "Examiner in Medicine, R.C.S.," *et praterea nihil*. We notice also one or two trivial inaccuracies—such as that a certain brother belongs to a lodge of which we happen to know that he was never a member and the misspelling of Mr. Cooper Forster's name. It would be strange, however, in a work which must have involved such enormous labour and research if a few slight errors had not occurred. On behalf of the medical profession we tender thanks to the author for the pains he has taken to support their claims in connexion with Freemasonry.

SMALL-POX IN OLDHAM IN 1893.

THE last report by Dr. Niven in his capacity of medical officer of health for the borough of Oldham has just been issued, and though late in appearing, having reference to 1893, it is not without present interest. The section wherein the epidemic of small-pox is treated in its relationships with vaccination and with the Westhulme Small-pox Hospital is especially of interest just now. The cases of that disease treated in the hospital during 1893 were 638 in number, and of these 403 came from the several wards of the borough, and other 167 and 41 respectively from the adjacent local board districts of Chadderton and Royton. The borough cases yield an attack rate of nearly 30 per 10,000 of estimated population, and the 41 deaths a mortality rate of 3 per 10,000 living. The epidemic was a continuance of the prevalence of 1892, during which year 75 cases came to the knowledge of the medical officer of health. The prevalence of 1892 could be assigned to three causes—namely, the potency for harm of the Westhulme Hospital, the prejudice existing against vaccination, and the non-recognition of mild cases of the disease.

In regard to vaccination the hospital data for 1893 are very striking, as the following statement shows. Among the 638 cases there were 64 deaths, a mortality rate of 10 per cent. of attacks; but this rate was made up of 3·6 among the 472 vaccinated patients, of whom 17 died; and of 27·6 among the 156 unvaccinated patients, of whom 43 died. Of 10 cases "doubtful" as to vaccination 4 proved fatal. Stated in age periods the figures run thus:—

Hospital Cases.

At ages—	Admitted.		Died.		Mortality per cent. of attacks.	
	Vacci- nated.	Not vacci- nated.	Vacci- nated.	Not vacci- nated.	Vacci- nated.	Not vacci- nated.
0 to 5	14	56	1	18	7·1	32·1
5 to 15	35	115	0	9	0·0	15·3
15 to 25	152	16	3	5	2·0	31·2
25 to 35	155	21	4	7	2·6	33·3
35 to 45	79	3	5	3	6·3	100·0
45 and upwards.	37	1	4	1	10·8	100·0
Totals at all ages	472	156	17	43	3·6	27·6

Dr. Niven well says that the figures are unmistakable in their significance. Without the differentiation of the vaccinated class among primary and revaccinations, which is wanting in the report, we see small-pox among the unvaccinated as compared with the vaccinated nearly eight times as fatal at all ages and nearly twelve times as fatal in the first fifteen years of life. The remaining data speak for themselves.

As regards hospital influence, Dr. Niven, proceeding on the same lines as in 1892, has arrived at the following figures, which represent the number of cases of small-pox in each 100 houses around the Westhulme Small-pox Hospital: quarter-mile zone round hospital, 12·9; between quarter and half-

mile zone, 6·6; half-mile and three-quarter mile zone, 2·0; three-quarter and one mile zone, 1·5; outside the mile radius, 0·8. The steadily diminishing incidence of small-pox is well marked as the distance from the hospital increases. If the outside radius attack rate be taken as unity, the several quarter-mile radii become 1·9, 2·5, 8·2, and 16·1 as we approach the institution. The effect thus attributed to the hospital is not to be looked upon merely as a continuance of the heavy incidence arising out of the 1892 prevalence and to be accounted for by the spread of the disease by personal infection or the like, since, among other things, there has been much more vaccination practised in the vicinity of the hospital than in other parts of the town; whilst on the removal of acute cases outside the town towards the close of 1893 attacks ceased to occur near the hospital, and the disease speedily died out entirely. We can add the testimony of Oldham in 1893 to the evidence now so largely accumulating to show the potency for harm of small-pox hospitals upon adjacent populations. The need for vaccination and revaccination of such—and, indeed, all—populations is no less evident.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Dr. H. T. Bulstrode's Report on the Sanitary Condition of the Village of Linslade, and on Diphtheria there.—The village of Linslade, which had in 1891 a population of 1982, is described as within the Leighton Buzzard rural district, contiguous to the town of that name, and as really urban in character. But though urban in type it lacks all the requirements of an urban district. The water-supply is from local wells, which, though of some depth, are dry-stained, and are placed in such relation to privies and other sources of filth that, according to Mr. Sandell, the medical officer of health, three-fifths of them are polluted. And Dr. Bulstrode takes occasion to say that Mr. Sandell is an energetic and an accurate officer. The sewerage of Linslade involves the humorous fact that, though glazed pipe sewers of nine-inch and fifteen-inch glazed ware were laid some thirty years ago, no one could find them, and Dr. Bulstrode, having sought some external evidence of their situation, can only say that in so far as the ordinary visible means of ventilation, inspection, and flushing are concerned these do not exist. But the two streams in Linslade are exceptionally foul, and they are admitted to have been the cause of well-nigh endless complaints because they have been turned into open sewers. Of closet arrangements the only good thing that can be said is that in those cases where pall-closets are resorted to, and these are replacing the vault privies, a scavenger does the cleansing, and removes the contents. In 1894 there were thirty-three cases of diphtheria in twenty-four houses in Linslade, and school operations served largely to extend the disease, school closure being freely resorted to in order to control its diffusion. The description given by Dr. Bulstrode as to Linslade and the surroundings of the houses is by no means complimentary to the sanitary authority and their administration of the place; and he tells the local sanitary authority, through his official report, that "it is difficult to see how, in view of his multitudinous duties," the inspector of nuisances, competent as he may be, "is able to devote proper attention to the Leighton Buzzard rural sanitary district."

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Lancaster County Sanitary District.—Some idea of the urban character of the county may be gathered from the fact that Mr. Edward Sergeant, the county medical officer of health, has received reports from district medical officers of health representing 112 urban and 23 rural districts. Two local authorities have failed to furnish reports to the County Council, and Mr. Sergeant suggests that the Local Government Board should be communicated with on the subject. We are sorry to hear from Mr. Sergeant that "there is evidence of an increasing tendency on the part of medical officers of health to modify the vital statistics of their districts by the undue exclusion of deaths." It appears that a very considerable number of deaths which took place in the county have

not been accounted for in the reports of medical officers of health. Mr. Sergeant has done well to call attention to this omission. The infantile mortality in many parts of the county was exceptionally high during 1893, more especially in some of the colliery districts; Mr. Sergeant remarks that the latter fact suggests that the conditions incidental to the late coal strike may have had some influence either directly or indirectly in bringing about the increased infantile mortality, and this opinion seems to be shared by several of the district medical officers of health. Mr. Sergeant thinks that section 17 of the Factory and Workshop Act (1891), which prohibits the employment of women within four weeks of childbirth, should have a very salutary effect, but he adds that so far no information has come beneath his notice as to the working of this section. In relating the history of small-pox in the county Mr. Sergeant refers to the fact that in the districts of Chadderton and Failsworth the introduction of small-pox was attributed to infection conveyed from the Westhulme Hospital belonging to the corporation of Oldham. Dr. Patterson of Chadderton states in his annual report that during the two months in which the Westhulme Hospital remained free from acute small-pox not a single case occurred in Chadderton. Mr. Sergeant quotes figures from the report of the Local Government Board (1892-93), showing how the Vaccination Acts are carried out in the several districts in Lancashire. The proportion of children not finally accounted for as regards vaccination varies from 74.4 per cent. in the Oldham Union to only 1.8 per cent. in the Bolton Union. In connexion with phthisis Mr. Sergeant remarks that, although the notification of the disease may be theoretically desirable, there are several practical objections to the way of carrying it into effect, and he points out that for the present the efforts of sanitary authorities can be properly directed to the amelioration of those conditions tending to favour the development of the disease. Eighty-four per cent. of the population of the county is, Mr. Sergeant states, protected by the provision of compulsory notification. Prestwich during 1893 added measles to its list of notifiable diseases, but Clayton-le-Moors relinquished it "from a financial point of view." In referring to the Isolation Hospitals Act, 1893, Mr. Sergeant remarks that "the necessity of separate hospitals specially isolated for the treatment of small-pox emphasises the importance of combination." The Housing of the Working Classes Act, 1890, does not seem to be carried out with much energy in Lancashire, and Mr. Sergeant tells us that comparatively few inspections are reported to have been made under the Act. Dairies, cowsheds, and milkshops do not, it appears, receive sufficient supervision in this county, and in some districts they are entirely ignored. Dwellers in manufacturing districts will read with pleasure the following extract from the report before us: "Private enterprise at Chadderton and Middleton has proved successful in reducing the smoke nuisance in those districts, and the fact has been effectually demonstrated that with boiler furnaces properly constructed the complete abolition of smoke is quite possible." A summary of the several district reports is given by Mr. Sergeant, and at the close of his report are full statistical tables.

Sheffield Urban Sanitary District.—The corrected death-rate of Sheffield during 1893 was 24.01 per 1000, a slight increase on the preceding year. The fluctuations in the infantile mortality for the last six years are shown below:—

Year.	Per 1000 births.	Year.	Per 1000 births.
1888	179	1891	170
1889	170	1892	167
1890	195	1893	193

After carefully studying the distribution of enteric fever in Sheffield Dr. Harvey Littlejohn reports that there is a comparative freedom from the disease in those parts where waterclosets are in use, whereas in those portions of his district where midden privies are in vogue there is frequent recurrence of the disease, more especially in yards and houses using a midden privy in common; in fact, Dr. Littlejohn tells us that he hopes to be able to show at a future date that enteric fever has often reappeared year after year in the yards and localities where the midden has once received the discharge of an infected person. Dr. Littlejohn refers to the great difficulty of ensuring proper disinfection of excreta in the houses of the ignorant poor and to the impossibility of efficiently disinfecting a capacious midden privy. He also lays stress on the desirability of hospital isolation in typhoid

fever. Six deaths were registered in Sheffield as due to plumbism during 1893, but five out of the six were brought in contact with the metal in their employment, and the sixth acquired the disease five years ago, apparently from the water as then supplied to Sheffield. The notification of erysipelas is, Dr. Littlejohn considers, of doubtful value, and he has not met with any instances where the disease spread from the infected person to members of the same family. It has been resolved to erect a separate small-pox hospital for thirty-two beds, but apparently further isolation accommodation will be required before long. It is very gratifying to learn that since higher salaries have been given to sanitary inspectors and more experienced men obtained the routine work in dealing with the abatement of nuisances has been carried on with less friction. In the matter of smoke prevention steady improvement appears to be taking place from year to year, and the following figures show the average number of minutes per hour during which black smoke has been observed since 1889:—

Year.	Minutes.	Year.	Minutes.
1889	11.0	1892	5.2
1890	7.0	1893	2.8
1891	6.3		

Under Part II. of the Housing of the Working Classes Act, 1890, thirty-six houses were condemned during 1893 as unfit for human habitation, and under Part I. Dr. Littlejohn received an official representation from twelve ratepayers as to a crowded and insanitary area in the centre of the town. He was able to demonstrate that the mortality-rate in the area referred to was much in excess of those in the borough as a whole, and an improvement scheme has been prepared for dealing with the area in question.

Glamorgan County Sanitary District.—Only a small proportion of the district reports in this county are printed, and there is, we regret to say, little or no improvement in this direction since 1892. It is somewhat a serious reflection upon the local authorities that they do not evince sufficient interest in the sanitary affairs of their district to wish even to peruse the reports of their medical officers of health. Dr. W. Williams, the county medical officer of health, remarks that there is a want of uniformity in certain reports as to the calculation of zymotic death-rates, some medical officers of health including influenza and erysipelas, others excluding diarrhoea. It appears, too, that in some districts proper allowances are not made for deaths in public institutions in calculating the vital statistics. Weekly returns of notifiable infectious diseases are made to Dr. Williams and the complete list is issued by him to all the district medical officers of health. Since Dr. Williams's appointment he has made a sanitary survey of the whole administrative area, so that he is well informed as to the general sanitary condition of the county. The general death-rate for the urban districts was during 1893 19.2 and for the rural districts 19.1 per 1000. There was, however, considerable discrepancy between the urban and rural districts in the matter of infantile mortality, the rate for the former being 168.4 per 1000 births, as against 135 for the latter. Dr. Williams urges upon the Glamorgan County Council the desirability of following the examples of such county councils as have established lectures for sanitary inspectors in their respective counties. Diphtheria and croup are, it seems, but little known in Glamorgan and are confined to certain districts. Puerperal fever caused 67 deaths in this county during 1893, the case mortality being 72.8 per cent., and Mr. Dyke, one of the district medical officers of health, very properly calls attention to the danger caused by midwives laying out the bodies of dead persons while they are attending to their usual duties. Dr. Williams has recently presented to the county council a report embodying returns from several of the local authorities as to isolation accommodation and the action taken under the Housing of the Working Classes and the Rivers Pollution Prevention Acts. The returns in several instances are far from satisfactory. In the return as to the Housing of the Working Classes Act we see that in some places the Act has not been "adopted."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6809 births and 4407 deaths were registered during the week ending Jan. 19th. The annual rate of mortality in these towns, which had increased in the preceding three weeks from 18.0

to 20.1 per 1000, further rose last week to 21.7. In London the rate was 20.0 per 1000, while it averaged 22.9 in the thirty-two provincial towns. The lowest rates in these towns were 12.9 in Plymouth, 14.4 in Cardiff, 15.1 in Leicester, 17.9 in Nottingham, and 18.9 in Birkenhead; the highest rates were 27.9 in Birmingham, 28.3 in Liverpool, 29.3 in Bolton, 30.7 in Sunderland, and 33.4 in Wolverhampton. The 4407 deaths included 338 which were referred to the principal zymotic diseases, against 399 and 363 in the preceding two weeks; of these, 96 resulted from measles, 66 from whooping-cough, 63 from diphtheria, 49 from diarrhoea, 36 from "fever" (principally enteric), 25 from scarlet fever, and 3 from small-pox. No fatal case of any of these diseases occurred last week in Halifax; in the other towns they caused the lowest death-rates in Nottingham, Cardiff, Bristol, and Sheffield, and the highest rates in Croydon, Sunderland, Newcastle-upon-Tyne, Salford, and Gateshead. The greatest mortality from measles occurred in Plymouth, Newcastle-upon-Tyne, Leeds, Portsmouth, and Gateshead; and from whooping-cough in Newcastle-upon-Tyne, Blackburn, and Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 63 deaths from diphtheria included 31 in London, 6 in Birmingham, 4 in West Ham, and 3 in Liverpool. Two fatal cases of small-pox were registered in Birmingham, and 1 in London, but not one in any other of the thirty-three large towns. There were 33 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 19th inst., against 16, 23, and 28 at the end of the preceding three weeks; 6 new cases were admitted during the week, against 8 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1653, against 1890, 1779, and 1713 on the preceding three Saturdays; 154 new cases were admitted during the week, against 116, 128, and 130 in the preceding three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 319 and 389 in the preceding two weeks, further rose last week to 399, but were as many as 362 below the corrected average. The causes of 82, or 1.9 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bolton, Newcastle-upon-Tyne, and in six other smaller towns; the largest proportions of uncertified deaths were recorded in West Ham, Salford, Burnley, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21.8 and 25.5 per 1000 in the preceding two weeks, further rose to 28.3 during the week ending Jan. 19th, and exceeded by 6.6 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13.7 in Perth and 21.0 in Aberdeen to 31.0 in Glasgow and 31.8 in Greenock. The 817 deaths in these towns included 45 which were referred to measles, 19 to whooping-cough, 12 to diarrhoea, 9 to diphtheria, 7 to scarlet fever, 5 to "fever," and 3 to small-pox. In all, 100 deaths resulted from these principal zymotic diseases, against 81 and 113 in the preceding two weeks. These 100 deaths were equal to an annual rate of 3.5 per 1000, which exceeded by 1.8 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 38 and 58 in the preceding two weeks, declined to 45 last week, of which 24 occurred in Glasgow, 13 in Edinburgh, and 6 in Aberdeen. The 19 deaths referred to whooping-cough corresponded with the number in the preceding week, and included 13 in Glasgow and 3 in Greenock. The fatal cases of diphtheria, which had been 4, 11, and 14 in the preceding three weeks, declined again to 9 last week, of which 3 occurred in Edinburgh and 3 in Leith. The deaths from scarlet fever, which had been 8 and 6 in the preceding two weeks, were 7 last week, and included 2 in Glasgow and 2 in Aberdeen. Of the 5 deaths referred to different forms of "fever," 3 occurred in Glasgow; and of the 3 fatal cases of small-pox 2 were registered in Edinburgh and 1 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 154 and 215 in the preceding two weeks, further rose to 235 last week, and exceeded by 85

the number in the corresponding period of last year. The causes of 62, or nearly 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 25.4 to 31.0 per 1000 in the preceding three weeks, further rose to 40.9 during the week ending Jan. 19th, a higher rate than in any week since January, 1894. During the past three weeks of the current quarter the death-rate in the city has averaged 33.4 per 1000, against 18.9 in London and 24.5 in Edinburgh. The 274 deaths registered in Dublin during the week under notice showed an increase of 66 upon the number in the previous week, and included 23 which were referred to the principal zymotic diseases, against 10 and 19 in the preceding two weeks; of these, 10 resulted from small-pox, 4 from whooping-cough, 4 from "fever," 4 from diarrhoea, 1 from scarlet fever, and not one either from measles or diphtheria. These 23 deaths were equal to an annual rate of 3.4 per 1000, the zymotic death-rate during the same period being 1.7 in London and 4.9 in Edinburgh. The fatal cases of small-pox, which had been 5 and 11 in the preceding two weeks, were 10 last week. The deaths referred to different forms of "fever," which had been 2 and 3 in the preceding two weeks, further rose to 4 last week. The 4 fatal cases of whooping-cough also showed a further increase upon those recorded in recent weeks. The 274 deaths registered in Dublin last week included 41 of infants under one year of age and 80 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those recorded in any recent week. Five inquest cases and 6 deaths from violence were registered; and 102, or more than a third, of the deaths occurred in public institutions. The causes of 27, or nearly 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING 1894.

COMPLETE statistics relating to sickness and mortality during the year 1894 in each of the forty-three sanitary districts of London are summarised in the accompanying table. The mortality statistics relate to the deaths of persons actually belonging to the various sanitary districts, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary districts in which the patients had previously resided. With regard to the notified cases of infectious diseases in London during 1894, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 9.4 per 1000 of the population, estimated at 4,349,166 persons in the middle of the year. In the preceding two years the rates were 10.8 and 15.7 per 1000 respectively. Among the various sanitary districts the lowest rates were 5.1 in St. Martin-in-the-Fields and in Strand, 5.5 in Stoke Newington, 5.6 in Westminster, 5.7 in City of London, 6.2 in Hampstead and St. Giles, and 6.4 in St. James Westminster; the highest rates were 11.5 in Marylebone, 11.7 in Plumstead, 12.1 in Greenwich, 12.2 in Bethnal-green, 12.5 in Limehouse, 12.6 in St. George-in-the-East, 12.9 in Poplar, and 15.9 in Rotherhithe. The prevalence of small-pox in London showed a marked decline during 1894, the cases notified being 1192, against 423 and 2813 in the preceding two years; of these, 308 belonged to Marylebone, 113 to Poplar, 97 to St. Pancras, 85 to Bethnal-green, 84 to Islington, 45 to Mile End Old Town, 40 to Fulham, and 36 to Hackney. The number of small-pox patients admitted into the Metropolitan Asylum Hospitals during 1894 was 1234, and 16 remained under treatment at the end of the year. The prevalence of scarlet fever in London during 1894 showed a very marked decline, 18,446 cases being notified, against 36,901 during 1893; this disease was proportionally most prevalent in Limehouse, Mile End Old Town, Rotherhithe, Battersea, Greenwich, Woolwich, and Plumstead sanitary areas. During the year under notice 11,767 scarlet fever patients were admitted into the Metropolitan Asylum Hospitals; the number under treatment, which had been 2872 at the beginning of the year, was 1865 at the end of December last. Diphtheria also showed decreased prevalence during 1894, the cases notified being 11,186, against 5907, 8349, and 13,694 in the preceding three years; this disease showed the highest proportional prevalence in Bethnal Green, St. George-in-the-East, Limehouse, Mile End

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING 1894.
(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1894.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths of infants under one year to 1000 births.				
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other con- tinued fevers.	Puerperal fever.	Krysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping- cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhoea.		Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.
LONDON..	4,249,166	1192	18,446	11,186	21	3360	163	253	6060	21	40,721	9.4	89	3391	961	2637	2094	5	608	13	1769	11,467	2.6	75,424	17.4	143
West Districts.																										
Paddington	121,583	28	298	393	—	71	3	5	123	—	901	7.4	3	66	14	93	45	—	19	—	49	289	2.4	1826	15.1	137
Kennington	167,350	17	355	219	—	87	8	8	186	—	971	5.8	—	111	22	77	58	—	21	—	57	349	2.1	2647	15.9	173
Hammer-smith	105,698	10	330	189	—	54	4	6	96	—	687	6.5	—	161	33	50	59	—	15	—	47	236	2.4	1712	16.2	147
Fulham	110,993	40	535	344	—	38	1	9	115	—	1082	9.8	—	161	33	106	60	—	12	—	57	425	3.8	1897	17.1	149
Chelsea	99,052	14	318	251	—	92	1	10	142	—	829	8.4	—	70	16	52	38	—	14	—	33	224	2.3	1619	16.4	131
St. George Hanover-square	75,033	11	257	106	—	66	4	1	52	—	497	6.6	—	31	11	19	21	—	9	—	10	108	1.4	1068	14.5	115
Westminster	54,414	3	148	73	—	46	2	1	33	—	302	5.6	—	35	7	28	7	—	5	—	14	52	2.0	991	18.3	138
St. James Westminster	23,571	—	59	38	—	24	—	—	23	—	150	6.4	—	13	—	15	—	—	8	—	—	—	2.2	393	16.7	144
North Districts.																										
Marylebone	138,554	308	560	287	1	151	6	10	261	—	1584	11.5	29	88	40	73	40	—	23	—	35	328	2.4	2652	19.3	130
Hamstead	75,443	18	232	99	—	49	1	5	66	—	470	6.2	3	31	10	19	26	—	6	—	8	104	1.4	798	10.6	113
St. Pancras	233,739	97	1274	511	1	200	7	12	468	1	2566	11.0	8	95	51	118	115	1	38	—	84	510	2.2	4256	18.3	145
Islington	331,900	84	1512	882	1	287	2	24	410	—	3167	9.6	3	204	69	221	195	—	36	—	119	847	2.6	5216	15.9	130
Stoke Newington	34,172	3	92	54	—	16	—	1	23	—	189	5.5	1	2	—	5	8	—	3	—	5	29	0.9	334	9.8	86
Hackney	211,493	36	1030	581	—	195	9	14	265	—	2130	10.1	1	186	57	122	68	—	38	—	82	534	2.6	3241	15.4	127
Central Districts.																										
St. Giles	38,144	7	87	43	1	34	—	—	63	—	235	6.2	1	15	2	14	27	—	8	—	11	78	2.1	757	19.9	132
St. Martin-in-the-Fields	13,783	1	21	17	—	15	1	—	15	—	70	5.1	—	16	1	6	6	—	2	—	4	27	2.0	243	19.4	210
Strand	23,179	8	56	29	—	29	—	—	77	—	117	5.1	—	23	—	9	21	—	7	—	8	62	2.7	524	22.7	179
Holborn	32,438	9	80	72	—	29	—	4	101	—	266	8.2	—	43	—	20	38	—	8	—	10	81	2.5	600	20.4	180
Clerkenwell	65,312	7	223	162	—	66	—	—	95	—	363	8.7	—	13	10	34	38	—	3	—	35	174	2.7	1243	19.1	145
St. Luke	41,168	16	124	64	—	31	—	1	42	—	315	7.7	—	14	9	6	11	—	6	—	26	87	2.1	945	23.5	123
City of London	54,532	1	80	43	—	—	—	—	42	—	198	5.7	—	3	—	—	—	—	—	—	4	39	1.1	679	19.5	160
East Districts.																										
Shoreditch	123,186	29	436	302	2	80	3	5	198	—	1103	9.0	2	69	28	75	93	—	12	—	70	350	2.8	2450	19.9	160
Bethnal Green	129,940	85	512	559	—	146	7	8	262	1	1582	12.2	5	135	27	133	70	—	27	—	60	457	3.5	2642	20.4	151
Whitechapel	75,498	11	269	181	—	36	—	7	99	—	603	8.0	—	66	23	46	52	—	10	—	34	231	3.1	1613	21.4	154
St. George-in-the-East	45,560	5	219	206	—	62	—	3	72	—	538	12.6	—	49	18	51	41	—	6	—	59	224	5.0	1196	26.4	185
Limehouse	57,000	9	376	194	—	45	2	4	83	—	712	12.5	1	93	33	51	27	—	8	—	31	244	4.3	1403	24.1	174
Mile End Old Town	108,242	45	578	347	—	79	—	4	163	—	1216	11.3	1	157	37	82	74	—	13	—	70	439	4.1	2281	21.1	156
Poplar	170,217	113	799	692	—	212	12	8	361	—	2197	12.9	10	214	40	108	77	—	31	—	68	549	3.2	3225	19.0	153
South Districts.																										
St. Saviour Southwark	26,712	2	103	90	—	8	—	1	34	—	238	8.9	—	46	6	20	9	—	2	—	4	87	3.3	560	21.0	145
St. George Southwark	60,060	15	287	185	—	29	—	6	75	—	585	9.8	—	80	17	49	27	—	5	—	39	327	3.6	1394	23.1	186
Newington	118,512	15	549	325	—	86	—	—	174	—	1155	9.8	2	103	19	61	75	—	14	—	53	217	2.8	2569	20.0	158
St. Olave Southwark	12,984	—	34	28	—	6	—	—	17	—	85	6.6	—	19	4	3	7	—	—	—	3	36	2.8	288	20.7	128
Bermondsey	84,053	8	391	268	—	51	—	1	94	—	816	9.7	1	79	23	66	51	—	16	—	42	279	3.3	1734	20.7	146
Rotherhithe	40,365	7	330	150	—	25	—	—	116	—	639	15.9	—	181	64	31	109	—	2	—	32	134	3.3	764	19.0	161
Lambeth	282,574	26	1173	621	3	257	50	16	307	13	2439	8.8	—	181	64	141	109	—	46	—	134	676	2.4	4845	17.2	133
Battersea	161,558	12	834	505	—	136	—	13	299	2	1845	11.2	—	151	32	116	75	—	28	—	83	493	3.1	2573	16.0	146
Wandsworth	179,518	3	674	354	—	131	—	20	247	1	1442	8.1	—	75	20	80	55	—	21	—	101	317	1.8	2224	12.4	114
Camden	248,893	16	933	718	2	127	12	16	328	2	2141	8.6	—	186	46	192	137	—	22	—	64	687	2.8	4045	16.3	148
Greenwich	173,128	25	1053	578	—	164	3	17	257	—	2097	12.1	—	144	59	132	112	—	32	—	101	540	3.1	2576	17.2	138
Lewisham (excluding Penge)	79,903	7	258	153	—	46	—	3	106	—	562	7.3	—	39	12	30	35	—	14	—	24	110	2.6	753	13.8	128
Woolwich	42,309	14	238	49	—	13	—	3	32	—	351	8.3	—	39	22	14	12	—	6	—	16	64	2.1	712	12.5	94
Lee	36,172	9	180	46	—	24	—	—	25	—	287	7.5	—	21	7	21	30	—	3	—	8	124	2.1	736	12.5	—
Plumstead	58,233	22	461	120	—	23	—	—	63	—	692	11.7	—	21	23	36	—	—	—	—	—	—	—	—	—	—
Port of London	—	7	18	5	—	13	—	—	2	—	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

† Including deaths from membranous group.

* Including 535 cases of membranous group.

Old Town, Poplar, St. Saviour Southwark, Bermondsey, Rotherhithe, and Greenwich sanitary areas. The Metropolitan Asylum Hospitals contained 293 patients at the beginning of 1894; 4128 new cases were admitted during the year, and 521 remained under treatment at the end of December last. Enteric fever was slightly less prevalent during the year under notice than in 1893; this disease was proportionally most prevalent in Bethnal Green, St. George-in-the-East, and Poplar. The number of enteric fever patients in the Metropolitan Asylum hospitals, which had been 103 at the beginning of 1894, was 104 at the end of December last; 675 patients were admitted during the year, against 623 and 734 in the preceding two years. Erysipelas showed the highest proportional prevalence in St. Pancras, St. Luke, Bethnal Green, Poplar, and Rotherhithe sanitary areas. The 253 notified cases of puerperal fever showed a decline of 144 from the number in the previous year; 24 belonged to Islington, 20 to Wandsworth, 17 to Greenwich, 16 to Lambeth, and 16 to Camberwell sanitary areas.

During the year under notice the deaths of 75,434 persons belonging to London were registered, equal to a rate of 17.4 per 1000, against 21.1, 20.3, and 20.9 in the preceding three years 1891-92-93. This rate was considerably lower than in any year on record, the nearest approach to so low a rate having been 18.0 in 1889. In the nine preceding years the London death-rate averaged 20.1 per 1000. In the various sanitary areas the lowest death-rates were 9.8 in Stoke Newington, 10.6 in Hampstead, 12.4 in Wandsworth and in Lee, 12.5 in Plumstead, 13.8 in Lewisham (excluding Penge), and 14.5 in St. George Hanover-square; the highest rates were 21.1 in Mile End Old Town, 21.4 in Whitechapel, 22.7 in Strand, 23.1 in St. George Southwark, 23.5 in St. Luke, 24.7 in Limehouse, and 26.4 in St. George-in-the-East. Taking the five groups of sanitary areas the rate of mortality during 1894 was equal to 16.1 per 1000 in the West, 16.2 in the North, 16.7 in the South, 20.5 in the Central, and 20.9 in the East districts. To the principal zymotic diseases 11,647 deaths were referred during the year under notice; of these, 3291 resulted from measles, 2637 from diphtheria, 2094 from whooping-cough, 1769 from diarrhoea, 961 from scarlet fever, 626 from different forms of "fever" (including 5 from typhus fever, 608 from enteric fever, and 13 from simple and ill-defined forms of fever), and 89 from small-pox. These 11,467 deaths were equal to an annual rate of 2.6 per 1000, against 2.3, 2.8, and 3.0 in the preceding three years 1891-92-93. Among the various sanitary areas the zymotic death-rates ranged from 0.9 in Stoke Newington, 1.1 in the City of London, 1.4 in St. George Hanover-square and in Hampstead, 1.7 in Lee, 1.8 in Wandsworth, and 1.9 in Lewisham, to 3.5 in Bethnal Green, 3.6 in St. George Southwark, 3.8 in Fulham, 4.1 in Mile End Old Town, 4.3 in Limehouse, and 5.0 in St. George-in-the-East. The 89 fatal cases of small-pox registered in London during 1894 were less than half the corrected average number in the preceding ten years; of these, 29 belonged to Marylebone, 8 to St. Pancras, 5 to Bethnal Green, 4 to Mile End Old Town, and 10 to Poplar sanitary areas. The 3291 deaths referred to measles were 659 above the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Limehouse, Mile End Old Town, Poplar, St. Saviour Southwark, St. George Southwark, and St. Olave Southwark. The 961 fatal cases of scarlet fever were 140 below the corrected average; this disease was proportionally most fatal in Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Greenwich, and Woolwich sanitary areas. The 2637 deaths referred to diphtheria were as many as 1150 above the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in Paddington, Fulham, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, St. George Southwark, Bermondsey, and Camberwell sanitary areas. The 2094 fatal cases of whooping-cough were 762 below the corrected average; this disease was proportionally most fatal in St. Giles, Strand, Shoreditch, Whitechapel, and St. George-in-the-East sanitary areas. The 626 deaths referred to different forms of "fever" were 68 below the corrected average; the highest "fever" death-rates were recorded in St. James Westminster and in Strand sanitary areas. The 1769 fatal cases of diarrhoea were little more than half the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in St. Luke, St. George-in-the-East, Mile End Old Town,

St. George Southwark, and Rotherhithe. In conclusion, it may be stated that the mortality from measles and from diphtheria showed a marked excess in London last year, while that from each of the other principal zymotic diseases was below the average.

Infant mortality in London last year, measured by the proportion of deaths under one year of age to registered births, was equal to 143 per 1000, and was considerably below the average. The rates of infant mortality in the various sanitary areas ranged from 86 in Stoke Newington, 94 in Lee and in Plumstead, 113 in Hampstead, 114 in Wandsworth, and 115 in St. George Hanover-square, to 174 in Limehouse, 179 in Strand, 180 in Holborn, 185 in St. George-in-the-East, 186 in St. George Southwark, and 210 in St. Martin-in-the-Fields.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN HALL has been posted to the North-Western and Surgeon-Captain Forde to the North-Eastern district on return from abroad. The following officers have arrived from India in the *Dilmara* on completion of a tour of service:—Surgeon-Majors Roche and Lewis and Surgeon-Captain Thacker. Surgeon-Major O'Sullivan has arrived in England from the Straits Settlements; Surgeon-Major Pike from Ceylon; and Surgeon-Captain Stiell from Egypt. Surgeon-Captain Kelly has embarked for Halifax. Surgeon-Captain Austin has been posted to Devonport on return from foreign service, and Surgeon-Captain Barefoot to Portsmouth, on exchange from Canada.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Lewis Allen Irving to be Brigade-Surgeon-Lieutenant-Colonel, vice W. H. B. Clapp, M.D., retired.

INDIA AND THE INDIAN MEDICAL SERVICES.

The undermentioned officers of the Army Medical Staff, who are shortly expected to arrive in India from England, have been posted to the Bombay Command in succession to the officers named:—Surgeon-Lieutenant T. P. Jones, in succession to Surgeon-Captain R. Holyoake; Surgeon-Lieutenant E. W. Slayter, in succession to Surgeon-Major C. A. Webb; and Surgeon-Lieutenant C. O'Connor Hodgins, in succession to Surgeon-Captain S. F. Clark. Surgeon-Captain C. W. Johnson is appointed to the Collateral Charge of the Civil Surgeoncy, Meiktila, vice Surgeon-Captain T. W. Stewart, transferred. Brigade-Surgeon-Lieutenant-Colonel J. D. Gunning, A.M.S., having been permitted, as a special case, to return to England, tour expired, during the trooping season of 1894-95, will be detailed by the Principal Medical Officer H.M.'s Forces in India for duty with troops on the homeward voyage. The Queen's approval of the retirement from the Service of the undermentioned officers appears in the *London Gazette* of Jan. 18th: Surgeon-Lieutenant-Colonel Herbert Boyd, Bengal Medical Establishment; Surgeon-Lieutenant-Colonel Thomas Charles Howell Spencer, Madras Medical Establishment; Surgeon-Lieutenant-Colonel Patrick Murphy, M.D., Bombay Medical Establishment.

NAVAL MEDICAL SERVICES.

The following appointments are notified:—Surgeons and Agents F. J. Spilsbury at Anderly and Chapel, and Geoffrey Cross at Skegness.

VOLUNTEER CORPS.

Artillery: 1st Forfarshire: The undermentioned Gentlemen to be Surgeon-Lieutenants:—George Halley, M.B., and David Allan Carruthers, M.B. 1st Devonshire (Western Division, Royal Artillery): Surgeon-Captain John Tubb Thomas is appointed Captain. 1st Newcastle-on-Tyne (Western Division, Royal Artillery): Surgeon-Captain J. E. Norman resigns his commission. *Rifle*: 1st Volunteer Battalion, the Manchester Regiment: Surgeon-Lieutenant H. E. H. Matthews resigns his commission. 2nd Volunteer Battalion, the Highland Light Infantry: Surgeon-Lieutenant W. Sandeman, M.B., to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: John Robert Whait, M.B., to be Surgeon-Lieutenant.

VOLUNTEER OFFICERS' DECORATION.

The Queen has been pleased to confer the Volunteer

Officers' Decoration upon the undermentioned Officers of the Volunteer Force, who have been duly recommended for the same under the terms of the Royal Warrant, dated July 25th, 1892:—*North-Western District*: 2nd Volunteer Battalion, the Worcestershire Regiment: Surgeon and Honorary Surgeon-Major William Smith Batten, M.D., retired. *Western District*: 4th Volunteer Battalion, the Devonshire Regiment: Surgeon-Lieutenant Ezekiel Rouse. *Home District*: Rifle: 3rd Volunteer Battalion, the East Surrey Regiment: Surgeon-Major William Adolphus Fredk. Bateman. 1st Tower Hamlets Rifle Corps: Surgeon and Honorary Surgeon-Major John Hayball Paul, M.D., retired.

THE POST OF PRINCIPAL MEDICAL OFFICER OF H.M.'S FORCES IN INDIA.

We think that the Army Medical Staff is to be congratulated on the fact that the Secretary of State for India has refused to sanction the extension of service of Surgeon-Major-General Bradshaw, C.B., in the post of Principal Medical Officer of H.M.'s Forces in India beyond March next, when he will be retired. In stating this we have not, of course, a word to say against the qualifications and services of the officer in question. Our opinion is entirely based upon a matter of principle and considerations of justice to the medical department generally. The system of extension should, we think, only be very exceptionally had recourse to and in the interest of the public service only, because such extensions prejudicially affect the interests, of course, of many officers awaiting their promotion. We may fairly conclude that the Secretary of State for India does not see any exceptional grounds in India at the present time for departing from the regulations and usual procedure in such cases. Military matters are somewhat in a state of transition in India at present owing to the introduction of the new system of army organisation in that country. The changes that will ensue on Surgeon-Major-General Bradshaw's retirement will greatly depend upon who is to be the successor in his appointment. Surgeon-Major-General Walsh, the present principal medical officer of Madras, may presumably be appointed, provided he is desirous of extending his Indian service beyond five years and the authorities do not specially select some other officer for the post.

PROPOSED TESTIMONIAL TO SURGEON-GENERAL SIR JOSEPH FAYRER, K.C.S.I., Q.H.P., M.D., F.R.S.

At a meeting of the medical officers serving at Netley, held on Jan. 16th, Surgeon-Major-General Giraud, P.M.O., in the chair, it was unanimously agreed that a testimonial should be made to Sir Joseph Fayrer on his retirement as Physician to the Indian Council, President of the Indian Medical Board, and Member of the Senate of the Army Medical School. The testimonial will take the form of a portrait, to be painted by an eminent artist, and to be placed in the officers' mess at Netley, with a replica for Lady Fayrer. All members of the Army Medical Staff and Indian Medical Service are invited to subscribe, and contributions will also be received from other friends and admirers of Sir Joseph Fayrer. The subscriptions are not to exceed 10s. 6d. from each officer serving at home or in the colonies, or ten rupees from officers in India. The following officers have been elected as a committee to carry out the details of the presentation: Sir Wm. Mackinnon, K.C.B. (Director-General, A.M.D.), president; Surgeon-Major-General C. H. Giraud, A.M.S.; Deputy-Surgeon-General H. Cayley, F.R.C.S., I.M.S. (R.P.); Brigade-Surgeon-Lieutenant-Colonel J. L. Notter, M.A., M.D., A.M.S. (hon. treasurer); Brigade-Surgeon-Lieutenant-Colonel E. J. Fairland, A.M.S.; Brigade-Surgeon-Lieutenant-Colonel K. McLeod, M.D., I.M.S. (R.P.); Surgeon-Captain W. W. Webb, M.D., I.M.S. (R.P.) (hon. secretary).

AMBULANCE WORK FOR SAILORS.

We are glad to notice that a movement has been made for organising a system of first aid for sailors, who, from the circumstances in which they must necessarily be often placed, the injuries and accidents to which they are exposed, and their natural handiness and aptitude in helping sick people and one another, as well as their common sense, are well fitted to benefit by a plain practical course of instruction in this direction. Mr. A. M. Cato recently delivered an excellent lecture on this subject at Fishmongers' Hall, at the instance of the Shipmasters' Society and the St. John Ambulance Association, in which he pointed out the great need that existed among seafaring men for dealing with injuries and diseases at sea. He thought, and we agree with him, that lectures and practical instruction might be given

to sailors by surgeons at sea. A brief but interesting discussion followed the lecture, in which Sir A. Rollit, M.P., Sir Herbert Perrott, chief secretary of the St. John Ambulance Association, and others took part.

AID TO THE WOUNDED IN WAR.

Brigade-Surgeon-Lieutenant-Colonel Evatt recently delivered a lecture at Toynbee Hall, in which he described the existing army organisation of aid to the wounded, and traced out the method of their removal from the actual seat of war to the nearest field hospitals, and those in the rear or at the base, until reaching their final destination at Netley or other large hospitals in this country. The lecturer described the various stages, as laid down in the regulations of our own army on the subject and as practised in warfare at the present time, and he accompanied his description by such practical details and commentary as to afford his audience a succinct and useful account of the subject. The improvement in the system of aid to the wounded in war had, he declared, been enormous since the Crimean War and the time that Miss Florence Nightingale was at Scutari, but he desired to emphasise the necessity of keeping a sufficient number of helpers on the medical staff.

THE PILGRIM TRAFFIC.

The *Times of India*, in an article on the above subject, says that the British Government, having accepted the terms of the Paris Convention of April last, has thereby bound the Government of India to a convention which has been drawn up wholly on European lines without reference to Asiatic conditions. No doubt almost all the improvements that had been already suggested by the port health officers at Bombay have been insisted on by the Paris conference, even to the establishment of an International Board at Jedda, with power to control the pilgrim traffic from all parts of the world. So far so good; but in other directions it is feared that the Convention, as it now stands, will involve difficulties of a religious character, in that the expense of a journey to Mecca will be altogether prohibitive to a large number of the poorer Mahomedans, who will consequently be unable to make the Haj—a serious matter for the numerous faithful followers of Mahomet.

THE LADY DUFFERIN ZENANA HOSPITAL AT GYA.

The ceremony of laying the entrance stone of the Zenana Hospital of the Dufferin Fund at Gya was performed by Lady Elliott on Nov. 28th of last year in the presence of a distinguished European and Indian assembly. It is expected that the building will be ready in March next for the accommodation of twenty-five in-patients, with ample space for the treatment of out-patients. At present only a one-storied building is contemplated, but should funds permit a second storey will be added.

We have previously alluded to the services which Sir Joseph Fayrer has rendered the State and Indian Government during his long and distinguished career, and we are glad to notice that Mr. Secretary Fowler has taken the occasion of his retirement to refer officially to Sir Joseph Fayrer's services in eulogistic terms.

The promotion of administrative officers to the rank of Surgeon-Major-General will henceforth be carried out under the auspices of a specially constituted Promotion Board, of which a general officer commanding a district will be president and two Surgeon-Major-Generals members. We understand that the board will sit at a very early date.

The *Times* says: "It is stated that the War Office has decided to rebuild Winchester Barracks and to re-establish the rifle depot in that city. The work will probably occupy two years."

A new Dufferin Hospital, which has just been constructed at a cost of about Rs. 30,000, is about to be opened at Amraoti in Berar.

CATHOLIC UNIVERSITY MEDICAL SCHOOL: MEDICAL AND SCIENTIFIC SOCIETY.—The following office-bearers have been appointed for the session 1894-95: President: Mr. A. Roche. Vice-President: Dr. E. J. McWeeney. Hon. secs.: Mr. D. J. Coffey and Mr. J. A. Ringhan. Committee: Dr. A. Birmingham, Dr. O'Carroll, Mr. J. G. Gill, Mr. R. Farnan, Mr. J. Frengley, Mr. T. Donnellan, Mr. P. J. Dempsey, Mr. J. Gubbins, Mr. McArdle, Mr. J. P. McArdle, and Mr. J. M. Tighe.

Correspondence.

*"Audi alteram partem."***"THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY."***To the Editors of THE LANCET.*

SIRS.—I am glad that Sir John Williams has drawn your attention to the astonishing resolution of the General Medical Council, dated Dec. 3rd, 1894. As an ex-president of the Obstetrical Society, and one who had much to do with the foundation of the society's examination for midwives, I had contemplated addressing you on this subject, but I refrained from doing so because I feared that in view of what seemed to me the outrageous coupling of the work of a scientific society such as the Obstetrical, even contingently, with such words as "infamous in a professional respect," I might have been tempted to write without the temper and moderation which Sir John Williams has shown. Had the General Medical Council taken the trouble to hear both sides of the question it could have easily ascertained that in instituting this examination the Obstetrical Society was acting from what, according to its lights, it considered the highest possible motives; that its examinations had been eminently successful; and that the society had only undertaken this work provisionally, and had frequently expressed itself as not only willing but anxious to discontinue it as soon as Government had legislated on the matter. Personally, I cannot see how the certificate granted can possibly be objected to; every year I issue a still more important-looking parchment to students who have achieved honourable mention in my class, which might quite as well be called a colourable imitation of a diploma. It appears pretty plain that "some enemy has done this thing," and that the Council has been thoughtlessly induced to lend a willing ear to the representation of the case put before it by the small but active section of the profession which aims at the impossible, and hopes to abolish midwives altogether. If the Council had done the Obstetrical Society the justice of pointing out in what way it wished its certificate altered there cannot be the slightest doubt but that its wishes would have received the most respectful consideration, and that the wording would have been immediately changed. Instead of doing this it fulminated, without any warning, the insulting resolution complained of. I am now told that the Council had directed some communication to be made to the society which it never received. If that is so, surely some explanation should be given of how such important documents were suppressed or failed to reach their destination.

I am, Sirs, yours truly,

W. S. PLAYFAIR.

George-street, Hanover-square, W., Jan. 19th, 1895.

"ISOLATION OF CASES OF OVARIOTOMY."*To the Editors of THE LANCET.*

SIRS.—Your correspondent, Mr. Malcolm, thinks it "most undesirable" to put ovariectomy patients in a general ward and gives his reasons for thinking so. He has been accustomed to the method of isolation, and he falls into the not uncommon error of concluding that the only right and proper practice is that in which he has been trained and which he has himself adopted. The fact is that the employment of isolation as a routine method is a relic of a bygone time, when ovariectomy was treated as something altogether different from other operations, when the peritoneum was regarded with an almost superstitious dread, and when, in our ignorance, we attributed our fatalities to atmospheric contamination instead of to our own surgical uncleanness. My experience at St. Thomas's Hospital has shown that the isolation of abdominal cases is, so far at least as regards hospital practice, as unnecessary as it is costly and inconvenient. I have at St. Thomas's Hospital only one separate ward, and that ward is single-bedded. When, owing to pressure of work, I began cautiously to try the effect of non-isolation, I did so in fear and trembling. All my prejudices then, like these of Mr. Malcolm now, were in favour of the older method. I soon found, however, that not only did no harm result from

its abandonment, but that the change brought with it a distinct gain to all concerned, to the patients themselves, to the nurses, and to the hospital. I encountered none of the dangers Mr. Malcolm fears. My experience of both methods is now considerable, extending to fifteen years of the older method and five or six years of the new. I still make occasional, though less and less frequent, use of my isolation ward for exceptionally severe cases and for cases that seem to be taking a markedly unfavourable course. For obvious reasons I never willingly let a death (after operation) take place in the general ward. This disposes of the one valid objection raised by Mr. Malcolm in the discussion to which he refers. I do not blame Mr. Malcolm for adhering to a practice with which he obtains successful results; but I do ask him, as a man who has proved his ability to think for himself and has shown himself to have a mind open to conviction, to suspend his judgment as to the comparative merits of the two methods until he has had experience of both. When he has, I venture to prophesy that he will come round to my way of thinking.

I am, Sirs, yours faithfully,

Brook-street, W., Jan. 19th, 1895. CHAS. J. CULLINGWORTH.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."*To the Editors of THE LANCET.*

SIRS.—Dr. Pavy confidently asserts that "the fermentation process and the crystalline osazone production" prove that sugar is present in normal urine, and that all evidence to the contrary "goes for nothing." No physician, probably, has had larger experience of the fermentation test than Sir William Roberts, who says, "According to my experience urine containing 0.5 per cent., or two and a half grains to the ounce and under, yields no sign to the fermentation test."¹ Dr. Pavy states that he got a negative result with this test applied to normal urine until he was led to neutralise the acid urine by carbonate of soda; he then found that fermentation proceeded actively.² Now, one effect of adding carbonate of soda to acid urine would be to set free carbonic acid, and it would be interesting to know whether Dr. Pavy was careful to ascertain that the carbonic acid which was given off from the urine at a "suitable temperature" was not that which had been previously combined with the sodium. Dr. Pavy, as we know, by ignoring the reducing influence of kreatinine, estimates the amount of glucose in normal urine to be about 0.05 per cent., or a little over. Upon this estimate Dr. Noel Paton, Superintendent of the Research Laboratory of the Royal College of Physicians of Edinburgh, remarks:³ "This is in opposition to the recent most careful observations of Baisch,⁴ who finds that the sugar, ascertained after separation by its power on polarised light, amounts to, at most, 0.009 per cent., or, estimated by its reducing power, to 0.012 per cent. These results correspond closely to those of Seegen." Is it conceivable that the fermentation process would detect so small a proportion of sugar as this? There is the yet further question whether the reducing substance obtained by Baisch was not a product of the method employed for its separation from the urine.

Then, as to the phenyl-hydrazine test, Dr. Pavy assumes that the formation of osazone crystals affords conclusive evidence of sugar being present; but Dr. Noel Paton, in the paper above quoted, says: "The carbohydrates are not the only bodies which yield crystalline compounds with phenyl-hydrazine. A glance at Beilstein's 'Organic Chemistry' shows that a vast number of substances give such crystalline compounds." A consideration of the series of processes by which Dr. Pavy obtains the osazone crystals renders it highly probable that a reducing substance has—to use an expression of his own—"by a cleavage process been split off" from some constituent of the urine.

It will be seen, then, that the tests upon which Dr. Pavy relies to prove that glucose exists in normal urine are fallacious, while, on the other hand, the evidence which I have adduced proves conclusively that kreatinine, which

¹ Urinary and Renal Diseases, fourth edition, p. 210.² The Physiology of the Carbohydrates, p. 181.³ On the Physiology of the Carbohydrates: Edinburgh Medical Journal, December, 1894.⁴ Zeitschrift für Physiologische Chemie, Band xviii.

Dr. Pavy persistently ignores, accounts for the entire reducing action of normal urine upon picric acid, and for all the reduction upon ammonio-cupric oxide, which is not due to uric acid. In short, while the absence of sugar from normal urine is established by positive and indisputable evidence the supposed indications of its presence are not to be relied upon. I am, Sirs, yours faithfully,

Savile-row, Jan. 22nd, 1895.

GEORGE JOHNSON.

"INFANT NEGLECT, INSURANCE, AND MORTALITY."

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of Jan. 19th you again refer to the practice of child life insurance and suggest the necessity for drastic reforms in a system of somewhat doubtful and limited advantage. Will you permit me briefly to draw the attention of your readers to a proposal in this connexion I made some time since, which was then submitted to the late Bishop of Peterborough? In the case of an infant or young child the one legitimate motive for insurance is to provide funds for its burial. This being so, what I propose is a short legislative measure prohibiting altogether infant life insurance by companies or firms, and empowering Government to enter into an agreement to inter any young child free of cost on the parents or guardians taking out a policy on its life and paying a small monthly premium at the nearest post-office. The working of such an arrangement would cost so little that all expenses could be met and decent burial secured for less than half the payments now made to insurance societies and burial clubs in respect of young children. However, economy is quite a secondary consideration; the main recommendation of my proposal is that in this way all possibility of temptation to neglect a child because it is insured for £6 would be done away with. Unfortunately, there are conditions in which such an apparently trifling sum represents a real temptation. I am, Sirs, yours truly,

FRANCIS VACHER.

Shrewsbury-road, Birkenhead, Jan. 22nd, 1895.

"THE DEBATE ON THE NATURE AND TREATMENT OF PERITONITIS AT THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 19th Mr. Lawson Tait complains that he has been misrepresented and misunderstood in regard to his teaching on the question of the administration of purgatives after abdominal operations, and he refers to Mr. Frederick Treves as having fully expounded his views on the subject. Mr. Treves¹ quoted Mr. Tait to the following effect: "I have never said that the purgative treatment will cure peritonitis."² But in 1886 Mr. Tait wrote as follows: "Now we beat the peritonitis. On the slightest indication of peritonitis after an ovariectomy we give a rapidly-acting purgative, it matters not what; the patient's bowels are moved and the peritonitis disappears."³ In 1887 I published a paper⁴ in which I argued, and brought forward evidence to prove, that the symptoms referred to by Mr. Tait as "indications of peritonitis" were not necessarily due to that condition; that peritonitis was not the cause of the intestinal distension in the cases that were cured by purgatives; and consequently that peritonitis could not "disappear" in these cases. Since I published that paper I have seen no recommendation to treat peritonitis by purgatives in the writings of Mr. Tait. He has repudiated the practice and, as quoted above, he has asserted that he has never recommended this treatment. As Mr. Tait has again raised the question in THE LANCET I hope you will allow me to ask him for an explanation of the apparently contradictory quotations that I have cited from his writings. Two facts in Mr. Tait's position on this question, as restated in THE LANCET of to-day, should be carefully noted. In the first place he makes no distinction between the causes of abdominal distension in the cases under consideration—for instance, between obstruction of

the intestine and septic peritonitis, which have usually well-marked differences in their clinical symptoms. Such details are to him "pathologico-metaphysical conundra," for which he does not "care a fig." But they are important in practice, for by studying these questions and getting more knowledge about them the surgeon is able to avoid such errors as Mr. Tait fell into in 1886—namely, the empirical treatment of a symptom under a misapprehension as to its cause. In the second place Mr. Tait lays little stress on the dangers of purgatives administered by the mouth during the first few days after an abdominal section. This also is an important point in practice. Mr. Tait seems to be puzzled by the fact that "after a completed abdominal section symptoms and conditions may occur harmlessly on the ninth day which would be fatal on the fourth." The explanation is that on the fourth day the inflammation due to the operation has just passed its greatest severity, and a complication occurring at that time is an added burden to the patient; whereas by the ninth day the inflammatory fever may have subsided, and the vital powers of the patient have then only to deal with the complication. Hence the later any complication appears the less likely is it to exacerbate or rekindle an acute inflammatory fever, and as a consequence it is less dangerous to the patient in proportion to the length of time that has elapsed between the operation and its onset. I have elsewhere⁵ described at length how abdominal distension affects traumatic fever, but I suppose this is one of the "pathologico-physiological conundra" which have no interest for Mr. Tait. Nevertheless, this question has an intimate bearing on the practice of giving purgatives after an abdominal section. To get the patient over the first week of convalescence is of the utmost importance in abdominal surgery, and when intestinal distension occurs it is much the best practice to try to clear the bowel by enemata and to try to prevent further distension by keeping the stomach and upper intestine at rest. In this way the patient may be tided over the most dangerous period; whereas if a rapidly active purgative be given, as recommended by Mr. Tait, and if the bowels do not move, the distension is increased at a time when the patient is least able to bear the strain.

At the present day the most successful practice in abdominal surgery is directed to the prevention and removal of the causes of abdominal distension. The chief of these causes are septic peritonitis, obstruction of the bowels, and pseudo-ileus. The first is usually characterised by the well-marked facial change on which Mr. Tait lays so much stress. The other two are not so characterised. If cases in which there has been an injury to a hollow viscus and cases in which the peritoneum is left exposed are excluded, septic peritonitis may be absolutely prevented by the use of antiseptics. Ileus and pseudo-ileus should be treated after an abdominal section on the same principles as when they occur independently of an operation, and it is well known that purgation is a dangerous treatment of these conditions, and should only be resorted to with great caution, although sometimes it is brilliantly successful.

I am, Sirs, yours obediently,

Portman-street, Jan. 19th, 1895.

JOHN D. MALCOLM.

THE PUBLICITY OF MEDICAL EXAMINATIONS.

To the Editors of THE LANCET.

SIRS,—The General Medical Council devoted a great deal of time to visitation reports of examinations. The examinations reported on were all held at times and places well known to the Council and duly advertised to the public. They were in some instances presumably open to graduates or licentiates of the bodies. In some instances their doors were shut on those licentiates. For instance, the Dublin College of Physicians used to admit its diploma-holders to be present at its examinations, and their possible presence exercised a wholesome effect. That body now refuses to admit them, for last summer I applied in vain for admission. The pretext was that I should have been a Member of the College of Surgeons, whereas the converse pretext was not raised by the latter body. The illogical position of the Physicians would be seen at a glance. Now, Sirs, as Council visitors and inspectors cannot be in a dozen places at the same time, it would be a great protection both to the public and to the profession if the Council would make a law throwing

¹ Lettsomian Lectures, Transactions of the Medical Society, 1894, p. 178.

² Brit. Med. Jour., Nov. 12th, 1892, p. 1050.

³ Ibid., 1886, vol. i., p. 921.

⁴ Transactions of the Medical and Chirurgical Society, vol. lxxi.

⁵ The Physiology of Death from Traumatic Fever.

open all examinations to the presence of every member of the profession. It is an utter waste of time and of money to be inspecting the recognised examinations when there are examinations of which the Council knows nothing and of which the public knows nothing—private special examinations, backdoors by which the black sheep of the flock can readily enter into the professional fold after they have been ignominiously rejected at the front door. It is absurd to be watching the front door while a back one is left open. I entreat your attention, Sirs, to this matter. Neither you nor the Council have the faintest suspicion of the abuses which flourish under it.

I am, Sirs, yours truly,

THOMAS LAFFAN.

Cashel, Jan. 7th, 1895.

THE TREATMENT OF EPILEPSY.

To the Editors of THE LANCET.

SIRS,—My attention has but recently been directed to the report in THE LANCET of Jan. 12th, of the meeting of the West London Medico-Chirurgical Society of Jan. 4th. I find I am therein represented as "referring to the benefits following the starvation treatment" of epilepsy (following the President in my use of this term). So far as I am concerned I am anxious to disavow the expression of such a view, my experience being that adequate nutrition is an essential to successful treatment. The view I advocated was, in truth, the utility of the substitution of an ample milk diet for one containing meat, for which, I submit, the designation of "starvation diet" is a misnomer. In my opinion advantage is derived, not only from the restriction of nitrogenous elements, which (according to some authorities) tend to the formation of unstable compounds in the nervous tissue favouring discharging lesions in the epileptic, but also from the avoidance of digestive troubles so often exciting an attack. In children especially, untrained in the Gladstonian method of mastication, who bolt imperfectly chewed masses of meat, the gain of a milk diet is great, as I had proof amongst the epileptic inmates of the Royal Albert Asylum, of which I was till lately medical superintendent. But the diet consisting of bread and milk, oatmeal porridge, farinaceous and custard puddings, with an ample supply of milk and eggs, was in no sense "starvation diet," the body weight usually increasing under the regimen. The discharging lesion of epilepsy appears, indeed, to depend upon nutrition being defective, not in quantity, but in quality; and Dr. Hughlings Jackson suggested long ago that "in the abnormal nutritive process producing unstable matter, nervous matter, the phosphorous ingredient is replaced by its chemical congener nitrogen." As regards drug treatment, borax in some cases seems to "act as a charm," but how to differentiate these cases is the difficulty. Regulated muscular exercise, especially in the open air (as in garden work), has, in my experience, been of more efficacy than drugs.

I am, Sirs, yours faithfully,

G. E. SHUTTLEWORTH, M.D.

Richmond, Surrey, Jan. 22nd, 1895.

THE LATE SURGEON-MAJOR PARKE.

To the Editors of THE LANCET.

SIRS,—As Provincial Deputy Grand Master of the Freemasons of North Connaught I would wish through your columns to inform those members of the profession who belong to the order that the Memorial Masonic Hall to be erected in Carrick-on-Shannon, the native town of the late deeply lamented Surgeon-Major Parke, has not as yet been commenced owing to the funds collected being insufficient for the purpose. I feel certain that every member of the medical profession would wish the name of one whose services both in the field and with the Emin Pasha Relief Expedition were so distinguished should be permanently kept in memory, and this being distinctively a Masonic memorial I would ask physicians and surgeons being Freemasons to contribute. Small donations will be thankfully received, and may be sent to me or to Surgeon-Lieutenant-Colonel Bradshaw, Carrick-on-Shannon. Further lists of subscribers will be published, and all subscriptions duly acknowledged.

I am, Sirs, yours faithfully,

FRANCIS E. CLARKE, M.D., M.R.C.P.I.
Boyle, Ireland, Jan. 17th, 1895.

PROPOSED ASSOCIATION OF QUALIFIED MEDICAL ASSISTANTS, JUNIOR MEDICAL OFFICERS, AND LOCUM-TENENTS.

To the Editors of THE LANCET.

SIRS,—It has occurred to me that such an association as the one proposed would be found to be very advantageous to gentlemen filling above appointments, and with this object in view I venture to state briefly some of the questions which might be settled by such a powerful organisation as this association might in time become if properly and rightly managed:—1. In connexion with this association I would suggest the formation of a special department, styled the "Medical Bureau," to take the place of the present private medical agencies, whereby members of this association might, by subscription or otherwise, possess the means at reasonable charges for obtaining suitable appointments. 2. The question of salaries paid to qualified assistants: (a) mode of treatment by principal or committee; (b) terms of engagement and dismissal; (c) contracts or covenants not to practise. 3. The "social" status of the qualified assistant should be fairly recognised as a legally appointed medical man. 4. Discontinuance of employment of unqualified men as medical assistants, and the results therefrom: (a) more openings for the qualified man; (b) therefore less needy men in our ranks ready to jump at any poorly paid office; (c) in every town where there are sufficient qualified chemists I would suggest that every practitioner should employ such to dispense his medicine; (d) such a plan as this would leave a field of labour open to the unqualified assistant, as his services might be used by chemists; (e) and in case medical men ceased to countenance or even employ unqualified men, then chemists should be compelled to give up prescribing as they do now. 5. I further think as a sound basis such an association should possess some code of ethics, so that each new man in the profession should become intimately acquainted with the true meaning of medical etiquette, which to my mind is the ground-work of all real proper feeling and treatment of one medical man to another. And, lastly, if these matters were carried out I venture to think in time we should gradually find our profession would take its proper and legitimate position in the world as a truly scientific calling, and not as the miserable trade which many make it.

I am, Sirs, yours truly,

T. HOWARD BROCKLEHURST, M.R.C.S. Eng., L.S.A. Lond.
Westham, Weymouth, Jan. 23rd, 1895.

* * It will be noticed that we have adopted Dr. Donkin's suggestion (vide THE LANCET, Jan. 12th, p. 120) with regard to a practical "plural of locum tenens."—ED. L.

THE ÆSCULAPIUS LODGE.

To the Editors of THE LANCET.

SIRS,—Gladly as would be welcomed amongst all good Masons any lodge bringing closer together members of the profession, I venture to suggest that the lodge in process of formation in connexion with St. Bartholomew's Hospital, as reported in THE LANCET, cannot be held to be quite on parallel lines with those of the three universities—Oxford, Cambridge, and London—or even with the Bar Lodge. The claim to such a distinction rests with the Æsculapius Lodge, now in its fourth year of existence, since we number not only members of a particular hospital, but of the whole medical profession wherever educated throughout the British Empire.—I am, Sirs, your obedient servant,

Portland-place, W.,
Jan. 19th, 1895.

THOMAS DUTTON,
Secretary, Æsculapius Lodge.

"THE SUPPORT OF HOSPITALS."

To the Editors of THE LANCET.

SIRS,—With reference to an annotation which appeared in THE LANCET of Jan. 12th, dealing with the financial condition of our hospitals and taking the case of Charing-cross as a text, I should like to make a few remarks.

It is especially of importance that those interested in the immediate working of a hospital should look most carefully into every detail of its management and see that its claims

are properly represented, not only to the inhabitants of the neighbourhood, but also to the public at large. It should not be left to a few well-known generous supporters of a hospital to make up a heavy deficit, but general pecuniary aid should at once be invoked. This reflection must arise in thinking minds whether, as hospitals at present seem to have to rely for their support mainly upon local aid, certain districts of London are not overdone with these institutions. A tradesman in Leicester-square, for instance, may, under the existing state of things, be expected to contribute to St. Thomas's, Westminster, Charing-cross, or King's College Hospitals, while a man who is run over in Parliament-street has his choice of at least three admirable hospitals within easy reach. Many poor people come to each of these hospitals from districts which hardly contribute one penny to the support of any of them, and drain the funds, which the more prosperous inhabitants of their neighbourhoods never dream of augmenting. I believe that the crowding of hospitals in one locality, due to the necessity of an accessible position for the medical schools, is a serious reason of the difficulty of supporting them, when, as is now the case, their claims are only known to the few in their immediate neighbourhood. I cannot doubt that a general hospital opened in such a district as Battersea or Camberwell would not only obtain good support, but would perform most useful work and be crowded with those forms of disease, especially surgical cases, which admit of such ready relief and are of such importance for medical study. We are all agreed that the function of hospitals as centres of medical education for students is one of the first national importance, and, while this is becoming seriously imperilled by the establishment of special hospitals in all parts of London, I do not see why local general hospitals should not be splendid centres of education. The special hospitals not only take away the cases most useful for medical instruction, but also attract not a small proportion of the funds which should flow to the larger institutions.

But these and kindred matters, including the chaotic state of London with regard to its charities and modes of medical education, while I am certain that they are yearly ripening for Government interference, are without the object of this letter, which is to urge upon the inhabitants of the different localities of the wealthiest city of the world the paramount and immediate necessity of rallying to the support of hospitals associated with teaching schools, now languishing for want of funds.—I am, Sirs, yours faithfully,

ASSISTANT SURGEON TO A GENERAL HOSPITAL WITH
Jan. 21st, 1895. A SCHOOL AND WITHOUT PAY WARDS.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Society of Chemical Industry.

AT the last meeting of this society a paper was read by Mr. Le Neve Foster on the Prevention of Smoke arising from Intermittent Firing in various processes of Chemical and Allied Industries. Some members of the Sanitary Association were invited to the meeting, and the vice-chairman of the Sanitary Committee of the corporation. Mr. Le Neve Foster said that in these days of foreign competition economy was essential, and the combustion of coal was the best and cheapest way of producing heat. With regular firing smoke could be avoided almost entirely, but in chemical works the firing was irregular. In most operations the apparatus had to be cooled on their completion; and before recharging "the fires had to be started *de novo* in order to heat a mass of cold brickwork and flues, entailing great difficulty in preventing the emission of black smoke." In spite of difficulties, however, much might be done by each individual manufacturer by strict supervision and careful construction of plant. This was shown in his own works, where the emission of black smoke had been reduced to an average of thirty-three seconds per hour. No doubt in some cases praiseworthy efforts had been made to minimise nuisances, both as to smoke and noxious fumes. In the main the discussion after the paper was disappointing, the speakers dwelling more on the difficulties of smoke prevention and on the terrible consequences that would follow any interference by the authorities rather than on the remedial methods suggested, in which, indeed, little interest was shown. The Chairman (Mr. Forbes Carpenter, a Govern-

ment inspector of practical and scientific eminence) mentioned one method which had been found successful; but it was not alluded to by any of the speakers, nor was another, seen in practical use in Germany, which was described by another member of the society. The impression left by the discussion was that much more might be done to lessen the emission of black smoke without injury to the manufacturers, and, of course, with corresponding advantage to the rest of the community, who now, for their sakes, suffer so much in comfort, health, and pocket.

Ladies' Health Society.

The annual meeting of this society was held recently in the Lord Mayor's parlour at the town hall. The Lady Mayoress occupied the chair, and the audience, composed chiefly of ladies, was very large. The meeting, indeed, compared with similar meetings of other philanthropic societies, was, as regards audience, a great success. The more than usual interest shown may perhaps in part be due to an elaborately organised charity ball having been recently held in aid of the funds of the society. It was a most skilful and, I may surely say, praiseworthy mode of advertising the society among those able to give efficient help, and was eminently successful both socially and financially, the proceeds clearing off a considerable debt. Notwithstanding this, however, more subscriptions are wanted, for the year's work left a deficit balance of £127. Yet this is one of the most useful philanthropic agencies we have, which has for thirty years past done quiet, practical, unostentatious work that cannot be done by men. In its beginning a few ladies distributed tracts and leaflets on health topics; for the ignorance of the poor on sanitary matters had impressed itself on the late eminent surgeon, Mr. Turner, and he suggested this mode of spreading such knowledge among the poor. About the year 1879 the late Bishop Fraser drew attention to the system of visiting among the poor of Elberfeld, and a scheme for visitation was welcomed by the ladies of the society as in some measure tending to lessen one of the great evils of modern manufacturing life—the separation of rich and poor, of employers and workpeople. The latter had become massed together in the near neighbourhood of the factories and workshops, while the former, with their wives and daughters, betook themselves further and further away from the dirt and smoke of the town. This scheme led to the employment of respectable, intelligent working-class women as health visitors under the supervision of the ladies. Districts are assigned to a health visitor, who goes among the people constantly, and is immediately responsible to the lady in charge of the district, with whom she is in frequent communication. The health visitor can understand the difficulties of the poor better in many cases than the lady, and is also less liable to be imposed on. The lady visits the district at least once a week, if not more frequently, and holds a weekly mothers' meeting, at which simple addresses are given and conversations held on such subjects as personal and household cleanliness, thrift, ventilation, the prevention of infection, the care of children, the feeding, washing, and dressing of infants, cooking and nursing, the making and mending of clothing, &c. The lady visitor is often accompanied by one or two young friends, who vary the proceedings with music and singing. The health woman is always present at these meetings, and in going her rounds afterwards can afford practical help in carrying out some of the hints given at the mothers' meeting. At present there are about twenty districts in Manchester and Salford, with twenty health women and about forty ladies engaged in this work, but there is room for more. Both corporations avail themselves of the help of the society in the superintendence of some women employed by them in similar work, with satisfactory results. This movement owes much of its success to the courtesy and enthusiasm of Dr. Tatham, the late medical officer of health. The great merit of the plan is that direct personal sympathy and help in domestic and sanitary matters are brought to the homes of the people. The meeting illustrated the fact that women, even in the most staid society, are throwing off the fetters of the old conventions. The chair, as already stated, was taken by the Lady Mayoress, who spoke very well, as did also two ladies who proposed and seconded a vote of thanks to the Lord Mayor and Lady Mayoress. Each gave interesting accounts of experiences as lady visitors, which showed the great value in many ways of personal intercourse with the poor. The meeting ought to be followed by an increase of subscribers and especially of lady workers.

Paupers' Tea and Food.

The Salford guardians are contemplating a revision of the workhouse dietary, and according to statements made in the *City News* last Saturday it might be more liberal without being lavish. In a previous issue a statement was made, from information received, that common soda was used in making the tea. This was denied, but "nothing was said last week at the meeting of the guardians about the quantity of tea used for a brew. We put this at one ounce to eight pints of water, say three-farthings' worth of tea to a gallon of water, or one-tenth of a penny per pint. Sugar is added, but no milk." "This is but a sorry beverage for the aged and infirm," with which opinion many of us would agree. The bread is said to be buttered, but while there is no butter on the list of provisions, 18,000 lb. of margarine are supplied at a trifle less than sixpence a pound, or three-eighths of a penny per ounce. According to the diet table at another workhouse half an ounce of this condiment is allowed at breakfast and supper, at a cost of about three-sixteenths of a penny a meal. In the same article the daily cost of the food of a grown-up woman, calculated from the tables of the Prestwich workhouse, is three-halfpence. Breakfast and supper are alike, and the menu is five ounces of bread, a pint of tea, and half an ounce of margarine. Dinner consists of a pint and a half of soup, with five ounces of bread. The soup is said to be "very thin" and the full quantity not always given. Last year's provisions for the Salford workhouse included 2764 lb. of tea. There are over 1300 inmates, so that in round numbers there would be 2 lb. per head, or three-quarters of an ounce a week. After considering the share that would fall to the men and the children, the article goes on to say: "Reckon as we like, the amount cannot be more than an ounce and a quarter a week, and for this the women have the liquid fourteen times a week, a pint each time." The conclusion this paper comes to is that in many of our workhouses the actual eating and drinking do not cost more than 10d. a head per week. This shows great—almost too great—regard for the ratepayers, and one is not astonished to read that the following remark is common among the old women: "We can manage somehow with the food, but the tea is a great trial to us."

Jan. 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Small-pox in Edinburgh and Leith.

LAST week seven fresh cases of small-pox were reported in Edinburgh and two in Leith. Of the deaths during the week in Edinburgh two were from small-pox.

The late Dr. Robert A. Goodsir.

Dr. Robert Anstruther Goodsir died in Edinburgh in the end of last week at the age of seventy-one. He was a brother of the eminent anatomist who shed so much lustre on the University of Edinburgh in the earlier half of the century. Another brother, also a medical man, accompanied Sir John Franklin's fatal expedition to the Arctic regions in 1845; and this was the motive which led Dr. Robert Goodsir to make two expeditions to those regions. In the second expedition he went as surgeon to the ship fitted out by Lady Franklin to search for her husband. Some time after returning from the Arctic regions he went to Australia, and there led the active, restless, and exciting life of an up-country squatter. He travelled much in Asia and elsewhere, and returned to Edinburgh about ten years ago.

The Edinburgh Medico-Chirurgical Society.

It has been intimated that at the February meeting of this society Professor Fraser is to open a discussion on Cardiac Therapeutics. It is anticipated that the discussion will be an interesting one, and will be a further addition to the valuable series of discussions this society has had during the past few sessions.

Conversazione at the Royal College of Physicians of Edinburgh.

Invitations have been issued by the President of the Edinburgh Royal College of Physicians, Professor Gairdner, and Mrs. Gairdner for a conversazione to be held at the College on Feb. 8th.

The Health of Aberdeen.

Dr. Matthew Hay, in his monthly report, states that the registrar's returns for December give a total of 285 deaths in the city, equal to an annual rate of 25.49 per 1000. This high rate is mainly due to the prevalence of measles. The mean age of all persons dying during the month was 21.8 years, as against 26.2 in the preceding month and 35.6 in the corresponding month of last year. This is one of the lowest recorded in recent years, and is due to the high infant mortality from measles. The mortality rate of children under five years is nearly twice the average rate for the corresponding month in the preceding ten years. Compared with the corresponding month in the preceding ten years, the past month exhibits a total death-rate which is higher than the average by nearly 14 per cent., and is also higher than in any individual year in the decennium except 1884, when the rate, partly owing also to an outbreak of measles, was as high as 28.97. The total number of zymotic cases reported during the month was 1223, with 54 deaths, as compared with 384 cases, with 23 deaths, in the preceding month. There are no further cases of small-pox; cases of scarlet fever, whooping cough, and erysipelas have declined; typhoid fever is stationary; diphtheria has increased considerably, 16 cases with 5 deaths having been reported; and measles has increased enormously, 1102 cases with 39 deaths having been reported, as against 251 cases with 5 deaths in the preceding month. The following is the return of cases of zymotic diseases notified during the past week: measles, 204; scarlet fever, 5; diphtheria, 5; typhoid fever, 1; whooping-cough, 7; erysipelas, 7; total cases, 229—being a decrease of 133 on the whole as compared with the previous week. The decrease is mainly in measles, but there is also a decrease in scarlet fever and typhoid fever. There are no cases of small-pox, typhus fever, or puerperal fever.

Public Health in Glasgow.

The most notable feature in the city's health condition just now is the slight spread of small-pox. In all, eleven cases have been reported, the entire series being traceable to contact with the four cases referred to in this column a fortnight ago. One death has occurred and some of the patients—particularly those who had not yet undergone revaccination—are dangerously ill. In connexion with this outbreak the authorities have very properly revaccinated the prisoners detained in the various local prisons, and, one of the prisoners having died some time after, it was alleged that the revaccination had been the cause of death. A post-mortem examination, however, showed that the patient had died from pneumonia and pericarditis, while the arm in which the lymph had been inserted was in a perfectly healthy condition. The health authorities are thus more than ever satisfied that in revaccinating the inmates of the city prisons they are taking a necessary and efficient precaution against the spread of a loathsome disease among those of the populace who really need it most.

The Duke of Argyll.

Dr. McCall Anderson is able to report favourably of the progress of the Duke of Argyll. On Thursday the temperature was generally normal, and although indigestion remained he showed a fair appetite, while the pulse was regular and stronger.

Jan. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dublin Hospital Sunday Fund.

THE returns for the Dublin Hospital Sunday Fund collections made last November are now to hand. The total collections, donations, &c. for 1894 amounted to £4323 15s. 7d., or an increase of some £93 as compared with 1893. Included in the amount was a sum of £55 18s. 5d., the proceeds of a football match, and £44 18s. 11d., the proceeds of an international lawn tennis match.

The Battle at Cork.

The battle of the clubs proceeds apace. Two other medical men came to town last week, making a total of four whose services are now at the disposal of those clubs whose members still think that they and their families should be treated for an entire year at a lower rate than 7s. 6d.

and 15s. when the member's income is under £100 and £200 respectively. Judging from the proceedings of the Queen-street Benefit Society, the clubs now consider that the four medical men they succeeded in bringing together represent a plethora of medical material, for I find one of the members of that society last Friday night solemnly warning his fellow members that the executive committee of the society delegates "had decided that three doctors were the most that the Cork societies could support." What a sad reflection—one of the four must go. For the sake of the Cork societies he despised the public opinion of the whole profession in the United Kingdom and was prepared to be ostracised by the medical men here. Yet what has been his reward for such disinterested services. The clubs simply tell him they will not have him, and he is left to his own devices to procure the fare to take him back to wherever he came from. Magnanimous and characteristic action of the Cork clubs to a member of the medical profession. The secretary of the St. Nicholas Club has resigned, and I have reason to believe that many of the members intend to follow his example. The Queen-street Society numbers some sixty or eighty members, and only twenty-seven of those took the trouble of recording a discriminating vote for one of the two competing imported medical men. Even more remarkable still, the Central Hull Society numbers some 100 members, and only seventeen of them voted last week at an election of a medical man, so little did the general body care which of the strangers obtained the appointment. A very sensible letter, too, appeared in the papers urging that a new society should be formed to embrace the many from the various societies who would be quite willing to accede to the medical men's terms. With these and other indications before me I cannot help feeling that victory is bound to be on the side of the medical men and that the end is approaching. It may be somewhat slowly, but all the same certainly and surely. I should mention that a curious development of the dispute took place last week. The medical students had previously been silent spectators of the struggle; but when they found that a gentleman who had been educated at the Cork Queen's College, and was quite recently a fellow student of theirs, had returned to the city to oppose his former teachers the students became very irate, and especially so when they saw by the newspapers that he used, in opposition to the interests of professors, hospital physicians, and surgeons, the very testimonials which those gentlemen had previously given him. Accordingly the students held a mass meeting and passed resolutions expressing sympathy with the local medical men, condemning the action of the strangers who had come to support the clubs, and declaring that any students holding intercourse with the latter should be expelled from all college clubs. This action of the students shows that there is a very strong and very commendable *esprit de corps* amongst the *alumni* of the Cork College, and some gentlemen holding medical qualifications would do better if they were guided by the same code of honour as the Cork students. After the termination of the meeting the students marched to the residences of various city medical men, cheering for the latter, and afterwards relieved their pent-up feelings by hissing and groaning outside the apartments occupied by the new club medical officers. The police were present in the interests of the latter, but the students had too much self-respect to think of doing anything calculated to require the intervention of the constables. However, the latter considered it more prudent to mount guard all night, and I have no doubt even the most junior of the newcomers finds that, at least under some circumstances, a "doctor's" life is not a happy one.

Nerwy Dispensary.

On Jan. 16th, at a meeting of the Nerwy Dispensary Committee, Mr. Henry W. Smartt was appointed medical officer for Nerwy No. 1 District, in the room of the late Mr. Andrew McBride, at a salary of £120 per annum as medical officer and £25 per annum as medical officer of health.

Queen's College, Belfast.

On Jan. 16th Dr. W. H. Thompson, Danville Professor of Physiology, began his course of lectures on health, which are free to the public. There was a very large attendance, the subject being the skin and its relation to health. In conjunction with the Gilchrist Lectures Committee the Society for the Extension of University Teaching has arranged that Professor Letts shall deliver six lectures on Chemistry, with special reference to Belfast Industries. The first lecture,

which was on Air and Water, was delivered on Jan. 17th in the Grosvenor Hall.

Belfast Hospital for Consumption and Diseases of the Chest.

At the annual meeting of the friends of this hospital, held on Jan. 16th, the honorary secretary of the medical staff, Dr. Howard Sinclair, reported that there had been 758 extern and 88 intern patients during the past year. It is satisfactory to find that the subscriptions have increased from £490 in 1893 to £605 in 1894. The endowment fund has been increased by donations of £164 11s. 8d., and the building fund has been increased by £1117 10s. 11d.—in other words, all the accounts show an increased revenue.

The Samaritan Hospital, Belfast.

The medical report submitted to the annual meeting held on Jan. 21st showed that there had been 501 extern patients during the year, while there were 106 treated in the wards. Sixty-six operations were performed, twelve of these being abdominal sections. The mortality was 3 per cent. for the year. While a large number have availed themselves of the advantages of the institution, it is regrettable to note that there has been a falling off in the list of subscriptions. This, however, may be due to the dullness of the times, as all charitable institutions have suffered. Several speakers spoke of the good done in the hospital and of the need of obtaining more subscribers.

Death of Mr. Henry, F.R.C.S. Edin., Pomeroy.

One of the oldest and most respected north of Ireland practitioners, Mr. Henry of Pomeroy, county Tyrone, died at his residence on Jan. 19th, at the advanced age of seventy-nine, and was buried on Tuesday last. Mr. Henry, who was a Fellow of the Royal College of Surgeons of Edinburgh, practised for a lengthened period at Pomeroy, county Tyrone, where he enjoyed the complete confidence of the public. He was a man respected alike for his kindness, ability, and high character, and enjoyed a large practice.

The Belfast Royal Hospital.

The working men's committee have just published their report of another year's work. The subscriptions from those engaged in various places of employment have reached the sum of £2371 4s. 1d., an increase of £210. These figures show that, since the committee was formed, the annual income to the hospital from this source has increased by over £800. What is very gratifying is that not only have the subscriptions increased, but the number of places contributing has also increased. As to the work done in the hospital, one out of every twelve of the inhabitants has received treatment in some form during the past year, and over 90 per cent. of these belong to the working classes. A pleasing feature in the report is the feeling of entire confidence expressed in the Royal Hospital.

At a recent meeting of the trustees of the South Infirmary, Cork, Dr. John Reid was elected house surgeon and Dr. R. P. Crosbie assistant house surgeon respectively.

Dr. Charles Mayne, visiting surgeon to the workhouse at Loughlinstown, Rathdown Union, county Dublin, has resigned his appointment owing to continued ill-health.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Sero-therapy as a Remedy for Syphilis.

MM. HÉRICOURT and RICHET, whose names will be familiar to the readers of THE LANCET in connexion with the sero-therapeutic treatment of tuberculosis, have been extending their experiments to other diseases. Four years ago injections of dog's serum were employed, at their instigation, in the wards of Professor Fournier against lupus and syphilis rebellious to ordinary medication. In two cases of syphilis unamenable to specific treatment dog's serum quickly transformed the general condition and paved the way for an efficacious application of ordinary specific treatment. The cases were as follows. A woman aged fifty years, to whom syphilis had been communicated by her husband twenty years previously, became, ten years after infection, neurasthenic and had osteoscopic nocturnal pains. Two years before admission into Dr. Fournier's wards she had an attack of iritis, and her walk became incoördinated

Specific treatment was found practically useless, as also was the employment of Brown-Séquard's method. Injections of inoculated dog's serum brought about in a week (three injections of 6 c.c. were made during this period) considerable improvement—the nocturnal pains and the lightning pains in the lower limbs from which she had suffered became almost inappreciable in intensity. This result would appear to indicate a method of treatment for ataxia of syphilitic origin. The other case was that of a woman aged twenty-five years, syphilitic for three years. When admitted she had numerous ulcers, reminding one of the aspect presented by cicatrising gummata. These lesions had existed for six months. Daily injections for one week were made of from 1 to 3 c.c. (22 c.c. in all) of prepared dog's serum. On the seventh day of treatment febrile urticaria developed, and vertigo was complained of. The treatment, commenced on Dec. 10th, determined in the ulcers a cicatrising action, apparent on the 14th, and recovery was on the 18th nearly complete. At the same time the woman gained flesh and lost her anæmia.

The Number of Medical Men, Dentists, &c. in Paris.

The Prefecture of Police will shortly issue a report giving the number for each arrondissement of medical, dental, and obstetric practitioners, and of pharmacists practising in this capital. It appears that on Dec. 31st, 1894, the list was as follows: Doctors in medicine, 2153; officiers de santé (now obsolete) 84; midwives (*sages-femmes*), 1090; chemists, 960; surgeon-dentists, 69. It must be understood that the 69 dentists only include those persons who have, since the promulgation of the new Medical Act in December, 1892, taken their diplomas. The bulk of the dental practitioners of Paris practise in virtue of a clause of the Act empowering such of them as had paid a patent for the year ending December, 1893, to continue their avocation. Medical practitioners are very unequally distributed amongst the twenty arrondissements. Thus, the eighth arrondissement, with a population of 91,000, possesses 385 medical men, or 1 in 235, whereas the much more populous twentieth arrondissement (population 130,000) boasts of only 29, or 1 in 4500.

The General Result of the Antitoxin Treatment of Diphtheria.

A survey of the statistics hitherto published in divers countries of the results of the application of Behring and Roux's method in the treatment of diphtheria up to the last day of December, 1894, gives a total of 2700 cases with 433 deaths, or a mortality of 16 per cent.

The Sterilisation of Drinking Water.

A very simple and efficient method of sterilisation of water is highly recommended by M. Meillère, Chemist-in-Chief of the Academy of Medicine. Four drops of the tincture of iodine of the French Codex sterilises in a few minutes one litre of spring water, all pathogenic micro-organisms being destroyed. For ordinary household use M. Meillère states that the best method of sterilising water is to prepare with it an infusion of tea, limes, or hops; but the iodine method may, he says, be advantageously employed by travellers.

Mr. Victor Horsley.

Our distinguished compatriot, Mr. Victor Horsley, was on the 16th inst. elected a foreign corresponding member of the Société de Chirurgie—a fresh proof of the esteem in which he is held by the profession in France.

Congress of Aliénists.

The Sixth Congress of the Alienists and Neurologists of France and French-speaking Countries will be inaugurated at Bordeaux on Aug. 1st, under the presidency of Professor Joffroy, the successor of the late regretted Professor Benjamin Ball in the chair of Mental Pathology at the Paris Faculty. The programme will include discussions on the following subjects:—Thyroid Gland and Exophthalmic Goitre—reporter, Dr. Brissaud; the Psychoses of Old Age—reporter, Dr. Ritti; the Medico-legal Aspects of Epileptic Impulsions—reporter, Dr. Partant. Excursions, visits to asylums, and a banquet will complete the doings of the congress, which has for its secretary a former pupil of Professor Ball—viz., Dr. Régis of Bordeaux.

Jan. 22nd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Public Health Items.

DURING the year 1894 there were, in the province of Ontario, fifteen outbreaks of small-pox, comprising thirty-five

cases, six of these proving fatal. This must be considered a most satisfactory record, especially when it is remembered that in the States to the west of us it is quite prevalent. According to reports received from the local boards of health diphtheria occurred in 110 municipalities, the total number of cases being 369, with 28.1 per cent. of deaths. Since the introduction of antitoxin the Provincial Board of Health has been in the receipt of weekly supplies from the New York Biological and Vaccinal Institute, averaging 500 c.c., which have been distributed by Dr. Bryce through the province where most needed. So far some hundred cases have received the treatment; blank forms for the systematic reporting of cases have been adopted by the board with a view to their being subsequently reported upon when a large number have received treatment.

Treatment of the Insane in British Columbia.

The report of the Royal Commission appointed to investigate the Provincial Insane Asylum at New Westminster has recently been laid before the Legislature, and from the reports to hand it would seem that the treatment received by the unfortunate inmates was not in many particulars along the line of "modern treatment"; the institution is said to be equipped with implements of mechanical restraint or punishment such as handcuffs, leather mitts and muffs, steel anklets, leather anklets for women, pinion straps, and strait-jackets. Besides the use of the foregoing there was a system known as the "ducking" or "cold dip." One clause in the Commissioners' report is given in the *Mail* of Dec. 22nd as follows: "We were astounded at bearing patient after patient telling the same stories of inmates being thrashed with straps, of their being kicked, handcuffed for trifling offences, struck with the fist, ducked in cold water until nearly suffocated, of their being tortured by semi-strangulation by means of the strait-jacket, and of one man having a hand crippled for life by the prolonged use of a leather mitt." I cannot help thinking that some amount of exaggeration may have crept into the evidence due to the mental condition of the inmates, but nevertheless the fact remains that severe measures have been adopted and carried out in some cases to the point of cruelty, and I hope to hear of speedy reorganisation of the management.

Accident at Beaconport Asylum.

While visiting one of the wards of this asylum recently Dr. Volee, the chief medical superintendent, was suddenly felled by a blow from a piece of iron pipe in the hands of an inmate. I believe I am correct in saying that he has since succumbed to the injury. Had it not been for the action of an attendant he would have been instantly killed.

Canadian Weather.

As evidence that we are not perpetually wrapped in snow and ice the following items from the report of the Meteorological Department for December, 1894, may be interesting. The mean temperature was 31.28° F., being 5.06° higher than the average for fifty-four years. The highest temperature (49.3°) occurred on the 16th and the lowest (6° below zero) on the 28th. On each of twenty-five days the mean temperature was above the average of that particular day and below on six days. The mean humidity was 80; the mean amount of cloud was 69, being 8 below the average; and there were 77.4 hours of direct sunshine out of a possible 277.3. Rain fell on eleven days to the depth of 1.895 in. and snow on seven days to the depth of 2.2 in.—i.e., 11.9 in. below the average. From this it will be gleaned that we have been enjoying an open winter.

THE PASTEUR-CHAMBERLAND FILTER.

THE remarkable stand which the Pasteur-Chamberland filter is making against the most severe and searching tests is a fact which in the interests of hygiene cannot be ignored. It would seem almost unnecessary, indeed, to institute further investigation, since it affords, as is well known, a reliable instrument in the bacteriological laboratory for the sterilisation of cultures, or for removing organisms from other fluids as in the preparation of antitoxin. For this purpose it is looked upon to accomplish this end as a matter of course, just as the fine paper filters which are to be found in every chemist's laboratory are relied upon to remove the finest particles suspended in fluids, or just as a given chemical reagent is entrusted to remove

completely certain metals from a solution of their salts. It may be urged, however, that in spite of the severity of the tests which may have been organised in the laboratory, yet certain conditions might still obtain in practice which might lay bare a weak spot in its armour. This is not likely in view of the care that in certain recent researches has been given to include every possible source and kind of contamination which a water may undergo and with which the filter may have to deal. The researches of Dr. Kirchner, described in detail in the *Zeitschrift für Hygiene*¹ in 1893, and more recently of Dr. H. H. Johnston, published in a thesis prepared for the D.Sc. degree of Edinburgh University on the relative efficiency of certain filters for removing micro-organisms from water, afford, we think, most conclusive evidence in this respect. The experiments of the former were either in part or entirely made with more or less dilute broth and without pressure, the liquid being thus constantly of a high nutrient capacity for organisms and containing a multiplicity of them. The latter investigation extended from October, 1893, to June, 1894, and involved over 300 examinations of filtrates, some derived from ordinary main water and some artificially contaminated. The experiments with the tube filters extended over periods of from three to six weeks of continuous filtration, and showed that the Pasteur filter retained the organisms both in the main water and in other fluids in which organisms were contained, yielding an entirely sterile filtrate during the whole of the period. These results are valuable enough by themselves, but it is still more satisfactory to find that the purifying efficiency of the Pasteur-Chamberland tube is also attested by actual practical experience. Although the Pasteur filter has been hitherto little employed in this country, it has been very extensively used in France, and the effect of its adoption on the health of large bodies of men in sufficient numbers and under a sufficient variety of circumstances to exclude the effect of coincidence has been very carefully observed. The figures, for instance, relating to the French Army, and disclosed in recent reports of the Minister of War, which were based on the use of the Pasteur filter by some hundreds of thousands of men, together with the more special figures relating to cholera and dysentery in the army of occupation of Cochin China and the Dahomey expedition, leave very little doubt that the use of the Pasteur filter in practice is a real preventive of water-borne disease. In the light of results like these there can be no excuse for reminding the profession of the existence of such a valuable instrument for good. There are, however, one or two points which have recently occurred to us in connexion with the working and construction of this filter which deserve to be more widely known and understood than it seems to us they appear to be. There is, for example, the impression, which has not unreasonably gained ground, that the material of which the filter tube is composed is so dense as to resist the passage of water through it unless considerable pressure is applied. As a matter of fact, this is not so, judging from recent experiments we have made with a domestic filter which has recently been submitted to us by Messrs. Defries and Sons of 147, Houndsditch, E.C. This filter, which was of two gallons capacity, contained three small Pasteur tubes, connected with a piece of rubber tubing outside, extending a short distance below the bottom of the filter. When the filter is filled the water gradually percolates through the walls of the tubes and finally overflows through the rubber tube, the rate of filtration depending, of course, upon the depth of fall of the delivery tube, or, in other words, upon the length of the longer limb of what really constitutes a syphon. By placing the filter high up upon a shelf, and thereby increasing the length of the outside limb considerably, the delivery of filtered water is quite rapid, but even with a short length of eighteen inches the water is delivered at a rate sufficient for all ordinary drinking purposes. In one test the flow of filtered water was found to be equal to two pints and a half per hour, which may be reckoned as equal to an output of three gallons per day. Another apparent drawback to the Pasteur filter is its incapacity to deal with the objectionable taste or smell that may chance to characterise some waters. When, however, regard is had to the fact that the Pasteur tube is simply and solely a perfect strainer, being, it should be added, of such interstitial structure as to effectually remove organisms, this is not surprising—it will not remove, that is to say, gases or solids existing in true solution, since it exerts a strictly mechanical and not a chemical effect upon

the organic impurities contained in the water. Where, however, there is an unpleasant taste or smell or an objectionable material in the composition of the water to be filtered a supplementary addition is made to the Pasteur filter for the purpose of removing it. This consists in the use of some well-known oxidising material. In most waters intended for domestic drinking, however (as, for example, the London supplies), such an auxiliary is seldom required. Instinctively we avoid water that is offensive to the senses; but the Pasteur filter comes to our aid in effectually warding off more insidious dangers, which under ordinary circumstances our senses fail to perceive.

Obituary.

KENNETH CORBET, M.D. ABERD., L.F.P.S. GLASG., L.M.

DR. CORBET, of Beaulieu, Inverness-shire, whose death occurred on the 16th inst., not unexpectedly, for he had, we are informed, been in failing health for several months, will be greatly missed in his neighbourhood, where he was very popular and had an extensive practice. Apart from his professional attainments he was a man of much culture, well versed in Highland folk-lore and in local history and genealogy. Beaulieu being his native place, he was naturally a proficient in the Gaelic language and literature. His first start in life was as an apprentice to a firm of pharmaceutical chemists in Inverness. He subsequently proceeded to Glasgow, where he studied medicine at the University, and in 1854 graduated as M.D. at Aberdeen. Dr. Corbet was appointed surgeon to the local Volunteer force almost on its first formation. He was conspicuous among the early promoters of the movement, and retained his appointment until only a few years ago, retiring with the rank of lieutenant-colonel. He communicated to our columns the results of more than one interesting observation.

JOHN ABERNETHY HICKS, L.F.P.S. AND L.M. GLASG., L.S.A. LOND.

The death is announced, on Jan. 17th, at the age of fifty-eight years, at Bexhill-on-Sea, Sussex, of Mr. John Abernethy Hicks after a lingering illness. He was the second son of the late John Hicks, surgeon (a pupil of Abernethy), of Emsworth, Hants, whose family have been medical practitioners in that neighbourhood for over 150 years. Having chosen the medical profession he was apprenticed to Dr. Walter Raleigh Baxter of Emsworth, who had succeeded his father, lately deceased. In due course he entered jointly at the Westminster Hospital and the Grosvenor-place School of Medicine. Soon after the commencement of the Crimean War he obtained a commission as Acting Assistant Surgeon; he served throughout the campaign till peace was declared, and was awarded the English and Turkish medals. After that he resumed his medical studies in London, and in 1862 obtained the diploma of L.S.A. and in 1865 the L.F.P.S. and L.M. of Glasgow. He married in 1866 the only daughter of the late Charles Davenport, surgeon, of Abbridge and Chigwell-row, Essex, whose practice he succeeded to and carried on for some years. He leaves a widow, one daughter, and three sons. One of the sons, Mr. Jno. Abernethy Hicks, is in the medical profession.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Külz, distinguished for his researches in physiological and pathological chemistry. He was born in 1845, and in 1880 became Professor of Physiology in the University of Marburg, where he has just died. He contributed much to our knowledge of diabetes, so that, although he was not a practising physician, his advice was sought by diabetic patients from all parts of the world. The University students found him a very strict examiner; some years ago they refused to attend his lectures, and the Minister of Public Instruction was compelled to interfere. In the early part of his medical career he was assistant to Professor Mannkopf. His special studies, both clinical and physiological, have been connected with diabetes,

¹ Vol. xiv., p. 299, and vol. xv., p. 179 et seq.

and in 1879 he was appointed to the chair of Physiology in succession to Dr. Nasse. It is an open secret that he had for some time past been the private adviser of the Prussian Education Department in medical matters.—Dr. Gottstein, the celebrated Professor of Laryngology in Breslau. He was born in Lissa (Posen) in 1832. He took a leading position among the early laryngoscopists and became well known for his performance of endo-laryngeal operations. He afterwards cultivated otology and made valuable researches into the structure of the cochlea. His works included a useful text-book on Diseases of the Throat, which has been translated into several languages.—Dr. Poppelauer, a Berlin Privy Councillor, and one of the senior members of the medical profession in that capital.—We regret to see that a *Kenter* telegram announces the death of Dr. Loomis of New York as having occurred at that city on Wednesday last.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Thursday, Jan. 10th:—

Anatomy and Physiology:

Atal, Pundit Prady Lal, Punjab University, Lahore.
Caglieri, Guido Enrico, California University and University College, London.
Dhingre, Behari Lal, Punjab University, Lahore.
Douglas, Percy Clarence, St. Mary's Hospital.
Grapel, Francis Gaspar, University College, London.
Harris, Norman MacLeod, Toronto University, Canada.
Hine, Hugh FitzNeville, Middlesex Hospital.
Lincoln, Charles Hope Septimus, Guy's Hospital.
Robertson, Richard Connon, Charing-cross Hospital.
Wilkinson, Arthur Wilfred, St. Bartholomew's Hospital.

Anatomy only:

Andrews, Cecil Edward, London Hospital.
Hay-Coghlan, William Killeagh, St. Mary's Hospital.
Lewis, Lionel Hugh, Guy's Hospital and University College, Cardiff.
Pattison, Albert John, London Hospital.
Robinson, John Hugh Ripon, London Hospital.
Miles, William, St. Mary's Hospital and University College, Cardiff.
Miller, George Valentine, University College, London.

Physiology only:

Amsden, Walter, St. Bartholomew's Hospital.
Foster, George Muir, University College, London.
Gibson, Charles Walter, Guy's Hospital.
Grucly, Edgar John, London Hospital.
Hendley, Albert Richard, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology.
St. John, Winstan St. Andrew, St. Mary's Hospital.
Waller, Harry Mortlock, St. Bartholomew's Hospital.

Fifteen gentlemen were referred in both subjects, six in anatomy only, and seven in physiology only.

The following gentlemen passed the First Examination of the Board, in the subjects indicated, at the quarterly meeting of the Examiners, under the five years' regulations:—

Part I., Chemistry and Physics:

Alltree, George William, King's College, London.
Bayly, Francis Stephen Goodenough, St. Thomas's Hospital.
Bent, Vincent Thomas Clare, Guy's Hospital.
Bingham, Frank Miller, St. Thomas's Hospital.
Blackstone, Charles Edgar, Middlesex Hospital.
Boyle, William Francis, Charing-cross Hospital.
Browne, Edward Wemyss, St. Thomas's Hospital.
Bullen, Edward Harry, St. Mary's Hospital.
Churton, John Gaitzkell, University College, Liverpool.
Cooper, Walter Edward, University College, London.
Corbett, Sidney D'Alton, St. George's Hospital.
Cox, William Alfred Clayton, St. Mary's Hospital.
Crawford, Vincent James, Guy's Hospital.
Crawley, Herbert Edward, Oxford University.
Davies, Walter C. C. Cornwalleys, St. Mary's Hospital.
De Coteau, Joseph Taph., Guy's Hospital.
De Freitas, Quirino Bonifacio, King's College, London.
Drake-Brockman, Ralph Evelyn, St. George's Hospital.
Driver, Henry Lloyd, St. George's Hospital.
Eastment, Gerald Meade, Middlesex Hospital.
Evans, Arthur Robert, University College, Cardiff.
Faulkner, Erasmus Oakes, St. Mary's Hospital.
Fawley, Tom Bower, Yorkshire College, Leeds.
Featherstone, Frank Reginald, Guy's Hospital.
Glaze, Thomas Horace, Mason College, Birmingham.
Gowing, Benjamin, Yorkshire College, Leeds, and Firth College, Sheffield.
Grindle, Cyril Page, St. Mary's Hospital.
Hand, Frederick Harold, St. George's Hospital.
Horton, Horatio Nelson, Middlesex Hospital.
Hudson, Edmund, Owens College, Manchester.
Hughes, Norman Alexander Aylmer, Yorkshire College, Leeds.

Illius, John Warwick, St. Bartholomew's Hospital.
Langdon, Harold Steele, Middlesex Hospital.
Lees, Charlie, Charing-cross Hospital.
Macintosh, Archibald Malcolm, St. Mary's Hospital.
Merry, Edward, London Hospital.
Michell, Ralph, Guy's Hospital.
Morley, Arthur Solomon, St. George's Hospital.
Moss-Blundell, Cuthbert Blundell, St. Thomas's Hospital.
Newton, Courtenay Howard, St. Thomas's Hospital.
Newton, Reginald Goldie, Oxford University.
Oxley, James Charles Stewart, St. Thomas's Hospital.
Parker, Herbert Alban, St. Thomas's Hospital.
Patch, Burnet Graham, St. Thomas's Hospital.
Pern, Norman, St. Thomas's Hospital.
Phillips, Norman Routh, London Hospital.
Pritchard, Sydney Clifford, King's College, London.
Rohil, Juan Jose, Guy's Hospital.
Row, Charles Martin, University College, London.
Row, Edward Reginald, Guy's Hospital.
Rutherford, William Harper, St. Thomas's Hospital.
Smith, Alan Ayre, Guy's Hospital.
Smith, Hugh, Mason College, Birmingham.
Sturdy, Harry Carlile, Guy's Hospital.
Tatchell, Percy, St. Bartholomew's Hospital.
Tredgold, Alfred Frank, London Hospital.
Vaughan, Arthur Llewellyn, St. Bartholomew's Hospital.
Vosper, Percy, King's College, London.
Weston, Alfred Follam, St. George's Hospital.
William, Norman, Otago University and Guy's Hospital.

Part II., Practical Pharmacy:

Brown, Alexander, King's College, London.
Horsburgh, Charles Bethune, University College, Bristol.
Humbly, Harry Robinson, St. Bartholomew's Hospital.
McMullen, William Halliburton, King's College, London.
Mason, Samuel, St. Bartholomew's Hospital.
Page, Shirley, Mason College, Birmingham.
Reid, Allen George, London Hospital.
Sass, Frederick Joseph Wilfred, St. Mary's Hospital.
Simpson, Graham Seales, Guy's Hospital.
Sprawson, Cuthbert Allan, King's College, London.
Storrs, Reginald, St. Bartholomew's Hospital.
Tatchell, Percy, St. Bartholomew's Hospital.
Tredgold, Alfred Frank, London Hospital.
Unsworth, Noel, St. Thomas's Hospital.
Whitaker, Leonard Edgar, St. Bartholomew's Hospital.

Part III., Elementary Biology:

Agar, William Harold, University College, London.
Agate, Henry St. Arnaud, St. Mary's Hospital.
Ainscow, James, Owens College, Manchester.
Anley, Frederick Eustace, Charing-cross Hospital.
Austin, Alfred Chalmers, St. Mary's Hospital.
Barlet, Jehan Meredith, St. Mary's Hospital.
Batchelor, Henry Charles, Guy's Hospital.
Beasley, Joseph Howard, Mason College, Birmingham.
Brind, Alfred Michael, Mason College, Birmingham.
Bullen, Edward, St. Mary's Hospital.
Carr, Henry Brookes, Guy's Hospital.
Chapman, Donald Poyntz, Charing-cross Hospital.
Coleman, Frank, Charing-cross Hospital.
Cox, William Alfred Clayton, St. Mary's Hospital and School of Science, Cheltenham.
Dalziel, Arthur Montgomerie, St. Bartholomew's Hospital.
Davies, Frank Aaron, Mason College, Birmingham.
Dewick, George, St. Thomas's Hospital.
Double, Meredith Sedgwick, Charing-cross Hospital.
Driscoll, Louis Cornelius, Charing-cross Hospital.
Feddén, Walter Fedde, St. Paul's School, London.
Garne, Sydney William, Charing-cross Hospital.
Goodwin, William Richard Power, St. Mary's Hospital.
Gribbell, William Ernest, St. Mary's Hospital.
Hipwell, Harry, Middlesex Hospital.
Humphreys, Jack Edmund, Charing-cross Hospital.
Jones, Ernest Samuel, University College, Cardiff.
Kilpatrick, James Armstrong, University College, Cardiff.
Kirkcounel, Edward Birchall, Owens College, Manchester.
Kirkman, Albert Henry Beaumont, Guy's Hospital.
Lamborn, William Alfred, Middlesex Hospital.
Lees, Charles, Charing-cross Hospital.
Lister-Kaye, Allan, Guy's Hospital.
Lloyd, Hugh Edward Drummond, St. Bartholomew's Hospital.
McIntyre, Daniel, Owens College, Manchester.
Martin, Malcolm Munro, St. Bartholomew's Hospital.
Maynard, George Darell, St. Mary's Hospital.
Newport, Alexander Charles, Charing-cross Hospital.
Passmore, William Henry, Charing-cross Hospital.
Pinches, Henry Irving, St. Paul's School, London.
Rhodes, Thomas Basil, Mason College, Birmingham.
Roche, Ivan Joseph, Charing-cross Hospital.
Rockwood, David Pratt, University College, London.
Row, Charles Martin, University College, London.
Scott, Henry Martin, Charing-cross Hospital.
Simpson, John Edgar, University College, London.
Smith, Percy Nelson, St. Mary's Hospital.
Smith, Sydney Joseph, Charing-cross Hospital.
Southan, Percy, Mason College, Birmingham.
Speirs, George Benjamin Armes, St. Mary's Hospital.
Sprague, Francis Henry, St. Mary's Hospital.
Stone, Gerald William, St. Bartholomew's Hospital.
Tayler, Henry Christopher, St. Mary's Hospital.
Thompson, William Atkin, Owens College, Manchester.
Tonge, George Preston, St. Paul's School, London.
Vawdrey, Percy Llewellyn, St. Bartholomew's Hospital.
Von Rosen, Alfred Dittlof Benedictus, St. Mary's Hospital.
Wagstaff, Charles Bertrand, Charing-cross Hospital.
Wells, Hardy Vesey, St. Mary's Hospital.
Westlake, Bernad Beaumont, Guy's Hospital.

Weston, Alfred Fullam, St. George's Hospital.
Whitaker, Leonard Edgar, St. Bartholomew's Hospital.
Wilshaw, Thomas Hatcliffe, Mason College, Birmingham.
Woodcock, Henry Chadwick, St. Mary's Hospital.

Part IV., Elementary Anatomy :

Alderson, Francis Bellairs, Firth College, Sheffield.
Barnes, Ernest Charles, London Hospital.
Bathurst, William Henry Isaac, King's College, London.
Bradley, John Bird, Mason College, Birmingham.
Bridger, James Frederick Edmund, St. Mary's Hospital.
Clogg, Herbert Sherwell, University College, Cardiff.
Cocke, Robert Sturgeon, King's College, London.
Davies, Frank Aaron, Mason College, Birmingham.
Dowsett, Ernest Blair, Guy's Hospital.
Francis, William Vane Chalmers, Westminster Hospital.
Garne, Sydney William, Charing-cross Hospital.
Gowing, Benjamin, Firth College, Sheffield, and Yorkshire College, Leeds.
Hamilton, William Gairn, St. Bartholomew's Hospital.
Herklots, Gerard Andreas, University College, London.
Hogan, Roger Joseph, London Hospital.
Hope, Walter Bayard, Guy's Hospital.
Humphreys, Jack Edmund, Charing-cross Hospital.
Jones, Ernest Samuel, University College, Cardiff.
Jones, John, University College, London, and Mr. Cooke's School of Anatomy and Physiology.
Joy, Norman Humbert, St. Bartholomew's Hospital.
Kelly, Thomas Thelwell, Guy's Hospital.
McClintock, John, King's College, London.
McIntyre, Daniel, Owens College, Manchester.
McLachlan, Arthur Ronald, Guy's Hospital.
Martin, Malcolm Murett, St. Bartholomew's Hospital.
Maynard, George Darell, St. Mary's Hospital.
Moggridge, Charles Francis Blagney, St. Thomas's Hospital.
Oliver, Arthur Cardell, University College, Cardiff.
Phillips, Norman Routh, London Hospital.
Reid, Allan George, London Hospital.
Ricketts, Arthur, University College, London.
Ruttledge, William Edward, University College, London.
Scott, Aleck Lauriston, St. Bartholomew's Hospital.
Smith, Sydney Joseph, Charing-cross Hospital.
Smith, Thomas William, Charing-cross Hospital.
Stone, Gerald William, St. Bartholomew's Hospital.
Stuart, Hackworth, University College, London.
Thomas, Alfred Messer, Guy's Hospital and Durham University.
Thomas, David Jones, London Hospital.
Unsworth, Noel, St. Thomas's Hospital.
Unwin, William Howard, Charing-cross Hospital.
Walker, John Frederick, London Hospital.
Wagstaff, Charles Bertrand, Charing-cross Hospital.
Wilshaw, Thomas Hatcliffe, Mason College, Birmingham.
Yoxall, Edward, Mason College, Birmingham.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects :—

Surgery.—R. B. Allen, St. Mary's Hospital; C. M. Beadnell, Guy's Hospital; W. S. Dibbs, Leeds; A. Douglas, Birmingham; R. H. Hayes, Guy's Hospital; P. S. Kesteven, St. Bartholomew's Hospital; W. A. Montgomery, St. Thomas's Hospital; A. T. Petyt, Leeds; E. P. Staples, St. Mary's Hospital; T. Stevens, Charing-cross Hospital; C. S. Taylor, Manchester; and J. M. Troup, King's College.

Medicine, Forensic Medicine, and Midwifery.—H. W. Clarke, St. Mary's Hospital; T. S. Collin, Manchester; L. C. Dillon, King's College; W. MacLellan, St. Mary's Hospital; G. P. U. Prior, King's College; and J. H. Whitaker, Belfast.

Medicine and Forensic Medicine.—O. W. Gange, University College.

Medicine and Midwifery.—A. H. Trevor, Guy's Hospital.

Medicine.—M. T. Archdall, Charing-cross Hospital; and T. Watts, Manchester.

Forensic Medicine.—T. Morris, Liverpool.

Midwifery.—W. J. H. Dawson, St. Thomas's Hospital; and P. S. Kesteven, St. Bartholomew's Hospital.

To Messrs. Allen, Archdall, Clarke, Dillon, Douglas, Hayes, MacLellan, Morris, Prior, and Stevens was granted the diploma of the society.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam*: Dr. M. Straub has been appointed Extraordinary Professor of Ophthalmology.—*Berlin*: Dr. O. Heubner has been appointed to the newly established Professorship of Children's Diseases.—*Constantinople (Military Medical School)*: Dr. Rifat Bey has been appointed Professor of Pathological Anatomy in succession to the late Dr. Ohanes Bey.—*Leipsic*: Dr. Friedrich has been recognised as *privat-docent* in Surgery.—*New York (Post-graduate School)*: Dr. R. Guiteras has been appointed Professor of Operative Surgery.—*St. Petersburg (Military Medico-Chirurgical Academy)*: Dr. J. A. Praxin has been recognised as *privat-docent* in Surgery.

A SESSIONAL MEETING of the Sanitary Institute will be held at the Parkes Museum on Wednesday, Feb. 13th, at 8 P.M., when a discussion will be opened by Dr. George Vivian Poore, F.R.C.P., on Dry Methods of Sanitation. The chair will be taken by Sir Thomas Crawford, K.C.B.

OFFICIAL RECEPTION BY THE SHERIFF OF YORK.—On the 16th inst. the Sheriff of the city of York (Dr. Tempest Anderson, J.P.) held an official reception in the York Exhibition Buildings. About 2000 guests attended and spent a most enjoyable evening. Dr. Anderson delivered an elaborate and important address on Man and his Habitation, illustrated by a series of lantern slides showing the development of human habitations from cave dwellings. Many objects of great scientific interest were on view, including a phonograph and a double pendulum apparatus for drawing harmonic curves.

THE board of governors of the Suffolk General Hospital at Bury St. Edmunds have regretfully accepted the resignation of Dr. Robert Macnab, the senior medical officer of the hospital, who has been on the medical staff of the institution for nearly thirty years. At a special meeting of the governors it was reported that Dr. Macnab could not be induced to reconsider his decision, and the resignation was, therefore, formally accepted. Many speakers made most complimentary references to the past services of Dr. Macnab, who was unanimously appointed consulting medical officer.

WE have received the sixth annual report (1894) of the Scottish Branch of Queen Victoria's Jubilee Institute for Nurses. The object of this association is to provide trained nurses for the sick poor in their own homes. Her Majesty the Queen has been pleased to appoint H.R.H. the Princess Louise, Marchioness of Lorne, President of the branch for three years from Jan. 1st, 1894. Seventy-eight of these nurses are at work in different parts of Scotland, both urban and rural. Eight new local associations have been formed and have been affiliated to the institute. The ordinary expenditure has exceeded the receipts by £462, and the deficiency has been met out of a reserve fund.

PRESENTATIONS.—Mr. G. E. Helme, M.B., C.M. Edin., on the occasion of his resigning the position of house surgeon at the district hospital, West Bromwich, was the recipient from past and present in-patients of that institution of a handsome case containing a set of surgical instruments in testimony of their respect and esteem.—Mr. W. J. C. Keats, L.R.C.P. Lond., M.R.C.S., has been presented with a cake basket by the nurses of the Greenwich Union Workhouse "as a token of their appreciation of the benefits derived by them from attending a course of his lectures at the infirmary."—Mr. M. R. Rich, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Crowland, Lincolnshire, has been presented with the Royal Humane Society's medal for saving a lad from drowning in November last.

INFIRMARY NURSING.—A meeting convened by the Matrons' Council, and held at the rooms of the Medical Society of London on the 17th inst., was largely attended by hospital and infirmary matrons, by medical men, and by Poor-law guardians. The chair was taken by Dr. Bedford Fenwick, and a paper was read by Miss Mollett, matron of the South Hants County Hospital and late matron of the Chelsea Infirmary, upon the Conditions of Nursing under the Poor-law. The lecturer drew special attention to the importance of delimiting and defining the respective duties of the medical superintendent and the matron of the workhouse infirmaries, showing that many of the disputes and nearly all the friction now so frequent are due to the present system.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Lectures will be delivered at the College during the winter session by Mr. W. G. Spencer, F.R.C.S. (Aris and Gale Lecturer), on "The Central Nervous Mechanism of Respiration," on the 18th, 20th and 22nd of February; Professor C. B. Lockwood, on "Traumatic Infection," on the 25th and 27th of February and the 1st of March; Professor Charles Stewart, on "A Revision of the Endoskeleton in the Physiological Series in the Museum of the College," on the 11th, 13th, 15th, 18th, 20th and 22nd of March; Professor Joseph Griffiths, on "The Testis," on the 25th, 27th and 29th of March; and Mr. J. H. Targett, F.R.C.S. (Erasmus Wilson Lecturer), on "Recent Additions to the Museum of the College," on the 1st, 3rd and 5th of April.

THE Musical Society of Middlesex Hospital gave their last periodical concert in the board room of the hospital on Thursday, Jan. 24th, at 5.30 P.M.

THE Congress of the British Institute of Public Health will be held this year in Hull, upon the invitation of the Mayor, the Sheriffs, and Town Councillors of that borough.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information available for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BAILEY, W. H., M.B. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the East Dulwich Sanitary District of the parish of St. Giles, Camberwell.

BARR, JAMES, M.D. Glasg., L.R.C.S., L.M. Edin., has been reappointed Physician to the Liverpool Northern Hospital.

BARROW, V. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Sampford Peverell Sanitary District of the Tiverton Union.

BATTEN, FREDERICK E., M.D. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to the Hospital for Sick Children, Great Ormond-street.

BROOKSHANK, H. J., B.A. Cantab., has been appointed House Surgeon to the Victoria Hospital for Children.

CAMPBELL, W. M., M.D. Edin., M.R.C.S. Eng., has been reappointed Consulting Surgeon to the Liverpool Northern Hospital.

COLMER, P. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Surgeon to the Yeovil District Hospital and Dispensary.

DICKINSON, E. H., M.D. Edin., F.R.C.P. Lond., L.R.C.P., L.R.C.S. Edin., has been reappointed Physician to the Liverpool Northern Hospital.

ELAM, GEORGE, M.D. Durh., B.S., M.R.C.S., L.R.C.P., has been appointed Honorary Surgeon to the Invalid Asylum, Stoke Newington.

HARRISON, D., F.R.C.S. Edin., M.R.C.P., L.M. Irel., M.R.C.S. Eng., has been reappointed Honorary Surgeon to the Liverpool Northern Hospital.

HUNT, M. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Dental Surgeon to the Yeovil District Hospital.

HESTER, W. L., M.D., B.Ch. Dubl., D.P.H. Eng., has been appointed Medical Officer of Health for the Putney District Council.

JACOB, E. L., M.R.C.S., has been appointed Medical Officer to the Leatherhead Urban Council.

JAMES, C. A., M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Consulting Surgeon to the Invalid Asylum, Stoke Newington.

LAWFORD, J. B., F.R.C.S. Eng., has been appointed Ophthalmic Surgeon to St. Thomas's Hospital, London.

MAHOOD, A. E., M.B., M.Ch. Irel., F.R.C.S. Eng., has been reappointed Medical Officer for the Northam Sanitary District of the Biddeford Union.

MANIFOLD, W. H., M.R.C.S., has been reappointed Consulting Surgeon to the Liverpool Northern Hospital.

MARSIE, C. J., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Honorary Surgeon to the Yeovil District Hospital and Dispensary.

MATTHEWS, WM., L.D.S.R.C.S. Eng., has been reappointed Dental Surgeon to the Liverpool Northern Hospital.

McMATH, WM., M.B., B.Ch. Irel., has been appointed Medical Officer to the Queen-street Friendly Benefit Society, Cork.

MONTGOMERIE, H. M., M.D., C.M. Edin., has been reappointed Physician to the West Cornwall Infirmary and Dispensary.

MONTGOMERY, J. B., M.D. Glasg., F.R.C.P. Lond., L.R.C.S. Edin., M.R.C.S., has been reappointed Consulting Physician to the West Cornwall Infirmary and Dispensary.

OLIPHANT, FRANK, M.B. Edin., has been appointed Junior House Surgeon to the Chesterfield Hospital.

PEARCE, A. CHANING, M.B. Lond., has been appointed House Physician to the Victoria Hospital for Children.

PUZEY, C., F.R.C.S., L.M., L.R.C.P. Lond., has been reappointed Honorary Surgeon to the Liverpool Northern Hospital.

SYMONS, J., M.R.C.S., has been reappointed Surgeon to the West Cornwall Infirmary and Dispensary.

WALKER, G. E., F.R.C.S. Eng., M., has been reappointed Consulting Ophthalmic Surgeon to the Liverpool Northern Hospital.

WALKER, H. S., F.R.C.S., has been appointed Lecturer on Ophthalmology and Otolaryngology at the Yorkshire College, Leeds.

WILSON, A. H., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Surgeon to the Liverpool Northern Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CANCER HOSPITAL (Free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and light provided.

DEWSBURY AND DISTRICT INFIRMARY, Dewsbury.—House Surgeon. Salary £80, with board and residence.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer, for one year. Salary £80 per annum, with board and lodging.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Clinical Assistants. Also Registrar and Pathologist for six months. An honorarium at the rate of 25 guineas a year.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Board and lodging (including washing) provided.

ROYAL SOUTH LONDON DISPENSARY.—Surgeon in Ordinary to visit patients at their own homes in the Waterloo District. Honorarium £20 per annum. Applications at the Dispensary, St. George's-cross, S.E.

SALFORD ROYAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

SALOP INFIRMARY, Shrewsbury.—House Surgeon. Salary £100 per annum, with board and residence.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House Surgeon for two years. Salary £100 per annum, with board, lodging and washing.

TACANTON AND SOMERSET HOSPITAL, Taunton.—Honorary Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

DUFF.—On Jan. 22th, at Tyrwhitt-road, St. John's, S.E., the wife of C. E. Duff, M.B., of a son.

ELAM.—On Jan. 17th, at Manor-road, Stoke Newington, N., the wife of George Elam, M.D., of a son.

FLETCHER.—On Jan. 22th, at Harley-street, the wife of H. Morley Fletcher, M.D., of a daughter.

GILBERTSON.—On Jan. 13th, at Hitchin, the wife of James Henry Gilbertson, L.R.C.P. Lond., M.R.C.S., of a daughter.

GREEN.—On Jan. 14th, at Rutherglen, Woodside, the wife of E. F. S. Green, M.D., of a son.

HAMLEN-WILLIAMS.—On Jan. 20th, at Belgrave-mansions, Grosvenor-gardens, S.W., the wife of T. R. Hamlen-Williams, M.R.C.S., L.R.C.P., Fairfield, Pontypool, Glam., of a daughter.

MORTON-WILSON.—On Jan. 18th, at Carlton-villas, Chichele-road, Cricklewood, N.W., the wife of G. Morton-Wilson, M.B., of a daughter.

SLAUGHTER.—On Jan. 18th, at A-hampton-road, Southsea, the wife of Surgeon-Lieutenant-Colonel W. B. Slaughter, A.M.S., of a son.

SUMPTER.—On Jan. 8th, at 2, Harley-place, W., the wife of W. J. Ernely Sumpter, M.R.C.S. Eng., and L.R.C.P. Lond., &c., of Sheringham, Norfolk, of a son.

SWAYNE.—On Jan. 16th, at Leicester-place, St. Paul's-road, Clifton, the wife of Walter C. Swayne, M.D., of a daughter.

SYLVESTER.—On Jan. 18th, at Trowbridge, Wiltshire, the wife of Kirwan F. Sylvester, Surgeon, of a daughter.

WARNER.—On Jan. 17th, at Brechin-place, S.W., the wife of F. Ashton Warner, F.R.C.S., of a son.

MARRIAGES.

CLARKE-ROBINSON.—On Jan. 7th, at Holy Trinity Church, Crockham-hill, Fielding Clarke, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., to Jamie, second daughter of Joseph Robinson, Esq., of Lewins, Crockham-hill, Kent.

DUGGAN-MAUNDE.—On Jan. 14th, at Chetwynd Church, Newport, Salop, Surgeon-Captain C. W. Duggan, M.B., Army Medical Staff, to Crystal Maunde, youngest daughter of W. H. Maunde, Esq., of Merevale, Newport, Salop.

WARD-ROLFE.—On Jan. 9th, 1895, at Great Amwell, George Smith Ward, L.R.C.P., Stevenage, to Fanny Stock Rolfe, of Leigh Court, Amwell.

DEATHS.

FITCH.—On Jan. 12th, at Alma-square, Scarborough, Samuel Edward Fitch, M.D., Clerk in Holy Orders, aged 84.

GOODSIR.—On Jan. 17th, at 11, Danube-street, Edinburgh, Robert Anstruther Goodsir, M.D., aged 71 years.

HICKS.—On Jan. 17th, 1895, at Oakhurst, Bexhill-on-Sea, in his 58th year, John Abernethy Hicks, L.F.P.S. and L.M. Glasg., L.S.A. Lond., son of the late John Hicks, surgeon of Bmsworth, Hants, and son-in-law of the late Charles Davenport, surgeon of Abridge and Chigwell Row, Essex. Interred at Epping, Essex.

JACKSON.—On Jan. 16th, at Nice, Deputy-Surgeon-General C. J. J. Jackson, H.M. Indian Medical Service (retired), aged 64.

WHISHAW.—On Jan. 20th, at Mentone, Alpes Maritimes, Brigade-Surgeon J. C. Whishaw, Bengal Army (retired), aged 62.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, Jan. 24th, 1895.

Date.	Barometer reduced to Sea Level and 52° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Jan. 18	29.69	W.	33	35	67	47	36	0.02	Cloudy
" 19	29.79	S.	44	43	57	47	37		Overcast
" 20	29.55	S.W.	49	43	69	53	43	0.55	Cloudy
" 21	29.55	N.E.	41	40	47	42	40	0.02	Raining
" 22	29.90	W.N.W.	33	31	40	40	32		Overcast
" 23	29.51	W.	40	39	67	40	33	0.35	Overcast
" 24	29.44	N.W.	37	35	46	42	30	0.14	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

(At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.)

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Percy Kidd: A successful case of Paracetamol Pericarditis.—Dr. E. Cautley: The Treatment of Empyema in Children, based on an Analysis of Eighty-six Cases.

THURSDAY.—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8 P.M. Card Specimens:—Messrs. Hodge and Ridley: Intracocular Melanotic Sarcoma with Peculiar Characteristics.—Mr. Lawford: Unusual Arrangement of the Retinal Vessels.—Dr. Argyll Robertson: Filariæ Lœa.—Mr. Marcus Gunn: (1) Peculiar Lenticular Changes following Old Injury of Eyeball; (2) Prolonged Hyperæmic Congestion of Optic Discs closely simulating Papillitis. 8.30 P.M. Papers:—M. Darier: Subconjunctival Injections of Mercury.—Mr. Jessop: Two cases of Diphtheritic Ophthalmia treated by Klein's Antitoxin.—Mr. Wray: Removal of the Lens for High Myopia with a case of —25 D.—Dr. G. Ogilvie: A case of Double Optic Atrophy with Peculiar Visual Fields.—Dr. G. Mackay: Eyesight and the Public Services.

FRIDAY.—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Miller Hospital, Greenwich).—8.15 P.M. Dr. Morgan Dockrell: Cutaneous Syphilis. WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8.30 P.M. Mr. C. Bucknell: A Case of Cowpox in Man.—Mr. Keetley: On Intestinal Affections requiring Surgical Treatment. Card Specimens by Messrs. Bidwell and Keetley and Dr. Abraham.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—SOCIETY OF ARTS.—3 P.M. Prof. Silvanus P. Thompson: The Arc Light. (Cantor Lecture.)

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals. (III.) CENTRAL LONDON THROAT AND EAR HOSPITAL.—4.30 P.M. Dr. Lennox Browne: The Antitoxin Treatment.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers. ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Diseases of Nails. WEST LONDON HOSPITAL (Hammersmith-rd., W.).—5 P.M. Dr. Seymour-Taylor: Cases of Thoracic Aneurysm. (Post-graduate Course.) SOCIETY OF ARTS.—3 P.M. Mr. Thomas Child: Peking.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. W. S. Lilly: Four English Humourists of the Nineteenth Century. (III.) SOCIETY OF ARTS (Imperial Institute).—4.30 P.M. Sir Alexander Wilson (for Mr. S. E. J. Clarke of Calcutta): India and its Women.

FRIDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Pathology of the Skin. ROYAL INSTITUTION.—3 P.M. Mr. Henry Irving: Acting—An Art.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Pathology of the Skin. 5 P.M. Dr. Morgan Dockrell: Tuberculosis of the Skin. ROYAL INSTITUTION.—3 P.M. Mr. Lewis F. Day: Stained Glass Windows and Painted Glass. (III.)

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used

MANAGER'S NOTICE

THE INDEX TO THE LANCET.

THE INDEX for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

THE POST AS A MEDIUM OF REPRESSIBLE CIRCULARS.

A VALUED CORRESPONDENT sends us a circular received by one of his patients a few days after the announcement in the *Times* of the birth of a son. The burden of the circular was to urge the importance of circumcision as a duty to one's male progeny on all moral and physical grounds. The illiterate and ungrammatical composition of the circular does not atone for its audacity in its virtual reflection on Providence, or for the insult to respectable people in receiving such a document. We have before pointed out how the post becomes an agent for mischief in the hands of such persons. We would recommend any person receiving such documents to forward them to the Home Secretary and the Public Prosecutor for their consideration. Some remedy should be devised by these authorities for such uses of the post.

Westwood.—Our correspondent is strongly advised not to undergo the treatment to which he alludes.

CLUBS AND CHRONIC CASES.

To the Editors of THE LANCET.

SIRS,—Will some of your many readers give me the benefit of their opinion upon the following case—as to whether it should be termed "chronic"? A member of a lodge of Shepherds has received sick pay from the funds during the past five years upon seven different occasions on account of gout, for various periods, in all amounting to 168 working days out of a possible 1484. He has always, excepting on one occasion, when he returned to his work before he had regained his strength, in my opinion, been cured, and certified by me as able to follow his employment. There has been an absence of stiffness or alteration in structure or form of his joints and of any obvious impairment of the organs of circulation or digestion—the usual indications of chronic disease. He has been able to work satisfactorily between each attack, and from Oct. 14th, 1893, to Dec. 17th of last year he did not come upon the lodge at all. The secretary and other members of this the largest lodge of Shepherds in the district are disposed to view this case as one of chronic disease, taking as their text the "Dictionary of Medical and Surgical Knowledge," "chronic" being there described as "any disease of long standing, the opposite of acute, a term applied to all diseases which have passed their first or acute stage without being cured."

I am, Sirs, yours faithfully,

Jan. 11th, 1895.

PODAGRA.

AN INQUIRY.

To the Editors of THE LANCET.

SIRS,—Will you allow me to ask through THE LANCET for information concerning lyceol, which I am told is very beneficial in the treatment of gout, but about which I have not been able to obtain any particulars?

I am, Sirs, yours truly,

Falmouth, Jan. 17th, 1895.

ARTHUR B. HARRIS, M.D.

A TAPEWORM IN THE URETHRA.

DR. AXEL SPOOF, writing in *Duodecim*, a Finnish medical journal, mentions the case of a man who complained of pain in the region of the bladder, which whenever he sat down was also felt in the perineum—a trouble which he had had for several years. When Dr. Spoor saw him he was engaged in trying to draw a tapeworm from the urethra, the head having been the first portion to appear. All attempts at traction causing pain, it was decided to desist, and to introduce an opium suppository into the rectum. The next day the worm was easily removed and the patient was able to micturate freely, though he required to do so somewhat frequently. The urine was clear, but it contained a considerable number of white blood-corpuscles. No ova could be discovered. The patient was able to return to his home without delay.

Adenoid.—Our correspondent does not give us sufficient information to make it possible for us to reply. And with all the facts before us the proper fee for a particular surgeon to charge a particular patient for a particular operation is not a thing about which a definite decided opinion can always be given.

SULPHUR & ANTITOXIN IN THE TREATMENT OF DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—To my mind it seems extraordinary the way the medical profession rush, one might almost say blindly, after every new treatment. I should have thought that recent disappointments—the treatment of tuberculosis, for example—would have been a warning, and that caution would be the watchword. We see published in lay papers the wonderful properties of antitoxin, we hear of prominent men in the profession actually wanting subscriptions to found a laboratory for the manufacture of this almost untried antidote to diphtheria. Our old friend sulphur tells the diphtheritic to go and wash in Jordan and be clean. His advice is too simple; there is no display about it. The profession do not like it. Dr. Sumpter in your issue of Dec. 8th gives sulphur a testimonial to which antitoxin cannot hold a candle. Further, Dr. Mules in the same issue writes stating his disappointment in antitoxin. In these cases even one old friend turns up on the successful side. I can imagine the antitoxins saying, "Fancy condemning the treatment because it has failed in one or two cases," and yet we are constantly hearing the new remedy extolled from an experience of one case only. It has been remarked that sulphur has only a local action. I say such is not the case. Observe the silver worm by those who have taken sulphur for any time, and behold the result. Examine the sputum of a patient taking sulphur and the unbeliever must be convinced. As far as my own experience goes, and that of my professional brethren who have used sulphur in the proper way, the dread of diphtheria has almost disappeared. Sulphur can be used locally and constitutionally with the least possible inconvenience in either adult or infant. Swabbing the throat is objectionable in infants, especially as it frightens the child just at the time that all nervous shocks should be avoided. How is it proposed to give an infant a hypodermic injection without giving a severe nervous shock? I suggest that before going into ecstasy over a mere acquaintance we give our old friend an unbiased trial. The best statistics published give antitoxin, compared with sulphur, quite a secondary position. I ask that two hospitals be established where diphtheria is prevalent, and that every alternate case be admitted to the sulphur and antitoxin hospital for twelve months. If I were a betting man I would lay two to one on sulphur.—I am, Sirs, your faithfully,

Aberdovey, Dec. 11th, 1894. W. HAWKINS CUTHBERT, L.R.C.P. &c.

TREATMENT OF TAPEWORM.

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly tell me the best way of getting rid of tapeworm? I have prescribed pomegranate and male fern in drachm doses, given fasting, and though this readily expels the worm it always returns.

Jan. 21st, 1895.

I am, Sirs, yours faithfully,

A. M. S.

"CARAMELS."

To the Editors of THE LANCET.

SIRS,—Can any of my medical brethren tell me what caramels are? I was lately told by a lady that they were much used to improve the bust when the mammae were small or wasted. This is something new to me, and I was not able to say whether they were injurious or not.

Jan. 21st, 1895.

I am, Sirs, yours truly,

M.R.C.S. (Retired).

"POISONING BY NUTMEGS."

To the Editors of THE LANCET.

SIRS,—A reference to Section 366:3 of the "Medical Digest" would have enabled Mr. Simpson to learn that the case reported by him in the last issue of THE LANCET did not stand by itself, several other observers having reported similar symptoms after overdoses of nutmeg.

I am, Sirs, yours obediently,

Boundary-road, N.W., Jan. 19th, 1895.

B. NEALE, M.D. Lond.

THE EDISON-LALANDE GALVANO-CAUTERY.

To the Editors of THE LANCET.

SIRS,—Will any professional brother who has used the large-sized Edison-Lalande cells for minor galvano-cautery operations kindly give me the benefit of his experience? Do they work well and last well, and are they fairly constant?

Jan. 24th, 1895.

I am, Sirs, yours faithfully,

N.

THE VALIDITY OF BONDS IN CASE OF MEDICAL AID ASSOCIATIONS &c.

Specs.—Many of the medical officers of medical aid associations, feeling the galling nature of their work and position, would gladly escape from it. One of the modes of escape is the theory that contracts with a body of laymen for medical service are without force. This is not a sound position. It has been repeatedly negated in courts of law, which are notoriously strong in enforcing contracts. And ethically a bond is a bond and cannot be altered. The only course open to gentlemen so situated is to come to terms with their committee. Let those who are not so bound avoid such fetters.

"ON THE OCCURRENCE OF DIPHTHERITIC PARALYSIS WITHOUT PREVIOUS FAUCIAL AFFECTION."

To the Editors of THE LANCET.

SIRS,—On turning over the leaves of my last year's volumes of THE LANCET I was surprised to find that in the one for Nov. 3rd I had overlooked the above article by Dr. Leonard G. Guthrie. In it he summarises evidence found in a number of cases published by various writers relative to the paralytic sequelæ of diphtheria. Among them he quotes from a case of mine which appeared in the *Medical Times and Gazette* as far back as the year 1866, entitled "Case of Diphtheria by Inoculation appearing on a Wound without the Corresponding Affection of the Fauces, and followed by Paralysis." My principal motive in referring to this article is for the correction—if you will kindly permit it—of the orthographical mistake which Dr. Guthrie has made in the spelling of my name. My patronymic—"Paterson"—is spelled with only one t, but Dr. Guthrie doubles this letter which makes the name "Patter-son." In nine cases out of ten the person possessing the former name would be Scotch, and a like number called Paterson would be found to be English, so that the names are distinctive of the two countries. I find there are other slips, such as the year of publication. The case was published, as above stated, in 1866, but Dr. Guthrie writes in the footnote to his article 1868. Again, he gives the number of the paper 158 for the page 608, the correct indications being *Medical Times*, vol. ii., 1866, No. 658, p. 608, while his footnote reads *Medical Times*, vol. ii., 1868, p. 853. I am quite sensible these inaccuracies are trifling, but they are mistakes, and one, at least, if allowed to pass, might very easily in the future tend to mix matters, if not to raise a question as to the genuineness of my claim to the authorship of the case. Nor is the latter itself of so little importance as to be cast aside lightly, since it enabled me to challenge the generally accepted (localise) pathology of diphtheritic paralysis of the time, and to propose another theory of the cause of this disease, which, in the main, I think, still holds its ground. The weakest point of the case, according to the present-day critic, it would seem, is the possibility of sore throat having been overlooked, and the cutaneous sore mistaken for diphtheria. I dare pledge my word, however, that there are absolutely no grounds for any such suspicion save—*humanum est errare*—the possibility of the thing. That there was no throat affection either before or accompanying the disease the late Professor Pirrie, the patient, and myself were as certain as we could be. Therefore, the theory of Gull that the cause of the nervous sequelæ of diphtheria lay in the transmission of the disease by continuity of nerve-tissue from its seat in the throat to the upper part of the spinal cord in my opinion became untenable, and, forming a different view from the foundation of fact which my case had established, I venture to put forward another which I believed to be more in accordance with truth, and of which it was said at the time that it had "caused the pathology of diphtheritic paralysis to be remodeled." Six-and-twenty years have passed since then; yet I think if anyone should deem it worth while to resurrect this particular copy of the *Medical Times*, and read the case as described on its original pages, he will be surprised to find how little, notwithstanding the exertions of celebrated investigators and full-blown laboratories, of practical knowledge has been added to the pathological hypothesis formulated by a humble worker in the field of medicine more than a quarter of a century ago. In those days diphtheritic paralysis was of common occurrence. How is it that it is met with so seldom now? I would like to know if this is an exceptional experience.—I am, Sirs, yours faithfully,

A. ROSS PATERSON, M.D. Aberd., M.R.C.P. Edin.

Stockton-on-Tees, Jan. 22nd, 1895.

* * We insert this letter from Dr. Paterson that the inaccuracies to which he alludes may be, as they should be, duly corrected; but we see nothing in Dr. Guthrie's paper that appears to minimise the value of Dr. Paterson's case. On the contrary, the case is twice quoted as being very important.—ED. L.

During the week marked copies of the following newspapers have been received:—*Bath Journal, Carlisle Patriot, Gloucester Journal, Wolverhampton Chronicle, Swansea Journal, Llandudno Directory, Nottingham Guardian, Glasgow Evening News, Ayrshire Post, Dundee Advertiser, Times of India, Sussex Daily News, Croydon Guardian, Birmingham Gazette, South Wales Daily Star, Andover Advertiser, Leek Times, Falkirk Herald, Blackpool Times, Hereford Times, Admiralty and Horse Guards Gazette, Wigan Observer, Northern Guardian, Buxton Herald, Scottish Highlander, Woodbridge Reporter, Leighton Buzzard Observer, Bury and West Suffolk Advertiser, Cork Constitution, Cork Daily Herald, Matlock Visitors' List, Westminster Times, Warwick Times, Berwick County Gazette, Staffordshire Post, Reynolds's Newspaper, &c., &c.*

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An Address

ON

EXPERIMENTAL CRANIOTOMY AND
DIAGNOSIS OF CEREBRAL ABSCESS.By PROFESSOR AUGUSTO MURRI, M.D.,
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Association, and specially reported and translated
for THE LANCET.**(Concluded from page 211.)*

PERHAPS it will seem to some that I have brought forward examples too remote to sustain my theory. And, in fact, when one cares to turn over the chronicles of medicine one can always manage to put together half-a-dozen cases which seem made on purpose for one's own theories. But I have taken my observations only from my own unfortunately narrow experience; I have not chosen them from among hundreds. Nor can I deny that cases less obscure than these often occur. The diagnoses which ordinarily answer best are those which rest on suppurative otitis. Yet, nevertheless, even in these cases, which are the most favourable, judgment is difficult. Gowers,¹ a man of wide clinical experience, writes: "The difficulty of distinguishing the existence of a cerebral abscess in a case of chronic disease of the ear is often very great, since certain general cerebral symptoms, amongst which is optic neuritis, may sometimes be produced by disease of the ear. Indeed, it is impossible to give any certain diagnostic rule in these cases. An important fact is that such cerebral symptoms, especially in severe cases of optic neuritis, are very rarely the result of disease of the ear, and in the great majority of cases in which they are found there exists an abscess." As a point of fact, there is a rule—i.e., to eliminate (treating and healing) the disease of the ear, and then to watch whether with it the cerebral symptoms also disappear. But until this elimination is affected (and the process is not easy) a rational distinction between a simple disease of the ear and otitis with consecutive abscess of the brain is often most difficult. Jansen, in giving an account of six assured cases of chronic cerebral abscess out of 13,000 patients studied in the clinic for diseases of the ear at Berlin, frankly confesses that only one of these abscesses was accurately diagnosed, and in that one the position was not determined; two other cases were decided to have intracranial complications without further diagnosis, "and in the rest of the cases" (I use his own words) "the post-mortem was a surprise to them."² Scheier, too, relates the history of a patient operated upon for suppurative otitis media, in whom the total disappearance of the symptoms had led to the belief that nothing existed within the brain, in which case nevertheless an abscess was found,³ a fact which proves that even after the elimination of the disease of the ear the doubt may still remain. Yet decidedly one cannot believe that surgeons so experienced in diseases of the ear could have lacked the knowledge or attention needed to mark the dreaded symptoms of the complications of suppurative otitis. Those ignorant of the difficulties of such criteria, as a rule, speak more certainly, and sometimes even hit the mark; but this is a proceeding utterly incompatible with science and good work. Diagnoses are made and admired as brilliant which show nothing but arbitrary assertions doomed to be disproved; sometimes there may be a fortunate one. What wonder that it should be so? But that which Bacelli has so well defined as the supreme power of experience is not a blind event, not a kind of game in the dark; it is instead the rare faculty of seeing rapidly and accurately the relations of clinical facts, and by logical analysis unravelling their remote origins. The description commonly given of cerebral abscess agrees with the acute or subacute cases met with by the surgeon.

Our learned D'Antona⁴ not long ago wrote that "a group of infective general disturbances belonging only to the abscess

help us to distinguish its course from that of a tumour, when the two processes in other ways are similar or confused. While the course of a tumour is essentially chronic and limited to local action, that of the abscess is never unaccompanied by subacute action." Yet more decidedly Dieulafoy teaches that "fever is constant in encephalitis."⁵ Many others affirm the same thing. If the clinic could sanction such sentences, differential diagnosis between tumour and abscess would not be difficult; but instead experience teaches that there are sudden deaths caused by abscesses as well as by tumour. Martius narrates the case of a nun who suddenly fell into a stupor with a slow pulse and difference of pupils, and who died the same evening as they were putting her to bed. A huge old abscess was found in the brain. The truth, therefore, is that from an acute and sudden course to a very chronic one nothing is impossible in the case of abscess, and the physician who really desires to be practical must keep account of these frequent occurrences and not diagnose tumour, hæmorrhage, tuberculosis, or cerebral inflammation without asking himself if possibly beneath the special manifestations of the case under treatment there may not lie hidden one of those less frequent and chronic abscesses of the brain. He will take note of the height of temperature not only as possible in the chronic abscess, but as favouring this judgment rather than that of any of those other diseases which are apyretic; but he must also remember that prolonged or high fever is very rare in cases of abscess; that, indeed, if there be a high temperature and the diagnosis of chronic abscess is possible, he will be led to suspect one of those complications which belong to it, for of itself the chronic abscess tends rather to produce a temperature below normal; and I here present to you, to prove this, the temperature charts belonging to two of the patients. That of one shows some periods of almost normal temperature, alternating with others of subnormal temperature, showing the successive increase of the inflammation, quickly followed by the lowering of the temperature. That of the other shows little but temperature below normal, and it refers to a case of a purely chronic abscess. Certainly such a phenomenon could not be foreseen, and it is exactly for this reason that the precept is so rooted in the minds of physicians that the temperature must rise with an abscess. To discuss the origin of this tendency of chronic abscess to lower the heat of the body would be difficult and would lead to very little conclusion. We know now that our organism can produce not only phenomena which increase heat, but also others which diminish it; perhaps it is from the nature of the chemical compounds of the brain that inflammation more often produces a diminution of heat rather than an increase. Inflammation undoubtedly gives rise to pyrogenous matters, but the organ upon which they exert their action also decidedly coöperates in the formation of their products, and these differ according to the materials which it supplies to them. It is a fact that the general effect of the action of inflammation is pyrexia; but, on the other hand, do the liver, the lungs, and the peritoneum when invaded by them give rise to a similar pyrexia? Nor must it be fancied that my thermographic charts display any singular features, since the same experience has happened to others, amongst whom it is enough to cite Hulke and Macewen. Consequently, without exaggerating the importance of the fact, it seems to me that we might rather say that a subnormal temperature of long duration, and not pyrexia, is an accurate sign of the chronic abscess of the brain.

Another feature which appears to be a part of this process consists in the apparent recovery of which the disease is capable. A neoplasm, a parasite, or an aneurysm of the brain can also have periods of inactivity, but the disorders caused by them in the functions of the brain, being for the most part mechanical, are more apt to increase than to diminish. Incipient encephalitis instead has a tendency to cause irritation around it, but once the pseudo-membrane is formed the irritation of the surrounding tissues grows less, the contents of the sac are partly absorbed, and thus the compression which it had exerted diminishes. It is no wonder, therefore, that the physiological effects of the compression should be allayed or even disappear. Naturally this period of rest or absolute silence can give no occasion for diagnosis; but when the functional disorders grow active again, which may not be for months or years, then the record of the cerebral disturbances which had first

¹ A Manual of Diseases of the Nervous System. London, 1893, p. 485.² Berliner Klinische Wochenschrift, 1891, p. 1164.³ Ibid., 1893, p. 887.⁴ La Nuova Chirurgia sul Sistema Nervoso. Napoli, 1894, vol. II, p. 232-233.

No. 3787.

⁵ Traité de Pathologie. Paris, 1894, 7ème édition.

arisen, and then disappeared or considerably lessened, might have great importance in the forming of a judgment. No less valuable would be the statement that some of the most important etiological influences had acted upon the organism of the patient. But in laying stress upon the past history we must not forget that these facts may be lacking even in cases where the action of the common causes of the abscess had not been wanting; sometimes the memory of the patient, sometimes the little importance one attributes to certain facts, is the cause of the deficiency of bygone data; but, above all, it must be borne in mind that the most insignificant occurrences, such as rhinitis or one of the commonest and slightest infective diseases, are enough to furnish the stimulus required to bring on a cerebral abscess. Another important consideration is the character of the cerebral disorders manifested at the "recurrence," as I may call it. The latent chronic abscess can increase rapidly and give rise to functional disorders; but these, being produced by the acute increase of intracranial pressure, have no special feature in the case of an abscess. At other times, however, the pus succeeds in escaping from the capsule which for a long time has retained it, insinuates itself into the healthy brain and inflames it, indeed, sometimes reaches the meninges or the ventricles, in which case symptoms occur which arise not from the abscess, but from acute encephalitis, severe meningitis, or from the breaking of the pus into a ventricle. In all these cases there is, nevertheless, the simultaneous action of a rapid increase of cerebral tension, but the preceding processes have some distinctive traits. The danger of confusing such effects of chronic abscess lies entirely in the possibility of being ignorant of the pre-existence of a cerebral lesion, for it is easy to mistake encephalitis or meningitis as being the first symptoms. If, on the other hand, the pre-existent lesion is known, the predicted succession of events increases in value, for neither a neoplasm, a parasite, softening, nor hæmorrhage is enough to give rise to acute inflammation of the brain and meninges.

A fortunate conjunction of symptoms for diagnosis of chronic abscess would be the following. A patient who, some time before, has been exposed to some condition which would cause an intracranial abscess, relates that he has suffered from headaches, fever, vomiting, slight delirium and stupor, or even simply tells us that he had had an illness which had been known as influenza or typhoid fever or rheumatic fever; that he recovered, but had remained slightly anæmic, with headaches now and again; that his mental activity seemed less, his memory less good, and his strength not so great; that, nevertheless, these facts had not been considered otherwise than as attributes of a state of health only relatively good. But suddenly phenomena arose which bespoke acute cerebral lesion, with a normal or, better still, sub-normal temperature, regularly interrupted by slight elevations of temperature. The suspicion of an abscess which had arisen in the brain would then be absolutely rational. Or that a moderate and continuous fever sets in; the functions of certain cranial nerves suffer in a serious way, and through a peripheral lesion; and epileptiform fits occur,—then the diagnosis of chronic cerebral abscess which has reached the meninges becomes quite probable. The value of such a past history would, without doubt, be great; it would almost give us the clue to the source and ulterior changes of the abscess. Unfortunately, in real cases either this history is wanting altogether or exists only in fragments of which the wisdom and caution of the medical practitioner will not permit him to avail himself. But if the history is altogether devoid of suggestion, little can be got from the facts which are offered by the present state. I think that the first cause of the symptoms, even in the abscess, is the mechanical action exerted upon the healthy brain; but this action is common to many other morbid states. Some affirm that the abscess does not exercise so strong a compression as the tumour, but that answers only for small abscesses; it is enough to have seen the brain of one who has died of suppurative encephalitis to be persuaded that the compression may be extremely great. There are others who maintain that the elements of the brain are destroyed by the abscess, and that this is not so much the case with the neoplasm; therefore, the abscess would offer more symptoms of failing function (Anfallsymptome) than does the tumour. The latter would seem to compress and irritate, not destroy. But even such an affirmation as this is not always true, for the tumour can also destroy. The not infrequent latency or semi-latency of the abscess proves that symptoms of imperfect function do not prevail in it. Symptomatic differences are more to be

expected from the diversity of action which morbid processes, essentially different in themselves, must exercise on the surrounding nervous elements. But this scientific presumption is by no means sanctioned by clinical experience. It has been said that the headache belonging to abscess is circumscribed; but the fact is rare, and when it does so happen the headache depends more upon the local pachymeningitis than on the abscess; and since local pachymeningitis may often have other causes, the headache caused by it is not altogether to be attributed to an abscess. Others would wish to give greater importance to pain on percussion of the head, but even this fact rather reveals the participation of the dura mater and the bone—a participation which can also occur in neoplasms and produce the same effects. A slow pulse and Cheyne-Stokes' respiration have often been noticed, but these symptoms seem to depend solely on the increased pressure on the bulb. The power which abscesses possess of increasing intracranial pressure, as I have repeated several times, is the attribute of many other morbid processes of the brain. Perhaps the prevalence of abscesses in the cerebellum, and perhaps, too, large abscesses in the temporal lobe, might more easily account for a more direct pressure of the purulent collection upon the centres of the heart and respiration, but in any case it is certain that this phenomenon may equally belong to all other processes which increase intracranial tension.

The pretence of bringing forward symptoms of interference with function to strengthen a diagnosis of abscess would scarcely warrant mention were it not for the fact that we meet every day with some writer who relates that, guided by these phenomena, he was able to discover the presence of an abscess in the brain. It is evident that we are treating of happy coincidences, not of rational judgments. What is a symptom of interference with function if not an impaired function of some part of the brain? And why would this loss of function be the effect of an abscess and not of the other morbid states, which, like the abscess, can alter the physiological conditions of that area of the organ which governs it? At the best, one can but say, on behalf of this distinction, that if the symptoms of interference pointed to the cerebellum or the temporal lobe, such a fact would favour the diagnosis of abscess, because this latter has a great tendency to develop in the two aforesaid situations; but everyone must see the fallacy of such an argument. The opinion which can be formed on the degree of lesion of the optic nerves is, perhaps, more accurate. I never remember to have seen an absolute amaurosis caused by abscess, except in the last stages, yet it is not infrequent in cases of tumour. Many also affirm that the optic nerves are more often injured by the presence of a neoplasm than by an abscess; but I know nothing of the proofs of this. On the other hand, it seems true that the changes in the ocular fundus are less pronounced in abscess (Gowers). B. von Beck attributes this difference to the different duration and intensity of the compression and of the venous stasis, but even here I must note that an abscess may last as long and compress as much as a tumour, if it is chronic and large. It has already been said that abscess more often than tumour causes unilateral lesion of the optic nerves corresponding to the affected half of the brain; but among the few cases narrated by me there is an example which precisely indicates not only the absence of this tendency on the injured side, but exactly the contrary. Besides this, I have had occasion to see a case of real Leber's "papillitis," so that, considering how in a cerebral tumour the lesion of the optic nerves varies from the greatest papillitis down to the slightest papillo-retinitis and to normal conditions, it is necessary to note that the different degrees of alteration in the optic nerves happen also in many cases of abscess. It is remarkable that Korner,⁶ although he writes of the most favourable cases being preceded by otitis, also affirms and demonstrates the "diagnosis of cerebral abscesses preceded by otitis is, as a rule, often impossible." To demand, therefore, a sure diagnosis, or even a very probable one, of chronic abscess of the brain shows an imperfect knowledge of the clinical facts which concern it, and means that either we must deliberately renounce the cure of even one of these patients, or that we must resign ourselves to explorative craniotomy. The merit of having dared most belongs to Horsley, Macswen, and the English surgeons in general, but their example has not yet been imitated by many physicians or many surgeons. Even

⁶ Die Otitischen Erkrankungen des Hirns. Frankfurt-am-Main, 1894, p. 111.

an illustrious surgeon like Bardeleben leaves a young man of twenty-six, for whom a diagnosis of abscess was made, to die, because the abscess was probably multiform and seemed extensive;⁷ and a clever physician, Baginsky, referring to the treatment of cerebral abscess by means of trephining, says frankly that "he did not wish to submit the patient to operation until the phenomena were absolutely imperative (*absolut dringend*)."⁸

Why refuse the operation? Why delay it even when diagnosis advises it? The excellent results obtained by Macewen are probably owing to speedy and frequent operation. Comparing the results of the treatment used in one of the most renowned surgical clinics, that of Heidelberg, one finds a marked difference between them and the most fortunate "experiments" of the Glasgow surgeon. From among eleven patients for encephalitis who entered Czerny's clinic during the last four years, one only was speedily operated upon, and was the only one to recover. The other ten all died, notwithstanding the fact that five of them had been operated upon by skilful hands. It is certain that if the pus is not removed till it has already devastated the brain, these devastations alone are enough to kill the patient. A probably perfect diagnosis is the guide for operation, the surgeon may perform it in a masterly fashion, but for the patient the operation will have become useless. Scientific exactness must then give place to practical utility. If there are surgeons who withhold their help to patients whose last chance it is, we must believe that they do so through fear of doing more harm than good. Is this fear justified? Bergmann has admirably demonstrated the perils of craniotomy, but successive experience has lessened the degree of danger. Even in the extraction of large tumours Brahman and Czerny have proved that the operation can be successfully performed. But cerebral abscess presents even fewer dangers than a tumour. I know that even to surgeons sincerely devoted to antiseptis it is not always given to avoid purulent meningitis. These cases are few, however, and will certainly diminish as precaution is greater; they may even entirely disappear. When we think of the wretched state of one who carries a mass of decomposition in his brain we can scarcely imagine anything worse for him. Incision of the brain, when performed with all the precautions which have rendered modern surgery so efficacious, is not succeeded by ill effects, even if the abscess be not evacuated—indeed, even in these less fortunate cases it may diminish suffering—nor can we always ascribe the benefit that ensues to the process for which, as a palliative, Horsley recommended puncture of the brain.

Professor Bergmann refers to Drummond's attempt to find an abscess which really existed. Well, he narrates that "trotz mehrfacher Punctionen" on the day after the operation the patient was conscious, his speech had returned, convulsions ceased, paralysis was gone, and yet the abscess had not been reached by either of the punctures.⁹ The eminent clinician also mentions one of his own patients in whom several punctures made to a considerable depth did not succeed in reaching the abscess. Nevertheless, the condition of the patient remained unchanged for three days, after which pus began to issue from one of the channels opened by the cannula.¹⁰ Czerny operated on a young man in whom he had made the diagnosis of abscess in the cerebellum, but found in the cranium neither pus nor anything else abnormal. After two months, whether in consequence of this operation or in spite of it, the young man was quite cured of the disturbances which had made them suppose an abscess existed, and which they afterwards interpreted as dependent on Menière's disease.¹¹ We could easily multiply facts by similar cases, but it is only needful to refer to one more. It belongs to Barker, and is also quoted by Bergmann.¹² Barker, believing an abscess to exist in the cortical centre of the facial nerve, applied the crown of the trephine not only once, but twice, to the motor region, but found no pus. Firm in his convictions, he tried it a third time further back, and found the abscess in the temporal lobe, and cured his patient. Facts like these show that even where the diagnosis of situation is mistaken the intention of the treatment might follow. The condition of the abscess in regard to explorative craniotomy is more favourable than that of the tumour, not only because its situation in the deeper parts is no obstacle to its treatment, but also because puncturing offers us a valid means of

correcting an erring diagnosis of its site. In the very first words of his treatise, Starr asserts that if the diagnosis of the nature of a cerebral process and of its seat cannot be certified, the surgeon must not be asked to operate; but when he comes to speak of abscess, he repents, and says that "even if the seat is uncertain it is the duty of the surgeon to explore."¹³

Truly admirable was the work of a bold and clever modern surgeon. Here is an example: On Sept. 15th, 1891, Macewen operated on a lad of sixteen years in whom cerebro-spinal meningitis had been diagnosed. He opened the mastoid and the base of the cranium to discover the dura mater corresponding to the under part of the temporal lobe. The dura mater and pia mater were incised and the exudation evacuated. The second operation was on Oct. 3rd. The dura mater was laid bare over the lateral sinus and the cerebellar fossa, a cannula was inserted in the temporal lobe, but no pus was found. Four days later a third operation was performed. The dura mater was again opened and the cerebral tissue once more perforated; the abscess was found and its cavity cleansed. But on Nov. 19th it was necessary to operate for the fourth time. A bony disc was removed from the squamous portion of the temporal bone, the dura mater again opened, the superficial cerebral tissue again incised, and another abscess emptied and its cavity washed. Notwithstanding a chronic pachymeningitis, an acute leptomeningitis, encephalitis, and two consecutive abscesses, the patient recovered.¹⁴ I shall never tire of searching. Where this is possible, what excuse can be made for the physician who resigns himself to the disease or death of curable patients? I seek in vain for any reason, practical, moral, or scientific, which can absolve one who renounces the privilege of saving another's life.

My worthy colleagues, I, too, have opened the skulls of patients in whom I had correctly diagnosed tumours or abscesses, but have refrained from giving you their history. It would have been certainly less humiliating to me and perhaps less tiresome to you. Secure in your indulgence, I have preferred this more tedious way to reach a conclusion which may be of practical use. It is this. Physicians and surgeons, we must apply our skill more largely to the benefit of the patient; those who suffer from brain diseases have not yet learned to consult the surgeon rather than the physician. It therefore rests with the practitioner to hold his mind always open to the suspicion of chronic cerebral abscess and to invoke the brotherly aid of the surgeon; but it is as yet irrational to ask that he shall be all-knowing of the real state of things, and pretend to perfect precision; the surgeon must accept the arduous honour of completing both diagnosis and cure. In this way hundreds of sufferers who now die will be restored to life. In times when we so often see the harm produced by irrational hysterectomy and ovariectomy, need we still so much dread exploratory craniotomy, which promises such great results? No one can so well respond to this as yourselves, an assembly of men who live to think and to act. I invoke your instruction. Individually, the field of experience is too restricted to carry out this beneficial reform in practice; collective work is necessary; and if my words have had power to convince you I can hope for no wiser and more cordial coöperation than that which you have it in your power to give.

ON SUPPRESSION OF URINE IN DIPHTHERIA.

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THE discovery and the recent extensive adoption of the antitoxin treatment have stimulated the study of diphtheria from all points of view. This paper, commenced upwards of a year ago, deals with certain of the symptoms of that disease, and its publication is prompted, not by the rarity of the cases recorded in it (for, in truth, such cases are common enough), but by the facts, firstly, that little attention has hitherto been paid to them, and, secondly, that of late the suggestion, if not actual assertion, has been made

⁷ Berliner Klinische Wochenschrift, 1891, p. 155.

⁸ Ibid., p. 1144.

⁹ Loc. cit., p. 23.

¹⁰ Loc. cit., p. 53.

¹¹ Loc. cit.

¹² Loc. cit., pp. 72-73.

¹³ Loc. cit.

¹⁴ Macewen: Op. cit., p. 162 et seq.

both in this country and in Germany that these very symptoms—amongst which anuria is prominent—are due to antitoxin.

CASE 1. *Diphtheria, faucial and nasal; total suppression of urine for nearly seventy hours before death.*—The patient was aged nine years. She was first taken ill on Oct. 22nd, 1893, and was admitted into the Eastern Fever Hospital, Homerton, on Oct. 25th. She was suffering from a malignant type of diphtheria; there were intense injection and oedema of the fauces, on which there was a thick sheet of membrane. There was a discharge from the nose, and the breath was fetid. The cervical lymphatic glands and cellular tissue were much swollen. The temperature on admission was 101° F.—Oct. 26th: She is in the same condition. The urine contains a good deal of albumen. The morning temperature was 99.4° and the evening temperature 100.4°.—27th: She has been sick four times during the night, the vomiting bearing no relation to the taking of nourishment. The pulse is 102. The patient states that she feels better, but she is actually in a critical condition. The morning temperature was 99.4° and the evening temperature 100.2°.—28th: The patient has passed no urine since 8 P.M. on Oct. 27th; before that she passed plenty of urine. The pulse is 108. 3.30 P.M.: The pulse is 72, irregular. The urine contains a good deal of albumen. 11 P.M.: The pulse is 94, a trifle irregular. The patient has only passed four ounces of urine during the day. The morning temperature is 98.6°, and the evening temperature 99.6°.—29th: No more urine has been passed; the pulse is 100 and the respiration 16. Since 7 A.M. a few red pimple-like spots have appeared on the legs. The morning temperature was 97.4° and the evening temperature 98.4°.—30th: This morning the patient is sitting up in bed knitting; she looks much better, but she is reported by the nurse to have had a very bad night, having been constantly trying to get out of bed. No more urine has been passed, even when the bowels have been moved. 12.45 P.M.: The pulse is regular and 64. The nose is blocked with thick mucus. There are patches of membranous material about the palate, uvula, and neighbouring parts, mixed with blood; these parts are in a very dirty and sloughy-looking condition. The patient is stated to have been sick thirteen or fourteen times during the night. The swelling of the cellular tissue of the neck is, if anything, less. 10.15 P.M.: She has passed no more urine. The patient sleeps much and is not so restless as she has been. The pulse is 60, irregular. The patient has been sick once during the day and once this evening. On the last occasion she brought up altered blood. 11.45 P.M.: The pulse is 66. The morning temperature was 97° and the evening temperature 98.4°.—31st: To-day there is hæmorrhage from the vagina and rectum; there is some bleeding from the gums, and a foul sanguineous discharge runs from the nose. The child is very drowsy, but wakes up and talks occasionally. The pulse at the wrist cannot be felt. She has passed no more urine. The bowels acted five times during the night. The heart sounds are faint but normal; action irregular, 72 per minute. Last night there was twitching of the left arm; this has not occurred again. The patient vomited nine times during the night; the vomited matter was like coffee grounds. At midday the child was sitting up in bed; she was quite conscious and stated she felt better. 5.15 P.M.: Drinks all return freely through the nose. The bowels have been opened seven times to-day. There is on the inner side of the right eye a small subconjunctival hæmorrhage. The pimple-like spots on the legs have become larger, and some have given rise to small pustules. A few similar papules and pustules have come out on the trunk and upper extremities. Small petechial hæmorrhages can be seen in the skin of the neck. At 7.50 P.M. the child became convulsed. There were twitchings of the muscles of the face and upper limbs, but not of the lower. These twitchings continued till death, which took place at 8 P.M. The morning temperature was 97° and the evening temperature 97.6°.—The bowels acted seven times during the last twelve hours of life; there was no urine passed on these occasions—in fact, no urine was passed for the last sixty-nine hours of life.

Necropsy, twenty hours after death.—The skin was very anæmic and waxy-looking; rigor mortis was well marked in the lower and less so in the upper limbs. The fauces were in a sloughy, blood-infiltrated condition, and it was difficult to see where membrane was attached, as it much resembled the tissues around. There was no membrane in the larynx or

lungs; the latter were normal. The heart and vessels were normal; there were no petechiæ on the pericardium. The cervical glands were swollen. In the tissue of the neck, chiefly about the sterno-mastoid muscles, there were patches of blood extravasation. There was also extravasation of blood into the tonsils and surrounding tissues. The œsophagus was healthy. The stomach contained eight ounces of partially digested blood; its mucous membrane was much congested, and beneath it there was general extravasation of blood; there were no ulcers. The intestines were normal; there was nothing in the rectum to account for the hæmorrhage during life. Here and there in the small intestines was a little tarry-looking material. The spleen was normal and not at all enlarged; the liver, pancreas, and adrenal bodies were normal. Numerous petechiæ and several extravasations of blood were scattered about between the layers of the peritoneum; there were also extravasations in the retro-peritoneal cellular tissue. The kidneys weighed five ounces and three-quarters. The capsules stripped easily; to the naked eye the only change was in the cortex, which appeared to be slightly thicker than normal. One small extravasation of blood was found on the surface of one of the kidneys; the pelvis and ureters were normal. The bladder was quite empty of urine, and contracted; in its lower and front part there was a dark submucous blood extravasation. The uterus was normal.

CASE 2. *Diphtheria, faucial and nasal; total suppression of urine for fifty-seven hours before death.*—The patient was aged four years. She was first taken ill on July 24th, 1893, and was admitted to hospital on July 28th with exudation on both tonsils and uvula. July 29th: The patient is seriously ill. There is a free, thin, slightly offensive discharge from the nose. The cervical glands on both sides are enlarged. 11.45 P.M.: She has spat out some large pieces of membrane. There is no albumen in the urine.—July 30th: There is a fairly thick sheet of membrane on the left side of the palate.—31st: The fauces are covered with membrane; the cervical glands are still enlarged.—Aug. 1st: The patient has been vomiting to-day. There is a thick precipitate of albumen in the urine.—2nd: The fauces are much swollen and injected, and upon them are small patches of membrane. There is a blood-stained discharge from the nose and mouth. The patient has passed no urine since 4 P.M. yesterday. As far as can be made out the bladder is empty. She has been vomiting frequently. The pulse is 96, regular.—3rd: She has passed no urine since the last note. She is very restless and is constantly vomiting. The pulse is 66, regular. There is no oedema anywhere. The patient is quite rational.—The child died at 1.10 A.M. on Aug. 4th. No more urine was passed. There was nothing particular to note concerning the temperature in this case.

Necropsy.—The kidneys were described as being "slightly swollen and a little congested."

CASE 3. *Diphtheria, faucial and nasal; almost total suppression of urine for nearly forty-two hours before death.*—The patient was a boy aged four years and a half. He was admitted on the evening of Dec. 15th, 1893. He had sore-throat on Dec. 13th. On his admission the fauces were found to be a little red; no membrane was to be seen; there was a nasal discharge and the breath was foul. The glands on both sides of the neck were enlarged. The patient did not seem to be seriously ill.—Dec. 16th: The urine is free from albumen.—17th: The patient has become much worse. There is now a large patch of membrane on the left anterior pillar of the fauces, left tonsil, and left side of the soft palate. The glands are larger.—18th: The condition is as yesterday; but the urine contains albumen.—19th: The patient passed about six ounces of urine at about 6 P.M. yesterday; none has been passed this morning. He vomited once yesterday, and twice in the night. There is a large patch of membrane on the left side of the palate, extending to the left tonsil. This patch is very thick and looks like wash-leather. There is a quantity of nasal discharge, which is offensive. The urine is loaded with albumen. Midnight: He has vomited twice this evening; he is pale; the extremities are cold; no more urine has been passed since last night. The nose is blocked. The pulse is about 90, regular, and very small at the wrist. The patient is now very drowsy, but has been wide awake all day. There is slight oozing of blood from the nose. The patient remained in a drowsy condition after the last note was made until the time of his death, just before noon the next day, Dec. 20th. The bowels acted three times, and he passed about half an ounce of urine with the stools, which was all he passed

¹ From Guy's Hospital Reports, vol. I.

within the last forty-two hours of his life. There was also vomiting on three or four occasions during the last twelve hours, independently of food. The temperature was 102° F. on the evening of Dec. 16th, 100° next day, and afterwards normal. A post-mortem examination was refused.

CASE 4. Diphtheria, faucial and nasal; total suppression of urine for twenty-two hours, partial for some days before death.—The patient was aged three and a half years. She was first taken ill on July 21st, 1893, and was admitted on July 22nd. She did not appear to be seriously ill. There was a casing of membrane round the uvula; the edge of the right side of the soft palate was irregular in appearance and was bleeding slightly. There was a thick nasal discharge. The urine was loaded with albumen.—July 23rd: There is less membrane. The amount of urine is diminished.—24th: The fauces are as yesterday. The urine contains much albumen. Eleven ounces were passed to-day.—25th: The patient has been vomiting. Pulse 102. There is no membrane now. Ten ounces of urine were passed to-day.—28th: The patient is constantly sick. There is no membrane, but there is an appearance as of ulceration along the edge of the palate and uvula. 9.30 P.M.: The patient has been sick several times during the day and has passed no urine since the early morning, when six ounces were passed. Pulse 104, regular. The child is much worse.—27th: Pulse 92. The patient is still vomiting. Six ounces and a half of urine were passed at 5 A.M.—28th, mid-day: There has been less vomiting during the last twenty-four hours. Pulse 92. The patient has only passed seven ounces of urine since the last note. The urine contains much albumen. Fluids return through the nose when the patient drinks.—29th: The pulse is irregular. The patient is very drowsy. She vomits at times. Drinks return by the nose. 11.45 P.M.: Pulse 108, very small; heart quite regular. There is a systolic apical bruit, and the pulmonary second sound is accentuated. Seven ounces and a half of urine have been passed to-day.—30th: The patient was sick last night after taking some jalap powder. She has been vomiting again this morning. Pulse 112, quite regular. There is a systolic apical bruit, but I cannot make out any cardiac dilatation. The urine is of a natural colour, but contains a considerable amount of albumen. Eight ounces were passed to-day.—31st: The patient seems worse to-day; her extremities are very cold. Pulse 120, regular. She has been frequently sick this morning. Ten ounces and a half of urine were passed during the day. The urine contained a thick precipitate of albumen.—Aug. 2nd: Vomiting is almost constant now. The child is extremely restless. She died at 3.40 A.M. in convulsions.—Four ounces of urine were passed at 5.30 A.M. on Aug. 1st; from that time till death no more. The patient's temperature varied from 97° to 99° 8' F.

Neurology.—Permission was granted only to remove the kidneys. To the naked eye these organs were quite normal.

CASE 5. Diphtheria, faucial and nasal; partial suppression of urine for four days before death.—The patient, a boy aged six years, was admitted into the Eastern Hospital on Jan. 3rd, 1894, in the afternoon. His illness began with vomiting on Dec. 29th, 1893, and there was sore-throat on the 30th. On admission there was membrane on both tonsils, which were swollen; the patient's breath smelt very offensively, and there was a copious thin discharge from the nose. The cervical glands on both sides of the neck were enlarged. The evening temperature was 100 4° F.—Jan. 4th: The pillars of the fauces and tonsils are swollen and injected, and their surfaces are marked by several superficial ulcers. Nothing was seen this morning that could be positively called false membrane. The tongue is thickly furred. The urine contains a heavy precipitate of albumen. Morning temperature, 100 8°; evening temperature, 99°.—5th: The urine is loaded with albumen; urates are present. At 1.30 P.M. the pulse was 124. Morning temperature, 99 8°; evening temperature, 100 2°.—6th: The urine is loaded with albumen. The patient vomited four times in the night. There is membrane to day on both anterior pillars of the fauces. Morning temperature, 99 6°; evening temperature, 99°.—7th: Morning temperature, 98 6°; evening temperature, 98 4°.—8th: There is still a heavy precipitate of albumen in the urine. There is membrane on the uvula and lining the pharynx and tonsils. At 2 P.M. the pulse was 102. Morning temperature, 98 6°; evening temperature, 98 8°.—9th: Morning temperature, 98 2°; evening temperature, 97 8°.—10th: The patient is slightly drowsy. Pulse 66, weak, regular. He vomited twice in the night; he has become very pallid. The urine is pale and clear, and contains a flocculent precipitate

of albumen. Midnight: Pulse 66, regular, soft. Morning temperature, 97 4°; evening temperature, 96 6°.—11th: The patient has vomited once during the night (after taking milk) and once this morning. He is not drowsy to-day, but is amusing himself with looking at pictures. There is still some nasal discharge. The pulse is very intermittent and soft; the heart intermits at every third beat. The rate is about the same as yesterday. There is only an opalescence of albumen in the urine. 5 P.M.: Pulse 62. The patient has vomited again once. Morning temperature, 97°; evening temperature, 96 8°. Midnight: Pulse, 58 to 60; respiration, 16.—12th: The pulse as counted by auscultation, 64. The heart is very irregular; there are occasionally no beats for a period of four or five seconds. The patient takes very little nourishment. He has vomited twice during the night and once this morning. There is some emaciation. The pulse cannot be felt at the wrist. There is a considerable amount of albumen in the urine, which is pale and clear. Some of the urine from the bottom of the vessel was microscopically examined, though there was no definite deposit. Nothing abnormal could be detected. Morning temperature, 97 4°. At 4 P.M. the heart-beats as counted by auscultation were 46 per minute, and regular in rhythm. The first sound of the heart was faint. The patient died at 4.35 P.M. He retched several times, and vomited a little brown fluid during the last half-hour of his life. He was rational, though perhaps a little dazed, up to the end. Some difficulty in keeping him warm existed for the last two days, though he was wrapped up in blankets and had hot water bottles in his bed. During the last twelve hours he resisted all attempts to feed him. He had lost flesh rapidly, and the progressively increasing pallor was very noticeable. Towards the end the respirations were "sighing" in character. At different hours on Jan. 11th and 12th the pulse-rate was as follows:—Jan. 11th: 9.30 P.M., 58; midnight, 60. Jan. 12th: 3 A.M., 58; 6 A.M., 56; 9 A.M., 54; noon, 64; 3 P.M., 48; 4 P.M., 46. The amounts of urine passed during each day were as follows (opposite them are placed the pulse-rates):—

Jan. 5th	oz.	Pulse.	Jan. 10th	oz.	Pulse.
5th	18 1/2	124	10th	5	65
6th	13 (about)	—	11th	5	62 to 58
7th	12	—	12th	1 1/2	58 to 46
8th	13	102			(once 64)
9th	8 1/2	—			

The amounts passed between 8 P.M. on one day and 8 P.M. the next were measured, so that the above amounts commence from 8 P.M. on Jan. 4th. Only half an ounce was passed between 8 A.M. on Jan. 12th and the hour of death. The bowels were opened every day naturally, sometimes two or three times.

Neurology forty-eight hours after death, by Dr. F. G. T. Fox.—There was some emaciation of the body, and the skin was very pale. There was nothing to be seen about the fauces that was undoubted membrane; there was a large crypt-like cavity in the right tonsil, opening by a large passage on to the free surface. The epiglottis and larynx were injected and raw-looking. The lungs, bronchi, and trachea appeared to be healthy. The kidneys, which weighed five ounces and a half together, had the pyramids congested. It was questionable whether the cortex was at all increased in size. The capsule peeled readily; there was no charge visible to the naked eye in the structures. The liver was much congested and of a deep purple colour. The heart and spleen were normal. The bladder was contracted and empty.

CASE 6. Diphtheria, faucial, diminution in amount of urine.—The patient, aged six years, was admitted on Aug. 5th, 1893, having been seriously ill since the day before. There was white deposit, not definitely membranous, on the left tonsil, and much swelling of the cervical glands. On Aug. 7th both tonsils were covered with whitish deposit. The following was the amount of urine passed daily from Aug. 7th to 20th:—

Aug. 7th	oz.	Aug. 14th	oz.
7th	11	14th	14
8th	17	15th	17
9th	10	16th	12
10th	7	17th	15
11th	12	18th	14
12th	12	19th	17
13th	15	20th	20

From Aug. 10th to 21st there was albuminuria, but only once in any considerable quantity. From the 10th to the 13th the patient was croupy. On the 16th there was paralysis of the palate. Up to the 9th there was considerable pyrexia.

There was no vomiting. The patient recovered and left the hospital on Oct. 28th.

[I have not given the notes of the treatment of these cases, partly to avoid waste of space, partly because it was unavailing. But in these cases, as well as in those referred to in the following remarks, various local remedies were employed—among others, boracic acid, carbolic acid and iodine, chlorate of potash, bicarbonate of soda, and magnesium sulphite.]

REMARKS.

These six instances have been selected from the notes of many others of the same kind as examples of the class of case in which anuria occurs, and the manner in which it supervenes. The condition they illustrate is a common one, yet it is curious that the text-books say little or nothing about it. As far as I know, my former colleague, Dr. G. G. Morrice, was the first definitely to draw attention to the suppression of urine in diphtheria.² Cadet de Gassicourt does not mention it. Hænoch, who speaks of "nephritis" in diphtheria, says only that one of the symptoms is a "diminution in the quantity of urine." Oertel³ refers to fifty fatal cases of diphtheria recorded by Bartels, in most of which there were dropsy and suppression of urine. But, as is observed by Fagge,⁴ doubt must be raised as to whether some, if not all, of these cases were not scarlet fever. Dr. Morrice refers to a paper by Dr. Gee.⁵ Dr. Gee's paper was written to draw attention to the gravity of repeated vomiting in diphtheria; but in three of the cases he records it is expressly mentioned that the urine was scanty and in three others that there was evidence of renal affection. In two of Dr. Morrice's six cases no mention is made of the quantity of urine.

It will be observed that there are certain points common to the six cases detailed above. They were all severe cases, with much local affection. There was albuminuria and more or less complete anuria. In the fatal cases there was frequent vomiting, and death was due to cardiac failure. This combination of symptoms is common in diphtheria. Some time ago I analysed the notes of thirty cases coming under my notice during the years 1892 and 1893, in which anuria was present in a marked degree. All these cases save three were fatal. I shall have occasion to refer to them in the course of my remarks.

Anuria.—This may be partial or complete. In 7 of the 30 cases there was total suppression of urine for from eighteen to nearly seventy hours before death; while in 12 others suppression was nearly complete for from twenty-four to seventy-two hours. Sometimes the excretion of urine is suddenly arrested; at others the period of total or nearly total suppression is preceded by one of gradual diminution in the amount excreted. In all cases there is albumen, often in large amount. The urine is of normal appearance, and rarely is there any sediment. Blood is never present. I have known anuria to set in as early as the third, and as late as the tenth, day of the disease.

Vomiting is often present, and was observed in 23 of the 30 cases. In 15 instances the vomiting was frequent. In 7 of these 15 cases vomiting set in simultaneously with anuria, before it in 4 (one to three days before), after it in 4 (two to four days after). The vomiting is quite independent of the taking of food. Only occasionally is there diarrhoea, but constipation is common.

Symptoms of cardiac failure are nearly always present from the time when the suppression of urine commences. The radial pulse is soft and small, and the cardiac sounds are faint. These symptoms are usually of gradual onset. The pulse at the wrist becomes more and more imperceptible to the touch and may be quite indistinguishable for some hours before death. The pulse-rate may during the same time become lowered; in seven instances it fell to below normal, the lowest rate observed being 44 per minute; but absolute infrequency of pulse-rate is not a constant feature of these cases, though there is often relative infrequency compared with the rate observed earlier in the course of the disease. Irregularity of cardiac rhythm is occasionally met with.

Death occurs often by sudden cardiac failure; in seven of the thirty cases it was immediately preceded by convulsions. At other times death is by slowly progressive cardiac failure. The patient's extremities become markedly cold and his skin and lips pallid; his temperature falls below normal; he is drowsy, but can easily be roused, though he resents being

disturbed. In these cases the end comes with such quietness that it is difficult to tell the exact moment of death. The fatal termination occurs most often on the seventh, eighth, or ninth day of the disease. In the thirty cases the extremes were the sixth and seventeenth day.

There is usually *much local exudation* upon the fauces. In twenty-three of the thirty cases there was evidence also of nasal diphtheria. The local exudation may entirely disappear before suppression of urine sets in. Even in cases where the exudation persists serious constitutional symptoms may not show themselves until the onset of anuria. To the inexperienced observer the patient may, in those cases where the membrane clears off and there is little if any vomiting, seem to be improving, and I have more than once had to warn a patient's relatives of the fallaciousness of appearances.

Post-mortem appearances.—In fatal cases of diphtherial anuria there are only two constant conditions observed at the necropsy, and they seem to be of little importance. The one is marked pallor of the skin and lips, the other a contracted and empty bladder. The kidneys are usually normal in every respect to the naked eye. Now and then they are paler than usual; very occasionally the cortex is slightly increased in width. In cases where the membrane has cleared off from the fauces before death there may be absolutely no morbid condition to demonstrate post mortem the nature of the disease.

What is the cause of these symptoms? The vomiting and pallor, taken in connexion with the albuminuria and scantiness of urine, suggest uræmia. Certainly anuria is enough to account for uræmia. What, then, is the cause of the anuria? It is stated by Dr. Morrice, in the paper to which I have already referred, that in the cases I am discussing the kidneys are found to be in a state of acute nephritis, and to this condition he evidently attributes the suppression of urine. He is supported in his view of the matter by the fact that certain other writers on diphtheria also speak of nephritis—Hænoch⁶, for example. On the other hand, Cadet de Gassicourt⁷ (who twice in one short chapter talks of the *bénignité habituelle* of the albuminuria of diphtheria) declares that among upwards of a thousand cases of diphtheria observed by himself he saw only three fatal from nephritis, and Dr. Goodhart⁸ states that the kidneys do not usually show any definitely marked change. There is thus much divergence of statement even as to facts. Now, clinically, these cases of diphtherial anuria differ widely from cases of acute nephritis. In the Eastern Fever Hospital, Homerton, into which very many patients suffering from scarlet fever or from diphtheria are admitted in the course of the year, there is ample opportunity of observing this difference. In acute nephritis hæmaturia, dropsy, pyrexia, convulsions (occurring during the course of the attack, and not merely just before death), and coma are common; in the anuria of diphtheria these symptoms are never met with. In nephritis there is usually recovery at the end of several weeks, or a chronic nephritis may result, and even in fatal cases death occurs after an illness of some duration, whereas in diphtherial anuria the usual termination is in death within a few days or even hours, and, in the cases which recover, recovery is always complete. In order to emphasise the difference between acute nephritis and diphtherial anuria I may mention that I have five times seen acute nephritis complicate an attack of diphtheria, and in these five cases the symptoms of the renal lesions were precisely the same as are seen in nephritis after scarlet fever. Lastly, treatment, such as is of great value in nephritis, is of absolutely no use whatever in the suppression of diphtheria. Clinically, therefore, diphtherial anuria is very different from acute nephritis. The evidence derived from the bedside is supported by that gained in the deadhouse. As I have already stated, to the naked eye the kidneys appear to be normal. With the microscope, also, little is to be found amiss. I have examined in this way ten cases, of which three were Cases 1, 4, and 5, described above. In some the kidneys were normal; in others there was a slight infiltration of the interstitial tissue with leucocytes, either around the Malpighian bodies or between the tubes; in two cases where fresh sections had been stained with osmic acid, slight fatty degeneration of the cells of the convoluted tubes was observed; but in another case which I have quite recently examined in this manner no such change is visible. In short, what

² St. Bartholomew's Hospital Reports, vol. xxviii.

³ Ziemssen's Cyclopædia, English Translation, vol. i., p. 604.

⁴ The Principles and Practice of Medicine, third edition, vol. i., p. 270.

⁵ St. Bartholomew's Hospital Reports, vol. xxv.

⁶ Lectures on Children's Diseases, Translation by Sydenham Society, vol. ii.

⁷ Traité Clinique des Maladies de l'Enfance.

⁸ Diseases of Children, fourth edition, p. 205.

changes are seen are variable and slight, and I would suggest that they are secondary to the greatly diminished flow of urine through the organs. The anuria is not, therefore, dependent upon nephritis. It is too marked to be due to either the vomiting (which is not always present) or the cardiac failure. I confess to being ignorant of its exact cause, and can only suggest that it may be due to the direct action of the poison (or poisons) of diphtheria upon the nervous mechanism that governs the excretion of urine.

A CASE OF TUMOUR OF THE CORPORA QUADRIGEMINA.

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AND

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CASES of tumour of the corpora quadrigemina are sufficiently rare to warrant the publication of one, which was studied for some weeks during life, and in which a post-mortem examination was obtained. We have collected about twenty cases of this condition scattered throughout medical literature, in some of which the tumour produced only partial destruction, while in others an extension of the growth involved neighbouring structures, such as the adjoining parts of the optic thalamus and the tegmentum. The case which we here record was characterised by the completeness of the destruction of the quadrigeminal bodies, with only slight implication of one optic thalamus and none at all of the tegmentum.

A piano-maker twenty-three years of age was admitted to the Hospital for Epilepsy and Paralysis, Regent's-park, on Sept. 6th, 1893, under the care of Dr. Guthrie, in the absence of Dr. Hughes Bennett, who has kindly allowed us to publish the case. The following history was obtained from the patient's mother. He had always been well until three years previously, when he had an attack of earache, followed by slight discharge from the right ear. The discharge lasted a few days only, and he had no further trouble from that source. In the second week of June, 1893, he complained of constant frontal headache, but he was able to continue work, and left London to take a situation in Birmingham on June 17th. On June 28th, the headache still persisting, he consulted Mr. Addenbrooke of Birmingham, who kindly sent the following particulars. "He complained of frontal headache and giddiness. He had no squint at that time, but it developed in a week or two. It was very difficult to get any family history from him, but I afterwards found out from his brother that he had lived rather a wild life, and that his father was an epileptic. He had a good deal of loss of coördination of movement even then, which got worse. There was also complete absence of the knee-jerks, and the pupils responded slightly to accommodation, but not to light. He had more or less want of control over the excretions almost from the first. He had no delusions whatever whilst under my care, and gave perfectly rational answers to all questions." There was no family history of phthisis or cancer. On admission to the hospital on Sept. 6th his condition was as follows: He was much emaciated (his mother stated that the wasting dated only from the onset of the present illness). He lay on his back with the legs extended. His head was retracted and turned to the right. He resisted with a frown of pain all attempts to move it in the opposite direction. His expression was dull and listless, though not indicative of pain; but if asked whether he was in pain he always answered "Yes," or nodded assent, placing his hand on his right temple to localise the site. There appeared to be some tenderness about the right occipital region and the right side of the neck. When raised to a sitting position he leaned heavily backwards, placing his hands on the bed behind him in order to support himself, but he would have fallen backwards unless held up. When placed on his feet he was unable to stand alone, owing to the inclination backwards. He could walk in short steps when strongly supported behind. The gait was not ataxic. There was marked convergent strabismus. From time to time he exhibited a sort of twitching movement of the eyes

outwards, followed at once by a return to the convergent position. Movement outwards of the left eye seemed perfect, but the right eye never got beyond the mid position. Apparently there was paresis of the right external rectus coupled with spasm of both internal recti. This interfered with accurate investigation of other ocular movements, but the upward movements of the globes also appeared to be defective. There was no ptosis. The pupils were moderately dilated, the left being larger than the right. The right pupil reacted moderately to accommodation but doubtfully to light; reaction to either was doubtful in the left. Most intense optic neuritis was present in both discs. Beyond the paresis of the right external rectus there was no paralysis of any part of the muscular system. He would shut his eyes, show his teeth, and put out his tongue when asked to do so. There was no deviation of the tongue. The hand grasp was equal on both sides, though somewhat feeble. The right hand and arm were tremulous; he moved the limb vaguely about, at times seeming to grasp at some object in the air, then placing his hand on his right temple, interfering, as if unconsciously, with ophthalmoscopic examination. He would touch various parts of his face with fair precision when told to do so. He moved his legs freely in bed, but only at request. Deglutition was slow but perfect. Unless attended at regular intervals he had incontinence of urine. The bowels acted only after the use of enemata. The urine contained no albumen. The heart and lungs were sound. The pulse was regular and of good volume, but slow (52 to 60 per minute). The respiration was regular and deep (15 to 16 per minute). The temperature remained between 97° and 98° F. There was complete absence of the knee-jerks on both sides. The superficial reflexes, cremasteric and abdominal, were exaggerated. On tickling the soles of his feet the legs were drawn up spasmodically. He lay in a dazed, semi-conscious state, from which he could be roused for a time to answer simple questions, put out his tongue, and so forth; but his attention soon seemed to wander and was difficult to regain. His speech was slow but quite distinct. He would pause for several seconds before answering a question, but would eventually answer correctly and to the point; if more than a few questions at a time were asked, however, he would cease to reply. Occasionally he spoke of his own accord, and once when a conversation arose in the ward on a recent exhibition he said "I've been there." Asked if it was worth seeing, he replied with emphasis, "I believe you," but nothing further could be elicited from him on the subject. He noticed correctly that the ward clock struck an hour slow. When asked to build a piano for the ward he said, "You've no room for it." He recognised the smell of roast beef, and objected to the mutton on the ground that it was too rich. He read the time correctly from a watch held a yard before his eyes, but would not name various common articles shown to him. More accurate investigation of the special senses was impossible. Sensation to touch and pain, as far as could be ascertained, was normal; he winced when the heat test was tried, but would not say whether he felt hot or cold. Examination of the right auditory meatus showed signs of past catarrh, with thickening and opacity of the tympanic membrane, but no perforation.

The general symptoms were obviously those of cerebral compression. Of localising symptoms, the morbid tendency to fall backwards and the inclination of the head to the right (which afterwards varied, the head being sometimes equally strongly diverted to the left) suggested a cerebellar lesion; while the tenderness of the right occiput pointed to the right cerebellum as the most likely site of disease. The diagnosis rested between tumour and abscess of the cerebellum, causing general pressure. The balance was slightly in favour of abscess, owing to the history of past aural disease. But the affection had been trivial, and the signs of its existence were few. There was no perforation of the membrane, no history of persistent discharge, and there had been no rigors. No history of syphilis could be obtained, and no signs of its presence were found; but on the chance that his condition might be due to gumma it was decided to treat him with increasing doses of iodide of potassium. During the next four weeks his condition remained practically unaltered, except that he wasted rapidly. The temperature was almost persistently subnormal, varying between 97° and 98°, but at times rising one point above normal. The pulse rate averaged between 60 and 70 per minute. He never vomited after admission. His appetite remained good. Mastication was slow and imperfect, accompanied by little or no lateral movement of the jaws. Deglutition was

unimpaired. At the suggestion of Dr. Althaus, who kindly saw the patient on Oct. 12th, strong counter-irritation by means of tartar emetic ointment was applied to the right occiput until active inflammation of the scalp was produced. This caused a rise of temperature of from one to two degrees above normal, but no beneficial effect was produced. On Nov. 1st, at Dr. Hughes Bennett's suggestion, it was decided to trephine, the operation being performed on the following day by Mr. Pearce Gould.

A trephine opening was made behind the right ear so as to expose the right hemisphere of the cerebellum. As nothing was found either superficially or on probing, the opening was enlarged anteriorly and the posterior part of the cerebrum brought to view. Here, again, there was no evidence of any localised morbid condition. The patient recovered temporarily from the effects of the operation, but remained dull and apathetic, and death ensued on Nov. 8th, 1893.

Necropsy.—There was a slight milkiness of the cortical pia arachnoid, with increase of the cerebro-spinal fluid and matting of the membranes over the base. On opening the brain there were noticed considerable dilatation of both lateral ventricles and excess of the ventricular fluid. A hard, somewhat nodular swelling occupied the position of the quadrigeminal bodies, and extended into the left optic thalamus. The optic thalami, quadrigeminal region, and pons were prepared for minute investigation. This examination showed that the tumour extended from the junction of the posterior and middle thirds of the left optic thalamus as far back as the posterior border of the testes. It involved the posterior part of the left optic thalamus and merely pressed upon, without implicating, the right thalamus. It destroyed both anterior and posterior corpora quadrigemina, the right bodies being less implicated than the left. It invaded the grey matter around the Sylvian aqueduct, and passed up to and involved the dorso-mesial part of the sub-thalamic region on the left side only. The tegmentum pontis et cruris was unaffected. The left lateral fillet, in its course to the left testis, was involved by the tumour. Histologically the tumour was an angio-sarcoma of apparently rapid growth.

Remarks.—The two outstanding features of tumour of the corpora quadrigemina are an unsteady gait and oculo-motor paralysis. The former is usually described as being that of a drunken person, resembling the gait of cerebellar disease rather than the heel walk of the ataxic. As the disease advances walking becomes impossible without support. Even in the later stages, however, there is no loss of power, unless from extension of the disease the motor tracts in the cerebral peduncles are involved either directly or from pressure. The oculo-motor palsy consists rather of symptoms in the region of the third and fourth nerves than in that of the sixth, which, indeed, is not unnatural, considering that the position of the abducens nucleus is some distance posterior to the testes. Paralysis of convergence, ptosis, and loss of the upward movement of the globes are the chief phenomena noted in the cases of this disease. Apart from these two symptoms, we would call attention to the fact that vision is not materially altered, except by the condition of optic neuritis, which is a constant feature in the cases. This supports the dictum of Nothnagel: "that visual acuity may be unimpaired in these cases may be stated without fear of contradiction." The difficulty of testing audition in these cases is very great, owing to the mental apathy and listlessness commonly present. It would seem, however, from a review of the cases in which this was carefully tested, that hearing is impaired on the side opposite the lesion, or in bilateral cases on the side opposite that which is most affected. Tremors, chiefly of the arms on voluntary movement, have been observed in other cases as well as in our own. They have been described as similar to those met with in disseminated sclerosis. They are probably due to an extension of the tumour growth into the tegmentum and optic thalamus. The knee-jerks are as a rule exaggerated in these cases; but, as not infrequently occurs in cerebellar disease, they may be abolished even from an early date, as happened in the case here recorded.

¹ Brain, 1889, p. 21.

MRS. CHARLES HALL has given £2000 to the Chelsea Hospital for Women in memory of her late husband, Major Charles Hall, formerly of Her Majesty's 1st Life Guards.

NEUROLOGICAL FRAGMENTS.

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(Continued from p. 1473, vol. II., 1894.)

No. XIII.

FITS FOLLOWING TOUCHING THE HEAD.—A CASE
PUBLISHED BY DR. DUNSMURE (1874).

I RECORDED¹ the case of a boy who had what I thought to be fits analogous to those artificially produced in guinea-pigs by Brown-Séquard's well-known methods. The boy fell down and had certain symptoms to be presently mentioned when his head was touched. A discussion followed the reading of the paper, in which Dr. Hadden, Dr. Hughes Bennett, Dr. Ewart, Mr. R. W. Parker, Dr. Beevor, Mr. Brudenell Carter, and Mr. Victor Horsley took part. I find that Dr. James Dunsmure, so long before as 1874,² published a case in all essential respects like that of my patient. Dr. Dunsmure has been so good as to give me particulars of his patient subsequent to 1874. I have no knowledge of the progress of my patient since the time of publication of his case.

Dr. Dunsmure's patient was five years of age (I refer to the boy's condition in 1874, until I mention his later progress). He began at the age of two years and a half to have attacks when his head was touched, and continued to be subject to them; they increased in frequency and severity, lasted about five minutes, when perfect recovery took place. He did not lose consciousness in them. (*Vide infra.*) Three months ago he was noticed to lose power in the right arm and leg during the attack. He could not speak except that he could say a few words with "o" in them, as "horse," which he calls "oss," "open," "ope." Yet he understood any word that was said to him. "He hums several Scotch airs very correctly, and is very fond of music." Dr. Dunsmure writes further (I italicise some words):—"On touching any part of his head sharply when he is unaware of it, he immediately falls to the ground, perfectly powerless, though quite sensible, and remains lying for a minute or more till he is able to rise again. The first time I saw him, the muscles of the right arm and leg were slightly tonically convulsed; but that is the only time I ever noticed any approach to a convulsion. His mother told me that once or twice, when he had had a very severe fall on a day when he was particularly sensitive to attacks, she noticed slight tremor of the right arm or leg, or of both legs alone. During an attack he occasionally cries; the eyes are either half-shut or open, the pupils are unaffected; the face is generally flushed, but it sometimes becomes very pale a short time afterwards, and the arms fall to the side. The sphincters are never relaxed. On days when he has had a number of attacks, the hands are very unsteady, and shake a good deal. He has a tendency to fall to the left side; sometimes the right arm and leg are quite powerless, and remain so for a minute or more, and then recover, while he generally raises the affected arm up with his left hand. Within the last three months he has used the left hand more than the right for doing anything, as feeding himself, &c., &c."

"It is not necessary for a second party to touch the head to induce an attack, for he frequently causes himself to fall while playing with a piece of paper or a ball, if it happens to come in contact with any part of the head; or even when touched suddenly with his own hands, or in feeding himself, if the spoon comes against his face. Combing his hair is a frequent cause of an attack. On being made aware his head is to be touched, he is able to withstand the attack even if a severe knock is given. He is generally in the greatest spirits, playing and romping about with other children; but some days he is irritable and dull, and on those days he is particularly subject to attacks. On the posterior part of the head there are generally one or two swellings, due to the falls he receives. Tapping him over the spine, especially in the dorsal region, causes him to start, and the right arm is jerked slightly away from the body. While eating anything hard he sometimes falls; for example, if given a lozenge or a bit of

¹ Transactions of the Medical Society, vol. x., 1887.

² Edin. Med. Jour., October, 1874.

sugar, he bites it very cautiously, evidently afraid of it breaking, which, if it does suddenly, he either starts or falls down.

"Galvanism applied to the head produces no attack, nor does the sudden application of heat or cold. Any sudden noise has no effect. When his head is touched during sleep, his whole body starts violently, and in about a minute or less his face becomes paler, which appears to me to be very much the same phenomenon as is produced when he is awake, only he is in the recumbent position, and is not able to fall. He drags his right leg very slightly on walking, and on going upstairs he always puts the left one up first. The digestive system is in good order; tongue moist and clean; urine normal; heart and lungs quite healthy; pulse 100; temperature 98.4°. Dr. Argyll Robertson kindly examined the eyes for me with the ophthalmoscope, and found them quite healthy. During the last six months he has improved very much, the attacks are neither so numerous nor so long. At present they rarely last above a minute.

"It is extremely difficult to know whether there is at the time of fall a momentary loss of consciousness or not. If attacks have been induced when he is sitting, I have noticed his head falls forward for a second, and then immediately recovers itself, during which time he may have been unconscious, or the falling forward of his head may have been entirely due to the loss of voluntary power."

Dr. Dunsmure brought the case before the Edinburgh Medico-Chirurgical Society a few years later. He has obligingly given me by letter particulars of the boy's progress since 1874. Before giving these further details I will remark on the resemblances of my patient's case to that Dr. Dunsmure had previously recorded.

In both cases the patients did not fall when touched on the head if they were aware that they were to be touched. In both cases attacks were producible during sleep. In both attacks were produced by accidental contacts during play, &c. In both there were one-sided symptoms, right in Dr. Dunsmure's patient, left in my patient. In my patient during the attacks, or soon after at least, the eyes turned to the right (evidence, I think, considering that the left limbs were affected, that the attacks were ponto-bulbar, "lowest level," fits) and there was stoppage of respiration for a few seconds. It was not certain that in either case there was loss of consciousness in the seizure. I thought there was in my patient's attacks and Dr. Dunsmure thinks there may have been in his patient's attacks.

I now give the further particulars with which Dr. Dunsmure has supplied me, as to his patient's progress in and subsequently to 1874. It will be seen that the patient had epileptic fits as well as the slighter seizures which for distinction are called "falls."

"During the summer of 1874 the 'falls' were incessant owing to his having been taken out in the hot weather, but they diminished when he was kept in the house. He had to be confined to bed the next summer for a short time, owing to the heat and the frequency of the falls. On March 5th, 1876, he had a nocturnal epileptic fit, and another in a month. After the fits began the 'falls' diminished till August, when the weather was hot, they were so frequent he had again to be confined to bed. He had only one fit to Sept. 11th. From then to Oct. 12th, 1876, he had only one fall and four fits of shorter duration; his right side was paralysed for a short time after each of them, the arm hanging by the side. He had a good many fits and no falls till January, 1877, when he had a bad fit in the morning and six falls in the first fortnight of that month. He had several fits to March, in which he would awake screaming out that he is falling and the mother fancied that, by giving him a slap on the back if she was in time, it stopped the fit. He was put on large doses, twenty-five grains, of bromide three times daily and he had only one fit for many months. In February, 1878, his mother drew my attention to the fact that when his attention was directed to something else and on his then getting a sharp blow on the back his right arm lost power for a minute or two. I saw this; the power returned in about two minutes. On the 31st I saw him again, and his mother stated that on the 20th, when going down the stair, a girl struck him on the back a severe blow with a stick. He ran back to the house and took a fit which lasted five minutes.

"In January, 1880, he had a fit which lasted ten minutes, the right side of the body was paralysed for a quarter of an hour afterwards. For a year or so afterwards fits were brought on by blows on the back. When he had bromide in large doses regularly he was always much better and was

often for months without fits. I do not think there is anything more to say in the case, for after the regular development of epilepsy I did not see much of the case after I made my last communication to the Society till his death.

"The patient died of peritonitis, 1892. The brain was examined by Dr. Bruce, Pathologist to the Royal Infirmary.

"There was no change or disease in the pons or medulla or in any part of the brain, except the cortex. The grey matter was somewhat sodden in appearance and many of the cells were vacuolated."

A SUCCESSFUL CASE OF PARACENTESIS PERICARDII.¹

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A MAN aged thirty-four years, married, came to the out-patient department of the Brompton Hospital on June 6th, 1894, and was admitted by my colleague, Dr. Habershon, under my care, on account of severe dyspnoea. On admission there was extreme dyspnoea, both respiratory and expiratory. The face was pale, ashy, and bedewed with a cold clammy sweat. The expression was anxious. A superficial and rapid examination revealed the presence of a pulse of high tension, and hypertrophy and dilatation of the left ventricle. There was oedema of the bases of the lungs, without signs of general bronchitis, and a small pleural effusion on the right side. The urine contained a small quantity of albumen. The case was regarded as one of granular kidney with asthma probably of uramic origin. A hypodermic injection of a quarter of a grain of morphia was at once given, and in about twenty minutes the dyspnoea had almost disappeared and the patient expressed himself as feeling fairly comfortable. He was then ordered to take liquor trinitrini, one minim, every four hours. Under this treatment he continued to improve. Occasional asthmatic attacks were successfully treated by inhalations of amyl nitrite. As soon as his condition permitted the following note was taken. "Family history unimportant. Previous history: Painter's colic in 1884, and an attack of hæmoptysis in 1889. Ailing three years with cough and occasional hæmoptysis. Present illness began at Christmas, 1893, with hæmoptysis, followed by recurring attacks of paroxysmal dyspnoea. The patient is pale and is still somewhat dyspnoeic. Maintains a sitting or semi-recumbent position day and night. Pulse 98, of medium size, regular tension much increased, artery hard. Heart apex beat at lower border of sixth rib half an inch external to the nipple line. Impulse forcible and diffused. Dulness begins at the fourth rib on the left side and extends outwards to the position of the apex beat. To the right the cardiac dulness merges in the pleural dulness to be subsequently described. Cardiac rhythm cantering, the first of the three sounds heard corresponding with the carotid pulse. Aortic second sound much accentuated. Lungs: On the right side in front dulness from the fourth rib downwards and behind from the angle of the scapula to the base. Over the dull area breath sounds weak and vocal fremitus diminished. At both posterior bases scanty subcrepitant râles. Breath sounds over left lung and upper part of right vesicular and loud. No rhonchi. Urine pale, acid; sp. gr., 1010; albumen, one-tenth; no casts. Ophthalmoscopic examination: Numerous small glistening white patches in the retina on each side external to the discs in the neighbourhood of the macula. Marked whitish thickening of the coats of the retinal vessels."

For the next fortnight there was little change. Asthmatic attacks were relieved by amyl nitrite as a rule, but occasionally a hypodermic injection of morphia had to be administered.—July 22nd: Dyspnoea has been increasing the last few days. The legs are now somewhat swollen and the signs of pleural effusion on the right side have increased. Paracentesis of the right pleura was performed, and sixty-three ounces of rose-coloured fluid were removed. Great relief was obtained, the dyspnoea diminished, and the oedema of the legs almost disappeared.—July 12th: Paracentesis had to be performed again as further effusion into the right pleura had occurred. On this occasion

¹ A paper read before the Medical Society of London on Jan. 28th, 1895.

forty ounces were withdrawn, the fluid showing the same sanguineous character as before. Again great relief was experienced, and for the first time the cantering action of the heart was replaced by the normal rhythm, the first sound being short, the second sound accentuated generally. After about a week the old symptoms returned, and on July 26th the patient complained of severe pain in the left side and was much distressed. A double pericardial friction sound was now heard over the whole præcordia, loudest over the right ventricle. Six leeches were applied to the cardiac region and speedy relief was obtained. A saline mixture containing ten minims of the tincture of digitalis and of the tincture of *nux vomica*, with three minims of liquor trinitrini, was now ordered to be given every four hours. Temporary relief to the dyspnoea was experienced, but the patient vomited occasionally—a symptom attributed to the digitalis. On Aug. 6th the patient had a sudden attack of dyspnoea and cardiac failure. He became pale and faint and his pulse was found to be very irregular and weak. After the administration of a hypodermic injection of ether and of brandy internally he rallied, but complained much of pain in the præcordial region and epigastrium. At bedtime an injection of one-eighth of a grain of morphia was given and the patient slept for a few hours. The next day the following note was made. "Dyspnoea marked. Respiration 32, shallow. Lungs: On the right side dullness reaches in front up to the third rib, and behind nearly to the spine of the scapula. Over the dull area weak breath sounds and diminished vocal fremitus. At the left posterior base slight dullness as high as the angle of the scapula, weak breath sounds, and some creaking. Heart: (Edema of the skin in the cardiac region, extending outwards nearly as far as the nipple on each side. Tenderness on pressure in this situation. Heart's impulse impalpable except at the apex, where it is fairly distinct. Apex beat in the same position as before—i.e., in the sixth intercostal space half an inch external to the nipple line. Cardiac dullness begins at the third rib on the left side, extending outwards and downwards as far as the apex beat. To the right the dullness is continuous with that already described in the examination of the lungs. Heart sounds very feeble; at the apex a cantering rhythm can be recognised; no pericardial friction. Liver much enlarged. Slight ascites. Urine: sp. gr. 1010; contains a trace of albumen. The excretion of urine had fallen during the last three days to twenty-seven ounces." The mixture containing digitalis was now discontinued and ten minims of tincture of *strophanthus* were ordered every four hours. It being now evident that the patient had pericardial effusion, instructions were given to perform paracentesis pericardii if his condition should become worse. The same evening the patient became very restless, the respiration was more laboured, and the pulse weaker. Accordingly at 9.30 P.M. paracentesis pericardii was performed by the house physician, Mr. R. M. Smyth, in the absence of the resident medical officer. A small quantity of cocaine was injected under the skin in the cardiac region, and shortly afterwards a trocar and cannula connected with an aspirating syringe were inserted through a small skin incision in the fourth left intercostal space, as close as possible to the edge of the sternum. The trocar hitched on the edge of the sternum, and after some little difficulty was carefully pushed through the intercostal space until it was felt to be in a cavity. The trocar was then withdrawn and the cannula was now felt to be lifted with each beat of the heart. A quantity of blood-stained serum was syphoned over through the exit tube of the syringe into a porringer. The cannula was gently moved about and the piston drawn out so as to obtain suction. Then fluid of a deeper red colour was obtained, but the cannula soon became blocked, so it was withdrawn and the wound covered with lint soaked in collodion. The patient was relieved at once, the pulse became stronger, and the apex beat of the heart came half an inch lower down than before. Five ounces of fluid were removed. On standing a layer of blood was deposited, the supernatant fluid presenting a clear claret colour.—Aug. 8th: The patient had a good night; he is less restless and in less pain. Respiration 30. The oedema of the chest wall has diminished. Pulse 120, stronger and regular. During the day the pulse-rate varied from 120 to 60, but in the evening it resumed its old rate, 120. The amount of urine passed in the twenty-four hours following the tapping rose to fifty-five ounces.—Aug. 9th: Fair night. Pulse 120, irregular. Cardiac dullness reaches up to the third rib. Rhythm cantering. Respiration 32. Urine, sp. gr.

1010. Albumen one-tenth.—Aug. 10th: The patient seems weaker. Pulse 80, very irregular. *Strophanthus* had to be discontinued on account of the vomiting it seemed to excite. A hypodermic injection of one-fortieth of a grain of strychnine was given in the morning. At 3.30 P.M. I saw the patient. He was then very dyspnoic and distressed. The respiration was 30. The pulse was 90, tension being lower than formerly. Intermissions, mostly coinciding with inspiration, occurred every sixth or seventh beat. The physical signs were unchanged. It was determined to resort to paracentesis again, the operation being performed by the resident medical officer, Dr. Stanley Ballance. The patient was placed slightly on the left side in a semi-recumbent position. After freezing the skin with ice and salt a small incision was made in the fifth intercostal space on the left side two inches from the sternum, and the trocar and cannula were then inserted. After slight aspiration had been employed the fluid was allowed to syphon over into a glass vessel, twenty-eight ounces being collected. The fluid had almost the colour of pure blood, and on standing some coagulation occurred. The specific gravity of the fluid was 1020. During the operation the patient was given a small quantity of brandy-and-water to sip frequently. After the fluid was withdrawn he expressed himself as feeling much easier. His colour improved, the pulse became stronger and less irregular, and the dyspnoea was obviously relieved. The area of cardiac dullness was not perceptibly diminished. On Aug. 11th the patient slept well in the recumbent position, which he had not been able to assume before. The oedema of the chest wall was less. The pulse was 88, stronger, but still irregular. The heart sounds were distinct at the apex, but fainter at the base; impulse was stronger. The quantity of urine excreted during the twenty-four hours following the operation rose to ninety-seven ounces. For the next month the improvement was maintained, though attacks of dyspnoea recurred from time to time. On Aug. 17th the cantering rhythm of the heart returned, the second of the three sounds now coinciding with the carotid pulse. The pulse became regular and regained its high tension. The ophthalmoscopic appearances underwent no further change. The physical signs in the chest remained the same. After the second tapping the patient was given a mixture containing iron and *nux vomica*. From the second week of September, when I went for my holidays, my colleague, Dr. Habershon, kindly took charge of the case. On Sept. 15th the patient's condition changed for the worse. The pulse became weaker, the dyspnoea increased, and the quantity of urine had fallen in two days from eighty-eight ounces to forty-eight ounces. The urine now contained one-fourth albumen, the sp. gr. remaining at 1010. As the area of cardiac dullness was thought to have increased slightly it was decided to tap the pericardium again. Paracentesis was performed in the fifth intercostal space on the left side just internal to the situation of the second puncture. No fluid could be obtained. From this time the patient gradually failed, the tension of the pulse fell, the restlessness and respiratory distress became greater, and the quantity of urine steadily declined. Frequent injections of morphia were required to relieve the distressing dyspnoea, but the patient sank and died quietly on Sept. 22nd, six weeks after the second tapping, consciousness being preserved to the last.

Necropsy.—There were recent pleuritic adhesions on both sides; the left pleura was adherent to the pericardium. The pericardial sac was entirely obliterated by adhesions, firm at the base but very soft towards the apex and lower part of the right ventricle. The pericardium was studded with numerous small hæmorrhages, old and recent. The heart (weight with pericardium twenty-three ounces) was greatly enlarged, the left ventricle being mainly affected, and its walls measuring nearly one inch in thickness. The muscle was rather soft. The cavity was moderately dilated. The valves were normal. The lungs were oedematous. There was slight marginal emphysema. There was no trace of tubercle. The larynx was oedematous. The kidneys (weight seven ounces and a half) were much contracted. The capsules were slightly thickened but stripped easily, leaving a granular surface. There were a few small cysts and some yellowish patches in the cortex, which was greatly thinned.

Remarks.—I have ventured to describe this case as a successful one for the reason that marked and immediate relief was obtained from paracentesis, and the improvement was maintained for fully four weeks, the patient's death being the inevitable result of advanced renal disease. Post-mortem examination showed that the pericardial cavity had been closed by adhesions. The case was, it will be admitted,

a very severe one—granular kidney with uræmic asthma, cardiac dilatation, retinitis, and sanguineous effusion into the pleura and pericardium. The fact that paracentesis pericardii gave unmistakable relief in so desperate a case is the best testimony to the efficacy of this mode of treatment. All who saw the case—and they were many—were convinced that but for the tapping the patient could not have lived many days. The first tapping, performed in the fourth left intercostal space close to the sternum, though it gave temporary relief only yielded five ounces of fluid. Accordingly on the next occasion the puncture was made in the fifth space two inches from the sternum. Dieulafoy recommends that the trocar be introduced at no great distance from the sternum, so as to avoid opening the pleura, but there was thought to be little danger of this occurrence in the present case as there were good reasons for believing that the pleura and pericardium were adherent. The greater success of the second paracentesis is largely to be attributed to the semi-erect position of the patient at the operation facilitating the displacement forward of the exudation, which, as so often happens, had gravitated to the posterior part of the pericardial sac behind the heart. The hæmorrhagic character of the fluid withdrawn from the pericardium as well as from the pleura is noteworthy, as pointing to the severity of the renal affection. The quantity of fluid removed on the second occasion, twenty-eight ounces, is rather large as compared with the average of cases recorded, though a much larger quantity has been removed in individual cases. It is, however, well to remember that the removal of a much smaller amount—e.g., four or five ounces—has been productive of excellent results in several cases that have been reported. The good effects of the tapping were manifested by the circulation, respiration, and secretion of urine. The rapid relief of the dyspnoea shows that this symptom was largely due to the mechanical difficulties under which the heart was labouring. Not less remarkable is the rise in the amount of urine that occurred. Thus, in the twenty-four hours preceding the first operation the quantity was twenty-seven ounces; during the next twenty-four hours fifty-five ounces were passed. After the second operation, on Aug. 10th, ninety-seven ounces were measured, and ten days later the quantity had risen to 137 ounces. No digitals, strophanthus, or other diuretics were given after Aug. 9th, so that the diuresis can only be attributed to the improvement in the circulation brought about by paracentesis. The oedema of the skin in the præcordial region began to diminish as soon as the pericardial pressure was relieved, but it was some days before it had completely disappeared. The diagnosis of the pericardial effusion presented no difficulty. Although the pulsus paradoxus was not present in its typical form it was noted on the day of the second tapping that the intermissions of the pulse mostly coincided with inspiration. This condition could no longer be observed after the fluid had been removed, and it did not return. The repeated hæmoptysis that occurred early in the history of the case is worthy of note in connexion with the hæmorrhagic character of the effusions into the serous cavities, and with the fact that the necropsy revealed no disease of the lungs with the exception of slight marginal emphysema. I have met with several cases of pulmonary hæmorrhage in middle-aged and elderly people who were free from any sign of cardiac or pulmonary disease beyond slight emphysema, but in whom the existence of granular kidney in a latent form was highly probable. Referring to these cases in the discussion that took place at the Medical Society of London a few years ago on the late Sir Andrew Clark's paper on the Non-tuberculous and Non-cardiac Hæmoptysis of Elderly Persons, I ventured to attribute the hæmorrhage to a rise of pressure in the pulmonary circulation secondary to the high tension in the aortic system. When, as is usually the case in such circumstances, some degree of emphysema and general arterial degeneration coexist we must recognise the presence of conditions favourable to the production of pulmonary hæmorrhage. I still regard this explanation as simpler and more probable than Sir Andrew Clark's assumption of a specific lesion of the pulmonary arterioles and capillaries dependent on "the arthritic diathesis." In a valuable paper by Dr. Samuel West on a case of Punctured Pericarditis treated by Paracentesis and by Free Incision, with Recovery,² statistics of paracentesis pericardii

are included, and many interesting points are brought out. Since this paper was published other cases have been recorded; but as Dr. West's conclusions still seem to comprise all the essential points I will now quote them in conclusion: (1) Paracentesis pericardii is not only justifiable, but an operation which may be safely undertaken with ordinary precautions; (2) the most suitable place for puncture is, in ordinary cases, in the fifth left intercostal space one inch from the edge of the sternum; but if the pleura be adherent the puncture may be made safely much further out, and even in the sixth space; (3) the instrument employed should be a trocar and cannula, with or without aspiration; and (4) the operation may be performed with advantage, not only in the pericardial effusions of rheumatic or primary origin, but also in those which occur in the later stages of general dropsy, if it should appear that the fluid in the pericardium is adding to the difficulties under which the heart is placed.

THE DIFFICULTIES OF PROGNOSIS IN INSANITY.¹

By HENRY SUTHERLAND, M.D. OXON.

EVERY practitioner of medicine is aware how difficult it often is to give a prognosis in ordinary cases of bodily disease. There is no point in our professional career which is so likely to endanger the opinion the public may have formed of our skill in diagnosis and treatment. It can, therefore, be easily understood that in all cases of mental disease this difficulty becomes much augmented, for the reasons that the patient will not assist us by describing his subjective symptoms, and will frequently complain that he is suffering from various bodily complaints of which there are no signs whatever. In forming an opinion about any given case of bodily disease we are usually asked: "Will the patient recover?" "How long will he be ill?" "Will the patient die?" "If so, how long has he to live?" And, of course, such questions as these refer just as much to the somatic troubles which may accompany mental disease; but in the prognosis of insanity we have to answer in addition the following style of questions: "Will the patient recover *mental* health?" "If so, how soon?" "Will he die of the *mental* disease?" "If he recovers, will he have another attack?" "If he remains permanently insane, will his life be a long or a short one?" The classifications which have been made of mental diseases do not throw much light on the subject of prognosis. Greissinger divides them under two heads—curable with functional disorder of the brain and incurable with organic disease. Maudsley drops an excellent practical hint in his subdivisions into emotional and intellectual insanity, emotional insanity being a condition in which horrible crimes are committed, while at the same time the public are unable to detect any abnormality in the intellectual faculties. But to my mind the rule of thumb employed at St. Luke's Hospital is by far the best foundation upon which we can rely for a really useful division of the subject. At this hospital curable cases are alone admitted. The medical officer is instructed to ask the friends who are applying for the admission of a patient: "What is his age? What is the duration of the attack? Is it the first attack or not?" and, lastly, "What is the form of mental disorder from which the patient is suffering?" One of the most important points in regard to prognosis is undoubtedly the age of the patient. Thurnam tells us in his statistics that "the probability of recovery is greatest in the young, and undergoes a regular diminution as age advances." Most writers look upon an attack occurring after the age of fifty as hopeless. Bearing this point in mind I gave a guarded but unfavourable prognosis in the case of a Member of Parliament aged fifty years who consulted me some years ago. His grandmother had committed suicide and his father had died insane. The patient had what he called "une idée fixe," a sort of modified delusion, with other well-marked mental symptoms. I certainly believed his case to be incurable. I prescribed rest, and I attended to his liver, which was much enlarged. Three months later he had completely recovered, and was able to make a long speech in the House of Commons. I must confess I was completely

² Transactions of the Royal Medical and Chirurgical Society, vol. xlvii, 1883.

¹ A paper read before the West London Medico-Chirurgical Society.

deceived on that occasion, as from the history of the case I had every reason to believe it to be incurable. As a contrast I may allude to the following case. A youth aged eighteen years was brought to me some time ago who was said to be a victim of self abuse. The late Dr. William Wood, who had a more profound knowledge of insanity than anyone I ever met with, pronounced the case to be hopeless. I did not agree with him; but I was wrong. In the course of time the patient so far recovered as to be able to start on a sea voyage. But the first night at sea he told his attendant that a horse had put his head in at the cabin window. After this he became violent, was placed in irons, sent home, and placed in an asylum. He is now under my care, having been insane for more than twenty years without any lucid interval. My opinion that his youth would save him from being a chronic lunatic turned out to be incorrect. The number of attacks a patient has had seriously affects the prognosis. A woman at the change of life consulted me. She had become depressed in consequence of having been left a large fortune unexpectedly, became suicidal, was sent to an asylum, and recovered. I prophesied that she would be a victim to recurrent melancholia. She went out and tried to keep house, but had not the strength to do so. She had a second attack and recovered. The patient went out again and got into the hands of two drunken women who swindled her. She had a third attack and returned to the asylum. She again left, and was taken in hand by another woman, and has had several attacks since. During one of them her brother and I endeavoured to persuade her to become a 'chancery patient.' She refused to take our advice, and she is now gradually drifting from a state of melancholia into one of hopeless dementia. On this occasion I was right. But in a case later I was not so fortunate. A woman had six times suffered from puerperal insanity and had been received into an asylum. When her seventh child was being thought of I advised that she should place herself under medical supervision as a boarder, and thus avoid the fatigues of the London season at this critical period. She passed through her seventh confinement without an attack. She had an attack on the birth of an eighth child. After that she was absent from her husband for two years, but after one year's absence from him a ninth child was born; a divorce was the consequence. Since then she has had children, and has remained perfectly sane on each occasion. My idea that she would end in chronic dementia has thus far proved incorrect.

The form of insanity is also of the greatest importance in giving an opinion. In Dr. Hack Tuke's Dictionary of Psychological Medicine there is an excellent article by Dr. Blandford giving the probability of recovery in every form of insanity. It can only be remarked here that acute cases as a rule are curable and that chronic cases are incurable. According to a very clever classification of mental diseases, drawn up by a committee of the Medico-Psychological Association, the following forms are incurable: general paralysis, epileptic insanity, senile insanity, paralytic insanity, and perhaps idiocy. In Dr. Mickle's work on General Paralysis of the Insane he mentions the names of not less than thirty-six writers who have published cases of recovery from general paralysis. In my own opinion a recovery from general paralysis, when the symptoms are well marked, never has and never will take place. In such so called recoveries either a wrong diagnosis has been made or the patient has left the asylum during a temporary convalescence and has been lost sight of. In the advanced stage the diagnosis of this disease is generally very easy. At least, so I and some others thought about a man whose case at the time attracted much attention in the psychological world. This patient's left pupil was always much contracted and insensible to the stimulus of light. The right pupil was much dilated. He had marked hesitation in his speech, more especially in his pronunciation of linguals and labials, which, as everybody knows, is very characteristic. I remember his delusions of grandeur very well. He said he had a horse which was going to win the Derby, that he was about to row for and win the Diamond Sculls, and that he had bought a four-in-hand. The case was carefully watched, epileptic attacks and other signs of advancing disease being daily anticipated. At the end of three months the patient made a good recovery, was discharged from the asylum, and I have reason to know never had a second attack. It was found out afterwards that his hesitation in speech was congenital, that the contraction of the left pupil was due to an old iritis, and that the

delusions of grandeur were only those which may be met with any day in certain cases of acute mania.

Any form of insanity associated with epilepsy is generally considered incurable. The exceptions to this rule are infantile convulsions, epileptic insanity at puberty in girls, and epilepsy after a prolonged and excessive use of alcohol. I was once sent down to Wales to rescue a lunatic who was being robbed of his property. He had been staying for some months in a low village inn, where, in order to conciliate him, he was supplied with unlimited beer. I found him reeling about with a glass of beer in his hand, which he sipped all day. I brought him up with great difficulty to London. On his arrival he had three distinct epileptic fits. We all pronounced the patient to be suffering from incurable epileptic insanity. In this we were wrong, as the patient for ten years never had another epileptic attack, the three on admission having been entirely due to drink. About the same time a woman aged twenty-eight years was sent by Dr. Buzzard suffering from epileptic mania. She commenced having these fits at about twenty-five years of age, and they were increasing in frequency every week. The diagnosis was clear and the outlook hopeless. After being in an asylum for some years she died from exhaustion, complicated with bronchitis. On this occasion we were all correct in our opinion.

A word as to idiocy. The prognosis in this form is most unfavourable, but more hopeful than might be supposed. Dr. Shuttleworth tells us that of patients discharged from idiot asylums after full training, 10 per cent. are self-supporting and more than 40 per cent. are capable of performing the ordinary transactions of life. Some years ago I was locum tenens at St. Luke's Hospital. As already stated, no incurable patients are admitted to this institution, and all patients are seen by the committee on their arrival. A male patient was brought into the board-room whose relatives had told us he was suffering from acute dementia. Two other medical men and myself were about to give directions as to the ward in which the case was to be placed, when a layman who had sat for many years on the committee exclaimed, "That is a congenital imbecile." I was sent out of the room to make further inquiries, and I found the layman was right, and that the three medical men, including myself, were wrong in their diagnosis. The patient was not admitted. An infant was brought to me by its parents about sixteen years ago. Forceps had been used at its birth, and the frontal bone had been compressed so that its form resembled the keel of a boat more than anything else. My prognosis was unfavourable. The girl is now eighteen years of age, can only articulate as a child of five years might do, and delights to play with dolls and to read childish books. She is quite incapable of doing any arithmetic or managing her own estate. It is impossible to describe cases illustrating points in prognosis in every variety of insanity, but we may take it for granted that in any patient in whom there is a regular periodicity in the attacks all hopes of cure are at an end. I have a woman under my care at the present time who suffers alternately from mania and dementia, each form of mental disorder lasting as nearly as possible nine weeks. I have also a man similarly affected. In most cases of *folie circulaire* which have come under my notice I have found dementia taking the place of mania more frequently than melancholia. Homicidal insanity is in my experience incurable. I was called upon some years ago to examine a man who had murdered his wife and two boys and also attempted to murder his two other children, but they refused to drink the poison he had prepared for them. The murderer then placed his own head on the line of a railway when an express train was expected, intending to commit suicide. He was rescued from this position by a pointsman. He was very much attached to his wife and the children he had killed, he had a good balance at the bank, and was in a good situation. He gave himself up and confessed all to the police. I had not the slightest doubt that the prisoner was suffering from the form of insanity known as "impulsive," which has been so ably described by Dr. Maudsley, and that he was an incurable lunatic. The judge, however, took a different view, informed the court that he would have no more murderers let loose on the plea of mental derangement, and was pleased to say that I had thrown dust in the eyes of the jury. After retiring for a few minutes the jury returned to the court, their verdict being "Not guilty, on the grounds of insanity." I visited Broadmoor Asylum some years later, where the prisoner had been sent, and found him to be one of the most maniacal homicidal patients in the institution, and also perfectly

incurable. The duration of the attack has naturally a great influence upon the chances of recovery. At the Retreat, York, 80 per cent. recovered who had been treated within the first three months of their attack. During the first year about 60 per cent. recovered. After the first year about 10 per cent. recovered. Dr. Thurnam says: "It may be stated fairly that six times as many cases recover within the first year as recover after the first year of the illness. After two years recovery is rare." Nevertheless, recoveries have been known to take place after six, ten, and even twenty years' duration. A woman was admitted to an asylum suffering from suicidal melancholia. Before she was placed under treatment she had gouged out her right eye with her thumb, in obedience to the command in the Bible, which says, "If thine eye offend thee pluck it out and cast it from thee." After some time the melancholic symptoms disappeared, and she settled down into what we considered to be a state of chronic incurable dementia. At the end of seven years she made a sudden recovery and was discharged perfectly able to manage her own affairs. In a long experience I have never known a case recover after so long a duration as seven years. I have had experience of patients, both male and female, who are still under my care after thirty, forty, and in one case fifty years. It is needless to remark that the prognosis is perfectly easy in such cases. With regard to sex it may be observed that a larger proportion of women than men recover. The numbers are 44 per cent. for females and 36 per cent. for males. One reason for this excess of recoveries on the women's side is that they are less afflicted with general paralysis than are the males.

I will now turn to somatic influences with regard to this subject. In my experience the prognosis in insanity from sunstroke is favourable in mild cases, but most unfavourable in severe cases. Sir Joseph Fayrer tells us that on post-mortem examination after sunstroke the brain and its membranes are found congested. My own idea is that when a person is attacked either slightly or seriously by *coup de soleil* the sympathetic circles of nerve fibres surrounding the arterioles become paralysed permanently, and in consequence the bloodvessels do not contract naturally. Hence a larger amount of blood is conveyed to the brain under even a slight stimulus, and excitement and mania result. I was once at a private ball at a seaside town. A young man entered the room, much flushed and talking loudly. He proceeded to pull the cornet out of the mouth of the player, lifted the hands of the pianist from his instrument, and pushed the violin from under the chin of the fiddler. He was expelled from the house, everyone saying he was drunk. He recovered next day, called on the hostess, and made his apologies in due form. This young man was an officer in the army and had had a slight sunstroke. He was a teetotaler, but feeling tired before the ball he took a glass of wine to revive himself, which went to his head and caused a transitory attack of mania. I had no reason to disbelieve his statement that one glass of wine produced these awkward consequences. But insanity from a severe sunstroke is a very formidable and incurable form of mental disorder. I had for many years an Indian general under my care who was one of the most dangerous patients it has been my lot to deal with. His condition was entirely due to a severe sunstroke he had sustained during an unusually hot summer in India. In such cases I have observed that there is a period of incubation. The symptoms most characteristic of the disease do not appear till some months after the exposure to the solar rays, although perhaps in the meantime a slight intellectual and emotional departure from the healthy standard may be observed. The catastrophe I am about to relate took place during the Indian Mutiny some forty years ago. The general had been told off to guard a certain number of commissariat waggons. His story, which he presented to me most modestly, has neither a clinical nor a pathological interest, but well illustrates how the mind may become unhinged even some months after a sunstroke has visited the patient. He said: "I was in command of a party of forty horsemen. We came suddenly upon a force of 400. It was a case of ten to one. It was my duty to retire, but I felt that murder was in the air. I gave the order to my men to charge. My trumpeter was shot down on the right of me and my orderly on the left of me. I cut my way in and I cut my way out. All perished except myself, and I thought I was well out of it." In these few words were expressed what appeared to me to be a most romantic episode of military life. Unfortunately there is a seamy side to the story. The general was tried by court-martial, and his behaviour was so eccentric on this occasion

that a medical examination as to his state of mind was ordered. He was found insane and sent from India to an asylum, where he remained for twenty years and finally died an incurable lunatic.

I now pass to the prognosis in cases of alcoholic insanity. There is no class of cases which recover so rapidly as do those of acute alcoholic insanity due to one inordinate drinking bout, and there is no class of cases more incurable than that of patients who during a long course of years have soaked themselves day by day in stimulants. A captain in the Royal Artillery was admitted suddenly one afternoon to an asylum. He had indulged in an unusual amount of alcohol and had become mischievous and almost homicidal. He had taken his wife in his arms and had held her over the balcony of his house and threatened to dash her on the spikes of the area railings below. The police were called in, and he was certified and sent to a harbour of refuge. On admission he was in a state of violent mania and passed the night in the padded room. I visited him again next morning, and after a three hours' examination could find no indications whatever of mental aberration. He had completely recovered in one day, the recovery being simply due to abstinence from stimulants. By his own request he was detained as a boarder for a week, as he said, to keep him from the drink. On his discharge he took more freely than ever to alcohol, and died six weeks later from delirium tremens. The prognosis was, however, very different as from even a temporary recovery in the case of a man aged seventy-six years whom I was sent for to attend one Sunday morning. He had for not less than forty years been in the habit of getting drunk frequently, although able to go down to his office in the City and manage his affairs fairly well. At last he became so unrepresentable that his sons were obliged to protest against his taking any further part in the business. The unfortunate part of the case was that the man would neither die nor become insane. In France a *conseil de famille* would have been held to decide what was to be done with this worshipper of Bacchus. Unfortunately no such law obtains in England. I only saw him once, but I heard afterwards that his and his sons' business was going from bad to worse owing to his unfortunate propensities. In this case it was suggested to my mind that the law of China as to the treatment of lunatics might have been justifiably employed. In that enlightened country they have but one method. All lunatics there are treated by decapitation. I have before alluded to Dr. Maudsley's subdivision of mental diseases under the two heads emotional and intellectual insanity. Emotional insanity is a very important form to recognise. It is very rare. It leads to horrible crimes being committed by its victims. The intellect being nearly but not quite intact, it is impossible to persuade the relatives that there is anything wrong with the mind of the patient. The prognosis is usually most unfavourable in this form. I have a woman at present under my care residing in the house of a medical man. She has been insane for about five-and-twenty years. On one occasion a high authority on lunacy visited her and pronounced her to be perfectly sane. I asked him how long he had talked to her. He said ten minutes. I told him to go back and give her ten minutes more. In the course of the second ten minutes all the delusions and hallucinations came out, and he was obliged to confess that she was an incurable lunatic. This patient knows a great deal, but not all, about her investments and dividends, but ask her to describe a carriage accident or any place of amusement she has visited and she breaks down before the end of even a short narration. She indulges in the most filthy conversation, rendering it impossible for her to take her meals with the family. The case is incurable. I had another very curious case under my care a few months ago. The patient was a clerk in a Government office, engaged in the most complicated transactions during many hours of the day. Excess of alcohol was the root of the evil in his case. If he were in the public streets or an omnibus he fancied that people put up their hands to their mouths, stamped their feet, or made grimaces on purpose to annoy him. He had a brother and a wife, one of whom always accompanied him to and from the office. It was useless to tell him that they, who had met the same people in the street that he had, had never seen them do anything which might be construed into an insult. He became worse, and I obtained leave of absence for him for six months. My prognosis was that as long as he kept from drink he would be perfectly sane. He became a teetotaler and recovered perfectly. The extraordinary part of the case was that this man, affected with delusions of suspicion, was able

to carry on severe mental work all the time he was apparently insane. As to delusions generally, it may be said that if the patient has a variety of them, quickly changing and accompanied with noisy violence, the outlook is hopeful. Fixed delusions, existing for more than a year and continuing when the acute symptoms subside, mark the case as incurable. From among such patients we obtain our asylum kings and queens, who are content to work in the scullery or laundry during the day and assume Court dress or a regal crown when festivities take place in the evening; but of all delusions those that are progressive are the worst as regards prognosis. The general paralytic will commence by telling you he is going into Parliament, that he has been knighted, made a baronet, or created a peer, that he is the Prince of Wales, and finally that he is God Almighty Himself. This is an important point to be remembered in diagnosing a case of general paralysis from one of chronic mania. A great deal of light is thrown on prognosis by observing the postures and movements of the insane. I have a young woman at present under my care who sits all day with her arm over the back of a chair and her head leaning on it. This position has remained fixed during the day for three years. The outlook is hopeless. Another woman, young on admission, rabs her nose continually, making it very red. This she has done for many years. A man under my care walks round two flower-beds in the garden, his course taking the shape of the figure 8. He kicks anyone who gets in his way, but is otherwise harmless. One elderly man has for twenty years rolled a pocket handkerchief up in a ball and turned it round and round in his left hand. With his right he continually percusses his knee and thus wears out the cloth of his trousers in less than a week, necessitating endless patches. *Hæmatoma auris* almost always is found amongst chronic incurable cases. I have a woman with a marked swollen ear at present under my charge who will never recover. I have, however, seen *hæmatoma* in sane people, generally prize-fighters. I exhibited a professional boxer at the Clinical Society of London some years ago who had this peculiarity. Certain bodily complications have great influence on the outlook. For instance, the recoveries in puerperal insanity are very numerous, but if the case should be accompanied by albuminuria the patient almost invariably dies. If the patient should increase in weight, the mental condition remaining unaltered, the outlook is very unfavourable. A woman admitted in 1891 weighed 8 st. 13 lb., and on the third anniversary of her admission—that is, in 1894—she had increased in weight to 12 st. 2 lb. This was an increase of 3 st., or 1 st. a year. Her delusions are always the same—that she is suffering from various bodily complaints of which there are no tangible proofs. Syphilitic insanity in the early stage is fairly curable, but later ends in the death of the patient. I had an Indian colonel under my care for many years suffering from syphilitic mania. Not being satisfied with my treatment a very eminent physician was called into consultation. A third medical man, a friend of the patient, was present. The physician diagnosed the case as one of syphilophobia—that is, a delusion on the part of the patient that he has contracted syphilis. I made no remark and the physician departed. When he had left the room I turned up the patient's trousers and showed his friend, the third medical man, a large open brown syphilitic sore which the patient had had on his shin for many years. The patient died a month later. The condition of the blood in the insane is a great guide in giving an opinion as to how long a patient has to live. When I was at the Wakefield Asylum I examined under the microscope the blood of some hundreds of lunatics. The results were very satisfactory. It would take too long to enumerate them here, but I cannot resist mentioning one point which was to me very striking. I found that if, in general paralysis of the insane, a much larger proportion of white corpuscles as compared with the red was present, the patient was sure to die within four days, although he might apparently be in fairly strong health. This and my other observations have been confirmed by Dr. Lauder Lindsay and Dr. Rutherford.

Before concluding, I should like to say a word or two about the diagnosis of recovery in a patient. Recoveries are always calculated on the admissions. According to Dr. Thurnam they may vary from about 25 to 50 per cent.; but, as I have said, at St. Luke's Hospital, where only curable patients are admitted, the number of recoveries reaches 60 per cent. Generally speaking a rapid recovery is likely to be succeeded by a second attack. A slow recovery is much more hopeful.

Convalescence from insanity is indicated by quietness of mind in the patient: he speaks freely about his disease, he does not perpetually bother the physician as to when he is to leave the asylum, he asks to see his friends, and he returns to his usual employments. An outburst of weeping in females during an attack of acute mania is a good sign, as showing that the patient is aware of her condition. On the other hand, a contented state of mind points to increasing dementia. Esquirol remarks that many patients who are considered cured by their relatives are not so really. In this I quite agree. In proof of this I may mention that not less than three patients removed from our care by the wish of friends and contrary to advice committed suicide, one on the very night of his discharge. Patients are frequently sent back to me to be examined after they have left in order to ascertain whether or not they are capable of managing themselves and their affairs. A list of their former delusions is prepared from the case-book, and the patients are taxed with them one by one. The conclusions are drawn from their answers. Valuable information can also be got from the attendant who usually accompanies them as to their actions and habits being sane or insane since they left the asylum. In almost all cases three months after discharge there are still present traces of the old disorder. Frequently the patient looks lost and distressed, the angles of the mouth are drawn down, there is a general feebleness about the outlines of the features, and the bodily health is never quite re-established. They complain of great irritability and they are easily moved to tears. Their letters also eloquently express their undecided and vacillating state of mind. In females there is a weak smile on the face and frequent showing of the gums, the eyebrows are elevated as they speak, and there is a marked transverse corrugation of the forehead expressive of doubt and anxiety. But it is only by long experience and a careful examination of a case that we are able to determine from these rough rules what is to be done with the patient. The importance of giving a correct prognosis in cases of mental disease cannot be over-estimated. Frequently large pecuniary interests depend upon our opinion—as, for instance, when a large sum is offered to the patient if his life is only to be a short one, as in general paralysis, or if he is to receive a pension if his life is to be a long one, as in chronic melancholia. The matrimonial prospects of both sexes are also much affected by the form of insanity and other points which have to be gone into when an alliance of this kind is contemplated. Cases of hysterical mania in young girls are very hopeful, as well as to recovery as to the non-probability of a second attack. Any girl who has had two attacks of insanity ought not to marry in my opinion. The parents of both parties will come to consult us on these difficult and delicate matters. One rule I always lay down in such cases, and that is that the sane contracting party should be told the whole truth about any previous attack from which the other may have suffered, and then if he or she choose to proceed with the engagement they do so with their eyes open and take the responsibility on themselves. The wife of a medical man during her engagement told her future husband that she had some dreadful secret to reveal to him. He thought she referred to some previous engagement. She said to me afterwards, "He little thought I had two asylums at my back," meaning she had been twice certified as a lunatic. Six weeks after marriage she became insane and remained so for many years, the unfortunate husband having all this time to maintain a wife who was worse than dead to him. Finally, our method of arriving at a correct prognosis may be compared to weighing in a pair of scales those points which, on the one hand, are in favour of, and, on the other, are against the chances of recovery in any given case, such points, however, not being estimated by their number, but by their quality. Experience alone can teach us the value of each individual point. But when the importance of the subject is considered it is surely our duty to neglect no opportunity of improving our natural powers of observation, and thus to be enabled by the accuracy of our opinion to confer health and happiness upon our less fortunate brothers and sisters.

Richmond-terrace, Whitehall, S.W.

MEDICAL MAGISTRATE.—Mr. Thos. E. Jacobson, L.R.C.P. Edin., M.R.C.S., has been placed on the Commission of the Peace by virtue of the office of chairman of the Sleaford urban district council.

"FIRST AID IN ELECTRIC ACCIDENTS."

By W. S. HEDLEY, M.D. EDIN.

IN THE LANCET of Aug. 25th, 1894, there appeared an article on "The Pathology and Treatment of Electric Accidents." This was followed, on Sept. 15th, by a letter under the above heading. It was there suggested that the appearance of a short code of plain rules emanating from some authoritative source bearing on the treatment of persons suffering from electric shock would be useful and opportune. In the same letter several expedients were pointed to suitable for dealing with such emergencies. Since that time definite instructions on these points have appeared in various quarters. The *Electrical Review*, after consulting medical opinions, has formulated a set of clear and concise instructions, and the electrical department of the Midland Railway Co. has issued a more elaborate code for the guidance of its own employés. It is now reported that the French Academy of Medicine has been asked by the Minister of Public Works to offer suggestions on these points, with a view to their being formulated into rules by a special technical commission. It is evident that accidents of the kind in question must be regarded from an electrical as well as from a medical standpoint. The purely medical aspect of such cases is simple, and, roughly speaking, resolves itself into the application of d'Arsonval's rule, "Un foudré doit être traité comme un noyé," not forgetting at the same time that syncope, rather than asphyxia, is at times the prominent condition to be dealt with. If, however, the body of the injured person be still in contact with the electric circuit there are in the first instance points of an electrical nature to be considered. Three possible conditions of contact present themselves, one or more of which may exist at the same time: 1. The body by contact with two conductors of different potential may have short circuited the current. Such a contact is usually fatal at once. 2. The body in contact with one conductor may have taken a portion of the current to earth. In this case the gravity of the accident will depend upon the nature of the contacts between the body and the conductor and the body of the earth. 3. The body by being in contact with two points of the same conductor (e.g., by holding with both hands) may have become the seat of a derived or shunt circuit. This, by itself, is the least dangerous form of contact, but of course it becomes much more serious if, at the same time, a circuit be completed to earth through the body. Whatever be the nature of the contact, it is clear that the first thing to do is to stop the dynamo or switch off the current; and if the accident has occurred near the dynamo room or in the vicinity of a switch there will doubtless be someone present who can promptly do so. Failing this, however, no time must be lost, but means at once taken to detach the body of the injured man from the circuit. Here the "First-Aider" must, in self defence, adopt certain precautions, all of which may be summed up in the word insulation—insulation from the cable, insulation from the earth, and insulation from the body of the injured person. This means, in practical language, that the hands of the rescuer must be covered with some hastily improvised insulating material, such as several thicknesses of a dry garment, and he must at the same time stand upon something of the same kind, such as a heap of dry rags or clothing, or a board or dry straw.¹ With these precautions the rescuer may pull the body from contact with the circuit, raising if necessary that portion of the injured man's body which may be in contact with the ground. Whilst this is going forward there are several other expedients available which to the non-electrical mind are perhaps a little perplexing in their nature and variety. Amongst these may be enumerated the diverting of the current to earth by some conductor of low resistance, such as an iron rod or a wire of large capacity, severing the conductor if small enough by a cutting instrument with insulated handles, or if the injured man be actually in contact with both conductors, the current may be short-circuited close to the part touched by the body.

In considering the "lethal" effects of electric currents it is commonly supposed that the alternating current is more dangerous than the constant one. The Board of Trade regulations, as well as the rules of the fire insurance offices, seem to point to this, inasmuch as whilst the constant current

is allowed to enter a house at 300 volts the pressure of the alternating is limited to 150. This seems to imply that the latter current is considered twice as dangerous to life as the former. If, however, it be remembered that the body is an electrolytic conductor, and that electrolytic conduction is invariably accompanied by decomposition, and further that, the living body not being homogeneous in its elements, and each different tissue thus forming a point of entry and of exit of the current with the accompanying electrolytic phenomena, it is obvious that a constant current of high voltage will on account of its electrolytic effects in the interior of the tissues be more dangerous to life, and its effects more difficult to recover from, than is the case with a current of an alternating character. Amongst the currents of commerce met with in this country are to be found constant currents having a pressure of 1000 volts.

Brighton.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

POISONING BY COCAINE; RECOVERY.

By E. J. WALKER, M.D.R.U.I., &c.

ON the afternoon of Jan. 11th I saw a healthy young man, under middle height and twenty-four years old, of whose illness the following is an account.

Being annoyed by toothache he had, about one o'clock that day, purchased from a druggist twelve powders, each supposed to contain fifteen grains of phenacetin. By a mistake of the dispenser he was given an equivalent quantity of hydrochlorate of cocaine—this I learned from the druggist, at whose request I undertook the treatment of the case. The patient, unaware of the error, divided one of the powders into two equal parts, and, putting one far back on his tongue, swallowed it in entirety. Having taken phenacetin on previous occasions he detected the difference, but when he wished to do so stated that he was unable to expectorate—at all events, he did not do so. I weighed the remainder of the fifteen-grain powder and as I found there were only six grains he must have swallowed between eight and nine grains of the drug. The effect, he said, was very rapid, a pleasant coolness spreading over his entire body, followed by a feeling of numbness in the mouth, tongue, and throat, changing very quickly to a sense of choking and desire to swallow, though he could not even perceive the presence of saliva. Returning to the druggist to inquire, he was given a stimulating draught; and still feeling queer, but in ignorance of what he had taken, he substituted a bowl of gruel for his ordinary meat dinner. Continuing to grow worse, he was sent home in a cab with the druggist, and on the way passed a large quantity of urine of a green colour. I saw him at his home at 5.30 p.m., and his condition was then as follows. He complained of a sense of constriction at the throat and over the heart; great difficulty in swallowing, but constant effort to do so; a dull, somewhat painful numbness (*sic*) in the stomach and abdomen; palpitation and an indefinite sense of oppression and mental dulness. I noted that the pupil light reflex was absent and that dilatation was present; the temperature was 97° F., and the reflexes were exaggerated; the pulse was almost uncountable. His appearance was that of a person partly under the influence of alcohol, but the most striking feature in the case was the state of the muscular system; he resembled a bad case of chorea, but the movements were much slower and more regular, the body was alternately rotated from side to side and bent at the same time, while the arms and legs were not still for a moment. A very strange effect was produced by uncontrollable action of the muscles of mastication. Owing to this he presented the appearance of a person chewing tobacco, and yet he was unable to eat a small piece of bread, and a cup of tea which he endeavoured to sip he spilled about the carpet. At times he showed some lividity round the lips and had difficulty in breathing. As the drug had evidently passed the stomach I did not attempt either to wash out that organ or to give an emetic; indeed, I fear that an attempt to do the former might have induced severe spasm. For the dyspnoea

¹ This improvised insulation supposes that indiarubber gloves and boots or mats are not at hand.

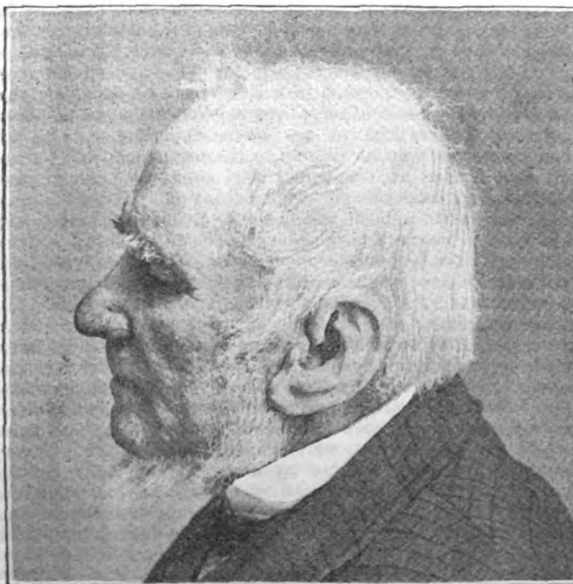
I used nitrite of amyl capsules with immediate benefit, and as the bowels had not acted I placed one minim of croton oil and five grains of calomel on the tongue. At 10 P.M. a great change was apparent. The purgatives had acted well, four or five liquid tarry motions had passed, the temperature had risen to 100°, the face was bright and clear, and the mind intelligent, the choreic movements had quite ceased and the masticatory almost, and the sense of oppression and dysprœa were gone. The next morning the man appeared to be quite well, but complained of slight weakness; two days after he was able to attend to his usual business.

Manchester.

AN ARTIFICIAL EAR.

By H. N. GROVE, L.D.S.

A MAN sixty-three years of age was admitted into the Queen's Hospital, Birmingham, in April, 1893, with an epithelioma of the left auricle. The greater part of the



auricle was removed by Mr. F. Marsh. A plaster-of-Paris cast was taken of the side of the head. An artificial ear was built up in wax to match the healthy one on the right side, and was then made in vulcanite and aluminium, tinted and

enamelled to harmonise with the complexion. No artificial contrivance (such as a spectacle frame) was made use of to support the artificial auricle, adhesion to the head being effected by means of a saturated solution of mastic in absolute alcohol.

Birmingham.

AN ATYPICAL ALBINO.

By A. J. BALMANNO ESQUIRE, M.B. LOND.,

SURGEON TO THE BRITISH HOSPITAL FOR DISEASES OF THE SKIN.

AN albino, although a rare, is nevertheless a familiar object, and, moreover, one of very undeviating type. Until the other day I thought that the type was absolutely without variation. I imagined that a person born with absolutely white hair and pigmentless skin (I am referring to those instances where the whole of the hair system and the whole of the skin are devoid of pigment) must necessarily have pink eyes and be unable to see clearly in bright sunlight, or, in other words, must needs be destitute of pigment in the iris and in the choroid; but, as it seems, it is not always so. A young man aged eighteen years, who has just come under my notice, is an albino. The whole of his hair system is white and the whole of his skin is pigmentless. He has presented this condition from his birth. However, the iris of each of his eyes is not pink, but, on the contrary, a very dark blue, and he can see as well in bright sunlight as he can at any other time. The glare of bright sunlight has never inconvenienced him in any way. In some instances of congenital complete albinism that I have met with more than one person in the same family has been affected. In one family a girl and two of her brothers were albinos. In this present case, however, there is but one albino in the family. He has four brothers and four sisters, one paternal uncle, three maternal aunts, and numerous cousins, but none of these relatives are albinos. His father has dark hair and his mother has flaxen hair. He presents a special condition, apparently in no way dependent on his albinism—which, however, is worthy of note, because I have met with it in at least one other albino,—and that is a constant oscillating movement of the eyeballs in the horizontal plane—that is to say, to and fro, from left to right and back again. The movement is so rotatable as to its range and so rapid as to its frequency that it is difficult to understand how he can acquire a clear idea of anything that he looks at; and he confesses that he does find it difficult to read print, but as to things in general he believes that he can see them as well as anybody else. I am not prepared to say whether this condition has or has not presented itself in every case of albinism that I have met with; for I had not taken account of the presence or absence of it (it not having arrested my attention) previously to the last two cases of albinism that I have seen—namely, this case and its immediate predecessor.

Weymouth-street, W.

ANKYLOSIS OF THE JAW OF LONG STANDING TREATED BY OPERATION.

By E. N. NASON, M.R.C.S. ENG.

THE patient, a man thirty-nine years of age, received a severe blow upon the right side of the face in 1882. It is not certain what the exact injury was, but it seems probable that the zygoma and condyle of the lower jaw on the right side were both a good deal damaged. No treatment was adopted, but after some little time the jaw could be moved freely without pain. It was not until two years and a half later that some restriction of movement began to be noticed. This slowly increased, and in two years' time the jaw became completely fixed, so that the teeth could not be separated at all. He remained in this condition for nearly seven years, living on liquids and sopped bread, as the power of mastication was completely lost. He came under my care in December, 1893, and was then more than half starved. After feeding him up for a week or so I operated upon the jaw on Jan. 7th, 1894. An incision was made along the posterior border of the ascending ramus of the lower jaw on the right side from half an inch below the zygoma to the angle of the jaw and carried down to the bone. Very considerable thickening, which seemed to be both bony and fibrous, was felt behind the

zygoma and around the neck of the jaw. The ascending ramus was then cleared with a raspatory three-quarters of an inch above the angle of the jaw and divided, and a wedge-shaped piece of bone with the base of the wedge (half an inch) posterior removed. This was effected with some difficulty partly by a keyhole saw and partly by cutting pliers as the bone was more than usually dense. There was no trouble with the inferior dental artery. The patient made an excellent recovery without constitutional disturbance and was able to masticate with very little pain on the third day. The mouth could be opened to the extent of seven-eighths of an inch, and very good lateral movement was obtained. The patient kept up passive movements very assiduously, and was given a graduated wooden wedge on which to measure the extent of the interval between the teeth. This has not tended to lessen during the last year, and the patient has at present perfect masticatory power, with free and painless movement, both vertically and laterally. This operation, the risk of which is small and the chief difficulty of which is the division of the bone without splintering or unnecessary damage, seems much more generally successful than excision of the condyle. The latter, as shown by Mr. Paul Swain some time back in THE LANCET,¹ has many risks, and often a result which is by no means satisfactory.

Nuneaton.

A Mirror

OF

HOSPITAL PRACTICE. BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

ADDISON'S DISEASE OF VERY RAPID COURSE; REMARKS.

(Under the care of Dr. DONKIN.)

THIS disease is one which has attracted the special attention of pathologists and physicians since it was first described by Dr. Addison. The communication by Drs. Alezais and Arnaud (summarised by Dr. Allen J. Smith¹) is one of the most interesting recently published as a contribution to its pathology. They consider the process to be essentially one of tuberculous infiltration, the presence of tubercle bacilli having been repeatedly demonstrated in the affected supra-renal capsules. The process may begin in the cortex or in the medulla, and less often in the fibro-vascular zone about the capsule. Changes may be found in the neighbouring tissues as the result of such processes in the supra-renal capsules, as alterations in the abdominal sympathetic nerve, changes in the mesenteric glands, tuberculous disease of the spine and lungs, and alterations in the kidneys and urogenital organs. They regard as being near the truth the view that ascribes the phenomena of the disease—especially the prominent nervous symptoms, such as the sudden and complete asthenia, the vomiting, the lumbago, abdominal pains, and often the sudden death—to alterations in the abdominal sympathetics. They think, however, that the pathological facts thus far established are insufficient to base any theory upon, as in a number of instances the abdominal sympathetic has been found quite normal. Of forty-nine cases met with, the abdominal sympathetics were quite healthy in twelve instances. They believe, however, that the nervous symptoms arise directly within the capsules themselves, and have found undoubted nerve ganglia in the periphery of the organ as a constant element, and state that these bodies are always implicated in the capsular lesion of Addison's disease although heretofore overlooked. They cite three cases in support of their view. In one there was marked tuberculous change all about these ganglia, which were, however, intact, and no symptoms of Addison's disease were present; in the second the pericapsular ganglia, as well as the left semilunar ganglion and branches of the solar plexus, were involved, the symptoms of Addison's disease being present; in a third the pericapsular ganglia were

alone involved, the rest of the abdominal sympathetic system being intact, Addison's disease being manifest.

A man aged forty-seven years was admitted into Westminster Hospital on Nov. 12th, 1894, complaining of very frequent vomiting and great prostration, and died on Nov. 24th. He had been perfectly well, according to his own and his relatives' accounts, until five weeks before admission. He had had no previous serious illness, had not had syphilis, and was in all respects a temperate man. This illness began quite suddenly one day with pain in the epigastrium and vomiting about three minutes after a meal, since which time he had vomited after every meal and become steadily weaker. Three weeks before admission his legs began to feel numb, and he suffered from pains in the back and shoulders. On admission he was thin; his skin was generally of a dark, bronzed colour, most marked in the face, dorsum of hands, and axillae, least marked in the lower limbs. There were a few dark patches on the soft palate and on the inside of each cheek and of the lower lip. In answer to inquiry he said that his friends had told him about a week or so before his admission that he was getting darker in appearance. He was very feeble and walked with difficulty; but there was no discoverable alteration of sensibility over the trunk or limbs, and no muscular paralysis. The pulse was very small and compressible, and the first sound of the heart markedly indistinct. The breathing over the front of the right lung was harsh, but the thoracic signs were otherwise natural. Nothing abnormal was discovered on abdominal examination, nor in the urine, which was, however, of rather dark colour. After his admission the vomiting ceased, and the man seemed to improve. On Nov. 20th, his bowels being constipated, he had a dose of senna mixture. His bowels acted, but he started vomiting again. The temperature, hitherto normal or sub-normal, rose to 102° F. Next day the vomiting continued, and the temperature, after falling to normal, rose again to 104°, at which point it remained during the day following. The patient, however, then felt better, the vomiting having ceased. He talked cheerfully and said that but for weakness he felt quite well. On the night of the 23rd he slept well. On the 24th, at 6 A.M., he complained of cold feet, and shortly afterwards sat up in bed and "became quite-rigid, while his breath was very short." Recovering from this condition, he seemed to be fairly well until 8 A.M., when his breathing became short again, and he died in a few minutes. There was a cloud of albumen in the urine on the last day.

Necropsy on the afternoon of the day of death.—The body was fairly nourished, rigor mortis being present; the blood was fluid and dark-coloured, drying quickly. There was general bronzing of the surface, least marked over the lower extremities. The larynx was normal, and the thyroid gland small. There were a few old adhesions over the upper lobe of the right lung, but elsewhere the pleura was quite natural. In both lungs were several discrete, large, and pigmented fibroid tubercles, but there was no breaking down. In other respects the lungs were normal, as also were the mediastinal glands. The heart's muscle was firm and very dark; all its structures were apparently normal. The abdominal organs were natural, with the following exceptions. There were a few large pre-vertebral lymphatic glands, with no tubercles discoverable by the naked eye. The adrenals were very large, and quite converted into fibro-carcinomatous masses in which all traces of normal tissue were lost, though the general shape was fairly well preserved. (The semilunar ganglia were normal.) The kidneys weighed ten ounces. There was cortical atrophy of the upper half of the right kidney, the capsule around this portion being very thick and adherent to the subjacent areolar tissue. In other respects the kidneys were normal. The bladder was healthy, but in the centre of the prostate were numerous small and yellow caseous foci, clearly tuberculous. The prostate was not enlarged. The vesiculae seminales were normal. The epididymis on both sides, especially the left, was much enlarged from tuberculous deposit, and there were tubercles in the body of the right testicle.

Remarks by Dr. DONKIN.—The most important clinical points in this case are the very definite onset of the first symptoms and the extremely rapid course of the expressed disease. After searching inquiry it was established that the man felt and looked perfectly well until a little under seven weeks before he died. The pigmentation, as is most often the case in the more protracted instances of the disease, was not observed until after the important symptoms of vomiting and prostration had been established for some time. The

¹ THE LANCET, July 28th, 1894.

rise of temperature a few days before death must be noted as a symptom of infrequent occurrence. With this may perhaps be associated as a possible cause the advancing tuberculous affection of the prostate, epididymis, and testicle. The tubercles in the lungs were probably the earliest change of all those revealed at the necropsy.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.

AN UNUSUAL CASE OF ADDISON'S DISEASE; SUDDEN DEATH; REMARKS.

(Under the care of Mr. PAUL STAR, senior house surgeon.)

TUBERCULOUS disease of the suprarenal bodies is an affection more common in men than in women, but the following case presents some other more important points of difference. From the usual type, which mark it as especially interesting. The most characteristic symptom of Addison's disease is the gradual development of debility without appreciable loss of flesh, and a sudden cardiac failure ending fatally without previous complaint of weakness is fortunately very rare. "It is probably not possible in any case to ascertain the exact date of the commencement of the disease; there are good reasons, indeed, for believing that the process of suprarenal degeneration is always far advanced before the clinical signs of the affection reveal themselves. Counting then from this latter date, the malady is sometimes remarkably rapid in its progress—proving fatal in the course of two or three weeks.—while sometimes it is prolonged for several years." Dr. Leva² has described a case the duration of which was supposed to have been eight years. This case exemplifies the advantages and advisability of holding a post-mortem examination in cases of sudden death.

A girl seventeen years of age was admitted to the Clayton Hospital on Jan. 27th, 1894. She had fallen in the street while on an errand, close to the hospital, and was brought to the institution on an ambulance. At the time of admission she was unconscious, motionless, and very pale; she was perspiring slightly about the face and neck, and the surface of the body was cold. There was no rigidity, and the sphincters were unrelaxed. The pupils were somewhat dilated, equal, and reacted to light. The conjunctival reflexes were present, but feeble. The tendon reflexes were normal, and there was no ankle-clonus. Respiration was shallow and the pulse was imperceptible. The cardiac impulse could just be felt and the sounds very indistinctly heard. The heart-beat was 65 to the minute. No injury to the head was apparent, and there was no distinct odour of the breath. Half a drachm of sulphuric ether was injected over the cardiac region, and a few minutes later the pulse could be distinctly felt at the wrist. The patient was put to bed and hot-water bottles applied to the legs and sides. She completely recovered consciousness in about half an hour. The pulse and respiration rapidly improved. She answered questions as to her name, previous health, &c., and said she felt quite well enough to go home. The heart and lungs were found to be quite healthy. The urine was normal. The patient was kept in bed and given some warm milk and about half an ounce of brandy. In about three hours the pulse again began to fall rapidly and became irregular in force and rhythm, the respiration at the same time becoming short and shallow. Sal volatile and brandy were exhibited, but there being no improvement in the pulse a drachm of ether was again injected over the heart. This had no effect, and the patient died a few minutes after the injection, the time between the commencement of the second attack and death being about ten minutes. The patient's mother said that her daughter had always been a healthy girl until about three months before the present attack, when she had to leave her situation owing to continued attacks of abdominal pain and vomiting. These symptoms were considered to be due to derangement of the digestive functions and had quite ceased about two months after their first onset, and she had again gone to work. Her family had always been healthy, and there was no history of any hereditary disease.

Necropsy.—A post-mortem examination was made fifteen

hours after death, when the body was found to be that of a well-nourished and finely developed girl. Rigor mortis was present in the lower limbs, but was passing off in the arms. There was no post-mortem staining, or pigmentation of skin, or mucous membrane, except below the umbilicus, where the skin of the abdomen was distinctly bronzed, forming a marked narrow line leading from the umbilicus to the pubes. The skin over the iliac regions was pigmented in a less marked degree. On opening the thorax the heart and lungs were found to be quite normal. The thymus gland was persistent and as large as that of a child twelve months old. It was normal in situation and weighed six drachms. The lobes were well marked. The abdominal viscera were normal. The stomach contained about half a pint of semi-digested food. The pelvic organs were normal. The adrenals were very large and tuberculated, hard to the touch, and on section showed no distinction between cortical and medullary substance. They cut like hard cheese and contained many cretaceous nodules, but no pus. Both the organs were surrounded by dense and tough connective tissue, and were bound down to the kidneys. The retro-peritoneal and mesenteric glands in their vicinity were enlarged and hard, but were normal in appearance on section. The semilunar ganglia and solar plexus were surrounded and compressed by fibrous tissue. The brain was normal. Microscopic examination of the adrenals showed the usual changes found in Addison's disease. Tuberculous growth was present in various stages; caseous centres were surrounded by small-celled infiltration with giant cells. A good deal of altered tissue was undergoing fibroid change. Sections of all other organs showed nothing abnormal. Unfortunately, the solar plexus and semilunar ganglia were not removed at the necropsy, so that a microscopic examination of their condition could not be made.

Remarks by Mr. PAUL STAR.—The chief points of interest about the case are—(1) the cessation of all symptoms for a month before death, the patient enjoying good health and following her occupation during that time; (2) the sudden death, this occurring about three hours from the time the patient fell in the street; (3) the presence of a large thymus; (4) the limited extent of the bronzing; and (5) there being no disease of other organs than the suprarenal capsules.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

A CASE OF CUT-THROAT INVOLVING THE LARYNX TREATED BY SUTURING; COMPLETE PRIMARY UNION; REMARKS.

(Under the care of Dr. ARNISON.)

THE ordinary rules of surgery as recently understood and expressed in our text-books left very little room for the exercising of the individual skill and discretion of the surgeon in charge of a case of cut-throat. If there was one thing about which there was unanimity it was the harm done by the insertion of sutures in such cases, and the great responsibility resting on the surgeon who ventured to use them. Dr. Arnison's treatment of his patient shows the excellent result which may be obtained by judicious suturing. The condition of these cases is often most unfavourable for the primary union of wounds: miserable, depressed, the subjects of chronic alcoholism, melancholia, renal disease, heart disease, or chronic phthisis—every injury, even the slightest, becomes of moment. Then, again the wounds vary very much in extent, depth, irregularity of surface and number of structures divided, and if there is any septic accumulation in a closed wound cellulitis of a spreading kind, only too frequently fatal, may ensue within a day or two. It is therefore necessary to exercise a careful selection before attempting primary union. For the notes of this case we are indebted to Dr. W. E. Harker, house surgeon.

A man aged forty years was admitted into the Royal Infirmary, Newcastle-on-Tyne, having cut his throat one hour previously. The skin incision began at the anterior edge of the left sterno-mastoid and tailed off a little beyond a corresponding point on the right side of his neck. Parts of the following muscles were cut: platysma, omo-hyoid (anterior belly), sterno-thyroid and thyro-hyoid, exposing on the left side the trunk of the vagus, which was lying internal to and on the same level as the vessels, which were uninjured. The thyroid cartilage was completely severed just below the pomum Adami, giving a good view of the interior of the larynx. The cut edges of the cartilage came accurately

¹ *Eristowe: The Theory and Practice of Medicine.*

² *Virchow's Archiv für Pathologische Anatomie und Physiologie und für Klinische Medizin, Berlin, Band cxxv., 1891.*

together, and were firmly retained in position by six catgut sutures. The divided muscles in turn were sutured over the cartilage. Deeply buried sutures were now inserted through the cellular tissue on either side of the larynx, so as to completely obliterate all spaces in which discharges might accumulate, after which the skin and subcutaneous tissue were united by silkworm gut sutures, entirely closing the wound, no drainage being employed. Careful asepsis was observed in dressing the wound. For three days after admission to hospital the patient was violently delirious (alcoholic), but was able to take liquid nourishment by the mouth from the first. At the end of seven days the wound was dressed for the first time, and the silkworm gut sutures were removed, primary union having taken place. Four days afterwards the patient was discharged.

Remarks by Dr. ARNISON.—The treatment in this case is quite opposed to the ordinary rules of surgery, but, given perfect asepsis, there is no reason why a wound in the throat should not heal as readily and completely as wounds in other parts. The difficulty in the case of wounds involving the air passage is that, however carefully the external wound may be treated, it becomes infected from the windpipe, with the resultant dangers of emphysema, cellulitis, &c. In this case I happened to enter the ward just as my house surgeon had finished suturing a somewhat jagged wound through the larynx, and I found he had closed it so carefully and effectually that I felt very confident that, with the same care in applying deep and superficial sutures to the external wound, and obliterating all dead spaces, it would heal throughout without drainage. My confidence was fortunately justified by the result.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

A Successful Case of Paracentesis Pericardii. — The Treatment of Empyema in Children, based on an Analysis of Eighty-six Cases.

An ordinary meeting of this society was held on Jan. 23th, Sir WM. DALBY, President, being in the chair.

Dr. PERCY KIDD described a successful case of Paracentesis Pericardii, which is reported in full in another part of this issue.—Dr. SANSON in discussing the case, dwelt upon the presence of lead poisoning and of contracted granular kidney, and said that two years ago he had stated that he had never seen a satisfactory recovery from pericarditis under those circumstances. Since that time, however, he had come across two cases of the kind, both of which presented traces of old retinal hæmorrhages, a sign which added greatly to the gravity of the prognosis. The present case, he thought, was partly a true pericarditis and partly a hydrops pericardii judging from the quantity of fluid withdrawn. In some other forms of pericarditis such a mode of interference would hardly be justifiable, and in many there would be great difficulties in the way, as in what Dr. Sturges called pancarditis, an inflammation of the whole heart, with swelling of its substance, followed by pronounced pericardial adhesions, where the presence of fluid was only a small part of the problem.—Mr. MARMADUKE SHEILD fully agreed that paracentesis pericardii should be restricted to very special cases, and dissented from Dr. West's statement that it was an easy and satisfactory operation. There was great difficulty in diagnosing with certainty pericardial effusion, and especially in distinguishing between that and enlarged heart with adherent pericardium, while an injury to the heart wall or a rim on its surface might easily occur. It was an important point first to make a small incision in the skin and then to pass the trocar obliquely. Anæsthesia was generally necessary, especially in young children.—Dr. CARR recalled a case seen post mortem. During life there had been great extension of the pericardial dulness, and the advisability of tapping was discussed and decided in the negative. The pericardium was greatly enlarged in all directions, containing pus and lymph, the pus being packed away, as is often the case, at the back of the pericardium. The heart itself was anchored by firm adhesions to the front of the pericardial sac, so that practically if any attempt had been made at paracentesis the needle must necessarily have gone into the

ventricular wall wherever and however inserted.—Dr. EWART fully agreed with what Dr. Kidd had stated and with the conclusions he had quoted from Dr. West's paper. He had had several cases with very similar results. The most satisfactory was one in which twenty ounces of very bloody fluid were removed from the pericardium of a man aged about forty who was suffering from valvular disease with extreme dropsy and was in imminent peril. The relief was complete, though recovery was slow, the œdema lingering for a time; but the man was subsequently enabled to resume his occupation. The speaker had had the operation performed in cases of rheumatic pericarditis of severe degree, and with complications which made the safety of the patient depend on the immediate relief of intra-thoracic pressure. In one case, for instance, there was effusion into the three cavities of the chest, and all these were laid open, two of them at one sance, the patient recovering completely. He insisted strongly on the necessity of laying the pericardium freely open and cited cases illustrating the inefficiency of merely inserting a trocar.

Dr. CAUTLEY read a paper on the Treatment of Empyema in Children. Solis Cohen mentioned that absorption of pus from the pleural cavity was practically a myth, and said the late Dr. Sturges was of opinion that resection of rib was necessary and that the small mortality of empyema in children was due to improved treatment in this respect. Sutherland went even further and insisted on the necessity of washing out the cavity. Dr. Cautley had analysed a series of eighty-four cases with a mortality of 16·6 per cent. In respect of the cases in which no surgical treatment was adopted the fluid might of course be absorbed, but it might also rupture externally through the chest wall or internally through the lung. There was a considerable element of danger in leaving these cases to themselves, though in a certain proportion of such cases, either when left alone or treated by aspiration, absorption did take place. Of twelve cases treated by aspiration only one died, one ruptured externally, and one discharged through the lung. Of thirty-five treated by incision and drainage seven died, while of thirty-three treated by resection and drainage six died. A comparison of the two latter tables showed that the average age was practically the same, the mortality almost the same, and the duration of the after-treatment only differed in the matter of one or two weeks in favour of resection. It was a remarkable fact that five out of six cases under two years of age treated by resection died. An analysis of the fatal cases showed that in a large proportion death was not due to anything connected with the wound. The object of treatment was to remove the pus, to prevent reaccumulation, to procure complete re-expansion of the lung, and to leave behind no deformity. Although it was possible for small effusions to be absorbed, Dr. Cautley asserted most emphatically that in every case in which pus was present the only sound treatment was its evacuation. It might be conceded that aspiration was sometimes useful and might cure cases in which the pneumococcus was the primary cause. The disadvantage of aspiration was that thick effusions would not pass through the cannula, that it was impossible to remove all the contents of the cavity, thus leaving behind a focus of irritation, and, lastly, that pus rapidly reaccumulated afterwards. Moreover, there were certain dangers if the operation was performed too rapidly. On the other hand, it was useful in cases of urgency, in cases with thin sero-purulent fluid, and in cases of double empyema. The advantages claimed for resection were better drainage, facility for exploring the boundaries of the cavity, and for breaking down loose adhesions; also that there was less danger of hæmorrhage, that the chances of recovery were better, and that recovery was more rapid. Dr. Cautley pointed out that none of these advantages were proved by the experience of this series of cases, and that it was sometimes a distinct disadvantage to break down adhesions. The disadvantages of resection were that it was more severe, and, judging by the mortality, ought never to be employed in children under two years of age; and that there was greater liability to pyæmia and deformity of the chest. It ought, he thought, only to be had recourse to in cases in which the tube could not be inserted without and when drainage was imperfect, or for the cure of an old sinus. The tube should be short and only left in for a short time. Empyemata did not heal by granulation from the bottom, but by expansion of the lung, ascent of the diaphragm, and contraction of the chest wall. The tube should always be removed as soon as the discharge

became serous and scanty. If left in longer it became a source of irritation. Dr. Cautley stated that he had notes of a number of cases of double empyema, the treatment of which was practically the same, allowing a few days between the operations.—Mr. MORGAN said surgical proceedings would be attended very frequently by a more speedy and satisfactory result if brought to bear at an earlier date. Physicians had almost a superstition in favour of the aspirating trocar, and cases, he thought, were marred by the tentative measures its employment involved before a free opening was made. With regard to operation, Mr. Morgan greatly preferred resection to incision with drainage. Irrigation of the cavity, he thought, was a useful measure, as it detached a good deal of thick lining membrane.—Dr. MORISON concurred in the advisability of early evacuation of pus, and thought that aspiration was only of use in cases where, owing to some emergency, the more complete operation was temporarily impossible. He preferred chloroform as an anæsthetic and considered it safe, though serious results followed turning the patient on the side. The point of election was the sixth space, just in front of the posterior axillary line, and the method incision and drainage, most cases requiring the drainage-tube for little over a fortnight. He did not approve of irrigation, as he thought it was apt to set up irritation, which led later to restriction of chest movement. It was important during convalescence to adopt exercises for the expansion of the lung on the affected side. Resection, he thought, would prove to be only necessary in neglected cases.

CLINICAL SOCIETY OF LONDON.

Detachment of the Retina in Chronic Nephritis.—Chronic Self-inflicted Ulceration of the Throat.—Association of Respiratory Paralysis with Cardio-pulmonary Symptoms in Diphtheritic Paralysis.

AN ordinary meeting of this society was held on Jan. 25th, the President, Mr. J. W. HULKE, F.R.S., being in the chair.

Dr. SAMUEL WEST described two cases of Detachment of the Retina in the course of Granular Kidney. Case 1 was that of a woman aged twenty-two years who had suffered from headache, vomiting, and failure of sight for nine months, and who ten days before being seen in the hospital had become quite blind. She had had a severe attack of acute nephritis seven years previously, from which she had apparently never completely recovered. She presented the conditions of granular kidney and had marked albuminuric retinitis. Six days after admission she developed general purpura, which disappeared in a few days. Five days later detachment of the retina occurred (not hæmorrhagic). This rapidly extended till it involved the whole periphery except the upper segment. Three weeks after this a hæmorrhage occurred behind the orbit, which caused great pain but entirely resolved. She ultimately discharged herself from the hospital a month later in much the same general condition as on admission, but Dr. West did not think she could have lived long afterwards, though he was not able to ascertain what became of her. Case 2 was that of a man who said he had been in good health till two months before, when vomiting and headache attacked him. No history of previous illness could be obtained. It was only six days before admission that his eyesight began to fail, and in those few days he became blind. The case presented all the characteristic features of granular kidney, and albuminuric retinitis in a marked degree was present. Seventeen days later detachment of the left retina was discovered, but there were no symptoms to point to any great eye mischief. The patient rapidly lost strength, diarrhoea set in, which still more increased his asthenia, and he died a few days later. Attention was directed (1) to the existence of the disease, the occurrence of marked symptoms in granular kidney showing first that the disease had existed for some time, and that it was in an advanced stage, and secondly, that it had reached its termination; (2) to the suddenness of the onset of symptoms in granular kidney, which was most strikingly seen in failure of vision, so that a patient might become blind in but a few days after the first defects of vision had been noticed; (3) to the hæmorrhagic tendency, illustrated in one of these cases by purpura and retro-bulbar hæmorrhage; and (4) to the detachment of the retina, a very rare occurrence in granular kidney, these being the only cases observed by

Dr. West in a long series of cases, in all of which careful ophthalmoscopic examinations were repeatedly made.—Dr. COUPLAND, while concurring generally in the views expressed, asked what was Dr. West's experience as to the prognostic significance of albuminuric retinitis. Personally, he regarded it as a symptom of the gravest import. He, too, observed this symptom as the first one to draw attention to the granular condition of the kidneys, and his experience was that life was not much prolonged after the date of its discovery, rarely extending beyond twelve months. He pointed out that there were cases in which dimness of the vision was not complained of though the retinal changes might be well marked. He asked whether the prognosis was equally bad in these cases. He, also, had observed instances in which patients presented themselves with what appeared to be a sudden acute attack of nephritis, whose history, however, pointed clearly enough to the renal trouble being of long standing.—Dr. HALE WHITE recalled the case of a man who came to the hospital with albuminuric retinitis not associated with loss of vision. He improved considerably under treatment and left the hospital. Some time later, when he returned on account of some other symptom of Bright's disease, nothing abnormal could be detected in the eyes. This was the only instance he had met with in which the eye lesion had cleared up. Another case, that of a child aged seven years, was interesting in that the eye appearances were indistinguishable from those of albuminuric retinitis, although the child presented no other indication of Bright's disease. In reference to the occurrence of hæmorrhages he remembered one case in which a man came to him on account of a hæmatoma of the ear. It occurred to him to examine the urine and he found it contained albumen, and three months later uræmia developed. He commented on the rapidity with which interstitial nephritis ran its course in persons at or under thirty years of age. So much was this the case as almost to constitute a separate clinical variety of the disease. The occurrence of tubal complications supervening on chronic interstitial disease was, he said, a frequent termination in chronic cases.—Dr. WEST, in reply, agreed that the prognosis in cases presenting the appearances of albuminuric retinitis was extremely grave. So far as he had been able to follow up these patients life had rarely been prolonged more than a few months. It was almost the rule in these cases that vision was not affected for a long time after the onset of retinitis. He had seen several cases of neuro-retinitis in children which could not be distinguished by the appearances alone from albuminuric retinitis. He had hoped to have heard more in respect of hæmorrhages in different parts of the body; for example, he had never heard of hæmoptysis in this association. He had seen several cases of hæmorrhage from the bladder, and in a case that had come under his notice that day in the post-mortem room there had been profuse hæmorrhage from the bowels without any lesion to account for the bleeding.

Dr. FELIX SEMON described a novel form of Malinger—Chronic Self-inflicted Ulceration of the Throat. The case was that of an unmarried woman aged thirty-six, who complained of chronic ulcerated throat, which had existed, practically, without interruption, for four years. She had been treated by many previous advisers, but according to her statements had never been benefited. On examination the mucous membrane of the soft palate, the uvula, the arches of the palate, the tonsils, and the posterior wall of the pharynx were seen to be one mass of in part infiltration and in part ulceration; in other spots the mucous membrane was bright red, again in others it was denuded of epithellum, and still in others whitish shreds were seen, which in some patches were yellowish and even brownish in colour. The most remarkable thing was the abrupt termination of the affection above and below the region indicated. Neither in the naso-pharynx, nor in the œsophagus, nor in the larynx, could anything pathological be detected. On the occasion of her second visit, a fortnight later, having taken iodide of potassium in the meanwhile, the condition as a whole was pretty much the same, but the details had considerably altered, inasmuch as some of the ulcerations had healed and the membranous shreds had disappeared, whilst in others the affection seemed to have made progress. The fact, however, which had at once attracted the observer's attention—viz., that the affection abruptly terminated with almost parallel borders both above and below where the parts would cease to be accessible to the patient herself—was quite unchanged. Dr. Semon expressed to the patient's

mother his firm conviction that the whole affection was self-inflicted by means of nitrate of silver or nitric acid. The mother seemed not surprised, and, on the contrary, told him that years ago the patient had artificially blistered her breast and also at one time had blackened her face under the eyes in order to induce sympathy. She also stated that Mr. Hutchinson, who had been amongst the gentlemen consulted, had become convinced that the ulceration of the throat had been artificially produced. The patient herself denied having artificially produced the ulceration, but the denial was certainly not given with the surprise and indignation a person unjustly accused would show. She refused to go into a home for a week's time, where she would be under strict supervision, and the observer saw her no more. On inquiry, however, he learned from the mother that the throat remained much in the same condition, whilst the details of the affection varied from day to day, and that some time after the second consultation her throat and lips had suddenly become very white, the medical man consulted having assured her that it was not diphtheria, as feared, but had been caused by some application, probably nitrate of silver. The whiteness soon passed off. Dr. Semon had considered it right to put the case on record because, protean as the morbid power of invention of such patients is to discover new forms of suffering, he was not aware that the throat had even been chosen as the locality for self-inflicted injuries for that purpose.—Dr. GUTHRIE asked whether any anaesthesia of the pharynx was given in this case. It had occurred to him that anaesthesia of the parts might account for the patience and persistence with which the mutilations were carried on.—Dr. W. WHITE referred to the case of a young woman who amused herself with applying nitrate of silver to a small crack in the lip, with the result of giving rise to the most intense colouration of the skin from absorption of the metal he had ever seen.—Dr. WILBERFORCE SMITH urged that in the treatment of these cases it was most important to show no sympathy with the lesions complained of, but to concentrate one's inquiries on the measures suggested for their relief, such as cold baths, exercise, &c.—Dr. HALE WHITE related the case of a woman who presented some ulceration of the inter-arytenoid space which so little resembled any known condition that it was surmised to be traumatic. It transpired, on questioning, that she had been advised to take steam inhalations, and it was evident that she had taken them at such a temperature as to determine the lesion in question. It healed rapidly enough when these were discontinued.—Mr. FRANCE GOULD said that many years ago a girl was brought to him who was said to be suffering from two tumours of the jaw. He found a swelling on either cheek, over which the cheek was, so to speak, "puffed out." The tumours were said to have been slowly growing, and the girl apparently had great difficulty in swallowing, along with a horribly fetid discharge from the mouth. She resisted the introduction of the finger into the mouth; but he succeeded in extracting two masses of some tape-like material, which she had been accumulating in the cavity in order to attract notice and sympathy. He pointed out that some persons were peculiarly liable to discolouration of the skin and argyria, and he referred to a case recorded by Onodi, of Budapest, of a man who developed marked discolouration of the skin after a few applications of nitrate of silver to the nares.

Dr. PASTEUR read a paper on the association of Respiratory Paralysis with Cardio-pulmonary Symptoms in Diphtheritic Paralysis. The communication was based on an analysis of 32 cases treated at the North-Eastern Hospital for Children, Hackney. Of the 32 patients 26 were between two and six years of age. In 1 case there was no history of a previous attack of diphtheria; in 5 cases the history was somewhat vague; in the 26 remaining cases it was quite adequate. The cardio-pulmonary symptoms might supervene at any time between the first and the fifth or sixth week of the paralysis. Vomiting occurred in 13 cases, of which 9 were fatal. It was invariably associated with the onset of acute asphyxial symptoms (bulbar crises), and was of bad augury. The diaphragm became paralysed in 29 cases, of which 16 were fatal. In 4 cases which recovered there was associated paralysis of intercostal muscles and unusual physical signs were present stimulating lung disease. In 14 cases the onset of diaphragmatic paralysis was associated with increased amplitude of the respiratory movements of the lower ribs. Diaphragmatic paralysis was found to occur under two different forms—(1) insidiously as part of the peripheral paralysis; or (2)

acutely as part of a bulbar crisis. Of the 32 cases 19 died; in 17 of these there were bulbar crises. In 5 cases in which the diaphragm had been paralysed for two or more days there was an extreme degree of collapse of the lungs after death, especially of the right base, which in two cases sank entirely in water. In other cases in which the paralysis had been of very short duration, or non-existent, there was little or no pulmonary collapse. The extent and degree of collapse appeared to be directly proportionate to the duration and degree of the paralysis. In conclusion, the more salient points touched upon were summarised as follows: 1. The mortality in diphtheritic multiple paralysis is probably higher than current opinion would lead one to suppose. 2. Death takes place by asphyxia. 3. The fatal symptoms are, in the large majority of cases, of sudden onset, and suggest a bulbar origin. 4. Recovery from a bulbar crisis is exceptional. 5. Paralysis of the diaphragm is comparatively frequent, and may occur either acutely as part of the bulbar crisis, or may develop immediately as part of the peripheral paralysis. 6. The supervention of respiratory paralysis very seriously increases the gravity of the prognosis. 7. Whenever paralysis of the diaphragm, or other part of the chest wall, is long continued (two or more days) collapse of the adjacent lung is very liable to occur, and may give rise to definite physical signs. 8. The base of the right lung is more liable to be affected in this way than the left.—Dr. GUTHRIE said he was glad Dr. Pasteur had emphasised the fact that diphtheritic paralysis was not the mild, almost trivial, affection which it was formerly thought to be in this country. In France they had long been alive to the gravity of this complication. He hesitated to accept the assumption of the dependence of collapse of the lung on paralysis of the diaphragm or chest wall. Paralysis often occurred without collapse. He pointed out that the bronchioles were surrounded by a muscular layer as well marked as in the arterioles, and it was more likely that the collapse was due to paralysis of the dilator muscles. When one emptied an empyema, for example, the lung, theoretically, ought not to expand, but it did expand as the fluid was withdrawn, and this could hardly be otherwise than in virtue of the intrinsic muscular apparatus of the lung. He remarked that there were many pathological and clinical reasons for believing that diphtheritic paralysis was a central lesion—among others, the rapidity with which the symptoms came and went, and their occurrence in "crises." He asked if Dr. Pasteur had remarked the supervention of painful manifestations referred to the region of the epigastrium. Certain French writers had stated that this pain, associated with a rapid pulse, was of very unfavourable augury.—Dr. SIDNEY PHILLIPS declined to admit that diphtheritic paralysis was regarded as so trivial a matter in this country as the previous speaker appeared to think. The proportion of 39 cases of paralysis of the diaphragm out of 64 cases of diphtheritic paralysis was curiously large, and the proportion of recoveries after paralysis of the diaphragm was hardly less remarkable. He himself had never seen a patient with well-marked paralysis of the diaphragm recover. Diphtheritic paralysis might occur later than six weeks after the attack, and he knew of one case in which it came on nine weeks after, the patient dying suddenly. In another case a child was discharged from one hospital as cured of diphtheria, and four weeks later was admitted to the Paddington Hospital for Children presenting symptoms of complete general paralysis, from which it died. This made it probable that the death-rate from diphtheritic paralysis was in reality greater than was usually believed. This fact tended to vitiate the statistics of the antitoxin treatment, sufficient time not having been allowed to elapse to be certain that the recoveries were established. It occurred to him that many of these supposed instances of lung collapse were not really collapse at all. Trousseau long since pointed out that when there was spasm of the bronchi or bronchioles one could obtain the most wonderful physical signs by auscultation. He mentioned that he had seen one case of unilateral paralysis of the chest wall.—Dr. PASTEUR, in reply, said he did not suggest that paralysis of the chest wall or diaphragm was the only factor in the production of the collapse of the lung, but only as being one important factor. Many of his cases of collapse were verified as such in the post-mortem room, and he had been most careful to exclude cases as to which there was the slightest doubt. The paralyzes sometimes occurred in crises suggesting a central lesion, while in others the distribution was suggestive of a peripheral lesion. Far from having noticed epigastric pain in these cases, he had always been struck by the curious absence of

painful manifestations. He had not included in his notes any cases of early death from cardiac failure, because these occurred at the end of the primary disease, while he had only taken cognisance of cases in which the paralytic symptoms supervened three weeks or so after.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

Epidemic Diseases in the Royal Navy.

A MEETING of this society was held on Jan. 18th, Mr. SHIRLEY MURPHY, President, being in the chair.

Fleet-Surgeon THEODORE PRESTON read a paper on *Epidemic Diseases in the Royal Navy*. It was impossible, he said, to study their history without regard to the great improvement in the diet and consequent increase of resisting power that had taken place during the last hundred years, beginning with the introduction of lime-juice and other reforms in 1795 the substitution of iron tanks for wooden water-casks, and more recently of distilled water fresh daily. Not less important was the general use of tea, coffee, or cocoa in place of rum. Before 1825 half a pint of raw spirits had been served out to everyone, it was then reduced to four ounces, and at present even that was issued freely diluted to those men only over twenty years of age who applied for it personally, and no sale or barter was allowed. Prior to 1795 the service was continually exhausted by scurvy, sloughing ulcer, typhus fever, and dysentery; it was impossible to keep a fleet at sea for many weeks together, and the mortality on long voyages was awful, as when Admiral Hozier, sailing to the West Indies with seven ships of the line, lost the whole of his crews twice over, and Lord Anson a few years later four-fifths of his from scurvy alone. Yet its nature and the virtues of lime juice had been known since early in the seventeenth century, and the experimental use of two-thirds of an ounce of lemon-juice daily on H.M.S. *Suffolk* had shown that a crew could be kept at sea for 162 days without a single case of scurvy. The result of the earliest reforms was seen in the rapid disappearance of scurvy and sloughing ulcer, and the fall of the death rate from all causes from 123 per 1000 in 1779 to 14 in 1813. Scurvy had, however, reappeared on several occasions, as in 1838, when there were twenty cases of so-called "night blindness" on board H.M.S. *Winchester* on her voyage to and from the Cape, and in the following year fifty-five cases of severe scurvy among the crew of H.M.S. *Alligator* during their laborious and unsuccessful efforts to establish a settlement at Port Essington in North Australia. Next, in 1854, the crews of the Baltic fleet suffered badly and two men died. The only cases since that time had been those of a few Kroomen in 1870-71 and the sledging parties of the Arctic Expedition in 1878, among whom 59 cases occurred with 4 deaths, though not being provided with fresh meat or lime juice. Passing by two alleged cases of plague, which were probably anthrax, the first authentic record of that disease in the navy was that of an outbreak in 1841 among the men landed at Kaiffa from the wreck of H.M.S. *Zebra* and the crew of the *Castor* sent to their assistance; of thirteen cases nine died, but the disease, which appeared to have been contracted in Acra, did not extend on board the *Castor*. Yellow fever had been familiar to navy surgeons for over 200 years, but he would begin with the remarkable outbreak at Ascension in 1839. It appeared at Sierra Leone after an absence of seven years, on board some merchant vessels, and spread to H.M.S. *Curlen*, which lost half her crew and two surgeons. She sailed thence to the Gambia, landed her sick, and set up an epidemic among the whites, the first and last known in the colony. Later in the year three ships, having contracted yellow fever at Sierra Leone, proceeded to Ascension, where they landed their sick with a semblance of isolation, but officers' effects and clothing were publicly sold. The fever, which had already attacked nearly the entire crew, broke out in the garrison, persisting for three months, when it ceased, and the inhabitants would never allow it again to approach their shores. He then described a succession of epidemics in the West Indies between 1863 and 1869, in 1873, and in 1882, which illustrated its intense infectiousness but varying mortality. At first hygienic precautions seemed useless; but later, and especially since the practical abolition of the bilge, its preventable character had been shown, and the number of cases and of deaths respectively in the navy had fallen in successive quinquennia from 1863 to 1892 as follows: 267 and 142, 178 and 77, 106 and

49, 54 and 21, 47 and 14, and 15 and 9. Much of the "dysentery" of past days might have been cholera; but the first clear account was that of an outbreak at Malta in 1837, when the disease, which, though prevalent in Italy and Sicily, had been kept out of the island by a rigid quarantine, was introduced aërially into a large poorhouse from the exposure of linen on board a Turkish man-of-war and other vessels moored in close proximity in the quarantine harbour. The inmates, 600 in number, were removed to barracks near the Grand Harbour, but no fewer than 400 out of the 600 died, while the garrison and civil population suffered heavily. Several ships of war calling at the island for a day or two and taking in water from the naval tanks were infected, and the navy had, in all, 219 cases with 38 deaths on that station. After describing the introduction of cholera into the allied armies and fleets in the Crimea and Baltic, and in particular the aerial infection of H.M.S. *Britannia* from the French troopship and the cholera camp on shore—facts familiar to all epidemiologists—he passed on to the outbreak on the China station in 1862, remarking that in the expedition against Khadung the naval brigade had 141 cases with 80 deaths, while the troops accompanying them, but bringing their own water from Shanghai, escaped entirely. In 1865 Malta was invaded from Egypt, the only precautions taken being an absurdly antiquated quarantine; the native population suffered heavily, 63 per cent. of those attacked dying, but only three cases occurred in the naval forces, all having been contracted on shore and ending fatally. Single ships had from time to time been infected by intercourse with the shore in different parts of the world where the disease was prevalent. After repeating the classic story of Admiral Kempenfelt's fleet in 1782, and with considerable detail the history of the influenza epidemic of 1837 on the home and Mediterranean stations, he observed, with regret, that no statistics were available for the period between 1843 and 1854, when they were resumed with the Russian war. In that epidemic there were 5018 cases and 3 deaths in a strength of 14 000 in the Black Sea and Baltic fleets. Many limited outbreaks had occurred on board vessels in different climates, but that on H.M.S. *Surly* in 1863, while cruising on the coasts of California and Mexico, was of special interest. When in the Gulf of Tehuantepec, 140 miles off the shore, a strong breeze set in from the land and lasted a considerable time, bringing with it a heavy perfume of flowers. Three days later cases of influenza began to appear in rapid succession, and on their arrival at La Union in San Salvador they found an epidemic of influenza raging, and recognised in the forests the perfume of the flowers. In 1750 one-fifth of the men enlisted died annually from small-pox, and in 1800 it broke out twenty times in the Channel fleet and compelled the return to port of one ship after another. In 1808 vaccination was officially "recommended," advice which was repeated in 1814 and 1825; but the first compulsory order was in 1864 requiring all new entries to be vaccinated, followed in 1871 by one for revaccination and another in 1873 enforcing the vaccination of "foreigners"—i.e., of Kroomen, Lascars, &c.—with the result that there had been a steady fall from between 5 and 8 cases and 0.3 to 0.6 deaths per mille in the sixties to 0.09 to 0.36 cases and 0.0 to 0.06 deaths during the last twelve years. Most of the local outbreaks occurred on the China station, where there had been great difficulty in obtaining lymph, which the establishment by the Japanese Government of farms for the supply of calf lymph had since removed.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Connexion between Female Labour in Factories and the High Infant Mortality in certain Manufacturing Towns.

A MEETING of this society was held on Jan. 21st, Mr. S. R. LOVETT, President, being in the chair.

A discussion on this subject was opened by Dr. PORTER, medical officer of health, Stockport, who endeavoured to show that the excessive mortality was to be ascribed rather to the insanitary conditions amid which the children were reared than to the mere fact of the employment of the mothers, though he admitted that it necessitated artificial feeding with its train of ills—diarrhoea, rickets, &c.—and that premature births were more frequent among women

engaged in textile industries than in rural populations; but the influence of the grossly insanitary conditions of most of our manufacturing towns, especially as to the housing of the working classes and the disposal of excrement by the midden system, was a disgrace to the country; huge leaky pits often abutted on the walls of the houses, in which the liquid and solid excrement of a whole court, it might be, putrefied, and exhaled a sickening stench. It was no wonder that the medical officer of health of Crewe found the infant death-rate four times higher in the quarters where middens were in use, and he had found nearly the same at Stockport, where the infant death rate among the legitimate was 225 and among the illegitimate 594 per 1000. Indeed, the life assurance companies would not take illegitimate children under three years of age; but he did not believe that the practice of insuring the lives of children led to neglect. The payment of £2 was not worth the risk of courting inquiry, and agents of life assurance associations had assured him that the insurers belonged to the most respectable and steady of the working classes, and that the mortality was lower amongst these children than among others. In fact, the Bill directed against was withdrawn on the ground of insufficient evidence. If children were the victims of foul play it was rather by the reckless use of soothing syrups &c., under which name, or that of syrup of violets, Dr. Jones, in his Howard Essay, stated that 39 lb. of laudanum were sold every week in one town, and in another two druggists paid £5 each and costs rather than face the exposure of a trial. The law at present forbade the employment of women within four weeks after confinement, and a deputation to the Home Secretary had recommended an extension of the period to three months; but Mr. Asquith had shown from the Registrar-General's returns a greater increase in some manufacturing towns, as Wolverhampton, where women were not employed, and Dr. Reid's statistics did not take into account the simultaneous increase in the general death-rate in the same towns. Such prohibition of female labour was impracticable; some drunkards did live on the wife's earnings, but more often they kept together the home of the unwilling idler, and no law could prevent "charing." Again, the infant mortality was greater in the first month than in the second and third together, due partly to work during the later months of pregnancy, and a month's rest before delivery would be of great advantage. Inquiries among mill owners and overseers led him to the conviction that more stringent legislation would be impracticable, since the expected date rested on the woman's statement, and, though often warned, their confinement generally occurred within a few hours of leaving work, sometimes indeed in the mill. Even the four weeks rule was evaded, for if the overseer refused to readmit a woman she would get work where she was not known; and she frequently lost her post, as it was, unless she could find an equally efficient substitute. Crèches, or public day nurseries, had been recommended and tried, both at the mills and elsewhere, but without success, for the mothers preferred a neighbour whom they knew living near their own homes. Indian women, however, nursed their children in the mill. The only remedy he saw was the extension of the Infant Life Protection Act to all caretakers excepting near relatives, with annual licences and inspection, and notice to the coroner of all deaths, although it would provoke resistance at first.

Dr. REID defended his position. In his county of Stafford there were many towns with from 10,000 to 30,000 inhabitants, some wholly devoted to iron founding and others to pottery. The sanitary conditions were practically identical, but in the former no women and in the latter many were employed. In these the increase of the infant mortality in ten years had been 23 per cent., as against 18 per cent. for manufacturing towns generally. Mr. Asquith's figures were fallacious, for in the case of Wolverhampton, instead of comparing the decades 1871-80 and 1881-90, he had taken the years 1885 and 1893 which happened to give the lowest and the highest infant death-rates on record. True, the infant mortality had risen in the last ten years; but then two industries had sprung up, galvanising and japanning, the one largely and the other wholly conducted by women; while prior to 1880 the sole industry of the town was the iron-works, employing only men. He maintained that the increase in the general death-rate alleged by Dr. Porter was wholly due to the rise in the mortality among infants. He still advocated the three months' absence from work, which would carry the infant through the most critical period; whereas

one month was of no advantage to the child, since it was not worth the mother's while to nurse an infant for so short a time, and the husband's wages were, as a rule, sufficient, though the additional twelve or fifteen shillings earned by the wife were a temptation.

Dr. TURNER could not agree with Dr. Porter, for the infant mortality from diarrhoea was not confined to the more insanitary towns. It was wholly a question of artificial *versus* "aseptic" breast feeding. The infant death rate was formerly the same at Leicester as at Portsmouth, but on the introduction of the shce trade, owing to disputes at Northampton, it rose in one year 50 per cent., and a further rise followed the transfer in 1860 of the silk ribbon industry from Coventry, where it was superseded by the cycle and sewing machine manufacture. There the release of the women led to a corresponding fall in the infant deaths, except in 1870, when the Franco-German war caused a transitory revival of the silk industry. Infant diarrhoea was almost unknown in Old London, insanitary as it was, just because feeding bottles had not been invented. At Much Hadham, a large village where the children were invariably breast-fed, the opening up of an ill-constructed system of communicating cess-pits and sewers was followed by an outbreak of diarrhoea which spared the infants even when their mothers were attacked.

Dr. SPOTTISWOODE CAMERON, Dr. REGINALD DUDFIELD, and others having spoken, Dr. PORTER replied. He did not deny the importance of female labour as a cause, but maintained that it was one of many, and he deprecated exaggeration and the advocacy of measures which, however desirable in themselves, would be found impracticable.

ÆSCULAPIAN SOCIETY OF LONDON.

Exhibition of Cases.—Strangulated Hernia.—Diphtheria.

A MEETING of this society was held on Friday, Jan. 25th. Dr. A. T. DAVIES exhibited a young woman the subject of extensive superficial Lupus of the Face and Neck who had been under treatment for seven months with thyroid extract. Steady and marked improvement resulted, the patches fading and becoming more flattened. There was no history of syphilis or tubercle. Dr. Davies regarded the effect of the thyroid treatment as suggesting a possible relationship between myxœdema and tubercle.—Mr. F. C. WALLIS mentioned two cases of severe lupus invading the nose and adjacent parts in which great benefit resulted from a combination of skin grafting with the thyroid treatment. He also showed a broad and sharp edged knife devised by him for shaving off large portions of skin for grafts.—Mr. STEPHEN PAGET showed a case of Acromegaly. Reference was made to a similar case observed in the dissecting-rooms at Edinburgh University seventeen years ago, in which the pituitary body was then noticed to be much enlarged.

Mr. PAGET read a paper giving details of twelve cases of Strangulated Hernia in which the bowel was found on operation to be gangrenous. Only one of the twelve recovered. Almost every case was practically hopeless when admitted to hospital. The reluctance of patients to undergo operation, the want of due assistance by practitioners, the deceptive character of such attacks, and partially successful reduction had each their share of responsibility for the fatal delay in operating. As regards the operation, resection was in several cases impossible on account of the extent and position (the large intestine) of the gangrene. Extreme gentleness and care in examination of the hernial mass might have done something—possibly not much—to alter the result, but the whole series of cases formed a protest against the danger of delay.

Dr. B. G. MORISON read notes of three well-marked cases of Diphtheria, two of them severe and relapsing, treated successfully with antitoxin diphtheria. The false membrane cleared rapidly and no sequelæ had been observed. In one case laryngeal symptoms were present and disappeared after the injection.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases.—Post partum Hæmorrhage.

THE fifth ordinary meeting of this society was held on Wednesday, Jan. 6th, Mr. T. F. CHAVASSE, President, being in the chair.

Dr. LESLIE PHILLIPS showed a curious case of Pityriasis

Rosa.—Dr. PURSLOW showed a Fœtus from a case in which Decapitation had been necessary to complete delivery.

Dr. MALINS opened a discussion on the treatment of Post-partum Hæmorrhage. He alluded to the importance of the subject to the majority of the society who were engaged in the practice of midwifery, and pointed out the value of trustworthy and accurate knowledge in times of emergency. The natural manner in which hæmorrhage was arrested after delivery was pointed out. Considerable stress was laid upon the prophylactic treatment and the treatment of those called "flooders." The order in which the treatment was enjoined after delivery of the placenta was: (1) manual stimulation, external and internal—bimanual compression also of the uterus in a position of antelexion was noticed; (2) the application of cold and heat; (3) the use of ergot by mouth and hypodermically; (4) the application of astringents, such as iron, by injection, swabbing and tampon, and the use of vinegar; (5) Dührssen's method of plugging the uterus; and (6) transfusion. The details of the above methods were considered, and the relative importance and advantage of each pointed out from the speaker's experience.—Mr. ALFRED FREER said that the hæmorrhage in some cases began before delivery was complete. The most dangerous cases were those in which the hæmorrhage took place between the birth of the child and the expulsion of the fœtus, and in such cases separation and removal of the placenta were of the utmost importance. Women who indulged in beer excessively were often "flooders," and a purgative course of treatment before labour seemed an admirable prophylactic. Vinegar and water had in his hands been of great service in some cases, and he preferred it to iron, which if used should be in very dilute solution. Neutral iron alum was to be preferred to the perchloride.—Mr. A. H. EVANS said that post-partum hæmorrhage was very rare in well-conducted labours. The worst cases were those in which, in the absence of a medical man, there had been only an imperfect delivery of the placenta. The passage of the hand into the uterus and a thorough cleaning away of all coagula were very important items in the treatment. He called attention to distension of the urinary bladder as an occasional cause of difficulty in contraction of the uterus, and alluded to the importance of a quick pulse after delivery as a warning of impending hæmorrhage.—Dr. PURSLOW found that the most troublesome cases of post-partum hæmorrhage occurred in primiparae after the application of forceps under chloroform for protracted labour. He insisted upon the importance of never losing the manual control of the uterus after delivery, and always gave a dose of ergot after delivery.—Mr. DONOVAN said that the treatment of post-partum hæmorrhage really began before delivery. The child should always be made to advance by forceps if the uterus when contracting forcibly was not capable of advancing it. Exhaustion and uterine inertia were thus avoided. When the head was delivered the advance of the body might be retarded and the uterus thus given time to contract. Ergot should be given as a routine treatment after the birth of the child.—Dr. E. UNDERHILL laid stress on the importance of anticipating if possible the occurrence of hæmorrhage by a careful inquiry into the history of previous confinements. The uterus should be grasped with the hand immediately the child is born. He urged the importance of supporting the strength of the patient and the administration of easily assimilated food in cases of weakness.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Spina Bifida.—Ovarian Tumours.—Glandular Proliferous Cyst of Right Ovary.—Uteri removed by Vaginal Hysterectomy.—Clinical Report of the Rotunda Lying-in Hospital.

A MEETING of this section was held on Dec. 21st, 1894, Dr. PUREFOY, President, being in the chair.

Dr. W. J. THOMPSON exhibited a patient with a Spina Bifida who had the following history. The patient was three months old and had a spina bifida at birth as large as an orange, flaccid, translucent, and covered with a thin bluish membrane. There was complete paralysis of the lower extremities, but not of the rectum or bladder. The laminae were wanting, and the bony ring around could be distinctly traced. The legs were everted from the hip-joint, and the left foot was a well-marked specimen of talipes calcaneus.

The case was either a meningo-myelocele or a syringo-myelocele—probably the former. For about one month there was no change in condition, and at the end of that time the tumour got smaller and more tense, and the skin healthier; the legs also regained power, and eversion became less marked. Two weeks after the improvement in the legs was noted hydrocephalus commenced and had gradually increased, the circumference of the head measuring now twenty inches. The bones were widely separated, the fontanelles greatly enlarged, and the sutures could be easily traced. There was distinct fluctuation, and the veins were enormously enlarged. From the statistics of the Clinical Society of London it would appear that spina bifida occurs once in 1000 births, and it was associated with hydrocephalus once in 10,000 births. The family history was good, but the first child had an enormous nævus. The treatment had consisted of firm pressure with simple antiseptic dressing. Dr. Alfred Smith thought that it could only live a week or two.—Mr. Croly, Dr. Macan, and Dr. Purefoy made observations on the case. Dr. Thompson replied.

Dr. ALFRED SMITH showed two specimens of Ovarian Tumour—(1) a large Papillomatous Cyst, removed from a patient aged fifty-two, recovery good; and (2) a small Ovarian Tumour removed from a patient aged thirty-two. The patient had been ailing for the past twelve months, and complained of great pelvic pain and of severe pain down the right leg, which caused the patient to walk very lamely. There were many attacks of hysterical convulsions, the seizures occurring chiefly when the patient was alone. On examination under ether a tumour the size of the fetal head was found jammed in the pelvis; it could not be released, being hitched under the promontory of the sacrum. After an easy operation recovery was uneventful, and the patient walked without showing any evidence of lameness. There had not been any recurrence of the convulsions. The operation was performed on Nov. 28th. Dr. Macan, Dr. Smyly, and Dr. Purefoy made remarks on the case, and Dr. Smith replied.

Dr. J. H. GLENN exhibited a Glandular Proliferous Cyst of the Right Ovary.

Dr. F. W. KIDD exhibited two Uteri removed by Vaginal Hysterectomy and gave an account of the operations.

The following Clinical Report by W. J. SMYLY, M.D., Master; J. H. GLENN, M.B., and H. TWEEDY, L.R.C.S.I., Assistants, of the Rotunda Lying-in Hospital for the year 1892-93 was submitted to the meeting:—During the year ending Nov. 1st, 1893, 1238 patients were confined in the hospital and 2105 at their own homes; total, 3393 cases relieved. In my former report of the Lying-in Hospital I stated that the morbidity of the patients delivered in the wards was a safer test of the precautions taken to guard them from septic infection than the actual mortality, and the present report confirms that opinion. By morbidity I meant the number of cases in which the temperature even once exceeds 101.4° F. The details of the fatal cases are even more convincing, three out of the five having been admitted in an advanced stage of the disease; a fourth was infected from an abscess in the pubic symphysis, the genital canal remaining healthy; and the fifth was the result of a surgical operation (sympphysiotomy). Forty-one women aborted, eighteen of whom required no assistance. In three the uterus was emptied by the finger alone, and in nineteen the uterus was curetted after the removal of the ovum. One patient only was plugged. There were three cases of transverse or oblique presentation. All the mothers did well. There were eight cases of placenta prævia with one death, the result of pulmonary embolism. In three cases the children were born dead. Two cases were left to the natural forces of labour. Forceps were applied in one instance, and in the remaining five cases turning and bringing down a leg through the cervix, then leaving the woman to be delivered by the natural process. As regarded accidental hæmorrhage, there were twelve cases with two maternal and six fetal deaths. In three cases no special treatment was required; in three version alone was adopted, while the remaining six cases were plugged and bound with a tight binder. Version was performed subsequently in three of these cases as further treatment. The vaginal plug, when efficiently applied before the rupture of the membrane, stopped the hæmorrhage in every instance, and had the further advantage of inducing labour pains and causing the rapid dilatation of the os. There were twenty-four cases of post-partum hæmorrhage. Six were traumatic (due to lacerations of the cervix), in three the rents were closed by suture, and in three plugged with

Iodoform gauze. The others were atonic—viz., in six the placenta or membranes had to be removed manually; two were plugged with iodoform gauze; and all were douched with hot water. The perchloride of iron was not used in any case. One patient with a submucous myoma died. There were ten cases of contracted pelvis; eight were flattened pelvis and two generally contracted flattened pelvis. The measurements were taken with Skutsch's pelviometer or Dr. Bullit's modification of the same. Four of these were delivered by forceps, one by perforation, two by induction of premature labour, and three by symphysiotomy. Version was performed eleven times (November, 1892, to November, 1893). In two instances external version was accomplished. In one of them a transverse presentation was changed into a vertex. In the other a head was converted into a breech as part of the treatment in ante-partum hæmorrhage. Symphysiotomy was performed three times, and, though one patient died, I hold it to be a good method of delivery in suitable cases. There were nine cases of eclampsia during the year. The mortality was in mothers two, in infants five. The urine in every case was found highly albuminous.—Dr. MACAN congratulated Dr. Smyly on the result of the report. There were very few cases of septicæmia, and most of them were brought from the outside. He considered that symphysiotomy was a very difficult operation, requiring three assistants and very skilled after-treatment. He thought that the consensus of opinion at the meeting at Rome was that it was unsuited for ordinary practice.—Dr. ATTHILL said that the question of plugging or not for accidental hæmorrhage was a very old one. It used to be laid down that it was absolutely wrong to plug in accidental hæmorrhage, but he had discovered that many cases of supposed placenta prævia which were plugged did very well, but turned out not to be cases of placenta prævia.—Dr. ALFRED SMITH entirely agreed with Dr. Smyly in thinking that morbidity is the real test of antiseptics employed. The removal of adherent placenta was considered one of the most dangerous operations in midwifery, but in the report he found that nineteen had been removed and that there was no record of death.—Dr. GLENN compared the statistics of morbidity within the last four years, and showed how greatly it had fallen off—first year, 185; second year, 117; third year, 94; fourth year, 60.—Dr. PARSONS said that the more he thought of the treatment of eclampsia by chloroform the less he liked it. That the convulsions could be stopped by it was perfectly certain, but he did not know whether it was a good thing to stop the convulsions.—Dr. CROLY thought that in convulsions nothing was so good as cold effusions to the head continued for a considerable time. They had the advantage of not depressing the patient.—Dr. PUREFOX looked rather unfavourably upon plugging in accidental hæmorrhage. He had seen no bad results follow the use of perchloride of iron.—Dr. SMYLY, replying, said that unfortunately a death had occurred from post-partum hæmorrhage, which commenced two or three hours after delivery in consequence of a submucous myoma. The uterus was left well contracted, but violent hæmorrhage came on again. He now came to the chief point in the report—namely, the treatment of deformed pelvis. Symphysiotomy was only a very small part of the treatment. If the head did not mould the forceps must be tried, or failing them, there was the choice between symphysiotomy and perforation. He shrunk from perforation on moral grounds. He admitted Dr. Macan's objection to symphysiotomy. The number of assistants required prevented its being used in general practice.

ERRATUM.—In our report last week of the meeting of the Leeds and West Riding Medico-Chirurgical Society, the remarks made by Mr. Cant should have ended with the sentence "and referred to Mr. Greig Smith's recent paper on the weakness of some of these adhesions." The remarks after this were made by Mr. Ward.

THE SUNDAY LECTURE SOCIETY.—The third series of lectures given by this society, of which Professor Huxley is the president, will begin on Sunday afternoon next, at 4 P.M., in St. George's Hall, Langham-place. The first lecture will be given by Mr. A. S. Woodward, the subject being the Restoration of Extinct Animals.

Reviews and Notices of Books.

A Treatise on Hygiene and Public Health. Edited by THOMAS STEVENSON, M.D., F.R.C.P., and SHIRLEY F. MURPHY, M.R.C.S. Vol. III.: Sanitary Law. London: J. & A. Churchill. 1894.

THE student of the first two volumes of this valuable work will, we think, after reading the third volume, agree that it forms a fitting completion to the treatise; and it will, too, be readily conceded that the anonymity of the articles is a fact of small importance when compared with their intrinsic excellence and the assurance of the editors that the writer in each case "is officially engaged in the administration of the law of that part of the United Kingdom to which his article relates." Volume III. does not lend itself to review in the same manner as did the two preceding volumes, and when we have said that the book is an able disentanglement and collation of the law as it relates to the several matters concerning, or likely to concern, the medical officer of health, we have in large part given the book its due.

The law appertaining to public health in England and Wales, in London, in Ireland, and in Scotland, is treated of separately in this volume, and in each case the most recent legislation is embraced. The reader will find, for instance, that in England the sanitary areas are spoken of in the terms of the Local Government Act, 1894. In a brief introductory review of the Public Health Acts in England and Wales the author of that part of the volume refers to the manner in which their value would be greatly enhanced were they so consolidated and amended as to be readily understood by the general public in whose interest they were framed, and he also draws attention to the difficulty which a lay reader must necessarily find in mastering the details of the several Acts, many of which are modified and partly repealed by later enactments.

No one who has endeavoured to unravel the intricacies of the laws relating to public health in England and Wales would be likely to do otherwise than heartily endorse these sentiments. The general arrangement of the book is such as cannot fail to commend itself to medical officers of health and students of sanitary law, as, the matter being dealt with under subject headings, it is possible to obtain by a minimum amount of reading a comprehensive knowledge of the law in regard to any subject upon which information is desired. In making this statement, however, we do not wish to imply that a thorough knowledge of the law can be obtained except by a study of the Public Health Acts themselves, but rather that a grasp of their main provisions sufficient for the medical officer of health in the performance of his daily duties will be procured.

The sanitary provisions of the Local Government Acts, 1888 and 1894, are well set forth, and considerable space is devoted to such subjects as the Burial Acts, the Housing of the Working Classes Acts, the Canal Boats Acts, Factories and Workshops, Slaughter-houses, Baths and Washhouses, the Duties of Sanitary Authorities and their Officers, and Port Sanitary Authorities. The Acts referring to vaccination are fully dealt with, the duties of parents, the public, the guardians, the public vaccinator and vaccination officer in regard to them being ably analysed.

Under Part IX. of the volume before us the law concerning public health in London is discussed, and, although the author professes to provide only a general outline of the very complicated system of sanitary administration at present appertaining to the metropolis, he has certainly succeeded in conveying to the reader a capital idea of the public health functions of the several bodies having jurisdiction in London, and more especially is this the case in connexion with the powers of the London County Council. In those portions of the volume relating to Ireland

and Scotland a very clear conception is given in each case of the several sanitary areas and their governing bodies, which will be most acceptable to those unfamiliar with public health administration outside the limits of England and Wales; and although the Public Health Acts in force in Ireland and Scotland are not dealt with in such detail as those in force in England and Wales, they are so compared and contrasted with the English Acts as to enable the reader to obtain a good grasp of the main provisions in each case.

In the matter of Scotland the reader will bear in mind that the Local Government Bill, 1894, has become law since the book was written. In conclusion, we have no hesitation in saying that Volume III. of this treatise on Hygiene and Public Health supplies a long felt want among medical officers of health.

Enlargement of the Prostate: its Treatment and Radical Cure.
By C. W. MANSSELL MOULLIN, M.A., M.D. Oxon, F.R.C.S.
London: H. K. Lewis. 1894. Pp. 176.

IN 1892 Mr. Mansell Moullin took as his subject for the Hunterian Lectures at the Royal College of Surgeons the Operative Treatment of Enlargement of the Prostate, and in the present volume he has discussed fully the causes, effects, and treatment of the same condition. In the earlier chapters the author treats of the normal structure and function of the prostate, and then proceeds to consider the etiology of enlargement of the gland; and after citing the views of various authorities he concludes that in the present state of our knowledge no satisfactory cause can be assigned to it. Mr. Moullin believes that the enlargement commences as a rule at a much earlier age and occurs much more frequently than is usually imagined, but that in a very small number only is the enlargement of such a form as to interfere with the due emptying of the bladder. The severe consequences which may follow from the obstruction offered to the outflow of urine by an enlarged prostate have long been recognised, yet it is only comparatively recently that any treatment more drastic than the systematic use of the catheter has been recommended. In 1856, indeed, Mercier in Paris devised and employed an instrument for removing portions of an enlarged prostate per urethram, yet the method met with but scanty recognition. Even the most earnest advocates of the habitual employment of a catheter for difficulty in micturition due to enlargement of the prostate must acknowledge that dangers attend its use. It is no easy matter for a surgeon even to be able to guarantee the perfect asepsis of the contents of the bladder in a case where a catheter has frequently to be introduced, however careful he may be of the asepsis of his instruments, and the dangers are increased manifold when the subject of an enlarged prostate is himself entrusted with the use of the catheter. Many cases do well in spite of the risk, but in a large majority the secondary affections of the kidneys sooner or later lead to a fatal issue; so that there is no need for surprise that efforts have been made to permanently cure the condition rather than have recourse to a method such as catheterism, which is merely palliative in itself, and so often productive of serious results. The earlier methods, such as those of Mercier already mentioned, never met with much success, though attempts have been made at intervals to reintroduce what are practically mere modifications of his method. Drainage through the perineum, with or without partial prostatectomy, does not now receive the support accorded to it a few years ago, though it is capable in many cases of almost completely relieving the obstruction to the outflow of urine. The supra-pubic operation, which is of most recent introduction, offers advantages which are not to be found in any of the other methods, and the results hitherto obtained, if confirmed by future experience, will suffice to

place this procedure in the front rank of operative methods for the treatment of enlargement of the prostate.

Mr. Moullin has given an excellent account of the various methods of operation, and has quoted the opinions of others in support of his views. He is inclined to favour, on the whole, for slight cases of enlargement with but a small amount of residual urine, the use of the catheter; but he forcibly insists on the importance of not trusting to the catheter when there is any difficulty in its introduction, when the bladder wall is beginning to lose its muscular power, when the quantity of residual urine continues to increase, or when there is evidence that the kidneys are becoming affected. In such cases he is inclined to recommend the supra-pubic operation, sometimes associated with a perineal incision, unless the condition of the patient is so grave that nothing more severe than drainage can be attempted. Mr. Moullin attaches great importance to the view that the prostate is purely sexual in function, and he speaks not unfavourably of castration as a treatment of the enlarged gland, as the atrophy which follows this operation seems to be both rapid and complete, and he suggests that it should be performed in the worst cases when everything else has failed. At the present time the number of cases in which castration has been done for this purpose, though they were apparently very successful, is not sufficiently large to enable a decided opinion to be formed as to its ultimate value. Mr. Mansell Moullin's work may be taken as a readable exposition of the present state of surgical knowledge with respect to enlargement of the prostate.

The Practice of Medicine. By M. CHARTERIS, M.D. Edin.
Seventh Edition. London: J. & A. Churchill. 1894.

THAT this compendious manual is much in favour with the student is evidenced by the rapidity with which one edition succeeds another, nor is the cause of this popularity far to seek. Covering the whole range of medicine the author has succeeded in giving terse and accurate descriptions of every disease, and has not failed to indicate clearly the main lines of treatment. Naturally his little book has grown in size since its first appearance, but in spite of this it still remains as a good example of the *multum in parvo*. Of the quality of the book we have often spoken, for we consider that it admirably fulfils its purpose, which we take to be that of an introduction to the more extended study of the subject. A student has, under prevailing regulations of the curriculum, at least three years to devote to systematic study of medicine, and therefore he would be well advised to commence his course of reading with a small trustworthy manual like this of Dr. Charteris before proceeding to assimilate the substance of more ambitious text-books. Such manuals as this should then supplement rather than replace the larger treatises. The present edition contains a notice of pathogenic micro-organisms, a proof of the fundamental importance of bacteriology to medicine. The notice, however, is limited to five pages, and although illustrated by a coloured plate can hardly be said to more than touch the fringe of the subject. It seems to us to be somewhat premature in an elementary work of this class to allude to a subject at present so undetermined as that of the existence of sporozoa in cancer.

Method of Operating for Cataract and Secondary Impairments of Vision, with the Results of Five Hundred Cases.
By Surgeon-Captain G. H. FINK, Her Majesty's Indian Medical Service. pp. 77. With Illustrations. London: J. & A. Churchill. 1894.

THE author of this little book has had large experience in performing the operation for the extraction of cataract in India—larger, indeed, than falls to the lot of metropolitan

surgeons even in considerable practice. He describes his method of operation, one of the points in which—the cutting short of the eyelashes—is not commonly resorted to in this country; and he uses both the solution of mercury bichloride containing one part in 5000 and the solution of cocaine, a proceeding that is sometimes thought to be rather dangerous, since it easily leads to detachment of the corneal epithelium; and he employs a special form of speculum in which the resistance of the orbicularis is opposed and overcome by easily applied weights. He tries to remove the lens without pricking or lacerating the capsule. The technique of the operation does not otherwise differ from that in common use, and he employs an antiseptic plastic as a dressing. He adds: "If complications arise they must be treated promptly *secundum artem*," which is good advice, but requires some details to make it useful in practice. The author gives a tabular statement of 500 cases of linear extraction with iridectomy, with results that are astonishing, the numbers being—successes, 453 = 90.6 per cent; accidents and complications, 33 = 6.6 per cent.; and loss by suppuration, 14 = 2.8 per cent. The only question here is what is meant by "cured" and "success." It would have been more satisfactory if the author had given the visual acuteness, after correction with glasses, a month or two after the operation. We notice one case of success in which the vision is stated to have been indistinct, implying that all the rest of the "cured" had good vision. The natives of India seem to be singularly free from most of the secondary complications of cataract extraction.

A Manual of Veterinary Therapeutics and Pharmacology.
By E. WALLIS HOARE, F.R.C.V.S. London: Baillière, Tindall, and Cox.

THIS work appears to be a very important addition to veterinary literature, for although books on the subject are by no means rare, yet none, perhaps, present such claims to attention for the novel features it presents or the wide extent of ground it covers. It professes to deal in a concise manner with the subjects of diagnosis and the general symptoms of disease in relation to therapeutics, as well as noticing in a general manner the action and uses of medicinal agents; it also treats of general therapeutics, and in doing so the plan adopted by Dr. Mitchell Bruce in his well-known work on "Materia Medica and Therapeutics"—that of discussing the actions and uses of remedies under the physiological systems of the body—is followed; while an interesting section deals with special therapeutics, the action of drugs being also arranged on Dr. Bruce's plan of discussing their action from their first contact with the tissues to their effects on the various organs and tissues until they become eliminated. Mr. Hoare has performed his work well and, so far as it could be done, thoroughly. The book may be accepted by those who are concerned in treating the diseases of domestic animals as a reliable guide and quite up to date in everything it deals with. Perhaps to many medical men the most attractive portion will be the special chapter on "Anæsthetics" and the Production of Anæsthesia in Animals. The more scientific and skilful veterinary surgeons of the present day resort much more frequently than their predecessors did to the beneficent and merciful employment of anæsthetics, and strongly recommend their use, especially in the more serious operations they have to perform. Mr. Hoare is known to be one of these advocates for anæsthesia, and having had considerable experience in its production in several species of the domestic animals, he may be considered as an authority competent to give a satisfactory opinion. His remarks will be read with interest by those who are anxious to solve some of the serious problems regarding the safe administration of anæsthetics to our own species, and they will probably

lead many to devote renewed attention to the question whether the results of experiments on animals can always be safely applied to mankind. The horse, for instance, it appears, will inhale pure chloroform with impunity, without any admixture of air, until complete anæsthesia has been induced. Hundreds of horses have been so treated without an accident being recorded. The rapidity with which narcotism is produced with only a small expenditure of the drug is the chief advantage found in giving it by means of a bag or a muzzle fitting closely over the lower part of the face. But Mr. Hoare does not approve of this method, and administers it largely mixed with air. The difference between the horse and dog with regard to their toleration for anæsthetics is very remarkable. Veterinary students and practitioners will, we feel sure, welcome this book and find it of much use in their studies and daily avocations.

The Middlesex Hospital Reports. (Reports of the Medical and Surgical Registrars and Pathologists for the Year 1892.) London: H. K. Lewis. 1894.

THE medical report, by Dr. Frank J. Wethered, is arranged, we learn, on a different plan to that of its predecessor. The general table of diseases has been arranged in accordance with the classification recommended in the "Nomenclature of Diseases" of the Royal College of Physicians of London, the table of results is also amplified. Of the total cases under treatment (1509) in the medical wards there was a mortality of 8.79. It is interesting to note that of twenty-six patients under treatment for diphtheria, sixteen died; tracheotomy was performed in fifteen cases. A short statistical report is followed by an abstract of important groups, a list of some cases of interest, and abstracts of exceptional cases, such as beri-beri, empyema, infective endocarditis, &c. The surgical report, by Mr. Leopold Hudson, is arranged as in previous years, the same nomenclature of diseases being employed. The mortality for the year was 10.8 per cent., but exclusive of death from malignant disease 4.4 per cent. There are included in the report a series of brief statistical tables, abstracts of cases of hernia, of perityphilitis, of sixteen cases in which the peritoneal cavity was opened for various purposes, and of twenty-three cases of compound fracture. An appendix comprises a report, in accordance with the resolution of the medical committee, of all cases of laparotomy with removal of uterine appendages: (a) cases in the gynaecological ward—eleven cases with two deaths; and (b) cases in the surgical wards—sixteen with six deaths. The pathological report, by Dr. A. F. Voelcker, has short records of 286 post-mortem examinations, and is preceded by a summary of diseases. This report occupies more than 150 pages, and could easily be condensed, or its form changed, so that it should not take up more than a third the amount of space which is now permitted. It contains valuable material for study and has evidently been carefully compiled.

Guy's Hospital Reports. Edited by Dr. HALE WHITE and Mr. W. H. A. JACOBSON. Vol. I., being Vol. XXXV. of the Third Series. London: J. & A. Churchill.

THE first impression which we obtain from this volume is one of disappointment; for it is not, in a proper sense, a report of the hospital. We want to know the result of the treatment of the patients, in order that we may learn something of the working of this large institution; but there is nothing on the subject. The first part of the work consists of papers by past and present members of the staff and others, most of them excellent and of permanent interest. Dr. S. Wilks contributes The first case of Popliteal Aneurysm treated by Pressure, the account of which is taken from the

notes which he made when dresser to Mr. Aston Key, on Nov. 25th, 1846; Dr. G. H. Savage, Suicide as a Symptom of Mental Disorder; Mr. C. Higgins, Three Cases of Distension of the Frontal Sinus; Mr. Jacobson, Five Cases of Digital Chancres occurring in Medical Men, with Remarks; Dr. E. W. Goodall, Note on the Hæmorrhagic Form of Diphtheria and Scarlet Fever; Mr. A. H. Tubby, the Prognosis of Abscess in Pott's Disease; Dr. James F. Goodhart, Clinical Observations upon Heart Disease; Dr. Thomas Stevenson, Cases illustrating (a) Poisoning by Terechloride of Gold, and (b) Breslau's Second Life Test in Infanticide; Dr. Hale White, the Effect of giving Lævulose and Inulin to Patients suffering from Diabetes Mellitus; Mr. J. H. Targett, Hydatids in Bone; Mr. F. Gowland Hopkins, Five Cases of Pernicious Anæmia, with Determination of the Iron in the Viscera, and some Observations on the Urine; Dr. J. H. Bryant, One Hundred Cases of Hyperpyrexia. The volume terminates as regards contributions to medicine with a list of specimens added to the pathological museum of the hospital during 1893. The illustrations are not numerous, but they are well executed; the paper by Dr. J. H. Bryant, however, is fully illustrated, there being no less than 100 temperature charts. This paper is certainly deserving of special mention, both for the amount of industry shown in its compilation and its usefulness for future reference. Another paper to which these remarks equally apply is the one on Disease of the Duodenum, which contains notes on 334 cases. Additional interest attaches to this issue of the Reports as it contains a general index to the volumes from one to fifty, including the years 1836 to 1893.

Analytical Records

FROM

THE LANCET LABORATORY.

1. SOMATOSE. 2. EUROPHEN.

FRIED. BAYER AND CO., ELBERFELD; BRUCE AND RUMPF, 15, FISH-STREET-HILL, LONDON, E.C.)

THE name "somatose," according to our examination of the substance to which it is applied, may be regarded as a substitute for albumose, and is derived, we suppose, from the Greek word *soma*, signifying the body. The preparation consists substantially of about equal quantities of deuto- and hetero-albumose, with mere traces only of peptone. It yields a nearly clear and almost tasteless solution, which responds to all the known tests which distinguish albumose from true peptone. A saturated solution of ammonium sulphate throws down practically the whole of the proteids from the aqueous solution. Analysis gave the following results: moisture, 11.50 per cent.; solid matter, 88.50 per cent.; albumose, calculated on 12.30 per cent. nitrogen, 77.49 per cent.; mineral matters, 5.00 per cent. It may be remarked that, although the amount of mineral matter is high, yet it contains a disappointing proportion of soluble phosphate—less than half per cent. of the whole substance—the bulk of it consisting of alkaline carbonates. Nevertheless, we think somatose is a valuable nutritive agent and may be employed with unquestionable advantage as a food adjuvant. It is, of course, especially indicated in impaired digestive function, and its completely neutral taste is an important and noteworthy characteristic.

From the same firm we have received a specimen of "europphen," which is an iodoform substitute stated to possess antiseptic and healing properties superior to those of that body. Chemically it is an iodide of iso-butyl-alcohol obtained by acting on a solution of ortho-iso-butyl-alcohol with a potassium iodide solution of iodine, and is insoluble in water, but freely soluble in alcohol. It contains 27.6 per cent. of

iodine, with which it readily parts company. It is a fine, yellow powder, practically odourless and non-poisonous. In the case of a long-neglected sore, one-half of which was dressed with iodoform and the other half (the worst) with europphen, the latter—so Dr. Nolda¹ states—was firmly cicatrised fully two days earlier than the former. These results are so promising as to merit extensive trial of this interesting derivative by the profession in this country.

CALIFORNIAN WINES (SOLIS BRAND).

(HAGUE, SMITH, & CO., 6, DICKINSON-STREET, MANCHESTER; AND GILROY, CALIFORNIA.)

California, or the Golden State as it is called, is now becoming widely known as a country where the fruits of the earth grow luxuriously and abundantly. It possesses a comparatively virgin soil, yet already the culture of the more delicate fruits—as, for example, the grape—is meeting with distinct success, judging from the excellent qualities of the wines produced there. We have recently had samples submitted to us from the Solis Wine Company, of Gilroy, for examination and analysis. Three types were chosen for this purpose. Side by side with the analytical results obtained they are as follows:—Solis burgundy: absolute alcohol by weight 11.23 per cent., by volume 13.90 per cent., being equal to proof spirit 24.36 per cent.; sugar, 0.15 per cent.; total acidity reckoned as tartaric acid, 0.76 per cent.; extractives, 3.98 per cent.; mineral matters, 0.30 per cent. Solis claret: absolute alcohol by weight 10 per cent., by volume 12.40 per cent., being equal to proof spirit, 21.73 per cent.; sugar, 0.14 per cent.; total acidity calculated as tartaric acid, 0.69 per cent.; extractives, 2.63 per cent.; mineral matters, 0.30 per cent. Solis Hermitage: absolute alcohol by weight 10.92 per cent., by volume 13.52 per cent., being equal to proof spirit 23.70 per cent.; sugar, 0.14 per cent.; total acidity reckoned as tartaric acid, 0.57 per cent.; extractives, 2.53 per cent.; mineral matters, 0.23 per cent. Apart from the satisfactory taste which each wine exhibits, it will be seen that they are free from an excessive amount of free acid constituents, while the sugar is practically nil. The burgundy is a fine full-bodied wine of strong grape flavour; the claret is a similar wine, but of medium character; and the Hermitage is a wine of a lighter kind, well suited for table use. It is satisfactory that wholesome wines like these, which compare favourably with older-established produce, can be obtained at really reasonable prices.

VI-COCOA.

(JAMES EGGO, BIRMINGHAM; AND 6, SOUTHGATE-ROAD, WOOD-GREEN, LONDON, N.)

If chemical analysis is worth anything in indicating the nutritive and tonic value of a preparation, then the above must be assigned a place in the front rank of really valuable foods, since it is the embodiment of the numerous principles contained in malt, hops, kola, and cocoa. While this is partly evident to the taste, further and stronger confirmation of the statement is afforded in the fact that we succeeded in extracting and recognising a tolerable crop of caffeine crystals. Vi-cocoa is, however, the conception of a medical practitioner, who (we quote an accompanying leaflet), "because of his professional duties, has disposed of the recipe to," &c. We are prepared to allow that this preparation is probably of distinct value as a restorative and stimulating food, but we regret to find that a member of the medical profession has lent his name to an enterprise of this kind.

UNSWEETENED CONDENSED MILK: "FIRST SWISS BRAND."

(FIRST SWISS ALPINE MILK EXPORTING CO., 17 AND 18, ST. DUNSTON'S HILL, E.C.)

That the reproach which is so often levelled against concentrated milks—i.e., that they are so frequently deficient in

¹ Therapeutische Monatshefte, October, 1891.

fatty constituents, is not applicable in the present instance is evident from the result of our analysis. Thus the composition of the condensed milk was found to be as follows: total solids, 37.65 per cent.; fat, 9.00 per cent.; mineral matters, 2.10 per cent.; water, 62.35 per cent.; while on diluting it with two and a half volumes of water a liquid giving the following composition was obtained: total solids, 15.06 per cent.; fat, 3.60 per cent.; mineral matters, 0.84 per cent.; water, 84.94 per cent. This corresponds with ordinary cow's milk of excellent quality. The sample was free from objectionable preservatives and added sugar, while no metallic contamination could be traced. So long as these excellent qualities are maintained the milk may be freely recommended for infant and invalid use as well as for ordinary purposes. We read with surprise—as others will—the statement of Mr. Goodfellow, contained in his report on this brand, to the effect that cane sugar “gives an excess of carbonaceous material *very harmful to the body.*”

OVALINE SOAP AND OTHER TOILET PREPARATIONS, MADE FROM YELK OF EGG.

(THE OVALINE SOAP CO., 52, KING-STREET, REGENT-STREET, S.W.)

It is well known that the chief proximate constituents of yolk of egg are vitelline (a peculiar proteid substance), nearly 15 per cent.; of fats (olein and palmatine), besides cholesterine and lecithin, an organic compound containing phosphorus, and a yellow colouring matter. The toilet preparations referred to above (ovaline hair-wash, shaving-cream, ointment, &c.), which are said to be prepared with yolk of egg, should therefore give some indication of the substances just enumerated. The evidence of these in ovaline soap is conclusive. Thus a strong solution of it yields, on boiling, several albuminous flocks, and a silver coin placed in the solution blackens on prolonged immersion from the phosphorus compounds present. Still further corroboration is afforded in the fact that the mineral matter obtained by incinerating the soap was found to contain phosphoric acid—an entirely foreign constituent in the ash of ordinary soap. Apart from the fact that the soap employed is of excellent quality, being free from excess of alkali and moisture, the presence of a definite proportion of fresh yolk of egg probably endows it with properties peculiarly agreeable and salutary to the skin, since not only is this addition calculated to give the latter a beneficial protective influence, but, by reason of the presence also of the easily saponifiable egg fats, protection against the injurious action which some soaps, by the chance excess of alkali contained in them, will occasionally produce on very delicate skins is doubtless to some extent secured. In the other preparations made with the same material we obtained similar evidence of the presence of the principles of yolk-of-egg, which may be regarded as serving a like end.

VIKING CONDENSED UNSWEETENED MILK.

(THE NORWEGIAN MILK CONDENSING COMPANY, LIMITED, CHRISTIANIA, NORWAY; AND BOTOLPH HOUSE, EASTCHEAP, LONDON, E.C.)

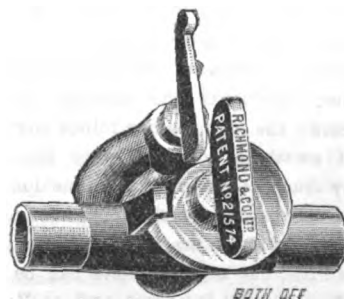
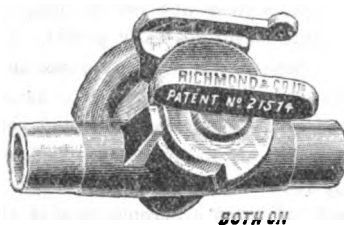
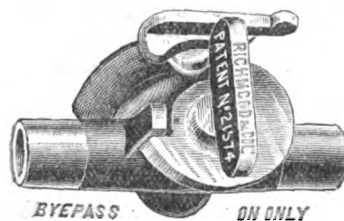
It is satisfactory to be able to confirm, in practically every particular, from the results of an independent examination, the claims made in regard to this concentrated milk. Thus our analysis agrees substantially with that already advertised concerning it. The results were as follows: total solids, 32.43 per cent.; fat, 9.00 per cent.; mineral matters, 1.89 per cent.; water, 67.57 per cent. On mixing one part of the milk with two and a half parts of water the resulting mixture exhibits the following composition: total solids, 12.97 per cent.; fat, 3.60 per cent.; mineral matters, 0.75 per cent.; water, 87.03 per cent. This accords with the composition of cow's milk of excellent quality, containing, it is satisfactory to add, the normal proportion of fat. It is preserved without, and is free also from, objectionable matters and metallic impurities. While we concede its undoubted value in infant feeding, it is obviously also well adapted for export and travelling purposes.]

New Inventions.

A TAP REGULATOR FOR GAS FIRES.

THE tendency of atmospheric burners to “light back” was one of the principal defects attached to gas fires, which was pointed out in the report of THE LANCET Special Analytical Sanitary Commission on Smoke Prevention and Perfect Combustion (III. Gaseous Fuel, Gas Heating, and Gas-cooking Appliances).¹ Since the appearance of this report we have had occasion to describe several burners which have been designed to prevent this occurrence, but obviously there is then a danger of running the gas at too low a pressure, so that, although lighting back may be prevented, the flames are easily extinguished on the slightest draught, in which case coal gas would escape unburnt. Moreover, if the flame were turned so low as to be near extinction point, the heating effect on the “fuel” would be practically nil, which would therefore fail to relight the gas when once blown out. To obviate the possibility of such an occurrence some means are required which will automatically restrict the use of the burner to, and within the extremes of, a range of heating power which is at once useful and safe.

One method of effecting this object is by a compound tap such as is described and figured below. It consists of two



taps (large and small), the former of which regulates the range of heat-giving power between the maximum and minimum, and the latter admits the minimum supply which is compatible with usefulness and safety. The taps are so arranged relatively to each other that on opening the large and main tap the “cam” on its plug acts on the lever of, and opens, the small or bye-pass tap, and when the large tap is “full on” the bye-pass is also “full on” and is locked so as to be immovable. During all subsequent regulations of the supply by the main tap the bye-pass remains open “full on,” supplying a minimum amount of gas, below which it is neither useful nor safe to go—say a supply equivalent to between 0.2 and 0.3 in. One main feature of the device is that the automatic opening and locking of the bye-pass prevent a forgetful or ignorant servant from either failing to open the bye-pass or attempting to regulate by it. A separate movement of each tap is necessary to extinguish the fire.

The manufacturers and sole licensees of this useful contrivance are Messrs. Richmond and Co., Limited, of Warrington, who are supplying them gratis with their “Majestic” Fires.

¹ THE LANCET, Nov. 25th, 1893.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 2, 1895.

IN many departments of medicine the powers of diagnosis possessed by the physician have far outstripped the means of treatment at his disposal; and this is what might have been expected, for the signs and symptoms on which the diagnosis depends are, in the main, the result of comparatively simple laws of chemistry and physics, but the treatment depends in a much greater degree on the more highly complex laws of life itself. Occasionally, however, it has happened that our power of remedying a morbid condition—especially by operation—surpasses our power of diagnosing with certainty its presence, and the question then arises, What degree of certainty should be required before proceeding to operate? The answer to this question must obviously depend on the severity of the operative treatment as compared with the danger from the disease.

We have had the great pleasure to be able in recent numbers of *THE LANCET*¹ to present to our readers an address by Professor AUGUSTO MURRI, delivered before the Lombard Medical Association, who deals with the question in a manner whose fresh and learned originality must, we are certain, have been generally patent. In this address he points out that, while in many cases an acute abscess of the brain may be diagnosed with some certainty, a chronic cerebral abscess may exist and yet may give no positive indication of its presence. Too often the condition is only discovered by post-mortem examination. The diagnostic indications of a chronic abscess of the brain are few and untrustworthy. In the place of first importance among such indications is the presence of a sufficient cause, such as middle-ear disease, local injury, or caries of the cranial bones. Not that the exciting cause need be so grave as these; the abscess may follow any of the specific fevers, and as these occur so very frequently without leaving any such sequela the connexion may not be recognised. The signs which a chronic cerebral abscess may present are few in number—pyrexia, headache, and optic neuritis, but none of these can be depended on: pyrexia is often completely absent, and, as Professor MURRI points out, in many cases a subnormal temperature is present; the headache, if localised and persistent, and occurring after one of the usual exciting causes, is suggestive, but nothing more; and optic neuritis may equally be a sign of a tumour or meningitis. Other symptoms, such as paralysis, though often of use in determining the situation of a lesion, are of no value in deciding as to its nature. If we have in any case a sufficient cause, and the signs already mentioned are well marked, we may be fairly confident that an abscess is present, but we cannot be at all certain. Several of the extremely interesting cases with which Professor MURRI has illustrated his paper demonstrate this most definitely; all the usual indications of a chronic cerebral abscess have been present, and yet

at the necropsy some other lesion has been found. Yet the disease is one most dangerous to life, and if timely surgical aid is not afforded death must result. Under these circumstances what should be done? Shall we wait until symptoms arise which will definitely satisfy us that an abscess is present? If so, it will in a large majority of cases be too late to operate; the abscess will have extended and have ruptured either on to the surface of the brain or into one of the ventricles. The surgeon is on the horns of a dilemma: if he operates before he is certain of the presence of an abscess he may find some other lesion for which he can do nothing; and if, on the other hand, he waits until he is sure of his diagnosis the delay may prove fatal to the patient. The decision must depend on the amount of danger connected with the operation itself. A very similar case is to be found in many abdominal conditions where, an exact diagnosis being impossible and the danger to the patient great, it is now customary to perform an exploratory laparotomy. If, then, exploratory trephining is in itself as little dangerous as exploratory laparotomy, it is obviously the duty of the surgeon, notwithstanding the weakness of the diagnosis, to attempt to discover and cure the morbid condition by opening the skull. With complete antiseptic precautions the operation itself, if carefully performed, is practically free from risk, and it is seldom indeed that it is followed by any disastrous effects.

It is a plea for greater frequency in this operative proceeding that forms the text of Professor MURRI's admirable contributions to our columns. The tendency at the present time among Continental surgeons is to await a certain diagnosis, with an eminently unsatisfactory result, for the statistics show that waiting for more data means waiting for more deaths, as by the time the diagnosis is certain the patient is dying. It may be that in the future some diagnostic method will be discovered whereby the nature of an intracranial lesion may be determined with the same certainty that we diagnose the nature of an intrathoracic condition; but that time is not yet, and at present the surgeon has to decide the question whether he shall leave a patient with a chronic cerebral abscess to die unaided, or whether, even though the diagnosis may be far from certain, he will by operative interference, undertaken with a reasonable chance of success, make an attempt to relieve the sufferer. It is in no spirit of reckless interference, but with well-reasoned sense, that Professor MURRI urges upon his professional colleagues the not infrequent necessity for the bolder measure; and we note with pleasure his compliment to British surgeons, whose records have shown exploratory measures to be frequently attended with exceedingly satisfactory results.

IN connexion with the publication of Surgeon-Colonel HARVEY's presidential address at the inauguration of the Indian Medical Congress at Calcutta we recently adverted to some questions in which, apart from what may be termed the medico-social aspects of such a Congress, Eastern and Western civilisation were alike interested, and concerning the elucidation of which the discussions at such a Congress

¹ THE LANCET, JAN. 5th, 12th, and 26th, and in the present issue.

might fairly be expected to render invaluable aid. Some of these were questions of fact, some questions of theory. There are also questions constantly arising in scientific medicine—of a clinical, bacteriological, and practical nature—which may be said to have assumed everywhere a new aspect when tested and considered in the light and by the aid of methods of modern medical research.

The subject of tropical life, its diseases and their sequelae, is not one of scientific or medical interest merely. It is full of practical everyday interest—to our own country in particular, for we are in constant communication with India and the colonies, with the result that many of the inhabitants of the British Empire are often being subjected to the influence of changes of climate. Professor VIRCHOW, in his address at the Congress of German Naturalists and Physicians at Strasburg in 1885, called attention to a sphere of research in which, he alleged, that neither the English nor the French had hitherto accomplished anything of importance—namely, the modifications of the organism, and particularly of the special alterations of each organ, connected with the phenomena of acclimatisation.

There is probably no country in the world where disease and death-rates are liable to such great fluctuations as India, according as epidemics are present or absent. The amount of labour that has been expended upon the natural history of these epidemics and upon the accumulation of a number of details, converging in certain definite directions according to the views advocated by authorities at different times, has been enormous. The geography, statistics, meteorology, food-supply, and climatic and local conditions prevalent at the time of an outbreak of epidemic disease have all been again and again patiently and laboriously worked out, without our being really any nearer the root of the matter, however, as regards the discovery of the true cause. The very multiplicity of the conditions and phenomena investigated proved most embarrassing, for it was often difficult or impossible to determine and select those which were really relevant to the inquiry, and however important or interesting in themselves they failed to be fruitful, mainly because they lacked precision and did not fall in with the inductive spirit of modern experimental science. All such investigations require to be supplemented and complemented by inductive and experimental methods of research and observation. Whether we must in future look to micro-pathology alone remains to be seen, but it is certain that no search for the causes of disease can be deemed adequate or complete where bacteriological investigations are excluded.

Surgeon-Lieutenant-Colonel CROMBIE concluded his excellent address as president of the Medical Section of the Congress on the fevers of India with an appeal to his medical hearers in Calcutta not to allow France and Germany to remain in the van of bacteriological research, but to make a more careful study of the cases which came under their observation in India. As the Sanitary Commissioner with the Government of India remarked in one of his late annual reports, what is wanted in India is not more private work, however enthusiastic, but work by trained experts in properly equipped laboratories to supplement the clinical work of medical officers. THE LANCET has frequently urged the need of this, as also some

organisation for the prompt investigation of outbreaks of disease at the time of these occurrences and while facts are still fresh in the minds of local observers, to be followed by such local remedial measures of a sanitary nature as are apparently required, either at once or after fuller investigation and report. In this way scientific and practical work would go hand-in-hand, and some real progress would be made. India presents a rich field for investigations of this nature. The fact that KOCH's comma bacillus, for example, is present in cases of cholera may be taken as established; but its causal connexion with cholera has, in the opinion of many, still to be demonstrated as an adequate explanation of all the phenomena of that disease as it comports itself in Indian experience. Again, Surgeon-Lieutenant-Colonel CROMBIE is a convert to the amoebic theory of malarial fever, and says that, although there are some striking points of contrast between the order of frequency of intermittent fevers in India as compared with other countries—the Roman Campagna, for example—still, wherever malarial fever is found to exist—in America, Africa, Asia, and Europe, and in localities differing from each other in every particular of climate—the essential phenomena remain the same, and LAVERAN's micro-organism is discoverable in the blood. Under such circumstances it seemed to him to be impossible to offer any longer a reasonable resistance to LAVERAN's theory of its causation. As regards the remittent fevers met with in India and semi-tropical climates some are attributable to malaria and some are not, and it is obviously of much practical importance that these should be differentiated, the one from the other, for quinine and arsenic are the proper remedies in the one case and inefficacious, if not actually injurious, in the other. Nor are all the cases of a continued non-malarious form of fever encountered in India and elsewhere clinically identical with typhoid fever. There is, moreover, a great deal still to be worked out in regard to this particular fever in India. Why should typhoid fever be so frequently and disproportionately present among our young European officers and soldiers during their earlier years of service in that country as compared with the natives? Is the typhoid bacillus of EBERTH and GAFFKY to be found in all the cases of typhoid fever met with in India, because the discovery of this bacillus would serve to distinguish the nature of the fever and stamp its identity with the typhoid fever of other countries? These and many other questions in Eastern medicine and pathology are still awaiting solution, and India affords a wide field for their investigation by the aid of modern methods and appliances of pathological and bacteriological research. Nor can it be denied that these are matters of urgent practical importance, for the loss of life and sickness caused by typhoid fever—to take only one example—among the young manhood of the British army in India amount to a terrible total annually.

Surgeon-Major DIMMOCK, Professor of Midwifery, Grant Medical College, Bombay, in his address to the Obstetrical and Gynaecological Section of the Congress, discussed the causes and effects of puerperal fever in India, and showed how in that country we are confronted with conditions of climate, season, race, habits, and environment, and not alone with special disease entities. SEMMELWEISS long ago put us in possession of the axioms of puerperal fever and

its relation to puerperal infective septicaemia. Professor DIMMOCK has extended his inquiries into the different forms of fever met with in the pregnant or puerperal woman in India. Mr. WEATHERLY, moreover, has related in a paper read before the same section of the Congress the results of his experience in Africa, Florida, and India in regard to the influence of malaria in abortion and sterility.

EXCEPTION may be taken to the title of a pamphlet we have received from Dr. ARTHUR RANSOME—namely, "The Consumption Scare,"—but without entering fully into the question of whether there is or is not a "scare" we can say with truth that there exists a tendency to attribute to pulmonary phthisis a much more gravely infectious nature than it is proved to possess. Dr. RANSOME quotes from a paper issued by a society of medical officers of health, setting forth with elaborate detail the way in which phthisis is spread by the dust of dried sputa, and adding directions as to disinfection, cleanliness, and similar precautions; but, as he rightly remarks, nothing is said therein about the security given by these means. Secondly, he quotes a paper by Dr. ARNOLD CHAPLIN on the Necessity for placing Tubercular Phthisis under Control, which paper contains some stringent regulations for segregation.

Let us try to picture what this drastic treatment of phthisis would mean to the sufferers by recalling the condition of the leper so recently as the seventeenth century. In the seventeenth century leprosy was the awful and abiding scourge of the peoples of Greece and the Aegean Islands. It was known to be infectious, and the means for the prevention of the spread of the disease were carried out to their logical end. The island of Leros, with the exception of one or two villages on the coast, was entirely given up to lepers. The territory they inhabited was called the "Desert of St. Cosmas." Communication with the rest of the island was entirely cut off by natural obstacles, as rocks and rivers, and where these failed by walls. There were two lines of fortification, so to speak, surrounding the desert. Inside the first strangers might go twice a year and return after holding converse with the inmates; inside the second, if anyone went, return was absolutely prohibited. Children, and there were many such born in the desert, were never permitted to leave it; at their death they were buried within the precincts. The lepers were ministered to by Basilian nuns and priests, who voluntarily undertook the duty. These also, once they had passed the second gate, never came out again. The system was undoubtedly effectual against the evil, and, moreover, was only logical. If segregation is to be of any use in a disease it must be complete, uncompromising, ruthless. (We are using the term segregation in its strictest meaning, and do not intend to overlook the benefits clearly to be derived from systems of notification properly worked. These are not segregation at all, and have not been suggested as of possible use in the prevention of phthisis.) To make minor attempts at secluding the infectious sufferers is to play at preventive medicine. Without debating the question further, does anyone imagine that our knowledge of phthisis warrants the recommendation of such measures towards the phthisical? Yet if segregation

is to be really useful, the Isle of Wight, say, should be transformed into an Isle of Leros.

The idea that phthisis is an infectious disease is an old one in the south of Europe, but of comparatively recent date in this country or in France and Germany. Dr. WILLIAM BUDD, in our columns (as early as 1867), was the first observer in England to make the suggestion that phthisis is a true zymotic disease, that the tuberculous matter is itself (or includes) the specific morbid material by which the disease is propagated from one person to another, and that by the destruction of this matter on its issue from the body, seconded by good sanitary conditions, may hope to rid ourselves of this scourge. These views met with but little favour at the time, and "it was not until after KOCH's great discovery of the essential organism of tubercle that any idea of serious danger occurred to the medical mind." It is not with any intention of saying, we presume, that no source of danger exists from infectivity in phthisis that Dr. RANSOME has written this pamphlet, but rather to show that infectivity has lately gained too much prominence, and the influence of pure air and light, especially sunshine, as the preventive and curative measures provided by nature proportionately belittled. In some experiments carried out by Dr. RANSOME and Professor DELÉPINE an exposure of dried sputum from tuberculous patients to sunlight for one hour entirely destroyed the bacilli, so that guinea-pigs—animals most susceptible to tubercle—were quite unaffected after being inoculated with the same. Specimens of the same tuberculous dust gave tubercle to guinea-pigs after being kept in the dark with little air for thirty-five days. That light and air are two potent preventive agents these experiments would tend to show, and we recommend them to the consideration of those who are concerned in the construction of our new buildings.

Annotations.

"Ne quid nimis."

WORKHOUSE ADMINISTRATION AS AFFECTING THE SICK.

WE noted in the last issue of THE LANCET an example of delay, which proved fatal, in the case of an aged inmate of the Stepney Workhouse, and remarked upon the many imperfections which still obtain in the arrangements for the care of the sick poor. This week we have received an important circular from the Local Government Board, addressed to the newly elected boards of guardians, dealing with this very subject. The circular deals in a most thorough manner with the duties of the medical officer, lays special stress upon the absolute necessity of a supply of good nurses, and strongly urges that pauper inmates should no longer be allowed to act as assistant nurses, except under special circumstances. The guardians are exhorted to see that due provision is made for nursing by night as well as by day, that all nurses should be adequately remunerated, and that the most careful consideration should be given to any representations made by the medical officer of the workhouse in the discharge of his prescribed duties. There is no reason why the sick poor in workhouses should not be treated as efficiently as they are in hospitals. Of course, the cases for the most part are those of a very chronic nature, but they are none the less distressing to the patients nor do

they need anything less than the most constant attention. The days of workhouse horrors as described by Dickens have, we may hope, passed away for ever; but even now there is need for more of the old spirit which animated the mediæval "bede-houses," when a sick poor man was looked on as the peculiar care of the Church and not, as we fear is in some measure the case now, an extra burden to the long-suffering ratepayer. The question of the relief of the sick poor has always been a matter of deep concern to THE LANCET and its founder. As far back as 1837 the then Home Secretary brought forward a motion, a similar one having been previously given notice of by Mr. Wakley, the ultimate outcome of which was the Poor-law Amendment Act of 1842.

A CASE OF APPARENT DEATH.

WE have received from Dr. R. Mitchell of Bury the following graphic detailed account of the remarkable case of resuscitation which has been so widely commented upon in the press: "Mrs. Sutcliffe of Heap Bridge, Bury, Lancashire," Dr. Mitchell writes, "was a very healthy woman up to the last three years, when she began to suffer from pain at the stomach and sickness with diarrhoea. She gradually got worse and became very emaciated—white and bloodless in appearance. Three or four days before death she on several occasions appeared to be on the point of death, and at these times the friends were all assembled to witness her last moments. On the night of Jan. 16th she was very restless up to midnight, when she asked to be placed on her left side, and all the pillows and bolster to be taken away, and she went into a quiet sleep which lasted till 2.30, then she gradually stretched her arms by her sides and her legs straight down, and became stiff and cold. Her jaw dropped, leaving her mouth open, and the son and nurse placed a little ice in it, but it ran out again. She did not open her eyes, did not breathe, and her heart, which was felt by her son and nurse to slowly beat, gradually ceased in about ten minutes. The nurse, experienced at death-beds, and the son believed her dead. They left her as she lay for one hour and twenty minutes, when they carried her upstairs to a bedroom with the assistance of a woman who had often helped in cases of death before. And these women remarked that the body was very stiff and cold, and that they would just have time to 'wash and lay her out' before she would be too stiff. Arrived in the bedroom, the body was placed on a sheet on the floor, washed, and dressed in the customary dead clothes, and then placed on a bed with a board beneath it. The laying-out was completed by 5 A.M., and during the morning friends frequently went to see the supposed corpse and all aver that there were no signs of life. The undertaker who measured the body for a coffin believed her to be dead. Several who had occasion to touch the body said it was cold and stiff as death. About 10.30 A.M. two women were arranging the chamber when the supposed corpse coughed, the pennies which were on the eyelids fell off and the women ran downstairs in terror and could not be persuaded to go back. Other women went and watched the gradual recovery of the life. The eyes opened without signs of consciousness, the breathing became freer and stronger, and the pulse better. These women say 'she gradually and slowly came round.' I saw her about 1.30 P.M.; she was lying as 'laid out,' her eyelids opened and closed, her breathing was regular and the bedclothes could be seen to rise and fall on the chest, her hands were clasped across the chest, and the pulse was easily felt, soft and regular. She was quite unconscious; the limbs were stiff and cold, possibly due to lying in a cold chamber for eight hours. She was removed to a warm bed, hot bottles were applied, and brandy and warm

water given in small quantities, and in the evening she spoke in whispers, asking to be put in her own bed, and other sayings, which showed her to be conscious. She never made any allusion to the state she was in during the morning and was never conscious before the evening of that day. She gradually became weaker and weaker, and died at 7 A.M. on Jan. 18th, twenty-eight hours after the supposed death, in exactly the same attitude and with exactly the same signs as in the preceding morning. The body was very much worn, and in sleep the face was like that of the dead. She had taken nothing but ice or a little water for days. There was an extensive bed sore slough at the bottom of the spine; it was black and had been exquisitely painful. The above is a true statement of the 'resuscitation of an apparently dead woman' according to the daily papers of the last week. (Signed) R. MITCHELL, M.D." From this account the case seems to have some analogies with the condition sometimes observed in cholera. The patient was obviously reduced to the last stage of asthenia, and the temporary suspension of vital functions, followed after the brief rally by actual death, is not surprising, although no doubt exceptional.

DEATH OF DR. LOMBARD OF GENEVA.

WE regret to have to announce the sudden death on Jan. 22nd of Dr. Lombard of Geneva, the leading medical climatologist in the world. He was born at Geneva in March, 1803, and had therefore nearly completed the great age of ninety-two when, without showing any notable failure of mental power, he passed suddenly away. Up to the last he took a keen interest in medical science and welcomed the reported successes of sero-therapeutics in diphtheria. Dr. Lombard commenced his medical studies at the University of Edinburgh (1822-24), then at the zenith of its fame, but, unable to stand the rigours of a Scotch climate, he passed to Italy, where he at once began to study the subject which favours his great claim to a niche in the Temple of Fame. He completed his medical education in Paris under Andral and Louis, graduating in 1827, his doctorate thesis being on Tubercles. He settled in Geneva in 1829 and gave himself up to hospital and consulting practice and literary labours, the latter resulting in 1856 in the publication of his "Climats de Montagne," of which a third edition appeared in 1873, followed by his monumental "Traité de Climatologie," which was published from 1877 to 1880. Until the age of eighty-three years he continued his scientific and practical labours, and in 1892 presided over the International Congress of Hygiene at Geneva. He was a man of great probity, charity, and full of the truly religious spirit, and was universally esteemed by his fellow townsmen, who were proud of his high reputation. It is interesting to find that Dr. Lombard, amongst his numerous distinctions, was an honorary Fellow of the Medical Society of London.

LEGISLATION ON PENNY ICES.

SIXTEEN years have already elapsed since we denounced the danger involved in the manufacture and sale of penny ices.¹ The colouring material, even when aniline dyes are used, is employed in such minute quantities that this offers no particular danger; but the use of bad milk and bad eggs in extremely unhealthy and filthy localities is a very serious matter. The manufacturers of penny ices are chiefly Italians of the lowest class, and they live crowded together in Italian colonies, the principal one being at Saffron-hill. They inhabit houses owned by a "padrone," who exploits their labour, finds the necessary capital, and is careful not to charge them any rent for their sleeping accommodation. Thus he is not a common lodging-house keeper and escapes

¹ THE LANCET, Aug. 24th, 1878, and Oct. 18th, 1879.

the action of the law. In a padrone's house of this description our commissioners found in the rooms three and four beds; some were occupied by men and women, others by single men or single women; all conditions and sexes living promiscuously together. Some of these Italians were piano-organ men, others traded in penny ices; and these ices were mixed or made on the premises, in the midst of indescribable filth and overcrowding. The milk, the eggs, the cornflour mixture, &c., as we reported at the time, are left standing for hours in the foulest atmosphere, are manipulated by the dirtiest and most unwashed Calabrians, and are mixed—sometimes boiled—in the same saucepans and cauldrons employed to cleanse dirty linen. Of course, in the case of such a population which has no conception of the laws of sanitation, the liability of the contamination of the stock of milk, eggs, and ice creams is a factor by no means to be disregarded. Obviously ices should be made with care and with all the precautions necessary to prevent such contamination. But so long as no supervision is exercised by the authorities the Italian padrone is not likely to indulge in so extravagant a luxury as cleanliness. Fortunately we are now informed that the Local Government Board has written to certain of the metropolitan vestries notifying that a Select Committee will be appointed to inquire into the advisability of instituting legislative action so as to secure the registration of itinerant ice-cream vendors. Thus at last we may hope that something may be done to improve the conditions under which this popular "delicacy," the penny ice, is made.

MEDICAL MEN AND INSANITY IN RELATION TO LAW.

THERE is, perhaps, no subject throughout the whole of medical jurisprudence which offers such difficulties to both medical men and lawyers as insanity. Numbers of both medical and legal text-books on the subject exist, all excellent in their way, but with the grave defect that the medical ones are too technical for the lawyers, and *vice versa*. Nor is it only the members of these two faculties who are in need of a clear and lucid exposition of the subject. Any educated man is liable to have to serve as a special jurymen and to have to decide cases in which insanity may bear a large part. It is because we are sensible of this want in medico-legal literature that we welcome the announcement of a work entitled "The Insane and the Law," written by Percy Smith, M.D., F.R.C.P., Physician at Bethlem Royal Hospital, F. Pitt Lewis, Q.C., and A. J. Hawke, barrister. From an advance sheet of the introductory chapter we learn that the book will deal with the *personal* position of the insane rather than with their property, as do the existing legal works on the subject, while existing medical books treat of the disease as such only; whereas the forthcoming work will try to set out in terms sufficiently plain for the non-medical mind, on the one hand, and the non-legal, on the other, the subjects of—(1) Detection and treatment; (2) maintenance; (3) responsibility, both civil and criminal; and (4) capacity to give evidence as a witness or to make a will. The authors' names are a sufficient guarantee that the book will be written by experts, and we await the appearance of the work with the consciousness that it will supply a long-felt need.

THE COST OF MEDICAL TREATMENT.

THE managing committees of hospitals have reason to think somewhat gravely of the cost of medical treatment. The drug bill, the figured columns relating to surgical necessities, and the order lists of dietetic accessories are as leaden weights upon the heart of their endeavours to benefit mankind. Nor is the general practitioner free from a like source of anxiety, at all events if, guided by the metropolitan

method, he adds to professional skill and labour the generous charity of dispensing medicines to an opulent community. He and others of the oppressed in pocket may, therefore, learn with an interest born of new hope that it is possible, even easy, out of the smallest professional gains to make practice pay and more than pay. Such, at least, is one obvious moral to be derived from certain published statements relating to the Lincoln Oddfellows' Medical Institute. The lodge, it is said, provides for 4889 members. Its receipts for last year amounted to £1155 1s. 4d. Of this sum £500 17s. went in salaries to medical officers &c. £231 for rent and general expenses, and £161 5s. 11d. for drugs, the credit balance being £206 0s. 3d. Prescriptions numbered 31 431, and the drug bill distributed over these consists therefore of components having each an average value of 1½d. This result is certainly very satisfactory in its purely financial aspect. As to whether it represents a relatively high average of medicinal or surgical efficiency we are not so certain. If the panoply of the Oddfellows' attack upon disease consists merely of stock medicines of a simple character, we may well agree that it does; but it is clear that in such an armament there exists no more than a nominal provision for many weapons of proved quality, to which our present modes of treatment owe much of their mastery. We fully recognise the value of economy, especially as applied in the medical practice of charitable institutions. It is evident that the Lincoln Oddfellows, and many other like associations, share our views on this matter. At the same time, we should like to be assured that they have not, with regard to it, bettered the suggestions of business prudence after the manner familiar to some parochial authorities. An expenditure so trifling as 1½d. on each prescription seems hardly compatible with power and effect in dealing with the varied and often dangerous phases of disease.

CLINICAL OBSERVATIONS ON WILD BEASTS.

THE *Bristol Medico-Chirurgical Journal* for December contains a remarkable paper by Dr. A. J. Harrison, in which he embodies some of the more striking events in connexion with a branch of practice of which few have much experience—that of physician to the inmates of a Zoological Gardens. The "tiger and ape" that lie dormant in every man's nature and occasionally get loose and secure for their late host the notice of a police magistrate are here found in plain, unvarnished form as one would expect, and Dr. Harrison mentions several crimes of violence committed by the animals under the influence of jealousy or sexual excitement. But what we should not expect to find is so much similarity among the cases related to the diseases and accidents most familiar in human experience. Intussusception, pericarditis, empyema, phthisis, Pott's paraplegia, cancer, ingrowing toe-nail, and ruptured uterus are examples of what we mean, and they serve to remind us that the gulf on the physical side between man and the brute is not so wide as might be imagined. Dr. Harrison's most interesting patients were, fitly enough, the lions. The first monarch, Hannibal by name, was found dead in his cage, the cause of death being hæmorrhage due to rupture of an enormously enlarged spleen which weighed twenty-one pounds and a half, at least twenty times the normal weight. Just sixteen weeks later (the average period of gestation in the lioness) his widow was confined of twins, both of whom subsequently had an interesting medical history. One, a lioness, had a prolonged labour and died from a ruptured uterus, an accident which Dr. Harrison has also known to occur in a cheetah. The other twin—a lion—was for many years an ornament to the Gardens, and died from "senile decay," but in his youth he suffered from an ingrowing toe-nail, which caused him so much suffering that its removal was necessitated. Chloroform is badly taken by these larger carnivora,

according to Dr. Harrison, causing much excitement and struggling, and other expedients had to be devised. Ultimately he was coaxed into a smaller travelling cage, and from that he was dislodged into a strong box just large enough to contain him, and, after he was in, in order to diminish his struggling space, large pieces of wood were pushed in to occupy any interstices. After violent struggles, which often caused a prudent retreat on the part of spectators, the lion incautiously put his paw through a hole which had been left in the front of the cage. The ingrowing nail was seized with carpenter's pincers, and the patient and the surgeon between them managed to induce the paw to part company with the nail. Immediately the operation was over the lion gave no trouble, and appeared to be as sensible of his surgeon's skill as was the lion of Androcles. Dr. Harrison, like many competent observers, throws great doubt on the theory that the snake "fascinates" his victims. He quotes instances where pigeons and even timid rabbits remained in the cage for several days, the python treating them in a kind and friendly way and caressing them, and then, as soon as time had sufficiently sharpened his appetite, killing his prey in a sudden and treacherous fashion. Regarding the fasting of snakes after gorging their prey he has some interesting observations. Seven or eight months of voluntary fasting have been observed, and one python who ultimately died is said to have lived for eighteen months without taking food, a record that no "fasting man" is ever likely to break.

DEATHS UNDER ANÆSTHETICS.

WE are indebted to the senior house surgeon for a careful account of a recent death under chloroform which took place at the Bristol Royal Infirmary on Jan. 14th. The patient, a woman aged fifty-five, suffering from trismus caused by a carious wisdom tooth, sought for relief and was admitted into the infirmary. On the 14th she was given chloroform after careful examination of her chest. The emphysema of the apices and borders of the lungs and dilatation of the tricuspid orifice revealed by the necropsy were apparently not sufficient to give clinical evidence, as we are told there was nothing abnormal about the chest. Chloroform was the selected anæsthetic, as it was believed nitrous oxide gas or ether would not have overcome the muscular spasm (trismus). Skinner's mask was used. The struggling stage, although violent, was not prolonged, and during it the chloroform was given with due caution. Anæsthesia was induced in four minutes, about three drachms of the anæsthetic having been used. At this time the corneal reflex was absent and the pupils were moderately contracted, the respiration and pulse being normal. The patient was then wheeled into the operating theatre, the transit occupying a few seconds. She was lifted on to the operating table, and respiration was then noticed to have ceased. At this moment slight cyanosis of the face was seen and the radial pulse was observed to be absent. The head and shoulders were pulled over the end of the table, the mouth opened, and the tongue pulled out with forceps, while artificial respiration was practised. The method of cardiac stimulation dependent upon rapid percussion over the heart area was also tried, and as these means failed electrical excitation of the heart was attempted, and finally acupuncture of that viscous was employed. The usual stimulants, nitrite of amyl and enemata, were also called into requisition, but no recovery took place. This unfortunate occurrence seems very difficult of explanation unless we regard it as a paralysis of the medullary centres through what was, not ordinarily speaking, an overdose of the chloroform. Moderately contracted pupils, with soft normal breathing, are hardly consonant with an excessive intake or a retarded output of chloroform. We are acquainted with an almost identical

case which occurred some years ago at a London hospital. The patient was apparently lightly anæsthetised by chloroform, and upon being lifted from the trolley-couch on to the operating-table died at once. In that case it was believed that the movement, acting upon an incompletely anæsthetised person, had in some inexplicable manner initiated an inhibitory impulse to the heart. This explanation may or may not have much weight—at all events, a patient is probably seldom so imperfectly anæsthetised as to be a likely victim to such a state of affairs. We reported a recent death at the Middlesex Hospital which took place from the A.C.E. mixture. We have now been favoured with a further account of the occurrence and place it before our readers. The patient, it will be remembered, was to have been operated upon for suppurating glands in the neck. He was a muscular man of intemperate habits and was admitted into hospital the night before the operation was to have taken place. On Jan. 3rd he was given some freshly prepared A.C.E. mixture from "the ordinary flannel-inhaler" (Skinner's mask). He struggled very violently and had to be restrained. To overcome this a "little chloroform" was sprinkled upon the inhaler and the struggling passed off. The muscular rigidity became less marked in two minutes, the A.C.E. mixture being again given. "A little later" the breathing became shallow and the pupils dilated. The face then became pale and the pulse could not be felt. Respiration then ceased and cyanosis appeared. The usual restorative measures proved abortive. The necropsy showed a dilated right ventricle with fatty infiltration of the myocardium. The left heart was also dilated and fibrotic, the lungs were emphysematous, and the other viscera and brain were congested.

THE WIGAN BOARD OF GUARDIANS AND OUT-DOOR RELIEF.

IN an annotation which appeared in the last issue of THE LANCET we referred to this board in reference to their medical officer's salary, a few of the guardians being anxious to save the rates by attacking his salary. At their last meeting the Local Government Board found fault in respect to their out-door relief, which we mentioned was excessive. Mr. Jenner-Fast, the inspector, apparently did not agree with the medical officer's salary being attacked, but pointed out that the number of cases on the relieving officer's books could not possibly be visited and efficiently inquired into. Medical relief was generally the thin edge of the wedge, and every case should be visited. About £12,000 a year was the amount of out-door relief paid in the Wigan Union. He suggested that additional relieving officers should be appointed in one district of the union alone (Orrell). He found the acreage was 20,038, the population 24,000, and 661 cases on the books; while the total amount paid in out-door relief for the half-year ending last Lady Day was £2128. The Local Government Board believe that 200 cases on a relieving officer's books are quite enough for one officer to look after properly; but he found in No. 1 district 715 cases, in No. 2 district 1000 cases, in No. 3 district 987 cases, in No. 4 district 252 cases, and in No. 5 district 645 cases. Now it is evident either that these numbers cannot be efficiently attended to or that the Local Government Board is wrong as to its estimate. If this newly elected board of guardians wishes to put its house in order and save the rates it will first appoint an efficient staff of relieving officers, for the inspector stated that "he felt sure that many applications for relief were granted which, if thoroughly looked into, would be found to be cases which could manage for themselves, and he could not see that the circumstances of the Wigan Union were so completely different from all the other unions as to necessitate an amount of out-door relief which

was ten times as large as that of most unions." Is it to be wondered at, therefore, that the medical officer's extras are more than in other districts? But before altering the terms on which an officer has been appointed it would be well for the guardians to attack the bigger and graver question. Some guardians, we know, would prefer to underpay their officers and give relief indiscriminately, but such a proceeding is not to be encouraged, for, although it is right and proper to relieve poor and needy persons efficiently, yet there is the moral responsibility not to manufacture permanent paupers. If more relief were given to the needy and less to those who have no title or right to it the rates would be saved and thriftless impostures would disappear.

DIPHTHERIA IN LONDON.

THE Registrar-General is able to record that last week's mortality from diphtheria in London was below the corrected average for the corresponding week of the preceding ten years. True, the deaths were but one below that average, but even so it is pleasing to find them on that side. The deaths registered were 29 in number, a progressive fall from 50 in the week ended Jan. 5th. Of the total, 26 were of persons aged from one to twenty years and 18 were of infants in the first quinquennium of life. Six belonged to Islington, 6 to Poplar, and 2 each to Mile-end Old Town, St. George Southwark, and Greenwich sanitary areas. In Greater London there were 15 deaths, 8 of which occurred in West Ham and 2 each in Croydon and Epping districts.

AN APPEAL FOR A MEDICAL MISSIONARY.

THE Secretary of the Archbishop's Mission to the Assyrian Christians sends us a note on the need of a medical man in this work. Hitherto the Mission has had to depend for medical assistance upon Dr. Cochrane of the American Presbyterian Mission, who has always willingly afforded help. If any young medical man possessed of good health desires a field of interesting work, both from a medical and an ecclesiastical point of view, here is a chance for him. His outfit (in reason) and the expenses of his journey would be paid for him, and all drugs, instruments, &c., would be supplied and would be the property of the Mission. His salary would be £25 a year with board and lodging. This is not, it is true, a large scale of payment, but it is more than most house surgeons receive in London. The Mission field lies on the borders of Turkey and Persia, the climate is pleasant, and a good horse can be bought for £10. The "practice" would include ordinary diseases with sundry local fevers, a good deal of eye work, and general surgery, with a possibility now and then of some military surgery owing to difficulties with the Kurds. Further information can be obtained from Rev. R. M. Blakiston, 7, Dean's-yard, Westminster.

THE MEDICAL DEFENCE UNION.

THE report of the Medical Defence Union for 1894, of which we have been favoured with an early copy, shows that this Union continues to grow in numbers and in usefulness. The somewhat disturbing incidents of the year which led to litigation are fully and frankly detailed in the report and in no degree lessen our sense of the efficiency of the Union for the great purposes which it was created to serve. A schedule of a few (about eighty, not itself a small number) of the cases and applications dealt with by the council in the year illustrates its great value in protecting medical men from unjust attacks, in guiding them in circumstances of perplexity, in averting lawsuits, in reporting to the medical corporations or the General Medical Council cases of unprofessional conduct, in advising in a kindly spirit members who are pursuing wrong methods of practice, in promoting prosecution in fit cases &c., in taking action where members

are attacked unjustly and bringing it to a successful issue, &c. The number of members of the union advances by leaps and bounds; they have risen from 2924 in 1893 to 3358 in 1894, and the guarantee fund has increased from £4150 to £5032. All the work, including the legal expenses of the last year, has been carried out without trenching on the reserve fund. One significant remark in the report is that "blackmailing" cases become less every year, and that in every case brought before the union the prompt action of the council in directing its solicitor to accept service of the threatened writ on behalf of the member has prevented its issue and stopped further proceedings. Mr. Victor Horsley, the President, has attended forty out of forty-two meetings, and displays as much interest in them as if he were the most general and assailed practitioner in the profession. We congratulate him and his staff on the thoroughly satisfactory report of the year.

PUBLICANS AND DEAD BODIES.

A CASE of considerable importance in view of the disposal of dead bodies was heard at the county court of Birmingham on Jan. 23rd, before Mr. John Amphlett, deputy judge. The action was taken by a publican to recover £15 damages from a police sergeant for the annoyance, expense, and loss of business occasioned through the dead body of a woman being deposited in the club-room of the public-house without plaintiff's permission. It appeared that on Saturday, Aug. 8th, 1894, a woman was taken ill outside the plaintiff's house. Plaintiff took her in, gave her brandy, and sent for a medical man; the woman, however, died, and plaintiff had her decently laid out in an outhouse. A police constable was satisfied with the arrangements, but the defendant when he appeared insisted upon the body being taken into the house, and in spite of plaintiff's protest it was carried into the clubroom, where much annoyance was caused. It seems that if there is no public mortuary the responsible person is the churchwarden of the district, upon whom devolves the duty of finding a suitable and decent place for the body. Evidence was given to substantiate the claim, and a verdict for the full amount was given. The power of the police to insist upon a publican finding room for dead bodies is therefore unsupported by legal authority, an action for trespass being the liable outcome of such decision. It also points to the desirability of properly appointed public mortuaries, a consideration for the reflection of the new county councils in the interests of the community. A popular fallacy is dispelled by this judgment and the law made clear and intelligible.

DR. JAMESON ON SOUTH AFRICA.

ON Monday evening, Jan. 28th, Dr. L. S. Jameson, C.B., Administrator of the British Chartered Company's Territories in South Africa, delivered an address before an audience of nearly 2500 people in the great hall of the Imperial Institute. H.R.H. the Prince of Wales presided, and many distinguished persons, representing art, science, the learned professions, and commerce, were present. The past, present, and future of South Africa constituted the subject of Dr. Jameson's address, and with a somewhat nervous though deliberate delivery he briefly sketched the rise and progress of our new South African territory. Starting from a period something more than 300 years ago, when some of the best families of France and Holland were compelled to emigrate and settle down on a narrow strip of land between Table Mountain and the sea, the lecturer traced the history of the colony to the time when the Cape of Good Hope was transferred to the English Crown. From that time to the present Dr. Jameson drew a brief and vivid picture, detailing our troubles with the Boers and the Zulus. In glowing colours he then put before his

audience Rhodesia as it is and its capabilities, expressing his belief that that territory has and will have the greatest effect in producing the future of South Africa—a future which he wished to interpret as the commercial union, amalgamation, and federation of the South African States. Rhodesia, the lecturer said, is a country nearly as large as Europe, a country where white men and women can live and where their children can be reared in health. In minerals and in the products of agriculture the country is rich, and railways, roads, and telegraphs are rapidly opening it up. The picture drawn by Dr. Jameson was of a land veritably flowing with milk and honey, and even if some allowance is made for his high eulogies, still what the lecturer desired to prove seems undeniable—namely, that in our African territory there we have magnificent accommodation for our overflow population.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

We publish this week the report of the Director of the British Institute of Preventive Medicine. In this is included the reports of the medical superintendents of certain of the fever hospitals under the management of the Metropolitan Asylums Board upon the results of the antitoxin treatment of diphtheria at their several institutions. We have from the beginning felt that so important a departure in treatment, with such high claims and excellent introductions, ought not to be judged lightly or speedily, and that all judgment should be based upon clinical records of series of cases undertaken under special and highly tested conditions. The reporting of isolated cases can, we consider, only be useful when such cases are properly collated for purposes of comparison, and when all the data necessary for making fair comparison are forthcoming.

PRESCRIBING CHEMISTS.

THE question whether it is not only legal but desirable that a person with no medical qualification should prescribe for a patient of whom he knows nothing was forcibly illustrated by a case which came before the St. Pancras Coroner's Court on Jan. 22nd, a brief account of which we give as reported by the *Times*. James Jefferies, aged fifty-eight years, having complained of severe internal pain, his daughter-in-law went to a chemist's and brought back an eight-ounce bottle labeled "The mixture; one tablespoonful to be taken every hour if needful.—J. B. Johnston, 218, Kentish-town-road." The sufferer took a dose at once and was relieved, but at 3 A.M., being again in pain, he took another dose and died. Dr. Sanctuary stated that on making a post-mortem examination he found a large aortic aneurysm which had caused death by pressure on the trachea. In this particular case the action of the chemist probably in no way accelerated the patient's death; but the difficulty of the responsibility of the unqualified prescriber still remains. The poorer classes make no distinction between a "doctor" and a "chemist." They are both people from whom you can get "a bottle" at eightpence or a "pink powder" for twopence. To be perfectly just to an intelligent and upright body of men, it is fair to say that deaths can but rarely be traced to the action of any drug supplied by a chemist. The danger lies in the disease not being recognised, and as long as those responsible for the sick are content to seek the services of an unqualified authority, we fail to see how the law can protect them against themselves except by making it illegal for any chemist to supply any remedy without the authorisation of a duly qualified practitioner. Questioned as to whether the medicine the man had taken had anything to do with the death, the witness replied that he could not say, but that no medical man would have prescribed such a mixture for a patient suffering from

disease of the heart and kidneys, as was the deceased. The chemist here remarked that the mixture contained a small quantity of chlorodyne and sal volatile. On the coroner calling his attention to the fact that he had offended against the Pharmaceutical Act the following conversation ensued:—

"The Chemist: It is a difficult thing to be a chemist at the present day. All chemists ought to be doctors, it seems to me. You have to say how people are to take their breakfasts, dinners, teas, and suppers, and how to use every half-pennyworth of stuff you sell.—The Coroner: But you know that by prescribing poisons you are committing an illegal act, for which you can be punished, and it is my duty to tell you so. I know your difficulties, and no doubt you think it hard that when a person comes to you late at night you are not allowed to serve him, but I must tell you that you run a great risk if you prescribe poisons.—The Chemist: I do not prescribe for people as a rule, and it is impossible for a chemist to say whether a person is suffering from heart disease.—The Coroner: But chemists must not act in the dark. You know it is beyond the province of a chemist to prescribe poisons.—The Chemist: Then medical men should not do their own dispensing. It seems an anomaly, because the Government allows me to sell as much chlorodyne as I like provided the bottle bears a stamp."

THE PROHIBITIVE PRICE OF ABSOLUTE ALCOHOL.

THERE are few agents at the present time which play a more important or useful rôle in practical scientific operations than absolute alcohol. Indeed, its use is indispensable in the prosecution of chemical, bacteriological, and physiological researches, to say nothing of the necessity of its employment in the preparation of the fluids used in sero-therapeutics. Yet all who are actively concerned in these important lines of research are severely handicapped because of its excessive price, very nearly the whole of which accrues to the Excise. On the Continent the retail price of absolute alcohol is considerably less than that charged in this country, and there is little doubt that this is one of the sources of the increased facilities in research work which obtain there; at any rate, its cost here militates against such progressive work. Surely in the interests of science and progress the authorities could be induced to grant a special concession in this matter to *bona-fide* research workers and to those engaged in unravelling the mysteries of disease. Why should not a memorial be drawn up and signed by influential members of the various scientific societies and presented in the proper quarter? We feel sure that our remarks will appeal to the majority of the members of the scientific professions.

THE DIFFUSION OF SMALL-POX.

THE number of fresh cases of small-pox notified in London last week was 7 and the admissions to the institutions of the Metropolitan Asylums Board 8, against 8, 8, and 6 respectively in the preceding three weeks. The end of the week found 35 patients in hospital, an increase of 3 on the previous Saturday. The disease does not obtain any great hold on the metropolis, nor is it completely shaken off. Mr. Wynter Blyth relates small-pox has been successfully combated under inauspicious circumstances in Marylebone last month. Four virulent cases were removed from premises the ground-floor of which was used as a small general shop. Prompt removal of the patients and closure of the shop under payment made to the tradesman have resulted in staying the disease. This instance is in striking contrast to the case which led to such disaster a few months ago in the same parish. In the provinces the news is generally of a reassuring nature. We are glad to see that despite its two registered deaths Birmingham had only some half-dozen fresh attacks; whilst Liverpool with the same number of deaths registered had only some dozen cases coming newly to light. Lancashire was otherwise fairly free.

from the disease. In Edinburgh, in the third week of January, 7 cases of small-pox were reported and 2 deaths were registered; whilst in Dublin in the same period the admissions to hospital were 61, as compared with 32 71; and 78 in the preceding three weeks, the last number having been erroneously stated in the weekly return as 83 and the corresponding number of patients under treatment having been stated to be 10 in excess of the actual number. Of the 10 deaths registered in Dublin in the week in question 5 were of vaccinated persons—1 an infant nine days of age, and the rest adults—and 4 of unvaccinated adults, the facts as to the remaining fatal case not being known. On the morning of Sunday, Jan. 20th, 310 patients were in hospital (of whom 134 were convalescents at Kilmainham), a fall from 335 a week earlier. The disease seems to be spreading in Ireland, news coming of its presence at Newry, Longford, Drogheda, Geray, and other places.

MEDICAL EVIDENCE AT INQUESTS.

ON Jan. 11th a man shot himself through the head with a revolver in the kitchen of his house in Wigan. He had returned home on that day, after an absence of some months, only half an hour before committing the fatal act. A medical man who was summoned and who arrived probably within thirty minutes of the shot being fired, found that he was already dead and that there were, in fact, signs of rigor mortis of the muscles of the jaw. The only wound was situated two inches behind the right ear and two inches below the parietal eminence. At the inquest, which was held on Jan. 14th, this gentleman was not called on to give evidence. Our ordinary sense of the fitness of things requires that a medical man should be referred to in cases involving injury or death, yet in this instance the coroner took upon himself to have the lesions described by a police constable. The family medical attendant was present and deposed to the deceased having had delirium tremens last year. It is unquestionable that the condition and surroundings of the deceased ought to have been described to the Court by the medical man who noted them shortly after the tragic occurrence.

A LEAD PENCIL IMPACTED IN THE AXILLA MISTAKEN FOR FRACTURE OF THE CLAVICLE

DR. SINCLAIR TONSEY in the *New York Medical Journal* describes the removal of a lead pencil four inches long which had been mistaken for six weeks for a necrotic fragment of the clavicle. The patient came to hospital (Roosevelt) presenting a sinus in the axilla and one below the middle of the clavicle, while a probe introduced into either sinus encountered a hard rough surface suggestive of necrosed bone. He stated that six weeks previously he had fallen and hurt his shoulder very badly, and that he had been attended immediately by two physicians, who said that his collar-bone was broken and applied suitable bandages. In the course of the next four weeks a very large swelling formed below the clavicle and another in the axilla. After examinations at a number of hospitals he was admitted as a ward patient in one of the largest hospitals in New York. There the two abscesses were incised, but it was decided not to attempt to remove the necrotic fragment until a later date. Ten days afterwards he was brought to the Roosevelt Hospital for treatment. Dr. Tonsey found that the hard fragment was freely movable when pushed upon by the probe, and also that pressure in the axilla was transmitted to the hard fragment below the clavicle. It was then perfectly clear that some kind of a spike had been driven into the axilla and had broken off, after penetrating so far that its point could be felt below the middle of the clavicle. The sinus below the clavicle was enlarged and the

lead pencil withdrawn, to the astonishment of the patient and his friends. The entrance of the pencil is easily explained; the boy had climbed a lamp post to light his bicycle lamp, and his feet slipped off the ornamental ledge which passes horizontally around the post about four feet from the ground. As he fell a lead pencil in his waistcoat pocket caught on this ledge and was driven into the axilla and broken off out of sight.

THE LINK SHELL TRUSS.

WE have again to warn our readers that advertisements in respect of this truss are being issued in which, as we said in our notice on Nov. 24th, 1894, our comments have been incorrectly quoted, and additions made thereto not warranted by those comments. We also call attention to the letter of apology from the maker of the truss printed by us on Nov. 24th, 1894. We cannot sufficiently express our indignation at the use made of our comments.

ENGLISH AND AMERICAN LIFE ASSURANCE.

AN interesting paper on Some Points of Difference between Life Assurance Medicine in America and in England was read before the Life Assurance Medical Officers' Association on Wednesday last by Dr. Glover Lyon. The paper was based upon a visit to New York, and brought out in strong contrast the various points wherein the methods of American life assurance offices differ from ours. One of the most striking features of life assurance in America is its colossal size: in the case of some offices nearly 500 medical reports are made every day. Speculation is an element less common in England than in America, and fraudulent attempts to obtain policies on bad lives are also more common in the less limited West. And not only does the material differ, but the method employed regarding the selection of lives widely differs in the two countries. The medical directors in America are usually dependent, or almost entirely dependent, upon their salaries, and they cannot be directors of more than one company. Thus they are at the mercy of the executive for their livelihood, and their opinion is not, as in England, unfettered. Large salaries are offered by American offices to encourage attention to special points in life assurance; but the medical officer has not the same facilities for keeping in touch with his profession as his English brother, who invariably combines with his official duties the labours of a private practice. In America, again, policies are more readily granted than in England, litigation frequently follows, and sometimes ends in the discomfiture of the medical officer who recommended the acceptance of the risk. The gist of Dr. Glover Lyon's interesting paper was to show that on the whole the methods adopted in England compare favourably with those in America; but, as a rebuff to any patriotic "swagger" on our behalf, he urged strongly that something should be done by our medical officers to make the forms in general use in the various offices more uniform.

AT the last preliminary meeting of the University Court of the University of Wales, held at Shrewsbury on Jan. 25th, Lord Aberdare was unanimously elected, subject to the approval of the Crown, the first Chancellor of the University. Dr. Isambard Owen was elected Senior Deputy Chancellor and Mr. A. C. Humphreys-Owen, M.P., Junior Deputy Chancellor.

DR. JOHN FRASER, Deputy Commissioner in Lunacy for Scotland, has been appointed a Commissioner in the room of Sir Arthur Mitchell, K.C.B., whose retirement we recently notified; and Dr. John Francis Sutherland, medical officer to Glasgow prison, has been appointed Deputy Commissioner in the room of Dr. John Fraser.

THE next meeting, on Tuesday, Feb. 5th, of the Pathological Society of London will be devoted to a discussion upon Pneumococci, with relation especially to Immunity. Dr. Washbourn will open the discussion; Dr. A. E. Wright will contribute some notes on the bacteriology and pathological chemistry of pneumonia; and several members have already promised to take part in the debate. A series of microscopical slides of the various appearances of pneumococci, under different conditions, will be shown.

THE degree of Doctor of Medicine in the University of Oxford was conferred on Tuesday last, by decree of Convocation, upon Professor J. S. Burdon Sanderson, F.R.S., Regius Professor of Medicine in the University of Oxford. On the same day Dr. T. Clifford Allbutt, F.R.S., Professor of Medicine in the University of Cambridge, was elected a member of the General Board of Studies in that University.

THE Duke of Cambridge will preside at the Biennial Festival of the National Hospital for the Paralysed and Epileptic, Queen-square, to take place at the Hôtel Métropole, on April 2nd.

WE may again remind our readers that the Hunterian Oration at the Royal College of Surgeons of England will be delivered on Feb. 14th, at the College, by the President, Mr. J. W. Hulke, F.R.S.

THE library of the Royal College of Surgeons of England will be closed on Feb. 13th, 14th, and 15th on account of the Hunterian Festival.

NEXT Friday evening, Feb. 8th, an address will be delivered at the Royal Institution by Dr. G. Sims Woodhead on the Antitoxin Serum Treatment of Diphtheria.

THE Royal Commission on the opium question began its final sittings on Wednesday, Jan. 23rd.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

THE REPORT OF THE DIRECTOR.

DURING the last three months the preparation of horses for the "antitoxic" serum has been proceeded with. Twenty-one horses are now under treatment, and all of them, three excepted, are now ready for bleeding. Their serum is of such strength that 0.0001 c.c. mixed with a quantity of toxine fatal to a guinea pig in twenty-four hours will prevent the occurrence of any symptoms. Dr. Bertram Hunt has now taken charge of the diphtheria cultures and the preparation of the serum, and the laboratory at the Institute's farm is now ready and in working order. The greatest difficulty we have had to contend with was the obtaining of an absolutely aseptic serum. During the necessary manipulations it is almost impossible not to expose the serum for a short time to unfiltered air. In order to avoid all risks a special room is now being fitted up at the farm, which will be specially devoted to all the necessary manipulations. Experiments on the concentration of the curative substance in the serum have been in progress. Mr. Nolan and I have been able to concentrate the serum to perfect dryness without its losing any of its properties. The dried serum can then be re-dissolved in a very small quantity of

distilled and sterilised water. We are also at work on the isolation of the curative substance.

The Metropolitan Asylums Board have been using the serum in the hospitals under their control. The results have been satisfactory.

Thus Dr. Matthews, medical superintendent of the Fountain Hospital, Grove-road, Lower Tooting, S.W., writes:—

"1. Cases of diphtheria admitted during October and November, 1894, not treated by antitoxin: Number of cases, 123; number of deaths 33; mortality per cent., 30.8.

"2. Cases treated during December-January with antitoxin: Number of cases, 61; number of deaths, 10; mortality per cent., 16.3.

"In these 61 cases all clinically diphtheria, diphtheria bacilli were found in 55; the 10 deaths occurred out of this number, giving therefore a death-rate of 18.1 per cent. in cases where bacteriological confirmation was present. But for the purpose of comparison the clinical and not the bacteriological diagnosis must be taken, inasmuch as the latter method was not used in the first group of 123 cases. The mortality amongst the cases treated with antitoxin shows a very striking reduction and has produced a strong impression in its favour upon my mind. Its ultimate value has doubtless yet to be fixed, but I feel no doubt that in it we possess an agent of great value in the treatment of diphtheria. With regard to after-effects, rashes with pyrexia were observed in some cases, but no serious or lasting ill-effects. The patients to whom the treatment was applied, were almost exclusively children of ten years and under. But this limitation would not have been made had our supply of antitoxin been sufficient for patients of all ages. In thanking you for your great courtesy in supplying me with material, I beg to express my sense of the services rendered to the cause of suffering humanity in this country by the enterprise of the British Institute of Preventive Medicine."

Dr. MacCombie, medical superintendent of the South-Eastern Fever Hospital, Hatfield-street, New Cross, S.E., states that

"Since November last, when he first began to treat diphtheria cases by antitoxin serum, 102 cases of diphtheria have been admitted and 51 have died; calculated on admissions and deaths, the mortality amounts to 14.7 per cent. From Jan. 1st, 1894, to Nov. 26th, 1894, his average diphtheria mortality was 25.6 per cent. It varied in different months, the highest being 38 per cent., and the lowest 23.0 per cent. in August. Dr. MacCombie does not feel justified in expressing an opinion as to the value of the treatment, but he is favourably impressed with its apparently beneficial action in cases in which the treatment begins before the fourth day of illness. He also draws attention to the unpleasant effects which, in his opinion, sometimes accompany the use of the remedy."

Dr. Gayton, medical superintendent of the North-Western Fever Hospital, Haverstock-hill, N.W.,

"Has treated 43 cases in which the presence of the diphtheria bacillus had been demonstrated; 2 died—mortality 4.6 per cent. Of these cases 1 was under one year of age, 22 were from one to five years old, 11 were from five to ten years old, and 9 were ten years old or upwards."

Dr. Caiger, the medical superintendent of the South-Western Fever Hospital, Stockwell, S.W., writes as follows:

"Owing to the facilities which you have been good enough to provide, I have been enabled to treat all severe cases of diphtheria admitted into this hospital with antitoxin for the past two months. I am pleased to be able to state my conviction that its use has been attended with most satisfactory results—results which my experience justifies me in asserting could not have been expected with previous methods of treatment. Not only does the reduction in mortality imply the saving of a considerable number of lives, but the treatment, if commenced at a sufficiently early date, is successful in warding off the necessity for tracheotomy, and thus, by averting suffocation, effects a reduction of the pain and terrors of a most distressing disease; while the painlessness of the treatment and the absence of any serious after-effects is to my mind as striking as the success of the remedy itself. Although, to ensure a favourable result in grave attacks of the disease, it is of the first importance that the patient should be brought under treatment at an early date, if possible not later than the third day, in a certain number of cases the most marked benefit has followed when the inoculations have not been commenced until two or three days later. It is my intention, when the number of serum-treated cases has become somewhat larger, to bring the results obtained at this hospital before the medical profession, and I desire to express my indebtedness to the Council for affording me the opportunity of using the serum at such an early date."

Mr. Bruce, medical superintendent of the Western Fever Hospital, Fulham, S.W., writes:—

"The number of cases treated with antitoxin at this hospital is comparatively small on which to base a conclusion as to the efficacy of the remedy. The results, judged from a clinical standpoint, have, however, so far been extremely favourable—sufficiently so, I think, to justify me in expressing a very high opinion of the value of the remedy in the treatment of diphtheria. The statistical evidence furnished herewith points to a like conclusion:—

¹ Too much importance is not to be attached to these statistics, as Dr. Gayton informs me that out of these 43 cases, 7 only were really severe.—M. A. K.

The Cases of Diphtheria treated at the Western Fever Hospital with Antitoxin.²

TABLE I. (A).—From Nov. 26th, 1894, to Jan. 25th, 1895.

Age Periods.	Admissions.	Deaths.	Type of Disease.			Complications.	
			Severe.	Moderate.	Mild.	Rashes.	Arthritis.
0 to 5 years	40	5	15	18	7	10	1
5 to 10 years	22	5	13	7	2	6	1
10 to 15 years	4	—	2	2	—	3	2
Upwards	2	—	2	—	—	1	—
Total	68	10	32	27	9	20	4

TABLE I. (B).—Day of Disease on Admission (according to Statement of Friends).

Day of disease.	Number of admissions.	Number of deaths.
First day	5	—
Second day	12	1
Third day	23	3
Fourth day	15	4
Fifth day	9	—
Later	3	2
Indefinite	1	—
Total	63	10

TABLE II.—Case Mortality from Diphtheria at the Western Fever Hospital.

Year.	Admissions.	Deaths.	Percentage of Mortality.
1891	141	54	38·3
1892	247	78	31·5
1893	256	94	36·7
1894 (to Nov. 26th)	507	176	34·7
Total	1151	402	Average = 34·9.

TABLE III.—Admissions &c. from Nov. 26th, 1893, to Jan. 25th, 1894, being the corresponding period of last year when no antitoxin was employed.

Age Periods.	Admissions.	Deaths.	Percentage.
0 to 5 years	20	12	60
5 to 10 years	21	6	28·57
10 to 15 years	7	—	—
And upwards	10	1	10
Total	58	19	32·85

Ten of these cases were complicated by laryngitis, with six deaths. Tracheotomy was performed in five cases, with one recovery, and intubation in one case, which was fatal.

It will be seen from these reports that, whereas during the time that the antitoxin treatment was being used at Homerton the mortality in the other hospitals of the Metropolitan Asylums Board remained practically the same, the mortality in all these hospitals at once fell when the antitoxin treatment was begun in them. Dr. Gayton's mortality of 4·6 per cent. in 43 cases of diphtheria in which the diagnosis had been established by bacteriological examination is, as far as I know, the lowest mortality on record.

M. ARMAND RUFFER, Director.

ABSTRACT OF REPORT OF BACTERIOLOGICAL DEPARTMENT BY DR. ALLAN MACFADYEN.

During the past year there were twenty-five workers in the laboratories. Amongst the students were medical men from Russia, Africa, India, Australia, New Zealand, and Canada.

² In all these cases the diagnosis was confirmed by bacteriological examination. Four are still in a critical condition.

The numbers have increased this year, there being at the present moment twenty students at work. An evening-class in bacteriology has been started and is well attended. The increase in work has necessitated the appointment of an assistant bacteriologist. Dr. R. T. Hewlett has already entered on the duties of the post.

A gratifying feature is the increase in the number of those engaged in original investigations. In 1894 six researches were commenced and completed. At present five gentlemen are engaged upon various investigations under the supervision of Dr. Macfadyen.

Dr. Hewlett is continuing the preparation of the tetanus antitoxin and is assisting Dr. Macfadyen in his investigations.

Dr. Macfadyen has, with the assistance of Dr. Hewlett, prepared mallein and tuberculin. These substances will be immediately tested upon animals, and there will soon be an adequate supply for the use of members of the veterinary profession.

The preparation of the toxines of erysipelas has also been undertaken. When ready the action of these toxines will be tested in cases of sarcoma.

An inquiry is being made for the county council of Derbyshire with regard to a supposed outbreak of hydrophobia.

Mr. Barnard has undertaken to give instruction in microphotography to the students in the laboratory, and it is believed that this will prove a valuable addition to the teaching resources.

ADDENDUM.

The following arrangements have been made with regard to the sale of the curative serum for diphtheria and tetanus and the bacteriological examination of cases of diphtheria or suspected diphtheria.

1. The serum may be obtained by any registered medical practitioner on application to the Director of the Institute, 101, Great Russell-street, London, W.C., or to Messrs. Allen and Hanburys, Plough-court, Lombard-street, London, E.C.

2. The price of the serum is fixed for the present at 1s. 6d. for 30 c.c., but it is to be distinctly understood that the serum is for the use of the United Kingdom and Colonies only. Under no circumstances whatever is it to be sent to other countries.

3. In order to facilitate the bacteriological examination of suspected case of diphtheria, a special sterilised box for the transmission of membrane will be sent to any medical man on receipt of one shilling in stamps. The fee for examination of the membrane will be 2s. 6d. Several cases having occurred in which apparently virulent bacilli have been found in patients who were to all appearances perfectly recovered from an attack of diphtheria, whenever the bacillus has been isolated, the examination will be repeated every fortnight without extra charge until the patient has been found to be free from diphtheria bacilli.

4. The institute possess a horse immunised against tetanus and are ready to supply a certain amount of tetanus antitoxin. The price of this will be 2s. 6d. for 1 gramme of dried serum, or 2s. for 10 c.c. of liquid serum. The supply is limited to the United Kingdom and the colonies, and none is to be sent to foreign countries under any circumstances whatever.

SMALL-POX IN DERBYSHIRE IN 1893.

DR. SIDNEY BARWISE, the medical officer of Derbyshire, has in his report on the county for 1893 brought out with admirable clearness the relations which small-pox bore in the county during that year to the vaccinated and unvaccinated communities which were invaded by the disease. As many as 1049 cases came to the knowledge of the local health officers in the administrative county, with ninety-three deaths, the disease having been largely spread by the agency of navvies working on the Dore and Chinley railway. Overcrowding prevailed, and the men wore each other's "overalls" while working, added to which they worked in night and day shifts after sleeping in the same beds. But what was even worse was the deplorable absence of hospital accommodation, temporary erections being in some instances prepared with all practicable speed, though, after all was done, only one-half of the total cases were isolated. And it was not for the want of money, since Dr. Barwise computes as a low figure the expenditure of £10,000 on the 1000 attacks in one and another way, such as loss of wages, isolation provision, and

the like. But, as he remarks, one cannot tell where the cost of an epidemic will end, the poor-rates often being saddled for years with the relief of the dependants of sufferers. Chesterfield with its ninety-six cases might have been freed from more than 80 per cent. of them had hospital accommodation been in actual readiness for the first cases. Other districts suffering heavy invasion were Newbold and Dunston, 178 cases; Chesterfield rural, 178 cases; and Ecclesall Bierlow rural, 222 cases. On the matter of influence of vaccination on the outbreak, Dr. Barwise is able to give data of his own as regards Whittington with its 135 cases and thirteen deaths down to March, 1894. Of 159 vaccinated persons in infected dwellings, aged under ten years, 6.9 per cent. were attacked and none died; of twenty-one unvaccinated in the same case and of similar ages, 71.4 were attacked and 23.8 per cent. died. In the two classes in the same order at ages over ten years the attack-rates were 35 and 100 per cent.; whilst the death-rates were 2.3 and 25 per cent. of the 300 and the four persons exposed to infection. True, the figures on which the results are based are small, but the rates are very startling, showing in an unmistakable manner the great need for vaccination, and equally for revaccination, looking to the almost complete immunity from attack of children once vaccinated and the complete immunity of those attacked from fatal illness. In the whole administrative county the deaths from small-pox were 8.9 per cent. of cases, and of 499 attacks concerning which the facts are known as to vaccination the per case mortality was 8.6 per cent., made up of 3.9 in the vaccinated and of 25 in the unvaccinated. Another point of interest is that 40 per cent. of the small-pox deaths were in children under five years of age, a figure which would seem to be taking us back to the early years of the century, when it was 90 per cent. of the total small-pox deaths. We must go back to a quinquennial period prior to the seventies for such a rate in England. The Derbyshire rate on children under five years of age in 1893 was twice that of England five years previously. Dr. Barwise sees in these data the result of the terrible laxity growing up over the county—and we may say country—in the matter of enforcement of the vaccination laws, and the figures certainly afford food for reflection on the part of professional agitators and of our legislators. We also commend them to the notice of the Vaccination Commission. Space does not enable us to dwell further on the point here, or to quote the interesting cases of malignancy of infection and of the protecting influence of vaccination to which Dr. Barwise refers. Such a report as this makes us wish that the printed reports of health officers were commonly available for the reading public, as by purchase or in other ways.

OYSTERS AND TYPHOID FEVER.

MUCH has appeared and is appearing in the daily press upon the subject of the possible communication of disease as a result of the consumption of oysters in a raw state. The President of the Local Government Board has instituted an inquiry into the circumstances under which the cultivation and storage of the bivalvular mollusc and other shell-fish around the coast are carried out as the result of a report from Dr. Thorne Thorne, the medical officer of the Board. The following is the report of a bacteriological investigation of water from an oyster bed and of oysters from the same source, made by Professor Crookshank, M.B., Director of the Bacteriological Laboratory, King's College, London:—

"This investigation was made at the request of Dr. Fuller of New Shoreham. The first sample of water, despatched by Dr. Fuller on Dec. 17th, consisted of sea water with a thick deposit of mud at the bottom of the vessel. The water and the deposit were separately examined. Experiments were made by special methods for detecting the presence of the bacillus of typhoid fever. The results were negative. Further experiments were made in order to isolate other bacteria present in the water and in the deposit, and to examine their exact nature. The colonies which developed in plate-cultivations were very numerous, and it was necessary to obtain a fresh sample of water and to repeat the experiments in order to obtain complete isolation of the individual colonies and to establish pure-cultivations of each species. The results obtained with the second sample will be referred to directly. There was no septic

odour in the plate-cultivations obtained from the first sample of water. The muddy sediment was examined by similar methods. There were no typhoid fever bacilli present, and the micro-organisms which were isolated and examined, both microscopically and in pure-cultures, were found to be well-known harmless bacteria. The majority of these colonies were the result of the multiplication of a harmless liquefying bacterium. On Dec. 20th three oysters were despatched by Dr. Fuller. The liquid of the oyster was mixed with liquefied gelatine and several plate-cultivations made. The number of colonies which developed was surprisingly small. The colonies were found to represent only five different species of bacteria. All of these were studied in the form of pure-cultivations, and were easily recognised as familiar and harmless species. The marked difference in the number of bacteria in the liquid of the oyster and in the water of the oyster bed suggests an interesting line of inquiry. The second sample of water, despatched on Jan. 11th, was so treated that the individual colonies would be completely separated even if the bacteria were found to be present in very considerable numbers. Nine separate experiments were made, and the average number of colonies which developed amounted to 50,000 in a cubic centimetre. The colonies consisted very largely of a non-liquefying and a liquefying bacterium. Other species were similarly isolated and studied in their microscopical and biological characters, and all were recognised as well known and harmless bacteria. There was no septic odour from the cultivations, and, in fact, the complete absence of foul-smelling or saprogenic bacteria was very striking; and in none of these experiments was the typhoid fever bacillus present. The number of bacteria, however, calls for some comment. The colonies were far in excess of those found in pure sea water, and a similar number, if found in drinking water, would raise a suspicion of sewage contamination unless a very considerable interval had elapsed between the time of taking the sample and its subsequent examination. The question therefore arises whether the excessive number of colonies in this particular sample of sea water indicates sewage contamination or is due to a want of cleanliness in the oyster bed and the presence of organic matter from other causes than sewage. The absence of septic and foul-smelling micro-organisms points to absence of sewage, unless sea water has a special action upon those micro-organisms which we expect to find wherever there is unquestionably mixture with sewage. The question of the presence or absence of such contamination can, however, be ascertained by further investigation and by local inquiry. The question which I have been asked is whether oysters from this particular bed are likely to be injurious to the consumer. From the bacteriological investigation of the samples of water and of oysters submitted for examination I am of opinion that there is no evidence, from the bacteriological examination, which would lead me to condemn the oysters as dangerous or unfit for food. I am led to this conclusion by the absence of typhoid fever bacilli and by the absence of any septic micro-organisms, and by the fact that all the micro-organisms which I succeeded in isolating were perfectly harmless species. I would venture to add, however, that more than a bacteriological investigation is required to relieve public anxiety upon the question of a possible danger arising from the consumption of uncooked oysters. The possibility of a constant or intermittent contamination of the oyster beds by sewage ought to be carefully inquired into. Any local evidence which justifies a suspicion of typhoid fever resulting from the consumption of oysters from a particular oyster bed ought to be carefully followed up. I am of opinion that the danger of the contamination of oysters with the specific cause of typhoid fever has been exaggerated, but I am equally convinced that it is quite possible that just as unboiled milk mixed with typhoid-infected water may distribute typhoid fever among the consumers, so also the liquid of uncooked oysters may be the means of conveying typhoid fever if water infected with typhoid fever is imprisoned between the valves of the oyster. The oyster may thus be the means of mechanically transferring typhoid bacilli to the mouth of the consumer, and the question then arises whether the bacillus has been derived from the sewage-fed oyster bed or from typhoid-infected water in the establishments in which the oysters are retailed. Here there is need for further and careful inquiry. Have there been groups of cases of typhoid fever traced to oysters distributed from some,

particular oyster bed, or have the cases been traced to any particular establishment or retail shop, so that suspicion may rest equally upon the water at the place of distribution to the consumer and upon the water of the oyster bed? I do not believe that either the cow or the oyster can elaborate typhoid fever from sewage, but it is quite possible that oysters may mechanically convey typhoid fever, just as milk mixed with infected water may be the medium for distributing this disease. In both cases it is more than probable that the danger is much exaggerated."

DINNER TO DR. JAMESON, C.B.

It was a happy thought which impelled some of the fellow-students of Dr. Leander Starr Jameson at University College to arrange for a dinner to him at which he would meet those amongst whom he worked in college and hospital, where for two years he held the position of resident medical officer. The dinner took place at the Whitehall Rooms on Thursday, Jan. 24th, and passed off with great *éclat*. The chair was occupied by Mr. Christopher Heath, senior surgeon to University College Hospital, having on his right the guest of the evening. Upwards of 120 sat down, many having come from long distances to be present on the occasion. Amongst those present were Sir J. Russell Reynolds, F.R.S., Sir J. E. Erichsen, F.R.S., Sir John Williams, Dr. Bastian, F.R.S., Dr. Gowers, F.R.S., Dr. F. T. Roberts, Dr. Poore, Mr. Tweedy, Mr. Bilton Pollard, Mr. S. J. Hutchinson, Dr. Bradford, F.R.S., Dr. Sidney Martin, Dr. Radcliffe Crocker, Dr. Corfield, Mr. Meredith, Mr. Quarry Silcock, Mr. A. J. Pepper, Dr. Dawson Williams, Dr. Sidney Coupland, Mr. Pearce Gould, Mr. Stanley Boyd, Mr. Buckston Browne, Dr. Campbell Pope, Dr. B. H. Allen (Hastings), Dr. Colgate (Eastbourne), and Mr. Farrell (Eastbourne). After the toast of the Queen had been duly honoured the Chairman in a brief speech proposed the health of Dr. Jameson, which was enthusiastically received.

Dr. JAMESON: Mr. Chairman and Gentlemen.—I thank you most heartily for this more than kind reception to-night. I need not say how gratifying it is to me that any work of mine should be considered worthy of such recognition from you, many of whom have been intimately associated with me during my early career. I need not say how honoured I feel at the presence here to-night, on my right hand and on my left, of those professors and teachers who, in my time as a student, more than twenty years ago, were even then the leading men at University College, then, and I believe still, one of the leading schools of medicine in the kingdom. It is a special gratification to me to have the honour of the presence of two of my old teachers who have been lately recognised by the Queen as leaders of the profession by special distinction of title. Gentlemen, it is more than seven years ago since I practically left the profession. I assure you it has often been to me, for many reasons, a regret that I have done so, and I shall always continue to feel a sense of regret. Yet it seems to me that I have rather drifted out of it than that I have deliberately left it. During the first year of the new work to which I turned I sometimes thought of going back to medical practice, but I soon found that the profession had also drifted away from me. Indeed, I began to wonder whether, in the first instance, it had not drifted away from me rather than I from it. I soon saw, from the rapid manner in which medical science was advancing, that if I attempted to resume it I should have to go to school again to become competent to treat patients. I felt that I should not have energy enough for that. Hence, by a natural consequence, as my work increased and my sphere became larger and of greater importance, my own interest in it increased also. So my old profession and I got further apart. I have gradually drifted from the medical man into the administrator, and yet, perhaps, after all it is more correct to say that the one has become merged into the other. I have always recognised that any capability I may have shown for my present work has been due in great measure to the experience I gained in the several resident posts I held in University College Hospital, and especially to the influence of the last two years, when in the time of some of the professors here to-night I held the much-coveted post of Resident Medical Officer. In those two years I learnt what I consider are the main

elements of success for anyone who attempts to govern or to administer. They are these two principles—first, never to promise anything you cannot undertake; secondly, to believe that one's own opinion is not the only opinion in the world, but that other people are worth listening to, and other opinions are worth considering. If these two principles are recognised in action, if they are thoroughly acted up to, I believe it will be found to be good for those who govern, good for the man who governs, and good for those to whom the administrator is responsible. I have thus to thank University College and University College Hospital for the groundwork of any success I may have had in my different sphere of work. I have also to thank University College Hospital for the memory of what I may truly say were the best years of my life. I remember the days when I secured a dressership under Mr. Erichsen, and only two days ago I met in the train my former house surgeon, Mr. Backston Browne. I wish, gentlemen, that I could go through those days again. Later on I was fortunate enough to secure the post of house physician in the hospital to Dr. Russell Reynolds, and still later a house surgeoncy to Mr. Marshall, when I had the supreme pleasure of beating my friend, Mr. Pepper. I can assure you that when I obtained this post I felt more gratification and was more proud of myself than I was last year when I arrived at Bulawayo. Although I had gone through a considerable amount of disagreeable work, and although the anxiety which preceded the success was very great, I think the examination for that house surgeoncy, and especially the horrible *viva-voce* part of it, gave me more anxiety than I experienced in all that campaign. Now, gentlemen, I will not trouble you with a digest of the downfall of Bulawayo or even of an outline of our Company's proceedings; but our Chairman mentioned the subject of what he was kind enough to call the "libel" on myself during our operations. If you will allow me, I should like to say a few words for myself on that subject. Our Chairman also said that this was not a political meeting; I hope sincerely that it is not. But when a friend of mine—one of our secretaries—this evening told me that you intended to give me a dinner, I felt that I did wish one thing. Whatever the country may think of the methods of our procedure in Matabeleland, I am anxious that the members of the profession to which I have the honour to belong should understand the origin of what took place. I myself, previous to our troubles last year, always hoped that the Matabele question would be settled without having recourse to force. I knew that Lobengula had always said he would never fight with the "white men," and I believed that he had absolute control over his Indunas. I, therefore, believed that we should come through all our difficulties without any conflict. I was egotistical enough to think that had I been at Pretoria when the trouble began I should have been able to stave off any conflict; but I was 200 miles away, and I will give you as short an account as I can of what happened. When I arrived I found on both sides of the road the Matabeles carrying off their goods in preparation for a fight; but a year before the same thing had happened, and I then took up a firm position and settled matters. I thought I might do the same thing again. It turned out that I was wrong. Only two things were possible—either 2000 people, including every white man, would have lost their all, and there would have been such a butchery of Mashonas as had never been heard of before, or we must use force—we must go to Bulawayo. When the war was over, after the settlement, I went over the whole of the facts, and heard the same account from everyone. I found I was right in regard to the king—he never wanted to fight; but I was wrong with regard to the natives. They had entirely the upper hand of the king. There were only two people who did not want to fight—one was the king, the other was one of the Indunas who had been over here. I wish you to know to-night that we adopted the only possible method we could adopt. We were driven into the campaign, and during the three preceding years we had done everything we possibly could to avoid such a thing as a conflict. No one could be more ready than I am to condemn any attempt to bring on a war with these unfortunate races. I have troubled you enough. I can only thank you most heartily for the extremely kind welcome you have given me.

Dr. Jameson concluded by proposing the health of the Chairman, which was most cordially received.

The toast of the Secretaries, Dr. Radcliffe Crocker and Mr. Quarry Silcock, to whom the success of the gathering was

largely owing, was also received with heartiness, and the proceedings, which had been enlivened by songs and recitations by Dr. Roberts, Dr. Campbell Pope, and other visitors, came to a close. It was generally agreed that a more pleasant reunion had seldom been held, an opinion enhanced by the fact that in the case of many of those present twenty years had elapsed since they were fellow-students together.

THE REGISTRAR-GENERAL'S ANNUAL REPORT FOR 1893.

THE Registrar-General for England and Wales has just issued his fifty-sixth annual report, dealing with the vital statistics for the year 1893. The marriages in the year were equal to 14.7 persons married to 1000 persons estimated to be living in the middle of the year; this rate showed a further decline from the rates in recent years, and was lower than the rate in any year since 1888, when it was 14.4. This decline in the marriage-rate was coincident with a further decline in the ratio of British exports to the population. The birth-rate was equal to 30.8 per 1000, which, although showing a fractional increase upon the rate in 1893, was 1.1 per 1000 below the mean rate in the ten years 1883-92. The proportion of births born out of wedlock, which has shown a fairly steady decline in a long series of years, was equal to 4.2 per cent. in 1893, and corresponded with the proportion in each of the two preceding years.

The meteorological conditions of 1893 were very exceptional. The mean temperature of the air was considerably above the average, the mean for each month from February to October inclusive showing an excess which was relatively largest in March, April, May, and August. The rainfall was only 20.1 in., and was 4.2 in. below the average, the greatest deficiency occurring in the four months ending with June. Thus the mean degree of humidity of the air was exceptionally low, lower indeed than in any previous year since 1852. These meteorological conditions exercised an undoubtedly unfavourable effect upon the mortality returns for the year.

The 569,958 deaths recorded in England and Wales during 1893 were equal to a rate of 19.2 per 1000 persons living. This rate showed a very slight increase upon the rate in 1892, and was identical with the mean annual rate in the ten years 1883-92. It ranged from 14.7 in Westmorland and 15.0 in Berkshire, Buckinghamshire, and Dorsetshire to 20.5 in Durham, 20.7 in Staffordshire and in the East Riding of Yorkshire, 20.8 in London, and 22.4 in Lancashire. The excess in the death-rate was mainly confined to children and young adults, while the rates among persons past middle age, on the other hand, showed a considerable decline. Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 159 per 1000, and exceeded the rate in any year since 1870; this excess was in great measure due to the exceptional fatality of diarrhoea. It is noteworthy that the increase of mortality in 1893 was entirely confined to town districts. The urban rate rose from 19.5 in 1892 to 20.2 per 1000, whereas the rural rate declined from 18.1 to 17.4.

The main feature of the increased mortality was the excess of deaths due to zymotic or specific febrile diseases, to which 94,126 deaths in 1893 were referred, equal to a rate of 3.2 per 1000, exceeding the rate in any of the ten preceding years, which showed a mean rate of 2.6. The mortality directly or indirectly referred to influenza showed a further considerable decline in 1893, and the death-rates from measles, scarlet fever, and whooping-cough were below the average, whereas the deaths referred to diarrhoea and diphtheria showed a large excess, and those from small-pox and enteric fever a very considerable increase. The increase in the death-rate from enteric fever was probably due in great measure to the high temperature and deficient rainfall, which undoubtedly caused the exceptional mortality from infantile diarrhoea. The death-rate from diphtheria was equal to 318 per million living, and was higher than in any previous year on record since 1859; the mean rate from this disease in the ten years 1883-92 did not exceed 175 per million. The greatest fatality from this disease occurred in the south-eastern counties, the rate in London and in nine almost contiguous counties averaging 612 per million living. The rates from measles and whooping-cough were exceptionally low. The diarrhoeal death-rate was 999 per million living, against

an average rate of 653 in the ten years 1883-92; the rate in 1893 has only been exceeded four times during the past twenty years. Small-pox mortality, which had been remarkably quiescent during the three years 1889-91, increased in 1892. The fatal cases of this disease were 451 in 1892, and further rose to 1457 in 1893. The deaths from puerperal fever and from the accidents of childbirth were exceptionally numerous, and the rate from these causes were higher than in any year since 1876. The proportion of deaths referred to premature birth and congenital defects, to registered births, also showed a further increase upon that recorded in recent years. No fewer than 20,076 deaths in the year were referred to different forms of violence, the rate from this class of causes somewhat exceeding the average.

Such are the main features of the detailed returns for England and Wales in 1893, the unfavourable nature of the figures being mainly due to the long drought and to the high temperature during the spring and summer. It is at any rate satisfactory to know that the increased death-rate in 1893 has been more than counterbalanced by the unprecedentedly low rate in 1894, which was only 16.6 per 1000.

CORK SOCIETIES' MEDICAL OFFICERS' INDEMNITY FUND.

THE following subscriptions to this fund have been received by Mr. Denis Dempsey Donovan, hon. treasurer, 51, King-street, Cork:—

N. J. Hobart, M.D. (Cork)	£20 0 0	D. J. O'Mahony, M.D. (Cork)	£5 0 0
Professor E. R. Townsend, M.D. (Cork)	20 0 0	P. T. O'Sullivan, M.D. (Cork)	5 0 0
P. J. Cremen, M.D. (Cork)	20 0 0	P. Tracey, M.D. (Cork)	5 0 0
Professor S. O'Sullivan, M.D., F.R.C.S.I. (Cork)	20 0 0	N. H. Runciman, M.D. (Cork)	5 0 0
D. D. Donovan, M.D. (Cork)	20 0 0	M. J. Murphy, M.D. (Cork)	5 0 0
Professor H. Corby, M.D. (Cork)	20 0 0	R. Dalton, M.D. (Cork)	5 0 0
T. Gelston Atkins, M.D. (Cork)	20 0 0	M. O'Connell, M.D. (Cork)	5 0 0
J. Cotter, M.D. (Cork)	20 0 0	P. J. Daly, M.D. (Cork)	5 0 0
Professor C. Yelverton Pearson, M.D. (Cork)	20 0 0	D. Flynn, M.D. (Cork)	5 0 0
H. R. Townsend, M.D. (Cork)	20 0 0	H. Hobart, M.D. (Cork)	5 0 0
W. A. Cummins, M.D. (Cork)	20 0 0	N. J. Townsend, M.D. (Cork)	5 0 0
E. Magner, M.D. (Cork)	20 0 0	E. Murphy, M.D. (Cork)	5 0 0
J. Giusani, M.D. (Cork)	15 0 0	C. Roche, M.D. (Cork)	5 0 0
Philip Lee, M.D. (Cork)	10 0 0	E. W. Allsom, M.D. (Cork)	5 0 0
T. B. Moriarty, M.D. (Cork)	10 0 0	T. Callaghan, M.D. (Cork)	2 2 0
P. J. Hayes, M.D. (Cork)	10 0 0	M. Cahill, M.D. (Cork)	1 0 0
J. MacMahon, M.D. (Cork)	10 0 0	P. Dee, M.D. (Cork)	1 0 0
P. Oscar Woods, M.D. (Cork)	10 0 0	J. O'Meara, M.D. (Cork)	1 1 0
D. C. O'Connor, M.D. (Cork)	5 0 0	H. T. Butlin, F.R.C.S. Eng. (London)	5 0 0
		W. P. Herringham, M.D. (London)	1 1 0
		A. Hargreave, M.D. (Tralee)	1 1 0

It will be perceived by the communication from one of our special correspondents in Ireland that the fund has received considerable augmentation since this list was sent to us.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6849 births and 3797 deaths were registered during the week ending Jan. 26th. The annual rate of mortality in these towns, which had increased in the preceding four weeks from 18.0 to 21.7 per 1000, declined again last week to 18.7. In London the rate was 17.6 per 1000, while it averaged 19.5 in the thirty-two provincial towns. The lowest rates in these towns were 11.3 in Leicester, 13.5 in Brighton, 14.6 in West Ham, 14.7 in Bradford, and 15.0 in Croydon; the highest rates were 22.0 in Burnley, 23.1 in Manchester, 23.7 in Wolverhampton, 24.1 in Preston, and 28.0 in Liverpool. The 3797 deaths included 328 which were referred to the principal zymotic diseases, against 363 and 338 in the preceding two weeks; of these, 75 resulted from measles, 69 from whooping-cough, 56 from diphtheria, 47 from "fever" (principally enteric), 42 from diarrhoea, 35 from scarlet fever, and 4

from small-pox. No fatal case of any of these diseases occurred last week in Leicester; in the other towns they caused the lowest death-rates in Nottingham, Derby, Burnley, and Huddersfield, and the highest rates in Sheffield, Gateshead, Preston, Sunderland, and Wolverhampton. The greatest mortality from measles occurred in Portsmouth, Sheffield, Newcastle-upon-Tyne, and Gateshead; from scarlet fever in Wolverhampton; from whooping-cough in Plymouth, Wolverhampton, Oldham, Halifax, Sunderland, and Gateshead, and from "fever" in Halifax. The 56 deaths from diphtheria included 29 in London, 6 in Birmingham, and 3 in Manchester. Two fatal cases of small-pox were registered in Manchester and 2 in Liverpool, but not one in London or any other of the thirty-three large towns. There were 35 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 26th ult., against 23, 28, and 33 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 8 and 6 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 1779, 1718, and 1653 at the end of the preceding three weeks, was 1662 on Saturday last; 186 new cases were admitted during the week, against 126, 130, and 154 in the preceding three weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 319 to 399 in the preceding three weeks, declined again to 324 last week, and were 310 below the corrected average. The causes of 79, or 2.1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Sunderland, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Salford, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding three weeks from 21.8 to 28.3 per 1000, declined again to 24.2 during the week ending Jan. 26th, but was 5.5 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 19.2 in Leith and 19.4 in Aberdeen to 26.0 in Greenock and 27.3 in Glasgow. The 698 deaths in these towns included 42 which were referred to measles, 18 to whooping-cough, 11 to diarrhoea, 9 to scarlet fever, 5 to diphtheria, 5 to "fever," and 2 to small-pox. In all, 92 deaths resulted from these principal zymotic diseases, against 113 and 100 in the preceding two weeks. These 92 deaths were equal to an annual rate of 3.2 per 1000, which exceeded by 1.6 per 1000 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 58 and 45 in the preceding two weeks, further declined to 42 last week, of which 25 occurred in Glasgow, 10 in Edinburgh, and 7 in Aberdeen. The 18 deaths referred to whooping-cough were within one of the number in the preceding week, and included 13 in Glasgow. The fatal cases of scarlet fever, which had been 6 and 12 in the preceding two weeks, declined to 9 last week, and included 5 in Glasgow and 3 in Edinburgh. The deaths referred to diphtheria, which had been 14 and 9 in the preceding two weeks, further fell to 5 last week, of which 2 occurred in Glasgow and 2 in Edinburgh. Of the 5 fatal cases of "fever," 4 were recorded in Glasgow; and of the 2 deaths from small-pox, one occurred in Leith and one in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 215 and 235 in the preceding two weeks, declined to 186 last week, but exceeded by 53 the number in the corresponding period of last year. The causes of 57, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 25.4 to 40.9 per 1000 in the preceding four weeks, declined again to 31.0 during the week ending Jan. 26th. During the past four weeks of the current quarter the death-rate in the city has averaged 32.8 per 1000, against 18.6 in London and 23.9 in Edinburgh. The 208 deaths registered in Dublin during the

week under notice showed a decline of 66 from the number in the previous week, and included 20 which were referred to the principal zymotic diseases, against numbers increasing from 10 to 23 in the preceding three weeks; of these, 7 resulted from small-pox, 5 from "fever" (principally enteric), 3 from diarrhoea, 2 from scarlet fever, 2 from whooping-cough, 1 from diphtheria, and not one from measles. These 20 deaths were equal to an annual rate of 3.0 per 1000, the zymotic death-rate during the same period being 1.3 in London and 3.4 in Edinburgh. The fatal cases of small-pox, which had been 11 and 10 in the preceding two weeks, further declined to 7 last week. The deaths referred to different forms of "fever," which had increased from 2 to 4 in the preceding three weeks, further rose to 5 last week. The mortality from whooping-cough and from diarrhoea showed a decline from that recorded in the preceding week, while that from scarlet fever showed an increase. The 208 deaths in Dublin last week included 30 of infants under one year of age and 72 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the exceptionally high numbers in the preceding week. Three inquest cases and 4 deaths from violence were registered; and 72, or more than a third, of the deaths occurred in public institutions. The causes of 20, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN R. H. MOORE, A.M.S., has been ordered to join at Netley for duty about the 8th proximo. Leave from Netley has been granted to Surgeon-Captain Reid from Feb. 1st to March 24th, and to Surgeon-Major Whitehead from Feb. 4th to March 5th. Surgeon-Major F. J. Jencken, M.B., has been ordered to proceed to Netley, for duty, on the 1st proximo. Surgeon-Major O'Brien and Surgeon-Captains Macleod and Wilson have embarked in the *Dilwara* for India. Surgeon-Majors Webb, Wilkinson, and Ryan, and Surgeon-Captain Clark have arrived from India in the *Britannia*.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel Richard Gillham Thomsett, A.M.S., has been posted to the Medical Charge of the Station Hospital, Mandalay; and Surgeon-Major William Amherst Daniel Cowen, A.M.S., has been posted to the Medical Charge of the Station Hospital at Poonamallee. The services of Surgeon-Captain Charles Duer, M.B., I.M.S. (Bengal), are replaced at the disposal of the Military Department. Brigade-Surgeon-Lieutenant-Colonel William Roe Hooper, Civil Surgeon and Superintendent of the Lunatic Asylum, Lucknow, retires from the service.

NAVAL MEDICAL SERVICES.

Fleet-Surgeon Robert Hall More, M.D., has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

The following appointments are notified:—Staff-Surgeons: John J. Dinns to the *Undaunted*, and R. E. Biddulph to the *Inflexible*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Peter M. Kerr, M.B., having resigned his Volunteer medical appointment, ceases to be an officer of the Army Medical Reserve of Officers. Surgeon-Captain Thomas McCraith Foley, 1st East Riding of Yorkshire Volunteer Artillery, to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Major A. O. Wiley resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 1st Volunteer Battalion, the Royal Sussex Regiment: Surgeon-Captain D. W. Giffard resigns his commission.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Herbert William George Macleod, M.B., to be Surgeon-Lieutenant.

THE WAR BETWEEN CHINA AND JAPAN.

In an article on "The War between China and Japan"

in the February issue of the *United Service Magazine*, Colonel Maurice sounds a note of warning to British residents who are still lingering in Chinese towns for fear of running the gauntlet of the disorderly soldiery marauding in the country. With half a million of men round Pekin, whose habits are filthy and who have hardly any knowledge of the meaning of the words discipline or organisation, with an absence of the faintest notion of the most ordinary military or sanitary precautions, there is every probability that a pestilence in some form or other will follow upon the melting in the spring of the snow, which has been defouled by vast numbers of men and animals. "Even as regards the march of the Japanese, in the early spring, on Pekin, I think," says the writer, "it will require all their admirable organisation, discipline, and sanitary skill to prevent the contagion reaching their army. A medical question of the greatest general interest needs to be answered. Within what time after warm, moist weather sets in ought we to expect actual illness to follow upon the hopeless sanitary neglect of vast disorderly congregations of men with many neglected animals? I think that the medical papers would do us an excellent service if they would answer it."

THE LATE CHOLERA OUTBREAK IN THE EAST LANCASHIRE REGIMENT.

It will be remembered that a very severe outbreak of cholera occurred in the East Lancashire Regiment at Lucknow last year. A committee, presided over by Surgeon-Lieutenant-Colonel Hutcheson, Sanitary Commissioner in the North-West Provinces, has recently been inquiring into the cause of the outbreak in question, and it is alleged that the propagation of the disease has been traced to have taken place through the instrumentality of the barrack-room filter. The sand used as a filtering medium had been taken from a *ghat* on the Gamti in the immediate vicinity of a native quarter where cholera had prevailed during the last hot weather. The filtering medium proved to have been the source and vehicle of the cholera infection. When the first company affected moved into camp their filter was, it is said, passed on to other companies and gave rise to the disease in them. The issue of the report of the committee, giving a detailed history of the evidence and results of their investigation, will, it is needless to say, be awaited with interest.

THE PAY OF PRINCIPAL MEDICAL OFFICERS OF ARMY CORPS IN INDIA.

The *Broad Arrow* calls attention to the fact that the pay of the surgeon-major-generals who may be appointed Principal Medical Officers of the Army Corps in India under the new organisation will be 2000 rupees a month, which will mulct the officers of the Army Medical Staff of 500 rupees per mensem. The present rate of pay in Bombay and Madras for the Principal Medical Officers of the Army Medical Staff is 2500 rupees. The secretary to the Principal Medical Officer will get 150 rupees extra if an officer of the British service, and if of the Indian Medical Service 600 rupees a month consolidated pay. For some time past it has been known that the Army Medical Staff officers lent by the Secretary of State for War to the Indian Government would suffer pecuniarily by the new arrangements.

EXPERIMENTAL RESEARCH IN INDIA.

A deputation from the Indian Medical Congress waited upon Sir Anthony MacDonnell, controlling the Home Department, to urge upon the Government of India the extension of facilities for the study of preventive medicine and the prosecution of scientific research in that country and also to protest against the Cantonment Act Amendment Bill. Sir Anthony MacDonnell in his reply assured the deputation of his interest in the objects in view and announced that, in addition to the bacteriological laboratory at Agra, a similar institution for experimental research was to be established at Lahore. The third clause—which was the one principally objected to in the Cantonment Act Amendment Bill—has, we are glad to say, since been withdrawn.

THE LATE COLONEL SANDWICH, C.B.

A good many medical officers who have served in Egypt and the Sudan will have read the news of the recent death, after a very brief illness, of Colonel Sandwich, C.B., the newly appointed administrator of Dominica, with great regret. Colonel Sandwich served for a long time in Egypt on the headquarter staff at Cairo, and was deservedly popular and much respected; he was a typical soldier in

manner and bearing, and affable and courteous to all with whom he came in contact. The late officer was the brother of Dr. F. M. Sandwith of Cairo.

THE HEALTH OF THE TROOPS DURING THE LATE CAVALRY MANŒUVRES.

The Inspector-General of Cavalry, in his report of Dec. 1st last on the cavalry division lately assembled under his command in Berkshire, says the health of all ranks was very good. The rations are described by the medical officer as of excellent quality. The six bell tents used for hospital purposes proved more than sufficient. All the sick were sent to Aldershot; the railway company arranged to provide at short notice a through carriage for serious cases. No accident of any importance occurred during the drills and manœuvres.

A NEW WATER SUPPLY FOR SOLON.

The troops quartered at the small hill station of Solon, known to most medical officers who have served in the Punjab, have of late years suffered more or less from typhoid fever, which was thought to be attributable to the water-supply. A sum of money has been granted by the Indian Government for its projected improvement.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General C. J. J. Jackson, of the Bengal Medical Service (retired), at Nice, on Jan. 16th, aged sixty-four. Brigade-Surgeon John Charles Wishaw, Bengal Army (retired), on Jan. 20th, at Mentone, aged sixty-two.

The *Pioneer Mail* states that Surgeon-Colonel Cleghorn, Inspector-General of Civil Hospitals in the Punjab, has been offered the post of Surgeon-General with the Government of India, in succession to Surgeon-General Rice.

The sixty-ninth session of the Army Medical School, Netley, terminated on Thursday, Jan. 31st, when the prizes were distributed by Mr. W. H. Russell, LL.D.

The *Malabar* sailed from Bombay on the 18th ult. with ten invalids for Netley.

The hired transport *Britannia* arrived on the 25th ult. with fourteen invalids for Netley Hospital.

Correspondence.

"Audi alteram partem."

"THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—Dr. Playfair does but scanty justice to those of our profession who object to the State recognition of midwives. Without entering fully into the matter, it may be pointed out that no objection has been raised to the Obstetrical Society or any other society examining midwives, but exception has been taken to the practice of issuing a pretentious paper to successful examinees which is capable of being and has been known to be used as a certificate allowing the holder to practise midwifery. If the council of the Obstetrical Society would agree to the suggestion made that it should print in red letters across the certificate "This certificate does not entitle the holder to practise either surgery, medicine or midwifery" everyone would be satisfied. Perhaps I may be allowed to correct the statement that there is a desire to attempt to abolish midwives altogether; the desire is to prevent the introduction of the foreign system of the practice of midwifery by State licensed midwives. Dr. Playfair will not prevent the success of the opposition by representing it as being small; it is much stronger than he imagines, and certainly his evidence before the Select Committee of the House of Commons does not add anything material in favour of legislation. It is not very easy to understand why the General Medical Council should mete out treatment to the Obstetrical Society different to that which it administers to the gentlemen who employ unqualified assistants. The one has encouraged unlicensed practice by issuing a colourable imitation of a professional certificate; [the others employ the unlicensed, who no doubt are often more competent than those possessed of the society's certificate. Perhaps I may be permitted to remind Sir John

Williams that any ill-feeling that exists is the result of the attempt on the part of those who are attached as teachers to medical schools and lying-in institutions, to thrust down the throat of the profession an unpalatable bolus. His letter will do more to make the profession believe that those who are attached to schools as teachers possess interests which are not identical with those of the rest of the profession.

I am, Sirs, your obedient servant,
Hatfield, Jan. 27th, 1895. LOVELL DRAGE.

To the Editors of THE LANCET.

SIRS,—Every year I issue a more important looking parchment to students who have achieved honourable mention in my class, which might just as well be called a colourable imitation of a diploma," is a clause in Dr. Playfair's letter in THE LANCET of Jan. 26th in his defence of the Obstetrical Society of London for the very proper objection raised by the General Medical Council against that Society as a diploma-granting body. Is it not a fact that all lecturers upon obstetrics in our medical schools award similar "certificates" to those students who have distinguished themselves in that particular branch of the curriculum? Dr. Playfair's contention, therefore, is somewhat irrelevant, inasmuch that the successful students in obstetrics are entitled to those respective certificates—although they go for nothing; whereas the "certificates," or, rather, "diplomas" (which are most misleading to the general public, who usually look upon their holders as being legally qualified women), granted by the Obstetrical Society afford them a right to practise midwifery and to sign death certificates for still and premature births, &c., alike, which, I maintain, is fraught with very grave objection. What is easier than for one of those so-called midwives to certify for a premature birth or otherwise in cases where an illegal operation may have been performed by some unscrupulous person outside, unknown to the particular midwife engaged?

If we are to accept the Obstetrical Society's diplomas to women for the future to practise a branch of the medical profession, why should not men likewise be admitted to their examination?

I am, Sirs, yours faithfully,
J. FRENCH BLAKE.
High-street, Putney, S.W., Jan. 26th, 1895.

"ISOLATION OF CASES OF OVARIOTOMY."

To the Editors of THE LANCET.

SIRS,—Dr. Cullingworth and I have stated our views on this subject, and I am quite willing to leave the matter to the judgment of the profession; but I should like to be allowed to draw attention to the fact that Dr. Cullingworth concedes the point that isolation is useful, after ovariectomy, "for exceptionally serious cases and cases that seem to be taking a markedly unfavourable course," whilst he makes no attempt to controvert my contention that it is impossible to select these cases with certainty before operation. Hence, if every patient is to have the best chance of recovery, every patient should have the advantage of isolation until convalescence is assured. It seems to me that there is a great danger that the very marked success which follows ovariectomy as a rule may have a tendency to jeopardise, in many ways, the more serious cases. A simple ovariectomy is not a difficult operation, but the diagnosis is never quite certain and the simplest looking case may tax the resources of the surgeon and the vital powers of the patient to the uttermost. I hope I may be permitted to add a cordial acknowledgment of the very kind way in which Dr. Cullingworth has referred to my work in his letter to you, and in the recent debate at the Royal Medical and Chirurgical Society. Such recognition and the manner of expressing it are most gratifying to me, and it is a special satisfaction to think that Dr. Cullingworth and I differ on the isolation question with mutual esteem and goodwill.

I am, Sirs, your obedient servant,
Portman-street, Jan. 26th, 1895. JOHN D. MALCOLM

THE MEDICAL ENTRIES AT THE UNIVERSITY OF EDINBURGH.

To the Editors of THE LANCET.

SIRS,—My attention has been called to an annotation in your issue of Jan. 26th, headed "The Medical Schools," in

which it is stated that "the new entries at the Edinburgh University show a total of 136, the number of students on the roll, including the fifth year and upwards, being 1213." I beg to inform you that these two numbers should be 207 and 1248 respectively. Hoping that you will be good enough to make this correction.

I am, Sirs, yours faithfully,
Edinburgh. J. KIRKPATRICK,
Secretary of Senatus.

* * We give publicity to this letter of correction from the Secretary of Senatus of the University of Edinburgh with pleasure. The figures as supplied to us from the University of Edinburgh in answer to an application were as follows:—Number of new students, 136. Students attending the University—first year, 199; second year, 244; third year, 222; fourth year, 241; fifth year and upwards, 307; total, 1213. The return was dated Nov. 15th, 1894, a date which we considered would nearly correspond with the date at which the returns were collected from the London schools. The return would thus be most useful for comparison with our table. The difference in the figures shows the accession to the roll of Edinburgh students that has taken place since the beginning of the current medical year.—ED. L.

THE DENTIST'S EDUCATION.

To the Editors of THE LANCET.

SIRS,—Very considerable alterations should be made in the curriculum of the L.D.S. Eng., not only in the interests of the dental student, but in those of the greater profession to which the specialty is gradually becoming more closely allied. The first step should be to make a third year of hospital study compulsory. At the present time a dental student need only pass two years at hospital, and although he must be signed up for three years' dental mechanics the third year of this course is usually ignored, and in many cases the apprenticeship is merely nominal. Consequently, many students have to crowd the whole of their education into two hospital years, and even if they get through the examination they are neither likely to prove a credit to their profession nor an unmixed blessing to the community. There is no earthly reason why students should not be compelled to pass a practical examination in dental mechanics before they enter hospital, and this would prevent the possibility of two or three of the best years of a young man's life being wasted or would throw the onus of his failure on those who accepted the premium for his apprenticeship. Two years of hospital are not sufficient, for in that brief time the hapless dental student has not only to dissect and to attend the lectures and demonstrations required for the second examination of the Conjoint Board, but has also to fulfil an elaborate special curriculum. He must attend lectures on dental surgery (two courses), dental anatomy (two courses), dental mechanics, and dental metallurgy, and every student ought to spend several hours a day between 9 A.M. and 4.30 P.M. in attending patients. He must do hundreds of "fillings," some of which will take at least three hours each, must learn to extract teeth, must make and fit dentures, regulation plates, and "crowns," and must, in general terms, acquire manipulative skill of the highest order. Dental students should be considered much cleverer than medical students if they are expected to do all this properly in two years.

The examination for the L.D.S. Eng. is grievously comprehensive and varied, commencing with written papers on anatomy, physiology, surgery, dental anatomy (human and comparative), and dental surgery. Every candidate has a practical examination of about six hours' duration on dental mechanics and practical dental surgery. At the *visa-voce* he is examined at four tables in succession—viz., anatomy, surgery, dental anatomy, and dental surgery. Nothing but severe cramming can get the candidates ready, and it is the rule, not the exception, to cram for the L.D.S. Eng. No astonishment need be felt at the high percentage of rejections. There is small gain in jumbling together anatomy, physiology, surgery, metallurgy, microscopy, materia medica, dental anatomy, dental surgery, and operative dental surgery in one final test at the end of two years. The examination should be divided into two parts. The first should be held at the end of the second year, embracing all the

above-named subjects excepting surgery, dental surgery, and practical dental surgery, and these three subjects should form the final examination at the end of the third year. Glasgow is far ahead of England in having divided the subjects of the L.D.S. into two parts. I believe that the need of a third year is widely felt amongst dental teachers, and that the extension would not materially check the registration of new students, whilst the value of the L.D.S. diploma would be enhanced and the status of the dentist would be improved. The adoption of a fifth year in the medical curriculum must be followed by a third year in the dental curriculum, or the hospital training of the dentist will become shorter still by comparison with that of the medical practitioner. The medical profession would like to feel that every dental surgeon had passed at least the second examination of the Conjoint Board, but unless the dental course is to be extended there is little hope of improvement.

I am, Sirs, yours faithfully,

F. NEWLAND-PEDLEY, F.R.C.S. Eng.

Devonshire-place, W., Jan. 25th, 1895.

"THE DEBATE ON THE NATURE AND TREATMENT OF PERITONITIS AT THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—I think it a waste of time to discuss whether micro-organisms cause peritonitis. If Mr. Tait is not convinced by the evidence before the profession he is not likely to be convinced by anything. I am glad to have given him the opportunity of better defining his opinions as to the benefit of purgatives after abdominal operations. Some years ago he said he cured peritonitis with them, as Mr. Malcolm has shown in his letter to you published in your last week's issue. Then he denied this. I supposed that he meant that he prevented it. Now we know that he claims neither to prevent nor cure peritonitis with purgatives, but simply to relieve intestinal distension. In this, I think, the profession will have no difficulty in agreeing with him.

I am, Sirs, yours faithfully,

Jan. 29th, 1895.

G. ERNEST HERMAN.

To the Editors of THE LANCET.

SIRS,—Mr. John D. Malcolm has made this subject so peculiarly his own that it is dangerous for any other dog to bark at it. Nevertheless, at the famous debate at the Harvelan Society he ingenuously admitted that his powers of oratory were not such as to permit him to make his meaning clear. I do not think his literary efforts are a success of a higher order, otherwise I certainly have spoken in vain. I offer to let him have his own way, in spite of all tradition and former belief that the cases I described are not peritonitis. I agree to admit his conclusion that the cases that die are peritonitis, because we make post-mortems of them and find it so. We do not make post-mortems of those that we help to recover by purging, and therefore I cannot say that they are cases of peritonitis. Mr. Malcolm says they are not cases of peritonitis, and I gracefully yield to the authority; but I say they would be cases of peritonitis if they were left alone or had opium, and therefore I say that we beat the peritonitis. Even this may be wrong, and therefore I say that I do not care for "pathologico-metaphysical conundra." Surely, after this concession Mr. Malcolm will either leave me alone or go and get trepanned.

I am, Sirs, yours truly,

Birmingham, Jan. 26th, 1895.

LAWSON TAIT.

THE LONDON MEDICAL STUDENTS AND THE UNIVERSITY OF LONDON: A GRIEVANCE.

To the Editors of THE LANCET.

SIRS,—The London medical students have a real grievance. The London University medical degree is too hard for the majority of students. Some recognise this from the first, and do not attempt to get it; others give up trying only after repeated failures. In Scotland the case is different. A man of ordinary ability and fair industry is sure to get a medical degree; in London this is not the case. At the end of their period of study, and after they have had a clinical experience

which it would be impossible to get in Scotland, many London students who have worked hard have to start in practice without a medical degree or to take one elsewhere. Some who have a year or two to spare go to Durham, and not a few to Brussels. It is sometimes assumed by graduates of other universities that there must be something wrong about a man who goes to Belgium for a degree. This assumption is unfair and often groundless. Many able, experienced, and learned men have found it the only method by which they could take a medical degree for which their previous training had fully entitled them. The fact that the degree of the University of London is much more difficult to get than that of the Scottish Universities is a real hardship to the London medical student, because his inability to get a degree may place him at an unfair disadvantage in practice if he have as a competitor a man who, although he has had less experience, is still a "Dr." whilst he is a "Mr." Your readers will, I think, agree with me that there are few country towns which could not furnish examples to the point.

I am, Sirs, your obedient servant,

York-street, W., Jan. 24th, 1895.

RICHARD SISLEY.

. Dr. Sisley enumerates with precision points which we have frequently taken occasion to bring to our readers' notice. We are happy, however, to print his letter, as a *résumé* of the position of the London medical student is well-timed at the present moment.—ED. L.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—A careful perusal of Sir George Johnson's interesting article in THE LANCET of Jan. 12th and an extensive experience of the picric acid test and most other of the reactions which have been proposed from time to time for the detection of diabetic sugar in urine induce me to make some comments on the facts and arguments adduced by Sir George Johnson.

No one will dispute that the test described by Sir George Johnson, and so strongly advocated by him, is one of great simplicity and facility of application; but perhaps all will not so readily endorse his claim that for clinical and life assurance purposes no method of testing for glycosuria equals this for ease, rapidity, and absolute trustworthiness. In the first place, Sir George Johnson does not appear to claim that the reaction is absolutely reliable in its application to urine containing less than two grains of sugar per ounce, if, indeed, it is trustworthy at all in the case of this and smaller proportions. A fluid ounce of water weighs 437.5 gr., not 480 gr., as I gather from Sir George Johnson's closing paragraph he supposes to be the case. Hence the so-called "percentage"—or, more correctly, the number of grains per 100 fluid grains—can be found by dividing the grains per fluid ounce by 4.375. Therefore two grains per ounce correspond to 0.46 "per cent." It would be absurd for me to question the view apparently held by Sir George Johnson that any proportion of sugar materially less than this may be safely neglected; but it is a proposition that many of those who suffer from glycosuria in its milder forms will be delighted to believe. It seems probable, also, that such cases will receive a warmer welcome from the insurance companies than has been the case in the past. Further, Sir George Johnson holds that a trace of sugar in normal urine, if existent, is of no practical importance to the physician. On all such points I at once bow to Sir George Johnson's opinion, but when he approaches the question from a chemist's standpoint I may say frankly that I am not convinced either by his arguments or his experimental evidence.

Sir George Johnson bases the whole of his argument on the assumption, in my opinion quite unwarranted, that it is possible to recognise slight differences of tint in liquids which are each of them somewhat strongly coloured. Thus, the kreatinine present in normal urine admittedly produces a blood-red colour with the picric acid test, and it is only the production of a red-brown colour (exactly imitated by a solution of acetate of iron) over and above this blood-red tint that we are desired to observe

Yet even this unavoidable colour produced by normal urine is apt to be more than twice as intense in one sample as in another, the coloration ranging, according to Sir George Johnson, from a tint represented by 0.5 gr. per ounce in some urines to 1.2 gr. in others; yet the allowance made for this variable interference is a constant one. In Sheffield, we are accustomed to estimate the percentage of carbon in steel by dissolving a weighed portion of the sample in nitric acid and comparing the depth of brownish tint possessed by the solution with that given by a standard steel treated similarly. Many hundreds of samples are tested annually in my laboratory by this process, which bears a close resemblance to the estimation of diabetic sugar by Sir George Johnson's micro-saccharometer. But our wide experience with this process has taught us that it is quite impossible to form an accurate opinion on the depth of tint of solutions so intensely coloured as those employed by Sir George Johnson. Hence his quantitative results must be of the roughest kind, and, while amply sufficient to form a judgment as to the progress made by a diabetic patient, are quite inconclusive as evidence on the vexed question of the presence of traces of sugar in normal urine. Sir George Johnson himself finds that the picric acid test gives no indication of sugar in solutions containing less than 0.01 per cent., and leaves it to be inferred that in solutions more concentrated than this the colour is produced with an intensity exactly proportionate to the amount of glucose present. This, on the face of it, is extremely improbable, and it is far more likely that the reaction becomes gradually more imperfect as the dilution increases, so that in highly dilute solutions considerably more sugar is required to produce a given tint than in concentrated solutions. The same argument applies to the colour produced by kreatinine. The fact is that, with the picric acid test, we are dealing with a variety of coloured liquids ranging in tint from pale yellow to deep coffee-brown, and their variability renders any exact quantitative inferences wholly impossible. First we have the colour of the urine itself, varying through a considerable range. Then Sir George Johnson must have been exceptionally fortunate if he has succeeded in obtaining picric acid which does not give more or less reddish coloration when boiled with caustic alkali. I have a specimen now before me which gives a colour indistinguishable except in depth from that yielded by a sample of normal urine; and on diluting with two measures of water the liquid resulting from the application of the picric acid test to the latter the tints are identical. Repeated recrystallisation has failed to prevent this behaviour entirely, and it follows that the purification of the reagent is difficult, and the unpurified acid untrustworthy. Then the caustic potash is apt to contain traces of cyanides which react with picric acid exactly like sugar. Next there is the colour (varying from 0.5 to 1.2 grs. per oz.) produced by normal urine; and finally we have the colour due to actual sugar. Yet, with all these variable conditions and sources of error, Sir George Johnson wishes us to regard an observation of the depth of colour produced with picric acid as conclusive evidence of the absence of traces of sugar from normal urine. It may be absent, but Sir George Johnson has not proved it. On the other hand, we have the production by numerous observers of the definite crystalline glucosazone by the treatment of normal urine with phenyl-hydrazine, a reaction far more convincing to chemists than the non-production of a red-brown coloration in presence of a blood-red, which is substantially the negative evidence on which Sir George Johnson's position rests.

In one of his communications to THE LANCET Sir George Johnson pooh-poohs the indications of the phenyl-hydrazine test because it detects traces of sugar undiscoverable by picric acid; but he has made no attempt to show what substance it is which, from its resemblance to glucose, has repeatedly deceived the very elect. He has also to explain away the fact (or traverse the method) that Dr. Pavy has, by operating on very large quantities of normal urine, isolated a substance which not only responds to the phenyl-hydrazine test, but reduces solutions of bismuth and copper, and last, but not least, ferments on addition of yeast.¹

Returning to the application of picric acid to the examination of urine for comparatively large quantities of sugar, it is evidently desirable to avoid, if possible, a test which gives more or less reaction even with normal urine. It is also an advantage to employ a test which consists in the discharge of a colour, as in Pavy's modification of the

copper test, rather than one in which colour is produced. Even Sir George Johnson would probably give the preference to a test of this sort, unaffected by kreatinine or uric acid, if it were as rapid and easily applied as that with picric acid. The above desideratum is met by a test proposed by M. Crismer,² based on the decolorisation of the red coal-tar colour known as "safranin" when heated in alkaline solution with glucose. I have myself proved that the reagent is not affected by kreatinine or uric acid, and M. Crismer states that it is also indifferent to kreatine, chloral, chloroform, hydrogen peroxide, &c., and is only slowly reduced by solutions of albumen. Hence, any notable discharge of colour produced by a sample of urine previously freed from albumen may confidently be set down to the presence of sugar. In carrying out the test I employ equal measures (1 drachm each) of the sample of urine, normal soda or potash (liquor potassæ, B.P.), water, and a solution of one part of commercial safranin in 1000 of water. The mixture, which has a deep red colour, is heated in a test-tube until it boils freely, agitation and consequent contact with air being avoided as much as possible. If the urine contain more than 0.1 per cent. of sugar the liquid will be decolorised, but otherwise the red colour will remain intact or be only partially discharged. If the colour be destroyed, the test may be repeated with two or three times the volume of safranin solution that is used of urine, every additional measure of safranin solution which is found to be decolorised representing roughly 0.1 per cent. of sugar in the sample. If more than four or five measures are required there is marked glycosuria, and it is desirable to dilute a portion of the urine to ten times its bulk with water, and make a fresh experiment with equal measures of this diluted urine, potash, and safranin solution.

The end of the reaction is indicated by the liquid becoming pale yellow and turbid. The colouring matter is not actually destroyed, but merely reduced to a leuco-derivative, which rapidly becomes red again on exposure to air.

In my experience the safranin test is one of the simplest and most certain clinical tests for urinary sugar, and deserves to come into general use. Its advantages over the picric acid test are obvious, while its application is quite as simple. The rough quantitative indications obtainable in the manner above indicated will often afford great assistance to the medical practitioner. On the other hand, attempts to base on the reaction an accurate quantitative method by operating in the manner of Pavy have been unsuccessful.

By employing the safranin in the form of pellets instead of in solution the addition of a definite quantity of the colouring matter would be much facilitated, and the clinical application of the test rendered extremely simple. The alkali might be employed with advantage in the same form, and I am in hopes that this suggestion will shortly assume a practical shape.—I am, Sirs, yours truly,

ALFRED H. ALLEN, F.I.C., F.C.S.,

Vice-President of the Society of Public Analysts.

Surrey-street, Sheffield, Jan. 19th, 1895.

P.S.—Jan. 30th.—The foregoing letter was written before the appearance of Sir George Johnson's letter published in THE LANCET of Jan. 26th. Although it is true that the carbohydrates are by no means the only bodies which react with phenyl-hydrazine to form crystalline compounds, still, if the compound obtained have the same melting point as the osazone yielded by glucose and exhibit the exact crystalline form of glucosazone, it is strong *prima-facie* evidence that we are really dealing with that body. It would be interesting to learn from Dr. Pavy whether he has made any attempt to regenerate the glucose from the crystals of pseudo-glucosazone which he obtained by the application of his process to normal urine; but, even in the absence of this crucial test, the affirmative evidence he furnishes is, to my mind, of incomparably greater weight than the negative reaction with picric acid.

MEDICAL BULLETINS.

To the Editors of THE LANCET.

SIRS,—Now that the sadness of Lord Randolph Churchill's illness has ended in his death, may I call attention to the daily bulletins issued by the physicians in charge of the case? The subject is one that demands the earnest consideration of the medical profession. The system of recording

¹ Physiology of the Carbohydrates, p. 180.

² Pharmaceutische Zeitung, xxxiii., 65; Pharmaceutical Journal, [3], xix., 348.

almost daily the various symptoms occurring may possibly from a clinical aspect be of some interest to the medical world, and their publication in a professional journal might not be very objectionable, though certainly unnecessary. But the severest comment upon them has been made by men of all shades of thought, who could not but wonder at the want of taste and professional reticence exhibited in the record we have daily read in the lay press. From a very early stage of the case the fact was admitted that recovery was hopeless; and yet, in spite of this, the physicians almost daily issued bulletins depicting the varying phases of the case, the gradual sapping of the fortress of life, in a manner that was as regrettable as it was inconsistent with the standard of professional reserve. The world knew that a great life was passing away, but it did not need to know the painful steps leading to the end, and it is impossible to say what good purpose is served by their publication. Personal friends might satisfy their anxiety in the usual way; more than this was inexpedient. Is it possible to hope that in future like cases a wiser reticence, a more discreet caution, may be observed?—I am, Sirs, yours truly,

Jan. 26th, 1895.

E. F.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday.

NOTWITHSTANDING the very inclement weather which prevailed here on Sunday, Jan. 13th, and the very depressed state of trade and commerce, the collections made, augmented by donations from those who were unable to be present and by some collections made on Jan. 20th, will compare very favourably with those of past years. Up to the present the treasurer has been advised of the sum of £5341. Among other collections are the munificent ones of £797 from the Unitarian Chapel, Renshaw-street; £626 from the Sefton-park Presbyterian Church; and sums of £158, £137, £125, £116, and two of £100 each.

Death from Anthrax at St. Helens.

An inquest was held on Jan. 21st by the county coroner on the body of a man forty-four years of age, who had worked as a labourer for some years for a firm who kept manure works. He went to work on the 16th in his usual health but seemed unwell at dinner time, and his wife noticed a swelling in his neck. He complained of a fluttering sensation there, and that night the swelling had increased. On the following day he was worse and saw Dr. Casey, who sent him to the hospital in a cab. He was there seen by Mr. F. Knowles, who found him suffering from acute inflammation in the neck, with much swelling and great difficulty in breathing. The deceased said he had had a pimple on his neck and had scratched it. He subsequently died from anthrax, and the jury, in returning a verdict of "Death from blood poisoning," suggested that there should be special rules for the guidance of men at similar works.

Fatality at the Liverpool Workhouse.

An adjourned inquest was held on Jan. 17th by the city coroner upon the bodies of three men who had died in consequence of injuries received from a boiler explosion at the Liverpool workhouse. It appeared from the evidence that the deceased men were respectively the engineer, fireman and attendant at the workhouse. The boiler was used for heating the main building and the hospitals. The explosion probably arose from some obstruction in the tank into which steam was periodically blown off and in which the body of a cat was found when it was emptied after the explosion. The engineer died the next day from shock and exhaustion, he having been very severely scalded about the arms and back. The fireman was severely scalded about the scalp, head and eyes, being rendered blind; he had also scalds on the chest and back and a scalp wound, he having been blown across the room. The attendant was scalded very severely about the arms and back. In returning a verdict of "Accidental death" the jury made some suggestions for the prevention of such accidents in future, which the vestry clerk promised should be fully considered.

Neglecting to Notify a Case of Small-pox.

A married woman was brought before the stipendiary magistrate for neglecting to notify to the medical officer of health a case of small-pox which occurred at her residence. A

sanitary inspector called at her house the previous Thursday, and she told him that there was no sick person in the house. On the Saturday he called again, and found her son in bed, his body covered with the eruption of small-pox. The patient had been working at the Birkenhead Docks the previous day and night. He was seen by Dr. Walker, who ordered his removal to the small-pox hospital. A penalty of 40s. and costs was imposed.

The Liverpool Northern Hospital.

The annual meeting of the supporters of the Northern Hospital was held on Jan. 16th, at the town-hall, the Lord Mayor (Mr. W. H. Watts) presiding. In their annual report the committee gratefully acknowledged the receipt of £1498 from the Hospital Sunday and Saturday Fund, expressing the conviction that but for this assistance it would have been impossible to carry on the work of the charity. The horse ambulance had been called out 956 times during the year, and had proved itself to be an invaluable adjunct to the institution. The committee regretted that the negotiations with regard to the new hospital were not yet quite completed, but they were so far advanced that there was now no reason to doubt that, through the munificence of the David Lewis trustees, and with the assistance of the corporation of Liverpool, a most complete and convenient hospital would very shortly be provided. In moving the adoption of the report and accounts the Lord Mayor said that the Northern Hospital was an institution which appealed very strongly to every heart that felt commiseration for human suffering. He had had the pleasure that day of going over the hospital, and had seen the noble work which was being done there, and which was carried on under circumstances of the greatest difficulty. He had been through the various wards, and had seen such an amount of suffering that it made one's heart bleed, and yet the loving care that was being bestowed on each individual case was one of the most satisfactory features that one could estimate. The demands on the hospital had outgrown the accommodation, and the arrangements were very defective and insanitary. He was struck with the crowded state of the wards, and though all that could possibly be done was done they were severely handicapped.

The Proposed New Hospital.

It is greatly to be desired that the new hospital shall not only have ample accommodation for the number of patients for which it must provide, but may also be constructed with a view to future contingencies. The situation of the hospital is now central rather than northern, and there is every probability, owing to circumstances, that a considerable addition to the present number of beds (155) will be required. The matter is to be discussed at the next meeting of the city council on Feb. 6th, and it is to be hoped that a spirit of foresight as well as of generosity will animate all who have to decide this very important matter. The hospital was established sixty-one years ago, and is the second hospital in this city.

Jan. 29th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Queen Victoria's Jubilee Institute for Nurses, Edinburgh.

THE sixth annual report of the Scottish branch of this institute has been published. During the year twenty-three probationers who had received hospital training had been received into the home for district training, and twenty-four had completed their training. At the end of their year the Scottish council was responsible for thirty-three nurses. During the year twenty-one nurses had, on the completion of their training, been engaged by local committees. Eight new local associations had been formed, all being affiliated to the institute. In Edinburgh and Leith, the report says, 2849 cases had been attended. In spite of the benevolent and Christian character of this work the finances of the institute are very unsatisfactory, for, while the ordinary expenditure has been £2046, the receipts have only amounted to £1583, leaving thus a deficit of from £400 to £500, which has been met out of a reserve fund, which, however, is almost exhausted.

The Longmore Hospital for Incurables, Edinburgh.

The cry from this hospital also is for funds. Last year the

accommodation was increased by the building of a new wing, and the hospital can now accommodate 104 patients. It is always full and there are always more applicants than can possibly be admitted. To build and furnish and endow the extension a sum of £15,000 was required and the authorities are still £5000 short of that amount.

Edinburgh University Endowment Association.

Financial assistance is greatly needed by this association also. Last year less money was received than during the preceding year. Amongst other objects to which it refers, the report says: "Another direction in which it would appear that the association is fitted to render substantial assistance is in providing travelling and research scholarships. Many able students are at present hindered by lack of means from undertaking medical or scientific research within the University, which thus loses the benefit of their work. With the aid of research scholarships they would be encouraged and enabled to prosecute such studies, which would be a direct advantage to the University both from the increased number of students who might be attracted to Edinburgh by such scholarships and from the retention in the University of its more distinguished and capable students."

Health of Edinburgh and Leith.

Among the notifications in Edinburgh for the past week were 20 cases of diphtheria, 7 of small-pox, and 336 of measles. There were 2 deaths from diphtheria and 9 from measles. There were no cases of small-pox reported in Leith, but there were 5 deaths from diphtheria.

Jan. 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

New Lunatic Asylum at Portrane.

THE overcrowding which exists in the Richmond District Asylum has rendered it necessary to construct an asylum at Portrane, which it is estimated will cost £200,000. Fifteen of the leading architects in Dublin were requested to send in plans for the asylum in question, with the understanding that each author of a plan should receive a sum of £40. Twelve architects accepted the proposal, and three assessors were appointed by the Board of Control to examine the plans sent in. These assessors were Sir A. Mitchell, Mr. George Hine, and Dr. Moody. They selected three of the plans which they regarded as of equal merit, the Board of Control to choose the first from among these three; the second to have £100, and the third best design £75. All the designs sent in have been exhibited at the Royal University of Ireland.

Benefit Societies, Cork.

A special meeting of the members of the St. Luke's Mutual Benefit Society was held last week for the purpose of electing a medical officer in the room of Mr. Philip Lee, L.R.C.P. & S. Irel., who had resigned. There were four applicants for the appointment, three hailing from England, but only two put in an appearance. Mr. William McMath, M.B. Royal University, was appointed, this being the fourth society to which he has been elected. A resolution thanking Mr. Lee for his past services was adopted amid applause.

The Club Fight at Cork.

Matters are progressing rapidly in connexion with the club fight. So far six of the clubs have accepted the reasonable terms of the medical men. Some time ago funds were subscribed for the purpose of defraying current and other expenses, but as it was felt that something more should be done, a meeting was held last Wednesday, and a sum of £450 was at once handed in. It is very much to the credit of some of the club practitioners that, though they have lost their clubs, they individually subscribed £15 and £20 to the medical war chest.

Resignation of Professor John England.

Professor John England, who for a period of over forty years occupied the chair of Natural Philosophy at the Queen's College, Cork, has retired on a pension. Many of the students who were pupils of Professor England now occupy high positions, both at home and in the colonies, and all entertain for

him the most cordial and genial feelings of friendship. He has been succeeded by Professor Bergin, M.A., who had a distinguished career at Trinity College.

Coronership of North Tipperary.

The office of coroner for the North Riding has become vacant, and there are six candidates for the post, three of whom are medical practitioners—viz., Mr. H. F. Powell, L.R.C.P. & S. Edin., J.P., of Nenagh; Mr. M. J. Quigley, L.R.C.S. Irel., J.P.; and Mr. J. C. Daly, L.R.C.P. & S. Edin., J.P., of Borrisokane. A like number are solicitors.

The Belfast Hospital for Sick Children.

The annual meeting was held on Jan. 25th, and from the report it appears that during the past year there were 11,438 extern and 403 intern patients. A class of senior students are attending the hospital clinics. The drainage at the Convalescent Home has been set right. The ordinary income for the year was £1956 13s. 9d. and the expenditure amounted to £1188 9s. 9d. The average cost per annum of each bed was £34.

Small-pox in Newry.

A serious outbreak of small-pox has occurred in Newry, the disease having been conveyed, it is thought, from Dublin. One case died on Sunday, another is in a very dangerous state, and eighteen patients are in the hospital. The schools are to be closed for six weeks. Vaccination is being carried out extensively, and a member of the Public Health Committee has given notice that he will move the adoption of the Infectious Diseases Notification Act. So far the disease is confined to the working classes.

Curious Inquest in Belfast.

An inquest has recently been held in Belfast which has caused considerable attention in medical circles. A man was brought to the Royal Hospital having sustained an injury by a fall, and subsequently died. At the inquest last week the resident staff reported that the cause of death was delirium tremens. This apparently annoyed the deceased's friends, and, their evidence being that he was not a drinker, the coroner adjourned the inquiry to Jan. 28th and ordered two outside medical men to make a post-mortem examination. Their evidence confirmed that of the house physician in the hospital, as they stated that the scalp wound present, which did not injure the pericranium, was not attended with any inflammatory action and the recently fractured collar-bone was in good position and perfectly set. They found the vessels in the head slightly congested, the right lung congested, a large quantity of fat about the heart, the liver 6 lb. in weight, congestion in patches of the interior of the stomach, the spleen twice its normal size, and the kidneys twice their normal weight. They believed (as was the view of the previous medical evidence given by the house physician of the hospital) that delirium tremens was the cause of death. The verdict was that death was caused by delirium tremens accelerated by a fall. One of the jurors disagreed with the verdict. One of the medical experts in his evidence stated that not only was the scalp wound not a severe one, but that it was not of such seriousness as to justify the staff of the hospital in detaining him. The medical experts thought that neither the scalp wound nor the fracture of the collar-bone was sufficient to cause the delirium tremens, but that the direct cause of death was delirium tremens. They could find nothing that would account for death except delirium tremens.

Jan. 29th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Idiopathic Polyuria.

DR. MARINESCO¹ has recently had under his treatment two boys (brothers) affected with the above disease. Their mother suffered from the same ailment, but in a slighter degree, during her pregnancies. The quantity of urine passed by each of the brothers averaged no less than twenty-eight litres a day. Analysis of the secretion revealed nothing abnormal beyond an excess of chlorides. One of the children

¹ Société de Biologie, Jan. 19th.

having succumbed to cerebral meningitis an opportunity was offered of a detailed examination of the nerve centres. The fourth ventricle presented to the naked eye an oedematous or, rather, gelatinous appearance. Histologically no alteration was discovered in the nuclei of the vagi, but the walls of the fourth ventricle were the seat of small hæmorrhages outside the vagi nuclei, and the neuroglia was considerably hypertrophied. The delicate fibrillæ of the ventricular walls had, moreover, disappeared.

Population Statistics of France in 1893.

During the year 1893 there were registered in this country 287,294 marriages, 6184 divorces, 874,672 births, and 867,526 deaths, a considerable improvement on 1892, during which year there occurred 18,825 births less and 8362 deaths more than in 1893. In other words, instead of a deficit of 20,041 we have on the credit side an excess of 7146 births. Of the children born no fewer than 76,562, or 8·8 per cent., were illegitimate—the highest proportion yet attained in France. The deaths comprised those of 449,682 males and 417,844 females, with a total mortality of 22·8 per 1000 inhabitants. Comparing the births with the deaths according to sex, it is found that with 446,957 births and 449,682 deaths there has been a loss of 2725 males, whereas an inferiority in the births has not prevented a gain on the female side of 9871. In thirty-six departments there was an excess of births over deaths, whereas in fifty-two departments the contrary was the case. Thus, in the Nord births exceeded deaths by 13,427; Pas-de-Calais, 8573; Seine, 4747; Finistère, 4403; Morbihan, 3080; Loire, 2437; and Corse, 2241. The principal offenders on the other side are the Rhône, Orne, Sarthe, Haute-Garonne, Hérault, Eure, &c. The number of divorces shows an increase of 412 over that of 1892, the proportion per 100,000 households being 81. Of the 6184 divorces the Seine department is responsible for no less than 1673—a proportion of 272 per 100,000 *ménages*. The Lozère department has the credit of having steered absolutely clear of the mode of relief placed at the disposal of *mauvais ménages* by M. Naquet. It is perhaps not generally known in England that the above-mentioned author of the Divorce Law, and former mentor of the late General Boulanger, was a distinguished chemist. His association with divorce proves him to have been fonder of analytical than of synthetical experiments.

Dr. Hergott.

This distinguished obstetrician (the father, not the son) was at the last meeting of the Académie des Sciences elected a corresponding member in the Section of Medicine and Surgery by 32 votes, as against 6 accorded to Dr. Laveran of paludic fame.

Prophylaxis of Broncho-pneumonia.

Dr. Hutinel has succeeded in almost stamping out broncho-pneumonia amongst his little patients at the Enfants Assistés affected with measles. The practical extinction of this formidable complication is due to the following precautions: every child is given sublimate baths; every sore, abscess, or crust of impetigo is carefully dressed; the nose and fauces are irrigated several times daily with boric solution or boiled water, and, finally, every child affected with broncho-pneumonia is promptly isolated.

Jan. 29th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Club Practice in Berlin.

THE position of the medical profession in Germany has been entirely modified by the "workmen's sick laws" (*Krankenkassen-Gesetz*). Formerly a young medical man began practice by treating the families of the working class till he became known and got patients among the better classes. Since the above law has come into force (1883) the workmen must form clubs, which are maintained by the contributions partly of the employers and partly of the workmen themselves. These clubs are obliged to provide the members with free medical attendance and medicine, and to pay a weekly sum if illness incapacitates them for work. The committees of these clubs, in order to pay as little as possible for the treatment of their members, appointed

a limited number of medical men and gave them a fixed annual salary on the condition that they attended the members free of charge. Thus club practice was withdrawn from general competition, and the position of the young medical men who were not fortunate enough to get club appointments became difficult. For the club members, too, it was a great drawback that they could not choose the medical man they liked, but had to apply to a practitioner in whom they had very often no confidence. No wonder that a combination, consisting chiefly of young medical men, made efforts to alter this state of affairs. They claimed that the united clubs should no longer appoint a limited number of medical officers with fixed salaries, but that every medical man who agreed with the club terms should be allowed to attend its members. They succeeded, indeed, three years ago, and a new system was adopted by some of the most important clubs. This system was that the clubs paid a certain amount (three marks a year) for every member, and that the total sum was distributed among the medical men according to the number of consultations they had given. All the medical men who were willing to treat club patients on these terms formed an association called the "Free Choice Society" (*Freie Arzt-Wahl*), into which every medical man could be admitted. At the end of 1894 more than 1100 Berlin practitioners belonged to the society. By this agreement club practice was, to the general satisfaction, open again to all the members of the profession. Also the sick workmen were very satisfied with the reform, and when more and more clubs adhered to the "free choice movement" it was expected that the old system would soon be entirely abolished. To the general surprise, the largest of these clubs (that of the unskilled workmen) declared at the end of last year that they would no longer admit every medical man without distinction to club practice. They asserted that many of the younger practitioners, to gain the favour of the patients, had ordered too many and too expensive medicines, that they had often extended the treatment too long, and that they were incapable of distinguishing the really sick from those who only feigned illness in order to be relieved by the club. These different things were said to have brought the clubs to the verge of bankruptcy. A still greater injury was done to the "free choice system" when the municipal authority, who have the legal control over the clubs, ordered them to appoint again a limited number of medical officers. Several did so and elected 150, but still adhered to the system of paying, not a fixed salary, but a sum according to the number of consultations. The importance of the club practice question will be clear even to foreigners if they consider that in some quarters of the town occupied by working people nearly 90 per cent. of the male and a large proportion of the female population belong to clubs. If the "free choice system" is given up definitely the result will be that the medical men who practise in these districts, but do not hold appointments, will make very little. We do not yet know the end of the matter, but the future of many Berlin medical practitioners depends on its issue.

Collective Investigation concerning Antitoxin.

An official investigation of the results of sero-therapy will be made by the Imperial Government. The hospitals of any importance throughout the empire are invited to take part. They must give a minute account of every case treated; if bacteriological examination was performed they must say if only Löffler's or other bacilli have been found; also they are asked if the curative effect of antitoxin was certain, probable, or not at all remarked. The answers are to be sent to the Imperial Health Office, where they will be collected and published. Another collective investigation will be made by the *Deutsche Medicinische Wochenschrift*, but this is not confined to hospitals only, but extends to all practitioners in Germany. Cards have already been sent to them with the following questions: How many of your patients were treated with, and how many without, antitoxin? How many in both these categories recovered and how many died? There are subdivisions for the ages of the patients, and the complications are also to be reported. The scientific and statistical work will be done afterwards by a committee, whose principal members are Professors Behring, Leyden, Heubner, and Ehrlich, and some other leading men.

A New Chair in the Medical Faculty of Berlin.

Dr. Heubner, Extraordinary Professor for Children's Diseases, has been promoted to the rank of Ordinary Professor. In foreign countries one scarcely understands the great

difference between an ordinary and an extraordinary professor, and English readers not acquainted with German university customs will not think this fact worthy of mention. They may be informed that only the ordinary professors belong to the board which controls the affairs of the faculty, nominates new professors and lecturers, promotes medical man, &c. They elect the dean of the faculty and the rector at the university, the highest rank in academical life, and are themselves eligible for these offices. Besides, they get fixed appointments from the Treasury and the fees for the faculty's degrees. The extraordinary professors have none of these advantages, either ethical or pecuniary, but earn only the salaries paid by the students for their lectures. Whilst the faculty may elect as many extraordinary professors as they think proper, the number of ordinary professors is strictly limited to the principal branches of medicine, anatomy, physiology, clinical medicine, surgery, and some others. The faculty boards are usually not much inclined to propose an increase of the ordinary professors, and Professor Henoch, the well-known predecessor of Heubner, (whose text-book has been translated into English), made long but unavailing efforts to have a new chair for children's diseases created. He suggested that this would be an honour conferred not on himself but on the specialty he taught. In many other universities—especially those of Bavaria, Saxony, and Austria—the number of ordinary professors is much greater than in Berlin, and the diseases of children, and diseases of the ear and of the skin have long since been found worthy to be represented on the faculty board. No doubt it would be still better if all these old-fashioned distinctions could be abolished and all professors have equal rights and equal duties; but this is, of course, not to be obtained without a total reform of university organisation.

Jan. 28th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Health of the Pope.

FROM Jan. 6th to 16th the Pope had a "leggero raffreddore" (slight cold), a return of the same indisposition which, as mentioned in THE LANCET of Dec. 15th, 1894, caused the suspension of all but private audiences on the part of His Holiness. On the 16th, however, the Commendatore Dr. Lapponi was able to assure inquiring visitors that the ailment was well nigh gone, a slight depression of voice being all that remained of the symptoms. Prudence still counselled the Holy Father's keeping his apartment, and only on the 17th did he resume his audiences, the first to be received being Monsignor Francica-Nava, the nuncio at the Court of Brussels, who was followed by Cardinal Galimberti, on important business relating to the presidential crisis in France. The responsibility resting on Dr. Lapponi and his coadjutor Dr. Topai is exceptionally great, particularly in times like these, when their octogenarian patient has the most delicate and difficult affairs on hand—the change from M. Casimir-Perier to M. Faure having disturbed negotiations approaching completion in France, and the substitution by Italy of the Franciscan for the Lazzarist missionaries in Abyssinia threatening unpleasant complications between the Tuileries and the Quirinal.

Sanitation and Hygiene in Italy.

The Direttore di Sanità Pubblica, Professor Pagliani, has just issued his report on the hygiene and sanitation of Italy during the last six months of 1894. Stated broadly, the health of the kingdom during that *semestre* has been satisfactory. There was but one serious epidemic during the six months, and that was the typhoid outbreak by which, in December last, Syracuse was so severely visited, when, in a few days, as many as 160 persons were attacked and twelve died. The phenomenon was tracked to its customary cause—the pollution of the water-supply. A thorough overhauling of the aqueducts and cisterns was instituted, and its completion has been followed by the practical disappearance of the malady from Syracuse.

Equally efficacious were the measures adopted by sea and land against the importation of cholera from its foci in Turkey, in Portugal, and on the French Mediterranean littoral. In fact, all danger from European ports having been averted, the Direzione della Sanità Pubblica was able, in November last, to suspend *sine die* the medical visitation and disinfection of suspected ships hailing from most of these harbours. These measures, however, have still to be enforced on vessels coming from the Black Sea, from the colonial French ports, from those of Russia and of Roumania on the Danube, from the Sea of Marmora, from the Aegean and from the North African littoral (excluding Tripolitania), and from Brazil. The various sanitary stations in the Adriatic, the Ionian Sea, and in Neapolitan and Tuscan waters (comprising the admirable one described in THE LANCET of Oct. 20th, 1894) have all done good service, the disinfecting processes particularly being carried out with promptitude and thoroughness. The "risanamento" (sanitary rehabilitation) of Naples, to turn to another topic, in spite of interruptions and restrictions due mainly to financial difficulties, is now on a more effective footing, and the Direzione della Sanità Pubblica is in hopes of registering still more progress at the close of the next *semestre*.

The Conditions of Child Labour.

The conditions of child labour in the subterranean industries, especially the sulphur mines in Sicily, have engaged the Ispettorato delle Miniere (mining inspectorship) in an important study which has this day been made public. The gravity of this question is known to readers of THE LANCET. On March 10th, 1894, you called attention to the fact that in Sicily, for example, in the province of Caltanissetta alone, the physical deterioration of the young is deplorable. Dr. Mosso, the Professor of Physiology at Turin, as the result of investigations on the spot, revealed the appalling results of mining labour in the island, results which explain the fact that in the four years from 1881 to 1884, out of 3672 young "solfurari" of Caltanissetta examined by the officers of the military levy only 203 were found fit for service in the army. The "study" just issued by the Ispettorato—the substance of which was brought before the recent International Congress at Milan for the prevention of casualties and deteriorating influences connected with labour—does not confine itself, however, to Sicily or to sulphur mining, but includes all subterranean operations throughout the peninsula and its islands, such as the lignite mines of Umbria, Tuscany, Sardinia, Lombardy, and Piedmont; the lead and zinc mines of Sardinia; the iron mines of Elba; the marble quarries of the Apuan Alps; the "pizzolana" pits in the Roman and Neapolitan "campagna"—in short, all the industries pursued underground, including even the tunnelling works in railway construction. The monograph, for such it really is, covers too vast a space to be more than referred to here. But its data, its conclusions, and its practical recommendations will be found of interest in other States besides Italy—wherever, in fact, labour is carried on removed from the light of day.

Insubordination among Students.

Undergraduate insubordination has lately assumed epidemic proportions throughout Italy—Rome, Pisa, Bologna, Padua, and minor schools like that of Parma, having become the scene of riotous outbreaks on the part of the students. To our British ideas there is far too pronounced an interest in current political affairs among Italy's academic youth, any public incident or "new departure" in the legislative sphere sufficing to engage the undergraduates in keen personal controversy, sometimes with their teachers, sometimes with this or that Education Minister, invariably (I may add) to the prejudice of their studies and the grave breach of that continuity of work and discipline without which academic qualification can never be sound. For the present, the worst of these outbreaks is over; but there is no saying when a new wave of excitement or enthusiasm may reproduce the turmoil and the anarchy so recently running its disastrous course throughout the universities. When, in 1860, Italy became united and independent, her great Minister, Massimo d'Azeglio, said: "Now we have to make Italians!" Certainly the remark, after a whole generation of "unity" and "representative institutions," has lost none of its sting, if the academic history of the last few weeks has any practical bearing on the future of young Italy.

Jan. 21st.

THE INDIAN MEDICAL CONGRESS.

THE SECTIONS.

OBSTETRICS AND GYNÆCOLOGY.

DEC. 24th, 1894.

Presidential Address on the Influence of Race and Climate upon Obstetrics and Gynæcology in India.

[SURGEON-MAJOR H. PEERS DIMMOCK, Professor of Midwifery, Grant Medical College, Bombay, delivered his presidential address. After a preamble dealing with the importance of the subject and the difficulties incidental to its treatment in an Oriental country, he proceeded to the consideration of puerperal fever, saying:]

"Since Professor Semmelweis first placed us in possession of the axioms of puerperal fever there has been accumulated a mass of evidence to demonstrate their truths, and fresh knowledge had been added to them, especially by the discovery of the antiseptic system of Lister. But though the ideas of all authorities are fairly well defined there are still many effects and conditions of puerperal fever and points of difference that are hard to reconcile. This is especially the case in a country like India, which teems with forms of pyrexial diseases that are liable to complicate the pregnant and puerperal states. To indicate all forms of puerperal fever as puerperal septicæmia, whatever the infective cause and however much the symptoms may vary, is alone sufficiently confusing when we are brought face to face with their actual protean clinical facts; and, on the other hand, to seek to differentiate each and every kind of puerperal fever according to its features, whether of cause or effect, would lead us into an interminable phraseology that would be too awkward for any practical purpose. The old familiar term 'puerperal fever' as a main distinctive indication is rendered sufficient for all purposes by the affix of a descriptive adjective for the special condition or cause associated with the pyrexia of the puerperium, which, after all, is the generic meaning of puerperal fever. Thus the words 'traumatic, septicæmic, and pyæmic puerperal fever' would describe fairly well the form of puerperal pyrexia that was associated with traumatism, septicæmia, or pyæmia. Any local effects can, at the same time, be described as complications, and we should thus have a designation like 'traumatic puerperal fever with pyo-metritis,' and so on. To eliminate the special characters and peculiarities of these and other complex puerperal fevers we require a very extensive knowledge of their clinical features, and in India we are confronted with so many kinds of the fever type of disease that such an inquiry is sure to be full of immensely interesting and intricate possibilities. Clinical observation and deductions therefrom are always most attractive, and have been naturally the principal methods of elucidation of disease throughout all time of medical knowledge. They demand the first attention of the physician, and nowadays, waited on by pathology and its youthful hand-maid bacteriology, they are yielding most fruitful results. In these rapidly progressive days we are continually on the outlook for some fresh means of divining the actual causes and conditions of disease, and those occurring in the pregnant state and the puerperium are so environed by their own peculiar accompaniments that there is a separate and special field for the study of them both clinically and pathologically. In a research into the causes and effects of puerperal fever in India we are confronted not alone with special disease entities, but also with the many conditions peculiar to the country itself—of season and meteorological events, of race, of surroundings, of habits, of intercurrent disease, and of the preliminary effects of the pregnant state under such conditions, in all of which I can only suggest what a large field there is for philosophical, thoughtful, scientific, and useful inquiry, especially to those members of the profession who actually practise amongst the people and are intimate by race association with their modes of life and other influences. In a tropical climate the main influence would, of course, be that of the high temperature of the air, by which all developments and changes are brought about with a greater rapidity, so that the tissues become less stable, less hardy, and so tend to disintegrate quickly when once a rift is opened in their continuity. The extreme changes of intense dry stimulating heat in the summer and of a depressing heat that comes with the onset of the monsoons present aspects of variation, apart even from acclimatisation, in the organisms of all who are subject to them, and still more of those whose temperaments are liable to an easy divarication of the physiological

equilibrium either towards depression or exaltation. As examples of the differences of disease types under such circumstances may be taken the sharp attacks of fever which occur in the drier seasons of the year and the low forms of continued fever and malarious cachexia with engorgement of the abdominal viscera, especially of the spleen, such as take place in humid states of the atmosphere and damp climates. Frequently the slow development of malarious cachexia produces in the pregnant woman a form of pernicious malarious anæmia which is characterised towards the end by intense anæmia, œdema, and an enlarged spleen and liver, for the sluggish circulation and nervous debility encourage congestion of the organs. Race may show its influence in the various tendencies that are developed out of evolutionary characteristics, as, for instance, the neurotic type, rendering the woman more susceptible of nervous impressions and reactions, often altering the characters of disease by super-added nervous phenomena, such as high temperature quickly subsiding. Habits of food, of drink, and of luxury are worthy of reflective consideration, and it may be accepted as a fact that pregnant women whose food is of a vegetable and non-stimulating kind will have less stamina in enduring prolonged pain and exhaustion, but will recover more quickly from ordinary trials, than those whose food is of a more generous description, while again the latter will be more liable to inflammatory reactions and rapid tissue changes, such as sloughing from traumatic injury. The surroundings of pregnant and puerperal women are manifold in their effects, and include those of the room, the house, the village, and the town, septicæmic, zymotic, and malarious puerperal fevers being the most likely outcome of dangers from these sources.

"I have had the usual experience of most inquirers in being baffled at the outset by forms of puerperal fever that I have had to deal with in India, and what impressed me most in the first instance with some of the cases was their unusual and surprising resistance to rigid antiseptic and aseptic precautions. A study of a series of temperature charts and the effects of various treatment on the temperature gave the true line of explanation. When once the clue was given the opening of some of the hidden processes was shown, so that I venture to tabulate certain forms of complex puerperal fever as follows:—

1. Malarious intermittent puerperal fevers.
(L) quotidian; (B) tertian; (Y) quartan.
2. Malarious remittent puerperal fevers.
3. Thermic do. do.
4. Dysenteric do. do.
5. Syphilitic do. do.

"I have no doubt that others will be added to their numbers as the science of medicine progresses and wrests from the chaos of uncertainty the many forms of Indian fevers. The protozoic causes of these fevers may develop in the pre-pregnant or the pregnant state, and be carried on into the puerperal state to be further impressed with a septicæmic pyrexial element, which is the result of the condition of the tissues and systems of the puerperal patient, rendering the unusual secretions and excretions more liable to the action of infective agents; or these causes may be latent in the system, manifesting no symptoms until they are excited to action by the onset of labour or roused to a more powerful influence by a septicæmic pyrexia. To deal with the group of the malarious forms of puerperal fever I submit cases with their accompanying charts. Many of you may be familiar with an experience that pregnant patients in this country who contract malarious fever, or whose systems are inoculated with its organisms, are very resistant to treatment for malarial fever or cachexia, either because the blood and tissues of the pregnant women are very retentive or reproductive of the disease factors, or because they are specially vulnerable to and ineffective in repelling their ravages. How often it happens that a pregnant woman suffering from malarious fever is treated by all the known methods, which produce no yielding of the fever for some time, and when the pyrexia runs high miscarriage is sooner or later brought about. The quinine may here be wrongly blamed for the mishap, which was in reality due to the overheated blood current and to the poisons circulating in it, and I have elsewhere protested against this shibboleth of the objection to use quinine in doses that are adequate for the control of the disease. At the same time we must not forget that sometimes malarious fever is not affected by quinine, and that the system may also be inoculated with previous treatment by

that drug, so that it fails to give the expected result. It may be some days even before an ordinary attack of ague in a pregnant woman can be controlled, and if the case is allowed to go on without treatment the disease gets such a grip of the patient as to be uncontrollable, and if labour or miscarriage results an additional puerperal septicæmia is an inevitable result. We are also all familiar with the sudden appearance of malarious fever coincidently with a severe shock to the system, such as a fracture of a bone, the passage of a catheter, or an overwhelming emotion, and recollecting that the dilatation of the os uteri is often accompanied by a rigor I have attributed the sudden accession of a high temperature at the commencement of labour to a disturbance of latent malarious poison by the vascular, nervous, and tissue changes wrought by the mechanical process of dilatation. It is difficult to account in any other way for the sudden appearance of these fevers at such crises when they have not been preceded by any signs of a taint lurking in the body, and I believe that the organisms are really latent and that their sudden activity is because the balance of nervous control is disturbed by the event of labour, the vitality of the cells and leucocytes are diminished, and their ranks are thereby thrown open to the invaders, because the reflex irritation to the nervous centres causes through the trophic nerves changes in the metabolism of the body, and through the sympathetic nerves changes in the circulation which facilitate such morbid processes. It is the same with malarious fevers that develop after labour in association apparently with the stimulus to the plasmodia of slight or severe puerperal septicæmic pyrexia, and in these instances the puerperal fever will be established with the thread of malarious fever running through it and giving a distinctive character to the temperature record, for the treatment of which complex condition it is necessary to combine methods applicable to both the diseases. Further, whenever malarial fever is developed in the puerpera there is a liability to what may be called an autogenetic form of septicæmia as a result of the high temperature of the malarial fever, for the lochial secretions decompose rapidly within the genital cavity, and their poisons are absorbed into the system, so as to produce the usual septicæmic effects in addition to those of malaria, and thus to cause a continuance of pyrexia during the intervals that would be remissions of the malarial fever, and to exaggerate the high temperature of the pyrexial stage of the malarious attack. Very high and alarming temperatures are developed in this way. Again, puerperal women who have malarial cachexia may have progressed favourably even beyond the first week, when they expose themselves to a chill, and this is followed by the typical phases of the rigor, of the pyrexia and sweating stages of ague. The lochia become offensive, the temperature is continuously high, and there is an intermittent recurrence of the ague and increased pyrexia. It takes several, sometimes many, days before recovery is brought about, while if proper measures are not adopted the case may end fatally. In all these cases, associated with malaria of whatever kind, we have not only general effects to deal with, but also those local effects that are inevitably associated with the traumatism of labour. The lowered vitality of the tissues makes them very prone to take on a sloughing or even gangrenous character, and such conditions are not only resistant to repair and will heal slowly, but add a further and serious danger to the case from a multiplication of poisonous agents. If no treatment of the constitutional state is adopted their ravages will increase to a terrible extent, so that I have seen cases of malarious cachexia in the puerpera where the genital passages have been in a gangrenous state throughout their whole area; consequently when artificial traumatism is produced by the use of instruments particular precautions are necessary to guard against such effects, and although there may be no apparent symptoms most rigid attention should be paid to the local antiseptic treatment. Another effect of malarious cachexia and of malarious fever during pregnancy is to cause a placentitis, from which the placenta becomes adherent, and so adds a further danger to the case at labour time. The shock of manual detachment may set up the pyrexia of malaria or there may be infection from without by the operation. Such patients often complain of excessive tenderness over the uterus during pregnancy, which is no doubt due to the inflammation that is going on. Another effect of malaria in the puerperium is to produce intense neuralgia of some of the sexual organs. It may be the uterus that is thus affected, in which case it is probably caused by some inflammation of the nerve filaments com-

municated from a placentitis, or an actual primary neuritis of malarial origin, and the patient may suffer great pain, especially in connexion with the after-pains. I have found the uterus in these patients to be excessively tender, and the condition has mostly yielded at once to quinine and anti-neuralgic drugs. I can recall one case of acute neuralgia of the ovary which followed a miscarriage. The patient did well in all respects except that at a regular hour every afternoon she suffered from acute agonising pain in the left ovarian region. It yielded at once to large doses of quinine. Post-partum hæmorrhage is also very likely to occur, mostly from the effects of the placentitis, but also in consequence of the state of the blood, of heightened blood pressure, and of the defective contractile power of the uterine muscular tissue. Diarrhoea is a frequent occurrence and is of great importance. In all conditions of health or disease in people living in India, whether native or acclimatised, there is a primary climatic potentiality towards diarrhoea. A chill, an irritant, or disease are likely to be accompanied by it in ordinary individuals, and in puerperal fever particularly this natural tendency is exaggerated by the secondary morbid and derivative tendency of the system to relieve itself of the toxæmia through the mucous membrane of the intestines. Accordingly the usual dose of castor-oil will frequently start a severe diarrhoea, and sometimes almost choleraic symptoms are caused by what seems a slight cause. Rheumatism is an occasional complication: the connexion between rheumatism and malaria is outside the present subject, so I will not discuss it. Mania is also a not infrequent sequel and has partly to do with the state of health and partly with the high temperature. The higher the temperature the more likely are the psychological centres of the brain to be injured and disorders connected with them to follow. The fœtus is, as a rule, not particularly affected, except in nutrition, and so suffers from fever at birth only in occasional cases, and this is probably due to the resistant and destructive power of the placental structures, which thus guard the entry of the foetal area from deleterious matters. A similar result occurs in some cases of syphilis contracted during pregnancy."

[Surgeon-Major Dimmock then quoted cases of various forms of malarious puerperal fevers with their treatment, laying special stress on the point that quinine should be administered hypodermically in order to avoid the effect upon the digestive tract. He continued:]

"The next series of puerperal fevers is that of the dysenteric form, which arises in connexion with a true dysenteric attack. The dysentery itself generally originates during pregnancy, either at full term or earlier. In the former labour and in the latter case abortion or miscarriage are very likely to occur, and so we have a puerperal condition with the dangerous concomitant of very poisonous alvine discharges. Infection of the genital passages from these produces an extraordinary disease of the puerperal fever type. Dysentery itself is very obstinate in pregnant women, and there are no doubt turgescence of the mucous membranes and changes in the circulation, which make the disease persistent. It is also desperately resistant to remedies, so that a dysentery of an acute form in a woman near the end of pregnancy is peculiarly dangerous in this respect as well as from the further risks of exciting premature confinement and of following up its primary havoc by an infection of the system with the faecal toxins. The most careful treatment often fails to prevent these consequences, and sometimes, when the case has taken a favourable turn, it is liable to relapse. Much may be accomplished by repeated large doses of ipecacuanha, opiates, sedatives, and antiseptics internally and externally; ipecacuanha is sometimes very well borne, so that I have been able to give thirty grains twice a day. No treatment is effective unless the food is absolutely unirritating, and peptonised milk and lime water are the only diet that serves the purpose. I have included an example of another series of cases, those of the syphilitic, because I have found peculiar results in the puerperal state in women who are strongly tainted with the specific disease.

"CASE 7.—M. M—, aged twenty, Hindu, para, admitted in labour on April 26th, 1894, and in consequence of a tedious second stage was delivered by forceps on the morning of the 27th. There had been no complication of pregnancy, but the patient had appearances on her body which indicated syphilis. On admission the temperature was 102.5°F. and the pyrexia continued after delivery. The case was treated antiseptically for simple septicæmia, and somewhat improved, but again relapsed. On the twelfth day of the disease iodide of potassium and santolin powder were

given, with a gradual improvement, but the patient still remained feeble and prostrate and in bad nutrition until inunction of mercury was resorted to on the twentieth day of the puerperium. The improvement was then rapid and satisfactory, and the patient was discharged well on June 11th. This case suggests many questions. Why puerperal fever should develop under such conditions, and whether it is puerperal fever, whether it is a climatic effect on the syphilitic patient, whether the syphilis stirs up an irritative fever in the system, or does the syphilis render the body more susceptible of septicæmia, and the septicæmia more persistent than usual, until specific remedies are used. In cases of puerperal fever of a continuous type associated with increasing cachexia, where the child shows also faint symptoms of congenital syphilis, it is always advisable to administer specific remedies. Of other forms of Indian puerperal fever the thermic is the one most frequently met with, and of course its main characteristic is intense and resistant hyperpyrexia. It is usually the sequel of pyrexia occurring before or during labour, although it may occur during the puerperal state, being most liable to happen on the third day in connexion with the usual slight fever which results from any affection or lacteal disturbances on that day. It may be associated with puerperal eclampsia, and cases of this kind that occur without albuminuria indicate an intense congestion of the meninges. Complex cases of puerperal fever in association with other diseases of the pyrexial type must sometimes occur."

[Surgeon-Major Dimmock paid an eloquent tribute to the value of good nursing and concluded:]

"Ne let the man ascribe it to his skill
That thorough grace hath gained the victory.
If any strength we have, it is to ill,
But all the good is God's, both power, and eke will."

PROCEEDINGS IN SECTION.

DEC. 26TH, 1894.

The following are abstracts of papers read at the Congress:—

Malarial Influence in Abortion and Sterility.

MR. ARTHUR J. WEATHERLY, M.R.C.S. Eng., L.R.C.P. Lond., in his paper under the above title said:—"From my experience in Africa, Florida, and India, I do not think sufficient stress is laid on the malarial influence in abortion and sterility. In my practice I have had the following cases:—

	Confinements at term.	Abortions.
England	56	2
Healthy parts of South Africa where malaria is unknown	35	2
Unhealthy parts of Africa	40	20
Florida	30	22
India	60	28

And a large proportion of these cases, though living in malarious districts, did not abort at times of an attack of fever—in fact, in very many cases malaria only showed itself in the habit of abortion. I have also noted that a very much larger proportion of women are sterile in malarial districts than in others, and that if they reside many years this sterility becomes permanent, whereas if they leave before too long a time has elapsed they bear children. Of course, in this latter class I do not include those who, miscarrying in malarial districts, bear children in non-malarial climates. Perhaps, as this paper has to be short, the quoting of two typical cases will be sufficient. I would like the experience of others in malarial districts on this subject, as I think its importance is not sufficiently recognised. A woman had frequent miscarriages in the plains. She was constantly in malarious districts. She was treated by various surgical and medical measures, including scraping out the uterus, both in India and in London. On her return to a malarious district, however, she invariably miscarried—generally in the third month. I saw her early in her fifteenth pregnancy (after ten following miscarriages in the plains), and advised her to go at once to the hills and stop there, giving her a tonic of citrate of iron, quinine, and strychnine, and enjoining recumbency for ten days at a time when her period would have been due if not pregnant. She went safely to term. Another woman had lived for years in a malarious district, and had never been pregnant. The first year on coming permanently to the hills both husband and

wife suffered much from fever, but in the second year both were in good health, and the woman became pregnant and went safely to term. These are only two instances of very many. The influence of malaria on abortion and temporary sterility is still more marked in the very deadly malarious climate of Florida, where I saw twenty-two cases of abortion to thirty confinements at term, and ten cases of temporary or permanent sterility in a period of two years in a very small district. In a malarious strip of coast country in East-south Africa sheep and cattle constantly abort, and, in fact, the natives have recognised this so well that they keep their breeding stock inland and only send their stock into this strip of country to fatten. In this country there were no Europeans, but abortions were frequent among the native women, though I could get no figures as to the proportion. A large number of women who have been in malarious countries, even if they do not abort, suffer very much more when pregnant at the times when their period would have come on than is common with women who have not been in a malarious country, and require very strict precautions as to recumbency, &c., at such times. In such cases I have found that giving quinine, rather than tend to bring about abortion, certainly tends to ward it off. Though my experience does not extend over very many years, it embraces malaria in very different climates; but in all with the same effect in bringing about abortions and sterility, and proves a danger in the former case, which, I think, is not sufficiently recognised and guarded against."

DEC. 27TH, 1894.

Biliary Cirrhosis of Children.

MR. JOGENDRO NATH GHOSE, L.M.S., read a paper on the above subject. He said: "Under this title I venture to lay before you some facts connected with what I may call a new disease, which has lately appeared among the children of certain classes in Calcutta and other parts of Lower Bengal. On account of its generally unsuccessful treatment and fatal termination it has of late drawn considerable attention and been the subject of serious thought in the minds of medical practitioners and the general public. I call it a new disease, because it has not yet been treated in any of the current books on practice of medicine. The short descriptions that have appeared in some of the recent medical works of a similar liver complaint are very vague and imperfect, and they do not seem to refer exactly to the particular disease now under discussion. It also escaped the observation of early European practitioners, who in most subjects have left behind valuable records of their Indian experience, and until twenty years back it scarcely drew the attention of our old and experienced medical brethren. The literature on the subject of this disease is, therefore, still very meagre. The peculiar features of the disease are that its onset is insidious, that it usually prevails among infants under the age of one year, and that it seldom attacks children after they have passed the third year. The attack generally commences on the seventh or the eighth month, chiefly at the period of weaning or the mother's next conception. The children of some parents are particularly liable to the disease. In one family I have observed fourteen children of the same parents die one after the other. Cases of attacks in the third or fourth month, or even a few days immediately after birth of the child, have also been noted. Children in Calcutta, as well as in the districts of Bengal, whether malarious or non-malarious, are equally subject to it. It makes no difference between the children of the intemperate, the sober, or the teetotaler. It spares neither rich nor poor, though the well-fed children of the wealthy and the middle classes are more liable to it than the ill-fed children of the poorer class. Muhammadan and Eurasian children suffer less than the Hindus. Hardly any cases are seen among Europeans. Children who were never put, or put for a short time only, to the mother's breast, and fed with cow's, goat's, or ass's milk, or with different kinds of artificial food, enjoy no immunity from this disease. In those families where the disease prevailed I noticed a few children escape apparently, being nourished by healthy wet-nurses. When the disease was first noticed in Calcutta more cases were found among male than among female children; but of late the proportion seems to be less, and more female children than formerly now come under the notice of practitioners. Still, I shall point this out as a peculiar feature of the disease. Another peculiarity noticed is that the female children mostly attacked are usually the

first-born of the parents, and who are necessarily the objects of great care in a family. It has been observed that a female child escapes the malady after the successive deaths of several males that preceded her, though again the next male child succumbs to it. Children of very healthy parents are not exempt, and the disease appears to be quite unconnected with long-standing purulent discharge, scrofula, syphilis, malarious fever, or any chronic constitutional disease. In a family of several brothers living in the same house and under exactly the same conditions as regards food, it is rare to find the children of more than one of the brothers affected with the disease. In one family of three brothers living together under the Hindu family system one brother lost fourteen children, most of whom died about one year old, while the ten children of the other brothers remained quite healthy. This is the rule, but exceptional cases have come under observation in which the children of two brothers living together were affected by the disease, of the children of a brother and a sister living apart being attacked, and of the children of two sisters living in different families having suffered from the disease. It has also been noticed that in some cases the later children of some parents escape the disease after the earlier ones have, one and all, died of it. The enlargement of the liver is gradual, and is unattended with pain. The subsequent contraction is, however, rapid. The termination is generally fatal, death being mostly due to cholæmia. The disease runs its course in from three to twelve months, though one case has been known to end fatally within a fortnight of the attack, and the patients in two other cases which came under my observation lingered on for three years, and in these cases change of climate was tried in vain. In my experience, out of about 400 cases only 6 recovered. The diagnosis in the case of 3 is, however, open to doubt. Of the remaining 3, one child was sent out for change at the very commencement of the disease, and two recovered after the first symptoms had fully manifested themselves, but in none of these cases was there persistent jaundice, which in my experience is a fatal sign."

[Mr. Ghose then sketched the history of the recognition of the disease.]

"The disease may be defined now as a painless enlargement of the liver, hard and resistant to the feel, beginning with slight fever, occurring in children only, and terminating almost invariably in death. The onset of the disease is so very insidious that, as a rule, nothing is noticed by the parents until the liver has attained a considerable size. To my knowledge qualified medical men of considerable experience failed to detect the disease at the early stage in cases even of their own children. The early symptoms which attract the mother's notice are nausea, occasional vomiting, sallow complexion, warmth of hands and feet, and a certain amount of constipation with straining at stool. The child also refuses food, gets irritable, loses its cheerfulness, wishes to lie down on a damp ground, and gets a little fever towards night or early in the morning. Some thirst also is noticed, as the child looks wistfully at the sight of water and tries to lay hold of the vessel containing it. A slight icteric tinge is also sometimes observed in the eyes. When the child is brought under a physician's observation the liver appears enlarged, at times so considerably that it extends as far as the umbilicus or even beyond it to the iliac crest. The skin is harsh and dry, there is slight jaundice, marked constipation, with white stools and bile-stained urine. Ascites sometimes occurs, and later on jaundice becomes intense. With the appearance of this symptom contraction of the liver proceeds with extraordinary rapidity."

[Mr. Ghose next discussed the etiology, being of opinion that the disease always arose from improper feeding and mal-assimilation. He laid special stress upon the practice of mothers suckling their children when pregnant, and in the case of bottle-fed infants upon unwholesome milk. Irregularity in feeding and over-feeding were also cited. Predisposition was mentioned as being a deciding cause, and a number of cases quoted showing that the disease attacks the children of only one wife, while those of the others by the same husband enjoy a perfect immunity. Mr. Ghose then discussed the diagnosis, differential and otherwise, of this disease, pointing out that it was especially a disease of large towns. The duration was from three to nine months. The prognosis was very unfavourable, and treatment, whether dietetic or therapeutic, had been so far unsuccessful. For the pathology and morbid anatomy he referred to an article by Mr. J. B. Gibbons in the Scientific Memoirs, Part VI., and concluded by an appeal to the profession to try to discover

some remedy, since there was nothing in the pathology to justify a hopeless prognosis.]

Biliary Cirrhosis in Children.

Mr. E. MACKENZIE, V.H.A.S., in a contribution under the above title, said:—"When I held charge of a dispensary in North Canara, a tract of country on the south-western coast of the Bombay Presidency, during the years from 1872 to 1880, I had extensive opportunity of seeing, and of verifying by post-mortem examinations, a fatal form of cirrhosis of the liver occurring in children from birth up to three or four years of age. About twenty applications were made to me every year, either for the purpose of eliciting an opinion or for treatment, or that post mortem I would remove the liver so that it might be destroyed separately from the body, under the superstitious belief that the diseased organ was a turtle¹ (a resemblance imparted to it by the shape and appearance of the organ, with the gall-bladder representing the head of the animal), endowed with distinct life, and needing a distinct process of cremation for its extinction. The disease was so well known and generally so easily recognised by the parents that once its existence was established they abandoned all hope of the child's life being spared. As this paper must necessarily be brief I will very concisely give the symptoms and post-mortem appearances observed by the naked eye and microscope; then refer to the cause as being very obscure and confessedly the weakest part of the paper; and, lastly, allude to the very unsatisfactory results achieved by treatment. If by putting forward this paper any good may result in elucidating the cause and the attainment of a more successful plan of treating the disease I should be very glad. The symptoms set in slowly with feverishness, high-coloured urine (staining the clothes a deep yellow), jaundice, anasarca, enlargement and induration of the liver and spleen with slight tenderness over these organs, liver enlargement downwards very considerable (involving both lobes equally), respiration hurried, prominent abdominal subcutaneous veins (especially on the right side), constipated bowels or scanty yellow faecal motions, in a few cases hæmatemesis (in one leading to an abrupt fatal termination) and in others melæna, conjunctivæ bright saffron, and the eyelids and scrotum slimy and oedematous, the latter so intense sometimes that I have been tempted to puncture and let out the yellow-stained serum. The duration of the disease is from one to four months, in cases of shorter duration death being due to hæmatemesis or coma from blood poisoning. The urine is dark and scanty, often thick, generally free from albumen; the bile acids are absent, and there is no leucine or tyrosine to be detected in it. The tissues were deeply jaundiced, the liver was not shrunken or hobnailed, of increased dimensions generally, more solid and firm, both lobes equally affected, surface granular or papillated, of yellow colour from bile-staining, and with predominance of fibrous tissue. On section it is hard and tough, the lobules being almost obliterated from pressure of fibrous growth in the interlobular tissues, around the interlobular bile-ducts, and extending into the lobules. The capsule did not appear thickened, and, although smooth to the touch, presented a granular or nodulated appearance from irregular deposit of the newly formed fibrous tissue within the organ. The lobules were atrophied and surrounded by fibrous tissue, which had permeated the organ throughout, invading and destroying the cells, some of them entirely. The gall-bladder was almost empty, and there was bile-stained serous effusion into the peritoneal, pericardial, and pleural cavities, and into the subcutaneous cellular tissue. The kidneys generally were congested and softer than usual, the capsules peeling off easily; they were sometimes mottled, but not contracted. The spleen was enlarged and more friable than usual. With the opportunities afforded, and in the face of facts before me tending to lead to some certain deductions, I regret I cannot satisfactorily connect cause and effect. Malaria, syphilis, climate, diet, and habits of the people have been considered, but none can be pointed to conclusively as a cause. That the disease is more prevalent in Canara than in other districts of the Bombay Presidency I feel justified in asserting from the fact that, during a service of twenty-six years located in Bombay, Guzerat, Canara, Aden, Deccan, and Sindh, to one case that may have been treated for a malady resembling this in nature in other parts of the country, twenty or more have been seen in Canara during the same time. The disease has been confined to Brahmin

¹ After which it was called "Kurmrogh."

children, or in those approaching in habits and mode of living to the Brahmins, but why it should be peculiar to them is not clear. A single instance was not found in a Sudra, Christian, or Mussulman, although all lived very much alike, partaking of very much the same kind of food, as rice, fish, pulse, vegetables, and condiments, excepting for a few sects of Brahmins (who formed only a fraction of the bulk of the population), who did not use fish. Looking upon infant feeding as a likely cause, there is nothing to show that the mode is more faulty in Canara than it is anywhere else. Here, too, the children have to battle against unsuitable food given them by their parents, like balls composed of grain flour and seasoned with aromatics kept prepared for weeks and used as required. The early administration of starch and the free use of spices and condiments at a tender age tend no doubt to set up fermentative changes in the stomach and become chemical irritants. Brahmin women in childbed adopt a diet which may conduce to the disease in the new-born infant, in whom it has been seen. They restrict themselves to the use of a strong decoction of black pepper to allay thirst, abstaining from liquid of any other kind, and as food use balls made up of boiled rice, ghee, and coarse sugar. Is it possible that the pepper here, acting through the mother's milk, might start irritation in the infant liver? Canara is a malarial district—heat, vegetation, and moisture tend to make it so in a pre-eminent degree; but the disease is as common on the sea coast as it is in the interior, where one would suppose malarial influences would be greater. Malaria, moreover, is not peculiar to Canara—then why should the disease be more prevalent there than in other parts of the country? Evidence pointing to syphilis as a cause is also wanting, and alcohol is out of the question in children so young. The people in those parts do not indulge to any excess in alcohol, tobacco, opium, or hemp, their favourite luxuries being *pān* and *supari* (betel leaf and areca nut), which can hardly have any connexion with the disease as a cause. The treatment has consisted of counter-irritation over the liver, the application of ung. pot. iodi. with ung. hydr., or tinct. iodi. Internally purgatives, calomel or hydr. c. creta, slowly administered and continued for some months; potas. iodic., ammon. chlorid., with acid. nitro-muriatic dil., syrup. ferri iodic., quinine, diuretics, and diaphoretics. All have failed."

Obituary.

JAMES LAWRENCE, M.D. ABERD., L.R.C.P. AND F.R.C.S. EDIN., J.P.

WE regret to announce the death of Dr. Lawrence, which took place on Jan. 10th, after a lingering illness of diabetic origin, at his residence in Cumnock, Ayrshire. Dr. Lawrence had an extensive local practice, which developed from his appointment many years ago to be surgeon to the Lgar Ironworks. He was born about 1828 in Kirriemuir, Forfarshire, and at an early age entered as a student in the Faculty of Arts in Aberdeen University. He subsequently attended the medical classes, and after the usual curriculum qualified as L.R.C.S. Edin. in 1849. Before long he commenced practice in Ayrshire, as already mentioned. The professional success which he obtained, together with his habits of studious diligence, induced him in 1860 to enlarge his medical qualifications by graduating as M.D. of his university and taking the diploma of L.R.C.P. Edin. In 1867 he became a Fellow of the Royal College of Surgeons of Edinburgh. Dr. Lawrence was very popular in the district, and his benevolent disposition endeared him to the poorer class of his patients. His death leaves a notable blank in local society.

A VACANCY in the office of obstetric physician to the Manchester Royal Infirmary caused by the retirement of Dr. Lloyd Roberts has been filled by the election of Dr. Archibald Donald. Dr. Donald's long connexion with St. Mary's Hospital, Manchester, is looked on by his colleagues as a guarantee that good and efficient teaching of the students will be forthcoming from him.

Medical News.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following have passed the Final Examination:—

A. S. L. Burke, J. Cairns, M. A. Corcoran, J. H. J. Davys, M. Delaney, J. Fleming, W. A. Gordon, R. D. Jephson, T. O. Jordan, H. G. Martin, W. F. A. McCann, W. Stratton, and J. H. Walsh.
Passed in Medicine.—J. W. Griffin, E. C. Hodgson, and E. J. K. Hogan.
Passed in Surgery.—C. Cavenagh, J. T. Harold, E. C. Hodgson, E. J. K. Hogan, H. T. J. Kennedy, and J. F. Sheppard.
Passed in Ophthalmology.—C. Cavenagh, J. T. Harold, E. J. K. Hogan, H. T. J. Kennedy, J. F. Sheppard, and H. E. Stone.
Passed in Midwifery.—C. Cavenagh, J. T. Harold, and H. T. J. Kennedy.
Passed in Hygiene &c.—J. J. Dolan, J. W. Griffin, and E. C. Hodgson.

THE seventy-first annual meeting of the Glasgow Eye Infirmary was held on Jan. 23rd, Sir James King, Bart., presiding. The total number of new cases during 1894 was 15 267; the in-patients amounted to 1419. A large proportion of the cases were the result of accidents in factories and mechanical works, and some arose from mishaps with bottles of aerated water. The treasurer's statement was satisfactory, the ordinary income being £300 in excess of the expenditure.

THE SANITARY INSTITUTE.—The nineteenth London course of lectures and demonstrations for sanitary officers commenced on Friday, Feb. 1st, at the Parkes Museum, Margaret-street, W. The first seven lectures deal principally with Physics and Chemistry, and serve as an introduction to the main course. Dr. R. T. Hewlett will lecture on Elementary Bacteriology on Tuesday, Feb. 12th. Among the names of those who will deliver the more advanced lectures on subjects pertaining to public health are the following: Sir Douglas Galton, Dr. Herbert Manley, Professor Wynter Blyth, Dr. J. F. J. Sykes, Dr. Arthur Newsholme, Professor Bostock Hill, Dr. Louis Parkes, Dr. Edward Seaton, Professor Corfield, and Dr. L. W. Darra Mair. Tuesdays and Fridays are appropriated to the lectures, and Wednesdays and Saturdays to demonstrations and inspections of various trades and buildings.

MANCHESTER ROYAL EYE HOSPITAL.—The annual meeting of this hospital was held on Jan. 23rd in the Lord Mayor's Parlour at the town hall, Manchester, Mr. David Bannerman presiding in the absence of the Lord Mayor. The report for 1894, which was the seventy-ninth year of the hospital, showed that the total out-patients numbered 21,575 and the in-patients 1336. The latter remained in hospital twenty-one days on an average. The medical staff considered it necessary, on account of the great increase among the out-patients, that the two hospitals—in St John-street and Oxford-street—should both be open every day at the same time, which would involve the appointment of two additional officers—a house surgeon and a dispenser. The financial position of the institution was satisfactory, the income having exceeded the expenditure by £760. A legacy of £2500 has been left to the hospital by the late Mr. Samuel Weston of Manchester.

WE have received the fifteenth annual report (1894) of the Workhouse Infirmary Nursing Association. The objects of the association are threefold: to raise the standard of public opinion on the whole question of workhouse nursing; to secure the appointment of trained ladies as matrons in all separate infirmaries; and to train and supply nurses to workhouse infirmaries in London and the provinces. H.R.H. Princess Christian is patroness and H.R.H. the Duchess of Teck is president. During 1894 the association supplied eighty-two nurses to thirty-six union infirmaries, and appointed superintendents of nurses to Plymouth Workhouse Infirmary and to Barton Regis Infirmary. At Bedford Workhouse a nurse sent by the association was dismissed by the guardians without explanation. In the result much local feeling was excited, the President of the Local Government Board was questioned in the House of Commons, and at the next parochial election all the guardians, except the two who had opposed the dismissal of the nurse, were rejected by large majorities.

THE Hospital for Infectious Diseases, newly erected by the corporation of Bangor, was on Jan. 23rd formally inaugurated by the Mayoress (Mrs. Langford Jones), who opened the door of the principal ward with a silver key and declared the building open for the reception of patients. A large company were present, including Lord and Lady Penrhyn and the Bishop of Bangor. The Mayor of Bangor (Alderman R. Langford Jones, M.R.C.S., chairman of the Sanitary Committee), in the course of an address, stated that patients would be admitted without payment.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.—At the annual meeting, held on Jan. 25th, 1895, the following gentlemen were elected as office-bearers and committee for the year 1895:—President: Dr. S. Woodcock. Vice-Presidents: Dr. J. B. Brierley, Dr. C. G. L. Skinner, Dr. A. Stewart, Mr. A. W. Stocks. Treasurer: Dr. D. Lloyd Roberts. Secretaries: Dr. F. H. Collins, Mr. John Ferguson. Committee: Dr. E. V. Brown, Mr. F. J. W. Cox, Mr. Richard J. Dearden, Mr. Joseph Foster, Dr. Alfred Godson, Dr. A. Helme, Dr. James Holmes, Mr. Walter E. Husband, Dr. E. T. Milner, Dr. W. E. S. Scott, Mr. W. Thorburn, and Dr. J. Watson.

PRESENTATION.—On Tuesday, Jan. 22nd, at a banquet given to Mr. W. P. Bothamley upon the occasion of his resignation of the post of medical officer of the eighth district of the Hackney Union, a very handsome silver fruit and flower stand was presented to him by Mr. J. Owen-Perry, the clerk to the guardians, on behalf of the officers of the Hackney Union, in the presence of a large company. With reference to this presentation the clerk to the guardians writes to us as follows: "By the resignation of Mr. Bothamley the guardians have lost the services of a capable and zealous officer and the sick poor a very kind and sympathetic medical officer."

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society, held on Jan. 17th, Dr. Porter in the chair, Dr. Arthur Hall showed (1) A Case of Acute Myelitis with almost Complete Paraplegia, Analgesia, Acute Bedsores, loss of knee-jerks and plantar reflexes in a girl aged twelve years, terminating in complete recovery; (2) a case of Aneurysm of Arch of Aorta just above the root of the left lung in a woman aged forty-five years; (3) a case of Tertiary Syphilitic Eruption on the face and Periosteal Swelling of the Tibia in a young married woman with no history of syphilis; (4) a case of Tuberculous Eruption of the Skin. Dr. Porter showed a specimen of a Cystic Tumour of right Kidney which had been aspirated during life and the fluid from which contained abundant crystals of cholesterol and blood débris. From a microscopic section it appeared to be of a sarcomatous nature. Mr. Pye-Smith showed a Zwancke's Pessary encrusted with phosphates, which he had removed from a woman aged seventy-three years who had worn it continuously for over twelve years. It had ulcerated through the bladder and also through the posterior vaginal wall, but not into the rectum. It was easily removed after dividing it with a compound bone-cutting forceps, but the patient sank and died twelve days afterwards. Mr. Pye-Smith also showed a Cirrhotic Liver removed from the body of a child aged twenty-two months. There was no alcoholic history. The other viscera were healthy. The liver weighed under twelve ounces and presented a well-marked hobnail appearance. Microscopic sections confirmed the diagnosis. Dr. Wilkinson showed Hydatid Cysts of the Liver and Primary Sarcoma of the Kidney with Secondary Growth causing Fracture of the Femur. Mr. Cayley read brief notes of a case of Convulsions probably due to Poisoning by Camphor.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London, W.C.
Bread, Bakehouses, and Bacteria. Reprints of various papers. By F. J. Waldo, M.A., M.D. Cantab., and David Walsh, M.B., C.M. Edin. 1895. pp. 65. Price 2s.

On Some Symptoms which Simulate Disease of the Pelvic Organs in Women. By A. Rabagliati, M.A., F.R.C.S. Edin. 1895. pp. 77. Price 7s. 6d.

CHURCHILL, J. & A., New Burlington-street, London.

The Galenical Preparations of the British Pharmacopœia. By G. E. Hawthorne, M.B. 1895. pp. 118. Price 4s. 6d.

FISCHER, GUSTAV, Jena.

Elektrophysiologie. Von W. Biedermann. Erste Abtheilung. 1895. pp. 440.

Lehrbuch der Allgemeinen und Speciellen Pathologischen Anatomie. Von Dr. Ernst Ziegler. Erster Band: Allgemeine Pathologie. 1895. pp. 746.

Allgemeine Physiologie. Von Max Verworh. 1895. pp. 584.

GALE & POLDEN, Amen-corner, Paternoster-row, London, E.C.

Gale and Polden's Military Series. Notes on Medical Services in War. By W. H. McNamara. pp. 46. Price 1s.

LEWIS, H. K., Gower-street, London, W.C.

A Handbook of the Diseases of the Eye and their Treatment. By Henry R. Swanzy, A.M., M.B., F.R.C.S.I. Fifth Edition. Illustrated. Edited by Louis Werner, M.B., B.Ch. 1895. pp. 582. Price 10s. 6d.

PHILIP, GEO. & SON, Fleet-street, London, E.C.

How to Live in Tropical Africa. By J. Murray, M.D. Illustrated. 1895. pp. 252. Price 5s. net.

REHMANN, F. S., Adam-street, Strand, London.

On Respiration in Singing. By Dr. Joal. Translated and edited by R. A. Wolfenden, M.D. Cantab. Illustrated. 1895. pp. 208. Price 5s.

SAMSON LOW, MARSTON, & CO., Fetter-lane, Fleet-street, London.

Colour Vision. Being the Tyndall Lectures delivered in 1894 at the Royal Institution. By Captain W. de W. Abney, C.B., D.C.L., F.R.S. Illustrated. 1895. pp. 231. Price 12s. 6d.

SIMPKIN MARSHALL & CO., London.

The Last Abbot of Glastonbury and his Companies: an Historical Sketch. By Francis A. Gasquet, D.D. 1895. pp. 155. Price 7s. 6d. net.

SMITH, ELDER, & CO., Waterloo-place, Regent's-street, London.

Transactions of the Pathological Society of London. Vol. xlv. 1894.

WILLIAMS & NORWICH, Henrietta-street, Covent Garden, London.

Bad Air and Bad Health. By Harold Wager and A. Herbert. 1894. pp. 98. Price, cloth cover, 1s.; paper cover, 6d.

The Droitwich Brine Baths as Therapeutic Agents in various Diseases; by W. H. Tomlins, L.R.C.P. Lond., M.R.C.S. (H. K. Lewis, London, 1895); price 1s.—The Psychological Review; January, 1895 (Macmillan & Co., London).—The Quarterly Medical Journal for Yorkshire and adjoining Counties; January, 1895 (John Bale & Son, London, and Pawson & Brailsford, Sheffield).—London Temperance Hospital Registrar's Report of the Medical, Surgical, and Ophthalmic Cases Admitted during the Year 1893; by L. Wilde, M.D., D.P.H. (J. Vincent & Son, Little Britain, London, E.C.).—Die Syringomyelie: eine Monographie; von Dr. H. Schlesinger (F. Deuticke, Leipzig und Wien, 1895).—Schemata zum Einzeichnen von Gehirnfunden; von Drs. A. Kolisko und E. Redlich, in Wien (Franz Deuticke, Leipzig und Wien, 1895).—On a Form of Congenital Thoracic Deformity; by John Thomson, M.D., F.R.C.P. Edin. (reprint from "Teratologia: a Quarterly Journal of Ante-natal Pathology," January, 1895).—Autobiography, James Beart Simonds; reprint from the "Veterinarian" (Adlard & Son, Bartholomew-close, London, 1894).—The Local Government Annual: An Official Handbook, 1895; fourth year of publication (S. Edgecumbe-Rogers, Dorset House, Dorset-street, Fleet-street, London); price 1s. 6d.—Hand-Atlas der Hirn- und Rückenmarksnerven; von Professor Dr. C. Hasse (J. F. Bergmann, Wiesbaden, 1895).—Ueberschau über den gegenwärtigen Stand der Ohrenheilkunde; von Dr. Fried. Bezold (J. F. Bergmann, Wiesbaden, 1895).—La Fièvre à Sulfate de Quinine; démemberement de la Malaria; par M. le Dr. Alcide Treille (Chas. Zamith et Cie., Alger, 1894).—The Royal Natural History, vol. iii., part 15 (F. Warne & Co., Bedford-street, Strand, London); price 1s. net.—Piloroplastica: storia di un Caso Clinico e Considerazioni; del Dr. L. Corazza (G. Franchini, Verona, 1894).—Archivos de Ginecopatia Obstetricia y Pediatría, 31 de Agosto de 1894 (Calle de Vergara, Barcelona).—The Report of the Department of Pathology of University College, London, December, 1894, vol. iv. (Langley & Son, George-street, London, N.W.).—Local Government Act, 1894, and Public Health Act, 1875: Model Standing Orders for District Councils, together with the Statutory provisions controlling their proceedings. Also, Local Government Act, 1894: Model Standing Orders for Parish Councils (Knight & Co., Fleet-street, London, 1894).—Sell's Directory of Registered Telegraphic Addresses for 1895 (Henry Sell, Fleet-street, London).—The Education Acts, and How to Deal with Ragged and Neglected Children (South Wales Printing Works, Cardiff, 1895).—Edinburgh Medical Missionary Society; quarterly paper, No. 3, vol. vii. (The Edinburgh Medical Missionary Society, George-street, Edinburgh).—How to Nurse in our own Homes; by A. M. Alexander (Wells Gardner, Darton & Co., Paternoster-buildings, London).—Magazines for February; Pall Mall Magazine.—English Illustrated Magazine.—Illustrated Modern Art and Literature, No. 3.—Boy's Own Paper.—Girl's Own Paper.—Leisure Hour.—Sunday at Home.—Knowledge.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- BAILEY, W. H., M.B.Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the East Dulwich Sanitary District of St. Giles' Parish of Camberwell.
- BAYNES, JAMES, has been appointed Public Analyst for the East Riding of Yorkshire.
- COATES, C. M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Creech St. Michael Sanitary District of the Taunton Union.
- DAVIDSON, A., M.D., F.R.C.P.Lond., has been appointed Honorary Physician to the Liverpool Children's Infirmary.
- DEAN, GEORGE, M.B., C.M. Aberd., has been appointed Pathologist to the Sick Children's Hospital, Aberdeen.
- DEVANE, THOS. P., L.R.C.P. Edin., L.R.C.S. Edin., L.F.P. & S. Glasg., has been appointed Medical Officer to the Beckenham and Penge Benefit Society.
- DINMOCK, A. F., M.D. Durh., M.R.C.S., has been reappointed Honorary Medical Officer to the Harrogate Cottage Hospital.
- DORR, W. M., M.D. Edin., M.R.C.S., has been appointed Honorary Consulting Physician to the Chester General Infirmary.
- DONALD, ARCHIBALD, M.D., C.M., M.R.C.P. Lond., M.R.C.S., has been appointed Obstetric Physician to the Manchester Royal Infirmary, vice Roberts, retired.
- ELLIOTT, J., M.D. Lond., B.Sc., M.R.C.P., F.R.C.S., has been appointed Honorary Physician to the Chester Infirmary, vice Dobie, resigned.
- FLETCHER, J. H., M.R.C.S., L.R.C.P., has been appointed Junior Assistant House Surgeon to the Sheffield Public Hospital and Dispensary.
- GUNN, F. W., M.D., B.S., L.S.Sc. Durh., M.R.C.S., L.R.C.P., L.S.A., A.K.C., has been appointed Medical Officer to No. 4 District, Morpeth Union.
- HENRY, WALLACE R., M.B., B.Ch. (Dub. Univ.), has been appointed Senior House Surgeon to the Birmingham and Midland Eye Hospital.
- HOBSON, LEWIS J., M.D. Lond., B.S., F.R.C.S. Eng., has been reappointed Honorary Consulting Physician to the Royal Bath Hospital and Rawson Convalescent Home, Harrogate.
- KEITH, W. R., M.B., M.S. Aberd., has been appointed Assistant Medical Officer for the Workhouse of the Aston Union.
- LEIGH, WM. W., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer for the Llanfabon Sanitary District of the Merthyr Union.
- MAPPLEBECK, W., L.D.S., R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the Liverpool Children's Infirmary.
- MARSH, N. P., M.B. Lond., M.R.C.S., has been reappointed Honorary Physician to the Liverpool Children's Infirmary.
- MARTIN, JAMES P., M.R.C.S. Eng., has been appointed Medical Officer to the Box and Colerne Branches of the Wilts Friendly Society vice T. F. Snow, deceased.
- MURRAY, R. W., L.R.C.P. Lond., F.R.C.S., has been reappointed Honorary Surgeon to the Liverpool Children's Infirmary.
- OZANNE, F. N., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Medical Officer to the Harrogate Cottage Hospital.
- STOKER, J. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S., L.M. Glasg., has been appointed Medical Officer for the No. 6 Sanitary District of the Romford Union, vice Gibbens.
- VORLOCKER, JOHN A., has been reappointed a District Agricultural Analyst, East Riding, Yorkshire.
- WATTS, F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 3 Sanitary District of the Yeovil Union.
- WEBER, F., M.R.C.P., has been appointed Hon. Physician to the German Hospital, Dalston.
- WILLIAMS, N., M.B. Cantab., M.R.C.S., has been reappointed Honorary Medical Officer to the Harrogate Cottage Hospital.
- WOOD, R. E., L.D.S., R.C.S., has been reappointed Surgeon Dentist to the Harrogate Cottage Hospital.
- WRIE, F. GEO., L.R.C.P. Irel., M.R.C.S., has been appointed Health Officer for the town of Warrnambool, Victoria, Australia, vice Fleetwood.
- YEARLEY, P. MACLEOD, F.R.C.S. Eng., has been appointed Clinical Assistant to the Ear Department of the Westminster Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM CITY ASYLUM, Rubery-hill, near Bromsgrove.—Junior Assistant Medical Officer. Salary £80 per annum, with board, &c.

- CANCER HOSPITAL (Free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.
- CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and light provided.
- CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Anæsthetist. A small honorarium given. Also Resident Medical Officer, for twelve months. Salary £50 per annum, with board, lodging, and washing.
- DERBYSHIRE ROYAL INFIRMARY, Derby.—One Honorary Physician One Honorary Surgeon. One Honorary Consulting Dental Surgeon
- DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon. Salary £100 per annum, with furnished apartments, board and washing.
- DEWSBURY AND DISTRICT INFIRMARY, Dewsbury.—House Surgeon. Salary £80, with board and residence.
- GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer, for one year. Salary £80 per annum, with board and lodging.
- HOSPITAL FOR WOMEN AND CHILDREN, Leeds.—House Surgeon for twelve months. Salary £75 per annum.
- KENT AND CANTERBURY HOSPITAL.—Surgeon.
- LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging provided.
- NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Board and lodging (including washing) provided.
- PARISH OF SAINT PANCRAS.—Assistant Medical Superintendent of St. Pancras (separate) Infirmary, Dartmouth-park-hill, N., for two years. Salary, £120 for the first year and £135 for the second year, with apartments, rations, and washing. Applications to the Clerk of the Guardians, Guardians' Offices, Vestry-hall, St. Pancras, London, N.W.
- RADCLIFFE INFIRMARY, Oxford.—House Surgeon for six months. Salary at the rate of £80 a year, with board, lodging, and washing.
- RIPON DISPENSARY AND COTTAGE HOSPITAL, Ripon.—Resident House Surgeon and Dispenser, unmarried. Salary £70 per annum, with board and lodging.
- ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London, W.C.—House Surgeon for six months. Salary at the rate of 50 guineas a year, with board, lodging, washing, and an allowance for wine, &c.
- SALOP INFIRMARY, Shrewsbury.—House Surgeon. Salary £100 per annum, with board and residence.
- STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House Surgeon for two years. Salary £100 per annum, with board, lodging, and washing.
- TAUNTON AND SOMERSET HOSPITAL, Taunton.—Honorary Surgeon.
- TIVOT HOSPITAL, Golden-square, London.—Clinical Assistants.

Births, Marriages, and Deaths.

BIRTHS.

- BARTRAM.—On Jan. 27th, the wife of A. B. Bartram, L.R.C.S., L.R.C.P., L.M., of Northallerton, of a daughter.
- BLIGH.—On Dec. 30th, at The Garlands, Caterham Valley, Lillian Josephine (*née* Lafone, L.O.S.), the wife of William Bligh, M.D., B.S. Lond., &c., of twins, boy and girl.
- CHAMBERS.—On Jan. 28th, at The Priory, Roehampton, S.W., the wife of James Chambers, M.D., of a daughter.
- FIELD.—On Jan. 21st, at Ladbroke-grove, W., the wife of A. Theodore Field, M.R.C.S., of a son.
- REECE.—On Jan. 28th, at 31, Holland-villas-road, Kensington, W., the wife of Richard J. Reece, M.D., of a son.

MARRIAGES.

- BROATCH—JONES.—On Jan. 25th, at St. Peter's Church, Bayswater, George T. Broatch, M.B., surgeon Royal Navy, son of Robert Broatch, Esq., of Edinburgh, to Mary Willis (May), elder daughter of the late George Jones, Esq., of Aughton, Lancashire.
- GIBSON—COLSON.—On Jan. 30th, at St. Saviour's, Paddington, Albert Gibson, M.B., C.M., Crouch-end, N., to Lillian Mary, elder daughter of the late Rev. H. Colson, Harrow House, Harrow.
- SYKES—HARVEY.—On Jan. 23rd, at Roupell-park Wesleyan Church, Tulsa-hill, J. Herbert Sykes, M.R.C.S. Eng., L.R.C.P. Lond., of Southport, to Alice, fourth daughter of John Harvey, Sunnyside, Lancaster-road, West Dulwich.

DEATHS.

- SECCOMBE.—On Jan. 27th, at Terrington Lodge, King's Lynn, John Thomas Seccombe, M.D., J.P., in his 61st year.
- SHEPPARD.—On Jan. 28th, at Guilford-street, Russell-square, Joseph Brigstoke Sheppard, LL.D., M.R.C.S., of the Ethelbert-road, Canterbury, aged 67.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Frederick Roberts: The Combinations of Morbid Conditions of the Chest. (Second Lettsomian Lecture.)

ONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. Howard Mummery: Photo-Micrography and its Application to the Study of Dental Histology.—Mr. W. K. Harding: On Perchloride of Mercury in the Treatment of Pulpless Teeth.—Mr. A. B. Colver: A Case of Retained First Permanent Molar.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. J. W. Washbourn: Researches on the Pneumococcus, with special reference to Immunity (Part I).—Dr. A. E. Wright: Notes on the Bacteriology and Pathological Chemistry of Pneumonia.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Renfry, Dr. Macnaughton-Jones, and Mr. Butler-Smythe. Dr. Probyn-Williams and Mr. Lennard Cutler: Some Observations on the Temperature, Pulse, and Respiration during Labour and the Lying-in. Annual Meeting. Election of Officers and Council. The President (Dr. Herman) will deliver the Annual Address.

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Mr. Frederick Treves: A Series of Cases of Removal of the Appendix for Relapsing Typhlitis.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M.—Clinical Cases only will be shown. Each member will receive a card of agenda before the meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. R. M. Gunn: Clinical Examination of the Eye.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. W. R. H. Stewart: Examination of the Ear.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Hypochondriasis.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals. (IV.)

CENTRAL LONDON THROAT AND EAR HOSPITAL.—4.30 P.M. Dr. Dundas Grant: The Diagnosis of Diseases causing a Discharge from the Ear.

SOCIETY OF ARTS.—8 P.M. Mr. Gleeson White: Drawing for Process Reproduction.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Choroidal Affections, with Cases.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Erythema, its Causes and Varieties.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Psoriasis and Seborrhoeic Dermatitis.

WEST LONDON HOSPITAL (Hammer-smith-rd., W.).—5 P.M. Mr. Paget: The Surgery of the Chest. (Post-graduate Lecture.)

SOCIETY OF ARTS.—8 P.M. Mr. Geoffrey Drage: The Labour Question in the Colonies and Foreign Countries.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. W. S. Lilly: George Eliot, the Humourist as Poet.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. John H. Morgan: Congenital Defects in Lower Extremities.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Tooth: Anatomy of Spinal Cord. Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.

FRIDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Bacteriology of Skin Disease.

LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: The Microscope and Methods of Cultivation.

ROYAL INSTITUTION.—9 P.M. Dr. G. Sims Woodhead: The Antitoxin Serum Treatment of Diphtheria.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Bacteriology of Skin Disease. 5 P.M. Dr. M. Dockrell: Diseases of Sebaceous Glands.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Melancholia.

ROYAL INSTITUTION.—3 P.M. Sir Alexander Campbell Mackenzie: Hansel und Gretel (with Musical Illustrations).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 31st, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Jan. 25	29.49	N.W.	38	36	53	41	36	0.16	Cloudy
" 26	29.73	N.W.	31	Fzn.	48	36	28	0.04	Cloudy
" 27	29.74	N.W.	27	Fzn.	44	33	25	...	Cloudy
" 28	29.96	N.W.	29	Fzn.	43	33	27	0.09	Snowing
" 29	30.23	W.	25	Fzn.	35	33	22	...	Overcast
" 30	30.43	N.E.	25	Fzn.	51	35	24	...	Snowing
" 31	30.21	N.E.	31	Fzn.	56	35	25	...	Bright

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29 h, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

ALLEGED DETERIORATION OF CORKS.

WE have received a letter from a correspondent complaining in unqualified terms of the present cork. He finds that although willing to pay a fair price he gets a dry, brittle, worm-eaten article, too short, and the same size all the way down, "as if cut off a stick." We cannot inform him if his strictures are generally endorsed in the profession, but probably not, as no previous complaints have reached us.

G.—Our correspondent may notify to the patients of his predecessor in the practice that he has succeeded to the practice; but he must not send circulars to the patients of other medical practitioners or distribute testimonials among them.

Mr. S. Wesley Wilson.—Our correspondent's letter so clearly imputes corrupt motives that he will not be surprised that we do not print it.

"A TAPEWORM IN THE URETHRA."

To the Editors of THE LANCET.

SIRS,—The interesting note under the above heading in THE LANCET of Jan. 26th (p. 255) reminds me of a very similar case which I observed some eight years ago at Guy's Hospital. I then happened to see a segment three inches long of *Tenia solium* wriggle through the meatus urinarius of a patient who was under the care of Mr. Arthur Durham. An explanation of this very unusual occurrence was easily found in the fact that the segment of tapeworm must have found its way into the urethra through a fistulous opening which the patient possessed between the neck of the bladder and the rectum. In connexion with Dr. Axel Spoof's case no mention is made as to any communication between the alimentary and the urinary tract. Without such explanation the facts published seem to me unintelligible.

I am, Sirs, yours faithfully,

Wood Green, N., Jan. 29th, 1895.

T. SLATER JONES.

CERTIFICATION OF MIDWIVES.

A CORRESPONDENT writes to us as follows:—

"Owing to an unfortunate death of a woman in labour under the care of an uncertificated midwife the island of Guernsey authorities are about to pass an "Ordinance" requiring that every woman practising as a midwife should provide a certificate of having received the necessary education for the purpose. Will you kindly inform me where to get such information as would enable the authorities to frame a law; also where certificated midwives are to be obtained; and also whether there is a law controlling midwives in France, &c.?"

* In France midwives practise under the provisions of the Medical Law of Nov. 30th, 1892. They must be provided with a diploma issued by the Government after examination. A diploma of some sort is required by any woman practising midwifery in most of the States of Europe—e.g., Spain, Germany, Austria, Hungary, Italy, Norway, Sweden, Denmark, and Russia all impose some condition of this sort. Several States in America—e.g., Michigan, Minnesota, and New Jersey—have similar laws. A scheme of compulsory registration for midwives in the United Kingdom was formulated by a Committee of the House of Commons in 1893, and is embodied in a Parliamentary paper (No. 367) ordered by the House of Commons to be printed on Aug. 8th in that year. This paper may be obtained from Messrs. Eyre and Spottiswoode, or any other agents for the sale of Parliamentary papers.—ED. L.

Dr. Weston.—Our correspondent raises the very large question as to whether all medical officers of health ought to give their whole time to the duties of their office. One aspect of this question will be found in the next instalment of our special articles upon difficulties under the Infectious Disease (Notification) Act. The question as a whole cannot be answered yet; so many special circumstances have to be taken into consideration.

F.R.C.S.I.—The association between pleurisy with effusion and phthisis has been noticed especially by French writers, some of whom go so far as to claim a tuberculous origin for most such pleuritic cases. We shall, however, be able to receive records of the cases mentioned by our correspondent.

Medicus.—"Outlines of Practical Histology," by Professor Stirling (London, Charles Griffin and Co.).

"SULPHUR *v.* ANTITOXIN IN THE TREATMENT OF DIPHThERIA."

To the Editors of THE LANCET.

SIRS.—Mr. Hawkins Cuthbert of Aberdovey, in THE LANCET of Jan. 26th, draws attention to the use of sulphur *v.* antitoxin in the treatment of diphtheria. There is no denying the fact that sulphur is a most excellent remedy in all ulcerative throat affections, but there is as little doubt that it is not a specific for diphtheria. I have used sulphur dusting for years in diphtheria, and still use it conjoined with antitoxin. A month ago I had a case of diphtheria treated for three days with sulphur, but all the time the symptoms continued to become more grave. Antitoxin was injected, and in twenty-four hours improvement commenced and continued, the patient making a good recovery. It is impossible to say what might have happened had no antitoxin been used; but coincidences are not so common. It would be very wrong of those of us who believe in sulphur to become faddists by sticking to it in face of the evidence which has been submitted to us. It still remains a very important accessory in the treatment of diphtheria.

I am, Sirs, yours faithfully,

Hawick, Jan. 26th, 1895.

JOHN R. HAMILTON, M.D.

J. J., M.D. & J.P. (Edinburgh) is thanked for his communication. We are afraid, however, that its insertion would not be likely to answer any practical purpose, as the large majority of the department are strongly opposed to our correspondent's views in regard to the points he has put forward and advocated.

Mr. A. F. Merton.—The particulars required could only be obtained by application to the officers of the various general and special London hospitals, and would then only be given to persons proving that they desired to obtain the records for ends likely to be serviceable to medical knowledge.

Dental Pupil.—We are not aware that the articles have been republished in pamphlet form; our correspondent is advised to apply to the journal where they originally appeared.

Perplexed is bound by the bond.

"MEDICAL ELECTRICITY."

To the Editors of THE LANCET.

SIRS.—Be pleased to inform me as to the best practical book on medical electricity for the use of a general practitioner, and much oblige,
Yours faithfully,
Jan. 29th, 1895. ELECTRIC.

* The best and simplest book upon the subject is "Medical Electricity," by Dr. H. Lewis Jones and the late Dr. Steavenson.—ED. L.

MEDICAL MEN'S FEES AND THE CORK MOVEMENT.

A CORRESPONDENT of the *Irish Times*, referring to our remark that families with a joint income of £200 or over should make it a point of honour to have a private medical man and to pay him adequate fees, asks for a definition of the expression "adequate fees" and invites the Cork medical men to state what their charges are. This is not altogether an unreasonable request. Medical men are known to charge their patients according to their means, either roughly judged by their house rent or by those more refined indications of circumstance with which few are more familiar than they. It is for the men of Cork to judge how far, as a part of this controversy, it would be possible for them to commence a scale of professional charges, as has been done in other places. It would tend to correct an impression that they are higher than in other parts of the United Kingdom, and would, we feel sure, show that they are as practical in meeting the case of families with incomes over £200 a year as in meeting the case of club patients.

Inquirer.—Our correspondent's duty is to preserve the life of his patient, and to reserve professional secrets for his own use to this end. He is not called on to be the accuser of his patient, even though she be a member of the same church. The authorities of the church must act on their own responsibility and on other evidence than his. No medical man would consider it his duty to report unsuspected sin in a patient of which he was cognisant in a professional way to ecclesiastical authorities. *A fortiori* it is not his duty where other evidence is available and actually forthcoming. As a member of the church he should abstain from all action and advice, just as a member of a court who has special reasons for not discharging any judicial or witnessing function.

Rev. F. J. Muspratt.—We are obliged for our correspondent's letter; but we are sure that the practitioner eulogised therein would not care for a dissemination of his praises that is coupled with a reflection upon the skill of his medical neighbours.

"ON THE OCCURRENCE OF DIPHThERIC PARALYSIS WITHOUT PREVIOUS FAUCIAL AFFECTION."

To the Editors of THE LANCET.

SIRS.—In the letter I wrote to you for the purpose of pointing out the mistake made in the spelling of my name by Dr. Leonard G. Guthrie, and which you did me the kindness to insert, believe me when I explain that it was my ambiguous and misleading composition, and not at all my intention, that caused Dr. Guthrie to appear, instead of myself, as the one indifferent to the case. My feelings and sentiments to Dr. Guthrie are quite the opposite of this, I can assure you, and I thank you for giving me an opportunity of saying so.

I am, Sirs, yours truly,

Stockton-on-Tees, Jan. 29th, 1895.

A. ROSS PATERSON.

Mr. John Galloway.—1. We think that the first consultant sent for was entitled to two guineas.—2. We cannot see the claim of the second consultant to a fee who was not sent for either by the patient or the practitioner in attendance.—3. Our correspondent should call on the first consultant and discuss the matter in a friendly spirit. The facts seem very simple as given in his letter and should occasion no dispute.

WANTED, A LANTERN AND SLIDES.

To the Editors of THE LANCET.

SIRS.—Will any of your readers kindly inform me if a lantern with suitable slides to illustrate a popular physiological lecture could be hired at a reasonable rate? If so, of whom? The lecture is intended to embrace some of the salient points of the physiology of the whole body.

I am, Sirs, yours truly,

Jan. 28th, 1895.

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During the week marked copies of the following newspapers have been received:—Hereford Express, Birmingham Post, Newcastle Journal, Stroud News, Sussex Daily News, Bedford Standard, Eastbourne Gazette, Banffshire Advertiser, Manchester Courier, Irish Times, Bridgewater Independent, Redcar News, Leicester Post, Congleton Chronicle, Cork Examiner, Kilkenny Journal, Daily Graphic, Daily News, The Times, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Local Government Chronicle, Sanitary Record, Reading Mercury, City Press, Leeds Mercury, Times of India, Australian, Medical Journal, Pioneer Mail, Hertfordshire Mercury, Health, Liverpool Daily Post, St. Mary's Hospital Gazette, Bristol Mercury, Yorkshire Post, Statesman (Calcutta), Indian Medico-Chirurgical Review, Surrey Advertiser, West Middlesex Advertiser, Guy's Hospital Gazette, Greenock Herald, Derby Express, Alliance News, Pocklington News, Buxton Herald, Liverpool Weekly Courier, Temperance Record, Public Opinion, Domestic Magazine, Local Government Journal, Inverness Courier, Alnwick Gazette, Scarborough Post, Galignani Messenger, Nenagh Guardian, Western Daily Press, Kingston and Surbiton News, Uxbridge Gazette, Kidderminster Standard, Aberystwith Observer, Observer, Liverpool Mercury, &c., &c.

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Jettsonian Lectures

ON THE

COMBINATIONS OF MORBID CONDITIONS OF THE CHEST.

*Delivered at the Medical Society of London on Feb. 4th, 1895,*By FREDERICK T. ROBERTS, M.D.,
F.R.C.P. LOND.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS AT UNIVERSITY COLLEGE; PHYSICIAN AND PROFESSOR OF CLINICAL MEDICINE AT UNIVERSITY COLLEGE HOSPITAL; CONSULTING PHYSICIAN TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

LECTURE II.

VI.—COMBINATIONS IN ACUTE CASES.

MR. PRESIDENT AND GENTLEMEN,—I now invite you to a discussion of certain aspects under which acute chest cases come before us in practice, presenting combinations of conditions which we are bound to recognise if we desire to understand these cases properly, and to treat them intelligently and rationally. I do not know whether my experience accords with that of others here present, but I meet nowadays with so many acute chest affections of a more or less complicated nature that it is really quite a comfort to come across a case that is fairly simple.

A.—Acute Conditions supervening on Chronic.

It is a very common event for some acute chest affection to supervene upon chronic morbid conditions of various kinds, and this is a most important point in relation to my subject. The natural tendency is to look upon an acute complaint as the sole mischief, especially if nothing is known about the previous history of the patient, and therefore it is always necessary to guard against this tendency, and to be constantly on the look out for any preceding chronic changes which happen to be present. On the other hand, when such changes are known to exist, and especially if they are pronounced, the development of any acute complication demands immediate recognition, as well as intelligent study in relation to the circumstances under which it occurs. I will now proceed to give a few illustrations of the more prominent combinations which have to be recognised under this category, so far as they have come within my own personal experience.

1. I must just refer once more in this connexion to the importance of always recognising the presence of certain conditions of the chest walls and other minor changes, discussed in the former lecture, when an acute affection develops in this region. That under such circumstances, especially if they are pronounced, they add more or less, and often seriously, to the troubles and dangers associated with such an affection is indisputable, and they may contribute in no small degree to a fatal result. I need scarcely say that the occurrence of an acute inflammatory disease as a complication in a case of a marked chest deformity is often most grave.

2. The importance of pleuritic adhesions in relation to acute diseases of the chest is so manifest that I make no apology for discussing this point in some little detail. In the first place, it is interesting to note that when a local adhesion exists, the history of which is quite unknown, the corresponding limitation or undue prominence of signs of a bronchial catarrh may reveal its presence and site, and I have known this happen again and again in the same case.

A far more important condition to be noted in its association with acute affections of the chest is the existence of a unilateral basic adhesion, extending more or less upwards, the signs of which may or may not have been previously evident. There is generally a history of some acute illness, be it only known by the expression "congestion of the lungs," and of course the practitioner may be aware of all the facts of the case. This condition always acts as a predisposing cause for the special implication of the lower part of the affected lung, which is embarrassed by the adhesion; and even when the patient has merely a slight cold, but still more if he has a definite bronchitic attack, the signs usually

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become so marked and out of proportion over the corresponding base that anyone who is not aware of the combination is very likely to attach far greater importance to them than they deserve, and to diagnose a serious congestion of the lung (which in a certain sense may be correct) or an actual pneumonia which does not exist. Therefore, whenever moist râles in more or less acute cases are heard only or in marked excess over one base, other signs of pneumonia being absent, the possibility or even probability of an adherent pleura being the explanation should always be borne in mind.

There is one class of case to which I particularly wish to refer in connexion with basic pleuritic adhesion. The tendency of this condition is not only to embarrass the lung and probably to damage its structure to some degree, but also to retain secretions or any morbid products which may be formed in the bronchial tubes or air vesicles. I frequently meet with cases in which râles due to such accumulation are constantly present at one base, varying in their amount from time to time. Indeed, sometimes, in association with a general agglutination, they are heard extensively over one side, and I have ventured to give to these adventitious signs the term "adhesion râles." Now it occasionally happens in course of time that without any obvious increase in the physical signs, indicating either pneumonic consolidation or pulmonary destruction or suppuration, more or less acute general symptoms set in, much like those of phthisis, which increase in severity, until sooner or later the patient succumbs. Local symptoms may develop or increase, but not in proportion, and there is often only a small amount of muco-purulent expectoration. Sometimes signs indicating secondary progressive implication of the lung tissues in an upward direction supervene, but they do not point to anything like a cavity. No doubt many of these cases become actually tuberculous, and they would be classed as "basic phthisis," but certainly not all. At any rate, I have met with some in which experienced bacteriologists have failed to detect any tubercle bacilli in the sputum, even after repeated examination. I have a strong opinion, however, that the grave results in all these cases are really due to micro-organisms, probably of different kinds, which gain access with the inspired air into the base of the lung, where they find a suitable nidus in the retained secretions and morbid products, in which they flourish and multiply, producing toxins which are absorbed and by degrees poison the patient. Whatever may be the explanation, the practical lesson is that a basic adhesion accompanied with the persistent presence of râles is a condition never to be overlooked or underrated, and one that decidedly predisposes to acute changes, which may be of a grave nature.

I now wish to say a few words with regard to acute conditions occurring in cases where one lung is universally adherent. Should a well-marked attack of bronchitis develop under such circumstances the signs on the two sides are likely to be quite different, and the embarrassed lung will probably suffer much more seriously than the opposite one. The relation of a generally adherent lung to acute tuberculous changes is extremely interesting and important. Unquestionably an acute phthisis with rapid destructive changes may develop in connexion with a lung which has been known to be generally adherent for a long period, but which until that time has given no apparent trouble, or it may start on the healthy side. Another tuberculous process which may possibly complicate a general chronic pleuritic adhesion is what may be described as an outburst of military tuberculosis in the corresponding lung, while the opposite one is practically free.

Before leaving the pleura I may mention that sometimes an acute intra-thoracic inflammation complicates the pronounced combined conditions associated with this structure alluded to in the previous lecture. The possibility of such a complication in a case of empyema which has communicated with the lung must also be noted, of which I have met with more than one striking instance.

3. With regard to the more definite chronic diseases of the chest, it must be borne in mind that acute complications may occur in connexion with any pulmonary affection, cardiac diseases, aneurysm, &c., or in more or less complex cases. The supervention of an acute complication upon a chronic cardiac affection is always a serious matter, and demands the most careful attention. Of course, any acute inflammatory disease associated with the respiratory organs may set in, and its dangers are likely to be much increased under the circumstances. Certain forms and combinations of cardiac diseases are liable to produce at any time acute pulmonary

congestion with oedema, or sometimes embolism and infarction; or hydrothorax may occur. The development of an acute endocarditis, probably malignant, on an old valvular disease is of supreme consequence, and this possibility should never be forgotten. When this condition happens to be added to an already complicated heart case, with an adherent pericardium, possibly accompanied with extensive aortic degeneration, the entire combination is from all points of view extremely grave.

B.—Associated Conditions in Air Tubes and Lungs.

It is important to draw attention to the fact that in a considerable proportion of cases in which the lungs are acutely affected, we have to deal with a more or less complicated state of things, as regards the actual conditions in these organs and in the air tubes. For instance, a mere attack of bronchitis, by obstructing the tubes in different degrees, leads, on the one hand, to temporary accumulation of air and consequent pulmonary distension, or, on the other hand, to pulmonary collapse of lobular or more extensive distribution. The expression "congestion of the lungs" is commonly employed in relation to acute chest cases in the most vague way possible, and is in not a few instances absolutely wrong and misleading; nevertheless, I wish to point out particularly that this is a real condition, which frequently forms an important element in a case, either directly or by its effects. Thus, in connexion with croupous pneumonia, especially if of rapid onset and extensive, or if both lungs are involved, the disturbance of the pulmonary circulation is sure to lead to congestion of more or less of those portions of the organs which are not consolidated, and it may be of practical consequence to recognise the combination. The conditions termed "broncho-pneumonia" and "capillary bronchitis" are also in reality of a mixed character, in which pulmonary congestion takes a prominent part. It is likewise associated with acute miliary tuberculosis, giving rise to certain of the signs observed in this disease.

C.—Secondary Effects of an Acute Disease.

Important combinations of morbid conditions come under this head, but it must suffice to give two or three of the more prominent illustrations. Cases of acute inflammatory effusion in the pleura or pericardium, or both, afford some of the most striking examples we have of the secondary effects of physical conditions within the chest, referred to in the previous lecture, and the combinations resulting therefrom are often very grave, not only in themselves, but also owing to the rapidity with which they are produced. Dropsy of these serous cavities developing acutely would give rise to similar consequences. Again, acute pulmonary affections not uncommonly act seriously upon the heart in different ways. Thus, an attack of bronchitis in a case of pronounced chronic emphysema tends to greatly embarrass the right heart, causing accumulation of blood in its cavities, actual temporary dilatation, or possibly cardiac thrombosis. Similar consequences are observed in cases of rapid and extensive broncho-pneumonia or capillary bronchitis, even when the lungs have been previously perfectly healthy, and the cardiac complications add seriously to the danger of such cases. In a severe case of croupous pneumonia, not only may similar difficulties arise, but the myocardium is also liable to undergo serious acute degenerative changes. On the other hand, secondary lesions in the lungs are likely to follow certain acute conditions associated with the right heart—namely, clotting of blood in its cavities, and endocarditis, especially if of the malignant variety.

D.—Combinations of Acute Inflammatory Diseases.

I now approach a question of great interest and practical moment in relation to acute diseases of the chest, and that is the various ways in which the several inflammatory diseases may be combined in particular cases. I am convinced that the frequency with which such combinations occur in actual practice is not by any means realised as it ought to be. It is impossible to do more in this lecture than to offer a few general remarks on this part of my subject.

1. *Tracheo-bronchitis.* Varieties of bronchitis.—I merely mention tracheo-bronchitis in order to point out that inflammation of the trachea is in many instances a very prominent element in acute bronchitic cases—at any rate, at their commencement—and, as a matter of fact, is mainly accountable for the early symptoms. It is further worthy of note that the term "bronchitis" really includes conditions

of different kinds, which are frequently associated in the same case.

2. *Pleuro-pneumonia.*—This is another expression in common use to which no very clear or definite meaning is attached. A certain amount of pleuritic exudation may be regarded as an almost essential concomitant of a pneumonia reaching the surface of the lung. There is, however, quite another class of cases, though I believe some authorities dispute their reality, in which pleuritic effusion and pneumonic consolidation exist together, sometimes developing more or less simultaneously, but more frequently one condition following the other. Then there are the cases in which, on the one hand, an acute empyema opens into the lung; or, on the other hand, a pulmonary abscess resulting from pneumonia bursts into the pleural sac; moreover, in cases of pulmonary abscess pleurisy may certainly be set up without any actual communication with the cavity of the pleura.

3. *Broncho-pneumonia.*—This may be regarded as a combination of acute inflammatory affections of the respiratory organs, but it needs no more than a passing mention. The association with this disease of non-inflammatory conditions involving the lungs has already been referred to.

4. *Bronchitis with lobar pneumonia.*—A certain degree of bronchitis is often associated with lobar pneumonia, but I draw attention to this class of cases more especially in order to emphasise the fact that a patient may have an extensive bronchitis, with abundant purulent or muco-purulent expectoration, while the lower lobe of one lung is at the same time the seat of definite lobar pneumonia. Under the circumstances the pneumonic consolidation is decidedly in danger of being overlooked, as I have known happen more than once.

5. *Diphtheritic extension.*—It will be convenient in this connexion briefly to notice those cases in which diphtheritic membrane spreads down the air passages into the bronchi, finally extending more or less into their smaller ramifications. This is of course a form of inflammation, while it gives rise to other inflammatory conditions, as well as to secondary pulmonary changes, which ultimately frequently lead to a very complicated state of things.

6. *Pericardial and cardiac inflammations.*—A very important class of acute cases which come under the category we are now discussing, are those in which pericarditis is associated with endocarditis, or there may even be at the same time a myocarditis. They are by no means uncommon, more especially in connexion with rheumatism in young subjects, and we see the results of the combination in many chronic cardiac cases which come before us in later life. The late Dr. Sturges, whose unexpected death under such sad and distressing circumstances we have to deplore, discussed this aspect of the subject in a very interesting and instructive manner in his Lumleian Lectures for 1894, and I cannot do better than refer you to these lectures for further details.

7. *Complicated cases.*—Lastly, we now and then meet with cases of acute intra-thoracic inflammation which can only be described as "complicated." Exceptionally these cases present an extremely intricate and complex aspect, especially if there happen to have been previous chronic conditions. Thus there may be more or less pleuro-pneumonia on both sides; double empyema; pericarditis may supervene on a pneumonia or pleuro-pneumonia; or there may even be a complication of pleurisy and pneumonia, perhaps double, with pericarditis, endocarditis, myocarditis, and a mediastinitis thrown in. The class of cases last mentioned may be associated with acute rheumatism, when, though very grave, they are not necessarily fatal; with influenza; or with some obvious internal septic or pyæmic condition. The direct causative relation of micro-organisms to all acute intra-thoracic inflammatory diseases is at the present time a favourite doctrine; and, at any rate, they are certainly concerned in some of these cases.

E.—Tuberculo-inflammatory Conditions.

There is a special class of cases which I think may be fairly differentiated under this heading. They come before us in different aspects: it may be as an ordinary lobar or more limited pneumonia, not necessarily apical; more commonly as a disseminated lobular or patchy pneumonia; or in some instances as a marked pleuritic or pleuro-pneumonic case. The foundation of all these lesions, however, is tubercle, as the course of events as a rule soon declares. Patients with these conditions may be actually walking about, and come to the hospital or consulting room for advice, the early symptoms not having been

sufficiently pronounced to attract much attention. I have known such cases present themselves for the first time with a temperature of 103° F. or more and obviously seriously ill. Sometimes the lesions follow a more or less profuse unexpected hæmoptysis. There is no class of acute cases against which we need to be more constantly on our guard, lest we should fail to detect them or misinterpret their significance. They do not necessarily go steadily from bad to worse, for the inflammatory products not uncommonly to a great extent become absorbed, the patient improving in a corresponding degree. The definite phthisical changes, however, usually remain, and the ultimate issue is sooner or later as a rule but too inevitable. Exceptionally, under favourable conditions of home treatment, climate, &c., cases of this kind undoubtedly practically recover; on the other hand, their history is far more likely to be that of a very acute phthisis.

F.—Miscellaneous Conditions.

I have thus designated a separate group of cases in order to indicate the fact that the organs contained within the chest, which are so essential to life, are liable to be affected in an acute manner, and to present more or less serious combinations of conditions, under circumstances which do not fall under any of the preceding classes, but which, nevertheless, it is highly important that we should recognise. I refer, for example, to those which result from, or are associated with, poisonous inhalations, not forgetting fogs; toxic causes; the "typhoid state"; exposure to extreme cold; partial suffocation; and certain nervous diseases. Their effects are evidenced by more or less grave disorders of the respiratory and circulatory functions; and it will suffice to state that they may more immediately give rise to such conditions as pulmonary congestion and its consequences, especially hypostatic; coagulation of blood in the vessels; embolism and infarction; pulmonary paralysis; cardiac dilatation or thrombosis; or failure of the respiratory muscles, especially the diaphragm. Inflammatory complication may of course subsequently supervene.

VII.—ACCIDENTAL LESIONS OR COMPLICATIONS.

Under this head I propose to notice very briefly certain classes of cases in which, usually quite suddenly or at any rate very acutely, some definite event or lesion occurs within the chest, which is associated with, and is the direct result of, some previously existing morbid condition or conditions. As a rule the complication is indicated by phenomena of a pronounced and often grave character; and it may cause immediate or very speedy death.

The important sudden lesions, not immediately fatal, which we have to be prepared for in practice as possible complications of previous diseases, are pneumothorax; the bursting of an abscess or collection of pus, especially of an empyema into the lung, a pulmonary abscess into the pleura, or a mediastinal abscess in different directions; some lesion leading to mediastinal and subcutaneous emphysema; rapid and extensive cardiac or pulmonary thrombosis; rupture of a cardiac valve or septum; certain forms of hæmorrhage, with grave hæmoptysis; changes affecting an aneurysm, especially its rapid enlargement or extension in certain directions, or its communication with the superior vena cava; and rupture of an oesophageal pouch, which, however, is an extremely rare event.

Pneumothorax is, of course, in the large majority of cases a complication of phthisis, but the possibility of its occurrence in this disease is not always appreciated as it ought to be, and I have known the lesion utterly mystify a clinical observer even when all the evidences of the condition were perfectly pathognomonic. It must be remembered, moreover, that pneumothorax may be on a limited scale, owing to the existence of pleural adhesions, and then it may not give rise to any serious disturbance in the way of symptoms, though the physical signs may be characteristic enough. Cardiac thrombosis and its consequences demand very careful study, and may be exceedingly difficult to recognise or understand. Hæmoptysis is usually regarded as a symptom, but when severe it is really an evidence of some definite lesion, the nature of which is generally clear enough, in relation to the known circumstances of the case, but certainly not always. Its occurrence is from this point of view of great significance in certain cases of phthisis, as well as in relation to the bursting of an aneurysm into the air passage.

One of the most interesting lesions which may occur in

connexion with an intra-thoracic aneurysm is the sudden formation of a communication between it and the superior vena cava, of which the following case is an interesting example. Some years ago I had under my care a very obscure and complicated case of aneurysm of the arch of the aorta. When I first saw the patient he was in great distress on account of his breathing, and, by the way, was supposed to be suffering from asthma. He improved so much under treatment that he became rather lax in carrying out instructions, and after a day of sight-seeing he was during the night suddenly seized with very grave symptoms. A neighbouring practitioner was summoned, and the sight that met him was that of a man suffering from urgent dyspnoea and struggling for his life, at the same time presenting a swollen and intensely cyanotic aspect. The patient was conscious that something had gone wrong in his chest, and drew the attention of the medical man to a tremendous thrill and a whirring noise which could even be heard at a distance. Need I say that he was somewhat taken aback, and could not quite understand the state of affairs. I saw the patient some hours afterwards, and he was so changed that I could not have recognised him. The physical signs persisted, and all the phenomena of obstruction of the superior vena cava became extreme, but the patient lived for some weeks.

VIII.—SUDDEN OR ACUTE DISORDERS OF FUNCTION, TEMPORARY OR PAROXYSMAL.

Under this head I have to draw attention to another most important group of combinations, in which sudden or acute disorders occur, sometimes very grave, which are often spoken of as functional, and which at any rate cannot be attributed directly to any definite structural lesion or change. The conditions to which I chiefly refer in this connexion are: 1. Respiratory disturbances, especially attacks of so-called "bronchial or spasmodic asthma"; cardiac dyspnoea and certain other forms of disturbed or excessive breathing; disorders associated with the larynx, due to interference with intra-thoracic nerves; and certain diaphragmatic functional difficulties. 2. Cardio-vascular, including mainly excessive or disturbed cardiac movements of various kinds, and palpitation; weakness or failure of the cardiac action, with syncope; and the complaint known as "angina pectoris." 3. Dysphagia, due to some functional disorder of the oesophagus. I may also note here that we should always take into consideration in cases of acute inflammatory diseases of the chest the important influence of the nervous system upon the respiratory and cardiac functions, by which the symptoms may be materially modified; and in all cases to be prepared for the possible tendency to what I may call "neurotic exaggeration."

Such terms as "asthma" and "angina pectoris" are unquestionably often thought to represent entirely independent complaints, at any rate by the laity, and we cannot too strongly insist upon the fact that they are not so in a large majority of cases, but that various structural changes, usually quite obvious, determine the occurrence of an attack. Some of the disorders alluded to may, like grave and sudden organic lesions, kill instantly or very rapidly, as when death happens from cardiac failure supervening on heart disease, or from angina pectoris; otherwise the attacks are of a temporary nature, and certain of them tend to be paroxysmal.

"Asthma" is a term of decidedly indefinite application, and it is not infrequently applied to cases which are really not asthmatic at all, while much more grave conditions, such as certain disturbances produced by an aneurysm, may be mistaken for this complaint even by experienced observers. The attack or "fit" of asthma, however, as a rule presents very characteristic features. In the large majority of instances it supervenes upon distinct and obvious morbid changes associated with the chest, which tend to become more and more pronounced as the case progresses. The cases in which asthma occurs are, as is well known, usually more or less of the "emphysematous and bronchitic" type, but rigidity of the chest walls, adhesion of the upper part of the lung, and other factors which I have already discussed are often of much importance in these cases in relation to asthmatic attacks. Another point to be remembered is that chronic cardiac disease may be present, and also that the right cavities of the heart become more or less overloaded with blood during the paroxysm. These complications when present must be adequately taken into account in relation to the symptoms observed in an asthmatic case.

Angina pectoris is another affection associated with the

chest which usually complicates more or less definite morbid conditions of an organic nature, and whatever view we may hold as to its pathology, it is obviously essential in each case to try to determine what the particular changes happen to be. Those which are most likely to be overlooked are atheroma or calcification of the aorta and coronary arteries, and cardiac degeneration not of a pronounced character.

IX.—MORBID CONDITIONS ORIGINATING FROM THE ABDOMEN.

It may seem needless to burden a subject already sufficiently complicated by dragging in the abdomen in relation to the chest, but this aspect of it must not be forgotten, though I will only allude to two or three points. It is not at all uncommon for accumulations of various kinds within the abdominal cavity so to interfere with the diaphragm and the thoracic contents as to lead to a very decided combination of morbid conditions, which may demand active interference for their relief. The trouble is all the greater if there happen to be previous organic diseases within the thorax. Extreme tympanites, ascites, any large abdominal tumour, and pregnancy afford familiar illustrations of the conditions originating these difficulties. The association of pregnancy with serious pulmonary or cardiac diseases, or both, often presents a very trying problem, both as regards diagnosis and treatment, especially if some acute chest affection still further complicates matters, a combination of which I have met with some striking examples. Again, an enlarged spleen or liver, or a renal tumour may encroach in various degrees in an upward direction, so as to lead to more or less obvious or serious consequences. The rupture of an abdominal abscess, not forgetting sub-phrenic, or of a hydatid cyst into the thorax, originates an important class of cases. I will only add, further, that to be called in and expected to give an immediate and positive opinion, from one examination, as to the origin and progress of a chest case which has started from some abdominal trouble, and which has existed, perhaps, for many weeks, and as to the existing state of things, with their treatment, is about the most trying experience and ordeal that any physician or surgeon, however skilled he may be, may be called upon to undergo.

CLINICAL LESSONS: INVESTIGATION OF CHEST CASES.

Having thus attempted to give some comprehensive summary of the chief combinations of morbid conditions of the chest, I now proceed to look at my subject from another point of view, with the intention of trying to bring out certain practical clinical lessons which I think it is calculated to teach, and of offering some general remarks on the investigation of chest cases. I take it for granted to start with that the advantages of some systematic arrangement of this kind for clinical purposes will be acknowledged by all who have had much experience in such cases. Personally I have found it of the greatest help, and I have no hesitation in affirming that without a fairly clear comprehension of, at any rate, the more common chest combinations which are likely to be met with, it is impossible to undertake the investigation of individual thoracic cases with any degree of confidence.

1. My first proposition, which needs to be emphatically urged in these days of hurry and bustle, is that every thoracic case is worthy of at least a fair amount of study and consideration, and that it is our duty to try to determine as accurately as possible what are the actual conditions which in various combinations we have to take into account. A chest case would, I suppose, be ordinarily understood to signify one in which symptoms of some kind and degree attract notice to this region. If these should happen to be of a pronounced character, be they sudden, acute, or chronic, no doubt they would receive as a rule adequate consideration; and it may be observed in passing how often serious combined morbid changes are thus brought to light by some accidental event, or, it may be, by what looks like a mere passing functional disorder. Should they, however, be slight or indefinite, then comes the special danger of superficialness or actual neglect of investigation. Over and over again have I found some apparently trivial symptoms to be the earliest revelation of various associated changes, not uncommonly of a pronounced and serious nature, of which it may be of the highest importance to the patient to be fully aware, if only from a preventive point of view.

2. The next point which I wish to enforce is that every chest case should be approached with an open, I may say a "comprehensive," mind and an unbiased judgment, both

as regards structures and diseases. At any rate, it is most dangerous to have a too definite or preconceived idea as to this or that organ being affected, the supposed nature of the complaint as expressed in a name, and the conditions which we expect to find. We must always be prepared, moreover, to meet with combinations of morbid conditions, affecting several structures it may be, for which we were entirely unprepared, even in cases which are apparently clear and simple; and sometimes we are confronted with such a complex or curious state of things that only a clinical observer fully acquainted with the particulars I have indicated is likely to understand it in the least. In dealing with sudden or acute cases we have to be specially on our guard against a too narrow conception of their nature and combinations, otherwise we shall be ever in danger of making most grave and irreparable blunders; but even in chronic and ordinary cases the same principle must guide us as a general rule, if we wish to avoid serious errors in diagnosis.

3. I now proceed to look at the clinical investigation of chest cases from the more positive point of view in its bearings upon my subject. I suppose we are all agreed that we ought to avail ourselves of every means which we can employ in such investigation, and to study intelligently all the clinical signs which are thus presented for our interpretation in any individual instance. We must be especially careful in these days of progressive and aggressive science not to neglect the old methods which have served us in such good stead in the past, and without which we absolutely cannot get on, or to allow them to be entirely supplanted by others of recent introduction, which, after all, can only afford a limited kind of information, and some of which are by no means always reliable or easy of application. Taking a comprehensive view of the immediate investigation of a patient supposed to be suffering from some chest affection, the process may be summed up as including: (1) systematic physical examination of the thorax and its contents, by the more simple methods commonly recognised under this expression; (2) intelligent inquiry as to the presence or absence of symptoms—subjective and objective, local, general, and remote—so far as they are directly associated with and the result of thoracic conditions, and the methodical study of any such phenomena which happen to be present; and (3) the employment in appropriate cases of special methods, and amongst these would come the use of the different instruments and other apparatus which are available for clinical purposes in relation to the thoracic structures.

I desire to offer a few practical remarks with regard to each of these divisions, in their relation to the investigation of combined morbid conditions associated with the chest.

I have placed physical examination first for the following reasons. It is, in the first place, obviously the only means by which we can gain any reliable information whatever as to the presence and nature of the combinations of morbid changes affecting the chest and its contents of which I have been speaking; and, therefore, it constitutes the most advantageous starting point of our clinical investigation in a large number of instances. Secondly, it is very important to remember that combinations of thoracic morbid conditions are not uncommonly detected by physical examination which are not revealed by any symptoms whatever, or, at any rate, none of sufficient moment to attract attention. Therefore, it is a safe rule thus to investigate the chest more or less in every case which comes under our professional observation. I believe it would be a very good plan, especially under particular circumstances, if individuals would present themselves for examination from time to time, just to see what is the condition of their important organs. Now and then, but only exceptionally, one does come across a wise person who thinks it worth his while and money to be thus overhauled; and on the whole these are about the most satisfactory cases to be met with in practice. The only opportunity, however, one usually gets of investigating from this aspect is in relation to life insurance, when we do sometimes discover very remarkable and unexpected morbid changes. Thirdly, physical examination often reveals readily and positively pronounced organic conditions in various combinations, which at once explain all the clinical phenomena observed, making the case perfectly clear and simple; and amongst these conditions it may detect one which demands immediate treatment. There is one point that I wish specially to notice in this connexion. It is often stated that certain conditions within the chest cannot be detected by physical examination with any certainty, or, at any rate, only exceptionally. I

more especially allude to pleuritic and pericardial adhesions. Such a statement I strenuously dispute, and I maintain that these changes, as well as others more or less obscure, may frequently be demonstrated as parts of a case, if they are duly borne in mind and properly looked for, and if their signs are intelligently appreciated.

In the next place I desire to say a few words as to the general principles upon which physical examination of the chest should be conducted, in order to be of any real service in demonstrating the presence and nature of the various combined conditions. Concisely stated, it must be always systematic, and as thorough and comprehensive in all respects as the circumstances of the case permit, with due regard to the state of the patient. An unmethodical examination, or one limited to the upper part of the chest and perhaps the cardiac region, is by no means adequate in any case, and such a mode of procedure habitually adopted is certain to lead to many disastrous results. There is one tendency against which it is necessary to warn in this connexion, and that is the practice of always looking for some special condition, such as lung consolidation, a pleural effusion, or disease of a cardiac orifice or valve; and, should either of these be found, fixing upon it and ignoring everything else. Of course, it is essential to be thoroughly familiar with the signs of such simple conditions and to be able to recognise them positively, but we must never forget that in a large number of cases they are mixed up in every conceivable way. Of course, in every case the heart and great vessels ought to be invariably separately and systematically examined. Moreover, should any exceptional disease be suspected or discovered, such as an aneurysm or solid tumour, it is well to have a definite and special plan of examination which can be methodically carried out in such cases. While it should be the rule in relation to physical examination of the chest to aim at finding out all the conditions present in a particular case, on the other hand much discretion is required not uncommonly in carrying it out, as in cases of an acute and complicated nature, or where sudden grave lesions or disorders supervene on chronic diseases, or in advanced phthisical or cardiac cases. Under such circumstances our investigation should be as brief and as little disturbing to the patient as possible, even though we are not able to make out to our satisfaction the exact state of things, and in some instances we had far better omit physical examination altogether in the meanwhile. It is remarkable, however, what we may find out even then without disturbing the patient to any appreciable degree, if we go about the examination in the right way, and make good use of our eyes and hands. The more simple methods of examination just alluded to—namely, inspection and palpation—are also often of the greatest service in the detection of certain associated physical conditions of the chest, especially when employed together and for definite purposes, and I do not think that they are at all utilised to the extent that they might be. There is one other point that is worth noting—namely, the essential value of certain special signs in the detection of a particular and unusual condition which happens to form part of a more or less complex case. Thus, the "bell sound" or the "succussion splash" may be the only evidence under such circumstances of the pleural conditions with which these signs are severally associated.

CHRONIC GASTRIC ULCER AND ITS TREATMENT BY PAPAIN.

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THE symptoms produced by gastric ulcer are so well known as to need no recapitulation, and in a well-marked and recent case are so unequivocal as to make the diagnosis both easy and certain; but in the chronic form of the disorder it often happens that the symptoms are indefinite, and it then becomes a matter of difficulty to arrive at a satisfactory conclusion as to what exactly are the local pathological conditions to which the signs presented by any given case are due. Ordinary ulceration of the mucous membrane of the stomach may be produced by various causes, but one of the most frequent etiological antecedents, especially in females, is anæmia, and when anæmia is not an antecedent condition it is generally in chronic cases a consequential

one, so that it may be looked upon as a concomitant of the disease. Treatment is often unsatisfactory and the following method is submitted, not because it embraces anything new, but merely because it seems to have been productive of good results in the cases here enumerated, as well as in many others of a more indefinite character which have come under observation but which the scope of this paper will not embrace. The value of papain in gastric conditions, presumably of an ulcerative character, was first suggested to me by the following case.

CASE 1.—A woman thirty-two years of age, thin, pallid, and badly nourished.

Symptoms and history.—She experienced pain soon after eating, and she had observed that the amount of pain had been proportionate to the roughness and solidity of the food which she had taken. The pain had always been accompanied by flatulent distension, and was increased by pressure over the epigastrium. There had been a continual sense of oppression and nausea, which was relieved if vomiting occurred. Heartburn had been a distressing symptom. Her appetite had been fairly good, but could not be indulged from fear of the subsequent discomfort. Constipation had been a constant trouble. The menstrual discharge had been irregular, scanty, and pale in colour. She had had occasional palpitation, uncomfortable attacks of faintness, and breathlessness on exertion. There was extreme tenderness to touch in the epigastrium, limited to a spot on the right of the ensiform cartilage. Her tongue was clean, red, glossy-looking, and abnormally sensitive. Her pulse was small and rapid, but the cardiac dulness was normal, and the sounds were masked by a hæmic murmur. Bruit de diable was well heard in her neck. The other organs were apparently healthy, and the urine was normal. There was some distension of the abdomen, which was tympanitic on percussion all over. When a girl she suffered from bloodlessness, for which she was repeatedly under treatment for months at a time. Six years ago she had a serious illness, the leading feature of which was a large vomiting of blood, followed by a smaller attack some weeks later. She was then ill for several months, but eventually recovered. Ever since she had suffered from dyspepsia, which had become aggravated within the last three months and complicated latterly by frequent sickness. The breathlessness on exertion was a comparatively recent development.

Treatment and result.—Careful dieting and the usual succession of remedies for the relief of her symptoms brought about in time a general improvement of her health, and particularly a marked diminution of her anæmia, but there still remained pain after food, especially if solid, and periodic attacks of violent sickness. An alkaline mixture, containing papain, morphia, and strychnine, was then ordered, and under its influence the dyspeptic symptoms yielded, and she gradually experienced greater comfort than she had known for years. Suddenly one day, after unusually heavy household work which her feeling of improvement had tempted her to undertake, she complained of acute pain in her abdomen, became collapsed, and at the end of a few hours died.

Necropsy.—There was no evidence of organic disease except in her stomach, which was found at one part of its lesser curvature to be glued to the edge of the left lobe of her liver. On the mucous surface, at a point corresponding to the seat of this adhesion, there was an old cicatrix, circular in shape and about the size of a florin, but at its outer and lower edge there was an elliptical portion of fresh ulceration, and in this situation the perforation had occurred. Close by were two smaller abrasions of surface, evidently of recent date—one circular and the other oval in shape. Both were in process of healing, and the larger of the two, though still of a deeper tint than the surrounding mucous membrane, was partially cicatrised. All the abrasions were on the anterior surface of the lesser curvature. These post-mortem appearances, when viewed in the light of the history of the case and when taken in conjunction with the positive assurance of the patient that from the date of the commencement of her illness she had never been so well and free from pain as since she commenced to take the papain mixture, suggested that possibly this drug, which had not been previously administered to her, had done something towards healing the ulcerated patches, and had, as a consequence, afforded relief to her symptoms. The perforation in all probability was caused by the unusual exertion which she was unwisely tempted to undertake, and was determined at the spot where it occurred by recent activity of the ulcerative process.

at the edge of the old cicatrix, and by special tenacity of the stomach wall at that particular situation.

Acting on this supposition, papain was administered in many suitable cases, and the following are selected because they most strongly illustrate the beneficial effect of the treatment adopted.

CASE 2.—A young woman twenty-eight years of age, tall, thin, but fairly well nourished.

Symptoms and history.—For nearly a year she had had discomfort immediately after food, and during the past three weeks the discomfort had increased till it had become sometimes pain of the most agonising description. For days past the pain had been so severe and continuous that she had been afraid to swallow anything. Till lately she had only suffered from sickness very occasionally, but since the pain had become worse it had been invariably accompanied by nausea, often leading to retching, and sometimes to active vomiting. On the least exertion she became giddy and faint, and experienced a sense of pulsation all through her body. She had an almost irresistible craving for stimulants. Her catamenia had ceased entirely for six months. On her return from a short walk, the latter part of which was hurried to avoid a shower of rain, she was suddenly seized with alarming hæmorrhage from the stomach, the quantity of blood vomited amounting to about two pints. The shock of this large bleeding was great, and when first seen her condition of collapse was so extreme as to make her recovery doubtful. Hypodermic injection of ether and ergotin, together with an enema of meat-juice and brandy, however, fortunately restored her. An ice-bag was intermittently applied to the abdomen, and for six days she was fed entirely by nutrient enemata. Three days after her first attack there was a renewal of the hæmatemesis to a much smaller extent, but still enough to induce a minor degree of collapse and to necessitate the repetition of ether and ergotin hypodermically. During these six days she was allowed to suck ice *ad libitum*; a succession of two small fly-blisters was applied to the epigastrium; and creasote for two days, followed by nitrate of silver for five days, was administered internally in pill form. At the end of a week the more acute symptoms had subsided, but she was still prostrate, blanched, and with a very rapid and soft pulse. There was excessive tenderness at the pit of the stomach and the least pressure excited acute pain and produced faintness. The tongue was red, raw, and dry, causing her difficulty in articulation. Her heart sounds were muffled, but the action was so rapid as to make it impossible to be sure whether or not there was a bruit; the percussion dulness was not increased. There was no evidence of organic disease otherwise. She had been dyspeptic all her life, and at eighteen years of age she had had a similar illness to this one, but the amount of blood then vomited was comparatively small. On several occasions she had been laid aside on account of depressed health, but she did not think she had ever suffered from acute disease. She had been led to understand that she had an anæmic tendency, and she had been frequently treated for a period of weeks with iron. Her menstruation had always been irregular and for the most part scanty. There was a dipsomaniac taint in her family history, which otherwise was satisfactory.

Treatment and result.—On the seventh day of her illness she was allowed to sip milk and barley water, and the nutrient enemata were reduced to two a day. On account of a slight return of the nausea the creasote was resumed night and morning, and three times a day a pill containing papain, reduced iron, and cannabis indica was administered. Her rectum was washed out with a simple enema every morning. After three more days the creasote and nutrient enemata were discontinued, and the diet was supplemented by farinaceous puddings, light broths, &c., leading on gradually to fish, white meats, and cooked vegetables, until eventually an ordinary diet of mixed animal and vegetable substances was tried. The papain and iron pills were increased to four a day, and when she began to take solid food she was ordered in addition a further quantity of papain with her midday meal. At the end of seven weeks from the date of her first hæmorrhage she was quite well and was able to take ordinary food without discomfort. She could walk some distance, sleep soundly, and was ready and anxious to return to work. Since that illness she has three times been threatened with a return of her old symptoms; but when the pain after food has warned her that she was falling off, she has taken similar pills plus a small addition of arsenic, has restricted her diet to milk and soup,

and on each occasion she has been well within a week or ten days. For upwards of two years now she has been in vigorous health.

CASE 3.—A young woman twenty-two years of age, thin, anæmic, and delicate-looking.

Symptoms and history.—Ten days previously it came to the knowledge of her mistress that this girl was taking little or no food, and on inquiry it was found that she had been ailing for several weeks and that her refusal of food was due to the pain which it caused her. From a slight beginning this pain had latterly become unbearably acute, and, no matter what she put into her stomach, it was invariably followed in about a quarter of an hour by pain, which often quite doubled her up and which was relieved by the attack of vomiting which generally followed. Her appetite was voracious, but she dare not gratify it. She had suffered for about six months from menorrhagia. She had constant headache, was easily fatigued, and in the evening had slight oedema of her ankles. She had always had constipation. Immediately after swallowing a cup of hot tea one morning she was seized with a feeling of faintness, and shortly afterwards vomited about a pint of blood. When first seen she was recovering consciousness, her pulse was feeble and frequent, her skin was bathed in a cold, clammy perspiration, her lips were colourless, and her respiration was shallow and sighing. A hypodermic injection of ether was administered and was speedily efficacious in reviving her. Later in the day, the girl's general condition having improved, it was found that she had tenderness over her epigastrium, which increased to acute pain on pressure. There was very considerable distension of the stomach. The tongue was clean, but shrunken and pallid. The colon was loaded, the bowels not having been relieved for several days. The heart sounds were clear, but there was a hæmic murmur to be heard all over the cardiac area. The urine contained a faint haze of albumen. She had never been a robust girl, but had not suffered previously from acute illness. She had been subject at times to a troublesome cough, but it had always yielded to proper care and management. Her family history was strongly tainted with pulmonary phthisis. One sister died suddenly after a long illness from "bleeding," but whether the hæmorrhage was from the lungs or stomach it was difficult to determine, though several circumstances made it seem likely that its seat was the stomach and that death was due to perforation.

Treatment and result.—Four days after the occurrence of the hæmatemesis the combination of papain, iron, and cannabis indica was ordered. Her diet was carefully restricted, and no solid food was allowed for a fortnight. At the end of three weeks iron, quinine, and arsenic were substituted for the former combination, and papain dissolved in glycerine was given with each meal. The food was gradually added to until a full dietary was reached, and the bowels were easily regulated by enemata of turpentine and oil during the first week and thereafter by a morning dose of infusion of senna pods. In six weeks she was convalescent; her digestion was restored, her strength re-established, and she was sent to a seaside convalescent home, from which she returned after three weeks the picture of good health.

CASE 4.—A married woman forty-two years of age, the mother of five children.

Symptoms and history.—For six weeks she had suffered from loss of appetite, heartburn, constipation, flatulent distension, and pain in the stomach, more or less acute, immediately after food. These symptoms had been augmented during the past week by the occurrence of sickness, and on two occasions by distressing and prolonged retching. She had been listless, depressed in spirits, unfit for exertion, sleepless at nights, and she had been rapidly losing weight. She had a muddy complexion and her expression was anxious and worn. There was not much tenderness in the stomach region except at one spot, so small as to be covered by the tips of two fingers, immediately to the right of the ensiform cartilage, but in this situation there was great sensitiveness, and she cried out on the least pressure. So tender had it been for some days that she had been obliged to leave off her corsets. Her heart was healthy, but there was some muffling of the first sound, which became much more pronounced after slight exertion. Her tongue was coated, dry, and tremulous. Her urine was normal, and there was no other evidence of organic disease. She had once suffered from pneumonia, and all her life she had been easily upset by extra work or worry. Her menstrual function was late in being established, and for the past six months it had been in abeyance. She had always been obliged to be careful as

to her dietary, but she had never before suffered such pain after taking food. Her confinements had been normal, but on each occasion her recovery had been protracted, and she had only been able to nurse two of her children for a period of about three months each. Her family history was unimportant, but was distinctly neurotic.

Treatment and result.—A small dose of calomel was ordered for three consecutive nights, to be followed by a saline draught in the morning. Her diet was restricted to milk and thin clear soups for a week, and a mixture of bismuth, soda, salol, and papain was prescribed to be taken three times a day. After a week the dietary was increased by the addition of fish, fowl, and toasted bread; and later by red meat and cooked vegetables. The bismuth mixture was replaced by the combination of papain, iron, and cannabis indica, and the bowels were regulated by means of compound rhubarb powder, taken according to requirements. In three weeks complete convalescence was established and the digestive functions were normal. All epigastric tenderness had disappeared and she could bear deep pressure without flinching.

CASE 5.—A young woman twenty years of age, ruddy, well nourished, and apparently vigorous.

Symptoms and history.—Two months ago her appetite began to fail, and for the past fortnight she had experienced pain in the pit of her stomach after every meal. The pain continued for three or four hours, and only subsided as the time for her next meal approached, unless vomiting occurred, by which it was at once relieved. It commenced in the epigastrium, but gradually extended through to the back, and was proportionate in degree to the kind of food taken. For ten days past sickness had become a pronounced symptom and had been welcomed by the patient as the speediest relief to her discomfort. Twice, if not three times, the vomited matter had been stained with blood, and on one occasion she observed that the morning evacuation of the bowels was black in colour. Coincidentally with her loss of appetite there had been failure of strength and disinclination for effort. Naturally energetic, she had of late become languid, irritable, and unfit for any work requiring concentration of energy. All her life she had been the victim of persistent constipation. On examination of the epigastric region there was considerable tenderness, which did not, however, appear to be concentrated in one spot, though it was greater to the left than to the right of the sternum. Pressure increased the tenderness and produced painful retching. The tongue was abnormally clean and so sensitive that warm or seasoned food dared not be put into the mouth. The apex beat of the heart was somewhat diffuse and the second sound was accentuated, but there was no bruit. There was imperfection of the respiratory murmur throughout the right lung, which did not expand as fully as the left. There was no derangement of the general nutrition. The urine contained an excess of phosphates. Some years ago she had gone through a serious attack of pleuro-pneumonia, from which she had made a slow recovery, but her life had been in other respects a healthy one. She had never before the present time suffered from derangement of her digestive organs. During the last year her work had been unusually arduous, and she had had to contend with an excessive amount of mental worry. Her family history was excellent.

Treatment and result.—A simple dietary was ordered of milk, eggs, clear soups, and farinaceous food; and she was advised to give up work entirely for a time. Papain, iron, cannabis indica, and strychnine were prescribed three times a day, with an aperient dose of euonymin, colocynth, and rhubarb every alternate night. After a week fish, fowl, stewed fruit, and cooked vegetables were allowed. The necessity for a regulated daily amount of open-air exercise was also insisted upon. In fourteen days she was so much better as to be able to resume ordinary food, and at the end of three weeks she was perfectly well and returned to the full duties of her occupation.

CASE 6.—A woman thirty-three years of age, thin, anæmic, and with a careworn, cachectic appearance.

Symptoms and history.—Her illness dated back four years, during the whole of which time she had been a martyr to dyspeptic troubles. She had now given up her work and come home in the hope of finding permanent relief from prolonged rest. She suffered from continual epigastric fullness and pain, which were so aggravated by the taking of food that she had been obliged to live almost entirely on milk, and even that at times had produced acute suffering. Since she first became ill every attempt to take solid food had been followed not only by pain but also by sickness and retching.

There had been slight hæmorrhage on several occasions, but she did not think the amount had ever exceeded a few ounces. Her nights had been sleepless, and she had experienced such misery from palpitation as to make her fear she was the subject of some serious form of heart disease. She had all her life suffered from dysmenorrhœa, but the amount of loss at each menstrual period had for over two years been markedly diminished. She had been subject to unaccountable attacks of vertigo, which had always occurred without warning and had often been so bad as to compel her to lie down. They had always been followed by distressing head symptoms, which she had difficulty in describing otherwise than by saying that her head felt "empty and as if it did not belong to her." She distinctly said the discomfort was not pain. Periodically she had an attack of diarrhœa, but as a rule her bowels were constipated and difficult to keep right. She had become very thin and felt unfit for any but the slightest exertion—indeed, if she followed her inclination she would keep to her bed entirely, because only there was she comfortable. She suffered from mental depression, amounting occasionally to mild melancholia. Her epigastrium dare hardly be palpated, and at two separate and circumscribed places near the middle line she could not bear pressure. Even the most gentle examination caused pain, which lasted for an hour or more and produced a continued feeling of deathly sickness. The stomach was distended and tympanitic. Her tongue was slightly coated on the dorsum, but was abnormally red round the edges; it was also dry and shrivelled. Her heart sounds were clear, but the impulse was feeble. The pulse was soft and rapid. There was some decrease in the area of liver dulness, but this was difficult to determine accurately on account of the distended state of the stomach. The urine contained an excess of urates. She had always been a most active person, and though possessed of a highly strung and sensitive nature she had been able to battle comfortably with the difficulties of her life and had never been ill till about four years ago, when, after a long spell of laborious and anxious duty, she broke down and first manifested the symptoms of her present illness. Her family history was highly neurotic, but it was not otherwise remarkable. In the course of this illness she had been better and worse, but never well, and twice before she had given up work for a period of six weeks.

Treatment and result.—Absolute rest in bed was advised, and boiled milk with lime water to the extent of from three to four pints in twenty-four hours, to be taken cold and sipped in small quantities at a time; also meat juice every four hours. One dose of calomel was ordered at bedtime the first night, and every morning an enema of glycerine and hot water. A fly blister was applied over the whole epigastrium. Every six hours she was instructed to take in milk a powder composed of carbonate of bismuth, sulpho-carbolate of soda, papain, and morphia. After a week prepared foods, meat jellies, and clear soups were added to the dietary, and the powders were replaced by a mixture containing strychnine, morphia, and bichromate of potassium. In another ten days the combination of papain, iron, and cannabis indica, to which in this case some arsenic was added, was resorted to. Farinaceous food, white fish, and the simpler meats were allowed, to be followed gradually by further additions as the comfort of the patient and the tolerance of her stomach permitted. At the end of two months she was able, with moderate care, to digest ordinary food. She then resumed her occupation. Her work was modified, and for another month she continued her medicine and still exercised a wise control over her food. In three months she was well and vigorous and able to leave physio alone. She has continued so, and has since reported herself as having regained her normal weight and strength.

CASE 7.—A young woman aged twenty-four years, of bright complexion, tall, and delicate-looking.

Symptoms and history.—Three months ago she first complained of discomfort after her meals. It had become worse daily, and was now accompanied by fullness of the stomach, together with heartburn and frequent attacks of sickness. She was never free from nausea. Her bowels were constipated and she had no appetite for food. Menstruation had been excessive for years, but for some months past the periods had recurred as often as every ten days. She had continual headache, which was worse in the evening than the morning and was relieved by sleep. There was no generalised tenderness and no apparent undue distension of the epigastrium, but to the left of the ensiform cartilage there was

one spot exquisitely tender, which she disliked having touched. Her tongue was fissured, flabby, and raw. There was a loud hæmic murmur in the large vessels and a systolic bruit at the apex, which was situated outside the nipple line. The right edge of cardiac dulness extended to the right margin of the sternum. There was accentuation of the second cardiac sound. The urine contained a distinct ring of albumen. She had twice suffered from hæmatemesis, the last occasion being between two and three years ago, when the bleeding was severe and the convalescence slow. From both attacks her recovery seemed to have been perfect, and she was able in the interim to live as usual and to comfortably digest ordinary food. She had been subject to attacks of rheumatism, but never in an acute form; and in winter time she frequently suffered from a hacking and obstinate cough. Her family history was phthisical.

Treatment and result.—A milk dietary for ten days, to be followed thereafter by gradual additions of solid food, was advised. Papain, iron, and cannabis indica were ordered from the beginning, with an iron and aloes pill for aperient purposes as often as necessary. At the end of a fortnight she was very much better, and in a month she was well except for the mitral murmur, which probably had been of old standing.

CASES 8, 9, AND 10.—These were all mild cases, which need not be detailed. In none of them had there been hæmorrhage, but all manifested the usual symptoms indicative of probable gastric ulcer, and in each the treatment by papain, iron, and cannabis indica produced an eminently satisfactory result in a period ranging from two to four weeks. Cases 8 and 9 were male patients.

General remarks.—The symptoms in these ten cases were so characteristic that it can hardly be doubted that in all of them the pathological condition was one of ulceration, actual or threatened, of the mucous membrane similar to that found post mortem in Case 1 of the series. The results, moreover, of treatment by papain, iron, and cannabis indica are so striking as to make it probable that in such a combination we have a powerful and useful weapon with which to combat a very intractable disease, and one which, perhaps more than most others, impairs the usefulness of the unfortunate victim and renders his or her life a burden. It would seem doubtful whether many cases of so-called irritative dyspepsia may not in reality be due to this definite lesion of the mucous membrane in a latent condition. Hæmatemesis is not necessarily present in every case of even acknowledged gastric ulcer, and in its absence it must always be a matter of difficulty to decide whether the train of symptoms owes its cause to a simple catarrh or to organic change in the substance of the stomach wall. The occurrence of hæmorrhage clinches the diagnosis; but where remedies, useful in cases about which by reason of the hæmatemesis there can be no doubt, give equally good results in allied cases which fall short of the confirmatory evidence afforded by the bleeding, we may assume that such cases may owe their symptoms either to an early stage of the same condition or to an accomplished lesion of the surface so chronic and indurated as to prevent actual loss of blood. By some observers the persistence of pain in patients who have admittedly suffered from gastric ulcer has been ascribed to imperfect movement of the stomach walls consequent upon the interference of the resulting cicatrix; but the histories of Cases 2, 3, 6, and 7 would rather indicate either imperfect healing or the occurrence of another patch of ulceration as the more probable explanation of the continuance of this symptom. Were this not so it is hardly conceivable that each of these cases could have recovered so thoroughly, because it seems certain that in several of them there must have remained one or more cicatrices of considerable dimensions. In all this series, putting on one side the differences of detail required by the idiosyncrasies of each, the plan of treatment has consisted in the exhibition of a mixture of iron, papain, and cannabis indica, generally in pill form, and with varying quantities of each of the ingredients. As the large proportion of such ulcerations occur in anæmic patients the *raison d'être* of the iron is manifest. It may be that in some cases iron is not indicated at all by the existence of any appreciable anæmia; but even then it is probable that the blood is impoverished to some degree, and that the hæmatinic properties of the drug not only restore this depreciation of quality but also, in a secondary way, promote the healing process at the site of lesion. The cannabis indica is useful as a sedative to the stomach walls, as a controller of its muscular action, and as a prop to its nerve-supply, while it

is also fully recognised as a direct promoter of appetite. Lastly, papain, which is the most important member of the trio, probably has a complex effect on the curative process. It is well known that when a solution of papain is painted over a fissured or ulcerated tongue it rapidly provokes cicatrization. The drug is also of value as a speedy solvent of dead tissue, and to some extent it is credited with antiseptic and tonic properties. Its great use, however, medicinally has hitherto been as a digestive ferment, and its activity in this respect would seem to exceed that of pepsin, pancreatin, or any other known agent. If all these powers of papain be admitted it is easy to conceive a reasonable hypothesis to explain the happy results afforded by it in cases of gastric ulcer, particularly when it is combined with other drugs such as those indicated, which by their collateral effect assist and intensify its action. This hypothesis is strengthened by the post-mortem evidences in Case 1 and still further confirmed by the marked alleviation, if not permanent cure, in the other cases above narrated.

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CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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(Continued from p. 213.)

CASE 31.—This case is in many respects a very remarkable and very interesting one, and I must give it in a little more detail than is necessary with most of the cases. A married woman aged forty-four years, mother of two children, both dead, the youngest a daughter, who had died from phthisis aged two and twenty only the year before I was asked to see the patient by Dr. Ferrier. The patient's father died from bronchitis aged seventy years; the mother was still alive; one brother and one sister were also living and well, and one sister was dead. In 1873 when travelling abroad the patient had a severe attack of abdominal pain, so-called "gastric," brought on by a chill, and after this menstruation was for some time very irregular. Before this illness, in 1866, she was riding a great deal a horse that "buck-jumped and did extraordinary things" (she rode this horse from 1863 to 1867), and she then noticed a lump in her right side, which she could sometimes find and sometimes not. She used to have pain in the side and could then feel the lump. In 1881 she got another chill just before the period, and had a severe attack of peritonitis and was laid up for three months; after this the periods again became very irregular and excessive, and there were pain and lameness of the left hip, and just before our first consultation the right hip had also begun to be painful. Dr. Ferrier asked me to examine the pelvis, various troubles for which she had been under his care having entirely resisted all treatment. I found a normal uterus in good position—a large prolapsed and somewhat fixed left ovary and a small right ovary embedded in adhesions and with a distended tube. Any pressure on the ovary caused severe pain and nausea. I advised removal of the ovaries and tubes, and operated on Feb. 24th, 1887. The whole pelvis was a matted mass of dense fibrous adhesions, and I removed two distended tubes (hæmato-salpinx) and, as far as I could, both ovaries; but the right one was so embedded in adhesions that I had to scrape it away, and I have no doubt that more or less ovarian tissue was left behind. She made an excellent and uncomplicated recovery until she went downstairs, when she began to vomit her food. She ate and enjoyed her food, but within a few minutes of swallowing it she vomited without nausea and without strain. She went back to bed, the vomiting became constant, and, to make a long story short, she was in bed for over a year, only kept alive by nutrient enemata and the small residuum of food retained by the stomach after a meal. This was extremely small, as we proved by washing it out for examination. The patient became a perfect skeleton, but was bright and cheerful, and even selected her meals with considerable care and enjoyed them, though they were vomited in less than a quarter of an hour. She was seen in consultation with Dr. Ferrier and myself by

most of the leading physicians in London at different times, and was constantly watched by both of us, but no one ever suggested any remedy that helped her or us. One day, fifteen months after the operation and fourteen after the commencement of the vomiting, it ceased as suddenly as it began, and three meals were taken in succession, and, though so extremely emaciated and weak, she sat up to eat them and remained sitting bolt upright for twenty minutes after, which, she said, seemed to settle her stomach. I have already mentioned a lump in her right side; this I could not find before the operation, and I did not then attach sufficient importance to it to look for it when I had the abdomen open—indeed, my hands were quite sufficiently full with what I had to do in the pelvis. But during this long illness, and when she was emaciated, we found a large, mobile, and somewhat tender right kidney. I may mention that the urine examined before the operation was a good average healthy specimen. She had been having massage shortly before I first saw her, and while this was going on she had for the first time noticed some slimy matter in her urine. There was nothing of the kind when I saw it. These are important facts when we come to the further history and conclusion of the case. When she had quite recovered her usual health she began to have irregular but pretty severe and prolonged uterine losses (probably due to the presence of remains of the right ovary and the irritation caused by changes around the ligatures used and from the contraction of scar tissue). I had always been inclined to regard the vomiting as a reflex result of some such irritation, and had at one time thought of a fresh exploration of the pelvis, but she seemed too emaciated and weak for any serious operation. These losses were an annoyance and disappointment to her, and I saw her from time to time and found that the right kidney was still palpable and tender, but it seemed to give her no trouble. In the early spring of 1889, about a year or less after the cessation of the vomiting, I was asked by Dr. Ferrier to see her again in consultation as the sickness had returned. It was soon as bad as ever, and both the patient and myself now directed much of our attention to the tender right kidney as a possible cause of it, and at last, as she was rapidly losing ground, I urged its removal and a thorough exploration of the pelvic cavity. I operated on June 24th, 1889, Mr. Murray giving chloroform, Mr. Malcolm assisting, Dr. Frank of Cannes and Dr. Ferrier being also present. I found nothing in the pelvis except little shot-like prominences where some of my ligatures were buried, and there was a little omentum adherent to the abdominal scar. The right kidney was a mere thin shell or bag of putty-like and calcareous matter; it was mobile, but very adherent, with fibrous bands and membranes. As I was working through a rather small median opening (I had merely reopened the old incision), I determined to incise the loin and thus extract the kidney. This I did with considerable difficulty, owing to the dense nature of the adhesions. The ureter appeared perfectly healthy, and this made me doubt whether the disease had been originally tuberculous. I have never in any other cases seen a healthy ureter with a tuberculous kidney. I planned it out in the loin wound. On making a final intra-peritoneal examination I found a large opening in the peritoneum over the site of the right kidney (a fact to be kept in sight when discussing lumbar *versus* abdominal nephrectomy) and a curious thick, strong, fibrous band stretching across the pelvis in such a way that it must have interfered much with all the pelvic organs, and it especially dragged on the right ureter. The kidney after removal was found to be a mere thin shell without a vestige of kidney tissue, its whole interior being occupied with a mixture of putty-like and calcareous material. The patient made an excellent recovery without any bad symptoms, in spite of a partial reopening of the wound after the removal of the sutures—an accident due, I believe, to imperfect union of two edges of scar tissue. I did not in this case, as I usually do in performing a second operation, entirely dissect out the old abdominal scar. Another unfortunate result of this bit of bad practice was a ventral hernia which I had to operate upon two years later, giving her the discomfort of a third operation. She has remained in very good health, but has never quite lost the hip lameness.

The urine examined by Mr. Malcolm at the end of 1887—nearly a year after the first operation and when she was in an extremely exhausted condition from the constant vomiting—was of a good amber colour, acid reaction, sp. gr. 1023, with only a slight deposit, which consisted of bladder and

renal epithelium and numerous oxalates. There was a mere trace of albumen. Evidently little or nothing was getting into the bladder from the right kidney either at this time or when I tested it before the first operation. It was very frequently examined during the second vomiting, and presented practically the same conditions. It seems perfectly plain from this remarkable case that the kidney, though entirely destroyed as a secreting organ, may still, when unduly mobile, give rise to the most severe reflex phenomena. All who devote special attention to the kidney must be struck with the very wide range of reflexes which are possible with an unduly mobile organ. This case seems to mark the extreme limit of digestive disturbance, and it certainly is strange that this limit should have been reached with an organ so completely destroyed by disease, and I am inclined to question whether it was the kidney or the healthy ureter dragged upon by the pelvic band which was the cause of the sickness. I have in one other case noted some troublesome sickness following nephrectomy in the case of a young woman whose ureter, fixed in the lower angle of the abdominal incision, remained for a long time patent, and required the occasional passage of a fine gum elastic bougie down it into the bladder to clear it of accumulating secretions. If we regard the alternately kinked or stretched ureter as the cause of the troubles in mobile kidney, we have an immediate explanation of the persistence of pain and other troubles when the kidney is sutured too low in the operation for its fixtue (nephrorrhaphy). Such a case is now under my care, and I have failed to entirely cure it by freely dividing adhesions and making a fresh suture because I altogether failed to get it pushed high enough up, though I appeared to have freed it thoroughly. To go back to the early history of the present case, we have a healthy girl riding a rough horse for some years, regardless of times and seasons (I refer to menstruation). This rough riding is, as I have already in a previous paper pointed out, an evident starting point in some cases of mobile kidney, nothing being more likely than that the muscular actions necessary to keep one's seat on a "buck-jumper" should produce dislocation of the kidney. Then followed two attacks of abdominal inflammation, both, as evidenced by the irregular menstruation, seriously affecting her pelvic organs. What more likely than that this mobile kidney, troubled by alternate distension to pain and collapse, already probably hydronephrotic, should suffer seriously from these attacks of surrounding inflammation (peritonitis)? The hydronephrosis becoming a pyonephrosis in one or other of them, whether tuberculous or simple inflammatory. The kidney was gradually destroyed without attracting much attention, and during this time she bore two children, both of whom died young and one from undoubted phthisis. The destroyed kidney passes into the background, while the ovaries in their more active life claimed attention; then the kidney, pressed down and irritated by the constant vomiting, again became palpable and painful. The slimy matter in the urine after the course of massage explains why the kidney was not a prominent feature at the time of my first examinations: its contents had been pressed out through the ureter, and in a flaccid condition such a soft bag as it was would readily escape touch when examining the abdomen unless it was tender and so called attention to its presence. I may mention that the irregular uterine losses gradually came less often and then ceased, a sequence I have before noted in cases in which small portions of ovarian tissue were left behind and were presumably the cause of the irregular metrorrhaxis. The commencement of the vomiting, when she first began to wear a tight abdominal belt and move about after three weeks' perfect quiet on her back, is much easier to understand than the sudden cessation, and the sudden recommencement when she appeared to be in perfect health.

CASE 32.—This is a very unfortunate case and its record is one which may, I hope, help both myself and others to avoid attempting surgery in similar cases. A woman aged forty-three years, single, consulted me in June, 1889, as to a large swelling in the abdomen. She had first noticed some swelling in the same situation ten years before her visit to me, and could not in any way account for its commencement. She suffered much from constipation and from an irritable bladder, having to get up during the night to pass urine, and sometimes frequently. Menstruation had commenced late and was always excessive. The urine was of low specific gravity 1009, hazy, barely acid, and contained an eighth of albumen. Seventy-three ounces passed in twenty-four hours contained 245 grains of urea. Another specimen examined three weeks later contained nearly a

quarter of albumen and some red blood cells. I came to the conclusion that the case was one of sarcoma of the right kidney, and in this diagnosis Sir Andrew Clark, who saw the case with me, concurred, and we advised its removal. The left kidney was also distinctly large, but this I thought was probably due to compensatory hypertrophy. The slow growth of the tumour made me hope that it was a sarcoma of the capsule, or of the supra-renal capsule, similar to others in which I had obtained excellent results by operation. It was a very soft kidney and there was an indistinct fluctuation, or thrill, which rather suggested that some cystic change was taking place. I operated on July 11th, 1889, by Langenbüch's incision, and as soon as I had exposed the kidney saw that I had to deal with that rare disease multiple cysts of the kidney. The whole organ was a mass of small cysts crowding upon one another and pressing one another out of shape, so that its exterior presented the appearance of a tessellated pavement. Passing my hand across to the left side of the abdomen I found the other kidney unmistakably in an early stage of the same disease, though there was still in it more healthy than diseased tissue. Clearly I ought to have closed my incision, for I was face to face with an incurable disease of both kidneys, but I thought that, as the one was already practically destroyed and giving her pain and discomfort, she might live longer without it. It enucleated very easily; indeed, I never had a simpler nephrectomy. There was only a small opening in the outer layer of the meso-colon, and this seemed to lend itself so well to complete shutting off from the general cavity of the peritoneum that I sutured it into the abdominal wound and drained the sac with a glass tube, a second mistake, as will be seen immediately. By tapping successive cysts I obtained four pints of fluid from the kidney, and it was still very large when I removed it. The vessels were tied separately and the ureter pinned out beside the sac. The patient began to retch directly after the operation and vomited persistently till I reopened the wound on the fourth day and found an immensely distended cæcum pressing on and obstructing the ileo-cæcal valve, the whole being due to the hooked-up position of the ascending colon from my sutures. I need not give in detail the downward progress of the case during these four days; it was unmistakably a case of obstruction, but I hesitated to reopen the wound, partly because we got large actions by gruel and turpentine enemata, though never any passage of flatus, and partly because I feared the effect of a further operation on the remaining kidney. There was no fever all through, but on opening and emptying the cæcum I found a patch of gangrene the size of a sixpence where the pressure had been most severe; this was excised and the incision closed with a row of Lembert's sutures, a second row of interrupted sutures bringing the peritoneal surfaces together as a support, my incision into the cæcum being closed in the same way. On putting a tube into the pelvis to more thoroughly drain the peritoneum I found that it was blocked with adhesions, the uterus, ovaries, and bowels being all bound together, and I then learnt for the first time that the patient had nearly died from obstructed intestine once before. The one kidney continued to work well, but she did not rally well from this second operation, and she died quite suddenly on the following day while telling me in a good strong voice about her previous illness.

I made two or perhaps three mistakes in this case. 1. I ought to have closed my incision when I found what the nature of the disease was. 2. I ought not to have sutured the edges of the sac into my peritoneal wound. I have over and over again decided that this is bad practice, and yet now and again some specially favourable case for shutting off the peritoneum tempts me to try it once more. In this case it caused a fixed bend in the ascending colon, which dragged upon the cæcum already held below by pelvic adhesions, and the more it distended the more it tended to close the ileo-cæcal valve. 3. I ought to have had the courage of my opinion and reopened the wound and freed the bowel sooner—i.e., directly I became convinced that there was obstruction. There is no condition in surgery in which hesitation and delay are likely to take away the chance of success so decidedly as in acute obstruction of intestine, and there is no condition in which patience and waiting, with a judicious use of atropine and morphia and of turpentine enemata, are so likely to be rewarded as in chronic obstruction, especially if it is in the very smallest degree incomplete.

(To be continued.)

THE INFLUENCE OF THE FORCE OF GRAVITY ON THE CIRCULATION.¹

By LEONARD HILL, M.B. LOND.,

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AND GROCERS' RESEARCH SCHOLAR.

THE effect of position of the body upon the circulation of the blood is a matter of daily observation with the physician and surgeon, but it has been curiously neglected by physiologists. So far as my researches into the history of the subject go the mere facts that the feet-down position lowers arterial pressure and that the feet-up position heightens it are almost all that has been determined. In 1885 Hermann placed the subject in the hands of two pupils, Blumberg and Wagner, with the object of investigating the dynamic and hydrostatic effects of gravity on the circulation. The hydrostatic moment is the altered relationship of level between the given spot on the artery (where the manometer is placed) and the rest of the vascular system. The dynamic moment is the altered relation between pressure and resistance produced indirectly by the change of position on the heart beat, the filling of the heart, the vaso-motor nerves, &c. Hermann instructed his pupils to find the indifferent point of the circulatory system, in order that the hydrostatic effect might be eliminated and the dynamic effect alone studied. Blumberg and Wagner determined the indifferent point by filling the circulatory system of the dead animal with salt solution and then by shifting the position of the axis round which the body was turned. I have found that on attempting, according to Wagner's method, to fill the circulatory system of the dead animal with salt solution the arterial part of the system does not remain filled, for the salt solution rapidly leaks into the splanchnic venous area. By alternately placing the animal with feet down or with feet up a pumping action is produced which gradually forces the salt solution out of the arterial system into the venous side, where it remains. The indifferent point cannot, therefore, be found on the dead body. Further, if it were possible to find the indifferent point on the dead body, the indifferent point on the living body could not be deduced therefrom, because such indifferent point depends on the coefficient of elasticity, which must constantly alter in the living animal with every alteration of the arterioles by vaso-constriction or dilatation. As regards the dynamic effect of gravity on the circulation, therefore, the work of Blumberg and Wagner cannot be accepted. My attention was first drawn to the influence of gravity upon the circulation by observations which I made upon the normal intra-cranial tension in a patient under the care of Dr. Clape Shaw. The patient had been trephined, and Dr. Shaw asked me if I could estimate his normal intra-cranial pressure. I did so by an adaptation of the method for investigating intra-cranial pressure described by me in the Proceedings of the Royal Society, vol. IV. I found that the pressure was negative while the man sat upright, but that it became positive as soon as the head was bent down towards the knees, and on any expiratory effort. The air-bubble index in the apparatus exhibited large cardiac and respiratory undulations. Experimenting on dogs, I found that exactly the same thing occurred. The normal cerebral pressure became markedly negative in the feet-down posture and positive in the feet-up posture. For the further investigation of the subject I constructed an animal holder which could be swung round a horizontal axis. In this axis the cannula connected with the vessel under observation was always placed, and the cannula itself was connected with a fixed hydrostatic manometer. The "hydrostatic and dynamic moments," to use Hermann's expression, were investigated and separated, not by attempting to find the indifferent point, but by carefully observing the effects of dividing and stimulating the vagus and splanchnic nerves and spinal cord, and by watching the influence of anaesthetics, curare, and asphyxia. The research has been carried out upon rabbits, cats, dogs, and monkeys, and the same general results have been obtained from all. The animals were anaesthetised in all the experiments, and were placed upon a board with the limbs fully extended in the same direction as the longitudinal axis of the body. The experiments group themselves under the following headings:

I. Effects on the circulation.—1. Normal effect on arterial

¹ Abstract of a paper read before the Royal Society.

pressure: (a) with carotid artery in axis, (b) with femoral artery in axis, (c) with splenic artery in axis. 2. Normal effect on venous pressure: (a) with splenic vein in axis, (b) with femoral vein in axis, (c) with torcular Herophilli in axis. 3. Influence of anæsthetics. 4. Effect of dividing the vagi. 5. Effect of dividing the spinal cord: (a) influence on heart. 6. Effect of dividing the splanchnics. 7. Influence of respiration and asphyxia. 8. Influence of curare.

II. *Effects on respiration.*—1. Normal effects. 2. Effect of dividing the vagi.

The venous pressures were recorded by means of a manometer filled with saturated sulphate of magnesia solution and placed in connexion with a delicate tambour or piston recorder. The cerebral venous pressure was taken in the torcular Herophilli by the method described by me in the before-quoted paper. The respiratory tracings were taken by means of a broad band of strapping passed round the thorax and connected to either side of a Paul Bert tambour. The changes of position prevented the use of any more accurate method for recording the respiration. The results of the research are shown in a series of tracings, from which the following conclusions are drawn:—(1) That the force of gravity must be regarded as a cardinal factor in dealing with the circulation of the blood; (2) that the important duty of compensating for the simple hydrostatic effects of gravity in changes of position must be ascribed to the splanchnic vaso-motor mechanism; (3) that the effects of changing the position afford a most delicate test of the condition of the vaso-motor mechanism; (4) that the amount of compensation depends largely on individual differences; (5) that the compensation is far more complete in upright animals, such as the monkey, than in rabbits, cats, or dogs, and, therefore, is probably far more complete in man; (6) that in some normal monkeys over-compensation for the hydrostatic effect occurs; (7) that in the normal monkey and man gravity exerts but little disturbing influence owing to the perfection of the compensatory mechanism; (8) that when the power of compensation is damaged by paralysis of the splanchnic vaso-constrictors, induced by severe operative procedures or by injuries to the spinal cord, by asphyxia, or by some poison such as chloroform or curare, then the influence of gravity becomes of vital importance; (9) that the feet-down position is of far greater moment than the feet-up position, because when the power of compensation is destroyed the blood drains into the abdominal veins, the heart empties, and the cerebral circulation ceases; (10) that, generally speaking, the feet-up position occasions no ill consequence; (11) that the horizontal and feet-up positions at once abolish the syncope induced by the feet-down position by causing the force of gravity to act in the same sense as the heart, and thus the cerebral circulation is renewed; (12) that firmly bandaging the abdomen has the same effect (while the heart remains normal, and so long as the mechanical pressure is applied to the abdominal veins, the pressure cannot possibly fall); (13) that if the heart is affected, as by chloroform or curare poisoning, the restoration of pressure is incomplete, and it is possible that the heart may be stopped altogether by the rush of a large quantity of blood, caused by too rapid an application of pressure on the abdomen (more work would be thrown upon the heart than in its impoverished condition it could perform); (14) that vagus inhibition and cardiac acceleration are subsidiary compensatory mechanisms in the feet-up and feet-down positions respectively; (15) that chloroform rapidly paralyses the compensatory vaso-motor mechanism and damages the heart; (16) that ether, on the other hand, only paralyses the compensatory vaso-motor mechanism very slowly and when pushed in enormous amounts; (17) that the vaso-motor paralysis induced by these anæsthetics lasts for some considerable time after the removal of the anæsthetics; (18) that chloroform can, by destroying the compensation for gravity, kill the animal if it be placed with the abdomen on a lower level than the heart; (19) that elevation or compression of the abdomen immediately compensates for the vaso-motor paralysis produced by chloroform; (20) that compression or elevation of the abdomen, coupled with artificial respiration and with squeezing of the heart through the thoracic walls, is the best means of restoring an animal from the condition of chloroform collapse (these results agree entirely with McWilliams', and are opposed to those of the Hyderabad Commission); (21) that the feet-down position inhibits respiration, and the feet up position accelerates

it; (22) that these respiratory results probably depend upon the stimulation of sensory nerve endings by changes of tension brought about by the alterations of position, because the results are abolished by dividing the vagi; (23) that in the feet-down position the respiration is thoracic in type, and the abdomen is retracted; in the feet-up position the respiration is diaphragmatic and the abdomen freely expanded; (24) that these types of respiration tend to compensate for the effects of gravity on the circulation, for the retraction of the abdomen in the feet-down position mechanically supports the abdominal veins, whilst the thoracic inspirations aspirate blood into the heart. In the feet-up position the full and free expansion of the abdomen withdraws all obstacles to the compensatory dilatation of the abdominal veins.

[In the last part of the paper the medical aspects of this research are discussed. It is suggested that emotional syncope is due to paralysis of the splanchnic area, and a case is quoted where compression of the abdomen immediately removed the syncopal condition. The same treatment, or that of elevation of the abdomen, is suggested for conditions of shock, chloroform collapse, and after severe hæmorrhage. Finally, a parallel is drawn between some of the results of this research in reference to monkeys and those obtained by Dr. George Oliver on man, by measuring the diameter of the radial artery with his ingenious instrument, the arteriometer.]

A CASE OF MYOSITIS OSSIFICANS.

By STEPHEN PAGET, M.A. OXON., F.R.C.S. ENG.,

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THE patient is a boy aged seven years and six months, thin and small, but fairly strong and active, and very intelligent; his general health is not impaired. His father, aged about forty years, is in good health and has never suffered either from gout or from rheumatism, but the boy's grandfather and grandmother both had rheumatic fever twice. The child's mother, aged about thirty-five years, is in good health, and has never had rheumatism; but her mother had rheumatic fever. One of her sisters died from cancer of the breast, and another died at the age of thirty-eight from "ulceration of the bowels." The patient is the eldest of three children; the others are healthy and have no deformity of the toes. The mother has not lost any children, and has never had a miscarriage. The boy was healthy during the first years of his life. He had measles when six years and six months old. The deformity of his toes was noticed a week after birth. There is no history of any injury preceding his present disease. It began with a swelling behind the left ear when he was four years and six months old. The growths of bone in the pectorals and down the spine came early in the disease. His mother is certain that the growths used to shift their places, disappearing at one place and appearing at another; but their appearance does not seem to have been preceded by pain or swelling.

Condition in 1892.—The patient was at this time five years and nine months old. (Dr. Rayner of Stockport, who has kindly allowed me to publish this case, let the child be under my care in the Metropolitan Hospital in the summer of 1892.) The following note was made at the time: "He holds his head in the position of wryneck, from contraction of the left sterno-mastoid. In each pectoral muscle, at the anterior fold of the axilla, are irregular bony nodules moving slightly with the muscles. On the right side these nodules are felt all over the pectoral muscle and are especially marked towards its insertion; here they are continuous with plates of bone under the deltoid and along the latissimus dorsi. Nodules are also felt on the origin of the serratus magnus. The latissimus dorsi presents a sharp ridge in the axilla, and is hard, but not prominent, down to the angle of the scapula; and there are two prominent masses, not fixed to bone, beneath the angle of the scapula. The scapular muscles themselves do not appear to be affected. On the left side the pectoral muscle is also infiltrated with bone; it is more nodular than the right pectoral, and the bony growths towards its insertion are more prominent. They are continuous, as on the right side, with bone in the fascia beneath the deltoid, and, though this is not quite certain, with the latissimus. The disease in the left latissimus is

most apparent below the inferior angle of the scapula; but it is less marked here on the left side than on the right. The left biceps is also affected. Crapitus is felt

FIG. 1.



To show the contraction of the left sterno-mastoid, the masses of bone in the latissimi dorsi, and the extreme amount of abduction of the arms obtainable.

FIG. 2.



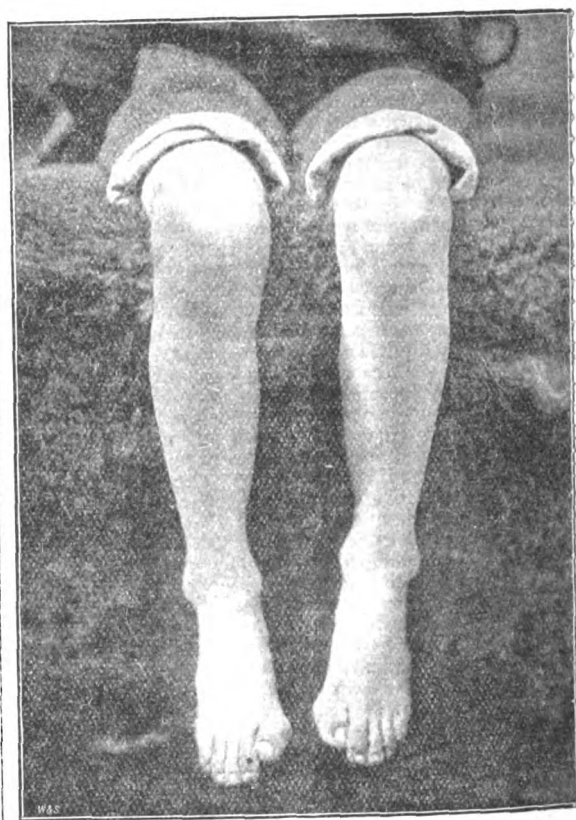
To show the abduction of the arms—front view.

when these growths are moved. Down each side of the spinal column is a hard ridge, more marked on the left side than on the right, which seems to be part of the

latissimus dorsi. The trapezius is healthy. In each posterior triangle of the neck there is an ill-defined hardness. The right sterno-mastoid is healthy; the left is very much shortened, but no bone is felt in it save one very small nodule in its anterior edge, about an inch above the clavicle. From the anterior fold of each axilla, between the nipple line and the axillary line, a hard vertical cord, about the thickness of a No. 4 or 5 English catheter, runs straight down over the ribs and the abdominal wall, and fades away about the level of the iliac crests. The right cord is somewhat more distinct than the left; they are slightly movable and hard, but not so rigid as bone; they feel to the touch like the diseased lymphatics of cancer or like very atheromatous arteries. There are no bony growths either on the head, or in the abdominal muscles, or on the lower limbs." The child was in hospital for several weeks. Dilute phosphoric acid was given, but with no result.

Condition in 1894.—The patient has lately made a good recovery from a mild attack of scarlet fever. Figs. 1 and 2 show that the disease has advanced very slowly. The cords which ran down from the axillary folds have disappeared. The

FIG. 3.



To show the congenital deformity of the toes.

masses of bone are more fixed than they were, and most of them appear to be closely united to the skeleton. The breathing is almost wholly abdominal; the ribs move very slightly on deep inspiration. There is some enlargement of the right os calcis. The patient has deformity of the great toes; they are shortened and drawn inward toward the middle line of the foot, so that they come beneath and behind the second toes. The proximal phalanges seem small and ill developed. The heads of the first metatarsal bones are large. There is no deformity of the thumbs. The child has of late been taking thyroid extract, but without any result.

As regards the child's family history, it is curiously like that of the child whose case is recorded in vol. xix. of the Transactions of the Clinical Society of London. In that case the father was somewhat rheumatic; the paternal grandparents both suffered much from rheumatism; the maternal grandfather was said to have died from cancer in the chest. The congenital deformity of the toes, as is shown in Fig. 3, is exactly as it has been described in other cases of this rare

disease. It proves that we have to do with a disease that is congenital, but latent during the first years of life, and it may be reasonable to suppose that rheumatism in the father's family and cancer in the mother's family may work together to cause it. The appearance and disappearance of the hard vertical cords down the front of the trunk are worthy of note. It is possible even that the present fixity of the ribs may disappear. In a similar case in my father's practice, in 1883, the ribs were firmly fixed. Ten years later—in 1893—the patient wrote to him: "The whole front, from throat to pelvis, is much better. I remember your gesture of despair when you found no movement of chest and sides on my drawing a breath. Now the chest and sides move very well—not properly, of course, but not badly." This patient has been for some years under Mr. Horsley's care, who kindly lets me refer to the case. He has steadily taken salicylate of soda.

Wimpole-street, W.

CASES ILLUSTRATING THE RESULTS TO THE EMPLOYEES OF IMPERFECT VISION TESTING ON RAILWAYS.

By W. M. BEAUMONT, M.R.C.S. ENG.,
SURGEON TO THE BATH EYE INFIRMARY.

THE two following cases show, in the first place, the danger to which the travelling public are exposed by the present modes of vision testing adopted on most of our railways; and, in the second place, they exemplify the hardships which may ensue to those employes who have been imperfectly examined as far as their sight is concerned when first joining a railway company's service. The labours of a committee of the British Medical Association have aroused the companies, and alterations which are not improvements in any marked degree have been made on some of the lines. Unfortunately the Board of Trade have no power to compel the railway officials to adopt a uniform, or in fact any, standard, nor can they insist that the tests shall be applied by qualified medical men. In this matter the Board of Trade are all-powerful to recommend and all-powerless to order.

CASE 1.—A man joined one of our most extensive railway companies eleven years ago as a cleaner. No test was applied to his sight then, but seven years ago, when he hoped for promotion, he was examined by a superintendent and failed to pass his test. As a consequence he was put on shed work and has been kept on it ever since. His wages now, including extra work, are £1 4s. 3d. a week, with little chance of increase. Had he remained on the line he might have risen to £2 5s. a week. On examining him a fortnight ago I found his vision to be—right eye, $\frac{3}{6}$, left eye, $\frac{1}{6}$. There was compound hypermetropic astigmatism, five dioptries in one meridian and three in the other. With correction his vision could be brought up to the normal standard. Whether officials should be allowed to wear glasses is a question which seems to be worthy of consideration. In hypermetropes and those with hypermetropic astigmatism, where vision can be improved to the normal standard, there seems to be no great objection to them for certain duties. Certainly, he who with spectacles can see $\frac{3}{6}$ is likely to be more efficient than he who without them can only see $\frac{1}{6}$; and at present on many lines they are content to admit men who have only $\frac{1}{6}$. Hypermetropia and hypermetropic astigmatism are not usually conditions which are progressive, and in them there is no reason to anticipate future deterioration. Hypermetropes, it is true, are more likely to develop glaucoma, but this is a rare contingency; and if all hypermetropes are to be excluded from railway service where shall we find the supply of emmetropes equal to the demand, for it is manifest that myopes must be ineligible? On some foreign railways the use of spectacles is common, and the objection that the glasses may become obscured by condensation at a critical moment does not appear to arise. With regard to myopia it is to be remembered that it is a condition of refraction which cannot become less, but which most probably will increase, and which glasses very frequently cannot altogether neutralise.

CASE 2 is that of a colour-blind man who joined another of our large railway companies in 1864 as porter. He was examined as far as distant vision was concerned, and found

to be capable of counting the dots, but no test of his colour sense was applied. In 1871 he was appointed guard to a goods train, but no re-examination of his sight was made. In 1876 he was promoted to be passenger guard, when again no test was applied. In November, 1893, in consequence, he said, of an order from the Board of Trade, his vision was tested by an inspector, and he failed to distinguish between red and green. He was taken off duty for a fortnight and then received an order to resume his employment as guard, no further examination of his sight having been made. In September, 1894, without any warning or testing, he was removed from his post and made a ticket collector; his wages at the same time were reduced from £1 7s. a week to £1 3s., with no chance of an increase. Had he remained a guard he might have risen to £2 a week; but now, at the age of forty-eight, when he might fairly hope for a little more money and a little more comfort, all his prospects in life are suddenly blasted, and more than thirty years' faithful service, in consequence of the company's negligence at the outset, are rewarded by an atrophy of pay and a stasis of promotion. Here, then, we have a man quite incapable of distinguishing the most vivid red from the most verdant green—a "guard," as the great railway company under which he serves paradoxically call him—travelling up and down their line week after week, month after month, for twenty-three years. It would seem to an outsider to be a more accurate term if they called him a "passenger."

Cases such as those to which I have referred are not rarities in ophthalmic practice; they come before us again and again. The railway companies laugh at our remonstrances and ask for proof that accidents have occurred in consequence of the imperfect vision of their servants. The public refuse to be awakened, and until some serious calamity occurs it is probable that no change will be made.

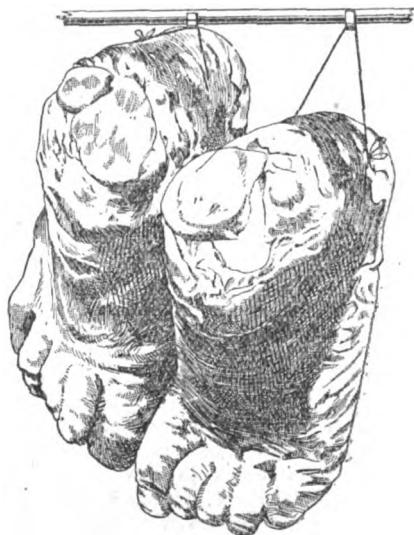
Bath.

A CASE OF RAYNAUD'S DISEASE OR NEUROPATHIC GANGRENOUS TROPHO-NEUROSIS OF THE LOWER EXTREMITIES.

By JOHN HAROLD, L.R.C.P. LOND., M.R.C.S. ENG.,
MEDICAL REGISTRAR, CHARING-CROSS HOSPITAL.

A PALE, weak, and ill-nourished boy aged four years and one month was admitted to Charing-cross Hospital on June 24th, 1887, as a case of Raynaud's disease. His parents were healthy and the patient presented no manifestations of syphilis, and had previously enjoyed very good health, nor had he ever had chilblains. There was no history of shock, of fits, or of paroxysmal dyspnoea. The mother's confinement was natural. On June 12th he complained of severe pain in the left big toe and of tenderness of the left ankle, but no objective physical signs were detected. Nine days later the left ankle was noticed to be discoloured and the middle toe of the right foot and the right ankle were cold and of a bluish tinge. The right wrist was tender. The tip of the nose and helixes of both ears were normal. On June 24th the left foot as far as the tarso-metatarsal articulation was of a lilac or purple colour, the colour being most marked on the dorsal aspect, increasing in intensity towards the toes, the ends of these being almost black and the nail bed of each toe being livid. The affected areas were quite cold and anæsthetic, the upper limit of discolouration being encircled by numerous small bullæ; the junction area of normal and abnormal tissues being very painful. The toes of the right foot presented a somewhat similar discolouration. Just below the right external malleolus a purplish-looking spot about the size of a shilling was noticed, as also a similar one immediately below the internal malleolus. The nerve trunks of the upper and lower limbs were not tender on pressure, and no trophic disturbances were noticeable on the thighs, arms, or forearms. The wrists showed no signs of discolouration. Palpation could be detected in the posterior tibial and dorsalis pedis arteries. The urine was non-albuminous, non-saccharine, and there never was hæmoglobinuria. The eyes were normal and there was no tendency to conjunctivitis. The purple colour of the dorsum of the left foot was, on June 29th, replaced by a reddish colour, especially along the first

metatarsal bone, the temperature rising to 101° F. On July 1st the right foot was generally very much discoloured, of a dusky purple colour, shading off towards the normal skin into a violet or pinkish hue. The affected areas were very tender, the patient strongly objecting to their being touched. He was very restless and kept constantly moaning. The end of the ring finger of the left hand became discoloured on July 2nd; the nail bed looked cyanosed, the skin of the dorsum of the hand being of a deep dusky hue. Small phlyctenæ were noted on several of the toes. The pulse in the left radial artery could easily be felt; it was regular and of good force. The patient was better subjectively on July 3rd and the affected areas were less painful, the left ring finger being no worse. The right thumb and right forefinger presented a mottled pink appearance, but no improvement was manifested in the feet. The left foot was of a lobster tint, the ends of the toes being quite black and shrivelled. A large collar of various sized bullæ surrounded the left ankle. On July 9th the affected fingers were diligently fomented. The toes of both feet were mummified and were of a mahogany red tint; the bullæ about the ankles ruptured, leaving an offensive-smelling surface. The patient was kept under the influence of morphine, and the gangrenous areas treated antiseptically. The hands were apparently well by July 12th, but the toes had become of a blue-black tint. On July 20 the plantar aspect of the left foot was black, and its toes much shrivelled. A deep and clearly defined line of demarcation was evident at both ankle-joints, the ligaments of the joints were exposed, and the pain unabated. In about



a week's time spontaneous amputation of both feet had occurred, no surgical interference being required. The boy afterwards suffered from abscesses about the left hip and other parts, but eventually made a satisfactory recovery and seemed apparently none the worse in general health from his serious illness. The following points of interest were also noted. The heart and lungs were normal; the spleen was not palpable. The ungual phalanges showed no tendency to clubbing; the patient had not a high palate, and there was no muscular wasting, and at no time was there any effusion into the affected joints. The tips of the fingers and toes did not show any evidence of scars—little scars at or near the nail on the pulps of the fingers and toes being, as is well known, characteristic evidence of antecedent attacks of Raynaud's disease.

Remarks.—In the case just recorded the usual etiological factors in the causation of the affection could be eliminated, such as constitutional diseases, toxic agents as ergot and arsenic, febrile disorders, injury, and frost-bite. Writing on Raynaud's disease, Lancereux¹ says: "Without pretending that all symmetrical gangrenes of the extremities have a toxic origin, I affirm that the symmetry of these lesions is an almost unerring indication of the toxic nature of the original cause of the affection." The perfect symmetry of the affection in this case would accordingly be indicative of a toxic origin, and manifestly implies that the condition owned a

general and not a local causation. From the point of treatment the absence of objective signs before the actual appearance of gangrene and the presence of subjective symptoms as pain are noteworthy in the prodromal stage, as possibly benefit might follow the administration of vasodilators. It is by no means uncommon to meet with cases of Raynaud's disease as young as this patient. The late Dr. J. E. Morgan of Manchester² collected and analysed 93 cases. Of these the youngest was two years and a half old, and the oldest fifty-nine years; 54 were females and 39 were males. Twenty-four of the 93 cases were under the age of ten years, and the younger the patient the more acute was the disease. Mr. D'Arcy Power³ recorded a case in a girl aged four years and eight months. Dr. Abercrombie, in an interesting and instructive paper, has commented on the relation of hæmoglobinuria, malaria, and jaundice to attacks of Raynaud's disease. As already mentioned, nothing abnormal was noticed in the urine in this case, and no polyuria was recorded. In the case of two children suffering from Raynaud's disease Dr. Haig⁴ noted an excessive excretion of uric acid, and that the renal vessels were apparently constricted at the same time as the cutaneous. In a contribution to the subject of idiosyncrasies Dr. Solomon Solis-Cohen⁵ designates by the term "vasomotor ataxia" the condition of instability of the mechanism of the circulation present in certain individuals, and which is characterised by an abnormal readiness of disturbance, with tardiness of restoration, of the equilibrium of the cardio-vascular mechanism. Among the recognisable exciting influences he mentions temperature, especially cold, emotion, reflex excitation of an internal or visceral origin, and various toxic agencies. Vaso-motor ataxia, he considers, may be acquired, congenital, or inherited. It is often present in several members of the same family, and may in some cases be characterised by parietic phenomena; in others it may be of a spasmodic character. Thus, in Raynaud's disease, we have in the "local syncope" stage an example of the "constrictive" variety type. Cases of Raynaud's disease are not infrequently associated with various cutaneous affections, such as urticaria, mottlings, scleroderma, and telangiectases, but the present case was not associated with any such trouble. Mr. Hutchinson⁷ has recorded cases of symmetrical gangrene of the extremities with scleroderma, and also cases of diffuse morphea, preceded by conditions resembling Raynaud's disease; and he considers that we can gather round the interesting condition of neuropathic gangrene a family group of other conditions of equal interest and allied to it. The treatment adopted in the case related consisted in the free employment of morphine to subdue the pain and quiet the nervous system, the gangrenous areas being treated antiseptically. There was no reproduction of the gangrene in the stumps or in their vicinity, and the patient is now in the enjoyment of excellent health.

I am indebted to Dr. Mitchell Bruce for kind permission to publish this case.

Harley-street, W.

A CASE OF HYDROPHOBIA.

By SAMUEL LODGE, L.R.C.P. EDIN., M.R.C.S. ENG.

A BOY aged three years and five months was bitten by a dog in the palm of the right hand about two months before I saw him. He was immediately after being bitten taken to a druggist and the wound was freely cauterised. The hand and arm became inflamed, requiring to be poulticed for two or three days. After that time the wound healed, but the boy continued restless, jerking his limbs when he slept and moaning from time to time. He appeared to be pretty well, however, playing about as usual during the day. There remained a hardened spot on the hand all the while, which the child said was always painful. Nothing more particular was observed till Sunday, Jan. 13th. On the morning of that day the patient complained that his throat was bad, and in the afternoon a medical man was sent for. Some medicine was supplied, but not a drop was taken; he

² THE LANCET, July 6th, 13th, 20th, and 27th, 1889.

³ THE LANCET, July 29th, 1893.

⁴ Archives of Pediatrics, October, 1886.

⁵ St. Bartholomew's Hospital Reports, 1892.

⁶ American Journal of the Medical Sciences, February, 1894.

⁷ Archives of Surgery, vol. ii., 1891.

¹ The Medical Week, vol. ii., No. 26, p. 301, 1894.

tried many times to swallow a dose, but did not succeed. The next day the medical attendant was informed of the dog-bite for the first time; he did what he could to encourage the parents, who were much alarmed, and in their excited state it appears they actually forgot to tell him that the boy could not swallow the mixture. I was sent to the case on Jan. 14th at 3 P.M. The little patient was clinging very closely to his mother's neck; he made some inarticulate sounds and seemed greatly excited; he struggled continuously, but did not loosen his hold on the neck of his mother for an instant. A young woman washing dishes at a table near was splashing water about rather noisily. She desisted at my request, when the suffering child became quiet, relaxed his clasp, and smiled. There was a little girl in the room who now approached him. He gently stroked her face and hair, saying "Mary, Mary." After about ten minutes had elapsed a teaspoonful of water was offered him, but he no sooner saw it than he clenched his teeth and screamed. This was tried many times and in various ways, but he could not be induced to swallow the smallest quantity. He did himself try once or twice, but the effort was too great and ended in the same way. The jaws became fixed. There was spasmodic contraction of the thoracic muscles, and inarticulate cries. Exactly the same effect was induced by the mother of the child drinking some water when she endeavoured to persuade him to swallow. After every paroxysm there was a flow of saliva; sometimes viscid, sometimes frothy, and at other times watery. A clean handkerchief was handed to him, which he used unceasingly, wiping the mouth, and occasionally twisting and thrusting it into the throat till he appeared to be almost suffocated. When an opportunity occurred I examined the boy according to rule. The tongue was white and enlarged; the pulse was 100 and of fair volume; the temperature did not appear to be high (I could not ascertain it precisely, of course). The pupils were widely dilated. The expression of countenance was gentle and dreamy. The respiration was natural. The examination described in these few words was made at intervals and with great difficulty. The friends were recommended to have the case removed to the infirmary, and on this step being objected to Dr. W. A. Evans, medical officer of health for Bradford, was communicated with. My friend saw the patient in my absence, and thus had the opportunity of forming an independent judgment. At 5.30 P.M. my assistant, Mr. W. M. Muat, saw the child and observed the same train of symptoms. Perfect quietude was observed in the house. The patient frequently held out his hands for the glass of water always in readiness, but directly it was passed towards him he became violently convulsed. At 11.30 the same night he was visited again; he was then sitting on the couch in a peculiarly excited condition, tearing a newspaper into small pieces and talking incoherently; if his attention was suddenly attracted he became sensible for a moment, but relapsed immediately. He was never still, raising himself from his seat and falling back continually. Saliva was running from the mouth all the time; this he wiped away in the manner before described, forcing the handkerchief into the mouth and occasionally clutching his throat with both hands. The poor child expired quite suddenly about three o'clock next morning. There was no inquest.

I ought to mention that the dog, having bitten the child, was tied to a chair in the house of its owner, where it contrived to strangle itself. The body of the creature was sent to one of the destructors, so we had not an opportunity of examining it.

Bradford, Yorks.

THE REMOVAL OF PATIENTS TO ISOLATION HOSPITALS.¹

By G. H. FOSBROKE, M.R.C.S. ENG., D.P.H. CAMB.,
COUNTY MEDICAL OFFICER FOR WORCESTERSHIRE, AND PRESIDENT OF
THE WORCESTERSHIRE AND HEREFORDSHIRE BRANCH OF THE
BRITISH MEDICAL ASSOCIATION.

As the question of providing isolation hospitals is now coming prominently to the front, and I have been officially connected with two such institutions in rural districts for many years past, it occurs to me that my experience with

regard to the distances patients suffering from infectious diseases can be safely removed to hospital may be of interest to some. Having carefully considered the question, I have come to the conclusion that, assuming the locality to be non-mountainous, the highways good, and suitable ambulances (with attendant nurses) provided, such persons may without harm be removed as far as eleven or even twelve miles. Table I. shows the distances patients have been removed to six hospitals in Worcestershire and Warwickshire.

TABLE I.

	Alcester.	Evesham.	Kidderminster.	King's Norton.	South.	Warwick.	Total.
Under 1 mile	302	9	11	—	39	—	361
From 1 to 2 miles ...	73	61	28	85	95	268	610
" 2 to 3 "	67	4	741	331	138	—	1281
" 3 to 4 "	—	26	57	311	75	1	470
" 4 to 5 "	205	64	8	104	145	20	546
" 5 to 6 "	362	72	7	274	16	55	786
" 6 to 7 "	138	17	—	22	11	—	188
" 7 to 8 "	42	2	20	3	16	7	90
" 8 to 9 "	3	—	6	—	19	21	49
" 9 to 10 "	2	—	2	—	11	9	24
" 10 to 11 "	—	—	—	15	3	36	54
" 11 to 12 "	—	—	—	7	18	—	25
Total	1194	255	880	1152	586	417	4484
Population of hospital district	17154	15072	38258	28300	29822	55200	—
Area in acres of hospital district	55071	47679	35129	22454	48693	68300	—

From this it will be seen that 242 patients in the above districts have been removed distances of from seven to twelve miles. I have selected these hospitals because I am personally acquainted with all of them, and have been officially connected with the Alcester and Evesham Hospitals since their establishment in 1875 and 1887 respectively. The majority of the cases removed to these hospitals were scarlet fever; the remainder were small-pox, diphtheria, and typhoid fever, there being comparatively few of the last named. It has been the custom in these districts for the medical adviser to state whether or not the individual patients are fit for removal and on that certificate the ambulance is sent. Thoroughly good ambulance arrangements and provision are in my opinion absolutely essential. It is by this means that it has been found practicable in London to transport cases of fever and small-pox (for distances equal to and even greater than those above mentioned) to the hospital and hospital ships of the Metropolitan Asylums Board. This has been done now for several years with safety to patients who are certified by their medical advisers to be fit for removal. In my opinion the powers conferred on county councils by Sections 6, 7, 8, and 9 of the Isolation Hospitals Act, 1893, should be utilised in rural and small urban districts to their fullest extent, inasmuch as the constitution of hospital districts including extended areas is generally conducive to efficiency as well as economy. Sections 6, 7, 8, and 9 of the Isolation Hospitals Act just referred to read as follows, viz. :—

"6. The county council may direct an inquiry to be made by the medical officer of health of the county as to the necessity of an isolation hospital being established for the use of the inhabitants of any particular district in the county, and in the event of such medical officer reporting that such an hospital ought to be established for the use of the inhabitants of a district, may take the same proceedings in all respects for the establishment of such hospital as if a petition had been presented by a local authority for the establishment of an isolation hospital for the district named in the report of such medical officer of health.

"7. The county council shall conduct the local inquiry into the necessity for the establishment of an isolation hospital, and as to the proper site for the hospital and the district for which it is to be established (in this Act called the hospital district), by a committee consisting of such number of their members either with or without the addition of such other persons or in such a manner as the council think expedient. All expenses properly incurred by any such committee shall be paid as hereinafter directed. The local inquiry shall be held subject to such regulations and otherwise as the council think fit. Due notice of the time and place at which any inquiry is to be held by the county council shall be given in such manner as the county council may think the best adapted to inform any persons interested, and such persons may attend and state their case before the members appointed to conduct such inquiry.

"8. (1) Every hospital district constituted under this Act shall consist of a single local area or two or more local areas as defined by

¹ A paper read at the Midland Branch of the Society of Medical Officers of Health on Jan. 3rd, 1895.

this Act. (2) The county council may vary any proposed hospital district by adding to it or subtracting from it any local area. A local area which is already provided with such isolation hospital accommodation as may, in the opinion of the county council, be sufficient for the reasonable exigencies of such area shall not without the assent of the local authority of such area testified by a resolution of such authority be included in the hospital district under this Act. (3) If any local authority having jurisdiction within any part of the proposed hospital district object to the formation of such a district or to the addition or subtraction thereto or therefrom of any local area within their jurisdiction, such authority may at any time within three months from the date of the order appeal to the Local Government Board, and the decision of such Board shall be conclusive.

"9. On conclusion of a local inquiry by the county council as to the necessity for the establishment of an isolation hospital, the county council shall make an order either dismissing the petition or constituting a hospital district and directing an isolation hospital for such district to be established. Provided that the county council shall not take steps for the constitution of a hospital district for one or more contributory places forming a portion of a rural sanitary district within the jurisdiction of the county council, or for one local area, unless the sanitary authority of such place or places or area assent to the application or are proved to the satisfaction of the county council to be unable or unwilling to make suitable hospital accommodation for such place, places, or area."

The county council of Worcestershire, after holding an inquiry by a committee of three of its members, one of whom was Sir Douglas Galton, K.C.B., have recently issued an Order (Section 9) grouping six sanitary districts (four urban and two rural), which collectively include an area of 104,973 statute acres and a population of 54,379. The following table gives the area and population of these districts.

TABLE II.

District.	Area in statute acres.	Population.
Bromsgrove country urban district ...	10,593	5,072
Bromsgrove town urban district ...	1,061	7,934
Redditch urban district ...	888	11,295
Droitwich urban district ...	1,705	4,021
Droitwich rural district ...	52,496	14,221
Bromsgrove rural district ...	38,227	11,836
Totals ...	104,973	54,379

The populous parts of this hospital district are for the most part situated to the centre of this area; but, on the other hand, there are two villages of considerable size which will be about twelve miles from the hospital. I propose, for the convenience of the medical officers and friends of the patients, that telephonic communication should be established between the hospital and the offices of the respective constituent authorities. By grouping these districts in this way I was able to show that considerable economy in construction and maintenance would be effected, as well as efficiency promoted, compared with any attempt on the part of the district councils interested to act independently. In conclusion, therefore, I submit that in most rural and small urban districts "grouping" of such areas for hospital purposes is desirable both for financial and other reasons. Furthermore, my experience—which I have recently learnt is corroborated by that of several medical officers of note—induces me to affirm that such a hospital district may often advantageously include a circle having a radius of eleven to twelve miles from the hospital as its centre, provided that the locality be non-mountainous, the highways well kept, the hospital accessible, and that thoroughly good ambulance arrangements are made.

Worcester.

A CASE OF DIPHTHERIA SUCCESSFULLY TREATED BY INSUFFLATIONS AND TABLOIDS OF PURE SULPHITE OF MAGNESIUM.

By BROWNLOW R. MARTIN, M.B. DUBL.

THE following case, which presents many points of interest, seems worthy of record in the columns of THE LANCET. On Wednesday, Jan. 16th, 1895, I was called in consultation by my friend, Dr. F. F. Moore of Mill-hill-park, to see a girl five years of age. On the previous Sunday, Jan. 13th, Dr. Moore saw this child for the first time, and then found a

slight membranous patch on one tonsil, the temperature being 102° F. As this patch continued to increase and spread he, suspecting diphtheria, asked me to visit with him. On our arrival on the afternoon of the 16th the case presented the following appearance. The tonsils, soft palate, uvula, and pharynx were thickly coated with leathery membrane, leaving no doubt in my mind that the surmise was correct. In order to make sure I removed some of the exudation with a sterilised swab and with it inoculated a tube of sterilised blood serum obtained from the Clinical Research Association, and handed it to the patient's father to transmit by post to that society for examination by their experts. I then freely insufflated the throat with pure magnesium sulphite, and Dr. Moore kindly did so three or four times daily, and between whiles the tabloids were administered. The result of bacteriological examination was as follows:—"The culture shows large numbers of typical colonies of diphtheritic growth. Microscopic examination of the culture shows the colonies to consist of almost pure bacillus diphtheriae; a few streptococci are associated with the bacillus." On visiting again with Dr. Moore on Friday, the 18th, the membrane had completely disappeared with the exception of a small patch not so large as a threepenny piece on one tonsil, and when I visited with him on Sunday, the 20th, every trace of membrane was completely gone. The points to which I would call attention are: 1. As to the child, she was thin, delicate, and anæmic, not in any way gifted with a constitution calculated to inspire one with much confidence as to her inherent ability to successfully combat an enervating disease. 2. Not only were the bacilli of pure diphtheria present, but also some streptococci. 3. No medicine of any kind was administered internally except the tabloids, the treatment relied on being the insufflations. 4. The rapidity of the cure. 5. The complete absence of any sequelæ, which, up to this day, the thirtieth, have not appeared.

Hammersmith, W.

A Mirror

OF

HOSPITAL PRACTICE. BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

ENUCLEATION OF HYDATID CYST OF LIVER; RECOVERY;
REMARKS.

(Under the care of Mr. JOHN H. MORGAN.)

THE treatment of hydatid cysts of the liver has, like most other diseases of that organ amenable to surgical operation, undergone various changes during the past few years. With reference to tapping of such cysts it is interesting to get definite records of cases, and these are supplied by the statistics of Dr. Davies Thomas¹—411 cases treated with the following result: 163 were reported cured, in 92 the operation failed to cure, in 68 relief was afforded, in 5 no relief was afforded, in 10 the result was unknown, and 73 died. Better results have been obtained by direct incision and drainage, the cyst being stitched to the margins of the abdominal wound. This method has been replaced by the removal of the mother cyst at the time of incision. Dr. J. C. Verco,² in a paper on the treatment of hydatid cysts, stated that he has never seen a surgeon in South Australia leave the membranes in a hydatid cavity after it had been opened by incision. He also pointed out that the fear of hæmorrhage should not deter the surgeon, as there is no organic connexion between the cyst wall and the cavity in which it lies.

The patient, a woman aged thirty-eight years, had noticed for four years a fullness unaccompanied by pain in the right hypochondrium. Except for an attack of dysentery in childhood, she had enjoyed good health and had never had jaundice. She had lived in England all her life. On Aug. 9th,

¹ Sajous' *Annals of the Universal Medical Sciences*, 1894, vol. iii. cap. 5.

² *Ibid.*, 1892, vol. iii., cap. 25.

1894, she had consulted her medical attendant for an attack of diarrhoea and vomiting, and he, finding the enlargement of the liver, advised her to go to the hospital, where she was admitted on Aug. 16th, under the charge of Dr. Bruce. She was a well-nourished, slightly anæmic woman, and on examination of the abdomen there was found a tumour lying to the right of the umbilicus and extending downwards into the right lumbar region and upwards into the right hypochondriac region. Its upper part sank under the costal margin, so that its extent could not be ascertained; its lower border was a few inches above the symphysis pubis; externally it extended with a convex margin towards the kidney, while internally it reached to the umbilicus. But for a dull heavy weight in the right side, the patient suffered no pain, and she had not lost flesh. She remained for some time under the observation of Dr. Bruce; but as no improvement took place a consultation was held, and Mr. Morgan inserted a trocar, and a very small quantity of clear fluid was withdrawn, which, when examined under the microscope, gave evidence which confirmed the diagnosis of hydatid cyst. It was decided to expose the tumour, and, if possible, to enucleate it. On Jan. 19th, 1895 a vertical incision was made over the tumour in the right linea semilunaris, at first two inches and a half long, but afterwards prolonged upwards to the costal margin and downwards to the extent of five inches. The parietes having been cut through and hæmorrhage arrested the peritoneum was snicked and divided with scissors. The tumour was at once seen, presenting a white shiny opaque wall, free from adhesions on its anterior surface and below. The tissue of the liver spread over a small area in front and projected on both its upper and lower surfaces. The tumour felt extremely hard and firm, and but for the microscopic examination of the fluid previously withdrawn might easily have been taken for a malignant growth, the surface looking greyish-yellow, with numerous superficial vessels. A trocar was inserted, but not more than half a drachm of clear greyish-yellow limpid fluid was withdrawn. At a later stage this proceeding was repeated in the hope of reducing the size of the tumour, but with no better result. The abdominal wound was packed below and on either side with broad, flat sponges, which were frequently changed during the remainder of the operation. The cyst was then cautiously and gradually enucleated. It was free from attachment to the surrounding structures in front, below, and on either side, but above and behind it was intimately connected with the liver substance, and was separated by the fingers with the greatest difficulty. On the outer and lower surface of the tumour there was seen a second prominent, tense, cyst-like swelling as large as a plum and closely connected with the larger tumour, of which it at first appeared to be a prolongation, but after the cyst wall had been slit up to admit the finger this second tumour was found to have no connexion with its interior, and steps were taken to strip it from the larger cyst, to which it was closely adherent. As it came away it was seen to be pear-shaped, with the apex upwards and passing to the hilum of the liver, and was recognised as the moderately distended gall-bladder. During this proceeding several vessels were torn. It being found impossible to separate the tumour from its connexions as it stood, it was opened freely along its anterior surface. No fluid escaped, but at once there poured out hundreds of daughter cysts of all sizes, from that of a pin's head to that of a large cherry, nearly filling a pint bowl. The cyst was emptied with a scoop, care being taken that none of the daughter cysts entered the peritoneum. The cyst wall was then teased away entire, exposing a raw surface of the liver and upper portion of the gall-bladder. Several vessels deep down in the cavity were ligatured, and hot boracic lotion was applied to the wounded surface. The bleeding was not formidable and ceased when hot dry sponges were applied. The wound in the abdominal wall was closed by a number of silk sutures passed through all the layers and including the peritoneum, and sal alembroth gauze and wool and an ovariectomy binder were applied. The operation lasted about an hour. The cyst was nearly as large as two closed fists; the wall was thick and tough and bore considerable traction with strong ovariectomy forceps without giving way. A portion of the outer wall remained attached to the liver, and was removed with scissors. The inner surface was smooth and partly covered by a lining of yellowish gelatinous material, which easily stripped off. The patient slept fairly well after a dose of morphia. There was some vomiting for the first forty-eight

hours. Only hot water was given by the mouth, and nutrient enemata were administered per rectum. The temperature did not rise above 99.4° F. The stitches were removed on the tenth day, and she left the hospital perfectly recovered at the end of three weeks.

Remarks by Mr. MORGAN.—The plan which was followed in the above case is a further development of that advocated by Mr. Lawson Tait, and is that which finds most favour with Australian surgeons, whose opportunities for gaining experience in this class of disease are so much more frequent than in this country. No doubt the case described was admirably suited to the plan which was followed, and it would not be possible in many cases to act on similar lines. In a paper by Mr. Wallis in the St. Bartholomew's Hospital Reports there is pointed out the danger of simple puncture, which is often followed by fatal results, which are ascribed as being due either to shock or to some active poison in the hydatid fluid which takes immediate action on the heart or respiration. In Mr. Lawson Tait's operation the sac, having been exposed, is incised and carefully evacuated; the edges of the incised sac are then stitched to the skin, and its cavity is washed out with some non-irritating antiseptic fluid and then sponged dry, a drainage-tube being inserted if thought necessary. This plan has been most successful in the hands of Australian surgeons; but the further development of this method as described in the above case—namely, the complete evacuation of the cyst and the enucleation of the sac where possible of accomplishment—must necessarily be a more satisfactory and radical measure. With proper precautions and good assistance the only danger to be apprehended is from hæmorrhage, and this can to a large extent be discounted by modern methods and the exercise of great care and patience. In the present instance it was never formidable and was soon arrested. It may be noticed that no drainage-tube was used, and that the site of the operation was marked only by a short linear scar, which was found to be firmly healed in ten days. The proximity and intimate connexion of the gall-bladder to the wall of the cyst might have led to serious complications if it had not been recognised. No harm seems to have followed the manipulation which was necessary to separate the adhesions between the two surfaces.

TORBAY HOSPITAL, TORQUAY.

WOUND OF KNEE-JOINT, FOLLOWED BY SUPPURATION;
RECOVERY.

(Under the care of Mr. F. T. THISTLE.)

THERE are few cases which call for the exercise of more care and skill on the part of the house surgeon to a hospital than those of suppuration in a large joint such as the knee. They require such unremitting attention and rigid application of certain definite rules of treatment that it is not usually possible for the visiting surgeon himself to fully give them the attention necessary. Even at the present day, when our results are so much better than they were twenty years ago, a suppurating knee-joint is a source of considerable anxiety amidst the best surroundings, and when a useful limb is obtained it is fit subject for congratulation. There are three things which are essential in such cases—adequate drainage, immobilisation of the limb, and an efficient dressing. It would, however, not be right to omit to remind our readers of the credit due to the careful nursing required, more especially in an adult case. In this patient the careful antiseptic treatment with drainage prevented suppuration in the first instance; a secondary suppuration the result of injury is unusual. For the notes of this case we are indebted to Mr. Arthur Watson, house surgeon.

A strong, well-developed man thirty years of age was admitted into the Torbay Hospital on May 19th, 1892. The patient whilst working at a quarry had been knocked over by a mass of rock and had fallen some fifteen or twenty feet, his left knee striking against a sharp point of rock. On admission to hospital a jagged-looking wound one inch in length could be seen on the outer side of the left knee and about two inches from the lower and outer margin of the patella. A copious sero-sanguineous discharge was oozing from the wound and could be pressed out from the under surface and side of the knee-joint. On introducing the

finger into the wound it was found that the knee-joint had been opened, the lower border and under surface of the patella could be felt, and in the same way part of the articular surfaces of the tibia and femur. It was decided to enlarge the primary wound at once, and to make a counter-opening on the inner side of the joint. This was accordingly done, and a drainage-tube passed through and the joint well irrigated with perchloride of mercury lotion (1 in 2000). The limb was fixed on a back splint and a dressing of blue wool, white wool, and carbolic gauze applied. The patient did well and had only a very slight rise of temperature at night, the temperature falling to normal on the eighth day. There was only a slight serous discharge from the wounds for the first four days. The joint was irrigated twice daily with mercurial lotion. One half of the drainage-tube was removed on the eighth day and the remainder five days later. The patient was discharged from the hospital on June 1st with the limb in plaster-of-Paris, and was told to keep the foot off the ground and to walk with the aid of crutches. He came to the hospital several times, and although the left knee-joint was somewhat larger than the right there was no increased heat or pain. On the morning of July 18th he was brought up to the hospital complaining of great pain in the knee. He stated that the night before he tried to walk across his bedroom without crutches and had tripped and fallen heavily on the left leg; this caused intense pain and he could not sleep. On examination the knee was found to be greatly swollen and tense; fluctuation could be obtained; it was extremely painful and tender; the skin round the joint was reddened, and the temperature was 102.2° F. He had had no rigors. He was readmitted to hospital, and on the afternoon of the same day a long hypodermic needle was thrust into the joint, and a small quantity of thin pus withdrawn. The patient was then anaesthetised, and an incision made on each side of the joint, but more posteriorly than the first incisions. The joint was drained as before, and irrigated twice a day. Hot carbolic fomentations were applied every three hours, and he was given a sleeping draught at bedtime. The temperature continued raised for some weeks, being about 101° in the evening, and falling to 99° or normal in the morning. The patient began to lose ground, and it was feared that amputation would be the only resource left. The discharge, however, lessened, and the temperature began to fall. On Aug. 20th the following note was made: "The patient has much improved during the last fortnight; there is now a little serous discharge from the wounds. The knee, although still swollen, is not painful or tender to touch. His temperature has been normal since the 7th; he takes his food well and sleeps well." The patient continued to improve, and left the hospital on Oct. 31st (fifteen weeks since admission). He has continued well ever since, and has for the last few months been following his usual work. The leg is straight; there is very little movement in the joint, but he can do a good day's work and walk long distances without pain or fatigue.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Researches on the Pneumococcus, with especial reference to Immunity.—Notes on the Bacteriology and Pathological Chemistry of Pneumonia.

An ordinary meeting of this society was held on Feb. 5th, Dr. PAVY, F.R.S., President, being in the chair.

Dr. WASHBOURN read a paper on the Pneumococcus, with especial reference to Immunity. He stated that Friedlander's pneumococcus was only of accidental occurrence, and that the pneumococcus of Salamon and Fraenkel was the real cause of the disease. The pathogenic properties of the pneumococcus in the human subject were mentioned. In addition to causing acute lobar pneumonia it was the cause of some cases of lobular pneumonia, other bacteria, especially streptococci, being the frequent cause of the latter disease. The peculiarities of the cultivation of the pneumococci were described. He considered the reaction of the medium and the temperature the most important factors. The cultivations rapidly lost their vitality; exceptions, however, had from time to time been recorded. In one case he found a broth cultivation alive and virulent twenty-three days, and in one an

agar cultivation alive and virulent sixty-four days, after being sown. This was possibly due to a spore formation, as believed by Emmerich, whose experiments were described. The short vitality of the pneumococcus rendered investigation difficult. The method of Arkharow and Foa of preserving the vitality in sealed tubes was described. Dr. Washbourn himself had adopted a method used by Pfeiffer for cultivating the pneumococcus on the surface of agar covered with blood. Experiments were quoted to show that on this medium it retained its vitality and virulence for as long as fifty days. Fraenkel and Reiche independently used the same method. The pathogenic effect produced by inoculation of the pneumococcus in different animals was described. Special mention was made of Dr. Washbourn's own extensive experience in the case of rabbits. Intra-peritoneal and subcutaneous inoculation were both employed. After the former peritonitis usually ensued; sometimes with very virulent cultivations no peritonitis was noticed, although the animals died from general infection. Sometimes an animal died from marasmus a long time after inoculation. No cocci are then found in the blood, but in some cases there was a parenchymatous nephritis. The course of the fever and the occurrence of cocci in the blood after inoculation were described in detail. It was not until the temperature began to fall that the blood became crowded with cocci. Of the various methods of producing immunity Dr. Washbourn had generally used that of G. and F. Klemperer by previous injection with heated broth cultivation. The immunity did not occur until twenty days after injection, and disappeared after the thirty-first. The experiments of others with the blood serum of immune rabbits were described, and Dr. Washbourn mentioned his own experiments. He quoted a number of experiments showing that the blood serum when injected with virulent cultivations was protective. In other cases the serum was not protective, and this was due either to the rabbits not being perfectly immune or to the fact that the serum was removed at the wrong date. The experiments of Klemperer with the serum of patients recovering from the effects of pneumonia were described. He (Dr. Washbourn) made but a few experiments and was only able to prolong the life of the inoculated rabbits. The serum removed by a blister from patients in the acute stage of the disease, injected either simultaneously with or previously to inoculation, exerted a deleterious effect and caused death earlier than in the control experiment.

Dr. A. E. WRIGHT read a paper on the Bacteriology and Pathological Chemistry of Pneumonia. "Diseases," he said, "which are due to bacterial infections may be classed into three great categories; they may be either 'septicæmias,' 'local inflammatory processes,' or 'intoxication processes.' In the case of septicæmias the bacteria are found free in the blood when the disease is at its height; in the case of local inflammatory processes the bacteria are constantly present in the inflamed tissues, but they do not necessarily invade the blood; and in the case of intoxication processes the bacteria elaborate their poisons only upon the inner or outer surface of the body, but the bacteria themselves do not invade the tissues. Now croupous pneumonia is primarily a local inflammatory process, and the lesions which characterise it are the result of an acute phagocytic reaction of the organism in response to a bacterial infection of the lungs. The infecting bacteria are generally the pneumococci of Fraenkel. Now the emigration of white blood-corpuscles into the alveoli of the lungs is entirely comparable with the emigration of white blood-corpuscles into the subcutaneous tissues, which constitutes an ordinary abscess. The white blood-corpuscles which emigrate are in both cases polynuclear white blood-corpuscles, and the subcutaneous abscess, equally with the pneumonia, may be the result of a pneumococcal infection. There are, however, important clinical differences between an attack of croupous pneumonia and a subcutaneous abscess. We need not refer to the obvious differences which result from the fact that the emigration of white blood-corpuscles in pneumonia directly interferes with the aeration of the blood. Nor need we refer to the fact that the emigration of white blood-corpuscles in pneumonia is a much more acute process. But we may turn our attention to the more important clinical difference which consists in the fact that pneumonia runs a definite course and terminates by crisis. The crisis which terminates an attack of pneumonia is very similar to the crisis which we meet with in connexion with spirillum fever, and spirillum fever is a typical septicæmic infection, and if we could succeed in understanding what occurred in the organism in the crisis of spirillum fever we

should probably not find it difficult to understand what takes place in the organism in the crisis of what we may now provisionally call 'pneumococcal fever.' I have therefore searched the admirable monograph of Vandike Carter for any data that appeared to throw a light upon this question of the pathology of the crisis. We learn the following facts from Carter. When spirillum fever is at its height we have an enormous proliferation of white corpuscles in the blood. We have also a number of free spirilla in the blood at the height of the fever. When the crisis supervenes the white blood-corpuscles diminish rapidly in the blood, and *pari passu* with their diminution we have a complete disappearance of spirilla from the blood. This diminution of white corpuscles and disappearance of spirilla are in nearly all cases associated with an excessive turgidity, and tumefaction, and tenderness of the spleen or liver. Now this triple phenomenon of a diminution of the white corpuscles, a disappearance of the bacteria from the blood, and the tumefaction of the internal organs, especially the spleen and liver, can be experimentally produced. We need only, as Werigo has shown, inject bacteria or particulate matter of any kind, such as carmine grains, into the blood, and we shall immediately produce our triple phenomenon. Almost all the polynuclear white corpuscles disappear from the blood in the course of the next few minutes, and on killing the animal we find the bacteria or particles we have injected in the internal organs, chiefly in the spleen and liver, and along with them we find our polynuclear white corpuscles. And we further find that many of our particles or bacteria are lodged in the interior of our polynuclear white corpuscles; and we thus see that the disappearance of white corpuscles from the circulating blood, the disappearance of the bacteria, and the tumefaction of the internal organs are all manifestations of a phagocytic reaction, which eliminates these intrusive elements from the circulating blood. We have now to apply these facts to the pneumonic crisis. During the height of the fever we have an enormous increase of the circulating blood-corpuscles, especially of the polynuclear white corpuscles. When the crisis occurs we have a very rapid fall in their number. In the first of a series of cases recorded by V. Limbeck the white corpuscles in the circulating blood decreased from 22,000 to 6400 when the crisis occurred. And if our hypothesis is true we should find that this diminution of white corpuscles which goes hand in hand with the critical fall of temperature was associated with a process of phagocytosis and with an elimination of pneumococci from the blood. We may now pass on to the pathological chemistry of pneumonia, and I have very little that is new to add to what I published three years ago in a lecture¹ in which I gave an account of the research work I was privileged to do at the laboratories of the conjoint Colleges. I desire, however, to repeat myself, for what I had occasion to state in that lecture appears to me to be confirmed by my subsequent researches, and I believe that it is the key to the understanding of many of the phenomena of pneumonia. We shall suppose that the pneumonic fever has terminated with the crisis and that it is over, and we shall suppose also that the local inflammatory process has also come to an end. Our patient is, however, not well yet, and it is not with him merely a question of recovering the strength he has lost. He has not simply to convalesce. He has also to undo all that the local inflammatory process has done. He has to reabsorb into his system and then to excrete substances which are contained in the enormous mass of white blood-corpuscles which is filling up the alveoli of his lungs; and as the albuminous substance of these white blood-corpuscles has to be absorbed into his blood it concerns us to study what this albuminous substance is and what effect it will have upon his blood. The answer to these questions can be given in a single sentence. Almost the entire substance of the white blood-corpuscle consists of a nucleo-albumen, and this nucleo-albumen is identical with the nucleo-albumen originally prepared by Wooldridge from the white blood-corpuscles of the thymus gland. It is hardly necessary to say that the injection of this albuminous substance was shown by Wooldridge to be followed by intravascular thrombosis; and it is only necessary to take a pneumonic lung and to make an extract with a solution whose alkalinity is comparable to that of the blood plasma, and to inject this solution into the blood of a dog, in order to kill the animal instantaneously with intravascular thrombosis. On the other hand, it is possible that the absorption of the nucleo-albumen from the lungs may take place so gradually

that its absorption may present no analogy with the sudden injection of nucleo-albumen into the blood in Wooldridge's experiment. We should then have nothing to fear in the direction of intravascular thrombosis. We should have to deal instead with the symptoms which result from a slow injection of nucleo-albumen into the blood. And these symptoms are a diminution of blood coagulability, which is analogous to the diminution of coagulability which results in animals from an injection of peptone; such a diminution of blood coagulability might be accompanied in man, as it is in the dog injected with peptone, with diarrhoea. Perhaps many of the critical diarrhoeas may be explicable in this manner."—Dr. RUFFER asked whether the serum of animals dead from pneumonia exhibited either antitoxic or curative power. There was another poison present in the juices of animals dead from diphtheria—namely, that producing paralysis; and he asked whether any similar observation had been made in pneumonia.—Dr. WASHBOURN, in reply, said that neither antitoxic nor curative power appeared to reside in the serum of pneumonic animals, and there were no late developments comparable to the paralytic seizures in diphtheria.

OPHTHALMOLOGICAL SOCIETY.

Two Cases of Diphtheritic Conjunctivitis treated by Klein's Antitoxin—Removal of the Lens in High Myopia, with a Case of — 25 D.—Eyesight and the Public Services.—Exhibition of Specimens.

AN ordinary meeting of this society was held on Jan. 31st. Dr. D. ARGYLL ROBERTSON, F.R.S.E., President, being in the chair.

Mr. W. H. JESSOP described two cases of Diphtheritic Conjunctivitis treated by Klein's Antitoxin. The first case was that of a boy aged nineteen months who had membrane on the upper and lower palpebral conjunctiva of the left eye, and a patch of membrane on the left side of the uvula; one lymphatic gland over the parotid was enlarged, and there was albumen in the urine. Three injections of Klein's antitoxin were given, one and a half drachm in all; the membrane disappeared in five days, and was not followed by conjunctivitis or other conjunctival change. There was no local treatment except distilled water. The second case was that of a male child eight months old. There was membrane on the palpebral conjunctiva of both eyes; the parotid lymphatic glands were enlarged; there was a muco-purulent discharge from the nose. Two injections of Klein's antitoxin, one drachm in all, were given, but there was no local treatment. The membrane disappeared in four days.—Dr. HAYWARD had examined the membrane in both cases and found large quantities of Löffler's bacillus. The membrane was well marked in both cases and only affected the palpebral conjunctiva.—The PRESIDENT inquired whether any paralysis had followed, as in diphtheria of the fauces.—Dr. HABERSHON asked the date of appearance of the membrane, as antitoxin injections were of little avail after forty-eight hours from its first development.—Mr. MACKINLAY referred to Mr. Tweedy's method of treatment by quinine and the good results obtained.—Mr. JESSOP, in reply, said it was still too early to look for any paralysis. The membrane was present when the patients presented themselves, and injections were employed at once. He could not say how long it might have existed. He doubted whether the cases quoted by Mr. Mackinlay were truly diphtheritic. As a rule, these cases did not recover without serious injury to the eye, and were usually complicated by purulent ophthalmia. His own cases were the first in which the new method of treatment was employed, and recovery so far had been perfect and had not been followed by any discharge.

Mr. C. WRAY read a paper on Removal of the Lens in High Myopia, with a Case of — 25 D. He thought that the operation was not applicable in the case of children with less than 10 D or in adults with less than 12 D of myopia. The objects of the operation were three in number: (a) to prevent detached retina; (b) to arrest or prevent retino-choroidal changes; and (c) to enable patients with the highest grades of myopia to work at reading distance if unable to do so. He presented statistics of myopia of 123 patients with 246 eyes; 38 cases, including 3 cases of detached retina, had vision less than $\frac{1}{16}$ in one eye, whilst 10 had vision less than $\frac{1}{16}$ in both eyes. His figures, he considered, admitted of three deductions: that the vision

was invariably less in the fourth decade than in the third; that retinal detachment was less to be feared than the changes in the retina and choroid; and that it was not necessary to regard every myope of 12 D and upwards as hopelessly drifting towards detached retina and blindness. He had seen a case of retinal detachment after the removal of a lens in a case of myopia of 30 D, and considered detachment comparatively frequent after operation. He pointed out that in myopia of low degree, associated with zonular cataract, the crescent is at times out of all proportion to the amount of myopia; and the presumption was that this was due to amblyopia, and on this conviction it was a common thing to remove zonulars when the patients could see $\frac{5}{6}$ and J 4, but he regretted that hospital reports did not furnish the subsequent history of these cases. As regarded the prevention of changes in the choroid and retina, the only case that would appear to bear upon the point was Meyer's, in which, after the removal of a lamellar cataract from a myope, the fundus changes were said to have progressed, and, judging from the statistics at his (Mr. Wray's) disposal, more rapidly than they would have done in all probability in the natural course of events. The point on which there was unanimity was that the patients were able to work much better after the operation, and some were enabled to follow vocations which had previously been impossible.—Mr. SPENCER WATSON commented upon the novelty of operation for this condition. He said he would himself hesitate to undertake it, not seeing how removal of the lens could relieve the progressive changes in high myopia. He had once removed a lens with its capsule for cataract in the subject of a high degree of myopia, and there had been some loss of vitreous, but the patient recovered well and with improved vision.—Mr. MARSHALL, Mr. HODGES, Dr. ROCKLIFFE, and Mr. RIDLEY mentioned cases in which interference had proved unavailing.—Mr. DOYNE did not think that loss of the lens would improve vision in a myopic and amblyopic eye.—Mr. LANG said he had operated for black cataract in an eye with 23 D myopia. Vision was improved from $\frac{1}{60}$ to $\frac{1}{30}$, but after some months the retina became detached. The same thing occurred in the other eye, so he did not think it could be attributed to the operation. On the whole, his experience was not favourable.—Mr. WRAY, in reply, said the age at which the operation was performed was of great importance. Cases showing 10 D myopia between the second and fourth decades underwent marked deterioration later. All those alluded to in the paper were amblyopic eyes with crescents. He thought the longer it was postponed the worse it would be. The operation would involve removing immature cataracts at the most dangerous age, and speakers had not mentioned the ages of their unsatisfactory cases.

Mr. MACKAY (Edinburgh) read a paper on Eyesight and the Public Services. His object was to express an acknowledgment and to elicit an opinion. The acknowledgment was that the recognition of the importance of good eyesight in the public services was due to the action of members of this society. The opinion to be elicited was whether the visual examinations were conducted in a satisfactory manner. He gave a short summary of the history of visual examination. In the public services coming to present facts, it would be found that there was a great difference between the method of fixing the standard recommended by this society and that generally regarded as sufficient by laymen or those not engaged in ophthalmic practice. The chief difference was that the one included an estimation of the refraction of the eye, the other did not; the result of this was that some candidates might be passed with a latent error so great that a time might come when their vision without glasses might fall below the standard, and they might have a difficulty in continuing their duty. This neglect of refraction was costly to the employer and a cause of hardship to the employed.—Mr. DOYNE considered the published instructions as to examination of vision were of no value whatever except for the navy.—Mr. MCHARDY said that for the Royal Navy full normal acuity of vision was required, no latitude whatever being allowed. He thought there was intense hardship in applying some tests of vision, not of refraction, to boys of twelve years after prolonged application, when there was sometimes temporary spasm of accommodation, which excluded the most studious, full acuity of vision being attained later. Cases of myopia were passed, refraction not being tested. Among the engineers the physical examination was held after the competitive one, which was regarded as a hardship in the navy. He strongly advocated the refraction test.—Fleet-Surgeon PRESTON said that in applying the tests there

were two standards. In the executive, including the fighting men and engineers, the highest standard of vision was required; while in the case of the civil department, including surgeons, chaplains, and paymasters, much more latitude was allowed. In the navy it was required that a man should read all the letters in the test types, and not merely two or three in a line. Cases of hypermetropia and astigmatism were rejected. Colour vision was adequately tested by coloured tinting, Holmgren's wools, and tinted glasses. An estimation of the refraction in each case would require a staff of specialists, and there was no money provided for such a purpose. He admitted there was some hardship in the physical examination being held after the competitive one. In answer to Mr. Bickerton (Liverpool), he said perfect colour vision was required with either eye. The earliest rules were published in 1864.—Mr. BICKERTON cited the case of the *Vanguard*, which was lost through slowing down in a fog—owing to one "look-out" man with defective sight out of five giving notice of a vessel ahead seen by no one else. This led to the ship being run down by the *Iron Duke*, which was following.—The usual time of the meeting having expired, a prolongation was proposed by Mr. PRIESTLEY SMITH, and seconded by Mr. STEPHENSON.—Mr. PRIESTLEY SMITH said there was a want of correspondence between the idealists and practicalists. Normal vision was represented by the power to discern $\frac{5}{6}$ in Snellen's types in a good light. The expressions used in the pamphlet that every candidate should be emmetropic ought to be crossed out if the refraction was not examined.—Mr. CRITCHETT said he fully endorsed these statements. A uniform bright light was essential.—Mr. LANG said he knew of one naval surgeon who tested his cases under a mydriatic, which was very much more satisfactory.—Mr. MACKAY replied.

Dr. STEPHEN MACKENZIE proposed the following resolution, which was seconded by Mr. JULER:—

"1. That in the opinion of this society no examination of eyesight is complete or satisfactory which depends mainly upon an examination of the form vision by means of test types and dots and omits consideration of the refraction of the eye.

"2. That this society hereby appoint the President of the society (Dr. ARGYLL ROBERTSON), Mr. Power, Mr. Nettleship, Mr. Lawson, Mr. Couper, Dr. Frazer, and Mr. Hartridge to accompany the deputation of the British Medical Association to the Board of Trade on Feb. 1st at 3 P.M. to give expression to the foregoing resolution."

The following card specimens were shown:—

Messrs. HODGE and RIDLEY: Intraocular Melanotic Sarcoma with Peculiar Characteristics.

Mr. LAWFOORD: Unusual Arrangement of the Retinal Vessels.

Dr. ARGYLL ROBERTSON: A specimen of Filaria Loa.

Mr. MACCUS GUNN: (1) Peculiar Lenticular Changes following Old Injury of Eyeball; (2) Prolonged Hypermetropic Congestion of Optic Discs closely simulating Papillitis.

Mr. E. CLARKE: A case of Pulsating Exophthalmos.

Dr. J. HAYWARD: Microscopical Specimens and Cultivations of Löffler's Bacillus.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Casual Cow-pox.—Intestinal Affections requiring Surgical Treatment.

A MEETING of this society was held on Feb. 1st, the President, Dr. R. BANNING, being in the chair.

Mr. BUCKNILL related a case of Casual Cow-pox which occurred in a man thirty-four years of age, who noticed a papule on the flexor surface of his left forearm two days after milking two cows; other spots followed and the pocks presented a most typical appearance. The vesicles contained clear fluid. During the first few days after the inoculation the patient complained of severe headache and general malaise; there was a deposit of urates in his urine and swelling and tenderness of the axillary glands. One of the cows was found to be suffering from bovine variola, and presented a number of dried-up pustules on the teats. All efforts to trace the origin of the disease proved abortive. The patient had four excellent marks of primary vaccination, and was revaccinated after this disease, but, as was fully expected, without the slightest result.—The President and Mr. Wood took part in the discussion.

Mr. KEETLEY then read a paper on some Intestinal Affections requiring Surgical Treatment. After referring to

twenty cases in which he had operated he remarked that physicians usually did not call in a surgeon except as a last chance, and that this delay was accountable for the high mortality of such cases. In his opinion the general attitude of patients towards operations was now changed, so that there was seldom any difficulty in obtaining their consent to laparotomy. He specially deprecated the administration of opium before a certain diagnosis had been arrived at, and recommended the administration of chloroform to facilitate the diagnosis. He also pointed out the similar symptoms which cases of appendicitis presented to those of other conditions. With regard to intestinal tumour he attributed their late diagnosis to the practice of treating obscure abdominal symptoms without making a thorough examination. He then reviewed the various methods of performing intestinal anastomosis, and gave the preference to Maunsell's method. Finally, he related a successful case of removal of a tumour of the ileo-cæcal valve.—Mr. EDWARDS mentioned a case of excision of rectum by Kraske's method, in which he attempted to join the cut ends by means of Murphy's button. The anastomosis was not successful, but the patient made a good recovery. He pointed out how satisfactory was the prognosis in cases of excision of rectal cancer if the case was operated on sufficiently early.—Dr. CHAPMAN called to mind many obscure abdominal cases which had recovered without operation. He doubted whether it was any use to operate on cases of intestinal cancer on account of the risk of recurrence.—Mr. BIDWELL could not agree with Dr. Chapman, and referred to two cases of removal of intestinal cancer—one from the cæcum and the other from the sigmoid flexure—which were alive four and two years after the operation respectively. He considered that the hesitation which physicians showed in handing over obscure abdominal cases to a surgeon was due to the fear of death from peritonitis. He pointed out that there was very little risk of this, and referred to twenty-nine laparotomies which he had done, in none of which was there any peritonitis, although four deaths occurred from other causes. Finally, he agreed with Mr. Keetley in recommending Maunsell's method of intestinal anastomosis, and related a case where he had recently successfully resected five inches of small intestine by this method. For lateral anastomosis he recommended Halstead's method, and referred to two cases of gastro-jejunostomy which he had performed by that method.—Dr. ROBERTS related a case of tuberculous peritonitis in which, although an abscess formed and was allowed to burst, the patient recovered.—Dr. MAUNSELL described his method of anastomosis. He advised the use of a piece of sponge over which is passed a safety pin as an intestinal clamp.—Dr. KEETLEY replied.

LIVERPOOL MEDICAL INSTITUTION.

Glioma of the Retina.—Injury to the Internal Carotid Artery; Ligature of the Common Carotid; Recovery.—A Case of Acromegaly benefited by Treatment.—A Case of Anæsthetic Leprosy.—Successful Trephining for Meningeal Hemorrhage.—Pregnancy complicating Fibroid Tumour of the Body of the Uterus.

A MEETING of this society was held on Jan. 31st, Mr. CHAUNCEY PUZEY, President, being in the chair.

Mr. RICHARD WILLIAMS showed a child the subject of well-marked Glioma of the Right Retina. He intended to enucleate the eyeball on the following day.

Mr. DAMER HARRISON related a case where the Internal Carotid Artery was wounded by a sharp, dagger-like instrument close to its entrance into the skull. The common carotid artery was tied and the wound plugged daily with cyanide gauze. The patient made a good recovery.

Dr. CATON described an early case of Acromegaly occurring in a woman aged twenty-seven. Enlargement of the hands, feet, lower jaw, tongue, nose, and lower lip had taken place. She complained of headache, aching in the eyeballs, dimness of vision, and excessive lacrymation. Exophthalmos was present, with oedema round the eyes and greatly diminished visual fields, but no optic neuritis or temporal hemianopsia. The thyroid was small. The patient complained of pain in the right hypochondrium, coldness of the extremities, muscular feebleness, depression, and apathy. After three months' treatment by rest, tonics, and good food she appeared to be worse rather than better. About the beginning of November,

1894, three tablets, each containing two grains of pituitary body, were given daily. After this her condition showed much variability; sometimes she was much better. On Dec. 18th, in view of the analogy between acromegaly and myxœdema, thyroid tablets were alternated with pituitary tablets. From this time improvement was rapid; all pain, headache, and oedema disappeared. Vision became perfect, and the visual fields normal in extent. The hands and feet diminished in size, as did also the lower lip. Her facial expression changed, muscular strength increased, and she became as cheerful and active as she had been three years before. Lantern photographs of the patient were put on the screen, showing the very great improvement in the patient's appearance since taking the thyroid and pituitary tablets.

Mr. BANKS showed a young man on whom he had operated five years before for Swelling in the Ulnar Nerve. The man was of dark complexion, his mother being an Eurasian. At the time of the operation he complained of great loss of power in the right arm. There was a long cylindrical swelling of many inches of the ulnar nerve; sensation was lost over the area supplied by this nerve. The nerve was exposed and very carefully split lengthwise, and a long, pinkish core, looking like old blood-clot, was removed from its interior. On microscopical examination this substance was found to contain the bacilli of leprosy. The man speedily regained power over his arm, and the lost sensation returned. At present he could use one arm as well as the other.

Mr. DAMER HARRISON showed a man who had been successfully Trephined for Meningeal Hemorrhage.

Dr. T. B. GRIMSDALE read a paper on Pregnancy complicating Fibroid Tumour of the Body of the Uterus. Having made a general reference to the subject and considered the symptoms, diagnosis, and dangers of the condition, he related a case in which he had terminated pregnancy at the fourth month. He rapidly dilated the cervix with Hegar's dilators, and extracted the fetus and placenta at one sitting. The result was quite satisfactory, and there was no hæmorrhage at the time of the operation. In this case the fibroid was larger than an adult head, and the abdomen was as much distended as if the pregnancy had reached full term. Dr. Grimsdale discussed the various methods of treatment adopted in these cases, and suggested some lines on which treatment should be regulated. He thought that the plan he adopted in his case would be applicable to a considerable number of cases of this description.—Drs. BRIGGS, GEMMELL and IMLACH criticised the paper.

Reviews and Notices of Books.

A Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A.M., M.B., Surgeon to the National Eye and Ear Infirmary, Dublin. Fifth edition with illustrations. pp. 582. Edited, under supervision of the author, by LOUIS WERNER, M.B. London: H. K. Lewis. 1895.

WE are glad to see this serviceable and well-written manual has attained its fifth edition. The author has secured the services of an able coadjutor in Dr. Louis Werner, who has conscientiously performed his task of editing the work. The volume has been increased by about one-tenth of its former size, and various additions and modifications have been made, amongst which may be mentioned an account of the astigmatometer and its use, of the effects of electric light on the eyes, of scintillating scotoma, of ophthalmia nodosa, and of enophthalmos. The articles on tubercle of the iris and tumours of the optic nerve have been rewritten, and some of the chapters have been revised and extended. Dr. Swanzy is one of the most vigorous advocates of the method of operating for cataract in which the linear operation is combined with a small iridectomy, and his success has been such as to justify his teaching. He states that in 200 consecutive extractions he has only had two cases in which prolapse of the iris occurred with incarceration. He adopts a proceeding after the delivery of the lens which he believes to be original and

which he regards as important. It consists in introducing a bent iris forceps open between the lips of the wound, closing the blades, and gently withdrawing the instrument. A tag of capsule, he states, is frequently captured by the forceps, and is to be snipped off with scissors. The forceps is then similarly inserted at an adjacent part of the wound, and in this manner the wound is searched from end to end for capsule. A tag of capsule is found in about 25 per cent. of the cases. He instils a drop of eserine solution before the operation, and one drop of atropine sulphate solution afterwards. In the chapter on the lacrymal apparatus, speaking of obstruction of the canaliculi, Dr. Swanzy observes with great prudence that when it is necessary to have recourse to the operation of slitting up the canaliculus, the passage should not, if possible, be slit up in its entire length. At least 3 mm. of its median end ought to be left intact, otherwise the patient is liable to regurgitation of tears from the lacrymal sac for ever afterwards. In his account of the surgical treatment of convergent strabismus Dr. Swanzy though he mentions it, does not appear to be strongly in favour of the treatment recently advocated of advancement of the external rectus in place of or combined with tenotomy of the internal rectus. There is a very useful appendix, containing a full account of Holmgren's method of testing the sense of colour and the regulations as to defects of vision in the several Services. It cannot be too strongly insisted by family physicians that before a lad is sent to a "crammer's" or is made to work for one of the Services at school his vision should be tested by an expert. It saves much subsequent annoyance. There are very few typographical errors; but on page 539, speaking of the distance at which a gas jet should be placed behind a Maddox rod, "mm." is given, instead of *m*. The work is an excellent treatise for the student and general practitioner, the various diseases being well and clearly described, and the illustrations being numerous and accurate.

A Treatise on Appendicitis. By GEORGE R. FOWLER, M.D., Examiner in Surgery, Medical Examining Board of the Regents of the University of the State of New York, Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, &c. Philadelphia: J. B. Lippincott Company. 1894.

THIS volume of nearly 200 pages consists of a revised and corrected reprint of a series of articles which have been already published in the annals of surgery. Dr. Fowler has had unusual opportunities of studying the disease which he and many others call "appendicitis," and he has produced a treatise of considerable value. There are very few subjects on which current medical opinion has undergone a more complete and radical change than on the pathology and treatment of typhlitis, and there are very few diseases the pathology of which has been more carefully worked out. As the result of much labour it has been shown that changes in the vermiform appendix underlie all the cases that were formerly grouped in typhlitis, perityphlitis, and paratyphlitis, and the most advanced view of the therapeutics of these affections is that excision of this appendix is the only really satisfactory treatment for all cases except those of the most trivial grade. There are still some physicians and surgeons who hold that there is a disease which can only be rightly called "typhlitis," inasmuch as it originates in pathological changes in the cæcum—but certainly such cases are very rare and exceptional. A large number of practitioners are still unconvinced that surgical measures should always be taken in marked forms of this disease. That recovery may ensue upon even a severe attack of typhlitis without reverting to surgery is undoubted, but that is very far from establishing the position that the expectant treatment is the wiser course to pursue. The removal of the appendix in the early stage of the

affection is apparently the safest course to pursue if the surgeon operates with proper skill and precautions. One of the most interesting problems in pathology is the etiology of typhlitis. Dr. Fowler's view is that infection by pathogenic organisms is an all-important part of the process, and that, while the bacillus coli communis is constantly present and is the most important of the organisms found in exudations, other organisms are also present, and that the process is truly a multiple infection. This infection, however, he argues, is only secondary. It is led up to and rendered possible by some alteration in the appendix which renders it vulnerable. In Dr. Fowler's opinion this primary change is to be found in the bloodvessels or the nerves of the part. On the one hand, torsion and angulation of the appendix may impede the circulation, and endarteritis and thrombosis may occur; the pressure of an enterolith may also cause local anæmia. On the other hand, he thinks he has found evidence of an endo- or peri-neuritis, which, by causing trophic change in the part, may be the starting point of the disease. The changes he figures in both arteries and nerves may be the result of the local inflammatory affection, however, and not its cause. But in this chapter, as in all the others of the treatise, the subject is dealt with very ably and impartially, and discussed with great knowledge of the facts. The literature of the disease is very extensive, and much of it consists of hastily considered judgments or ill-digested observations; and it is, therefore, all the more refreshing to turn to a *brochure* marred by neither of these faults. Even those who cannot accept all Dr. Fowler's practical conclusions cannot fail to recognise the worth of the solid basis on which he founds them, or the admirably lucid and careful manner in which they are stated. Dr. Fowler has certainly made a valuable contribution to surgical literature.

Dr. William Smellie and his Contemporaries. By JOHN GLAISTER, M.D., F.F.P.S. Glasg. Glasgow: Jas. Maclehose and Sons. 1894.

DR. GLAISTER has performed his task, not as a mere compiler, but somewhat in the spirit of an original investigator; in fact, the preface implies that local patriotism was among the inducements which led him to the undertaking. Of course, much has already been written on the life and works of the famous accoucheur, but the present biography adds some useful details to our already existing knowledge of the subject and presents in a convenient form much information bearing on the history of midwifery in the seventeenth and eighteenth centuries.

William Smellie was born in the town of Lanark in 1697. He probably received the rudiments of a medical education as an apprentice to a surgeon in Glasgow, and, though not in possession of a legal qualification, established himself as a general practitioner in his native place about 1720. In 1724 he married, and in 1733 he became a Member of the Faculty of Physicians and Surgeons of Glasgow. Towards the end of 1738 or beginning of 1739 he left Lanark for London, soon proceeding to Paris, where he remained at least three months, attending the midwifery lectures delivered by Grégoire. Probably in the same year, 1739, he returned to London and commenced practice as an accoucheur and apothecary in a humble way in the vicinity of Pall Mall. The principal teachers of midwifery in London at this time were Dr. John Maubray and Sir Richard Manningham. The former had received pupils at his house in Bond-street as far back as 1724, and had published two treatises, in one of which obstetrics were combined with astrology and mysticism. Sir Richard Manningham was just beginning to give instruction in St. James's Infirmary, Westminster, where in 1739 a ward was set apart for lying-in women, being apparently the first separate maternity institution in this country. Smellie

mentions in his third volume that he himself was a teacher of midwifery in 1741, and Dr. Glaister's researches have elicited that on Feb. 18th, 1745, the University of Glasgow conferred on him the degree of M.D. *in absentia*. By 1748 he had attained such celebrity and trained so many pupils as to draw on himself the active hostility of the midwives and of several practitioners who disapproved of male obstetricians. As his success increased he removed from Pall Mall to Gerrard-street, and afterwards to Wardour-street, Soho, which reads oddly nowadays. In 1751 (see p. 165) he published his first volume, an octavo, entitled "A Treatise on the Theory and Practice of Midwifery," and the London *Monthly Review* for December of that year gave it a very favourable reception. In 1754 he brought out a second volume describing 274 obstetric cases, the majority of which had occurred in his own practice. This work was revised for publication by Tobias Smollett, the novelist, who mentions it in a letter written from Chelsea to Dr. Moore in Glasgow. Dr. Glaister reproduces this letter by an excellent photoprint, which would have been still better if not so much reduced in size. Accompanying the second volume there appeared in folio form his "Anatomical Tables," consisting of thirty-nine plates and containing the first published drawing of his straight and curved forceps. He used French forceps as far back as 1737; between 1744 and 1745 he invented the familiar method of locking the blades, and before 1748 he gave the instrument that form which is still known by his name. He also invented the perforating scissors, which was the prototype of the modern perforator. In his directions for performing craniotomy he "for the first time detailed the steps of an operation which in practically every feature has been followed by every enlightened accoucheur and by every writer on obstetrics since his day." In 1759 he retired from practice and returned to Lanark, his native place, where he worked at the preparation of his third volume until his death in 1763. This third volume, edited probably by Tobias Smollett, appeared in 1764, and was entitled "A Collection of Preternatural Cases and Observations in Midwifery," by W. Smellie.

The biography would have been improved by greater conciseness of style and by the omission of a few inelegancies such as "scatologic medicine" (on p. 171), a Greek synonym for "fecal" being quite needless. Many of the Latin words and quotations contain obvious typographical errors, as on pp. 35 and 229, and elsewhere. The author has, however, collected and examined his materials with unusual care and has produced a book of no small merit.

Syphilis. By ALFRED COOPER, F.R.C.S. Eng. Edited by EDWARD COTTERELL, F.R.C.S. Eng. London: J. & A. Churchill. 1895.

TEN years have elapsed since the appearance in 1885 of the first edition of this work, and in the present issue, which has been edited by Mr. Edward Cotterell, all the chapters have been revised, several have been entirely rewritten, and a chapter on the Relation between Syphilis and Insanity has been added. After a short account of the history and geographical distribution of syphilis a description is given of the ordinary course of the disease. Then follows a discussion of the "unity" and "duality" theories, which now do not possess either the interest or importance they once had. The general and local manifestations of syphilis are well described, and a chapter is devoted to the inherited form of the disease. The question of the prevention of syphilis is discussed, and a chapter on the various methods of treatment concludes the volume. The chief new feature of this edition is to be found in the illustrations, which are contained in twenty plates, and of these eleven are coloured. All the illustrations are of a high order of excellence, but chief praise must be given to the coloured plates, which are reproductions of original

paintings taken for this work; they represent very graphically some of the more characteristic syphilitic eruptions. Plates X., XI., and XIII. are especially worthy of commendation. The microscopic appearances are well represented in the drawings, four of which are reproduced from Dr. Radcliffe Crocker's work on the Skin. We may say, in conclusion, that the work in its present form contains a very satisfactory exposition of the present state of our knowledge with regard to syphilis.

JOURNALS.

Teratologia: a Quarterly Journal of Antenatal Pathology. Edited by J. W. BALLANTYNE, M.D., F.R.C.P. Edin., F.R.S.E. Vol. II., No. 1. London: Williams and Norgate. January, 1895. It speaks well for the width of view now embraced by pathology, and the activity exhibited in its pursuit, that a scientific journal should be founded with the sole object of recording facts in foetal pathology and congenital anomalies. The contents of the present number, which begins a new volume, prove that the topics are of wide and varied range, that there is much to be learnt in a field that has been comparatively neglected, and that the studies in this department are full of promise for the elucidation of many problems and the rectification of many theories. Dr. Ballantyne is to be congratulated upon his efforts to disseminate this new learning in the cause of pure science. The first paper is by Dr. John Thomson on a Form of Congenital Thoracic Deformity, based upon a collection of eighty-six cases on record, together with three others that he has himself observed. Briefly, the deformity consists in unilateral defective development of the chest wall, hair, subcutaneous fat, breast, pectoral, and other muscles, costal cartilages, and anterior ends of ribs, associated with deformity of hand and forearm. The defect is not analogous to the condition of mesial fissure, but is probably due to intra-uterine pressure affecting the side of the thorax and the upper limb. The paper is fully illustrated. Dr. William Osler records an example of Cerebral Hemorrhage in a Six Months Fœtus, removed after the death of the mother. The editor describes a case of Pre-auricular or Branchial Appendage, and in another article enters into the history and associated pathology of the whole subject. Several reviews and a copious collection of abstracts from current literature make up a very interesting number of a periodical which may be commended to the notice of pathologists.

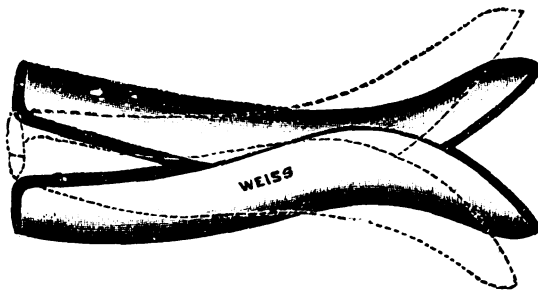
Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin. Herausgegeben von RUDOLF VIRCHOW. Band cxxxix., Heft 1. (*Archives of Pathological Anatomy and Physiology and of Clinical Medicine*. Edited by RUDOLF VIRCHOW. Vol. cxxxix., No. 1.) Berlin: G. Reimer. 1895.—In spite of the increasing number of channels for the publication of original contributions to medical science the popularity of *Virchow's Archiv* is unabated. Of this famous journal four volumes have appeared annually since 1878 in place of three a year as formerly, but the editor is, notwithstanding, compelled to address some words of warning to his contributors to condense their material and limit the number of their illustrations. The number of papers now in his hands is so large that it is proposed to publish a supplementary part to the just completed volume (the 138th), and, if necessary, to issue another similar supplement subsequently. This is not the first time that Professor Virchow has been impelled to ask his contributors to be concise and forbearing. In 1878, and again in 1881, he made a similar appeal. Amongst the papers of marked interest in the number just issued are the following: On Parasitic Ictero-Hæmaturia in Sheep: a Contribution to the Study of Amœbo-sporidia, by Professor Bonomo of Padua; on the Etiology of Parenchymatous Nephritis (Puerperal Eclampsia, Ptomainæmia), by Dr. A. Favre of Neuchâtel; F 3

on Normal and Inflamed Cardiac Valves, by Dr. Veraguth of and Zurich; and on Oedema of the Larynx and Submucous Laryngitis, by Dr. Kuttner of Berlin.

New Inventions.

A MODIFICATION OF THE BIVALVED SPECULUM.

IN the leading article on "Advances in the Treatment of Uterine Fibroid Tumours," which appeared in THE LANCET of Jan. 19th, 1895, the words occur: "Many prominent operators in America and on the Continent practise total extirpation of the uterus in cases of uterine fibroids." May I be allowed to point out that this practice has also been adopted for some time in this country, notably by Dr. Smyly (Dublin), who, in the paper he read before the British Medical Association meeting at Bristol last year, recorded fifteen cases, with two deaths, Mr. Greig Smith and myself. I have performed total extirpation for uterine myomata on three occasions, each case making a good and speedy recovery. As the operation I adopt differs somewhat from that as performed by Martin in Berlin or Dr. Smyly it will not be out of place to briefly describe it. For the purpose of the operation in my first cases I used an ordinary Fergusson's speculum, which answered the purpose fairly well, but I have had made for me by Messrs. Weiss a modification of a bivalved speculum, which I now use. (See Fig.)



The abdomen being opened in the middle line and the tumour delivered through the wound, the broad ligaments are ligatured and divided on each side. Small anterior and posterior flaps of peritoneum are raised from the uterus, the bladder being pushed away in front and the rectum behind. The speculum, which is nine inches long, is introduced into the vagina and held in position by an assistant, and is now pushed well home, and, the assistant pressing on the outer ends, the blades are forced open and the roof of the vagina put upon the stretch. It is then an easy matter to cut into the vagina from above on to the ends of the blades of the speculum in front and behind. This being done, the uterine arteries are readily secured by ligatures and the tissues between them and the cervix uteri divided. The myomatous uterus is then lifted out of the abdomen. Any bleeding points being secured by catgut ligatures, the peritoneal flaps are closed by passing long sutures (about six in number) in the following manner. The needle, threaded with a No. 4 silk suture, is passed from the raw surface through one of the flaps, and then over and through the other flap from the peritoneal surface; these are tied in long loops and conducted through the speculum down the vagina and pulled taut, the effect being to evert the flaps into the vagina, thus securing the peritoneal surfaces into accurate apposition. The loops can be withdrawn the next day. The vagina finally is washed out with carbolic lotion and packed with iodoform gauze. The abdominal wound is closed in the usual manner.

FRED. BOWREMAN JESSETT, F.R.C.S.

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THE ENEMA RACK.

INDIARUBBER enema syringes which are habitually kept in their boxes when not in use suffer very much from the long-continued bending of the tubes. The material has a natural tendency to become hard in course of time, and the result is one or more curvatures in the tube. To meet this difficulty Messrs. Reynolds and Branson, 13, Briggate, Leeds, have introduced an enema rack, consisting of a stout tinned wire,



rather over two feet long, jointed in the middle for portability and having fixed loops at one end and at the other a support for a small bottle. The valved end of the syringe passes through one of these loops, and by the other loop the whole can be suspended in a vertical position with the nozzle of the syringe in the bottle so as to avoid any drip or splashing. The device is perfectly simple and of obvious utility.

THE WITTMANN FILTER.

THIS filter may justly claim to be free from the complicated structure of most filters, which makes it difficult to ascertain when a filter is foul with impurities or when it is necessary to replace the filtering medium. In the Wittmann filter the medium consists of a well-prepared animal charcoal fashioned into the shape of a bowl about four inches deep, and it is this feature which constitutes the real novelty of the device. The charcoal bowl simply rests upon a narrow gallery or ledge provided on the inside of a glass reservoir or other suitable receptacle. Apart from the purifying powers which well-burnt animal charcoal is known to possess, especially in regard to deodorisation and decolourisation, this arrangement, we find, is effectual in bringing the filtered water into intimate contact with the air, and by its constant fall in drops under conditions of free exposure to the air a maximum degree of aeration is secured. While also the filter will remove from the water impurities which will accumulate in course of time according to the quality of water with which it has to deal, these may easily be removed by cleansing and immersing the bowl in boiling water as occasion may require. Everything being exposed to view, the time when this should be done will be manifest. On this account the use of this filter is calculated, we think, to ensure the consumption of clean and bright water. We notice that Drs. Sims Woodhead and Wood in their bacteriological report upon this filter, remark that, "although its filtering capacity is above the average, it offers no effective impediment to the direct passage of micro-organisms." The filter is made by Messrs. Wittmann and Roth, 47, Great Marlborough-street, W.

THE LIVERPOOL WATCH COMMITTEE AND THE VACCINATION OF THE POLICE.—The Watch Committee of Liverpool have had their attention drawn by Mr. F. W. Lowndes, one of the surgeons to the police, to the fact that a proportion of the recruits applying for admission to the force have no vaccination scars on their arms at all, while very few have undergone revaccination. They have resolved that in future every man before admission to the force be required to prove to the satisfaction of the police-surgeon that he has been efficiently vaccinated or revaccinated. It was also resolved that such members of the force as may desire it be vaccinated or revaccinated by the police-surgeon free of cost; that they be upon the "hurt list" if necessary; that the police-surgeon be paid for each case one shilling; and that the cost of lymph be paid by the corporation. The principle of practical compulsory vaccination has been admitted by the State for many years past, the men of the army, navy, militia, and postal and other services being obliged to undergo revaccination before being appointed. The same remark applies to members of the Metropolitan Police Force, the Royal Irish Constabulary, and other police forces throughout the kingdom. It is greatly to be hoped that the same rule will be enforced wherever required, policemen being very liable to be exposed to the contagion of small-pox.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 9, 1895.

On Friday, Feb. 1st, a large and influential deputation, including almost all the leading ophthalmic surgeons in Great Britain, waited upon Mr. BRYCE, the President of the Board of Trade, to impress upon him the extreme importance of applying scientific tests to the eyes of men and officers about to join the mercantile marine or the railway services. The chief points which were emphasised by Mr. MACNAMARA, who introduced the deputation, and by the speakers who followed him, were that every man should be tested in regard to his vision both for form and colour; that this examination should be conducted by a responsible person, and, if possible, by an expert; that the conditions in regard to light and distance should be as uniform as possible; and, lastly, that the examination should be repeated at stated intervals in order that any deterioration resulting from disease or from the advance of age might be detected. It was urged, and rightly urged, that such tests were already in use in the army, navy, and Indian services, and more especially on the Indian railways, and that no difficulty was experienced in obtaining a sufficient number of competent men without visual defects for those departments. Mr. BRYCE, in reply, whilst acknowledging in a very courteous manner the great weight and influence of the deputation, contended that the Board of Trade had shown that they were already fully alive to the importance of the subject. The Board of Trade, he remarked, possessed only limited statutory powers; but quite recently, in the autumn of last year, a modified and improved method of examination had been instituted, by which the eyes of all candidates for the posts of master mariners and of mates were tested; beyond that the Board was not empowered to go. It had no statutory powers in regard to railway officials.

This reply, however, does not quite touch the root of the question. Examinations may be instituted, but the real question is, Are they carried out in a thoroughly satisfactory manner? It was, moreover, shown by more than one of the deputation that no effort is even now made to determine the refraction of the eyes of the candidates, and that consequently cases of hypermetropia and of astigmatism may present themselves with sufficient acuteness of vision to enable them to pass muster and yet be inadequate, after the lapse of a variable period, for the due discharge of their duties. When we consider that the modern liner not infrequently cuts the water at the rate of a mile in three minutes; that she carries from 300 to 1200 passengers, besides a cargo of the value of many thousands of pounds; that there are scores of such ships afloat; that, as the late accident has demonstrated, she is liable to be sunk in less than half an hour by a blow affecting a vital part delivered by a comparatively small vessel; and, lastly, that the recognition of any danger ahead in time to enable it to be averted is dependent upon the keenness of sight and correctness of colour vision of two or three

men on the look-out—when we consider all these points surely we are entitled to demand that every possible precaution to prevent disaster that knowledge and science can suggest should be exercised, and that no pains should be spared to debar the entrance into responsible positions of men whose defect is often not from any fault of their own, but a congenital imperfection. It may be perfectly true, as Mr. BRYCE remarked, that very few, if any, accidents, the causes of which have hitherto been the subject of investigation, can be shown to have resulted from the visual defects of the officers or men on board our mercantile marine; but it will be acknowledged by all that where so much life and property are at stake it would be madness to overlook an extremely probable though recently discovered source of danger. The old adage of "Forewarned, forearmed" may still be borne in mind, especially as the defects in question afford a reasonable explanation of accidents for the cause of which no plausible suggestion has been made. That which is true of the mercantile marine holds, in the same sense, for the railway service, and two cases reported in our issue of this week by Mr. W. M. BEAUMONT show well that the danger to the public who travel by rail from the visual errors of railway servants is not imaginary. The possession of normal acuteness of vision and of normal perception of colour is imperative among railway officials no less than among sailors for the safety of life and for the protection of property.

The contention advanced by Mr. BRYCE that the railway companies are sufficiently alive to their own interests to prevent men with defective vision entering their service is well founded, and it appears that several of the larger companies have taken the precaution to appoint a competent surgeon to examine all candidates for admission to the service. Yet even in these cases it seems to be doubtful whether the refraction of each eye is accurately determined. It would do no harm if, as Mr. LEET suggests in his letter to us, some responsible adviser, some professional head analogous to the Director-General of the Medical Departments of the Army and the Royal Navy, were appointed, whose business it should be to see that the recommendations and orders of the Board of Trade on this point are carried out, and to whom all complaints might be referred. This appointment would not enable the railway companies to shirk their responsibility on the ground that the State certificate superseded their own duties, as Mr. BRYCE thought would occur if the tests were applied by a Government official. It would simply ensure that the provisions for the safety of the travelling public were duly enforced. The frequency with which colour-blindness occurs in the population generally is known to be about 3 or 4 per cent.; but it may be of interest to state that the number of candidates for masters' and mates' certificates of competency in the British mercantile marine who failed in the colour test during the fifteen months ending with August last year—that is, before the more recent and better mode of testing the eyes for this defect had come into play—was no less than eighty-one, every one of whom in old days would have been permitted to enter the service without question, but to the manifest danger of Her Majesty's subjects. The suggestions of the deputation that the eyes of all candidates for the mercantile

marine service should be tested for keenness of vision and for colour sense, and that the condition of refraction should be accurately determined by a competent examiner at regular intervals, seem to be not only prudent but absolutely necessary, whilst they present no difficulty that render their adoption impracticable.

THERE is no longer the least doubt that Lord RAYLEIGH, Sec.R.S., and Professor RAMSAY, F.R.S., have made a most important discovery, and the most remarkable thing connected with it is that the new element (or it may be elements) has been separated, not from any rare earths or other comparatively unknown source, but from our own familiar friend the air we breathe. "Argon" has thus escaped the notice of investigators for nearly a century, and its probable existence was only lately surmised by a physicist when he observed that the density of nitrogen expelled from chemical compounds was about $\frac{1}{2}$ per cent. lighter than atmospheric nitrogen; its actual separation and identification seem, however, to have been reserved until both chemist and physicist attacked the problem. The former was Lord RAYLEIGH and the latter Professor WILLIAM RAMSAY, and the result of their joint labour is a happy instance of the success which attends the coöperation of those who, though engaged in different but adjoining fields of scientific research, yet labour in concert to unfold the secrets of nature. It is not possible to enter into the masterly and extremely interesting argumentative details of the paper contributed by Lord RAYLEIGH and Professor RAMSAY, the reading of which by the latter riveted the silent but expectant attention of the Fellows of the Royal Society and their friends in the theatre of the London University on Thursday afternoon last week. Suffice it to say that the history of the progressive stages of the investigation was not the least fascinating portion of the paper, as were also the clear and lucid arguments and experimental evidence adduced, which left the distinguished audience in little doubt as to whether the element or constituent separated was really new or old. We may, therefore, pass at once, in accordance with the plan of the chemical text-books, to a brief account of the history, preparation, and properties of the new element. By way of preface, however, it is impossible to forget the classic work in the last century of CAVENDISH on the composition of the air, which must appeal once more to the wonder and admiration of present-day chemists and physicists, his power of discernment being, in the light of this recent discovery, more clearly evident than ever before, since in his remarkable paper published in the Philosophical Transactions in 1788 he expresses doubt as to whether the nitrogen of the air (phlogisticated air) was in kind elementary, and he even adduced distinct experimental evidence—based on the oxidation of nitrogen by means of the electric spark and subsequent absorption of nitric fumes—of another constituent in the atmosphere. Thus he wrote, "If there is any part of phlogisticated air of our atmosphere which differs from the rest and cannot be reduced to nitrous acid we may safely conclude that it is not more than $\frac{1}{15}$ th part of the whole." This residue was, no doubt, Lord RAYLEIGH's and Professor RAMSAY's argon, which occurs probably to the extent of between $\frac{1}{15}$ th and $\frac{1}{10}$ th part of the whole atmosphere.

It was by repeating the Cavendish experiment, with the facility of appliances which the improvements of a hundred years have afforded, and by adding successive quantities of air out of which the nitrogen was eliminated in the manner indicated, that Lord RAYLEIGH and Professor RAMSAY showed that the residue could not be nitrogen, but another body, which they have called "argon." Under similar treatment chemically obtained nitrogen yielded no such residue, except such as could be accounted for by accident or other cause. Argon is best obtained, however, by first freeing the air, from which carbonic acid and water have been removed, from oxygen by means of red-hot copper and then absorbing the nitrogen by means of metallic magnesium, which, when heated to redness, combines with the nitrogen, forming an orange-coloured mass of magnesium nitride. The residual gas after this series of operations—the passage of the gases being repeated again and again—is argon. In this process, again, chemically derived nitrogen yields no such residue. The density of pure argon is 20; hence its molecular weight in accordance with Avogadro's law must be 40. There are reasons for believing that, like mercury, its molecule contains but one atom; its atomic weight, 40, is therefore identical with its molecular weight. Argon is soluble to the extent of 4 volumes per 100 volumes of water, so that it is about two and a half times as soluble as nitrogen, and possesses approximately the same degree of solubility as oxygen, and is accordingly found to occur in increased proportion to nitrogen in rain water. According to Dr. OLSZEWSKI, a well-known authority on the constants of liquefied gases at low temperatures, argon easily condenses to a colourless liquid at a temperature of -128.6°C . and under a pressure of thirty-eight atmospheres. At a lower temperature argon freezes to a crystalline mass like ice; at a still lower temperature it becomes white and opaque. Its freezing point is -189.6° , its boiling point -187° , and its density as liquid is 1.5. As far as spectroscopic work can decide Professor CROOKES concludes that Lord RAYLEIGH and Professor RAMSAY have added one, if not two, members to the family of elementary bodies. It appears that argon yields two distinct spectra, and this would indicate it to be in reality a mixture of two gases, which have as yet not been separated. On the other hand, Dr. OLSZEWSKI has shown that argon has a definite melting point, a definite boiling point, and a definite critical temperature; and these, as is well known, afford excellent criteria of a pure substance, while there is no certainty that the exhibition of several spectra is necessarily characteristic of a mixture. Still further light, however, is needed upon this all-important point, and the discoverers hope to decide the question in the experimental work which they promise shortly to undertake. If argon be a single element, then there is reason to doubt whether the periodic classification of the elements is complete—whether, in fact, elements may not exist which cannot be fitted among those of which it is composed. On the other hand, if argon be a mixture of two elements they might find place in the eighth group in Mendeleef's classification, one after chlorine and one after bromine. If it be supposed that argon belongs to the eighth group, then its properties would fit fairly well with the requirements of the periodic law. For the series which contains silicon, phosphorus, sulphur, and chlorine

might be expected to end with an element of mon-atomic molecules of no valency—i.e., incapable of forming a compound, or, if forming one, being an octad; and it would form a possible transition to potassium with its monovalence on the other hand. "Such conceptions are, however, of a speculative nature, yet they may perhaps be excused if they in any way lead to experiments which tend to throw more light on the anomalies of this curious element." Lastly, the extreme indifference or inertness of argon to combine with other elements, in spite of its solubility in water, is remarkable. This property has suggested its name, which is derived from *ἀργον*, the same word being used in the Greek Testament in the familiar passage about "every idle word." All attempts to combine argon with the bodies which commonly exhibit a vigorous affinity for certain elements have proved utterly abortive. Fluorine, which lays siege to almost every known body, has, however, not been tried. In this connexion it should be borne in mind that it is nitrogen's very inertness which makes it so powerful an agent in modern high explosives; it strongly resents partnership or a tied existence, as does apparently argon, and longs to exchange the solid condition for the gaseous. We are face to face, then, with a mass of remarkable evidence, brought forward with singular skill and clearness by the discoverers, in favour of the existence of a new constituent of the atmosphere. It has stood unflinchingly the minute and exacting investigations of Dr. OLSZEWSKI and Professor CROOKES, and the discoverers have received the congratulations of the presidents of the learned societies, so that, regarding the important contribution in the light of a proposition, we may write conclusively at its end Q.E.D.

That being so, what, we may ask, is the significance of this newly discovered constituent of the atmosphere? Does, for instance, its presence affect the phenomenon of respiration or of the assimilation of food material by plants? Would not its solubility in water, which is greater than nitrogen and equal to oxygen, lead to its transmission through the moist membrane of the lung, and, if so, what part does it play in the physiological processes in man upon which his very existence depends? Does its alternating presence in the air possibly account for the bracing influence of sea and mountain air, and are the benefits of balneo-therapeutics, *inter alia*, to be ascribed to argon? Again, is it nitrogen or, after all, argon that is disengaged from certain warm mineral waters, as those of Buxton? All these and other questions of probable importance will at once occur to our readers when they learn the existence and the properties of the new atmospheric constituent. Who can tell, therefore, that the discovery of argon may not open a new vista even to the student and practitioner of medicine? It is certain that now the existence and position of argon have been indicated, as with a new planet or comet, a host of observers will turn their instruments upon it and many deductions on these and other points are sure to be orthcoming.

It is pardonable perhaps in the vacation season for our lay contemporaries to devote their columns to the discussion of a very old question—the propriety of medical men dispensing their own medicines. The opening of Parliament

will no doubt see the termination of such a discussion long before the question is settled to the satisfaction of either side. Some good things have been said on both sides, and some very foolish things. The subject is one which admits of no dogmatic treatment, and one on which every medical man must be allowed to do that which he deems best in the circumstances of his particular practice. One of the foolish arguments is adduced in favour of a medical man writing prescriptions. It is to this effect—that he thereby gives his patient an opportunity of judging of the propriety of the treatment, for the patient can then see what the medicines prescribed are, and by consulting a book on *materia medica* can tell whether the medical man is acting rightly; as if the patient were a detective to watch his medical man suspiciously, and capable of judging his treatment by reference to any old book on medicine that might be at his finger ends. Not very much more serious is the argument from the suggestion that medical men often injure their patients by mistakes of dispensing, but that nothing comes of it because of their power of filling up certificates of death. The teaching of pharmacy in medical education, though more and more insisted on, is not so perfect as it should be; but it is to medical men that we owe all precautions of therapeutics and the wisdom of giving the smallest doses of drugs that are compatible with their usefulness. They cannot be free from the responsibility of dispensing their most powerful drugs, for they have to do so in all night practice and in lonely and remote places. It is essential that they have this faculty in the interest of their patients and for their speedy relief. Readiness is a great part of the value of any medical man—"His ready help was always nigh,"—the ability to act and to relieve without waiting for the assistance of druggists or nurses or any subordinates. They would deprive the general practitioner of a great power of usefulness who would dissociate him from the manipulation and preparation of drugs. They might as well, and better, dissociate him from the use of his splints and pocket-case. One writer in our contemporary, the *Birmingham Daily Mail*, says truly that there are in that city medical men who give their professional services and supply medicine at the rate of one penny per week per head! Would that Birmingham—"the best governed city in Europe"—were alone in that respect. Medical men are not entirely to blame for this mean arrangement. It is dictated by the "sweating" views of the committees of medical aid associations, medical clubs, &c. But medical men are not without blame and must feel that they place the profession in an undignified and false position. We are not concerned to defend those who thus bring medical service into contempt. They have been condemned by the general judgment of the profession and the implied judgment of the General Medical Council.

But while we demand for the medical practitioner the right to dispense—that is, full control over the immediate and direct use of drugs—we are quite favourable to the delegation of the drudgery of dispensing to druggists wherever this is practicable. In country places and in poor districts or practices it is not practicable; but in other places and circumstances it is practicable and should be practised. The neat and careful preparation of medicines is of such importance that it may properly be delegated in

favourable circumstances to one specially devoted to it. It is not the fault of medical men that such an arrangement as is said to obtain at Margate is not in much more extensive use, where medical men and druggists are under mutual obligation—within reasonable limits of course—the former not to dispense and the latter not to prescribe. If druggists would show less disposition to prescribe and to make secondary uses of medical prescriptions, and if they would contrive better to adapt their charges to the means of patients as medical men have to do, they would do much to hasten this division of labour. It is no part of this argument to disparage the legitimate business of druggists, which is a dignified and worthy one; but we deny entirely their right to prescribe. The General Medical Council at every meeting removes from the Register medical men for allowing unqualified practitioners to act as if they were qualified. This is what many druggists do, even in grave cases, often with grave results; and it hinders that coöperation and confidence of medical men which we all desiderate.

Annotations.

"Ne quid nimis."

SEWAGE ORGANISMS AND DISEASE.

IN previous reports¹ presented to the London County Council Mr. J. Parry Laws, F.I.C., made the important observation that the micro-organisms contained in sewer air were not only less in number than the micro-organisms in fresh air in the vicinity at the same time, but that they were also apparently related to and derived from those of fresh air rather than sewage, while there was no evidence forthcoming that sewage was able to give off micro-organisms to the air in contact with it. Acting on the instructions of the Main Drainage Committee of the Council this investigation has been extended by Mr. Laws, with the assistance of Dr. Andrewes, to a study of the organisms existent in sewage. From a copy of the valuable report which has recently been issued, and which contains a careful series of well-chosen and laborious experiments, we gather the following materials. The most striking difference in the bacteriology of sewage and sewer air appears to be the absence of moulds from the latter, while in the former moulds were found to be a predominant feature. The bacillus coli communis was found, with one exception, in each sample of sewage examined, but neither it nor its allies were ever found in sewer air. The bacteria of sewage rapidly liquefy nutrient gelatine, while organisms possessing this property were practically absent in sewer air. This evidence would seem to be conclusive that there is no relationship between the organisms of sewer air and sewage, and the writers are thereby led to think that some of the ill-effects which have been erroneously (?) ascribed to sewer air may be due to subsoil air derived from soil polluted by constant infiltration of excremental matter, but suggest that it is not until the outer margin of the permeated soil has become dry that the air is infected with organisms. In a search for the typhoid bacillus in sewers, where it might be expected to be present in large proportion, such as in the drains of the Eastern Hospital at Homerton, they were successful in demonstrating the actual presence of the bacillus typhosus; but in a sample taken about a quarter of a mile away no single colony developing on culture could be referred to the bacillus of typhoid fever. In the light of this and other

results it is concluded that sewage, even in the absence of the normal micro-organisms which it contains, is clearly an unfavourable medium for the growth of the typhoid germ, whereas the colon bacillus can grow and multiply freely in it. It might be anticipated, it is pointed out, that in competition with other organisms, able to grow well in sewage, the typhoid bacillus would die out even more speedily. These experiments are only preliminary and are necessarily incomplete, but they give a distinct indication of the probable fate of typhoid bacilli which gain access in a living condition to sewage, while it seems "clear that sewage does not form a medium in which much, if any, growth is possible for them under natural conditions, and their death is probably only a matter of a few days, or at most one or two weeks." Obviously, this resistance to growth may be overcome by attenuation, as when sewage has access to the drinking supply or to milk. It would appear, then, that so far as bacteriological analysis goes there is no ground for believing that sewer air plays any part in the conveyance of typhoid fever; but are the conditions under which the bacteriological examinations of sewage and of sewer air are made such as to give us absolute assurance on these and other points? In spite of its apparent bacteriological innocuousness no one entertains the least doubt that sewer air is a constant source of disease, and if this is not to be referred to micro-organisms to what may it be ascribed? There is undoubtedly a poisonous agency at work when sewer air is inhaled, which, though it may not directly act, yet so prepares the soil that the system is unable to resist the invading organism when it comes. In some well-known experiments recorded in THE LANCET² it was shown that when rats, amongst other animals, were inoculated with a weak growth of typhoid culture, after previously being exposed to sewer emanations, they nearly all succumbed. On the other hand, rats treated to the same dose of typhoid culture, but exposed to fresh air after inoculation, showed little sign of illness and eventually recovered. What, then, is this poisonous constituent of sewer air which leaves the system defenceless against the attacks of the microbes which it may encounter? An investigation on this point would form, we suggest, an excellent and fitting sequel to the above valuable contribution.

SNOW SALT, AND SLUSH.

EVERYONE will agree that the severe and bitter cold we are experiencing just now hardly requires accentuating. Eight degrees of frost all day in London, with probably twice that number registered in the suburbs, require no ordinary amount of endurance on the part of pedestrians, but to reduce this to zero by artificial means on the pavements of our streets is intolerable and unnecessary. Yet the sprinkling of salt in the streets appears to be the only means which has occurred to the street authorities for removing the fallen snow. It is a matter of common knowledge that such a mixture produces instant liquefaction and consequent great absorption of heat, and the temperature of the resulting mixture, *pro tempore*, sinks to zero. But this is not all; the mixture, being saline, remains wet at a temperature considerably below freezing point, so that the pavements are made much more uncomfortable and cold than they would be if nothing at all was done. There is little doubt also that the salt solution, finding its way into the soles of boots, renders them permanently damp and therefore permanently cold. The roads (for we must bear in mind our four-footed friends) and the pavements should be swept immediately after a fall of snow, or, if salting must be done, the saline slush could be "squeezed off" the moment it is formed so that we may have at least a dry footway. The street sanitary authorities should surely use their powers and, if unable to do the work

¹ THE LANCET, March 24th, 1894.

² THE LANCET, Sept. 29th, 1894.

themselves, encourage the occupiers of each shop to keep the adjoining pavement properly and promptly clear of snow for the comfort of the passers-by, amongst whom must be reckoned their customers. It is well known that the prevalence of cold weather is a factor which largely contributes to increased mortality, chiefly referable to diseases of the respiratory organs, and some little care should, therefore, surely be taken to exclude anything that is calculated to aggravate any liability of this kind. Prolonged and excessive coldness with dampness of the feet is a likely enough source of illness, and what is calculated to produce cold and wet feet more effectually than a wet freezing mixture, which is exactly what our feet are exposed to when snow is sprinkled with salt?

THE ABUSE OF MEDICAL CHARITIES.

WE see with much satisfaction that the *Westminster Gazette* is publishing a series of articles on the above subject by "Scrutator." It is of great importance that the lay press should take up this subject and impress it on the public mind. In his first article "Scrutator" says that in the majority of cases hospital managers in no way concern themselves with the abuse practised on their institutions by those for whom they were never intended. The sole concern of the managers is to give an imposing account of the numbers relieved, and especially to show that they are increasing at an ever-increasing ratio. If their appeal to the public for more funds cannot be based on the fact of an enlargement of premises the next favourite basis is an increase in numbers. This, of course, is chiefly in the out-patient department, while the accommodation for in-patients is often a diminishing quantity and consists in displacing poor patients for those who can pay. Such evils are familiar to the medical profession, and will increase year by year unless public feeling is aroused to condemn them. If we might be allowed a word of criticism on "Scrutator's" first article on this subject we would say it deals too much in general statements. The strength of the case is in details of individual hospitals, and in close investigation of the circumstances of individual cases.

FIRST AID ON SHIPBOARD.

THAT measure of acquaintance with the rudiments of medical and surgical knowledge which is comprised under the term "First Aid" is probably more essential to seafaring men than to any other class of the community. The nature of their adventurous calling exposes them continually to bodily risks of all kinds, and limits each ship's company to its own resources in the event of any illness or injury, however grave. The Passengers Act requires that British foreign-going vessels on which there are fifty passengers shall carry a medical man, and the Merchant Shipping Act has a like requirement in the case of all foreign-going vessels having 100 or more persons on board. The large number of vessels not fulfilling these conditions, and consequently not provided with medical officers, affords frequent opportunities for amateur surgical practice at sea, some interesting particulars of which were given by Mr. A. M. Cato, M.R.C.S., L.R.C.P., in a paper read before a meeting of the Shipmasters' Society, London, held on Jan. 21st at the Fishmongers' Hall. He states that the sailing ships and steamers which do not carry surgeons number about 5600, and that their crews amount to the large total of about 140,000 persons. The numerous cases of disease and injury occurring among this great body of men, scattered everywhere over the face of the ocean, are necessarily treated by the officers of the vessel, who have at their disposal the stock of drugs authorised by the Board of Trade and contained in the medicine chest. Some guidance in the use of these medicines is provided in a small "Book of Directions,"

also contained in the chest. In nautical life surgical emergencies are perhaps more numerous, and certainly more conspicuous, than equally urgent illnesses requiring medical treatment. As the ship's officers will in most instances have the management of these cases to their termination, something more than the ordinary first aid will often be required. Mr. Cato judiciously proposes that when the classes are composed of seafaring men the five lectures constituting the first aid course of the St. John Ambulance Association might be somewhat extended. Another recommendation of his—viz., that ship's surgeons might be authorised to give first aid instruction while at sea—is well deserving of favourable consideration. The officers and petty officers who have learned something in this way will naturally in the course of their service find themselves on board vessels on which there is no surgeon, and opportunities for putting their knowledge in practice will sometimes occur. It is satisfactory to find that the Board of Trade acknowledge the utility of instruction in first aid by endorsing on an officer's certificate of rating the fact that the owner also possesses the certificate of an ambulance association.

A SPECIFIC AND ITS SUPPORTER.

A CORRESPONDENT signing himself "M.D." has written to the *Morning Post* advocating the employment of a certain substance in the treatment of diphtheria. He says, "I know neither its origin nor composition," and yet he does not hesitate to guarantee the nostrum as "absolutely safe," or to try to lead his readers to believe that it acts as an infallible specific. The apology advanced by "M.D." for addressing his communication to a lay paper is in itself condemnatory. "I take the unusual course of publishing it in your journal because it will thus be brought directly before the public without loss of time, whereas in a medical paper it would probably receive no notice unless I were to publish a detailed report of some hundred cases." An anonymous endeavour to puff a quack remedy would not be worthy of notice if it were not for the fact that the communication containing it appears in the columns of a highly influential and well-conducted paper. This fact we take to be a sufficient guarantee that the writer is in reality what he professes to be—a medical man; and we feel bound to draw his attention to the grave irregularity of which he has been guilty. It is possible that a letter from the sole agent for the company supplying the drug, which appeared in the *Morning Post* four days after his original communication, has already opened his eyes.

A NICE DERANGEMENT OF PLATITUDES.

OF late there has been a boom in what we may call the pathological medical novel and now a member of the medical profession has determined to return the compliment and publish a "novel" medical work. True, he calls it the *Family Physician*, and what a delightful picture of both the family and the physician is here presented. "Woman's sphere," he says, "is not to sparkle in the realms of literature, but to shine with a clear, steady and warm light in her home, while affection glows in her eyes to the exclusion of critical hauteur, and children comprise her companions instead of books on recondite philosophy." So much for the family. When we come to the physician we are much struck by the novelty and soundness of his remarks. "Jaws," he gravely tells us, "as is well known, form a portion of the skull, and are employed in the process of mastication." Also Her Majesty Queen Anne is dead! "Jejunum is the lower portion of the small intestine." Mr. Ruskin, if we remember rightly, in "Modern Painters," says that the Greeks had a deficient colour sense, and gives as an instance, amongst others, the term "hyacinthine" as applied to hair. Our author knows all

about it. *Sub voc.* "Hair" we find: "Hair in many ways resembles a plant, as it grows from a follicle within the skin..... Its mode of growth is very similar to that of the hyacinth." We commend this book with a few errata to the notice of pure literature societies and village library committees or school boards as an exercise in grammar. Take the following: "Salads when combined with animal substances and the different varieties of fish often enable one to eat, in consequence of their palatable composition, when they might not be able to do so were the more common varieties of food presented to them." The picture of an anorexic salad is indeed touching.

DIPHTHERIA IN LONDON.

UNHAPPILY the constant decline in the death-rate from diphtheria in London witnessed since the first week in January has received a decided check. Whereas in the three succeeding weeks the deaths were respectively 34, 31, and 29, they rose last week to 45, and were 12 in excess of the corrected average. Only 1 occurred in an infant under one year of age, but 31 in the next four years of life, and 11 in young people under twenty years of age. They included 7 in Islington, 6 in Camberwell, 3 each in Mile End Old Town, Newington, and Plumstead, and 2 each in five other widely separated sanitary areas. The cases admitted to the hospitals of the Metropolitan Asylums Board were last week 76, or almost identical with those of several recent weeks; whilst the cases remaining under treatment last Saturday (519 in number) showed but little variation, having been 517, 514, and 528 on the three preceding Saturdays. In Greater London there were 12 deaths registered last week as due to diphtheria, including 5 in West Ham district.

THE EXPOSURE OF AN INFANT.

AN inquest was held by Mr. Luxmore Drew at the Fulham mortuary on Jan. 28th touching the death of the newly born male child of Florence Blunger, a domestic servant. From the evidence it appears that the girl went into residence at the house of a midwife for the purpose of being confined, and that she made arrangements for the child to be taken away to be nursed. Only two hours had elapsed from its birth when the infant was removed by the person charged with its care. The weather at the time was bitterly cold, and there is little cause for surprise at death occurring two days later. The post-mortem examination showed that the child, though small, was healthy except for the acute disease which ended its life. The lungs had been fully inflated by natural respiration, but each showed marked congestion passing into pneumonia. It has been said that "death from starvation is death by cold." In this case there was partial starvation, since very little nourishment had been taken, and in addition there was direct exposure to a low temperature. The fact of the child having been well wrapped up was no protection against the deleterious effect of admission of cold damp air to the delicate structures of the lungs, and at a time when these organs are, so to speak, in a state of physiological embarrassment, at the time of inception of respiration. To say the least, such exposure showed gross carelessness on the part of the midwife—who could not shield herself under the claim of gross ignorance—in allowing a child of such tender age to be heedlessly submitted to climatic conditions sufficient to test the strength and endurance of the most robust adult. Guided by the able and lucid address of the learned coroner, the jury forebore to bring in a verdict of manslaughter, but to their finding that death was from natural causes they added a rider to the effect that the midwife was deserving of severe censure. They expressed their "strong condemnation of the system of houses for wholesale

confinements and distribution of children being unlicensed," and urged "that all such houses and every person taking a child to nurse should be registered." We endorse every word of this presentment. Much has been done by the Legislature to protect infant life, but a consideration of the above case shows there is still urgent need for a further enactment.

NURSE OR MIDWIFE?

A CORRESPONDENT has sent us the first annual report of the Lincolnshire Nursing Association, in which a system of nursing is described as an alternative to the system of nursing with nurses of higher training, and as applicable to poor districts or villages in the country which are too poor to employ the latter class. The training "consists of three months' training in midwifery, at the end of which they pass the L.O.S. examination and receive its diploma" (*sic*); also three months' training in monthly nursing, with as much instruction and training in general sick nursing in the district as can be given in so short a time. We observe that the committee of the association recognises the entirely limited nature of the training and aptitudes of these women, and wishes to subordinate their action to the medical men of the districts in which they are employed. We do not gather that any of them have been employed by the Association as midwives, but rather surgically. Their training, such as it is, has been procured mainly by county council scholarships bestowed on selected candidates. Still, it is to be regretted that the document of the Obstetrical Society is spoken of as a "diploma." We do not propose now to discuss fully the scheme of this association, which contains some interesting and even commendable features. We only observe the report as an illustration of two things—first, the prominence of the "diploma" of the London Obstetrical Society; and, secondly, the efforts of poor districts to supply a class of women with some slight training when the more thoroughly trained nurse is an impossible luxury.

STREET SHELTERS IN RELATION TO THE POOR AND TO THE PUBLIC.

A REPORT issued last week by the Charity Organisation Society on the condition and the social and sanitary effects of street shelters in Whitechapel is of interest as a criticism upon the tendencies of this method of relief. Briefly summed up it amounts to a verdict of unqualified condemnation. The good intention of the charitable originators is admitted, but experience, it is said, has proved their whole system to be founded upon a fallacy. Due account has not been taken of the frailty of human nature. The shelters do not, we are told, become centres of improvement tending to engender self-respect and independence in their occupants. Instead of this, they have been found to promote idleness and neglect of social and domestic obligations. Those who tenant them at night pass the day in begging or equally unprofitable pursuits. The internal management falls far short of what is desirable. All manner of persons are herded together indiscriminately, and crime, dirt, and disease find among them a common home, secure from the inconvenient intrusion of the police or of sanitary inspectors. Furthermore, the shelters act as hindrances to other and more carefully administered measures of charity. Those who resort to them would under other circumstances come under the notice of parochial guardians or in contact with voluntary agencies not a whit less charitable than the shelter committees, but in their methods and purpose elevating, educative, and opposed to pauperising tendencies. The shelters do no more, in fact than their name barely indicates, unless it is to hold the pauper contented in his degradation and careless

of his duty as a member, even if a poor member, of an industrious community. A more damning indictment than this could hardly be conceived. Unless the statements contained in it should be very materially modified on further examination the free, or virtually free, shelter is no better than a nursery for social weakness and iniquity. To the absence of inspection, which is one of the most regrettable features of this system, we have already directed attention,¹ and we consider it to be absolutely essential that this anomaly should be done away with by legislation if the shelter is to enjoy even a permitted existence amongst us.

TAXATION AND THE MEDICAL PROFESSION.

THE time is coming round when the Chancellor of the Exchequer will be engaged in considering, on the one hand, how he can raise the money which he needs, and, on the other, how he can relieve the taxpayers who are entitled to his consideration. A correspondent with much force argues in favour of a reduction in the inhabited house duty paid by medical men on the ground that their house is a part of the heavy expenditure necessitated by their profession. Other classes are favoured in respect of this particular tax whose claims are not any stronger than those of the medical profession. It is not too much to hope, considering the modest proportions of medical incomes and the large deduction to be made from them for unavoidable expenses of practice and the initiatory cost of medical education, that the principle of exemption will be so stated as to apply very freely to them. There has been a disposition to regard medical men as being among the classes with comfortable incomes unaffected by the vicissitudes of commerce and earned without much labour. No mistake could be greater. Their incomes are small and precarious, and they represent an amount of labour and risk greater than that of almost any other calling. Under these circumstances we appeal to the Chancellor of the Exchequer, not for pity, but for justice.

TABES AND GENERAL PARALYSIS.

In the *Archives de Neurologie* a paper on this subject recently appeared by Dr. Chabbert, which is shortly abstracted in the *Neurologisches Centralblatt*. The relation of the two diseases is considered with special reference to the case of a woman aged forty-three, who had suffered from syphilis in her thirtieth year. In 1889 she had had severe neuralgic headaches, giddiness, and amblyopia. The difficulty in regard to vision passed off after six months. A year later she had during a period of ten days attacks of sickness lasting for one hour and a half to two hours at a time, quite irrespective of the taking of food and unassociated with pain. She experienced a few months later difficulty with both bladder and rectum, which was only temporary. She also had during twelve days sharp lightning pains in the lower extremities. Between 1891 and 1893 she was fairly well, but her sight was gradually becoming worse. After a few months symptoms of general paralysis manifested themselves—extravagant ideas, tremor of the hands, and characteristic articulatory difficulty. There was progressive failure of intelligence, weakness in the lower limbs, internal ophthalmoplegia, and blindness. Dr. Chabbert discusses the question whether the foregoing case is to be regarded as one of tabes dorsalis, followed by general paralysis, or as one of general paralysis with initial symptoms simulating tabes. The gastric crises and lightning pains would favour the former view were it not that, as he remarks, the vomiting was unaccompanied by the severe pain which usually accompanies true gastric crises, and the pains in the limbs were too brief in their duration to be regarded as true lightning pains. Further, the knee-jerks were present

all through the illness, and there was no sensory impairment. All these facts lead him to believe that in this particular case no true tabes was present, but that the symptoms which were observed in the early stages of the illness are to be regarded as early indications of general paralysis. It seems to us that a wide question like this is not to be settled by reference to a single case. That there is a close connexion between tabes dorsalis and general paralysis no one, we venture to think, who has had much experience of either disease will think of denying. If the essential lesion in tabes is to be regarded as posterior sclerosis it is also indubitable that certain cases of general paralysis have symptoms of tabes long before any unequivocal symptoms of dementia are present; and that the one disease should occasionally merge into the other is not to be wondered at if, as most authorities now agree, syphilis is to be regarded as a causal factor in each.

THE MAKING OF MENDICANTS.

WE must congratulate the council of the Charity Organisation Society upon the practical unanimity of their recent meeting for the purpose of putting a stop to charitable mendicancy, for so we desire to term the custom of sending children into the streets to beg for contributions to charitable institutions. That this practice has increased very much within the last few years no one will deny—in Piccadilly, Kensington, and Chelsea especially so, Sloane-square being a sort of focus. Boxes are rattled in the face of passers-by by children not infrequently tricked out in some fantastic garb, and the pennies of the good-natured thus obtained on behalf of charities which may be perfectly reputable or may be, for all information to the contrary that can be obtained, questionable. Our experience of this method of collection is that the sum received by the charity when collected by these means amounts to about one-third of the total collected. We are sure that any self-respecting hospital or institution which has been driven to collect money by these means would gladly welcome any way of repressing the evil, and indeed we are not sure that the repression of the practice of street collecting by the Hospital Saturday Fund might not be included in the scheme of reform.

A MODERN IMMORTAL.

NEARLY fifty years have passed since a discovery was made which was to revolutionise surgery, and not until now, except upon his tombstone, has the name of the discoverer been inscribed in any public place. At the end of last year—to be accurate, November, 1894—the State of Massachusetts placed the names of fifty-three of her most celebrated sons in the new chamber of the House of Representatives in Boston. Prominent among these is the name of Morton, to whom belongs the immortal honour of having been the first to demonstrate that prolonged anaesthesia could be safely produced by means of ether. It is a fitting coincidence that at this time Boston should be preparing to decorate her library with the Legend of the Holy Grail—a Christianised version of the old Celtic story of Ceridwen's cauldron, which offered life and freedom from care and pain to all who drank from it; and who will deny that anaesthetics are a life-prolonging draught to thousands who partake of them and that pain is robbed from the sufferers while they sleep? In some memoranda kindly sent to us by Dr. W. J. Morton of New York, is an interesting letter from the late Oliver Wendell Holmes, dated Nov. 21st, 1846, addressed to Dr. Morton, in which he says, "Everybody wants to have a hand in the great discovery." He goes on to suggest that the state produced by the new agent should be called "anaesthesia," and the adjective should be "anæsthetic." He draws special attention to the necessity for having

¹ THE LANCET, Dec. 23rd, 1893.

an appropriate name, for "the term will be repeated by the tongues of every civilised race of mankind." Morton, as is generally the case with benefactors of their species, died at an early age, worn out and in poverty.

SIR SYDNEY WATERLOW.

It is gratifying to us to see accounts of the improvement in Sir Sydney Waterlow's health. He has been somewhat seriously ill, but is said to be making gradual progress towards recovery. Sir Sydney Waterlow is identified with many causes of public and social importance, notably with the Hospital Sunday Fund and with the housing of the working classes. All who have worked with him will desire his complete restoration to health, so that he may continue to afford assistance and counsel in these great questions.

CHARGE OF MANSLAUGHTER AGAINST A MIDWIFE.

DR. DANFORD THOMAS on Tuesday last concluded an inquiry into the circumstances attending the death of Hilda Gray, aged twenty-four, of Peckwater-street, Kentish-town, from puerperal fever. She had been attended by a midwife, by name Rake, who, it is alleged, had continued to attend cases after being requested by Dr. J. F. Sykes, the medical officer of health of St. Pancras, to desist from doing so, his attention having been called to three cases of puerperal fever in patients under her charge, and subsequently to two more, and then to three more—eight in all. It transpired in the course of the inquiry that of these eight cases five had died, and Mrs. Rake was committed for trial on a charge of manslaughter. Under these circumstances we withhold all comment on a very painful case.

THE DIFFUSION OF SMALL-POX.

LAST week there was a considerable rise in the number of fresh cases of small-pox notified in London, the increase being due, however, to the rapid manner in which attacks occurred in one sanitary area—namely, Marylebone. To this parish also belonged the two deaths registered from small-pox in London during the week, one being in an unvaccinated infant under one year of age and the other in a person in the age-period five to twenty years, concerning whose state as to vaccination no information is given. The admissions to the institutions of the Metropolitan Asylums Board numbered 21, against 8, 6, and 8 in the preceding three weeks; and the total number of patients remaining under treatment on Saturday last was 51, an increase of 16 in the week. The fresh cases were 22 as compared with 7. News of a case comes from Leicester, and Smethwick and Aston Manor each had multiple attacks recorded. At Birmingham matters have taken a happy change, the new cases numbering less than half a dozen, no death being registered. During the concluding quarter of 1894 the notified cases of small-pox were 401 (as against 2 and 583 in the two preceding fourth quarters), 70 cases being notified in the fifth week of the quarter; the disease declined towards the close of the year. The deaths numbered 32 among the 401 cases, or 8 per cent., the 19 deaths among 356 vaccinated patients being equal to 5.3 per cent. of cases, and the 12 deaths among the 31 unvaccinated patients being 38.7 per cent. of those cases. It speaks well for the organisation of the health department that 395 of the cases were removed to the City Hospital. Two or three attacks occurred in Bootle and some half a dozen in Liverpool last week, no death, however, having to be chronicled. Dr. Hooper has reported to the Tooting board of guardians that in the Tooting district, to which the prevailing outbreak of small-pox has been almost entirely confined, three times and a half as many children escape vacci-

nation as compared with Liverpool proper, and that in one small locality alone no fewer than 230 unvaccinated persons had been found. The marvel is that the outbreak has been such a mild one. We trust that the area may not yet have to learn the danger of delay. In Dublin the fourth week of January witnessed a rise from 61 to 64 in the number of admissions to hospital, 73 patients being discharged and 171 remaining under treatment, in addition to 147 convalescents at Kilmaham; of 7 deaths which occurred, 3 were in vaccinated and 2 in unvaccinated persons. No statement could be made as to the two remaining. It now transpires that the corrections noted in THE LANCET of the 2nd inst. were not called for, the Registrar-General having reaffirmed the data as presented in our columns of Jan. 26th as to admissions and remaining cases. At Newry there were 21 cases in hospital at the beginning of this month, one death having occurred in January. Schools have been closed for six weeks, and hundreds of persons have secured the benefits of vaccination at the dispensary. Of the 52 deaths from small-pox in Ireland in the last quarter of 1894, only 1 (in Londonderry) occurred outside the Dublin registration district. Small-pox continues to be heard of in Edinburgh and district, 7 cases having been reported in the city in the fourth week of January and 1 death having been registered in Glasgow and in Leith respectively.

COIR FIBRE FOR SOLDIERS' BEDDING.

THE Secretary for War, when introducing the Army Estimates in the House of Commons in March, 1894, referred, among other improvements, to the issue of coir fibre bedding in place of straw bedding—a change greatly to the comfort of the soldier. He added that the change necessitated an increased charge at first, although it would probably cause a considerable saving eventually to the department. There can be little doubt that Mr. Campbell-Bannerman spoke advisedly in these respects; the use of coir fibre as a substitute for straw for bedding, in addition to its hygienic advantages, adds to the soldier's comfort and is also calculated to effect a considerable saving to the State. It appears that this subject was brought to the notice of the Surgeon-General of Her Majesty's forces in India by Brigade-Surgeon-Lieutenant-Colonel Hill Climo in 1884 and that coir bedding is, by orders of the Government of India, used for British troops serving in that country. Brigade-Surgeon-Lieutenant-Colonel Climo, impressed with the advantages—hygienic and financial—of coir as a substitute for straw, subsequently, we believe, brought the subject to the notice of the military and War Office authorities of this country, and the use of coir for soldiers' bedding was experimentally tried and tested for some time at Aldershot, with such a measure of practical success that it was adopted. The officer who so zealously interested himself in getting this reform introduced into the army has since retired from the service. Assuming what we have said to be a correct statement of the facts, we should like to know whether his services in this direction have ever obtained any recognition or reward.

"THE NEW STREET DANGER."

ACCIDENTS in connexion with underground electric light mains are reported from Rochester, Eastbourne, and Dover, and on the 2nd inst. there occurred the more serious disaster at Southwark-bridge. In this last instance it appears that coal gas escaping from a main under the carriage way had found a path into the electric light culvert under the footway, and becoming ignited the explosion had blown up the pavement, the covers of four junction boxes being "shot up some distance into the air." Five persons were injured. One of these "suffered from shock," and others from bruises and wounds. This is, we believe, the sixth accident of the

kind which has occurred in the City during the past two years, and in one case, at least, the vestry were advised of the danger beforehand and of the method of remedy. A time will probably come when electrical engineers will find themselves in practical agreement as to the best and safest systems of laying underground electric lighting mains, but in the meantime existing systems have to be dealt with. It is evident that underground electric main culverts and "boxes" constitute in some instances reservoirs of considerable capacity for an accumulation of escaping coal gas, which, unmolested and ever increasing, only awaits the electric spark or arc or red-hot conductor, or the lamp of the workman or a discarded match, to determine its explosion. The means of minimising this kind of danger by ventilation, drainage, insulation, and attention to the construction of street boxes with a view to the reduction as far as possible in their capacity, are sufficiently well known. And searching inquiry should follow all such accidents. But it may also be suggested that inspection might materially diminish the frequency of their occurrence.

A HEALTH MANUAL FOR THE PEOPLE.

THE Imperial Health Institute of Berlin, which has done so much to advance sanitary science in its highest and widest sense, has lately issued a small manual of health for popular use and at a popular price (it is only one mark) under the title of "Gesundheitsbüchlein." Within its 254 pages it comprises a brief account of the structure and functions of the body; it then deals with individual or personal hygiene, in respect to air, water, soil, food, clothing, dwelling, work, and rest. Next comes what may be called social hygiene, and a fourth section deals with the dangers to health from external influences, as climate and weather, infection, and accidents. An appendix gives some counsel on the care of the sick. Dr. Gärtner, who in the *Fortschritte der Medicin*, notices appreciatively this new departure of the State Department interested with the care of the public health, points out that in some matters the book hardly speaks positively enough, although he fully recognises that a work issued from so authoritative a source must needs be cautiously worded.

NINETEENTH-CENTURY VAPOURS.

In the current number of the *Contemporary Review* there is an interesting article by Professor Clifford Allbutt, which we recommend to our readers on account of its cheery optimism. All of us who read have been made much aware of late of the presence among us of a noisy if small band of Jeremiahs, who tell us persistently that the world is worn out; that madness and neurotic diseases increase day by day; that all the old safeguards of morality and religion are one by one being broken through; that, in short, nothing and no one is any good. The cry is a very old one, and none the more true for that; but its supporters are many of them eloquent with voice and pen, and any opinions shouted loudly enough are sure to command a hearing. But, we repeat, it is not true, and is made the excuse for a good deal of meddlesomeness. We are living, in fact, in an island of Polupragmosyne, where, as Charles Kingsley says, "everyone knows his neighbour's business better than his own, and where all people set on the wayfarer to show him that he does not know his way and to demonstrate incontestably that, whichever way he is going, he is going wrong." Modern life, with all its complexities, is of course a very different thing to the simple existence led by our forefathers, but there is no proof that we are not fully equal to the divers strains. There will always be those who fall by the way, but this is not a calamity peculiar to our generation, and for one of us that falls from over brain work surely two of our ancestors were wont to succumb to the hard work of idleness. It is, to quote Professor Allbutt, "rather the conditions under which

work is done than the work itself which is mischievous." "The secret of health," he goes on to say, "and the secret of virtue, which is the health of the mind, are happily one, and it lies in the concern of the active intellect with the sensations which bear upon us without." The healthy exercise of the mind is to the brain—the heart of the nervous system—what bodily exercise is to the bodily heart, honestly done work demands as its complement honestly taken pleasure, and neither if not abused can harm either body or mind.

DEATH AND HIS BROTHER SLEEP.

It is difficult to see what purpose, either scientific or pleasurable, can be served by "experiments" like that now being carried on at the Westminster Aquarium. The possibility of human beings existing for days in a cataleptic or trance state has, we believe, been proved over and over again. But if this were not so, if the Aquarium were exhibiting for the consideration of laymen a real medical curiosity, it would still be altogether unfitting that Dr. Forbes Winslow, a Member of the Royal College of Physicians of London, should lend himself to the furthering of such a show. He is reported in the *Times* of Feb. 2nd as saying that there was no recorded instance of a person sinking while in a hypnotic trance. Now, just such a death occurred in Hungary last year, the case being that of a girl to whom it was "suggested" that she had phthisis, and the tragic affair was made the subject of more than one comment in our columns. Did not Colonel Townsend also—we have not the reference at hand—die in one of his self-produced trances? Dr. Forbes Winslow appears to us to have not only taken upon himself an unwise and undignified task, but, if he has been correctly reported, to have disseminated wrong information. The temperature of the first of the Aquarium performers fell to 95.4° F. after being some twenty-four hours in his unnatural condition, whereupon he was awakened, and no one will say that it was not the wisest course to pursue. Since writing the above we have received a letter from Dr. Forbes Winslow, and also one from Dr. Norman Kerr, which are published in another column; while we learn that a second subject who was placed under hypnotic influence last Monday has showed signs of a flagging circulation.

HOSPITAL SMALL-POX INFECTION.

DR. CHARLES PORTER, the medical officer of health of Stockport, has placed on record two curious and interesting cases in which the infection of small-pox was received in the ward in the borough hospital in 1893 under very exceptional circumstances. In the first instance, a child admitted to the scarlet fever ward in January was found to have the papular eruption of small-pox a month later. Minute investigation failed to discover the cause of infection, until it was found that a cat, secretly kept by an attendant in the ward, had visited the small-pox pavilion. Needless to say that the "harmless, necessary cat" was expelled at once and proper measures of disinfection and sulphur fumigation were taken in the ward. The second instance occurred in the same scarlet fever pavilion a fortnight later, and its relation to the small-pox ward was discovered quite accidentally. Dr. Porter traced a smell of sulphur in the latter ward, then empty, at the end nearest the scarlet fever pavilion, and investigation led to finding an unsuspected subway between the two wards, by means of the tunnel along which the heating pipes were carried. The higher temperature of the fever ward had, says Dr. Porter, evidently drawn in air from the small-pox ward. One or two points, however, do not seem to us to be quite clear as to the cause or causes of these two cases of small-pox. First of all, nothing is said as to the condition of the patients as to vaccination. And

next, granted the source of the first case, might not the second have derived infection therefrom, nothing being said, however, as to the date of admission of this second case? And, again, may not both cases have derived their infection aurally? But at any rate the hypotheses advanced are of interest, especially in view of the fact that after elimination of the supposed causes of the disease no further secondary cases of small-pox occurred in the hospital. Still, we are glad to find Dr. Porter, in another portion of his annual report, advocating separate hospital accommodation for small-pox.

THE DANGERS OF CIRCUMCISION.

SOME interesting letters on the risks of circumcision appear in the *New York Medical Record* of Jan. 26th. They do not deal with the rite as such, but with certain dangers incidental to its careless or unskilful performance. One question is whether it can be performed as safely by the Jewish mohel as by a surgeon acquainted with all the details of antisepticism, and the argument of the writers is strongly in favour of its being done by the educated surgeon. Dr. Henry Levien has examined the reports of the Board of Health and found circumcision reported as a cause of death sixty-seven times between 1881 and 1894 inclusive. He attributes the greater mortality since 1881 to the great increase in the Hebrew population since that date. Dr. Martin Schwartz denies that the mohel is an expert in the sense that the physician is, and says he has seen various mutilations as a result of his operation, such as cutting off part of the glans penis, removal of too much foreskin, and in one case the removal of a piece of the scrotum the size of a half-dollar. The practitioners of the east side of New York, he says, are frequently called to hæmorrhage in such cases. The mohel knows very little of sepsis, and ties up the wound with dirty rag. Neither his hands nor instruments are antiseptic, and he is in the habit of sucking the wound with his mouth, with the risk of contact with any carious teeth or syphilitic or other sores of the mouth. That circumcision by the mohel does not figure more frequently as a cause of death is attributed to the fact that if complications arise the physician is called in and saves the patient. It must be admitted that in this country we seldom hear of such accidents, but the questions raised are serious ones and worthy the consideration even of those who regard the operation as a religious duty.

THE Lord Mayor will take the chair in the Egyptian Hall at the Mansion House on Wednesday afternoon next, Feb. 13th, at 3 P.M., at a meeting to be held in aid of the special appeal fund for St. Thomas's Hospital. As we have already announced, his Lordship will on this occasion be supported by H.R.H. the Duke of Connaught, the President of the hospital; and among others who will be present we may mention the Bishop of Rochester, Sir William MacCormac (consulting surgeon to the hospital), Sir Stuart Knill, Sir Albert Rolit, Dr. W. M. Ord (senior physician to the hospital), and Mr. Mackellar (senior surgeon to the hospital).

DR. MANSON will lay the results of his work on the Malaria Parasite before the Hunterian Society at the London Institution on Wednesday next, at 8.30 P.M. This communication will form the Annual Oration for 1895, and all members of the profession are at liberty to attend.

SIR RALPH THOMPSON, K.C.B., has been appointed Chairman of the Weekly Board of the Middlesex Hospital, W., in the room of Lord Sandhurst.

A SPECIAL MEETING of the council of the Charity Organisation Society will be held on Monday next, Feb. 11th, at the Hotel Victoria, Northumberland-avenue, at 3 P.M. Mr. W. Bousfield, chairman of the council of the society, will preside, and Colonel Montefiore will read a paper on the Need of a Central Hospital Board in London, with special reference to the promotion of uniformity in the system of admission to hospitals. Sir John Erichsen and Dr. W. M. Ord are announced to take part in the discussion.

DIFFICULTIES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

III.¹

3. Action to be taken as the Result of the Visit.

THE purport of the visit to be paid by the medical officer of health, when he regards the information conveyed to him as involving an "outbreak of any contagious, infectious, or epidemic disease of a dangerous character," is very clearly set out in the official Order. It is that he shall "inquire into the causes and circumstances of such outbreak, and in case he is not satisfied that all due precautions are being taken he shall advise the persons competent to act as to the measures which may appear to him to be required to prevent the extension of the disease, and to take such measures for the prevention of disease as he is legally authorised to take under any statute in force in the district or by any resolution of the sanitary authority."

One of the first objects, then, is that the medical officer of health shall determine whether or not he is satisfied that all due precautions are being taken which are required to prevent extension of the disease, and he is to advise accordingly. Now it is evident that he cannot in a number of instances form a proper judgment as to this without some sort of communication with the medical practitioner in attendance on the case; and it is doubtless for this reason that the Local Government Board have so often suggested that there should be harmonious coöperation in such matters. Thus, they wrote in one case: "It is of the utmost importance that he (the medical officer of health) should act in harmony with the medical attendants of the sick, so as to obtain from them the valuable assistance which they can afford to him in his work." In another case they wrote thus: "They may observe, however, when the patient is under the charge of a private medical practitioner the medical officer of health should, no doubt as a general rule, confer with such practitioner in considering what precautions should be taken to prevent the spread of the disease, but that where conference could not be had it would not be right to delay local inquiry into the matter." We must admit that in large urban centres where the poorer and the labouring classes are thickly congregated there might be much difficulty in complete compliance with this injunction; but, on the other hand, we are convinced that in such cases medical practitioners will leniently view any departure from it, especially if they know, from the general action of the health officer, that he makes it a point, where practicable, of securing the harmonious coöperation indicated. Indeed, many medical practitioners gladly welcome the advent of the sanitary officials with their printed forms as to precautions, their disinfectants, &c.; and in well-organised urban and other districts it is by no means always necessary that the action to be taken should involve any other visit, at least in the first instance, than that of the sanitary inspector. And there will be many cases, where a visit from the medical officer of health is not needed, when direct communication

¹ Parts I. and II. were published in THE LANCET of Jan. 19th and Jan. 26th, 1895, respectively.

as to a case between him and the practitioner in attendance will not be requisite.

Sometimes difficulty arises as to whether measures of disinfection and the like ordered by a practitioner are sufficient. The responsibility as to these measures, and as to school and other attendances of members of the infected family or household, rests primarily with the medical officer of health; and as a rule his judgment should be accepted as final. But if a difference of opinion does arise such a case will, more than any other, be one where the two medical men should if practicable meet, with a view to that harmonious action so essential under the circumstances.

There have been occasions when a medical officer of health has felt it his duty at once to advise removal of a patient, concerning whom he has received a notification, to an isolation hospital, and much irritation has been occasioned when a medical practitioner has found that, unknown to him, preparations have been made for the removal of his patient or else that the removal has actually been effected at the time when he first hears of it. Recalling some of the cases which have come under our notice we are bound to admit that it is extremely difficult to lay down any rule as to this which shall suffice for application in all instances. In a widely scattered rural district where a medical officer of health finds a patient suffering from infectious disease under circumstances which he feels confident are certain to lead to the immediate spread of infection, and so call for the closure of the schools and the consequent suspension of elementary education; or where he finds that the only disposal of the infected excreta must involve risk to water-supplies, public or other, it must be clear that he has a duty towards the public to act promptly and not to delay action—the whole value of which will depend in its being immediate—merely in order to observe certain professional courtesies. In such a case personal communication before action with the medical attendant might ensure mischievous delay, and he could hardly be expected to do more than inform the medical practitioner as speedily as possible of the instant action which he had found it imperative to take; but, speaking generally of such cases, it might be well to limit immediate action to those patients who are so circumstanced that compulsory removal to hospital could and ought to be enforced. This means that, to use the terms of Section 124 of the Public Health Act, 1875, the patient would be either "without proper lodging and accommodation," or "in a room occupied by more than one family," or "on board any ship or vessel." In most other cases—and, indeed, in all cases where it is practicable—no such action should be taken except after an endeavour to secure the coöperation of the medical practitioner in question.

4. Cases where the Diagnosis is Matter of Doubt.

Certificates of notification are at times received by medical officers of health who doubt the correctness of the diagnosis. The cases of this class that have given rise to most trouble are those in which the medical officer of health has reason to doubt whether the patient to whom the notification relates has either any infectious disease at all or is suffering from one that is notifiable under the statute. The case of certificates deemed to be fraudulent has already been dealt with, and we only refer here to cases where the diagnosis is regarded as incorrect, and where no wrong motives can be ascribed to the notifier. The action which we would strongly urge in such cases is that the medical officer of health should always act on the assumption that the certificate is correct even if he doubts it. Fortunately, many leading medical officers of health act on this assumption as a matter of practice, feeling that any loss of time or money which results from processes of cleansing, disinfection, &c., which may turn out to be unnecessary, bear no comparison in importance with the necessity of avoiding friction between the public health department and the local

members of the medical profession. The Local Government Board have evidently adopted the same view. Thus, writing on Jan. 28th, 1891, to a metropolitan vestry clerk, that Board said: "The Board gather from the report that the medical officer of health regards it as incumbent upon him to visit each patient and verify by personal examination the accuracy of the certifying practitioner's diagnosis. The Board, however, do not consider that either the Act itself or any Order of the Board imposes any such obligation on the medical officer of health, and it appears to the Board that it would usually be very inexpedient that he should undertake a personal diagnosis of a case notified to him for the purpose of testing the accuracy of the certificate, unless he has reason to believe that the medical practitioner is not acting in good faith. In the present case there is apparently no allegation of bad faith. The question seems to be one of differing diagnoses only, and this in itself is, in the Board's opinion, not sufficient to warrant the rejection of the certificate of the medical attendant." And in a subsequent letter, written in 1891 to a provincial town clerk, the Local Government Board say: "I am to state in reply to the inquiry with which your letter concludes that unless in the cases to which you refer the sanitary authority satisfy themselves that they have sufficient grounds for doubting the good faith of the certifying practitioner the authority should, in the Board's opinion, pay the fees for the certificates."

These two letters set out that which is the habitual practice of most medical officers of health, and it would be well that the advice which they give should be uniformly adopted. In a district where the diagnosis of a case was recently questioned the medical practitioner contended that he, as a bedside practitioner, was more competent to form an opinion than the medical officer of health, who had early in life abandoned clinical work and had for a series of years devoted himself exclusively to public health duties. This is a consideration which is worth remembering, and it incidentally raises the extremely important question as to how far it is for the public benefit that medical officers of health should altogether sever their connexion with clinical and bedside work. Some, indeed, contend that, whilst medical officers of health may in a number of districts be properly prohibited from following general practice, they ought to be encouraged to hold appointments, as, for example, in the capacity of medical officers to institutions, where they would remain in touch with clinical work. But however this may be, we only refer to it here as indicating an additional reason why the medical officer of health should accept certificates without attempting to revise the diagnosis, even where he may think that diagnosis to have been made in error.

(To be continued.)

ARMY MEDICAL SCHOOL, NETLEY.

TERMINATION OF THE SIXTY-NINTH SESSION.

THE sixty-ninth session of the Army Medical School was brought to a close on Thursday, January 31st, when the prizes were presented and an address was delivered by Mr. W. H. Russell, LL.D., in the presence of the staff of the Royal Victoria Hospital and a distinguished company.

Surgeon-Major-General C. H. Giraud, Principal Medical Officer, Netley, opened the proceedings, and referred with regret to the unavoidable absence of the Director-General, Sir William Mackinnon, K.C.B., and of Sir Joseph Fayrer, K.C.S.I. He called on Brigade-Surgeon-Lieutenant-Colonel J. L. Notter, Secretary to the Senate of the School, to read the results of the examination. Professor J. Lane Notter then read out the official lists, of which the following is a summary:—

British Medical Service.

List of Surgeons on Probation of the Medical Staff of the British Army who were successful at both the London and

Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School.—The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—

Jan. 31st, 1895.		Combined marks.	
*Harrison, W. S.	3652	Staddon, H. E.	3533
Howell, H. A. L.	4931	Whitehead, J. H.	3577
†Lawson, D.	4556	Murison, J. A.	3537
Steel, E. B.	4316	Tomlinson, L. P.	3746
Proffit, C. W.	4251	Perry, S. J. C. P.	3514
Kiddle, F.	4183	Heaton, A. F.	3552

* Gained the De Chaumont Prize in Hygiene and the Martin Memorial Medal.

† Gained the Montefiore Second Prize in Surgery.

Indian Medical Service.

List of Surgeons on Probation of the Indian Medical Service who were successful at both the London and Netley examinations.—The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—

Jan. 31st, 1895.		Combined marks.	
*Milne, C. J.	5635	Morgan, E. J.	4438
Stevens, A. F.	4971	Ward, A. E. F.	4394
†Bensley, C. H.	4845	Carr, W.	4313
Watling, F. H.	4768	Hamilton, J. A.	4252
†Evans, S.	4621	McDonald, J. H.	3745
McMillan, J. D.	4534	Wall, F.	3822
Gwyther, A.	4506	Matthew, C. M.	3758

* Gained the Herbert Prize of £20, the Montefiore Medal and prize of 20 guineas, and the Maclean Prize for Clinical and Ward Work.

† Gained the Parkes Memorial Medal.

‡ Gained the Pathology Prize presented by Sir W. Mackinnon, K.C.B.

Dr. Russell afterwards distributed the prizes, and at the conclusion of the interesting ceremony he delivered a very excellent address, full of incidents of the Crimean War. He said he could honestly say that he was not accustomed to addressing public gatherings, and when the request was sent to him to present the prizes on that occasion, he did not see any special fitness in asking him to perform a ceremony which had been discharged by so many eminent men in that hall—except one, perhaps, and that was that it had been his fortune, good or bad he knew not, to see more of the work of medical officers in the field than perhaps any of his predecessors, no matter who they might be. He had had to follow armies in no fewer than nine campaigns, and following an army was about the most painful duty that could fall to any man. The Crown Prince of Germany observed after the great action outside Paris, when he noticed the surgeons attending to the wounded, "God help those poor fellows." He (the speaker) thought the Prince was referring to the wounded, but it transpired that he was speaking of the surgeons, who had commenced their work after the soldiers had done theirs. He was very much struck with the remark. The surgeons had been through a long and laborious march, and on that particular day they had covered a distance of nearly fourteen miles. It frequently happened, except in the case of standing camps, that the surgeons had to commence their work when the soldiers' work was over, and it was beyond all doubt the most trying and painful duty that any man could perform—at least, it used to be so, when, without proper apparatus and assistance, the surgeons were left to manage a large number of wounded people on the field of battle. Notwithstanding what the surgeons were sometimes called upon to do, and the very little consideration paid to them, he had never known an instance in any army in which a medical officer had deserted his post or refused to go on with his work. More than that, until late years he had never known an instance in which any general ever mentioned the name of a medical officer in a despatch. It was unknown in the English army. The Principal Medical Officer forwarded his observations to the General-in-Chief, and the General-in-Chief sent them as an appendix to his report. The only exception which he could remember was the case of an assistant-surgeon at the battle of Inkerman, who rallied a few men when the Guards were broken and the Duke of Cambridge was in danger of being taken, and thus saved the latter's life and the colours of the Guards.

It was well that his name should be known—it was that of Assistant-Surgeon Wilson. His name was mentioned in Lord Raglan's despatch, in which it was stated that the Duke of Cambridge recommended him to notice for his gallant conduct. He hoped now that military appellations had been accorded to the medical officers of the army they would be thought worthy of mention with the combatant officers, whose work they had been trying to improve upon. It was a very desirable thing, and he hoped it would be recognised. He thought that a surgeon who rendered conspicuous service was fully entitled to every rank and honour which they could confer upon him. There were surgeons who had spent their lives for their country's benefit who had gone down without comparatively any reward or recognition, but he believed there was a good time coming. There were those who desired to see a special "order" instituted for medical officers, but he considered this to be unnecessary and undesirable, as all the orders, both military and civil, were open to medical men. The names of the professors of the school were a guarantee of the excellence of the instruction imparted to the surgeons-on-probation. There was a glorious career open to them. He considered there was nothing more ennobling than to fight in the cause of their country the most terrible enemies of mankind. Pope had said that the proper study of mankind was man, and surely the proper study for a medical practitioner was man, and in the Army Medical School they were taught how best to study the different diseases and their remedies. In 1854 he first made the acquaintance of two gentlemen whose names they knew and honoured, and he made their acquaintance not on the field of battle exactly, but certainly on the field of bloodshed, on the plateau before Sebastopol. He meant Sir Thomas Longmore and Sir William Mackinnon. It might be new to them to know that Sir William Mackinnon at one time wielded the claymore. He was seized with military ardour when he was assistant-surgeon, he believed, to the 93rd, and he received an ensigncy. Immediately after the defeat of the Russian cavalry at Balacava by the "Thin Red Line," Sir Colin Campbell approached Sir William Mackinnon and said, "I think you would be more deadly with the lance than the sword." Mackinnon, not finding any chance of more "Thin Red Line" work, went back to the profession of which he was now the chief and honoured ornament. He hoped Sir William Mackinnon would not be angry with him for telling the story. He only regretted he was not present to hear it. He need not say a word about Alexander, Muir, Ross, Tyse, Fraser, and a long roll of medical officers in the Crimea who were crushed under the weight of obloquy for what they could not help. They could not make bricks without straw, and these men were called upon to do what no man could do—to save the lives of those who were perishing from hunger, cold, want of medicine, clothing, and everything necessary to keep men alive; but they struggled on most nobly, and there was not a single instance of any neglect to be recorded on the part of any medical officer in the Crimea. He should not say much to them about their duties. He believed they knew them better than he could tell them, and judging from the work of their predecessors, all he should say was, "Do as well as they did." When Dr. Andrew Smith was ordered to prepare for the Crimean expedition an adequate medical staff and stores, he replied that neither he nor his officers knew what would be necessary for such a campaign, and on referring to the medical memoranda at the War Office, he found nothing but a list of a few officers who served in the Peninsular War. As to any records, with the exception of Sir John McGregor's notes he had nothing to guide him with regard to his arduous duties. Now all was changed. We live in better times, when the Medical Department is responsible for all arrangement. Over 18,000 men died in the Crimea apart from those killed in battle, and of that number 1700 died from wounds and 17,000 from diseases. That showed the work the medical men had to do, and the work they could not do as well. When Sidney Herbert established the Royal Victoria Hospital after the Crimean War, he had to create a military school to give them the first idea how to deal with an army, not only in war, but in peace. He regretted the absence of Sir Joseph Fayrer, whose name was associated with the siege of Lucknow, as he would have been able to say a great deal more than he could. He had received a letter from Sir Thomas Longmore, who regretted that the state of his health would not permit of his presence that day. Sir Thomas Longmore begged to bear his testimony to the substantial service rendered to the Army Medical School by Sir Joseph Fayrer, who had always earnestly endeavoured to promote its welfare.

in every direction. By his ceasing to be a member of the Senate, the school had sustained a serious loss. He had been present at most of the prize distributions, and often came down from London at great inconvenience to himself in order to be in attendance. The extent of his services to the school was beyond valuation and known but to few. Of those present at the inauguration of the school by Sidney Herbert in 1860, he (Sir Thomas Longmore) was the sole survivor. He was deeply impressed with the importance of the school, and should feel ungrateful if he did not make an acknowledgment of the debt that he and all interested in the school owed to Sir Joseph Fayrer. Dr. Russell then proceeded to say he entertained the greatest admiration for the services rendered by army surgeons, and if any of them liked to see an affecting memorial to their predecessors, when they visited Constantinople, let them go across to Scutari, where they would see row after row of monuments erected to the memory of surgeons who fell nobly on the field of battle. He was very thankful to them for the kind way they had listened to him, and he wished them every success in their future careers.

Surgeon-General Maclean also briefly addressed the young officers. He asked them to remember that although they belonged in name to two services, yet he hoped that they would regard themselves as one body; they had been messmates for four months, and he hoped no petty service prejudices or differences would ever come between them. They should be one body in thought, for they served one Royal Mistress. He said the services Dr. Russell rendered to his country in the Crimean campaign would never be forgotten. He wished the young officers a successful, happy, honourable, and useful career.

The Chairman then thanked Dr. Russell for presenting the prize, and the proceedings terminated.

ARGON.

A MEETING of the Royal Society was held in the theatre of the London University on Thursday, Jan. 31st, to discuss a paper on "Argon, a New Constituent of the Atmosphere," by Lord Rayleigh, secretary of the Royal Society, and Professor William Ramsay, F.R.S. Lord Kelvin, D.C.L., LL.D., presided.

Professor RAMSAY, who communicated the paper, speaking with reference to the density of nitrogen, said that it has already been shown that nitrogen extracted from chemical compounds is about $\frac{1}{2}$ per cent. lighter than atmospheric nitrogen. He detailed various experiments that have been made which show that nitrogen prepared from magnesium nitride, obtained by passing "atmospheric" nitrogen over red-hot magnesium, has the density of "chemical" nitrogen, and that also ammonium chloride prepared from magnesium nitride contains practically the same percentage of chlorine as pure ammonium chloride. It may therefore be concluded that red-hot magnesium withdraws from "atmospheric nitrogen" no substance other than nitrogen capable of forming a basic compound with hydrogen. Professor Ramsay next dealt with the reasons for suspecting a hitherto undiscovered constituent in air, remarking that the work of Cavendish on the composition of the air in a great measure anticipated the present discovery when, in a paper published in the Philosophical Transactions of 1788, he expressed doubt as to whether phlogisticated air was the simple body it was thought to be, and went on to say, "If there is any part of the phlogisticated air of our atmosphere which differs from the rest and cannot be reduced to nitrous acid, we may safely conclude that it is not more than $\frac{1}{100}$ part of the whole." This residue, said Professor Ramsay, is not improbable contained the new gas called argon. To prepare argon on a large scale air is freed from oxygen by means of red-hot copper. The residue is then passed over red-hot copper in order to remove all traces of oxygen; the issuing gas is then dried by passage over soda-lime and phosphorous pentoxide. It then enters a combustion-tube packed tightly with magnesium turnings, and heated to redness. Having collected the residue from 100 or 150 litres of atmospheric nitrogen, which may amount to 4 or 5 litres, it is transferred to a small gas-holder connected with an apparatus whereby, by means of a species of a self-acting Sprengel's pump, the gas is caused to circulate through a tube half filled with copper and half with copper oxide; it then traverses a tube half filled with soda-lime and half with phosphorous pentoxide; it then passes a reservoir of

about 300 c.c. capacity, from which, by raising a mercury reservoir, it can be expelled into a small gas-holder. Next it passes through a tube containing magnesium turnings heated to bright redness. The gas is thus freed from any possible contamination with oxygen, hydrogen, or hydrocarbons, and nitrogen is gradually absorbed. As the amount of gas in the tubes and reservoir diminishes in volume it draws fresh supplies from the gas-holder, and, finally, the circulating system is full of argon in a pure state. At present all attempts to induce argon to combine have proved abortive. The presence of argon in the atmosphere, however, is proved on many lines, and the probable nature of the gas, or mixture of gases, remains to be discussed. From Avogadro's law the density of a gas is half its molecular weight, and the density of argon being approximately 20, its molecular weight must be 40. Some interesting remarks with reference to the place of argon in Mendeleef's table concluded Lord Rayleigh and Professor Ramsay's brilliant paper.

Professor CROOKES, F.R.S., then read a paper on the Spectra of Argon, and Professor RAMSAY communicated a paper by Dr. K. Olazewski on the Liquefaction and Solidification of Argon.

Professor ARMSTRONG (President of the Chemical Society) said everyone would gladly join in the chorus of approbation which had been started by Mr. Crookes. On behalf of the chemist he wished to say that he felt especially indebted on this occasion to Lord Rayleigh and Professor Ramsay, not only on account of the extreme importance of the information they had given, but more particularly on account of the example they had set. The case for the existence of the new constituent was undoubtedly a very strong one, but it had not been so logically brought forward as it might have been. However, it was quite clear that there was a very sound body of evidence that made it certain that there was in the atmosphere a constituent that had long been overlooked. The paper would no doubt meet with considerable criticism throughout the world, but there was not the least doubt that their would soon be abundant confirmation of the correctness of the discovery. Apart from the facts brought forward, there was what he might call a widely speculative portion of the subject, and in dealing with the probable nature of this new element the extraordinary properties possessed by this gas had not been sufficiently taken into account. Nitrogen was a very inert form of matter, and its nature derived from its study in the atmosphere is of an altogether wrong character. If anything at all could be judged from the properties which argon is known to possess it is like nitrogen, but more so. It was quite likely that the two atoms existed so firmly connected with each other as to make it impossible for them to interfere or to take notice of anything outside them. There was a good deal to justify a view of this kind. Spectroscopic evidence did not appear to justify the conclusion that argon was a mixture of two gases. Argon had fewer affinities for nitrogen than any other substance, and there was a difficulty in placing it in Mendeleef's table.

Professor RÜCKER (President of the Physical Society) said it was extremely important to distinguish between the various points of doubt and the certain fact that beyond question a new constituent of the atmosphere had been discovered. It seemed to him that one of the most interesting results arrived at from a physical point of view was the fact that the gas was monatomic. It was necessary that the atom of argon should be considered spherical in order that its specific ratio of heat might be obtained. Whatever the difficulty might be of placing it in the periodic table, Mendeleef's law was only empirical, and did not stand on the same footing as the great mechanical generalisations which were the foundation of science.

Professor ROBERTS AUSTEN referred to the possible bearing of argon on the Bessemer steel process.

Lord RAYLEIGH said that the difficulties connected with the present investigation were extremely great. Every experiment took about ten days or a fortnight to complete, and consequently no time was left to determine by experiment many doubtful points it was desirable to clear up. This specially applied to the question of densities, and consequently they were not so satisfactorily elaborated as one could wish. The molecule behaved as a whole as if it were monatomic. Mercury gas was the only other substance which presented a similar property.

Lord KELVIN congratulated the authors of the paper on their brilliant success, and the discussion terminated.

THE CASE OF SHENTON V. SMITH: THE RESULT OF ANOTHER PETITION OF RIGHT.

ON Saturday last the Judicial Committee of the Privy Council gave judgment in the appeal of the Government of Western Australia (in the person of their Colonial Secretary) from a decision of the Supreme Court of that colony upholding a verdict and judgment for £200 obtained by Mr. Henry Lionel Smith, M.R.C.P. Irel., the respondent in the present appeal, for unreasonable dismissal from the public service. In 1887 Mr. Smith received the post of acting medical officer at Albany. In the following year events happened during the transfer of the Albany Colonial Hospital to new buildings which resulted in the death of a patient suffering from enteric fever, the immediate cause of death being, as was alleged, exposure to cold. For this death a coroner's jury of three persons attached blame to Mr. Smith, and the Government dismissed him, an order being passed on July 9th, 1888, informing him that his tenure would cease at the end of the year. Mr. Smith proved that he was not responsible for the mishap, and that the act of the workmen which led to the exposure of the patient to cold was done in his absence and without his authority, and the Government allowed an appeal to the Secretary of State, who upheld the Governor's decision. Thereupon Mr. Smith entered a petition of right, with the Colonial Secretary as defendant. In this trial the jury disagreed, but in a subsequent trial they found for the plaintiff, with £200 damages for wrongful dismissal. On the further consideration of whether the plaintiff had or had not been wrongfully dismissed the court were divided, so that the original verdict remained undisturbed. In an appeal from this before the Judicial Committee of the Privy Council on Feb. 2nd, 1895, the court ordered that judgment be entered for the appellant (the Government of West Australia), but without costs in regard to the litigation in Australia. It would appear, therefore, that colonial civil servants holding acting appointments can be dismissed at any moment by the Government without any reason being assigned, and that the regulations are of no value as protection to them; for Lord Ripon, in his reply to a memorial of a Parliamentary Committee, has said that the regulations do not apply to anyone holding acting commissions, and that the Governor can terminate all such appointments without notice and without assigning any cause. In this case Mr. Smith finds himself lying under the stigma of being a constructive murderer, and is in addition practically ruined; all this misery arising from the ill-considered judgment of a coroner's jury of three men probably entirely ignorant of medicine and incapable of forming a right judgment upon scientific subjects. We await with curiosity and a painful sense of anxiety the steps that it may please Imperial Parliament—regardless of politics—to take to recompense Mr. Smith for wasting eight years of his life, and allowing him to be pursued with all the legal machinery at the disposal of a Government with a view to fixing indelibly upon him the stain of ill-behaviour of which all who know the facts recognise that he was entirely guiltless.

A FRESH OUTBREAK OF SMALL-POX IN TOXTETH PARK, LIVERPOOL.

At the last meeting of the Health Committee Dr. Hope, the medical officer of health, alluding to the charge of neglecting to notify a case of small-pox, stated that owing to the deception practised the young man was going about the city for a fortnight spreading the infection everywhere. This case afforded an illustration of the difficulty they had in tracing such cases and carrying out their duties under the Act. He (Dr. Hope) had the case reported to him by means of an anonymous note. The guardians of the township of Toxteth Park recently requested the Health Committee to inform their board whether there were any conditions which may contribute to the prevalence of small-pox and other diseases in the district now affected by small-pox. In consequence of this request Dr. Hope was asked to

report and sent a most carefully prepared and elaborate report, of which the following are extracts:—

"The health committee have approved at great cost of precautionary measures of a stringent character, as Liverpool is particularly liable to the importation of sickness; and it is by no means infrequent that small-pox is introduced either overland or by sea. Up till comparatively recent years several matters relating to the prevention of disease were dealt with by the Poor-law authorities, but with one notable exception the whole of these matters now fall within the province of the sanitary authorities. The exception in question is vaccination, which constitutes one extremely important factor, perhaps the most important, in the prevention of small-pox. The present outbreak in the Toxteth district, so far as could be ascertained, had its origin in the introduction of the disease by tramps from the Yorkshire district. Infected persons were found by officers of the Health Committee in the more squalid parts of the district and it was apparent that there was an undue proportion of unvaccinated persons in that district. The medical officer of health consequently called the attention of the vaccination officer on Sept. 19th to the gravity of the circumstance and the guardians caused the district to be placarded with vaccination notices and provided some additional assistance temporarily for the visiting officer.

"The guardians have no doubt experienced difficulty in discovering and securing the vaccination of many of the young children of the shifting population of the lower districts, but their efforts have not been rewarded with the same measures which have attended those, for example, of the select vestry of the parish of Liverpool. Thus, according to the last published annual returns of the Local Government Board the number of children born during the two years referred to and not finally accounted for as regards vaccination are about three times and a half as numerous in the Toxteth Park district as they are in the parish of Liverpool. The difficulty encountered in discovering the unvaccinated children is not insuperable, since the district sanitary inspector of the Health Committee, who was instructed to report the unvaccinated he came across, reported over 230 in a few streets, all of whom were duly referred to the vaccination officer. A few of these may have been below the limit at which vaccination is compulsory by law and a few may have been adults, but that, in the face of the grave danger, is no ground for withholding the protection which vaccination affords. Even in some of those cases to which attention was called a somewhat inexplicable delay arose in effecting vaccination, and in two instances the children, after the lapse of thirteen days and seven days respectively after attention had been called to them, were attacked with small-pox and removed to the hospital.

"The class of people who suffer most by small-pox are the lowest and most indifferent of the population. The exhibition of placards upon the street corners is but of small avail in securing the vaccination of people such as these. Many of them probably cannot read. The only effectual course to pursue in order to discover the unvaccinated is the employment of an adequate staff of trained and intelligent people who will be able by persuasive means to secure, not only attention to primary vaccination, but will be able to advise successfully the revaccination at the appropriate age.

"The incidence of small-pox and its confinement to the Toxteth district are remarkable. Out of a total of 236 cases dealt with from Sept. 1st up to Jan. 20th, no less than 192 occurred in the Toxteth district; but the danger was by no means confined to that area, for 11 of the 44 cases which occurred in other parts of the city were proved to be directly infected by intercourse with Toxteth cases, and it is not improbable that they in turn infected others. The outbreak on the *Clarence* was traceable to a similar source."

Dr. Hope proceeds to deal with the question of vaccination, and concludes his report thus: "Relative mortality amongst vaccinated and unvaccinated patients in the Toxteth Park district from Sept. 1st, 1894, to Jan. 20th, 1895: Number of vaccinated patients, 151; died, 8; percentage, 5.3. Number of unvaccinated patients, 41; died, 10; percentage, 24.3."

ROYAL INSTITUTION.—At the general monthly meeting of the Members of the Royal Institution, held on the 4th inst., Sir James Crichton-Browne presiding, the special thanks of the members were returned to Professor Dewar for his donation of the Ramford Prize money to the fund for the promotion of experimental research at low temperatures.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE ordinary quarterly comitia of the College was held on Jan. 31st, Sir J. Russell Reynolds, President, in the chair. At the opening of the proceedings the President reported to the College that Dr. Allchin and he had attended the deputation to the Prime Minister to urge on the Government to take steps towards the appointment of a Statutory Commission, as proposed by the Gresham University Commissioners; and that Dr. Allchin had, at his request, addressed the Prime Minister on behalf of the College.

Drs. T. V. Dickinson, J. Fawcett, L. Humphry, Mr. E. G. Little, Drs. J. P. Parkinson, A. Ransome, Whitley Bland Stokes, S. R. Wells, and L. Wilde were admitted Members of the College.

Licences were granted to 139 candidates who had passed the recent examination, and the diploma in public health (granted conjointly with the Royal College of Surgeons) to thirteen candidates at the examination in that subject.

Communications were received—(1) from the Secretary to the Royal College of Surgeons of England reporting the proceedings of the Council of that body; (2) from Mr. W. H. Baillie, presenting to the College a portrait by Hoppner of Dr. Matthew Baillie, and one of Dr. Edward Jenner by Sir Thomas Lawrence; and (3) from Sir R. Quain, presenting to the College a silver cup for the use of the Fellows' Club.

Thanks were voted to Mr. Baillie and Sir R. Quain for their gifts.

The President presented to the College on behalf of Dr. Theodore Williams a pencil drawing of Dr. Richard Mead by his contemporary, Dr. Stukeley, and in doing so gave some interesting details concerning Drs. Mead and Stukeley.

The thanks of the College were accorded to Dr. C. T. Williams for his gift.

On the motion of the Senior Censor a vote of congratulation to the President on the honours conferred upon him by Her Majesty the Queen was heartily accorded by the Fellows, and acknowledged by Sir Russell Reynolds in appropriate terms.

The following Fellows were, on the nomination of the Council, elected to fill vacancies on the Council—viz., Dr. Hensley, Dr. Gervis, Dr. Ord, and Dr. Cavafy.

It was resolved, on the motion of the President, seconded by Dr. C. T. Williams, that during the annual meeting of the British Medical Association in London in August next a conversazione be given in the College, and that as many members of the Association be invited as space will permit. It was further decided to leave the arrangements in the hands of a committee to be nominated by the President.

The Registrar moved, and the Treasurer seconded, and it was resolved for the first time to make the alterations in By-laws cxlii. and cxlixi. relating to the fees payable by Fellows and Members agreed on by the College at a previous meeting.

The report of the Weber Prize Committee was received, on the motion of Dr. J. E. Pollock, the chairman of that committee. The report enumerated the regulations for the triennial award of a prize of 150 guineas, to be called the Weber-Parkes Prize, "to the writer of the best essay upon some subject connected with the etiology, prevention, pathology, or treatment of Tuberculosis, especially with reference to pulmonary consumption in man," the prize to be accompanied by a bronze medal specially designed, a similar medal being given to the next in order of merit. It further provided for the nomination of an adjudication committee, whose duty it would be to select the subject upon which they will adjudicate. The competition was proposed to be open to the world, and a provision was made for the bestowal of the award for original work produced within the stated period in the event of no essay being sent in of sufficient merit to receive it. The reception of the report having been carried it was further resolved, on the motion of the treasurer, to refer it back to the committee before its final adoption, in order to make some provision for the remuneration of the members of the proposed adjudication committee.

The report of the representative of the College on the General Medical Council (Sir Dyce Duckworth) was read, and a vote of thanks accorded to him for his services.

Reports were also received from the Finance Committee

and from the Committee of Management, and a return of the results of the examinations of the past year from the examiners.

THE MEDICAL DEFENCE UNION, LIMITED.

AN ordinary general meeting of the Medical Defence Union was held at the rooms of the Royal Medical and Chirurgical Society of London on Wednesday last to receive the annual report of the council and the statement of accounts for the past year and to transact other business. The President of the Union, Mr. Victor Horsley, presided.

In moving the adoption of the Report, Mr. Victor Horsley desired to congratulate the Union on having, in spite of various obstacles, passed through the most successful year of its existence. In the first place, as regards membership the increase—namely, 781—is greater by 200 than the increase of any previous year. The Guarantee Fund has during the year increased by nearly £1000, and now amounts to over £5000. During the year every liability has been discharged out of the income and the most rigid economy observed, an economy which the working of the Finance Committee has greatly contributed to. The result is that this year not only have the heavy liabilities of the previous year been cleared off, but a handsome surplus remains. He particularly desired to draw attention to the fact that during 1894, in addition to the charges for the year, a legal account of Messrs. Johnson and Co., presented for work done in 1893 and amounting to over £350, was paid. This does not appear in the balance sheet for 1894 because the liability which was stated in the balance sheet for 1893 had been thus got rid of, the balance sheet of course only stating what liabilities remained on Dec. 31st, 1894. The work of the Union during the past year has been singularly successful. In the first place, as regards the defence of members the existence of the Union of recent years has caused a diminution in the cases of blackmailing, and this year the prompt action of the Union has so crushed the assailants in every case that not in one instance during 1894 was there any necessity for going into court. Much friction has arisen with public bodies in regard to the Infectious Disease (Notification) Act, and actions for damages have been made against members of the profession arising out of their certificates. The Union has won every case of this kind. As regards the prosecution of unqualified persons, for the first time a bonesetter has, in an action by the Union, been successfully prosecuted, and in all the other prosecutions of quacks by the Union penalties have been inflicted and costs recovered. The development of the Union has been so rapid and the increase in its work so great that it has been found necessary to revise the articles of association, and a committee is now sitting and has already agreed upon certain fundamental principles of revision. A plan, which it is hoped will receive both the support of the Union and the British Medical Association, has been suggested whereby the Defence Union should be in a measure affiliated to the Association, and, without losing its present successful independent power of working for the defence of its members, it should also operate as a department of the Association. For this purpose it is proposed that the Association should grant a subsidy to the Medical Defence Union of a considerable sum—say of £1000 or £1500 a year—under the condition that it is to be expended in the prosecution of quacks. Further, that to properly provide for the administration of the same a certain number of members (say six) of the Council of the Association should be placed on the council of the Union, and that the latter should be known as the British Medical Defence Union. This plan seemed to him to be extremely practical, because, although the Medical Defence Union has all the experience and machinery for the prosecution of unqualified persons and although it has ample funds for the defence of its individual members, it naturally has not means sufficient to deal with the evil of quackery as completely as could be wished.

Dr. Bridgwater, in seconding the motion, congratulated the members of the Union on the admirable report which had been presented. He was glad to see that the name of the Union was becoming a power in the country, and it was gratifying to know that they might now consider themselves as a "good going concern." A good deal of their financial success was due to the honest method of "paying

your debts as they are contracted," and he thought that members who had not paid up their subscriptions might take the hint from this that their funds were needed.

The report was carried.

The following retiring members of the council—Dr. Danford Thomas (London), Mr. Hall-Wright (Birmingham), and Mr. Horder (Cardiff)—were re-elected.

In reply to a member, Mr. Horsley said that he quite agreed that there should be one paid secretary only, who should attend solely to the business of the Union. The matter was under consideration.

The usual courtesies to the chairman were tendered by Dr. Jones, who was cordially supported by the meeting.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6366 births and 4000 deaths were registered during the week ending Feb. 2nd. The annual rate of mortality in these towns, which had been 21·7 and 18·7 per 1000 in the preceding two weeks, rose again last week to 19·7. In London the rate was 19·0 per 1000, while it averaged 20·2 in the thirty-two provincial towns. The lowest rates in these towns were 11·8 in Croydon, 14·6 in Portsmouth, 16·0 in Birmingham, 16·3 in West Ham, and 16·8 in Huddersfield; the highest rates were 23·5 in Manchester, 24·4 in Brighton, 25·3 in Salford, 26·8 in Preston, and 27·9 in Liverpool. The 4000 deaths included 299 which were referred to the principal zymotic diseases, against 338 and 328 in the preceding two weeks; of these, 76 resulted from whooping-cough, 70 from diphtheria, 48 from measles, 45 from diarrhoea, 33 from "fever" (principally enteric), 25 from scarlet fever, and 2 from small-pox. No fatal case of any of these diseases occurred last week in Leicester or in Halifax; in the other towns they caused the lowest death-rates in Cardiff, Bristol, and Bradford, and the highest rates in Brighton, Preston, Wolverhampton, Bolton, and Salford. The greatest mortality from measles occurred in Bolton, Preston, and Gateshead; from scarlet fever in Salford; and from whooping-cough in Brighton, Plymouth, Salford, Huddersfield, and Swansea. The 70 deaths from diphtheria included 45 in London, 3 in Birmingham, 3 in Manchester, and 3 in Blackburn. Two fatal cases of small-pox were registered in London, but not one in any other of the thirty-three towns. There were 51 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highbury Small-pox Hospital on Saturday last, the 2nd inst., against numbers increasing from 15 to 35 at the end of the preceding six weeks; 21 new cases were admitted during the week, against 8, 6, and 8 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1653, against 1713, 1653, and 1652 on the three preceding Saturdays; 160 new cases were admitted during the week, against 130, 154, and 186 in the preceding three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 399 and 324 in the preceding two weeks, rose again to 377 last week, but were 126 below the corrected average. The causes of 77, or 1·9 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leeds, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 28·3 and 24·2 per 1000 in the preceding two weeks, further declined to 23·9 during the week ending Feb. 2nd, but was 4·2 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·5 in Leith and 15·3 in Paisley to 25·7 in Perth and 26·5 in Glasgow. The 690 deaths in these towns included 37 which were referred to measles, 25 to whooping-cough, 12 to scarlet fever, 6 to diarrhoea, 6 to "fever," 3 to diphtheria, and not one to small-

pox. In all, 89 deaths resulted from these principal zymotic diseases, against 100 and 92 in the preceding two weeks. These 89 deaths were equal to an annual rate of 3·1 per 1000, which was 1·6 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had declined from 58 to 42 in the preceding three weeks, further fell to 37 last week, of which 15 occurred in Glasgow, 10 in Edinburgh, and 9 in Aberdeen. The 25 deaths from whooping-cough exceeded by 7 the number in the preceding week, and included 21 in Glasgow. The fatal cases of scarlet fever, which had increased from 6 to 9 in the preceding three weeks, further rose to 12 last week, of which 7 occurred in Glasgow, 2 in Edinburgh, and 2 in Paisley. The deaths referred to different forms of "fever," which had been 5 in each of the preceding two weeks, were 6 last week, and included 3 in Glasgow. The 3 fatal cases of diphtheria showed a further decline from the numbers recorded in recent weeks, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 235 and 186 in the preceding two weeks, further declined to 168 last week, but exceeded by 40 the number in the corresponding period of last year. The causes of 54, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 40·9 and 31·0 per 1000 in the preceding two weeks, rose again to 31·9 during the week ending Feb. 2nd. During the past five weeks of the current quarter the death-rate in the city has averaged 32·6 per 1000, against 18·7 in London and 23·7 in Edinburgh. The 214 deaths registered in Dublin during the week under notice showed an increase of 6 upon the number in the preceding week, and included 16 which were referred to the principal zymotic diseases, against 23 and 20 in the preceding two weeks; of these, 5 resulted from small-pox, 4 from "fever" (principally enteric), 3 from whooping-cough, 3 from diarrhoea, 1 from scarlet fever, and not one either from measles or diphtheria. These 16 deaths were equal to an annual rate of 2·4 per 1000, the zymotic death-rate during the same period being 1·4 in London and 2·5 in Edinburgh. The fatal cases of small-pox, which had been 11, 10, and 7 in the preceding three weeks, further declined to 5 last week. The deaths referred to different forms of "fever," which had increased from 2 to 5 in the preceding four weeks, were 4 last week. The mortality from whooping-cough showed a slight increase upon that recorded in the preceding week, while that from scarlet fever showed a decline. The 214 deaths in Dublin last week included 31 of infants under one year of age and 59 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons showed a further decline from recent weekly numbers. Five inquest cases and 7 deaths from violence were registered; and 84, or more than a third, of the deaths occurred in public institutions. The causes of 15, or 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAINS Baylor and Riordan have embarked in the *Jumna* for duty in Malta, and the following officers have embarked in the *Britannia* for a tour of service in India:—Surgeon-Lieutenant-Colonel Saunders, Surgeon-Captain Kelly, and Surgeon-Lieutenants Bray, Hinge, and Erskine. Surgeon-Major Clements has embarked for service in Sierra Leone. The following Surgeons on probation, who have just passed out of Netley, have proceeded to Aldershot to undergo a course of instruction at the depot, Medical Staff Corps: W. S. Harrison, H. Howell, D. Lawson, E. Steel, C. Profeit, F. Kiddle, H. Staddon, J. Whitehead, J. Morison, L. Tomlinson, S. J. Perry, and A. Heaton.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Barnard William Wellings retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenants E. W. Slayter and T. P. Jones have

on arrival from England been posted to general duty, Poona district. Surgeon-Captain J. L. T. Jones and Herbert Herbert have respectively delivered over and received charge of the Kaira Prison. Surgeon-Major R. W. S. Lyons, M.D., has delivered over the charge of the Ratnagiri Prison. Brigade-Surgeon-Lieutenant-Colonel J. C. G. Carmichael, M.D., I.M.S., Officiating Principal Medical Officer, Presidency district, and Surgeon-Major A. V. Lane, A.M.S., Aden, have been granted leave to England. Surgeon-Lieutenant J. A. Howell, I.M.S., Civil Surgeon, Karwar, retires from the service.

NAVAL MEDICAL SERVICE.

Staff-Surgeon Otway Peter Browne, B.A., M.B., has been placed on the Retired List of his rank.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion, the Northumberland Fusiliers: Surgeon-Major A. Wilson to be Surgeon-Lieutenant-Colonel. 2nd Volunteer Battalion, the Princess of Wales's Own (Yorkshire Regiment): Surgeon-Major W. T. Colby, M.D., to be Surgeon-Lieutenant-Colonel. 4th (Donside Highland) Volunteer Battalion, the Gordon Highlanders: Samuel George Davidson, M.B., to be Surgeon-Lieutenant.

THE WAR BETWEEN CHINA AND JAPAN.

Colonel Maurice, in an article on this subject (to which we briefly alluded last week) in the last number of the *United Service Magazine*, warns us that with some half a million of men round Peking whose habits are filthy and who are without discipline or organisation, or any regard for ordinary sanitary precautions, pestilence in some form or other is likely to follow on the accession of warm weather, when the melting of the snow, befouled by vast numbers of men and animals, takes place, and he asks how soon afterwards actual sickness may be expected to appear. It is, of course, quite probable that some outbreak of epidemic disease may occur under the circumstances and conditions he depicts, but its exact nature must be a matter of conjecture in the meantime. The conditions described may be said to represent a manufactory for disease of some sort, or rather they present a fitting soil for the rapid growth and development of any disease-cause that may be present or introduced. With a recent history of plague in China and Hong-Kong the liability to epidemic cholera, or to outbreaks of typhoid fever or other diseases, it is not easy to say what, may arise; and we cannot determine the interval that will ensue before a disease becomes widespread and epidemic unless we know the particular form of sickness with which we have to deal. But assuming that it is one capable of being spread by water, from about ten to thirty days would elapse in the case of typhoid fever, for example, whereas the interval would probably be much less than the first-named period in the case of cholera. As regards typhoid fever, there is a very instructive epidemic on record in connexion with Plymouth, Pennsylvania, a town of 8000 inhabitants. The dejects of a typhoid fever patient were, during part of the first three months of the year 1885, thrown out on the snow, under which the ground of a hill sloping towards the water-supply of the town was deeply frozen. On March 25th a sudden and great thaw occurred, and the water did not sink into the ground, but immediately ran off into the natural surface channels. On April 10th the epidemic began, which affected 1200 persons and caused 130 deaths. This may be said to approximately represent the conditions described by Colonel Maurice. The medical history of our last war in South Africa will also furnish some interesting data of a somewhat similar character *apropos* of wholesale water contamination.

THE NEW TROOP SERVICE SYSTEM.

Army medical officers who have made voyages to India in Her Majesty's troopers will be interested in knowing what is thought of the steamers employed under the present system. According to an apparently well-informed correspondent writing to a service contemporary the new system of transport seems to have advantages and disadvantages as compared with that of the old service of Her Majesty's Indian troopship which it has replaced. The passage to India is several days quicker, and the accommodation for officers and ladies, warrant officers, and married non-commissioned officers is much better in the present vessels, but the men are no better off, indeed, rather worse off, than they were, mainly owing, it is alleged, to the insufficient space afforded on the upper deck

and on the troop decks. This renders the proper inspection of the troops and the maintenance of ventilation and cleanliness difficult.

THE LATE PLAGUE AT HONG-KONG AND THE SHROPSHIRE REGIMENT.

Although the Shropshire Light Infantry received great credit locally for the work they performed in Hong-Kong nine months ago, in connexion with the outbreak of plague at that station, we doubt whether their conduct on that occasion obtained all the credit it deserved elsewhere. The visitation was a severe one, and gave rise to a great panic and exodus among the native population, the name of the disease alone being sufficient to create great alarm. The officers and men of the regiment came forward in a very brave and unselfish manner, and constituted themselves into a sanitary service which did a lot of practical work of an essential kind with highly successful results. Members of the medical profession are best qualified perhaps to gauge the merit of labours of this sort.

THE COMPETITIVE EXAMINATION FOR THE ARMY MEDICAL STAFF.

We would call attention to the fact that the next examination of candidates for twelve commissions in Her Majesty's Army Medical Staff is to be held at the Examination Hall, Victoria Embankment, on the 15th inst. and following days.

THE NEW DRAINAGE WORKS AT ALDERSHOT.

The *Army and Navy Gazette* states that the War Office, after consultation with the local civil authorities, has obtained the sanction of the Treasury for a vote of £60,000 for the purpose of expediting the new drainage works at Aldershot. Let us hope that we may now hear of a new site being chosen for, and an altogether better sewage farm being provided for the camp than that now in use, which is universally recognised as unfit and unsuitable for the purpose. There have recently been some cases of typhoid fever among the officers stationed at Aldershot, the origin of which was variously attributed to defective barrack drainage or the nuisance caused by the sewage farm, but it is rumoured that some samples of drinking water have not afforded satisfactory results on analysis and examination. The health of the troops generally is, however, as far as we can at present learn, good.

An order that deserves a word of commendation has been issued by the General Officer commanding at Lucknow. Some of the British soldiers having dressed in khaki during the early morning, the attention of the officers in charge has been drawn to the necessity of soldiers being properly clothed. Khaki is only to be allowed between 9 A.M. and 5 P.M. unless otherwise ordered.

The appointment of Principal Medical Officer of all India, which post is about to be vacated by Surgeon-Major-General Bradshaw, will be conferred upon Surgeon-Colonel Gore, now serving in Bombay.

H.M.S. *Malabar* is expected to arrive at Portsmouth about Feb. 9th with nine patients for Netley.

We hear that a sum of £25,000 is to be expended on repairs at the Royal Victoria Hospital, Netley.

LITERARY INTELLIGENCE.—"The Royal Natural History," which we have perused from the beginning of its issue with the greatest interest and respect for the enterprise of those in charge of the production, having completed the series of its numbers devoted to the world's "Mammals," begins in this month's issue an interesting and well-illustrated account of the "Birds," past and present. Among the contributors are the editor—Mr. Lydekker, F.R.S.—Dr. Bowdler Sharpe, Mr. Macpherson and Mr. Ogilvie Grant, and among the illustrators are Keulemans, Smit, Lodge, Specht, and Gambier Bolton. Messrs. Frederick Warne and Co., the publishers, announce that the nine parts, which comprise the above, will contain over 400 illustrations.—A new *Elementary Text-book of Anatomy*, by Mr. Henry E. Clark, editor of Wilson's "Student's Vade-Mecum," will very shortly be published by Messrs. Blackie and Son, Limited, Glasgow.—Messrs. Selwin Tait and Sons of New York have issued an edition of Dr. Norman Kerr's "Inebriety" for the United States.

Correspondence.

"Audi alteram partem."

DEFECTS OF VISION IN THE MERCANTILE MARINE AND RAILWAY SERVICES.

To the Editors of THE LANCET.

SIRS,—In this seafaring community the published statements have made a profound impression that such shocking accidents as that of the *Elbe*, with its appalling loss of life, can be traceable to the defective eyesight of mercantile marine officers and sailors on shipboard as the probable cause of many such disasters, and "quite possibly," in the opinion of to-day's *Times*, "the actual cause in the case of the *Elbe*." So the public has good ground for asking the pertinent question, Why has not the Board of Trade kept pace with science, and revised their medical regulations? Why is the eyesight of the shipmaster tested for the last time upon obtaining the certificate of that rank instead of continuous re-examinations at intervals rendered necessary by age deterioration, bearing in mind that his previous examinations were incomplete on points of vital, practical importance in the commander of a passenger ship? For the correct reply to these questions we must go to the root of the evil. It is an open secret that the Marine Department of the Board of Trade has no medical adviser, no professional head analogous to the Director-General of the Medical Departments of the Army and of the Royal Navy. The medical surveyors, who are also the medical inspectors of emigration at our ports, and the unorganised crowd of ship surgeons, all should be in touch with the Board of Trade through such a head of a health department of the most important mercantile marine in the world. Until this appointment is made there will be no security that the forthcoming revised regulations *re* vision tests will not share the fate of other sanitary requirements of the Board of Trade, and be either evaded or carried out perfunctorily, as illustrated in my paper upon the Medical Department of the Mercantile Marine, published in the recent volume of the Transactions of the Sanitary Institute (Congress at Liverpool, 1894).

I am, Sirs, yours faithfully,

C. H. LEET, F.R.C.S.

Norma-road, Waterloo, Liverpool, Feb. 2nd, 1895.

To the Editors of THE LANCET.

SIRS,—On reading the account of the deputation of medical men who waited upon Mr. Bryce at the offices of the Board of Trade yesterday afternoon in connexion with the eyesight of seamen and railway servants I notice that the latter gentleman is reported to have said that "the department had always shown due vigilance in the matter of the eyesight of seamen." In order to show that this vigilance is, to say the least, not sufficient, I shall mention the case of a man who called upon me professionally, but not on account of his eyes, on Dec. 18th, 1891. Observing that he had marked external strabismus of the left eye, I proceeded to examine the state of his vision, which was as follows:—R.V., $\frac{1}{4}$ (one letter wrong); no improvement by lenses. L.V., $\frac{1}{8}$; no improvement by lenses. The right cornea had a fair-sized nebula. The left cornea was obscured by numerous opacities. In other words, this man had less than one half the normal vision in his right eye, and only $\frac{1}{8}$ th part in his left, with the probability of still further deterioration. This man was an able seaman, employed up to the time of my accidental examination on board a steamship conveying passengers to keep watch on deck, by night or by day, during its frequent journeys between ports on the North Sea. I considered it my duty to inform the officials of the company to which the ship belonged that my patient was unfit for such "look-out" work, and I had a letter of thanks telling me that more suitable employment had been provided for him.

Doubtless this company has taken precautions against a similar case occurring in future; but the Board of Trade and all shipping and railway companies should know that a medical man is the only suitable person for examining eyesight. He is the only person who could diagnose and treat cases of tobacco blindness, which to a certainty occur frequently in the mercantile marine. This and other diseases may seriously affect the vision at any time, and on this account an initial examination is quite insufficient. Periodical

examinations should be made in the case of all responsible persons. In replying to the deputation, Mr. Bryce said it was a remarkable fact that few accidents had been traced to defective eyesight, either at land or sea. It is a remarkable fact, but one which gives additional significance to the belief that many accidents, both explained and unexplained, may have been due to defective eyesight. I am not aware of a single case where serious catastrophe has occurred in which the question of the eyesight of those charged with the "look-out" was either inquired into or an inquiry even suggested. Until the eyesight of all responsible persons is systematically and periodically examined by medical men it is entirely misleading to say that few accidents are caused by defective eyesight because few have been traced to that cause.

I am, Sirs, yours faithfully,

A. RUDOLF GALLOWAY, M.B., C.M., M.A.

Union-street, Aberdeen, Feb. 2nd, 1895.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—Sir George Johnson still persists. He must not therefore complain if I subject his letter, which appeared in THE LANCET of Jan. 26th, to the sharp criticism to which it is open.

Sir George Johnson remarks: "No physician, probably, has larger experience of the fermentation test than Sir William Roberts, who says, 'According to my experience urine containing 0.5 per cent., or two and a half grains to the ounce and under, yields no sign to the fermentation test.'" What are we to understand from this quotation, made use of without any qualification? It is quite meaningless if not intended to be associated with the implication that upon Sir William Roberts' authority the fermentation test will not reveal the presence of sugar in urine when existing below 0.5 per cent. As normal urine is only affirmed to contain much less than this, *ergo*, upon Sir William Roberts' dictum, put as Sir George Johnson has put it, normal urine cannot be shown by the fermentation test to contain sugar. Sir George Johnson omits to mention that what Sir William Roberts says refers distinctly to the application of the fermentation test in a direct manner to diabetic urine, whilst, as everyone knows, when used in connexion with normal urine it is applied to the extracted sugar. Sir George Johnson has here placed himself in this dilemma: either his perceptive power has been insufficient to enable him to properly grasp the situation, or, in his endeavour to score a point in argument, he has considered himself at liberty to neglect to give consideration to the misleading effects of putting an incomplete representation before your readers.

Next follows: "Dr. Pavy states that he got a negative result with this test [fermentation] applied to normal urine until he was led to neutralise the acid urine [in reality, I say nothing about the acid urine; I distinctly speak of the acid product from the urine] by carbonate of soda; he then found fermentation proceeded actively. Now, one effect of adding carbonate of soda to acid urine would be to set free carbonic acid, and it would be interesting to know whether Dr. Pavy was careful to ascertain that the carbonic acid which was given off from the urine at a 'suitable temperature' was not that which had been previously combined with the sodium." I take it Sir George Johnson cannot mean what he writes as intended to be read in earnest. He must be indulging in some kind of jest which does not show itself upon the surface. The suggestion borders too much upon the absurd to conceive that it should be otherwise. If, however, anything should be possibly considered to be further wanted, I may state that if Sir George Johnson had turned to the reference given in my book from which he has quoted, he would have found that in the application of the test not only was the evolution of carbonic acid by unmistakable fermentation observed, but also the chemical recognition of the production of alcohol.

Then, as to the phenyl-hydrazine test, Sir George Johnson says: "Dr. Pavy assumes that the formation of osazone crystals affords conclusive evidence of sugar being present; but Dr. Noel Paton, in the paper above quoted [a paper contained in the December number of the *Edinburgh Medical*]

Journal on the Physiology of the Carbo-hydrates, which, I may announce by the way, will be shortly criticised by me], says: "The carbohydrates are not the only bodies which yield crystalline compounds with phenyl-hydrazine. A glance at Beilstein's 'Organic Chemistry' shows that a vast number of substances give such crystalline compounds." There is nothing new in being told that there are other substances besides sugars that yield crystalline osazones with phenyl-hydrazine. The bodies that do so, however, are restricted to those which, by virtue of their molecular constitution, belong to the aldehydic and ketonic groups. It is not the mere fact of the formation of a crystalline osazone that is relied upon, but the distinctive characters presented as regards form, melting point, and solubility.

Sir George Johnson seems to consider it no offence to literary proflity to quote from an author as far as he finds it convenient and to stop short when he comes to that which does not suit his purpose. In this particular instance, the very thing which he is striving to deny is given as a proven point, brought to bear in connexion with another matter, by his author in the succeeding words to those abstracted for use! Running on from the quotation given above by Sir George Johnson Dr. Paton says: "It is only when an elementary analysis of the compound [osazone] is made that it can be definitely concluded that a carbohydrate is a constituent part. Such analyses are given by Baisch in his researches on the carbohydrates of the urine, and by Bial in his observations on the sugar produced by the ferment of the blood, and the conclusions of these authors are thus placed beyond doubt." (The italics are mine.)

Passing to Von Baisch's own writing, the effect of what he says¹ is that the existence of sugar in normal urine is susceptible of demonstration by the polarimeter, evidenced by crystalline from melting-point and composition, by Fehling's solution, by the production of glucosazone with phenyl-hydrazine, and by fermentation with yeast with the formation of alcohol.—I am, Sirs, yours faithfully,

Grosvenor-street, Jan. 30th, 1895.

F. W. PAVY.

* * Dr. Pavy's letter was received last week, but did not reach us till too late for insertion.—ED. L.

To the Editors of THE LANCET.

SIRS,—If Mr. Allen had carefully read the paper which he has done me the honour to criticise he surely would not have made the numerous inaccurate statements to which he has committed himself. With your permission I will briefly reply to some of his assertions which call for special notice. In the early part of his letter he incorrectly states that I do not claim for the picric acid reaction that it is "absolutely reliable" as applied to urine containing less than 2 grains of sugar per ounce. Yet in a subsequent paragraph he truly states that I place the limit of delicacy at 0.01 per cent., this being one-fifth the amount which Dr. Pavy in his book and Mr. Allen in a previous communication to THE LANCET² declare to be present in normal urine. How does Mr. Allen reconcile these conflicting statements?

Again, Mr. Allen politely suggests from the concluding paragraph of my paper that I am ignorant of the fact that an ounce of water weighs 437.5 grains, not 480 grains. The following is the paragraph referred to: "The percentage weight of sugar to the volume of urine may be ascertained by dividing the number of grains per fluid ounce by 4.8." My critic would doubtless resent the suggestion that he is ignorant of the fact that a fluid ounce contains 480 minims, and therefore that in urine containing 4.8 grains per fluid ounce the proportion of weight to volume is 1 per cent. There is here no question as to the weight of distilled water. In our English system there is not the direct relation between the volume and weight of water as in the foreign metrical system. Thus, 1 c.c. of water weighs 1 gramme, while 1 minim weighs 0.911 grain. It is, therefore, simpler, if not more correct, to speak of the percentage of grains to the volume of the liquid analysed rather than to the weight of water. Mr. Allen erroneously attributes to me the view that any amount of sugar less than 2 grains to the ounce may be safely neglected, and this notwithstanding my repeated assertion that as normal urine contains neither sugar nor albumen the smallest trace of either is pathological, and therefore may not be "safely neglected."

Mr. Allen's statement that it is impossible to distinguish slight differences of tint in liquids, that the colour resulting from the picric acid reaction is "blood-red," "brown-red," and even "deep coffee brown," indicates either that he has had scarcely any experience of the test or that he has the misfortune to be colour-blind. The dark-red colour which results from testing a liquid which contains more than 1 grain of sugar per ounce is by dilution brought to the ferric acetate standard colour, which is neither blood-red nor brown-red. It is practically easier to ascertain the identical shade of two bright red liquids placed side by side than to determine the exact point at which the blue colour finally disappears from Dr. Pavy's valuable ammonio-cupric solution. Mr. Allen's *a priori* assumption that there is no strict relation between the degree of picramic acid colour and the amount of sugar in solution is disproved by numerous conclusive observations and experiments. When a known weight of glucose, varying from a small fraction of a grain to 40 grains per ounce or more, is dissolved in water the amount is indicated with the greatest facility and certainty by the colour test. When the amount of sugar is less than half a grain to the ounce the quantitative determination is made by diluting the standard solution in an accurately graduated tube until the colour of the weak saccharine solution is equalled.

Mr. Allen says that I must have been exceptionally fortunate in obtaining picric acid which does not give a red colour "when boiled with caustic alkali." If by caustic alkali Mr. Allen means solid caustic potash or a strong solution of the same, he surely must know that by this violent agent a solution of the purest picric acid is decomposed and reddened; but the liquid used for sugar testing is the weak liquor potassæ (P.B.), and using this solution I have, during many years' experience of picric acid, met with only one specimen which gave a red colour when boiled with potash, and that was a manifestly impure specimen.

This impure specimen not only gave a red colour with liquor potassæ but the boiled liquid was turbid. When a saturated aqueous solution of pure picric acid is boiled with half its volume of liquor potassæ (P.B.) the result is a pale yellow transparent liquid, without the slightest tinge of red, which on cooling deposits the pale yellow picrate of potash. Whether, as Mr. Allen suggests, "caustic potash is apt to contain traces of cyanides which react with picric acid exactly like sugar" I do not know; but this I do know, that no specimen of liquor potassæ that I have met with has produced this reaction with pure picric acid. My friendly critic may rest assured that I am careful to ascertain the purity of both the picric acid and the potash which I employ as test agents.

Mr. Allen, acting as *advocatus Diaboli*, having cleared the way by exposing the imaginary vices of picric acid, goes on to proclaim the supposed virtues of M. Crismer's "safranine" test. As this is admitted not to be a quantitative test its advantages are not so obvious as its advocate declares them to be.—I am, Sirs, yours faithfully,

Savile-row, W., Feb. 4th, 1895.

GEORGE JOHNSON.

To the Editors of THE LANCET.

SIRS,—The fact that Dr. Pavy has obtained from normal urine a substance which undergoes the alcoholic fermentation with yeast is the strongest argument he has adduced that the substance in question is sugar. I find, however, on referring to p. 181 of his book, that the material he operated with was "strongly acid" and did not ferment with yeast till rendered alkaline with sodium carbonate. Sir George Johnson, in his letter published in THE LANCET of Jan. 26th, points out that here is a serious source of error, for the carbonic acid obtained might possibly originate by the interaction of acid and sodium carbonate. Acting on this suggestion, I have performed a few experiments which may not be uninteresting to those who have followed with attention the discussion between Sir George Johnson and Dr. Pavy. I took some yeast and found by control experiments that it caused the usual fermentation with a solution of dextrose. Next I found that the same yeast caused fermentation in some normal urine to which 1 per cent. of dextrose had been added; the acidity of the urine did not, therefore, inhibit the activity of the yeast. With normal acid urine, without any addition of sugar, it caused no fermentation, and with the same urine rendered faintly alkaline by ammonia the result was also negative. But in a third specimen, in which neutralisation had been effected by sodium carbonate, there

¹ Zeitschrift für Physiologische Chemie, Band xviii., p. 193.

² THE LANCET, July 28th, 1894.

was an abundant evolution of carbonic acid gas. To a fourth specimen sodium carbonate was added, but no yeast; no gas was formed, showing that the salts to which urine owes its acidity do not of themselves decompose sodium carbonate. All these tubes were inverted over mercury and kept at a suitable temperature for the action of the ferment. One other tube was added to the list; this contained a dilute solution of sodium carbonate and yeast, no urine being added. Here also there was a formation of the gas. These experiments show that in testing for sugar by the fermentation test the use of sodium carbonate is inadmissible; and if it is found necessary to correct the acidity of a suspected sugar some other alkaline substance must be employed. The ammonia used in the experiment just recorded was not sufficiently strong to kill the yeast, as control experiments showed it to be still active after being exposed twenty-four hours in the faintly ammoniacal urine.

I am not prepared to explain how it is that carbonic acid gas forms on adding yeast to sodium carbonate. Two explanations suggest themselves: one is that the yeast has the power of decomposing that salt; the other is that the yeast itself contained some sugar which was decomposed by the cells in a medium containing sodium carbonate. For the present I am rather inclined to adopt the former hypothesis; for in the specimen of weakly ammoniacal urine there was no formation of gas, and, moreover, I have not succeeded in discovering alcohol in the tubes containing sodium carbonate with or without urine after being exposed to the action of the yeast. I may add that the yeast I used was slightly acid—this might be a possible explanation for its action.

With regard to the general question whether or not normal urine contains sugar I think that a careful study of the researches of Seegen and of Baesch, in which more stringent chemical methods were used than those employed by Dr. Pavy, will convince the impartial observer that a small quantity of glucose is obtainable. Whether this is artificially produced by the method of analysis, as suggested by Sir George Johnson, is a subject that demands renewed research. Dr. Pavy gives the percentage of sugar in normal urine about five times greater than has been found by these observers, and I think his high figure is most easily explicable by Sir George Johnson's hypothesis—namely, a neglect to take into consideration the reducing action of kreatinine.

I am, Sirs, faithfully yours,

King's College, London,
Feb. 5th, 1895.

W. D. HALLIBURTON.

"THE DEBATE ON THE NATURE AND TREATMENT OF PERITONITIS AT THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—I agree with Dr. Herman that it is a waste of time to discuss whether micro-organisms cause peritonitis—that is, so long as Dr. Herman assumes that they cause all peritonitis. That they do cause some peritonitis I have proclaimed on the hustings. But the jump from some to all is what I will not make. I claim much more for the purgative treatment than the simple relief of distension. I claim that it prevents death after abdominal section of all kinds, and I think it an absolute waste of time to discuss the words we are to use in defining the stages of the fatal process thus prevented. I am satisfied with the facts and most willingly leave the conundra to those who like them.

I am, Sirs, yours obediently,

Birmingham, Feb. 1st, 1895.

LAWSON TAIT.

To the Editors of THE LANCET.

SIRS,—In his letter to you, dated Jan. 26th, Mr. Lawson Tait says, referring to myself: "I agree to admit his conclusion that the cases that die are peritonitis, because we make post-mortems of them and find it so." I have no desire to comment upon Mr. Tait's grammar, but if I understand his meaning I think it necessary to say that I have come to no such conclusion. I have pointed out that there are certain cases of abdominal section which exhibit signs of peritonitis after death, but in which if the abdomen is reopened some days after the operation, when the symptoms which Mr. Tait used to attribute to peritonitis are well advanced, but of course before the patient is moribund, no sign of peritonitis is found. Peritonitis, I hold, is therefore a secondary result in these

cases, and is not the cause of the conditions which lead to the death of the patients. I have asked Mr. Tait, and I ask him again, to explain two contradictory statements made by him: The first, in 1886: "On the slightest indication of peritonitis after an ovariectomy we give a rapidly active purgative, it matters not what; the patient's bowels are moved, and the peritonitis disappears."¹ The second, in 1892: "I have never said that the purgative treatment will cure peritonitis."² Mr. Tait has repeatedly asserted that he has been misrepresented in this matter. I cannot answer for others, but I am not aware that I have ever misrepresented him. He now wishes me to leave him alone. I am willing to do so, but towards this end I would suggest that it would be well for Mr. Tait either to leave this subject alone or to explain what appears to be an inconsistency on his part, and that if he desires to make any further complaint of being misrepresented he should be good enough to state who has misrepresented him, and where the misrepresentation is to be found.

I am, Sirs, your obedient servant,

Portman-street, Feb. 5th, 1895.

JOHN D. MALCOLM.

To the Editors of THE LANCET.

SIRS,—As a general practitioner with a large midwifery practice I for one am grateful to Mr. Lawson Tait for having some time ago published the results of his treatment of peritonitis by purgatives. I am not going to quibble as to the correct terms to be used, but I will say that cases occurred in my practice the symptoms of which were identical with those I am able to recognise in so-called cases of peritonitis, and by the treatment of the old-fashioned plan of rest and opium five out of every six died, but since I have adopted the purgative treatment (mist. alb.) in similar cases I have not had one death. To be able to save the patient's life is to me of far more importance than discussing whether we cure or prevent peritonitis. I am, Sirs, yours obediently,

RICHARD EMMETT.

Woodville, Kingston-road, Portsmouth, Feb. 4th, 1895.

"THE LONDON MEDICAL STUDENTS AND THE UNIVERSITY OF LONDON: A GRIEVANCE."

To the Editors of THE LANCET.

SIRS,—I am a London "Conjoint" man, and I have often felt the disadvantage under which we labour, many times having been told that I was not so highly qualified as Dr. So-and-so, who happened to be the fortunate possessor of a Scotch or provincial M.D. No amount of explanation will disabuse the minds of the laity on this point. My case is that of many. I am emboldened by Dr. Sisley's letter to suggest a remedy. Let Durham be persuaded to grant her M.D. degree (without residence) to practitioners of seven years' standing and not less than thirty years of age, instead of, as at present, to men not less than forty and of fifteen years' standing. After fifteen years in practice few men have either the time, opportunity, or inclination to devote themselves to reading for an examination, but during the first six years or so the case is just the opposite. Were this suggestion acted on much of the disadvantage under which we labour would be done away with.

I am, Sirs, yours faithfully,

Oriel House, Leigh, Essex, Feb. 4th, 1895. STANLEY KIRTON.

To the Editors of THE LANCET.

SIRS,—I have read Dr. Sisley's letter in your last issue, also in the *Standard*, and cannot but wonder why the London diploma should have so many apologies put forth on his behalf. "Qui s'excuse, s'accuse," and it is regrettable that Dr. Sisley's repeated excuses will not tend to raise the conjoint diploma in one's estimation. It is hardly possible that anyone at all conversant with the question would have an opinion otherwise than that a teaching university in London is very desirable; but what most men seem to desire is a degree-mongering institute—a university which will grant a degree to men who have attained to nothing more either in general or professional education than the standard exacted by the London Conjoint Board. The curriculum required for this diploma would not be recognised by any Scotch

¹ Brit. Med. Jour., 1886, vol. i., p. 921.

² Ibid., 1892, vol. ii., p. 1060.

university as sufficient to qualify a man to present himself for the M.B. examination, nor is the preliminary examination deemed sufficient, while the University of Edinburgh does not even recognise such examination. Moreover, the standard in general education required for the M.B. examination is not of itself sufficient for the M.D. degree, and at Edinburgh University the number who graduate to M.D. is only one in four. Dr. Sisley displays a want of knowledge of university regulations and etiquette when he states that a graduate is a "Dr.," while the diplomate is only "Mr." Nobody is entitled to the address of "Dr." by courtesy or otherwise until he has graduated to a doctor's degree in one of the faculties of a university. Bachelors in all faculties are on the same footing in this respect, but the man who is most ready to assume the address of "Dr." is the one with the most inferior diplomas. By all means let us have a teaching university in London, but let it be one which will leave intact the standard of education exacted by the presently existing universities.—I am, Sirs, yours truly,

H. CRITCHLEY, M.A. Durh., M.D. Edin.

London, Feb. 4th, 1895.

"AN ATYPICAL ALBINO."

To the Editors of THE LANCET.

SIRS,—So far from nystagmus being an exceptional phenomenon in albinism, as one might infer from Dr. Squire's report of a case in the last issue of THE LANCET, it is, on the contrary, a very usual accompaniment of that condition. The pigmentless condition of the choroid so frequently met with in albinos, and the defective vision consequent thereon, is generally considered to be the cause of this symptom. To my mind, the interest of Dr. Squire's case rests upon the condition of the choroid, and on this point he has not enlightened us; but since he tells us that there seems to be no inconvenience in the presence of a strong light, and no defect of vision (although with regard to the latter I gather we have only the patient's word to guide us), the inference is that the choroid cannot be very defective. To what, then, is the nystagmus due? In albinism there is generally a total absence of pigment in the irides, but in blue eyes this is not so, but merely a deficiency, a fact which perhaps may account for the unusual amount of vision in this particular case. Considering that the nystagmus is so well marked it would be interesting to know (1) the condition of the choroid, and (2) the visual acuity of the patient.

I am, Sirs, yours faithfully,

R. BRUCE FERGUSON, M.A., M.B. Cantab.

Feb. 2nd, 1895.

"THE DENTIST'S EDUCATION."

To the Editors of THE LANCET.

SIRS,—With one point, at least, in Mr. Newland-Pedley's letter in THE LANCET of Feb. 2nd I most cordially agree—viz., that the Royal College of Surgeons should hold an examination in dental mechanics which all dental students should be compelled to pass before entering a hospital for their further training for the L.D.S. This previous examination in dental mechanics would ensure the due attention of students to this important subject, and would compel practitioners receiving pupils to see that the instruction which they profess to give becomes a fact instead of fiction, and in the event of their neglect it would be known with whom the responsibility rested. At the present time students may be rejected at the end of their hospital career because that which they should have learnt before they joined a hospital at all was never taught them, and the hospital becomes discredited unfairly, while it is impossible for parents to know with whom the responsibility really lies.

I am, Sirs, yours faithfully,

STOREB BENNETT, F.R.C.S. ENG., L.D.S., &c.

London, Feb. 5th, 1895.

CORONERS AND THEIR DUTIES.

To the Editors of THE LANCET.

SIRS,—You will greatly oblige by giving your opinions concerning the duty of a coroner in the following case. A short time ago I was asked by a midwife (unregistered), who attended the woman in her confinement, to see the body of a child which she said was stillborn. I examined the body, but refused to give a certificate of stillbirth as the child was

fully developed and there were no signs that it was born dead. The midwife informed me that the child was born "feet first." I communicated with the police, telling them that I could not certify and that probably the child died during the process of birth, and in my opinion if a medical man had been present the child's life would have been saved. This was reported to the coroner, who gave an order for burial, saying an inquest was unnecessary.

I am, Sirs, yours faithfully,

Feb. 4th, 1895.

JUS CIVILE.

THE REMUNERATION OF THE RESIDENT OFFICERS IN ST. BARTHOLOMEW'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I have heard that within the past few months the governing body of University College Hospital have decided to board as well as lodge the resident house surgeons and physicians of that institution, and no longer to exact a weekly payment from them. I am under the impression that St. Bartholomew's is now the only hospital in London (and, I suppose, it is admittedly the most wealthy) where the resident staff have to board themselves. I am informed that although a house surgeon there is paid at the rate of £250 per annum for his services, yet during the six months in which he is in residence he is usually about £1 per week out of pocket for his board. If this be true, is it not a shame that these gentlemen, who give their time and very often their health, and without whose services the work of the hospital could not possibly be carried on, should be subjected to a system of what is little else than sweating? It seems to me a great pity that the governors of that institution have allowed smaller institutions, which are dependent on voluntary contributions, to be before them in making such a laudable reform in the remuneration of their officials.

I am, Sirs, yours faithfully,

Jan. 10th, 1895.

FAIR PAY.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Paupers' Food.

THE article in the *City News* of the 19th ult. has not been unnoticed. At the Prestwich Board one of the guardians said the worst day in the table was taken; but even then the cost should have been 3d. instead of 1½d., which would give 1s. 9d. for the week; and he stated further that the cost "solely for food and drink" was 2s. 3d. In a letter to the paper Dr. Boddy, the medical officer to the workhouse, stated that the books showed the cost per head was over 2s. a week, but that the number of young children who consume and receive less food than the adults, with also some infants at the breast, make the average cost for adults not much less than 2s. 6d.; and that the fact that the food is bought wholesale makes its amount considerably more than if it were bought at retail prices. Moreover, three ounces of tea instead of one and a quarter ounces are used to fourteen pints of water, and no soda is added. Pea-soup is given twice a week, and it is said not to be thin, but good. On four days meat and potatoes, and on Sundays bacon, potatoes, and bread, are given; and a few years ago new milk was substituted for skim milk. At the Salford Board the chairman of the workhouse visiting committee maintained that "margarine was better than lard butter," and that it cost more than 6d. a pound. There was some difference of opinion as to the tea, the chairman saying it was good enough for him, and that the old people preferred it without milk. Another of the guardians took a more generous view: "It was no use saying the tea was good" with eight pints of water to an ounce of tea, and he would reduce the water to six pints. Indeed, he considered that the paupers should be treated "like ordinary Christians," and should have milk in their tea. The recent circular of the poor law board is so humane and considerate in tone that it seems as if for the sick and aged the days of penal severity may come to an end as soon as the guardians, or at least some of them, have grasped the idea that old age and sickness are not criminal.

Medico-Ethical Association and the Midwives' Diplomas.

A special meeting of this association was held about ten

days since to consider the action of those members who still grant diplomas or certificates to pupil midwives, the effect of such action on the training of medical students, and to decide the course to be adopted. After a long and somewhat heated discussion, a resolution condemnatory of the giving of these documents was passed by a large majority. Although many of the consultants, or specialists, as they are too often designated, are members of the association, general practitioners are the most numerous. The latter contend that this movement is ruining their midwifery practice, the importance of which as the surest stepping-stone to family practice has long been acknowledged. This is believed to be due to the multiplication of midwives by the temptations and encouragements thrown out to women to take up this branch of the profession after a training of three months. According to the testimony of those acquainted with some of these women the training must be in many instances scanty in amount and the knowledge acquired very superficial, consisting largely of learned phrases, not always apposite, but well calculated to impress those more ignorant than themselves. Some have advertised in the papers that besides attending midwifery they treat the diseases of women and children. All this is distinctly asserted; but, even allowing for some exaggeration, it discloses an evil pretty sure to accompany the good the authors of the new order of practitioners no doubt sincerely hope for. The general practitioners deny the need of so many midwives, though they appreciate the value of good nurses. Much correspondence (not calculated to raise the profession in public estimation) has been going on for months past in the Manchester papers. Most of the letters are anonymous, some purporting to come from members of the profession, others from laymen, and some from midwives. The Professor of Gynecology in the Owens College has written long letters to the papers, advocating what is called the professorial view that this action is philanthropic. The general practitioners, on the other hand, feel sorely aggrieved, saying that it is taking the bread out of their mouths and is no boon to the poor, but is fraught with danger. Just now feeling runs too high for calm and dispassionate treatment of the question. The spectacle is not edifying, even to a looker-on belonging to the profession, and the lay spectator may be forgiven if he should feel some contempt for a divided profession carrying on its squabbles in public.

Manchester Eye Hospital.

The seventy-ninth annual meeting was held on the 23rd ult. At the out-patient department in John-street 11,972 patients attended, an increase over the previous year of 1405; at the Oxford-road Hospital 9603, an increase of 1269: the total being 21,575, showing an increase of 14 per cent. There were also 1336 in-patients, against 1315 in 1893. The average stay in hospital was twenty days and three-quarters. The accident cases at the two places were 3020, against 3234 in the previous year. The benefits of the institution are freely sought by patients from the neighbouring towns. The chairman said that in 1889 the number of patients was over 15,000, but now they had "achieved the grand total of 21,575"—a number, he believed, reached by no other hospital except that of Moorfields in London. Mr. W. H. Holland, M.P., said "there was a surprising need for the institution, as was shown by the fact that the out-patients showed an average of 70 per day." These statements show that crowds of people are ready to make use of the hospital, but whether they suggest an abuse of the charity is another question. The lay board of a hospital is no doubt influenced—often unconsciously—by the feeling that the institution must be made a success; and this can best be made clear by the number of patients that can be cited at an annual meeting, showing what a "grand total" has been "achieved." Among the 21,575 out-patients, how many were suffering from trivial affections such as any qualified practitioner could treat, and how many could have afforded to pay his modest charges?

Medical Evidence at Inquests.

A question arose at the conclusion of an inquest yesterday on a case of poisoning by an overdose of chloral which is of some interest. The medical witness was asked by the coroner why he did not give assistance to the officer who was sent to him for information in order to prepare his report. The witness said he had done so. But it was objected that he would not state the cause of death, to which the answer was that on two previous occasions when he had done so inquests

were held, but no medical evidence called. The coroner spoke about spending the ratepayers' money, and said: "If we can do without a doctor we always do." The witness maintained that he did give assistance to the officer, and that the information he withheld could be best given at the coroner's court. Is it fair to a medical man to obtain from him gratuitously information that will enable the coroner to do without his evidence?

Feb. 5th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

"Should Doctors Dispense?"

UNDER the above title an animated discussion has lately been carried on in one of the local evening papers. The origin of the controversy was a case which occurred in London. It is notorious that chemists will prescribe for patients over the counter, an abuse which it is difficult to prevent as long as the public choose to adopt this form of getting medicine for their ailments. As a rule, no doubt chemists act carefully and intelligently, but the evil remains as to the mode of doing so. The reasons against medical men dispensing their own medicines are urged with more coarseness than candour—that the power of giving death certificates might be used to cover any fatal mistake; that they have not a sufficient knowledge of dispensing; and, lastly, the liability to substitute cheap drugs for more expensive and efficacious ones. As usual a middle course reveals the truth. It is impossible for a medical man living in a rural district to avoid dispensing his own medicines. In large towns the competition among medical men who do their own dispensing renders it a necessary part of their living. In better-class practices the same excuses do not hold good, and the principle of each sticking to his last will enable the medical practitioner to prescribe and the chemist to dispense, with the mutual good understanding which generally prevails.

Hospitals and the Voluntary System.

At the annual meeting of the Children's Hospital, held on Jan. 28th, the President, Lord Cobham, made some interesting observations upon this subject. He was afraid that unless these institutions received more liberal support the voluntary system could not go on much longer, and the State would have to step in and undertake the management. He mentioned also that the new death duties would probably influence the direction of contributions. I am inclined to think that the views thus expressed are somewhat too depressing, and that, making allowances for bad trade, scarcity of money, and the rapid increase of population, this aspect is too severe for general acceptance. In this city the charities are doing fairly well under the circumstances. In this particular hospital, thanks to the energy of the committee, the subscription list was raised last year by about 10 per cent. The amounts vary in different years to individual institutions, and there is no doubt that fresh sources of income must be found to meet the requirements of each. Increased activity in collecting, an aptitude in reaching the large class outside the usual subscribers, will do much towards raising additional funds. It will be a disastrous time when the experiment of handing over our hospitals to the State is tried, and the cheerful giver is supplanted by officialism and rates.

Registration of Midwives.

A special meeting of the Birmingham Branch of the British Medical Association was held on Jan. 31st to receive, *inter alia*, the report of the committee on the registration of midwives. A considerable amount of discussion took place, and in the end the report of the committee was rejected. The fate of the midwives was an adverse one; probably with some alteration in the propositions laid down another attempt to secure the adoption of rules for their efficiency and regulation may be more successful. At present the local feeling is certainly that of opposition to any scheme in which the effort to supply the needs of this branch of practice is taken from the rôle of the ordinary medical attendant.

The Wyld Green Poisoning Mystery.

On Jan. 19th I gave a *résumé* of this remarkable series of cases of poisoning, and stated that at the coroner's inquest Mr. C. W. Iliffe, the coroner for North Warwickshire, recommended that an expert should be asked to assist the medical

man in deciding as to the cause of death. The following is Dr. Klein's report upon a sample of the soup which appeared to have been the active agent in spreading the poison:—"I beg herewith to report on the results of the examination of the sample of soup submitted to me. I. On Jan. 24th I received a glass jar of fluid material, tied with a membrane. The material in the jar had, on opening, a sour smell and gave a strong acid reaction. It was a thick fluid, containing various vegetables, fat, and bits of flesh. Under the microscope besides these substances there were seen a multitude of microbes—in fact, the whole material was crowded with them. Amongst them could be recognised various forms of bacilli, differing from one another in length, and numerous yeast cells. II. Cultivations were at once made so as to isolate the microbes. These cultivations yielded the following microbes in colonies: 1. Torula, a yeast very copiously present. 2. A short non-motile bacillus, not liquefying gelatine, fairly abundant. 3. A bacillus which proved on sub-culture to be closely related to the bacillus coli. This microbe is a normal inhabitant of the bowels of man and animals, and is a prominent microbe of sewage. In the soup it was present in considerable numbers. 4. A bacillus which also proved on sub-culture to be closely related to the bacillus coli, but must be considered as a variety of the typical bacillus coli. It is also a normal inhabitant of sewage, and was present in enormous numbers in the soup. III. Experiments were made with the soup and with the cultivations obtained from it: (a) Feeding of mice with the soup produced no ill effects. This does not prove much since the time that had elapsed since the consuming by human beings at Wylde Green and the experiments made here was considerable; and it is known that organic substances poisonous at one time lose their action when exposed to additional fermentative changes. (b) Inoculations of guinea-pigs with the cultures of microbes Nos. 3 and 4 (bacillus coli and variety) prove these microbes to be virulent, microbe 4 was particularly highly virulent. (c) Inoculations of guinea-pigs with microbes 1 and 2 had no ill effects. (d) Microbe 4 multiplies extremely rapidly in beef broth kept at body temperature—i.e., about 37°C. It turns the broth very turbid in twenty-four hours, the broth being filled with the microbe. In addition there are present by this time numerous flakes and flocculi entirely made up of the bacilli. If such a broth culture is subjected to filtration, by which the bacilli are separated from the fluid, and when this latter is injected in small quantities (0.05 c.c.) into guinea-pigs, it is found that these die in from six to eight hours under symptoms of acute poisoning. From this it is then clear that this microbe is capable of forming rapidly in broth poisonous chemical substances. IV. Conclusions.—From the foregoing observations the following conclusions can, I think, be drawn. 1. The soup contained microbes which were derived from sewage; it is, therefore, highly probable that the soup had been polluted with sewage. 2. Amongst the microbes present in the soup the bacillus mentioned (sub 4) as a variety of the bacillus coli is possessed of virulent properties on account of its extremely rapid multiplication at the body temperature and the poisonous substance which it elaborates in broth culture. It is most probably this microbe which caused in the consumers of the soup the ill effects and the disease. This bacillus, it will be remembered from the foregoing paragraph, was present in the soup in enormous numbers."

Feb. 5th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Appointments to the Scottish Lunacy Commission.

It is with much satisfaction that we in Scotland have received the news of the appointment (already announced in your columns) of Dr. Fraser as Assistant Commissioner in Lunacy to the Commissionership rendered vacant by the resignation of Sir Arthur Mitchell. When Sir Arthur Mitchell's resignation was intimated it was pointed out in these columns that the vacant commissionership ought to be filled by the promotion of Dr. Fraser. It was feared that political considerations might unduly influence the appointment. I do not profess to be acquainted with the political bearings of this appointment—if there are any; but it may safely be said that to the profession as a whole Dr. Fraser's appointment is most satisfactory. His work as deputy commissioner has been done with zeal and enthu-

siasm and with that kindly and judicious consideration for patients and their friends which is so desirable in anyone holding such a post. Dr. Fraser was a distinguished student of the University of Edinburgh, being one of the two best men of his year. After graduation he became assistant medical officer to the Fife and Kinross Asylum, and some years later superintendent. In that position he showed great administrative ability and tact, and when a vacancy occurred on the Commission by the retirement of Dr. Paterson, Dr. Fraser was appointed an assistant commissioner in 1877. Part of his duty in this capacity has been to visit boarded-out lunatics in many of the most outlying parts of the Highlands and islands, duty implying a good deal of arduous work, travelling, and exposure. The post rendered vacant by Dr. Fraser's promotion has been given to Dr. J. F. Sutherland, medical officer to the Duke-street Prison, Glasgow, who is also a graduate of Edinburgh University. Dr. Sutherland is secretary to the departmental committee on habitual offenders, vagrants, and inebriates which lately sat in Edinburgh, and he has taken an active interest in, and has written upon, hospital construction and management, dipsomania, and allied topics.

St. Andrews University and the Medical Education of Women.

A correspondent, who writes as if he were well acquainted with St. Andrews affairs or inspired by someone in touch with the inner workings of that University, has written to one of the Scottish newspapers on the subject of the medical education of women. He says that at a recent meeting of the University Court it was proposed and carried: "That two chairs be founded at St. Andrews and endowed out of the Berry bequest, to be called respectively the Berry Chair of Anatomy and the Berry Chair of Materia Medica, with a view to giving two complete *anni medici* at St. Andrews." Mr. Berry, whose name is attached to these proposed chairs, left a legacy of £100,000 to the University. The correspondent says that it has been felt for years that it was important to develop not only medicine, but also science, at St. Andrews. The medical and science chairs at present are chemistry, natural history, physiology, natural philosophy, and mathematics, and a lectureship on botany. If to these were added a chair of anatomy and another of materia medica the medical and science chairs would be eight in number. The facilities for studying the fundamental subjects in medicine and science at St. Andrews could not, it is held, be surpassed. The distance between St. Andrews and Dundee is found to be an insuperable barrier to having the St. Andrews medical and science school located wholly in Dundee. Not a few of the divinity and arts students are desirous of studying medical and science subjects at St. Andrews for the purpose of general culture, and it is right and reasonable they should have opportunities for so doing. Comments are then made to the effect that the affiliation of Dundee with St. Andrews had been a failure. It is pointed out that, according to the ordinances recently issued by the Universities' Commissioners, two years of university residence are required on the part of all those who aim at graduating in medicine in any of the Scottish Universities, it being provided that the remaining three years can be taken at any recognised medical school in Great Britain or Ireland. Other reasons for extending medical teaching at St. Andrews are that quite recently fifteen medical bursaries, each of the annual value of about £30, have come to the University, and are designed for lady medical students at St. Andrews and cannot be transferred to Dundee or elsewhere. To this is added the fact that a spacious residential hall is about to be built for lady students attending the University, so that it is regarded as the bounden duty of the University to make an effort to supply the necessary medical teaching for at least the two residential years. No objection can well be made to this scheme. St. Andrews cannot ever be a fully equipped medical school, for it has no facilities for clinical teaching, and if it prefers to try to attract students for a couple of years, rather than have a fully equipped school at Dundee, no objection need be made to it. As a matter of experience schools which only provide a partial curriculum are not successful, and now, both in Edinburgh and in Glasgow, a full curriculum is provided for female medical students, which allows them to graduate at the university of the city in which they have studied.

Public Health at Glasgow: Small-pox and Vaccination.

The most alarming feature in the public health of Glasgow just now is the rapid and very considerable spread of

small-pox. Starting about a month ago with five cases (all in one family), there are now (Wednesday) thirty-nine cases in hospital, most of them severe. As many of the patients worked in a rag store suspicion was at first directed to the rags with which they worked as being the source of the infection. This view has now, however, been given up, the disease having been carried by one of the first cases to the store in which she worked. This outbreak is the largest and most important we have had in Glasgow for a good many years. It started in a family whose history affords a good object lesson in the value of vaccination. The family in question is a respectable one, living in a house of three apartments; the ages of its members and their condition as to vaccination are as follows: Father, fifty-two, vaccinated; mother, forty-eight, had small-pox in infancy; grandmother, seventy, vaccinated; son, twenty-seven, vaccinated; daughter, twenty-one, vaccinated; daughter, twenty, vaccinated; daughter, eighteen, vaccinated; daughter, fourteen, unvaccinated; son, twelve, vaccinated; daughter, eleven, unvaccinated; daughter, six, unvaccinated; grandson, four, unvaccinated. The last to be vaccinated was the boy aged twelve, who shortly after developed hydrocephalus; he is at present a dwarfed child, almost perfectly helpless, with a very large head. As this illness was attributed to vaccination the parents would not allow any of their other children to be vaccinated. As far back as Dec. 7th one of the girls (vaccinated) fell ill, developed a few spots, but after ten days at home she returned to work. Then the four unvaccinated children sickened in succession, and were removed to hospital, where one died from malignant small-pox and the others are struggling for their lives. As this infected family were in unrestrained intercourse with the public from Dec. 7th till about Jan. 9th the extent of the present outbreak need not be wondered at. Amongst the later cases was that of a friend of the family; he was said to have been vaccinated in infancy, but he presented no mark of the operation; he died shortly after admission to hospital. This history gives a good illustration of the basis on which much of the popular prejudice against vaccination rests. The hydrocephalus, which, like many other allied diseases, is apt to appear in the first year of life, had nothing to do with the operation; it led to the abandonment of vaccination in this particular family, however, rendering it a standing danger to the whole community, and causing lasting grief and regret to the parents, who were themselves protected.

Feb. 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Outbreak of Small-pox in Dublin.

In consequence of this contagious malady showing no abatement in Dublin the Public Health Committee have adopted a resolution to the effect that, having heard Sir Charles Cameron and Mr. Stafford, Local Government Board inspector, and having given the question of the prevention of the spread of infectious disease every consideration, this conference is of opinion that in the interests of public health provision should be made for the isolation of such infectious disease by the erection of one or more hospitals to be wholly devoted to the reception of such cases. It is proposed that these hospitals shall be erected in some rural district distant from any populous centre and that thereafter no infectious disease shall be received into any of the existing hospitals in Dublin. The above resolution has been recommended to the serious attention of the urban and rural sanitary authorities of Dublin and surrounding townships, with a request that they should nominate representatives to attend any future conferences convened by Sir Charles Cameron.

Health of Dublin during December.

Sir Charles Cameron in his report on the state of public health in Dublin for the month of December states that as compared with the previous month the mortality caused by small-pox was more than double—viz., 26. There was an increase in the fatal cases of typhoid fever, diarrhoea, dysentery, and whooping-cough. The death-rate was 3.85 per 1000 below the mean rate for the corresponding month in the previous ten years. Notwithstanding the epidemic of small-pox the zymotic death-rate was only 0.53 in excess of the mean rate for the month. The epidemic of small-pox continues, and, no doubt, will continue during at least the winter months. It had nearly died out upon the north side

of the city, but it now appears to be on the increase there. During the month cases of small-pox were admitted to hospital from thirty streets on the north side and ninety-six on the south side. Everything has been done to limit the spread of the disease. At present there are no fewer than fifty-six men and women occupied in the removal of patients to hospital, in disinfection of clothing and bedding, and in the disinfection, whitewashing, and cleansing of infected dwellings.

The Battle of the Clubs at Cork: the Benefit Societies.

A meeting of the members of the different lodges of the Oddfellows was held last week for the purpose of electing a medical officer for the Munster, City of Cork, Commercial, and Hibernian Lodges. After some discussion it was decided to elect two medical officers instead of one. Applications were received from Mr. M. J. Cahalan, Nenagh, Mr. James McLoughlin, Dr. Joseph Alexander O'Sullivan, Dr. M. A. Morris, and Dr. W. McMath. Mr. McLoughlin and Dr. O'Sullivan were proposed as medical officers and unanimously elected. A meeting of the Roman Catholic Young Men's Benefit Society was also held to elect a medical officer, when, on a poll, Dr. J. A. O'Sullivan was successful by a majority of twelve votes. The following resolution was adopted unanimously: "That the best thanks of this society be conveyed to Mr. Maurice O'Connell for his unfailing kindness and attention to our members while acting as medical officer of the society, and we regret that the new rules of the medical profession oblige him to sever his connexion with us."

The Battle of the Clubs at Cork: the Attitude of the Chemists.

One of the most noteworthy incidents during the week in connexion with the club fight has been the action of the chemists. I must explain that the majority of the club medical officers in Cork have not been in the habit of supplying medicines, and a contract was generally entered into by the club with one of the local druggists. The rates varied, but latterly 5s. per family per annum was the lowest sum paid to the druggist. However, "example is contagious," and the druggists, finding that it was not merely poor working men they were dealing with, decided that the gentlemen members of the clubs should pay for their drugs on the same terms as anybody else. To accomplish that end the druggists, like the medical men, were obliged to include all club members unless the clubs should think fit to exercise reasonable discrimination in the admission of members. This action of the druggists, whilst helping themselves, must necessarily prove a very severe blow to the clubs in their fight with the medical men. To understand the full bearings of it it must be looked at in this way. The minimum charges asked by the medical men were 7s. 6d. and 15s., according to income. Five shillings added for medicines would make 12s. 6d. and 20s. respectively. Now the member of the club gets no reduction on his medicine bill, which at the end of a few weeks' illness would amount to a very respectable figure. I wonder how soon the poorer members of the clubs will fully realise how dearly they are paying for their chivalrous defence of the rich men's meanness. Will the richer members give their employees an increase of wages to meet the increased cost of the medicine bill?

Health of Ireland.

During the quarter ended December last the births registered amounted to 24,977, equal to an annual birth-rate of 21.7, and the deaths to 18,799, or 16.3. The birth-rate in Ireland for the quarter was 0.4 over the average rate for the corresponding quarter of the past ten years, and 0.5 over the rate for the fourth quarter of 1893. The deaths were below the last quarter of 1893 to the extent of 3117. Compared with the returns of pauperism for the corresponding quarter of 1893 there is a decrease of 691 in the average number of workhouse inmates on Saturdays during the quarter, and a decrease of 1439, or 2.5 per cent., in the average number of persons on out-door relief. Measured by the mortality, the state of the public health must be regarded as satisfactory, the death-rate (16.3) being exceedingly low, and there has been no general prevalence of any zymotic disease. Small-pox caused numerous deaths in Dublin, but it appeared in only a few other localities, and but one death occurred outside the Dublin district. Whooping-cough was prevalent in several districts, and the mortality therefrom was above the average, as were also the deaths from scarlet fever and diphtheria; but, on the other hand, there was a decline in fatal cases of measles, typhus fever, enteric fever, simple continued fever, and diarrhoea.

Feb. 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Fetid Endometritis of Old Women.

ENDOMETRITIS occurring in women after the establishment of the menopause is doubtless due in some instances to the reawakening of an old infectious process or to a necrobiosis accompanying the elimination of a moderate-sized fibroma; but these causes cannot explain other cases. Thus, Fritsch,¹ and, later, Patru,² ascribe its occurrence to a destruction of the endometrium. In some of these sufferers the symptoms recall those of cancer of the uterus—vaginal irritation, periodic flow of pus, emaciation, and straw-coloured complexion. The importance of a correct diagnosis in such cases has impelled Dr. Maurange to publish three observations of the disease, for a description of which classical works on gynaecology may be vainly thumbed. The first case was that of a woman aged fifty-five, in whom menstruation had ceased at fifty. For the past few months she had lost flesh, the features were drawn, and the complexion yellowish. She complained of abdominal pains, with a constant discharge of a horribly fetid, thick liquid—so great was the stench that her *femme de chambre* could not bear to remain near her. An examination by Drs. Piqué and Josias, surgeon and physician respectively to the Paris Hospital, led to the diagnosis of cancer, despite the smallness and mobility of the uterus and the absence of lesions of the os. Hysterectomy was proposed and accepted, but fortunately for the patient the os was first dilated with laminaria, the removal of which gave exit to a flow of pus, floating in which were fragments of mucous membrane. Examination of one of the fragments failing to confirm the diagnosis of malignant disease, the uterus was thoroughly scraped, with the result that recovery ensued in a month. Two years later her appetite had returned, the complexion was normal, and all pains had ceased. The other two cases cited were similar to the first. It would appear that the disease occurs in women from five to fourteen years after the onset of the climacteric, that it attacks women who have had children as well as those who have never been pregnant, and that pathological antecedents have no appreciable influence on its occurrence. The symptoms are as detailed above, and, in addition, the sound enters for a distance of from seven to eight centimetres; its introduction is painful and its removal induces a copious flow of bloodstained pus whose fetidity surpasses even that of cancerous ichor. Only histological examination of debris collected by curettage can enable us to distinguish between this disease and cancer. In only one instance has this examination been made (by Dr. Maurange). The lesions discovered were those of chronic catarrhal endometritis—viz., glandular hypertrophy, leucocytic infiltration, and areolar hyperplasia. Macroscopically the uterine mucous membrane is swollen, hardly ever ulcerated, and is easily detached with the curette. The prognosis is favourable if the following treatment be carried out: dilatation of the os and thorough scraping of the uterine lining, followed by *tamponnement* of the uterine cavity with iodoform gauze.

A Cheap and Efficient Disinfectant for the Sick-room.

The fetid exhalations emitted by the faeces are a source of great annoyance to patients condemned to a prolonged sojourn in one room, as is the case in, for example, typhoid fever. M. Meillère strongly recommends the following powder as an efficient and very cheap deodorising and disinfecting agent: sulphate of zinc, 1000 grammes; sulphuric acid, 5 to 10 c.c.; essence of mirbane, 2 c.c.; colouring matter (e.g., indigo blue), 15 centigrammes. About five grammes of this salt are placed in the bedpan before it is used. Contact with urine or liquid stools determines prompt solution of the salt, deodorisation is instantaneous, and the liquid excreta are at once sterilised. The fetor is transformed into a rather agreeable odour. The employment of this method allows, also, of the preservation of the excreta for microscopical examination.

Antitoxin Gossip.

Notice is given that, after the 10th inst., practitioners and the police desirous of procuring anti-diphtheritic serum must apply, not to the Pasteur Institute, as at present, but to pharmacists, who will then be the exclusive *dépôtaires* of

the precious antidote. The poor of Paris and the provinces will be supplied gratuitously through the Assistance Publique and analogous provincial bodies, the distribution being regulated by rules formulated by the Comité Consultatif d'Hygiène Publique de France and the Administration. Meanwhile, the readers of THE LANCET will be glad to have fresh statistics bearing upon the efficacy of the method in the diphtheria wards of the Hôpital des Enfants Malades. Thanks to M. Lebreton, I am to-day enabled to communicate the results of three months' application of Dr. Roux's method at that institution. At first the little patients were located in two wards—one for each sex—and in a common room where cases in which other germs in addition to Löffler's bacillus had been discovered were isolated. There have been erected since wooden pavilions, and the accommodation is correspondingly improved. In each case an injection of serum was invariably practised before the diagnosis was bacteriologically settled. It would appear that the energy of the antitoxin has increased, for smaller doses are now given than formerly. Of 330 children, 258 of whom were recognised as diphtheritic and treated solely with antitoxin and tonics, 31 died, giving a mortality of 12 per cent. Subtraction being made of 8 who died within twenty-four hours after admission, and without having had time to undergo the treatment, the percentage of deaths is diminished to 10.8. Twenty-four tracheotomies gave 9 deaths (37 per cent.), and 51 out of 60 intubations necessitated by diphtheritic croup yielded a mortality of 27.45 per cent., due to broncho-pneumonia or bronchitis already existing when the antitoxin treatment was instituted. The *contretemps* determined by the injections were, (excluding one case of local suppuration due probably to a *lapsus* in disinfection): 1. Eruptions, principally urticarial, less frequently scarlatiniform or mealy, and (twice only) polymorphic, accompanied in ten instances by an elevation of temperature above 102.2° F., this hyperthermia appearing to be caused by the employment of certain specimens of antitoxin. 2. Albuminuria, observed in 140 subjects. In 57 of these the phenomenon appeared late, as if it constituted an effort of elimination coinciding with recovery. Post-diphtheritic paralysis is said to be rarely met with, but figures are not supplied. Intubation is said to be less harmful than formerly, seeing that the injections allow of the more early removal of the tube. In many cases of pure diphtheria the removal was effected in forty-eight hours; its average sojourn was from three to five days, the guide being the cessation of the reproduction of false membranes. In 7 cases the tube had to be removed owing to its becoming obstructed either by membrane or by the string, which is only left attached in the case of children under one year and a half old. Seven times the tube was expelled in coughing, but it was not always necessary to reinstate it. In every case it is necessary to obviate the drying of the inner wall of the tube by the action of the steam spray kept going near the patient. Once the extractor used for the removal of the tube got loose and the tube was swallowed, to be later on expelled per rectum without any harm resulting. Sometimes removal of the tube is followed by spasm of the glottis, necessitating a fresh intubation. The possibility of these accidents impels M. Lebreton to give the preference in private practice to tracheotomy, intubation being reserved for hospitals. But even in the wards he believes tracheotomy to be preferable when grave asphyxial symptoms supervene. M. Lebreton does not appear to be in favour of antitoxin used prophylactically.

Feb. 5th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Antitoxin Treatment of Diphtheria.

No less than three meetings of the Society of Physicians of Vienna were taken up by a discussion on this subject, but it cannot be said that anything new has been brought before the profession as a result. The majority of the speakers were in favour of the treatment, and the opposition raised by Professor Kassowitz was more a criticism of the scientific value of Behring's discovery than a report of his own personal experience, which he confessed extended only over eight cases. These cases all recovered, but Professor Kassowitz could not see that the improvement took place quicker than it might have been expected to do under any

¹ Handbuch für Frauenkrankheiten, vol. 1., p. 990.² Endometrite Purulente Sénile ou Endometrite Atrophique. Revue Médicale de la Suisse Romane, May 20th, 1893.

other treatment. The following figures illustrate the results obtained with antitoxin by the chiefs of the Vienna Hospitals: Primarius Gusendinger of the Rudolfs-Kinderspital had 27 cases of diphtheria, of which 11 died, the mortality being under 40 per cent.; the mortality from diphtheria before the antitoxin treatment had been 45·5 per cent. Primarius Heim of the St. Josef-Kinderspital had 27 cases of diphtheria treated by antitoxin, of which 6 died, a mortality of 22·6 per cent. From Nov. 4th to Dec. 18th last, when no antitoxin could be obtained, 32 cases of diphtheria were admitted to this hospital, of which 21 died, with a mortality of 65·6 per cent.; while from Dec. 18th till Jan. 10th 21 cases of diphtheria were treated by antitoxin, of which only 4 died, giving a mortality of 19 per cent. The mean mortality from diphtheria at this hospital during the last ten years had been 51·1 per cent., with the maximum of 58·7 per cent. and the minimum of 38 per cent. Professor Monti, of the Poliklinik, had treated 25 cases of diphtheria with antitoxin, and only 1 case has died. He drew attention to the fact that post-diphtheritic paralysis occurred in a high percentage of his cases, and said that in 7 cases he had observed erythema to follow the injections, so that he believed them to be not quite innocuous. Primarius Unterholzner, of the Leopoldstädter Kinderspital, had treated 30 cases with antitoxin, of which 8 died, the mortality being 26·6 per cent. When antitoxin could not be obtained, the mortality rose to 66·7 per cent. The discussion lost the character of a quiet scientific debate and became very personal at the last meetings. Some of the most eminent physicians in Vienna appeared to conclude as a result of the debate that medical men would do well to study more closely the pathology and symptomatology of diphtheria before entering into dialectics on the value of the antitoxin treatment.

Memorial to the late Professor Billroth.

A bust of the late Professor Theodor Billroth will be unveiled on Feb. 6th at a special meeting of the Society of Physicians of Vienna. Professor Albert will give an address on the occasion.

Medical Peers in Austria.

Professor E. Albert, the teacher of surgery of the Vienna University, and Professor Wiederhofer, the body physician of the Austrian Imperial family, have been appointed members of the Austrian Herrenhaus (Upper House of Parliament).

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Annual Meeting of the Victorian Branch of the British Medical Association.

THE Victorian Branch of the British Medical Association has changed the date of its annual meeting from the first to the last month of the year, so that it no longer clashes with that of its rival, the Medical Society of Victoria. The report of the council for the past year was highly satisfactory, and the balance sheet showed a credit of £240. The following officers were elected for the ensuing year: President, Dr. Snowball; Vice-President, Dr. O'Sullivan; hon. treasurer, Dr. McAdam; hon. secretary, Dr. Mullen; council, Dr. Gresswell, Mr. Kenny, Drs. Meyer, Molloy and Snowball, and Mr. Springthorpe. The retiring president, Dr. Felix Meyer, read an able and scholarly address. After commenting briefly on the continued advances of bacteriology, the results of "serum therapeutics," with a passing allusion to the treatment of snake-bite by chloride of lime, Dr. Meyer dealt at some length with the present position of his own particular branch of medicine, that of gynaecology, emphasising the necessity for the gynaecologist being also a physician in the true sense of the term, as "a misguided enthusiasm for the surgical attack of women's ailments has, from time to time, not only caused a depreciation of the value of the gynaecologist in the eyes of the general practitioner, but has constituted him in the lay mind a *monstrum horrendum*, with the result that not infrequently the conscientious suggestion of operative measures is received by the patient with coldness and distrust, if not altogether rejected." Dr. Meyer suggested that, "seeing what remarkable changes are effected in the nervous functions of women by changes in her special organs, it would, perhaps, lead to light being thrown on cases of female lunacy if the observations of the resident medical officers at asylums

were supplemented by carefully conducted examinations by recognised authorities on the diseases of women." *En passant*, reference was made to the "new woman." "The growing girl," he considered, "educated in the elements of anatomy, physiology, and hygiene, can be taught to emancipate herself from the hurtful slavery of much that is fashionable in dress and custom without the possible danger of developing a three-volume novel or a fibroid tumour With a healthy nervous system and healthy bodily functions women may be safely left to determine for themselves the limits of their 'sphere.'" Dr. Meyer also deprecated "the element of sexual psychopathy which has been a marked feature of some recent novels. Tortured theories of heredity, exemplified by undesirable or impossible men, women, and children, can serve no good purpose and may give rise to harmful impressions." The address concluded with an eloquent peroration on the future of medical science, which, being truly evolutionary, will continue its great work towards the prevention of disease, and then with the process of time "the evils that flesh is originally heir to, or has since acquired, will have become matters of ancient history, and the natural decay of great old age will remain the sole disease."

Chloride of Lime in Snake-bite.

The merits of chloride of lime as a practical antidote to snake venom are being tested as cases occur. Mr. Hodgson reports one case in the *Australian Medical Journal* for December. The patient was bitten on the left forefinger by a snake two feet long. A ligature had been applied round the base of the finger and the wound well sucked. A 1 in 60 solution of chloride of lime, freshly prepared, was injected in doses of 20 minims into the finger, into the back of the hand, and the front of the wrist; 100 minims were injected into the arm, 60 minims into the right calf, and 80 minims into the right forearm. The injections caused great pain. The patient recovered. Mr. Mackenzie reports another case. The patient was bitten on the third left finger by a tiger snake. A ligature was applied to the base of the finger within ten seconds of the bite, but in ten minutes caused such pain and swelling that the patient removed it. Almost immediately he collapsed and broke into a cold sweat. His subsequent symptoms were dilated pupils, giddiness, with staggering gait, and dimness of vision. One hour after being bitten 30 minims of a 1 in 12 solution of chloride of lime, prepared for four days, were injected into the left leg, a little later 30 minims were injected into the right arm, and at intervals twenty-five injections were given in all in different parts of the body. The injections caused no local irritation, and the patient gradually recovered. Additional symptoms which developed during the case were, hiccough, vomiting of blood, double vision, swelling of the tongue, intolerance of light, and drowsiness.

Treatment of Hydatids.

Hydatid disease—its prevention and treatment—is kept pretty continuously before the profession in Australia. At the last meeting of the Medical Society of Victoria Dr. R. B. Duncan of Kyneton read a paper on a Series of Cases of Abdominal Hydatids, and introduced an interesting discussion on their treatment. Dr. Duncan in most of his cases followed the method known as Lindemann's. In performing this operation he insists on the necessity of partially emptying the cyst by a trocar before incising it, and fixing it to the abdominal wall, and that, when fixed, it is unnecessary at the time of operation to further evacuate the cyst. Instead of using a drainage-tube afterwards he packs the cavity with strips of iodoform gauze. He points out that ventral hernia is very apt to follow this method of operating, and hence cysts of moderate dimensions can be treated by complete evacuation and immediate closure, as recommended by Bond; while "in a not inconsiderable number of cysts free in the abdominal cavity partial or complete excision may be practised." In the discussion that followed several surgeons stated that in Bond's operation it was unnecessary to close the cyst with sutures, and confirmed the statement as to the liability to ventral hernia after Lindemann's operation. Mr. C. S. Ryan quoted a most remarkable case in which he had operated six times, and treated chiefly by Bond's method, modified by not stitching the adventitia, thirty-two cysts, five in the liver and the rest in the omentum and abdominal cavity. Several of the latter were excised entire. The patient had recovered, but still had two cysts remaining, one on the convex surface of the liver and one in the spleen. In the *Australasian Medical*

Gazette of December Mr. L. Fitzpatrick of Dabbo, N.S.W., records seven cases of hydatids. One was dissected out of the anterior triangle of the neck, and another from the fibres of the external oblique muscle of the abdomen. Another cyst was in the loin and presumably in the kidney, and was successfully treated by tapping and drainage. The most interesting case was one of intra-cranial hydatid, causing blindness, nystagmus, and frontal headache, and close to the upper third of the occipito-parietal suture a small, soft, pulsating swelling. On exploration the bone was found to be absorbed and the cyst bulged through the aperture. It was incised and the mother cyst extracted. It occupied the subdural space, lying over the second and third occipital convolutions, pressing the cerebrum forwards and the cerebellum downwards. The patient died a few days afterwards with frontal pain, paralysis, and fever. The *Australasian Medical Gazette* also, in an editorial article, advises that the health authorities should give more attention to the prevention of hydatids. Children as well as adults should be instructed as to the nature, mode of propagation, and means of infection of the disease. All dogs should be treated for tenia by being purged and dosed with areca nut and turpentine.

Medical Journalism in Australia.

The New South Wales Branch of the British Medical Association have decided to purchase the *Australasian Medical Gazette* from its present lay proprietor and make it the organ of all the branches of the Association in Australia. The other branches are to be supplied with the *Gazette* at a reduced rate, and will each appoint a local editor, but will have no monetary responsibility.

Suicide of a Medical Man.

Dr. Hood of Grafton, N.S.W., died suddenly on Dec. 26th, and it appeared that he had taken a fatal dose of hydrocyanic acid. At the magisterial inquiry it was found that the deceased committed suicide while temporarily insane. He had been melancholic for some time.

THE INDIAN MEDICAL CONGRESS.

THE SECTIONS.

SURGERY AND OPHTHALMOLOGY.

DEC. 26TH, 1894.

Presidential Address upon the Influence of Percival Pott, Syme, Simpson, and Lister on Modern Surgery.

[Surgeon-Lieutenant-Colonel Edward Lawrie, M.B. Edin., delivered his presidential address in the Section of Surgery. Commencing with an eulogium upon British surgery in India, and quoting the case of an ovariectomy successfully performed by one of his own pupils, who had for assistants three perfectly untrained laymen, he passed to the consideration of the subject of his paper, saying:]

"I have thought long and anxiously over the problem of the best way of occupying the time at my disposal for the delivery of the formal Address on Surgery before this, the first Indian Medical Congress. The conclusion I came to was that we cannot do better than consider the influence of four great British surgeons on modern surgery—Percival Pott, Syme, Simpson, and Lister. Percival Pott represents the surgery of the latter half of the eighteenth century. He resigned the office of surgeon to St. Bartholomew's Hospital in 1787. Syme and Simpson resigned their posts of professors of clinical surgery and of midwifery respectively in the University of Edinburgh nearly a hundred years later. Pott and Syme both served their schools, as Pott used to say of himself, "man and boy," half a century. In one of his well-known tracts Pott says: 'Our fathers thought themselves a great deal nearer perfection than we have found them to be; and I am much mistaken if our successors do not, in more ways than one, wonder both at our inattention and our ignorance.' Up to the time of Pott the state of surgery was imperfect. Operations were unnecessarily painful. The maxim *dolor medicina doloris* was accepted as fully demonstrated. Dressings were painful; the actual cautery was prepared as part of the necessary apparatus when the surgeon paid his daily visit to the hospital; and the natural processes of healing were either not recognised or disregarded. Pott's biographer states that he lived to see these remains of barbarism set aside and a more rational plan, of which he was the chief author, universally adopted. Pott was singularly successful with the trephine, and his

essay on Injuries of the Head is well worth careful study in connexion with the recent advances in brain surgery for which we are so much indebted to the splendid work of Ferrier and Victor Horsley. Pott discovered that, when the bone inflames after a blow on the head and a puffy inflammatory swelling makes its appearance in the scalp covering it, this generally indicates suppuration exactly opposite the same spot, on the inside of the cranium, which may be relieved by laying on the trephine. Pott published a most interesting and remarkable series of cases of head injury, numbers of which were lost from simple inflammation and pressure or from sepsis. There is very little doubt that most, if not all, of the cases to which I refer would have recovered if he had known the secrets of antiseptic surgery, which we shall see later he very nearly stumbled on to accidentally, and the modern use of antimony in the prevention of simple inflammatory conditions. When inflammation of the contents of the skull threatened to arise after injury of the head Pott's only available remedies consisted mainly of phlebotomy and the trephine, and he certainly used them most freely. Where he employed phlebotomy and the trephine in the cases of threatened intra-cranial inflammation we now use antimony, either in good big doses at long intervals or in small doses frequently repeated, and if it is a simple uncomplicated inflammation the antimony often cuts it short and saves the patient's life and obviates the necessity for an operation."

[Surgeon-Lieutenant-Colonel Lawrie then went on to mention the improvements introduced by Pott in the treatment of fistula in ano and internal hemorrhoids. Continuing, he said:]

"I much regret that time will only permit me to draw your attention to one more subject in surgery on which Pott left the record and stamp of his genius. I allude to *fractures*, and it is curious to note that almost every word he wrote on the principles of their treatment more than a hundred years ago is true to-day. He begins his tract on fractures and dislocations with the following quaint words: 'No part of surgery is thought to be so easy to understand as that which relates to fractures and dislocations. This is the opinion of a considerable section of the general public. They regard bone-setting as no matter of science; as a thing which the most ignorant farrier may become soon and perfectly master of; nay, that he may receive it from his father and family as a kind of heritage.' In the treatment of fractures Pott insisted on the importance of setting the fracture at the earliest possible moment after its infliction, and that it is wrong to wait for pain and swelling to subside, as these and other symptoms of the injury are due to, and are best remedied by rectifying, the faulty position of the broken fragments. But the pre-eminent principle we owe to Pott is that, considered abstractedly, neither extension nor counter-extension can even be necessary on account of the mere fracture—i.e., on account of the mere fragments of the broken bone, which if left to themselves remain just as motionless, just as absolutely still and with as little tendency to move, as these pieces of bone on the table. Pott showed that nothing can move the fragments of a broken bone but the muscles which are attached to them, and that the difficulty we meet with in making and in keeping up extension of the broken limb proceeds from the muscles only. To extend the muscles by putting the limb into that position which puts them into a state of tension is, if not to irritate them and cause them to offer resistance, at all events to give them their greatest power, whether of displacing the fragments of the broken bone or of opposing their reduction or setting. On the other hand, putting a limb into such a position as shall most relax the whole set of muscles belonging to or in connexion with a broken bone must best answer the purpose of incapacitating the muscles from acting upon it, and must remove the resistance they have it in their power to make attempts to reduce or set it. It follows that such a position of the broken limb as will best relax the muscles must be the best for setting the fracture and for keeping it set afterwards. A moment's reflection will prove to you that this is generally the position which the patient naturally puts a broken limb into in order to obtain ease until he gets proper assistance. The general position with regard to fractures then, comparing Pott's day with our own, is this: the obstacle to the setting of fractures is the action of the muscles. In Pott's time there were two available means of overcoming or counteracting this action—namely (1) extension, and (2) position; and Pott proved that extension is both unnecessary and painful. Modern surgery is armed with

three ways of doing the same thing—namely (1) extension, (2) position, and (3) chloroform. If extension is employed chloroform ought to be given in the setting of all fractures; but if position is relied upon—and it is entirely sufficient—the pain is so slight that chloroform is unnecessary in the setting of any fracture but the one exceptional fracture of the thigh. Not the least interesting feature in the connexion between Pott's principles of fracture treatment and modern surgery is the fact that the great surgeon himself once sustained a compound fracture of the leg. Amputation was decided on at a consultation of the St. Bartholomew's Hospital staff, and was within an ace of being performed when the opinion of one alone of the consultants prevailed and the limb was preserved. The fracture then united without inflammation, exactly like a simple fracture, and Pott attributed this happy result to the circumstance that when the protruding end of the broken tibia was reduced the valve-like opening of the soft parts closed behind it in such a way that the entrance of air into the wound was prevented, thus accidentally foreshadowing, a century in advance, the scientific aseptic method of the immortal Lister. In 1866, exactly 110 years after Pott's accident, which so nearly led him to the discovery of Listerism, Lister himself treated a compound fracture in the Glasgow Royal Infirmary by methodically preventing the entrance of air into the wound by means of an artificial scab of lint, blood, and carbolic acid; and in this way he opened up the new era which we call, and which is in truth, 'modern surgery.' The connecting link between Percival Pott and modern surgery is Syme. Pott died in 1783; Syme was born in 1799. Throughout his career, which ended in 1870, Syme upheld and consolidated Pott's surgical principles; but he was not the man to follow any beaten track, and during the fifty years he practised and taught he introduced many new measures into surgery which will perpetuate his name as long as medicine lasts. In 1823, when barely three and twenty years of age, he performed amputation at the hip-joint for the first time in Scotland; and in 1829 he excised the whole of the upper jawbone for the first time in Great Britain. A report of the latter case reached THE LANCET, and was published with the following editorial note in a bracket: 'We need no ghost from the grave to tell us what has become of the patient,' but a month later THE LANCET had the pleasure of recording his complete recovery. Syme established the operation of excision of joints in England; his operations on aneurysms have never been surpassed in boldness and originality; he showed that amputation of the whole arm with the scapula is a feasible procedure; and he was the first surgeon in England who successfully removed the whole tongue. It was not alone in great things that Syme excelled. It is to him that modern surgery owes the simplest and most perfect operation for harelip; the only faultless amputation known, that of the foot by the heel-flap; and the easiest and most lasting method of curing organic stricture of the urethra. With regard to Syme's amputation I need merely remind you that the tendency of all modern surgery is to make amputation flaps of skin. The next noteworthy phase of Syme's genius, which has had a remarkable effect upon modern surgery, was his almost intuitive perception of the cardinal point or essence, not only of an obscure case of disease, but also of new procedures and propositions in surgery. When Simpson brought *chloroform* to the notice of the profession Syme very quickly perceived the nature of its action and laid down rules for its administration, which have been proved by clinical experience and by the experiments of the Hyderabad Commission to be entirely sufficient when strictly followed to ensure the safety of the patient. Syme's rules are and I beg you will consider them well:—'The points we consider of the greatest importance in the administration of chloroform are: first, a free admixture of air with the vapour of chloroform, to ensure which a soft porous material is employed, presenting a pretty large surface instead of a small piece of lint or any other apparatus held to the nose; secondly, if this is attended to, the more rapidly the chloroform is given, the better, till the effect is produced, and hence we do not stint the quantity of the chloroform. Then, and this is the most important point of all, we are guided as to the effect, not by the circulation, but entirely by the respiration; you never see anybody here with his finger on the pulse while chloroform is given. We never continue the inhalation beyond the point when the patient is fully under the influence of the anæsthetic.' Finally Syme accepted and adopted Listerism as the perfection of

surgical science, in that it keeps away or removes from wounds every source of external irritation and contamination which can interfere with the natural processes of healing or cicatrization. The Listerian principle came to Syme as the most fitting termination of his labours in surgery, and he welcomed it with the quiet satisfaction of a successful general who has taken a leading part in an arduous campaign which ends in long anticipated victory. This brings us to the consideration of the direct influence of Sir Joseph Lister on surgery. However much the teaching of Pott, and later of Syme and his contemporaries, had led up to the antiseptic principle, or had, as it were, prepared the way for it, it came eventually as a surprise, and it revolutionised the surgery of the civilised world. The change was complete and final, though Lister has since improved his methods as the principle has been developed and circumstances have seemed to require it. The antiseptic method of Lister showed us exactly how to attain the very thing surgeons had been striving after for so long, but which no one had previously discovered. No surgeons had made greater efforts in this direction than the French. I spent the year 1869 studying medicine in the Paris hospitals, first in the service of Alphonse Guérin at the St. Louis Hospital, and later in that of Maisonneuve at the Hôtel Dieu. Alphonse Guérin thought he had discovered the panacea for surgical fevers and blood poisoning in lavish dressings of alcohol. He was undeceived by one of the worst outbreaks of pyæmia in the St. Louis Hospital which it is possible to imagine—one of his patients actually died from pyæmia after the amputation of a finger. Maisonneuve worked in a different fashion. His idea was that it was impossible to keep the germs of putrefaction, whatever they might be, out of wounds, and he therefore endeavoured to prevent organic fluids from collecting in them by exhausting them with an air-pump, which the patient had to work himself, and which was on this account impracticable. In other places it was hoped that by giving patients more cubic space in larger, better constructed, and better ventilated hospital wards success would be obtained. As to the value of this plan many of you may recollect what happened here in Calcutta. The Medical College Hospital was very nearly condemned as unfit for the treatment of surgical cases on account of inveterate pyæmia and erysipelas. At one time all the surgical patients were placed in tents; but, if anything, the erysipelas and blood poisoning were worse in the tents than they had been in the wards. All other attempts to successfully stamp out septic processes in wounds failed, and there is no more to be said about them than that they failed because they were not Listerism. The changes brought about by the introduction of the Listerian principle were mainly twofold—one immediate and the other remote. The immediate change was that hospitals in every part of the world, which had previously been considered unhealthy, became healthy under the antiseptic system, and it was found possible to keep surgical wounds absolutely free from sepsis and infection, no matter in what hospitals they were treated. The remote change effected by the Listerian principle in surgery is very ably explained in Watson Cheyne's paper on *Modern Methods of Wound Treatment* in THE LANCET of Nov. 17th, 1894."

[After some further remarks on Listerism the President passed to Sir J. Simpson and his application of the use of chloroform to surgery, and referred to the results of the Hyderabad Commission as proving that Simpson and Syme were right in their theories, and continued:]

"Finally, as you all know, the acknowledged safety of chloroform in India has been accounted for in various ways by our brethren in England. It does not appear to have struck them that the real reason for the safety of chloroform in this country is that for many years past the principles of Simpson and Syme have predominated throughout the whole of India; and it is not too much to state that the general adoption of these principles in modern surgery in future will alone render the benefits of Simpson's priceless discovery unlimited. Gentlemen, I have finished. I have endeavoured to bring before you this morning some of the principles of surgery which have been handed down to us by men like Pott and Syme. Their greatness and success as surgeons lay largely in their profound knowledge of anatomy, their choice of simple procedures and methods of operation, and their undivided responsibility for everything connected with the treatment of their patients."

The President concluded by an eulogistic reference to the medical profession in India.

PROCEEDINGS IN SECTION.

DEC. 28TH, 1894.

The following are abstracts of papers read in the section of Surgery and Ophthalmology :—

Vesical Calculus in India, its Distribution, and a Theory of its Cause.

Surgeon-Captain A. E. ROBERTS read a paper upon Vesical Calculus in India, its Distribution, and a Theory of its Cause. In this paper he said : "It has long been a commonplace of a certain rough-and-ready order of pathologists to assert the origin of vesical calculus in 'salts in the drinking water.' The theory commends itself by its beautiful simplicity; the patient takes in 'stone' at one end and passes it (or fails to do so) at the other, and makes as little demand upon the thoughtful intelligence of those who accept it as it received in the process of its conception. In the course of some observations on the chemistry of the excretions of natives of India I was struck by the fact, which runs counter to the routine doctrine of the schools, that the excretion of uric acid was far more marked in well-fed natives who never touch meat (or rarely) than in the ordinary European official living in this country. It then occurred to me that some one had attributed 'stone' in Norfolk to the excessive farinaceous diet of the people (? dumplings), and it was thought to be a promising subject to trace the incidence of the disease in its relation to diet in different parts of India, and on arriving at a definite fact of connexion to endeavour to explain cause and effect in physiological terms. Very roughly India may be divided into three great agricultural regions: 1. Extra-tropical India, the wheat region—the great plains of Northern India, where rainfall is moderate or small and the winter temperature comparatively low. This region almost corresponds with that lying north of the January isotherm of 65. The principal grains are wheat and barley. 2. The damper portions of tropical India, the rice country—all Bengal proper (including Assam), all the region north of the Krishna from the Bay of Bengal to the edge of the Trap country in the Deccan, together with the coast and delta lands of South India. 3. The drier parts of tropical India and all the black soil country, the millet region—besides the whole Deccan Trap area, with the exception of the west coast; this comprises all the black soil tracts of Southern India, and a very large proportion of the undulating red soil country. The principal grains are *jamari* (or *cholam*) and *chajra* (or *kambu*)."

[Surgeon-Captain ROBERTS then proceeded to give statistics of the various districts of India under grain cultivation, and continued:]

"Let us set down at once the relative incidence of calculus of the bladder in the various areas as above. The figures we give are the annual average prevalence of a varying number of years, as shown by all the various operations for calculus, and great care has been taken to search all available records, though these are in many cases very imperfect.

Different Areas of Hindustan in the order of "Calculus prevalence."

Area.	Proportion of population eating rice.	Rates of calculus operations per mille of population	Population in millions.	Average annual operations.	Remarks.
1. Punjab	$\frac{1}{2}$	0.078	19	1482	—
2. N.-W. P. & Oudh	$\frac{1}{2}$	0.021	45	925	—
3. Bombay	$\frac{1}{2}$	0.017	16 $\frac{1}{2}$	283	—
4. Central Provinces	$\frac{1}{2}$	0.011	9 $\frac{1}{2}$	112	—
5. Bengal Proper ...	$\frac{1}{2}$	0.0034	69 $\frac{1}{2}$	218	Numbers raised by Behar.
6. Madras	$\frac{1}{2}$	0.00067	31	21	
7. Assam	$\frac{1}{2}$	Nil.	4 $\frac{1}{2}$	Nil.	None known.
Total annual average operations for all India					3041

"1. In British India, then, every year no less than 3041 calculi are removed from the bladders of natives, or rather 3041 operations for the removal of as many (and more)

'stones' are performed, and of this total nearly one-half occur in the Punjab. 2. The next point to note is that the order of calculus prevalence is in inverse ratio to the population eating rice as its staple food upon each area. 3. Where practically the whole population lives on rice as its staple food calculus disappears, as in Assam. 4. As we leave the coast areas and mount ever higher above sea level towards the interior calculus increases in prevalence. Though Bombay stands third on the list its coast area is very limited, the rice-eating population is small, and the calculus rate represents the high-lying millet region of the Deccan. We place a double contrast in view in the above sketch—(a) a contrast between the staple foods of certain defined areas; (b) a contrast between the sea-coast and the interior. What we here set ourselves to show is that vesical calculus in India follows as a result of the factors involved in this double contrast. A very interesting battle drama is constantly going on in the upper layers of the soil—a fight between carbonic and silicic acids for possession of the bases, sodium and potassium, and the result is that the sea accumulates all the sodic chloride, while the soil inland is robbed of this salt and contains little else than potassium salts (see Bunge). Now the amount of NaCl in any organism corresponds and varies with the amount in the environment. 1. Inland populations are, to a certain extent, battling with an unfavourable environment as regards the absence of the necessary salt, in which they originally developed; this also serves to explain the unconquerable desire which the great majority of people exhibit for salt in their food. 2. It explains the necessity for a liberal allowance of salt to children, our "embryological ancestors," if we may so call them, and the consequences of its deprivation will be the more apparent in pathological effects. The offices which common salt performs include—(a) The construction of organs; (b) it is the chief factor in the formation of gastric juice; (c) It dissolves 'globulins'; (d) The nitrogenous products of metabolism cannot be eliminated by the kidneys in the absence of chlorides."

[Surgeon-Captain Roberts then discussed with great care the dietetic value of sodium chloride, with special regard to the physiological chemistry of the body, and showed how absolutely necessary it is for vegetable feeders to have a free supply of salt. He went on:]

"The people who take salt, though differing in every other respect, are all characterised by a vegetable diet. In the same way those who do not use any salt at all are all alike in taking purely animal food. We have also seen that this urgent necessity for salt in vegetable diet depends upon the eliminating action of the excess potash salts, and if various food stuffs are compared in respect of this potash constituent it will be found that the proportion of potassium to sodium is highest in the very food staples on which the vast bulk of the Indian population is supported—that is to say, highest in all the common Indian food stuffs save rice."

[Surgeon-Captain Roberts then drew a parallel between the diets of a native and a European soldier, pointing out how deficient salt is in the former's dietary. He went on to tabulate the results arising in the human economy from a diet exhibiting insufficiency of NaCl, and proceeded:]

"Now the most important Indian diet stuffs—i.e., the cereals and leguminosae, not rice—yield urine which is as acid as that due to a meat diet, under normal conditions of digestion, because they are rich in albumen and phosphates and in calculus. The evil factors at work are, as we have shown, (1) the great amount of albumen and (2) the poverty of bases (due in great extent to deficiency of the common salt necessary, which are able to neutralise the uric and sulphuric acids formed from albumen). One more point as regards the liability of children to calculus. The amount of kidney excretion per kilogramme of body weight is far greater in children than in adults. Parkes gives the following statement:—

	In children.	In male adults.	Excess in children per kilogramme.
Water	59 c.c.	23 c.c.	36 c.c.
Urea	0.973 gram.	0.500 gram.	0.473 gram.
Urea and volatile salt...	0.279 "	0.151 "	0.128 "
Chlorine	0.308 "	0.106 "	0.202 "

1 Physiological and Pathological Chemistry.

Hence in children the amount of chlorine is three times greater than in adults (note, also, the excess of nitrogenous products), and hence the special necessity of extra NaCl and the special liability to concretions in children. Again, NaCl acts as absorbent, not only of crystalloids, but of colloids, fibrin, mucin, and albumen. Hence Jones first showed the solvent action of NaCl on urate of ammonium, and this is also the case with uric acid. One part of uric acid requires 8000 parts of water to dissolve at the body temperature, whereas the addition of $\frac{1}{2}$ per cent. of NaCl doubles its solubility, and 2 per cent. of NaCl quadruples its solubility (Plowright). Perfectly healthy urine should show no appreciable deposit; when it becomes concentrated (as it is liable to do in natives for reasons given) uric acid is thrown down as a urate. This may occur within the bladder, and the presence of a solid body in any part of the urinary tract favours depositions greatly. Dr. Goodhart has put it on record that the specially farinaceous feeders among children are those addicted to passing uric acid in abundance.² Lastly, Hirsch, in his great work on 'Geographical and Historical Pathology,' remarks on 'the mystery of the excessive prevalence of stone in the tropics,' while 'gout' is practically unknown. Now Dr. Haig, to whom I return thanks for much kindly personal help, has shown that the excretion of uric acid is greatly influenced by the comparative alkalinity or acidity of the blood, and that the amount of acidity may be made to vary within very considerable limits by the kind of food and by the process of digestion (as we have seen), as well as by the use of drugs. Uric acid in an acid blood tends to get stored in the spleen and joints, but when the blood is rendered alkaline (as we have seen it by deficiency of NaCl and excess of K) uric acid is dissolved out and excreted. We have then (1) greater tendency to formation of uric acid in natives, with excess of albuminates and their deficient metabolisms; and (2) very complete elimination of this uric acid by alkaline blood (due primarily to deficiency of common salt) as far as the bladder. The obvious result is that gout must be a very rare disease among the natives, because the alkaline blood stream never permits storage of the uric acid in the system or the joints. Sir W. Roberts³ draws attention to the effect of sleep and long daily fasts in increasing the amount of uric acid excreted, and these are assuredly factors in far greater play among natives in India with their fast from evening to mid-day and their somnolent habits than in Europe. The very common affection of enlarged spleen is another factor in the excessive excretion of uric acid. Pettenkofer found the normal average to be 0.872, while in a case of enlarged spleen it rose to 1.424 part in 1000. A case of a boy of sixteen years of age is recorded who excreted 18.28 grains daily, while his normal average should be about 6 grains. We have then perhaps an excessive production of uric acid by the factors at work just described, and certainly far more complete elimination of it from the body and tissues by the alkaline blood stream as far as the bladder. What, then, causes its deposition here? I do not think we can at present detail with certainty the steps in the process, which are doubtless varying and complicated. One important factor, perhaps, is the neutralisation of the acid sodium phosphate (the uric acid solvent) by the aromatic sulphates; and we know that the alkaline bases are diminished which go to neutralise the sulphuric and uric acids. My chief object to-day has been to draw attention to some important dietetic considerations underlying calculus formation in India. More intimate and sustained observation of the chemistry of the excreta may perhaps avail to clear up doubtful points, and piece together the scattered fragments of our little knowledge, and I hope in a fuller paper to throw some light on this important problem."

A Retrospect of Ophthalmology in Bengal.

LAL MADHUB MUKERJI, RAI BAHADUR, L.M.S., F.C.U., President and Teacher of Ophthalmology, Calcutta Medical School, and President of the Indian Medical Association, read a paper on the above subject. He began by saying that though ophthalmology as an exact science was as modern as bacteriology, as a crude art it was known in the East from very ancient times, and that although until recently Oriental practitioners knew no anatomy or physiology, yet they had treated successfully nearly all the best-known disorders of the human

eye. With this preamble he passed to consider modern ophthalmology in India and especially in Bengal.

"The history of modern ophthalmics in India dates from the establishment of the Medical College in Bengal in the year 1835. Prior to this a number of surgeons of the old Honourable East India Company's service had opened dispensaries in various stations in Bengal, notably in Calcutta, where the poor had their ailments gratuitously treated and often at the entire cost of these medical men. In these outdoor infirmaries, as they were called, there were a few beds for operation cases, and here Western medicine gained many of its earliest disciples, who became useful and distinguished practitioners. Not, however, until 1835—that is, on the opening of the Medical College Hospital in Calcutta—was any well-organised effort made to teach anatomy and physiology. Sixteen years later Western ophthalmics found an able exponent in Dr. Martin, whose appointment to the chair of ophthalmic medicine and surgery dates from the year 1851. His successors, Mr. Macnamara and Drs. Archer, Cayley, and Jones, have all been men of great ability, and have left brilliant legacies of their work behind them. Charles Macnamara, who is now one of the leading ophthalmic surgeons of London, gave India the first work of eye surgery and medicine based on Indian experience, and his book is still a valuable guide to our students, in spite of the gigantic strides that ocular therapeutics have made in the past two decades. I will deal briefly with some special points connected with ophthalmics in Bengal, and of necessity I can only touch the merest fringe of my subject, which has admittedly a very wide range. The world has been busy with ophthalmics, and never in the history of our profession has there been such a profuse display of knowledge and original research in ocular therapeutics as we have seen in Great Britain, America, France, Germany, and Europe generally at the present time. It is not my province to deal with new light and recent knowledge, but I am called on to sift the garnered grain of past generations, and to present, if possible, in a nutshell the work of others whose lives and records are now matters of history. In Bengal we have ocular diseases common to India generally, but I am concerned only with this province, and the limit of time and space remind me, and you also, of the duty of brevity. My remarks, therefore, will scan such familiar disorders as cataract, ophthalmia neonatorum, glaucoma, atrophy of the disc, and disorders of refraction and accommodation. The occurrence of cataract in Bengal is very common, and this may be judged by the fact that on an average nearly 300 operations have been performed yearly in the Eye Hospital of the Medical College during the past thirty years. The most generally performed and most successful method of operating for cataract in Bengal has been, and is still, by simple extraction of the lens without iridectomy, the pupil being previously dilated with atropine. The incision involves about one-third of the cornea and is made as nearly as possible in the sclero-corneal junction. There is much in success which depends on the individuality of the operator, and this cannot be exaggerated. Clean steady fingers and a delicate, dexterous touch, with a high moral appreciation of the responsibility, do more to make a record in successful ophthalmics than all the book reading in the world. I am able to corroborate this assertion by my own experience in watching the exceptionally able and dexterous operative work of my old teacher and friend, Mr. Charles Macnamara, a former professor of ophthalmics in the Calcutta Medical College Hospital. His modified linear extraction, which bears his name, involved no iridectomy. The pupil having been previously well dilated, his incision, so perfectly performed by a special knife of his own invention, left it an easy matter to introduce a scoop, and with a gentle pressure exerted upon the circumference of the lens caused it to be rotated on its axis to find a rest in the concavity of the scoop, and thus delivered from the eye with the least possible disturbance of the adjoining structures. The lens with its capsule entire so freed resulted invariably in the most perfect success of vision possible. Such, too, was the special individuality of Professor Henry Cayley of our College, whose operative work with cataract was extremely successful from the combined methods of Professor Macnamara and Von Graefe. The success of these two Calcutta ophthalmic surgeons gave a result of 87 per cent. of cures by Macnamara's method and 77 per cent. by von Graefe's. It is important in this connexion to state that these results were from hospital patients, in whom there was no choice of selecting suitable or unsuitable

² Brit. Med. Jour., Aug. 1st, 1891.

³ Croonian Lectures, 1892.

cases. The records of these surgeons in private practice, better where selection was the rule, yielded far better results, and a success of 90 to 95 per cent. was nearer their average. Personally, my experience during a practice of nearly thirty years, which has been guided largely by my association in work at the Ophthalmic Hospital for fourteen years with Mr. Macnamara and Drs. Cayley and Jones, has led me into selecting the operation for cataract usually performed by these surgeons combined and modified—that is, a von Graefe, —the sections being, however, purely corneal, and thus avoiding iridectomy in every possible case, and I may with gratification say that I have had results that equal those of my revered teachers. The operation which I have been accustomed to perform for many years past is preceded by preliminary antiseptic precautions. I wash my face and hands, and then cleanse the face, eyes, and eyebrows of the patient with cotton and a solution of boracic acid (one grain to an ounce of water), the lotion being freely put into both eyes while the patient is in bed. I now drop a freshly prepared 3 per cent. solution of cocaine into the eye to be operated on, which has already for two or three days been under the influence of atropine. The instruments are dipped in boracic lotion and then used. Special attention is paid to the knife, which is tested before operation as regards sharpness and polish. I use a stop-speculum. The section made by a Graefe's knife is corneal, and occupies nearly the upper third of the cornea. The left hand is used for the left eye and the right for the right. The section is completed by cutting directly through the cornea. It is so cut through that it allows the edges of the section to come directly together. I then take the curette and place it on the sclerotic at the lower part near the corneo-sclerotic junction and deliver the lens by pressure. I allow a little time to elapse, if necessary, for accumulation of aqueous humour to reveal any lenticular substance which may remain behind. The iris invariably gets into its place; if not, I set it by gentle manipulation or by allowing the rays of light to act upon it. Sometimes it may be that I have to take the aid of the curette to adjust the section and to replace the iris. I then drop in a four grain solution of atropine to put the iris at rest, and apply a pad and bandage to both eyes. I perform iridectomy, if the pupil has not responded sufficiently to atropine, or if the lens is hard and large, or if there is adhesion of the pupil, where the lens requires to be removed by a vectis or a curette, or if by accident the iris be injured, and when the patient is incapable of enduring the quiet indispensable to the prevention of prolapse of the iris. Concerning loss of vitreous in cataract operations, this accident was held for many years by operators in Great Britain and on the Continent as a calamity involving insecurity to ataversion in cataract operations. It is a remarkable fact that Mr. Charles Macnamara held and taught as far back as 1868 that loss of one-fourth of the vitreous was no bar to a perfect recovery of sight. His declaration on this matter was stoutly contested in London, but time has proved that Macnamara was right, and now our friends in Europe are reconciled to his views."

[Statistics followed with regard to loss of vitreous, showing that even when more than one quarter of this humour escaped the percentage of success was 77.]

"There is a remarkable augmentation of cures in recent times, due probably to a more extended knowledge, the selection of operations, and to antiseptics. But there is a regrettable drawback that every ophthalmic surgeon in Bengal has to contend with—that is, the need of a practical surgical instrument maker to sharpen cataract knives, as all instruments have to be sent to England for repair. Reverting to the subject of augmented success in cataract operations, the recent experiences of the Calcutta Medical College Hospital, in which, undoubtedly, individuality as a feature conducing to success has played an important part together with modern antiseptics, we find the report of the Eye Hospital of Calcutta with a percentage of cures that has reached the high figure of 95.56 per cent., but 76.13 has been the average for the past six years. Surely, this is an achievement which reflects considerable credit on Professor R. C. Sanders, our present ophthalmic surgeon. In recent times the prevalence of diabetes in Bengal has added largely to the occurrence of cataract, and it is remarkable that these patients derive considerable benefit from a judiciously performed cataract operation. The latter stages of diabetes, which usually terminate in nephritic changes, afford abundant evidence of the great value of the ophthalmoscope as a diagnostic agent of nephritic retinitis. Bengal is the land of mendicants. It is no exaggeration to say that a million

or more of the people of this rich and fertile province are beggars. This fact is of enormous significance and interest when it is found that over sixty per cent. of these helplessly poor fellow creatures are totally blind, and, further, that over 40 per cent. of these visionless objects owe their destruction to ophthalmia neonatorum. Total disregard of the simplest hygienic laws in the lying-in room, the absolutely careless neglect of cleanliness of the infant immediately after its birth, are ruefully responsible for more than half the blindness one sees in Bengal. Household therapeutics limits the treatment of sore eyes in infants to penicilling the eyelids with black sulphide of antimony or with butter and lamp-black (*kajul*), or washing them with milk and warm water, or *neem* infusion; and these ablutions are so faultily done as to allow the lids to ensack quantities of purulent matter, and thus the destructive and corrosive changes of the corneal structures go on till vision is hopelessly ruined. If only our *dhais*, or native midwives, could be trained sufficiently to regard the vaginal discharges as peculiarly prone to infect the eyes of their infant charges, how much the number of Indian mendicants could be reduced and how much of happiness could be added to the blighted lives of our fellow-creatures. For the treatment of ophthalmia neonatorum I have found the early application of a 2 per cent. solution of nitrate of silver as eye drops most beneficial. Of course, it is an eminently preventable disease, and if sufficient cleanliness be observed in washing out the vagina before birth, and in seeing to the eyes immediately after birth, it can with certainty be shorn of its ill-effects. As soon as the head of the child is born both eyes should be wiped with cotton wool before they are opened to prevent infection by any discharge that may be present, and the nurse should be instructed, when washing the child for the first time, to use different water for the eyes with a pledget of cotton wool. When this has been done one drop of a 2 per cent. solution of nitrate of silver should be dropped inside each of the eyes. Of course, while cleanliness is absolutely necessary in every case, it is only essential to guard the eyes of the infant by nitrate of silver solution as a collyrium in those cases in which there is a suspicion of impure vaginal discharges. Frequent cleansing of the eyes is a *sine qua non* of treatment, and while antiseptic solutions of such reagents as boracic acid, perchloride of mercury, permanganate of potash, &c., play a helpful part as aids, the destruction of the morbid germs, which created the disease, is most effectually performed by nitrate of silver. Granular conjunctivitis is a very common affection among the poor, consisting, as it does, of the formation of granular tracheomatous bodies in the conjunctival connective tissue. I have found it extremely prevalent in Bengal. It is undoubtedly due to malhygienic conditions of life. Among the various forms of treatment I have found nothing to equal dusting the lids with tannic acid both morning and evening, then once a day, and later on every other day. In the meantime keep the eyes scrupulously clean by the frequent application of antiseptic drops, such as boracic acid and perchloride of mercury. Tannic acid sets up sufficient inflammatory changes to cause absorption of the neoplastic bodies. Sulphate of copper was much used in former days. We still apply the *lapis divinus* to granular lids. But I think tannic acid can better reliably take its place. The various reputed specifics of a decade ago, such as acetate of lead, quinine dusting, solution of perchloride of mercury, and strong solution of nitrate of silver, have all had their day; but sanitary measures, generally tonics, and tannic acid dusting, hold the highest place in affording relief and cure to this troublesome and painful disorder. Glaucoma is another commonly prevalent disorder in Bengal. Iridectomy is the sheet-anchor of cure of this most dreadful affection. In Bengal much difficulty is experienced in inducing sufferers from glaucoma to undergo the necessary surgical operation of iridectomy, and so recourse has long been had to various other forms of relieving intra-ocular tension by means of leeching and by ordinary antiphlogistics; but more recently the discovery of the great therapeutic value of eserine has placed in the hands of Indian practitioners a most accommodating and efficient aid. The use of eserine affords relief for some time, and by-and-by the patient makes up his mind for an iridectomy. In many cases a fair field of vision is maintained by the use of eserine, while the further progress of the disease is cut short. In atrophy of the disc (a common ailment) the use of eserine collyria and the subcutaneous injections of atropine have afforded the best results. It is remarkable how prevalent this disorder is among excessive tobacco

smokers and in those who use ganja and alcohol. The rigorous enactments of the Bengal Education Code, and the high mental tension which arises out of the keen competition that marks the training and education of our youths of to-day, have resulted in a most deplorable augmentation of the errors of refraction and accommodation; and so we find boys and girls of twelve to sixteen years decorated with spectacles—a sight that would horrify our forefathers were they to return to their mundane sphere."

[In concluding his paper Professor Mukherji earnestly appealed for a more systematic and thorough training of students in Indian colleges in eye diseases, and paid a warm tribute of gratitude to England for the part she had taken in advancing Indian medical science.]

Medical News.

DR. WILLIAM SLIMON of Bow, E., has been placed by the Lord Chancellor upon the Commission of the Peace for the County of London.

FOOTBALL CASUALTIES.—During a recent match between the Notts County and Grimsby Town teams a player fractured his clavicle.—At Tipton, Staffs, a young man while playing a match sustained "internal injury," from which he died last week.

ON Friday, Jan. 25th, the governors of the Royal Victoria Hospital, Bournemouth, held their annual meeting in the Havergal Hall, the Earl of Malmesbury presiding. According to the report 4225 cases had been treated during the year, exceeding by 566 the number under treatment in 1893. The expenditure for the year had exceeded the income by £184 15s. 10d.

THE seventh annual meeting of the Brighton, Hove, and Preston Dental Hospital was held on Wednesday, Jan. 30th, at the institution, Alderman Dr. J. Ewart presiding. During the past year the admissions to the hospital had been 2993, anaesthetics being used in 324 cases. The chairman remarked that the hospital was still in a very flourishing condition, but regret was expressed at the small number of donations received from workmen's boxes, seeing that 50 per cent. of the patients were either workmen or members of workmen's families.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Goldscheider, Kroenig, Immanuel Munk, and Leopold Landau have been granted the title of Professor.—*Kazan:* Dr. Kotovshchikoff has been promoted to the Professorship of Clinical Therapeutics, in succession to the late Dr. Khomiakoff. Dr. Kazem-Beck has been appointed Extraordinary Professor of Medical Diagnosis.—*Kharkoff:* Dr. Anfimoff of Tomsk has been appointed to the chair of Neurology and Mental Diseases. Dr. Orshanski has been promoted to an Extraordinary Professorship of the same subjects.—*Paris:* Dr. G. Filomusi-Guelfi has been promoted to the Ordinary Professorship of Forensic Medicine. Dr. Fasola has been recognized as *privat-docent* in Experimental Physiology.

OBSTETRICAL SOCIETY OF LONDON.—The annual general meeting of the Obstetrical Society of London was held on Wednesday last, when the principal business was the election of officers for the ensuing year. The proceedings on these occasions are generally of a formal character, the list recommended by the council being usually adopted *ex bloc*. This time, however, we are informed many Fellows of the Society were dissatisfied at not finding Dr. Cullingworth among those recommended for high office by the council, and it was known that at the meeting on Wednesday they would endeavour to give effect to their views. The result was that in a full meeting the list recommended by the council was adopted, with the exception that Dr. Cullingworth was elected to the post of Chairman of the Board for the Examination of Midwives. We append the complete list:—President: Francis Henry Champneys, M.A., M.D. Vice-Presidents: James Duncan, M.B., John H. Galton, M.D., Peter Horrocks, M.D., and Thomas Cargill Nesham, M.D. (Newcastle-on-Tyne). Treasurer: John Baptiste Potter, M.D. Chairman of the Board for the Examination of Midwives: O. J. Cullingworth, M.D. Hon. Secretaries: William Duncan, M.D., and W. Radford Dakin, M.D. Hon. Librarian: John Phillips, M.A., M.D.

WE learn with regret of the sudden death of Mr. Burroughs, of the firm of Messrs. Burroughs, Wellcome, and Co., from pneumonia, at Monte Carlo, on Wednesday last.

THE yearly meeting of the Harrogate Royal Bath Hospital and Rawson Convalescent Home was held at the hospital on Jan. 24th. The sixty-ninth annual report was presented and showed that upwards of 1000 patients had received benefit during the eight months in which the hospital and home were open for their reception. Of these patients 831 were treated in the Royal Bath Hospital, including cases of eczema, psoriasis, gout, rheumatism, and hepatic disease. Two deaths occurred—one from rupture of a bloodvessel and the other from cancer of the liver. The sulphur baths numbered 6457. Two hundred and two cases were treated in the Rawson Convalescent Home.

THE annual meeting of the Jenny Lind Infirmary for Sick Children was held on Jan. 30th at the Infirmary, Pottergate-street, Norwich, the Mayor of Norwich (Colonel Bignold) presiding. An influential company assembled, including the High Sheriff of Norfolk (Mr. J. H. Gurney), the Deputy Mayor (Sir Peter Eade, M.D.) and Lady Eade, Sir Frederic Bateman, M.D., and the Dean of Norwich (Dr. Lefroy). The report showed that the total number of patients last year was 1333, of whom 198 were in-patients. The financial position was satisfactory, the income having been £430 in excess of the expenditure. A medallion bust of the late Madame Jenny Lind was presented to the institution by Mr. Goldschmidt.

THE METROPOLITAN HOSPITAL SUNDAY FUND.—The Right Hon. the Lord Mayor, Sir Joseph Rennals, Bart., presided at a meeting of the Council of the Metropolitan Hospital Sunday Fund on Thursday last, when the following committees were nominated and re-elected:—Committee of Distribution: Sir Savile Crossley, Bart., Sir David Evans, K.C.M.G., Mr. H. Cosmo O. Bonsor, M.P., Captain James Cundy, Mr. Herman Hoskier, Mr. F. H. Norman, Dr. W. Sedgwick Saunders, and Mr. Alfred Willett, F.R.C.S. General Purposes Committee: The Chief Rabbi, the Ven. Archdeacon Sinclair, the Rev. Canon Fleming, the Rev. Canon Ingram, the Rev. Donald McLeod, the Rev. J. Kennedy, the Rev. J. H. Rigg, the Rev. Dr. Marks, the Rev. W. H. Harwood, the Rev. J. F. Kitto, M.A., the Right Hon. Lord Sandhurst, Colonel Francis Haygarth, Mr. Herbert Brooks, Mr. Henry C. Burdett, Mr. F. C. Carr-Gomm, Mr. A. L. Cohen, Dr. J. G. Glover, Dr. C. J. Hare, Mr. Albert G. Sandeman, Dr. W. Sedgwick Saunders, and Mr. Wakley, F.R.C.S. Sir Edmund Hay Currie and Mr. Richard B. Martin, M.P., the honorary secretaries, were re-elected, as was also Mr. H. N. Custance, the secretary to the Fund. Messrs. W. H. Pannell and Co. were appointed auditors for the ensuing year, and the usual courtesies to the Lord Mayor as chairman terminated the proceedings.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

THE fourth session of the twenty-fifth Parliament of the United Kingdom opened on Tuesday, Feb. 5th.

Alterations in the House of Commons.

During the recess extensive and important alterations and improvements have been made in the House of Commons and the buildings adjoining. They are in most part based on recommendations adopted by a Select Committee which sat last session, although they do not follow these recommendations rigidly. Very little has been done in the legislative chamber itself. Some alteration has been made in the arrangements for strangers, and in the Press Gallery the old door has been taken away and two new ones substituted, a change which, it is hoped, will add materially to the convenience of those who use this part of the House. For a long time the heating and ventilation of the chamber have been subjects of complaint by members, but on the present occasion nothing has been done in this connexion. A further report, however, has been made by Mr. James Keith, in which serious defects are pointed out and several suggestions put forward. With this report before them, the authorities of the House should at least be able to do something to improve matters. In the buildings adjoining the legislative chamber several very substantial changes have been made. For instance, the kitchen where the meals of members are cooked has been enlarged and its apparatus supplemented. A magnificent grill has been fitted up. In another part of the building four commodious bath-rooms have been provided, and in their neighbourhood

a hair-dressing room, where members will be able to have a shampoo and "make their toilet." Then there is a new dressing-room with six curtained cubicles, and the servants, who are a very large body and who hitherto have had no special accommodation allotted them for their meals, have been provided with a very adequate Servants' Hall. Considerable addition has also been made to the smoking-room accommodation for members of the House and the Press Gallery. The whole work has cost between £14,000 and £15,000.

Old Age Pensions.

Mr. Henry Broadhurst has given notice that he will seek a date for the discussion of the following motion: "That in the opinion of this House all persons of sixty years of age and upwards shall be entitled to a pension on application to the local authority of the district in which the applicant is resident."

Food and Drugs Adulteration.

Steps will be taken as soon as possible to appoint a select committee to resume the inquiry started late last session into this subject. Endeavour will, of course, be made to enlist the services of the members who served on last year's committee.

The Opium Commission.

Mr. Bartley has given notice that he will ask the House to express the opinion that no part of the cost of the Royal Commission on Opium should be defrayed by the natives of India.

HOUSE OF COMMONS.

THURSDAY, FEB. 7TH.

Electric Light Accidents.

Mr. Howart questioned the President of the Board of Trade with reference to recent electric light accidents in London, and Mr. Bryce, in the course of his reply, said that the Board of Trade was earnestly pressing upon the electric lighting companies the necessity of taking proper precautions to prevent accidents.

Tuberculosis Commission.

In reply to a number of questions, Mr. Shaw-Lefevre said the Government greatly regretted the delay that had occurred in connexion with the inquiry of this Commission. During the recess he had been in communication with the chairman on the subject, and he fully realised how much importance was attached to the early publication of the report. When the Commission met at the end of the present month or the beginning of March, a draft report would be before them for their consideration.

The Consolidation of the Poor-laws.

Mr. Shaw-Lefevre, replying to Mr. Howell, said he was afraid the engagements of the Government would quite prevent their introducing a Bill to consolidate the Poor-laws during the present session.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BANCROFT, PETER, M.B., Ch.M. Syd., has been appointed City Health Officer of Brisbane, Queensland.
BARNETT, L. E., M.B., C.M. Edin., F.R.C.S. Eng., has been appointed Lecturer on Surgery to the Otago University Medical School, Dunedin, New Zealand, vice Wm. Brown.
BELL, GEO. L., M.B., Ch. B. Melb., M.R.C.S. Eng., L.R.C.P., has been appointed Government Medical Officer and Vaccinator for the district of Camden, New South Wales.
BRIGHT, J. A., M.R.C.S., has been appointed Medical Officer to the Hearts of Oak Friendly Society, Glastonbury.
BROOKS, CHAS., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gerrard's Cross Sanitary District of the Eton Union.
BUTLER, ALBAN, L.R.C.P., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Walsham-le-Willows Sanitary District of the Stow Union, vice McNaught resigned.
CAMERON, HUGH F., M.B., C.M. Aberd., has been appointed Parochial Medical Officer and Vaccinator for Rosskeen, Alness and Kilmuir, vice Sutherland.
COOPER, W., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Barnstaple and North Devon Dispensary.
DAVIDSON, PETER, M.A., M.B., C.M., has been reappointed Honorary Physician to the Liverpool Infirmary for Children.
DOBIE, H. E., L.R.C.S. Edin., has been appointed Resident Medical Officer for East Kimberley, Public Vaccinator for the Urban and Suburban Districts of Wyndham and Rural District of East Kimberley, also Quarantine Officer for the port of Wyndham, Western Australia.
FIELDER, SYDNEY, L.K.Q.C.P. Irel., L.S.A. Lond., has been appointed Government Medical Officer and Vaccinator for the district of Brisbane Water, New South Wales.
GOING, JOSEPH A., M.R.C.S. Eng., L.S.A., has been appointed a Public Vaccinator for the district of Katakawa and Chaiawai, New Zealand.
HALLIWELL, J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Wincombe Cottage Hospital.
HICKMAN, J. B., has been appointed Resident Medical Officer to Guest Hospital, Dudley, vice P. Templeton, resigned.
HODGSON, J. W., M.D., C.M. Aberd., M.R.C.S., has been appointed Consulting Physician to the Exmouth Dispensary.
HOWSE, ALFRED O., L.R.C.P. Lond., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Wingham, New South Wales.

HUTTON, E. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Tottenham Sanitary District of the Edmonton Union.
HUXTABLE, R. B., M.B., C.M. Edin., has been appointed Assistant Resident Medical Officer at the Charters Towers Hospital, Queensland.
JACOB, E. L., B.A. Lond., M.R.C.S., has been appointed Medical Officer to the Weybridge and Walton Urban District Councils respectively.
JOHNSTON, JOHN, M.D., M.Ch. Edin. Univ., L.S.A. Lond., has been appointed Public Vaccinator for Great Bolton District, vice Walter Morris, resigned.
KELLAND, JAMES, M.B., C.M., L.R.C.P., L.R.C.S. Edin., has been appointed Honorary Surgeon to the Salisbury Infirmary.
KIDD, HUGH C., M.B. Lond., L.R.C.P., F.R.C.S., has been appointed Honorary Medical Officer to the Cottage Hospital, Bromsgrove.
LOCKING, B., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Napier Rifle Volunteers, New Zealand.
MASSON, GEO. B., L.R.C.P., L.M., L.R.C.S. Edin., has been reappointed Medical Officer for the fifth sanitary district of the Downham Union.
NEWELL, B. A., M.B. Syd., M.Ch., has been appointed Government Medical Officer and Vaccinator for the district of Walgett, New South Wales.
OWEN, ARTHUR DEAKER, M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Divisional Surgeon to the Metropolitan Police, vice Vaughan Holberton, resigned.
PATCH, H. H. L., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to the Devon and Exeter Hospital.
PEGGER, L. HEMINGTON, M.D., M.R.C.S., has been appointed Assistant-Registrar to the Central London Throat and Ear Hospital.
ROBERTSON, J. G., M.D., C.M. Edin., has been appointed Medical Officer for the Third Sanitary District of the Royston Union.
SKINNER, G. H., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon, with the rank of Captain, to the Victorian Mounted Rifles, Victoria, Australia.
STEEN, ROBERT H., B.A., M.B. Lond., has been appointed House Physician to the Brompton Hospital for Consumption and Diseases of the Chest.
SWAN, R. JOCELYN, M.R.C.S. Eng., L.S.A. Lond., has been appointed Consulting Surgeon to the London Tramways Company, vice Geo. Milson, resigned.
WICKATLEY, A. J., M.B., C.M. Edin., has been appointed Deputy Medical Officer for the Mersea and Peldon Sanitary District of the Lenden and Winstree Union.
WRIGHT, FRANCIS G., L.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Officer for West Kimberley, Public Vaccinator for the Urban and Suburban Districts of Derby and Rural District of West Kimberley; also Quarantine Officer for the Port of Derby, Western Australia.
WRIGHT, JOSEPH FARRELL, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer to the Western Division of Great Bolton, vice Walter Morris, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C.—House Surgeon. Rooms, coats, and light provided.
DERBYSHIRE ROYAL INFIRMARY, Derby.—One Honorary Physician One Honorary Surgeon. One Honorary Consulting Dental Surgeon.
GENERAL INFIRMARY AT LEEDS.—Resident Casualty Officer. Salary £100 a year, with board, lodging, and washing.
KENT AND CANTERBURY HOSPITAL.—Surgeon.
RADCLIFFE INFIRMARY, Oxford.—House Surgeon for six months. Salary at the rate of £30 a year, with board, lodging, and washing.
STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon; board, lodging, washing, &c., provided.
THORNTON HOSPITAL, Golden-square, London.—Clinical Assistants.
TOTTENHAM AND EDMONTON GENERAL DISPENSARY.—Vacancy on the Medical Staff. Applications to S. Hedley, Esq., Trafalgar House, Tottenham.
WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Fourth Assistant Physician.

Births, Marriages, and Deaths.

BIRTHS.

BROOK.—On Jan. 28th, at James-street, Lincoln, the wife of W. H. Brook, M.D. Lond., F.R.C.S., of twin sons.
EVANS.—On Jan. 28th, at Denmark Lodge, Clapham-common, the wife of Lewis Evans, L.R.C.P. Edin., L.F.P.S. Glasg., of a daughter.
LEWIS.—On Feb. 1st, at Farleigh, Pontypriid, the wife of B. M. Lewis, M.R.C.S., of a son.

MARRIAGES.

BEGRIE—REYNOLDS.—On Feb. 6th, at the Cathedral, Bombay, India, Francis Warburton Begrie, Surgeon-Captain A.M.S., son of the late James Warburton Begrie, LL.D., of Edinburgh, to Catharine Mary, the eldest daughter of Walter Reynolds, J.P., of The Grove, Highgate, Middlesex. (By telegram.)

DEATHS.

CHAPMAN.—On Feb. 2nd, at Willow Lodge, West Norwood, John Chapman, M.R.C.S., L.S.A., aged 77.
MASON.—On Jan. 13th, at Beacon House, Painswick, Gloucestershire, Joseph Wood Mason, M.D., aged 74.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopedic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. L. Guthrie: Case of Unusual Mal-development of Skull unassociated with Cerebral Symptoms.—Mr. S. Winford Edwards: Some cases after High Excision of the Rectum by Kraake's Method.—Mr. Buckton Browne: Case of a Cork in the Adult Male Bladder.—Dr. Outterson Wood and Mr. E. Cotterell: Two cases of Right Hemiplegia with Epilepsy treated by Trephining.—Mr. H. Allingham: (1) Case of Pyloroplasty; (2) Case of Enteroplasty; (3) Case of Gastro-enterostomy.—Mr. C. B. Keetley: Case of Rare Deformity of the Toes.—Dr. W. S. Colman: Case of Pseudo-hypertrophic Paralysis with Knee-jerks preserved.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. Frederick Taylor: The Causation of Agophony.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. The President (Dr. Felix Semon): A case for Diagnosis (2 Malignant Disease, Syphilis, or Tuberculosis of the Larynx).—Dr. A. A. Kanthack: Pathological Specimens (1) Adenoid Vegetations; (2) Perforation of the Septum Nasi.—Dr. Scanes Spicer: A case of Chronic Stenosis of the Anterior Nares with Laryngitis.—Mr. Charters J. Symonds: (1) A case of Paralysis of Left Vocal Cord; (2) a case of Paralysis of Left Vocal Cord after Injury; (3) the case of Pachydermia Laryngis previously shown.—Dr. Herbert Tilley: A case of Pachydermia of Inter-arytenoid Fold with Fissure (inter-arytenoid), Laryngitis Sicca, and Pharyngitis Sicca.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (St. Bartholomew's Hospital).—4 P.M. Specimens by Dr. Hubert Higgins, Mr. F. G. Parsons, Prof. Wardrop Griffith, and Prof. D. J. Cunningham. Papers:—Prof. D. J. Cunningham: Pithecanthropus Erectus—the Man-like Transitional Form of Dr. Eugene Dubois.—Prof. Sherrington: Remarks on the Distribution of the Sixth Lumbar Nerve in Macacus Rhesus.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8 P.M. Annual General Meeting and Election of Officers. 8.30 P.M. Dr. Patrick Manson: The Malaria Parasite (Demonstration).

NORTH-WEST LONDON CLINICAL SOCIETY.—8.30 P.M. General Meeting for Election of Officers, &c.; Clinical Demonstration.

THURSDAY.—BRITISH GYNECOLOGICAL SOCIETY.—The President's Address. Dr. Macnaughton Jones: Specimen of Intra-uterine Fibroid.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Great Northern Central Hospital, Holloway).—8.30 P.M. Clinical Evening. Cases will be shown by Dr. E. S. Tait, Dr. Scott, Dr. Galloway, Mr. Merton, and others.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Lacrymal Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Edward Law: Examination of the Throat and Nose.

SOCIETY OF ARTS.—4 P.M. Mr. Alan S. Cole: Means for Verifying Ancient Embroideries and Lace. (Cantor Lecture.)

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Hysterical and Delirious Mania.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals. (V.)

LONDON SKIN HOSPITAL.—8 P.M. Mr. Jas. Startin: On some Uncommon Affections of the Skin.

ROYAL BRITISH NURSES' ASSOCIATION.—8 P.M. Dr. W. S. Colman: The General Hemispheres and General Symptoms of Brain Disease.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloombury).—3 P.M. Lecture by Dr. Gowers.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Retinal Affections.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Seborrhoea.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Keratosis.

WEST LONDON HOSPITAL (Hammersmith-rd., W.).—5 P.M. Dr. Donald Hood: Angina Pectoris.

SOCIETY OF ARTS.—8 P.M. Mr. J. W. M. Acworth: Light Railways.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. L. Fletcher: Meteorites.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Thomas Barlow: Ricketts.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Beevor: Cerebral Localisation.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Jonathan Hutchinson: Cases in the Ward.

SOCIETY OF ARTS (Imperial Institute).—4.30 P.M. Mr. C. Krishna Menon: Village Communities in Southern India.

SOUTH WEST LONDON MEDICAL SOCIETY (Suffolk Hotel, East Putney).—8.30 P.M. Dr. Cullingworth: Demonstration of Tube Cases (illustrated with Magic Lantern Slides).

FRIDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Bacteriology of Skin Disease.

LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Examination of Air, Soil, and Water.

HUNTERIAN SOCIETY.—7 P.M. Dinner at First Avenue Hotel.

ROYAL INSTITUTION.—9 P.M. Mr. Clinton T. Dent: Mountaineering.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Bacteriology of Skin Disease. 5 P.M. Dr. M. Dockrell: Dermatitis Exfoliativa and Herpetiformis.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Acute Mania.

ROYAL INSTITUTION.—3 P.M. Sir Alexander Campbell Mackenzie: English Country Songs (with Musical Illustrations).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 7th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Feb. 1	30.03	N.E.	28	Fzn.	39	35	25	0.14	Overcast
" 2	29.91	N.	35	34	38	37	28	0.07	Overcast
" 3	30.00	N.E.	32	Fzn.	39	35	24	...	Overcast
" 4	30.17	N.E.	35	34	49	36	30	...	Overcast
" 5	30.09	E.	25	Fzn.	44	31	24	0.03	Overcast
" 6	29.83	N.E.	19	Fzn.	41	25	16	...	Snowing
" 7	29.85	S.E.	19	Fzn.	42	25	17	...	Overcast

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

"DETERIORATION OF CORKS."

WE have received several letters from medical men the gist of which is that our previous correspondent on this subject is badly served, and that corks as good as the corks of old are still in the market.

"ON THE TREATMENT OF GLEET BY THE URETHROSCOPE.
To the Editors of THE LANCET.

SIR,—My attention has been called to a letter under the above heading in your issue of Jan. 12th. I have hesitated making an explanation, as the letter, like most others of its class, bears an anonymous signature. The copy of the Medical Week which "M.D." objects to was sent to me by the author of the article in question, who

is a personal friend of mine. I am entirely to blame for its appearance in the Isthmian Club, where I left it accidentally. The blue pencilling was for my benefit. I should have thought that the name which headed the article, bearing as it did the letters "F.R.C.S.," would have been sufficient to have protected its author against the suggestion of advertisement amongst members of a club "which are chiefly young men." "M.D." would have shown more discretion and good taste if he had placed his grievance in the hands of the secretary of the Isthmian Club, who is thoroughly well able to protect its interests.

I am, Sirs, yours faithfully,
Isthmian Club, Piccadilly, W., Feb. 1st, 1895. STANLEY DAVIES.

THE EXHIBITION OF HYPNOTISED SUBJECTS.

To the Editors of THE LANCET.

SIRS.—On Friday the 1st inst. I attended with others as a spectator to witness a hypnotic *séance* at the Royal Aquarium. The two medical men who had agreed to watch the proceedings being absent in consequence of a postponement of the time, Mr. Ritchie, the chairman of the board of directors, seeing me in the room, asked me to examine the man, who was lying in a sort of coffin. I found a fairish strong man to all outward appearances, the pulse weak but regular, and large dilated pupils. In about one minute and a half Mr. Morrill placed him in a complete trance. The pulse then got much stronger, from 75 to 95, whilst the pupils of the eyes became much contracted, the breathing becoming purely abdominal. The *séance* commenced at 7.30 P.M. He continued quite unconscious throughout; but on Saturday at 11 P.M., in consequence of a threatened failure of his heart, the beating of which was scarcely perceptible, whilst the temperature had gone down from 97.2° F., which it was in the morning, to 96.4°, together with a cyanotic condition of the face, induced Dr. Trevor, who was in attendance, and myself to consider that a continuance of the proceedings with that subject was an unwise one. He was at once brought to consciousness, and our opinion was justified by finding that he had a weak, dilated heart and swelling in the ankles. The original man on whom this experiment was to be tried failing to appear at the last moment, Nolan was put in his place without any sort of preparation as regards diet. He is none the worse beyond feeling very thirsty and a tingling in the feet. His insensibility was absolute throughout the thirty hours.

I am, Sirs, your obedient servant,
Devonshire-street, Feb. 5th, 1895. FORBES WINSLOW.

To the Editors of THE LANCET.

SIRS.—Will you kindly allow me space to protest most strongly against the patronage and co-operation of medical practitioners in the placing of a man under hypnotic unconsciousness as a show at the Royal Aquarium? In some other countries such a public exhibition would have been unlawful, and I had hoped that even the medical advocates of hypnotism would have condemned such a performance in a place of public resort and amusement.

I am, Sirs, yours obediently,
Grove-road, N.W., Feb. 5th, 1895. NORMAN KERR, M.D.

CORK SOCIETIES' MEDICAL OFFICERS' INDEMNITY FUND.

Continued List.

Mr. J. G. Curtis (Cork)...	£20 0 0	Mr. T. Callaghan (Cork)...	£5 0 0
Dr. A. Sandford (Cork)...	20 0 0	Dr. J. Ward Cousins,	
Mr. R. Byrne (Cork)...	2 2 0	(Portsmouth)...	2 2 0
Dr. P. O'Brien (Cork)...	2 2 0	Dr. W. Edmunds (Lond.)...	1 1 0
Dr. T. J. Murphy (Cork)...	2 2 0	Dr. A. Finegan (Mul-	
Surg.-Capt. Crooke Law-		lingar)...	1 1 0
less, A.M.S. (Dublin)...	2 2 0	Dr. Scallan (Cork)...	1 1 0

D. D. DONOVAN, Hon. Treasurer.

M. B.—Our correspondent's is a very legitimate complaint, and we hope to be able to refer to it more fully at an early opportunity.

Dr. J. B. Helliier.—The communication is marked for early insertion.
Enquirer.—Yes.

A QUERY.

To the Editors of THE LANCET.

SIRS.—Can any of your readers inform me of a suitable home or school at reasonable terms for a boy of about fourteen who is deficient in intellect? So far as I have been able to ascertain there is no choice between giving £70 or £80 per annum and the parish schools at Darenth. My patient might be able to afford £35 to £40 per annum, but not more.

I am, Sirs, yours faithfully,
Feb. 6th, 1895. J. P. S.

WANTED, HISTOLOGICAL SLIDES.

To the Editors of THE LANCET.

SIRS.—I shall be very much obliged if any of your readers can tell me where I can obtain histological slides (preparations) ready put up for the microscope, as I have not time to prepare them myself and my own old school ones have more or less gone wrong?—Yours faithfully,
Jan. 30th, 1895. MEMBER.

QUALIFIED DISPENSERS.

To the Editors of THE LANCET.

SIRS.—Be pleased to inform me as to any other bodies besides the Apothecaries' Hall who grant certificates qualifying dispensers.

I am, Sirs, yours faithfully,
Feb. 1st, 1895. CHEMIST.

* The Pharmaceutical Society grants certificates to dispensing chemists to act as such. This is the only legal qualification in England and Scotland.—ED. L.

RICHARDSON'S MEDICAL ASSISTANTS' AGREEMENT FOR SERVICES.

THIS is a form of agreement which principals may find useful in engaging assistants. It is very explicit. It can be obtained from Messrs. Richardson Bros. and Co., Medical Agents, Liverpool.

A Twenty Years' Subscriber.—Certainly so. He could put nothing on his plate more proper or to the point.

Dr. E. Robinson.—Our correspondent's course appears to us to have been perfectly correct

BACTERIA IN BREAD.

To the Editors of THE LANCET.

SIRS.—Please allow an American physician (now travelling in Europe) to state in your columns that attention was called to the subject of bacteria in bread as early as 1832 in a paper read before the Philosophical Society of Great Britain upon the relations of "Yeast to Man." This paper was written upon invitation and forwarded to the society by Dr. Ephraim Cutter, now of New York, a graduate of the Harvard University Medical School, in 1856. It was profusely illustrated by most excellent micro-photographs and drawings executed by an American artist, and displayed bacteria in common bread, pilot bread, and pumper-nockel, the latter being richest of all in bacteria. As this subject has been recently revived by communications to medical societies and articles in THE LANCET and other journals, both in England and America, it would seem an act of justice to acknowledge the work of a pioneer in this important department.

Gibraltar, Jan. 12th, 1895. YOURS TRULY, CLASSMATE.

THE QUALIFIED ASSISTANT AND THE FEES FOR NOTIFICATION.

To the Editors of THE LANCET.

SIRS.—I should like to know whether a qualified assistant is entitled to claim the fees for notifications of infectious diseases sent to the medical officer of health, or whether the principal is entitled as employer to the fees for notifications notified by his assistant.

I am, Sirs, yours truly,
Feb. 4th, 1895. INQUIRER.

* The Infectious Disease (Notification) Act knows nothing of principals or qualified assistants. The medical practitioner "called in" to the patient is bound to send in the notification certificate, whether he is the principal or the assistant, and the local authority is bound to pay the fee to the medical practitioner "for each certificate duly sent by him." The qualified assistant in notifying infectious disease, as in all his other duties, is acting for his principal. Apart from some special arrangement he is not entitled to the notification fees.—ED. L.

"WANTED, A LANTERN AND SLIDES."

To the Editors of THE LANCET.

SIRS.—"Subscriber" would find what he wants in the way of physiological lantern slides of a popular character in a series called "The Human Body, or the House I Live In," by Furneaux, to be obtained of any optician dealing in lantern slides, from whom he could also obtain lanterns on hire.

I am, Sirs, yours truly,
Richmond Hill, Feb. 5th, 1895. G. E. SHUTTLEWORTH.

To the Editors of THE LANCET.

SIRS.—"Subscriber" will get all he requires, and of the very best, at Messrs. Newton and Co., 3, Fleet-street, Temple Bar, E.C. Sets of slides copied from physiological works may be obtained also from many places, as Mr. Luscombe Toms, 78, Queen Victoria-street, E.C.; Mr. Walter Tyler, 48, Waterloo Bridge-road, S.E., and others, from whom also lanterns and fittings can be hired.—I am, Sirs, yours faithfully,
Feb. 4th, 1895. J. G.

INSURANCE AND CARDIAC MURMURS.

To the Editors of THE LANCET.

SIRS.—Is there any circumstance in which a medical examiner for insurance would be justified in recommending an insurance company to accept a person suffering from a cardiac murmur?—Yours truly,
Feb. 4th, 1895. BAYNEHAM.

Mr William Horne.—We never recommend practitioners, treatment, or particular hospitals.

Mr. A. Thornhill Greenhill.—The post alluded to is not vacant.

Dr. W. Sumpter is thanked for his communication.

ERRATUM.—In a review of the "Indian Manual of Hygiene," published in our issue of the 12th ult., we omitted to mention that the London agents for the book are Messrs. H. K. Lewis of Gower-street.

During the week marked copies of the following newspapers have been received:—Midland Herald, Sevenoaks Chronicle, Arbroath Guide, Dundee Advertiser, South Wales Argus, Milton Sunday Chronicle, Warwick Gazette, Sussex Daily News, Midland Evening News, Birmingham Post, Jewish World, Truth, Walsall Observer, Umpire, Australasian Medical Gazette, Bristol Mercury, Times of India, Folkestone Express, Isle of Man Times, Limerick Chronicle, Manchester Guardian, Bedfordshire Times, East Morning News, Family Doctor, Hereford Times, Kensington Society, Loughborough Examiner, Glasgow Evening Times, Scotsman, Banffshire Journal, Elgin Courier, Montgomery County Times, Public Health, Kenish Express, Sunday Times, Ayr Advertiser, Express and Star, Citizen, Warwick Times, Essex Telegraph, Kenish Press, Manchester Evening News, Western Daily Mercury, Wallacey Chronicle, &c., &c.

Communications, Letters &c. have been received from—

- A.**—Mr. C. E. Ady, Lond.; Aylesbury Union, Clerk of.
B.—Dr. A. G. Bateman, Lond.; Dr. R. Boxall, Lond.; Dr. R. Beveridge, Leith; Mr. L. A. Bidwell, Lond.; Mr. S. Bennett, Lond.; Mr. S. H. Benson, Lond.; Mr. W. F. Brook, Swansea; Mr. W. M. Beaumont, Bath; Mr. C. Broeyer, Carlton; Mr. C. A. G. Browne, Lond.; Mr. C. Birchall, Liverpool; Mons. O. Berthier, Paris; Messrs. F. B. Bengier and Co., Manchester; Messrs. Burgoyne, Burdidge, and Co., Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Blackie and Son, Glasgow; Barth'sche Buchhandlung, Aachen.
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E.—Enquirer.
F.—Dr. D. A. Fraser, Aden; Mr. M. H. Feeny, Ulverston; Mr. J. Faever, Anerley; Mr. C. Fuge, Taunton; Mr. T. Fletcher, Warrington; Mr. W. A. Frost, Lond.; Mr. M. Flynn, Lond.; Mr. L. A. Freeth, Woolstone; Mrs. A. Fryer, Lond.; Fides, Lond.
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son and Co., Lond.; Hope, Lond.; Honor, Lond.

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K.—Dr. Norman Kerr, Lond.; Dr. S. Kontoleon, Piræus; Messrs. Kilner Bros., Lond.; Messrs. Keith and Co., Edinburgh; K. M., Lond.

L.—Dr. J. P. Little, Lond.; Surg.-Major A. W. D. Leahy, Calcutta; Mr. C. H. Leet, Liverpool; Mr. L. A. Lawrence, Lond.; Mr. S. Lodge, Bradford; Mr. T. Laffan, Cashel; Mr. P. T. Lunn, Blakeney; Messrs. Loescher and Co., Rome; Leeds Gen. Infy., Sec. of; Leeds Hosp. for Women and Children, Sec. of.

M.—Dr. W. J. Morton, New York; Dr. J. M. H. Martin, Blackburn; Dr. J. Murray, Malvern; Dr. J. G. McNaught, Curragh Camp; Mr. H. J. Marston, Lond.; Mr. W. Maguire, Lond.; Mr. J. H. Marsh, Macclesfield; Mr. R. Mayman, Oxford; Mr. C. Matthews, Farnham; Mr. J. Moffat, Whitehaven; Messrs. Maple and Co., Lond.; Metrop. Hosp. Sunday Fund, Sec. of; M., Lond.; Medicus, Lond.

N.—Mr. A. Neve, Kashmir.

P.—Dr. F. Page, Newcastle-on-Tyne; Dr. Peacock, Lond.; Mr. Y. J. Pentland, Edinburgh; Messrs. Pidcock and Sons, Eastbourne; Physician, Lond.

R.—Mr. E. Ransom, Bedford; Mr. J. Roger, Madrid; Messrs. Ridges and Sons, Wolverhampton; Messrs. Read and Co., Bristol.

S.—Dr. H. Sutherland, Lond.; Dr. D. Stanley, Birmingham; Dr. W. Sumpter, Norfolk; Mr. N. L. U. Somers, West Bromwich; Mr. A. H. Smith, Boston; Mr. J. Shaw, Lond.; Mr. C. Sanders, Lond.; Messrs. G. Street and Co., Lond.; Messrs. Southall Bros. and Barclay, Birmingham; Messrs. F. Stearns and Co., Lond.; Messrs. Shanks and Co., Barryhead; St. John's Hosp. for Diseases of the Skin, Lond., Sec. of; Staffs. Gen. Infy., Stafford, Sec. of; Sanitary Institute, Lond., Sec. of; St. Peter's Hosp., Lond., Sec. of; S. W., Bristol.

T.—Dr. F. J. Waldo, Lond.; Dr.

S. L. B. Wilks, Skipton; Surg.-Major H. R. Whitehead, Netley; Mr. E. H. Wagstaff, Leighton Buzzard; Mr. S. W. Wilson, Dorchester; Mr. E. Wilson, Exeter; Messrs. W. Wood and Co., New York; Messrs. F. Warne and Co., Lond.; Woodhall Spa Sanatorium, Sec. of; Workhouse Infy. Nursing Assoc., Law Sec. of; W. M. C.

X.—X., Bradford; X. Y. Z., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. R. R. Anderson, Carmarthen; Messrs. Armour and Co., Lond.; Apollinaris Co., Lond.; Ashwood House, Kingswinford, Sec. of; Aston Union, Clerk of; Arthur, Lond.; Ager, Lond.; Assistant, Lond.; Alpha, Lond.; A. B. C., Lond.; Argon, Leamington Spa; A. B. C., Lond.

B.—Dr. D. C. Black, Glasgow; Mr. R. Bevan, Lydd; Mr. E. S. Bishop, Manchester; Mr. S. H. Byam, Lond.; Mr. J. S. N. Bull, Swaffham; Mr. C. E. G. Bateman, Liffeld; Messrs. Bryce and Rumpff, Lond.; Birmingham Gen. Hosp., Sec. of; Birmingham Daily Post, Manager of; Bury Disp. Hosp., Sec. of; Brighton and Hove Lying-in Inst., Sec. of.

C.—Mr. J. Carter, Lond.; Mr. J. H. Collier, Sheffield; Mr. B. R. Conolly, Funchal, Madeira; Coll. of Preceptors, Lond., Sec. of; Carlisle Disp., Sec. of; Clerical and Medical Bank, Bristol, Manager of; C. D., Lond.; Cheltonian, Lond.; Chirurgeon, Lond.

D.—Dr. A. J. Dixon, Bristol; Mr. E. G. Down, Bournemouth; Messrs. Douglas and Foulis, Edinburgh; Daleth, Lond.; Dispenser, Lond.

E.—Mr. F. G. Ernst, Lond.; Exeter City Asyl., Clerk of.

F.—Dr. F. D. Fisher, Manchester; Mr. V. P. Foote, Lond.; Mr. M. H. Feeny, Havorthwaite; Mr. C. E. S. Flemming, Freshford.

G.—Messrs. Gale and Co., Lond.; Gen. Apoth. Co., Lond., Sec. of; Gilbertus, Lond.; Gerald, Lond.

H.—Dr. V. D. Harris, Lond.; Dr. L. A. Hawkes, Pendlebury; Dr. J. Hunter, Linlithgow; Mr. E. Hollinshead, Tunstall; Mr. O. L. Holst, Eastbourne; Hanover Inst. for Nurses, Lond., Supt. of; Hulme Disp., Manchester, Sec. of; H. C. L., Lond.

I.—Islington, Lond.

J.—Mr. Y. M. Jones-Humphreys, Cemmes; Mrs. Jones, Liverpool.

Y.—Yost Typewriter Co., Lond., Managing Director of.

T.—Dr. Tate, Grisons; Mr. N. Tarachand, Mansfield Woodhouse; Mr. H. G. Turney, Lond.; Mr. W. C. E. Taylor, Scarborough; Mr. Lawson Tait, Birmingham; Mr. H. Taylor, Gullford.

U.—University of Pennsylvania Press, Philadelphia, U.S.A.

V.—Dr. A. M. Vargas, Barcelona; Veracity, Lond.

W.—Mr. C. S. Kirton, Leigh; Messrs. Kenyon and Lord, Manchester.

L.—Dr. A. B. Lyon, Macduff; Mr. J. Logan, Glasgow; Messrs. Lee and Nightingale, Liverpool; Liverpool Northern Hosp., Sec. of; Leipsic, Lond.

M.—Mr. J. McKevae, Lond.; Mr. J. B. Monks, Great Harwood; Messrs. J. F. Macfarlan and Co., Lond.; Messrs. Margrave Bros., Llanelli; Manchester Boy Infy., Sec. of; M. D., Manchester; M. F., Lond.; Medico, Aldborough; Medicus, Liverpool; Medius, Lond.; Minus, Lond.; Medius, Hull; M. B., London; Medical, Todmorden.

N.—Messrs. H. J. Nicoll and Co., Lond.

O.—Mr. C. A. P. Osburne, Hythe; Oxon, Lond.

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An Address

ON

APPENDICITIS.

Delivered before the Surgical Section of the College of Physicians of Philadelphia,

By J. WILLIAM WHITE, M.D.,

PROFESSOR OF CLINICAL SURGERY AT THE UNIVERSITY OF PHILADELPHIA.

GENTLEMEN,—It has been my intention in preparing this paper merely to review some of those important points relating to the cause, course, and diagnosis of appendicitis, and more especially to its treatment, about which great differences of opinion still exist in the profession, and to make my own slight contribution towards the acquirement of a fulness and certainty of knowledge which will permit us at some future day to lay down certain broad general propositions accepted and endorsed by both surgeons and physicians.

As regard etiology, we may first consider (a) the predisposing causes. The explanation of the great frequency with which the appendix becomes the seat of inflammatory and destructive lesions as compared with the other portions of the digestive tract is undoubtedly to be found in its anatomical relations. There can be no question that those structures which remain to us as functionless vestiges of parts once useful are possessed of low vitality and but feeble resistant powers. In addition, its dependent position, its communication by an orifice, often more or less narrowed, with that portion of the intestine in which inspissation of intestinal contents first occurs, while at the same time it is removed from the direct fecal current, all appear to be conditions so markedly predisposing to inflammatory attacks that we need look no further for a sufficient explanation of the extraordinary frequency of appendix trouble. We may next consider (b) exciting causes. Putting aside the comparatively rare cases in which tuberculous or other general disease localises itself in the appendix, we have two chief classes of exciting agencies, clinical differentiation of which is to be earnestly aimed at: the mechanical, and the bacterial or infective. The latter comes into play usually, perhaps almost constantly, as a sequel of the former, which may, I believe, exert its action alone from first to last in many cases. The following anatomical points must be remembered. The appendix is commonly found curved upon itself because its mesentery, derived from the inferior layer of the mesentery of the ileum, is too short for it. Along the free concave border of the mesentery runs a single vessel, a branch of the ileo-colic, and from this branch the appendix as a rule derives almost its entire blood supply. Another peritoneal fold runs from that part of the ileum most remote from its mesenteric attachment and is united with the mesentery of the appendix. It carries no bloodvessels. It is the remains of the true mesentery of the appendix. (Treves.) It is interesting to note the fact that in the different types of cæcum found in our species those which involve a disproportionate growth of the cæcum show that it derives its peritoneal covering partly at the expense of the mesentery of the appendix, which becomes more and more scanty and more vertical in direction the larger the relative size of the cæcum. We here have the factors which enter into the production of a large number of cases of appendicitis. Distension of the ileum with gas or of the caecum with gas or fecal matter will cause dragging on one or the other of these folds, already too scanty, increase the torsion of the appendix, interfere with the blood-supply through its single vessel, and according to the degree of torsion produce congestion and tumefaction, catarrhal inflammation, ulceration or gangrene, with the clinical symptoms that belong to each. The importance of the matter will be apparent if we remember that it has been asserted that all cases of appendicitis are infections in their nature, and that from this assumption has followed the corollary that all cases should be operated on, as one attack means almost certainly another at some future time. It seems probable, though hardly yet proven, that the bacterial cause of appendicitis is as a rule the

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bacterium coli commune. It is almost invariably to be found in the intestinal tract, and seems in the presence of sound mucous membrane to have little or no power for evil. But it is equally well demonstrated that if the epithelium is once destroyed it has both pathological and pyogenic properties. (c) A third class of causes which may be regarded as both predisposing and exciting must be made to include fecal concretions and foreign bodies. The latter, once thought to be the chief factors in producing the disease, are now known to be of great rarity, occurring in only about 4 per cent. of operative cases.¹ Fecal concretions are found in 15 to 20 per cent. of such cases, and there is evidence to show that they may occasionally by their presence give rise to the lesion of the mucous coat which precedes infective processes, but they are so often absent in cases of all grades of severity and so often present at necropsies on persons who have died from other diseases that they should not be considered of primary importance.

How are we to recognise clinically the cases in which the mechanical element alone is the factor and the circulatory disturbance stops short of the production of necrotic lesions of epithelium, mucous membrane, or appendix wall? If the views advanced as to etiology are sound, not only do such cases occur but they probably outnumber the more serious forms of the disease, frequent as are the latter. Statistics support this view, as there is good reason to believe that from 60 to 80 per cent. of cases of appendicitis recover without operation, and in the majority of these cases an infectious element must almost certainly be absent. Nor do the facts bear out the assertion so often made recently that such recoveries are merely apparent or temporary. If we review the early symptoms of a typical case of so-called mild or catarrhal appendicitis and assign each to its anatomical or pathological cause it is discouraging to find that thus far we have at this stage practically no means of distinguishing the cases which are going to stop short of grave organic lesion from those which, unless cut short by surgery, are predestined to almost certain fatality. Let us suppose that we have a case in which constipation (which has been obviously or unsuspectedly present in 90 per cent. of my cases) or diarrhoea, or at least some digestive derangement, has caused intestinal distension with fecal matter, or with gas, or irregular and excessive peristalsis in the ileo-cæcal region. The meso-appendix is dragged upon, the torsion of the appendix increased, and the return of blood interfered with; the arterial supply, more difficult to disturb than the venous current, is but little affected. If we could see such an appendix we would undoubtedly find swelling and congestion, hypersecretion, and nerve irritation. It seems to me theoretically unreasonable to suppose that in every such case there is necrosis even of epithelium or infection even of low grade. The usual symptoms of such a case as we are considering, with their explanation, are: Pain, at first general and diffused over the abdomen, because the superior mesenteric plexus of the sympathetic, which supplies the appendix, also largely supplies the intestines, and because irritative nerve pain is apt to be referred to the peripheral extremities of nerves; next, and within a very short time, it is felt in the umbilical region, because as such pain increases in intensity it is often referred to the nearest nerve centre, and the great sympathetic ganglia of the abdomen are situated in that region. After a few hours there is tenderness on pressure in the right iliac fossa. It is a localised tenderness in all the varieties of appendicitis, because, while the appendix itself is movable, it always arises from the same part of the cæcum, and the mobility of the latter is much more restricted. The point of pain on pressure known as McBurney's point indicates, therefore, with moderate accuracy the base, not the tip, of the appendix, and is rarely absent even in gangrenous cases, because that portion of the appendix is usually the last to be affected by interference with the blood-supply. Vomiting commonly follows, has little relation to gastric conditions, and is ordinarily reflex and due to reversed peristalsis as the ejecta show a degree of digestive change corresponding to the time which has elapsed since the last meal. Moderate fever (99.5° to 101° F.) and slightly increased pulse-rate (90 to 110) are usually present, and are doubtless due to the absorption of intestinal products. There is slight rigidity of the right rectus muscle, and later of the other abdominal muscles over the right iliac fossa, often, but perhaps not necessarily, due to peritonitis, and in any event arising from

¹ Matterstock, Fowler.

the fact that those muscles receive their nerve-supply from the seven lower intercostals, while the superior mesenteric plexus gets its contribution from the spinal system through the splanchnics derived from the same seven intercostals.

This group of symptoms includes all that are of any value in this type of appendix trouble. It has been asserted (Rushmore, Osler, and others) that to speak of the first day that the patient complains of pain as the first day of the disease is fallacious, and it is said that what we recognise in appendicitis is peritonitis, which has been preceded by ulceration of the mucous membrane and a perforation of the appendix itself. Now, if this were demonstrably true it would, I think, oblige us to accept the rule laid down by some surgeons that the diagnosis of appendicitis brings with it the obligation to operate. But it is demonstrably untrue. Not only does not every case with the above symptoms have precedent ulceration, but there have now been enough early operations and removals of appendices at this stage to enable us to say positively that, apart from the conditions already described—swelling, congestion and associated vascular changes, and nerve irritation—there are often no grave lesions of either the mucosa, the parietes of the appendix, or of its peritoneal covering. While the explanation already given of the etiology and symptoms in these cases shows (1) that they may depend upon mechanical causes and are not necessarily infective, and (2) that there is no phenomenon associated with them which of itself indicates either a solution of continuity of the mucosa, infection of the appendix wall, or peritonitis, unfortunately it must also be said that there is none which excludes the graver conditions. Colicky pain, localised tenderness, slight abdominal rigidity, vomiting, and moderate fever may be the only symptoms of a case which is going on to a rapid termination by gangrene, perforation, and septic peritonitis. It must therefore be decided whether, taking a large number of such cases, medical treatment or operation offers the best chance for recovery. At present the facts seem to be as follows. Perhaps 80 per cent. of cases of this type recover under medical treatment. Of the remaining 20 per cent. at least one half can be saved by operation during the condition of localised abscess which would form in probably that proportion of cases. Of the remaining ten, in which no protective adhesions would form, a certain indeterminate proportion would recover after operation done before septic peritonitis and intestinal paralysis had occurred. This would leave a death rate of, say, from 5 to 8 per cent. If, on the other hand, every case were operated on as soon as seen, would this death-rate be increased or diminished? The operation, however skilfully conducted, means of necessity a certain amount of traumatism to the peritoneum, and an equivalent diminution of its local resistant power. Most surgeons of experience will agree with Treves, who in his recent admirable Lettsomian Lectures says: "There is no doubt that the nervous disturbance which attends any abdominal operation leads to some degree of intestinal paralysis. This paralysis, attended as it is by vaso-motor changes in the bowel wall, is favourable to the absorption of septic matters from the intestine." It should also be remembered that Terillon has shown that the effect of irritation of the parietal peritoneum, which is chiefly disturbed in ordinary exploratory operations, is comparatively feeble, while it is violent and intense when that covering the intestines is involved. (Treves.) Therefore, while both my experience and my observation lead me to believe that in good hands these very early operations will have an extremely low mortality, perhaps lower than that of the disease treated medically, I do not believe that it will be "practically nil."

As to the diagnosis of the class of cases we have just been considering, it is to be made chiefly from stercoral typhilitis, a condition which has been so overshadowed during the advance of our knowledge in regard to appendix disease that we are in danger of acting as if it were non-existent. It has many features in common with appendicitis, and it is quite possible, as has been asserted, that to some degree this is present in most cases of stercoral typhilitis; but the independent existence of the latter condition has been shown unquestionably, both at necropsies and at operations where severe forms of typhilitis and perityphilitis have been found, to be dependent on stercoral ulcers of the cæcum, the appendices being normal. The relation of the mild attacks of appendicitis to digestive derangement has been quite unmistakable in my experience, and it is not very uncommon to find in relapsing appendicitis that one particular article of food is

the especial exciting cause of an attack. Now, if in so many cases fecal distension of the cæcum is the starting point of appendicitis, it is reasonable to believe that in some of them the trouble does not pass beyond the cæcum, and it is important to recognise these cases because the prognosis is so much more favourable and operative measures need not, as a rule, be thought of. They have occurred with me chiefly at the times of life when appendicitis is less common, and more especially in children. They can be recognised with certainty only by the initial presence of a doughy, sausage-shaped tumour in the cæcal region, associated with the usual symptoms of appendicitis in a modified form. The localised tenderness is not so great, the fever is very moderate, vomiting is rarely a prominent symptom, and constipation is almost invariable, though occasionally a spurious diarrhoea may make its appearance. The discovery of a tumour in the very beginning of an attack of apparent appendicitis of obviously mild type would, I think, justify the diagnosis of stercoral typhilitis; but I know no other way in which the diagnosis can be made, and in the absence of that symptom it would be safer to consider doubtful conditions as almost certainly indicating appendicitis.

CASE 1.—A little girl had an attack of vomiting followed by umbilical pain and almost immediately by right iliac tenderness. When first I saw her, about eight hours after the beginning of the illness, a distinct mass could be felt in the cæcal region; tenderness at the edge of the right rectus in the omphalo-spinous line was marked; she lay on her back, with the knees drawn up. Her temperature was 101° F. and her pulse 110. Her mother stated positively that the bowels had acted regularly and that she had never known her to be constipated. Salines which had already been given were continued. Hot fomentations were applied to the abdomen. The diet was reduced to teaspoonful doses of peptonised milk at hourly intervals. At the end of twenty-four hours there was a little aggravation of all the symptoms; at the end of forty-eight hours there was slight tympany; at the end of sixty hours, when we were considering the advisability of operation, there was an enormous stool, followed by two others in rapid succession and by a complete disappearance of all the symptoms.

It will be convenient now to consider the non-operative treatment of these mild "catarrhal" cases before passing to those of the next grade. Ordinary clinical experience with other forms of enteritis demonstrates the value of absolute rest in bed and on the back. The frequent inability of the stomach to retain food, the certain inability of a portion of the intestinal tract to take care of the residue even if it reaches that point, and the absolute need for the avoidance of all sources of local irritation point clearly to a diet reduced to the lowest possible terms. The use of heat, drawing the blood to the superficial veins of the abdomen, of cold, by means of ice kept on long enough to bring about local anæmia extending to the parietal peritoneum or deeper, and the actual abstraction of blood by leeches seem to have about equal claims to employment. Personally I prefer either the heat or the blood-letting. I strongly object to blisters, iodine, and ointments as rendering the skin unsuitable for a satisfactory operation later if one be required. The question about which there is the widest apparent divergence of opinion concerns the respective merits of the use of salines and the use of opium. My present opinions, which have not been reached without some thought and much hesitation, but which seem to me more and more satisfactory as my experience widens, are based on the following considerations. I have never happened to see one of these extremely mild cases, in which there was diarrhoea, or one in which the bowels were moved easily by enemata or aperients, run into the graver type of case. Every surgeon who has had any abdominal work knows how essential it is to have the intestinal tract thoroughly evacuated before operation. It is in this way and by the prompt administration of salines according to Tait's plan on the first appearance of symptoms of "pseudo-ileus" that general peritonitis is often avoided, not cured as is incorrectly stated. As any cause of appendicitis may become an operative case it is of the highest importance that in the early stages whatever remains of peristalsis should be encouraged and not destroyed by the use of opium. For these various reasons my rule in practice is in all ordinary mild cases to give salines until free purgation is assured, and then to continue the action more gently by the use of divided doses of calomel, which by its antiseptic properties has a distinct value, and through its effect on the portal circulation aids also in the depletion of the ileo-colic vein and its tributaries.

Spontaneous severe colicky pain, altogether distinct from pressure tenderness, is the only indication I recognise for the use of opium, and I give it then in minute doses combined with enough calomel to overcome its constipating tendency. I am at present satisfied that this treatment is practically sound, and I am certainly convinced that many patients to whom opium is given early and freely die partly because the imperative need for operation is thereby disguised and the favourable opportunity lost, and partly because that free evacuation of the bowels so necessary for success is interfered with. I may say here before leaving the subject of the medicinal treatment at this early stage that, in my judgment, not enough attention has been paid to what might be called the antiseptic treatment of appendicitis. It is reasonable to suppose on *a priori* grounds that in a disease the most serious varieties of which are produced by infection with micro-organisms whose habitat is the digestive tract intestinal antiseptics would be of distinct value. And furthermore I would say that in all forms of sepsis, present or threatened, there is good reason for believing that the systematic administration of soluble and powerful antiseptics is of far more importance than is commonly supposed. If the medicinal and dietetic treatment has been successful the symptoms gradually disappear, the local tenderness often being the last to go. Scrupulous continuance of rest, restricted diet, and mild laxatives should be continued for from one to two weeks. If the symptoms are worse instead of better at the end of forty-eight hours, or earlier than that if there is severe sharp pain, increased tenderness and rigidity of the abdomen, and beginning tympany, either local or general, I think there can be no doubt that surgical interference offers by far the best hope of recovery. In the majority of cases these phenomena then indicate a perforation of the appendix wall, possibly not macroscopic, but permitting the filtration through it of bacteria and their products. So far as diagnosis goes there is practically no condition for which such a case can be mistaken. It is of course not impossible for resolution to take place in these cases. Not every one of them goes on to gangrene in mass and to infection of the general cavity. Even if resolution does not occur a protective inflammation may wall off the appendix and does so in a large proportion of cases. But there is absolutely no way of recognising with any reasonable certainty which of these three events will follow: resolution and recovery; localised abscess, with from 90 to 95 per cent. of chances in the patient's favour; or general peritonitis, with almost sure death if it is once well established. If operation is done at this stage it is unusually easy. An incision two or three inches in length is better than a smaller one, and is most advantageously placed if it is oblique, with its centre a little outside of McBurney's point. There will usually be found a moderate excess of peritoneal fluid, clear or only slightly turbid, a circumscribed peritonitis, weak adhesions between the cæcum and the parietal peritoneum and adjacent intestines, and a tense, swollen appendix. It can be removed most safely by making a circular incision through its peritoneal coat three-quarters of an inch from the base, reflecting it like a cuff, ligating the mucous coat with a circular ligature, touching its surface with a drop or two of pure carbolic acid, replacing the peritoneal coat, and stitching with a Lambert suture. When the peritoneum has become thickened and brittle almost equally good results can be obtained, and more expeditiously, by throwing a ligature around the whole appendix one quarter to half an inch from the cæcum, removing the organ and cauterising the stump with carbolic acid. As a rule the wound may be closed without drainage, and if closed properly the risk of ventral hernia is a very small one. The operation will certainly have a small mortality, but for reasons already given it will be a larger one than if it were a simple exploratory operation. While, however, I believe more patients would be saved by operation at this time than by any temporising measures, I may say that experience has taught me to await events with more equanimity: 1. If the bowels are loose. 2. If the pain is dull and throbbing (connective tissue pain, Bryant), and not sharp and lancinating (serous tissue pain); the former I refer to a tense appendix with infiltration of the wall, but without gross perforation or intense or widespread peritonitis. 3. If the spot of greatest tenderness on pressure by a finger-tip is not precisely at McBurney's point. This is an empirical rule, but I have noticed in a number of cases in which there was delay at this stage, and which finally did well without operation that the point of greatest tenderness so anxiously

investigated at each visit was more or less remote from the usual region. 4. If vomiting is not marked. It is not usually a prominent symptom of this stage of appendicitis in cases which lead to recovery. It will almost always be found present in an inverse relation to the looseness of the bowels. Its absence is a very favourable circumstance, and always, and I believe justly, influences my prognosis. 5. And, finally, I am less anxious during this period of delay if, without marked change in the general condition, increased resistance, slight dulness, and the presence of a mass recognisable by palpation indicate that a localised abscess is forming, shut off by adhesions from the general peritoneal cavity.

CASE 2.—A young man had the usual symptoms of a moderate attack of appendicitis for three days. At the end of that time the conditions present were: rigidity of the abdominal muscles over the right iliac fossa; slight tympanitic distension of the same region; temperature 101.5° F. and pulse 110; marked tenderness at a point just above Poupart's ligament at the junction of the middle and inner thirds. He had been continuously on salines. His stomach was retentive, but there had been no bowel movement for two days. He was getting no food. I was strongly inclined to operate, but delay for twelve hours was decided upon, and at the end of that time there was such marked amelioration of all the symptoms that operation was not further considered.

We may pass in this condition of uncertainty into the period extending from the third to the fifth day with very little alteration of the symptoms, but usually during this time one of the three events already mentioned will occur. If the bowels continue to act spontaneously or with mild laxatives, if the tympany, which may be quite marked, begins to decrease, if the fever lessens, and especially if tenderness remains well localised and tends to subside, the prognosis is, on the whole, favourable, although the patient is unquestionably in grave danger during every minute of this time. If no amelioration of these symptoms occurs, although no new ones develop, the case at that period, from the third to the sixth day, becomes one of the most anxious and trying with which either physician or surgeon can be confronted. It is the time at which, as Richardson has tersely put it, we may feel that it is "too late for the early operation and too early for a safe late operation." It is probable that adhesions have formed, offering a certain degree of protection against general infection; but experience shows that in many cases they cannot be depended upon, and we may find at any visit that the tenderness and tympany have increased in intensity and become more widely diffused, that vomiting is more frequent and uncontrollable, that the fever has risen to 104° or 105° F., or, more onerous still, has disappeared leaving the temperature subnormal; in other words, that the general peritoneum has become involved. If, with the fear of this occurrence before us we proceed in such a case on the fourth or fifth day to removal of the appendix we do so with the knowledge that there is much risk of breaking up the recent and delicate adhesions which have thus far been the patient's safeguard, and we know that it is not always possible under these circumstances, however thorough and minute our precautions, to prevent a spread of the infection. With absolutely identical symptoms on which to base a prognosis at this stage, any two cases may go on, one to recovery, the other to death, and the same remark applies to the result of operation. On the whole, however, this very uncertainty tends to favour operation in spite of its undoubted dangers. We are now dealing with a case of circumscribed peritonitis threatening to become general. The infection which is giving rise to it is a progressive one. Ziegler and others have shown that the effect of injecting a culture of the colon bacillus into the peritoneum of animals varies, other things being equal, with the dose. In the mildest cases an illness, in which diarrhoea is a symptom, is followed by recovery. In another grade a localised purulent peritonitis is produced, running a slow course. If the dose is larger a fatal diffuse fibro-purulent peritonitis follows, and, if still larger, death may occur from acute sepsis before there has been time for any of the phenomena of peritonitis to develop. The peritoneum has thus undoubted ability to take care of certain quantities of bacterial poison, but succumbs to larger ones, and for this and other reasons it cannot be questioned that if the choice had to lie between infection, during, and because of, an operation on the third or fourth, or fifth day, and on the other hand an operation to which we are forced on account of spontaneous infection at some later period, the former course is by far to be preferred.

What we need is information as to what symptoms indicate a persistent circumscription of the inflammatory action, whether it be suppurative or otherwise, and what symptoms point to an extension to the general peritoneum. Treves has shown that in the larger proportion of cases of fatal peritonitis the leading symptoms are those of poisoning and not of inflammation. Extension of the latter to the general peritoneum means that a large part of the enormous area of that membrane takes part in the absorption of the products of the bacterial infection. It should not be forgotten that the cases in which suppuration is most pronounced are among the most favourable examples of peritonitis, and that the most hopeless cases are often among those that show the least inflammatory changes. At present we have no safe rule to guide us as to the greater or lesser likelihood of generalisation in any particular case of appendicitis in the stage of circumscribed peritonitis. As we know clinically that localised varieties of peritonitis and circumscribed exudations are very rare in the area occupied by the small intestine, and as we know both clinically and experimentally that the peritonitis which involves its covering is of the most violent and intense variety, it might perhaps be safe to say that where the area of tenderness is small and distinctly confined to the cæcal and pericæcal area the prognosis is more favourable than when it extends beyond that region, and the latter occurrence might thus be regarded as pointing in the direction of generalisation, and therefore of operation; but I have no reliable observations to confirm this view, which may be unsound as a practical guide.

Of the phenomena which mark the actual onset of diffused peritonitis perhaps the gradual increase of tympany and tenderness and persistent vomiting is the most significant. If operation is done in a doubtful case at this time it will differ from the procedure already described in the necessity for thorough cleansing of the peritoneal cavity, if it is found to be infected, and in the employment of drainage. It differs also in the great care which must be taken, if a localised cavity containing purulent or sero-purulent fluid is found, to avoid making a communication with the general cavity of the abdomen. Large numbers of cases show now beyond all doubt that it is infinitely better to leave the appendix than to make a prolonged search for it or to employ much manipulation in freeing it from adhesions preparatory to removing it. The later the time of operation and the stronger and firmer the abscess wall, the safer the operative procedure becomes, but in every case and at every period if there is a circumscribed abscess it is poor surgery to insist upon finding and taking away the appendix in the face of obstacles. I have often removed the appendix when it was easily found, but I have oftener left it without more of a search for it than could be made in two or three minutes.

CASE 3.—A woman who was suffering with an attack of appendicitis of a chronic type had been ill for more than two weeks. There was a thick-walled tumour in the right iliac fossa. An incision through thickened and oedematous tissues gave vent to a large quantity of fetid pus. Digital exploration with the finger showed dense adhesions in every direction. No further search for the appendix was made. A drainage-tube and iodoform gauze were inserted, and the angles of the wound closed. Recovery was uninterrupted.

In a series of cases of perforative peritonitis reported by Kaiser, of six examples in which the exact point of perforation was never found five recovered. In seventeen cases in which Fowler did not remove the appendix and which recovered there was recurrence in only two within the next two years. The remainder had gone for variable periods, three of them for between three and four years, without any symptoms. I have now had fifteen such cases myself, and in none of them have I heard of any subsequent trouble other than the occasional occurrence of a small fecal fistula which sometimes relapsed once or twice, but has thus far finally closed spontaneously and permanently in every instance.

CASE 4.—The patient was a woman fifty years of age. She was of low intelligence and no satisfactory history could be obtained. After admission to the hospital she complained bitterly of pain in the left iliac region and only later of pain and tenderness on the right side. Vaginal examination revealed a firm, resistant, tender mass on the left side and nothing abnormal on the right side. Her temperature was 101° to 103° F., and her pulse 110. There was dullness over the right flank. There was general tympany; some general tenderness was present, more marked, however, on the right side and at McBurney's point.

Borborygmi could be heard by abdominal auscultation. The bowels acted freely under salines, after which there was a drop of two degrees in temperature and some improvement as to her feelings, but the local phenomena remained unchanged. An incision gave exit to perhaps twenty-four ounces of horribly fetid pus, which had been under great pressure. Inspection showed the distal extremity of the appendix projecting into the cavity from among a mass of intestinal coils covered with lymph and firmly matted together. No effort was made to remove it. The patient has done well.

The same reasons that forbid interference under these circumstances have prevented me from looking long or earnestly for other foci of suppuration. Sometimes they may easily be recognised and opened into the larger abscess cavity by the finger, but when this is not the case I think the patient's chances are better if the possibility of their presence is disregarded, as they are found in only a minority of cases, and they not infrequently open spontaneously into the original cavity. Irrigation, drying the cavity and dusting it with iodoform, the insertion of a large thick-walled rubber drainage-tube, and light packing with iodoform gauze complete the operation as I am in the habit of performing it. The prognosis during all this period is in direct relation to the localisation of the symptoms and of the absence of general sepsis. Accordingly a well-marked tumour, a moderate fever, a high tension pulse not of excessive frequency, a limitation of the tenderness to the right iliac region, even if there it be exquisite, and evidence of continued peristalsis, such as the recognition of borborygmi by abdominal auscultation, are all favourable. But at this or at any stage of the disease, from the earliest onset to the period of complete recovery, we may meet with quite a different set of symptoms. In the beginning the torsion of the appendix may be nearly or quite complete; or with moderate torsion there may be an exceptionally imperfect blood-supply; or in either case the bacteria present may be of especial virulence or in unusual quantity; or finally the resistant power of the individual may be markedly defective. According to the varying predominance of one or the other of these factors we meet clinically with types of cases directly comparable with those conditions produced in animals by experimental inoculation with the colon bacillus. Two of these we have now very imperfectly considered—the mild cases, in which the peritonitis is an inconsiderable element and which usually end in recovery, and the cases of distinct circumscribed peritonitis running a more chronic course and ending either in resolution or, if more severe, in localised suppuration. Either with or without these precedent stages we may have a general peritonitis. If this results from spread by continuity—the usual mode in which a localised peritonitis becomes general—or by infection through the lymphatics of the appendix and meso-appendix, or by a slow leakage of inflammatory products through the appendix wall, or by the migration of bacteria along the same channels, its approach may be slow; if it follows the rupture of an abscess it will be much more rapid.

CASE 5.—The patient had been apparently convalescing from an attack of appendicitis when, contrary to orders, he walked from one room to another. He was at once seized with a violent abdominal pain, which was immediately followed by distension, vomiting, and symptoms of shock. I operated a few hours later, irrigating and draining the peritoneal cavity, which contained a large quantity of pus, but he died the next day.

But in either event it is usually of the fibro-purulent variety and is accompanied by much exudation. The patient soon presents the typical picture of diffused peritonitis—the incessant restlessness, the greatly distended abdomen tender everywhere to the lightest touch, dorsal decubitus, constant vomiting of small mouthfuls without much effort, thoracic respiration, obstinate constipation, absence of intestinal sounds, and high fever, followed towards the end by subnormal temperature, cold sweats, and collapse. It is of great interest, however, to note that even the cases which tend to run this course will occasionally recover when seen and operated on at the very onset of the generalised symptoms. In fact, if operation precedes the development of septic paralysis of the intestines a very fair percentage of such cases will recover. But after the latter phenomenon has appeared I regard the case as absolutely hopeless. If it is unmistakably present it is, I think, best to decline to operate. But if there is any doubt about it it is well to open, irrigate, and drain the abdomen. The suppurative cases are among the most favourable examples of peritonitis, whether general or localised. When localised they are very

favourable, and even in these general septic cases the more the suppurative process overshadows the toxæmia the better are the patient's chances. It may be well to note a possible explanation of this fact. Reichel some years ago determined that by gradually administering increasing doses of pure cultures of pyogenic micrococci to the peritoneum of an animal an immunity against an extremely large dose of this poison could be produced. The same immunity was acquired in the same way against the introduction of a sterile filtrate from the cultures and against the metabolic products of the staphylococci. Control experiments were uniformly fatal in animals not previously prepared. Attention has been called by Binnie to the clinical differences between the rupture of a chronic pyo-salpinx, even if of enormous size, and a case of very acute or so-called fulminating appendicitis with gangrene of even a small portion and escape of its contents.

CASE 6.—I saw some time ago a child in whom within a very few hours of the onset of the symptoms there was gangrene not only of the appendix itself, but also, and apparently as a result of an overwhelming bacterial infection, of an adjacent portion of the ileum. Distension was enormous. An enterostomy was done with a little temporary relief, but the child died soon afterwards. The chances of the patient, if operated on in a reasonable time, are far better in the former than in the latter case. Operation within three hours of the very first symptoms of such an event has failed to save the patient. He dies, as Treves has emphasised, not from the inflammation, or still less on account of any suppurative process, but from a profound toxæmia. In the pyo-salpinx there has been an opportunity for slow auto-inoculation. In the rapid gangrene of appendicitis there has been no time for this process. It is in such cases that we find the flat, silent abdomen indicative of absolute paralysis of the whole intestinal tract, and we have all the symptoms of shock and collapse. Here operation also is useless and to be avoided. But in the suppurative cases, for both the practical and theoretical reasons above given, if any sign of peristalsis remains—and this is the very best indication I know of as to interference or non-interference in these excessively grave cases—it is better to open and irrigate even if the patient is liable to die on the table. Occasionally a desperate and apparently hopeless case will be saved. The best immediate indication of gross perforation of the appendix with escape of its contents into the general cavity is sudden, violent, excessively acute pain, followed by rapid change of temperature, either rise or fall, and marked increase of the pulse-rate with diminution of volume and force. If the sepsis is profound the abdomen may be flat. If a little less in degree it may be barrel-shaped. Vomiting is usually a conspicuous symptom of this as it is of other forms of perforative peritonitis except that resulting from perforation of the stomach. It often shows its usual inverse relation to normal peristalsis. Of course in these cases operation must be immediate, and even then the mortality has been, and doubtless will be, for many years enormous. There remains to consider briefly the subject of recurrent and of chronic relapsing appendicitis. If, as I believe, various mechanical factors enter into the production of acute attacks, and if quite commonly those factors are brought into play by digestive derangement, and if an acute attack does not of necessity leave a permanent lesion of an infective type it is obvious that a patient may have two or even more mild attacks and safely decline operation. If, however, after any and every inflammation of the appendix the patient is left, as has been asserted, with what is practically a charge of dynamite in the abdomen, operation should be much more frequent than it has yet become. We shall do well both in discussion and in practice to separate the recurrent from the chronic relapsing cases. The former are well illustrated by the following case.

CASE 7.—In December, 1889, a man aged thirty-eight years had a mild attack of catarrhal appendicitis. He was ill for two or three days. He was treated by rest, starvation, salines, and calomel. His attack followed immediately upon a too hearty meal of broiled lobster after a day's shooting. In 1890 he was in New York on a visit and had another attack. I went to see him, meeting in consultation a well-known surgeon who had been called in at once. We agreed as to the undesirability of an operation at that time, but later disagreed, the New York surgeon advising removal of the appendix as soon as convalescence was once established, and I dissenting. I based my advice on the fact that the second attack, like the first, was clearly due to over-eating when tired, and especially on the circumstance that it again

followed a meal of broiled lobster. Moreover, neither attack had been of a dangerous type. The opposing views were submitted by the patient at my suggestion to Dr. Agnew, who decided in favour of delay, and subsequently to Mr. Treves in London, who coincided in that opinion. The patient has never had another attack. I have seen many such cases and at present I feel quite clear that the outcry for operation after one or two such attacks is based on conceptions of the etiology and pathology of the disease which are so incorrect that they entirely vitiate the arguments founded upon them. In chronic relapsing appendicitis the case is somewhat different. The interval then is not one of entire health; there are digestive disorders, flatulence, constipation or diarrhoea, and pain in the right iliac fossa aggravated by motion or exercise or fatigue. The attacks themselves are of a higher grade of severity, are accompanied by the appearance of a tumour, which often never entirely disappears, and by distinct evidence of localised peritonitis. The general health suffers severely and the patient is apt to be anæmic and emaciated.

CASE 8.—A girl aged ten years was reduced to a condition of such chronic invalidism and exhaustion that even during an interval it was a question whether she could survive the journey to Philadelphia; and yet the operation was of the easiest type, completed in ten minutes without trouble. The appendix was thickened and twisted and diseased, but had no important adhesions. The improvement in health was immediate and has been continuous.

In the majority of cases which finally require operation, especially in those in which the persistence of the local symptoms during the interval is marked, pus is present in small quantity and surrounded by thick firm adhesions. Even these cases of chronic relapsing appendicitis do not invariably require operation. In some instances I have suggested it and then have acquiesced in the patient's request for a period of delay, which has now in several cases extended over some years and seems likely to be permanent. There is good reason for believing that the mortality of the operation in skilful hands will be a low one. The experiments of Reichel already alluded to demonstrate beyond a doubt the possibility of a certain immunity resulting from auto-inoculation with pyogenic material. There seems to be good reason for believing that this comparative invulnerability thus acquired renders the peritoneum more indifferent to traumatism than in its normal condition. It is a clinical fact that an intra-peritoneal operation on a subject who has had several attacks of subacute or chronic peritonitis is, *ceteris paribus*, a less serious affair than if the same operation is done on a patient whose peritoneum has hitherto been uninvaded by disease or for operative purposes.

CASE 9.—In a relapsing case the appendix was buried in dense adhesions posterior to the cæcum and was firmly adherent by its tip to the iliac vein. The union was so intimate that I tied off both tip and base and removed the intermediate portion, which showed a small perforation. There was present a general plastic peritonitis. The patient, who had only recently recovered from a severe attack, was extremely emaciated and had the typical facies abdominalis, and yet six hours after the operation, which took three-quarters of an hour, his temperature was normal, his pulse 102, he had a movement of the bowels, and expressed himself as feeling better. He is now making an excellent recovery.

If the indications for operation are clear I think that the question as to whether it shall be done between or during attacks must be unhesitatingly decided in favour of the period of quiescence, the operative difficulties being then much less, especially as regards the important question of possible general infection. In the recurrent type, if operation is to be considered at all, it would be well to take the inappreciable risk of waiting for another attack which may never come. In the chronic relapsing cases, however, if the surgeon in deciding upon operation limits himself to the following indications formulated by Treves, which fairly express those of many surgeons in this country, myself included, he had far better take advantage of the interval. Operation is indicated when (1) the attacks have been very numerous; (2) the attacks are increasing in frequency and severity; (3) the last attack has been so severe as to place the patient's life in considerable danger; (4) the constant relapses have reduced the patient to the condition of a chronic invalid and have rendered him unfit to follow any occupation; and (5) owing to the persistence of certain local symptoms during the quiescent period there is a

probability that a collection of pus exists in or about the appendix. The operation itself may be one of the easiest in abdominal surgery or so difficult as to be impossible in its entirety if due regard is had to the survival of the patient.

[It has been found necessary to publish merely a selection of the cases quoted, on account of pressure on our space.—ED. L.]

NEUROLOGICAL FRAGMENTS.

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(Continued from p. 275.)

NO. XIV.

THE LOWEST LEVEL OF THE CENTRAL NERVOUS SYSTEM— THE STUDY OF TABES DORSALIS, AND SOME OTHER NERVOUS MALADIES, AS OWING TO DISEASE OF THIS LEVEL AND ITS IMMEDIATE CONNEXIONS.

I HAVE¹ implied that tabes dorsalis should be considered as a disease of the Lowest Level of the central nervous system. This level is, I believe, much the same as Marshall Hall's "True Spinal System." It is necessary to say something of the higher levels; we are concerned with them as well as with the lowest level in an analysis of the symptomatology of tabes; obviously we have to take them into account when dealing with the ataxic gait; walking is of cerebral initiation, although largely of lowest level performance.

I divide the central nervous system into two Sub-systems—Cerebral and Cerebellar. The lowest level of the cerebral sub-system is also, I suppose, the lowest level of the cerebellar sub-system; it is the cerebro-cerebellar level. However, no motor connexions² between the cerebellum and the spinal cord (motor centres of the lowest level, as I should say) have been yet proved to exist. There certainly are afferent fibres from certain centres of the cord to the cerebellum. I shall, for the most part, ignore the cerebellar sub-system in this and in subsequent notes, and shall speak of the lowest level as if it were the lowest level of the cerebral sub-system alone.

The foregoing and what is to follow on the hierarchy of nervous centres is, of course, hypothetical.

Each of the three levels of the cerebral sub-system is sensori-motor,³ but I shall limit illustration to the motor provinces of the levels (companion sensory provinces being understood). (1) The anterior horns of the cord and the motor nuclei of cranial nerves—a homologous series of lowest motor centres—make up the (basis of the) motor

province of the lowest level. (We may say that the motor centres of this level are a series from the nuclei for ocular movements to the anterior horns for movements of the perineum; perhaps, in another way of speaking, we may say that it extends from the tuber cinereum to the conus medullaris.) (2) The centres of the Rolandic regions of the cortex make up the motor province of the middle level. (3) The centres of the præ-frontal lobes make up the motor province of the highest level. I am, however, I fear, almost alone in the supposition that the præ-frontal lobes are motor.

The foregoing account of the constitution of the lowest level, merely provisional, is incomplete; several centres, among them the gracile and cuneate nuclei, have been ignored. Even so far as the account goes it is in mere outline. In particular the morphological groups of cells, anterior horns and motor nuclei of cranial nerves, which I call motor centres of the homologous series, ought, so far as our present knowledge permits, to be distinguished into centres proper. I shall return to this subject and shall in another note speak of Superior Centres of the level, to which centres of the homologous series are subordinate. It is because there are superior centres that I spoke of the homologous series of motor centres (anterior horns and nuclei of motor cranial nerves) as making up the basis of the motor province of the lowest level.

Manifestly in very many cases of tabes dorsalis there is disease of more than of elements of the spinal cord. But it was a blunder to speak of this malady as I did by implication (*loc. cit.*) as being owing to disease of the lowest level alone, of its intrinsic elements only. The intrinsic elements, the elements of the level itself, are a series of centres with their interconnecting fibres.⁴ What I call extrinsic elements are fibres which, although in some of their course part of the morphological masses, cord, medulla, pons, &c., are not elements of the anatomico-physiological community I call lowest level, but are (a) fibres connecting centres of the level with parts of the body (fibres extrinsic downwards), and (b) fibres connecting its centres with centres of higher levels (fibres extrinsic upwards).

I will, for illustration of the terms used in the foregoing, take the case of the Ataxic Paraplegia of Gowers. There is in this malady disease of fibres of the posterior columns (fibres extrinsic downwards) which connect centres of the lowest level with parts of the body; there is also disease of fibres of the pyramidal tract⁵ (fibres extrinsic upwards) which connect centres of the lowest level with those of a higher, the middle, level. So far, although there is disease of the morphological mass, the cord, there is no disease of any part of the lowest level itself. If in a case of ataxic paraplegia, muscular atrophy were to supervene due to disease spreading to anterior horns, there would then be disease of elements of the level itself, of some of its motor centres (intrinsic elements).

Fibres of the pyramidal tract are fibres extrinsic upwards of the level not only within the cord, medulla and pons, but also in their further course (through the crus cerebri, the internal capsule and the corona radiata) to the motor province of the middle level. In the case of hemiplegia, from destruction of motor fibres of one internal capsule, there is a negative lesion of fibres of the same tract as there is in lateral sclerosis of the cord, of fibres extrinsic upwards; or equivalently there is a negative lesion of fibres inter-connecting motor centres of the lowest level, and motor centres of the middle level. Fibres of the posterior columns of the cord are extrinsic downwards of the level as much as their continuations are in their after course to the periphery.

To return to tabes dorsalis. Certain extrinsic elements of the lowest level are those especially diseased in many cases of tabes. Speaking with regard to one symptom, ataxic, fibres of the posterior columns are sclerosed (negative lesion), and these, though solidly part of the morphological mass, the cord, are extrinsic elements (downwards) of the anatomico-physiological community I call lowest level. To illustrate more particularly: certain fibres of Burdach's column are extrinsic downwards all the way from the cuneate nucleus, a lowest level centre, to the periphery.

⁴ Although I use the words "connexion by fibres" that expression is not to be taken literally; it is to be taken as standing for any sort of junction, definite or indefinite, or, so to say, for any contrivance by which different nervous elements can influence one another.

⁵ Fibres of the pyramidal tract are chiefly affected in the lateral sclerosis of cases of the ataxic paraplegia of Gowers, and in one or two cases the sclerosis was limited to fibres of these tracts. Gowers, "Diseases of the Nervous System," vol. i., second edition, p. 456.

¹ Brit. Med. Jour., July, 1893.

² Marchi has described descending degeneration of fibres of the circumferential part of the antero-lateral column of the cord after extirpation of one lateral half of the cerebellum. But his observations have not been confirmed by Ferrier, Aldren Turner, and Risien Russell.

³ Although in the text I speak of the middle and highest levels as sensori-motor, I ought to say that Charlton Bastian has long held that there are no motor centres of the central nervous system higher than the anterior horns of the cord and the motor nuclei of the medulla, pons, and aqueduct of Sylvius. He believes that the Rolandic region of the cerebral cortex is sensory and that it is the region in which are registered the mixed body of impressions accruing from our different movements—these being in part superficial, cutaneous, impressions, and in part deep impressions of various kinds emanating from muscles, fasciae, tendons, and articular surfaces. He contends that, "A mixed body of impressions of this kind is evoked as a result of every movement, and this group of impressions is revived in memory as though it were a simple impression immediately anterior to the reproduction of each of such movements" ("Hysterical or Functional Paralysis," 1893, p. 797). Hence he calls the centres in which such impressions are registered Kinæsthetic Centres. He, of course, agrees with those who hold that the centres of the Rolandic region are motor, that upon destruction of these centres there ensue paralysis and "descending" degeneration of the pyramidal tract; but he thinks that the fibres of this tract are not motor although efferent from the sensory, that is, Kinæsthetic, Centres of the Rolandic region to the anterior horns of the cord and motor nuclei of cranial nerves. The centres of the Rolandic region are, on Bastian's view, at once the receivers of fibres from contracting muscles and other coacting parts and the givers-off of fibres (efferent not motor) to the anterior horns which, with their higher homologues (nuclei of motor cranial nerves) are the sole motor centres of the central nervous system. He thinks too that discharge beginning in this or that part of the Rolandic region produces convulsion by intermediation of anterior horns &c., beginning in this or that part of the body. Bastian's opinions on the nature of the representation by the Rolandic region are being accepted by an increasing number of eminent neurologists. Those who agree with him will, I hope, have no difficulty in substituting his terms and the opinions they imply, for the terms and opinions set forth in the text.

Still I think *tabes* should be studied *with regard to the lowest level*, as elements intrinsic and extrinsic of different regions of it are diseased. What I call extrinsic elements, although no part of the level itself, are fibres *directly* connected with its centres. It is convenient to use such terms as "medulla region" and "cord region" of the level, and such as "dorsal" and "sacral," and also "spinal" and "supra-spinal" region of the level.

Tabes is in some cases a malady made up, so to say, of several different sub-maladies. Numerous parts (theoretically all parts of the body, if we take numerous cases to fill up the type), are "fields of symptoms" in this clinical entity. If *tabes* be owing to disease of intrinsic and extrinsic elements of different regions of the level (not of those of its cord region alone), there should at least be a series of *symptoms* referable to disease of extrinsic and intrinsic elements of several (theoretically, if we take many different instances, of all), regions, supra-spinal as well as spinal, of the level. This is in accord with the evolutionary status of the level. For its centres represent all parts of the body—motorily all parts from iris or ciliary muscle to sphincter ani and—with the exception of Superior centres of the level—represent all parts directly, or by intermediation of ganglia of the sympathetic. There are in some cases of *tabes* symptoms referable to disease of extrinsic or intrinsic elements of or towards the two extremes of the level—the Argyll-Robertson symptom and incompetence of the sphincter ani⁶—and there are in some cases symptoms referable to several regions of the level between its extremes. What is of more importance—speaking now with reference to the suggestion that *tabes* may be regarded as a series of lowest level sub-maladies, not merely as a series of symptoms—is that the lowest level in comparison with the higher levels represents parts or systems (digestive, circulatory, &c.), of the body in detail; it represents them (I say again, in comparison with the higher levels), with considerable, not complete, independence of one another. And since the several parts or systems thus represented are exceedingly different, we have in cases of *tabes* sub-maladies so diverse as, to mention but some of them, Rectal Crises from disease of intrinsic or extrinsic elements of the sacral region of the level, Ataxy of locomotor movements of the legs from disease of extrinsic fibres (fibres of the posterior columns), in its lumbar regions, Laryngeal Crises from disease of extrinsic or intrinsic elements of the medulla region of the level, and the Argyll-Robertson Symptom from disease of intrinsic or extrinsic elements of a region of the level higher than its pontal region. There are, in cases of *tabes*, ocular, laryngeal, gastric, intestinal, locomotor, vesical, rectal and sexual sub-maladies. For the interpretation of at least some of these sub-maladies, we shall have to take into account Superior centres of the level.

I will stay to speak briefly and in outline of the evolutionary constitution of the lowest level, so far as I have incompletely defined it, dealing only with the motor elements of this sensori-motor level.⁷ There are four factors in evolution. The lowest level (that is, in comparison with higher levels of the cerebral sub-system, say, with its highest level, (1) represents few *different* movements (little differentiation) little complexity; it (2) represents movements of little definiteness, movements for less particular ends (great generality, otherwise little specialisation); (3) its centres represent in detail—that is, each centre represents some district of the body (little width of representation by each centre, that is, little integration); the centres of the level are (4) little inter-connected (little association of centres; little coöperation).

Whilst saying that the lowest level is least complex, &c., and that the highest level is most complex, &c., we must bear well in mind that the former is the most strongly organised and therefore the least modifiable of all the levels; and that the latter is least strongly organised, and, therefore, the most modifiable of all the levels. Most generally the more simple (less complex), &c., a centre the more strongly it is

organised and the less is it modifiable; the more complex (less simple), &c., a centre the more weakly it is organised and the more is it modifiable. Were not the cardiac, the vaso-constrictor, and the respiratory centres of the lowest level more strongly organised *inheritedly* than are the centres of the highest level, life would be impossible; if the centres of the highest level (those concerned during mentation) did not continue to be (in comparison with those of the lowest level) little organised and thus very modifiable, few new acquisitions would be made. The centres of the lowest level, to speak figuratively, make few mistakes, but do not develop much after birth in comparison with those of the highest level; the centres of the highest level make many mistakes, are less prompt and sure in their operations, but after birth they develop very much in comparison with those of the lowest level. And as to the fourth factor of evolution: whilst the centres of the lowest level have few inter-connexions and those of the highest many, the inter-connexions of the former, being strongly organised, ensure much more nearly inevitable coöperation than do the weakly organised connexions of the latter.

Perhaps the four assertions made under the formula may be thought to apply only to the centres of the lowest level which are concerned with organic duties. The centres of the lowest level which subserve the highest level in animal duties (to speak popularly, "which act under the command of the will") are by themselves little without the higher levels: on this matter I remark later. I submit that to centres of the lowest level concerned with organic duties the formula does apply. I limit further remarks to representation of the parts engaged in these duties; the lowest level by itself represents them very efficiently. The operations by the digestive, circulatory, and respiratory systems are certainly (1) simple, few *different* movements (obviously in the case of muscular walled tubes, arteries and intestines, the movements of which parts can differ but little from one another); the movements are for (2) very general ends, for in one case, aeration of the blood at all times; (3) each of its centres represents some district of the body (representation by the lowest level in detail); (4) the centres representing the several systems are in but little coöperation (in comparison with those of the higher levels).

To say that the lowest level represents organic (visceral) parts, including, of course, their apparatuses, in detail (Factor 3) may seem untrue; I will consider the case of the respiratory system. I have so far been dealing only with what I called the homologous series of centres of the lowest level; centres of this series do represent the respiratory apparatus in detail. There are centres (laryngeal) in the medulla region of the level for movements of the laryngeal muscles; there are centres in the cervical region (phrenic) for movements of the diaphragm; and there are centres in the thoracic region (costal) for movements of the intercostal muscles. I have yet to speak of Superior Centres of the level. One of these, the respiratory (medulla) centre, governs the respiratory apparatus by inter-mediation of motor centres, laryngeal, phrenic and costal, of the three regions of the lowest level mentioned. But of course this Superior Centre is a part of the evolutionary constitution of the level and must be taken into account. I shall speak on this matter in a future note.

The foregoing, as to the evolutionary constitution of the lowest level, is, as I have several times declared, said of it *in comparison with the evolutionary constitution of the highest level*. The following is, of course, hypothetical. The motor province of the highest level (1) represents most numerous *different* movements (great complexity, great differentiation); it (2) represents movements of great definiteness (great specialisation); (3) its centres represent widest regions of the body, if, indeed, each is not universally representing (great width of representation, great integration); (4) its centres have most numerous inter-connexions (great coöperation). The physical condition for insanity, I mean the condition produced by disease, is a negative lesion of more or less of the highest level—synonymously, anatomical substrata of consciousness, so-called "organ of mind." Although there are different *kinds* of insanity (different insanities) implying disease of different areas of the highest level, yet any insanity is an abnormal state of a whole person; physically there is disease of, or of parts of, sensori-motor nervous arrangements which represent all parts of the organism in most complex, &c., ways. There are different kinds of insanity, but there are no sub-maladies in any case of insanity.

⁶ The topographical extremes of the body are the crown of the head and the soles of the feet, but these are not the anatomical extremes. The soles of the feet are supplied sensorily by the third and fifth lumbar posterior roots. The perineal district is supplied, in part at least, by lower, sacral, roots. The legs are supplied motorily and sensorily by centres of the level above those supplying the perineal district. (See an admirable paper by Allen Starr, Amer. Jour. Med. Sci., July, 1892, one of extreme scientific interest and also of great practical value.)

⁷ Although I use terms which are more familiar to medical men than are the terms Herbert Spencer uses, I am, I believe, essentially adopting his formula of evolution. He is, of course, not to be held responsible for the terms I use nor for their application. I should be sorry if any crudities of mine were imputed to him.

I submit that in tabes each part of the body should be studied in detail, as it is the "field of symptoms"—as each case is a series of more or fewer sub-maladies"—that it is well, for example, to analyse separately the "crises," the abnormal pupillary conditions, the ataxic gait, &c., before we deal with the different sub-maladies we encounter in single cases, as together making up a more or less Compound Malady owing to one kind of disease—destruction the result of one kind of pathological process—of intrinsic and extrinsic elements of different regions of the lowest level. And I submit that tabes should not be spoken of as being owing to disease of the cord, but as resulting from disease of intrinsic and of extrinsic elements of different regions, often supraspinal as well as spinal, of the lowest level.

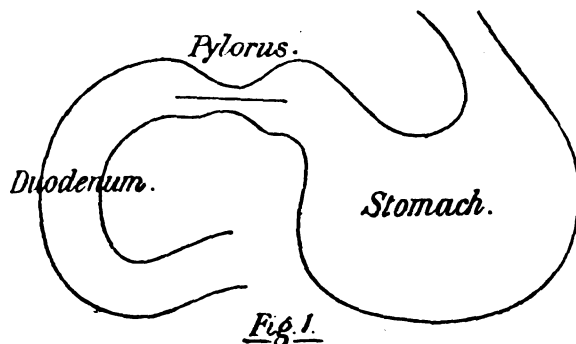
A SUCCESSFUL CASE OF PYLOROPLASTY.

By RUTHERFORD MORISON, M.B. EDIN.,
F.R.C.S. ENG. AND EDIN.,

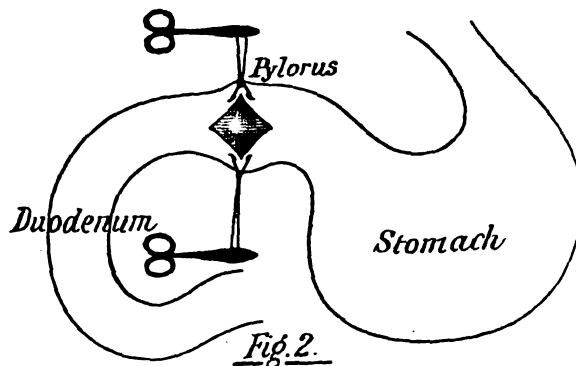
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A WOMAN aged forty-eight years was sent by Mr. Sheraton of Sedgefield to consult Dr. Drummond, who placed her under my care. The patient was suffering from vomiting and gastric pain. Her illness had commenced five years previously with an attack of vomiting. Similar attacks recurred every three months or so. Since the first seizure she had been unable to take any but the lightest forms of food. Beef or any heavy meal brought on an attack. In the early part of last year the attacks of sickness became more frequent and were accompanied by pain. Since the middle of July, 1894, she had been a complete invalid, with the following symptoms: For two or three days, provided she took very little food and that only of a liquid or farinaceous kind, she would feel fairly well; then a "lump" would gradually form in the umbilical region, producing sensations similar to those experienced during the later stages of pregnancy when the child is moving vigorously about. The "lump" after a time became hard and painful, and violent vomiting accompanied the pain. After lasting for two or three days these troubles disappeared, and for a short time relief was obtained, so that each week was divided into two nearly equal periods—one of pain and sickness, the other of comparative ease. The vomited matter had a frothy, yeasty appearance, an offensive odour, and in quantity always exceeded what had been taken. Early in July she ate a small portion of cabbage, and for three days afterwards she noticed traces of it in the vomited matter. Latterly she had observed that the vomit contained material like coffee grounds and that her stools were black. Her previous health had been good except for a liability to indigestion, more marked during the last twenty years. She had had seven children and one miscarriage. A sister had died from phthisis at the age of twenty-six years. There was nothing else worthy of note in her family history. On Oct. 6th, 1894—i.e., two days after coming to Newcastle—the ordinary vomiting attack came on. Nothing was allowed by the mouth, and nutrient enemata were ordered. On the 7th the patient vomited, from 3 A.M. to 10 P.M., three pints of yeasty, fetid, brownish fluid. She had passed a restless night. On the 8th she vomited about ten ounces of blood. The nutrient enemata were ordered to be continued. On the 9th she vomited some blood at 11 A.M., just before I saw her for the first time. Dr. Drummond and I agreed to wash the stomach out. This was done at 2 P.M. Immediately after washing a small quantity of milk, barley water, and brandy were administered. There was no more vomiting at the time. The fluid removed from the stomach was brown in colour, with a fetid, yeasty odour, and contained changed blood. From this time to the date of the operation the treatment consisted of daily stomach lavage, the frequent administration of small quantities of liquid nourishment by the mouth, and the use of nutrient enemata. On Oct. 15th the following note was made of her condition: "The patient is much emaciated and weighs only 5 st. 1 lb.; she has no appetite; the complexion is sallow and the expression anxious; the abdomen is retracted and flat except over the epigastric, left hyperchondriac, left umbilical, and left lumbar regions, which are elevated by the distended and dilated stomach, the shape of which can be fairly made out through the thin and flaccid abdominal walls. On palpation succussion sounds are

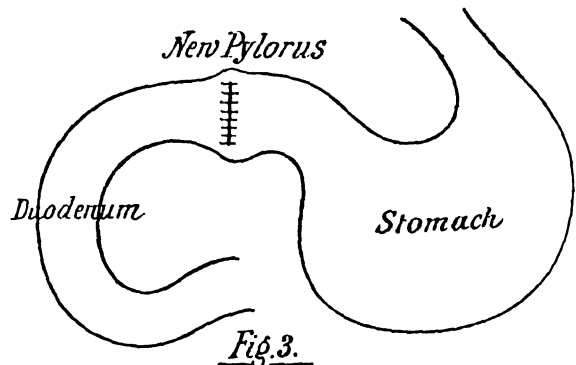
elicited, and just above the umbilicus and immediately to the right of the middle line a firm nodule the size of a walnut is to be felt. After the stomach has been emptied by the tube the nodule can be picked up between the finger and thumb. It is movable in every direction and when pressed directly backwards has pulsation communicated to it by the aorta. Percussion corroborates the belief that the stomach is much



dilated. All the other organs of the body appear to be healthy." On Oct. 16th the Heineke-Mikulicz operation was performed. On opening the abdomen the nodule described was found, as was anticipated, to be the pylorus. Taken between the finger and thumb it felt thickened and resisting, as if an indiarubber ring was embedded in it. The stomach was opened one inch above the pylorus and an attempt made



to pass the little finger through this opening into the pylorus. The pyloric orifice was, however, found to be so small that neither the little finger nor a pair of small clip forceps, closed and introduced subsequently, would pass through it. The incision made in the stomach was then prolonged with scissors through the middle of the exposed anterior portion of the pylorus for about an inch into the



duodenum. (Fig. 1.) The pyloric ring was firm and thick. There was no evidence of old ulcer, scar, or puckering. Drawing apart the middle of each side of the longitudinal incision converted it into a transverse one. (Fig. 2.) This position was permanently secured by a first row of sutures passed close to the edges of the incision through all the

coats of the stomach and duodenum, and a second row through the peritoneum only, in Lembert fashion, burying the first. (Fig. 3.) The operation was completed by closing the abdomen in the ordinary way, and occupied half an hour. The patient, notwithstanding her feeble condition, stood it well. Immediately after being put to bed she was slightly sick. For the first twenty-four hours nothing was given by the mouth. Nutrient enemata were administered every two hours. Twenty-eight hours after the operation teaspoonfuls of hot water were given occasionally. On the third day small quantities of barley-water and milk were given by the mouth and the nutrient enemata were continued. On the evening of this day, after having barley-water and milk, she felt a pain "as if the fluid was passing over a raw surface out of her stomach." On the fourth day she had arrowroot and milk, with mutton broth. On the sixth day she complained of feeling hungry, a sensation she had not experienced for years. On the tenth day the dressing was removed for the first time and the wound was found to be entirely healed. At this time she was having regular meals of bread-and-butter, tea, eggs, fish, and potato. During her convalescence the pulse and temperature never rose above normal, and she made steady progress from the day of the operation.

On Nov. 8th (three weeks after the operation) the patient was shown at a meeting of the Northumberland and Durham Medical Society. She was then in good health and weighed 6 st. 1 lb. (a gain of 1 st.). On Jan. 21st, 1895, she writes: "I am glad to say I am keeping very well, and I weigh 8 st. 6 lb. I don't think I ever weighed so much in my life, and nothing disagrees with me."

Newcastle-on-Tyne.

CASE OF GENERAL PARALYSIS OF THE INSANE IN A CHILD.

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AND

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THE following is the record of a case of general paralysis, beginning at the very unusually early age of ten years and eight months in a girl of average intellect, running a course similar to that most commonly observed in women, and ending in death after a steady breaking down of the bodily and mental powers during a period of two years and four and a half months. An interesting point in the clinical history was the presence for about six months of very marked "facial irritability" (Chvostek's symptom). We have recently observed this symptom in another case of developmental general paralysis—a young woman aged about twenty years—and in a case of ordinary general paralysis. In many of the cases of general paralysis beginning in early life that have been reported, congenital syphilis has been looked upon as an important etiological factor.² Whether it was so in the present instance must remain an open question, for, although we could obtain no decisive facts, our investigations left a strong impression on our minds that the presence of syphilis in the parents was quite within the range of possibility. The post-mortem appearances were perfectly typical of advanced general paralysis and put the nature of the case beyond a doubt.

The patient, a girl aged eleven years and five months, was brought to the Dispensary of the Royal Hospital for Sick Children, Edinburgh, on Dec. 7th, 1892. Her mother complained that her daughter was very nervous—constantly shaking—and that she was quite unable to do any lessons. The condition had lasted for more than nine months. The father was a strong, healthy-looking man. He admitted that he occasionally drank too much, but denied having ever had any venereal disease. There was no history of nervous or mental disease in his family. The mother was nervous and excitable; she had the reputation among her neighbours of being intemperate. Her mother's brother became insane

in old age. The patient was the youngest of seven children. One had died from hydrocephalus; two (immediately preceding the patient) were stillborn; the other three were alive, and healthy with the exception of the eldest, who suffered from "abscesses." None of the children had had snuffles or a rash during early infancy. There had been no miscarriages. The mother had good health during pregnancy. The child had no symptoms suggestive of syphilis as an infant, and she had always been looked upon as strong and healthy. Her mother said she was "the most easily brought up of her children," and that she never had any bad habits or mental peculiarities. She was a natural, bright, affectionate child, who did her lessons fairly well and took a good place at school.

Nine months before I (Dr. Thomson) saw her she had been promoted by the schoolmaster of the Board School from the fourth to the fifth standard after some sort of an examination. At that time, apparently, nothing abnormal had been noticed about her by anybody. Shortly after beginning the work of the higher standard, it was noticed that she was quite unequal to it and seemed to be getting less and less intelligent. She was, therefore, after a few weeks, put back into her former class. She was then found by the teacher who had taught her before to have changed very much in her capacity, and to have become so stupid that she could scarcely be taught anything at all and had forgotten a great deal of what she knew quite well before. She could not do the very simplest sums, and it seemed to be impossible to teach her even a single line of poetry by heart. It was also noticed that her speech was slower than it used to be, and that her handwriting was worse, the strokes being "thin and like a saw." At home it was also seen that she was getting more stupid. She had to be told over and over again to do simple things and had to be shown exactly how to do them or she did them wrong—e.g., she tried one day to sweep the floor with the wrong end of the broom. If sent with a message she forgot it unless she repeated it over and over again to herself on the way. Her hands were very unsteady; she often let cups fall, and she dropped her stitches when she tried to knit. No cause could be assigned for the onset of her illness. She had become steadily worse on the whole, although she was sometimes brighter than at other times.

The following are the notes taken at the time:—
"On examination the child is found to be fairly well nourished, but under-sized and poorly developed. Her height is 47½ inches and her weight 4 st. ½ lb. No sign of congenital syphilis can be found. The cranium is normal in size and shape. A prominent ridge is felt in the position of the frontal suture. The palate is somewhat high, but not very abnormal. The teeth also are not abnormal in shape, and the ears are well formed. There is a marked absence of expression about the upper part of her face. The heart, lungs, and abdominal organs are normal. The pulse is 96 to 100 and regular. Her attitude and gait are peculiar. She stands with her shoulders forward and her arms hanging down in front. She always keeps her hands closed pretty tightly, generally over a penny or some other small object, and her mother has difficulty in opening them when she is washing her. In walking she keeps her legs rather far apart, bends her knees very little, and takes small steps. As one of her neighbours says, she 'walks like a baby.' Her muscular movements are accompanied by a coarse tremor. This is very distinctly seen in her hands if she tries to do anything with them or to hold them still and extended; and its traces are very noticeable in her writing, which is very characteristic. The tremor is also extremely marked in her tongue when she protrudes it, and in her lips and lower jaw at the same time. When she puts out her tongue she tries to steady it by compressing her lips tightly upon it. Her voice is slow and hesitating and distinctly suggestive of general paralysis. Her eyes have been examined by Dr. E. E. Maddox, who finds sufficient hypermetropia present to account for her convergent squint and also for her rather small pupils. The pupils react very slowly and only slightly to both light and accommodation. The left is somewhat larger than the right, and both are somewhat irregular in outline. Owing to the child's extreme restlessness and the smallness of her pupils it is found impossible to get a good view of the fundus, but nothing abnormal can be seen. The child is somewhat deaf, especially on the left side. In other respects the special senses seem normal. The knee-jerks are present equally, but not strongly, on both sides. Her mental condition is very dull. She has to be

¹ Dr. Thomson is responsible for the clinical, and Dr. Dawson for the pathological, notes.

² Clouston: *Neuroses of Development*, p. 76. Middlemass: *Journal of Mental Science*, January, 1894.

told several times to do anything before she does it, the delay being evidently due to slowness of comprehension and not to disobedience. When once she understands what is wanted she repeats it over and over again—e.g., she had to be told many times to put out her tongue before she did it, but for some minutes after, when asked what her name was, or any other question, she replied by putting out her tongue. Her mother says that she seems to wander from one subject to another and never to adhere to the same one for any time. She reads aloud pretty fluently, but evidently does not understand what she is reading. She can name any numbers at once, but cannot add 2 and 1 or 2 and 4 together. She can name ordinary articles, such as pencils, penknives, &c., but seems unable to count them if there are more than three. If told to count up to 100 she does so pretty correctly up to 40, but misses a good many of the higher numbers without seeming to notice her mistake. She takes no interest in dolls or in any other amusement. She is very easily frightened by noise, and starts and trembles if spoken to suddenly or roughly. She seems to be annoyed by her own stupidity; she reddens when she fails to answer or to do some simple act; and when she finds herself unable to put on her boots (as happened once, owing to her having laced them up first) she cries with vexation.

During the first few weeks she was under observation she had many hallucinations and delusions. For example, one day she said to her mother that a boy had told her that a little girl she knew well was dead, and she sat looking out on the street for more than an hour, saying that she was seeing the coffin. The child in question was not even ill. Again, she frequently blamed her sister for stealing things from her which she had never possessed, and she several times told her mother that she had met and been spoken to by friends who, as was afterwards proved, had not been in the neighbourhood on that day. At night she usually lay awake a long time talking to herself loudly, and often repeated words over and over again—e.g., "Mary Jane stole the purse and there was sixpence in it." In January and February, 1893, a distinct temporary improvement occurred. The trembling was less, so that she could hold cups, &c., better, and she was more reliable in taking messages and a little quicker in doing what she was told. In February it was noticed that on percussion on the cheek below the molar bone there was marked "facial irritability" on both sides, precisely similar to that obtained in cases of tetany and laryngismus. The pupils became more distinctly irregular in outline. Towards the end of February she began to get worse again in every way. The trembling became so bad that she could not feed herself, and she ceased to be able to thread a large needle or to hold a pen. In March she began to have incontinence of urine both at night and during the day, and also for the first time she seemed to have difficulty in protruding her tongue when she tried to do it. On April 9th it was noticed that she constantly held her body over to the left side both when sitting and when standing, so that the right shoulder appeared to be about two inches higher than the left. This persisted for several days. About this time she became more irritable, starting and crying on the slightest provocation. If left alone she was generally pretty quiet through the day and free from hallucinations, but she was often restless and noisy at night. She could still write, but very irregularly. Towards the end of April she was worse. She sometimes did not know her own parents, and thought that she was away from home. For two days she refused to open her mouth, and had to be fed forcibly with a spoon. In May she improved again very much, getting fatter and more cheerful. Her speech was a little better, and she began again to try to knit. This improvement lasted for about six weeks. In June she gradually became worse again, and began to have prolonged fits of screaming at the pitch of her voice. Sometimes when she screamed she said that a little boy who lived on the opposite side of the street was beating her. On June 26th her mother heard her screaming in the next room, "Go away with you!" "Take it away!" &c., and when she went to see what was the matter she found the child pointing at a fly which was crawling on the table, and saying that it was a big dog and that it frightened her. About this time the child could not be got to put out her tongue or to hold anything in her hand. The "facial irritability" was beginning to be less marked. During July she had several attacks, in which she fell over to the left side and was very weak and confused, but towards the end of the month she improved greatly, recognised her parents, was

less nervous, took her food better, and began again to feed herself for the first time for many weeks. During the autumn of 1893 she continued to lose ground; she became thinner and weaker, and often seemed to be very cold. She could no longer write at all. Occasionally she recognised her parents and friends, but often she did not do so. She was unable to feed herself or to take a drink without help, and never asked for food, although she took it readily enough when put into her mouth. She had complete incontinence of urine and faeces. She usually leant over to the left side as she sat, and from time to time she had "turns," in which she fell to the left on to the floor if she was not caught. The "facial irritability" had entirely gone, and did not return; but she was still very nervous, starting and grimacing if any quick movement was made near her. She often had screaming fits which lasted for hours, and occasionally would laugh for an hour at a time, equally without apparent cause. She often also repeated one or two words over and over for an hour or two at a time, but at other times would sit quite quietly for many hours together. On Oct. 7th, 1893, she was admitted to the Royal Edinburgh Asylum. During her stay there the disease steadily progressed, but no new symptom developed. She gained considerably in weight, but her mental condition was in no way improved. Soon after she was taken home (Nov. 2nd) it was found that she could no longer stand. She lay in her bed all day with her limbs flexed on her body, seeming to notice nothing and rarely recognising anyone, even her mother. Now and then she suddenly distorted her features as if in pain, and she often cried. When told to put out her tongue she would open her mouth, but seemed unable to do more, and when asked to give her hand she moved it towards one a little. She could no longer repeat any words when asked. Within a fortnight of leaving the asylum bedsores began to form on her back and over the trochanters, and they continued spreading in depth and extent up to the time of her death, in spite of careful treatment. In February, 1894, after saying nothing for six weeks, she began again to repeat a few words. Towards the end of the month she improved further, and seemed brighter and happier than she had been for many weeks. On one occasion, when a book was given her upside down, she seemed to recognise the mistake. After February she never spoke at all; she seemed not to understand when asked to give her hand or to put out her tongue, and she steadily emaciated. During May she continued getting weaker. Her temperature was usually 99° to 100° F.; her pulse 130 to 140; and her respiration 36 to 40, and very shallow. Her right thigh was flexed fully on the abdomen and could not be straightened, but the left could be extended almost completely. Any passive movement of her lower limbs appeared to hurt her very much. During June and the earlier half of July very little change took place. On July 18th she became unconscious and remained so until she died on the 22nd. For the last two days of her life there was constant rhythmical rotation of the head to the left and movement forward and inward of her right upper arm at the shoulder-joint.

Pathological report.—The diagnosis received full confirmation from the necropsy, which was made on July 22nd, 1894, twelve hours after death. Although the weather was very warm, post-mortem rigidity had not passed off, and there was little or no lividity. The pupils were of medium dilatation. The body was excessively emaciated, and bedsores had formed over the sacrum and both great trochanters. There was a slight degree of the malformation known as pigeon-breast; the abdomen was strongly retracted, the limbs were more or less firmly fixed in a position of flexion at the knees, hips, and elbows, and the shoulders were also fixed. A small amount of pubic hair was noted, but the figure and mammary development were those of a young child. On examining the head the scalp was not found to be unduly adherent, but the skull-cap, the inner and outer tables of which were thickened (partly at the expense of the diploë), had contracted adhesions with the dura mater, especially along the superior longitudinal sinus. The sinuses contained red and white clot and were engorged, as were the veins opening into them from the pia mater, whilst the dura mater itself was everywhere thickened, and in some places was separated from the bone by a false membrane, the latter a somewhat rare condition, constituting the pachymeningitis externa of German writers.³ In addition to this, however, the dura mater over the whole

³ See, for example, Ziegler: *Pathologische Anatomie*, seventh edition, Band ii., p. 377.

extent of the cerebrum was lined with a false membrane, which varied greatly in thickness, being merely a thin film in the middle cranial fossa, whereas over the parietal regions it was fully a quarter of an inch thick in places. This membrane was adherent to the arachnoid all over the vault, though not very firmly, except in the part corresponding to Broca's lobes, where a fibrous band was noted. It left the cerebellum uncovered, but was observed to pass downwards beneath the pons and medulla so as to invest the spinal cord also. The pia-arachnoid was congested and thickened, especially so along the vessels, and over the surface of the arachnoid a number of fine, white, non-adherent grains were observed, whilst a considerable amount of sub-arachnoid fluid gave the brain a jelly-like appearance when first removed. The pia mater was found to be universally adherent to the cortex over the cerebrum, and there was also an attachment between the anterior lobes of the brain just in front of the genu of the corpus callosum. There was marked superficial atrophy of the brain, most pronounced in the frontal and parietal regions, where the convolutions were very distinct and the sulci wide, and the encephalon as a whole was abnormally small, the cerebrum, cerebellum, pons, and medulla, with the small portion of cord removed with them, weighing only 26 oz. (of which the cerebrum made 21 oz.)—some 10 oz. less than the average at that age. On cutting into the brain the grey matter, both of the convolutions and the basal ganglia, was seen to be of a deep reddish-grey or brown colour, and its vessels were full of blood; but, whereas the cortex was tough in consistence, the ganglia were soft and friable. The former was everywhere atrophied, and in no region could the usual layers be distinctly made out in it. The white matter was pinkish in colour, and though of soft consistence was tough. The ventricles were dilated, and contained some turbid fluid, whilst the ependyma (at least, in the lateral ventricles) was thickened and tougher than normal. Fine granulations were visible on the floors of the lateral ventricles, whilst that of the fourth ventricle was covered with a great profusion of coarser ones. The soft commissure in the third ventricle was exceedingly tough. The choroid plexus of the lateral ventricles was congested and contained some cysts. The cerebellum showed much the same conditions as the cerebrum, except that there was no subdural membrane and the pia mater was not adherent. There was nothing very remarkable about the pons or medulla. The vessels of the cord, as elsewhere, were injected. Had any doubt still remained as to the nature of the disease it would have been completely removed by the study of the microscopic appearances. Sections of the cortex were cut by the modified fresh method of Bevan Lewis from the anterior part of the frontal lobe, the motor area, and the occipital and temporo-sphenoidal lobes, and were stained with aniline blue-black. The pia mater wherever retained was found to be thickened, while the tissue immediately underlying it was fibrillated and contained numerous spider cells. The latter were also visible in the deepest layer of the cortex, as well as (in some places at least) in its thickness, and they were detected in the white substance, especially near some of the arterioles. The capillaries were more prominent than normal, and their nuclei appeared to be multiplied in places, whilst the small arteries frequently showed great proliferation of the adventitia nuclei, and the perivascular spaces sometimes contained masses of pigment. The pyramidal cells, large and small, were in an advanced stage of degeneration, losing their processes and breaking up; but, on the other hand, the cortex contained an abnormally large number of round cells. The changes were unusually uniform all over the brain, but perhaps, on the whole, more advanced towards the anterior part. Sections cut from the cervical region of the (hardened) cord and stained by Vassale's modification of Weigert's method showed much degeneration, which, although somewhat diffuse, was especially marked towards the posterior parts of the posterior and lateral columns, and in a less degree in the region of the direct pyramidal tracts in front. Transverse sections of a nerve taken at random from the cauda equina and similarly treated showed many degenerated fibres. The false membranes, both inner and outer (sections of which, including the dura mater, were stained with hæmatoxylin and eosin), consisted of vascularised fibrous tissue, the most internal layers of which—i.e., those nearest the brain—had in some places acquired a homogeneous hyaline appearance. The vessels of the true dura mater were here and there dilated owing to the increased blood supply required for the new membranes, and the dura mater itself, which

was thickened, contained in places, in its actual substance, structures resembling in every respect the earlier stages in the formation of false membranes—i.e., a network of fibrinous bands containing round cells in its meshes—an interesting fact which was noticed and pointed out to us by Dr. W. F. Robertson. The minute white particles strewn over the surface of the arachnoid were not examined, but they were similar to particles seen by one of us in another case, and which appeared to be composed of fibrin entangling numerous colourless cells. Further observations, however, are required. As regards the other organs, little need be noted. The serous cavities were drier than normal. There was a slight adhesion over the apex of the right lung, and the latter contained a small, well-defined, yellowish nodule, which showed no signs of breaking down, and was possibly of syphilitic origin, as no distinct evidence of tubercle was elsewhere discovered. Both lungs were congested and slightly emphysematous, and the bronchial glands were enlarged, though not caseous. The heart, which was contracted, was healthy, and the vessels were normal, so far as examined; the liver was soft and flabby, with much fatty infiltration; the spleen was pale and soft; the kidneys were congested and fatty, the capsules being adherent in places. There was an hour-glass contraction of the stomach, rather nearer the pyloric than the cardiac end, but the rest of the intestinal tract seemed to be normal. The bladder was greatly distended. The uterus and ovaries were healthy.

FILTERS IN CONNEXION WITH THE SPREAD OF DISEASE.

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THE following two instances of the apparent distribution of disease through the medium of ordinary water filters, such as are commonly used in India, have been kindly communicated to me by Surgeon-Captain Aldridge, A.M.S., who on both occasions had the cases under his observation, and they appear to be of such high interest and importance as to deserve publication in *THE LANCET*. The cholera outbreak at Lucknow is already attracting public attention, and some of its details will now have a special interest. I will merely state the facts as observed by Surgeon-Captain Aldridge. The lesson to be learned from them and the conclusions to be drawn are obvious.

1. *Cholera*.—During the recent very serious outbreak of cholera among the troops at Lucknow the disease was almost confined to the East Lancashire Regiment (in which there were about 135 cases and ninety deaths) and to one ward in the station hospital. Amongst the other troops of all arms, European and native, there were only eight or ten cases in all. The disease was distributed pretty generally through the different barracks occupied by the East Lancashire Regiment; there were cases in ten out of sixteen barrack buildings. In the station hospital men in one ward only were attacked; this was the special ward in which the severe and acute cases of disease were under treatment—chiefly cases of enteric fever. In this ward about seven of the patients were attacked with cholera. The first case occurred about August 1st. In the regimental barracks nine cases occurred between July 19th and 28th. On July 29th about 350 of the men were sent into camp on the brigade parade ground close by, where they remained under the same condition of food and water-supply. Cholera continued among them, and these men were marched on August 1st to camp at Kakra, about six miles distant. Between July 29th and August 9th 117 cases occurred. Amongst the men about 250, who remained all the time in their barracks, there were far fewer cases than among those who went out into camp.

The milk-supply was from cows kept at the regimental barracks; the men consumed very little milk. The same milk was supplied to the married quarters, in which there were only a few cases of cholera, and to the Station Hospital, in which cases occurred in only one ward, and the disease could in no way be attributed to infected milk. The drinking water was from two wells, one for each division of the barracks, a road dividing the two divisions.

The wells are completely closed in and free from any ascertainable source of contamination. The water is pumped up from the wells into the filtering tanks, and thence drawn into buckets and passed through Macnamara's filters. The filtering medium of the tanks consists of sand and gravel. Filter tank No. 1 was recharged with new sand and the water again used on July 14th. The first case of cholera occurred on July 19th, the second case on July 24th, in the part of the barracks using water from this tank. Filter tank No. 2 was recharged with sand on July 21st or 22nd. The first case of cholera among the men using the water from this source occurred on July 24th. The filter-tanks in the barracks occupied by other corps were recharged under a separate contract and at different dates. Those in the barracks occupied by the Royal Irish Regiment, in which only one case of cholera occurred, were recharged six months previously. The mineral water factory of the East Lancashire Regiment obtained water from the same tanks as the barracks of the regiment, and supplied only the regiment and the station hospital. In the latter the aerated waters were chiefly used in the "special" ward in which cholera broke out. The men out in camp, when they moved from the station, had a different water-supply, but the same mineral waters, which were sent out daily in large quantities, as they were considered to be safe for drinking, and the supply was barely sufficient to meet the demand, so that they were drunk at once after manufacture.

The barracks occupied by the East Lancashire Regiment were separated only by a road from those of the Royal Irish Regiment, and the Station Hospital was alongside of the latter. The sand with which the filter tanks were recharged was said to have been procured from the banks of the Gumti River, about two miles from the station; there was at the time cholera among the natives, and, as is well known, the natives regularly resort to the banks of rivers and tanks to obey the calls of nature, to bathe, and to wash their clothes. The sand was said to have been washed and roasted before use, according to regulation, but this was done by the contractor who supplied it, and may have been done very imperfectly. A new pipe water-supply was introduced at the end of July, but the water was turbid at first, and its use discontinued. After a few days it was again brought into use, and for a week or so both water-supplies were used by the men remaining in barracks. On Aug. 9th the supply from the filter tanks was shut off, and cholera ceased from that date.

About Aug. 11th Mr. Hankin made bacteriological examination of the water used at the barracks. He reported as follows: "Water from wells Nos. 1 and 2, no cholera vibrios. Water after passing through filter tanks Nos. 1 and 2, cholera vibrios present in both. Soda-water freshly manufactured from this tank water, cholera vibrios present." This outbreak of cholera was practically limited to the men of the East Lancashire Regiment in barracks and camp and to those in the "special" ward of the hospital. The only condition that was common to these two sets of men and not to the rest of the garrison, and that could be connected with the outbreak of cholera, was the water that had passed through the filter tanks, some of which was used for the mineral waters.

The first case of cholera in each division of the barracks occurred from two to four days after the filter tanks had been recharged with sand, and the first case in hospital was a few days later, in the ward where the mineral waters were chiefly used. Many of the cases in camp occurred at a long interval (ten days) after the men had been removed, and had ceased using the water direct from the filter tank, but these continued to use the freshly manufactured mineral waters. The men sent into camp suffered very much more than those remaining in barracks. The latter used both the water-supplies—that from the tanks and new pipes—and they also consumed much less of the mineral waters. That men sent into camp during cholera epidemics suffer more than those who remain in barracks is by no means an uncommon occurrence, and the thought often presses itself on one that when cholera appears in a community sending the men into camp is a mistake. It is of course the generally accepted practice, founded apparently upon experience, that when cholera breaks out the men should be sent into camp and moved at short intervals, and in India regulations have been laid down in accordance with the idea. But what are the facts? When cholera appears, say, in a regiment, if during the first ten days the cases are at all numerous the men are moved out into camp. It then almost

always happens that for the first few days or the first week in camp the disease increases, it then begins to decline and becomes less severe, and in the course of another week or so it finally ceases, except for a few isolated cases. This is the natural history and behaviour of the disease. In any restricted community it reaches its acme in about a fortnight, then gradually lessens, and in three or four weeks is at an end. Of course, in large towns or widespread communities it lasts much longer, but even in Hamburg the epidemic only lasted for about two months.

Up-country in India outbreaks of cholera almost always occur in the rainy season, when men in camp are exposed to great discomfort and suffering, and, far worse, to the sources of such serious diseases as malaria, dysentery, &c. Clearly they should not be subjected to such exposure unless the benefits are undoubted. With our present knowledge of the various ways in which cholera may be introduced into the system, many of which may be absolutely guarded against, it again requires consideration whether the men may not be safely left in cantonments and every possible precaution taken to prevent the food, the water, and the air (as by dust) being contaminated, and all other possible channels of infection. This can certainly be done more effectually in cantonments than in an exposed camp in the rainy season.

2. *Enteric fever*.—The second instance, an outbreak of enteric fever in the 3rd Battalion Rifle Brigade, occurred at Jullander in 1891 and points strongly to a similar cause. The first case, that of a woman, was admitted into hospital on March 27th. She had been ill in quarters for a few days previously. On April 14th the next case was admitted—one of the men from barracks—and during the next five weeks eleven more cases occurred in the barracks. No direct infection and no pollution of wells seemed to be possible. The milk was from the regimental dairy and seemed to be unimpeachable. The material used in the filter-tank through which all the drinking water passed was sand and gravel. The sand was dug from the side of the river, at the time practically stagnant, and at the spot where the sand was collected, and for a few hundred yards above and below, the clothes of the regiment were washed. The first case, that of the woman, occurred a few days previous to March 27th. The filter tank was recharged with sand from the place indicated on April 1st or 2nd, the woman's clothes having been washed near the spot a few days before. On April 14th the first case from barracks was admitted. Here, again, the evidence is very strong that the sand used in the filter tanks was the source of the outbreak, and the same thing may easily have occurred in numberless other outbreaks. Experiment has shown that no filters, except perhaps the Pasteur-Chamberland, will prevent the passage of pathogenic germs for more than a very short time. The Macnamara filter cannot, therefore, be relied on to free drinking water from such organisms if they be introduced into the water from the sand filter tanks.

SYPHILIS ACQUIRED IN CHILDBED.

By F. D. FISHER, M.B., C.M. EDIN.,

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A SERIES of cases of syphilis acquired in childbed and exhibiting tertiary phenomena rarely comes under observation. The unhappy victims of this misfortune were not in the first instance attended by medical men, but were all delivered by the same midwife, who had been inoculated on the hand with syphilis while nursing a prostitute. All the confinements took place in 1882—six in August, three in September, and one in October. There is no reason to suppose that the midwife ceased to follow her vocation after the latter date, and it is certain that the cases which were traced did not include all that occurred. In none of the cases could any history of inherited or previously acquired syphilis be obtained. Seeing that the events in question took place twelve years ago, and that most of the women suffer from impairment of memory, it is not surprising that their recollection of the dates of the primary and secondary symptoms is very defective.

CASE 1.—This patient was delivered of a child in October, 1882. The first sign of inoculation was a sore situated just within the labia, and not accompanied by any special symptoms. The midwife's explanation of it was that she

had scratched the patient during delivery. Skin eruptions first appeared as "red spots" on the legs, but the body and buttocks were in turn quickly invaded; the period of eruption is not known. The hair then fell off, especially from the crown of the head, and eruptions subsequently appeared on the arms. About two and a half years after the first symptoms she suffered from "fits" during several weeks; they occurred four or five times a week, and generally came on at night; during the attacks she was unconscious, and was said by her friends to have foamed at the mouth and become rigid. There are now numerous scars on the arms and face, and a large scar on the forehead, a little to the right of the middle line, marks the place from which a "tumour" was removed after three years' duration. A yellow, fetid discharge from the left ear commenced twelve months before the operation, and was accompanied by dull pains in the temple and partial deafness; it lasted for twelve months, and the patient thinks it ceased after the operation. Her memory is distinctly impaired, so much so, indeed, that her statements can hardly be relied upon. On the crown of the head there is an ulcer six inches long and five inches in diameter, with irregular edges, a black base, and a very fetid yellow discharge. The movements of the eyeball and the field of vision are now normal, but no ophthalmoscopic examination was made. There is no history of eye disease, but the patient suffered some time ago from diplopia. She now complains a good deal of pains in the back. She has had no more children or miscarriages. This case was not treated in its early stages; at what period treatment was begun cannot be ascertained. The husband was inoculated about a month after his wife, but nothing is known of his symptoms; he died in an asylum five years afterwards.

CASE 2.—This patient was delivered of a child on Sept. 17th, 1882. She had a sore on the vulva, but denies having had any secondary symptoms, and is now apparently quite well. The child was evidently infected from the midwife. The navel became ulcerated and the sore healed slowly under treatment; rashes appeared on the head, body, and buttocks. The child became greatly emaciated, but subsequently gained flesh and appeared to be quite well. The child died when seven years old from accidental burning. The husband developed a sore near the frænum of the prepuce a month after a visit to his wife, and the prepuce sloughed extensively. It was at this period that treatment was begun. He has now a scar in each groin, where abscesses were opened, and he presents the symptoms of locomotor ataxia, with delusions. He does not appear to have had any local paralysis, but has girdle pains round the body, incontinence of urine, the Argyll Robertson pupil, and a typically ataxic gait. His sexual power is now greatly diminished, and his patellar reflexes are lost. No ophthalmoscopic examination was made. Since 1882 the woman has had six children and one miscarriage at the third month. The first and third children are alive, the second died of marasmus, the miscarriage then followed, the fourth child died of paralysis in infancy, and the fifth and sixth children died from marasmus.

CASE 3.—This case is particularly interesting, as its nature was suspected and treatment begun before the stage of incubation was over. The disease ran a mild course. The patient was delivered of a child on Aug. 28th, 1882. Rashes appeared on the back and neck; she lost her hair, and had a sore-throat, followed by "inflammation of the eyes"; her vision is now impaired. The child is alive and well. In July, 1885, she was admitted into the Sheffield Infirmary and operated on for ovarian tumour, twenty pints of fluid being removed. Since then she has had two children, neither of which presented any symptoms of inherited syphilis, and their present condition is very good. The husband states that he never had a sore or secondary symptoms.

CASE 4.—This patient was delivered of a child in August, 1882. The puerperal period was prolonged, "weakness" being assigned as the cause. The secondary rashes were distributed chiefly on the neck and arms, and were attributed by the nurse to "poorness of blood"; the hair of the head and eyebrows also came out. Treatment was begun in January, 1884, seventeen months after inoculation; the medicine caused "fits," which ceased when she took it after food. There appear to have been no eye affections or sore-throat. The woman now enjoys good health, headache and impaired memory being chiefly complained of. One child was born on Dec. 26th, 1888, and is alive and well. In August 1891, there was a miscarriage (period not known)

without apparent cause. Three months after the woman's confinement her husband noticed a sore near the frænum of his prepuce, where there is now a scar. Skin eruptions subsequently appeared, chiefly on his neck and thighs; he also had a very bad sore-throat. About two years after the first symptoms his left nasal cartilage began to ulcerate, and part of it is now absent.

CASE 5.—This patient was delivered of a child on Aug. 12th, 1882. The placenta was retained, and was removed by the midwife who passed her hand into the uterus. The patient noticed a sore on the nurse's finger; it was described as a crush caused by the wringing machine. The first symptoms were observed in October, 1882, when small red pimples appeared all over the body. The vulva is described as resembling raw beef. The patient suffered from loss of hair and prolonged sore-throat; her teeth decayed and broke off. There was also partial deafness and tinnitus aurium, both conditions being due to accumulation of cerumen. In December, 1890, the nasal cartilages began to ulcerate. At present the septum and both nasal cartilages are completely destroyed, there are large depressed oval scars all over the face and arms, and the upper lip is swollen and affected with a dry eczema, the whole face presenting a hideous appearance. In March, 1894, she had chronic periostitis of the tibia, which terminated in suppuration. The child, which was the sixth, is alive and well. A full-term child was born on Feb. 22nd, 1885; it was always ailing, had snuffles and a nasal discharge, and when fourteen months old died from marasmus. There have been no miscarriages. The patient's memory is defective, and her statements are not very trustworthy. Neither the duration of treatment nor the date of its commencement can be ascertained. The husband has apparently not contracted the malady from his wife, and there is no history of previously acquired syphilis.

CASE 6.—This patient was delivered of a child on Aug. 6th, 1882. About three weeks later she complained of noises in the ears and partial deafness. This was followed by a rash in the form of small pimples, which were first noticed on the legs, but subsequently affected the whole body, except the face and the palms of the hands. She lost her hair and had several attacks of sore-throat, with "lumps" in the neck. She has had four full-term children since 1882, without any abortion or miscarriage. The first child died from marasmus when fourteen months and a half old. The second had snuffles and a "funny head"; it died from fits and teething when eighteen months old. The third child is now four years old, and the fourth is a year and a half old. Neither of them present any signs of congenital syphilis. Specific treatment was begun two months after confinement. The patient is now fairly well, her only complaint being very marked loss of memory. The husband had a sore on the glans penis, but appears to have had very few secondary symptoms.

CASE 7.—This patient was a niece of the midwife. She is described as being the worst case of the series, and was the only primipara known to be infected. The subjoined notes are taken from her mother's statements. She was delivered of a child in August, 1882, and did not leave her bed for over three months. The vulva became very sore, and presented the appearance of raw beef. A red rash soon afterwards came out over the whole body, and ulcers showed themselves on the face. Remedies were administered from the development of the symptoms until she left home. She was then a "perfect wreck" and "horrible to look upon." Part of the upper lip and both nasal cartilages are now absent, and the face is extensively marked by scars. There have been no more children or miscarriages.

CASE 8.—This patient was delivered of a child on Sept. 12th, 1882. A vaginal examination was made by the midwife a fortnight previously, and again just before labour set in. About a month afterwards a sore appeared within the labia and was poulticed. The external organs of generation soon became raw and very tender. Rashes then appeared on the back, buttocks, and neck, and subsequently on the arms and legs. The patient was so sore that the weight of the bedclothes could not be borne, and for several weeks she could not lie down. She also had a severe and prolonged sore-throat, and "something wrong" about the anus. She lost her hair extensively. Inflammation of the eyes supervened later, but was greatly benefited by her medical attendant, who "passed needles into both eyes"; the sight is now impaired. Her memory is unaffected, and she now enjoys good health. Treatment was begun two months after delivery. The child was apparently healthy,

but contracted "small-pox" when eighteen months old, and was removed to the hospital, where it died. Two years after this labour abortion occurred at the third month without any known cause, and twelve months later a dead foetus, which was "like a bag," was born at the ninth month. Two children were subsequently born, and now seem to be quite healthy. The husband's history could not be obtained.

CASE 9.—This patient was delivered of a child in August, 1882. No trustworthy information is obtainable. The husband was inoculated and afterwards died in an asylum. The widow married again, and her residence is unknown.

CASE 10.—This patient was delivered of a child in August, 1882. It is certain that she suffered from syphilis, because she was medically examined and gave evidence in Court against the midwife. She has, however, left the district, and cannot be traced.

Remarks.—The tertiary symptoms presented by the female patients did not include any dependent on implication of the brain or spinal cord. The cranial nerves were all examined and found to be normal, except the second and, perhaps, the eighth. The senses of taste and smell were intact; there was no paralysis of the muscles of the eye-ball, and the pupils were equal and normal in every case, except the husband of the patient in Case 2, who had the Argyll Robertson pupil. There was no distinct evidence of gummatous growth in any part of the body. In Cases 1, 5, and 7 the face of the patient is extensively marked by scars resulting from the dermatitis associated with tertiary syphilis. The disease being acquired in childhood the puerperal period was continuous with the primary symptoms, hence none of the cases were treated in hospital till (in most instances) the tertiary symptoms developed. The midwife, who is still alive, knew the nature of the sore on her finger. She was tried at the Leeds Assizes in February, 1883, and was sentenced to twelve months' imprisonment with hard labour.¹

A CASE OF

RAPIDLY FATAL FACIO-CERVICAL CELLULITIS FOLLOWING TOOTHACHE.

By JAMES ELIAS, M.R.C.S. ENG., D.P.H. CAMB., &c.

ON Thursday morning, April 12th, 1894, a young man twenty years of age complained of toothache and was unable to go to his work as weigher of bluestone at a copper works. The pain was rather severe, the seat of mischief being the last right molar of the lower jaw. On the following day a slight swelling appeared on the right side of the face, the pain disappearing at the same time. By Saturday, the 14th, the swelling had increased, and in the afternoon I first saw him. On examination I found the face swollen over the right side of the lower jaw, the swelling extending under the chin and slightly down the neck. The inside of the mouth was in a state of general congestion, extending to the back of the throat, and the floor of the mouth was raised, and beneath the tongue the mucous membrane was so cedematous that it partially protruded when the mouth was open, suggesting the appearance of a second (smaller) tongue. The tooth complained of was much decayed, and sharp pain was elicited on percussing it. The temperature was 103.5° F., and the pulse 130. There had been no rigor. The offending tooth was extracted, pus welling out of the cavity. An aperient was prescribed, also an antiseptic mouth-wash. On Sunday morning (the 15th) I again saw him. The swelling in the face and neck had now considerably increased, and I felt convinced that it was a case of rapidly spreading cellulitis. I sent for Mr. Lewis of Neath to see the case with me. He came in the evening. During this short interval the disease had made rapid progress; the face appeared to be double its usual size, the right eye being almost closed. The swelling had increased all over the front of the neck, the oedema extending over the chest to the level of the nipple. The patient was at this time perfectly conscious, but he was unable to lie down, the dyspnoea, however, not being urgent. Rigor and pain were absent. Speech was difficult. The temperature was 103° and the pulse 140. We decided to operate at once. No chloroform was administered. A deep incision was made in the middle line, extending from the symphysis menti down to about the middle of the neck.

¹ The trial is reported in THE LANCET of Feb. 17th, 1883.

A probe was now carefully passed deeply amongst the structures below and parallel with the lower jaw on the right side and brought to the surface opposite the angle where the point was cut down upon. A sinus forceps was then passed along the probe, and after the latter had been extracted the forceps were opened to an extent which allowed a medium-size drainage-tube to be inserted. No pus was reached, although we probed carefully for it. The operation, which was borne well by the patient, was performed under strictly antiseptic precautions, the final dressing consisting of boracic lint (in the form of a hot fomentation) covered over with cotton wool. He passed a rather restless night, complaining of mucus at the back of the throat, which was difficult to clear away. There was no delirium, and he took nourishment fairly well. At 7 A.M. on Monday (the fourth morning after the swelling first appeared) the nurse stated that the patient had a "fit," which only lasted a few minutes, and then he died.

That this case should have ended fatally is not to be wondered at, for there were three dangers threatening the patient's life—viz., oedema glottidis, extension of phlebitis (along communicating venous branches) to the brain, and oedema of the lungs; he undoubtedly died from the first of these. The disease was evidently septic in nature and resulted from an ordinary dental abscess, so common at the roots of decaying teeth. It seems surprising that such cases as the one recorded above are not more common, and this must be attributed to the fact that the mouth, like the rest of the alimentary tract, is remarkably free from those pathogenic organisms which are the cause of septic inflammation. Such germs must, however, continually find their way into the mouth, but it is more than probable that they meet with an early death through the action of the secretions unless they find a suitable nidus, due to an abrasion of surface or faulty secretion, which would enable them to flourish. There are numbers of germs, on the other hand, mostly of a parasitic nature, which flourish well in so favourable an incubator as the oral cavity, thus proving that the oral secretions exercise a "protective influence" and exert a bactericidal action over those pathogenic microbes only which are fatal to the human organism. The exact way in which the various secretions of the human body behave towards certain bacteria offers a wide and important field for research to the practical bacteriologist; but the result of such discoveries can only tend to emphasise the importance of keeping the secretions in as healthy a state as possible and of assisting their germicidal action in all surgical operations involving mucous membrane by the constant use of antiseptics.

Neath, Glamorganshire.

A PROLONGED CASE OF HICCUGH.

By D. FERGUSON, L.R.C.P., L.R.C.S. EDIN.

THE patient was a man about thirty-three years of age, who had been suffering from hiccough for about twenty-four hours before I first saw him. He was robust and in good general health, but perhaps rather thin; he had no pain, gastric derangement, or flatulence; he did not vomit, and his bowels acted freely. His urine contained no albumen or sugar; his skin and conjunctivæ had a faint yellow tinge. Physical examination revealed no abnormality except slight hepatic enlargement. His own opinion was that there was nothing the matter with him except the hiccough. He was a total abstainer, and had been one for years. In the hope that a sudden and unexpected shock might break the habit of the spasmodic action of the diaphragm, a large piece of ice was, without previous warning, applied to his spine; but no benefit was obtained. Aromatic spirit of ammonia, ether, and pressure on the phrenics were similarly ineffectual. Thirty grains of chloral hydrate were then given, after which he immediately fell into a sleep lasting about two hours, but the hiccough continued throughout as before. Spirit of camphor was then given, followed by chloroform and tincture of opium internally, while hot fomentations with turpentine were applied to the epigastrium. No relief being obtained I injected half a grain of morphia hypodermically. At my next visit I found him decidedly worse. He looked pale, worn out, and dejected. The morphia had not produced sleep. With every spasm his whole

body shook convulsively, even the muscles of his neck quivering, and his face was for the first time slightly cyanosed. Previously he had been taking nourishment freely, but during the last few hours all food was rejected. On the administration of chloroform the hiccough ceased, but the inhalation was discontinued after a quarter of an hour on account of the shallowness of his respirations, and in less than an hour the hiccough was as bad as ever. At my next visit I was accompanied by a medical friend. No sooner had we entered the patient's room than the hiccough ceased, nor did it return during the ten minutes or so that we remained there; but it recurred with unabated severity on our departure. Probably the arrival of two medical men agitated the patient and acted on him as a temporary counter-irritant. In accordance with my friend's suggestion I endeavoured to administer tincture of belladonna in combination with aromatic spirit of ammonia; but the mere sight of the medicine produced painful retching. I therefore again injected half a grain of morphia under the skin of the arm and used chloroform inhalation. The morphia caused drowsiness, but no sleep, and although the hiccough ceased while the chloroform was being given, it returned in all its former urgency as soon as the unconsciousness passed off. The patient now seemed to be in a critical state. No nourishment of any sort had been taken for many hours, and the cyanosis was intense, while the hiccough was continuous and violent. I then sought the advice of three friends of hospital experience to whom I described the case. They recommended the successive trial, in the following order, of (1) ice to the phrenics; (2) galvanism to the same region; (3) dry cupping to the loins, on the chance that there might be latent kidney mischief; (4) drachm doses of subnitrate of bismuth; and (5) the prolonged inhalation of chloroform short of producing narcosis. It was impossible for the patient to swallow the bismuth, and the chloroform had been pushed as far as I was disposed to venture. The other recommendations were carried out, but did not produce the slightest apparent benefit. As a final resource I then injected below the skin of the arm six minims of a solution containing one-sixtieth of a grain of atropia and half a grain of morphia. The dose was large certainly, but the same quantity of morphia had been already injected without producing any further effect than a little drowsiness. In five minutes the patient was fast asleep, and the hiccough had entirely ceased. In rather less than two hours I returned, in response to an urgent summons, and found his face cyanosed, his lips particularly blue, and his breathing stertorous, and so slow and laboured that he seemed to be on the point of suffocation. There was, however, no clammy perspiration, and the pulse was comparatively strong, slow, and regular; the pupils were slightly dilated and quite insensible to light. He could not be awakened by slapping the face with wet towels, shouting into the ears, or applying galvanism to the temples, but tickling the soles of the feet made him start so violently that he regained sufficient consciousness to answer a few questions and swallow a little coffee. He was allowed to fall asleep once more, but in about an hour his breathing became so much obstructed that he was again awakened, this time with far less difficulty than before. He talked for a few minutes quite rationally, drank some beef tea, and fell asleep again. Next morning he complained of nothing except some stiffness of the neck and difficulty in swallowing. There was no return of the hiccough, which had lasted for seventy-two hours without cessation, except during the short periods while he was under chloroform and while he was visited by my medical friend and myself together. His subsequent improvement was rapid, and in a few days he regained his normal condition.

Camden-town.

ANÆSTHESIA BY THE CHLOROFORM AND ETHER MIXTURE.

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THE large number of deaths from chloroform administration that has been noticed lately has caused anaesthetists to look out for a safer anaesthetic. A mixture of 1 volume of chloroform and 2 of ether has been used under the impression that the vapour inhaled would consist of 2 volumes

of ether and 1 of chloroform, and in that way the depressing action of the chloroform upon the heart would be neutralised by the stimulating action of the ether. To the chemical mind this would seem most unlikely. Ether boils at 35° C. (95° F.) and chloroform at 62·7° C. (145° F.), and it seems highly probable that the ether would vapourise out of all proportion to the chloroform. In the administering of an anaesthetic there are two factors which determine the assumption of the vaporous condition. The first of these is the property of diffusion, by which a body capable of volatilisation becomes diffused through an adjacent gas or vapour. The said body may be solid or liquid. During a hard frost it is matter of notoriety that snow will gradually disappear by evaporation. Water, in the same way, volatilises at ordinary temperatures. It is known that gases or vapours diffuse with a velocity inversely as the square root of their densities. The density of ether vapour being 37 and that of chloroform being 59·75, and their square roots 6·082 and 7·729 respectively, it follows that ether vapour will diffuse to chloroform vapour as 7·729 to 6·082, or as 100 to 78·8. So far, then, as regards diffusion, the vapour of the ether will preponderate. The second factor is the boiling point. To determine the relative proportion of the mixed vapours as occurring during the administration of the mixture I have made one or two experiments, which I will now detail.¹

Ether having a specific gravity of 0·72 and chloroform one of 1·497, two volumes of ether and one of chloroform will be very nearly of the same weight. I took equal weights—66 c.c. of chloroform and 137·2 c.c. of ether—putting the chloroform into a long, slender, stoppered vessel graduated in c.c. with a thermometer, whose volume was ascertained, as it had to be immersed in the mixed liquids. I then carefully poured in the ether, which lay above the chloroform without mixing with it. The volume then (subtracting the space occupied by the thermometer) at 18° C. was 203·2 c.c. On mixing by turning upside down a few times, the thermometer rose to 23° C., and the volume of the liquid increased. On cooling down to 18° the volume contracted down to the original volume of 203·2 c.c. I took a flask having a capacity of 1200 c.c., intending by the space thus obtained to give an opportunity for the same diffusion to take place as occurs during the administration of anaesthetics. Into this flask, which had a side tube in the neck for distillation, I introduced the mixture, closed the flask with a stopper carrying a thermometer reaching down into the centre of the flask, and connected the side tube with a glass condensing apparatus. I then placed a small water bath under the flask, and applied gentle heat. The flask was raised a little distance from the water bath, and the temperature was kept between the limits of 36·6° and 40° C. (98° and 104° F.). The heat was so gentle that the distillate came over slowly, the first 50 c.c. coming over in seventy-five minutes, the next 25 c.c. in sixty minutes, and the last 10 c.c. in twenty minutes. When these 85 c.c. had come over distillation ceased, the thermometer reading being 40° C. The specific gravity of the distillate was 0·7344. This denotes a mixture by weight of 1·87 chloroform and 98·13 ether, by volume 1·87 chloroform and 196·26 ether; in other words, 100 volumes of ether to 0·953 chloroform—i.e., less than 1 per cent. That chloroform was present in the distillate, and that its higher density was not due, or not due solely, to the alcohol which chloroform is allowed to contain, was shown by two tests: (1) formation of benzo-isonitrite by warming with alcoholic soda and phenylamine; and (2) reduction of Fehling's solution. The residue in the flask was next examined. It amounted to 103 c.c. The specific gravity was 1·187, equivalent to a mixture by weight of 60 chloroform and 40 ether, by volume 60 chloroform and 80 ether, or 100 volumes of ether to 75 of chloroform. Thus, administering this mixture, the patient would be inhaling 100 volumes of ether to 0·953 of chloroform at the first; whilst if the whole of the contents were used up the patient at the last would be inhaling 100 volumes of ether to 75 of chloroform.

¹ Since writing the above I have examined the residues left in Clover's apparatus in three administrations of the mixed anaesthetics. The specific gravities were 1·144, 1·095, and 1·028, giving the respective quantities of ether to chloroform by weight as 45·3 to 54·7, as 51·7 to 49·3, and as 59·5 to 40·5; or by volume as 90·6 to 54·7, as 103·4 to 49·34 and as 119 to 40; that is, to 100 volumes of ether, 50, 47·6, and 3, volumes of chloroform respectively, in the state of vapour. The residue first examined, as stated above, contained 100 volumes of ether to 75 of chloroform. These cases show conclusively that in administering the mixed anaesthetics we are using a vapour of varying and uncertain composition.

Consideration of these figures must show us the inadvisability of using the mixture of ether and chloroform. To be giving an inhalation which may vary between 100 to 0.9 and 100 to 75 is clearly a most dangerous proceeding. It appears to me that for ordinary cases ether is by far the safer anæsthetic of the two; that when this is contra-indicated, pure, unmixed chloroform should be used, every precaution being taken as in the case of all anæsthetics, to give it carefully; but that to use the two mixed is unscientific and unsafe. In these remarks I have had in view administration by Clover's inhaler. In giving the mixture by dropping it on to an open flannel mask the vapours would doubtless be more evenly distributed.

Derby-road, Nottingham.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF TRAUMATIC INTRA-PERITONEAL HÆMORRHAGE.

By E. H. WAGSTAFF, M.R.C.S. ENG.

IN connexion with Mr. Battle's case of Intra-peritoneal Hæmorrhage in THE LANCET of Jan. 26th a sketch of the following case, which occurred recently in my practice, might be of interest.

A man met with an accident under the following circumstances. On Dec. 19th, 1893, whilst driving in an ordinary spring cart his horse stumbled and fell, whereupon he jumped from the cart and fell on the road on his left side. Assistance was immediately at hand, and he was conveyed—in a sitting position in another cart—to his home, a distance of about two miles and a half. I saw him immediately on his arrival and found that he had sustained a fracture at the junction of the middle and upper thirds of the left femur, which was promptly put into position. A careful examination was made, but no further injury could be made out. It was remarked at the time that there was an entire absence of shock. The patient was warm, and the pulse, temperature, and respiration were normal an hour after being put to bed; indeed, he was extraordinarily cheerful considering the circumstances. The friends report that, though a generally healthy man, he suffered from flatulent dyspepsia and want of appetite, evidently the result of alcoholism, his tendencies in that direction being well known. All went well until Dec. 21st, when slight vomiting set in with flatulence, the former relieving the latter. No abdominal pain was complained of. There was no dullness or undue distension of the abdomen. As the bowels had not been open since the accident an aperient was given, but without effect. The vomiting recurred at intervals until the morning of the 22nd, when it ceased, but the bowels continued obstinate. The vomiting recommenced in the early morning of the 23rd, and continued at intervals throughout the day. During the whole of this time the pulse varied between 72 and 85, and the temperature between 97.8° (after vomiting) and 99.4° F.; the tongue was moist and fairly clean, and the respiration was normal. At 8.45 P.M. on the 23rd the patient complained of faintness, and, on my visiting him at 9.30, to my surprise I found him cold, pulseless, and collapsed, in fact *in extremis*, from which condition he never rallied, but died at 10.45. The necropsy (twelve hours after death) revealed nothing of moment on first opening the abdomen. There was no peritonitis. The stomach, bowels, spleen, liver, and kidneys were healthy, the latter wonderfully so, considering the alcoholic habit. A small length of bowel above the cæcum was collapsed, but there was no undue fecal accumulation. On tracing the bowel upwards to the duodenum with a view to its removal a large retro-peritoneal hæmorrhage was discovered in connexion with the pancreas. It was impossible to define its precise origin, as the whole organ was so bruised and lacerated as to break up on handling. Here was evidently the cause of death, an accident in itself perhaps worthy of record; but I venture to suggest that the chief interest lies in the absence of any of the ordinary symptoms attending so extensive a lesion of so important an organ. The bruising

and laceration of course occurred at the time of the accident, whilst the hæmorrhage probably occurred a few hours before death as the result of inflammatory changes or the effort of vomiting.

Leighton Buzzard.

INVERSION OF UTERUS; DEATH.

By THEODORE MAXWELL, M.D. CAMB., F.R.C.S. EDIN.

THOUGH I can hardly think that cases of complete inversion of the uterus are as rare as one in 150,000, as has been stated, they are quite rare enough and fatal enough to justify my recording the following one. I find a similar case mentioned by Dr. J. L. Kerr¹ of Crawshawbooth, Manchester, where, however, the woman died ten minutes after replacement from shock and hæmorrhage, and where there was a suspicion that the midwife had pulled at the cord, which I feel sure she did not do in my case. I was called at 6 A.M. on Jan. 26th last by a midwife to a young woman in her first confinement, and found the child, which was somewhat premature, born, the woman very pale and low, and the afterbirth, which was to a large extent invested by the membranes, hanging out of the vulva. On this mass gentle traction had no effect. Pinching it near the vulva caused pain, and there was no tumour to be felt above the pubes. I then passed my finger cautiously into the vagina, and found, as I suspected, that there was no os, but that the mass was continuous with the fornix and consisted of the inverted uterus, with the placenta partly attached. I found no difficulty in peeling off the latter, and very little in replacing the uterus by the pressure of three fingers. It was, however, so soft and flabby that it could not be felt through the abdominal walls. I syringed out the vagina with a hot solution of creolin and administered a little ergotin and some egg and spirit, but death occurred in about an hour. There was no hæmorrhage at any time. The midwife said that the labour was a breech case and extremely easy, there being very little pain. The child was born about 5 o'clock, and as the afterbirth did not come and there was no pain or hæmorrhage she proceeded to wash the infant. While doing so the placental mass appeared. She had once seen a case of inversion, and had a suspicion of what had occurred and therefore sent for me at once.

Woolwich-common, Kent.

CASE OF ACUTE ALCOHOL POISONING.

By NORMAN KERR, M.D. GLASG., F.L.S.

A WOMAN aged forty-one years, wife of a labourer, a periodic inebriate, on Dec. 19th, 1894, in London, drank one and a half pints of whisky 22 over proof (47 stronger than whisky as usually retailed). As this is nearly double the ordinary retail spirituous strength, she must have swallowed more than two and three-quarter pints of the latter. The spirit was taken right off. In a few minutes she was found lying on her back insensible, and never recovered consciousness till she died five and a quarter hours later. The post-mortem appearances thirty hours after death were venous engorgement of the head, with subarachnoid effusion, in addition to old-standing congestion, with white, milk-like film on the surface of the pia mater. The walls of the heart were fatty, pale, and thickened. The cavities contained about half an ounce of fluid, tarry-like blood in the right ventricle. There was slight pleural effusion in the lungs, and patches of extravasation of blood in both. The walls of the stomach, which were thinned in parts, with patches of mucous membrane semi-detached, presented brownish-black ridges, with a red, fiery, tree-like aspect, on a translucent, pale, interspersed with red ground, corrugated inflammatory appearances extending into the duodenum. The stomach contained eight ounces of grumous fluid with a faint odour of alcohol. The spleen was engorged. The capsule of the kidneys was semi-adherent. While the patient was alive the face was pale, the eyes suffused and dull, the skin cold and clammy, with cold perspiration, the pulse thin and compressible, almost imperceptible, and the breathing stertorous. Throughout the pupils were dilated. The temperature fell 7° F. below normal.

Regent's-park, London, N.W.

¹ THE LANCET, Oct. 28th, 1882.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CANCER OF RECTUM; INGUINAL COLOTOMY; PREGNANCY; CÆSAREAN SECTION; RECOVERY.

(Under the care of Dr. WILLIAM DUNCAN.)

THERE are one or two points in this case which render it unusually interesting. The patient was young for the occurrence of such a disease as cancer of the rectum, and it is of course very rare for that disease to be complicated by pregnancy. The great difficulty which presented itself with regard to the operation of Cæsarean section was the vicinity of the artificial anus to the region of the new incision. It was imperative to render the parts aseptic before operation, in order to prevent septic infection during its progress and until the wound was soundly healed; this was effected with a most satisfactory result.

A woman aged twenty-six was admitted into the cancer ward of the Middlesex Hospital on June 28th, 1894, under the care of Mr. Hulke. Eighteen months previously she began to suffer pain on defecation, and constipation. Twelve months ago she was told she had cancer of the rectum, and for this a left inguinal colotomy had been performed. She had one child two years old. On her admission to hospital the finger encountered about one inch and a half within the anus a large firm mass about the size of an orange in the anterior wall. The mucous membrane appeared to be intact over the lower accessible portion of the tumour, but the examining finger was blood-stained. Per vaginam the mass could be felt projecting prominently along the posterior vaginal wall, but there was no ulceration of the vaginal surface. There was a blood-stained mucoid discharge from the rectum. The patient was in considerable discomfort from the irritation and straining, and injections of morphia had to be repeatedly given. In August enlargement of the abdomen and breasts led to a diagnosis of pregnancy of between five and six months' duration, but the patient could not remember when the catamenia last appeared. Owing to the extensive blocking of the pelvic canal by the malignant growth it was decided to let the patient go on to full term and then have Cæsarean section performed, for which operation the patient was transferred by Mr. Hulke to Dr. Duncan's care. The operation took place on Nov. 22nd. There were no signs of labour. The patient having been anaesthetised, the abdomen was carefully washed, and the inguinal opening into the bowel closed by a pad of lint, which was firmly supported by an assistant's hand during the whole operation. A median incision about six inches long was made and the uterus exposed. Then a large flattened-out metal Hodge's pessary was pressed on the anterior uterine wall with a view to control hæmorrhage, and the uterus was opened by a vertical incision within the pessary. It was found that the bleeding was more effectually controlled by digital compression, so the pessary was discarded. The incision cut into part of the placenta (which was attached on the anterior wall), so the wall was rapidly cut through and the opening extended chiefly downwards. The uterus was brought up to the abdominal wall by an assistant, who hooked the forefinger of each hand into either end of the incision. The membranes were ruptured and the fœtus (which lay in the first vertex position) was delivered head first. The child was a female and immediately cried lustily. The placenta and membranes were now rapidly and completely removed from the uterus, which was then brought outside the abdominal wall. The bleeding, which was not much at any time, came from vessels in the incised uterine wall. A hot sponge was put into the uterine cavity and the uterus itself surrounded by a towel wrung out of hot perchloride of mercury solution. Uterine contraction set in very soon, aided

by manipulation with the fingers and by an injection of three grains of ergotin into the gluteus muscle. A series of stout silk sutures was now passed through the uterine muscle, down to, but not through, the endometrium. Next, a large pair of cyst forceps was passed down into the vagina to make sure that the cervical canal was freely patent for the lochial discharge. The cavity of the uterus was thoroughly swabbed out with a 1 in 2000 perchloride of mercury solution, and the sutures were tied. The peritoneal edges of the uterine incision were then brought accurately together by a series of fine silk Sûnger sutures between the deep ones, and the uterus was returned to the abdominal cavity. No fluid having escaped into the peritoneal cavity during the operation, the abdominal incision was closed with silk sutures in the ordinary way. On account of the nearness of the inguinal colotomy aperture the wound was covered over with a collodion scab, and then dressed with salicylic wool and strapping. The operation lasted about one hour. On the 23rd the patient passed a restless night. Injections of morphia (half a grain) were given hypodermically every four hours, and three grains of ergotin at midnight. There was no sickness. Nutrient suppositories were ordered to be given through the colotomy wound every four hours. The pulse was 120. On the 24th she passed a better night. The pulse was steadier. An ounce of milk and the same of water were given every hour. The morphia injections were continued (two-thirds of a grain every four hours). There was very slight vaginal discharge. From this time onwards the patient progressed satisfactorily; she was continually crying out for the morphia injections, but this was due to morphia craving, for she did not appear to suffer more pain than was accounted for by the condition of the rectum. Nourishment was taken well. On the fifth day, as the breasts were causing discomfort, an aperient was given and the bowels acted well. On the sixth day fish was given and on the tenth the stitches were removed, the abdominal incision being perfectly healed. The temperature throughout never rose above 100° F. The child was thought to be little more than eight months. It weighed 5 lb. at birth, but steadily gained weight and strength whilst under observation. The patient was retransferred to the cancer wards under Mr. Hulke's care.

Remarks by Dr. DUNCAN.—It must be very rare to meet with a case such as that just described, in which a woman on whom an inguinal colotomy had been performed months previously for extensive malignant disease in the pelvis became pregnant and subsequently required Cæsarean section. When the pregnancy was first discovered after the patient had been in the hospital nearly two months it was difficult to say how far gestation had advanced, because, in the first place, the patient could remember very little about menstruation, and, secondly, the uterus was pushed up by the growth in the pelvis. It was quite evident, however, as there was so much obstruction that the proper course in the mother's interest was to let the pregnancy go on to term; but even in cases where there is much less narrowing of the parturient canal, whether from disease of the cervix uteri or of the surrounding parts, I am strongly of opinion that, provided the disease be of a malignant nature, the life of the child should receive much more consideration than if the disease were not cancerous, and an attempt ought always to be made to save it by Cæsarean section. In the present instance there was no difficulty in deciding against the induction of abortion and for Cæsarean section, and I am much indebted to the courtesy of my colleague, Mr. Hulke, for so kindly handing the case over to me for operation. With regard to the operation itself, when the abdomen was opened I did not (as has hitherto been my custom) bring the uterus outside the abdomen before incising it in order to prevent the escape of any liquor amnii or blood into the peritoneal cavity. With a good assistant it is not necessary to do this, and thus a much longer incision in the abdominal wall is avoided. Nor was any attempt made to control bleeding by constricting the cervix uteri with an elastic band; the use of an elastic band is bad, for though it stops hæmorrhage it has the grave defect of tending to cause uterine paralysis, and thus, when the constricting band is removed, violent post-partum hæmorrhage may set in. I have seen one of the most skilful operators obliged (owing to his inability to stop the hæmorrhage) to convert the Cæsarean section into a Porro operation by removing the uterus. In order to prevent bleeding during the incision of the uterus I adopted the plan recommended by Dr. Murdoch Cameron of Glasgow (and which answered perfectly in my last Cæsarean section) of placing a flattened-out

large metal Hodge's pessary on the anterior uterine wall and making a vertical incision inside the pessary whilst an assistant pressed it firmly against the uterine wall. In this case it had no effect, but that was due most likely to the fact that the placenta was situated in front. This makes my third case of Cæsarean section in which the placenta was unfortunately so placed. Now some observers say they can diagnose the placenta when in front even before the abdomen is opened. All I can say is that I am unable to do so with any degree of certainty when the uterus is exposed. In one of my former cases the anterior wall of the uterus appeared to be unusually pale, and yet it held the placenta which I cut into. If the placenta is incised the operator requires to cut through it expeditiously, taking care to let his incision extend lower down the anterior uterine wall than usual. After all, the loss of blood is not much—certainly not much greater than at an ordinary confinement. It is necessary to pass something through the cervical canal in order to ensure its patency in those cases where labour has not been started some hours previously to operating. As a rule it is better to introduce a bougie into the uterine cavity for eight or nine inches some six or eight hours previously, as the uterus is then more certain to contract after being suddenly emptied of its contents, besides which there is less danger of the lochial discharge being pent up. In the present instance, owing to the blocking of the pelvis by growth, a bougie was not inserted. The most important part of the operation is the suture of the uterine wall, and too much care cannot be taken both to avoid piercing the endometrium and to accurately coapt the uterine walls and peritoneal coats together. Silk is the material I always use and prefer. Lastly, as the patient (if recovery took place) was to return to the cancer ward, no steps (such as removal of a piece of each Fallopian tube) were taken to prevent the possibility of future impregnation. The successful result of this more than usually difficult Cæsarean section is in great measure due to the unremitting care bestowed upon it by my excellent house physician, Dr. G. Stanley Dodgson.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE

CASES OF OPERATION FOR GALL-STONES THROUGH A TRANSVERSE INCISION.

(Under the care of Dr. G. H. HUME.)

THE following report of these cases is from notes by Dr. A. M. Martin, surgical registrar.

These cases are published as illustrations of a method of operating for gall-stones which offers certain definite advantages. The first is the greater facility of access afforded by the transverse incision. Much of the difficulty of the usual operation by vertical incision arises from an insufficient exposure and inadequate access to the parts. When the peritoneal cavity is opened transversely the neighbourhood of the gall-bladder and bile-ducts is much more accessible both to the eye and the hand, and there can be no doubt that a transverse wound of the abdominal wall in this region carefully sutured heals almost as readily and with as little after-weakening as a vertical one. A further advantage of the transverse incision is efficiency of drainage. The thoroughness with which the space below the liver can be drained to a dependent opening in the right hypochondrium has been demonstrated in an able paper by Mr. Rutherford Morison;¹ and confidence in drainage with protective packing justifies the adoption of direct incision of the ducts in cases of impacted stone, in the place of more complicated and tedious methods. Where the incised duct can be sutured it is advisable to do so. After opening the gall-bladder also, the opening should be closed with sutures; but, whether sutured or not, an opened gall bladder is better left to drainage than stitched to the parietal peritoneum. It may fairly be claimed that the fatal event in the fourth case was not in any way due to the method of operating. The field of operation was found post mortem to be secluded and to be free from any appearance of sepsis. Death seemed to be attributable to cholæmia, or, at any rate, to be the result of the long-continued jaundice, whose depressing influence was in this case aggravated by mental trouble.

CASE 1.—A man aged sixty-three years was admitted into the Royal Infirmary under the care of Dr. D. Drummond in

February, 1894. He gave a history of illness beginning eight years ago with a severe attack of pain in the right side followed by jaundice. In June, 1893, he had another severe attack, and between these two dates there were many slight attacks. Some of them were ushered in by shivering. Vomiting brought relief to the pain, and each attack was followed by return or increase of jaundice. On admission he was found to be emaciated and jaundiced, and suffering from constipation and dyspeptic symptoms. On March 13th he was transferred to Dr. Hume for operation. The abdomen was opened by a transverse incision from a point outside the sheath of the right rectus to near the tip of the eleventh rib. Before the peritoneum was divided all bleeding points were carefully ligatured. The gall-bladder was found to be contracted, with thickened walls and adherent omentum. It contained no stones. After separation of some of the adhesions a large stone was found to be blocking the common duct close to the duodenum. The surrounding area having been packed with sponges, the lesser omentum was pulled forward as far as possible, and an incision made into the duct over the stone. This proved to be of very soft consistence, and it was removed piecemeal with a director and scoop. Bile flowed after its removal. A large rubber tube was placed with one end against the opening in the duct, and the other projecting from the outer extremity of the wound. Enough iodoform gauze was packed around the tube to completely isolate the area it traversed, and the operation was completed by suturing the wound in layers. The after progress of the case was as follows. There was at first a copious discharge of bile through the tube, and the wound required dressing—sometimes twice daily. The gauze was removed on the third day and the tube not till the fourth week. The discharge of bile gradually lessened and the motions had become coloured. On May 4th he left the hospital with the wound healed and the jaundice and pain entirely gone.

CASE 2.—A woman aged thirty-eight years was admitted on April 2nd, 1894. She was deeply jaundiced and stated that she had been so for eighteen months. Her first attack of pain occurred a year before her admission, when the jaundice had already existed for six months. Once the attacks of pain began they recurred at varying intervals. After each attack there were deepening of the jaundice and tenderness over the right side for a few days. It was found that she had evening pyrexia (101° F.), and hepatic dulness was increased. The gall-bladder could not be felt. She was operated upon on April 9th. The abdomen was opened by transverse incision, and the liver, enlarged and very dark in colour, presented. The gall-bladder was adherent to the great omentum. When the adhesions were separated the common duct was found to be enormously distended. The area having been guarded with sponges, the distended duct was aspirated and nine ounces of clear mucoid fluid were drawn off. As the sac was collapsing it was pulled forward and opened with scissors. Two stones were found to be blocking the opening into the duodenum, and these were removed with finger and scoop. One was an inch long and truncated at the ends; the other was smaller and faceted. A third stone was removed from the right hepatic duct at its opening into the common duct. The gall-bladder was then opened, and from it a large number of small white calculi were removed. The opening into the gall-bladder was sutured as accurately as the friability of its walls permitted. The opening into the sacculated common duct was also sutured. A large drainage-tube and gauze tampon were placed in the same manner as in the previous case. The patient made a quick recovery. The gauze was removed on the second and the tube on the thirteenth day. There was a high temperature for a few evenings. The jaundice disappeared, and the patient went out recovered on May 10th.

CASE 3.—A man aged fifty years was admitted on May 31st, 1894, under the care of Dr. Drummond and transferred to Dr. Hume for operation. He was jaundiced and had attacks of pain in the right hypochondrium, accompanied by vomiting and sweating. The operation, which took place on May 7th, consisted in opening the peritoneal cavity by transverse incision, separating adhesions between the omentum and gall-bladder, opening the latter and removing therefrom a number of small faceted calculi, as well as two large stones—one from the bladder, the other from the cystic duct. The opening in the gall-bladder was not sutured. The isolating sponges having been removed, a large drainage tube was placed—one end in contact with the gall-bladder, the other projecting from the outward extremity

¹ Brit. Med. Jour., Nov. 3rd, 1894.

of the parietal incision, and it was packed round with strips of iodoform gauze. The after-progress was uninterrupted, and the patient left the hospital recovered on June 21st.

CASE 4.—The patient was a married woman aged fifty years, who had been jaundiced for three years. The jaundice was preceded by an attack of very severe pain in the right side, accompanied by profuse perspiration and vomiting. There had been many attacks of pain, and during the three years she had every few weeks a febrile attack with vomiting and sweating, followed by deepening of the jaundice. Owing to a reverse of circumstances she had been worn down by much mental trouble as well as hard physical work. She was seen to be in an unfavourable state for operation, but she was becoming quite disabled and was anxious for relief. The operation (on June 4:h) was carried out on the same plan as in the preceding cases. The abdomen was opened by transverse incision. A large stone was found in the common duct, close to the duodenum. The duct was hooked forward with the fingers, and an incision was made over the stone, which was delivered with a scoop. It was an inch in length and flattened at the ends. The duct was not sutured, but drainage was provided for by a rubber tube and gauze packing. After the operation the patient never became quite conscious. She was restless and drowsy, vomiting now and again. She continued in this condition, with rapid pulse, slight rise of temperature (100·8° F.), and increasing drowsiness, till she died in the early morning of June 7th. The post-mortem examination of the abdomen showed that the area of the operation was completely shut off and that there was no peritonitis. The patient had apparently died from chœmia.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Causation of Agophony.

AN ordinary meeting of this society was held on Feb. 12th, the President, Mr. HUTCHINSON, being in the chair.

Dr. FREDERICK TAYLOR read a paper on the Causation of Agophony. He said that:—1. Agophony was no more than, or different from, ordinary musical *discord* or *dissonance*. 2. This discord was the result of *beats* occurring between the higher harmonics of the note uttered by the patient. 3. The beats constituting the discord were audible because the higher harmonics were reinforced while the fundamental tone and lower harmonics were suppressed. 4. Both the reinforcement and the suppression were due to modifications of the bronchial tubes, which caused them to resonate the higher harmonics and not the lower. It was pointed out that *discord* as a factor in agophony had not been sufficiently recognised by writers, and that the late Dr. Stone, in his Croonian Lectures, confined his attention almost entirely to the high pitch of the morbid sound. Discord was favoured by (1) the pre-existence of high harmonics in considerable force, such as is known to be the case with syllables containing the vowels *e* and *i*; (2) by reinforcements of the higher harmonics; and (3) by suppression of the lower harmonics and fundamental tone. The last two conditions could be effected by modifications of the resonating qualities of the bronchial tubes, such that they would resonate very high tones and would not resonate the lower normal tone. It was argued that such an alteration in the resonating qualities of the tubes was a sufficient explanation of agophony without the necessity of conceiving that liquid in the pleural cavity cut off the lower tones. It was shown that there was no ground for believing that liquid cut off lower notes and transmitted higher, or that higher notes were in general more penetrating than lower notes. It was shown, further, that the familiar sounds, such as nasal voice, the Punch and Judy voice, and others with which agophony were compared, did not depend on transmission of sound being affected by a layer of fluid, but on differences in the resonating spaces. Some remarks were then made on the position in which agophony was usually heard, with observations of twenty-one cases, from which it was shown that agophony was not always limited to the upper part of the area of dullness. The occurrence of agophony in the absence of pleural liquid was then

discussed, and a case was quoted showing its appearance in pneumonia with plugs or casts of fibrin in the bronchial tubes. The conclusion was that, though agophony was most frequent in the presence of liquid because the liquid compressed the lung, it might be produced by alterations in the bronchial tubes independently of liquid.—Dr. THEODORE WILLIAMS said he regretted that the early use of the aspirating needle nowadays had abolished the necessity of the study of certain physical signs. As regarded the nature of agophony, he supported Dr. Taylor's views, and thought it was more common in women and children than in men. One objection to those views appeared to him to be that in intra-thoracic tumour the bronchi were usually much compressed, but in no single case of this nature had he ever found agophony. Why did it last such a short time? The late Dr. C. J. B. Williams had stated that agophony would disappear whenever the fluid between the lung and the chest had accumulated to the depth of more than an inch.—Dr. MAGUIRE agreed that agophony was a sign of no practical value in medicine, and that it was merely a discordant modification of the voice due to altered conditions of resonance in the bronchial tubes. But there was a wide difference between resonance and consonance, which two seemed to be confused in the paper. Ordinary musical discord or dissonance was quite different from agophony. The harmonics of any given note uttered by a patient would never produce a discord. The nearest to it was the chord of the seventh; this was the product of the harmonics of any fundamental note, but in no sense of the word was it a discord, except in so far as it produced in the musical mind a feeling of expectancy which could only be relieved by the sequence of its "resolving chord," as it was called. Consonance could only occur with regard to one particular tone, and it was utterly impossible that a series of bronchial tubes could correspond with a consonating chamber. There was no space for such a chamber for one note, much less for all the notes of the human voice. In excessive bronchophony one got a kind of agophony, but that was an instance of resonance and not of consonance. The disagreeable noise of the phonograph was a form of agophony; it was certainly not a question of harmonics, but only of confusion of tones of different timbre but of the same pitch. The real explanation of agophony was therefore a confusion of sounds of the same character and pitch—a confused echo, tones of different quality, but not of different elevation, jarring with one another. If this were so it was impossible to conceive that Dr. Taylor's fourth proposition could be correct.—Dr. SANSOM held that agophony had still some diagnostic importance. He quoted the view endorsed by Barth and Roger that in cases of effusion, at the level at which agophony was heard, there was a thin layer of flattened lung separated from the chest wall, which was set in vibration by the voice-like the tongue of a Jew's harp. Agophony was not likely to be due to one cause in all instances.—Dr. SCHORSTEIN said that musically it was impossible to produce discord from any one note or its harmonics. In a recent case in which agophony was audible when the patient said "99" he found it to be still present when the patient sang a pure "Ah," which proved, therefore, that it could not be a discord. Dr. Taylor appeared not to have discriminated between what was musically known as discord and the popular idea of a discord—i.e., an unpleasant noise. The bleating of a sheep, the note of a bassoon, and that of a bagpipe, though unpleasant to many, were not musical discords. He remarked on the rarity of agophony in cases of recognised pleurisy.—Dr. SQUIRE stated that if, after bathing, a little water were left in the external meatus the sounds which reached the ear were altered, being raised in pitch and somewhat resembling agophony. He had recently seen a case of old-standing effusion in which agophony was plainly heard. If the explanation in the paper were correct agophony should be more frequently heard in pneumonia.—Dr. TAYLOR, in reply, said he had not been able from his reading to make out such a distinction as had been drawn between discord in its popular and in its musical senses. He relied rather on the statement made by an authority in acoustics that a compound tone might be harsh or dissonant in itself if it contained high harmonics. If the explanation quoted by Dr. Sansom held good agophony ought to be heard only along the upper line of dullness, but this was by no means the case. As intra-thoracic tumours grew from the root of the lung they early compressed the bronchi and cut off any possibility of resonance from the larynx; but he had heard a sound like agophony in a case

of malignant disease of the lung. His cases were all males with one exception, and none of them were children. Agophony could not be a pathognomonic sign of pleural effusion, and in pleuro-pneumonia it was perhaps more common than was generally believed.

The PRESIDENT notified that in future special evenings would be set apart for discussions. These would be introduced by a short and lucid account of the subject, which would then be left entirely to the meeting. At the next meeting of the society a discussion will take place upon the Affections of the Nervous System during the Early Period of Syphilis.

MEDICAL SOCIETY OF LONDON.

Unusual Maldevelopment of Skull unassociated with Cerebral Symptoms.—*High Excision of Rectum.*—*Cork in Adult Male Bladder.*—*Right Hemiplegia with Epilepsy treated by Trephining.*—*Pyloroplasty.*—*Enteroplasty.*—*Gastro-enterostomy.*—*Pseudo-hypertrophic Paralysis, with Preservation of Knee-jerks.*

A CLINICAL EVENING of the above society took place on Feb. 11th, the President, Sir WILLIAM DALBY, being in the chair.

Dr. GUTHRIE showed a boy aged four years who was the subject of typical scaphocephalus. The boat shape was present at birth; the circumference of the head was 21 in., the extreme length 8 in., and the width at the biparietal eminences 4½ in. There was synostosis of the sagittal suture, and the frontal bone was pushed forward as a whole, the keel-shaped ridge at the top being very well marked. There had been no convulsions and no rickets, and the intelligence was good. The child was the youngest of seven, three of whom had died of diphtheria, but none of the others had shown deformity of the skull. Professor Turner, in discussing the etiology of these cases, said that the synostosis was probably due to causes operating in intra-uterine life. The PRESIDENT said that he knew of a very exaggerated example of this deformity of the skull occurring in a public man of great intellectual attainments.

Mr. SWINFORD EDWARDS showed a man aged sixty-one years who was admitted into St. Mark's Hospital in February, 1891, with signs of cancer of the rectum. It extended four inches up the bowel, but he could not get his finger above it. After inguinal colotomy, a coccygeal extirpation of the rectum was performed by the method of Kraske. The patient at the present time is in good health and has had no further rectal trouble. He also said that he had operated on a second case, that of a female aged fifty years, who entered the West London Hospital in August, 1891, for rectal carcinoma. The growth measured two inches in length and extended to within three inches of the anus below; there were no extra-rectal adhesions. The patient being placed on her left side, he made an incision from the mid-sacrum to the anus, removed the coccyx, divided the left sacro-sciatic ligaments and dissected away a portion of the sacrum with the saw and cutting forceps. The growth was removed and the rectum united end to end, but this union did not hold. The patient had since much improved in health and strength. Mr. CLUTTON held that carcinomata high up in the rectum could be removed without resort to Kraske's method. He made a free incision posteriorly beside the coccyx and introduced his hand. He then opened the peritoneum freely, pulled the sigmoid flexure down, and attached it to the anal margin; he next dissected out the whole of the rectum and finally fixed the sigmoid down to the anus with many sutures. As a preliminary step it was best to perform an inguinal colotomy and introduce a plug into the lower portion of the colon to keep the wound clean. Kraske's operation would rarely or ever be required in women, but it might materially assist the operation in some cases in men. Cancer of the rectum varied much in malignancy in different subjects.

Mr. BUCKSTON BROWNE showed a man aged fifty-four years from whom he had removed a Cork from the Bladder in January, 1893. The patient was a gentleman of a sensitive habit of mind who was afflicted with occasional incontinence of urine. He was staying with a friend in the country, and in order to prevent the chance of wetting the bed he inserted into the end of his penis a small cork from an eau de

Cologne bottle. On getting up next day he failed to find the cork either in his penis or in the bed. In March, 1893, an examination of the bladder was undertaken with a negative result. In August, there being much pain after micturition and other signs of bladder irritation, he was sounded, and a foreign body was felt. Next day it was broken up with a fenestrated lithotrite and the greater portion of it removed. A week later the remaining portion came away in the eye of an evacuating catheter. The patient had remained well to the present time. The operation was done with an almost empty bladder, and he preferred this condition of the viscus for all cases of lithotrity.

Dr. OUTTERSON WOOD and Mr. COTTERELL showed two patients who had been afflicted with Right Hemiplegia and Epilepsy, who had been treated by trephining. The first patient, a female aged three years, was paralysed on the right side. When one year old she had a fall and afterwards had an epileptic seizure; several more fits followed, always beginning in the thumb and fingers. She had been trephined over the centre of the head, and there had been no return of fits since the operation. The second patient, a girl aged twelve years, had been paralysed since birth. There had been a difficult instrumental labour. There was no paralysis in other children of the same family. There was rigidity of the right hand, arm, and leg, with wasting of the leg and eversion of the foot. Epileptiform seizures commenced last April, preceded by a well-marked aura of numbness and tickling of the thumb. She was trephined over the hand centre last September, and since then there had been no fits; the hand and arm were less rigid, and she walked better. Mr. COTTERELL said that in the first case he found a cyst connected with the arachnoid, which was probably an old hæmorrhagic extravasation. In the second case the dura mater was found to be thickened, but the arachnoid and brain were healthy. He did not interfere with the exposed cerebral cortex.

Mr. HERBERT ALLINGHAM showed a patient upon whom he had performed Pyloroplasty. The man, who was thirty-four years of age, had had an acute gastric trouble four years ago, and since then signs of pyloric stricture had developed. He opened the abdomen in the middle line and explored the pylorus. Much cicatricial tissue was found round it, and so he divided the stricture longitudinally, then pulled the wound open, and stitched it across transversely.

Mr. H. ALLINGHAM also showed a woman forty-nine years of age who some years ago had complained of Dyspeptic Symptoms, and had afterwards suffered from intestinal obstruction with pain of a colicky nature. When admitted into the Great Northern Central Hospital obstruction had lasted for ten days. He opened the abdomen in the left inguinal region and found the large intestine distended with flatus. He opened the large intestine in the inguinal region. Next day, as the obstruction was unrelieved, he made a second opening over the cæcum. In the small intestine, at the junction of the jejunum with the ileum, he found a stricture, evidently the result of an old perforation. He performed enteroplasty, and later resected the artificial anus, bringing the cut ends together over a Mayo Robson's bobbin.

Mr. H. ALLINGHAM showed a third case, of a woman aged forty-one years, who suffered from severe gastric trouble some years previously. On opening the abdomen he found the pylorus involved in an enormous growth. He stitched the jejunum up to the stomach and united them over a bobbin. The operation was performed in July, 1894, and she had since gained over three stones in weight. The growth appeared to have diminished in size since the operation. Mr. BIDWELL asked if Loreta's operation was inferior to that described; it seemed to him to be simpler. For gastro-enterostomy he preferred Halstead's method of stitching. Mr. ALLINGHAM, in reply, said that pyloroplasty was the better operation for a rigid pylorus, a healthy piece of mucous membrane being inserted into the strictured portion. The bobbin acted like a splint and kept the parts firmly together.

Dr. STILL showed, for Dr. Colman, a boy aged ten years and three months who was the subject of Hypertrophic Paralysis, but in whom the knee-jerks were preserved. The weakness and enlargement commenced five years ago. There were three other children in the family, none of whom were affected. The head was curiously shaped; the mental condition was good. The muscles of the calves and the infra-spinatus muscles were markedly enlarged; the deltoids and triceps were enlarged to a less degree; and the vasti externi were enlarged and weakened more than the

interni. There was atrophy of the biceps, of the lower half of the pectoralis major, and of the latissimus dorsi. The knee-jerks, which had been very brisk, were still definitely present.

CLINICAL SOCIETY OF LONDON.

Cystic Hygroma in an Adult.—Two Cases of General Eczema and one of Psoriasis treated by Thyroid Extract.—Progressive Muscular Atrophy with Argyll-Robertson Pupils.—Two Cases of Congenital Dislocation of the Hip treated by a New Method.—Stenosis of Pharynx.—Lateral Rotation of Bodies of Vertebrae without Curvature.—Symmetrical Intermittent Parotitis with Xerostomia.—Extreme Displacement of the Heart due to Basic Cavity of Left Lung.—Green Urine due to Ingestion of Indigo.—Left-sided Empyema in a Patient who had had an Empyema on the same side Seven Years before.—Congenital Dislocation of the Shoulder backwards.

A CLINICAL MEETING of this society was held on Feb. 8th, Mr. J. W. HULKE, F.R.S., President, being in the chair.

Mr. RICKMAN GODLEE showed a case of Hygroma in an adult forty-one years of age, who when a boy had had a large swelling involving the neck, the side of the face, and the submaxillary region. This from time to time developed acute inflammation associated with pyrexia, sometimes threatening suffocation. He was first seen during such an attack in May, 1890. At that time there was a large swelling occupying the right cheek, floor of the mouth, and submaxillary region, extending part of the way down the neck and slightly to the opposite side. Part of the mass felt solid, but the greater part was obviously composed of larger and smaller cysts, some of the largest of which projected into the floor of the mouth. The tongue was covered on the upper surface with a great quantity of papillary masses, with countless minute cysts on its under surface. In November, 1890, Mr. Godlee removed through the mouth several of the large cysts, and no serious inflammation followed the operation. Since then the patient had been much more comfortable. He was again seen in November, 1894, complaining of a swelling below the zygoma, which extended over the ramus of the jaw and some distance behind it. He had taken iodide of potassium and arseniate of soda without appreciable benefit. This was, Mr. Godlee thought, an example of cystic hygroma, combined with an amount of naevoid structure. It was the first time he had met with this condition in an adult.—Mr. RUSHTON PARKER referred to similar cases which he had treated by injection, and asked what relation the naevoid growths had to lymphatic tissue.—Mr. GODLEE said the cysts communicated with one another and with lymphatics, and were lined with lymphatic epithelium. He regarded the cysts as lymphatic ravi and had removed them by wide incisions.

Dr. ALBERT WILSON showed a woman who had been suffering from Psoriasis, which gradually became general. In October last the thyroid treatment was commenced. The knees and elbows cleared first, and by the end of the year the skin was clear and supple and hair had commenced to grow. The treatment was stopped in January. There was no depression while taking fifteen grains of thyroïdin three times a day. Two cases of General Eczema which had been treated by the same method had relapsed slightly on discontinuing the extract.

Dr. JAMES TAYLOR showed a case of Progressive Muscular Atrophy with Argyll-Robertson Pupils in a young man. Weakness of the right wrist had been complained of four months before he came under observation. There was wasting of the forearms and shoulders with fibrillar twitchings. The condition of the pupil was well marked.

Mr. W. ARBUTHNOT LANE showed a boy and a girl on whom he had performed the operation of placing the head of the femur in a cavity cut in and beneath the anterior inferior spinous process of the ilium, the proximal limit of the anterior portion of the capsule being sewn firmly to the fibrous tissues about the anterior inferior spine and to the straight head of the rectus femoris at its origin, this having been cut carefully away from its attachment to the innominate bone so as to leave quite enough to make a strong retaining ligament in its new position. The thigh was rotated outwards and fixed in a suitable apparatus at an angle with the foot of about 50° or more with the vertical. At the same time movements were commenced in the acquired joint, and these soon became very free. The most important fact

was that the new articulation lay in front of the transverse axis around which the pelvis rotates—viz., a line passing through the acetabular cavities, so that instead of there being an ugly, insecure, and often incapacitating lumbar curve, with an unpleasant forward projection of the abdomen, the curve of the lumbar region was obliterated and the shortening that existed could be compensated without exaggerating the deformity, and with the result of tending to obliterate any lateral spinal curve that was previously present. It was not suggested to perform this operation in cases in which it was possible to bring the head of the femur into the acetabulum and retain it there. He had applied the same principle with the greatest possible mechanical advantage to cases of dorsal dislocation from disease of the hip joint and of ankylosis of this joint in a position of flexion.—Mr. BOWLEY considered that the first child walked very much in the same manner as if the dorsal dislocation were unreduced on one side, while the other appeared to be nearly ankylosed, with much eversion. He wished to know if any information could be afforded as to the treatment of cases of ankylosis.—Mr. F. C. WALLIS asked whether the improvement in walking noted in the boy might not be due to the raising of the foot by a high boot which had been worn since the operation. He thought the principal movement was in the pelvis rather than in the hip.—Mr. EVE referred to a case which he had treated in a somewhat similar way, making a new socket, and the head of the bone had remained in position. In another case the rim had been deficient and he had deepened the acetabulum. He recommended cutting through the great trochanter and turning it out with the muscles attached in order to gain access to the joint. He did not appreciate the advantage of advancing the head.—Mr. GODLEE doubted whether the head remained in position, inasmuch as the great trochanter appeared above the spine of the ilium.—Mr. MORGAN said the details of the operation offered many difficulties. There was great laceration of tissue and the immediate effects were severe. The result as to freedom and range of movement he did not consider a great advance on the original condition, and he was not disposed to perform the operation himself.—Mr. STANLEY BOYD had performed Hopper's operation, replacing both heads in the acetabula. Nevertheless, the child was unable to stand erect for some time afterwards, a failure he attributed to the undeveloped condition of the gluteus maximus. Later she could stand and walk. In another case, where dislocation resulted from acute effusion, one joint remained ankylosed, the opposite femur being placed in position beneath the anterior superior spine of the ilium. It lapsed into a dorsal dislocation with much eversion, but later the condition of the limb much improved.—Mr. MAKINS recounted the case of a child, who had never stood or walked, in whom he divided both femora with a successful result.—Mr. LANE said there could be no doubt of the marked improvement after operation; there was a stationary instead of a movable point of flexion, and the movements permitted were free and various. The transference of the joint in front of the axis of rotation of the pelvis was an important feature, reducing the lordosis and the difference in position of the head of the bone in the erect and supine positions.

Mr. BATTLE showed a case of Syphilitic Stenosis of the Pharynx. The patient, aged twenty-four, who had previously been under his care for tertiary ulceration of the upper part of the pharynx and gummata of the skin, developed difficulty in swallowing, with signs of commencing emphysema of the lungs, when under the care of Dr. Calvert at the Royal Free Hospital in the summer of 1894. He had been admitted for renal dropsy. The obstruction to respiration and the difficulty in swallowing were due to cicatricial contraction of the lower pharynx at the level of the tongue, the opening no larger than a No. 12 catheter, being visible when the tongue was depressed. This was surrounded by very dense cicatricial tissue, and the epiglottis had disappeared. Mr. Battle had performed a preliminary tracheotomy and then divided the stricture with scissors and a sharp knife, using dilators. The pharynx had undergone contraction for a distance of about one inch and a half, the contraction being so irregular at one point that a No. 12 could not be passed. Much improvement had resulted from the operation, but it was still necessary to employ dilatation from time to time to overcome the great tendency to renewed contraction. He referred to the rarity of these cases, and to the extreme contraction in this patient, the mouth having been almost made a closed sac, the upper part of the pharynx being shut off from

the nose in a similar manner by the earlier disease. The communication would barely admit a cedar pencil.

Mr. BATTLE also showed a girl aged ten years with a most unusual condition of the Spine, one which resembled Rotation without Lateral Curvature. She had complained of pain in the back for six months, supposed to be due to strain. There was a fulness on the left side of the lumbar spine, much more marked on stooping, which was unaccompanied by rigidity or pain. It was like a bony column, well rounded towards the left and diminishing from below upwards. On the right side there was a depression, and the muscles gave the idea of "hollow tension," there not being a normal amount of resistance to pressure. She had lost the pain and her general health had improved, but the local condition was unchanged.

Mr. BATTLE showed a third case, a very rare one, of Recurring Symmetrical Parotitis with Xerostomia. The dry mouth began five years before. The patient, a married woman aged fifty-four years, was admitted to the Royal Free Hospital under Mr. Battle's care. The parotitis had been in existence on and off for two years; its cause was unknown. The parotids were subject to an inflammatory swelling which recurred on the two sides equally about every two or four weeks. The mouth was dry and smooth, this including the tongue and the mucous membrane of the cheeks, where the glands were atrophied, as well as in the epithelial surface. She was obliged for some time to drink fluid in order to permit of mastication. She had no teeth left, using artificial ones. The parotids were considerably enlarged and firm, markedly lobular, painless, not tender, and without affection of the skin. She was a nervous woman who easily flushed on excitement and had tremors without apparent cause. The condition of xerostomia began when she was about forty-nine years old, at which age the menopause occurred rather abruptly. She improved very much when in hospital, and an interval of two months intervened for the first time between two attacks.

Dr. A. T. DAVIES showed a case of Extreme Displacement of the Heart in a female patient aged thirty-three, single, who was admitted to hospital in February, 1894, complaining of cough and occasional attacks of bleeding. On examination there was found, in addition to left apical changes, a cavity at the left base extending up to the mid-scapular region. The apex of the heart was situated anteriorly to the posterior axillary fold. She was not seen again until December, when she complained that "her heart got in the way of her arm when she moved it." Examination showed that the apex beat was then situated under the angle of the scapula, so that it had been still further drawn towards the spine, a distinct systolic thrill was felt in the upper part of the axilla, and on auscultation a loud displacement murmur was heard. There appeared to be entire subsidence of the lung symptoms.

Dr. A. GABROD showed a specimen of Green Urine sent to him from the country by Mr. Harold Owen. It was quite limpid, acid in reaction, and had a tint resembling that of green Chartreuse. It was passed early one morning by a healthy child aged two years and a half, and it transpired that on the previous evening the child had been sucking some blue cloth. The tongue was stained dark-blue. This cloth proved to be dyed with indigo. Analysis of the urine showed that the green colour was due to the combination of the yellow tint of the urine with the blue of indigo. On passing the urine through filtering paper it lost much of its green tint, and the paper was stained blue, showing that the indigo was in suspension.

Dr. S. WEST showed a lad aged fifteen who was seen at St. Bartholomew's Hospital with signs of Fluid in the Left Chest, and who gave a history of an empyema eight years previously, for which he had been operated upon. The diagnosis lay between phthisis with a thickened pleura and a second effusion, and it gave rise to much difference of opinion. A fortnight later a needle was inserted in the mid-axillary line, but no fluid escaped. As the area of dulness increased a second puncture was made later in the sixth interspace in the anterior axillary line, this time with the result of discovering pus. The next day the side was opened in the mid-axillary line and twelve ounces of pus removed. Recovery was rapid and uninterrupted and the lung re-expanded.

Mr. EVE showed an infant aged nine months delivered with instruments. The mother stated that the day after birth the left arm was noticed to be paralysed. On admission the movements of the left shoulder-joint were obviously limited, the arm being held stiffly and rigidly as oss the

chest, about opposite the nipple. A smooth spherical tumour, evidently the head of the humerus, was felt on the dorsum of the scapula, just beneath the junction of the acromion with the spine. The articular surface was directed backwards and to the right. There was half an inch shortening on the affected side. It was, he said, difficult to imagine how such a condition could be produced by injury during parturition unless the joint was malformed.

OBSTETRICAL SOCIETY OF LONDON.

Some Observations on the Temperature, Pulse, and Respiration during Labour and the Lying-in.—Annual General Meeting.

A MEETING of this society was held on Feb. 6th, G. E. HERMAN, M.B. Lond., President, being in the chair.

Dr. R. J. PROBYN-WILLIAMS and Mr. LEONARD CUTLER read a paper on Some Observations on the Temperature, Pulse, and Respiration during Labour and the Lying-in, in which they first considered the effect of labour on the temperature, pulse, and respiration. They find that their temperature results coincide with those of Dr. Giles.¹ They consider the low rate of the pulse after delivery, as given in the text-books, exaggerated. In 100 cases of normal labour observed in connexion with this point, they found that in 76 the rate was diminished, in 11 it remained stationary, and in 13 it was increased after the end of the third stage. In this series the average decrease between the rates during the first stage and half-an-hour after the end of the third was 11 beats per minute (from 89 in the first stage to 78 after delivery). Parity and the length of the labour have some influence on this fall; and after the administration of chloroform during labour it is common to find the pulse remaining high after delivery. In 19 cases of post-partum hæmorrhage there was an average rise of 19 beats per minute (78 during labour, 97 after delivery). Tension, as estimated by tracings made with Dudgeon's sphygmograph, is usually above normal during labour; but is occasionally low, notably in one case in which delivery was followed by considerable hæmorrhage. After delivery there was on the average a fall of 1 respiration per minute (23 during labour, 22 after delivery). After the administration of chloroform this decrease was not observed. They found that the average temperature of 100 cases varied between 98° and 99° F., being higher in the evening than in the morning. The highest average temperature was reached on the first day, and was higher in primiparæ than in multiparæ. Rupture of the perineum had no appreciable effect on the temperature during the puerperium. They do not agree with the statements in the text-books that the pulse is normally very slow during the first week, but found that the average rate of 100 cases was never lower than 72. The pulse-rate was faster in the morning than in the evening throughout this series. In a few cases the tension is diminished by delivery, but in the majority it is increased. Whatever may be the tension of the artery during labour, and whether it rise or fall after delivery, within twenty-four hours it has always increased so much that it is at least as great as, and generally greater than, the tension during labour. This increased tension may persist throughout the puerperium, and commonly lasts longer in multiparæ than in primiparæ. The rate of respiration was found to vary between 20 and 22 per minute. It tends to follow the pulse-rate in being higher in the morning, and not the temperature, which is higher in the evening.

The annual general meeting of the society was then held. The reports of the Hon. Treasurer (Dr. Potter), the Hon. Librarian (Dr. John Phillips), and the Chairman of the Board for the Examination of Midwives (Dr. Champneys) respectively were read and adopted, and a vote of thanks passed to each gentleman.

The PRESIDENT then delivered his valedictory address.—Dr. GERVIS proposed, and Dr. HAYES seconded, that a vote of thanks be accorded to the President for his address, and that it be published in the Society's Transactions.—This was carried unanimously.

The report of the scrutineers of the ballot was read. It was to the effect that the list recommended by the Council had been adopted, with the exception that Dr. Cullingworth

¹ Transactions of the Obstetrical Society, 1894.

was elected chairman of the Board for the Examination of Midwives.

The names of the officers have already appeared in our last week's issue. The following are members of the Council:—Dr. Thomas Rutherford Adams (Croydon), Dr. Fletcher Beach (Sidcup), Dr. Robert Boxall, Dr. Archibald Donald (Manchester), Dr. Lovell Drage (Hatfield), Dr. William John Gow, Dr. Walter S. A. Griffith, Dr. Gerald S. Harper, Dr. Constantine Holman, Dr. John D. Malcolm, Dr. David Ritchie Pearson, Dr. William Rivers Pollock, Dr. Leonard Remfry, Dr. Walter W. H. Tate, Mr. Willoughby Furner (Brighton), Mr. John Henry Salter (Kelvedon), Mr. John Bland Sutton, and Mr. James Henry Targett.

A vote of thanks to the retiring officers and other members of the Council was passed.

The following specimens were shown:—

Dr. REMFRY: Case of Absence of Uterus and Breasts.

Dr. GRIFFITH: A patient on whom Symphysiotomy had been performed.

Mr. BUTLER-SMYTHE: Pellet-like Bodies contained in an Ovarian Dermoid Cyst.

Dr. W. DUNCAN: Microcephalic Fœtus, with only one Palpebral Fissure and no Nose.

HUNTERIAN SOCIETY.

The Hunterian Oration on a Microbe of Malaria.

THE Hunterian Oration, delivered before the Hunterian Society on Wednesday, Feb. 13th, has this year been made the occasion of a most interesting and instructive exposition of one of the recent developments of symptomatology—the discovery of the microbe of malaria. It was delivered by Dr. PATRICK MANSON, who has had large experience of tropical diseases in China.

When announcing that his theme would be Malaria and its Parasite he drew attention to the vast practical importance of the subject, and deplored the inattention of English investigators to this field of research, which has been so profitably cultivated by Continental and American observers. Though malaria is rare in England, yet in India in 1879 3,500,000 persons died from fever of various descriptions, and of that number Sir Joseph Fayrer estimates that about one-half succumbed to malarial fever; that is to say, malaria is in the aggregate more destructive than tubercle, and claims six times as many victims as cholera. The specific organism of the disease was discovered by Laveran about fourteen years ago. It is polymorphic, occurring in the blood in very numerous and varied forms, most if not all of which may be classified under certain leading types: (1) free spores and free sporulating bodies, often having the outline of a diverging rosette; (2) small unpigmented epi- and intra-corpuscular bodies; (3) large pigmented intra-corpuscular bodies; (4) intra-corpuscular rosette bodies; (5) crescentic bodies; (6) various forms derived from those already mentioned; (7) flagellated bodies and free flagella; (8) bodies which are probably degenerate stages of some of those already enumerated; (9) pigmented leucocytes. These are phagocytes which have ingested the particles of pigment set free when the rosette body falls to pieces and this process of pigment inclusion can often be witnessed. All these various bodies are but different stages in the life of a sporozoön. The best explanation of their mutual relationship is that supplied by Golgi, who considers that the free spores are the first stage, and that they, invading the red blood-corpuscles and nourishing themselves on the hæmoglobin, grow into the larger pigmented intra-corpuscular forms. After a time these segment and become the rosette bodies, which presently fall to pieces and liberate spores, to start a new generation. The flagellate bodies originate either (1) from certain of the large intra-corpuscular pigmented bodies, which, having escaped from the corpuscles, after a time throw out flagella; or (2) from the crescentic bodies, which can be often seen under the microscope to change into oval and spherical bodies, and finally to throw out flagella. There are believed to be at least two leading types of the malaria organism, the benign and the malignant, differing both in their figure and in their pathological effects. The former never gives rise to the fatal pernicious fevers, but only to the mild tertians, quartans, and double tertians called quotidianas, found both in temperate and in warm climates. It

appears in the peripheral circulation in all its stages of small intra-corpuscular amoeboid body, large pigmented form, rosette, and flagellated body. The malignant forms produce the dangerous remittents, quotidianas, and tertians of warm climates. They appear in the peripheral circulation chiefly (and sometimes only) as the small epi- or intra-corpuscular non-pigmented form, and are frequently ring-shaped. The rosette, or sporulating, bodies and the pigmented intra-corpuscular bodies of the malignant type are very rarely obtained from finger blood. These stages of this type are passed in certain viscera, such as the spleen, brain, &c., and the organisms can be obtained by aspirating blood from the spleen at the beginning of a febrile rigor. The special virulence of this type seems to depend on its habit of accumulating in the viscera quite as much as on the pyrogenetic toxins which it is supposed to liberate. A principal and characteristic feature of the malignant parasite is the crescent-shaped body, a form which is usually present in the finger blood when the infection is of some standing, and especially when cachexia is marked.

Dr. Manson illustrated his description of the microbe by microscope specimens of blood from cases of typical malaria, as well as by drawings of the organisms. He also read the clinical notes of four cases of genuine tropical malaria occurring in patients under his care in the Albert Dock branch of the Seamen's Hospital, the temperature variations and the associated increase or diminution in the numbers of the microbes being represented in graphic curves. The first case was a man, stated to be forty years of age, but looking more like sixty, admitted into hospital last September. For the last five years he had been employed on steamers plying between London and Bombay. Two days after leaving Bombay on Aug. 4th, 1894, he fell ill with weakness, inability to work, excessive perspiration, and thirst, and was treated with quinine. He was not delirious and was not confined to his bed. The vessel having arrived in London he was taken to the hospital on a stretcher on Sept. 4th. On admission his temperature was 100° F., but was normal next day. His liver was somewhat enlarged, but his spleen did not apparently extend beyond the edge of the ribs. He was slightly anæmic, there was no albumen in the urine, and the thoracic viscera were healthy. He suffered from conspicuous mental aberration, apparently dementia. He was with difficulty induced to speak, and after uttering a few words he often terminated the conversation by turning his back on the questioner. At times he would get out of bed and wander about aimlessly. This demented and apyretic condition continued for about a week. On Sept. 11th his temperature was 101.6°, on the 12th it was normal, and on the 13th at 4 P.M. it was 102.2°. His apathetic, sullen demeanour, difficulty in finding words, and tendency to turn his back when spoken to recalled to Dr. Manson a case of malarial aphasia which he had seen in China many years ago, and suggested that the patient's mental symptoms might be of malarial origin and due to an accumulation of organisms in the cerebral vessels. This suspicion was at once confirmed by examination of the blood, which teemed with parasites, many being visible in every field of the microscope, and many different forms occurring simultaneously. Manifestly the patient was suffering from a mixed malarial infection, including ordinary tertian or quartan ague, as indicated by the large pigmented intra-corpuscular bodies, and in addition a malignant tertian of some duration, as indicated by the small ringed parasites and the numerous crescents. At 8 P.M. the organisms, though fewer than at 4 P.M., were still very numerous, and in seven fields twelve parasites and pigmented leucocytes were counted. On Sept. 14th the blood did not yield much additional information, but on the 15th a sporulating parasite was found for the first time, indicative of an impending paroxysm of fever. Accordingly at 2 P.M. the patient had a rigor, and at 4 P.M. enormous numbers of small epi- and intra-corpuscular unpigmented forms were discovered, showing that large numbers of spores had been liberated by the breaking up of rosette forms. No fewer than eighteen corpuscles in six fields were invaded by these bodies. On Sept. 16th at 8 A.M. fifteen parasites and two pigmented leucocytes were found in eight fields. Treatment by quinine was now commenced, and twelve hours later, after twenty grains had been taken, twenty fields yielded only nine parasites and two pigmented leucocytes. On the afternoon of Sept. 17th it required thirty-six fields to yield the same number of parasites and pigmented leucocytes, and there was no rise of temperature at the hour at which

it was due. On Sept. 13th there was a slight rise of temperature during the early morning, but only two parasites and two pigmented leucocytes were discovered in thirty-five fields. Thereafter for four days a few crescents and flagellated organisms were found, but it was evident that the parasites were rapidly disappearing. On Sept. 22nd one flagellated organism was found after examination of fifty fields, and no more were subsequently discovered. The patient's mental condition rapidly improved, coincidentally with the cessation of the fever and the disappearance of parasites from the blood, and when he left the hospital some weeks later he seemed to be in sound health both mentally and physically. This case exemplified the high practical value of examination of the blood as an aid to diagnosis. It showed also that quinine, while powerful in subduing the fever and in destroying the ordinary intra-corporal forms of the parasite, acts less promptly against the crescentic forms of the organism and the flagellated bodies derived from them. Laveran states that the flagellated bodies are among the first to disappear on the administration of quinine, but Dr. Manson's experience is to the effect that as long as crescents are seen in the blood so long will the flagellated bodies be encountered. In the present case the crescentic forms were to be detected fully a week after the first administration of quinine, and they persisted, though in diminished numbers, for a considerable time after all the other parasitic forms had disappeared. The next case was that of a man who contracted malarial fever in the West Indies and who was admitted to the hospital on Nov. 1st, 1894. He was treated by rest in bed in a warm room, liberal diet, and a gentian placebo without quinine at any time. The result was spontaneous recovery, although rigors occurred on the 2nd, 3rd, and 4th. It was interesting to observe the progressive gradual disappearance of the organisms from the blood. The flagellate organisms were found only after a long and patient search. Dr. Manson agrees with Mannaberg in the opinion that this organism is present always and in every case, although it may be in numbers so small that for days it escapes detection. In the remaining two cases microscopic examination of the blood yielded results similar to those already described.

Dr. Manson next pointed out the extreme value of examination of the blood as a means of definitely recognising the comatose, hyperpyrexial, choleraic, and other forms of paludism. He believes that many cases of so-called sunstroke or heat apoplexy are really malarial and are to be treated by prompt immersion in cold water and hypodermic injection of quinine. The portable and inexpensive pattern of microscope devised by Surgeon-Major Ross, and shown to the audience, is excellently adapted for these investigations. The routine practice of treating pyrexia in tropical diseases with quinine is an error which may be avoided by the use of the microscope, quinine being given only when the malaria microbe is present. In conclusion Dr. Manson dwelt on the ease with which the microbe may be recognised by any microscopist after a very little practical instruction, and on the difficulty in finding it experienced by those who have not had the advantage of a preliminary demonstration. He assured his hearers that plenty of cases of malaria and several other tropical diseases will be revealed by researches in the neighbourhood of the docks, and that clinical material sufficient for instruction may be obtained without much difficulty or expense. To those about to enter on practice in tropical climates Dr. Manson's address was of the highest interest.

BRIGHTON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.—Uric Acid Gravel.

A MEETING of this society was held on Feb. 7th, Mr. VERRALL, President, being in the chair.

Dr. PALEY showed a man aged forty-four years, a turner by trade, suffering from Molluscum Contagiosum. The eruption was first noticed on the back of the neck six months ago. It has now spread beneath the chin and on to the front of the neck. There has been one vesicle on the eyelid. The patient is married, but neither wife nor child are affected.

Dr. CRESSWELL BABER showed a woman aged thirty-one years, who came to the Throat and Ear Hospital on Feb. 12th, 1894, complaining of head pain and discharge from the right ear. A large polypus, measuring nearly one

inch in length, was removed from the meatus. Afterwards a soft band was seen stretching horizontally across the fundus of the ear, which subsequently contracted till it became very narrow. On March 12th, as she still complained of pain, although less severe, she was made an in-patient. The pain was in the occipital and right temporal region and "throbbing." There was some tenderness on pressure over the right mastoid. After rest and blistering there was improvement, and the patient was discharged on March 20th, there being still some tenderness on deep pressure. Various astringent remedies were applied locally to the ear and antipyrin and other drugs administered internally. The pain was, however, so persistent as to incapacitate from work, and after consultation with Dr. Urban Pritchard it was decided to open the antrum. On Oct. 28th the antrum was opened under aseptic precautions in the usual position with a gouge and mallet. The bone was sclerosed and very dense. The antrum was not reached until the bone had been penetrated half to three-quarters of an inch. The cavity was small and did not contain pus. A probe passed into the wound touched another introduced through the meatus, but liquid did not syringe through. The wound was plugged with cyanide gauze. The patient did perfectly well, and the wound healed by Dec. 21st. The temperature never rose to 100° F. The pain was completely removed and has not returned. The ear still suppurates a little. There is now no distinct tenderness on pressure over the mastoid. Dr. Baber considered this one of the cases in which operation is demanded on account of continued pain, the result of intrinsic pressure, and which is relieved by the removal of a piece of bone.

Dr. GORDON DILL showed a man suffering from an attack of Gout in the Hand of a painless nature.

Dr. VAUGHAN HARLEY read a paper on Uric Acid Gravel, its Chemical Pathology, Symptoms, and Treatment. In a comprehensive memoir on the chemical pathology of uric acid he showed that there is no experimental evidence of its being converted into urea in the animal body, and that it is not derived from the metabolism of the general proteids which yield urea, but from the nuclein furnished by the nucleo-albumen of the tissues. After a meal, especially of animal food, the uric acid excreted rises rapidly, so that in from two to five hours the amount may be twice or thrice as much as during abstinence from food. Now it is known that a hearty meal, especially of animal food, is followed by a great increase of leucocytes in the blood, and it appears that this increase of uric acid in the urine is coincident with the destruction of the leucocytes and the liberation of their nuclei. It has been found that the uric acid excreted in leucocythæmia may be double the amount eliminated by a healthy person, the urea formation being alike in both cases. This shows that the nitrogenous matter taken as proteids in the food was equally eliminated in both cases, while the preponderance of leucocytes in one case led, by their extensive breaking-down, to a proportionate excess of uric acid. The actual seat of the formation of uric acid is still undetermined; there are some grounds for locating it in the liver. The precipitation of it in the solid form is probably due to the acid lecithin-albumen of the kidney converting disodic phosphate of alkaline reaction into monosodic phosphate of acid reaction. In the normal formation of urine the bases which combine with the lecithin-albumen are in their turn taken up by the carbonic acid generated in the tissues, and the lecithin-albumen is thereby set free for renewed action. When the blood contains a sufficiency of disodic phosphate, as in ordinary circumstances, the renal cells do not break up the soluble urates; but when the alkalinity of the blood is diminished the renal cells liberate uric acid, which is precipitated either in the tubules of the kidney, in the urinary tract, or in the voided urine, and the appearance of uric acid gravel is the result.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases.—An Unusual Form of Anæmia.

THE fifth ordinary meeting of this society was held on Feb. 6th, the President, Mr. T. F. CHAVASSE, being in the chair.

Mr. ASTLEY PROSSER showed a patient with a number of Growths in the Subcutaneous Tissue of both Arms and Thighs. The tumours, which had been noticed for nine years, were multiple, sessile, and varied in size from a pea

to a small orange. The larger masses were tender and showed some signs of inflammation. The growths were probably myxo-fibromata or fibro-lipomata.—Mr. HASLAM showed a man aged thirty-six the upper part of whose left thigh had been crushed by the passage over it of the wheels of a waggon. On admission the upper part of the thigh was bruised and there was a broad depression seen crossing the limb from just below the attachments of the adductor muscles to the pelvis, passing across the thigh below and parallel to Poupart's ligament and just missing the anterior superior iliac spine. There was no fracture of bone, but no pulsation could be felt in the femoral artery or in the posterior tibial; the limb was cold and pale. It was elevated and kept warm, the collateral circulation proving equal to maintaining its vitality. There was never any sign of impeded venous return, nor was there any amount of extravasated blood at the seat of injury, and to these two facts the successful issue of the case is to be largely attributed. The diagnosis was a rupture of the inner and middle coats of the common femoral artery. The patient is now well and able to work, and a feeble pulsation can be felt in the posterior tibial artery. The accident occurred eleven months ago.—Mr. BARLING showed a boy aged eleven who was admitted to the Birmingham General Hospital on April 14th last, with a very extensive compound depressed fracture of the right side of the head. He was deeply unconscious, and was operated on without an anæsthetic, an area of depressed bone about two inches and a half square being removed from the right side. From this a fracture ran horizontally round the forehead and was lost in the bone of the left side of the head. A large quantity of blood was liberated by stripping the dura mater from the bone of the vault of the skull. The next day it was discovered that the right arm and leg were paralysed, and to some extent the left side of the face. The boy was still unconscious and remained so for eleven days, during which time he had to be fed with a nose tube. On the twenty-first day he noticed things going on around him, shook hands when asked to do so, but with his left hand. He was unable to speak or to produce any sound except a grunt, and could not protrude his tongue; he could understand written and spoken words, and could write with his left hand. The left side of the face was still inactive, but the right arm and leg were much better. On the thirty-fourth day he spoke for the first time, saying "orange," "yes," "no," and his name very indistinctly and with a nasal twang, and it was then discovered that the soft palate was paralysed on both sides. There was now steady improvement of the paralysed parts all round, and he was discharged eight weeks after the injury practically well. The wound healed by first intention, and gave no trouble at all. At the present time the boy is emotional and easily irritated, but the only distinct remnant of his various paralyses is a slightly nasal voice.—Dr. CARTER showed a man aged twenty-nine with Complete Paralysis and Atrophy of the Deltoid, Supra-spinatus and Infra-spinatus Muscles of the Left Shoulder. Four years ago he sustained some injury of that shoulder and the adjacent part of the neck from a fall, and previously to an attack of small-pox last year the limb had not been so strong as before the injury, but no marked wasting was observed; on his recovery from the attack of small-pox, which was very severe, he found that he had lost the power of raising his left arm. Neither of the above-mentioned muscles react either to faradism or galvanism. Dr. Carter considered that the lesion was in the left anterior cornu of the cervical cord, and though directly due to the influence of small-pox might possibly have some remote connexion with the injury received four years ago.—Dr. CARTER also showed a case of Persistent Brachialgia in a man sixty years of age, supervening on an injury to, and amputation of, the third finger upwards of a year ago.—Mr. E. LUKE FREER showed a boy with Relapsed Talipes Equino-varus, which he had treated by tenotomy and manipulation and massage. The feet now showed little, if any, deformity, and the boy walked well.

Dr. DOUGLAS STANLEY then read a paper on an Unusual Form of Anæmia. The subject of the paper was that form of disease frequently called "splenic anæmia," a term which is likely to cause confusion. The cases are characterised by a marked reduction in the number of red blood-corpuscles, the white being unaltered or else also reduced. There are frequently poikilocytes and even poikiloblasts present. The hæmoglobin is also reduced. The spleen is greatly increased in size and the liver is frequently enlarged. There is no affection of the lymph glands. Marked asthenia passing into marasmus is observed, and in some cases there is pigmentation

of the skin, which may occur in local patches. The duration of the disease may extend over many years, and during its course there are acute attacks, during which the patient is greatly prostrated, may become of a yellow olive colour, and the temperature may rise to 105° F. During such an attack the urine becomes of a dark-brown red colour and contains large quantities of pathological urobilin. When such an attack passes off there is a slow restoration to the former condition. The pathological basis seems to consist in severe hæmolytic, probably due to the absorption of products from the intestine. Post mortem sclerosis of the spleen and pancreas was found, with marked changes in the supra-renals. The prognosis is always bad, although the duration may be long. The treatment which has done most good seems to be intestinal antiseptics. Extract of supra-renals (freshly prepared) produced a marked increase in the number of red blood-corpuscles.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.—Bullet Wound of the Thorax.—The Use of Increasing Doses of Bromides in Cases of Obstinate Epilepsy.

A MEETING of this society was held on Feb. 5th, Dr. ADOLPH BRONNER, Vice-President, being in the chair.

Dr. WOOD showed: 1. A Ruptured Lung. 2. The liver from a case of Suppurating Hydatids. Frequent aspiration had been practised, followed later by abdominal section (in two stages) and drainage. For six weeks all went well, the cyst draining satisfactorily. Three days before death signs of peritonitis set in. Post mortem a large cyst, containing clear fluid, was found in each lobe of the liver. The cyst which had been drained was found to be contracted. The cause of the peritonitis was doubtful. 3. Heart showing Embolus *in situ* in the Pulmonary Artery. This was taken from a woman who had her leg broken in a railway accident, there being also bruising of the femoral and tibial veins.—Mr. HORROCKS showed: 1. A Sarcoma of the Lower End of the Femur taken from a boy, amputation of the thigh having been performed. The growth was of three months' duration. 2. A Stomach showing a Perforating Gastric Ulcer.—Mr. MERCER related the early history of this case. For three years a woman had symptoms of gastric ulcer. Early one morning before taking any food a sudden attack of severe abdominal pain came on, causing the patient to swoon. Gastric perforation was diagnosed and operation decided on. Abdominal section was performed the same evening by Mr. Horrocks. A perforation of the stomach on its anterior surface near the cardiac end was found; and a fusiform piece around the perforation having been cut out with scissors the opening was closed. The peritoneal cavity was sponged out and drained. On the eleventh day the patient died from general peritonitis. The case was discussed by Drs. A. Bronner, Major, Rabagliati, and Bell, and Mr. Horrocks replied.—Dr. RABAGLIATI showed: (1) a Suppurating Ovary; and (2) an Ovary and Tube showing signs of Inflammation and Cystic Formation.

Dr. WOOD read notes of a case of Bullet Wound of the Thorax in which, although both lung and pericardium were injured, yet the patient made a good recovery. No surgical interference was attempted.

Dr. H. BRONNER related his experience in the Use of Increasing Doses of Bromides in Cases of Obstinate Epilepsy, as many as ninety grains of potassium bromide being given during the day, the dose being regulated by the frequency of the attacks. In one case the bromide produced a rash which closely simulated scarlet fever—fever, rash, and sore-throat being well marked. In another case marked loss of memory came on after the taking of bromides in large doses, requiring the medicine to be omitted. The paper was discussed by Dr. A. Bronner, Dr. Major, Mr. Wilmot, Dr. Evans, Dr. Bell, Mr. Shackleton, and Mr. Mercer, and Dr. H. Bronner replied.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Cardiac Therapeutics.

THE fifth meeting of the seventy-fourth session of this society was held on Feb. 6th, Dr. CLOUSTON, President, being in the chair.

Professor T. R. FRASER opened a discussion on Cardiac Therapeutics with a paper on the Remedies employed in Cardiac Affections and their Indications. He emphasised the importance of the subject to the general practitioner. Having glanced at the history of digitalis and its action as a strengthener of the cardiac contractions and not as a sedative, he pointed out that many substances had been used in cardiac disability—for example, strophanthus—all of which belonged to a single group. He gave illustrative cases where in affections of the mitral valve, especially regurgitation, strophanthus had been used. Tracings showing the improvement in the pulse were shown, and the increase in the amount of urine during the exhibition of the drug was dwelt upon. In mitral and tricuspid disease, with bronchitis and emphysema, the drug had been found of great benefit. The effects of uncomplicated mitral stenosis were not so benefited by its use as incompetence. In both aortic stenosis and incompetence there was usually compensation through hypertrophy, and so the group of cardiac stimulants were not necessary. In angina opium, nitrites, or nitro-glycerine were indicated. Nitrites, however, frequently failed, sometimes where there was high tension, and sometimes succeeded where the tension was low. Iodide of potassium he could see no indication for using in cases of high tension. Its only action could be on the fibrous changes in the aorta and heart. Sometimes in aortic disease stimulants to the cardiac muscle did good. A case was narrated where from want of compensation the treatment indicated was that applicable to auriculo-ventricular disease. Under strophanthus the patient rapidly became convalescent. When cardiac degeneration came on in aortic disease and auriculo-ventricular disease appeared the cardiac tonics were indicated. Illustrative cases were given where strophanthus had proved of great value. Not only in valvular disease, but also in affections of the myocardium, this group of substances proved useful. A case was instanced where, though there was no organic valvular disease, there was dilatation and great oedema, the result of the cardiac weakness. On the exhibition of strophanthus a rapid recovery ensued. Other conditions were mentioned, for example, the cardiac weakness during fever, where tonics were indicated. Strophanthus had also been used to prevent the reaccumulation of fluid in the pleura by increasing the flow of urine. Failure should be looked for where the myocardium was so degenerated that it could not be stimulated and where the valves were so stenosed or so incompetent that compensation could under no circumstances be set up by any agent. It was claimed for strophanthus that it had been shown experimentally that it increased the cardiac contractions better than any other drug. It was entirely soluble and so was superior to digitalis, some of the active principles of which were insoluble. Again, the action of digitalis on blood-vessels was greater than its action on the heart, and hence its use was restricted as it increased the work the heart has to do. Both drugs might fail in producing diuresis from this cause, even though the action of the strophanthus on the vessel wall was but slight. The one indication for the use of cardiac tonics was cardiac insufficiency, and the practitioner should use the drug with whose action he was most familiar. Other measures of cardiac therapeutics, especially rest, were dwelt upon. Warning was given against the administration of digitalis wherever a cardiac bruit was discovered without due reference to the circumstances of the case.

Dr. G. W. BALFOUR agreed that rest and diet were well fitted to cure many cases of cardiac disease without the use of digitalis. He had been rather disappointed in the use of strophanthus, probably owing to its want of action on the blood vessels, and hence the blood-supply of the heart not being so much increased as by digitalis. He had always found the heart respond readily and regularly to due doses of digitalis. Formerly the doses used were much larger than at present. He counselled caution in the use of large doses on account of the cumulative action. If used with caution the drug could be continued for months or years. One grain every twelve hours was enough to get the tonic action, and could be continued for months or years. Where there was much oedema it was better to give large doses at short intervals to ensure rapid action; three to five or seven grains every four hours might be given with caution until diuresis set in. Evidence of saturation till thirty to forty grains had been given was seldom seen. When diuresis set in digitalis might be stopped for a few days, and when diuresis began to fall be begun again. When digitalis was given in smaller doses at frequent

intervals the action set in more gradually—differing from the copious sudden diuresis attendant on large doses. We might not notice the slowing of the pulse, and might be brought face to face with digitalis poisoning. Under those circumstances it was difficult to avoid saturation, with sickness, nausea, and rapid irregular action of the heart. Slowing of the heart was not of any great importance, and occurred early in the use of the drug. Digitalis in pretty full doses not only caused contraction, but kept the heart contracted. In all cases of heart disease we must remember that compensation was for ever failing. There was no such thing as perfect compensation. It was well to take time by the forelock and to feed the heart and tune it up, and so postpone the more serious developments. This held in all classes of cases, even in mitral stenosis. Digitalis was not always necessary, but strychnine or arsenic might be used. Where there was free regurgitation, either mitral or aortic, we should use digitalis as a tonic to the heart, but also to contract the heart and prevent dilatation. Especially was this necessary in aortic regurgitation when from the hydraulic laws which govern the circulation we had a column of blood by its weight more or less rapidly dilating the ventricle. The heart should be contracted and the urgent symptoms thus relieved. The patient must be placed in the recumbent position and relieved from pressure. Where there was obstruction in front in the shape of diseased arteries vascular stimulants must be used, or the heart may become irritable and irregular in consequence of being thrown into a state of strain. He preferred iodide of potassium because he found it efficacious. In doses of two or three grains it quieted the heart apparently because it prevented the action of digitalis on the arterioles and allowed the blood to pass more easily. Iodide was more permanent in its action than nitrites or other drugs. Iodide given in moderate doses dilated arterioles, reduced blood pressure, and allowed an aneurysm to contract. Large doses were not good. The patient was put to bed, the recumbent pulse-rate ascertained, and the iodide administered in increasing doses till the pulse-rate began to rise; we thus got the exact dose necessary to dilate the arterioles. Dr. Balfour concluded by emphasising the necessity for very careful diagnosis in cardiac conditions.

Sir T. GRAINGER STEWART found digitalis more successful than strophanthus, probably because the latter might be inferior to that used by Professor Fraser. Strophanthus was, however, better for an emergency than digitalis. It was important not to use cardiac tonics if there were active changes going on in the heart. In those cases he preferred iodide of potassium. He advocated the use of allied remedies with the cardiac tonics. In practice he attached the greatest importance to mechanical relief to the circulation by tapping pleural effusions, ascites, &c.

Dr. AFFLECK expressed his general concurrence with the statements made. Every cardiac case required treatment on its own merits; when treatment became indicated by evidence of failing compensation it was very often found that other organs had developed diseased action also. And we had to address ourselves to this state of matters, which to a large extent interfered with the application of cardiac remedies. The state of the cardiac wall, lung, kidneys, and liver became of prime importance if we were to deal effectively with the case. He preferred digitalis to strophanthus as a tonic, but found the latter useful in emergencies. He dwelt on the value of rest and diet, and the hygiene of the case. In dyspnoea dry cupping was of the greatest value, and if there was much lung engorgement moderate bleeding. In insomnia he advised the administration of equal parts of morphia and chloric ether. Speaking of the collapse which occurred in pneumonia and delirium tremens, Dr. Affleck advised the use of digitalis in large doses.

Dr. UNDERHILL spoke of the occurrence of heart trouble in children as the result either of rheumatism or of influenza, and the functional disorder of the heart in children. He spoke of the value of rest in the treatment of organic lesions, not rest for weeks, but for months or years. He advised caution in the use of opium in angina in elderly people, as the case might be gouty and complicated with gouty kidneys.

The discussion was adjourned.

SERVICES REWARDED. — Brigade-Surgeon L. Boor, M.R.C.S. Eng., of Nel. or, New Zealand, has been awarded the Imperial Volunteer officers' decoration for having served in the New Zealand Volunteer force for nearly twenty-four and a half years.

Reviews and Notices of Books.

Lo Scolgimento Storico della Fisiologia Prelezione del Professore L. LUCIANI al suo Corso di Fisiologia nella Reale Università di Roma. Torino: Ermanno Loescher. (*Historical Evolution of Physiology*. Lecture by Professor L. LUCIANI in his Course of Physiology at the Royal University of Rome. Turin: Ermanno Loescher.) 1894.

La Fisiologia in rapporto colla Chimica e colla Morfologia. Prolusione al Corso di Fisiologia Sperimentale del Dottore GIULIO FANO, Professore Ordinario nel Reale Istituto di Studi Superiori in Firenze. Torino: Ermanno Loescher. (*Physiology in its Relation to Chemistry and Morphology*. Address in the Course of Experimental Physiology, by Dr. GIULIO FANO, Ordinary Professor to the Royal Institute of Higher Studies at Florence. Turin: Ermanno Loescher.) 1894.

THESE two publications may be taken as the high-water mark of biological thought and work in Italy. They proceed from men who, in the experimental laboratory and academic chair, have already given proof of no ordinary power in research and in exposition. The first is by Dr. L. Luciani, lately chosen to succeed Professor Moleschott in the chair of Physiology at the Sapienza—an appointment received with universal satisfaction in all the schools and professional centres of Italy,—and it sustains quite worthily the high standard of scientific and literary excellence which made his predecessor's "prolusioni accademiche" famous. Starting with a "strategic map," so to speak, of the biological field, he shows how evolution within its limits has been carried out in the past and how its movements may be made still more effective for the future, laying his finger on the points which require reinforcing, and from which fresh attacks may be delivered with every prospect of success. This is done in the course of a brilliant retrospect of previous operations, in which the leaders of biological thought and work are "placed" and estimated with extraordinary precision and vividness. He is thus induced to revise many traditional views as to the respective values of these pioneers, and sets posterity right as to the exact amount of service rendered by each. For example, after commenting on the disastrous reversion of biological research into the "high priori road" by the "mechanical dynamism" of Hoffmann and the "animism" of Stahl in the last century, he indicates the salutary return to true scientific method effected by Haller, and, while giving him due credit for his work of rehabilitation, points out that the Swiss biologist's beautiful object-lessons in experimental investigation had been anticipated by the English Glisson, the real author of that doctrine of "muscular irritability" which goes by Haller's name. A healthy catholicity of appreciation pervades Professor Luciani's instructive monograph, not least conspicuous in his eloquent "apologia" for error as a contributing force in the development of biology. In a striking passage he distinguishes between "errori felici" (happy errors) and "errori funesti" (disastrous errors), and shows how even Paracelsus, with scarcely a sound indication or theory to show, had an indispensable place in biological history. Van Helmont and Silvius, amid all their waste of power and perversion of ingenuity, were also workers of good, something more than admonitory finger-posts to subsequent explorers. Borelli, again, the initiator of "animal mechanics," has been of signal use by his "errori felici," while Santorio—"that patient and acute experimentalist who lived whole days and nights suspended in a balance to determine the variations of his weight in relation to ingesta and excreta"—may be justly credited with having discovered the fact of "insensible perspiration," and must be respected as having, if

indirectly, started that complex series of investigations which have slowly built, and are still building up, the "physiology of material exchange, in which," adds Professor Luciani, "the work of the youngest and most energetic physiologists is to-day most largely employed." The whole monograph—for such it really is—is animated by the most generous belief in humanity, showing itself in an almost limitless hope. As to Italy's contribution to the "grand result," he remarks, however, in somewhat melancholy strain, on the poverty which deprives her of the "mezzi necessari" so richly furnished to the English-speaking or German investigator.

Professor Giulio Fano, as our readers are aware, was brought from the Physiological chair in the University of Genoa to fill the same post vacated by Luciani in the Istituto di Studi Superiori in Florence, and the "prolusione" under notice was delivered on entering on his new office. Choosing as his theme the relations of physiology with chemistry and morphology, he discusses in illustration the genesis and growth of the doctrine of inhibition, and reviews the work of his predecessors in that field—the brothers Weber, Schiff, Bernard, Romanes, Lauder Brunton, Hering, and others—while enlarging on the independent view already taken by himself in his "Chimismo Respiratorio negli Animali e nelle Piante." The lecture as now revised and enriched with a running bibliography is well worth perusal as the production of one who is not only a physiologist but a physiologist, and not only a physiologist but a physician.

LIBRARY TABLE.

Organic Chemistry. Part II. By W. H. PERKIN, jun., Ph.D., F.R.S., and F. STANLEY KIPPING, Ph.D., D.Sc. Lond. London and Edinburgh: W. and R. Chambers, Limited. 1895.—Despite the great number of "organic" text-books which exist we welcome the publication of the one before us, since not only are the authors well-known and valued contributors to our knowledge of organic chemistry, but they evidently possess the faculty of telling a very complex story with that simplicity and clearness which make an introductory work of real educational value. Drs. Perkin and Kipping deserve praise also for the admirable manner in which they have managed to include in the compass of two comparatively small text-books¹ so extensive a range of subjects as is presented in the enormously wide and ever-widening field of organic chemistry. Part II. (the present volume), dealing with the Aromatic Compounds, opens with an account of coal tar and its treatment, which is naturally followed by a description of the preparation and properties of benzene and the discussion of its constitution in the light of facts previously dealt with. On the subject of constitution the authors speak with evident authority and experience. When we add that the succeeding chapters include such subjects as the dyes, alkaloids (a chapter, by-the-by, which should be of service to medical students), and stereo-isomerism, it will be understood how fairly comprehensive is this account for a book which is called introductory. We do not quite understand why the book has been issued in two separate parts, since together they would have made up a volume of no bulkier dimensions than the average modern text-book, while in that form the work would certainly have been more handy and convenient.

Tables and Directions for Qualitative Chemical Analysis. By M. M. PATTISON MUIR, M.A., Fellow and Prælector of Gonville and Caius College, Cambridge. London: Longmans, Green, and Co. 1895.—This little book embodies a scheme for the qualitative chemical analysis of moderately complex mixtures of salts; its sphere of usefulness is, therefore, necessarily limited. The author admits this when he

¹ Part I. was noticed in THE LANCET, Aug. 18th, 1894.

says that "the tables do not apply to the analysis of mixtures of salts, the reactions of some of which salts are greatly modified by the presence of other salts in the mixtures, nor do they apply to very complex mixtures, nor to mixtures containing salts of the rare elements." The methods for the separation and detection of metals and acids, so far as our own experience would show, and under the conditions, of course, just laid down, are reliable and should give satisfactory results in the hands of intelligent students. It is to be observed that there is a multiplicity of similar schemes published, each of which is designed to meet the requirements of a special course of study. Their value, therefore, as with the book before us, lies within very narrow limits. Analytical work knows no limits, and analytical charts are, figuratively speaking, of little value except in well-explored seas; to the general chemist they are useless, since he is constantly meeting with rocks not marked on the map; it is better and more scientific to depend upon a sound knowledge of the principles and facts of the science, and then a clear and unobstructed course is possible.

Sell's Directory of Registered Telegraphic Addresses. London: Henry Sell. 1895.—To all men of business and to the great majority of their customers this volume is well-nigh a necessity. The extent of the field which it covers will sufficiently appear from the fact that the list of special telegraphic addresses of houses in London alone fills 295 large pages; the corresponding information for the provinces occupies nearly twice as much space. The accuracy of all these particulars is assured by their being taken from lists supplied by the authority of the Postmaster-General. Telephone numbers have now for the first time been included in the list. The National Telephone Company have officially authorised the insertion of their numbers, and those of other companies are distinguished by an explanatory word. The too-late list of additions and alterations is brought well up to date, being corrected for London to Dec. 31st, and for the provinces to Nov. 11th, 1894. A useful addition is a list of railway stations at which public telegraphic business is transacted, and maps of England, Scotland, and the Manchester Ship Canal.

James Beart Simonds: an Autobiography. London: Adlard and Son. 1894.—This little work is of the utmost interest to the veterinary profession, and in many respects deserves the attention of medical men. After a short account of his family connexions Professor Simonds describes his gaining, in 1829, the diploma of the Veterinary College, with which the whole of his subsequent distinguished career was bound up. His first opportunity for investigation of a new disease appears to have been on the occasion of the original introduction of foot-and-mouth disease into England in 1839. In 1842 he was appointed professor of cattle pathology and chief veterinary surgeon to the College, which was in 1844 incorporated by Charter as the Royal College of Veterinary Surgeons. The author describes in a most entertaining fashion the first invasions of sheep-pox, anthrax, pleuropneumonia, and cattle plague, and records with obvious satisfaction his appointment to be Principal of the College—an office which he held from 1872 to 1881, when age and ill-health induced him to retire from the official duties which he had performed so long and so worthily.

The Castle Line Atlas of South Africa. London: Donald Currie and Co. 1895.—All the sixteen maps of this series are admirably executed and coloured. Six of them are on the scale of either forty or sixty miles to the inch, whereby a great number of names of places are legibly inserted. There are also maps of Cape Town, Durban, Port Elizabeth, Pretoria, and Johannesburg—of course, on a much larger scale. The South African Republic, Matabeleland, Mashonaland, and the Witwatersrand Goldfield's are shown in much detail.

The usefulness of the atlas is greatly enhanced by about fifty preliminary pages of descriptive and historical matter.

The Phonographic Record of Clinical Teaching and Medical Science. No. 3. Edited by Dr. GOWERS and Dr. J. TAYLOR. London: Sir I. Pitman and Sons. Price 6d.—This journal, the organ of the Society of Medical Phonographers, will in future be published monthly instead of quarterly, except during the three vacation months of April, August, and September. It should prove useful in promoting the use of shorthand among medical students and practitioners, and enable them at the same time to increase the knowledge of their profession. Hitherto only medicine in its clinical aspect has been dealt with, and the present issue contains a lecture on Lateral Curvature of the Spine by Mr. Christopher Heath, and the concluding portion of Dr. Gowers' lecture on the Treatment of Infantile Paralysis; but the scope of the "Record" will be widened in later numbers. The facility for the interchange of thought which shorthand affords has long been taken advantage of by phonographers by means of what is known as the "Ever-circulator"—that is, a manuscript passing from hand to hand through the post in which is discussed some subject on which each member comments before posting to the next recipient. Each member has an opportunity of seeing the completed manuscript, and under able editorship the plan should prove especially useful to the medical student. Mr. Norman Porritt of Huddersfield, the first medical practitioner to advocate in print the use of shorthand in medicine, has undertaken the organisation of such a department of the society; and should a medical "Ever-circulator" be started Dr. Gowers has promised to contribute a series of articles on the general subject of Examination for Life Assurance. The size of the "Record" is eminently suited for the pocket and the shorthand is excellently lithographed. The admixture of elementary outlines with advanced contractions is, however, rather incongruous and not at all likely to lead to that uniformity of outline which is so desirable if use of the "winged art" is to become universal among the profession. Upon the whole the editors are to be congratulated upon the general get up of the journal of the Society of Medical Phonographers.

How to Live in Tropical Africa. By JOHN MURRAY, M.D. London: George Philip and Son.—That this book appears at a happy time no one will deny. The new field for the reception of our surplus population which has been opened up by the toils and heroism of Rhodes, Jameson, Johnson, and Stanley will probably not yield all its treasures to the colonist without some toll from the settler in addition to that which it has already exacted from its conquerors. The aim of Dr. Murray in writing this book is evidently to show that with proper attention to hygiene, a cleanly life, and the use of common sense a man may reasonably hope to either escape the dangers of tropical fevers altogether, or, at any rate, to mitigate them. The book opens with two chapters on Climatology, and the rest of it is practically taken up with the malarial problem. The precautionary measures as to sites for houses, camps, &c. are all thoroughly gone into, as well as the etiology and the recognition of the malarial parasite. Directions for treatment are given and are plainly set forth so as to be of use to the uninstructed layman. The chapters on Food, Drink, and Clothing are all excellent, and from a fair experience of rough travelling in other parts of the world we can commend Dr. Murray's unpretentious little work to all those whose lot shall lie in the fair ground of New Africa.

MEDICAL MAGISTRATE.—Mr. John V. Laverick, L.R.C.P. Lond., L.F.P.S. Glas., L.R.C.P. Edin., has been placed on the Commission of the Peace for the North Riding of Yorkshire, by virtue of his election as chairman of the district council of Hinderwell.

New Inventions.

GAITER SUPPORT FOR FLATFOOT AND TALIPES VALGUS.

THIS support is one which I have used occasionally for some years in cases of flatfoot and talipes valgus. It consists of a gaiter of black kid reaching from the tubercle of the tibia to the malleoli, and lacing in front. Running the entire length of the inner side of the gaiter, and sewn into it, is a steel bar, from one-half to three-quarters of an inch in width. To the upper part of this bar a buckle is attached; a piece of webbing passes round the ankle to the outer side, where one end is buttoned to the main band, and is continued under the hollow of the sole to the inner side, where a piece of stout black elastic is attached to it, and to the other end of the elastic a black kid strap, which is then buckled at the top of the gaiter. By this strap the elastic and webbing can be drawn up to the required pitch and altered at will. The advantages of this support are—(1) it can be fitted to any leg, and will keep its place however thin the leg may be; (2) the boots can be changed or slippers worn with-

FIG. 1.

FIG. 2.



out interfering with it; (3) it is neat, and on casual observation looks like a high French boot; and (4) in suitable cases it is very comfortable to the patient, the elastic acting as an artificial calcaneo-scapoid ligament. The cases in which it will, I think, be found specially useful are those of flatfoot combined with a valgus condition, such as we find in delicate or rachitic children. It is also useful in some older patients, but in many the surgical sole answers all requirements. Cases of valgus depending on spasm of the peronei I find do better with the inner part of the sole and heel of the boot raised, the above appliance and also the surgical sole appearing in some cases to increase the spasm. The support has been made for me by Messrs. Ferris and Co. of Bristol.

W. J. PENNY, F.R.C.S. Eng.

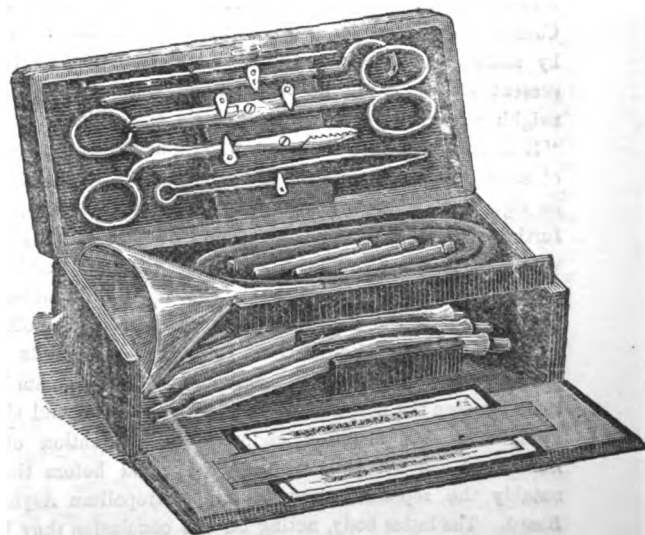
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NEW TRANSFUSION APPARATUS.

THE apology for introducing this new transfusion apparatus to the profession is that if ever transfusion is to become a widely used means of saving life (threatened by hæmorrhage) and alleviating the supervening distressing symptoms of certain toxic conditions of the blood—e.g., diabetes, uræmia, and certain poisons—the apparatus for its performance must be simple, compact,

and ready at hand. The many transfusion apparatus at present known to the profession, such as Professor Annandale's and Dr. Herbert Spencer's, are in themselves most excellent, but they are rarely ready at hand in an emergency, both on account of their size and complicated mechanism. A practitioner cannot be expected always to go about with a Spencer's transfusion apparatus, and should the necessity for transfusion be indicated the patient is possibly dead before the apparatus can be obtained. The advantages claimed for this apparatus by Dr. L. J. G. Carré, who suggested it, are: 1. Its absolute simplicity. Transfusion can be quite readily performed absolutely single-handed. He informs us that he has done so in a case of excessive collapse after severe post-partum hæmorrhage. 2. Its compactness. Everything that can possibly be required for the safe and successful performance of the operation is immediately at hand. 3. The small size of the complete case, so that it is possible that it may serve as one of the invariable contents of the practitioner's midwifery bag or the surgeon's operating bag. A transfusion apparatus is always required on an emergency, and generally when the practitioner is least prepared. In this apparatus he may always feel that he has with him often the last resource which will enable him to save life. Spencer's transfusion bottle is essentially a hospital apparatus, this is an apparatus rather adapted for the use of the private practitioner.

The case, which measures $2\frac{1}{2}$ in. by $3\frac{1}{2}$ in. by $7\frac{1}{2}$ in., is lined with a special leather, which will wash, so that the whole apparatus can be kept aseptic. Comprised in the case are all the instruments necessary for the performance of saline infusion—a metal-handled scalpel, a combined director and



aneurysm needle, a pair of scissors, a pair of Spencer Wells forceps, a pair of dressing forceps, and silk. The case also contains six small glass tubes, each holding a drachm of pure chloride of sodium. In addition, there is a piece of flexible celluloid funnel, attached to which is a piece of flexible rubber tube, which does not kink or collapse, this, again, ending in a glass cannula bent at an angle of 30° , bulbous at one end, over which the rubber tube fits tightly, tapering at the other, so that a vein is easily entered. The cannulas are supplied in three sizes. The apparatus is a very neat one, and should find a place amongst the instruments kept ready for emergencies in hospitals and in the midwifery bag of many practitioners. An advantage is undoubtedly possessed by having all the instruments together; the majority, however, are contained in every surgeon's dressing case, and greater call would probably be made for a small bag containing the celluloid funnel and its tubes and the chloride of sodium tubes. The apparatus is made by Messrs. C. Wright and Co., 108, New Bond-street, W.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 16, 1895.

THE reissue of a memorandum¹ on isolation hospitals by the medical officer of the Local Government Board acquires some importance by reason of a greater amplification than heretofore of the conditions under which sanitary authorities may contemplate the erection of hospitals for the reception of patients suffering from small-pox. Apart from this the memorandum has undergone but little change. Its wording has been made to meet the provisions of the legislation of last session, the document being addressed to the new district councils, and the extremely useful plans by which it is illustrated have been slightly modified, but otherwise it is essentially the same document as heretofore. The small-pox question, however, deserves attention.

On the issue some thirteen years ago of Mr. POWER'S well-known report on the diffusion of small-pox amongst the population resident around one of the small-pox hospitals of the Metropolitan Asylums Board the question of this diffusion was regarded as of such importance that a Royal Commission was appointed to inquire into the whole subject. Amongst the conclusions at which that Commission arrived we would recall the following: "That by some means or other the Asylums' hospitals, in their present shape, cause an increase of small-pox in their neighbourhoods appears to us clearly established..." and "It is evidently of paramount importance that the areas of small-pox wards, as well as their administration, should be rigorously separated from those of fever hospitals, and further that their construction should be such as to reduce within the smallest limits the chance of spreading infection."

It is, however, impossible to read that report without being convinced that the Commission were, as a body, disinclined to believe that the mischief done by small-pox hospitals was produced otherwise than by means of personal communications between the hospitals and the outside world, and their attitude in this direction endorsed the contention of a number of the witnesses who had appeared before them, notably the representatives of the Metropolitan Asylums Board. The latter body, acting on the conclusion they had maintained in this matter, soon set themselves to work in the determination to put an end to the spread of small-pox from their institutions by remodelling their administration and by laying down and enforcing regulations with a stringency and at a cost that could hardly have been effected by a body less powerful and less wealthy in the financial and other resources on which they could rely to carry out their decisions. But, unfortunately, small-pox still went on spreading around their hospitals as it had done before; and not only so, but the rate of incidence of the disease on the surrounding communities was regulated as formerly by the differing proximity of the inhabitants to the small-pox

hospitals. Taking the total results over a series of eight years beginning in 1877, and including some half dozen different periods of small-pox prevalence in London, it was found that the percentage of houses round the Fulham Small-pox Hospital in which small-pox had appeared was as follows: 30·1 within a quarter of a mile, 14·5 between a quarter and a half mile, 9·5 between a half mile and three-quarters, and 4·6 between three-quarters of a mile and one mile.

It was on the repetition of such results in the later portion of the period referred to that the Asylums Board evidently found it necessary by a series of stages to discontinue the attempt to treat small-pox in London, and the establishments down the Thames and near Dartford were the ultimate results of the decisions arrived at. And this change of procedure revealed in its results another piece of experience bearing upon the influence of small-pox hospitals, not only as diffusing infection, but of ensuring an increased frequency of small-pox epidemics by reason of the frequency of their operations in collecting together at one or more centres the occasional cases of that disease. In this way there came about a recurring concentration of the infection under circumstances that must now be regarded as often tending to the production of a poison having a special potency for spread. In fact, whereas during the sixteen years' existence in London of the Asylums Board's small-pox hospitals the death-rate for small-pox was extremely high and outbursts were frequent, it so happens that since those centres of small-pox aggregation in the metropolis have been abandoned the death-rate has been trivial in comparison with the previous one.

The experience of the last three years has tended strongly to confirm the opinion that, whatever authorities may be able to do, there are conditions under which small-pox hospitals become a distinct danger to surrounding communities. Those who concur in this view not only increase constantly in number, but they include the main bulk of investigators of repute and acknowledged standing. Some, indeed, whilst apparently accepting the conclusion, have sought to show that the distance at which diffusion of small-pox takes place is much more limited than many have supposed. Thus Dr. MATTHEWS of the Gore Farm Hospital, reporting on a single year's experience of a fever hospital, together with an asylum and schools, all of which lie about 1000 feet from a small-pox hospital, states that because no one to his knowledge contracted small-pox in any of the institutions in question "there seems sufficient evidence from this experience for assuming that the diffusion of small-pox through the air does not extend to a distance of 1000 feet." Not a word is said as to the condition of the school inmates as regards vaccination or as to the proportion of convalescents to total small-pox cases. The experience, even if vaccination and convalescence be ignored, is a solitary one, limited to a comparatively brief period; and it is negative. As such it will carry conviction to very few minds. It is also quite clear that any such view does not weigh with the authorities at Whitehall; for after a long period, in which evidence had been accumulating on the subject, they now lay down the following rules, which, though put in the form of advice, will

¹ On the Provision of Isolation Hospital Accommodation by Local Authorities, with plans. 1895. Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. Price 1d.

evidently serve for the future to govern the decision of that Board in cases where their sanction is required for the erection of small-pox hospitals. "A local authority should not contemplate the erection of a small-pox hospital—1st, on any site where it would have within a quarter of a mile of it as a centre either a hospital, whether for infectious diseases or not, or a workhouse, or any similar establishment, or a population of 150-200 persons; 2nd, on any site where it would have within half a mile of it as a centre a population of 500-600 persons, whether in one or more institutions or in dwelling-houses." These conditions, it is specially stated, are laid down, not by way of indicating that the distances specified represent the limits of small-pox diffusion, or take cognisance of differing qualities of small-pox for spread in different epidemic periods, but merely "with a view of lessening the risk of infection." And a further paragraph accentuates the difficulty which is felt in attempting to lay down any general rule that shall cover all circumstances affecting different classes of communities, for it is added: "It must be understood that even where the above conditions are strictly fulfilled there may be circumstances under which the erection of a small-pox hospital should not be contemplated. Cases in which there is any considerable collection of inhabitants just beyond the half-mile zone should always call for special consideration."

Incidentally the memorandum indicates that the attempts which have been made by certain authorities to comply with the recommendation embodied in one of the conclusions of the Royal Commission we have quoted, as to reducing "within the smallest limits the chance of spreading infection" from small-pox hospitals, have not yet been successful. The complete combustion of all out-going air from such hospitals is a matter of greater difficulty than had evidently been contemplated by the Commission.

It is said by scoffers that if it were not for the unfailing variety of our weather we should have no subject of conversation. This estimate of our social weaknesses is perhaps somewhat unfair, but the fact remains that (at the present time, at any rate) the weather is the subject which is uppermost in most people's minds. We cannot wonder at this if we consider how, in a machine so highly organised as our complex modern life has become, the stoppage of one little wheel throws everything out of gear, and when we think that for eighteen consecutive nights the temperature at Greenwich has never been above freezing point, and frequently much below that point, it is easy to picture the common dangers to which this exceptionally long-continued frost may give rise.

As our household surroundings and the thousand appliances which minister to our daily life grow more and more luxurious and complicated, so we must expect any interference of the conditions under which they act to be accompanied with a proportionate amount of disturbance. Take, for instance, the supply of the first necessary of life—water. We now consider ourselves badly off if at some three separate points in a house we cannot at once command a full supply of hot and cold water by simply turning a tap. Having finished with the water we open a valve and it disappears, how or whither most

people never take the trouble to inquire. Our ancestors, who lived through winters quite as cold as the present, were naturally not nearly so much upset, inasmuch as the balance of their lives was not nearly so delicately adjusted. In the first place, they were not so particular about their ablutions, and in the second, always having been accustomed to go to the spring or the well it made very little difference whether they had to break a layer of ice or simply draw their household supplies in the ordinary way. But not only are we moderns inconvenienced, but many are practically living with what is equivalent to a charge of dynamite in the basement. It is needless here to go into the mechanism of the explosion of hot water circulating boilers, but a glance at any daily paper will show how real and how widespread is the danger. Frozen soil-pipes, again, are an obvious source of danger. The inconvenience need not be dwelt upon of having no escape for domestic sewage, but the after-effects of a prolonged block to the soil-pipes may not only be expensive of remedy, but seriously dangerous to health. As for the cold water service, we doubt not that when the thaw comes the old tale will be repeated, and flooded houses, with their accompanying evils of damp rooms, broken-down ceilings, plumbers, rheumatism, and other misfortunes, will be as common as in 1855, when LEECH drew his inimitable pictures of the heroic struggles of the BRIGGS family with the burst pipes.

Let us turn now from these effects of a frost, which, disastrous though they be, are to some extent preventable by the exercise of sense and supervision, and which, if not preventable, are endurable, to the effects upon the health of the population. A graver picture presents itself. Men must work, and women too, but it is surely a grave reflection upon a community that omnibus drivers and conductors should have to work for some sixteen hours without relief in a temperature like the present, and that no less than five have died from the cold, of whom one was found dead on his box. Upon the aged, the poor, and the very young the extreme lowness of the temperature tells most fatally, and when in addition to the cold a gale blows, any man or animal exposed without shelter runs a grave risk of death. From every part of the country, from the Channel to the north of Scotland, we hear of sailors frozen in the rigging, wayfarers lost on high roads and lonely moors; trains are snowed up with passengers and freight for days; and in one case the wild deer came down from their bleak forests and crowded among the passengers who had gathered round the engine to share in the warmth. Now it is quite evident that we cannot alter the weather, but we can mitigate its consequences by due attention to physical and physiological laws. For accidents to boilers and pipes the preventive measures to be applied are in some cases perfectly well known, and these it is the householder's fault if he does not apply. With regard to food and clothing, the two questions may be summed up in two words—fat and wool. All dwellers in cold countries consume large quantities of fat, and it is well to remember that by taking fat in some digestible shape, such as cream, butter, or small quantities of cod-liver oil, our power of resisting cold is much increased. The days have gone by when delicate women went about in the depth of winter in thin cotton

dresses with only one under-garment; but even now there is much need for the exercise of common sense in the change from morning to evening dress. Some woollen garment, however thin, should always be worn next the skin, clothing should be as loose as possible, and the fact that two thin things are warmer than one thick should be always borne in mind. If these precautions are taken those who have the means to take them may reasonably hope to come to no harm in the frost. But let us not forget the sufferings of those poor who have neither food, fire, nor clothing. The cold, so cruel to the young and the sick, is especially cruel to the under-fed; and all those of our poorer fellow-creatures whose vocations compel them to expose themselves for long hours to the bitter weather with insufficient clothing and insufficient nourishment should be made the subjects of our practical sympathy. They deserve it and require it.

ONE great difficulty in the way of hospital reform in London is the isolation of the institutions. They act apart and somewhat competitively. Each has to fight for its own hand and in its own way. Each has its own friends and is dependent to a great extent on the idiosyncrasies of its own secretary. Each has its own methods and its own views. The competition which obtains between hospitals has reference not only to appeals for help from the benevolent public, but to the number of patients attended. When the isolation of such institutions is considered, and their ever-increasing number, it will be seen how difficult it is to exercise any control over them. Their voluntary character, their peculiar glory, for the purposes of reform is apt to be even a disadvantage. For these reasons any central body with benevolent purposes which would take them all into its purview and care ought to be a great blessing, and its suggestions ought to be received with gratitude. The Charity Organisation Society therefore did good service by organising a meeting on Monday last for discussing the formation of such a board.

It is well known that such a recommendation was the principal outcome of the deliberations of the Select Committee of the House of Lords in 1889 (Lord SANDHURST's Committee), and that for some reason or other the proposal came to naught. The hospitals themselves have not welcomed the idea, and for some time past it has been in abeyance. Colonel MONTEFIORE, in the paper which he read at the meeting on Monday, gave a history of the proposal and its fate, and in an elaborate survey of the position of hospitals gave weighty reasons why in some form the suggestion should be accepted by the London hospitals. His account of the out-patient system with its 1,200,000 patients, exclusive of the casual system, (which is rapidly growing into large proportions), was almost appalling, whether we consider the interest of the patients or that of medical practitioners who begin to see in hospitals a sort of conspiracy to ruin general practice. Only the grossest abuse of hospitals on the part of the public explains why practitioners entertain such views of institutions to which they owe so much in the way of instruction. The medical speakers who took part in the discussion said nothing in depreciation of hospitals when restricted to the reception of proper cases and in proper numbers. Sir

JOHN ERICHSEN, in a dignified and thoughtful speech, touched with great judgment on the question of pay wards. He entirely disapproved of these as part of the system of an ordinary hospital. He recognised that there was a class needing the accommodation of a pay hospital, and that such hospitals or homes should be provided on ordinary commercial principles, and should in their charges meet the requirements of the clerk or other person who in emergencies might not be able to command at home the nursing and accommodation necessary for his case. Though the monstrous proportions of the out-patient department and the tendency to adopt the pay system were the principal evils dwelt on by the speakers on Monday, it was not denied that there were others—that some medical charities are excessive in their cost, that in-patients are admitted who can well afford to pay, and that the system of accounts is far from uniform. Colonel MONTEFIORE did not speak pessimistically of the finances of hospitals; but he showed the extreme uncertainty of legacies as a means of income, while it is on them that hospitals seem to depend more than they do on annual subscriptions. Moreover, legacies are bequeathed with so little system and so capriciously as to enrich some hospitals and leave others impecunious.

The promoters of the meeting were probably well advised in being content with a general discussion and in not pressing conclusions to the length of a resolution in favour of a central board. This was done out of consideration to hospital authorities, and wisely done. But these authorities on their part will do well to take note of this meeting as an index of growing public opinion in favour, not only of the retention of voluntary hospitals, but also of their being restricted to the relief of persons gravely affected with disease and unable to command medical advice and comforts proportionate to their need. The creation of a central board would in no way injure well-conducted hospitals. The chairman of one hospital and the chairman of the Hospital Saturday Fund thought there would be difficulty in defining the duties and functions of such a board. But it will be to the discredit of the able and experienced business men who administer our hospitals if they cannot agree on some general functions—friendly and advisory—which would tend to support our much-threatened hospital system.

Annotations.

"Ne quid nimis."

THE DUKE OF CONNAUGHT ON ST. THOMAS'S HOSPITAL.

PRACTISED orators to a certain extent all of our Royal Family tend to become, but it required more than verbal facility to speak as sympathetically and as accurately as His Royal Highness the Duke of Connaught did at the Mansion House on Wednesday last, when appealing to the public for £100,000 to place St. Thomas's Hospital, of which institution His Royal Highness is the president, on a securer financial basis. It required an intimate acquaintance with the subject and a deep sympathy with the needs of the suffering poor to speak at once so broadly and so precisely, and we cannot doubt that the practical outcome of the appeal will be substantial, although—to put it colloquially—

times are very hard. During the whole of the period the opportunities that the institution has of doing good have been seriously crippled by a lack of funds, and the authorities now find themselves face to face with the following crucial question: How best can they help the sick of an enormously increasing neighbourhood when their own funds compel them to offer a rapidly decreasing accommodation. For there can be no doubt that if substantial aid is not forthcoming yet more wards will have to be closed. His Royal Highness pointed out that it was through no fault of the hospital authorities that their expenditure had grown while their income had dropped. The vast spread of South London threw an ever acuter strain upon their resources, while agricultural depression lessened their income, both directly by depreciating the hospital property and indirectly by affecting their subscription list. Many and many wide and vexed questions in hospital constitution and hospital administration in the metropolis were touched upon, to which we do not at the present moment intend to make reference, considering that we shall most efficaciously back His Royal Highness's appeal by simply summing up the immediate situation. St. Thomas's Hospital is allowed on all hands to be doing splendid charitable work, and it cannot continue to do so unless the public will come to its immediate rescue. This we hope earnestly they will do, and in such a bountiful manner that this great charity will be able to pursue its beneficent life, and, by closing its pay wards, pursue it on proper lines—those of pure and undefiled charity.

THE PATHOLOGY OF PNEUMONIA.

FACT and hypothesis were happily blended in the communications made at the last meeting of the Pathological Society by Dr. Washbourn and Dr. Wright bearing on the pathology of acute lobar pneumonia. Dr. Washbourn rigidly confined himself to observations upon the microbe that has been proved to be the almost constant concomitant of this disease; whilst Dr. Wright, in his suggestive reasonings from analogy, put forward sundry explanations of the remarkable phenomena that characterise it. The bacteriological history of acute pneumonia is instructive, since in the first instance the bacillus discovered by Friedländer was thought to be—and the view received support from many sides—the pathogenic organism responsible for exciting it. But Dr. Washbourn's statement that the real "pneumococcus" is that discovered by Fraenkel and Talamon, and studied by Sternberg and Weichselbaum and many others, is in accord with general opinion, although we note in a recently published text-book of high standing in this country the pneumonic rôle is still assigned to the bacillus of Friedländer. Dr. Washbourn pointed out that the occurrence of the pneumococcus in healthy secretions did not militate against its pathogenic property, instancing diphtheria as an example of this. Now although practically the same conclusion was arrived at some years ago by Dr. Sternberg, it must be admitted that the fact enlarges the view of the microbic origin of disease. It seems to demand the intervention of a second factor, disposing the body to the action of the organisms. Indeed, for pneumonia such a factor has been assumed in the phrase "lowered vital resistance," such as may be produced by cold or exhaustion, rendering the subject more vulnerable. Experimentation upon animals with regard to the pneumococcus has brought out many interesting facts as proving its relation to inflammatory processes in various tissues and organs; but it cannot fail to strike the clinical observer that the parts mostly attacked by inflammation after "pneumococcal" inoculation are not those which are prone to such lesion in the human disease. This was partly

explained by Dr. Wright's statement that the pneumococcus had mainly a local action, and in acute pneumonia its entrance is obviously by the respiratory tract. The question of immunity and the allied subject of the use of "curative serum" has been studied experimentally in pneumococcus infection for some time, notably by Drs. G. and F. Klemperer of Munich; indeed, some of the earliest work on "antitoxins" was that done on the occasion in question by these observers. It is clear, however, that more requires to be proved before the practical application of such researches can be adopted. Moreover, in a self-limited disease like pneumonia it will be assuredly a difficult matter to determine whether the abatement of symptoms is due to the administration of serum from an immunised subject—e.g., the blister serum from one who has just passed through an attack—or to the natural termination of the process. Amongst the striking phenomena of this remarkable disease must be reckoned the occurrence of crisis and the reabsorption of the mass of exuded leucocytes, which convert the spongy tissue into a solid grey mass. Dr. Wright advanced an interesting explanation of the crisis when he compared it with the phenomena of spirillum fever. Crisis is denoted by a rapid fall in the excessive leucocytosis that precedes it, and this means the withdrawal of pneumococci from the blood; yet neither the height of the fever nor the degree of crisis is influenced by the amount of lung involved—i.e., of leucocytal emigration from the blood; nor do signs of resolution concur with those striking changes in the functions of the whole body which supervene at the crisis; nor finally, as Dr. Washbourn says, do the pneumococci exist to any marked extent in the blood. That the reabsorption—sometimes with great rapidity—of the large amount of nucleo-albumen of which exuded leucocytes are composed does not lead to intra-vascular thrombosis, in accordance with the late Dr. Wooldridge's beautiful demonstration, is remarkable, and was explained by Dr. Wright by assuming an equally rapid elimination by the urine, and in some cases, perhaps, by the bowels, of the absorbed material. It is well known, however, that the periods of crisis and that of commencing resolution are often those at which the need for free stimulation is most urgent; and we are far from saying that some of the deaths at this period of the disease attributed to cardiac failure may not really be due to cardiac thrombosis. On either view alcohol is indicated, and we may add that ammonia, another time-honoured remedy, would equally answer the indications, and that most physicians would rather trust to it than to citric acid to prevent the tendency to coagulation within the blood-vessels.

LIFE ASSURANCE SCHEMES.

Two life assurance schemes have been recently pressed upon public notice, one devised by an American the other by an English company, being the Mutual Life Assurance Company of New York and the Royal Exchange Assurance Company respectively. Of the ability of both companies to meet their obligations it is possible to speak with a large measure of confidence, for each is prudently managed and possessed of ample means. In this respect there is no need to choose between them. But the two plans are very distinct in character, and we cannot hesitate to give the preference from a professional point of view to the English scheme. The object of its originators has been to give as large an immediate return as possible upon the premium charged, and for this purpose the distant future is sacrificed to the near. That is to say, the Royal Exchange Company is prepared to issue policies at extraordinarily low rates of premium upon the condition that the remitted balance of the ordinary premium rate shall be represented by an accumulating debt chargeable against the policy monies when these fall due for payment. This growing debt

may probably have the effect of cancelling the assurance in the case of persons who live to extreme old age, so that the transaction really works out to a temporary assurance covering the working life-time, and the premium rate is proportionately light. The American scheme, on the other hand, reverses this process. During the first twenty years of what is—not very felicitously—called a debenture policy, part benefit only is enjoyed and even when death occurs one-half only of the sum assured becomes payable, the payment of the other half being deferred for twenty years upon payment in the interval by the company of interest upon the withheld balance at the rate of 5 per cent. Thus, in the English scheme the idea of life assurance properly so called prevails; in the American the prevailing idea is that of an investment. We have on previous occasions expressed the opinion that what a medical man needs to compass by means of a life assurance policy is mainly a protection to his dependents against the pecuniary consequences of his own premature decease. It is a grievous mistake to be led away by the prospect of personal advantage in the distant future from making the largest possible provision for the contingencies of the near future. We think, therefore, that medical men contemplating life assurance will do better to examine the Royal Exchange Company's prospectus than that put forward by the Mutual Assurance Company of New York, for the former is conceived in the spirit of a juster appreciation of what the assurer requires. The latter is eminently well adapted to produce a large accumulation of funds in the hands of the company's trustees, but that is an object in which the company's policy holders cannot be expected to take a very lively interest.

THE TEETH OF SIOUX INDIANS.

A RECENT pamphlet by Dr. Wilberforce Smith contains some interesting data relative to the teeth of ten Sioux Indians which he had the opportunity of examining at the time of the visit of the "Wild West" to London. The manner of investigation pursued by him was to count the teeth in pairs—for instance, the first permanent lower molar and its opposing tooth, the first permanent upper molar, would be considered one pair; when applied to the whole of the molar and premolar series the number of pairs would be ten (six molar and four premolar). Basing his observations upon this method he found that in five of the Indians under the age of twenty-two two had the pairs complete, the remaining three being two pairs short, due to the fact that the third molars had not erupted. Of five Indians between the ages of thirty-five and fifty, four had the pairs complete, the remaining one having two pairs missing due to the absence of the third molars. By way of contrast Dr. Wilberforce Smith records some observations upon the teeth of the average Londoner. In nineteen cases between the ages of twenty and twenty-one the number of pairs was found to be reduced to 2.50 in the molar series and to 2.53 in the premolar; while in twenty-two cases between the advanced ages the number of pairs was reduced to 1.12 in the molar region, the statistics of the premolar region not being recorded.

L'UNION MÉDICALE.

OUR admirable contemporary, *L'Union Médicale*, has inaugurated its entrance on fifty years of uninterrupted existence by some rather startling changes. For the future it will appear once a week only, instead of three times as formerly; but, on the other hand, although the number of pages of letterpress (twelve) remains the same the size is almost doubled, and there is a vast improvement, not only as regards type, but also in the quality of the paper used. The price, which used to be thirty-two francs per annum, making *L'Union Médicale* the most costly of all the Parisian medical

journals, now becomes five francs, which certainly seems extremely moderate, as it brings the charge for a single copy down to something less than a penny. In the course of some remarks addressed to his readers before the transformation the Director, Professor L. G. Richelot, says: "The alterations which time has wrought in our scientific and professional habits have profoundly modified the material conditions of journalism as well as of its aspirations and tendencies. We no longer write with the same ink, we no longer chat in the same way with our readers, we are colder and more formal, less prone to discussion, criticism has given place to reporting à outrance, to ill-digested news." Professor Richelot nevertheless concludes that it is necessary to march with the times. "*L'Union Médicale* wishes to follow contemporaneous progress without, however, blindly obeying the mode," and hence the modifications in form and price. Considerable changes have also taken place in the editing department. Dr. H. Richardiére is associated with Professor Richelot as director of the medical section of the journal. Each number is to contain a leading article dealing in turn with every branch of the profession. The reports of scientific societies are, it is stated, to be placed before the reader in a form that will prove attractive instead of after the usual out-and-dried fashion. All questions concerning the dignity and the interests of medicine will, as heretofore, continue to be defended; and any work, French or foreign, which may possess real value will be thoroughly criticised and done justice to. The ardent desire of the direction is to evolve genuine medical journalism; to set forth facts scientifically and critically, but entirely in their own language and from their own point of view; and to, as far as possible, avoid producing pages of stenographic reportage bearing a close resemblance to an index catalogue. A bi-monthly *feuilleton* will still be a feature of the rejuvenated journal, and a review of hygienic affairs will, as usual, be entrusted to the competent hands of M. Jules Rochard. The responsible, but not easily defined, duties of *rédauteur-en-chef* continue to be performed by M. Eugène Rochard, who has occupied the post for the last two years. In conclusion, the Direction address a pious souvenir to the original founders: Amédée Latour, Richelot, and Aubert Roche, in whose footsteps they hope to tread.

"DANGERS IN THE POCKET."

IN THE LANCET of Jan. 26th we published a brief note on the dangers likely to be incurred by carrying certain articles of popular request in the same pocket. The details of the particular case to which we referred have since been reported to us by Dr. W. Davidson, and we are glad to note that the result of the "pocket explosion" has not been so serious as it might have been. On the morning of Saturday, Jan. 19th, Dr. Davidson was called to see the patient and found him suffering from an extensive burn of the inner surface of the left thigh, with another burn of smaller extent, but more severe, extending over the thenar half of the left palm. The history of the injury elicited was that the patient had been suffering from sore-throat and had purchased some chlorate of potash lozenges. These he was carrying in his trousers pocket rolled up in a piece of paper. One of the lozenges was loose in the pocket, which also contained a box of safety matches. While moving about he suddenly heard a noise like the hissing of a squib before the detonation, and saw smoke issuing from his pocket, which he grasped from the outside thinking to smother the fire. An explosion followed which blew out the whole of the front of the trousers-leg. There was no loud noise, only an exaggeration of the hissing noise heard at first, but there was a considerable volume of flame. What had evidently happened was that the loose lozenge, by rubbing on the composition on the outside of the box of safety matches, had become ignited and that the rest of the lozenges had been exploded by it, causing

the chief explosion. On the room being searched the remains of several of the lozenges were found. They had been reduced to about a third of their normal size and the outside of them appeared scorched. The patient had fully one ounce of the lozenges in his pocket at the time of the occurrence. On Jan. 25th the wounds were healing rapidly and were almost entirely covered with new epidermis.

THE PAY SYSTEM AT THE GREAT NORTHERN CENTRAL HOSPITAL.

WE understand that Dr. Glover has given notice of the following motion for consideration at the annual meeting of the governors of the Great Northern Central Hospital on Friday, Feb. 22nd, at 5 P.M.:—"That this meeting of governors of the Great Northern Central Hospital regrets the recent changes in the administration of the hospital by which pay patients have been admitted to its wards, to be attended gratuitously by the honorary staff, is of opinion that such a system is not likely to conduce to the welfare of the hospital or the advantage of the poor for whom such institutions exist, and should without further delay be abandoned."

FROZEN WATERCLOSETS.

THE discomforts, not to say dangers, which attend the freezing of water-pipes are alone hard enough to endure; but when the frost is so severe and stays so long with us as to lead to the stoppage of soil-pipes we are brought face to face with a new evil which demands very prompt and careful action. We learn that in many houses in the suburbs of London this has occurred, and that in many cases the occupiers have been obliged to carry the excreta into the garden or to avail themselves of the premises of an obliging and more fortunate neighbour. When the thaw does set in the consequence of this condition of things may be very serious, and those who are unfortunate enough to be in such an unenviable position should have a stock of some efficient disinfectant at hand. It would be a proper and useful preliminary precaution to place a quantity of disinfecting liquid, such as carbolic acid, in the pan of the frozen closet. The public health authorities might, we suggest, help the people in this matter, so that pestilence and disease may not be counted amongst the contingencies which prolonged frost brings in its train.

LIFEBOAT EFFICIENCY.

FROM time to time we have directed attention to the work which has been carried on by the National Lifeboat Institution with so much unselfish heroism, and, happily, with no small measure of success, during the past seventy years. Every winter, every storm, adds to the lustre of a record which our spoken praise may explain, but cannot glorify. Lives have, indeed, been saved around our coasts by other more or less efficient agencies; to all such we would allow due honour; nor is the Institution already mentioned less free in its commendation of these allies. Nevertheless, with all our admiration of the gallant disregard of danger shown by fishermen and others engaged in this generous duty, we cannot but associate the work of rescue with a system which has been above all other agencies distinguished in it. Of course, there is no organisation which is perfect, and the Lifeboat Institution is doubtless governed by this general rule. Its boats, we are told, are constructed on antiquated and even dangerous models; they owe their utility largely to the aid of steam-tugs, and much of the fame commonly associated with their use must be accorded to the rocket apparatus. All this is partly true; but still the fact remains that neither steam-tug nor rocket gear can, except under certain conditions, be enabled to reach and to save the living freight of

shipwrecked vessels. This is, in fact, the peculiar faculty of an efficient boat service. Whether more might not be done than is now done to increase the present degree of efficiency is another and an important question. Improvements in boats and in management may very well be possible. Had the timbers of the Ramsgate boat which was injured the other day been somewhat stouter she might have escaped with a mere submersion. So with other like matters of detail. When, again, we come to structural design we touch a vital matter. In this respect it would seem clear that the lifeboat has reached an important stage in its evolution. Steam, which has altered so greatly all our means of transport, is here also asserting its superiority. The idea of a steam lifeboat is probably not a new one. Of late it appears to have ripened in a most practical form in the construction of a hydraulic steam lifeboat independent of paddles, screws, and even rudder, capable of considerable speed in any kind of weather, of lateral movement which enables her to maintain her position safely beside a wreck, and commodious enough to convey thirty persons besides her crew. Such a craft certainly marks a great advance in construction. She would as certainly cost much more than an ordinary lifeboat, and this fact will doubtless postpone for some time her adoption into the life-saving service. There appears no reason, however, why the advantages claimed for her should not be more fully tested in actual use than they have been, and we doubt not she will ere long find her place at some of the more dangerous of our coast stations. It will be long before the rowboats which have done such excellent work are quite superseded. A difficulty in the way of their proposed successors, it seems to us, will be found in the management of the steam apparatus in case a vessel of this type should capsize. If this obstacle be overcome steam launches of the new pattern may very probably become the lifeboats of the future.

TUMOUR OF THE SPINAL CORD.

TWO cases of considerable interest have lately been read before the New York Neurological Society. The first, reported in the *Medical News* of Jan. 12th by Drs. Holt and Herter, was a case of "Rapid Gliosis of the Spinal Cord." The patient was a child aged one year with a good family history, in whom, three months before coming under observation, a weakness was noticed in the right arm and hand, and the head began to droop forward. The motor paralysis in the right arm gradually increased, and finally there was complete loss of power in both arms and in the shoulder muscles, with atrophy. The muscles of the neck were exceedingly rigid and the head was carried stiffly slightly in advance of the normal position, with the face looking directly forwards. There seemed to be some loss of power in the legs. The knee-jerks were exaggerated. Ankle-clonus was present. There was considerable dyspnoea. The temperature showed irregular daily variations ranging from 100° to 105° F., and even higher. There was occasional vomiting. The pupils were equal, normal in size, and responsive to light. There was partial analgesia of the body below the arms. After the lapse of a month slight strabismus was noticed, and the head was rolled continuously from side to side. At times there was marked cyanosis, the respiration ranging from 32 to 52 per minute; the temperature rose to 106° and death took place. Upon post-mortem examination a greyish projecting mass was found occupying almost the entire right side of the medulla and a large portion of the left side. The medulla was considerably enlarged from before backwards, and from side to side. There was also considerable enlargement of the cord as far down as the eighth cervical segment, and from this point to the sixth dorsal there was some enlargement; below this the cord appeared to be

normal. Histological examination revealed a typical gliomatous structure, which involved to a greater or less extent the medulla and almost the entire cord. The second case was recorded by Drs. van Gilson and Fisher (*Medical News*, Jan. 19th). The patient was a man aged sixty-one years, with a negative family history, but a personal history of syphilis at the age of twenty-five, who for about six months before coming under observation had suffered from pronounced dizziness on standing erect. There was diplopia of three years' duration. For eight months there had been retention of urine and frequent severe attacks of diarrhoea. There was no weakness or ataxia of the upper extremities, but progressive loss of power in the lower of about one year's standing. There was a feeling of numbness from the waist downwards. Coördination in the lower extremities was impaired, the patient being unable to stand erect and falling to the floor unless supported. The gait was markedly ataxic. There was a gradual loss of sensation to touch and pain in both feet. The knee-jerk on the right side was absent, but was present on the left. Finally a large bed sore developed over the sacrum, and death soon followed. The post-mortem examination disclosed an extra-medullary tumour of the spinal cord, measuring a little more than an inch in its broadest part and extending from a little above the second lumbar segment downwards into the cauda equina, a distance of nearly three inches. It rested on the ventral surface of the cord and at about the level of the fourth lumbar segment. There was some distortion of the cord, especially at the fifth lumbar segment, both the anterior and posterior horns being compressed into a thin mass. The neoplasm proved to be a gliosarcoma.

THE WATER CARRIAGE OF SEWAGE.

MR. CHARLES TATTERSALL, the medical officer of health of Oldham, has just presented to his sanitary authority a concise report upon the above subject, a report much on the same lines as that made recently to the Nottingham sanitary authority by Dr. Boobyer, which we noticed in a recent issue.¹ The conclusions, too, at which Mr. Tattersall arrives are, in the main, similar to Dr. Boobyer's. Returns as to the methods of excrement disposal were obtained from thirty-eight large towns, and of this number six have always had the water carriage system, six have converted their systems to water carriage, sixteen are in process of converting their systems, and two are considering the expediency of so doing; in other words, thirty out of the thirty-eight towns reported upon have adopted or are adopting the water carriage system. In only four of the towns where conversion is going on does the corporation afford financial assistance to the owners of houses. In Hanley £1 is allowed for each pail converted into a water closet; at Accrington £2, and at Sheffield two-thirds of the cost of conversion; at Ashton-under-Lyne allowance is in some instances made for the cost of the closet on new property. Waste-water closets have been introduced in varying degree in twenty of the thirty-eight towns referred to. Mr. Tattersall summarises for the sanitary committee the pros and cons in regard to the ordinary type of water-closet, trough closets, and waste-water closets. In discussing the latter he goes fully into all the arguments for and against their use, but he is obviously convinced, both by the evidence adduced and by his own observations, that waste-water closets are under certain conditions of high value. He finally expresses his opinion that the adoption of water carriage for sewage would be found advantageous to the public health and economical to the sanitary authority. The best results would, Mr. Tattersall thinks, be obtained by

(1) the conversion of stacks of privies into troughs with automatic flush tanks, under the control of the corporation; (2) the conversion of existing privies situated in yards attached to single dwellings into waste-water closets of some approved type; and (3) the provision on new property of ordinary water-closets or waste-water closets, preferably the former. We notice that, like Dr. Boobyer, Mr. Tattersall refrains from specifically recommending any particular make of apparatus. There is no doubt that, as Dr. Boobyer remarks, it is best to simply retain the right of vetoing any unsuitable pattern.

CHOLERA IN CONSTANTINOPLE.

THE Turkish papers of the 5th inst. officially announce the outbreak of cholera in Constantinople. According to the official lists three cases were reported between Jan. 31st and the 2nd inst., of which one occurred among the infantry. On the 2nd and 3rd inst. there were six cases, of which two occurred among the troops. Only three cases have been fatal. An official communication was published in Constantinople on the 6th, containing instructions with regard to the prophylactic measures to be taken. A telegram from Athens informs us that on learning of the outbreak of cholera in Constantinople a quarantine of five days was decreed by the Greek Government against arrivals from the Turkish capital, and we understand that a similar regulation is in force at Madrid.

THE NEED OF REFORM IN WORKHOUSE ADMINISTRATION.

A STRIKING instance of the need of reform in workhouse administration as affecting the sick comes from the north of Sussex. In his half-yearly report to the guardians the medical officer enumerated many improvements which were required in the management of the house, and particularly as regarded the infirmary: No real nursing in the proper acceptance of the term and no night nursing, the insufficiency of surgical appliances, and the shortcomings of the bathing accommodation, were only a few of the faults referred to. But perhaps even worse than these was the mention by a member of the board that he found one inmate dying in bed, and that the other men in the ward were allowed to sit in their chairs as witnesses of the scene. These matters are to receive the immediate consideration of the guardians, and it would seem that as far as this particular workhouse is concerned the Local Government Board circular has come very opportunely. One by one boards of guardians in Sussex are supplying an efficient staff of nurses in the infirmaries, and we venture to hope that instances such as those just mentioned are of the past and not of the future.

GERMAN CONGRESS OF INTERNAL MEDICINE

THE Congress for Internal Medicine, which mostly assembles at Wiesbaden, is to hold its thirteenth annual meeting at Munich from April 2nd to 5th, under the presidency of Professor von Ziemssen. The general sittings on each of the three days—Tuesday, the 2nd, Wednesday, the 3rd, and Thursday, the 4th—will be given up, as usual, to predetermined subjects. This year the subjects selected are: 1. Ferruginous Therapeutics; to be opened by Professor Quincke of Kiel and Professor Bunge of Basle. 2. The Results of the Treatment of Diphtheria by Curative Serum; to be opened by Professor Heubner of Berlin. 3. The Pathology and Treatment of the Forms of Typhlitis; to be opened by Dr. Sahli of Berne and Dr. Helferich of Greifswald. Several papers of interest are already announced. Amongst them may be mentioned: Dr. A. Baginsky (Berlin), the Pathogenic Effects associated with the Serum Treatment of Diphtheria, an important question for which there should be much material now available; Dr. M. Litten (Berlin) on the Physiological and Clinical Significance of the Diaphragm Sign

¹ THE LANCET, Jan. 19th, 1895.

(Zwerchfellphänomen) with Demonstrations, a subject of some clinical interest which, we believe, was first drawn attention to last year by Dr. Litten at the Berlin Medical Society; Dr. T. Rumpf (Hamburg) on the Treatment of Typhus Fever with Dead Cultures of the Bacillus *Pyocyaneus*—we presume enteric fever (typhus abdominalis) is meant here; Dr. E. Sonnenburg (Berlin), Appendicitis Simplex; Dr. Semmola (Naples) on the Toxicity of Urine in its degree and “nosographisme” as a Factor in Diagnosis and Prognosis in Disease generally, and especially in Acute Infectious Diseases; Dr. O. Bollinger (Munich), the Causes of Death in Pneumonia; Dr. Smith (Schloss Marbach) on Alcohol in Therapeutics; Dr. Mordhorst (Wiesbaden), contribution to the Chemistry of Uric Acid and the Origin of Attacks of Gout; and Dr. Seifert (Würzburg) on Bronchial Stenosis. The permanent secretary of the Congress is Dr. Emil Pfeiffer of Wiesbaden, and the executive committee consists of Drs. Bäumler, Mosler, Schmidt, and Quinke.

DIPHTHERIA IN LONDON.

THE deaths from diphtheria in London last week showed further fluctuation, having declined from 45 to 34, though still 2 above the corrected average. Of the total 26 were in children aged between one and five years; and 4 each belonged to Poplar, Battersea, and Greenwich, and 3 each to St. Pancras, L'mehouse, and Camberwell sanitary areas. The per case mortality last week was as high as 31.5. The admissions to hospital numbered 49, against 74, 72, and 76 in the preceding three weeks, but were less than half the total fresh cases heard of, and Saturday night last found just 500 patients still under treatment. In Greater London also the deaths from diphtheria showed notable decline, 7 only being recorded—namely, 3 in West Ham and 2 each in Edmonton and Bromley districts.

A RECEPTION HOUSE FOR ST. GEORGE-THE-MARTYR, SOUTHWARK.

THE duty imposed upon metropolitan sanitary authorities by Section 60 of the Public Health (London) Act, 1891, of providing temporary shelter for families whose houses are being disinfected is one of the most important in the Act, and we imagine that medical officers of health under the Public Health Act, 1875, must often regret that a similar duty is not incumbent upon provincial sanitary authorities. Certainly all who have had experience of sanitary administration must have over and over again had reason to deplore their utter helplessness in dealing effectually with tenements of one or two rooms where cases of infectious diseases have occurred. There is, we are glad to see, a good prospect of the parish of St. George-the-Martyr soon adding a shelter to its public health defences, and the district medical officer of health, in recent report on the proposed shelter, puts the facts in regard to the matter in a very lucid manner before the sanitary authority. In illustration of the impossibility of efficient disinfection in many cases he points out that between June 1st, 1892, and Dec. 31st, 1894, there were 610 persons occupying infected tenements of one room, 1357 of two rooms, and 461 of three rooms; and in all these cases disinfection could not be properly carried out. In other words, within the last two years and a half no less than 526 infected tenements, occupied by 2428 persons, have not been properly disinfected. It would be of much interest to ascertain whether in many of these cases secondary attacks of infectious disease have occurred after the return of patients from hospital, as it would seem to be by no means unlikely that on the return of a patient infected clothing and articles might be again brought into use and exposed. Dr. F. J. Waldo, in urging the claims of such a shelter, refers to its economical aspects, and he thinks that such provision will ultimately lower the rates instead of raising them by pro-

viding fewer inmates for the workhouses and fever hospitals. The plea of poverty cannot, Dr. Waldo contends, be any longer urged by the poorer sanitary districts of the metropolis as an excuse for inaction in carrying out the provisions of the Public Health (London) Act, 1891, inasmuch as the operations of the Equalisation of Rates Act, 1894, will very materially assist those districts which hitherto have had difficulty in the matter of expenditure.

THE REMOVAL OF BONE IN THE MICRO-CEPHALIC SKULL.

IN a paper on the microcephalic or idiot skull and the macrocephalic or hydrocephalic skull, contained in the recent number of the *Journal of Anatomy and Physiology*, Sir George Humphry remarks that in none of the nineteen specimens of idiot skulls of which details are given is there anything to suggest that the deficiency in the development of the skull was the leading feature in the deformity and that the smallness of the bony cerebral envelope exerted a compressing or dwarfing influence upon the brain, or anything to give encouragement to the practice lately adopted in some instances of removal of a part of the bony case, with the idea of affording more space and freedom for the growth of the brain. In these, as in other instances of man and the lower animals, the brain growth is the determining factor, and the skull grows upon and accommodates itself to the brain whether the latter be large or small. This view is corroborated by the fact that, in the brains taken from the two idiot skulls in St. Bartholomew's Hospital, as well as in other instances, as those shown by Professor Cunningham, the convolutions of the brain give no indications of compression, but are free, outstanding, and separated by well-marked sulci.

“ANAGLYPHS.”

SEVERAL remarkable pictures termed “anaglyphs” have been submitted to us. They are printed in two colours, red and blue, the two images of the same object overlapping each other laterally to about three-sixteenths or one-quarter of an inch, and vertically either to about one-sixteenth of an inch or scarcely perceptibly. The pictures are looked at through a binocular eyeglass, one of the glasses being red, the other of a peculiar deep violet blue or blue purple. The overlapping of the images gives to the pictures when examined with the naked eye, a confused, blotchy appearance; but when looked at through the glasses the blotchiness disappears, and instead of it, with a clear outline, the most perfect stereoscopic effect is produced. The reason of this appears to be that the prevailing tone of the pictures is red, whilst the chief outlines are strongly defined in white. These are, of course, seen through the red glass. The blue outline is much fainter, and hence, although it ought to be seen through the blue glass, becomes imperceptible owing to the deep tone of this glass. Only the stronger white and dark outlines can be easily seen through the blue glass. The main outlines, as well as the details, are seen essentially through the red glass, but by skilfully shading the red lines with blue an effect of distance is secured, and the stereoscopic effect is thus in part produced. The best of the pictures we have examined is that of the “Salle de Sculpture—Musée du Luxembourg,” which has the curious effect when inverted of bringing the background forwards and throwing the figures back.

CEREBRAL TUMOUR OF ACUTE ONSET.

AT a meeting of the Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten Dr. Bruns recently showed a cystic angioma of the brain which had been removed from the left-leg centre in the posterior central convolution, close to the middle line. He had at first, on account of the absence of

the classical symptoms of tumour and on account of the fact that the onset of symptoms had been acute, thought that the cause of the symptoms was encephalitis rather than tumour; but as no improvement took place an operation was decided upon. The cortex of the central convolutions was healthy. The foot centre—there had been cramps starting in the right foot—was then determined electrically, and an incision made. A tumour was at once evident, and this was removed, together with some brain substance. In the evening and on the next day there was no increase in weakness or impairment of ordinary or of muscle sensibility. The patient unfortunately died from septic meningitis, and the necropsy showed that the rest of the brain was quite healthy. The interesting points in the case are that it was one of tumour without any of the usual symptoms and with quite a sudden onset. The condition after operation, in which presumably there had been removal of a certain part of the cortex, is also interesting because of the absence of any sensory disturbance as a result of this.

TRIONAL.

AN abstract of an important contribution on the action of trional by Dr. K. Rychlinski appears in a recent number of the *Neurologisches Centralblatt*. Fourteen cases of sleeplessness due to various causes, chiefly psychical conditions, were treated with this drug, and at different times sulphonal, chloral hydrate, and duboisin were substituted, and their effect compared with that of trional. He found that in certain cases of long-continued insomnia trional in doses of from one-half to one gramme was efficacious without producing any headache; whereas in the same cases ordinary doses of chloral hydrate or sulphonal were inefficacious and larger doses only procured a short sleep. In certain cases the dose was limited to one gramme, but in only two of the fourteen cases were large doses of four grammes necessary in order to procure unbroken sleep for eight or ten hours, and in those cases chloral hydrate and sulphonal were more efficacious in smaller doses of two or three grammes. Trional in hot milk or tea procured eight hours' sleep usually within half an hour. Sometimes, however, its effect was not produced until two hours after administration. Several times dose took effect also on the second night, but only when a large dose was administered. In a case of mitral regurgitation there was no evidence of any bad effect produced on the heart, and this was confirmed by sphygmographic tracings. Although further experience of this drug is still requisite it cannot be denied that experiences such as those recorded in this paper suggest that in trional we may find a safe, efficient, and reliable hypnotic.

MEDICAL WITNESS AND JUDGE.

ON Feb. 8th, at the Winchester Assize, before Mr. Justice Cave, a labourer named Cousins was indicted with having attempted to carnally know a girl aged ten years. The jury found the prisoner guilty, and he was sentenced to eighteen months' hard labour. The case is of interest to the medical profession on account of the severe strictures passed on the medical testimony by the judge. Dr. L. Maybury and Mr. Colt gave it as their opinion that "there was no evidence that penetration had occurred," whereupon Mr. Justice Cave remarked that the witnesses were attempting to decide the case and so usurping the province of the jury. It seems to us that the conflict between the judge and the medical witnesses unfortunately arose through the latter—no doubt unintentionally—stating there was no evidence of penetration. What they intended to say was that the evidence as obtained from an examination of the prosecutrix was not conclusive, since the hymen was not ruptured and there was no laceration or bruising of the parts. At the same time there was presumptive evidence of the act, for the vulva were inflamed

and there was a purulent discharge, and on the shirt of the prisoner the microscope revealed semen, pus, and epithelial scales. We regret that the learned judge did not take a more generous view of the medical evidence, instead of practically ascribing an interested motive. Nevertheless, the incident should form a valuable object-lesson of the importance, especially in criminal cases, of using correct phrases and of drawing logical inferences.

PSEUDO-BULBAR PARALYSIS.

DR. SACAZE of Montpellier records in the *Revue de Médecine* the case of a patient who in consequence of two separate attacks suffered from left hemiplegia, hemi-chorea, aphasia, and aphonia, with great difficulty in swallowing, and paresis of the tongue and of the soft palate. The necropsy revealed areas of softening in both hemispheres, the internal capsule, the lenticular nuclei, and the caudate nuclei being destroyed on both sides. The pons and medulla, apart from commencing secondary degeneration of the pyramids, were quite normal. This case illustrates the fact, which has now frequently been pointed out, especially by Dr. Barlow and Drs. Hughlings Jackson and James Taylor in this country, that a lesion on each side of the cerebrum gives rise to symptoms which so closely resemble those of bulbar paralysis as to be clinically almost indistinguishable from these. The reason of this seems to be that whereas a unilateral lesion in the brain gives rise to only transitory and slight affection of the bilaterally associated movements, the occurrence of a second lesion on the opposite side of the brain so weakens those movements as to cause very distinct impairment of the oesophageal, laryngeal, palatal, and tongue movements, thus giving rise to symptoms which closely simulate those of bulbar paralysis.

THE DIFFUSION OF SMALL-POX.

THE new cases of small-pox notified in London last week were 11 in number, and the admissions to institutions of the Metropolitan Asylums Board were 18, against 6, 8, and 21 in the preceding three weeks respectively. The disease continues to prevail in the parish of Marylebone, to which belonged the 3 deaths from small-pox registered in London during the week. On Saturday last there remained 56 cases of small-pox under treatment, an increase of 5 on the total on the preceding Saturday. Last week witnessed an increase of fresh cases in West Ham, where over 6 attacks were chronicled. One or two cases came to light in other suburban districts. A dozen attacks at Birmingham show that the disease is getting under control there; and, moreover, no death was registered. Generally the midland districts were free, as compared with recent weeks. In Scotland small-pox continues to spread in Glasgow. A death occurred on Wednesday of last week in the person of a sailor from London, and 4 fresh cases came to light, followed by 2 more the next day; when also two persons were dismissed from the infirmary, having been admitted under a mistaken diagnosis. The total cases in the city were then 39 in number. In Edinburgh there were 25 patients known to be under treatment in the middle of last week, 7 cases having been notified since Jan. 27th. In Govan and Auchterarder stray cases have recently been discovered. In Dublin in the week ended the 2nd inst. 69 cases were admitted to hospital, 64 discharges took place, and 171 patients were left under treatment, 131 additional convalescent cases being under isolation at Killmainham. Five deaths occurred, including 2 in vaccinated persons (aged nine and fifty years respectively) and 2 in unvaccinated persons, both under ten years of age. A total of 108 deaths had been reached up to the date in question. Much good will, it is hoped, be effected by the very stringent order of Archbishop Walsh as to the disabilities of persons in the

matters of school attendance and confirmation if not vaccinated or revaccinated as their age may require. In December no fewer than 127 streets were invaded by small-pox—30 on the north side and 97 on the south side of the Liffey. The admissions to hospital were 262 in number, the notified cases 210, and 26 deaths were registered. All possible steps are being taken to prevent the spread of the disease, and 56 persons were at the close of the year occupied in the removal of patients and in the necessary processes of disinfection. In the fourth quarter of 1894 the admissions to hospital numbered 466 and the deaths registered 51, including 27 unvaccinated sufferers under five years of age.

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THE ROWLANDSON EXHIBITION.

the comic portrait painter of the eighteenth century whom he intended to bring into ridicule as the victims of acromegaly? Acromegaly is still of sufficiently frequent occurrence, yet to the eyes of Rowlandson, Bunbury, may mankind could best be brought into contempt by painting them with the *facies* of the disease as they had derived it from their imagination. The immensely lengthened, the projection of the under jaw and lip, the low forehead, the sunken eyes, the large ears, the swollen face are there, and placed on paper a hundred years before the pathological condition was known to our profession. And this becomes more astonishing when we remember that the artists of those days were not idealists, but that without any modern pretensions to realism they painted what they thought they saw. And that they really saw the human face, whether wrung into distortion for purposes of caricature or graciously smoothed out for purposes of flattery, to be different from what we see it, is proved to our minds by the fact that Reynolds's and Gainsborough's courtly creations have the same similarity to each other that we have described as being present in the work of the caricaturists. Except to a connoisseur, who may be guided by some trick in brush-work, it is often difficult to see the difference between the Duchess of Dashire with hoop by Reynolds and the Marchioness of Blankaster with dog by Gainsborough. Those interested in Rowlandson's work had an excellent opportunity recently of seeing a collection of his drawings at the Fine Art Society in Bond-street.

Famous as a caricaturist, he was there seen in his less known character of a graceful portrait painter, but the characteristic countenances were not without numerous examples.

PYLOROPLASTY.

IN THE LANCET of July 9th, 1892, Dr. Limont and Mr. Page published an account of the first case of pyloroplasty performed in this country. In the following May Mr. Pearce Gould¹ published also in this journal an account of a case in which he had repeated Mikulicz's operation and entered more fully into its details and advantages. He also collected a series of twenty-two other cases by various American and Continental surgeons. In a recent *brochure* Dr. Corazza of Verona records a successful case of his own, and adds a series of twenty-seven other cases by Continental surgeons. Together with Mr. Miller's case recorded in THE LANCET of Dec. 1st, 1894, and Mr. Morison's case published in our columns to-day, we obtain a total of fifty-three cases in which pyloroplasty has been carried out for pyloric stenosis. Of these, six have proved fatal—two from collapse, three from sepsis, and one from internal hæmorrhage consecutive to the operation. These figures show an exceedingly satisfactory result, and there is reason to look for a still further improvement if the patients are submitted to operation at an earlier period of the affection and with more perfect observance of complete asepsis. The restoration of the function of the stomach is a different matter from mere recovery from the operation, and the published reports of the cases are not in all cases complete in this respect, nor have they been made sufficiently long after the operation to permit of a full statement on this head. But here, too, early operation is likely to yield far better results than when the disease has been allowed to progress almost to a lethal point before operation is resorted to.

DIPHTHERIA AT MITCHAM.

DR. MAIR, the medical officer of health to the Croydon Rural District Council, has presented a report to his health committee upon the prevalence of diphtheria in Mitcham during 1894, which contains some instructive facts. Out of a total of 64 cases notified in the whole district during the year, no fewer than 53 occurred in Mitcham and the adjoining part of Merton, the number of houses invaded being respectively thirty-seven and twenty-seven for the same areas. Dr. Mair very properly points to the disparity between invaded households and cases as a pressing need for an isolation hospital. As regards the disproportionate incidence in Mitcham and its vicinity the facts point clearly to school infection, children attending one particular school in the district from twenty-one out of the twenty-seven invaded houses, yet in eleven of these the child first attacked did not attend school. Dr. Mair thinks, therefore, that a wider explanation is to be found in the drainage conditions, not only of the school, but of the whole of the affected portion of Mitcham. Owing to the defects in gradients and connexions there is an actual influx of sewage from the main sewer into the drains during flood times. His advice that everything should be done to remedy this "heading back" of the sewage at all costs is therefore thoroughly warranted; and in further proof of the unhealthiness of the area it may be remarked that an inspection of 318 children attending the school in question resulted in the discovery that 243, or nearly 77 per cent., had "unhealthy throats." Chronic tonsillitis and a certain proportion of granular throats were the prevailing conditions. It is not surprising then that diphtheria should have found a footing

¹ Jahrbuch für Kinderheilkunde, 1894. Abstract in Fortschritte der Medizin, 1895, No. 3.

¹ THE LANCET, May 20th, 1893.

here—the only wonder is that on such a fertile soil and in such an environment it did not make more serious ravages. Croydon has, as we know, generally enjoyed the reputation of being particularly careful in its sanitary affairs. Its rural sanitary authority must bestir itself if it is not desirous of losing this distinction, for a clearer case of defective sanitation of a district could not be made out.

THE USE AND ABUSE OF INFANT INSURANCE.

It is not to be expected that a practice so common among the artisan classes as infant insurance should fail to excite some difference of opinion. We are, therefore, prepared to find that our own utterances on this subject are contrary to the views of certain critics. Two of our assertions¹ in particular have been called in question. One is that which relates to the cost of burial as being within the competence of almost all thrifty working people; the other notices a possibly suggestive coincidence in the fact that among 4629 children recently subjected to cruel treatment 1237 were insured. It must not be supposed that in these statements we desire to associate with the principle of such insurances any necessarily pernicious tendency. But, on the other hand, we are by no means sure that they are as essential to the domestic economy of the poor as some have asserted, or so fully justified by their effects as is desirable in the public interest. Homely thrift may not always meet the demands of illness or death, although we believe it can do so much more often than is generally known. Where it cannot, let it be aided by any prudent method which is safe and just, but this, in order to attain its purpose, must, in our view, be regulated with a view to the actual cost of a poor child's funeral, and not by such lavish estimates as ignore that modest estimate; and it will be a matter well worthy of the consideration of the Legislature, when the question of children's insurance again occupies the attention of "the House," whether the limit at present placed by law upon such transactions should not be cut down to a smaller figure than that at which it at present stands.

CHANGES IN THE LIVER IN TYPHOID FEVER.

VERY few observers have drawn attention to the pathological changes occurring in the liver during typhoid fever; nevertheless, marked lesions are frequently found after death. A paper by Dr. J. A. Amyot, detailing the histological appearances thus exhibited, appears in the *Canadian Practitioner* for January of this year. The conclusions arrived at were based upon the examination of the liver in seven cases. Little nodules were found in all the specimens, in some in small numbers and in others in comparatively great numbers. They varied from about one-fortieth to one-fifteenth of the size of the lobules, and were distributed irregularly. Dr. Amyot divided the nodules into two classes, the lymphoid and the necrotic. Neither of them seemed to be of new growth. At first they appeared to be alike, but afterwards became invaded to a greater or lesser extent by lymphoid cells. The nodules were made up of masses of unstained granular protoplasm. In some of these masses the nuclei were still visible, though unstained. Some of the nodules were broken up into several fragments, which stained diffusely. The capillaries of the nodules were filled with granular material. Lymphoid cells were found chiefly in the capillaries, but a few were seen between the hepatic cells. The so-called lymphoid nodules differed from this only in the difficulty with which the formed elements were seen and on account of the great number of lymphoid cells present. They were sharply cut off from the surrounding tissue. Besides these nodules there were present areas of capillary

dilatation, with only the nuclei remaining in the hepatic cells. These areas were of varying size and location, but were generally larger than the nodules before described; they were as a rule circular in form and were not so sharply marked off from the surrounding tissue as the necrotic nodules; they were present in four out of the seven specimens. There was no pigmentation. The other changes in these specimens were nutmeg change, atrophy and pigmentation of the hepatic cells, and dilatation of the capillaries in the intra-lobular vein zone. Fatty degeneration of the cells in the portal vein zone was present in two of the specimens. Beyond some excess of granulation there was no change in the protoplasm of the cells. Dr. Amyot, quoting Dr. Osler, remarks that no definite relation between the typhoid bacilli and the nodules above described has so far been made out.

THE students of King's College have arranged for a concert to be given at the College on Tuesday next, under the patronage of H.R.H. the Duke of Cambridge, the Duke of Westminster, the Bishop of London, the Hon. W. F. D. Smith, and Dr. Wace, on behalf of the funds of King's College Hospital. Mrs. Hutchinson, Miss Gambogi, Madame Haas, Miss Kendall, Madame Anna Lang, Herr von Dulong, Mr. Rumford, Mr. Wolseley, and Mr. Sewell will give their services.

LORD REAY, G.C.S.I., Vice-President of University College, London, will preside at a dinner at the Criterion Restaurant on Wednesday, March 13th, at which Sir John Erichsen, Bart., F.R.S., Sir J. Russell Reynolds, Bart., F.R.S., and Sir John Williams, Bart., M.D., are to be entertained by their colleagues, friends, and pupils. The honorary secretaries, from whom tickets and all information may be obtained, are Dr. Poore, 30, Wimpole-street, W., and Mr. W. A. Meredith, 21, Manchester-square, W.

Pharmacology and Therapeutics.

CHLORAL HYDRATE AND IRON.

SOME recent observations by Mr. Alexander Gunn¹ show that under some circumstances crystals of chloral hydrate are subject to a peculiar yellow discolouration. This affects only the surface of the crystals and seems to be due to the accidental presence of a particle of iron in the stock bottle and to the liberation of free hydrochloric acid. Similar discolouration was easily produced by leaving some ordinary white crystals of chloral hydrate in a test-tube for a week together with a minute fragment of iron.

IODINE ADMINISTERED BY INJECTION.

The injection of a solution of iodine subcutaneously, or into the substance of a muscle, has recently been practised by some Italian surgeons for the treatment of several classes of diseased conditions with apparently much success.² Dr. F. Durante, Clinical Professor of Surgery in Rome, has employed these injections in pulmonary and arthritic affections of a tuberculous character, and more recently Dr. Mennella, a military surgeon, has extended the same treatment to joint affections of a non-tuberculous nature. In two cases of hydrarthrosis of the knee of traumatic origin, where ice, tincture of iodine, blisters, and fixation, together with large doses of iodide of potassium, had been tried for a couple of months without result, peri-articular hypodermic injections of iodine caused the fluid to rapidly disappear. Again, in glandular enlargements both in the neck and in the groin the same treatment gave excellent results. Dr. Mennella subsequently tried iodine injections in cases of syphilitic and grave malarial cachexia, and in anæmia and hydremia in patients recovering from exhausting diseases, also in chloro-anæmia in young girls, and in rickets in

¹ Vide THE LANCET, Jan. 19th, 1895.

² Pharmaceutical Journal, No. 1278, p. 533.
³ La Semaine Médicale, Dec. 26th, 1894.

children. In all these good effects were observed. He then employed the treatment in a tedious case of bronchopneumonia where the cough had persisted for a long time, with insufficient respiratory sounds in the left apex. After a fortnight the patient was able to resume his work. The liquid employed by Dr. Mennella is simply a 1 per cent. solution of metallic iodine in boiled distilled water containing just sufficient iodide of potassium to dissolve the iodine. Of this, fifteen minims are injected once daily. In the case of very anæmic subjects fifteen minims of a 5 or 10 per cent. solution of ammonio citrate of iron may also be injected, either at the same time as the iodine or alternating with it. As a rule, there is but little irritation at the point of puncture, but occasionally the injections have to be suspended for two or three days because of the inflammation produced. Of course, iodism may be produced, but when this occurs it is less severe than when caused by the internal administration of iodide of potassium. The idea of injecting iodine in some of the above classes of cases is not new, though the exact form of solution may be. Mr. Messenger Bradley³ published an account of some cases of glandular tumours which he had successfully treated by injecting tincture of iodine into the substance of the tumour; and previously Dr. Luton⁴ had with excellent results injected a solution of iodic acid in goitre, in indolent adenopathic swellings of the cervical and submaxillary regions, and in a case of osteo-periostitis of a phalanx of the hand. This plan was also adopted in lymphatic tumours with satisfactory results by Dr. Hardman⁵ of Blackpool.

GUAIACOL APPLICATIONS.

In the course of a discussion in the Paris Société de Thérapie on Dec. 12th, 1894,⁶ on the external application of guaiacol in pleuritic effusions and scarlatinal nephritis M. Miron Sigalea, who was one of the originators of this method of treatment, stated that he had never observed any lowering of the temperature, rendering collapse imminent, as reported by some physicians. MM. Grellety and Ferrand, however, declared that caution was very necessary lest a collapsed condition be produced, at all events in patients already very weak and low from the disease. On this subject M. Catillon's warning as to the importance of employing pure guaiacol, which has the property of being completely soluble in glycerine, should be useful. He remarked that whenever a non-crystalline guaiacol is employed no certainty can be felt that it is pure.

THE LANCET

Special Analytical Sanitary Commission

ON THE

MANUFACTURE AND CHARACTERISTICS OF MUNICH LAGER BEER.

GERMAN BEER, more especially the Munich beer, is undoubtedly becoming a very popular beverage in this country. It is not "heady," and is both light and very cool. Those who cannot do sedentary or clerical work after taking the strong and heavy English ales and stout are not inconvenienced by drinking lager beer. It is in every respect an excellent drink for the advocates of true temperance—that is to say, for those who are opposed alike to the intemperance of excessive drinking and the intemperance of total abstinence. German beer ranks side by side with light natural wines, which French legislators now qualify as hygienic drinks. Of all German beers, that which is the most renowned and the most extensively drunk in all parts of the world is undoubtedly the Munich beer. For this reason we have thought it useful to institute a special inquiry with a view of ascertaining how far this preference was justified. It is not to-day, but we might say from time immemorial, that Munich has been renowned for its beer. This reputation, so early acquired, may be due in a measure

to the severity of the Bavarian laws in respect to the making of beer. We find that an official publication dealing with "the common rules concerning the statutes and customs of the Principality of Upper Bavaria and of Lower Bavaria," and bearing the date of 1516, contains the following enactment: "Wheresoever in our towns, markets, and rural districts, it is forbidden to employ other material beyond barley, hops, and water for the making of beer." This law was renewed in an "ordinance of beer," dated 1616. Finally, the law is reaffirmed by an ordinance of April 25th, 1811, and by the law of Nov. 10th, 1861.

Apart from the laws restricting brewers to the use of only malt, hops, and water, there is another legislative reason why Munich beer should be of good quality. A tax has been imposed on malt since the year 1543. Now in the breweries there is a special apparatus, which is sealed and kept under control by Excise officers. The malt passes through a sort of revolving drum; each revolution is recorded mechanically, like the revolutions of a steam engine, and thus a correct account of the amount of malt that has gone through is obtained. The tax varies according to the quality of the barley employed; therefore there is nothing to be gained, so far as the tax is concerned, by using inferior qualities of barley. This malt tax being very high, it pays best to have only the best quality of barley. Then there is the law of May 16th, 1868, which in Article 7, after again repeating that beer shall be made only of hops, malt, and water, adds that it is especially forbidden to use barley that has not been converted into malt, or that is mixed, partly barley, partly malt. Thus the law has brought about the best fundamental conditions for the production of a really wholesome beer; for, not only must beer be made exclusively of malt, hops, and water, but the excellent quality of the malt is ensured. Now that beer is manufactured with the aid of complicated machinery and in enormous quantities, the great object of brewers is to ensure uniformity of quality. For this the same water and the same barley are necessary. One reason of the superiority of Munich beer is the great skill with which the barley is selected. The barley must have a definite amount of albuminous substances so as to produce a good fermentation, and it is not the barleys with the best exteriors that give the best results. On this point it is difficult to lay down a fixed rule, and where only a small quantity of beer is brewed it is possible to watch the effects and modify the procedure accordingly; but when a large quantity of beer is brewed it is more practical to use a barley of such quality as will give a stable result. Better barleys are therefore now employed. It is, however, especially in the details of manufacture that the explanation of the excellence of Munich beer will be found. Therefore, to understand the subject it is necessary to visit throughout a leading brewery. There are thirty breweries at Munich, and as it was impossible to visit all these vast establishments, a selection had to be made, and the directors of the Löwenbräu, which stands first of the large breweries, gave every possible facility for the complete inspection of all the processes they employed in the manufacture of the most popular of German beers.

The process of brewing differs greatly from that generally practised in England, and, as will be seen, it is well calculated to produce a very wholesome beer. It is reckoned that one hectolitre of malt will give a little more than two hectolitres of beer. Water, which weighs four times more than the malt, is first mixed with the malt when cold, and slowly warmed to 12° or 14° R. (60° F.). This done, hot water is pumped on to the mixture till it attains a temperature of 28° R., care being taken to stir actively the whole time, and thus the malt is well distributed throughout the liquid. Of course, this is all done by machinery. Only a portion of this liquid is brought over into a second boiler, and there it is heated to boiling point—that is, 80° R. (212° F.). What remained in the first boiler is no longer stirred, but the portion which has been boiled—it now takes the name of mash—is sent back and mixed with the stagnant part till the two together attain a temperature of 38° R. (120° F.). The same process is again repeated in all three times, till the temperature of the latter is raised to 58° or 60° R. (170° F.). The liquid resulting from this slow heating and mixture of water and malt is what is called wort. It is now placed in a tank, which has a sieve filter at the bottom to retain the malt, while the clear liquid passes to the space underneath. When this filtered liquid, by

³ THE LANCET, Sept. 4th, 1875.

⁴ THE LANCET, Sept. 27th, 1875.

⁵ THE LANCET, Oct. 9th, 1875.

⁶ La Semaine Médicale, Dec. 26th, 1894.

the opening of a tap, is allowed to pass away, hot water is poured on the grain that remains above the sieve. This water draws the extract of the grain, and forms at first a very strong wort, which soon gets weaker and weaker. It is so contrived that, when all the worts, weak and strong, are mixed together, the general average of the liquid shall contain 14 per cent. of extract. The wort, after it has been boiled with the hops and filtered, is pumped to the topmost floor of the brewery, where it spreads out in twelve large, shallow, tray-shaped tank-coolers. To further cool the wort it travels down to the cellars through double pipes. The water used for cooling of course soon gets warm, but it is cooled again by being thrown over a large quantity of pipes filled with ammonia. Also, through this sort of cascade four ventilators propel a strong current of air. The whole of the process up to this point takes about twelve hours, and when once the wort has been cooled the fermentation may be allowed to begin.

The first fermentation takes place in large open vats, and lasts from ten to twelve days. It commences at a temperature of 5° R. (43° F.), and is allowed to reach a temperature of 8° R. (50° F.). At this point the heat is checked, and this is done by introducing into the vats tubes and hollow plates, inside which very cold water circulates. Also, the cellars in which the fermentation takes place are kept at a temperature that is only a degree or two above freezing point. When the fermentation is over the beer is at a temperature of 5° or 5½° R. It has then to be reduced to a temperature of 2° R. (36° F.), which is accomplished by passing it through cooling pipes. It may now be placed in casks in which the second fermentation is allowed to take place. For this purpose the bung is not inserted and the temperature of the cellar is not allowed to exceed 1° R. (34° F.). The second fermentation lasts six or more weeks. The rate of the second fermentation is modified according to whether the beer is wanted quickly or not. If the second fermentation has to be checked this is done by putting wood shavings into the cask, which collect the yeast, and, slowly sinking, carry it down to the bottom of the cask, and thus also the beer is clarified. When the second fermentation is finished care must be taken to fill the cask up to the brim so as to allow no place for the gathering of foam or air, and then the bung hole is closed. The beer must stand eight or ten days, so that enough carbonic acid may be generated to render it agreeable to the palate. But as the beer must not be closed up for longer than ten days in large casks, it is generally at this stage put into smaller casks, where it will keep from six to eight weeks in a cellar the temperature of which is not more than 7° R. (46° F.). Thus it comes to this, that the beer should be drunk within six weeks after it has gone through all these processes or put into bottles and "Pasteurised." What is known as the March beer, which is drunk in autumn, has 16 instead of 14 per cent. of extract before fermentation, and therefore keeps longer.

It will be seen from all these details that the great secret of Munich beer may be summed up in the one short word "ice." At the Löwenbräu Brewery there are enormous engines occupied exclusively in compressing air so as to produce cold. In the vaults of the cellars there are tubes in which salt solution reduced by refrigerators at some degrees below zero is made to circulate. The circulation of the air of the cellar, in consequence of the method of cooling, travels in a downward current, and the aqueous vapours it contains on entering condense on these intensely cold tubes. It forms clusters of ice and snow, and the air that enters the cellar is thus at once dried, purified, and cooled. This is the all-important secret for the production of really good nutritious beer, which nevertheless contains very little alcohol. Great cleanliness and a very cold temperature are the fundamental principles. Formerly it was impossible to make beer in the summer. Indeed, even now the smaller brewers only brew in winter, for it is only by the employment of expensive machinery that a cold temperature can be artificially created. On the other hand, a temperature which is the result of mechanical action can be much more precisely regulated. Therefore, both in winter and in summer we find in the cellars of the brewery exactly the same conditions, and thus a beer of fixed quality and excellence is regularly produced.

In respect to the bottled beer, the bottles, after careful cleansing, and after being filled with beer and corked down by a patent air-tight porcelain and rubber stopper, are "Pasteurised." This means the immersion of the bottles

into a tank of water into which steam is discharged so as to bring the heat up to about 160° F., at which temperature the germs of second fermentation are destroyed, and the beer can then be kept an indefinite time and exported even to the hottest climates. It has been thought that the peculiar flavour of Munich beer is due to a special race of yeast employed. No evidence on this head was forthcoming. Professor Louis Aubray, Director der Wissenschaftlichen Station für Brauerei in München, to whom we are indebted for much valuable information and assistance, stated that there were often several races in the yeast of one single brewery. One special sort of yeast might suit one brewery and not another, but there was apparently no connexion established between the flavour of the beer and the form of the yeast. There is, however, a great difference between yeast of high fermentation and rapid action employed in English breweries and the yeast of slow action utilised by the Bavarian brewers.

Such, briefly, are the main features of the manufacture of Munich beer, as it was shown and explained to us at the largest brewery on the Continent.

THE ANALYSIS OF MUNICH BEER AND THE EXAMINATION OF THE MATERIALS USED IN ITS MANUFACTURE.

We have seen what are the salient points of difference between the English and German or Bavarian mode of manufacturing beer, and we may refer to these points for an explanation of the qualities—especially in regard to flavour, alcoholic strength, and the quantity of malt and hop extractives—which sharply distinguish the one from the other. Thus the peculiar qualities—especially the flavour—of Munich beer are doubtless to be ascribed, in a large measure, first to the fermentation being very slow and carefully restricted to a low temperature. Secondly, the employment of sedimentary yeast tends to render the products of a simpler, and doubtless more wholesome, nature than those which are evolved when a more rapid fermentation is allowed to proceed, such as occurs when a comparatively high temperature and top-growing yeast are adopted. Again, the quantity of hops used in the brewing of Munich beer is much less than is employed in this country, while in Bohemia and Bavaria the hops are gathered earlier, so as to exclude much of the narcotic principles which longer growth fosters. Since, as is well known, the constituents of the hop are distinctly narcotic, this, in addition to the decreased percentage of spirit, would account for the comparative absence of drowsy symptoms when Munich beer is drunk, but which so frequently follow the consumption of English beers. A knowledge, then, of the processes which the Munich brewer employs throws considerable light upon the observation that while Munich beer serves admirably to quench thirst, yet it is devoid of those properties of English made beer which have given rise to the proverbial saying that "to drink beer is to think beer." We may next turn our attention to the information derived in the laboratory upon the composition and character of the various materials employed in the preparation of Munich beer and of the finished beer itself. To this end we have obtained samples direct from the Löwenbräu Brewery at Munich of the water, yeast, and malt, as well as the beer; they were all packed in ice in special conveyance on the journey, and were kept in ice until the precise moment of making the analysis. We may discuss these in the order in which they were examined.

It is well known that variations in the mineral constituents of the water used in brewing exert an important influence on the character of the finished beer. Hard and somewhat saline water, for instance, is preferred in the brewing of pale and bitter ales in this country, since it extracts less colouring matter and—what is more important—less albuminous matter or proteid from the malt. It is the latter substances which, when present in excess, are fatal to the prime condition of English brewed ales. Thus in England hard waters are in general use, as is illustrated in the following analysis of a water drawn from the well of a well-known Burton brewery.

Constituents.	Grains per gal.
Sodium chloride	10.12
Calcium, magnesium, and potassium sulphates (permanent hardness)	36.58
Calcium and magnesium carbonates (temporary hardness)	17.21

On the other hand, the Munich brewer uses a softer and practically non-saline water, which extracts a greater and requisite amount of albuminous principles. This is confirmed by the following analysis, made in our Laboratory, of the sample of water used in the Löwenbräu Brewery.

Constituents.	Grains per gal.
Sodium chloride	0.46
Calcium and magnesium sulphates (permanent hardness)	7.21
Calcium and magnesium carbonates (temporary hardness)	8.69

Thus it will be seen that the Burton water is twice as hard as regards temporary hardness and five times as regards permanent hardness, and, in addition, contains a notable amount of common salt, of which the Munich water contains none. It was, further, remarkably free from organic matter and perfectly bright and clear.

It has already been mentioned that a yeast that is formed by a violent or racy fermentation and at a higher temperature, as employed in English brewing, has more active qualities than yeast found at a lower temperature and by slow fermentation. The first spreads itself rapidly over the surface of the fluid and is termed "superficial" yeast, while the second sinks to the bottom of the vessel and there continues its action; it is, therefore, termed "sedimentary" or bottom yeast, and is what is employed in the Munich Löwenbräu Brewery. The important advantage of the use of a yeast growing at a low temperature in brewing is that while the normal functions of the yeast are free to act, yet the same cold discourages the growth of disease ferments, and a healthier beer is ensured. A sample of the Löwenbräu yeast on examination presented the appearance of a firm, clean grey sponge, which, under the microscope, was seen to consist of well-developed and regularly sized cells and to be quite free from foreign matters, and, what is more important, from bacterial forms of life. An excellent fermentation was induced by its use in an experiment we tried with a solution of ordinary cane sugar.

The excellence of the hops grown in Bohemia and Bavaria is well known, where they thrive under conditions eminently suited to the development of those qualities which are essential for the production of sound and wholesome beer. The samples submitted exhaled the peculiar fragrant odour of the oil of hop when gently warmed and pressed, while no evidence was obtained that the dealers in these hops have sought to preserve them by the process of "sulphuring." The agreeable smell, the sweet, characteristic taste, coupled with the crispness and friability of the malt submitted, afford evidence of its quality, while its activity was shown by the readiness with which a cold-water extract of it converted starch paste into dextrin and sugar. Lastly, the analysis of the finished product, the beer itself, gave the following percentage results. Side by side will be found the results of analysis of two average samples, mild and bitter, of English beer. Thus an interesting comparison is established.

Constituents.	English beers.		Löwenbräu beer.
	Mild.	Bitter.	
Alcohol by weight	Per cent. 6.78	Per cent. 5.44	Per cent. 3.55
" volume	8.45	6.78	4.45
Equal to proof spirit	14.81	11.89	7.80
Total malt extractives	6.74	5.42	7.09
Mineral matters	0.43	0.24	0.36
Albuminous matters	0.26	0.16	0.577
Maltose and dextrin	5.77	4.22	6.15

These results are instructive in partly accounting for the differences of physiological effect between English and Munich beer. Thus, in spite of the fact that the Munich beer contains a greater proportion of nutritious malt extractives than even the strongest beer in the above analyses, yet the alcohol is reduced to almost exactly half the quantity contained in the English beer. It is, however, the influence of both hops and alcohol which combine to produce drowsiness and stupor, so that we have at once a complete explanation of the advantages which the consumption of Munich beer affords in this respect. Nor is the reduction of these constituents effected at the expense of the important

alimentary constituents of beer. On the contrary, the percentage of malt extract in Munich beer is slightly in excess of ordinary "mild" English ale. The nutritive value of malt extractives is due in part to dextrine and malt sugars, but the mineral matter, owing to its richness in phosphate, must add largely to the nourishing properties of the beer. Thus the analysis of the mineral matter of Löwenbräu beer furnished the following results (calculated on a hundred pints of the ash):

Phosphoric acid (P_2O_5)	32.00 per cent.
Potash (K_2O)	37.80 "
Silica	9.44 "
Other salts, chiefly carbonates and sulphates of lime and magnesia	20.76 "
	100.00

The ash consists, therefore, for all practical purposes, of the valuable dietetic agent, phosphate of potassium. It follows also that the nutritive matter of beer, including the nitrogenous principles, are in a soluble form, and therefore favourable for easy assimilation and digestion.

The final operations of analysis were devoted to the examination of the beer for hop substitutes and objectionable preservatives. Although by law the use of substitutes is forbidden in Germany, yet we have frequently found objectionable substance—as, for example, salicylic acid in German export beer. It has already been explained, however, that the Löwenbräu beer is preserved by the simple and effectual process of "Pasteurising," which obviates the resort to the use of objectionable antiseptics, while it does not interfere with the taste or condition of the beer to any appreciable extent. As a matter of fact, we found the beer was entirely free from substances of this class, and our search for bitter substitutes was attended also with similarly negative results. In the light of these excellent qualities which our analyses have brought to view, we are justified in regarding the beer as not only genuine, but wholesome.

DIFFICULTIES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

IV.¹

5. Multiple Certificates relating to the same Patient.

THERE are occasions when two or more certificates of notification are sent to the medical officer of health of a district, the several certificates relating to the same case of infectious disease, and in such instances the sanitary authorities concerned have hesitated to pay more than one fee. The Infectious Disease (Notification) Act is quite clear on that point. It states in Section 3, I. (b) that "every practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, send to the medical officer of health a certificate." Multiple certificates must therefore be paid for, if they are sent in, where two or more practitioners are "attending on or called in to visit the patient." The only doubt that can remain is as to the meaning of the words "attending on or called in to visit." These words have never received any legal interpretation, and the Local Government Board have announced that they are not empowered to give an authoritative interpretation of Acts of Parliament. But whilst they very naturally take this attitude, they added as follows in a letter to the clerk to the Uppingham rural sanitary authority on Dec. 29th, 1890: "They may, however, state generally that they are disposed to think that a practitioner who sees a patient, not as his medical adviser, but for some purpose unconnected with his treatment, cannot be regarded as [in the words of Section 3, I. (b) of the Act] 'attending on or called in to visit the patient'; and he is, therefore, not required to certify or entitled to be paid for a certificate under the Act. If, however, two practitioners are in actual attendance on or

¹ Parts I., II., and III. were published in THE LANCET of Jan. 19th, Jan. 26th, and Feb. 9th, 1895, respectively.

are called in to visit a patient, whether at the same period or successively, and their attendance or visiting is connected with the medical treatment of the patient, both are, in strict law, required to send certificates of notification, and these must be duly paid for by the sanitary authority." Also, in another letter at about the same date, the Local Government Board wrote: "If, as a matter of fact, a patient is suffering from a notifiable disease when a medical practitioner is called in to attend on such patient, the fact that a notification in respect of the case has been given by a previous medical attendant (whether such attendant is medical officer of health or not) does not dispense the second medical practitioner from the obligation of certifying."

Beyond the principles here indicated we do not feel that we can usefully lay down any rule on this subject, but we are of opinion that there are cases in which it is possible to put too great a strain upon the actual words of the section. Thus, where a medical practitioner who is in attendance on a case sends on occasion one or more qualified assistants to pay odd visits on his behalf he may hesitate to authorise the issue by them of new certificates of notification.

6. Notification by Medical Practitioner as well as by Head of Family.

It will be remembered that under Section 3, I. (a) of the Act the head of the family or other responsible person is obliged to notify to the medical officer of health the existence of cases of the specified infectious diseases; and that under (b) of the same section a similar duty devolves on the medical practitioner in attendance. This is, in fact, the system of dual notification. But as a dual system it is in one sense a dead letter, for proceedings are now rarely if ever taken to enforce certificates from the heads of households in cases where a medical practitioner is called in and notifies the disease. But there are instances of mild infectious disease in which the head of the house does notify, and it is only later, when graver symptoms supervene, that a medical practitioner is called in. Whatever the period at which the medical practitioner is called in and becomes aware of the fact that the disease is a notifiable one, it is his duty forthwith to send in a certificate of notification, and this notwithstanding the fact that he knows that a prior certificate has already been transmitted to the medical officer of health by the parent or head of the house. That this is also the view of the Local Government Board will be seen from the following extract addressed by that body to the town clerk of Hoxton on Feb. 6th, 1891: "As regards the general question, I am to state that it does not appear to the Board that the fact that a notice has been given under Subsection I. (a) of the Act relieves a medical practitioner from his obligation to give a notice under Subsection I. (b) of the Act, but that the Board cannot undertake to express any opinion as to the general expediency of enforcing such obligation under the circumstances mentioned in your letter."

7. Certificates of Notification by Medical Officers of Health.

In dealing with the subject of "multiple certificates relating to the same patient," we incidentally referred to a precedent which shows that a medical officer of health, when in attendance on cases of notifiable infectious disease, is bound, like any other practitioner, to draw up a notification certificate as to the case, and is equally entitled with any other practitioner to the fee for so doing. Some authorities have contended that they ought not to have to pay the notification fees to medical officers of health, but the Act makes no distinction between medical officers of health and other medical practitioners, and the letter from the Local Government Board which we have quoted shows that where a medical officer of health is "attending on or called in to visit the patient" he is entitled to his fee just as if he were an ordinary medical practitioner. The visit should, however,

be definitely one of attendance on the patient and not one of inspection as health officer.

We do not pretend that in this series of articles dealing with Difficulties arising under the Infectious Disease (Notification) Act we have exhausted all the points as to which doubt has arisen or may arise. There must remain a number of difficulties which can only be solved by reference to the actual circumstances under which they have arisen, and there are others which, though they have general application, occur at such rare intervals that it hardly becomes necessary to deal with them in any general articles. But we trust that we have been able to supply information that will serve as a guide both to medical officers of health and to medical practitioners generally, and that the precedents we have quoted may save misunderstandings and difficulties that might otherwise arise. We conclude by once more stating that many difficulties would be avoided between the medical officer of health and the regular medical practitioner if the courtesies which are deemed essential in cases of consultation and other joint action between medical practitioners were always studiously observed on both sides in all matters relating to the notification of infectious diseases. That this view is strongly taken at Whitehall has already been made evident; it is one which we cordially endorse, and hence we conclude by again reminding all concerned that in the interpretation of the duties devolving on one and another medical practitioner under the Act in question it must be taken for granted that "the customs that usually govern the relations of medical practitioners to each other" will in all cases be observed. This being done, the remaining difficulties will be purely technical and will in no way involve professional considerations.

THE UNIVERSITY RIOTS IN ITALY.

HIS EXCELLENCY DR. BACCELLI, Minister of Public Instruction, has closed the University of Naples for the remainder of the academic year. This step is a summary one, but, on due consideration of the facts, justifiably so. A number of students having failed to pass their examinations in July, and having either declined to come up again or failed a second time, in the so-called "sessione di riparazione" conceded them in November, have insisted on a third opportunity being afforded them in March. The inconvenience of the "sessione primavera" (spring session) thus demanded has already, on the occasions when it has been granted, proved intolerable, and the Senatus Academicus refuses to be coerced into making it an "institution." Other universities, equally with that of Naples, have voted it a nuisance, and, acting on the representations of the collective academic mind of Italy, Dr. Baccelli has suppressed all such "sessioni straordinarie," or supplementary sessions *simpliciter*. A number of the students in each seat of learning, but very far from a majority of them, have protested at this interference with their "rights." Their indignation has taken the form of violent interference with the business of the classes; professors have been insulted in their chairs and even outside the University precincts; and, in short, the insubordination in nearly all the faculties has been such that a period of absolute suspension of academic work has been judged necessary. That period may be long or short, according to circumstances. At Bologna, for instance, after a brief interval "for deferrescence" the University was reopened. But in Naples, owing, doubtless, to the more excitable southern blood, a longer suspension has been found imperative, and, as already stated, the classes have been closed for the rest of the current *annus academicus*. In taking this step Dr. Baccelli has the approval of nearly all the heads of the educational world. Only in a few organs of very advanced opinion has there been the slightest note of censure. Why, it is asked, is the bad conduct of a section of the students to be visited with punishment by which all are the sufferers? A wise instinct has guided Dr. Baccelli in the step he has taken. It is this: the Universities must be removed from

State control and made, as in their bright mediæval foretime, autonomous. In other words, the "sensus communis" of the whole University body, including students as well as teachers, must give tone and law to its life and working. So long as that power was retained the well-conducted majority of the students made short work of their riotous fellows, and, in concert with the professorial or governing body, purged their ranks of the rowdy element. Far otherwise is it with the Italian universities as they have since degenerated. Under State control they are now dominated by political ideas, and no student, however insubordinate, is without the consciousness that he can find some friend in the Chamber of Deputies to make an interpellation in his behalf. Successive Ministers of Public Instruction, in fact, have, especially of late years, been hampered in every way by the power possessed by undergraduate organisation to get the ear of Parliament and make their grievances or claims "State questions." Under this system students are almost invited to become politicians, at an age, however, when their one and only concern should be their preparation for professional life. Concentration of thought and work is thus made next to impossible for all but those who have the moral strength to resist the surrounding contagion. All this Dr. Baccelli aspires to put an end to by a return to the condition of things which prevailed at Bologna, Pisa, Padua, and such like centres of academic culture at, and immediately after, the Renaissance. Let there be two distinct "spheres of influence" dominating the student's career. Let there be the examination for graduation, in which only the University shall have a voice. Secondary to that, let there be the examination by the State giving the right to practice. The former grants the *jus docendi*, the latter the *exercere*. Full liberty to teach it is for the University to confer; but when it comes to bringing that teaching *en rapport* with the public—in other words, when the practitioner is brought into relation with the citizen—let the State see that the public have a duly qualified functionary, be he medical man or lawyer or engineer. By that time the University shall have done its work. The body of graduates, long past the stage at which youthful insubordination occurs, will, with a view to professional practice, be subjected to government examiners, who shall migrate from one university to another, and grant qualifications impartially and judiciously only after due cognisance of fitness has been taken. Such is Dr. Baccelli's ideal embodied in the rubric, "Torniamo alle antiche tradizioni!" (let us return to the old traditions); and when his Bill, already formed, shall have passed into law we hope to witness a salutary reform in Italian academic life, under which such riots as have lately discredited it will become impossible, and such Draconian measures as that just applied to Naples a thing of the past.

SANITATION IN MASSACHUSETTS.

THE twenty-fifth annual report of the State Board of Health of Massachusetts, which refers to the year 1893, is a production of no mean size, and the subject matter of which it treats is dealt with in a thoroughly scientific spirit. The volume comprises 784 pages, exclusive of an excellent index, and amongst its valuable contents may be mentioned exhaustive reports on Water-supply and Sewerage, the Analysis and Filtration of Water, and an elaborate report on Infectious Disease Hospitals. The volume also contains an interesting account of a series of experiments made by Dr. Thomas Drown, chemist to the Board, on the Amount and Character of Organic Matter in Soils and its Bearing on the Storage of Water in Reservoirs. These investigations were carried on more especially in reference to the proposed storage reservoir for the city of Boston, as it was deemed expedient prior to forming the reservoir to obtain a thorough knowledge of the character of the soil so as to be in a position to determine how much soil it would be necessary to remove in order to procure a clean bottom and sides free from organic matter. The results obtained were, as was to be expected, somewhat irregular, but it was found generally that there was a rapid diminution in the amount of organic matter below a depth of nine to eleven inches, and at a depth of three feet the

amount of organic matter was, as a rule, below 1 per cent. In order to render the observations more complete, samples of the soil were treated with water and the filtrates from the solution analysed. The watershed from which the several samples were taken was but sparsely populated, and the organic matter present mainly of vegetable origin. As a result of a very thorough examination of the effect of water upon the soils experimented with, Dr. Drown has provisionally fixed 1.5 to 2 per cent. of organic matter, as determined by the loss on ignition of the sample dried at 100° C., as the permissible limit of organic matter that may be allowed to remain on the bottom and sides of a reservoir. It is not possible for us here to deal in any way exhaustively with the Massachusetts report, but we may say that it does honour to those who compiled it, and we can conscientiously commend it to the notice of all students of sanitary science. There is one special feature which distinguishes this as well as all the later Massachusetts reports, and that is the completeness with which the writers deal with the statistical side of all such subjects which can be approached from a statistical standpoint. The notification of infectious disease was started at an early date in Massachusetts; indeed, it appears from the report before us that as far back as 1792 householders were required to report cases of dangerous infectious disease to the local authority, while in 1827 dual notification came into operation. An Act of 1893 has specified the diseases "dangerous to the public health," and these include measles, yellow fever, cerebro-spinal meningitis, hydrophobia, malignant pustule, leprosy, and trichinosis, in addition to most of the diseases required by our own Notification Act to be notified. We observe, however, that erysipelas and puerperal fever are not included among the diseases "dangerous to the public health." The report upon infectious disease hospitals, to which we have already referred, was compiled by Dr. S. W. Abbott, Secretary to the Board of Health, owing to oft-repeated demands on the part of local authorities for information upon the subject. Dr. Abbott points out how the increasing tendency of the population to congregate in cities favours the spread of infectious disease, and he shows that in 1840 the urban population of Massachusetts was but 27.1 per cent. of the population of the State, while in 1880 it was 58.4 per cent., and in 1890 69.9 per cent. As an illustration of the relation of this tendency to the mortality and in all probability to the prevalence of infectious disease the following very interesting table is given. The term "Dense" refers to districts where there is less than one acre to each inhabitant, "Medium" to those having more than one but less than four to each inhabitant, and where there are over four acres to each person the term "Sparse" is used.

Mortality from Eight Principal Infectious and Destructive Diseases in Dense, Medium, and Sparsely Settled Districts in Massachusetts, that of Dense Districts being taken as 1000.

	Mortality from							
	All causes.	Measles.	Scarlet fever.	Diphtheria and croup.	Small-pox.	Cholera infantum.	Consumption.	Typhoid fever.
Dense...	1000	1000	1000	1000	1000	1000	1000	1000
Medium ...	825	517	818	780	332	898	810	1109
Sparse ...	760	445	587	634	149	639	727	1175

It will be seen that, with the exception of typhoid fever, there appears a direct relation between density of population and mortality. Dr. Abbott, in dwelling on the advantages of hospital accommodation, points out that where it obtains, the ordinary duties of the household, attendance at school, and the support of the family by the wage-earner can be carried on without disturbance. During the twenty years 1871-1890 the deaths from measles, scarlet fever, diphtheria, croup, and typhoid fever amounted altogether to 74,597; and Dr. Abbott remarks, in regard to these figures, that if the usually observed case mortality of the several diseases was maintained there would have been some 700,000 cases of these diseases during the twenty years; and he considers that, had proper isolation provision been in existence from 1871, a very material proportion of this illness and mortality

might have been prevented. In dealing with hospital construction and management, Dr. Abbott quotes largely from Dr. Thorne Thorne's standard work on the "Use and Influence of Hospitals for Infectious Disease," and it is impossible to read without a feeling of national satisfaction that "hospitals for infectious disease have reached their highest type of development in England." In the report before us plans of pavilions both of the Boston and Cambridge infectious disease hospitals are given. In the former case the arrangement differs materially from those usually found in the more modern fever hospitals in England, and in both cases there are no annexes for cutting off aerially the waterclosets, &c., from the wards. In an appendix to his report Dr. Abbott reviews the practices of different countries in regard to hospital provision, and his report generally serves in an excellent manner the purposes for which it was intended.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 7th inst., the President, Mr. J. W. Hulke, F.R.S., being in the chair.

The Council approved the following resolution, which had been adopted by the Court of Examiners on Jan. 23rd, 1895, in consequence of having been called upon by the Council to take into consideration the arrangements for admitting visitors to the examinations:—

"The Court of Examiners, having considered the question of the admission of visitors to the final examination for the Fellowship, are of opinion that for the present it will be sufficient if a notice is handed to each visitor on his arrival, in the following terms—namely, 'Visitors are requested not to approach too closely to the candidates while the examinations are in progress, and to refrain from examining patients in close proximity to the examiners.'"

Mr. J. McCarthy and Mr. Edmund Owen were elected members of the Court of Examiners' section of the Board of Examiners in Dental Surgery.

The Council proceeded to the further consideration of the resolution carried at the meeting of Fellows on Jan. 3rd requesting the appointment of a conjoint committee, and resolved: "In accordance with the opinion of the legal adviser of the College the Council do not deem it expedient to accede to the resolution passed at the meeting of the Fellows held on Jan. 3rd."

It was further resolved: "That a committee of the Council be appointed to receive deputations from the Fellows of the College upon the subject of the resolution of the meeting of Fellows of Jan. 3rd last and to report thereon to the Council." Copies of these resolutions were directed to be sent to the mover (Mr. W. H. Bennett) and the seconder (Mr. T. Holmes) of the resolution at the meeting of Fellows.

A letter was read, dated Jan. 30th, from Mr. W. G. Dickinson requesting by desire of the committee of the "Society of Members of the Royal College of Surgeons of England," that the following resolution might be laid before the Council—viz.:

"That in the event of the Council of the College consenting to form a joint committee, composed of Members of their own body and of that of the Fellows, to consider the desirability of applying for a new Charter they are hereby requested to add some representatives of the Members to the same committee."

In reply, the Council directed that copies of the two resolutions just passed should be sent to Mr. Dickinson.

A further communication was read from the Committee of the Society of Members, giving the reasons of the Society for opposing before the Home Secretary the proposed alterations in the bylaws.

The Council left it to the President to determine whether a meeting of the Council should be held in March. The date of the quarterly meeting in April was fixed for Thursday, the 4th.

WE learn that the Eighth Universal Cookery and Food Exhibition is to be held at the Portman Rooms, Baker-street, from May 7th to 10th inclusive. Cookery competitors will be held and £200 awarded in special prizes as well as medals and diplomas, while half the profits of the exhibition will be devoted to the providing of meals for poor children.

ST. THOMAS'S HOSPITAL.

A MEETING in aid of the special appeal fund for the purpose of opening the closed wards in St. Thomas's Hospital was held in the Egyptian Hall of the Mansion House, London, on Wednesday, Feb. 13th. In the absence of the Lord Mayor, Sir Joseph Renals, his predecessor, Sir Stuart Knill, K.G., presided, and was supported by H.R.H. the Duke of Connaught, president of the hospital. Amongst those present were the Earl of Leven and Melville, the Bishop of Southwark, Mr. Alderman and Sheriff Samuel, Mr. Sheriff Hand, Sir William MacCormac, Sir Henry Doulton (senior almoner of the hospital), the Rev. Newman Hall, D.D., the Rev. David MacEwan, Mr. A. O. MacKellar (senior surgeon to the hospital), Dr. J. F. Payne, Mr. F. A. Bevan, and the treasurer, Mr. J. G. Wainwright. Letters of apology were read from the Archbishop of Canterbury who referred to the growing population of South London and its dependence upon St. Thomas's Hospital for medical aid, which day by day grew more important, the Bishop of Rochester, Duke of Rutland, Lord Selborne, Lord Rothschild, Duke of Devonshire, and Sir Sydney Waterlow. A sympathetic letter was also read from Miss Nightingale, in which she called attention to the moral effect of residence in the wards of St. Thomas's Hospital upon a patient's life.

Sir STUART KNILL, in calling upon his Royal Highness the Duke of Connaught to propose the first resolution, said the citizens of London looked upon St. Thomas's Hospital as essentially their own institution, and it was their duty to take the initiative in commencing to replace that hospital in its proper position. The wards were not closed through bad management, but through the falling of the hospital funds from the great agricultural depression.

The Duke of CONNAUGHT then moved: "That this meeting has heard with sincere regret that notwithstanding the large increase in the population of South London, and the consequent greater demand for hospital treatment, there are several wards in St. Thomas's Hospital lying empty and unused owing to the income of the charity not proving sufficient to maintain a greater number of beds than those now in use (436)." In supporting his motion his Highness referred to the appeal that he had already addressed to the public and hoped they would believe that it was thoroughly genuine, thoroughly open, and contained all the secrets connected with this important hospital. He referred to the important work done in connection with St. Thomas's hospital by Miss Nightingale, which had had such a wide influence on nursing throughout the country, and he then briefly traced the history of the hospital from its foundation in 1551 to the present day. It was said by some people that they would not support the hospital because in incurring their enormous expenses they had followed the fads of the medical men. That was not so, and he did not believe that the general public held such an opinion. Since 1871 the population around the hospital had increased from 644 000 to 961 000 in 1891, and at the present time it was upwards of 1,000,000. The number of patients admitted to the wards in 1894 was 5840, and they stayed on an average 22 7 days under treatment. There were also 24,082 out-patients and 82 782 casualty patients who received attention. Out of the Samaritan Fund 670 persons were given assistance at a cost of £1159 12s. 9d., 400 cases being sent to convalescent homes and the remaining 270 being aided in various ways, such as being supplied with surgical appliances, grants of money to redeem tools and clothing from pawn, and for travelling. He confidently looked to the public to support an institution that was capable of such vast work—an institution which was really one of the most deserving in the country.

The Bishop of SOUTHWARK, who seconded the resolution, said he believed it fundamentally better to have a few great centres of hospital work than a number of smaller ones.

Sir WILLIAM MACCORMAC testified to the important work done by the hospital, remarking that it would be nothing short of a national scandal if the hospital were allowed to remain in its present state.

The Rev. Dr. NEWMAN HALL supported the motion, which was carried unanimously.

On the motion of the Earl of LEVEN and MELVILLE, in the absence of Sir Albert Rollit, M.P., the following motion was supported by Dr. J. F. PAYNE and the Rev. DAVID MACEWAN, and carried: "That taking into consideration the

noble work accomplished by the hospital since its foundation in 1551, both as a medical charity and also as one of the leading schools of medicine and surgery in the kingdom, this meeting views with considerable alarm the falling off of its income from country estates, and records its opinion that an effort should be made to obtain the sum of £100,000, with the view of enabling the at present closed wards to be opened for the free treatment of the poor of this great metropolis."

Alderman Sir STUART KNILL proposed the following resolution: "That, bearing in mind that originally the hospital was placed by King Edward VI. under the fostering care of the mayor, commonalty and citizens of London, the great City Guilds and the citizens of London generally be specially invited to consider the importance of supporting this appeal."

Sir HENRY DOULTON seconded and Mr. F. A. BEVAN supported the resolution, which was carried.

Before proposing a vote of thanks to the Lord Mayor for the great interest he had shown in the prosperity of St. Thomas's Hospital, Mr. J. G. Wainwright (treasurer of the hospital) gave some statistics showing the loss the hospital had sustained through the great agricultural depression. A farm from which the hospital a few years ago was receiving £1270 per annum, and upon which £2000 had been expended, was three weeks ago let for £385. Another farm had depreciated from £1320 per annum to £600 and others from £637 to £221, from £250 to £100, from £406 to £200, from £381 to £100, from £280 to £200, from £600 to £330, and from £780 to £449. The hospital was rated by the parish at £2450. Although they paid the parish these enormous rates over 2000 maternity cases were attended to for the parish. There was not the slightest ground for the rumour which had been started with reference to the unsanitary condition of the buildings, and Mr. Wainwright read a letter from the surveyor to this effect.

Mr. A. O. MACKELLAR seconded the vote of thanks to the Lord Mayor, and the usual courtesies to the chair brought the meeting to a close.

The receipt of the following donations towards the £100,000 asked for were announced during the course of the meeting: Her Majesty the Queen, £100; Duke of Devonshire, 100 guineas; Miss Florence Nightingale, £100; and Mr. Deputy Creasy, 10 guineas. A working man—a former patient—sent a donation of 5s.

THE LONDON COUNTY COUNCIL AND CORONERS' INQUESTS.

At the weekly meeting of the London County Council, held on Tuesday afternoon, the adjourned report of the Public Control Committee on the subject of coroners' inquests was discussed at some length. The following recommendations, the first six of which are, *ipsisima verba*, the suggestions of Sir Walter Foster's Select Committee upon Death Certification, were submitted:—

- (a) That in no case should a death be registered without production of a certificate of the cause of death, signed by a registered medical practitioner or by a coroner after inquest.
- (b) That a medical practitioner in attendance should be required, before giving a certificate of death, to personally inspect the body and identify it as the body of the person he has attended, and should include in his certificate a statement pointing to the absence of accident, poison, violence, or criminal neglect.
- (c) That a form of certificate of death should be prescribed, and that in giving a certificate medical practitioners should be required to use such form.
- (d) That medical practitioners should be required to send certificates of death to the registrar instead of handing them to the representatives of the deceased.
- (e) That it should be made a penal offence to bury or otherwise dispose of a body without an order from the registrar stating the place and mode of disposal, which order, after it has been acted upon, should be returned to the registrar who issued it.
- (f) That it should be made an offence to retain a dead body unburied or otherwise legally disposed of beyond a period not exceeding eight days, except by permission of a magistrate.
- (g) That the certificate should be endorsed by the burial authority, with the date of interment or disposal and the place where the body is buried, and returned to the registrar by the burial authority.
- (h) That when the medical practitioner is unable to certify he should be required to report direct to the coroner. Relatives, friends, and others having cognisance of suspected cases should also be required to report them to the coroner.
- (i) That every case of death after surgical operation should be reported to the coroner with a view to preliminary inquiry, and if necessary the holding of an inquest.

(j) That medical investigators should be appointed: (1) To inquire into causes of all uncertified deaths, assisted by qualified and responsible inquiry officers. (2) To examine the body in all such cases, and make post-mortem examinations where necessary. (3) To report the results to the coroners sitting in court, who will then decide as to the necessity for holding formal inquests. (4) To give evidence at inquests and act as medical advisers to the coroners.

(k) That London should be divided into districts so arranged as to give approximately equal amount of work, and that coroners be paid by salary, not dependent on the number of inquests held.

(l) That franchise districts should be abolished.

(m) That a court or courts should be provided for each district, with a coroner, clerk, inquiry officers, and other necessary officials as in police courts.

(n) That one or more medical investigators should be attached to each court and be paid by salary.

(o) That the office of deputy coroner should be abolished as unnecessary in London.

(p) That inquests should be held and evidence taken by the coroners in all cases where the reports of the medical investigators show further inquiry to be necessary, and in all cases of violent or suspicious death.

(q) That viewing the body, except by the medical investigator and for purposes of identification, should no longer be obligatory.

(r) That the number of jurymen should be reduced to one-half of the present number—i.e., to not less than six or more than eleven.

(s) That in cases involving subsequent criminal proceedings, such as murder or manslaughter, or other criminal offence, the coroner should have full power to commit, and to bind over all witnesses; and further investigation by magistrates in such cases should not be required.

(t) That proper records of all cases dealt with by the court, whether inquests be held or not, should be kept as records of the county.

(u) That the court should have jurisdiction in cases where the body is lying in the district to which it is attached, except in cases of accident &c. where more than one death has taken place, when the jurisdiction shall be with the court for the district in which such accident &c. occurred.

(v) That the committee be authorised to attend as a deputation before the Lord Chancellor in support of the amendment of the law relating to coroners' inquests in the county of London in accordance with these recommendations.

All these clauses were adopted as submitted, save that to clause (b) words were added to the effect that "coroners should be required to accept evidence from representatives of the families of the deceased where it is alleged that death has been caused by accident"; and that to clause (v) words were added to the effect that "the Public Control Committee be instructed to urge the advisability of paying jurymen a sum sufficient to compensate a workman for the actual loss of time incurred in performing the duty, and of making it compulsory that coroners' juries should be summoned by rota." With the majority of these points we have dealt at different times, so that our readers are familiar with our views; but we shall return to the subject next week.

Public Health and Poor Law.

SCOTCH URBAN MORTALITY IN 1894.

LOWEST DEATH-RATE ON RECORD.

ABOUT 36 per cent. of the population of Scotland reside in the eight principal towns, which are estimated to have contained 1,482,962 inhabitants as at the middle of 1894, the computed enumeration of all Scotland at the same date being 4,124,691. We have gone through the laborious process of piecing together the items in the Scotch Registrar-General's monthly returns applicable to these eight cities, and we now present the results for the whole of last year. The combined registration area of these eight chief towns is 40,340 acres, giving an average of 36 330 persons to an acre. In round numbers there are only 14 persons to the acre in Perth, 19 in Aberdeen, and 20 in Paisley; while in Leith the density of the population rises to 35 per acre, Dundee coming next with 38, Greenock with 43 Edinburgh with 44, and Glasgow with 60. The estimated population of Glasgow is 686,820; of Edinburgh, 270,588; Dundee, 158,719; Aberdeen, 131,642; Leith, 72,003; Paisley, 70,363; Greenock, 62,400; and Perth, 30,232. With regard to climatic conditions, on striking a balance for a whole year the average state of matters may be considered as practically the same for the whole of the eight towns.

In these eight towns together there occurred last year from all causes 28,110 deaths. Of these, 14,145 were those of males and 13,965 those of females. The general mortality was thus, notwithstanding the increase of population, below that for 1893, which amounted to 31,606 (males, 15,979; females, 15,627).

females, 15,827). Not only was it absolutely lower, but when the increase of population is taken into account the diminution becomes more conspicuous. Last year the total deaths in the eight towns combined were at the rate of only 191 per 10,000 of their estimated gross population, while in the year previous the rate was 217. For lowness of death-rate last year breaks the record, which extends back for forty years—viz., to 1855, the first year under the Registration Acts for Scotland. The year 1888, with 193 deaths per 10,000 inhabitants, is next lowest. The worst year on record of the whole forty was 1864, with 307 deaths per 10,000 of population. In each of the months of last year the deaths, allowing for greater population, were below the average for the corresponding month during the last ten years. The 28,110 deaths were divided among the different months as follows: January, 2846; February, 2310; March, 2524; April, 2405; May, 2409; June, 2165; July, 2021; August, 1939; September, 1784; October, 2335; November, 2592; December, 2780. Keeping in view that February was three days shorter than October, it will be seen that the mortality was heaviest in the cold months—viz., January to March inclusive, November and December. The first quarter of the year shows 1936 deaths more than the third quarter. The fall in the number of deaths in the third quarter, as compared with the first, applies to all the age divisions, the infant class (under five) benefiting by 896, the adolescent (five to twenty) by 58, the adult (twenty to sixty) by 538, and the aged (sixty and upwards) by 444. Summer was therefore most salubrious for all ages. January, "the coldest month in all the year," is usually the most fatal, being especially severe on the aged and on very young infants. Last year proved no exception. Of the 28,110 deaths, 10,448 were those of children under five years of age (including 6168 infants under one year old), 2519 those of adolescents, 9212 those of adults, and 5931 those of aged persons. The infantile mortality (0-5) was higher in December than in any other month of the year, being 43·8 per cent. of the whole deaths for that month. Over the whole year it constituted 37·17 per cent. of the gross mortality of the eight towns. The most disastrous month for the aged was January, which witnessed the departure of 650 persons 60 years of age and upwards. September and August had the lowest record in this class—viz., 416 and 417 respectively. No centenarians died during the year; but 85 persons between 90 and 100 years of age joined the majority. Females as usual show most vitality, 63 of these 85 nonagenarians being women, while only 17 were men. Two widows are said to have each been 99 years of age at death.

The 28,110 deaths were distributed as follows, the towns being given in the order of their population: Glasgow, 13,674; Edinburgh, 4745; Dundee, 2992; Aberdeen, 2454; Leith, 1213; Paisley, 1258; Greenock, 1200; Perth, 574. The estimated population of each of the eight towns is given above. Making the necessary calculations, we find that the death-rate for last year per 1000 of estimated population was, in Leith, 16·84; Edinburgh, 17·53; Paisley, 17·87; Aberdeen, 18·64; Dundee, 18·85; Perth, 18·86; Greenock, 19·23; and Glasgow, 19·90. For the previous year Aberdeen took the most favourable position with 18·47, followed by Leith with 19·10 and Edinburgh with 19·68, Glasgow showing the highest ratio—namely, 23·30. The death-rate for 1894 was lower than that for 1893 in all the eight towns except Aberdeen, which lost its position owing to the heavy mortality there in December last, arising chiefly from an extensive epidemic of measles and the prevalence of bronchitis. Taking the mean of the ten years 1883-92, Edinburgh, Leith, and Perth, with 1·97 deaths per cent. of population, were the healthiest towns, Aberdeen coming next with 2·00, followed by Dundee with 2·13, Greenock 2·21, Paisley 2·34, and Glasgow with 2·43. In every hundred of the total deaths in Edinburgh and Perth last year about 31 were those of children under five years of age, the rate in Paisley and Leith being 36 fully, in Greenock nearly 38, in Glasgow almost 39, in Aberdeen a little above 39, and in Dundee somewhat under 40. These rates are all lower than in the previous year, except as regards Aberdeen, which shows a rise of 7 per cent., due in great measure to the measles epidemic referred to.

Of the 28,110 deaths 3853 arose from specific febrile or zymotic diseases, 6 from parasitic diseases, 114 from dietetic diseases, 5616 from constitutional diseases, 1890 from developmental diseases, 14,388 from local diseases, 1051 from violence, and 1192 from insufficiently specified causes. To refer more particularly to diseases, there were 2918 of the deaths from miasmatic diseases, 518 from diarrhoeal, 10 from

malarial, 1 from zoonogenous, 124 from venereal, and 32 from septic diseases; 3201 from diseases of the nervous system, 59 from diseases of organs of special sense, 2479 from diseases of the circulatory system, 5434 of the respiratory system, 1917 of the digestive system, 28 of the lymphatic system and ductless glands, 777 of the urinary system, 105 of the organs of generation, and the same number from diseases of parturition, being together 210 from diseases of the reproductive system, 189 from diseases of the organs of locomotion, and 94 from diseases of the integumentary system. Last year owes its low death-rate to a great extent to the small number of deaths from zymotic diseases. As stated, only 2918 deaths arose from miasmatic diseases, showing that there were few serious epidemics. The diarrhoeal deaths occasionally affect the summer mortality materially, but during the whole of last year there were only 9 deaths from simple cholera and 509 from diarrhoea and dysentery together, fatal cases of the two latter being most numerous (88) in August, when also 6 of the deaths from simple cholera happened. Last year there were in the eight towns collectively 113 deaths from small-pox, as against 40 only in 1893. Of these 113, 57 deaths occurred in Edinburgh, 48 in Leith, 5 in Glasgow, and 1 each in Dundee, Aberdeen, and Greenock. Whooping-cough prevailed most extensively from January to May inclusive, carrying off 1110 persons, nearly all children under five years of age, as against 1111 for the previous year. Diphtheria caused 472 deaths, as compared with 424 in 1893. Scarlet fever had 350 deaths ascribed to it last year, as contrasted with 400 in the preceding year, and measles caused only 420 deaths in 1894, compared with 1535 in 1893. There were few deaths last year from this cause until the month of December, when measles became epidemic in Aberdeen and Glasgow. The deaths from influenza fell from 291 in 1893 to 147 last year. Typhoid fever tends to diminish in the towns, but infection is often conveyed into them by milk from country districts. Last year the deaths in the eight towns from enteric fever numbered 255, compared with 279 the year before. Typhus fever, from the exertions to prevent overcrowding, has become almost unknown. Only 19 deaths were due to that cause in 1894 and 35 in 1893. The mortality from puerperal fever last year was 112. Directly caused by intemperance were 87 deaths last year and 116 in the year previous; of these 87, 73 were ascribed to chronic alcoholism and 14 to delirium tremens. Pulmonary phthisis, or consumption, was the deadliest disease, cutting off 3019, principally young people, there being 2902 from the same evil in the previous year. The relative frequency of phthisis last year is as follows: in Perth the mortality was at the rate of 16·10 per 10,000 inhabitants; Paisley, 16·48; Edinburgh, 17·00; Aberdeen, 18·00; Leith, 19·30; Greenock, 20·99; Dundee, 21·23; and Glasgow, 22·58. In 1893 the highest mortality from phthisis occurred in Paisley, Edinburgh, Aberdeen, Leith, and Perth. Among the other constitutional diseases cancer is the most fatal. Last year there were 1119 deaths from that cause, being a rise of 82 on the previous year. In 1893 cancer was most marked in Edinburgh, Aberdeen, and Leith. Last year's figures show great divergences as to the relative prevalence of the disease in the various towns. In Perth the mortality from cancer was only 4·60 per 10,000 inhabitants, and in Paisley it was 4·97; but in Greenock it was 5·93; in Leith, 6·25; Glasgow, 6·77; Dundee, 7·43; Aberdeen, 8·29; and in Edinburgh 10·94. The high ratio in Aberdeen and Edinburgh, especially the latter, is noticeable, keeping in view the 1893 result. From affections of the respiratory organs (not including pulmonary phthisis and whooping-cough, which have been already mentioned as included in other classes) there were 5434 deaths last year. This figure includes 2457 deaths from bronchitis, which in the year before claimed 2978 victims, and was the most fatal individual disease for that period. In Aberdeen last year bronchitis cut off 19·52 per 10,000 inhabitants, the ratio in Dundee being 18·84, in Glasgow 16·80 in Edinburgh 14·59, and in Leith 12·36. There succumbed to pneumonia last year in the eight towns collectively 2158 persons, as compared with 2640 in 1893. In Edinburgh last year the deaths from pneumonia were at the rate of 11·53 per 10,000 of population, in Aberdeen 11·69, in Leith 11·94, in Dundee 16·38, and in Glasgow 16·44; while in the previous year Edinburgh, Glasgow, and Dundee had the highest ratios. Croup is responsible for 297 deaths in 1894. Heart diseases are accountable for 2479 deaths last year, the mortality from diseases of the circulatory system in 1893 having been 2347. January gave the most fatal monthly record in 1894

under this head. The 2479 deaths include 2065 from endocarditis, the monthly mortality from which varied from 203 in January to 128 in September, August being the next lowest with 139. Last year the deaths from valvular disease of the heart were at the rate of 8.50 per 10,000 of population in Aberdeen, 13.29 in Dundee, 13.30 in Greenock, 13.35 in Glasgow, 14.99 in Leith, 15.34 in Edinburgh, 15.35 in Paisley, and 16.43 in Perth.

In Glasgow last year there were registered the deaths of 2940 children under one year of age, 906 in Edinburgh, 759 in Dundee, 621 in Aberdeen, 294 in Leith, 273 in Paisley, 268 in Greenock, and 107 in Perth. The cause of death in 803 of these 6168 cases was certified as being premature birth debility. Thirty children under five were suffocated in bed, and 15 suffocated otherwise during the year. Last year there were 963 deaths due to apoplexy, and the cause of 578 others is given as "hemiplegia, brain paralysis." "Old age" simply is put down as the cause of 916 deaths, January giving the largest contribution (100) of any of the months, and August (54) and July (59) the lowest; 981 deaths were due to accidents or negligence, being rather more than in the previous year, when these numbered 969. Six persons lost their lives by "homicide." There were no executions, but 64 persons committed suicide last year. "Debility, atrophy, inanition" is given as the cause of 929 deaths, of which 460 were those of children under five years of age. There occurred last year 136 deaths from causes not specified.

The urban mortality for 1893 was low, principally owing to there being few epidemics. That for 1894 is lower still, partly owing to a similar absence of zymotic diseases, including influenza. Further, the heat in the summer months was not great, and there were frequent rainfalls. As to the winter, although January was stormy and colder than usual, there was an absence of "hard" weather in February, and the mean temperature in March was above previous averages. Generally speaking the decrease in the death-rate is evidence of the earnest work carried out by sanitary officers and authorities to promote the public health.

ENTERIC FEVER MORTALITY IN 1893.

THE recrudescence of enteric fever mortality in 1893 was one of the most notable features in the statistics for that year dealt with in the Registrar-General's annual report recently issued. The annual death-rate from this disease in England and Wales, which was equal to 326 per million in the ten years 1871-80, declined to 193 in the succeeding ten years 1881-90, the largest decline occurring in the latter part of that decade. The rate was 236 per million in 1884, but was below 200 in each of the six years 1885-90. In 1891 and 1892 the rate further fell to 168 and 137; whereas in 1893, probably under the influence of the long drought and high temperature, the enteric fever death-rate rose again to 229, a higher rate than in any preceding year since 1884, when it was 236 per million. The rate from this disease in the various English counties showed remarkably wide variations. The lowest rates per million were 58 in Wiltshire and Oxfordshire, 66 in Buckinghamshire, and 73 in Berkshire. Even in the vast urban population of London the rate did not exceed 160 per million and was 69 below the mean rate in the whole of England and Wales. The highest rates were 320 in Lancashire, 326 in the North Riding of Yorkshire, 448 in Sussex (due to the disastrous epidemic in Worthing), 487 in the East Riding of Yorkshire, and 565 in Durham. In seven other counties and in South Wales the rate exceeded the mean rate in England and Wales. The remarkable fatality of this disease in a group of registration districts situated for the most part in Durham, but also extending into Northumberland and into the northern parts of Yorkshire, to which especial attention had been directed in the Registrar-General's reports for 1890, 1891, and 1892, showed a further increase in 1893. The enteric fever death-rate in this group of eighteen registration districts was equal to 395 per million in 1890; it fell to 301 and 181 in 1891 and 1892, but rose to 480 per million in 1893, and was more than double the mean rate in England and Wales in the same year. The excess of the rates in some of these registration districts in 1893 calls for special notice. The rate was 510 in Middlesbrough, 693 in Chester-le-Street, 836 in Sunderland, 977 in Auckland, 1112 in Easington, and 1163 in Houghton-le-Spring. Taking the mean rate in the four years 1890-93, the highest rates were 528 in Auckland, 540 in Stockton, 544 in Houghton-le-Spring, 559 in Easington, and 633 in Middlesbrough. Such rates,

from a preventable disease like enteric fever, during a period of four years, call for the active intervention of the central health authority, since it affords abundant evidence of ineffective and negligent local sanitation. A local epidemic of enteric fever of four years' duration should be recognised in the present day as conclusive condemnation of the sanitary authority charged with the health responsibility for the district. We venture to hope that the terrible figures from the Registrar-General's last annual report to which we have called attention will serve to awaken the sanitary authorities of the county of Durham to the urgent need for vigorous action with a view to check this scourge of enteric fever prevalence which caused so heavy a rate of death and suffering during the four years 1890-93.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Derbyshire County Sanitary District.—The vital statistics of this administrative county, which contained at the last census 426,768 persons, are well set forth by Dr. Sidney Barwise in the accompanying table.

District.	Rates per 1000 of population.			Deaths of children under one year to every 1000 births.
	Births.	Deaths from all causes.	Deaths from seven chief zymotics.	
Rural districts of Derbyshire ...	34.8	16.6	1.8	129
Urban districts of Derbyshire ...	35.7	18.9	2.4	171
Whole administrative county ...	35.3	17.5	2.1	149
England and Wales... ..	30.8	19.2	2.47	159

The statistics in reference to small-pox and vaccination we have already noticed in our columns.¹ There were 105 deaths from measles in the county during 1893, and Dr. Barwise advises that some arrangement should be made by which the school attendance officers should notify to the medical officers of health cases of measles which they come across in the course of their duties. Out of the whole population of the county there are still 55,304 to whom the Notification Act does not at present apply. Dr. Barwise has presented to the county council an exhaustive report on the hospital provision of the county, and he points out that in 1893 only 1 per cent. of the scarlet fever cases were removed to hospital, 3.7 per cent. of typhoid fever cases, and not a single case of diphtheria. The whole county has been mapped out into twelve hospital districts, and Dr. Barwise calculates that by erecting twelve hospitals in suitable positions 421,000 of the population of the county would be within eight miles of a hospital, and all the urban districts and workhouses within six miles. There are at present but two steam disinfectors in the county, and the provision of an apparatus at each proposed hospital would serve the requirements of each hospital district. Much progress in the matter of sewage purification is being made throughout the county, and Dr. Barwise is making systematic examination of the rivers in order to be in a position to compare their subsequent condition with the present. The analyses already made of the Derwent are very interesting, the river showing a gradually increasing amount of free and albuminous ammonia as far as Derby, but after this town has been passed the organic matter is more than doubled.

Stapleton Urban Sanitary District.—Small-pox was the disease with which Dr. William Brown had chiefly to deal during 1894, and it seems that the vast majority of the cases occurred in Barton Regis workhouse and Eastville, the district abutting upon the workhouse. Special means of isolation have since been provided by the sanitary authority, and Dr. Brown expresses the hope that for the future there will be no especial incidence of small-pox upon the workhouse and the district adjoining it.

Kingston upon Thames Urban Sanitary District.—Mr. Beale Collins, in his annual report for 1894, devotes considerable space to a consideration of the proposed extension of the borough boundaries, so as to include the ecclesiastical parishes of Kingston and Ham. He discusses the manner in

¹ THE LANCET, Feb. 2nd, 1895.

which such extension would modify the present age, sex, and class distribution of the borough, and thus affect the birth, death, and disease rates. In dealing with the arrangements for isolation accommodation Mr. Collins shows that much advantage both as regards efficiency and economy would be gained by providing one large hospital for the whole district instead of several small ones. In short, Mr. Collins thinks that an amalgamation such as that proposed will be likely to afford the sanitary authority "greater facility in dealing with outbreaks of disease, and to give the best practical working scheme for draining the whole of the district." In the matter of vaccination Mr. Collins suggests, among other things, that all persons having conscientious scruples against vaccination should be compelled to register themselves and their families as unvaccinated, and that only by this means should they be exempt from prosecution for non-vaccination; he also suggests that all persons registering themselves as vaccinated or revaccinated should receive a small fee in return for services rendered to the State. Mr. Collins thinks that some such regulations as these would ensure a thorough vaccination of the community with little or no increase of expenditure, "as the vaccination officers could be almost entirely dispensed with and small-pox hospitals would not be required." We must confess we are not so sanguine as Mr. Collins as to the good effect of the means he proposes, and we think that the possibility of evading vaccination by registration would be widely taken advantage of, so much so indeed that small-pox hospitals would be as much a necessity as at the present time.

Aston Manor Urban Sanitary District.—Mr. Henry May is always prompt in the compilation of his annual reports, and that now before us is one of the earliest we have received for 1894. The general death-rate for the year in question was but 14 per 1000, the lowest on record for the last twenty-one years with the exception of 1885, when the rate was 13.9. The Warwickshire County Council, advertising to Mr. May's report for 1893, wrote to the Aston urban sanitary authority expressing their opinion that no charge should be made for the admission of patients to the fever hospital. The Aston sanitary authority, however, apparently resented this action on the part of the county council, and replied that they were unaware of any case where admission had been refused and that it was their practice to excuse the fee in the case of patients being unable to afford it. Experience has certainly shown that charges for admission to the general wards of a fever hospital are undesirable, but perhaps this is a question which may on the whole be left to the discretion of local authorities.

Kettering Urban Sanitary District.—The general death-rate of this district during 1894 was 14.9 per 1000 and the zymotic death-rate 2.4 per 1000. Phthisis has, Mr. Winter Dryland reports, claimed fewer victims in Kettering in proportion as new factories with improved methods of ventilation and more air space have sprung up; but it seems that in a large number of cases pneumonia and bronchitis have occurred in newly erected houses occupied before the walls were perfectly dry. In referring to infantile mortality Mr. Dryland points out that, if the mothers of Kettering would be guided by their medical attendants as to the feeding of their infants, many lives might be spared. Many of the cases of scarlet fever which occurred during 1894 were, Mr. Dryland states, followed by rheumatism, and he attributes this to want of care during slight attacks. There seems to be a good prospect of a joint fever hospital being shortly procured by the Kettering urban and rural district councils.

Mirfield Urban Sanitary District.—In his annual report for 1893 Mr. Thomas Fairclough states that the water-supply of the district has been abundant notwithstanding the exceptionally dry spring and summer. He reports, however, that it is still necessary to draw off the water which has been standing in the lead service pipes and also to filter it through a charcoal filter before drinking, as the water still retains the power of acting upon lead. He advises that the use of lead service pipes should be discontinued. Mr. Fairclough cannot understand why the Huddersfield corporation are "so obstinate in this water question," as it must eventually be faced and dealt with.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6870 births and 4210 deaths were registered during the week ending

Feb. 9th. The annual rate of mortality in these towns, which had been 18.7 and 19.7 per 1000 in the two preceding weeks, further rose last week to 20.7. In London the rate was 21.0 per 1000, while it averaged 20.4 in the thirty-two provincial towns. The lowest rates in these towns were 13.5 in Derby, 14.5 in Leicester, 15.0 in Bradford and in West Ham, and 15.2 in Gateshead; the highest rates were 23.8 in Birkenhead, 24.0 in Plymouth, 24.8 in Manchester, 27.1 in Bolton, and 30.9 in Liverpool. The 4210 deaths included 312 which were referred to the principal zymotic diseases, against 328 and 299 in the two preceding weeks; of these, 78 resulted from whooping-cough, 67 from diphtheria, 56 from measles, 39 from diarrhoea, 36 from "fever" (principally enteric), 32 from scarlet fever, and 4 from small-pox. No fatal case of any of these diseases occurred last week in Swansea; in the other towns they caused the lowest death-rates in Bristol, West Ham, Bradford, Leeds, and Hull, and the highest rates in Croydon, Blackburn, Manchester, Gateshead, and Plymouth. The greatest mortality from measles occurred in Croydon, Plymouth, Bolton, Preston, and Halifax; from whooping-cough in Plymouth, Oldham, Burnley, Blackburn, and Gateshead; and from "fever" in Birkenhead and Gateshead. The mortality from scarlet fever showed no marked excess in any of the large towns. The 67 deaths from diphtheria included 34 in London, 5 in Birmingham, 5 in Manchester, 3 in Wolverhampton, and 3 in Liverpool. Three fatal cases of small-pox were registered in London, and 1 in Derby, but not one in any other of the thirty-three towns. There were 56 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 9th inst., against 32, 35, and 51 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 6, 8, and 21 in the three preceding weeks. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1667, against 1653, 1662, and 1653 on the three preceding Saturdays; 149 new cases were admitted during the week, against 154, 186, and 160 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 324 and 377 in the two preceding weeks, further increased last week to 480, and slightly exceeded the corrected average. The causes of 86, or 2.0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Cardiff, Leeds, Sunderland, and in six other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Preston, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 28.3 to 23.9 per 1000, rose again to 26.2 during the week ending Feb. 9th, and exceeded by 5.5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17.5 in Dundee and 20.5 in Edinburgh to 26.0 in Greenock and 32.4 in Glasgow. The 757 deaths in these towns included 27 which were referred to whooping-cough, 26 to measles, 8 to diarrhoea, 7 to diphtheria, 6 to "fever," 4 to scarlet fever, and 3 to small-pox. In all, 81 deaths resulted from these principal zymotic diseases, against 92 and 89 in the two preceding weeks. These 81 deaths were equal to an annual rate of 2.8 per 1000, which was 1.3 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 18 and 25 in the two preceding weeks, further rose to 27 last week, of which 20 occurred in Glasgow. The deaths referred to measles, which had declined from 58 to 37 in the four preceding weeks, further fell to 26 last week, and included 10 in Glasgow, 9 in Aberdeen, and 4 in Edinburgh. The fatal cases of diphtheria, which had been 9, 5, and 3 in the preceding three weeks, rose again to 7 last week, of which 4 occurred in Glasgow. The 6 deaths referred to different forms of "fever" corresponded with the number in the preceding week, and included 3 in Edinburgh and 2 in Glasgow. Of the 3 fatal cases of small-pox, 2 were recorded in Edinburgh and 1 in Glasgow. The deaths referred to diseases of the

respiratory organs in these towns, which had been 186 and 168 in the two preceding weeks, rose again to 214 last week, and exceeded by 93 the number in the corresponding period of last year. The causes of 43, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31.0 and 31.9 per 1000 in the two preceding weeks, was again 31.9 during the week ending Feb. 9th. During the past six weeks of the current quarter the death-rate in the city has averaged 32.5 per 1000, against 19.1 in London and 23.2 in Edinburgh. The 214 deaths registered in Dublin during the week under notice corresponded with the number in the previous week, and included 19 which were referred to the principal zymotic diseases, against numbers declining from 23 to 16 in the three preceding weeks; of these, 7 resulted from small-pox, 5 from whooping-cough, 4 from "fever," 2 from diarrhoea, 1 from scarlet fever, and not one either from measles or diphtheria. These 19 deaths were equal to an annual rate of 2.8 per 1000, the zymotic death-rate during the same period being 1.5 in London and 2.5 in Edinburgh. The fatal cases of small-pox, which had declined from 11 to 5 in the four preceding three weeks, rose again to 7 last week. The 5 deaths from whooping-cough showed a further increase upon the numbers recorded in recent weeks. The deaths referred to different forms of "fever," which had been 5 and 4 in the two preceding weeks, were again 4 last week. The 214 deaths in Dublin last week included 35 of infants under one year of age and 66 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed an increase upon those recorded in the preceding week. Eight inquest cases and 4 deaths from violence were registered; and 75, or one third, of the deaths occurred in public institutions. The causes of 21, or nearly 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING JANUARY, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during January in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7.0 per 1000 of the population, estimated at 4,392,346 persons in the middle of this year. In the three preceding months the rates had been 10.0, 9.5, and 8.4 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Paddington, St. Giles, Strand, St. Olave Southwark, Lewisham, and Woolwich; while they showed the largest excess in Marylebone, St. Pancras, Limehouse, Mile End Old Town, Poplar, Rotherhithe, Battersea, and Plumstead. The prevalence of small-pox in London showed an increase during January, 53 cases being notified during the month, including 39 in Marylebone, 5 in Battersea, and 3 in Greenwich sanitary areas. The Metropolitan Asylum Hospitals contained 51 small-pox patients at the end of January, against numbers declining from 93 to 16 at the end of the four preceding months; the weekly admissions averaged 10, against 9, 6, and 3 in the three preceding months. The prevalence of scarlet fever in London showed a slight further decline from that recorded in recent months; this disease was proportionally most prevalent in St. James Westminster, Bethnal Green, Limehouse, Mile End Old Town, Poplar, Rotherhithe, Battersea, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1633 scarlet fever patients at the end of January, against 2207, 2114, and 1865 at the end of the three preceding months; the weekly admissions averaged 148, against 246, 208, and 171 in the three preceding months. The prevalence of diphtheria in London showed a marked further decline during January; among the various sanitary areas this disease showed the highest proportional prevalence in St. Luke, Whitechapel, St. George-in-the-East, Mile End Old Town, Poplar, St. Saviour Southwark, Rotherhithe, and Battersea. There were 515 cases of diphtheria under treatment in the Metropolitan Asylum hospitals at the end of January, against 537, 517, and 521 at the end of the three

preceding months; the weekly admissions averaged 71, against 100, 90, and 93 in the three preceding months. The prevalence of enteric fever in London also showed a marked decline during the month under notice; among the various sanitary areas this disease showed the highest proportional prevalence in St. Martin-in-the-Fields, Strand, St. George Southwark, Rotherhithe, and Lee sanitary areas. Erysipelas was proportionally most prevalent in Marylebone, St. Pancras, Bethnal Green, Whitechapel, Mile End Old Town, and Poplar sanitary areas. The prevalence of puerperal fever showed a marked increase during January, and considerably exceeded that recorded in any recent month; the 41 cases notified during the five weeks ending Feb. 2nd included 9 in St. Pancras, 6 in Camberwell, 4 in Lambeth, 4 in Hackney, 3 in Islington, and 3 in Chelsea sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, Feb. 2nd, the deaths of 7691 persons belonging to London were registered, equal to an annual rate of 18.3 per 1000, against 15.8, 15.2, and 17.7 in the three preceding months. The lowest death-rates during January in the various sanitary areas were 6.2 in Lee, 10.8 in Hampstead, 11.5 in Stoke Newington, 14.4 in St. George Hanover-square, 14.7 in Wandsworth, and 15.1 in Westminster and in Lewisham; the highest rates were 24.7 in St. Saviour Southwark, 25.5 in St. Giles, 25.6 in Holborn, 26.1 in St. George-in-the-East, 26.6 in Limehouse, 27.6 in St. Luke, and 29.6 in Strand. During the five weeks of January 656 deaths were referred to the principal zymotic diseases in London; of these, 3 resulted from small-pox, 133 from measles, 53 from scarlet fever, 187 from diphtheria, 136 from whooping-cough, 76 from enteric fever, 1 from an ill-defined form of "fever," and 67 from diarrhoea. These 656 deaths were equal to an annual rate of 1.6 per 1000, against 1.6 and 1.8 in the two preceding months. No fatal case of any of these diseases was recorded last month in St. James Westminster; in the other sanitary areas they caused the lowest death-rates in St. James Westminster, Marylebone, Hampstead, St. Saviour Southwark, and Bermondsey; and the highest rates in Chelsea, Strand, Holborn, St. George-in-the-East, Limehouse, Poplar, Lee, and Plumstead. Only 3 fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 22; these 3 cases belonged to Marylebone sanitary area. The 133 deaths referred to measles were little more than half the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Paddington, Holborn, Bethnal Green, Poplar, Greenwich, and Plumstead. The 53 fatal cases of scarlet fever were only half the corrected average number; this disease was proportionately most fatal in Poplar sanitary area. The 187 deaths from diphtheria exceeded by 35 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Bethnal Green, St. George-in-the-East, Mile End Old Town, Poplar, Newington, and Plumstead. The 136 fatal cases of whooping-cough were less than a third of the corrected average number; among the various sanitary areas this disease was proportionately most fatal in Clerkenwell, Shoreditch, St. George-in-the-East, Limehouse, Battersea, and Lee. The 76 deaths referred to enteric fever slightly exceeded the corrected average number; this disease showed the highest proportional fatality in Strand and City of London sanitary areas. The 67 fatal cases of diarrhoea were within 3 of the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was nearly 40 per cent. below the average.

Infant mortality in London during January, measured by the proportion of deaths under one year of age to registered births, was equal to 123 per 1000, and was considerably below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hampstead, Stoke Newington, Strand, St. Olave Southwark, Lewisham, and Plumstead; and the highest rates in St. Martin-in-the-Fields, City of London, St. George-in-the-East, St. Saviour Southwark, Woolwich, and Lee.

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—JANUARY, 1895.
(Specially compiled for THE LANCET.)

Sanitary area.	Estimated population in the middle of 1896.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.		
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Krysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhoea.				Total.	Annual rate per 1000 persons living.
LONDON...	4,392,346	53	1119	849	2	427	12	41	483	—	2956	7.0	3	153	83	197	136	—	76	1	67	656	1.6	7691	18.3	193
West Districts.																										
Paddington	122,766	—	15	10	—	9	—	2	8	—	42	3.6	—	9	1	2	1	—	1	—	—	1	15	1.3	212	18.0
Kenington	167,671	—	22	20	—	23	—	—	15	—	82	5.1	—	—	—	—	—	—	—	—	—	—	13	0.8	247	15.4
Hammermith	106,429	—	37	29	—	8	—	—	9	—	60	5.8	—	—	—	—	—	—	—	—	—	14	1.3	171	11.9	
Fulham	117,745	—	18	18	—	11	—	—	8	—	79	7.0	—	—	—	—	—	—	—	—	—	23	2.0	198	17.5	
Chelsea	96,930	—	14	7	—	5	—	—	2	—	58	6.1	—	—	—	—	—	—	—	—	—	24	2.4	186	19.4	
St. George Hanover-square	74,037	—	13	12	—	7	—	—	1	—	32	4.5	—	—	—	—	—	—	—	—	—	10	1.0	102	14.4	
Westminster	64,003	—	11	2	—	1	—	—	1	—	35	6.8	—	—	—	—	—	—	—	—	—	—	0.8	78	15.1	
St. James Westminster	23,149	—	—	—	—	—	—	—	—	—	15	6.8	—	—	—	—	—	—	—	—	—	—	—	—	48	17.2
North Districts.																										
Marylebone	137,392	39	27	23	—	17	—	1	21	—	128	9.7	3	—	—	—	—	—	4	—	—	8	0.6	249	18.9	
Hamstead	77,892	—	20	8	—	12	—	—	6	—	47	6.3	—	—	—	—	—	—	—	—	—	—	0.4	40	10.8	
St. Pancras	233,543	1	76	57	—	19	—	3	44	—	206	9.2	—	—	—	—	—	—	—	—	—	30	1.3	412	18.4	
Islington	335,929	—	96	66	—	25	—	—	32	—	222	6.9	—	—	—	—	—	—	—	—	—	47	1.5	505	15.7	
Stoke Newington	35,214	—	12	8	—	5	—	—	3	—	28	8.3	—	—	—	—	—	—	—	—	—	—	0.9	39	11.5	
Hackney	215,623	—	38	40	—	24	—	4	17	—	124	6.0	—	—	—	—	—	—	—	—	—	25	1.1	319	15.4	
Central Districts.																										
St. Giles	37,554	—	4	4	—	5	—	—	—	—	13	3.6	—	—	—	—	—	—	—	—	—	3	0.8	92	25.5	
St. Martin-in-the-Fields	13,536	—	2	1	—	3	—	—	—	—	6	4.6	—	—	—	—	—	—	—	—	—	2	1.5	26	20.0	
Strand	22,986	—	—	4	—	5	—	—	—	—	9	4.2	—	—	—	—	—	—	—	—	—	5	2.3	64	29.6	
Robbott	32,188	—	6	2	—	1	—	—	5	—	15	4.9	—	—	—	—	—	—	—	—	—	7	2.3	79	25.6	
Clerkenwell	65,036	—	14	6	—	4	—	—	9	—	33	5.3	—	—	—	—	—	—	—	—	—	12	1.9	123	20.5	
St. Luke	40,763	—	9	12	—	6	—	—	5	—	31	7.9	—	—	—	—	—	—	—	—	—	7	1.8	108	27.6	
City of London	53,824	—	3	3	—	—	—	—	3	—	15	4.6	—	—	—	—	—	—	—	—	—	4	1.2	71	21.9	
East Districts.																										
Shoreditch	122,932	—	20	21	—	9	—	—	15	—	65	5.5	—	—	—	—	—	—	—	—	—	24	2.0	237	20.1	
Bethnal Green	130,061	—	43	30	—	2	—	—	24	—	105	8.4	—	—	—	—	—	—	—	—	—	26	2.1	235	18.8	
Whitechapel	76,820	—	21	19	—	2	—	—	11	—	53	7.3	—	—	—	—	—	—	—	—	—	8	1.1	162	22.3	
St. George-in-the-East	48,227	—	12	15	—	4	—	—	4	—	32	7.4	—	—	—	—	—	—	—	—	—	13	3.0	113	26.1	
Lincolns	68,835	—	23	14	—	—	—	—	2	—	49	9.0	—	—	—	—	—	—	—	—	—	15	2.8	145	26.6	
Mile End Old Town	108,443	—	52	29	—	6	—	—	20	—	108	10.4	—	—	—	—	—	—	—	—	—	21	2.0	210	20.2	
Poplar	171,250	1	80	62	—	6	—	—	25	—	168	10.2	—	—	—	—	—	—	—	—	—	58	3.5	352	21.4	
South Districts.																										
St. Saviour Southwark	28,570	—	5	7	—	—	—	—	—	—	12	4.7	—	—	—	—	—	—	—	—	—	1	0.4	63	24.7	
St. George Southwark	60,168	—	10	9	—	10	—	—	5	—	32	5.9	—	—	—	—	—	—	—	—	—	1	1.2	141	24.4	
Newington	119,358	—	36	25	—	14	—	—	12	—	88	7.7	—	—	—	—	—	—	—	—	—	17	1.7	238	20.8	
St. Olave Southwark	13,065	—	2	—	—	1	—	—	1	—	8	4.0	—	—	—	—	—	—	—	—	—	1	0.8	177	22.6	
Bermondsey	83,861	—	19	11	—	10	—	—	2	—	45	5.3	—	—	—	—	—	—	—	—	—	6	0.6	171	22.0	
Rotherhithe	40,713	—	25	14	—	38	—	—	6	—	57	14.9	—	—	—	—	—	—	—	—	—	1	1.3	67	17.2	
Lambeth	294,933	—	42	53	—	38	—	—	30	—	172	6.3	—	—	—	—	—	—	—	—	—	28	1.8	474	17.4	
Battersea	165,130	—	53	42	—	27	—	—	21	—	149	9.4	—	—	—	—	—	—	—	—	—	34	1.8	281	18.7	
Wandsworth	185,956	—	49	47	—	26	—	—	23	—	116	6.5	—	—	—	—	—	—	—	—	—	32	1.6	326	19.4	
Greenwich	252,737	—	34	42	—	30	—	—	16	—	143	7.9	—	—	—	—	—	—	—	—	—	10	1.3	119	15.1	
Camberwell	176,181	—	60	42	—	10	—	—	2	—	12	3.0	—	—	—	—	—	—	—	—	—	8	1.0	130	16.8	
Lewisham (excluding Penze)	82,410	—	4	10	—	7	—	—	2	—	16	3.6	—	—	—	—	—	—	—	—	—	3	0.6	18	19.0	
Lee	38,832	—	6	15	—	5	—	—	2	—	31	5.6	—	—	—	—	—	—	—	—	—	5	1.2	23	16.2	
Plumstead	61,494	—	44	15	—	—	—	—	1	—	62	11.0	—	—	—	—	—	—	—	—	—	22	3.7	112	19.0	
Port of London	—	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

† Including deaths from membranous group.

• Including 41 cases of membranous group.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR F. J. JENCKEN, M.B., A.M.S., arrived at Netley for duty on the 1st inst., and is taken on the strength accordingly. Surgeon-Captain R. H. Moore, M.D., who reported his arrival at Netley on the 8th inst., has been granted leave from the 12th inst. to the 12th prox.

ARMY MEDICAL STAFF.

Surgeon-Captain James H. Daly is placed on temporary half-pay on account of ill-health. The under-mentioned Surgeon-Lieutenants to be Surgeon-Captains:—Edgar M. Pilcher, M.B.; Henry P. Johnson; William G. Bests; Harold A. Stalkart, M.B.; Henry N. Dunn, M.B.; Samuel H. Withers, M.B.; Edward M. Morphew; Ernest C. Anderson; Nicholas Tyacke; Robert H. E. Holt; Lionel A. Mitchell, M.B.; Charles C. Fleming, M.B.; John Hennessey, M.B.; Claude B. Martin, M.B.; George J. Buchanan, M.B.; Charles B. Lawson, M.B.; George E. Hughes; Joseph F. M. Kelly, M.B.; Gilbert S. Crawford; and John D. Alexander, M.B.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Colonel D. O'Connell Raye (Bengal), Officiating Inspector-General of Civil Hospitals, Punjab, are replaced at the disposal of the Military Department. The following officers are transferred:—Surgeon-Lieutenant-Colonel J. McConaghy, Civil Surgeon, from Allahabad to Lucknow; Surgeon-Lieutenant-Colonel A. J. Willcocks, Civil Surgeon, to the Agra district; Surgeon-Major C. P. Lukis, Civil Surgeon, from Agra to Shahjahanpur; Surgeon-Captain J. Morwood, Civil Surgeon, from Shahjahanpur to Basti; and Surgeon-Major F. C. Chatterjee, from Basti to Pilibhit; Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, Civil Surgeon, Lucknow, has retired from the service.

NAVAL MEDICAL SERVICES.

Staff-Surgeon H. S. R. Sparrow is appointed to the Plymouth Division of Marines.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant W. Vernon to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 2nd Cinque Ports (Eastern Division Royal Artillery): Surgeon-Captain F. Shaw resigns his commission. 4th Lancashire: John Cecil Mackmurdo Given, M.D., to be Surgeon-Lieutenant. 5th Lancashire: Douglas John Mayhew Bone, M.B., to be Surgeon-Lieutenant. *Engineers*: 1st Flintshire (Buckley): George Osborne Morgan Lunt, M.B., to be Surgeon-Lieutenant. *Volunteer Infantry Brigade*: Northern Counties Brigade: Surgeon-Lieutenant-Colonel F. B. Mallett, M.D., 2nd Volunteer Battalion the Loyal North Lancashire Regiment, to be Brigade-Surgeon-Lieutenant-Colonel.

"ENTERIC FEVER AT ALDERSHOT."

A correspondent, in a contribution under the above heading to the *Standard* of the 12th inst., calls attention to the various rumours that have been current of late respecting the unhealthiness of Aldershot Camp and the alleged unsatisfactory condition of some of the occupied barracks and quarters and the drainage of the camp, with a view to a question being put to the Secretary of State for War in the House of Commons, so as to elicit information as to the actual state of affairs there. We have from time to time referred to the subject in connexion with the bad and insanitary condition of the sewage farm and other matters, and we alluded last week to the alleged contamination of some of the water supplied to the troops. As regards the latter the correspondent of the *Standard* states that a sample of water taken from the tank supplying the officers' mess of the Tournay Barracks in the Marlborough Lines has been found to be contaminated with animal and vegetable products, and that H.R.H. the Duke of Connaught is reported to have recently forwarded a sample of this water by special messenger to Netley for examination. That the sewage farm for the camp is regarded as a bad one and quite inadequate for the purpose is undoubted, for the Treasury would not otherwise have made a grant of money for providing another in connexion with the Aldershot civil authorities, as has been recently announced; but irrespectively of this there have been so many allegations in different public journals with regard to the barracks themselves, the state of the drainage, and the prevalence of

disease in the camp attributable to preventable causes that it is surely time for the War Minister to enlighten the public as to the truth or otherwise of these rumours.

ABDOMINAL SURGERY ON THE BATTLEFIELD.

We may call the attention of members of the military and naval medical services to the observations of Professor N. Senn, President of the Association of Military Surgeons of the United States and Surgeon-General of the National Guards of Illinois, in regard to this subject, reprinted as a pamphlet from the *St. Louis Clinique* for June, 1894. Professor Senn is firmly convinced that abdominal surgery has a great future before it in military practice, and considers it to be the duty of the military authorities to make ample provision for initiating some well-matured plan of procedure calculated to save life occasionally on the battlefield in cases heretofore beyond the reach of surgery. We are afraid that the conditions of war, the provision of transport, stores, and surgical material, with a *personnel* specially trained to the work, will render abdominal operative surgery extremely difficult of successful accomplishment under such circumstances. Be this as it may, the remarks which Professor Senn makes on penetrating gunshot wounds of the abdomen in regard to the arrest of hæmorrhage and direct treatment of visceral wounds, preparation for laparotomy and operation in the field, together with the practical suggestions he has to offer in order to give effect to his proposals, are very suggestive and well worth reading. The pamphlet is well illustrated.

DISTINGUISHED SERVICE REWARD.

We congratulate Sir Anthony D. Home, V.C., K.C.B., upon having a reward for distinguished service conferred upon him. There can be no doubt about the long and distinguished field services of this officer whilst on the active list of the Army Medical Department, for he took part in the Crimean campaign of 1854-5, in the Indian Mutiny, including the siege and relief of Lucknow, in the China War, the New Zealand War of 1863-65, and in the Ashanti War. It is not easy to beat such a war record as this. Sir Anthony Home, in addition to having earned a V.C. for an exhibition of great personal gallantry during the Indian Mutiny, occupied several very important posts whilst serving in the Medical Department, and was at one time Surgeon-General of Her Majesty's Forces and Principal Medical Officer of India. He also temporarily served on the Medical Department of the Privy Council, and has the reputation of being a man of culture and ability, with an exceptional talent for organisation.

MEDICAL SERVICES IN WAR.

Medical officers of the army may be glad to have their attention directed to a very useful little publication entitled "Notes on Medical Services in War," by Brigade-Surgeon-Lieutenant-Colonel W. H. McNamara (Messrs. Gale and Polden's military series). It sets forth shortly and intelligibly much information which it is necessary for medical officers to know about the requirements of modern war and the peace training necessary to meet them. They cannot readily find this out for themselves, it being nowhere laid down in a succinct and easily accessible form. The author of these "Notes" seems to us to have provided an excellent guide—especially for junior medical officers—at the trifling cost, it may be added, of one shilling.

BACTERIA AND CHIMNEY SMOKE.

Amid the vagaries of the scientific imagination in regard to the methods of diffusion of bacteria and micro-organisms of disease generally the most ingenious and droll seems to be that entertained by the municipal authorities of Bombay who, according to the *Pioneer Mail*, have applied for the services of Mr. E. H. Hankin, the chemical examiner, Government analyst, and bacteriologist for the North-West Provinces and Oudh, to institute an inquiry into the possible influence of chimney smoke in the dissemination of bacteria!

THE POST OF PRINCIPAL MEDICAL OFFICER OF INDIA.

It is currently reported, but it has never been officially announced, so far as we know, that Surgeon-Colonel Gore is to succeed to the appointment of Surgeon-General of Her Majesty's Forces and Principal Medical Officer of India on that post being vacated by the retirement of Surgeon-Major-General Bradshaw, C.B.

Surgeon-Major-General J. Warren, Principal Medical Officer, Bombay Army, will shortly proceed to make his annual inspection of the barracks and hospitals at Aden.

Correspondence.

"Audi alteram partem."

SCHOOL BOARDS AND MEDICAL CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—The question of signing School Board certificates is arriving at a stage in which some concerted action one way or the other appears desirable on the part of the profession; and as the subject is coming up for discussion at our next Hospital Committee I and my colleagues ask for your advice in order that we may adopt a course which shall commend itself to our professional brethren. The School Board for this district in the case of non-attendance at school issue certificates to the parents of the absentee (requiring them to be returned duly filled up and signed by a medical man) of which the following is a copy:—

SCHOOL BOARD FOR WEST HAM.
FORM OF MEDICAL CERTIFICATE.

..... is suffering from 189
and is not now fit to attend school, but will probably be able to return in weeks. The child has been under my care since the 189
(Signed)

* If the child is now fit to attend school have the kindness to strike out the word "not" and the words following "school."
NOTE.—The Board will not be liable for any expense attending the filling up of this certificate.

Doubtless many of these certificates have been filled in and signed gratuitously by medical men as the simplest way of ridding their patients of the irksome visits of the School Board attendance officer, but in the out-patients' room of our hospital we have always declined to sign them, feeling sure that the hospital card which is kept by the patient should be sufficient evidence of illness. Lately, however, a member of the Hospital Committee wrote to the secretary "asking to be informed by whose authority the medical staff refused to sign the above certificate." The matter has been referred to the Staff Committee for report. It has always been our boast that the disease from which our patient is suffering is a private matter between our patient and ourselves. This rule has been broken through by the legislature in the case of the Infectious Diseases (Notification) Act, 1889 in the interests of public health, where the principle is recognised that the medical profession are entitled to a fee from the local sanitary authority for the information supplied. The educational Acts merely cite illness as a legitimate reason for non-attendance at school. Does this imply that the School Board are entitled to know the particular disease which causes the disability? If it does not, then surely the medical man, in filling in the certificate, is committing a breach of professional etiquette. If it does, then the local authority for educational purposes is requiring information in the interest of public education, and should be prepared to pay for it in the same way as the local authority for public health purposes; but quite apart from information our board goes a step further and desires a distinct professional opinion, a professional opinion requiring the greatest development of medical skill—namely, the probable duration of the disease—at the same time intimating to all and sundry its desire to have this professional advice without paying for it. Granting for one moment that the information is desirable, the system of entry of our out-patient department would enable any case of illness to be easily traced throughout the whole course of its attendance, and the information required by the certificate could be supplied to any officer of the School Board appointed to attend the hospital with that object. The cases of bogus illness which the certificates are apparently intended to check must be comparatively few, while the certificates themselves are freely distributed to scholars who do not attend, from which it would appear that the time and skill of the medical profession are to be used in order to save trouble to the school attendance officer, and in order that the School Attendance Committee of the West Ham School Board may render itself efficient by means of the labour of other people. We all here recognise the ability with which the School Board studies the interests of education in this district, and no class is more interested in and desirous of the spread of education than that of medical men, but surely on principle it is time for us to pause when an

important executive department of the country asks us to give it gratuitous advice, and it is proposed that a hospital committee shall recognise the appreciation of the suggestion that it is our duty so to do.

I am, Sirs, yours faithfully,

CHARLES SANDERS.

Romford-road, Stratford, E., Feb. 5th, 1895.

* * We see no reason that the School Board should be informed of the exact medical diagnosis. The fact that under certain circumstances this diagnosis is communicated to the local sanitary authority is sufficient for the safeguarding of public health. We entirely agree with our correspondent that medical services should not be expected by individual or corporation to be given gratuitously, and hope that the hospital committee in question will see the propriety of supporting their medical staff in so reasonable a contention.—ED. L.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—I hold it to be the duty of anyone engaged in a scientific discussion to publicly admit any error of statement which he may have made so soon as his attention has been directed to it. On reading Dr. Pavy's letter and referring again to his book I find that, although his position might have been more clearly stated, I was wrong in supposing that he applied the fermentation test directly to normal urine and not to a product extracted from the urine by a series of chemical processes. I now admit my mistake and express my regret for having made it. Dr. Pavy's comment on my quotation of Sir William Roberts as to the limitation of the fermentation test is unfair and misleading. I have already admitted my error in supposing that Dr. Pavy applied the test to the entire urine and not to an extract therefrom; but while believing the former to have been the method employed it was quite pertinent to indicate that the largest amount of sugar supposed to be present in normal urine could not be shown by the fermentation test. With this simple explanation I leave to the impartial judgment of others whether it is not Dr. Pavy who "has considered himself at liberty to neglect to give consideration to the misleading effects of putting an incomplete representation before your readers."

Again, in suggesting that Dr. Pavy by neutralising his acid fluid by carbonate of soda before he applied the fermentation test was introducing a possible source of error, he facetiously says that I am "indulging in some kind of jest, and that the suggestion borders too much on the absurd to be otherwise than a jest." Dr. Halliburton, however, appears to have thought the suggestion sufficiently reasonable to induce him to perform some experiments, the results of which he recorded in THE LANCET of last week. He found that the acidity of urine to which 1 per cent. of sugar had been added did not prevent fermentation, and that normal acid urine and the same urine neutralised by ammonia did not ferment with yeast, but normal urine neutralised by sodium carbonate with the addition of yeast gave off an abundance of carbonic acid gas. Another tube contained a weak solution of sodium carbonate and yeast, but no urine. Here also gas was given off. One result of my "jest" and of Professor Halliburton's experiments will be that in future Dr. Pavy will not neutralise an acid fluid with sodium carbonate before applying the fermentation test. Since, however, he states that the production of alcohol was ascertained this appears conclusive. It is to be regretted that a scientific discussion cannot be conducted without an unseemly display of personal feeling, and even the suggestion of an "offence to literary probity," to which I do not feel called upon to reply. What would be thought of the doubtful taste displayed if, in referring to Dr. Pavy's persistently ignoring the reducing action of kreatinine, I were to speak of it as "too much bordering on the absurd to be anything but a jest"?

The present position of the question as to the presence of a trace of sugar in normal urine may be briefly stated. Some eminent chemists and physiologists obtain from the urine a substance which has all the characters of glucose; but the

question arises, Does this substance pre-exist in the urine or is it an artificial product of the processes employed for its extraction? This question has not been answered, and it is one which it will be extremely difficult to answer satisfactorily; but surely Dr. Pavy should be the last to deny the possibility that a carbohydrate may be split off from some constituent of normal urine, since throughout his work on "The Physiology of the Carbohydrates" he repeatedly asserts that all the tissues and organs of the animal system are "glucosides," from which by a "cleavage-process" sugar may be separated. Thus by boiling with acids or alkalis he separates sugar from muscle, from beef-tea, from the white and yolk of egg, and from various other proteids. It is remarkable that in Dr. Pavy's book there is no mention of two almost ubiquitous cupric oxide reducing substances, kreatine and kreatinine. It is certain that a portion at least of the reducing action of such a tissue as muscle or such a liquid as blood must be due to one or both of these bodies, yet there is no indication that Dr. Pavy, being aware of this source of error, has been careful to guard against it. The fact that his estimate of the amount of sugar in normal urine is about five times greater than that of the German observers Baisch and Seegen is unquestionably explained by his ignoring kreatinine and attributing to glucose the entire reducing action on cupric oxide which occurs after the removal of uric acid.

The question of the presence of a trace of sugar in normal urine is one of little or no practical importance; but I have the satisfaction of knowing that by the picric acid test, employed as I have described in my last paper,¹ I can with the greatest ease and certainty detect the smallest trace of sugar which has any clinical significance. Let me remind your readers that there are two classes of facts which appear to be inconsistent with the presence of sugar in normal urine: (1) the fact discovered by my son that, after the separation of uric acid and kreatinine by the mercuric chloride process, which does not remove sugar, the filtrate is found to contain no trace of a reducing agent; (2) the experiments described in my paper prove that the entire picric acid reduction² of normal urine is accounted for by the kreatinine contained therein. In no specimen of normal urine have I found a trace of sugar, but I have a dyspeptic friend and patient now seventy-one years old whose urine during the last ten years has occasionally contained sugar varying in amount from one to three grains and a half per ounce. With strict attention to diet he is now apparently in good health, but, thinking it probable that the urine might still contain a trace of sugar, I lately asked him to send me a sample. The specific gravity was 1023. Boiled with picric acid and potash, the reduction colour indicated one grain per ounce, calculated as glucose. The reducing power of kreatinine being less than that of glucose in the proportion of 10 to 12, a solution of kreatinine in the proportion of 1·2 grain per ounce gave the same depth of colour as the urine. When the two liquids, the urine and the solution of kreatinine, were tested after their dilution had been carried beyond the point (one grain in 10,000 minims)³ at which glucose ceases to exert any reducing effect upon picric acid, the urine was visibly paler than the kreatinine solution; and in order to equalise the colour of the two liquids one-fifth of its volume of water was added to the solution of kreatinine in a small graduated tube of the same diameter as that which contained the urine. This analysis shows that 0·8 of the picric acid reduction was due to kreatinine, this being the average amount in normal urine, and 0·2 to glucose. This amount of glucose, one-fifth of a grain per fluid ounce, thus easily determined, is slightly less than Dr. Pavy declares to be present in normal urine. This simple but accurate method of analysis has been rendered possible only by my son's success in separating and obtaining in a pure state the unchanged urinary kreatinine. This work of his, which has hitherto been strangely neglected, will, I venture to say, be soon acknowledged to be the most important contribution to urinary analysis that has been made within the last ten years.

In the numerous communications on the subject of urinary tests which during the last twelve years the Editors of THE LANCET have done me the favour to publish I have had in view two main objects. First, to prove that in picric acid

we have an invaluable quantitative as well as qualitative test for both albumen and sugar. In the pursuance of this object I have from the first had to meet the strenuous opposition of Dr. Pavy with some other opponents of less note.⁴ My second object has been to impress upon the profession the duty of testing the urine of every patient and of every applicant for life insurance.

A few weeks before the death of Sir William Gull, during an interesting half hour's chat with my old friend, though an occasional opponent, he said to me, "You know the true interpretation of *γνώθι σεαυτὸν* is *test your urine*." If every member of the profession would systematically act upon this maxim the result would be that fewer cases of insidious latent disease would remain undiscovered until they have passed into an incurable stage.

I am, Sirs, yours faithfully,

Savile-row, Feb. 12th, 1895.

GEORGE JOHNSON.

To the Editors of THE LANCET.

SIRS,—A transposition of some words in the last paragraph of my letter inserted in your last issue has occurred, whereby a portion of it has been rendered unintelligible. May I ask you, therefore, to make the correction? It refers to von Baisch's statement; and should run as follows: "The existence of sugar in normal urine is susceptible of demonstration by the polarimeter, by Fehling's solution, by the production of glucosazone, evidenced by crystalline form, melting point, and composition, with phenyl-hydrazine, and by fermentation with yeast with the formation of alcohol." Dr. Halliburton has now entered the discussion, and I seek permission to comment upon what he has said. Carrying on the figurative allusion introduced into last week's correspondence he may be spoken of as having undertaken the *role of advocatus Dei*. Let us see whether in this *role* he displays that soundness and clearness of judgment and impartiality upon which he has justly attained so high a reputation in his physiological writings.

Dr. Halliburton begins by misquoting me. This from him I am much surprised at. He says: "I find, however, on referring to p. 181 of his book that the material he operated on was strongly acid and did not ferment with yeast till rendered alkaline with sodium carbonate." I do not state "rendered alkaline." What I do state is "neutralised," and this makes all the difference in relation to the subsequent remarks of Dr. Halliburton on the suggested effects of the presence of sodium carbonate. Turning to my original writing,¹ which is referred to in my book as the basis of my text, brought to a neutral state is the form of expression used. I am constrained here to reproduce what follows about the testing of the neutralised product, as, although written nineteen years ago, it falls appositely into the present discussion and forcibly speaks to the point. "With the product in my possession, procured from healthy urine, I can now show a good reaction with all the tests I have referred to. At the meeting of the Royal Medical and Chirurgical Society of Nov. 23rd, 1875 I exhibited a specimen of the product and applied the various tests before the Fellows present. Moore's test gave a dark brown colouration; the bismuth (Böttger's) test became black; the copper solution gave a copious precipitate of orange yellow reduced oxide; and the fermentation test acted briskly. The process of fermentation was allowed to proceed during the course of the meeting, and at the end of the evening the evolved gas was shown to consist of carbonic acid by the absorbing action of potash, and further the fermented liquid was submitted to distillation and the distilled product allowed to fall into a solution of chromic acid in sulphuric acid, when the change to green, indicative of the presence of alcohol, was obtained."

I referred in my last letter to Sir George Johnson's suggestion about evolved carbonic acid from sodium carbonate by the action of an acid being open to being mistaken for that evolved by fermentation. In the hands of a competent person, and with proper evidence of fermentation afforded, it is utterly impossible for the mistake to be made. The evolution of gas from fermentation does not begin to any significant extent until a supposed evolution from sodium carbonate would have been long over. It then goes on increasing in briskness, so that after, say, half or three-quarters of an hour at a temperature of 90° to 100° F. an

¹ THE LANCET, Jan. 12th, 1895.

² Uric acid which reduces cupric oxide has no reducing action on picric acid.

³ See my paper before referred to.

⁴ See THE LANCET from November, 1882, to December, 1884.

¹ "On the Recognition of Sugar in Healthy Urine," Guy's Hospital Reports for 1876, p. 421.

Infinitely greater amount of activity is observable than previously.

Dr. Halliburton has advanced upon the position taken by Sir George Johnson, and from simply one set of experiments makes bold to suggest, in opposition to all previous knowledge, that yeast has the power of splitting asunder the acid and base of sodium carbonate and leading to the evolution of the former in the form of gas. As an alternative explanation he suggests that the yeast itself may have contained some sugar which was decomposed by the cells in a medium containing sodium carbonate, but he declares himself for the present to be rather inclined to adopt the former hypothesis. I have repeated Dr. Halliburton's experiments without obtaining the slightest corroboration of his proposition that sodium carbonate is responsible for the evolution of gas in the presence of yeast, which is what Dr. Halliburton wants to prove; and I affirm that sodium carbonate is quite the proper thing to use as a neutralising agent under the circumstances. But, as far as my application of the fermentation test to the extracted sugar from healthy urine was concerned, the ground of objection raised by Dr. Halliburton did not exist owing to the fact that virtually there was no sodium carbonate present, the addition of it only having been carried to the point to attain neutralisation. Dr. Halliburton says nothing about having taken the precaution to wash his yeast previous to employment. There is always a certain amount of fermenting impurity present. This doubtless constituted the essential factor connected with his results. Withal, however, there is a want of consistency about them, and to base such a proposition, as Dr. Halliburton has done, upon the few experiments he only claims to have performed is nothing short of an offence to true science. Would Dr. Halliburton have introduced the crude material he has sent to you into his scientific writings? If he reply in the affirmative, all I can say is that with procedure upon such lines it would not, I am of opinion, take long for the good reputation he now possesses to vanish. I ask, then, is Dr. Halliburton to consider himself at liberty to serve up material to you for the medical profession that I venture to think he would not bring forward at any scientific society or introduce into any scientific writing? Notwithstanding the position he has taken, Dr. Halliburton before finishing, admits that he thinks there is enough to convince the impartial observer that a small quantity of glucose is obtainable from normal urine. What more than this is wanted? It is all in reality that I have throughout contended for. Sir George Johnson has based arguments upon the *quantity* he says I have asserted to be present. I have not, however, committed myself to anything absolute upon this point. My statement contains the provisional "if" to meet the doubt that existed in my mind. It runs thus: "If the cupric oxide reduction found to occur [after treatment with the neutral and basic lead acetates] be read off as produced entirely by sugar, the amount of this principle ordinarily existing in healthy urine may be said to stand at about 0.5 or a little over per 1000." 0.5 per 1000 would only give about two-thirds of a gramme, or about ten grains, as the average elimination for an adult subject in the twenty-four hours—a quantity that cannot be looked upon as *per se* having any importance. As long as only Sir George Johnson quoted me imperfectly I did not consider it necessary to take any notice, but Dr. Halliburton at the end of his letter falls into the same imperfect representation. Hence the explanation I have given.

Grosvenor-street, Feb. 13th, 1895.

I am, Sirs, yours faithfully,
F. W. PAVY.

To the Editors of THE LANCET.

SIRS,—I am obliged to Sir George Johnson for explaining some of the points respecting which I, doubtless in common with other of your readers, had misunderstood him. I certainly thought that the confusion of grains per 100 minims with the "percentage weight of sugar to the volume of urine" was due to inadvertence; but now that Sir George Johnson maintains that the expressions are practically identical I must point out the distinction. "Percentage weight in volume" will be understood by most people to mean the number of grains weight of a substance contained in 100 fluid grains of a solution, or in the metric system the grammes of substance per 100 cubic centimetres. But Sir George Johnson applies the term to *grains weight per 100 minims*—that is, to the number of grains per 91.1 fluid grains. Probably Sir George Johnson will be

alone in applying the term "percentage" to this curious relationship. But Sir George Johnson is not even in agreement with himself on the matter, for, while he gives the divisor 4.8 in his recent paper, in the directions issued with his picro saccharometer the correct divisor, 4.375, is directed to be used. Of course I at once accept Sir George Johnson's assurance that he lays stress on the presence of urinary sugar even in the smallest traces, but I feel bound to show how I came to misunderstand his views. In the directions issued with his apparatus it is stated that if the colouration produced is less than the standard the urine is either free from sugar or contains less than one grain per fluid ounce, and that all normal urines reduce picric acid and produce a colouration to a variable extent, ranging from that corresponding to 0.5 up to 1.2 grains of glucose per fluid ounce. It is evident that in presence of an unknown and variable proportion of kreatinine, itself liable to produce a colour corresponding to more than one grain per ounce of glucose, it is quite impossible to estimate small quantities of sugar, or even to detect them. Of course, if the kreatinine be first removed, by Mr. G. Stillingfleet Johnson's or other method, the chief cause of obscurity is removed, but the test thus compulsorily modified does not bear out Sir George Johnson's statement that "for the clinical observer the presence or absence of glycosuria may be decided in about two minutes," "no other method of testing for glycosuria equalling this for the ease and rapidity with which it may be conducted, and for the absolute trustworthiness of the result." I am not traversing the convenience and value of the picric acid test for detecting and roughly estimating sugar in typical cases of glycosuria. As stated in my last letter, while the results are amply sufficient to allow of a judgment as to the progress made by a diabetic patient, they are quite inconclusive as evidence on the vexed question of the presence of traces of sugar in normal urine. As to the liability of picric acid to yield a more or less reddish solution when boiled with liquor potassæ (B.P.), I can only repeat that my experience is at variance with that of Sir George Johnson, and it would be interesting to learn whether the behaviour mentioned by me has been observed by other of your readers.

I am, Sirs, yours faithfully,

Surrey-street, Sheffield, Feb. 11th, 1895.

ALFRED H. ALLEN.

"THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—Having given Sir John Williams and Dr. Playfair an opportunity for further explanation, and having noted that neither of them have made use of it, it appears to be an opportune moment to call attention to a few points. Dr. Playfair speaks of the high motives of the Obstetrical Society and the success of the examination. Sir John Williams advances as an argument against the recent action of the General Medical Council that all the obstetric physicians of note are contingently branded with infamy. He further states that none are better able to train and examine midwives or are better informed of the needs of the poor in their travail. Now, however high motives be, men of the highest respectability and position may be mistaken in the means they adopt to attain their end. The regulations for these examinations, for instance, do not compel the candidates ever to have attended a lying-in woman during the puerperium, and the examiners have gone on examining year after year and have not detected the fact that some women (how many is not known) who have passed the ordeal of examination with success have not done so. That the successful candidates themselves are admittedly ignorant of the rudiments can be shown by the fact that a printed circular was recently sent to the successful candidates warning them that they ought not to undertake cases if they were suffering from such troubles as *ozæna*, suppurating sores, or necrosis of bone. This certainly appears to be a practical acknowledgment of the fact that candidates who are given the diploma which is the cause of the trouble are not to be trusted. To encourage such women to practise amongst the poor may be considered by some to be in the interests of humanity, but because others do not do so there is no obvious reason why their representations should be unheeded. Representations have been made to the effect: 1. That on the Continent, where midwives practise midwifery under strict State control, the

following results are observed—(a) the lowest mortality amongst the lying-in is 5.4 per 1000, the highest 12.3 per 1000, that in our own country being about 4.5; (b) the system has not resulted in removing the unqualified practitioner from the poor, who practises as she does in this country; (c) the midwives do not, as a matter of fact, although required to do so by law, send for the surgeon for the repair of the perineum—in fact, they do not send for medical assistance unless compelled to do so in extremity. 2. That although the Obstetrical Society has over 2000 midwives on its books, these persons are not found to be generally practising amongst the poor unless employed by institutions or charities. 3. That certified midwives have been found guilty of criminal practices.

I will now call attention to the case of the certificated midwife, mentioned in THE LANCET of Feb. 9th, as showing some of the dangers which are likely to be the result of the action of the Obstetrical Society. It appears to me that the obstetricians of note, so far from promoting the interests of humanity, with the best intentions in the world, have done and are doing just the reverse. The Royal College of Physicians of London cannot escape some responsibility in the matter. Just before the meeting of the Select Committee of the House of Commons it issued a report on the subject of midwives' registration. The medical profession, no doubt, knowing the propensity of the College for being at least a quarter of a century behind the times, did not pay much attention to it, but it carried weight before the Select Committee. In this report allusion is made to the fact that in Continental countries midwives practised under State control. The College could not be expected to ascertain the results obtained under such a system; indeed, there was no information available relating to all foreign countries until the return on stillbirths was published, and, as Dr. Farquharson admitted when I was giving evidence before the Select Committee, their committee could not be expected to sit more than two or three times. It could not in view of the composition of the committee and the old-world ways of the College, but it does not follow that a reasonable conclusion could possibly be arrived at by such procedure. If accoucheurs of note will kindly enlighten our darkness on any or all of these points I am sure they will delight an admiring profession, which at present fails entirely to see the reasonableness of their course of action.

I am, Sirs, your obedient servant,
Hatfield, Feb. 10th, 1895. LOVELL DRAGE.

"THE DENTIST'S EDUCATION."

To the Editors of THE LANCET.

SIRS,—The examination of candidates for the L.D.S. of the Royal College of Surgeons of England has long been a grievance with dental teachers. Beyond the introduction of the "practical" portion in 1879 no other improvement of any moment has taken place in the examination since 1872, when written papers were given in addition to the *visu-voce*. All the other licensing corporations—Edinburgh, Glasgow, and Dublin—have their primary and final examinations at two periods of the dental student's career. But in this matter the Royal College of Surgeons of England remained stationary, apparently fixed, notwithstanding the utterances of teachers and others, many times repeated from 1879, urging that the examination in the general subjects of the curriculum—at all events, anatomy and physiology—be taken at a different time from that of certain of the special subjects—dental surgery &c. Not only would such a division of the examination reduce the tendency to "cram," which the existing single examination in all the subjects fosters, but the onus of preparing the candidates in anatomy and physiology would rest upon the teachers of those sciences at the general medical schools and not, as heretofore and at present, upon the tutors of the dental schools—a preposterous anomaly which ought not to exist. Regarding the question of adding another—a third—year to the hospital portion of the dental curriculum referred to by Mr. Newland-Pedley in THE LANCET of Feb. 2nd I shall not discuss it now; but I would emphasise this fact, that the marked superiority of the British over the American dentist's education has hitherto consisted in the better theoretical groundwork and knowledge of the former. Our "cousins" are, however, advancing in this respect and that markedly, and if we are to maintain that higher standard the Royal College of Surgeons of England—the licensing corporation that admits to the pro-

fession the majority of the recruits—should not lose any more time in effecting improvements in the nature and scope of its dental examinations.

I am, Sirs, yours faithfully,

THOMAS GADDES,
late Dean of the National Dental College, London,
and also of the Dental Department of the
University of Denver, U.S.A.

Harrogate, Feb. 6th, 1895.

"THE DEBATE ON THE NATURE AND TREATMENT OF PERITONITIS AT THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—As the author of the paper which has been the occasion of such lively correspondence the last two or three weeks, will you grant me space for a few remarks? Nothing impressed me more at the debate than the antagonism of the views advanced by different speakers even on a mere question of fact; whether, for example, a certain case was or was not a case of peritonitis. The letter of Mr. Emmett in your last week's issue has, to my mind, the right ring about it. The mortality in his obstetric practice, from conditions which he had been wont to regard as due to peritonitis, has diminished since his adoption of the purgative treatment to the vanishing point. My advocacy of the employment of purgatives in peritonitis rests apparently on entirely different grounds from those maintained by Mr. Lawson Tait; but whether one theory or the other, or neither, is correct matters, after all, but little. Truth is not absolute and final, much less can the statement of a truth be. Let the profession put the treatment advocated to a practical test. For the other suggestions in my paper I do earnestly beg the like consideration. Firstly, the regular washing out of the stomach until the bowels can be got to act; secondly, the support of the heart strength and kidney activity by the administration of strychnia and digitalin; and, thirdly, inhalations of oxygen with the object of increasing the oxidising power of the blood.

I am, Sirs, yours obediently,
Queen Anne-street, W., Feb. 11th, 1895. JOHN SHAW.

To the Editors of THE LANCET.

SIRS,—Many, like myself, are grateful to the man who has helped us so much to bring our abdominal operations to a successful termination. It seems to me that it is a very small and cheap notoriety that is to be obtained by attacking a man on what Mr. Richard Emmett well describes as a verbal quibble. Surely Mr. Lawson Tait may be allowed to treat such attacks with contemptuous silence. We all know perfectly well what Mr. Tait means when he says that the removal of distension prevents peritonitis, and if he has at some time expressed this in terms which might lend themselves to a different construction it ill becomes anyone to be continually carping at him. It is not too much to say that many hundreds of lives have been saved by the adoption of Mr. Tait's purgative treatment of distension, and that abdominal surgery owes its position to-day in a great measure to his boldness and teaching.

I am, Sirs, yours faithfully,
Huddersfield, Feb. 13th, 1895. T. KILNER CLARKE.

THE TREATMENT OF DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—I observe that in the comparisons now being drawn between the results of the antitoxin treatment of diphtheria and those obtained by the old methods the writers have referred to only two remedies as being used in combating the disease—namely, the perchloride of iron and chlorate of potassium with hydrochloric acid. I have seen no mention made of a preparation which in my hands has had a marked effect in arresting the exudation of membrane on the fauces. I allude to the euechlorine solution first employed as a remedy for scarlatina anginosa and enlogised by Sir Thomas Watson in his lectures on the Practice of Physio. For more than twenty years I have used the solution, made according to the formula given in the lectures, in cases of diphtheria, and I may say with a success nearly comparable to that obtained with antitoxin serum in the metropolitan hospitals. In fact,

the only instances of its failures I can remember were complicated with laryngeal and tracheal effusions or were primarily cases of membranous croup. It always appeared to me that this solution, which is a most powerful antiseptic, has both a topical and general effect in neutralising the diphtheritic poison, as it not only hastens the detachment of membrane from the throat, but it appears to lessen the chances of secondary affections, whether in the form of paralysis or renal incompetence. But for these effects to be obtained it is necessary that the solution should be freely and frequently administered, so as to keep the fauces as nearly as possible aseptic. And with the same view I have always used sulphurous acid or solutions of carbolic acid either as a spray or to swab the throat with. My estimate of the value of euclochine in diphtheria is supported by the testimony of Mr. T. Schollick, who was for several years medical officer of the Isolation Hospital for this union, and who had opportunities of testing its effects during more than one severe epidemic of this disease. It may seem late to propose a remedy for diphtheria in the face of the remarkable results obtained by the use of antitoxin, which possesses the advantage of controlling the laryngeal and tracheal affections, so often a cause of fatality. But circumstances may even yet arise to render a substitute for the serum a not unwelcome addition to our resources.

I am, Sirs, your obedient servant,

Guildford, Feb. 5th, 1895.

HENRY TAYLOR.

"ENUCLEATION OF HYDATID CYST OF LIVER."

To the Editors of THE LANCET.

SIRS,—While congratulating Mr. Morgan on the satisfactory result in the case of hydatid cyst of the liver published in THE LANCET of Feb. 9th, I am anxious to draw attention to a method of treating these cases which I believe to be an advance on that followed in Mr. Morgan's case. In a paper published in 1891,¹ and again in January this year, I explained the method of treating all cysts which are not suppurating by incision, evacuation of the contents, and parasitic cyst only, and closure of the abdominal wound without drainage. By simply removing the daughter cysts and the parasitic endocyst, which has no organic connexion with the adventitious cyst, and by not making any attempt to remove or separate from surrounding parts the latter fibrous investment, the danger of hæmorrhage is entirely avoided. No doubt some omental cysts can be removed with the fibrous cyst entire, but this should not be attempted in liver cysts. Although this method seems after four years to be but yet little practised in England, it has been extensively adopted in Australia, and from your Australian Correspondent's account of the Medical Society of Victoria's meeting, reported in THE LANCET of Feb. 9th, it would appear, successfully. No doubt it is not always necessary, except in the case of very large cysts, to invert and suture the adventitia as I originally suggested; neither is it, I think, desirable to anchor the evacuated cyst to the parietal peritoneum, as advocated by some Australian surgeons, unless any accidental contamination should have occurred at the operation.—I am, Sirs, yours faithfully,

King-street, Leicester, Feb. 11th, 1895.

C. J. BOND.

AN APPEAL.

To the Editors of THE LANCET.

SIRS,—I desire to make an appeal to the profession on behalf of Mrs. Julia Guthrie, who is a widow of the late Professor Guthrie, at one time President of the Royal College of Surgeons. Mrs. Guthrie was married at St. Ann's, Soho, early in 1856, and was left a widow in that year with one son, who has since died. Mrs. Guthrie was left on the death of her husband unprovided for, but the son was during his lifetime assisted by members of the family. For many years Mrs. Guthrie has been dependent upon her relatives, who have now all died, and she is left alone in the world. A few months ago I was instrumental in obtaining a pension of £18 per annum for Mrs. Guthrie from the British Medical Benevolent Fund, which at the present moment is sufficient to pay for her one room. It is desired to make a provision for her life of the very moderate sum of £1 per week, and as Mrs. Guthrie is nearly seventy-five

years of age I confidently appeal to the profession to assist in this charity. An account has been arranged at the Capital and Counties Bank (head office, Threadneedle-street, E.C.), and any subscription can be paid to them to the "Guthrie Relief Fund" or to the honorary secretary, Mr. R. Brandreth, L.L.D., solicitor, 2, Duke-street, Brighton, of whom any further particulars of Mrs. Guthrie's sad case can be obtained.

I am, Sirs, yours obediently,

ALFRED UPTON, L.R.C.P. Lond., M.R.C.S. Eng.
Lansdowne-place, Hove, Brighton, Feb. 13th, 1895.

"FILARIA LOA."

To the Editors of THE LANCET.

SIRS,—With reference to the filaria loa described in THE LANCET of Oct. 27th, 1894, supposed to be found only in Africa, I would mention the following case. A few weeks ago a horse was brought to me with a filaria moving rapidly about in the ante-chamber of its left eye. The filaria appeared about an inch and a half long, tapering at one end, blunt at the other. I ordered some perchloride of mercury solution to be injected through the cornea to kill it. Unfortunately for the specimen, but fortunately for the horse, when the aqueous escaped through the puncture the filaria also wriggled through, fell on the ground, and was lost, as I was not informed of the result in time to search for it.

I am, Sirs, yours faithfully,

Mission Hospital, Kashmir, Jan. 7th, 1895.

ARTHUR NEVE.

THE MEANS OF CULTIVATING ORGANIC REACTIONS IN AIR AND THEIR RELATION TO ZYMOTIC DISEASE.

To the Editors of THE LANCET.

SIRS,—The indefinite nature of recorded research due to the natural difficulties of demonstrating the facts involved in atmospheric pollution by sewage is exemplified in the following statement made at a recent meeting of the London County Council regarding sewer gas in London. The Main Drainage Committee had the subject under consideration, and when they learned from the experts that sewer gas was free from germs they were very much astonished. They had, however, referred it to the experts to say whether sewer gas was not injurious to public health "in some way" other than through the presence of bacilli. The evidence available in proof of pathogenic origin in organic reactions in air as yet is more valuable in its indications than in actual facts. The effects, however, of organic pollution in air were early noticed by me during very protracted experiments in aerifying sewage and other liquors between 1878 and 1886. These effects, regarded as distinct from odour, were always apparent during the treatment of sewage in any stage of putrefactive ferment, and as possessing a distinct bearing on a subject which I believe requires investigation on its own account.

The first actual evidence of pathogenic origin in air is supplied by the result attending the influenza inquiry instituted by the Local Government Board. It is simple history that a subsequent official inquiry by the Board attributed the malady chiefly to the presence of refractory organic impurities in the air. It was now apparent that the march of events by investigation must soon supply the corroborating details which I felt were required to clearly indicate the direction and means by which a real demonstration of the facts might be conveniently obtained. These details were furnished in the highly important conclusions advanced by Dr. Percy Frankland, F.R.S., dealing with the subject at last year's Congress of the British Association at Nottingham, which, I venture to think, afford the clue to the ultimate results of phenomena described, and also, short of demonstrating the facts, define the modification influence which operates in nature through organic reactions in air. The following quotation from Dr. Frankland's address on Bacteriology at the Congress of the British Association in 1893 contains the conclusions referred to:—1. "The science of bacteriology dates from the introduction by Koch of the method of pure cultures some twelve years ago. Microscopical determinations, at first entirely relied upon, had given way more and more to chemical tests, but the differentiation and identification of 'particular species' remain very difficult, and, indeed, become more and more so." Comment is needless, beyond asking the question, Why, unless a modifying

¹ Brit. Med. Jour., April 7th, 1891.

influence expands in sympathy with ever-increasing volume of putrefactive sewage, should identification of "particular species" remain with experience very difficult, and, indeed, become "more and more so"? 2. "By educational culture the character of an organism may be quite changed. On the other hand, the virulence can be increased, although as yet no pathogenic organism 'has been raised' from non-pathogenic, but as 'similar modification processes' evidently go on in nature we must grant that bacilli acquire new characteristics under new conditions." The question here is, Does chemistry or nature itself in other direction afford us the study of similar conditions to those prevailing in sewers? If not, we must admit that organic life exposed to such influence must adapt its function to surroundings. How this adaptation works is the very essence of the actual demonstration required. 3. "We have real anthrax and an exceedingly similar innocuous modification, both occurring in the soil. Many toxic forms—cholera, typhus, diphtheria bacilli—have pseudo-forms. In certain cases the modification may be due to the exclusion or exhaustion of oxygen. Assuming fermentation in presence of air to be normal, as in the early days of Pasteur, a modified reaction can apparently proceed when no more oxygen is at disposal, so that we have also anaerobic fermentation." We have here the modification influence defined, and also the answer to both the questions asked; whilst, as regards the influence exerted by organic impurity in air, we find that all available evidence supports the view that an actual demonstration of facts of the first importance to the medical profession and the public at large is alike possible and much to be desired.

In recent experiments made with a special form of apparatus suggested by results described I have, I believe, secured the means of convenient observation of sewage reactions in every form, produced under precisely the same natural conditions which operate in town sewers under variable conditions of time, temperature, and air-supply. As regards the practical aspect, since the introduction of Koch's method of culture I have held the belief that by securing control of the nature of fermentation in sewage we secure the only effectual means of reducing that organic pollution of the atmosphere of populations which all available evidence proves the public interest demands. This control I have secured by means of halogen disinfection through the medium of air-supply. It will be remembered that similar means are relied upon to secure the disinfection of organic emanations escaping at manholes, &c., connected with the system of the London main sewers. In that case sulphurous acid is, I believe, the agent employed; the cost, however, in perhaps all other cases is prohibitive. On the other hand, by using the sulphurous vapours (given off by the storage batteries used in electric supply), in conjunction with air and complete removal of the volatile by-products of sewage, we obtain effectual control over the fermentive course, even with fluctuations in the amount of organic matter as high as 800 per cent. The fluctuations in London are doubtless of much wider range and serve to show the futility of relying on any practicable degree of aeration sufficient to meet the necessities of the case in which the oxygen required for normal course may vary in an hour between two and ten or even more grains per gallon. In such fluctuations as named we probably see the first cause of putrefactive ferment in town sewers, which ends in producing influences under which we must grant that bacilli acquire new characteristics. It is equally probable that with exhaustion of oxygen a modification begins by which the normal functions of organisms become changed. Pathology has taught us much regarding the life history of germs attending specific forms of disease, but the question still remains, How come these disease germs into existence? I am, Sirs, yours faithfully,

Sheffield.

J. HILL-HARTLAND.

* * We publish this letter in view of the interest of this subject, but we have been compelled to reduce the great length of the original communication.—ED. L.

"THE REMUNERATION OF THE RESIDENT OFFICERS OF ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—If you will kindly allow me a little space I should like to reply to your correspondent "Fair Pay" in the

matter of his letter about the pay of the resident officers at St. Bartholomew's. What are his facts: (1) the residents get £25 per annum; (2) during the six months they are in residence they have to pay for their food. These are perfectly correct, but "Fair Pay" might remember that wages or salary are regulated by the laws of supply and demand. There is no doubt that even if the residents had to pay a fee for holding the resident appointments there would be no lack of candidates, so that under the present régime there is something to be thankful for.

Now I am certain that no one who has been on the junior staff of St. Bartholomew's will deny that the experience he gained, and, to use a colloquialism, the general good time he had, were worth far more than the £50 which he spent on his food. Whether he were in the service of the hospital or not, he would have to eat, for the average man out of whom a resident officer is made is of coarser mould than Eve Níegen, the lady who lived on the smell of flowers. Finally, if "Fair Pay" has anything to do with St. Bartholomew's, why does not he say so? If he has not, he appears to be interfering in a matter which cannot concern him—unless, indeed, he is the parent of a house physician or surgeon.

I am, Sirs, yours faithfully,

AN OLD HOUSE SURGEON OF ST. BARTHOLOMEW'S.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Recent Severe Weather.

THE severity of the frost here may be judged by the appearance of ice in the Mersey. Fourteen years ago the river was in parts frozen over, a most unusual sight, and again has this sight been witnessed. The training ships have been as icebound as if they had been in Arctic regions, and ferry steamers have had to plough their way through the ice. As many as 15° F. of frost have been registered in the city itself, while in the suburbs an even lower temperature has been reached.

The Medical Charities.

During the months of January and February the annual meetings of all the medical charities are held. These all show a continuation and aggravation of the state of chronic bankruptcy into which our hospitals and dispensaries are permitted to languish. The Royal Infirmary owes its bankers £3000, the Northern Hospital owes £4000, and the Royal Southern Hospital has a balance on the wrong side of £5000. Thus a total of £12,000 will be required to free these three institutions from debt, and then the struggle between an insufficient income and a heavy expenditure will begin again. Out of the half million inhabitants of this city not more than ten thousand at the very most are annual subscribers to the medical charities. A prominent citizen remarked at the annual meeting of the Royal Southern Hospital yesterday that with a few honourable exceptions the shopkeepers did not support the charities as they deserved, and from what has just been stated it must be obvious that there is plenty of room for improvement.

The Lord Mayor and the Hospitals.

The Lord Mayor (Mr. Watts) has shown his interest in the various hospitals, not only by presiding at the annual meetings (except at the Royal Infirmary, when Lord Derby presided), but also by visiting them. In addition to the hospitals already alluded to his lordship has visited the Hospital for Consumption and the Liverpool Eye and Ear Infirmary. These visits from the chief magistrate are very greatly appreciated.

Salting the Streets: the Removal of Snow and the Unemployed.

The question as to whether the salting of the streets after snowstorms is or is not a desirable practice has again come to the fore. On the one hand, it is contended that it is cruel to horses and barefooted persons, and also to the public generally, since it intensifies the coldness of the atmosphere. It is urged, on the other hand, that in such a city as this, with 300 miles of streets, it would be impossible to remove the snow in any other way. The usual scavenging staff was augmented by casual helpers, but only a very small proportion of the number required applied out of the alleged large number of unemployed. It is to be feared that too many of these men prefer idling and hawking their grievances in the streets to honest efforts to obtain work, forgetting or ignoring that such conduct may end in a reappearance of typhus fever.

The Alleged Compulsory Vaccination of Liverpool Firemen.

A paragraph appeared in the local papers stating that a fire had taken place at the Small-pox Hospital and that all the members of the police fire brigade who were present had to submit to compulsory vaccination. In consequence of this Mr. Hopwood asked the question in the House of Commons of the Parliamentary Secretary of the Board of Trade on Tuesday last. Sir Walter Foster answered that there was no compulsion, nor could there be. The idea of forty or fifty policemen being compulsorily vaccinated by the resident medical staff of a hospital would be ludicrous to anyone except the learned recorder of Liverpool, whose sense of the humorous is absorbed in his chronic horror of compulsion. The hospital had at the time cases of small-pox more or less severe, some of the firemen had never been vaccinated since infancy, none had been done recently, and many fully intended being vaccinated in accordance with the suggestion of the Watch Committee, noticed in THE LANCET of last Saturday, p. 352. To have permitted these men to return to their homes from an infected centre without strongly urging the best protection which they could have would have been gross neglect on the part of the hospital staff. All the men's arms have taken extremely well; not one has been infected with small-pox nor have incurred any ill-effects beyond those incidental to vaccination, and many members of the police force are availing themselves of the opportunity afforded to them of being revaccinated.

Feb. 13th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Durham.

DEAN KITCHIN has come into residence, and as warden is taking a very active interest in all that concerns the University. A scheme of extension lectures, among other undertakings, has been elaborated for the benefit of the northern counties, in which the professors in the various faculties at Durham and at Newcastle are all to participate, so that there is hardly any subject, literary or scientific, which will not be dealt with. The scheme is an ambitious one, but there is every reason to believe that it will be successfully carried out and fully appreciated.

Newcastle-upon-Tyne Royal Infirmary.

The annual meeting of the infirmary governors was held on Feb. 7th, when the reports for the past year were read. The expenditure has exceeded the income by £3000, due chiefly to a falling off in contributions and dividends. The average cost of each in-patient has been £4 0s 11d., and the gross cost of each occupied bed £52 16s. 0d. The medical report is a satisfactory one, showing a considerable increase in the number of patients treated in all departments. 1754 operations were performed. The abdomen was opened 155 times and 29 patients died. The kidney was removed 4 times with 1 death. Ten cases of stone in the bladder were treated without a death. Sixty-eight operations were performed for the radical cure of hernia with 1 death, and 14 for strangulated hernia with 3 deaths. Phelps's operation for club-foot was performed 6 times with most satisfactory results. There were 68 major amputations with 8 deaths, all but one within a few hours from shock and loss of blood; one occurred from pyæmia, the patient being septic on admission and at the time of operation. There were 25 excisions of joints without a death. The staff call attention to the want of a new infirmary in the following terms:—"The work of the infirmary is each year carried on with increasing difficulty. The house is old and inconvenient. The accommodation for in-patients is inadequate. The out-patient department is as bad as it can be. There is not living room for the staff of nurses in the building. All these and other defects render the administration difficult and expensive, and emphasise the resolution passed by the governors at the last annual meeting that a new hospital, on another site, is urgently required. The staff are unanimous as to the site on which a new infirmary can be built most advantageously."

University of Durham College of Medicine.

Messrs. Hargreaves and Joblin, trustees of the estate of the late Professor Johnson, some time Professor of Chemistry in the University of Durham, have generously presented the

sum of £200 to the College of Medicine for the purpose of providing additional physiological instruments.

Newcastle-upon-Tyne Lying-in Hospital.

The annual meeting of governors of this charity was held in the hospital, New Bridge-street, on Jan. 30th, the Rev. J. Wilkinson, vicar of St. Peter's, being in the chair. The report of the committee showed a large increase of both in- and out-patients during the past year, 348 women having received the benefit of the charity. The treasurer's report showed a slight falling off in the annual subscriptions in 1894, but the year closed with a balance of £13 12s. 2d. to the credit of the charity. A vote of thanks to the chairman concluded the proceedings. The credit of the good financial position of the above charity is due mainly to the business capacity of Mr. Neatham, the honorary secretary.

The Medical Defence Union, Limited.

A meeting of the profession was held on Feb. 7th in the council chamber of the University of Durham College of Medicine. Professor Arnison, one of the vice-presidents, was in the chair. Mr. Victor Horsley pointed out the objects of the society and the claims for support it had upon the profession. In the course of his remarks he said the society would like to undertake the prosecution of quacks, but that it had not the means wherewith to do so. He suggested that the British Medical Association, out of its large and yearly increasing surplus, might be able and willing to give of its abundance a substantial donation to the Defence Union for this purpose. It was agreed by a large majority to refer this question to the Northern Branch of the British Medical Association for consideration. The determination was not arrived at unanimously. A prominent member of the British Medical Association expressed his opinion that it was undesirable for the two associations to be associated, and advanced arguments in which there is undoubtedly much force.

The Newcastle-upon-Tyne Clinical Society.

This society held an extraordinary meeting in the Medicine Theatre of the College of Medicine on Feb. 7th. The President, Professor G. R. Murray, occupied the chair, and introduced Mr. Victor Horsley, who delivered a most interesting and instructive lecture to a large and appreciative audience on Oxydisation in the Tissues. The lecture was illustrated by an experiment and by lantern slides. In the evening the annual dinner was held in the Hôtel Métropole. Nearly 100 members and guests assembled, among whom were Mr. V. Horsley, the Sheriff, the President of the Northumberland and Durham Medical Society, and others. Professor Murray occupied the chair. An excellent dinner was provided, and a very pleasant evening spent.

The Toy Pistol again.

A youth is under treatment in the Royal Infirmary, Newcastle-upon-Tyne, owing to a pistol accident. He was amusing himself in his bedroom firing at a mark. The pistol was a breechloading one, and to open the breech it was necessary to turn the barrel at a right angle, the muzzle being directed towards the person loading it. Not infrequently the pistol misfired, and it was after such an occurrence, the cartridge being *in situ* but unexploded, that in the attempt to extract it the breech was opened. Immediately the cartridge exploded, the ball entering the lad's chest, which was bare just over the heart. On admission, nearly three weeks after the occurrence, the lad was in a very critical condition, the left chest being filled with pus. He had never spat blood, and did not suffer much inconvenience till fluid accumulated. The chest has been incised and the lad is progressing satisfactorily. How long are these dangerous weapons to be legally sold as toys?

Newcastle-upon-Tyne, Feb. 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Discussion on Cardiac Therapeutics at the Medico-Chirurgical Society, Edinburgh.

AT the meeting of this society last week a discussion on Cardiac Therapeutics was inaugurated. There was a considerable attendance of members and a goodly number of senior students, whose presence made the room somewhat crowded and the atmosphere oppressive and unhygienic.

The opening of the discussion devolved upon Dr. Fraser, Professor of Materia Medica and Therapeutics and an infirmity physician. It was, of course, an admirable opportunity for a masterly statement of the present position of the subject from a purely scientific standpoint, as well as from a practical one, tested and weighed by the results of a considerable experience in hospital practice. The opener, however, devoted himself almost exclusively to strophanthus. Its pharmacological action was indicated, and its practical use was illustrated by a number of hospital cases in which he had used it with success. The insistence on the merit of one drug would have been more effective had the discussion been one on strophanthus; as an introduction to the larger subject it necessarily was less so. Dr. Fraser was followed by Dr. G. W. Balfour, who expressed his determined adherence to digitalis. The discussion was postponed for a fortnight, and Dr. Bramwell, Dr. Russell, Dr. Gibson, and others are expected to speak at the next meeting.

President's Reception at the Royal College of Physicians of Edinburgh.

Last Friday night Professor Gairdner and Mrs. Gairdner gave a reception to the Fellows of the Royal College of Physicians in the College rooms in Queen-street. The rooms are large, and as few save Fellows and the ladies who accompanied them were present they had a somewhat bare and empty look. Much, however, had been arranged for the edification and entertainment of the guests. In addition to a good supply of music there were interesting demonstrations by Professor Rutherford, Dr. Carlier, and Dr. Gustave Mann, while Professor McKendrick had sent a phonograph which provided a variety entertainment in itself.

Health of Edinburgh.

Amongst the deaths in Edinburgh last week were two from small-pox. Three fresh cases of this disease were reported. Measles have reached an epidemic level, 580 cases having been reported during the week.

Glasgow Royal Infirmary.

The recently issued annual report of this institution—interesting as being the hundredth annual publication of its kind—shows that during the year 1894 the admissions were 5527; deaths, 540; mortality, 9.7 per cent., or, deducting 122 deaths occurring within forty-eight hours of admission, 7.7 per cent.; average residence of in-door patients, thirty-five days. The cost of each fully occupied bed was £56 2s. 8d., and the average cost of each patient treated to a conclusion, £5 8s. 11d. In the out-door department 55 104 consultations were held. The total revenue of the infirmary for the year was £30,505 15s. 6d.; total expenditure, £30,143 12s. 2d.; giving a surplus on the year's work of £362 3s. 4d. The managers intend to extend the pathological department and spend on the project £8000, for which sum they appeal to all those interested in the welfare and efficiency of the infirmary. For a long time everyone has been dissatisfied with the accommodation provided for the pathological department, which has really undergone very little change since it was first organised, while the house at large has been altered and extended in every way. The managers also acknowledge a complete electrical plant, consisting of gas-engine, dynamo, and all the accessories required for surgical and medical treatment and diagnosis, together with an electric lantern microscope for teaching purposes.

Public Health in Glasgow.

The death-rate in Glasgow for the past week has risen to 32 per 1000, an increase due to the present extreme cold. There has been but one case of small-pox reported since last Wednesday (Feb. 6th), while there have been dismissed from hospital, making a net decrease of two cases, there being now but 37 in Belvidere Fever Hospital.

Glasgow: Inconveniences caused by the Frost.

The Victoria Infirmary is entirely dependent on its boilers and engines for cooking, lighting (electric, there being no gas-fittings in the building), heating, and ventilation, the latter being managed on the "propulsion" system, whereby washed and warmed air is driven through the wards. When, therefore, the engines stopped for want of water for the boilers, the feed-pipe from the water main being frozen, the infirmary was at once plunged into difficulties of a very mixed kind. These have been got over for the time being by having a steam fire-engine from the city to pump water to the infirmary from the nearest hydrants. This breakdown,

however, and the serious consequences to which it might easily have given rise, teaches the lesson that in an institution of the kind it is not good policy to trust to one source of energy for the performance of so many functions.

Feb. 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Dublin: Quarterly Report.

DURING the quarter ended December last the births registered in the Dublin registration district amounted to 2314, or 26.5, and the deaths to 2047, or 23.4 per 1000. The number of deaths from zymotic diseases amounted to 250, or 26 over the number for the preceding quarter. Of these, small-pox caused 51 deaths, of whom 27 were unvaccinated, 21 had been vaccinated, 1 infant was vaccinated too late, and in 2 cases there was no statement as to vaccination. As regards the ages of the persons who died from small-pox and their relation to the protective power of vaccination, it is to be noted that all the 9 children under five years of age were unprotected by vaccination (1 having been vaccinated too late), and of 42 persons above five years of age, 19 were unvaccinated and 21 were vaccinated; all of those vaccinated except 1 (aged six) were over seven years of age, the period at which the protective power of primary vaccination is known to be weakened. Enteric fever caused 45 deaths, or 10 over the number for the preceding quarter, typhus fever only 1 death, and simple continued fever also 1 only, scarlet fever caused 11 deaths, being 33 under the average, influenza 15 deaths, and diarrhoea and dysentery 55.

Richmond Lunatic Asylum.

At a meeting of the governors last Tuesday Mr. C. Norman, resident medical superintendent, reported that there were at present in the asylum 715 male patients and 765 female patients, or a total of 1480. These numbers were respectively 210, 170, and 380 above the nominal limit of accommodation. Since the last meeting of the board five fresh cases of dysentery had occurred in the asylum and two deaths had taken place.

The Battle of the Clubs at Cork.

A meeting of the City of Cork Branch of Oddfellows was held last week. The proceedings, for obvious reasons, took place inside closed doors, and only an official communication appeared in the local press, yet the amount of information allowed to filter through is well worth recording as illustrating the frame of mind of many of the club members, and demonstrates pretty clearly the slow, but sure, crystallising process which is taking place. One of the brotherhood moved a resolution—of which he had given notice—that a member of the lodge need not contribute to the fund for the medical officer if he did not choose to do so. In other words, the proposition was that all should subscribe to the fund for relieving sick members and burying deceased ones, but that if any member did not care to engage the services of the newly appointed medical man he would be under no obligation to contribute to his salary. This proposition very nearly commended itself to a majority of those present. The resolution was finally rejected, but only by the casting vote of the chairman. That decision clearly meant that fully one-half of those in the room were anxious to be at liberty to call in any medical man they might select. What may be the action of this thoughtful half remains to be seen, but to-day large posters are exhibited announcing that a meeting is to be held on the 21st inst. to consider the dispute. As it is ostentatiously mentioned that there will be free admission I have no doubt many of the affluent members of the clubs will find no difficulty in putting in an appearance, and the medical men may be prepared for the ordinary amount of oratorical vituperation. But any thoughtful observer will ask what is the need for this meeting at all. The practitioners of the city considered the services of a medical man ought not to be offered to the clubs at a lower rate than certain specified prices. The clubs thought differently, and after searching north and south, east and west, they find some six or eight members of the medical profession ready to accept their terms. Out of this group each recalcitrant club and association has made its selection. If happy in their choice, why seek to evoke public sympathy in their favour? The local practitioners see no necessity for

rushing into the market-place. Deeds, not words, is their motto. They are quite satisfied as to the justice of their action, so they simply rest on their oars and are quiet observers of current events. Since the snow commenced to spread its white mantle over the earth one of the imported practitioners finds himself famous in the annals of one of the local newspapers. A paragraph seriously announced that the medical man was passing the College on his way to visit a patient when he was seriously assaulted with snowballs by students. The students, however, give an entirely different version. They state that they were amusing themselves and at the same time endeavouring to keep up their temperature by throwing snowballs at each other. The medical man happened to pass along, and, believing one of the snowballs was intended for him, rushed at one of the students and struck him so violently with a stick that it was broken across his back. The student turned round, and, though unarmed, went for his opponent so vigorously that the latter's practice was immediately increased to the extent of necessitating the prescribing for a case of epistaxis in propria persona. One local print is, of course, quite satisfied that the whole thing was premeditated. The local medical men knew the imported practitioner had a patient in that direction. Then they procured a fall of snow, and, knowing from their own experience that embryo medical men could not amuse themselves without being vicious, they gave the hint to the students to be ready for action at the crucial moment. Such is the farrago to which we are now accustomed and at which we can afford to smile.

The Belfast Asylum.

At the monthly meeting of the governors, held on Feb. 11th, the medical superintendent reported that the house was overcrowded, there being 645 patients in residence, and it was necessary to supply more bedsteads in the corridors for the accommodation of the patients admitted. The committee appointed to investigate the question of the lighting of the new projected asylum (Purdysturn House) found that gas would involve an expenditure of £100 less annually than electricity, and consequently they recommended its adoption. Regarding the sewage question, there was a difference of opinion amongst the governors. The subcommittee agreed with the architects in advising the adoption of the international system of sewage purification. Some members of the board strongly objected to this system of sewage on the ground that it had broken down when tried in London, and finally it was decided to ask the board of control to give special attention to, and to transmit their views on, the subject, and to say if they thought it suitable for Purdysturn Asylum or whether they can suggest any better plan.

The Ulster Hospital for Women and Children.

At the annual meeting of the friends of this charity, held on Jan. 31st, it was stated that there had been 8624 extern patients during the year—7049 children and 1575 women. There were 211 intern cases. An intern maternity ward has also been fitted up, which has been found of much value. Dr. Mitchell has been appointed a member of the staff in place of Dr. John Scott (deceased).

Mr. O'Gorman, L.R.C.S. Irel., Ballyragget, has been placed on the Commission of the Peace for the county of Kilkenny.

Mr. W. K. Parry, A.M., has been appointed Examiner in Practical Sanitary Engineering to Trinity College, Dublin.

Feb. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Etiology of Dysentery.

M. DE SILVESTRI¹ relates the results of his recent researches into the nature of dysentery based upon bacteriological examination of the characteristic stools, which were of a lemon-yellow colour, liquid, had floating in them lumps of blood-stained mucus, and emitted a very marked faecal odour. The microscope brought to view particles of undigested food, débris of epithelial cells, red blood-corpuscles, and numerous bacteria, amongst which a diplococcus predominated largely.

¹ Société de Biologie, Feb. 2nd.

A culture yielded a number of colonies composed almost exclusively of the diplococcus referred to above. This micro-organism is round, stains with difficulty, is not coloured by Gram's method, and does not liquefy gelatine. It grows rapidly (in eight hours) in different media. A culture of the diplococcus mixed with sterilised water and injected per rectum into a dog and two cats determined diarrhoea quite recalling the characteristic features of that of dysentery, the stools containing the diplococcus. M. de Silvestri opines that there exist several varieties of dysentery due to different specific micro-parasites, but that the *origo mali* in the epidemic observed by him was the diplococcus in question.

The Temperature in Experimental Diptheria.

MM. Courmont and Doyon² have been engaged in studying the oscillations of temperature in the dog, the rabbit, and the guinea-pig inoculated with diphtheria toxins. With a small dose hypothermia lasting from five to six days appears after an interval of eighteen hours. The animal survives, but is paralysed. A larger dose determines at first a fall of 1° to 2° C., lasting about fifteen hours, when a further fall suddenly occurs, and the animal dies in one, two, or three days, with a rectal temperature of only 30° or even 25° C. A still stronger dose (50 c.c.) brings about hypothermia after a reduced incubatory period of two or three hours, and the animal quickly succumbs. Death may occur even before the onset of hypothermia. From these experiments it would appear that the diphtheria toxine is endowed with hypothermic properties and that the fall of temperature is always preceded by an incubatory period varying, according to the dose administered, from two to eighteen hours. The fall is quicker or slower according as the medium in which the animal is placed is cold or warm. That the hypothermia is not the cause of death is proved by the fact that it supervenes as rapidly in animals placed in an oven at 40° C. as in those kept in the cold and whose rectal temperature has descended before death to 25° C.

The New Premises of the Academy of Medicine.

I have on several occasions referred to the insufficient accommodation afforded by the dingy building in the Rue des Saints-Pères, which, although only a *dépendance* of the Charité Hospital, is the home of the learned body, the Paris Academy of Medicine. In the near future the Academy will be transferred to more commodious quarters in the Rue Bonaparte, near the École des Beaux-Arts. Here an unoccupied building belonging to the Assistance Publique has been allotted to the corporation, who can only be congratulated on the long-desired change.

"English as she is wrote."

Summoned to attend the child of one of my patients the other day, I found that, alarmed by baby's serious state, a French *confrère* had already been sent for and left directions which a neighbouring French druggist had translated for the benefit of the English nurse in charge. The document is too amusing to be passed over, and I therefore make no apology for transcribing it, together with the necessary explanation within parentheses supplied by myself: 1. To distend the children of other children. (To isolate the baby from her sister.) 2. Not many flower in the eat and not give him that milk prepared. (Suppress farinaceous food and also the milk as hitherto prepared.) 3. Before the col of children use éponge warm." (Apply a hot sponge to the child's throat.) 4. Every body that have occupation of children wild vbach the hands in liquor of van Swieten. (Every person coming in contact with the child to wash his hands in van Swieten's solution.) 5. All the linen deteriorated shall be wbach in solution before londres. (All soiled linen to be washed in the solution before being sent to the laundress.)

Death of Professor Regnaud.

The death is announced of M. Regnaud, Honorary Professor of the Paris Faculty of Medicine. Before he had reached the age-limit necessitating retirement he occupied for many years the chair of Pharmacology. I well remember how, at the first examination I passed at the Faculty, he propounded to me, in his own genial fashion, a question on induction, and how he exclaimed, "Votre compatriote Faraday était, à mon avis, le plus grand savant qui ait jamais existé. J'ai eu l'honneur de lui serrer la main à Lyon en 18—."

Feb. 12th.

² Loc. cit.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Czynski Trial.

A MOST remarkable case was brought before a jury of Munich some weeks ago. A Pole, Czynski by name, gave in several German towns hypnotic stances which were largely attended by sick people. In the course of these performances he made the acquaintance of a certain rich and noble spinster who consulted him at first unromantically for stomach affection. Later their relations became more intimate, and finally, it appears, the lady became Czynski's mistress. He, it seems, was not yet divorced from his first wife, and a marriage ceremony, which he went through with his victim by the usual help of a friend in the rôle of clergyman, was a sham. At the instance of the lady's brother Czynski was arrested on a charge of "crime against morality." The public attorney's indictment accused the prisoner of having violated the lady while in a state of hypnosis. The defendant denied the crime, and asserted that the lady loved him and had married him of her own free will. Czynski's counsel submitted that it would not be possible to deprive a person of will by hypnosis, and medical men were summoned as experts to give evidence to this end. Professor Fuchs of the University of Bonn asserted that hypnosis was unable to annihilate the freedom of will. He had seen hypnotised people in Paris and was persuaded that they had done what the operator ordered them either to oblige him or to pose as interesting. In short, he held all hypnotism to be a farce. Professor Preyer and Professor Hirt declared that they were of an entirely contrary opinion, but they also said that the Paris experiments quoted by Professor Fuchs did not prove anything, as nearly all the mediums there were drilled for hypnotic performances. The jury finally acquitted Czynski of having violated the lady while in a state of hypnosis, but condemned him to three years' imprisonment for frauds in connexion with the false marriage. Professor Preyer has given his opinion of the verdict in the *Deutsche Medicinische Wochenschrift*. He declares himself to be fortified in his view that Czynski not only hypnotised his victim but also her companion, who had acted as witness at the wedding ceremony, and even the man who impersonated the clergyman. He has come to this result after examination of their signatures to the marriage register, which, he believes, offer some very characteristic signs. He also alludes to a condition where the person is not really reduced to hypnotic somnolence, but is merely influenced by the strong will of the operator. This state, which he has sometimes seen, especially in people of a weak character, he terms "abulia." The questions involved being of great medico-legal and scientific interest, the various professors called as experts intend to collaborate in producing a pamphlet on the case.

The Number of Medical Men in Germany.

The number of German medical men increases from year to year. At the end of 1894 there were 22,287 medical men, whilst there were 21,621 in 1893, and 16,864 only in 1887. Of these, 1834 live in Berlin, 438 in Munich, 355 in Breslau, 314 in Leipzig, 236 in Hamburg, 233 in Frankfurt, and 220 in Strasburg. There are now on an average 4.5 medical men for 10,000 inhabitants, in 1887 there being only 3.6. The number of dentists equally has increased from 915 in 1893 to 1007 in 1894.

How should the Surgeon clean his Hands?

In Germany the usual method for surgeons to clean their hands is that of Fürbringer. It consists in brushing the hands and nails with soap and hot water, then dipping them in an 80 per cent. alcohol solution, and finally washing with a 2 per cent. sublimate of mercury, each part of this proceeding to last one minute. Recently Reinecke of Leipzig has asserted that a sure disinfection of the hands may be obtained by rubbing them with alcohol only and washing afterwards with pure sterilised water. The alcohol owes its power to its action in dissolving the sebaceous substance on the surface of the skin and enabling the bacteria which adhere to it to be easily washed away. Instead of brushes, which are difficult to clean and which irritate the hands, he recommends loofah sponges. Another reformer in this matter is Dr. Schleich, who rejects all brushing, and only washes the hands with a soap invented by himself, which consists of

domestic soap (one part), marble powder (three parts), and lysol (4 per cent. of the whole). This soap is said to clean less by chemical than by mechanical means, the fine marble powder penetrating into all the folds of the skin and rubbing away all dirt and detritus.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Antitoxin Treatment of Diphtheria in Russia.

THE main source of supply of the diphtheria antitoxin in St. Petersburg is the Imperial Institute of Experimental Medicine. Serum derived from German firms is also on sale in the druggists' shops in the city. The serum which the Institute supplies is partly obtained from Germany and partly prepared in the laboratories of the Institute. In the first two weeks of the present year (Old Style) the Institute sold as many as 2500 bottles of the serum, for which they received some 8500 roubles (nearly £900 at the present rate of exchange). The price of the antitoxin in St. Petersburg appears to be fairly constant, but in some provincial towns, it is worthy of note, where it is on sale at druggists' shops, the price varies enormously. For instance, in Kharkof some druggists charge 5 roubles while others charge 20 roubles for exactly the same quantity of serum. The profit in the latter case must be considerable. But little has been published yet as to the clinical results obtained in Russia by the use of the antitoxin in the treatment of diphtheria. At a meeting of the Society of Specialists in the Diseases of Children Dr. Rauchfus reported thirty completed cases occurring in the Prince of Oldenburg's Hospital for Children in St. Petersburg in which he had employed the new treatment. Of the 30 cases, 19 recovered and 11 died; this gives a death-rate of 36.6 per cent. All the cases were well-marked cases of diphtheria, and in all the presence of Löffler's bacillus was demonstrated. The average age of the nineteen children who recovered was 4.6 years; they were admitted on the third to the sixth day of the disease; separation of the membrane began two and a quarter days after the first injection and lasted for five and a half days. Most of the patients had albuminuria. Of the 11 fatal cases the majority were children of one to three years of age; in all of them the symptoms were stated to have been extremely severe, and the majority died within twenty-four hours after injection. All the cases were treated during November and December. During these months one half of the diphtheria cases admitted to the hospital were treated by the method of serum injection and the other half by the older methods of treatment. The mortality among the former was 36.6 per cent., while among the latter, who received no injections, it was 52 per cent. Erythema was a frequent result of the new treatment; it appeared equally often, whether Behring's or Roux's serum were employed. In conclusion, the writer of the paper considered his results as encouraging, though not conclusive. He mentioned that Professor Filatof had obtained much better results: he had treated 9 cases, with only 1 death.

Changes in Russian Medical Journals.

The *Chirurgicheski Věstnik*, or *Surgical Messenger*, the monthly journal edited by Dr. Veliaminof, is henceforth to be called the *Russian Archives of Surgery*, and will appear quarterly instead of monthly, as heretofore. The removal of Professor Kovalevski from Kharkof to Warsaw, in consequence of his appointment to the Rectorship of the Warsaw University, will affect two medical journals. The *Archives of Psychiatry, Neurology and Legal Psychology*, hitherto published in Kharkof, will now be published in Warsaw; and the *Journal of Medicine and Hygiene*, published by the Kharkof Medical Society, will cease to exist.

Forthcoming Medical Conferences in Russia.

A conference of practitioners in the province of Podolia has been summoned to meet this month in Kamenetz-Podolsk, the capital of the province, to discuss the cholera epidemic, from which Podolia has suffered more severely than almost any other part of Russia during the past three summers. It is proposed to hold next year in Russia a conference of syphilologists. The tenth congress of Russian naturalists and physicians will be held in Kief next year.

St. Petersburg, Feb. 9th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Condemnation of the Game of Football.

A RECENT football match between the students of two of our colleges, the most important because the most popular trial of the year, was attended with so much "slugging" that the immense audience were thoroughly disgusted with the scenes of brutality which they witnessed. Even experts in the game were compelled to protest against the inhuman acts which were encouraged by the managers on both sides. A large number of severe and crippling injuries have been recorded, and the surgeon and his assistants were as busy as a surgeon on the field of battle. The result of this contest between the teams of two favourite colleges has been a severe set-back to this hitherto popular game. In the opinion of the President of Harvard University the game of football grows worse and worse as regards foul and violent play and the number and gravity of the injuries which the players suffer. It has become perfectly clear that the game as now played is unfit for college use. The rules of the game are at present such as to cause inevitably a large number of broken bones, sprains, and wrenches even during trial or practice games played legitimately; and they also permit those who play with reckless violence or with shrewd violations of the rules to gain thereby great advantages. What is called development of the game has steadily increased its risks, until they have become unjustifiable. Naturally the public is losing faith in the sincerity of the professed desire of coaches, captains, and promoters to reform it. The players themselves have little real responsibility for the evils of the game. They are swayed by a tyrannical public opinion—partly ignorant and partly barbarous—to the formation of which graduates and undergraduates, fathers, mothers, and sisters, leaders of society, and the veriest gamblers and rowdies all contribute. The state of mind of the spectators at a hard-fought football match cannot but suggest a query as to how far these assemblies differ at heart from the throngs which enjoy the prizefight, cockfight, or bullfight, or which in other centuries delighted in the sports of the Roman arena. Several fatal accidents have happened this year to school-boys and college students on the football field, and in every strenuous game now played, whether for practice or in an inter-collegiate or other competition, there is the ever-present liability to death on the field. It is often said that by employing more men to watch the players, with authority to punish instantly infractions of the rules, foul and vicious playing could be stopped. The sufficient answer to this suggestion is that a game which needs to be so watched is not fit for genuine sportsmen.

A National Health Department.

The President has urged upon Congress in a recent message to that body the necessity of such legislation as will create a well-organised and efficient Health Department in the general Government. This is the first time that a President has recommended a national board of health in decided and emphatic language. He says: "I am entirely convinced that we ought not to be longer without a national board of health or national health officer charged with no other duties than such as pertain to the protection of our country from the invasion of pestilence and disease. This would involve the establishment by such a board or officer of proper quarantine precautions or the necessary aid and counsel to local authorities on the subject, prompt advice and assistance to local boards of health or health officers in the suppression of contagious disease, and in cases where there are no local boards or officers the immediate direction by the national board or officer of measures of suppression; constant and authentic information concerning the health of foreign countries and all parts of our own country as related to contagious diseases; and consideration of regulations to be enforced in foreign ports to prevent the introduction of contagion into our cities and the measures which should be adopted to secure their enforcement." There seems to be at this time a decided inclination to discuss measures of protection against contagious diseases in international conference with a view of adopting means of mutual assistance. The creation of such a national health establishment would greatly add to our standing in such conferences and improve our opportunities of availing ourselves of their benefits. At the last session of Congress several Bills were under discussion as to creating a health department,

but no measure was finally agreed upon. A new Bill has now been drawn with respect to which all parties unite and which will meet with no effective opposition.
Feb. 1st.

Obituary.

CHARLES MOSS, M.R.C.S. Eng., L.S.A.

MANY old King's College men will hear with regret of the death of Mr. Charles Moss on the 8th inst. from acute intestinal obstruction. He was seized with abdominal pain on the previous day, and though evidently ill he kept an appointment at Dr. Wharton Hood's house in the afternoon, but while there he fainted and was taken home in a cab. Dr. Duffin saw him the same night and again the next morning in consultation with Dr. Cayley, and it was agreed to ask Mr. Christopher Heath to see him at midday on Friday, but he died before the consultation was held. Charles Moss was a native of the Cape of Good Hope, and went to King's College older than the average student. He became a Member of the Royal College of Surgeons of England in 1862, and was for some time house surgeon at the Moorfields Ophthalmic Hospital. Here he had considerable experience in the administration of anaesthetics, so that he was prepared to take up that work for Sir William Fergusson, both at the hospital and in private, when the late Dr. Anstie gave it up about 1863. Mr. Moss for many years absolutely discarded chloroform, and invariably administered the A.C.E. mixture when not giving gas for dental operations. He was able to boast that he had never had a fatal case in his long practice, and looked upon strong ammonia inhalation as his sheet-anchor in cases of heart failure. He held the post of anaesthetist to King's College Hospital for many years, but upon the retirement of his old friend Mr. Henry Smith he resigned, and of late years had confined himself to the practices of old friends, by whom he was much appreciated, both professionally and socially. He was buried at Kensal-green on Wednesday last.

ALBERT RICHARD WAGHORN, M.D. ST. AND.,
M.R.C.S. ENG., L.S.A.,

SURGEON-MAJOR, BENGAL ARMY (RETIRED).

DR. ALBERT RICHARD WAGHORN, whose death we regret to announce as having taken place on Feb. 6th, received his medical education at King's College Hospital. He became a Member of the Royal College of Surgeons and Licentiate in Midwifery in 1854. In June of the same year he received his commission in the Indian army, and shortly after went to Calcutta in charge of troops. When the mutiny broke out he was serving as civil surgeon at Hirsar in the Punjab. The other English officials with their wives took refuge at the time of the massacre; this he refused to do, and offered the use of his camels to the women, but this offer was declined. Every European in the place was murdered with the exception of himself and a sergeant who remained with him in his bungalow. Mounting a camel he rode with this man out into the jungle, and after wandering for a night and day made his way to Delhi. Dr. Waghorn was Surgeon-Major in the Bengal army. He served at the siege, assault, and capture of Delhi in 1857, receiving a medal and clasp, and in the Bhootan campaign in 1865, for which he received a similar decoration. He was Acting Superintendent of Vaccination for the North-West Provinces in 1867-8, and subsequently Civil Surgeon of Mirzapore. During 1872-3 he was on leave in England, and became a Licentiate of the Society of Apothecaries and an M.D. St. Andrews. On his return to India he served with the 26th Native Infantry until he retired from the service in 1881. From that time until 1893 he was in practice at Redhill, when his health failing he retired from active work. Dr. Waghorn contributed to THE LANCET of Nov. 15th, 1873, an account of an Unusual Case of Urethro-vesical Calculus and quick Recovery, and an article on Stimulants in the Treatment of Pneumonia on Aug. 3rd, 1878.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—Dr. D. Hicguet of Liège, a well-known and much regretted surgeon of that city. He was chief surgeon to the *Hospice*

des Anglais and one of the founders of the Liège Medico-Chirurgical Society. During the Franco-German War he had a large number of wounded under his care at Liège, and in recognition of his services to the French he received the ribbon of the Legion of Honour. He wrote various papers on surgical subjects in French and Belgian Medical Journals and was one of the earliest members of the staff of *Le Sculptel*. He had been in practice for some forty-five years.—Dr. D. K. Rodziewski, Extraordinary Professor of Pharmacology in the University of Kharkoff.—Dr. L. Rouge, formerly editor of the *Bulletin de la Société Médicale de la Suisse Romande*.—Dr. H. C. Lombard, President of the International Congress of Hygiene and Demography held in Geneva in 1882.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Andrews, Henry Arthur, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Ashton, Joseph, L.R.C.P. Lond., St. Mary's Hospital.
 Astbury, Thomas, L.R.C.P. Lond., Mason College and Queen's and General Hospital, Birmingham.
 Badcock, Ernest Reginald, L.R.C.P. Lond., London Hospital.
 Bagshawe, Arthur William Garrard, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
 Barber, Maurice Charles, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
 Barford, Percy Crompe, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Barker, Gordon Campbell, L.R.C.P. Lond., St. George's and King's College Hospital.
 Barrett, James Wilkie Collingwood, L.R.C.P. Lond., Mason College and Queen's and General Hospital, Birmingham.
 Best, Frederick Henry de Graves, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Bloomfield, Herbert Wadmore Gissing, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Bousfield, Arthur, L.R.C.P. Lond., King's College Hospital.
 Brakenridge, Francis John, L.R.C.P. Lond., St. Thomas's Hospital.
 Brewerton, Elmore Wright, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Bromet, Edward, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
 Brooks, William Patrick, L.R.C.P. Lond., Charing-cross Hospital.
 Bryant, Charles Henry, L.R.C.P. Lond., Durham University and Guy's Hospital.
 Burrell, Lionel Cottingham, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
 Chandler, George, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
 Chapman, Walter, L.R.C.P. Lond., Mason College and Queen's and General Hospital, Birmingham.
 Charsley, Gilbert William, L.R.C.P. Lond., Oxford University, Mason College and Queen's and General Hospital, Birmingham.
 Christmas, Robert William Samuel, L.R.C.P. Lond., Charing-cross Hospital.
 Clay, David Lloyd, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Clay, Francis Edmund, L.R.C.P. Lond., Westminster Hospital.
 Cole, George, L.R.C.P. Lond., King's College Hospital.
 Collier, Henry William, L.R.C.P. Lond., Guy's Hospital.
 Collings, Dudley Willis, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Connell, Walter Thomas, L.R.C.P. Lond., Kingston General Hospital and Queen's University, Kingston, Canada.
 Constable, John Cecil, L.R.C.P. Lond., Guy's Hospital.
 Cotter, George Edmund Wentworth, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
 Crossley, Richard, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Cummings, Arthur Pollard, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
 Cunliffe, Thomas Varley, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Currey, Edmund Francis Neville, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Daniel, Edgar George Clement, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
 Davidson, Guilford, L.R.C.P. Lond., St. Thomas's Hospital.
 Davis, Henry John, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
 Dawes, Christopher Dering, L.R.C.P. Lond., St. George's Hospital.
 Dillon, Rupert Wentworth, L.R.C.P. Lond., St. Thomas's Hospital.
 Dockray, John Smalley, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Duke, Robert Everet, L.R.C.P. Lond., University College Hospital.
 Eder, Montague David, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Ensor, Cecil Arthur, L.R.C.P. Lond., Guy's Hospital.
 Recombe, William, L.R.C.P. Lond., Charing-cross Hospital.
 Evans, Edgar Griffith, L.R.C.P. Lond., Guy's Hospital.
 Every-Clayton, Leopold Ernest Valentine, L.R.C.P. Lond., Guy's Hospital.
 Finch, Herbert Jonathan, L.R.C.P. Lond., Westminster Hospital.
 Flint, Thomas Buxton, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.

Forrester, William, L.R.C.P. Lond., Bengal Medical College, Calcutta, and St. Thomas's Hospital.
 Fry, Augustine Craddock, L.R.C.P. Lond., Guy's Hospital.
 Gibbes, Lewis Nicholas, L.R.C.P. Lond., St. George's Hospital.
 Giles, Leonard Thomason, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
 Greenway, Charles Melville, L.R.C.P. Lond., Guy's Hospital.
 Greenwood, Augustus Charles, L.R.C.P. Lond., Middlesex Hospital.
 Hampton, Thomas, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Hancock, George Charles, L.R.C.P. Lond., Westminster Hospital.
 Handley, William Sampson, L.R.C.P. Lond., Guy's Hospital.
 Harding, Lionel Nicholson, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
 Hayes, Reginald Hewlett, L.R.C.P. Lond., Trinity College, Dublin, and Guy's Hospital.
 Hedges, Charles Edward, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
 Henderson, Robert, L.R.C.P. Lond., Guy's Hospital.
 Hinds, Herbert Austen, L.R.C.P. Lond., Guy's Hospital.
 Hodge, Albert, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Home, Alfred Lucette, L.R.C.P. Lond., St. Thomas's Hospital.
 Hooper, Arthur Winsmore, L.R.C.P. Lond., St. Thomas's Hospital.
 Horner, William Ernest Leatham, L.R.C.P. Lond., University College Hospital.
 Horseman, Frederick, L.R.C.P. Lond., Yorkshire College and General Hospital, Leeds.
 Horton, James Henry, L.R.C.P. Lond., Guy's Hospital.
 Horwitch, David, L.R.C.P. Lond., Mason College and Queen's and General Hospital, Birmingham.
 Hosford, John Stroud, L.R.C.P. Lond., University College Hospital.
 Hughes, Burroughes Maurice, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Hughes, Robert, L.R.C.P. Lond., St. Thomas's Hospital.
 Hughes, Robert Thomas, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Hugo, James Henry, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Jackson, Francis Seymour, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Jacob, Frank Harwood, L.R.C.P. Lond., King's College Hospital.
 James, Sydney Price, L.R.C.P. Lond., St. Mary's Hospital.
 Jeffery, Charles Chinnio, L.R.C.P. Lond., Charing-cross Hospital.
 Jones, Richard Llewelyn, L.R.C.P. Lond., University College Hospital.
 Kearney, Charles James, L.R.C.P. Lond., Guy's Hospital.
 Kettlewell, George Douglas, L.R.C.P. Lond., London Hospital.
 Knight, Henry, L.R.C.P. Lond., St. Thomas's Hospital.
 Leon, George Alexander, L.R.C.P. Lond., London Hospital.
 Levy, Oscar Ludwig, L.R.C.P. Lond., Munich, Berlin and Freiburg Universities and Westminster Hospital.
 Linnon, Frederick, L.R.C.P. Lond., Charing-cross and St. Thomas's Hospital.
 Mackintosh, John Stewart, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Mansergh, William, L.R.C.P. Lond., Owens College, and Royal Infirmary, Manchester.
 Mathew, Charles, L.R.C.P. Lond., St. Mary's Hospital.
 Mayne, William Sidney, L.R.C.P. Lond., University College Hospital.
 Messiter, Frederic Gerald, L.R.C.P. Lond., Mason College, and Queen's and General Hospital, Birmingham.
 Milward, Frederic Victor, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
 Morison, Henry Baumerman, L.R.C.P. Lond., Durham University and Middlesex Hospital.
 Morrison, Alexander, L.R.C.P. Lond., University College Hospital.
 Morrison, David, L.R.C.P. Lond., University College Hospital.
 Newington, Charles Willmott Henderson, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Norris, Frank Baker, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
 Oliver, Richard Sobey, L.R.C.P. Lond., King's College Hospital.
 O'Malley, Edward Dominic Joseph, L.R.C.P. Lond., Middlesex Hospital.
 Osborn, Edward Collet, L.R.C.P. Lond., Westminster Hospital.
 Parkinson, Walter George, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
 Pern, Horace, L.R.C.P. Lond., Guy's Hospital.
 Phillips, John, L.R.C.P. Lond., University College Hospital.
 Porter, Robert Ibbetson, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
 Power, Herbert Robert, L.R.C.P. Lond., St. Mary's Hospital.
 Quait, Alexander Wortley, L.R.C.P. Lond., St. Thomas's Hospital.
 Reeves, Albert, L.R.C.P. Lond., Guy's Hospital.
 Rigby, Hugh Mallinson, L.R.C.P. Lond., London Hospital.
 Roberts, Cecil David Dale, L.R.C.P. Lond., Mason College and Queen's and General Hospital.
 Robertson, Frederick William, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Robinson, Charles Henry James, L.R.C.P. Lond., Middlesex Hospital.
 Robson, Thomas Stretton, L.R.C.P. Lond., Guy's Hospital.
 Rogers, Frederick Edward, L.R.C.P. Lond., London Hospital.
 Rost, Ernest Reinhold, L.R.C.P. Lond., St. Mary's Hospital.
 Rykert, Arthur Frederick, L.R.C.P. Lond., Toronto General Hospital and University, Toronto, Canada.
 Salter, Alfred, L.R.C.P. Lond., Guy's Hospital.
 Schnöller, Anton, L.R.C.P. Lond., Zurich, Lausanne, Berne and London Hospital.
 Sharpin, Walter Archdale, L.R.C.P. Lond., St. George's Hospital.
 Shephard, Alfred Edward, L.R.C.P. Lond., Middlesex Hospital.
 Smith, Graham Udale, L.R.C.P. Lond., King's College Hospital.
 Snoad, Philip Ephraim, L.R.C.P. Lond., St. George's Hospital.
 Stenhouse, James Wilson, L.R.C.P. Lond., Edinburgh University.
 Stokes, Frank William, L.R.C.P. Lond., University College Hospital and Durham University.

Storrs, Eric Glendow, L.R.C.P. Lond., King's College Hospital and Yorkshire College and General Infirmary, Leeds.
 Sullivan, Daniel Vincent, L.R.C.P. Lond., Queen's University and Kingston General Hospital, Kingston, Canada, and University College Hospital.
 Taylor, Herbert Stockley, L.R.C.P. Lond., University College Hospital.
 Thomas, Thomas Morrell, L.R.C.P. Lond., Guy's Hospital.
 Tinley, William Edwin Falkingbridge, L.R.C.P. Lond., St. Thomas's Hospital.
 Tregenza, William, L.R.C.P. Lond., Firth College, Sheffield, and University College Hospital.
 Waite, Joseph Edward, L.R.C.P. Lond., University College Hospital.
 Watts, Brian, L.R.C.P. Lond., Firth College, Sheffield, and London Hospital.
 Webb, Arthur Lisle Ambrose, L.R.C.P. Lond., University College Hospital.
 Weeks, Courtney Charles, L.R.C.P. Lond., University College Hospital.
 Welch, Edmund, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
 Wells, Thomas Henry, L.R.C.P. Lond., Middlesex Hospital.
 White, Arthur Thomas, L.R.C.P. Lond., Westminster Hospital.
 Williams, Richard Bridgman, L.R.C.P. Lond., St. Thomas's Hospital.
 Zumbado, Federico, L.R.C.P. Lond., Durham University and Guy's Hospital.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen having passed the necessary examinations have been admitted by the two Royal Colleges Diplomates in Public Health:—

Ferrand, Edward (Surgeon-Major, Madras Army), M.R.C.S. Eng. and L.R.C.P. Edin., St. Bartholomew's Hospital.
 Gill, Joseph William, L.R.C.P. Lond. and M.R.C.S. Eng., Middlesex Hospital.
 Helby, Ernest Hasler, L.R.C.P. Lond. and M.R.C.S. Eng., King's College Hospital.
 Jones, George, M.B. and B.Ch. Oxon., L.R.C.P. Lond. and M.R.C.S. Eng., London Hospital.
 Jones, Rowland Francis Hugh, L.R.C.P. Lond. and M.R.C.S. Eng., St. Bartholomew's Hospital.
 Meadows, Robert Thornton, M.D. and C.M. Edin., Edinburgh University.
 Moore, Samson George, M.B. and Ch.B. Vict., University College and Royal Infirmary, Liverpool.
 Newton, Henry William, L.R.C.P. Lond. and M.R.C.S. Eng., Middlesex and King's College Hospitals.
 Paine, Alexander, M.B. and B.S. Lond., St. Mary's Hospital.
 Paine, Charles, M.B. Lond., St. Mary's Hospital.
 Russell, William, M.B. and C.M. Abert., Aberdeen University.
 Simmons, Harold, M.B. and B.S. Durh., L.R.C.P. Lond., and M.R.C.S. Eng., Bristol Medical School and Middlesex Hospital.
 Wilkes, George Arthur, L.R.C.P. Lond. and M.R.C.S. Eng., Mason College, Birmingham, and Yorkshire College and General Infirmary, Leeds.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Burckhardt, Extraordinary Professor of Hygiene, has been promoted to the rank of Ordinary Professor.—*Budapest:* The duties of the chair vacated by the death of Dr. Scheuthauer are to be divided, Dr. A. Genersich of Clausenburg having been appointed Professor of Pathological Anatomy and Dr. O. Pertik Professor of Pathological Histology; Drs. Szili, Goldzicher, St. Csapodi, and Feuer, Lecturers on Ophthalmology, have all been appointed Extraordinary Professors.—*Göttingen:* Dr. Nicolaier, *privat-docent* in Medicine, has been granted the title of Professor.—*Jena:* Dr. Gumprecht has been recognised as *privat-docent* in Medicine.—*Lyons:* The Professorship of Hygiene and Forensic Medicine has been officially declared vacant.—*Padua:* Dr. T. Ferrari has been recognised as *privat-docent* in Midwifery and Gynaecology, and Dr. G. Dalle Ore as *privat-docent* in Operative Medicine.

THE WORTHING WATER-SUPPLY.—The new well at Broadwater, near Worthing, which is being constructed by the corporation, has again reached chalk, in which the workmen are excavating at a depth of 106 feet from the surface; 102 feet have been encased in cylinders, and the daily yield of water is put at three-quarters of a million gallons. This is being lifted by powerful pumps and discharged in a disused pit between the well and the town of Worthing. Mr. Monsergh reports that the progress is equal to his expectations, and that the supply of water is gradually increasing. The Local Government Board stipulates for a daily yield of 1,000,000 gallons before sanction will be granted to the loan which the corporation seeks to raise to cover the cost. This has to be obtained before the Corporation Stock can be issued, and the finances of the borough will be therefore somewhat crippled until the necessary yield is ascertained and maintained for a fortnight. The present temporary works at the foot of the South Downs are meanwhile being worked at considerable expense, although a very great waste of water has been remedied.

We learn that there is an opening in Cape Colony for a thoroughly qualified medical officer of health. The salary is £1000 a year. Applications (supported by testimonials and stating the candidate's age, date when he would be prepared to enter upon his duties, &c.) will be received by the Agent-General, 112, Victoria-street, S.W., and by the Under Colonial Secretary at Capetown, up to noon on March 15th next.

On Wednesday, Feb. 13th, before Baron Pollock and a special jury, a trial took place of great interest to medical men. Mr. Aaron Langley, a surgeon, was sued by a police constable and his wife for damages in that the defendant had, as it was alleged, seriously injured the female plaintiff by the premature use of instruments during her confinement. The jury stopped the case before the conclusion of the defendant's evidence, returning a verdict in his favour, with costs. We congratulate Mr. Langley upon such a successful termination to a very annoying position.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 31st, the President, Mr. Makeig Jones, being in the chair. A discussion on the Treatment of Diphtheria by Antitoxin was opened by Dr. Caley and Dr. Addison. Dr. Gwynne gave particulars of a severe case of diphtheria which he treated successfully with antitoxin supplied by the British Institute of Preventive Medicine. The President, Mr. Garrard, Dr. Burgess, Mr. Pye-Smith, Mr. Atkin, Dr. Martin, Dr. Samson Mathews, Mr. Lockwood, Dr. Stedman, Dr. Dyson, and Dr. Rhodes joined in the discussion.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Wednesday, Feb. 6th, 1895, Mr. F. A. Southam, M.B., F.R.C.S., being in the chair. The President delivered an address on "Recent Advances in Urinary Surgery," contrasting the surgery of the present day with that of the past, and reviewing the various operative measures which have recently been introduced in the treatment of disease of the bladder, urethra, and prostate. Dr. Mules related the history of a case of operation for radical cure of hernia where, in spite of the usual antiseptic precautions, acute œdema commenced forty-eight hours after the operation, followed by sphacelus of the larger part of the scrotum, but on the side opposite to the operation. Dr. Dreschfeld, who had taken an interest in the case, showed Koch's œdema bacilli. Free incisions over the scrotum and penis, with generous diet, brought the patient from an apparently hopeless condition to satisfactory convalescence. Dr. Mules also explained a new operation for ptosis. Mr. Walter Whitehead showed a patient after excision of the scapula, and also mentioned particulars of a singular pistol accident. Dr. Wilkinson described a case illustrating difficulties in the diagnosis of abdominal tumour.

FAREWELL DINNER TO MR. WORDSWORTH POOLE, M.B., B.C. CANTAB.—A farewell dinner was given to Dr. Wordsworth Poole in the hall of the College of Guy's Hospital on Feb. 1st, the eve of his departure for Zomba to take up the duties of Government medical officer to the British Central African Administration in the Shire Highlands, south of Lake Nyassa. Mr. R. Clement Lucas, the surgeon under whom he had formerly dressed, took the chair, and was supported by a large number of Dr. Poole's friends and fellow students. In proposing the toast of the evening the Chairman said they had met together to bid farewell and wish God-speed to a former student who was about to proceed to Central Africa, where he would be exposed to risks of climate, dangers, and hardships which in this centre of civilisation it was difficult to understand or fully appreciate. The law of the land to which he was going would be little more than the law of the individual; and he wished to assure him that in any hardships or dangers to which he might be exposed he would have the support and sympathy of his fellow students and of his profession. Dr. Jameson had shown that medical men might be illustrious administrators as well as distinguished physicians. Whatever might be Dr. Poole's future they trusted that his departure would be but the commencement of a long, a prosperous, and a distinguished career. Dr. Wordsworth Poole, in reply, said that he should always look back with pleasure to the kindness and sympathy shown to him on the eve of his departure by his fellow students. A vote of thanks to the chairman for presiding was proposed by Mr. Fagge, and briefly responded to by Mr. Lucas.

WIGAN MEDICAL SOCIETY.—The annual meeting of the above society was held on Feb. 7th, and the following gentlemen were elected office-bearers for the ensuing year:—President: Wm. Mitchell Roorcroft, M.R.C.S. Eng., &c. Committee: Wm. M. Roorcroft, G. H. Monks, jun., C. M. Brady, R. H. Cowan, M. Benson, J. P. Molyneux, and W. C. Barnish. Treasurer: G. H. Monks, jun. Secretary: Wm. Berry, F.R.C.S. Irel. The annual dinner was afterwards held, and a good muster of members and visitors were present.

THE MEDICAL REGISTERS FOR 1895.—In answer to more than one inquiry of which both the Registrar and ourselves have been the recipients, we beg to announce that the three registers of the General Medical Council for 1895 will very shortly be published by Messrs. Spottiswoode and Co. The registers are issued as soon as they can be obtained from the printers; they have been carefully revised up to date; and the usual preliminary data have been presented in tables with such improvements as constant attention may suggest.

PENDLETON PROVIDENT DISPENSARY.—The idea of a provident dispensary is no doubt an excellent one, but it requires no little tact on the part of the various members who work it to avoid friction. From Manchester we learn that the whole of the medical staff attached to the Pendleton Provident Dispensary have sent in their resignations. The cause seems to be that some affiliated dispensaries, feeling the pinch of poverty owing to the depression in trade, sent out circulars appealing to people outside to join the dispensary. This the medical staff regarded as advertising, and very properly sent in their resignations. It is fair to say that the Pendleton committee at the annual meeting repudiated the action of the affiliated societies.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—The annual dinner of this society was held at the Holborn Restaurant on Thursday, Feb. 7th. Dr. James Grey Glover, President of the society, was in the chair, and there was a large attendance of members and guests. Mr. Charters J. Symonds, President of the Hunterian Society, answered to the toast of the "Sister Medical Societies," proposed by Dr. R. W. Burnet; and Dr. G. Sims Woodhead caused much amusement by his description of the advantages and disadvantages of not being a "practical doctor" in acknowledging the toast of "The Guests," proposed by Mr. William Dingley. Mr. Frank Godfrey proposed the chairman's health, and a very pleasant and successful meeting of the society was brought to an end. The musical programme, of excellent quality, was provided by the members and their friends under the guidance of Drs. Malcolm and Remfry.

The next general meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at the County and City Asylum, Powick, near Worcester, on Thursday, Feb. 21st, 1895, under the presidency of Mr. Conolly Norman, F.R.C.P.I. Dr. Cooke will read a paper entitled "A Review of the last Twenty Years at the Worcester County and City Lunatic Asylum, with some conclusions derived therefrom"; Dr. Bond will read a paper on "Atrophy and Sclerosis of the Cerebellum"; Dr. McClaughry will read a paper entitled "Influenza as a factor in the increase of Insanity in Ireland." The next examination for the medical certificate will be held in July. Those who intend to compete for the bronze medal and prize must send in their essays to the president, Mr. Conolly Norman, Richmond Asylum, Dublin, on or before May 30th. Particulars on both subjects can be obtained of the registrar, Dr. Spence, Burntwood Asylum, Lichfield.

BURROUGHS MEMORIAL.—A meeting of the personal friends of the late Mr. S. M. Burroughs was held on Tuesday, the 12th inst., at the Cannon-street Hotel, with M. Cartelghe, the President of the Pharmaceutical Society, in the chair, to discuss what steps should be taken to perpetuate the memory of Mr. Burroughs, whose many good qualities and kind heart made him universally liked and esteemed. It was proposed that the memorial should take the form of a pharmaceutical Burroughs Scholarship, or that a Burroughs Benevolent Fund should be placed for administration in the hands of the council of the Pharmaceutical Society. By others it was preferred that the memorial should take more the form of a general charity. Subscriptions of over £350 were received up to the close of the meeting. It was resolved that a general committee be formed to further the objects of the meeting and that the executive committee consist of Mr. Michael Cartelghe, chairman; Mr. John Moss,

treasurer; Mr. H. Helbing, hon. sec.; and Messrs. Radford, Wootton, and Frank Smith. Subscriptions may be sent to Mr. John Moss, 39, Tressillian-road, St. John's, London, S.E. (Cheques to be crossed "London and County Bank.")

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Marriage with a Deceased Wife's Sister.

MR. WALTER McLAREN has given notice that on the second reading of the Bill to legalise marriage with a deceased wife's sister he will move the following amendment—viz.: "That this House is unwilling to pass a Bill which, while altering the law with respect to marriages, creates for the first time an inequality between the position of the husband and the wife and grants a privilege to the husband by enabling him to marry his deceased wife's sister which it does not give to the wife, as it does not enable her to marry her deceased husband's brother."

The Vaccination Acts.

A number of practical points in connexion with the administration of these Acts have been put before members of the Ministry by Mr. Hopwood, who appears to keep a very watchful eye upon magisterial proceedings throughout the country.

The Consolidation of the Poor-laws.

In consequence of the intimation by the Government that they do not intend during the present session to introduce a Bill for the consolidation of the Poor-laws, Mr. George Howell has given notice that on an early day he will call attention to the matter and move: "That, in the opinion of this House, it is expedient to consolidate the whole of the 135 indexed enactments relating to the relief of the poor, and also, in the same measure, the whole of the Poor-law orders of the Local Government Board, so that boards of guardians, all rating authorities, and others interested in the administration of the laws relating to the relief of the poor shall be able to comprehend what enactments and orders are in force, to understand what powers are conferred upon the guardians, and be able to apply such statutory enactments and orders in such manner as will best accord with the spirit of the age in which we live and the altered circumstances of the times as regards in-door relief and out-door relief, temporary medical assistance, the casual poor, and temporary relief works for the unemployed."

The Registration of Plumbers.

A Bill for the national registration of plumbers has again been introduced into Parliament. Its promoters, in a memorandum, state that the chief object of the measure is to afford additional safeguards to the public health by enabling persons employing plumbers to select, when they desire to do so, persons who have given evidence of their qualification for plumber's work. There has been for several years a system of registration established in the chief centres of Great Britain and Ireland, and by the Bill it is proposed to place this system upon a broader and more permanent basis. The arrangements as to the examinations for registration will be placed under the jurisdiction of a general council representing the master and operative plumbers, the Plumbers' Company, and the chief educational and sanitary bodies of the United Kingdom, with branch councils in Scotland, Ireland, and Wales. It is proposed also to give the council power to promote technical education among plumbers and to exercise discipline among those whose names are enrolled upon the register. The Bill does not contemplate any monopoly, and it does not interfere in any way with the rights of non-registered plumbers. It prohibits, however, such men from representing themselves to be registered plumbers.

Working Men's Dwellings.

A Bill has been brought in by Mr. Wrightson to give facilities for the acquisition by working men of their own dwellings. It proposes to give power to local authorities to advance money if they are satisfied that the workman actually resides or *bona fide* intends to reside in the dwelling house in respect of which the advance is applied for, that the title to the house is good, the sale is made in good faith and the price is reasonable, and that the house is in a sanitary and tenable condition. Restriction is put upon the amount of the advance and conditions are laid down as to the charge to be made to the workman, and certain borrowing powers are given to the local authorities for the purposes of the Act.

The University of London.

The Government have signified their intention of shortly introducing a Bill in the House of Lords with reference to the University of London.

Beer Adulteration.

The Bill for better securing the purity of beer provides that every person who sells or exposes for sale, by wholesale or retail, any beer brewed from or containing any ingredients other than hops or malt from barley shall keep conspicuously posted in the premises a legible notice stating what are the other ingredients. Penalties ranging from £5 to £20 are provided, and "beer" is taken to mean beer, ale, or porter.

HOUSE OF COMMONS.

THURSDAY, FEBRUARY 14TH.

Mr. Channing asked the Secretary of State for the Home Department whether his attention had been called to a sentence passed by Mr. Denman at the South-Western Police-court in September last, on F. D. Summers, of seven days' imprisonment with hard labour for non-compliance with a vaccination order; whether he is aware that F. D. Summers was, contrary to law, subjected to the hard labour regulations while in prison; and whether he will direct compensation to be made to him for this illegal punishment.—Mr. Asquith: I have communicated with the magistrate and with the Prison Commissioners, and I am informed that Summers was neither sentenced to hard labour nor subjected to hard labour. Therefore, no question arises.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ALLEN, JAMES, L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Bollington Urban Sanitary District.

ANNINGTON BUSHELL, M.D. Cantab., M.R.C.S., has been reappointed Medical Officer for the Chesterton Urban and Rural Sanitary Districts.

ARROLL, CHAS., M.D., C.M. Glasg., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Sheregreen.

BARBER, G. F. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Workhouse of the parish of Birmingham.

BOLT, HENRY, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Brentford Urban Sanitary District.

BOSTOCK, LEONARD, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the Liskeard Union.

COUMBE, JOHN B., M.D. Brux., F.R.C.S. Eng., L.R.C.P., L.M. Edin., has been appointed Medical Officer for the Ninth Sanitary District of the Westminster Union.

ETCHES, WM. R., L.R.C.P. Lond., M.R.C.S., D.P.H., has been reappointed Medical Officer of Health for Macclesfield.

FARRAR, CHAS., L.F.P.S., L.M. Glasg., has been reappointed Medical Officer of Health for the Chatteris Urban Sanitary District.

FENWICK, J. C. J., M.D. Lond., M.R.C.P., has been appointed Honorary Consulting Surgeon to the Durham County Hospital.

FERRARY, GEO. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth and Fifth Sanitary Districts of the parish of Birmingham.

FYFE, THOS. H., M.B., M.S. Aberd., has been appointed Honorary Medical Officer to the Forbes Leachcoil Hospital.

GOODALL, JOHN K., L.R.C.P., L.M., L.R.C.S. Edin., has been appointed Medical Officer of Health for Birmingham.

GOODMAN, T. HERBERT, M.R.C.S. Eng., L.S.A. Lond., has been appointed Medical Officer to the Hearts of Oak Benefit Society, Haverhill and District.

HAY, GEO. P., M.D., M.S. Aberd., has been appointed Honorary Medical Officer to the Forbes Leachcoil Hospital.

HUGHES, A. E. PRIEST, M.R.C.S., L.R.C.P., has been appointed Senior Resident Medical Officer to the Sheffield Union Infirmary and Children's Homes, vice Collier, resigned.

JAMESON, W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Ashover.

JONES, L. G. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First and Second Sanitary Districts of the parish of Birmingham.

KENWOOD, HENRY R., M.B., C.M. Edin., L.R.C.P. Lond., D.P.H., has been reappointed Medical Officer of Health to the Finchley Local Board.

KNIGHT, ERNEST, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Salford Royal Hospital, vice S. M. Brown, resigned.

MILLIGAN, GEO. C., M.B., C.M. Aberd., has been appointed Honorary Medical Officer to the Forbes Leachcoil Hospital.

MORRISON, J. T. J., M.B. Cantab., F.R.C.S., M. Eng., has been appointed to the Chair of Surgery, Mason Hall, Birmingham.

NEWBY, THOS., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Great Grimsby.

RAY, J. HOWSON, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Salford Royal Hospital, vice E. Knight.

RAYWOOD, JOHN R. I., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., has been appointed Honorary Surgeon to the Montgomeryshire Infirmary, Newton, N. Wales, vice G. H. Biden, resigned.

SKINNER, S., M.B., C.M. Aberd., M.R.C.S., has been appointed Medical Officer of Health to the Clevedon Urban District Council.

STANLEY, ARTHUR, M.B. Lond., has been appointed Assistant Physician to the Manchester and Salford Hospital for Skin Diseases.

TAIT, W. P., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fifth Sanitary District of the Ashton-under-Lyne Union, vice Hopwood, resigned.

THOMSON, JOHN A. M., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer of Health to the Bradford-on-Avon Rural District Council.

WHITEHEAD, WALTER, F.R.C.S., F.R.S. Edin., has been appointed Honorary Consulting Surgeon to the Manchester and Salford Hospital for Skin Diseases.

WILD, ROBERT B., M.D. Lond., M.Sc. Vict., has been appointed Honorary Physician to the Manchester and Salford Hospital for Skin Diseases.

WILLIS, GEO. N., L.D.S.R.C.S. Eng., has been appointed Dental Surgeon to the East Dulwich Provident Dispensary.

WITHERS, JOHN S., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Sale Urban Sanitary District.

WOOD, E. STANLEY, has been appointed Factory Surgeon for Cambridge and District, vice W. Russell Hall, deceased.

YONGE, EUGENE S., M.B., C.M. Edin., has been appointed honorary Surgeon to the Chorlton-on-Medlock Dispensary, Manchester, vice G. R. Gowland, resigned.

YOUNG, ADAM, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Certifying Factory Surgeon for Hampstead.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, Gloucester.—Junior Assistant Medical Officer. Salary £100 a year, in addition to board &c.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon, for six months. Board, lodging, and washing in hospital provided.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water.—Junior Assistant Medical Officer. Applications to Dr. Philipp, Virginia Water.

KENT AND CANTERBURY HOSPITAL.—Surgeon.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Western Hospital for Fever Patients, Seagrove-road, Fulham, S.W. Unmarried. Salary £160 per annum for the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance and washing. Applications to the Clerk to the Board, Chief Offices, Norfolk-street, Strand, London.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London.—House Surgeon, from April 1st to Nov. 7th. Salary at the rate of £50 per annum, with board and residence. Also Surgeon to Out-patients.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.—Junior House Surgeon. Salary £20 a year, with apartments and rations (wines, spirits, and washing are not included).

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Board, residence, and laundry provided.

ST. GEORGE'S HOSPITAL, London, S.W.—Surgeon and Assistant Surgeon.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, W.C.—House Surgeon for six months. Salary at the rate of 50 guineas a year, with board, lodging, and washing, and an allowance for wine &c.

THROAT HOSPITAL, Golden-square, London.—Clinical Assistants.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer; unmarried. Salary commences at £100 per annum, with board, lodging, and washing. Applications to Dr. Cooke, The Asylum, Powick, near Worcester.

Births, Marriages, and Deaths.

BIRTHS.

ACKERLEY.—At Croft House, Surbiton-hill, on Feb. 5th, the wife of Richard Ackerley, M.B., of a son.

BATTERSBY.—On Feb. 10th, at Rawal Pindi, Punjab, India, the wife of Surgeon-Major J. C. Battersby, Army Medical Staff, of a daughter.

DREW.—On Feb. 8th, at The Hannings, Framlingham, Suffolk, the wife of Dr. J. Bowerman Drew of a son.

GROSS.—On Feb. 5th, at South-side, Clapham-common, the wife of Asher Gross, L.R.C.P., M.R.C.S. Eng., of a son.

MARRIAGES.

BATEMAN—METCALFE.—On Feb. 6th, at St. Paul's Church, York, Hinton Bateman, L.R.C.P. Lond., M.R.C.S. Eng., to Edith Beatrice, second daughter of the late Rev. J. Metcalfe, M.A., Rector of Holy Trinity, Micklegate, York.

BROADBENT—FIELD.—On Feb. 12th, at St. George's, Hanover-square, by the Rev. W. Page Roberts, assisted by the Rev. David Anderson, Rector, John Francis Harpin Broadbent, M.A., M.D., eldest son of Sir William H. Broadbent, Bart., to Margaret Elizabeth, eldest daughter of George P. Field, Esq., of 34, Wimpole-street, and Normanswood, Farnham.

CROPPER—WALKER.—On Feb. 6th, at St. Stephen's, Caerwent, Monmouthshire, John Cropper, M.A., M.B., B.C. Cantab., second son of Edward William Cropper, J.P., Fearnhead, Great Crosby, Liverpool, to Ann Ellen (Nellie), third daughter of the late Thomas Andrew Walker, J.P., Mount Ballan, Chepstow.

WILLIAMS—EAGLES.—On Feb. 7th, at St. Peter's Church, Bedford, Henry Llewellyn Williams, M.D., M.R.C.P., of Kensington-square, W., to Emily Mary, widow of the late Thomas Henry Eagles.

DEATHS.

CHAMPNEYS.—On Feb. 11th, at Hamilton House, Penge, Henry Montagu Champneys, F.R.C.S. Eng., L.S.A., in his 77th year.

DAWSON.—On Feb. 10th, at St. Helen's, Great Malvern, suddenly, William Henry Dawson, M.D., aged 57.

MCGEAGH.—On Feb. 6th, at 20, Spellow-lane, Liverpool, Marion Ethel, beloved and only surviving child of William McGeagh, M.D., aged 12 years and 11 months.

WAGHORN.—On Feb. 6th, at Redhill, Surgeon-Major A. R. Waghorn, M.D., Bengal Army, retired, aged 66.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.). At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Frederick Roberts: The Combinations of Morbid Conditions of the Chest. (Third Lettsomian Lecture.)

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. D'Arcy Power (for Mr. E. Jones): Endosteal Sarcoma of the Patella.—Dr. F. Hawkins: Congenital Obliteration of the Bile-duct.—Mr. S. G. Shattock: Fetus with Reptilian Characters in the Sexual Ducts.—Dr. Voelcker: Carcinoma of Ureter.—Mr. L. A. Bidwell: Carcinoma of Stomach treated by Gastro-duodenostomy. Card Specimens.—Dr. W. W. Ord: Hydronephrosis due to Stricture of Ureter (congenital). Dr. G. Newton Pitt: (1) Kidneys increased fourfold by Acute Nephritis; (2) Renal Calculi in Infants.—Dr. C. J. Arlidge: Ulceration of the Large Intestine.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Mr. K. Mawley: Report on the Phenological Observations for 1894.—Mr. W. Marriott: The Thunderstorm and Squall of Jan. 23rd, 1895.—Mr. A. B. MacDowall: On some Gradual Weather Changes in certain Months at Greenwich and Geneva.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Ordinary Meeting.

THURSDAY.—HARTMAN SOCIETY.—8.30 P.M. Dr. James Taylor: Syphilitic Diseases of the Brain.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. E. W. Goodall: An Unusual Case of Diphtheria of the Air Passages.—Dr. Lee Dickinson: A case of Malformation of the Heart with Hemophilia.—Mr. Barling: A case of Gangrenous Umbilical Hernia; resection and immediate union by Murphy's button; recovery.—Dr. Hector Mackenzie: A case of Hysterical Contracture of the Legs of two years' duration successfully treated.—Mr. Arthurnot Lane: A case of Extensive Degenerating Nævus of the Bladder.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Conjunctival Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Edward Woakes: Nasal Neuroses.

SOCIETY OF ARTS.—4 P.M. Mr. Alan S. Cole: Means for Verifying Ancient Embroideries and Laces. (Cantor Lecture.)

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Hyslop: Delusional Insanity; Paranoia.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals. (VI.)

THE CLINICAL MUSEUM (211, Great Portland Street).—Open at 2 P.M., Lecture at 4.

CENTRAL LONDON THROAT AND EAR HOSPITAL.—4.30 P.M. Dr. Dundas Grant: The Treatment of Disease causing Discharge from the Ears.

ROYAL BRITISH NURSES' ASSOCIATION.—8 P.M. Dr. W. S. Colman: Chorea, Delirium, and Hysteria.

SOCIETY OF ARTS.—8 P.M. Mr. A. F. Baillie: Paraguay.

WEDNESDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—2 to 6 P.M. Dr. Morgan Dockrell: Pemphigus. **NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC** (Bloomsbury).—3 P.M. Lecture by Dr. Bervor.

WEST LONDON HOSPITAL (Hammersmith-rd., W.).—5 P.M. Mr. Eccles: The Mechanical Treatment of Hernia. (Post-graduate Course.)

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Progressive Myopia, with illustrative cases.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Acne.

SOCIETY OF ARTS.—8 P.M. Admiral P. H. Colomb: Rule of the Road at Sea.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. L. Fletcher: Meteorites. **LONDON POST-GRADUATE COURSE.**—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., The Medical Registrar: Pathological Demonstration.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Buzzard: Insular Sclerosis.—Central London Sick Asylum, Cleveland-street, W., 5.30 P.M., Dr. Cheadle: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Eczema.

LONDON SKIN HOSPITAL.—8 P.M. Dr. Barry: Psoriasis and its Treatment.

ROYAL INSTITUTION.—9 P.M. Prof. A. Schuster: Atmospheric Electricity.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square W.C.).—2 to 6 P.M. Dr. Morgan Dockrell: Sycosis.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: Stupor; Catalepsy; Katatonia; Dementia.

ROYAL INSTITUTION.—3 P.M. Sir Alexander Campbell Mackenzie: Moore's Irish Melodies (with Musical Illustrations).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 14th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Feb. 8	29.95	S.E.	17	Fzn.	50	30	16	...	Overcast
" 9	30.13	S.W.	18	Fzn.	34	29	17	...	Foggy
" 10	29.94	N.E.	24	Fzn.	46	31	17	...	Bright
" 11	29.60	E.	29	Fzn.	54	33	24	...	Cloudy
" 12	29.88	W.	24	Fzn.	54	38	23	...	Foggy
" 13	30.17	W.	24	Fzn.	34	33	23	...	Foggy
" 14	30.30	S.E.	26	Fzn.	48	27	24	...	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

MEDICAL CERTIFICATES AND MEDICAL TITLES.

THE *Blackburn Times* editorially notices and discusses an opinion of Dr. Martin that medical men in giving certificates for use in courts of law should attach their titles to their signatures. We quite agree with Dr. Martin. Such attachment is becoming in a medical document. It does not of itself, and apart from registration, give validity to the certificate; but it is seemly and it is an additional means of identifying the certifier—whose competence should not be judged by mere common knowledge, but by his appearance in the Medical Register.

Constant Reader.—The coroner has perfect discretion in the matter, but cases quoted not infrequently in our columns show that he is not always discreet.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Could you or some of your numerous readers kindly give me any information as to the best form of an inexpensive conveyance for removing infected bedding &c. through the streets to and from the disinfecting chamber?

I am, Sirs, yours faithfully,

J. H. JENKINS.

MEDICAL RESPONSIBILITY AND BABY FARMING, &c.

Honor.—Medical relations with such a house as our correspondent describes are not necessarily prohibited, but they need to be strongly conditional. An accoucheur either in such a house or a lying-in hospital is not called on to act as a detective, but he is not to shut his eyes or give any countenance to questionable ways of dealing with children born under discreditable circumstances. He can, if he rightly uses his office, be their best friend. He should absolutely refuse to attend if children are kept without due compliance with the Act of Parliament which requires their registration. If they die without evidence of their care and medical attendance he must absolutely decline to certify. We gather that the landlady in this case is a respectable person and has every wish to comply with the law; where this is obviously not the case the medical man should decline all medical attendance beyond what humanity dictates.

Dr. Russell Steele.—We are informed that at both places the bread can be obtained by arrangement.

"THE EXHIBITION OF HYPNOTISED SUBJECTS."

To the Editors of THE LANCET.

SIRS,—Having had occasion on Friday, the 1st inst., to see Mr. Ritchie, the chairman of the board of directors of the Royal Aquarium, on a private matter, not in any way connected with the Aquarium, I went there for that purpose. I was then informed for the first time of the proposed trance. I have already, in your issue of Saturday, explained how it was that I took any prominent part in the first *séance*. Having on many previous occasions attended interesting demonstrations at the Aquarium by invitation, where I have seen numbers of medical men also present, I did not think the matter unusual. As to the second trance. I got so deeply interested in the first that I decided to watch this, purely from a scientific point of view, to see whether a six days' trance could be possible. I must confess that I was very doubtful of the fact notwithstanding I had been informed of similar cases. I also considered that if such could be proved it opened out a dangerous vista to science, inasmuch as criminal and other acts might be committed under similar circumstances, whereas it also proved that in persons susceptible of hypnotic influence it might be used to perform severe operations, and to prolong sleep in cases of mental disease requiring brain rest. I desired to be convinced on this matter, and never having had any opportunities of seeing or knowing where in England such investigations could be made I decided to grasp this occasion, and purely in the interests of science. I also decided that if such were proved to be the case some law should be passed on the subject deciding when it may or may not be used and by whom. Immediately I saw that my name was appearing in the newspapers I wrote and requested Mr. Ritchie to stop this, as it was against my wish to appear in any official or public capacity in the matter. This was, as you may have observed, immediately done. I was not directly or indirectly a party to the proceedings, and my services throughout were given voluntarily, with the sole object of testing the possibility of such a proceeding. I was informed by one who attended at the resuscitation, which took place on Saturday night, but at which I was not present, that Mr. Ritchie stated that 150 medical men had examined the case, and that many had left their cards and signed a paper as to their opinion on it, thus showing the interest taken by the profession. I might state that on being asked whether there was any danger to life whilst in a hypnotic trance I replied, so far as I knew, there were no recorded instances. I had never heard of the phthisical case until my attention was drawn to it, not being a student in hypnotism or versed in the literature of the subject, but one anxious to learn. I trust that you will give this letter the same prominence as the paragraph in Saturday's issue.

I am, Sirs, your obedient servant,
Devonshire-street, W., Feb. 11th, 1895. FORBES WINSTON.

P.S.—The man remained in a perfect state of insensibility from 3.30 p.m., Monday, the 4th, until 10.30 p.m., Saturday, the 9th inst., in spite of everything that was done to rouse him.

A TAX ON ERRAND-BOYS.

To the Editors of THE LANCET.

SIRS,—The Inland Revenue authorities want me to pay the "male servant" tax on my errand boy, whose duties are to clean knives and boots, run on errands, and take out the medicines. I shall be glad if you or some of your readers can tell me if I am liable for this tax. I may add that my father, who practised for forty years, kept a similar servant and was never asked to pay the tax. I enclose my card.

I am, Sirs, yours faithfully,
Feb. 11th, 1895. VERULAM.

A POINT OF ETHICS.

To the Editors of THE LANCET.

SIRS,—I should be thankful if you would kindly enlighten me on a question of medical ethics. In a case of a Government employé being laid up ill at home is it proper that the medical officer attached to the department should visit him, remove dressings, and make suggestions as to diagnosis and treatment, without giving his local medical attendant a chance of being present at the interview?

I am, Sirs, yours faithfully,
Feb. 13th, 1895. B. C. L.

. There can be but one answer—certainly not.—ED. L.

GRAPHOLOGY.

HANDWRITING as a diagnostic sign in obscure cases of cerebral or mental disease has lately been invested with much importance by the Italian school of anthropology, the head of which, Dr. Cesare Lombroso, the eminent Turin professor, has just issued a little volume on the subject. It is entitled "Grafologia," and is published by Ulrico Hoepli of Milan. A history of graphology, going into the handwriting of "individui normali," and showing how it illustrates individual character, precedes an elaborate examination of the handwriting of "individui anormali," in which the distinctive features of the cursive style assumed by epileptics, lunatics, and "hypnotics" is described with great minuteness, aided by the copious reproduction of facsimiles. This is much the most interesting portion of the treatise, and Dr. Lombroso's immense experience as a medico-psychological expert in criminal trials is displayed to special advantage. The "range of variation" within which the same individual, healthy as well as insane, will modify his handwriting according to his cerebral-mental condition is one of the many interesting inductions arrived at by Dr. Lombroso.

W. M. C.—The fair arrangement, it seems to us, would be to value the drugs at both times and pay half on the sum so obtained.

Mr. Thomas Lafan.—We regret to be unable to be of any practical assistance to our correspondent.

HOMES FOR CHILDREN OF DEFICIENT INTELLECT.

To the Editors of THE LANCET.

SIRS,—In reply to the query by "J. P. S." in your last issue, allow me to state that accommodation for such a case as he mentioned (presumably mentally suitable for Darent) might be obtained at moderate rates at any of the charitable institutions for imbecile children. At Earlswood (secretary, Mr. Downing, 35, King William-street, E.C.) patients are received as "put-payment" cases (specially voted for at the elections) at 15 guineas or more annually, and on full payment at 60 guineas and upwards according to requirements. At the Eastern Counties Asylum, Colchester (secretary, Mr. Turner) payment cases are taken at £50 per annum, but reduction is made to £40 if the friends cannot afford more. At the Royal Albert Asylum, Lancaster (secretary, Mr. Diggins), the full payment is 60 guineas, and the reduced (available only for residents in the northern counties) 25 guineas per annum. Payment cases are also taken at the Western Counties Idiot Asylum, Starcross, and the Midland Counties Asylum, Knowle, near Birmingham. There are a few private educational establishments also for mentally feeble children, of which I should be glad to give your correspondent information if he would write to me.—I am, Sirs, yours truly,

G. E. SHUTTLEWORTH, M.D.
Auraster House, Richmond Hill, Feb. 11th, 1895.

ADVERTISEMENT BY NEWSPAPER CARD—CAPE COLONY.

SUCH a mode of announcing the commencement of practice is not approved at home, and would be better avoided in the colonies.

C. H. W. P.—We can understand that the Local Government Board in practice would have the same difficulty as we should in theory, or more, if it set itself to lay down hard-and-fast definitions and regulations to apply to all cases alike; and we fear that we shall be unable to make the perfectly clear and authoritative statement that is desired for that reason. A systematic inspection may in some cases involve a house-to-house inspection. Undoubtedly the Local Government Board has purposely left points in its instructions to the intelligent interpretation of the individual health officer according to the actual circumstances, which he alone knows.

Enquirer.—There is no Society of United Medical Botanists in Great Britain whose diplomas are of any legal value or confer any right of practice. The advertisements are enough to stamp their authors with quackery.

FAIR COMPETITION.

To the Editors of THE LANCET.

SIRS,—Will you kindly answer the following queries in the next issue of THE LANCET? There is a forge in this town for which a medical officer is appointed every three years. A has held the appointment for several terms. The committee decided this year to have a ballot. A letter was sent to several medical men, asking if they would allow their names to be submitted as candidates. Would B, having been one of the medical men asked, have acted against any rules of medical ethics or in any way ungentlemanly in allowing his name to be placed on the list for election? A was also asked again to be one of the number. I am, Sirs, yours faithfully,

Feb. 11th, 1895. NEMO.

. If the committee has decided openly and formally to throw the appointment open there can be no reason, legal or moral, why other medical men than A should not compete for it. A could not properly feel aggrieved at candidates competing with him for the post unless he was given to understand, when originally appointed, that the post was a permanent one. We presume, as our correspondent makes no allusion to this point, that A is not being now made to undergo re-election having formerly been promised that he should not be so troubled.—ED. L.

THE DANGER OF QUACK MEDICINES.

THE *Bradford Observer* recently reported an inquest on Mr. Charles Vickermann of Huddersfield, who died at the age of seventy-three years. He was taking a patent medicine. He wrote to the vendors in London about his complaint, and they urged a continuance of the medicine. He became suddenly worse, and died before assistance could be procured. The deputy-coroner said this sort of thing should be exposed and people shown the great danger of taking medicines prescribed by persons they had never seen. The risk is too obvious. But to whom are we to look to act in the name of the public? The coroners as a body should make a representation of these cases to the Home Secretary.

A. B. M.—The Matriculation Examination of the University of Melbourne is accepted by the Joint Board of Examiners of the Scottish Universities, as exempting from the Medical Preliminary Examination of the Scottish Universities, provided the examination includes all the subjects required under the regulations of the General Medical Council and prescribed by the medical ordinances of the Scottish University Commissioners (see the Students' Number of THE LANCET). With regard to the further question of the Junior and Senior Public Examinations of the University of Tasmania, these do not appear on the list of examinations accepted by the Board as exempting from the Medical Preliminary Examination; but we understand that the Secretary of the Aberdeen University Court will be asked to bring up the question of the recognition of these examinations at the meeting of the Board in April. In the event of any special cases involving hardship or requiring immediate attention arising in the intervals between the meetings of the Board there is an urgency committee empowered to deal with such cases on their merits.

A LEGITIMATE GRUMBLE.

To the Editors of THE LANCET.

SIRS,—Will you allow me to protest through THE LANCET against the discourtesy that prevails in our profession? I am one of that unfortunate genus *assistant*, and when applying for a post, although I send a full-stamped and directed envelope, not one in twenty gentlemen will take the trouble to return my photo and testimonials. I think myself lucky if I get 50 per cent. of my photos back, even after writing a second time for them. Mine, I find, is no exceptional experience, and it is a pity there is not a little more of that good old feeling amongst us—to do unto others as we would be done by.

I am, Sirs, yours truly,

Feb. 11th, 1895.

M.B.

. We have headed our correspondent's letter with a title which we consider apt to its contents. It may be complimentary to "M.B." that his photograph should in so large a proportion of cases be retained, but it is a compliment that has its drawbacks.—ED. L.

"CLUBS AND CHRONIC CASES."

To the Editors of THE LANCET.

SIRS,—Assuming the case one in which the patient has not broken the by-law in reference to contributing in any way to his illness, I should advise "Podagra" to ignore the society's definition of "gout" as a "chronic disease," and for two reasons: First, because if he allows the society to define such terms for him he might possibly find the precedence awkward at some future date. An insurance office on one occasion was desirous of disputing a death claim because the word "atheroma" occurred on my certificate. The insured had deceived them by not stating he was the subject of a "tumour or large swelling of the vessels." Secondly, because the local manifestations of the gouty diathesis are acute attacks, separate illnesses from time to time, and certainly entitling the poor sufferer to go on the funds. Ultimately no doubt the case will show some decided form of "chronicity."

I am, Sirs, yours obediently,

NATHAN HANNAH.

Ashton, Jan. 29th, 1895.

A QUESTION OF DOOR-PLATES.

To the Editors of THE LANCET.

SIRS,—Is it legal for a medical man who holds the following qualifications—M.D. Brux., L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S.G.—to have on one plate on his door "T. F. S.—, M.D." and on another plate "Dr. S.—"? I am, Sirs, yours faithfully,

Feb. 11th, 1895.

ENQUIRER.

. There is nothing illegal, we believe, in such a description, but we certainly think that under the circumstances two door-plates are quite unnecessary.—ED. L.

"QUALIFIED DISPENSERS."

To the Editors of THE LANCET.

SIRS,—Does the reply to "Chemicus" in THE LANCET of Feb. 9th respecting qualified dispensers imply that the Apothecaries' Hall qualification is not a legal one?

I am, Sirs, yours faithfully,

COLLOID.

Feb. 9th, 1895.

. What does our correspondent imply by the Apothecaries' Hall qualification?—ED. L.

CORONERS ON UNQUALIFIED PRACTICE.

To do prescribing druggists due justice, they generally do not tamper with their own children. Though they may indulge freely in unqualified practice they are usually alive to the advantage of medical advice when their own family is concerned. But a remarkable instance to the contrary has been partly exposed at Rotherham by the coroner, Mr. D. Wightman, in the case of William Eric Holmes, aged five years and a half, the son of Mr. Samuel Holmes, chemist, of Rotherham. Mr. Holmes was so satisfied with his own medical knowledge and wisdom that he treated his own child up to the time of his death. For eight or ten days the boy was ill, and even towards the end, when he "detected" signs of pneumonia, he did not send for the medical man. A neighbour was expecting him to call, and he asked her to send him in, but he did not call the first day, and Mr. Holmes simply repeated the request a second day through the neighbour. When he did call he found the child dead. Hence the inquest. The coroner made some strong observations on the conduct of the druggist; but not too strong. He dealt chiefly with the fact that by not calling in the medical man an inquest had been necessitated. This is the least objection to the course taken by Mr. Holmes. The greatest is that he did not give his child the benefit of medical attendance.

Durham.—The hard-and-fast line between the physician and surgeon cannot always be observed in provincial hospitals, but it certainly seems to us upon the facts put before us by our correspondent, that the surgical work should be strictly done by the men appointed by the governors to do it. Gynecological surgery is by common consent held to be a thing apart, and the rules or customs of different institutions dictate the different procedures.

Badge 17, 234.—We cannot do anything to practically display our sympathy.

"DIFFICULTIES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT."

To the Editors of THE LANCET.

SIRS,—In your interesting series of articles under the above heading you have not yet come to the point of payment. The clerk of a sanitary board refuses to pay me certain half-crowns on the score that I did not give him notice of the debt within a year. The Act does not order me to give such notice, nor has the aforesaid clerk till now informed me that such is necessary. Have I any redress?

I am, Sirs, your obedient servant,

Melksham, Wilts, Jan. 26th, 1895.

S. GROSE.

. Our articles have not attempted to deal with every individual case that might arise (see answer to "C. H. W. P."). There is nothing in the Act giving the clerk the position he has assumed, and our correspondent should communicate with his local authority. Perhaps the clerk's action is for convenience of audit.—ED. L.

"C A R A M E L S."

To the Editors of THE LANCET.

SIRS,—For the information of your correspondent, "M.R.C.S. (Retired)," in your issue of Jan. 26th, I quote the following from Roscoe's "Elementary Chemistry": "Sugar melts at 160° to a colourless liquid, which solidifies on cooling to a colourless transparent mass (barley-sugar) and on standing becomes crystalline and opaque. When more strongly heated, water is given off, and a dark-coloured mass, called caramel, is left behind." I have little doubt that this is the foundation of the caramels sold by confectioners, these being made of chocolate, white sugar, and butter boiled together in a pan and variously flavoured.

I am, Sirs, yours faithfully,

Sheerness, Feb. 4th, 1895.

JULIUS CÆSAR.

LEGAL REQUIREMENTS IN VACCINATION.

To the Editors of THE LANCET.

SIRS,—May I ask if there is any law or rule for a medical man in private practice to vaccinate any individual in more than one place?

I am, Sirs, yours faithfully,

Feb. 11th, 1895.

VACCINE.

. There is unhappily no binding rule.—ED. L.

During the week marked copies of the following newspapers have been received:—*Birmingham Argus*, *Midland Evening News*, *Star*, *Bradford Daily Telegraph*, *Judy*, *Dover Express*, *Newcastle Daily Chronicle*, *North Star*, *Brighton Argus*, *Western Morning News*, *South Wales Echo*, *Yorkshire Herald*, *Manchester Guardian*, *Perthshire Courier*, *San Francisco Chronicle*, *Lincolnshire Chronicle*, *Cheltenham Examiner*, *Cape Times*, *Falkirk Herald*, *Science Siftings*, *Cork Constitution*, *Yorkshire Evening Post*, *Sanitary Record*, *West Middlesex Standard*, *Reading Mercury*, *Local Government Chronicle*, *Weekly Free Press* and *Aberdeen Herald*, *Newcastle Daily Leader*, *City Press*, *Times of India*, *Architect*, *Pioneer Mail*, *Leeds Mercury*, *Yorkshire Post*, *Builder*, *Bristol Mercury*, *Guy's Hospital Gazette*, *Liverpool Daily Post*, *Scotsman*, *Herefordshire Mercury*, *Southern Times* (Weymouth), *West Middlesex Advertiser*, *Cork Examiner*, *Nature*, *Southampton Echo*, *Lancashire Evening Express*, *Local Government Journal*, *Lincoln Gazette*, *Matlock Visitor*, *Coventry Herald*, *Jarrow Express*, *Cornish Telegraph*, *Hampshire Advertiser*, *Kentish Mercury*, *Salford Chronicle*, *Perth Constitutional*, *Oswestry Advertiser*, *Somerset Journal*, *Worcester Chronicle*, *Forres*, *Elgin*, and *Nairn Gazette*, &c., &c.

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The Hunterian Oration.

Delivered at the Royal College of Surgeons of England on Thursday, Feb. 14th, 1895.

By J. W. HULKE, F.R.C.S. ENG., F.R.S.,
PRESIDENT OF THE COLLEGE, &c.

MR. VICE PRESIDENT, VISITORS, FELLOWS, AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—We meet to-day to commemorate the 166th anniversary of the birth of John Hunter, that remarkable man whose name in this College is as a living presence, who did so much, and with such great success, last century to raise surgery from the lower grade of an empirical handicraft, which it then too greatly resembled, to the dignity of a branch of science by basing the principles that should guide its practice on the combined foundation of anatomy, physiology, and pathology. His great achievements as a surgeon, his life-history, and his personality have been so frequently and so fully dwelt on here that I may pass these by and at once take up the theme on which I would speak to you to-day. Its subject is John Hunter, the biologist, the sagacious investigator and interpreter of "organic nature." Of John Hunter in this character I can, however, offer you only a very incomplete sketch, since even if the time at my disposal permitted, and had I the necessary ability for such a task—a gift I may not claim—the materials for a complete presentment of him as a biologist do not now exist, for ten large bound volumes of manuscript, written mostly by his assistants at his dictation, and then revised, corrected, and added to by himself, embodying the records of the labours of many years, purchased, together with his museum, by the nation, which made our College their custodian, were about thirty years after John Hunter's death designedly burned by Sir Everard Home, his brother-in-law and executor. He, when interrogated respecting this act, asserted that he had destroyed these MSS. by John Hunter's expressed desire, as being by him considered too imperfect for the public eye. That these ten volumes of MS. were included under the words "Collections and everything belonging thereto," which John Hunter in his last will directed should be offered to the Government "in one lot," is not open to doubt; yet Sir Everard Home, shortly before the transfer of the "collections" from Leicester-square to Lincoln's-inn-fields, and, therefore, after their purchase by the Government, had them removed to his own house. The Board of Curators of the museum of the College appear not to have known that they had existed until after their destruction. This irreparable loss looms the larger when we study John Hunter's anatomical and physiological collections, when we ponder on the fragments of his writings rescued from destruction by the solicitude of William Clift, his devoted assistant and our first conservator, and when we read his lectures and other papers collected and published by this College and by Palmer, Ottley, and R. Owen. The better my knowledge of the extensive series of anatomical and physiological preparations, nearly all made by John Hunter's own hands—a series which may properly be regarded as the centre around which are clustered our own now very greatly extended and in some respects unsurpassed collection—the more profoundly am I impressed with the vastness of our great master's anatomical and physiological work, which, it should be remembered, was all accomplished within the relatively short space of thirty years, broken in upon by frequent and severe illness, and by the many interruptions incidental to the life of a practising surgeon; and the better my acquaintance with the Hunterian series the more am I impressed with John Hunter's sagacity, for in this series of preparations we have not the bald presentments of disconnected facts, but each preparation unfolds a tale, each conveys a lesson, each is a link in a chain, and not infrequently one clears up something which is obscurely represented or only hinted at by another. The overshadowing greatness of his zoological works perhaps accounts for the imperfect recognition by so many of us of how much John Hunter also occupied himself in botanical research. In one of several physiological papers, after discussing the agreements and the differences between that which the terms "common or original matter and animate matter"

—or, as we now should say, between inorganic and organic substances—and affirming the derivation of the latter from the former, for the reason that "animate is found to return to inanimate matter," he proceeds to analyse the resemblances and differences of the matter of which animals and vegetables are composed. He restricts "to vegetables the power of immediately converting common (i.e., inorganic) matter into their own kind"; and from this he draws the inference that a "vegetable seems an intermediate link between common and animal matter." In his lecture on the Principles of Surgery we find him reviewing the "accord" between the physiological endowments of vegetables and those of animals. He mentions that "a self-moving power has been observed and is universally allowed in vegetables"; and he adds that "this principle seems to be as much a property in vegetables as in animals." He illustrates internal mechanical work done within vegetable tissues by reference to Hale's notable experiments on the rising of the sap in trees, and he contrasts the magnitude of the force employed in this movement with that exerted in the heart's systole. Having defined "irritability" as the power of responding to stimuli by internal and external work, he draws attention to the visible movements of the "whole parts" of plants in response to external excitation as examples of this property. He instances the movements of the leaves of the leguminous plant *Hedysarum gyrans* as an example of this phenomenon; and he comments on an apparent analogy between these movements and those of respiration in animals suggested in their periodic repetition in both divisions of organic nature. He is, however, careful to avoid the error of attributing to these superficial resemblances an essential correspondence of function. With characteristic caution he says: "This—i.e., the recurring movements of the leaves—is an action apparently similar to breathing in animals, though, perhaps, it does not answer the same purpose." The circling movements of tendrils, as if seeking for a mechanical support, and their twining round this when they come into contact with it, did not escape Hunter's notice. Nor did he overlook the remarkable circumstance which characterises the twisting of the stems of certain climbing plants—viz., its constant direction for each plant. He notes the honeysuckle (*Lonicera*) and the hop (*Humulus*) as climbers, of both which he says: "Their stems turn to the left, whereas the stem of *Clitoria* and that of *Convolvulus* turn to the right." He instances *Dionæa muscipula* (Venus's fly-trap) and the *Mimosa pudica* (sensitive plant) as plants endowed with considerable powers of movement. He remarks that "the leaf of *Dionæa* upon being touched closes up, and, as it were, confines the stimulating cause"—that is, it entraps the insect which, in settling upon its upper surface, has touched the little cluster of extremely irritable hairs, there projecting above the general local of the cuticle. Of the *Mimosa pudica* he observes that it bends its leaflets in response to a gross mechanical stimulus, and also in response to the subtle excitation of varying quantities of light incident upon them. In connexion with this latter kind of stimulus, that of light, he mentions the goats-beard (*Tragopogon*) and *Calendula pluvialis*, two plants in the order *Compositæ*, and he says that they and many other plants close their blossoms towards night or at the approach of rain. Of this habit our indigenous centaury (*Erythræa*) and the scarlet pimpernel (*Anagallis arvensis*) furnish familiar examples. Then he proceeds to tell us that some other plants, as certain species of "convolvulus, open their flowers in the evening and close them at the approach of the sun." In striking contrast to these dusk-loving plants, John Hunter mentions that nearly the entire class *Diadelphis* (now designated *Leguminosæ*), which comprises, he says, "chiefly wing-leaved plants," close their "foliola towards night, not expanding them till morning," and he remarks that this phenomenon had been called by Linnaeus the "sleep of plants." This reference to the great Swedish botanist is interesting, because it proves John Hunter to have been acquainted with Petrus Bremer's remarkable treatise bearing the Latin title "*Somnus Plantarum*." It is included in the "*Amoenitates Academicæ*" of Linnaeus, published at Stockholm in 1759. In this instructive memoir Bremer asserts that "plants possess most qualities in common with animals—they feed, they have movement and rest, they have excretions, and they celebrate their nuptials." To Bremer we are indebted for an anecdote of the circumstance which first brought to the great botanist's notice the phenomenon of the folding of the leaves of certain plants at night, before unrecognised. Linnaeus, he tells us,

had placed in charge of an assistant a lotus (*Ornithopodioides*) and had enjoined him to take particular care of it. The lotus blossomed. Throughout the day its conspicuous blossom attracted notice, but in the evening, when the assistant visited the plant, the blossom, to his consternation, was not to be seen. The unhappy man, conceiving that the blossom might have been surreptitiously plucked by an evil-disposed person, watched the lotus more closely than before. Next morning a blossom again appeared; in the evening it had again vanished. Perplexed, and unable to account for the singular occurrence, but convinced that the blossom had not been stolen, the assistant hastened to tell Linnaeus what had happened. Linnaeus at once went to the lotus, and on closely inspecting it he detected the vanished blossom, still actually present, only hidden from view, mantled by the green leaves wrapt about it. Attention once aroused, the phenomenon was soon found to be common to many other plants. That it should have so long escaped recognition, and it should then owe its discovery to an accident, is but one of many instances we could readily adduce to show how easily do circumstances for which we are not looking pass unnoticed, even though daily occurring under our very eyes. John Hunter made the *Mimosa pudica* the subject of a study into which he threw himself with characteristic energy. He writes that "in order to have the greatest part of the day before me I began my experiments at eight in the morning while the leaves were in full expansion, and I continued them till four in the afternoon, as longer would not have been just, for they begin to collapse of themselves between five and six o'clock." With his peculiar aptitude for planning an experiment he contrived a small screen upon which he could trace and measure the arc through which a selected leaflet moved in response to a certain stimulus. In this way he found that "the leaflets are less affected as they become accustomed to the stimulus"; "that they require a stronger and quicker stimulus to produce motion after being some time accustomed to it"; and "that they erect themselves less after a repetition of such actions." Here the analogy to the corresponding occurrences in connexion with excitation of animal tissues is very obvious. Searching for the mechanism concerned in the movement of the *Mimosa* leaflets, John Hunter discovered that "the motion is principally confined to one part, and this differing from the others in external appearance, which difference is its increased thickness and uniformity of surface." Thus he locates the motor mechanism in the swelling at the base of the petiole, and in the homologous parts of the stalks of the leaflets. Next he tells us that he slit longitudinally the swelling on the "footstalk," and also that part of "the stem on which it stands," and he is about to record what he saw in these; but here, as Otley observes, there occurs a blank in the manuscript which leaves us ignorant of what he actually discerned in them. I do not gather from the context that John Hunter employed the compound microscope in this investigation. The contrary appears more probable, for the use of the microscope was then only dawning, and vegetable histology had made relatively little advance since Malpighi began to cultivate it in the latter half of the preceding century. We, at our standpoint, can hardly imagine the possibility of Malpighi holding concurrently the chair of Botany and that of Zootomy in his University (Bologna); yet in both these chairs he made discoveries which gained him enduring fame. We *medici* are wont to think of Malpighi as an anatomist only, whose honoured name has come down to us chiefly in association with certain minute bodies in the kidney, and in the spleen and a certain layer in the integument; but botanists revere Malpighi as the founder of vegetable histology. For John Hunter it may fairly be claimed that he pushed his investigation into the motor mechanism of the *mimosa* leaflets as far as was then practicable with the means at his command. Later investigators have demonstrated that when in a young, vigorous, succulent *Mimosa* a cut is made with a sharp knife in the petiolar swelling, dividing its parenchyma down to the central strand of vascular tissue, a drop of water oozes from the wound, upon which follows the well-known movement of the leaf. In the absence of this effusion of water no movement of the leaf occurs. Julius Sachs, who in recent years has done so much to advance the study of vegetable physiology, has further demonstrated that the visible leaf-movement is caused by the afflux of water in the petiolar parenchyma, distending this tissue and so causing it to become elongated more than the less extensible axile band of vessels. By such distensions of the mass of parenchyma

situated above the axile vascular band the upper part of the petiolar swelling is lengthened disproportionately to the lower part, and the leaf necessarily bends down; whereas, when the lower mass of the parenchyma is turgid with water the opposite occurs and the leaf is erected. By the device of removing first the upper mass of parenchyma and then the lower mass of it, Sachs was able to demonstrate that only the lower mass, below the axile vessels, is endowed with this irritability. It is now known that the movements of the *mimosa* leaflets are attended with the production of feeble electric currents. Such have been also demonstrated by Professor Burdon Sanderson to attend the movement of the leaf of *Dionaea muscipula*. Dr. Kunkel, working in Sachs's laboratory, has since demonstrated that weak electric currents accompany the movement of water in the vegetable tissues, however this movement is originated, and thus the generation of such electric currents is proved to be not peculiar to leaf-movements induced by external stimuli. Whilst experimenting on the *Mimosa*, John Hunter relates that he observed that when he touched the leaflets the visible effect of the local stimulus spread to the neighbouring leaflets, which he saw successively bend down in pairs until all the leaflets of the compound leaf were folded. He also noticed that this progressive effect of the stimulus spread from the point of its application more readily in the direction towards the stem than in the opposite direction towards the distal end of the leaf. Professor J. Sachs, and with him some others, appear disposed to regard the petiolar, axile, vascular bundle as the path along which the molecular disturbance initiated by the stimulus travels; but, whether this or the parenchyma is the path, it seems probable that a molecular disturbance in the living, active protoplasm is the efficient cause of the influx of water that produces the leaf movement. The protoplasm of adjoining vegetable cells is now known to be continuous through minute openings in the cell-wall, so that we are warranted in regarding the protoplasm in living vegetable tissues as a "continuum," and thus the propagation of a molecular disturbance to considerable distances from the point of application of a mechanical stimulus originating it becomes readily intelligible. John Hunter's experiments on the *Mimosa* were not restricted to the effects of mechanical stimuli. He also experimented on this plant with heat, with chemical solutions, and with ether. He tried also the effect of a tight ligature placed around the stem or branch, and he found that when the parts below the ligature were cut very slight or no movements of the leaf occurred. Continuing his discussion of the resemblances between animals and vegetables, John Hunter remarks that "vegetables are supposed, with great reason, to have an action analogous to breathing, for the same kind of air which kills animals which do breathe certainly kills vegetables also." He touches this subject so briefly that he leaves us uncertain whether he had himself experimentally investigated the influences of gases on plant life or had merely adopted the conclusions of others. This latter appears to me more probable when we remember the standpoint of the chemistry of the gases in his day. Carbonic acid gas was discovered by Black in 1767, nitrogen by Priestley in 1772, oxygen also by Priestley in 1774, and hydrogen by Cavendish in 1776, the year of John Hunter's Croonian Lecture, from which I have just quoted. We know that John Hunter and Cavendish were personally acquainted, for Hunter tells us that Cavendish examined for him "air" contained in certain bladders present on the intestines of a hog sent him by Jenner. There is, then, no improbability in the idea that Hunter may have derived from Cavendish his knowledge of the influences of gases on vegetable life. However this may have been, botanists have long recognised as a general principle the necessity of oxygen for vegetable life; that vegetables derive free oxygen from the surrounding atmosphere; and that they are also able to seize upon oxygen when presented to them in weak chemical combination. Of this latter action the reduction of oxy-haemoglobin to haemoglobin in the circulating blood by the bacillus of anthrax in animals dying of cattle plague has been regarded as a significant example. In the absence of oxygen plants are asphyxiated; vegetable protoplasm loses its irritability, though less quickly than does animal protoplasm, because the processes of vegetable life are less actively carried on than are those of animal life. When a plant is deprived of oxygen, as when it is placed in an atmosphere from which this gas is absent, during a short period the

want of the external supply of oxygen is in some measure compensated by the atmospheric oxygen previously enclosed in the air-spaces of the vegetable tissues; perhaps also some oxygen is derived by the plant from the decomposition of weak combinations of oxygen normally present in certain chemical substances contained in the tissues, but these sources of oxygen are soon exhausted. To this general law of the necessity of oxygen for the maintenance of vegetable life certain low forms seem to offer notable exceptions. Thus the yeast plant (*Saccharomyces cerevisiæ*) can live and even increase in an atmosphere devoid of oxygen. Its highest life-phase, however, requires the presence of oxygen, for it does not produce spores unless it has access to the atmosphere. Then, also, there are certain schizomycetes to which free oxygen appears positively deleterious—they die in its presence. The explanation of this remarkable phenomenon still awaits solution. The final products of the oxygen taken into the tissues of the plant are carbon dioxide and water. The former of these is exhaled from every part of the external surface of the plant. This, Von Tighem says, is the most constant phenomenon of plant life, and thus in the matter of gas-exchanges we find confirmed the impression mentioned by John Hunter as current in his day—viz., that a very close correspondence exists between vegetable and animal respiration. That plants, like animals, have “the power within themselves of producing or generating heat” was not unnoticed by John Hunter. He experimented also with freezing mixtures in order to ascertain the effects of very low temperatures on succulent and on woody plants, and he found greater resistance to cold in the latter. He also carried out a series of observations, prolonged over a year, on the internal temperature of trees relatively to the temperature of the external atmosphere. He mentions that he read his thermometers at six o'clock in the morning, and again at the same hour in the evening; and he mentions that he was obliged to discontinue the experiments because the sap froze in the bore-holes made in the trunks for the reception of his thermometers. He relates that he was careful to allow a sufficient interval to elapse between boring the holes and the insertion of the thermometer, in order that the heat produced by the friction of the gimlet might be dissipated; and he tells us that he enclosed the externally projecting part of the thermometer in a box and packed it in wool as a safeguard against “all immediate external influences, either of heat or cold.” We find, too, that John Hunter made a series of temperature experiments on vegetable seeds similar to others he had made on eggs, and he mentions his intention to record these. No record of them has, however, been found, and perhaps it may have been amongst the manuscripts burned by Sir Everard Home. John Hunter has left us a brief account of experiments in connexion with the movement of the sap. We possess also short statements of his views concerning the influence of light on the production of the “green colour” of vegetables; the changes undergone by the leaf when dying; the natural decay of the vegetable tissues; the morphology of the bud; and “germination and generation in vegetables.” I cannot now enlarge upon his work in connexion with these several subjects, nor is it necessary for me to do so, since enough has been said to justify me in claiming for John Hunter that he was a very close observer and an acute reasoner upon many of the phenomena comprised under vegetable physiology.

Leaving botany, John Hunter's title to a place in the foremost rank of original investigators in zoology, the other primary division of biology, is so universally acknowledged that more than a passing reference to his researches in the animal kingdom may seem unnecessary—particularly within these walls; yet on this occasion I may not dismiss them with a bare allusion. His memoirs on “The General Principles of the Blood,” on “The Vascular System,” on “Digestion, Absorption, and Nutrition,” and on “The Growth of Bones,” even at the standpoint we have reached, require attentive study. They show how far he was in advance of his contemporaries. John Hunter's devotion to physiology, which had its root in his conviction of the necessity of this “discipline” for the intelligent practice of surgery, was made a reproach by empirical surgical contemporaries, who called him a theorist and not a practical surgeon; indeed, his tardy recognition as a leading surgeon in the metropolis was probably partly owing to this wrong impression of him. One of his most important memoirs is certainly that on “The General Principles of the Blood.” From it we learn how much patient

investigation, how much concentrated thought, he gave to the striking phenomenon of its coagulation. “This,” he says, “is not a property of the blood as a whole, but only of one of its component parts—the coagulable lymph.” Then, with nice discernment, he makes the comment that “this would better be termed coagulating lymph, since blood serum also contains a coagulable substance, which, however, needs the addition of a chemical agent for its change from a liquid to a solid state.” Coagulable lymph—now termed fibrin—John Hunter regarded as the most important constituent of the blood, chiefly because he found it universally present in it. He sought to ascertain the influences of temperature on the coagulation of fibrin, and he proved that this is retarded by cold and hastened by heat. The effect of motion and of rest on coagulation also occupied his attention, with the result that he was led to regard rest as an important direct factor of coagulation, but not its immediate cause. The final outcome of his experiments and observations on the blood was the view of its coagulation, which I reproduce in his own words: “That the fluid state of the blood is connected with the living vessels which are its natural situation, and with motion; and that where there is a full power of life the vessels are capable of keeping the blood in a fluid state.” These views appear to harmonise closely with those of the present day. The red corpuscles of the blood, with whose appearances John Hunter was familiar, he considered a less important constituent than the “coagulable lymph,” for the reason that they are not universally present, not occurring in the colourless blood of the lower animals. The white corpuscles seem to have been unknown to him, a circumstance not surprising when we recollect how imperfect the compound microscope then was, and the entire absence of our numerous resources, of which I need cite only the use of differential staining agents by which so many delicate details of minute structure have been disclosed. How narrowly John Hunter scrutinised every unusual circumstance that came before him is shown by his remarks on “Liphæmia.” “The serum of the blood,” he says, “is often wheyish, and then upon settling it often throws up a whitish scum like cream.” “This was most probably first observed in human blood, but it is not peculiar to it.” He had noticed it “more frequently in the blood of breeding women, but he had seen it in others and sometimes in men.” Examined with the microscope he found this scum to be composed of “globular particles” which are not soluble in water and which rise to the top. This pathological condition of blood serum has in recent years attracted much attention; reference to it was made by more than one speaker in the “Discussion on the Morbid Anatomy of Diabetes,” an account of which was published in the Transactions of the Pathological Society of London.¹ Numerous and varied experiments were made by John Hunter to determine the cause of the different colour of venous and of arterial blood. He noticed the influence of respiration on the colour, and to the objection advanced by some persons, “that in the lungs the blood cannot come into contact with the air” he opposed the familiar fact that the bright red colour assumed by the outer surface of a blood-clot when exposed to the air “extends some depth into the clot,” whence “it is evident that air can and does pervade animal matter.” Passing to the “vascular system,” John Hunter notices the predominance of a muscular element in the coats of the smaller bloodvessels; and then he comments on the respective influence of the elastic and of the muscular tissue on the calibre of the vessel. He notices the branching and the anastomosis of arteries, and he discusses the effect of these arrangements on the velocity of the blood current. Then he investigates the pumping force of the heart in relation to the resistance offered by the arteries, the relative capacities of the venous and arterial systems, the retardation of the blood-current in the veins, and the form, structure, and distribution of the valves in the last-named vessels.

John Hunter's observations on “Digestion and Nutrition,” though much less extensive, are scarcely less instructive. I shall cite only one memoir—viz., that on “The Digestion of the Stomach (by its own Juices) after Death,” occasioning appearances which had previously been regarded as pathological, and respecting the true nature of which much acute difference of opinion continued long subsequently to exist, notwithstanding the thoroughness of Hunter's exposition. In a communication to the Royal Society made at the instigation of its President, Sir John Pringle,² John

¹ Vol. xxxviii., 1883. ² Read on June 18th, 1772.

Hunter insists on the prime importance of a correct knowledge of the appearances produced in the tissues of the body by those changes which they naturally undergo in those dying suddenly, as by fatal violence inflicted on persons in perfect health. He significantly remarks that in the absence of this knowledge appearances, collectively products of putrefaction, may readily be mistaken for others the results of disease, pathological in their nature and occurring during life, and thus confusion and misapprehension will arise. Then he proceeds to explain that "there is a case of mixed nature which cannot be reckoned a process of the living body nor of the dead; it participates of both, inasmuch as its cause arises from the living, yet it cannot take effect till after death." He adduces the fact that "animals or parts of animals possessed of the living principle, when taken into the stomach, are not affected by the powers of that viscus so long as the living principle remains. Thence it is that we find animals of various kinds living in the stomach or hatched or bred there; but the moment that any of these lose the living principle they become subject to the digestive powers of the stomach." His argument is that "if the living principle was not capable of preserving animal substances from undergoing that process [digestion] the stomach itself would be digested," which it is not. The "appearance" which John Hunter ascribed to post-mortem digestion is a dissolution of the stomach at its great extremity, in consequence of which there is frequently a considerable aperture made in that viscus. "The edges of this opening appear to be half dissolved, very much like that kind of dissolution which fleshy parts undergo when half digested in a living stomach, or when dissolved by a caustic alkali—namely, pulpy, tender, and ragged." At a loss to account for these appearances, John Hunter had supposed them to have been produced during life, and to have been the cause of death (then the current view); but the absence of associated symptoms and their frequency in persons who in health had died violent deaths occasioned him perplexity and made him "suspect that the true cause was not even imagined." He tells us that the first time he had observed this "appearance" was under circumstances that precluded its causation by disease—the man had just before his death taken a hearty supper of cold meat, cheese, bread, and ale. On opening his body a large hole was found in the stomach, through which part of the ingesta had escaped into the general cavity of the abdomen. Doubtful as to what this might mean, he began "many experiments on digestion on different animals, all of which were killed at different times after being fed with different kinds of food; some were not opened immediately after death, and in some of them [he adds] I found the appearance above described in the stomach." The memoir is worthy of study, if only as an illustration of John Hunter's method of work; whenever puzzled by anything of which the explanation did not immediately present itself he turned to experimentation for its solution.

These very incomplete references to some of his physiological researches show that, as an original investigator in this branch of biology, John Hunter was in line with the foremost workers of his day. How great an anatomist he was is evidenced by his published papers, by the value in which his lectures delivered in the Windmill-street rooms were held by those who made the effort to understand them and appreciate them, and is told even more eloquently by his "preparations" in our Museum. In anatomy, as I have already hinted, he was not a mere accumulator of facts, not a mere describer of figure, colour, and the relative positions of the organs and members of the animal body; but he ever sought for the explanation of these. He endeavoured to import into the art of anatomy the character of a science. He was ever seeking the how, the why, and the wherefore of the facts disclosed to him by his scalpel, ever reasoning inductively from particular instances and endeavouring to deduce general laws.

But John Hunter was not only a distinguished physiologist, zoologist, and anthropologist; he also assiduously prosecuted researches in embryology, previously little cultivated, and he gathered a rich harvest. How keenly, how penetratingly, he observed and how sagaciously he interpreted what he saw is apparent in his article on the "Development of the Chick." In order to ensure a supply of eggs for this research he kept large numbers of fowls and also a flock of geese during several years. John Hunter's labours passed beyond the limits of ontogeny, the development of the individual, to phylogeny, the evolution of the "stem." "We may

observe," he writes, "that in natural things nothing stands alone; that everything in nature has a relation to or connexion with some other natural production or productions; and that each is composed of parts common to most others, but differently arranged. Therefore, in every natural production there is an appearance of an affinity in some parts of its composition (with those of some other natural productions), and where there are the greatest number of these affinities (or corresponding parts) the correspondence or affinity between those of one production with those of another the nearer are those (natural productions) allied." In another passage, after premising that "definitions are the most damnable things," he defines "species" as "things having the same relationship in their most essential properties, however much they differ in others." So "animals breeding in the fullest extent of that process constitute the species, although this may differ in some of their parts or other circumstances, but which differences are less essential, only constituting a variety." He comments on the greater tendency of domestic species to variation than obtains in wild animals, which he illustrates by referring to the many diverse breeds of dogs and the few distinct races of wolves. This difference he attributes to the existence of domestic animals under other than their natural circumstances; in short, he recognises the plastic influences of environment. He perceives "in a great many species a considerable variety in the same, and from variety in the same species it becomes [he adds] a doubt whether they were all original or none of them, or, if any be original, which that one is." He alludes to the variability of species in more than one passage, and then makes the important comment that some variations are transmissible to offspring. He tells us that "it may certainly be laid down as one of the laws of nature for species to deviate from their type under certain circumstances"; and he significantly adds that it is neither necessary nor does it follow that all deviations from the original must be a falling off—it appears just the contrary; therefore we may suppose that nature is improving her works, or at least has established the principles of improvement in the body as well as in the mind." In these passages, laboured and somewhat deficient in perfect clearness of expression as they are, we find John Hunter enunciating the principles of the "inherent variability of species," of the "modifying influences of environment," of the transmissibility of variations from parent to offspring, and of evolution from lower to higher forms—in short, in those of his papers which escaped destruction there is to be found abundant evidence that his mind was often and deeply engaged in the consideration of the pregnant question comprised in the word "evolution" around which so much and such fierce controversy has been waged in our own day.

The significance of past forms of life did not escape John Hunter; he studied their fossil remains, of which he collected a considerable number. In a previous communication to the Royal Society on a series of fossil bones from caves at Galleereenth, presented to that body by his Serene Highness the Markgrave of Anspach, we find John Hunter investigating the circumstances of their fossilisation, comparing the form of these bones with those of extant animals, reviewing the geographical distribution of animals in past time, and drawing lessons from the *gisements* of fossils as to the condition of the earth's surface in past ages. From these and similar considerations John Hunter inferred a duration of our earth prolonged through "many thousand centuries." This chronology was so greatly at variance with that then universally received that a second memoir communicated by him to the Royal Society, in which he expressed this opinion, caused such misgiving in the council of that body that the suggestion was conveyed to John Hunter through a friend that he should substitute "years" for "centuries." With characteristic adherence to his convictions he would not modify his original statement and withdrew the paper.

John Hunter's researches were not limited by the walls of the dissecting-room, museum, and study; outside these he was a keenly observant student of living nature. To the great value of these two lines of work he was fully alive. In fragmentary notes on "Natural History" (edited by R. Owen) he remarks that "writers on the natural history of animals have been of two kinds, one [concerned] only in what they could observe externally, such as form and mode of life, the second [studying] only the internal parts and the structure of the whole animal, which was performed by the anatomist. As [the subject of] the first has an

immediate connexion with [that of] the second, the describers of form conjectured what the structure ought to be by consulting the works of the anatomist; and the anatomist conjectured what the living history is or ought to be from the natural history of others, filling up what he conceived to be just and fancy supplying the rest. But such union of knowledge does not properly match. It is one building built at different times—an addition to an original plan. It is no wonder, therefore, that the whole is imperfect." Can we pronounce all later anatomists and writers on natural history to be free from this reproach? John Hunter's remarkable memoir on the Life-history of Bees testifies to his excellence as a naturalist. For the convenience of close continuous observation of his bees without molesting them he had hives made with glass windows, which allowed him at all times to watch their occupants. He inquires into the causes of the deaths of certain bees in winter; he mentions that "there was plenty of honey in their hive; that on closely examining the dead bees he found they all died with their proboscides extended, their stomachs were full of honey, and their intestines, especially the last part, also full of excrement." No circumstance, however minute, eluded his notice. He comments on the heat of bees, and remarks that without warmth they become dull, inactive, and torpid. He tells us that "on July 18th, at ten in the evening, wind northerly, thermometer at 54° in the open air, I introduced it into the top of a hive full of bees, and in less than five minutes it rose to 82°. I let it stand all night. At five in the morning it was down to 79°, at nine in the same morning it had risen to 83°, and at one o'clock to 84°, and at nine in the evening it was down to 78°. Dec. 30th. Air at 35°, bees at 73°." John Hunter made the discovery that the wax is not gathered by the bees from flowers, as is "farina" (pollen), but it "is formed by the bees themselves." He says: "It may be called an external secretion of oil. It is formed between each scale on the under surface of the belly." He detaches the minute flake, warms it on the point of a needle in the flame of a candle, sees it melt and run into a bead, and then burn in the manner of wax—in short, it is wax. Then he describes the building of the comb and of the royal cell; the deposition of eggs by the queen, their attachment to the bottom of the cells, and their occasional transference from the cells in which they were first placed to other cells; the storing of bee-bread for feeding the grubs; the development of the grub, its pupal phase, and final escape from the cell as the imago. He notes the different life forms present in the community—the queen, the males, and "the working bee, which cannot be called either sex." Lastly, he describes the anatomy of the bee and comments on its special senses. With equal thoroughness he investigated the life-history and habits of the wasps and the hornets. We also find him occupied in a study of the economy and anatomy of the humble-bee (*Bombus terrestris*), on which subject he has left a long note. With untiring industry he examined all the occupants of one nest, and found them to comprise 157 females and twenty-five males, and he noted that the former had longer proboscides than the latter. The humble-bee does not, he tells us, colonise, like the honey bee; it does not swarm like these, but the family is begun by a single female, assisted later by her offspring. None but young queens live through the winter, on the approach of which they leave their nests and seek winter quarters in holes in dry banks and similar places, from which they emerge in the following spring. About May the humble bees construct their hives, which are usually beneath ground. He describes in considerable detail their structure, the deposition of the egg by the queen, the grubs which result from these, and their life-history, ending in the imago stage. The black humble-bee (*Anthophora retusa*) and the "leaf-celled bee" (*Megachile centuncularis*) were also objects of his study. He notices the habit of the latter of cutting pieces of the leaves of roses, strawberries, and figwood, and he admires the dexterity they evince in carrying these into their holes, and the skill and neatness shown in adapting them to the construction of their cells. His attention was not limited to the Hymenoptera, for we find him busy with beetles. Of the dung-beetle (*Geotrupes stercorarius*) he records that in June he found the grubs nearly ready to assume the pupal phase, and that the perfect beetle emerged at the end of July or in August. The nests enclosing the grubs are holes from twelve to eighteen inches below the surface of the ground, usually near cow dung. These and also other holes pierced for the purpose they use for winter quarters. Most of them die, but a few survive till

the following spring. Of the common cockchafer (*Melolontha vulgaris*) and the rose-beetle (*Cetonia aurata*) he has also left short notes. In Orthoptera he describes at some length the grasshopper (*Phasgoneuron viridissimum*), with special notice of the external appearance and the anatomy of its eye. He detects the predatory habit of the dragon-fly (*Esthna grandis*), concerning which he makes the following thoroughly characteristic note: "Aug. 18th, 1778, at eight o'clock in the evening, I saw the dragon-fly flying about, making short turns, which were performed very quick. I also observed gnats flying; and what took my attention most was his making up to a gnat, and the gnat was seen no more; therefore I conjectured he was feeding upon them. I caught him and opened him next morning, and could observe in the stomach the scales of some insects." What a picture this little anecdote gives of the acuteness of John Hunter as a field naturalist.

As a zoologist and morphologist John Hunter could not be satisfied with the highly artificial zoological classifications current in his day. He remarks on the want of an adequate knowledge of these preliminary and indispensable studies, which led even the great classifier Linnæus into some very singular arrangements in the earlier editions of his "Systema Nature," of which he notices one—viz., the placing together, in one order of mammalia, man, the elephant, and the bat, because in each the mamma are pectorally situated. Such classifying as this, he caustically observes, may be pertinent as regards nipples, but not as regards animals. He did not stop at showing the defects of the current artificial systems of classification of animals, but he suggested as bases for a natural classification the arrangements of the vascular, the respiratory, and the nervous systems; and he tentatively drew out the scheme of a natural classification founded on a combination of what he termed essential and circumstantial characters. Thus, of the class Mammalia he gives as essential characters a four-chambered heart, lungs confined in a proper cavity, the enlargement of which is the cause of respiration, lungs divided into small cells, respiration quick, viviparous, &c.; whilst circumstantial characters are found in the structure of the auditory organ. This illustration will suffice to prove how sound and how advanced were John Hunter's views as a systematic zoologist.

If in this sketch of John Hunter, imperfect, incomplete as I know it to be, I have succeeded in some small degree in presenting him to you as one of the most indefatigable workers, one of the most earnest seekers after truth, one of the very closest of skilled observers, one of the most sagacious expositors of vegetable and animal life, I shall not have altogether failed in accomplishing the design which I wished to offer you on this commemorative day—a presentation of John Hunter as a biologist in the widest sense of this now much-used word. For this I have made large use of his own words, because these best show his mind, and "the mind is the man."

The Aris and Gale Lectures

ON THE CENTRAL NERVOUS MECHANISM OF THE RESPIRATION.

Delivered before the Royal College of Surgeons on Feb. 18th
and 20th, 1895.

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LECTURE I.

GENTLEMEN,—In these three lectures I propose to give an account of the nervous mechanism which produces respiration and to point out some of the practical uses to which this knowledge may be put. In doing so I have no wish unduly to separate this particular physiological action from the other vital functions of the nerve matter situated in the base of the brain. It is closely allied with the vascular mechanism and with the internal or tissue respiration producing heat. I began to make observations on this subject when I was collecting matter

for the essay on Intracranial Tumours and Abscess which received the Jacksonian prize. The work has been carried out at first at the laboratory of the Brown Institution and later in the pathological laboratory of University College. I am indebted to the Royal Society and also to the British Medical Association for grants of money towards the expenses of this research. My thanks are also due to Mr. Horsley for much help in connexion with the work.

HISTORY, COMPARATIVE ANATOMY, AND PHYSIOLOGY.

[The lecturer then gave a *résumé* of the views held about the respiratory function from ancient times down to Legallois, in whose works, published in 1830, the subject of the central nervous mechanism of the respiration was practically first treated. He then proceeded to consider the comparative anatomy and physiology of the respiratory function, and showed from specimens in the museum of the Collège how the alimentary canal is used for respiration (a) throughout its own length (a loach), (b) in its anterior part (salamander and amphioxus), and (c) by diverticula (gills or lungs). In certain fishes the air bladder is used as a storehouse for oxygen. In the higher animals muscles are used for respiration which in lower forms are either used for progression or are connected with the alimentary canal. Mr. Spencer then went on to speak of:]

The connexion of the automatic movement of respiration with the roots of the vagi nerves in the bulb.—In the pharyngeal form of respiration these nerves are both the afferent and efferent channel for the gill arches. In mammals it remains the chief afferent channel to the respiratory centre, but its efferent connexions are limited to the larynx, the facial nerve above being the channel for the nose, and as the muscles of the thorax take on a respiratory action efferent impulses go by the spinal cord.

The supremacy of the bulb over respiration and the subordinate influence of the spinal cord.—Legallois¹ was the first to show that an animal continued to breathe regularly after the removal of the cerebrum, cerebellum, and part of the bulb, so long as the section was made above the roots of the vagus group of nerves. On an injury to the origin of these nerves respiration finally ceased. The respiratory function was thus taken out of the category of voluntary movements, in which it had been previously included. Although respiration continues regularly for some time after section of the bulb immediately above the vagus roots, yet within a few hours the animal dies, for the highest centre for heat production and internal respiration and the vaso-motor centre are cut off, and thus a warm-blooded animal cannot live for any length of time. A section through or below the roots of the vagi destroys all respiratory movement except that of the nose and jaw. So long as the roots of the facial are intact² rhythmic movements of the nose and jaw occur during asphyxia—that is, when the facial nuclei have been quite separated from the vagi. The transverse section of the bulb immediately below the tubercula acustica abolishes all reflex sensory effects upon respiration from the cornea or nose, as well as the rhythmic movements of the nostrils—the facial muscles being either above the section or actually traversed by it. The first transverse section immediately affecting respiration runs just below the facial nucleus. The respiration becomes deeper and slow, with prolonged inspiration, just as after section of both vagi in the neck;³ in other words, the regulatory fibres of the lungs are connected with the highest part of the centre, and this fact has been confirmed by finding that the fibres enter the bulb by what is now called the "glossopharyngeal root." A transverse section at the level of the *alae cineræ* causes the respiratory movements to become irregular, sometimes periodic, and breathing comes to a standstill altogether by passing through the stages of asphyxia. Evidence as to a similar limit to the respiratory centre in man has been obtained from anencephalous monsters⁴ in which life has been prolonged even for four days. A fetus in whom the cerebrum and part of the cerebellum had been destroyed during birth continued to breathe regularly at the rate of six per minute after complete section of the

bulb by scissors 1 cm. above the calamus scriptorius.⁵ Bat a section immediately below the calamus abolished all respiration together with the reflexes. The effect of dividing the spinal cord below the bulb was known to Galen.⁶ He stated that when the spinal cord was divided between the first and second cervical vertebrae the animal immediately died, when between the third and fourth natural respiration was lost, and when below the sixth the diaphragm continued in action, the muscles of the thorax remaining stationary. After a section lower down the thoracic muscles were capable of movement. The effect of such injuries to the spinal cord are, unfortunately, too well known in man. Rhythmic movements of the facial muscles may continue for a long time if artificial respiration be intermittently performed. When the bulb is isolated⁷ by dividing it from the cerebrum, cutting the vagi nerves and the spinal cord below the sixth cervical vertebrae, the diaphragm continues in regular action. In a frog⁸ the cerebrum, including the mesencephalon, has been removed and the cord divided behind the atlas and destroyed, the lungs and even the heart extirpated, so that the bulb is entirely cut off from all peripheral influences, only 5 mm. of brain matter being left. Yet regular movements of the mouth, nose, and vocal cords go on, and traces of respiratory movement have been found so long as twenty hours afterwards. Experiments such as the foregoing seem to show clearly the supremacy of the bulb over the respiratory movement, and the unimpaired connexion of the spinal nerve roots with the bulb *a sine qua non*. Yet some have held the view that the ganglion cells in the anterior cornua of the spinal cord are the real sources of the movement, the bulb merely coördinating the whole. This opinion is founded upon the occurrence of rhythmic movements of the respiratory muscles after the separation of the cord from the bulb. They are seen in newborn animals⁹ which are kept warm, in animals of about six months when strychnine has been administered;¹⁰ in adult dogs after artificial respiration has been kept up from one to four hours.¹¹ In all these cases there is a very high excitability of the spinal cord, so that rhythmic movements of the limbs occur along with those of the trunk, and all reflexes are exaggerated. The rhythmic movements of the respiratory muscles in no way aid respiration. The animal dies as quickly when they occur as when they do not unless artificial respiration be performed. Indeed, there is no real inspiration¹² from enlargement of the thorax, for it is the muscles of extraordinary expiration which act strongly and without coördination, so that although the thorax may be rhythmically constricted it never dilates during such movements beyond the position of rest. The only positive evidence in favour of inspiration occurring after division of the spinal cord from the bulb is furnished by Langendorff's¹³ experiments upon the tortoise. After the division the inspirations as seen in his tracings become very much less and are followed by a forced expiration. If the small inspiration recorded be not due to some error in the experiment, such as the recoil of the lever beyond the position of rest after the forced expiration, one must admit that a small inspiration can be produced by the spinal respiratory centres of the tortoise. The arrest of respiration on section of the cord just below the bulb has been attributed to inhibition from the effect of the injury (shock).¹⁴ A much longer incision, however, can be made exactly in the middle line of the same region of the cord without affecting respiration, and a section above the roots of the vagi, were the arrest caused by inhibition, ought to have a like effect.

Brown-Séquard, however, in his last paper maintained the position he had always held—viz., that respiration was dependent upon nerve elements to be found throughout the base of the encephalon and cord. He laid special stress upon those cases in man in which a tumour involved the bulb, and in those in which a dislocation of the axis upon the atlas vertebra causes the odontoid process to press

¹ Legallois: Œuvres, tome I. Paris, 1830.

² Flourens: Du Système Nerveux, p. 199. 1842.

³ Markwald: The Movements of Respiration. London, 1888.

⁴ Lallemand: Recherches Anatomiques sur l'Encephale, tome III., p. 230. Arnold: Bemerkungen über den Bau des Hirns und Rückenmarks. Zurich, 1838. Lawrence: Medico-Chirurgical Transactions, 1814, vol. v., p. 165.

⁵ Kehrler: Zeitschrift für Biologie, 1892, Band xxviii., p. 450.

⁶ Galen: De Anatomicis Administrationibus. Kühn, lib. viii., cap. ix. De Symptomatum Causis, lib. i., cap. v.

⁷ Rosenthal: Archiv für Anatomie und Physiologie, 1865, p. 191.

⁸ Langendorff: Ibid., 1887, p. 285.

⁹ Brown-Séquard: Journal de Physiologie, 1860, tome III., p. 151. Archives de Physiologie, 1890, p. 371; 1893, p. 131.

¹⁰ Rokitansky (Procop): Medicinische Jahrbücher, 1874, p. 30.

¹¹ Wertheimer: Journal de l'Anatomie et de la Physiologie, 1886, tome xvii., p. 458.

¹² Markwald: Loc. cit. Laborde: Comptes-rendus de la Société de Biologie, 1890, tome II., p. 620.

¹³ Langendorff: Archiv für Anatomie und Physiologie, 1891, p. 498.

¹⁴ Langendorff and Nitschmann: Ibid., 1880, p. 510.

backwards upon the cord. In such cases breathing continued for some time, although in some of the cases there was paralysis of the limbs and larynx. These cases of tumour in the bulb were many of them recorded long ago, and only scanty details are given as to the part of the bulb actually involved. Paralysis of the limbs simply proves the pyramids to have been affected, and the laryngeal paralysis may have arisen from pressure on the vagus roots. There has been no microscopical evidence to show that the region of the roots of the vagi were actually involved, and the tendency of slow growing tumours to displace nerve elements without robbing them of their functions is well known. A gradual dislocation backwards of the odontoid process narrows the foramen magnum antero-posteriorly without necessarily pressing on the lateral columns in which the respiratory tracts descend. Moreover, cases of dislocation of the odontoid process ultimately die from impaired respiration. If one were to assume that a specimen of a dislocated axis had reached the full displacement found post mortem without impairing the breathing, we should be unable to explain the patient's death and the impaired breathing which preceded it.

[Mr. Spencer then went on to consider the different connexions of the respiratory centre. In mentioning the discrepancies that obtain in the results of different observers, he pointed out how necessary it was that the degree of anaesthesia should be carefully recognised. He then continued:]

The respiratory centre can be affected by the excitation (a) of the vagi nerves, (b) of the cortex cerebri, (c) of all sensory nerves, and (d) of the floor of the fourth ventricle.

(a) *The vagi nerves.*—Owing to the differences in the description and nomenclature of the nerves passing through the jugular foramen considerable confusion has arisen. The nerves called glosso-pharyngeal, vagus, and spinal accessory outside the skull do not correspond in the composition of their fibres with the intracranial nerve roots which bear these names. Some have assumed that these nerves could be divided into a sensory and motor portion like a spinal nerve, whereas all evidence tends to show that the fibres outside the bulb are completely mixed. It is a matter for regret that the description given by Willis¹⁵ and illustrated in his drawing has not been generally followed. He speaks of the eighth pair of nerves as the vagi or wandering pair, using the word vagus in an anatomical sense. He likewise employs the term *accessorius* in its primary anatomical meaning to describe his spinal nerve as approaching and adhering to the vagus. The chapter containing his discovery of the nerve is entitled "Of the Spinal Nerve, an Accessory to the Wandering Pair." By many writers a physiological significance has been imported, as if the word accessory were used in its secondary sense of aiding the vagus. This error of using the term accessory in its secondary sense of aiding has led to the further error of applying this term to fibres which do indeed aid the vagus—viz., the lowest of the fibres arising from the bulb, which Willis included in the vagus. Thus the spinal accessory of one writer has a spinal origin, and the spinal accessory of another has a bulbar origin. I shall keep to the description of Willis and apply the word vagus to all the roots arising from the bulb. The spinal accessory nerve of Willis is quite distinct from the vagus, both in its origin, in its course, and in its distribution to the sterno-mastoid and trapezius, and finally, as I shall show, in its structure. It is absent in fish and snakes, whilst in other reptiles, amphibia, and birds it varies according to the development of the neck muscles to which it is distributed. The vagi, on the other hand, are constant in all vertebrates, arising from the lower half of the bulb in a well-developed form. By careful dissection the spinal nerve of Willis can be easily separated from its adhesions to the lower roots of the vagus. In man, no doubt, the fibrous sheath is tough and the nerves have generally softened from post-mortem decomposition. But in the stillborn foetus I have found no difficulty in separating the spinal accessory away from the vagus by simply using needles. The same can be done in the species of monkey (*Macaca rhesus*) I used in my experiments, in a gibbon I dissected at the Zoological Gardens by the kindness of Mr. Beddard, in a chimpanzee which had been experimented upon by Messrs. Beever and Horsley, and also on one contained in the college stores. In the rabbit, horse, mule, ass,¹⁶

and dog, all the roots from the bulb are intimately united, and the spinal accessory runs distinctly apart. Undoubtedly in the cat there is a closer adhesion between the spinal accessory and the lower bulbar roots. I have under the microscopes specimens of the nerves in a monkey. The nerves were hardened *in situ*, cut whilst embedded in paraffin, and stuck on the slides before the paraffin was removed. It will be seen that the spinal accessory nerve of Willis is similar in structure to the hypoglossal, whilst the vagus roots all resemble in structure the white rami communicantes of the sympathetic system of nerves. That the vagus roots should resemble the sympathetic rather than other cranial nerves is not surprising. In the cyclostomes the vagi include the sympathetic and extend to the anus. Even in higher mammals there is no sharp boundary between them. The ganglion of the trunk of the vagus is closely connected with the superior cervical ganglion, there is an intimate connexion in the anulus of Vieussens, in the cardiac and pulmonary plexuses, and lastly in the abdomen, where the fibres of both completely intermingle. The sections and drawings which I show you illustrate the following points. The spinal accessory nerve of Willis as well as its separate roots consists entirely of large medullated fibres collected into a compact nerve with hardly any connective tissue and nuclei separating its fibres. It is thus similar in structure to the hypoglossal. Where it is adherent in the jugular foramen to the lowest vagus roots it is separated from them by a distinct connective tissue sheath. It shows no ganglion cells on any part of its course. The size of the nerve before it adheres to the vagus roots is the same as when it has separated to go to the muscles. There is a gap between the uppermost of its roots and the lowest of those from the bulb, between which the posterior cerebellar artery runs backwards.¹⁷ All the vagus roots have the same character. They consist in the main of small medullated fibres with a few large medullated fibres scattered among the smaller ones. Separating the fibres in each root is a considerable amount of connective tissue and nuclei. Moreover, all have ganglion cells upon them. From the roots nearest to the nerves down to the lower end of the bulb there is no gap between the several roots. It is only as the roots approach the foramen that they become gathered into separate trunks. The lower vagus roots have a number of ganglion cells upon them. In the section of each root there is at least one ganglion cell to be seen.¹⁸ These roots are gathered up together and become applied to the dorsal and anterior part of the spinal accessory, but, as aforesaid, separated from it by connective tissue. The spinal accessory afterwards separates completely. These lower root fibres communicate with the ganglia on the main vagus trunk, but it does not completely fuse with the latter until the lower end of the ganglion of the trunk of the vagus. The upper and middle roots are collected into two trunks as they enter the jugular foramen. Each has a ganglion upon it, and in the foramen these two ganglia become intimately united. Thus, microscopical examination distinctly separates these roots from the spinal accessory nerve of Willis, and shows that there is no gap in the origin of all the vagus roots, that they are similar in structure, and are intimately connected in or just beyond the jugular foramen.

LECTURE II.

THE FUNCTION OF THE VARIOUS ROOTS OF THE VAGUS, ESPECIALLY OF THOSE AFFECTING RESPIRATION.

[Mr. Spencer commenced by giving reasons for his choice of the monkey to experiment on, and gave a short description of his methods. He continued:]

If I place the results hitherto obtained in a tabular form it will show the chief functions of the vagus nerve roots in order from above downwards; but this order must be taken in a very general sense. There is, as I have shown, no gap in the nerve roots coming from the bulb. It is, therefore, very easy for the electrical current to spread or for injury to be done to adjacent roots in the attempts made to divide or separate them. Even if such a division into upper, middle, and lower vagus roots be granted, yet different observers will not make exactly the same divisions. With all due allowance

¹⁵ Willis, Thomas: Works, ch. xxviii., p. 141, tables 9 and 10. London, 1684.

¹⁶ Toussaint, quoted by François-Franck: Comptes-rendus de la Société de Biologie, 1881, p. 78.

¹⁷ Claude Bernard: Leçons sur le Système Nerveux, vol. II., p. 246 1855.

¹⁸ Remak: Forleips, Neue Notizen, 1837, No. 54, p. 150.

for this the following table roughly expresses the results hitherto obtained:—

Table of the Functions of the Vagus Roots.¹⁹

	Afferent.	Efferent.	
Vagus.	Upper roots = "IX. nerve"	Regulatory fibres of respiration (lung). Fibres exciting respiration (inspiratory). Superior laryngeal.	Cricothyroid. Stylopharyngeus. (Esophagus. Pharynx (constrictors).
	Middle roots = "X. nerve"	Fibres inhibiting respiration (expiratory). Bronchial (cough).	Gastric. Bronchial (muscular). Inferior laryngeal. Cardio-inhibitory. Levator palati and azygos.
	Lower roots of bulb		Sterno-mastoid and trapezius.
Spinal accessory nerve of Willis = "XI. nerve"			

The fibres which come from the lung enter through the highest roots, for the division of these roots produces the same changes on respiration as does that of the vagi in the neck. The first transverse section across the bulb which involves the respiratory centre has also this effect. If these fibres be stimulated when anaesthesia is slight the effect is an excitation of respiration. Should the stimulus be greater there is a tendency to arrest in inspiration or over inspiration. Excitation of the middle vagus roots in not too deep a stage of anaesthesia produces cough, in a deep stage arrest in expiration. No doubt if a stronger current be employed in a monkey completely anaesthetised, arrest in expiration can be obtained from any of the vagus roots, yet the middle roots always arrest with the weakest stimulus. Stronger currents tend to spread and are therefore a source of fallacy. If the proximal end of the middle roots be excited the same arrest in expiration occurs as when the fibres are stimulated in continuity. When the distal end is excited after division the larynx is closed by the adduction produced, and thus the respiration is rendered slow and laboured as by excitation of the recurrent laryngeal nerve itself. The weakest current affects the cardio-inhibitory fibres. In the monkey a current with the secondary coil 16 cm. distant from the primary has a greater influence on the heart than the excitation of the vagus in the neck with a current 8 cm. away from the primary coil. Those fibres which most readily inhibit the heart are the lower roots of the vagus.

ON THE INTIMATE STRUCTURE OF THE CENTRE OF THE BULB.

It is chiefly by experiments such as those just described that our knowledge has been extended with regard to the physiology of the bulb itself. The nature of the experiments made upon the bulb have been chiefly cutting operations, and therefore liable to produce complications. Thus Flourens and Laborde²⁰ found that an animal could be instantly killed by removing the layer of grey matter at the calamus scriptorius, which is exposed by the separation of the posterior median columns of the spinal cord. This "nœud vital" experiment must, however, produce its result through neighbouring structures, for the bulb and upper part of the spinal cord can be divided down the middle line,²¹ including the calamus, without arresting respiration on either side. Other experiments have been equally contradictory, the "intermediary bundle,"²² the "ascending root of the ninth and tenth nerves,"²³ two groups of cells²⁴ nearer to the middle line than the hypoglossal roots, the "dorsal nucleus" of the pneumogastric,²⁵ a circumscribed zone in the formatio reticularis lateralis²⁶ external

to the hypoglossal roots have each in their turn been claimed as the essential seat of automatic respiratory movement. In young animals²⁷ the roots of the nerves going to respiratory muscles are supplied from both sides of the bulb, so that a hemisection at the upper end of the cord causes only a temporary or slight impairment of respiratory movement on the side of the lesion so long as the origin of the phrenic nerve is not injured. In order to avoid the complications produced by injuring the bulb I have made a number of observations on the excitation of different points of the floor of the fourth ventricle. The floor was exposed by removing a portion of the occipital bone and then raising the middle lobe of the cerebellum or actually removing it in part or wholly. The results have served to confirm those just described on the vagus nerve. At the level of origin of the upper vagus roots respiration may be excited and over-inspiration may be produced. At the level of the middle roots, if the animal be in deep anaesthesia, there is always arrest in expiration, behind this at the level of origin of the lowest vagus roots cardio-inhibition.

The cerebrum and respiration—Whilst experimenting upon the fourth ventricle I found that respiration could be affected by excitation of the floor far above the roots of the vagus. Recognising that this must be due to the stimulation of the fibres descending from the cerebrum to the respiratory centre I turned to the research which is described in the last number of the Philosophical Transactions under the title of "The Effect produced upon Respiration by Faradaic Excitation of the Cerebrum in Monkey, Dog, Cat, and Rabbit."²⁸ No definite results had been obtained by previous observers, the animals having been either too deeply or insufficiently narcotised. Munk²⁹ alone had some results which as far as they go were confirmed by my own. Christiani³⁰ and also Martin and Booker³¹ found respiration to be influenced from the mesencephalon, especially at the side of the hinder end of the third ventricle and the aqueduct of Sylvius. They supposed their experiments to show respiratory centres in the mesencephalon, but I have no doubt that they stimulated the tracts leading from the cortex to the respiratory centre in the bulb which I am about to describe. As a result of a number of experiments upon the four species of animals—cat, dog, rabbit, and monkey—by excitation of the cerebral cortex, and the surfaces of cerebral sections carefully made in a vertical plane backwards to the bulb, I found four different results, each obtainable from a distinct area on the cortex, and traced each back along a definite line. These four effects I will proceed to illustrate by photographs and tracings, and it will be seen that they are such as can be produced upon the respiration by means of the will. (a) The first effect is that which leads to a diminution of action on the part of the respiratory centre, and finally to an arrest. Slowing consisted in a definite diminution of the rate of respiration during the time of the stimulus, and if the strength of the stimulus were increased there was an immediate arrest of the rhythm. This arrest might last for a minute or more if the stimulus were strong enough. Generally respiration started again at the previous rate immediately on the cessation of the excitation. If the stimulus were insufficient it might only momentarily arrest it. The cortical area from which this result was obtained is situated upon the frontal lobe just outside the olfactory tract, anterior to the point where it joins the temporo-sphenoidal lobe, as indicated by the crossing of the Sylvian artery. The same result was obtained along the line of the strand of fibres known as the olfactory limb of the anterior commissure. After decussation in the latter structure the tract continued backwards by the side of the infundibulum into the red nucleus below and external to the aqueduct in the plane of exit of the third nerve. That the strand of fibres on either side decussates in the middle line may be shown by making hemisections backwards until the anterior commissure be reached. Before the hemisections have reached the level of the anterior commissure the cortex of the sound hemisphere still retains its power of arresting respiration. When, however, the hemisections pass the anterior commissure the cortex of the sound side loses its excitability, but arrest can then be obtained from the mesial out surface of the anterior commissure. The fibres affecting respiration are thus excited just

¹⁹ (Early).—Bischoff: *De Nervi Accessorii Willisii Anatomia et Physiologia Commentatio*, p. 94. Darmstadt, 1832. Claude Bernard: *Leçons de Physiologie*, 1862, tome xcvi. (Recent.)—Beever and Horsley: *Brit. Med. Jour.*, vol. II, 1868, p. 220. Semon and Horsley: *Philosophical Transactions*, 1890, p. 187. Grabower: *Archiv für Laryngologie und Rhinologie*, 1894, Band II., p. 143. Grossmann: *Sitzungsberichte der Wiener Akademie der Wissenschaften*, 1893, Band xxviii., pp. 385, 466. Méthé: *Ibid.*, 1892, p. 381; 1893, p. 201. Grossmann: *Pflüger's Archiv*, 1894, Band lxx., p. 1. Kreidl: *Ibid.*, p. 8.

²¹ Volkmann: *Wagner's Physiologie*, 1846, Band i., p. 391.

²² Longuet: *Archives Générales de Médecine*, 1847, tome xlii., p. 377.

²³ Giercke: *Centralblatt für die Medizinischen Wissenschaften*, 1885, p. 591.

²⁴ Mislavsky: *Ibid.*, p. 465.

²⁵ Holm, quoted by Gad and Marinisco.

²⁶ Gad and Marinisco: *Comptes-rendus de l'Académie des Sciences*, 1892, tome cxv., p. 444.

²⁷ Langendorff: *Archiv für (Anatomie und) Physiologie*, 1881, p. 78; 1883, p. 397.

²⁸ Spencer: *Philosophical Transactions*, 1894, vol. clxxxv., p. 608.

²⁹ Munk: *Ueber die Formationen der Grosshirnrinde*, p. 614. Berlin, 1890.

³⁰ Christiani: *Zur Physiologie des Gehirns*, chap. I. Berlin, 1885.

³¹ Martin and Booker: *Journal of Physiology*, vol. I., p. 370.

after decussation. The character of the arrest varied in different stages of anaesthesia—the deeper the anaesthesia the greater the tendency to arrest in expiration; in lighter anaesthesia arrest was either in full inspiration or in over inspiration.

(b) The other effects found have the tendency to increase the action of the respiratory centre in the medulla. The respiratory rate may be greatly accelerated, but what is gained by acceleration may be partly lost by diminution in amplitude. This diminution does not neutralise, however, the increase of rate, because apnoea may be produced in this way. In an imperfectly anaesthetised animal any excitation of a sensory surface may tend to cause some acceleration, but the tracings in my animals show that this is a very marked acceleration of the rate unaccompanied by any irregular movements. The cortical area on which the greatest acceleration can be obtained lies around the upper end of the infra-orbital sulcus in the dog and cat. In the rabbit the point is marked by a vessel which comes up between the mesial edge of the hemisphere and the falx cerebri, and then turns out over the convex surface, grooving the surface of the cortex in a line which suggests correspondence with the crucial sulcus in the cat and dog. Marked acceleration is obtained on either side of the vessel at the edge of the hemisphere. The position is similar in the monkey—viz., about the sulcus X. The acceleration may be followed back through the lenticular nucleus, where it borders on the outer ventral portion of the internal capsule. The strand runs at first externally and then ventrally to the motor portion of the internal capsule and so reaches the tegmentum. The lines from the two sides meet in the interpeduncular grey matter at the level of and just below the plane of exit of the third nerve. A hemisection in front of the exit of the third nerve does not remove the acceleration effect from the cortex of the remaining hemisphere. On the other hand, a hemisection immediately in front of the pons does so.

(c) Another increased action of the respiratory centre can be obtained, resembling that made by snuffing. The four species of animals reacted in a similar way. The animal first made an over inspiration, then several sharp over inspirations were super-imposed and followed the primary one. These over-inspiratory jerks were peculiar in following one another at regular intervals in a rhythmic manner, and not ceasing exactly at the same time with the stimulus, one, two, three, or more over-inspirations taking place after the cessation of the stimulus. To this movement I have given the term over-inspiratory clonus. Each over inspiration was followed by a sharp expiration, during which the thorax did not reach the position of equilibrium—that is, there was no action of expiratory muscles. This effect was obtained from the mucous membrane of the upper part of the nose, from the olfactory nerves, bulb, and tract. On applying the stimulus in a line backwards along the olfactory tract, this snuffing movement was traceable to the uncinate convolution of the temporo-sphenoidal lobe. From the uncus it passed behind the optic tract to the crus, and thence obliquely inwards underneath the crura. Thus the tract on each side converged to meet in the middle line at the upper border of the pons. Excitation of this point was the only place on the section where this result could be obtained.

(d) The fourth effect which can be obtained from the surface of the cerebrum is a widely generalised one, because it can also be got by the excitation of any sensory nerve. The chest assumes a position of over inspiration by means of the tonic contraction of the extraordinary muscles of inspiration, but the rhythmic movements of the ordinary muscles continue in a regular manner. If an excessive stimulus be used the over-inspiratory spasm produces a pseudo-arrest by masking the rhythmic movements. But the latter can be seen to continue, only obscured by the tetanic spasm. The sensory motor area on the cortex and the descending motor tract specially yield this result. It can also be got from the fifth nerve and from the sciatic after complete removal of the cerebrum at the level of the tentorium cerebelli.

SUMMARY OF THE AFFERENT CONNEXIONS OF THE RESPIRATORY CENTRE.

Sensory nerves of all kinds tend to excite the respiratory centre in the direction of inspiration, any acceleration of the rate being due to the will, and, therefore, not obtainable in anaesthetised animals. If the stimulus be too strong the thorax is driven into an over-inspiratory spasm, but the respiratory rhythm is here not really arrested except by the

spasm of other muscles counteracting those of ordinary respiration. Such inspiratory spasms are seen in any wide excitation of the skin, such as by cold water, tickling, and in the first stage of drowning. When the spasm comes to an end in the last case bubbles of air escape from the mouth. This inspiratory³² spasm in the first stage of drowning is not dependent on the will, for it takes place in a narcotised animal; nor is it due entirely to the cold, for it takes place in water at the temperature of the blood; neither is it wholly due to inhibition from the larynx, for respiration is arrested in rabbits although a tube may have been previously placed in the trachea and its free end kept above water. The vagus nerve in the neck contains inspiratory fibres which enter the bulb through the upper roots. The centre of the sensori-motor area of the cortex is likewise influenced in the same way—e.g., in epileptic fits. This inspiratory influence through sensory nerves is entirely lost in deep anaesthesia, so that the strongest current applied, for instance, to the fifth nerve has no effect on respiration. The respiratory centre can be inhibited, its rhythm slowed and arrested in expiration, and the chest remains motionless in the position of equilibrium. This takes place by electrical excitation of the fibres entering by the middle roots of the vagus, by excitation of an area on the cortex cerebri and of a tract connecting this area with the medulla, and by excitation of the floor of the fourth ventricle. The deeper the anaesthetic the more readily is the inhibition obtained uncomplicated by inspiratory influence. Acceleration of the rhythm apart from the influence of the will of the animal is far more marked on the cerebral cortex and on a tract leading down to the bulb. Probably it is difficult to get such acceleration from the floor of the fourth ventricle on account of the simultaneous excitation of inhibitory influences. From the nose two forms of excitation may pass back to the respiratory centre—an inspiratory tonic effect through the fifth nerve and an inspiratory clonic effect through the olfactory nerves and brain. No inhibition of respiration was obtained from the nose in anaesthetised animals. The arrest of respiration which other observers have noted has happened in animals fully awake. When tobacco smoke or chloroform is blown into the nose of a rabbit it holds its breath. The will is the cause of the arrest in this and other powerful sensations which can be perceived by the animal.

Over-action of the respiratory centre.—The respiratory centre can be stimulated by changes in the composition of the blood supplied to it: (1) by excess of carbonic acid; (2) by deficiency of oxygen; (3) by an increase of oxygen, especially if the centre be failing; (4) by an increase in the temperature of the blood; and (5) by the products of muscular metabolism.

1. An excess of carbonic acid gas in the air breathed begins to cause hyperpnoea when it reaches to 3.5 per cent.³³ This is about the amount contained in expired air. In air containing about 5.5 per cent. breathing has to be as deep as possible, and at double the normal rate. If the amount of carbonic acid gas be greater distress becomes marked when the carbonic acid gas amounts to 10 per cent., even although there be an ample supply of oxygen. If, however, the carbonic acid be mixed with oxygen—air in which oxygen has not been diminished—7 per cent. of carbonic acid can be for a time inspired without harm. The hyperpnoea thus excited by the carbonic acid introduces sufficient oxygen.

2. Reduction of oxygen to 12 per cent. excites respiration, but not to the extent of the corresponding increase in carbonic acid. Marked hyperpnoea is caused with 9 per cent. of oxygen. When reduced to 7 or 6 per cent. there is a tendency to loss of consciousness, paralysis of limbs, and impairment of breathing. We are well acquainted with this diminution of oxygen in the course of the administration for anaesthesia of nitrous oxide or nitrogen gas.

3. An increase of oxygen tends to stimulate a failing respiratory centre. The administration of air restores the respiration to the normal; oxygen in a more concentrated form produces general excitement and stimulates the respiratory centre so much that apnoea does not occur.

4. A most powerful stimulant to the rate of rhythm and to its depth is a slight increase in the temperature of the blood flowing through the bulb. Either the blood in the carotid

³² Falk: Archiv für Anatomie und Physiologie, 1869, p. 239.

³³ Haldane: Proceedings of the Physiological Society, 1894. Proceedings of the Royal Society, 1895. Haldane and Lorrain Smith: Journal of Pathology and Bacteriology, 1895, vol. i., p. 168.

may be warmed or the animal may be overheated.³⁴ Thus in an experiment when the temperature in the vagina or rectum was 39.8° the rate was 42 per minute, at 41.1° C. 142.³⁵ A dog with a rectal temperature of 39.2° C. and a respiratory rate of 20 per minute was placed in a chamber at 73° C., when the rectal temperature rose to 40.8° C., the respiratory rate quickened to 50 per minute, more than double the amount of air passing in and out per second. During this acceleration by heat the animal cannot be made apnoëic, and moreover shows great resistance to narcotic poisons. Thus morphine or chloral may be given in a sufficient dose to lower the rectal temperature and impair the respiration. On the application of heat sufficiently to raise the rectal temperature 1° C. above the normal the respiration rate may be doubled.³⁶

5. The centre is further excited by the products of muscle metabolism. Afferent stimuli being excluded by division of the spinal cord, the tetanising of the muscles of the hind limb³⁷ causes an increase in the respiratory rhythm, whilst the oxygen and carbonic acid in the blood remain normal. Thus during work increased respiration keeps the amount of oxygen and carbonic acid in the blood normal. In the horse the amount of oxygen taken in and the carbonic acid given out is enormously increased during movement, the respiratory quotient not altering as compared with that during rest.³⁸ The walk increases the respiratory interchange about two and a half times, the trot five times that of the rest; in the gallop ten to twenty times more air is taken in and given out.³⁹ This enormous increase in respiration is connected with the diminished alkalinity of the blood⁴⁰ from an excess of lactic acid produced by muscular activity. This acid acts as a direct excitant to the respiratory centre of the rabbit.⁴¹ The carbon dioxide diminishes the alkalinity of the blood, and the excitation which it causes may be an instance of the same kind—viz., the excitation of the centre by a weak acid. In diabetic coma not only lactic acid but acetic and oxybutyric acid⁴² have been found in the blood. When sugar in sufficient quantities to affect a dog is injected lactic acid is found in the blood. Diabetic coma and rapid tissue changes in fevers may, therefore, have a double excitatory influence on the respiratory centre by diminishing the alkalinity of the blood, as well as by raising its temperature.

Diminished action of the respiratory centre.—The action of the respiratory centre may be lowered: (1) by diminution in the amount of carbon dioxide in the blood, provided that this is not neutralised by excess of oxygen, or of temperature, or of the products of metabolism—this diminution may be due to removal by forced artificial respiration or by a diminished production of carbon dioxide; (2) by excess of carbonic acid (asphyxia) and poisons (anæsthetics &c.); and (3) by impairment of the circulation through the centre, whether by failure of the heart, by vaso-motor paralysis, or by increase of intracranial pressure.

*Apnoea.*⁴³—Forced artificial respiration by removing more carbonic acid from the pulmonary alveoli causes the blood to become of a more scarlet hue. If this be done with air at the temperature of the room the animal is rapidly cooled. Long apnoëic pauses are obtained when the centre has been depressed by the cooling. After artificial respiration for one minute a pause may follow for twenty-five to thirty seconds, after artificial respiration for two minutes a pause of two minutes, or for ten minutes after artificial respiration for half an hour. At the end of the apnoea the blood has lost its bright colour and natural breathing begins. After making a number of deep respirations the length of time during which a man can hold his breath can be extended from a quarter of a minute to one minute or more. The conditions, however, are not exactly the same as in experiments upon animals, for whilst holding the breath expiratory muscles gradually compress the air in the lungs and so favour the entrance of oxygen, as in the Cetacea. (See below.) When we turn to other conditions in

which apnoea occurs—viz., the apnoea of the fœtus, that existing during hybernation, or in those apparently dead—we must take into consideration the important relations which the central nervous mechanism of the respiration has with that of the heat regulation or internal respiration,⁴⁴ and that of the vaso-motor mechanism. The mechanism of heat regulation in warm-blooded animals is intimately connected with respiration, for the excess of CO₂ given off in the production of heat must be got rid of. But before birth and for a variable time after birth the animal is more or less cold-blooded—i.e., has not yet developed a complete heat-regulating mechanism.⁴⁵ Thus new-born mammals such as rats, mice, and puppies react like cold-blooded animals, their temperature sinks towards that of the surrounding medium, and at the same time there is a corresponding fall in the amount of CO₂ given out. Soon after birth they gain a heat-regulating mechanism, which becomes so established that when placed in an atmosphere colder than themselves they give out more CO₂ and maintain their temperature. Thus in young blind mice about three days old on a fall of temperature from 30° to 20° C. there is a lessening in the discharge of CO₂ within thirty minutes to about one half; a few days later, on the other hand, there is a rise in the CO₂ given out under similar circumstances. A chick in the egg reacts like a cold-blooded animal, its temperature falling with that of the medium and less CO₂ being given out. It reacts like a warm-blooded animal after hatching, and it has then control over its muscles and is able to run about. A pigeon when hatched is blind, naked, and helpless, one of the parent birds is constantly sitting over it and feeding it, and when exposed to cold it reacts like a cold-blooded animal.

The human fœtus⁴⁶ when born, especially if before term, rapidly cools if exposed to a medium much lower than that of the blood, less CO₂ is produced, and the respiratory centre may not be excited. Hence the answer to one of the questions put by Harvey: Why does a fœtus born in its membranes not breathe? Being like a cold-blooded animal little CO₂ is produced, and the circulation passing by the ductus arteriosus is not obstructed in attempting to pass through the lungs. Life—that is, the circulation—has been said to last in a new-born child, especially before term, for fifteen hours without any apparent respiration. These infants may show after death evidences of injury such as ecchymosis &c.⁴⁷ On the other hand, the normal respiratory centre at term is sufficiently excitable to be stimulated by any increase of carbon dioxide above the amount existing in the circulation of the mother. If the abdominal aorta of a pregnant animal at term be compressed the fœtus begins to gape and inspire in the liquor amni. As in apnoea produced by inflation, so also in the apnoea of the fœtus a sufficient excitation to the skin may produce one inspiration, but is not the cause of the commencement of rhythm. An apnoëic fœtus responds to external stimulation by an inspiration, whereas one which has become asphyxiated does not. Whilst under normal circumstances an increasing venosity of the blood is a sufficient stimulus to the centre, yet if the centre be weakened from any cause it may fail to respond to the venous blood, therefore death may occur without any attempt at breathing. The circumstances of a long labour by hindering the circulation of the fœtus may gradually impair the centre, whereas if the venosity of the blood comes on rapidly without any preliminary exhaustion of the circulation a fœtus must inspire whether before or after birth.

When the fœtus has once breathed it must continue to do so. Oxygen, entering with the first breath, raises the excitability of the centre and at the same time stimulates internal respiration, whilst the distension of the lungs from their previous atelectatic state diverts the circulation through them. After the first breath an arrest of respiration places a mechanical hindrance in the way of the circulation, which has now to pass through the lungs. Further also, the more active metabolism increases the amount of CO₂ given off. Hence the answer to Harvey's second question—why it cannot dispense with respiration when once it has breathed—is to be found in the increased excitability of the respiratory centre and the larger amount of CO₂ given off from the tissues. Instead of apnoea asphyxia then occurs. Whilst in an apnoëic fœtus an external stimulus may cause it to take

³⁴ Ackermann: Archiv für Klinische Medizin, 1867, Band ii., p. 357. Goldstein: Würzburger Verhandlungen, 1872, p. 156.

³⁵ Anderson: Dublin Journal of Medical Science, 1880, vol. lxx., p. 269.

³⁶ Brunton: Journal of Anatomy and Physiology, vol. viii., p. 332. Brunton and Cash: Ludwig's Festschrift, 1887, p. 149. Wood and Cerna: Journal of Physiology, 1892, vol. xiii., p. 870.

³⁷ Geppert and Zuntz: Pflüger's Archiv, 1888, Band xlii., p. 189.

³⁸ Zuntz and Lehmann: Journal of Physiology, 1890, vol. xi., p. 396.

³⁹ Smith, F.: Ibid., p. 65.

⁴⁰ Lehmann: Pflüger's Archiv, 1888, Band xlii., p. 284.

⁴¹ Jaquet: Archiv für Experimentelle Pathologie und Pharmacologie, 1892, Band xxx., p. 11.

⁴² Harley: Proceedings of the Royal Society, 1893 and 1894.

⁴³ Rosenthal: Hermann's Physiologie, Band iv., Theil ii., p. 264.

⁴⁴ Ewald: Pflüger's Archiv, 1873, Band vii., p. 575.

⁴⁵ Hale White: Brit. Med. Jour., vol. ii. 1894, p. 1093.

⁴⁶ Pembrey: Proceedings of the Physiological Society, 1894 and 1895.

⁴⁷ Preyer: Specielle Physiologie des Embryos, Leipzig, 1885. Engström Skandinavisches Archiv für Physiologie, 1891, Band ii., p. 158.

⁴⁸ Bardinet: Gazette Médicale de Paris, 1864, p. 683.

one inspiration and so introduce oxygen, this method must compare unfavourably with artificial respiration, in which there is not the danger of mechanical injury. Exposure in a cold room or the application of cold water, by lowering the temperature, impairs the centre. In a state of asphyxia the fœtus will not respond to external stimuli, and then artificial respiration is the sole remedy, aided always by external warmth—an important adjunct—applied by a hot bath or especially to the neck.

In hibernating animals the absence of respiration is accompanied by a great fall in the production of carbon dioxide. They become cold-blooded, the temperature falling almost to that of the air; at the same time the circulation becomes very feeble. A hibernating marmot or dormouse can live in an atmosphere of CO_2 in which a bird or rat perishes instantly.⁴⁸ The respiratory centre is in them in a stage of apnoea, a marmot pinched during hibernation gives an inspiration. A raising of the temperature of the medium excites respiration, the animal recovers its normal temperature, and circulation and muscular activity.

A rapid production of carbonic acid in a warm-blooded animal produces asphyxia, paralysing the respiration. Two influences may delay the onset of asphyxia—a large amount of blood holding a good stock of oxygen, and an increased tension of the oxygen in the lung favouring absorption. The respiration in the Cetacea⁴⁹ forms an interesting example in this respect. In them internal respiration must be enormous to maintain a body temperature of 37°C ., and they are very active animals. They are characterised by having a circulatory apparatus and an amount of blood much in excess of a land animal of the corresponding size. Seals can remain under water for five minutes and whales for a much longer period, yet the time they spend at the surface is exceedingly short. A dolphin at rest in an aquarium breathed three times a minute. It began with a rapid forced expiration through the vent for one second, the return to the position of equilibrium and an inspiration lasted another second, and this was followed by a pause of eighteen seconds. This pause is really an inspiration during which, the vent being closed, the air is subjected to pressure from the chest walls. In this way oxygen can pass from the lungs into the blood during the time the animal is under water. The excessive amount of carbon dioxide which has collected during the pause whilst the animal is under water is got rid of by the forced expiration. It is by imitating this respiration of the Cetacea that men can dive and remain under water in active movement. To show the value of the store of oxygen in a large amount of blood Paul Bert⁵⁰ compared the behaviour of a fowl plunged under water with that of a duck. A fowl plunged under water is soon distressed, the inspiratory inhibition gives way, bubbles of air escape, the bird loses consciousness, and falls on its flank with a loss of the corneal reflex in about two minutes. It makes a series of inspirations, the last accompanied by rigidity, and in about three minutes is dead. The duck can remain under water, simply struggling to escape, for seven minutes after immersion without expiring. Its heart beats much slower, and may even fall in rate from 100 to 14 per minute, showing that carbonic acid is collecting, but the conjunctival reflex remains, and consciousness is preserved. The want of oxygen is not felt for seven, ten, or even fifteen minutes, then the animal loses consciousness and its reflexes, lets air escape, falls on its side, makes some inspirations, becomes convulsed, and dies. The behaviour is the same in the two birds, when the trachea is clamped, the fowl dies within three minutes and the duck lives from eight to sixteen minutes, so that the delay cannot be attributed to the custom of diving on the part of the duck. The lungs and air sacs are similar in the two birds. Weight for weight, however, Paul Bert found the duck to contain one-third more blood than the fowl. If about half the blood were first taken from a duck it died as quickly under water as a fowl.

⁴⁸ Spallanzani: *Memoirs on Respiration*, p. 305. Senbier, 1805.

⁴⁹ Jolyet: *Archives de Physiologie*, 1893, p. 610.

⁵⁰ Paul Bert: *Leçons sur la Respiration*, 1870.

THE governors of the Farringdon General Dispensary held their annual meeting on Feb. 12th at the offices in Holborn, Mr. Lacy, the treasurer, presiding. The patients during last year numbered 24,286. The total income for the year was £730. The Hospital Sunday Fund and the Hospital Saturday Fund made grants of £43 and £11 respectively, and a donation of £25 was received through Alderman Treloar. The balance in hand at the end of the year was £109.

Jettsonian Lectures

ON THE

COMBINATIONS OF MORBID CONDITIONS OF THE CHEST.

Delivered at the Medical Society of London on Feb. 18th, 1895,

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LECTURE III.

CLINICAL LESSONS; INVESTIGATION OF CHEST CASES.

Symptomatology.

MR. PRESIDENT AND GENTLEMEN,—Although in my last lecture I placed physical examination in the forefront in relation to the investigation of combined chest cases, I by no means wish to give it undue prominence. On the contrary, I feel it necessary to utter a protest against a practice which is not at all uncommon—namely, to be content with finding out in this way what physical changes or conditions, if any, exist, and looking at the case solely from this standpoint, estimating its importance simply by the presence or absence and the degree of such changes. This is a dangerous error, and I now urge the imperative necessity of an intelligent study of the symptomatology in every instance, and of endeavouring to understand the phenomena complained of or observed in their relation to the morbid conditions present. I say “study” advisedly, as distinguished from a mere enumeration of chest symptoms, which is of little value, as it may apply equally to any number of thoracic cases which are essentially different in character.

I have already pointed out that there may be practically no symptoms even when very pronounced and complicated morbid changes are present in connexion with the chest. This negative aspect, however, must not be overlooked; for it may be highly significant as indicating the pathological nature of these changes, showing that they are not, at any rate, of a serious character in themselves, and that they do not materially interfere with the important thoracic contents. But I have now to deal with chest symptoms from their more positive aspect; and I am anxious to indicate as clearly as possible certain points which, in my opinion, are of the greatest consequence in relation to the subject which forms the basis of these lectures. In the first place, it must be remembered that the thoracic structures are closely related to each other, anatomically and physiologically, as well as pathologically, and it is a great mistake to separate too definitely the symptoms associated with particular organs. It must be familiar to any intelligent clinical observer that there is no actual line of demarcation between the symptoms due to pulmonary and cardiac diseases respectively, and when we have to deal with complicated conditions any distinction of this kind becomes absolutely impossible and mischievous. Under these circumstances it is imperative that they should be studied on a thoroughly comprehensive basis, in order to understand their practical relations and significance. In an acute or sudden case the study of local chest symptoms is of the utmost importance, and may reveal the presence of conditions or disturbances which cannot possibly be determined by physical examination, especially when the state of the patient does not allow such examination to be carried out efficiently. The phenomena, even of individual acute diseases, as described in text-books, are by no means always typical; but when we have to deal with the various combinations to which I have previously referred, they become still less characteristic. It is under these circumstances that the study of the symptoms becomes particularly instructive. The severity and characters of pain and other morbid sensations, the kind of disturbance of breathing and the various noises associated therewith, the peculiarities of the cough and expectoration, and other symptoms, are all worthy of attention, and often reveal important features of the case. The varieties of so-called “dyspnoea” demand special study, for they are often most significant, and we may have to found our diagnosis

of certain conditions very much on what we thus observe. When circumstances permit, and especially in dealing with chronic cases, I think it is a good rule to start by finding out, approximately or even fully, by physical examination what conditions are present in connexion with the chest, and then to study systematically the symptomatology, both comprehensively and individually, in relation to the sum total of these conditions. It must always be remembered that in complicated cases most of the symptoms are either produced or modified by more than one, it may be several, factors; and it is decidedly to our patient's interest and advantage that we should find this out as precisely as possible. A known combination of certain morbid conditions will often prepare us for the occurrence of sudden attacks or accidental lesions, so that we ought to recognise without difficulty the symptoms by which they are respectively revealed.

I wish now to draw special attention to the essential importance of a single symptom in relation to diagnosis in some cases of a mixed character. And here let me urge the great value of the senses of hearing and smell in the detection and recognition of certain of these symptoms, in addition to the exercise of the faculty of keen observation. Let me illustrate this point by two or three examples. A particular kind of disorder of breathing or the characters of a cough may certainly reveal to us at once not a few individual conditions; the characters of the materials expectorated are also often highly significant, and the sudden discharge of a quantity of pus may be the one indication of the bursting of an empyema into the lung, or of certain kinds of abscess into the air passage, of the existence of which we might previously not have been aware. To the sense of smell I have been indebted on several occasions for arriving at an immediate diagnosis as to the presence of conditions which had previously been absolutely overlooked. I allude, of course, to the offensive or foul odour which the expired air may yield under certain circumstances, especially after a vigorous cough. This has revealed to me bronchiectasis in highly emphysematous lungs, which could not possibly be detected by physical examination, as well as gangrene of the lung in obscure cases, and obvious pyo-pneumothorax, which a careless and limited examination of the upper part of the chest had failed to detect. With regard to the sense of hearing, this is of essential value, altogether apart from auscultation, in recognising peculiar characters of, or sounds associated with, the acts of breathing and coughing, as well as alterations in the voice. I have several times been enabled to make an immediate diagnosis in cases of obscure intra-thoracic aneurysm on these data, some of which had even been admitted into the hospital wards as cases of asthma. One case was so extremely interesting, and taught me such a lesson, that I venture to describe briefly what happened.

A good many years ago, during the early period of my connexion with the Brompton Hospital, on returning home, physically tired and mentally exhausted, after a hard day in the out-patient department, I found a man waiting for me with a letter from a lady asking me to see him (gratuitously, of course) as he was suffering from bronchitis. I told him that I was not fit then to examine him properly, and asked him to come in the morning. It seemed to be a mere case of ordinary bronchitis and emphysema, but, fortunately for me, the patient gave a slight cough, and I instantly perceived that it was one of the obscure cases to which I have previously referred, in which an aneurysm presses directly on the trachea. I told him to go home at once to bed and that I would come to see him in the morning. Before I could do so, however, I received a message that he had begun to spit blood, and within twenty-four hours he died from profuse hæmoptysis, the aneurysm having ruptured into the trachea.

Another aspect of the symptomatology of chest diseases which is of essential importance, but is often regarded very casually, is the relation of general or remote symptoms to these affections, especially when they are of a combined character. Here again I must content myself with merely offering two or three prominent illustrations. The occurrence, type, degree, mode of progress, and associated phenomena of fever are often most significant. Thus we may recognise not only pronounced inflammatory or tuberculous cases, but also those indefinite changes going on in the lungs to which I have previously referred. Moreover, by the presence of fever we may be led to conclude that there must be some obscure condition within the chest, as, for instance, a localised collection of pus, which is entirely out of reach of direct examination. In cases of phthisis I need scarcely say that pyrexia is a most valuable indication as to the activity and progress of the disease. But perhaps one of the most striking

illustrations of the diagnostic value of this pathological state is when malignant endocarditis supervenes upon old chronic disease of the cardiac valves, which it may be impossible otherwise to recognise. General wasting is another symptom which is very instructive, as indicating what is going on in the chest, not only in relation to phthisis, but also to other conditions, especially obscure cases of malignant disease, particularly when it involves the pleura. Anæmia, likewise, often deserves thoughtful attention. The phenomena resulting from obstruction of the general venous circulation, notably dropsy, always demand careful study. It is a very common tendency to associate these phenomena simply with heart disease. Let it be remembered, however, that this is by no means their sole cause, and that they may be very pronounced when the heart is practically normal, while in cardiac cases they are often aggravated by pulmonary conditions. This class of symptoms, especially dropsy, is often of great help in determining what is the actual state of things in connexion with the heart, and here it may be particularly noted that functional disorder superadded to organic cardiac disease is often accountable for the occurrence of dropsy or for its temporary aggravation. I will only further state that general symptoms not uncommonly add more or less to the troubles immediately connected with the chest, especially by disturbing the breathing and the cardiac action. The relation of the pulse to morbid conditions of the chest opens up a very wide subject upon which I cannot now attempt even to touch. I will only say that, regarding it merely as a symptom, and without reference to any elaborate methods of investigation, it affords in a large number of instances most valuable diagnostic information about combinations of these conditions which I do not think is always adequately appreciated. I may, by the way, draw attention to the fact that the absence of the radial pulse on one side is another important point to be remembered in relation to the diagnosis of an obscure intra-thoracic aneurysm. I have incidentally referred to certain of the minor structures contained in the mediastinum in my preceding remarks. I wish now merely to point out that interference with these structures, or their implication in actual organic changes, is chiefly indicated by what may be regarded as mere symptoms as distinguished from physical signs. These may be merely modifications of the ordinary chest symptoms, to which, however, they give special characters, such as pain, cough, respiratory disorders, or cardiac phenomena; but some are of special kinds, such as dysphagia due to obstruction of the œsophagus, or signs of implication of the sympathetic nerve, of certain veins, or of the thoracic duct.

Special Methods of Investigation.

It would obviously be impossible for me to deal at any length in these lectures with the various methods which are employed at the present time in the investigation of morbid conditions of the thorax and its contents. I can only indicate their general nature, and say a few words about each in its relation to my subject. Those to which I propose to refer are: 1. Examination of the sputum. 2. The use of certain instruments and other apparatus for particular purposes. 3. Operative procedures. 4. Examination of the larynx and trachea. 5. Examination of the œsophagus.

1. *Examination of the sputum.*—When carried out in a rational manner, there can be no doubt whatever that systematic examination of the materials discharged by expectoration is of the utmost value in many chest cases of a more or less combined nature, by giving us definite information about special pathological changes and conditions associated with the respiratory organs. I have already alluded to certain points relating to the general examination of the sputum, but I take this opportunity of saying that such simple examination is often most instructive, and it is by no means carried out to the extent which, and as methodically as, it ought to be. Of its chemical examination I can say nothing from personal knowledge. As to its microscopical investigation, this is so thoroughly familiar to everyone nowadays that I almost blush to mention it. I will only venture to hint that it is always desirable to carry it out with intelligence and judgment, and that it cannot invariably be relied upon, either from its positive or negative aspect. At the same time I fully recognise its importance, not only in relation to the detection of tuberculous lesions, but also in revealing destruction of the lung tissues, gangrene, actinomycosis, and other conditions, of which we might otherwise have no definite knowledge.

2. *Use of instruments, &c.*—There is undoubtedly a

tendency at the present day among the more scientific members of our profession, especially what I may call the "advanced juniors," to make use for clinical purposes of different kinds of apparatus, not uncommonly of a very elaborate kind, which no doubt give more accurate information about various details relating to the size and conformation of the chest, or the respiratory and circulatory functions and movements, than can otherwise be obtained. Personally I have always had a strong inclination towards simplicity in examination, and have never cared for employing elaborate instruments of any kind, nor do I hesitate to affirm that as a rule they are not required. At any rate, I must again express my opinion that no instrument ought to be allowed to take the place of the trained and educated senses of sight and touch, used in a simple and intelligent manner. With the ordinary kinds of apparatus coming under the present category no doubt you are all familiar, but if you want information with regard to some of the more recently introduced instruments I may refer you to the Goulstonian Lectures for 1894, on the "Physics of the Circulation," by my friend, Dr. Paul Chapman of Hereford, and to the recent work on "Pulse-gauging" by my old friend and fellow-student, Dr. George Oliver of Harrogate.

3. *Operative procedures.*—I must not encroach upon the domain of the surgeon, but I feel bound to point out the essential value of certain operative procedures in the investigation of not a few more or less complicated chest cases, which I have on many occasions found of the greatest service under such circumstances. I allude more particularly, of course, to the use of the exploring needle or trocar, and other measures intended to demonstrate the presence and situation of fluid in either serous cavity, as well as its nature, or the existence of an obscure abscess in the lung or elsewhere, or of a hydatid tumour. More serious operations may be demanded for diagnostic purposes in exceptional instances, but to these I need not further refer.

4. *Examination of the larynx and trachea.*—The inherent importance of laryngoscopic examination in relation to certain intra-thoracic diseases is so well known that I need scarcely do more than mention it. Not only does it directly reveal associated morbid states in the larynx or even in the trachea, especially tuberculous and syphilitic; but the signs produced as the result of interference with one or other of the laryngeal nerves may be almost the only data upon which we can positively recognise an aneurysm or growth obscured by other conditions within the chest. Similar signs may be associated with an adhesion and fibroid thickening in a case of old chronic apical phthisis. I may also allude here to "tracheal tugging," a sign which Surgeon-Major Porter has shown to be of real service in the diagnosis of deep-seated aneurysm.

5. *Examination of the œsophagus.*—In relation to this form of special examination I will merely remark that it may be useful, not only in the investigation of morbid conditions of the œsophagus itself, but also of diseases in its vicinity. Obviously it requires the aid of a skilful manipulator.

REMARKS ON TREATMENT.

It must appear a very rash and irrational procedure on my part to launch out into the vast subject of treatment at the conclusion of these lectures; and yet I cannot resist the inclination to make an attempt to deal with it from certain general aspects in its relation to the combinations of morbid conditions of the chest. Of course, I shall say but little about therapeutic methods or agents, and my object is simply to bring into prominence a few broad principles or indications, which I think need to be specially enforced at the present time, and which my subject obviously and fairly suggests.

1. The management of chest affections is far from being such a simple and easy matter as many people seem to imagine, and they certainly cannot as a rule be dealt with as individual entities, to be severally treated on a routine and settled system or plan, or with a particular remedy, varying according to the age in which we happen to live, the prevailing therapeutic fashion or fad, or the personal, and it may be very peculiar and original, views of the individual medical practitioner or "scientific therapeutic." Still less ought we to be content with merely treating symptoms—a practice but too often habitually adopted—sometimes, indeed, with remarkable success and undeserved kudos, for the man who acts on this principle, and who does not take the trouble to investigate his cases, will often administer powerful drugs, with benefit, it may be, when they are in reality very dangerous, and when a

well-informed practitioner, who had ascertained the facts of the particular case, would not dare to use them. In the long run, however, this method of procedure is certain to do infinite harm, and to lead to lamentable results, of which but a very small proportion actually come to light; and not only is it directly mischievous and dangerous, but it does infinite harm by allowing serious morbid conditions within the chest to progress unchecked, which might often be arrested, or at any rate controlled, in their early stages, if their presence had been properly detected. And here I must enter an emphatic protest against a state of things extensively prevailing, and with which as a profession we are deeply concerned, that not only permits, but encourages in a high degree, the evil against which I have been speaking—namely, the prevalence of "cheap dispensaries," where so many patients are polished off within the hour; the employment of ignorant unqualified assistants; and the encroachment of the "prescribing chemist" on the domain of the medical practitioner. We do occasionally see in the newspapers some startling revelations brought out in the coroner's court, but these only give a faint hint as to what is actually proceeding on a very large scale. These revelations, however, do not lead to any change, and things go on just as before.

After this digression I return to my point, and must insist on the fact that a large proportion of chest cases, even when they belong to a particular category, must as a necessary consequence of their combined conditions present more or less difficulty in their management, and that they ought always to receive due consideration from a therapeutic as well as a diagnostic standpoint. Sometimes the difficulties are very great, and we may be able to do little or nothing for our patient. But while fully recognising this aspect of the question, I affirm, on the other hand, that much can often be done, even in highly complicated cases, in the way of treatment, if we study them adequately and intelligently, and deal with the existing conditions rationally and judiciously.

2. Now, the first thing we have obviously to determine in relation to the treatment of combined chest conditions in a particular case is what we can and what we cannot do. We are bound to face the uncomplimentary fact that there are morbid changes which we cannot influence materially, or perhaps not at all, and we had therefore better leave them alone. Of course there are grave diseases for which we can do absolutely nothing, and then I think we ought to be very cautious in using powerful drugs or practising special methods of treatment, the good results of which are, to say the least, highly problematic, though of course it is impossible to lay down any "hard-and-fast" rule in this matter, and each case must be dealt with on its merits.

There is another class of cases, of very common occurrence, in which permanent changes in various combinations affect the chest and its contents, not necessarily immediately dangerous or serious in themselves, but which give rise to more or less troublesome symptoms, and yet we can do little or nothing for them directly. Under these circumstances our main indication is to try to get the patient to understand the state of things, to learn to put up with and make the best of them, accommodating himself or herself to existing conditions, and to ward off further evils by judicious care, and avoiding doing foolish acts which are likely to bring on additional troubles. I must say that patients do not like this kind of advice, and as a rule resent our ignorance and incompetency, but really it is often the best and most honest advice that we can give, and in the long run many come to acknowledge this fact. A large number of cases coming under this category merely present the combination of minor changes to which I referred in my first lecture. Others belong to the group, and a very trying and sad one it is, where individuals who have led a too active and energetic life, and who often boast that "they have never had a day's illness," are unexpectedly found out and pulled up by the development of one or more prominent chest symptoms, or by some sudden serious disturbance, and it is then discovered that more or less grave morbid conditions have been slowly but surely progressing for some time, of which these phenomena are the outcome and manifestation. To bring such patients to reason, and to make them understand that they must give up their hunting and shooting, their mountain-climbing, their boxing and fencing, their lawn-tennis, or even their golf, is anything but an easy task for the medical practitioner. Even the "old man" who has long passed his "three score years and ten," and has had a "real good time" in every respect, cannot understand why he should

come to the "end of his tether," and that not even "hypodermic injection of spermine" can infuse new life into him.

There is still another class of cases to which I must allude here—namely, those in which definite and easily recognised chronic morbid conditions exist in the chest, in various combinations, but entirely inactive and quiescent, though no remedies or methods of treatment can modify them in the least degree. There are hundreds and thousands of cases of this kind, to which we apply particular names, and which throng our hospital out-patient rooms, where I venture to affirm that no active treatment at all is needed, and indeed such treatment is often worse than useless. And here let me say a word as to the frequent necessity of a more judicious use of applications to the chest. By way of illustration I may call attention to the fact that to go on applying some preparation of iodine—sometimes, too, with not very pleasant results to the patient—day after day, and week after week, for the supposed purpose of "absorbing" something which cannot possibly be absorbed, such as a greatly thickened pleura or a densely fibroid lung of long duration, is at least not "scientific therapeutics." Of course this procedure may be of service as a "placebo," or to relieve a symptom, when judiciously carried out, but that is altogether another matter.

A very important matter in relation to the classes of cases I am now discussing is that, although any active treatment may be decidedly contra-indicated, the prevention of any further chest complication is of the greatest consequence, and more or less stringent measures towards this end have often to be carried out. Obviously, climate comes in here as a valuable therapeutic factor, but due care is necessary even under the most favourable climatic conditions. Moreover, the great advantages of "home treatment" must also be duly recognised in this connexion, the good effects of which may be very striking. I have already alluded to patients suffering from chest affections who are able and willing to remain indoors all the winter under comfortable conditions, and thus not only prolong their lives considerably, but often manage to have a by no means unenjoyable time. But they are not all so amenable to reason, and what one finds is that not a few individuals, suffering, it may be, from even serious chest diseases, want to enjoy all the amusements and fun that are going on in the world, without any regard to the risks involved, and they expect us, in our professional capacity, to avert all the evils which their imprudence brings upon them.

From the point of view I am now discussing, in-patient hospital treatment becomes an inestimable boon, even in a "hospital for consumption," with all its supposed risks, and my personal observation and experience will bear ample and emphatic testimony in support of this statement. At the same time, in the light of modern researches and observations, I fully admit that it is our duty to take every possible precaution to prevent tuberculous infection; and it may be a question whether it is desirable to bring phthisical patients in whom the disease has been practically arrested and cured into too close contact with those who are suffering from the complaint in an active form.

The next point worthy of notice is that in the cases we have been considering, should any complication supervene, even if it be but a slight cold, it ought always to receive immediate attention. Neglect of this principle is accountable for much serious mischief.

3. I now proceed to say a few words about the treatment of combinations of diseases or morbid conditions of the chest in acute cases, as they come before us in practice, and for which we are expected to do something definite. Obviously it is impossible to lay down any distinct general rules, but every case must be studied individually, bearing in mind the recognised principles which usually guide us in dealing with the several acute chest affections. It is especially desirable in these cases to try to realise fully at the outset what conditions we have actually to treat and what we propose to do by our therapeutic measures. I think the general tendency is rather to be too active than the reverse, and it is well to lean to the side of discretion. A routine line of treatment directed only to one factor in an acute combined case, say pneumonia, is decidedly to be avoided. The supervention of acute or pronounced chronic conditions often gives us a very trying case to manage, and if the combination is not understood it will probably be a bad time for the patient; if nothing worse happens he is pretty sure to be subjected to a more energetic treatment than the circumstances demand. Of all the cases that harass the medical practitioner and make him feel his smallness and

impotence I think there are none worse than those complicated acute inflammatory chest cases of rapid onset and progress, to which I referred in my previous lecture. Some of them are obviously hopeless almost from the first; in others we feel that we must make a fight for life, and there is no greater satisfaction than when, by sticking to our patient and encouraging others to do the same, we succeed, aided by intelligent, judicious, and devoted nursing, in bringing the conflict to a favourable issue, and, humanly speaking, save his life. Unquestionably the rational administration of medicinal agents becomes in these cases of the highest value, especially of those which affect the functions of the vital organs, or which assist or modify expectoration. I cannot now refer to other details of treatment, and will only say that it is in grave, acute chest conditions that we derive such timely help from active therapeutic measures intended for special purposes, more particularly abstraction of blood, either by venesection or local methods, or even by cardio-centesis, free dry-cupping, inhalation of oxygen, artificial respiration, or subcutaneous injection of powerful drugs, such as ether, strychnine, or digitalin. How far the injection of antitoxins is going to be of service to us in the future in the treatment of formidable acute inflammatory diseases of the contents of the thorax remains to be seen, but so far as diphtheritic cases are concerned I can affirm that the results which have been achieved in my wards at University Hospital, under the active management of my late house physician, Mr. Bunch, are most satisfactory, and fully bear out the favourable reports from other quarters.

4. The actual treatment of chronic chest cases which come before us, presenting such a variety of morbid conditions, in every conceivable combination and not uncommonly highly complicated, is a problem that always requires thoughtful consideration, and often gives abundant scope for the application of sound therapeutic knowledge and skill, guided by discretion and judgment on the part of the individual practitioner. As I have already intimated, many cases of even pronounced chronic chest diseases do not require any active measures at all—at any rate, as a constant or regular practice; but in others we can do much, by the administration of suitable remedies or in other ways, to influence or control morbid processes, to relieve or help symptoms, or to affect temporary conditions or disturbances which so often form part of the history of these cases. Of course general or constitutional, as well as climatic treatment, and that directed to the digestive or other systems, is frequently of essential importance, and I must draw special attention to the great value, not uncommonly, of more or less prolonged rest in bed from time to time, particularly in cardiac cases. As regards the use of medicines, I think the tendency is to overdo things in this direction in chronic cases, even when they are needed, and I may observe that sometimes we find a condition present which distinctly contraindicates the use of a particular drug, or at any rate should make us very cautious in its administration—as, for example, extensive pericardial adhesion, which certainly is not favourable for the employment of digitalis and allied agents. It is interesting and important to note that if one has the opportunity of watching the progress of chronic chest cases of a combined nature, it will frequently be found that they present exacerbations of symptoms from time to time, which pass away under treatment, but in many of them a period comes when nothing further can be done, and the patient must inevitably succumb. The laity cannot understand this at all, and do not see why what has been accomplished before cannot be done again; and I must say that occasionally even a medical man does not quite realise the state of things under these circumstances, but expects the "consulting physician" to achieve impossible results.

5. I now come to the consideration of a definite principle in the treatment of combined chest cases of all kinds, be they sudden, acute, or chronic, as well as indeed in those of a simple nature, and one which I regard as of the greatest consequence. It is this: to be always on the look-out for, and prepared to deal more or less actively with, certain morbid conditions, often of a pronounced kind, which we can materially influence by treatment or even absolutely get rid of, but which, if allowed to continue, are sure to lead to serious results, either immediate or remote. This principle applies also to certain individual diseases of a grave nature, which may in not a few instances be greatly checked, or even entirely cured, by

appropriate treatment. It opens up a wide range of subjects, and in individual cases it often gives us occasion for deep and anxious thought in determining what is best to be done for our patient's interests, while special difficulties may face us as to carrying out a method of treatment which we know is clearly indicated. There are some who, in relation to certain of the conditions to which I allude, are, I think, inclined to be too hasty or even rash in the employment of vigorous and heroic measures; but the general tendency is decidedly in the opposite direction, and one sometimes sees an exasperating "pottering" about cases which really call for very prompt and definite treatment.

Without any comment I can now only mention the chief conditions or diseases to which the preceding remarks refer—namely, fluid effusions in the serous cavities; pneumothorax and its effects or accompaniments; purulent accumulations of any kind, whether empyema, pyopericardium, or either of the several abscesses; excessive secretions and morbid products in the air-tubes or pulmonary vesicles, especially if of a purulent or fetid character, as well as materials formed in phthisical cavities, special care being taken as far as possible not to allow persistent accumulation of these fluids in the bases of the lungs; solid inflammatory products in the lungs, the remains of pneumonia or broncho-pneumonia, which even when very extensive and abundant, and of long standing, may sometimes be got rid of entirely by appropriate treatment, systematically and diligently carried out; syphilitic changes, often markedly benefited by specific remedies; aneurysm, which is in not a few instances remarkably amenable to treatment; cardiac thrombosis; and such exceptional diseases as hydatids or actinomycosis.

6. The treatment of temporary disorders of a more or less serious nature, occurring as complications of various diseases or combinations, whether acute or chronic, presents another aspect of the management of chest cases, which always demands thoughtful consideration, as well as often promptitude of action. Many of these disturbances yield readily to simple measures, such as rest, warmth, posture, and the use of old-fashioned and comparatively harmless remedies, such as "ammonia with ether." The obvious tendency nowadays, however, is to rush off to certain special drugs or methods of treatment, without at all considering the case which has actually to be dealt with, or making any attempt to understand the conditions present. I allude more particularly to the treatment of attacks of spasmodic asthma and angina pectoris. I have no hesitation in affirming that such attacks, or supposed attacks (for the disturbances called by these names are by no means always correctly so designated), are often regarded from too narrow and restricted a standpoint as regards the adoption of measures for their immediate relief, that different cases require to be treated in different ways, and that it is a serious mistake to fly to any one remedy as a routine practice. Further, we must never forget that by the repeated use of these remedies, which are usually powerful and dangerous, we may be doing positive mischief, and especially that we may be laying the foundation for their habitual employment by patients themselves on the slightest provocation, a practice the injurious results of which we so constantly meet with in these days, when all kinds of drugs and preparations in convenient and attractive forms for use can be so easily obtained. At the same time I fully recognise the remarkable effects which can be produced by certain agents which modern experimental pharmacology has provided for us, as well as their essential value in the treatment of the conditions of which I am now speaking, provided they are employed judiciously, and under the direct supervision of a medical man who knows what he is about. Nor must I forget to note here that some of the very active measures to which I have previously alluded may be urgently demanded in cases belonging to the present category, and that they may be immediately instrumental in averting threatened death.

7. The treatment of symptoms opens up most important questions in relation to combined morbid conditions of the chest, and calls for much consideration in a large number of instances. It is impossible for me now, however, to do more than offer a few general remarks on the point. When in an earlier part of this lecture I strongly condemned the mere symptomatic treatment of chest cases, of course I did not mean to imply that they should not receive due attention when required. As a matter of fact, they often need a good deal of consideration, and it is by no means easy to cope with them under many circumstances in which various thoracic changes exist together. But here comes in the essential importance of studying each symptom individually,

in relation to the conditions present, before attempting to influence it. It frequently happens that we then find that little or nothing can be done for a particular symptom which is troubling the patient, and what we have got to do is to enforce the principle to which I have previously referred—namely, that he must learn to accommodate himself to his circumstances. This applies more especially to disturbances of respiration and cardiac action. On the contrary, it may be that there is some state of things within the chest which can at once be recognised as the cause of the disorder, and that treatment directed thereto will immediately relieve the symptom or symptoms thus produced, even when they are of a severe or grave character. To go on pouring in drugs for the relief of urgent dyspnoea and palpitation (so-called), obviously depending upon a large pleural effusion which demands instant removal, is certainly not rational treatment, and yet it is possible even in these enlightened days. Again, it is often not desirable to check a particular symptom, even when this can be done, such as cough, provided it serves some useful purpose, though it may at the same time perhaps be controlled and helped in various ways. One general rule, at any rate, should be followed in dealing with symptoms in combined chest cases, and that is not to give more medicine than is really needed, and to employ simple and harmless remedies as much as possible. I may draw attention to the great advantage to be derived in relation to thoracic symptoms not uncommonly from the adoption of treatment directed to some particular general condition or conditions, especially anæmia, emaciation, and obesity, though I think the last-mentioned is sometimes rather injudiciously attacked. Nor must I overlook the immense relief to be often obtained by getting rid without delay of certain abdominal accumulations which physically interfere with the diaphragm and thoracic contents, as well as of extensive subcutaneous dropsy. The beneficial effects which thus follow tapping for ascites, or relieving anasarca by operative measures of different kinds, have in my experience of a good many cases been most remarkable.

8. I now come to my last point bearing upon the treatment of combined chest cases, and that is to say a few words about special therapeutic methods. I need scarcely remind you that we are living in an age when, to say the least, there is no great respect paid to traditional therapeutics; and when active and energetic workers are on all hands trying to discover new systems, methods, or even remedies, which will enable us to cope more effectually and successfully with disease in its varied and complex forms. It behoves us, however, as a profession, to be somewhat cautious in our so-called "progress," and not to be too eager to adopt and practise supposed "cures," which a little consideration may show to have really no rational foundation. Such caution is especially necessary in relation to the treatment of diseases of the chest, and a comparatively recent experience gave us all round a lesson which it is to be hoped will not soon be forgotten.

The more prominent special methods of treatment at present in vogue in relation to chest affections may be summed up as follows: 1. Antiseptic treatment, practised in various ways, including intra-laryngeal injections, a method recently brought prominently before the profession by Dr. Colin Campbell. The use of antiseptics may unquestionably be of the greatest value in many combined chest cases, and not merely in those of a phthisical nature. 2. Hypodermic injections of different kinds, which may be rational enough in connexion with certain exceptional conditions, but on the whole, as at present recommended and carried out, rather indicate a want of any actual clinical or even pathological knowledge of the grave diseases with which they profess to deal, and sometimes border on the absurd. 3. Climatic treatment, to which is added not uncommonly some particular "cure." About this treatment—which, of course, is the essential requirement in a large number of instances—I will only say that I find that the "resident doctors" in climatic "health resorts" do not at all like a very advanced or complicated chest case of any kind to deal with, but almost invariably, and for obvious reasons, give their opinion that their particular climate will not be suitable for the patient, and that he had better go elsewhere or stay at home. 4. The use of "respiratory gymnastics," often of the greatest service for various purposes when properly carried out. 5. Methods connected with the employment of "condensed or rarified air," especially for emphysematous cases. 6. Treatment directed to the

nasal cavities and the throat, which in appropriate cases is of unquestionable advantage. 7. Mechanical or physical methods practised in the treatment of cardiac affections, such as massage, graduated mountain climbing, cycling, or special exercises. With regard to these methods, no doubt they are most beneficial in suitable cases, as I can testify, but each one requires very careful consideration before it is treated in any such way.

The preceding remarks have been intended merely to bring to your remembrance, without attempting to discuss them, certain methods of treatment, one or other of which might appropriately be called for in the management of more or less complicated chest conditions. Their individual application must be left to the matured judgment, practical experience, enlightened common sense, and honesty of purpose of each member of the profession to which we have the privilege and honour to belong.

And now, Mr. President and gentlemen, my task is ended. I am but too conscious of the imperfect manner in which it has been performed. One of the greatest and most trying problems which the medical profession has to face at the present day is how to diminish by preventive measures the enormous number of cases of chest disease which overwhelm us on all sides, and how most effectually to cope with these diseases, in their many forms and combinations, so as to restore health, to prolong life, or to lessen human suffering, according to the circumstances and conditions with which we have to deal. I can honestly say that my object in these lectures has been to contribute something, however insignificant, to the attainment of these ends. Increasing experience has made me feel more and more strongly that before we can succeed in our aims in anything like a satisfactory degree we must not be content with a general, and often vague or theoretical, conception of the maladies against which we have to contend, or of their treatment; and I venture further to suggest, with all deference and respect, that we cannot consent to be guided in this matter solely by the teaching of modern experimental pathology and pharmacology. We are bound to realise things as they actually exist in living patients; and it is from this point of view that I have thought it might be of some positive advantage to bring the combinations of morbid conditions of the chest prominently before the profession, at the same time trying to arrange them under some kind of order, to take a comprehensive survey of their clinical investigation, and to glance at the more important principles bearing upon their practical management. On some points I have felt it my duty to speak out with no uncertain sound, but I trust that I have said nothing which can justly give offence to anyone. It now only remains for me most cordially to thank the Council of the Medical Society of London for the great honour they conferred upon me in electing me Lettsomian Lecturer, and to express my deep obligation to you, Mr. President, and to those other gentlemen who have sustained me by their presence and have so patiently listened to my tedious discourses.

NEUROLOGICAL FRAGMENTS.

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(Continued from p. 396.)

NO. XV.

SUPERIOR AND SUBORDINATE CENTRES OF THE LOWEST LEVEL.

IN a future note I shall attempt an analysis of a sub-malady of tabes, the Laryngeal Crisis. As a preliminary to doing so, and for other reasons, I will speak further on the evolutionary constitution of the Lowest Level. There are, I submit, in this level, centres of higher rank than those of what I called (No. XIV.) the homologous series (anterior and posterior horns and motor and sensory nuclei of cranial nerves); these centres of higher rank I name Superior Centres of the Level. Certainly the respiratory centre of physiologists (medulla region of the level), to take that case, is not homologous with an anterior horn; it is a superior centre of the lowest level; it represents the respiratory apparatus, or, as I prefer to say, Thoracic Cage (musculature of the larynx, diaphragm, and chest-walls), not directly,

but indirectly; that is, it represents different parts of the thoracic cage by *intermediation* of different motor centres of the homologous series, those which I name, from the parts of the cage they supply, laryngeal, phrenic, and costal centres; these three are motor centres (of the homologous series) subordinate to the medulla respiratory centre. Properly speaking, the respiratory centre *represents* the muscles of the thoracic cage. (Further on in this note I shall make a distinction between different parts of what I call subordinate centres.)

The respiratory centre and its three subordinate centres, with their interconnecting fibres (companion sensory centres and sensory fibres understood) are intrinsic elements of the lowest level. Fibres connecting the three subordinate motor centres with the musculatures of different parts of the thoracic cage, are extrinsic elements of the level, fibres extrinsic downwards. There are fibres connecting the respiratory centre with higher levels; they also are extrinsic of the level, extrinsic upwards. These and certain other fibres differently extrinsic upwards will be spoken of again after a short preliminary.

I prefer the term "thoracic cage" to that of "respiratory apparatus" because there are other than respiratory services of the so-called respiratory apparatus—a question begging epithet. There is not only an organic service ("menial work") of the cage (respiration proper), but it is engaged in non-respiratory, animal services. When a "man draws in his breath" when told to do so (so-called "deep inspiration"), or when he fixes the cage in a high, so-called "inspiratory" attitude whilst lifting a heavy weight, there is a non-respiratory, an animal, service of the cage—one of cerebral (highest level) initiation. I submit that in these animal services there is engagement of motor fibres (of the pyramidal tract) from the highest, through the middle, level; and that in their further course these fibres, evading the medulla respiratory centre, pass direct to the laryngeal, phrenic and costal centres of the lowest level.¹ It must be borne in mind that the motion of the cage when a man draws in his breath when told (so-called "deep inspiration") is of a different kind, obviously in the adult male, from that in ordinary breathing (respiration proper). When an adult male² breathes (respiration proper) the motion of the cage is diaphragmatic first and most, there being a sequent slighter costal motion. But when he draws in his breath when told to do so, the diaphragm acts little, there may be recession of the epigastrium; the chief motion is costal. The latter, an animal duty, is a "voluntary movement," and, as the word "voluntary" implies, is one

¹ I almost ignore all sensory and certain inhibitory elements of the respiratory nervous system of the lowest level in the above exposition; they, especially vagal fibres, including, of course, fibres of the superior laryngeal nerve, are to be tacitly taken into account.

² Marekwald (*The Movements of Respiration*, translated by Mr. Thomas Haig, p. 120) thinks it probable that fibres of the phrenic nerves carry stimulations direct from a motor centre of the surface of the brain, in their passage downwards evading the (medulla) respiratory centres. It may be that these fibres come from cerebral (higher level) *true respiratory* centres, direct to what I call subordinate centres of the lowest level. We must be very careful how we draw clinical inferences from Marekwald's statement, supposing it to be, as he thinks, probable. In some cases of death in coma (cerebral lesion) the respiration is costal and not at all diaphragmatic. (Breathing becomes more costal in anybody when he is excited or when his respiration is rendered difficult by disease.) In the case of coma alluded to the epigastrium may sink whilst the chest rises in inspiration. Such a condition may be, and I believe has been, taken for paralysis of the diaphragm as a direct consequence of the cerebral lesion. And I believe that this condition in dying in some cases of peripheral neuritis has been supposed to indicate paralysis of the diaphragm from lesion of the phrenic nerves. Another explanation of the condition is possible. It may be owing, I submit, to increased volume of the lungs (posterior congestion and anterior "vicarious emphysema") whereby the diaphragm is pushed down. (Compare breathing in certain cases of true emphysema [*volumen pulmonum auctum*] in which there is recession of the epigastrium in inspiration.) Here is, however, I admit, a difficult question, for in some cases of coma from cerebral lesions, even in women, the chest sinks whilst the abdomen rises in inspiration. I have watched the respiratory motions in but few cases of the coma of chloroform, both in men and women; in two or three cases I observed the chest sank whilst the abdomen rose in inspiration. It may be that chloroform poisons the costal centres (lateral horns?) before it poisons the phrenic centres of the lowest level.

³ In the text I speak of the two uses, organic and animal, of the thoracic cage in adult males. Walshe (*Diseases of the Lungs*, fourth edition, p. 36) wrote: "The adult male seems to the eye to breathe with the abdomen and the lower ribs, from about the tenth to the sixth; the adult female with the upper third of the chest alone." So much for respiration proper. Now as to "forced breathing" (voluntary expansion of the cage, as I call it). Walshe writes (op. cit.): "..... The sexual differences disappear in forced breathing; in both sexes the pectoral movement is, out of all proportion, greater than the abdominal, and even in the male the expansile action, if abrupt, commences superiorly."

of cerebral (as I should put it, highest level) initiation; I shall call it "voluntary expansion" of the cage (costal part). The former is a lowest level movement, one initiated by a superior, the respiratory, centre of that lowest level; I shall continue to speak of it as inspiration proper.

I have more to say on the nervous mechanism of the "voluntary," non-respiratory, motion of expanding the cage when told. A further speculation is that the respiratory, medulla, centre in that and other animal services of the cage is inhibited by fibres from the highest level; I suppose that it is so strongly inhibited in such an animal duty as that of lifting a heavy weight, that respiration proper is stopped in order that the laryngeal, phrenic, and costal centres—the respiratory centre ceasing to act on them—may directly serve the highest level. It is not, to speak roughly, that the highest level succeeds in overpowering the influence of the respiratory centre on the three centres mentioned, but that the respiratory centre is compelled to surrender them to the sole activity of the highest level. A man lifting a heavy weight cannot keep his cage fixed for long; when the blood becomes too venous, the respiratory centre is so strongly stimulated that it regains its sway over the subordinate centres in spite of the aforesaid cerebral (higher level) inhibition. The two sets of fibres engaged in the animal, non-respiratory, duty of the cage—motor from the highest level direct to the three subordinate centres, and inhibitory from the highest level direct to the superior, respiratory centre,—are those alluded to at the close of the second paragraph of this note; they are fibres of the level extrinsic upwards. I believe that there is another kind, or perhaps I should say, degree, of higher level inhibition of the respiratory centre.

Besides the occasional, and often strong inhibition of the respiratory centre during "voluntary," non-respiratory services of the cage, there is, I suppose, a continuous (I do not mean unvarying) inhibition of it by the higher levels as it serves, by sub-agency of the subordinate centres, in the "menial work" of respiration proper. I will call this the second kind of higher-level inhibition. I think evidence of slight diminution of the second kind of higher level inhibitory influence upon the medulla respiratory centre is supplied by some cases of hemiplegia, right and left, from lesion in one half of the brain (internal capsule). These cases illustrate also what has been said on the difference of the two, the "voluntary" and the respiratory, services of the cage.

In some cases of hemiplegia, recent and old—I will suppose left is illustration—the motion of the left upper chest is, in a very slight degree, of greater amplitude in inspiration proper than that of the right, whilst the motion of the left upper chest is in a very slight degree of less amplitude than that of the right when the patient expands his cage when told ("voluntary movement"). I will now consider the implications of these differences.

What I have so far spoken of as the respiratory centre is really double, in two halves; there are twin medulla respiratory centres. Applying the principle of Broadbent's hypothesis, on representation of bilaterally acting parts of the two sides of the body in each half of the brain, to the cases of, say, left hemiplegia now under remark, we could only expect there to be very slightly greater amplitude of inspiration on the left side consequent on loss of inhibition from the right half of the brain on but one, the left, of the twin, cross-connected, respiratory centres; and still having regard to Broadbent's hypothesis, we could only expect there to be very slight diminution of motion of the left side of the cage from loss of "voluntary" influence from a lesion in the right half of the brain.

Recently I have, with the assistance of Dr. W. H. Stoddart, investigated twenty-eight cases of old hemiplegia in this regard. Most of the observations were made by Dr. Stoddart. In seven cases of left, and twelve of right hemiplegia, the upper chest on the paralysed side moved very slightly more than on the non-paralysed side in inspiration proper, and in "voluntary" expansion, moved less on the paralysed side, than on the non-paralysed side. The wording of the foregoing implies that there appear to be exceptions to what I believe is the rule; there is the obvious complication of old thoracic disease in some cases.

What has been said on the respiratory motion of the cage in some cases of hemiplegia bears on Cheyne-Stokes respiration. In very grave cerebral lesions with Cheyne-Stokes respiration, the continuous which I called the second kind of higher level inhibition by both halves of the brain is probably taken off both respiratory centres. This double taking off

will, again having regard to the principle of Broadbent's hypothesis, be far more than the double of taking off, as in the cases of hemiplegia mentioned in the foregoing, of inhibition from one of the two respiratory centres by lesion of one, the opposite, half of the brain. The twin respiratory centres bereft of higher level inhibitory influence will still be under vagal inhibitory influence, except perhaps in cases where the lungs have become gorged.⁴ The respiratory centres in cases of Cheyne-Stokes' respiration due to a grave cerebral lesion will be left more than is normal to their own inherent automatism and will presumably be more susceptible to the state of the blood, and perhaps to the influence of the vagi. There seems to me to be in Cheyne-Stokes respiration from cerebral lesions something analogous to hippus. When in patients subject to this ocular peculiarity, light goes into the eye it stimulates the retina; therefrom, indirectly of course, the pupil contracts; the pupil being contracted, less light enters to stimulate the retina and the pupil dilates; and so on again and again. In the case of Cheyne-Stokes respiration I am considering the supposition is that higher level inhibition is taken off both medulla respiratory centres; whereupon, respiration proper being greater, apnoea occurs and the respiratory movements cease. At length from this cessation the blood becomes super-venous, and thus the respiratory centres are stimulated and there ensues a number of respiratory movements of gradually increasing amplitude; wherefrom, the super-venosity again ceasing, the respirations diminish gradually in number and amplitude and there is again the pause; or once more from this cessation of respiratory movements super-venosity occurs, and then once more there is stimulation of the respiratory centres, and another series of respiratory movements.

For a clearer understanding of the differences of the two kinds of motion, animal and organic, of the thoracic cage, I must speak more definitely than I did by using the morphological terms anterior horns and nuclei of motor cranial nerves, or by using the term subordinate centres. It is not likely that the elements of what I called the subordinate centres which are acted on by higher levels in the "voluntary" (animal) service of expanding the cage when told and during "effort," are the same elements as those which are acted on by the respiratory (medulla) centre in the organic service of the cage (respiration proper). The former elements are probably those of the cell column, whilst the latter (for the costal centres) are, considering Gaskell's researches, probably the lateral horns.⁵ So then, amending former statements, we say that during "voluntary" expansion of the cage, the respiratory centre, being inhibited, ceases to act on the lateral horns for the direct supply of the muscles of the cage and the higher levels then act on the cell column, or some part of it, also for the direct supply of the muscles of the cage. If this be so, we see the importance of distinguishing between action of muscles and movements; the intercostal muscles serve in two different movements.

More generally and with regard to the organs of the digestive, circulatory, and respiratory⁶ systems, the supposition is that they are in adult man efficiently, I do not say solely, represented by the lowest level, as they do the "menial work" (organic service) of digesting food, circulating blood, and aerating blood. I imagine that there are superior and subordinate centres of the lowest level for the "menial work" of each of these systems, but I refrain from

⁴ McKendrick (Text-book of Physiology, "Special Physiology," p. 356) writes: "Division of the vagi at once causes periodic breathing to disappear [in animals when the medulla has been divided above the respiratory centres], and in its place there are irregular respiratory spasms. It is clear, therefore, that periodic breathing occurs when the upper nervous tracts are inactive and when in these circumstances the vagi convey impressions to the respiratory centre. Hence it is that the Cheyne-Stokes phenomenon appears when the higher nervous centres are totally or partially inactive, or, at all events, when the upper brain tracts are not conveying impressions downwards."

⁵ Since I wrote the above I have met with what I think is clinical confirmation of the hypothesis as to the difference between the two (the "voluntary" and the organic) services of the thoracic cage, or rather of the costal part of it. I refer to the case mentioned in No. 12, THE LANCET, Dec. 22nd, 1894, a case in which, with loss of the respiratory movement of the intercostal muscles, good "voluntary" movement by the same muscles remained possible.

⁶ I neglect the animal heat system in this note. There is, I think, nothing absurd in suggesting, as I now do, that at least some of those thermic centres, which are supposed to exist in the brain, may be centres of the lowest level; for lowest level is an anatomico-physiological, not a morphological, expression. I am not speaking of the sensation heat; that, like all other sensations, no doubt arises concomitantly with activities of the highest cerebral centres. Thermogenesis is a part of physiological physics. It does not follow that any cerebral centres any way concerned with animal heat, the thing physical, are centres during the activities of which the sensation heat arises.

giving details of the speculation on this matter in these cases. One general hypothesis is that as the organs of the three systems do that "menial work," they are very little positively (that is motorily), but much negatively (that is inhibitorily), represented (properly re-represented) in the higher levels; I speak, in this regard, of adult man.

With regard to the positive representation of the respiratory apparatus (which I call the thoracic cage) in the higher levels (Rolandic cortex), Horsley and Semon have written much to the same effect with regard to its organic ("menial") and animal services, or those two different services of a part of it (larynx). Some of the results of their experiments are, I think, in harmony with certain doctrines to be presently adverted to put forward by Herbert Spencer. Horsley and Semon write,⁷ speaking of the vocal cords: "We have seen that the first of these functions, phonatory adduction [what Semon call 'purposive' or 'volitional'] is represented most completely in the cortex the higher we ascend in the animal scale, and the more completely as the cortex is developed in the life of the individual, i.e., by age, while, *pari passu*, the function of respiration, although present in a minor degree as evidenced by acceleration, is least represented where phonation is most completely developed. *Respiration is represented in the higher animals only as acceleration and that above and rather in front of the focus of phonation.*" (These words are not in italics in the original.) Semon and Horsley⁸ write: "Of all animals experimented on by us, the cat appears to possess the greatest development, the monkey the least, of respiratory representation in the cortex, since in the former animal alone have we found an actual centre for genuine abduction [of the vocal cords] to exist, close to the border of the olfactory (rhinal) sulcus. A similar preponderance of cortical representation of respiration, we have found in young animals of different species."

Now as to negative representation (inhibition) of the respiratory centres by the higher levels. I cannot say that there is experimental evidence to show that, as the higher levels from lower to higher mammals, and from young to grown-up animals, come to have less to do with the direction of organic operations these levels come to have more suspensive, inhibitory, power over those operations. I, however, submit the following extract from a very valuable paper⁹ by W. G. Spencer, *The Effect produced upon Respiration by Faradic Excitation of the Cerebrum in the Monkey, Dog, Cat and Rabbit*. Mr. W. G. Spencer writes, "*An Increased Action of the Respiration in the Monkey*": "I have been forced to distinguish the monkey from the rabbit, cat and dog, because in it an increased action of the respiration is so much less marked. There appears to be no fundamental difference, for I have obtained the same reactions 'acceleration,' 'over-inspiratory clonus' and 'over-inspiratory tonus,' at the points corresponding to those of the other animals, but only to a much smaller degree. The monkey reacts like the other three species do when [they are] very exhausted. I have not yet succeeded in artificially producing a greater excitability of the monkey's brain so as to obtain marked increased action of the respiration. The result of such attempts has been to excite irregularity of the rhythm and general convulsions. This lessened representation of the other phenomena, or the relatively greater sensitiveness to the effects of anaesthesia on the part of the monkey, allows slowing and arrest to be obtained all the more readily, and the localisation of the points of representation to be more easily recognised, since the effect is not so liable to be complicated by a simultaneous calling forth of increased action." (No italics in original.)

The wording of the foregoing (I mean what I have written in this note on the representation of the digestive, circulatory and respiratory systems) implies—at any rate it is meant to imply—that the organs of the three systems are very much positively represented in the highest level as they are concerned in non-menial work—that they are very much represented in the anatomical substrata of consciousness. I have already spoken of this with regard to the thoracic cage, have implied that it is largely represented positively in the highest level for "voluntary," animal, duties. Plainly the cage is engaged during emotions. I submit that its unusual engagement during strong emotion, the physical process being cerebrally initiated, is not a true respiratory service; at any rate the

"menial work" of the cage, respiration proper, goes on badly so far as emotion is concerned. To take an extreme case, artificially limiting the illustration; it is scarcely likely that the heart is much, if at all, positively represented in the highest centres as it does the "menial work" of circulating the blood. Yet, as popular phrases ("hard-hearted," "kind-hearted," &c.) imply, it is no doubt represented for other purposes (re-represented) in the highest cerebral centres; obviously it must be represented in the anatomical substrata of emotions; but during great emotion, plainly during great fear, the heart serves badly in "the menial work" of circulating the blood, that is in its character as a blood-pump.

An hypothesis implied by what has been said in this note is that the lowest level is, for organic duties ("menial work"), by itself very efficient, and that it is for those duties considerably independent of the motor, directive, influence of the higher levels, although much under their negative (inhibitory) influence. Another general doctrine is that the centres of the lowest level which serve in organic ("industrial") duties can be compelled by higher levels to suspend those duties in order that the higher levels may act on animal centres of the level in "voluntary" operations. All this seems to me to be but an application of Herbert Spencer's doctrines on analogies between an individual organism and a social organism, as the use in a part of the foregoing of the word "industrial" is meant to signify.

I suppose that there are other superior centres of the lowest level, some in regions of it lower than the medulla region; for example, there are probably superior centres for the bladder and rectum in the lumbar region of the level, with centres subordinate to them in its sacral region.

I imagine that the corpora quadrigemina are superior centres of the lowest level; that they serve not to co-ordinate the retinae by the optic nerves and tracts with ocular muscles for the estimation of distance, at least of objects out of reach (that is as the ocular movements symbolise so much locomotion), and not as they co-ordinate locomotor movements, but that they serve in co-ordinating both these co-ordinations; or to use a Spencerian term, that they, like the respiratory centres, are centres of Compound Co-ordination.

MYXCEDEMA AND ITS RELATION TO GRAVES' DISEASE.¹

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THE disease we are about to consider is comparatively rare. Personally I have had the good fortune to recognise six cases in the last ten years, or an average of three-fifths of a case a year, a ratio which you will admit is not large. Prior to 1870 the disease was practically unrecognised in adults, while in children it was called "sporadic" or "endemic" cretinism, and was looked upon simply as a peculiar form of idiocy. In its so-called endemic form it was known to exist in many Alpine villages, and I have a vivid recollection of the ugly little imps I met with in a certain village when on a walking tour in the Swiss Alps in 1865.

Historical summary.—In 1873 Sir W. Gull read a paper before the Clinical Society of London on a Cretinoid State Supervening in Adult Life in Women. In 1877 Dr. Ord presented a communication to the Medical and Chirurgical Society on Myxcedema. These two papers detailed cases and described diseases which were beyond doubt identical. To Dr. Ord belongs the credit of having discovered that the essential feature of the disease was a mucin-yielding cedema, and that the thyroid gland was in all cases either atrophied or cirrhotic. In 1881 Charcot described the result of his clinical observations, and named the disease cachexia pachydermique. In 1882 M. Reverdin drew attention to the symptoms following extirpation of the thyroid gland, and resembling those of myxcedema. In April, 1883, Professor Kocher read a paper before a congress of German surgeons, describing the symptoms he found to follow the total extirpation of the thyroid gland, and which he described under the term of "cachexia strumipriva." Dr. Felix Semon, in November, 1883, pointed out the resemblance of the symptoms described by Kocher to those of myxcedema

⁷ Transactions of the Philosophical Society, 1890, B., p. 209.

⁸ On the Relations of the Larynx to the Motor Nervous System, Deutsche Medicinische Wochenschrift, 1890, No. 31.

⁹ Transactions of the Royal Society, vol. 185 (1894), B.

¹ A paper read before the West Herts Medical Society.

observed in England; and in December, 1883, a committee of the Clinical Society of London was appointed to investigate the phenomena of the disease. From their report, published in 1888, the above facts have been culled. Soon after the appointment of the committee, Mr. Victor Horsley commenced a series of experiments on monkeys, and succeeded in demonstrating that loss of function of the thyroid gland produced all the symptoms known as myxœdema and cachexia strumipriva.

Characteristic symptoms.—1. The most obvious of these is a disfiguring œdema of general distribution over the body, and peculiar in that it does not pit on pressure. 2. There are slowness and thickness of speech, a tottering gait, a peculiar pallor of the skin, and fetor of the breath. 3. To the touch the skin feels cold, hard, and leathery—altogether unlike that of the normal surface. 4. The hair becomes dry, fluff, and scanty almost to baldness; this applies to the pubes and other parts, as well as to the scalp. 5. The patient, whose temperature is generally subnormal, always feels cold, and will gravitate to a fire in the hottest weather. 6. The bulk and weight are always increased, often to a great extent. 7. Though the specific gravity of the urine is frequently low there is rarely any albumen present, except in those cases in which it is a symptom of concurrent disease. 8. The thyroid gland is small and hard, or not to be felt. 9. Histologically the wasted gland is found to consist of a dense fibrous stroma, with scarce a trace of normal gland tissue left. To my mind, however, the interest in this disease does not centre alone in its peculiar features, but involves the broader consideration of the relation which it bears to another equally uncommon disease—viz., Graves' disease, or exophthalmic goitre. The two following cases will illustrate this point.

CASE 1.—This patient was at one time in my service as nurse to my children. When she was thirty-six years of age she noticed a swelling of the thyroid gland. She had previously suffered from a feeling of fullness in the throat, accompanied by palpitation and proptosis. For these symptoms she was under treatment for two years, at the end of which time they disappeared. She, however, never felt well, and very soon fell into a state of health which was worse than the former. She noticed that her tongue became too large for her mouth, which made her speech slow and indistinct, also that she had always a bad taste in her mouth in the morning. Her urine became scanty and pale, and her periods, which formerly recurred at intervals of three weeks, were often absent for six weeks, and the loss was much diminished. Her hair became fluff and fell out. Her gait became so uncertain that she had to crawl upstairs on her hands and knees. Sensation was impaired, the extremities were numb, and she was oppressed by a feeling of weight. The skin felt dry and leathery, whereas it had formerly been unduly moist. She slept badly and was always cold, and during the winter of 1891-92 she suffered so much from this cause that she could not go out, but sat shivering over the fire all day. Her symptoms were attributed at a London hospital to myxœdema, and she was treated by tonics and diuretics. Oddly enough, she recovered to such an extent as to be able to resume her household duties.

In the second case the connexion between Graves' disease and myxœdema was so obvious that I was led to a closer study of their pathology and to the conclusion that their relation in this instance was by no means accidental. That some such relation should exist seemed to me as logical a sequence as that atrophy should follow upon congestion and cirrhosis of the liver. As in the liver, so in the thyroid, chronic hyperæmia leads to the formation of plastic fibrous tissue, which, if the patient lives long enough, shrinks, crushing and destroying the delicate cells contained in its meshes, until in the end he is left with a more or less useless mass of fibrous tissue in the place of an active gland.

CASE 2.—I first saw this patient, then aged eighteen and a half years, at the end of 1889. I found her the subject of marked Graves' disease. I subsequently learned that she had "gone the rounds of the consultants," both regular and irregular, and had tried everything from arsenic to "blue electricity!" (Mettel.) She gave the following history. At ten years of age she "had a shock" from falling into a pond. Shortly afterwards she had a severe fright, owing to her having accidentally set fire to some drapery. From this date her health became impaired and she suffered from palpitation, fullness of the throat, and painful prominence of the eyeballs. A year later she was in a carriage accident and became worse. Early in 1890 she contracted measles and her

temperature went up to 105° F. The attack was very severe, and the pigmentation left by the rash lasted for some months. From the date of her convalescence from measles the symptoms of Graves' disease became modified. In the intervals of my attendances I saw her frequently as a friend, and she was under my observation from first to last—nearly three years. At the end of 1891 I was asked to examine her carefully, and to give a definite opinion as to her condition, her symptoms having gradually undergone a complete change. As a result of my examination I came to the conclusion that she was suffering from myxœdema—a fact which I had suspected some months previously. Owing to the gravity of her condition I took her to Dr. Ord, who agreed that the case was one of myxœdema in a very early stage of the disease. The notes taken of the case are too copious to condense within the limits of this paper. They, however, form the basis of my remarks in the following commentary. Briefly, her symptoms were those of a disease in every way the opposite to that for which she first came under my care. In fact, she had passed from Graves' disease to myxœdema—from a condition of general exaltation with thyroid hypertrophy to one of depression with atrophy of that gland—a striking and unique illustration of the deterioration of an over-stimulated organism. Those who have carefully watched a case of Graves' disease must have observed that the condition of the whole vascular system is one of congestion. Every organ is over-full of blood, and the heart works like an express engine in keeping up the high pressure. The arterial tension is, however, not so great as one would expect it to be, and the force of the cardiac contractions is less marked in the radials than in the carotids. This we may conceive to be due to two causes: (1) vaso-motor paresis, which allows of the rapid absorption of increased force; and (2) a ventricular systole of unequal tone, forcible, and quick at the commencement of the contraction, but rapidly becoming weaker—in fact, the jerky action of an irritated and jaded muscle. From this it follows that the vessels and organs nearest the heart would feel the effect of the increased force sooner than the distal vessels, just as in certain cases of valvular disease only one beat in two is felt at the wrist, while every pulsation can be counted in the carotids. Those organs, consequently, which show the most marked evidence of excessive blood-supply are the thyroid, the eyes, and the brain. In the thyroid it can be felt, in the eyes it can be seen, and in the brain it is evidenced by the excitability, the passion, and the rapid cerebration and speech. (It is difficult to understand why it was ever considered necessary to seek the aid of the insignificant muscular fibres of the orbital membrane to explain the proptosis when the abnormal tension of the eyeball, and the congested scleral and episcleral vessels only too plainly indicate the cause.) The frequent pulse necessitates an increased rate of respiration and the temperature is high, nearly always above normal. The skin is hot and moist and the mouth is full of saliva, evidence of glandular activity the result of hyperæmia. Such briefly are some of the salient features of Graves' disease. Now in myxœdema the tables are completely turned. The pulse becomes slow and feeble; the thyroid becomes small and hard and is barely perceptible. The eyeballs recede to a certain extent, and the palpebral skin is thrown into heavy folds. The integument of the body becomes cold, dry, and leathery, and the extremities feel numb. The mouth, too, becomes dry and the saliva sticky. Cerebration is slow and speech sluggish. The appetite, previously voracious, is lost; constipation follows and the pill which once acted copiously now barely takes effect and soon has to be increased in strength. The temperature falls (even below 95° F. in the morning) and rarely, except during the catamenial period, reaches the normal level. The heart sounds are weak and soft and the impulse is lost, though the basic murmur persists. The patient is no longer restlessly energetic, but becomes alternately peevish and apathetic and crouches over the fire in the vain endeavour to keep warm. The catamenia, previously regular and often profuse, become scanty and are absent for months; the hair becomes fluff, dry, and brittle, and falls out "by the handful." Such is the contrast between the two diseases as exemplified in this case, and I venture to believe that the relation which here evidently existed between them will be found to be more common the more the subject is studied and the more carefully the previous history of each case of myxœdema is investigated.

As to the origin of Graves' disease it is barely profitable to speculate. That it is due to a lesion of the vaso-motor area in the bulb is very probable, and that the thyroid

enlargement is merely a consequence is almost certain. The changes in the cervical ganglia of the sympathetic are also probably secondary. What it is that produces the central lesion still remains in the region of hypothesis. Someone may some day discover a bacillus. At present severe mental strain or nerve shock is credited with its production. As bearing upon the title of this paper and the object I have had in writing it, I would point to the significant fact that the ratio of males to females affected is almost identical in both Graves' disease and myxœdema—that is, about one to six. Of six cases of myxœdema which I have seen since 1884 three had histories of previous thyroid enlargement and concomitant symptoms. The first two I have just related; of the third I have no notes, and it is consequently valueless. In the remaining cases no history of exophthalmic goitre was obtained. However, from the facts already mentioned and from others which the compass of this paper will not permit me to discuss, from the sequence of events in the two cases detailed, and from the study of the pathology and histology of both diseases, I am led to believe that myxœdema is certainly a possible, and may even be a probable result of an antecedent Graves' disease.

Treatment.—My experience is limited to five of the six cases just alluded to. The first case recovered under tonic and diuretic treatment alone, possibly because some part of the gland escaped destruction and, subsequently becoming hypertrophied, sufficed for the needs of the body. The most recent case is still under treatment with the "extract," and already shows some improvement. In three of the cases the result of the treatment by thyroid extract savours of the miraculous. Snatched from a life of unloveliness and suffering, the patients have been restored to health, beauty, and vigour. Surely their gratitude is due to those members of our profession whose acumen led them to the discovery of a remedy the therapeutic value of which is as yet but very imperfectly gauged, and which has opened up a field of research full of brilliant promise for the future.

Great Stanmore, Middlesex.

CASE OF LARGE POLYPOID GROWTH IN THE UTERUS BECOMING SARCOMATOUS; UTERUS AND GROWTH REMOVED BY COMBINED ABDOMINAL AND VAGINAL HYSTERECTOMY; RECOVERY.

By FRED. BOWREMAN JESSETT, F.R.C.S. ENG.,
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THERE are few cases that come under the notice of a gynaecologist which cause him more anxiety than cases of fibro-myoma of the uterus, and when these tumours become sarcomatous, as they occasionally do, the difficulty in dealing with them is very much increased; in fact, the only hope of eradicating the disease from the system rests on the total removal of the organ with its disease. Such removal is always attended by considerable difficulty. If the uterus is not much enlarged they may be removed per vaginam; but if the growths have attained considerable size this proceeding is impossible, and it becomes necessary to consider what is the best method of removing the organ—whether to remove it through the abdomen by Freund's operation or to adopt Martin's operation of combined vaginal and abdominal operation, and finally, the uterus with its growth being removed, to consider what is the best plan to adopt in dealing with the peritoneum. The following case is one, I think, of very considerable interest and importance in connexion with these questions.

On April, 9th, 1894, I was asked by Mr. J. R. Walker of Hamilton-terrace to see with him a widow fifty-seven years of age. She had three children, the youngest being about thirty years of age. She had enjoyed good health until about three or four years ago, when she had some violent floodings, for which her medical man, at that time, took her to see Dr. Braxton Hicks. She has had a great deal of worry and anxiety. There is no history of cancer in the family. In answer to a letter I wrote to Dr. Braxton Hicks as to her condition when he saw her, he most courteously sent me the following particulars: "About two years ago I saw the patient in question. She had then a sloughing fibroid; the greater portion of the mass came away, but some remained. She gradually

improved in health and got about. I saw her about four months ago. She was then without offensive discharge; there was leucorrhœa, and the uterine tumour was about the size it was when I saw her before. There was nothing then to indicate change of growth or operation." Since then the patient had complained of pain in the back; she could not walk without a good deal of distress. She had had attacks of bleeding and some badly smelling discharge. The jolting of cabs and omnibuses caused her great pain. She had had two attacks of intestinal obstruction, one a very severe attack. By abdominal examination there was discovered to be a well-marked tumour situated somewhat deeply in the pelvis; the parietes were flaccid and admitted of ready examination. The patient was well nourished, although she had lost flesh of late. The tumour appeared to extend somewhat along the left broad ligament. A boss was also felt about the size of a Tangerine orange apparently in the right broad ligament. Per vaginam the os felt healthy; there was no erosion or ulceration. The uterus was readily movable; the tumour appeared to be in the body of the uterus; there was a good deal of thickening of the left broad ligament. A sanious, blood-stained, badly smelling discharge was seen escaping from the os; this discharge was seropurulent in character and caused a good deal of irritation of the labia. The sound passed readily for four inches and a half; slight bleeding followed its introduction. Bi-manually the uterus presented a soft, doughy sensation; it was freely movable excepting on the left side, where it seemed to be slightly held down. The diagnosis arrived at was that there had been a fibroid growth in the uterus; but taking into account the age, the offensive discharge with hæmorrhage, and the fact that it had been growing of late, I was of opinion that we had to deal with a growth of a sarcomatous character and advised early removal, which, after consideration, was agreed to by the patient and her friends. On April 19th, with the assistance of Mr. Walker, Dr. Purcell, and Mr. West, Dr. Dudley Buxton administering the anæsthetic, I performed the following operation. From the size of the tumour it was recognised that considerable difficulty would be experienced in removing the uterus with its growth per vaginam, although I hoped to be able to do so. I was, therefore, prepared to open the abdomen in case such difficulty was experienced, which proved to be the case. For three days preceding the operation the vagina had been syringed out three or four times a day with carbolic lotion, and tampons of wool soaked in the lotion had been kept in the vagina. Before the patient was placed on the table she had an enema composed of two ounces each of beef-tea and brandy. The patient was placed in the lithotomy position and the vagina was well washed out with a 1 in 40 carbolic solution. The os uteri was then seized with vulsellum forceps and readily drawn down to the vulva. The mucous membrane was next divided round the whole circumference of the cervix and the anterior and posterior cul-de-sacs of the peritoneum opened. The uterine arteries were now secured and the uterus freed to a point above the arteries. I next endeavoured to tilt the uterus, both anteriorly and posteriorly, but from its size found it impossible to deliver it. I then discussed the advisability of opening up and dividing the uterus, but as I believed the tumour to be a sarcoma, and there was a risk of soiling the peritoneum extensively if I adopted this procedure, I determined to open the abdomen in the middle line and finish the operation from above. The patient still being retained in the same position, I, standing as before, after shaving the pubes and thoroughly cleansing the skin, made an incision some three inches long in the middle line and seized the fundus of the uterus with vulsellum forceps and readily drew it through the wound; I then found that the left ovary and tube were matted together to a loop of intestine. I detached this and ligatured the broad ligament from above downwards, first on the left and then on the right side, the lowest ligature meeting that which had been passed round the uterine arteries from the vagina. The broad ligaments now being divided between the ligatures and the uterus, the latter was easily lifted out. The abdomen was flushed out with warm water, being allowed to drain out through the vagina. All bleeding being arrested I caught the two flaps of peritoneum with curved pressure forceps through the vagina and drew them down, introduced a glass drainage-tube into the peritoneal cavity, and packed the vagina around the drainage-tube with strips of iodoform gauze. The patient, who was very exhausted, was now returned to bed. She rallied rapidly and in the evening was quite comfortable. The drainage-tube and gauze packing

were removed the next day, as the patient complained of a good deal of pain in the right side. Most of the ligatures were removed at the end of the week. There was a good deal of discharge, and pain was complained of in the right iliac region. On the tenth day there was a sudden rush of pus, which appeared to come from the right side rather high up; after this the temperature, which had been 102° and 103° F., dropped, and the patient was much easier. At the end of a fortnight the discharge had much decreased, and a large slough with some ligatures came away. The patient three weeks after the operation was lifted on to the sofa, and Mr. Walker writes to me that at the present time (Feb. 20th, 1895) she is in good health.

Remarks.—This case is one of interest, I think, from two points of view: one the fact of these large intra-uterine fibro-myomata becoming sarcomatous, and the other from the method in which the operation was performed. Sir John Williams has in his Harveian Lecture drawn attention to the way in which carcinomata occasionally assume a polypoid shape, while the uterine wall at their base may be healthy. These polypi, as Ruge and Veit and John Williams have explained, may break down and disappear, leaving a mass of cancer in the uterine walls. It is fully recognised that fibro-myomata of the uterus do undergo sarcomatous degeneration; thus, as Mr. Plimmer has drawn my attention to, Dr. Sims Woodhead¹ observes that portions of a fibroid tumour (of the uterus) undergo sarcomatous degeneration. Mr. Alban Doran² gives an account of a case of a fibroid becoming sarcomatous. Dr. Finlay³ showed a case at the Pathological Society of a large fibroid which had become sarcomatous, the patient dying from secondary deposits in other organs. Numerous other instances have been recorded by Playfair, Cornil, and Ranvier, Pozzi, and others; but in none of these do they, I think, describe just the condition which existed in this case—viz., an intra-uterine fibro-myoma assuming a polypoid form, being connected with the fundus of the uterus by a narrow pedicle, and then becoming sarcomatous. Mr. Plimmer has kindly furnished me with the following pathological report of the specimen. He says: "The tumour consists of non-striated muscular tissue and sarcomatous material in varying proportions. In the hard parts it is almost entirely of the ordinary 'uterine fibroid' structure, but in all but the very hardest parts there is some sarcomatous material with it. The softer parts are almost entirely sarcomatous, with bands of connective tissue, which are rich in fusiform cells with prolongations of various length between; these bands are large collections of round cells with well-marked nuclei closely packed together. In the superficial parts are bundles of fibrous and unstriated muscular tissue. The blood-supply is rich, and there are around the vessels some spots of hemorrhage. No mucous membrane or glands found." The operation was conducted much in the same way as described by Martin (Berlin), although I have never seen this surgeon operate. The advantages I think are obvious: first, from the position the patient is placed in, the abdominal parietes are made quite lax, so that it is easier to withdraw a tumour through the abdominal wound; secondly, the surgeon has complete control of the vaginal and abdominal openings, and so is enabled much more accurately to ligature the broad ligament, and the peritoneum and vagina are more readily and thoroughly washed out and all clots removed; the final steps of the operation differed from Martin's method in that he laces the peritoneum across through the abdominal wound, thus closing the peritoneal sac. I prefer, as I have mentioned on many former occasions, to draw the two flaps of peritoneum down into the vagina and packing around these strips of iodoform gauze, passing for the first twenty-four hours a glass drainage-tube into the peritoneum. The specimen consisted of a large polypoid growth, lobulated, in some parts very hard, at others soft and cystic. It is attached to the fundus of the uterus by a narrow pedicle. The uterine walls are somewhat soft and thinned. The cervix and os appear to be quite healthy.

Buckingham Palace-mansions, S.W.

¹ Woodhead's Pathology, p. 226. ² THE LANCET, May 10th, 1890.
³ THE LANCET, March 10th, 1883.

A CONTRIBUTION TO THE PATHOLOGY OF CHLOROFORM SYNCOPE.

By ALEXANDER HAIG, M.D. OXON., F.R.C.P. LOND., &c.,
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HOSPITAL FOR CHILDREN AND WOMEN.

THE extremely interesting paper by Mr. A. Wilson¹ and the notes and papers which have followed it have brought prominently before my mind the argument as to the causation of chloroform syncope which I have elsewhere given.² My argument is that syncope following the administration of chloroform has an identical causation with those more common conditions of syncope seen in connexion with high and rising blood pressure, and that in all cases it is the high and rising blood pressure which overpowers the heart and produces the syncope. It is generally acknowledged that the effect of chloroform inhalation is to lower the blood pressure, and it follows from this that when the chloroform has been stopped and its effects are passing off there will be a rise of blood pressure. Now I have good reason to believe that this rise of blood pressure is a danger to the heart, and that this danger is increased the greater and more sudden the rise and the weaker the heart or the more imperfect its nutrition. Further, the very interesting experiments and observations of Dr. R. Kirk³ show that a similar irregularity of the heart and tendency to syncope is met with in animals after the last drop of chloroform has left the blood; and he has further pointed out that in the human subject these troubles often occur during a break in the administration or soon after it has been discontinued, and this is a point which several of the cases recently discussed in THE LANCET illustrate in a remarkable way. Thus in Mr. Wilson's Cases 1 and 2 we have, as he truly says, all the signs of primary failure of the circulation, and in his Case 6 we have this occurring as the patient is coming round and is sufficiently conscious to give a cry of pain; but whether in Cases 1 and 2 the syncope came on during slight breaks in the administration of the chloroform, as contended by Dr. Kirk, there is not sufficient evidence to show. With regard to Case 6 Mr. Wilson remarks that the syncope was due to the reflex inhibition of the heart by the pain, but that some blame must also be laid upon the semi-anæsthetic condition of the patient at the time, but I shall have to speak of these points again. It is interesting to note also that Mr. Wilson agrees with Dr. Kirk in looking upon a sudden quickening of the pulse as a danger signal.⁴ Dr. Kirk also mentions in the reference just given the case of a patient who died from "the reaction which ensued when he began to breathe fresh air."

Then in THE LANCET of Nov. 24th, 1894, there is the record of a case of syncope under chloroform in which nitrite of amyl averted a fatal result and its effect is said to have been "almost instantaneous." I have elsewhere suggested that this drug acts by reducing the blood pressure and thus freeing the heart from its overpowering effects (for another case in which it was used with success see THE LANCET of March 7th, 1885). And even in the same number of THE LANCET (Nov. 24th, 1894) there is the record of a case in which death ensued, and it is said with regard to the onset of the fatal signs that "the administration of the chloroform had been stopped," and in an annotation on the same case in the next number (p. 1291) further points of great interest are mentioned: (1) that she had taken chloroform with impunity on other occasions; (2) that she had been confined fifteen months previously and had recently lost a child, and was suffering from the depressing effects of grief; (3) that there was slight renal disease (and I note also that one of Mr. Wilson's cases suffered from chronic Bright's disease); and (4) that "before the dentist had touched the patient, although the chloroformist had taken away the chloroform from her face and pronounced her ready for operation, she suddenly became ashy pale, but respiration continued"; here, then, we have exactly the condition described and insisted upon by Dr. Kirk and Mr. Wilson.

Another death under chloroform—in which there was great difficulty in giving the anæsthetic owing to the nose being the point to be operated on, and where the patient, therefore,

¹ THE LANCET, Nov. 17th, 1894.

² Uric Acid as a Factor in the Causation of Disease, second edition, p. 166.

³ THE LANCET, Aug. 19th, 1893.

⁴ THE LANCET, June 23rd, 1894.

DR. R. BALLOTA TAYLOR, an English practitioner residing at Santander, Spain, has been recently elected Corresponding Member of the Royal Academy of Medicine of Madrid

came round several times before the fatal event—is recorded in THE LANCET of Aug. 26th, 1893, and similar deaths from too little chloroform or a lull in the administration were discussed in 1892 and 1893.⁵ I have mentioned above Mr. Wilson's opinion that in his Case 6 the syncope was due to the reflex inhibition of the heart by the pain; but it seems to me that a somewhat different relation between cause and effect to that he suggested is possible. Thus I have said, with reference to the effect of high blood pressure on the action of the heart,⁶ that my own heart never falters or flutters except when there is high or rising blood pressure; but there is one condition I ought to have mentioned in which my heart does flutter or falter just as in pulse tracing A⁷ (which shows well-marked high arterial tension), and that is during severe irritation of a sensory nerve. I happen to suffer many things with the dental branches of the fifth nerve, and I have several times noticed that with the most severe paroxysms of pain my heart falters and flutters just as it was doing when the above-mentioned pulse tracing was taken, for these cardiac irregularities, not being habitual with me, are always distinctly felt. Now, in the case of my own heart was this a reflex or was it due to rising blood pressure? If we may consider—and, so far as I know, physiology does not negative the idea—that irritation of a sensory nerve causes a general contraction of arterioles and a rise of blood pressure, the cause was in both cases the same, and my heart fluttered under the dental pain for the same reason that it did so in pulse tracing A, because in both there was high and rising blood pressure. We can now fully appreciate the bearing of Mr. Wilson's Case 6. Here the patient was coming out of the chloroform anaesthesia, and blood pressure was therefore rising; suddenly to this was added severe irritation of the sensory nerves of the knee, causing an acute rise of blood pressure, and it was little wonder that the heart was thus completely overpowered and that syncope at once resulted. And this explanation reminds me again of Marey's observation, which I have elsewhere quoted, that changes in the rate and rhythm of the heart, while often attributed to nervous influences, are in not a few cases really due to pressure changes in the vessels.⁸ If further we may take it, as I have suggested, that excess of uric acid in the blood is the most common and potent cause of high blood pressure, we can easily understand the fatal result in Mr. Wilson's Case 2, with atheromatous arteries and granular kidneys, and in the other case mentioned above where there was slight renal disease, and this patient also had been suffering under the depressing effects of grief, while recent pregnancy and other factors are mentioned. Now I have no hesitation in saying that in one and all of these conditions there would probably be excess of uric acid in the blood, and that they are just the conditions in which I should expect syncope after chloroform to take place. I quite agree with Mr. Wilson that one cause of death after chloroform is syncope, and endorse his valuable suggestion that syncope under other conditions should be studied to illustrate it; and if this is done many will, I believe, be astonished to find how large a number of syncope cases are preceded or accompanied by evidences of high and rising blood pressure, and, if these can also be examined, with excess of uric acid in the urine and blood.

I make these suggestions for what they are worth—for a place beside other hypotheses; but if they are ever proved to be true it is evident that we should soon be in a position to prevent or to avoid all such cases of syncope, and also to say with considerable certainty in what cases and conditions it is dangerous to give chloroform.

Brook-street, W.

⁵ Brit. Med. Jour., vol. i. 1892, and vol. ii. 1893, p. 1452.

⁶ Op. cit., second edition, p. 109.

⁷ Ibid.

⁸ Circulation du Sang, p. 484.

THE annual meeting of the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor, was held on Feb. 14th at 34, Craven-street, Charing-cross, Sir Algernon Borthwick presiding. Suitable reference was made to the death of the founder of the hospital, Dr. Arthur Hill Hassell, a portrait of whom has been placed in the large dining hall. During 1894 there were 793 patients, a higher number than in any former year. The income exceeded that for 1893, chiefly in consequence of a gift of £1500 from an anonymous donor.

FURTHER CASES ILLUSTRATING THE RESULTS TO THE EMPLOYÉS OF IMPERFECT VISION TESTING ON RAILWAYS AND IN THE MERCANTILE MARINE.

By W. C. ROCKLIFFE, M.A., M.B. CANTAB.,
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AS might be expected in a seaport town, I could, if I had time to peruse my notes of the last twenty years, find many cases to substantiate the contention of the deputation of ophthalmic surgeons which recently waited on the Board of Trade, which I take to be "that it is unfair both to the patients themselves as well as the general public that the testing of the acuity of vision and colour sense of railway and marine officials is not undertaken in every case by persons fully versed in ophthalmic knowledge and capable of detecting without doubt either errors of refraction, achromatopsia, or diseases of the eye—more especially the fundus." In support of which statement I quote from cases which have come under my care during the last eighteen months.

CASE 1.—A man aged thirty-eight had since boyhood been to sea and gradually risen to the obtaining of his master's certificate. Three times had his sight been tested, including colours, and each time he passed without difficulty; but on presenting himself as master he was found to be colour-blind and rejected. On examination he selected for green—salmon, grey, and drab; called rose green, and selected blues and purple; and matched bright red with dark brown.

CASE 2.—A young man aged twenty-five years had during the nine years he had been at sea never experienced any difficulty in "picking up lights," and had passed the colour test twice before, but was rejected on passing for master. On examination he selected for green—greys and light brown; for rose, purple and blue; and for red, dark brown.

CASE 3.—This case particularly exemplifies the hardship entailed by inefficient examination. A young man aged twenty-two years had been educated at a public navigation school, been second and first mate, and obtained his master's certificate, but was rejected at the moment his appointed ship was awaiting its captain. Throughout the whole of his life he bore a most exemplary character, and had twice been passed by the same examiner before rejection. His surprise and disbelief in his colour blindness caused him to consult me. On examination he called green green, but selected drab, salmon, and grey; he called rose light green, and selected blues, violet, and emerald green; and he called red red, but selected dark brown and claret.

CASE 4.—A young man aged twenty-three had worked his way through the shops, been engine-cleaner, and afterwards fireman for three years and a half, and was refused his driver's certificate on one of the largest lines in England on the ground of colour blindness. On examination he selected as green—magenta, drab, grey, and buff; and as rose—emerald green, ultramarine, and violet.

I have also within my recollection the case of a fireman who could not see the guard's signal at the end of the train, and yet this man had been for some years with the same company, and it was only when his driver refused to take the whole responsibility during foggy weather that his condition was discovered. Another man had considerable amblyopia with atrophy of the optic nerve; and again, a third, an able-bodied seaman, was refused by his captain, a personal quarrel being assumed as the motive; on examination his vision was found to be $\frac{3}{8}$, and he had high myopia, and yet this man for years had taken his watch on a large passenger steamer.

Remarks.—These cases will, I think, add some little proof to the assertion that not only ought our railway officials and seamen to be examined by competent persons before they commence their career, but also (as the deputation further insisted) from time to time while they are following their various avocations; and doubtless a considerable volume of similar evidence might be obtained from many other ophthalmic surgeons, by which even the Board of Trade might be compelled by public feeling to take such steps as were advocated by the deputation, and, as Mr. Beaumont correctly states, prior to some serious calamity at sea or at home. The deputation could not possibly have been composed of a

more powerful assembly of ophthalmic surgeons. Nevertheless, I feel that they might have considerably strengthened their hands had they solicited from their many *confrères* such evidence as was supplied by Mr. Beaumont in THE LANCET of the 9th inst. The whole matter was somewhat "rushed" at the meeting of the Ophthalmological Society on Jan. 31st, and an influential deputation was promptly formed to support that of the British Medical Association; but, judging by the cases quoted on the spur of the moment by several members present at the meeting, I venture to think it would have been better to have issued circulars asking for information and cases to support their argument, the immense necessity for which is of undeniable public importance.

Charlotte-street, Hull.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMOVAL OF PAROTID TUMOUR; SUBSEQUENT SALIVARY FISTULA.

By L. A. LAWRENCE, F.R.C.S. ENG.

A MAN of middle age came to the Western General Dispensary early in November, 1893. He had a tumour in his left parotid region about the size of a small orange. It was of four years' duration and presented the usual signs of an innocent enchondroma. The patient desired its removal on account of its unsightliness. After watching the case for a short time I decided to operate, and accordingly on Nov. 16th the tumour was removed with ease and turned out to be an enchondroma. A line over the most prominent part of the swelling was chosen for incision; this was three inches long, and extended from just below the tragus of the ear to a point midway between the angle of the mouth and the angle of the jaw. Only the superficial integuments were incised, and immediately below them the capsule of the tumour presented. The mass itself shelled out. There was no hæmorrhage, and the facial nerve was not seen. The wound was washed out and the skin brought together along the whole line of the incision with horsehair sutures. The patient made an excellent recovery. The dressings were soaked through on the first night, and this condition was observed each time they were changed. Owing to staining the true nature of the discharge was not appreciated till four days after the operation, when the wound having healed in nearly its whole length the clearness of the fluid escaping at once showed it to be saliva. The small salivary fistula was situated in the line of the incision about one inch from the ear. This condition continued for five weeks. On Dec. 10th I probed the left duct of Steno from the mouth; there was considerable difficulty in finding the opening, much more so than on the right side. A fine probe entered about two inches and did not point towards the wound. Between the 10th and 15th a probe was inserted twice again. The house surgeon, Mr. Jackson, then gave him some belladonna in hopes of reducing the flow of saliva. The quantities taken were fifteen minims of the tincture on Dec. 15th. Then twenty minims each day till Dec. 21st, when the drug was omitted; from then till the 23rd twenty-five minims were taken daily. After this date the drug was stopped. On Dec. 27th the saliva ceased to run from the wound, which then closed spontaneously. I have brought the case forward on account of several curious features it presented. 1. As to the cause of the flow of saliva. The incision was quite superficial, and the facial nerve, except for, perhaps, some fibres on the surface, was quite intact. It may be doubted therefore whether Steno's duct was the source of the flow. A possible glandula socia may have been cut, but I was not aware of any such proceeding at the time of operation. 2. The influence of the belladonna treatment. After the first dose the patient said less saliva flowed through the opening. The first dose, however, was given the same day, when the last probing took place. There was never any dilatation of the pupils and only a trifling dryness of the mouth on waking in the morning, not sufficient for its being considered due to the drug. There were no other physiological effects of belladonna observable.

Then, again, the flow did not cease till five days after the medicine had been discontinued. Lastly, one may ask, What effect had the probing of the duct? To my mind none. If the duct had been cut probing the distal portion would not have helped the saliva to flow through it. If it had not been cut the saliva could not have escaped from it. I have lately again seen the patient, who is in excellent health in every way.

Harley-street, W.

REMARKABLE GUNSHOT INJURIES.

By J. G. STRACEY FORREST, L.R.C.P. LOND.,
M.R.C.S. ENG.

ON Jan. 18th, 1895, being in the vicinity, I was called by the police to see the body of a man found dead on the beach at St. Leonards. He was tall and stout, and apparently about thirty-six years of age. On examining the body, which was still warm, I found the whole of the left side of the face blown away; the roof of the mouth and also the cranial bones on that side were broken into fragments, enormous damage being done to the brain substance, which was exposed. Although the terrific force succeeded in producing such terrible destruction it nevertheless failed to produce any external lesion of the scalp. The whole scalp covering the calvarium was intact, there being an utter absence of external injury beyond that already mentioned on the left side of the face, although the cranial bones on that side and in front were so freely broken and loose. I also found about four inches below and one inch and a half internal to the left nipple a circular wound with charred edges, from which fat protruded, but no great hæmorrhage had apparently taken place. There was a corresponding hole in the waistcoat, shirt, and vest. On Jan. 20th, in conjunction with Dr. Kenyon, a post-mortem examination was made. We found the seventh and eighth ribs smashed, but the contents of the chest were uninjured. On examining the wound, which led straight in, we found the two wads covering the shot and powder and several small shot, apparently sixes, embedded in the fat, muscles, and tissues, but no perforation of the stomach or intestines was discovered. He was found lying on the beach on his back by a coastguardsman, with a double-barreled 12-bore gun lying between his legs, the muzzle resting on his stomach and inclined to the left. The right barrel had been discharged, but the left was still loaded. It appears that he must have first discharged the gun at his breast, but, this not proving immediately fatal, reloaded, placed the barrels in his mouth, and fired again, causing instantaneous death.

St. Leonards-on-Sea.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

ACUTE INTUSSUSCEPTION IN AN INFANT AGED FOUR MONTHS; LAPAROTOMY; RECOVERY; REMARKS.

(Under the care of Mr. E. W. ROUGHTON.)

WE have for many years advocated the publication of cases of intussusception which have been submitted to operation, for the list of recoveries after abdominal section for this condition, at any age, is still a small one, and information is required on several heads. The case recorded below is especially worthy of notice, because, so far as we can ascertain, the patient is the youngest on whom laparotomy has been successfully performed for that condition. Dr. Kammerer¹ and Mr. Howard Marsh² have each recorded a success after operation in a child aged six months; but it is well known that abdominal section is only

¹ Medical Record, New York, 1890, p. 114.

² In 1875.

too often followed by a fatal result when the patient is under the age of two years. The attainment of success in children is not entirely dependent on the promptitude with which laparotomy is performed after the child has come under observation, although the duration of the disease does influence the prognosis most seriously. We have seen laparotomy carried out within six hours after the patient showed symptoms of the intussusception; reduction was easily effected: the manipulation required was comparatively slight, took but a short time, and the surroundings were favourable, yet the child died in a few hours with cerebral symptoms, not due to visible organic disease. There was no peritonitis, and the condition of the parts involved was satisfactory. We do not think this experience unusual. Shock is also a result of operation much to be feared in children. Whilst there are without doubt cases in which the patient would have died but for the operation which permitted reduction to be promptly and certainly effected, the result of abdominal section has not been so satisfactory that we can afford to discard the use of injections of air or fluid, which have frequently proved effectual. We are strongly of opinion that these measures should be tried in all cases where the symptoms have been in existence for less than forty-eight hours, and that laparotomy should be recommended if injection has failed. We do not discuss this question more fully as we have often brought it forward in the columns of THE LANCET.*

A female infant aged four months was admitted to the Royal Free Hospital on Dec. 27th, 1893. On the previous day she had been suddenly seized with pain in the abdomen and vomiting, soon followed by the passage of blood per rectum. The following was its condition on admission. The child was well nourished and not collapsed. The abdomen was tense but not distended; in the left iliac region a fulness but no distinct tumour could be felt. Per rectum a soft, elastic mass could just be reached towards the left iliac region; the rectum itself was empty. An operation was performed twenty-four hours after the onset of the symptoms. Chloroform having been administered the abdominal tumour could be distinctly felt. No attempt was made to reduce the intussusception by injection or inflation. The abdomen was opened in the middle line. On introducing the finger the mass was at once found and brought out at the wound; reduction was easily effected by kneading from below upwards. The invagination extended from the ileo-caecal valve to the sigmoid flexure. Rapid and complete recovery ensued. The patient was last seen six months after the operation; there was then a small umbilical hernia the result of whooping-cough, but no bulging of the scar.

Remarks by Mr. ROUGHTON.—I attribute the recovery of this child to the early performance of abdominal section without previous attempts at inflation or injection. Many cases of acute intussusception have been cured by inflation or injection, and it is quite possible that this case might have been cured by one of these methods; on the other hand, many cases have been killed, either directly by bursting the intestine or indirectly by the waste of time entailed by unsuccessful attempts at reduction. The fatality of acute intussusception varies directly as the length of time allowed to elapse before reduction is effected. I think that inflation should be discarded, that injection should be reserved for the very earliest cases, and that immediate operation should be performed in all cases of twenty-four or more hours' duration.

ROYAL BERKSHIRE HOSPITAL.

PERFORATION OF A GASTRIC ULCER; OPERATION; RECOVERY; REMARKS.

(Under the care of Mr. J. HOPKINS WALTERS.)

WE publish with pleasure the account of a successful operation for the cure of perforating gastric ulcer. The promptitude of diagnosis and treatment is answerable for the happy result, and we have nothing to add from a scientific point of view to Mr. J. Hopkins Walters' remarks.

A woman aged twenty years was admitted into the Royal Berkshire Hospital, Reading, on the morning of Sept. 16th, 1894. She had been sent by Dr. G. H. R. Holden, who suspected perforation of a gastric ulcer. She had suffered from gastrodynia

and vomiting after food for nearly four years. The evening previous to admission she had tea and bread-and-butter about 5 P.M., and whilst walking about 9 P.M. was seized with sudden pain in the left costal region. She felt sick, but did not vomit. On her admission the temperature was 100° F. and the pulse 120, weak and irregular. She complained of pain at the margin of the left costal cartilages, transmitted to the left shoulder, which, however, was not severe except on movement. The abdomen was somewhat distended; the liver dullness was absent. There were general tympanites and slight tenderness over the whole abdomen, which was more marked over the region of the stomach. There was no marked collapse nor typical facial expression, and the legs were not drawn up, but abdominal respiratory movements were absent. At 10.30 A.M., after consultation, Mr. Walters opened the abdomen by a median incision in the epigastrium. The peritoneum was distended with flatus, which escaped when the cavity was opened. There was no general peritonitis. The stomach was easily reached and well pulled out, when on the anterior surface, about three inches from the cardiac end, towards the lesser curvature, there was seen a clean-cut, punched-out aperture the size of a cedar pencil in the centre of a thickened and hardened portion of stomach wall of the circumference of a half-crown piece. The edges of the perforation were almost cartilaginous in appearance and feel. There were no adhesions. No stomach contents were found in the peritoneal cavity, but the sponges brought up some pieces of lymph from the region of the spleen. The ulcer was doubled upon itself, in the long axis of the stomach, with the serous surfaces in apposition and the perforation in the centre of the fold. The serous membrane was united with a first row of Lembert's sutures, followed by an outer continuous suture, all in fine catgut. The peritoneal cavity was then washed out with weak boracic lotion and the abdominal wound sutured. A quarter of a grain of morphia was given by the skin. The progress of the case calls for little remark, recovery having been rapid and uninterrupted. There was slight chloroform sickness, the vomited matter being a blood-stained fluid. The temperature, which previously to operation was 100.4°, at once fell and never afterwards reached 100°. The patient was at first fed with rectal enemata, lemon-juice with water was used as a mouth wash, thirst was relieved by large injections of water, and morphia was continued hypodermically. On the 18th, two days after the operation, cold water was allowed by the mouth in very small quantities often repeated, as thirst was urgent. On the 23rd, seven days after the operation, one ounce of chicken broth every half hour was permitted by the mouth and the quantity gradually increased. She was next allowed arrowroot three times a day, and on Oct. 5th ate some boiled sole without discomfort resulting. The wound was dressed on the seventh day and found to be completely united. The only drawback during convalescence was some phlebitis in the left saphenous vein, leading to slight swelling of the leg, which soon passed away. On Dec. 24th she was discharged, having regained strength and flesh. She was cautioned to keep chiefly to a soft, easily digested dietary.

Remarks by Mr. WALTERS.—This case was a particularly favourable one by reason of the long time that elapsed from the last meal to the occurrence of perforation, this taking place on an empty stomach, of immediate medical attendance with accurate diagnosis, of prompt transportation to hospital, and of early operation. The patient's ability to endure the operation was, therefore, at its best, although she was quite a delicate girl. In performing the operation I dealt with the conditions on their merits without adhering strictly to precedents. On finding the hole I first considered whether I should follow the lead of some operators by excising the entire ulcer. This would have left such a formidable opening in the organ, and the case looked so favourable owing to the absence of complications, that I was unwilling to run the risk of making it more grave by such a procedure. My judgment in this matter seems to be justified by the resulting continuous convalescence. I also abstained from the fashionable "procedure of precision" of injecting water into the viscus to see whether my needle-work had produced an absolutely impervious seam. I think this in most cases a needless precaution on account of the rapid adhesion of serous surfaces to one another and the early perfection of such sealing. Where the stomach is found to contain food I think the proper thing is to thoroughly empty and wash it out. These, with perfect cleansing of the peritoneal cavity, are essentials to success, and there is no chance of leakage from an empty stomach

* THE LANCET of Jan. 26th, 1889, Nov. 29th, 1890, May 23rd and June 13th, 1891, and Feb. 24th, 1894.

where the sutures are inserted with judgment and care. In this case, with perfect impunity, I permitted the ingestion of small quantities of water so early even as the second day, by which time peritoneal adhesions are tolerably firm. The result from first to last has been most gratifying, and I am glad to be able to add one more to the small list of successful operations for the cure of perforating gastric ulcer.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Endosteal Sarcoma of the Patella.—Fœtus with Reptilian Characters in Sexual Ducts.—Adenoma of Lip.—Portal Thrombosis and Hepatic Infarction.—Exhibition of Specimens.

AN ordinary meeting of this society was held on Feb. 19th, the President, Dr. PAVY, being in the chair.

THE PRESIDENT alluded to the loss sustained by the society in the death of Mr. Hulke, a past president of the society. He referred to Mr. Hulke as possessed of great ability and of high and varied mental attainments. At the time that he was president of the Pathological Society he was also president of the Geological Society, and he occupied a prominent position among palæontologists. Mr. Hulke was a man of the highest rectitude of character and of an evenly balanced mind, whose opinion could be relied upon with the greatest security. A resolution of the council that expressions of sympathy should be conveyed to Mrs. Hulke was carried *nem. con.*

Mr. D'ARCY POWER showed for Mr. ROBERT JONES of Liverpool an Endosteal Myeloid Sarcoma of the Patella. The new growth involved the whole of the knee-cap, but the articular cartilage remained and was healthy. The tumour was solid. The tibia, fibula, femur, and the articular surfaces of the knee appeared to be quite healthy. The patient was a girl aged twenty who had twice injured her knee by falling upon it. The growth was of four and a half years' duration and its origin dated from the last injury. Mr. Robert Jones at first thought that the growth was an enlarged bursa patellæ, so closely did it simulate fluctuation. The skin over it was blue and brawny, however, and the hollow around the patella was obliterated in a manner which was unusual in the case of such enlarged bursæ. The tumour continued to grow and Mr. Jones amputated the thigh in its middle third. This was the first case of endosteal tumour which had been brought before the society. Mr. Power knew of only one other specimen, and that was in the Hunterian collection, to which it had been presented by Sir Astley Cooper. The Hunterian specimen, however, presented the ordinary cystic character of myeloid sarcomata, whilst the present growth was solid. It was doubtless this solidity which had caused the difficulty in recognising it, for although it was very soft there was no eggshell crackling.—Mr. SHATTOCK said that there was a specimen in the museum of St. Mary's Hospital, which was described and illustrated by Mr. Pepper. It was a primary sarcoma arising in the patella and leaving the cartilage intact.—Mr. BOWLBY said that where collections of blood existed in these sarcomata they usually grew very slowly, while if the growths were solid they progressed more rapidly.—Mr. D'ARCY POWER, in reply, said that although the growth was solid it had existed nearly five years.

Mr. S. G. SHATTOCK exhibited a Male Fœtus showing Reptilian Characters in the Sexual Ducts. The specimen showed a malformation of the sexual ducts which came in the category of abnormal arrest at a normal stage in human development, and which he regarded as best explained on the principle of atavism or reversion to an ancestral type. The malformations in question were associated with extraversion of the bladder and prolapse of the posterior segment of the intestine, which terminated blindly at the umbilicus. The particular characters referred to, however, consisted: 1. In a remarkable elongation of one of the kidneys, recalling the condition in certain lacertilia and ophidia, and it was noteworthy that the kidney so altered was the right, for in ophidia the right kidney was normally much longer than the left. 2. In the persistence of both Müllerian ducts, which remained quite distinct from one another throughout and opened in the neighbourhood of the ureters on the extroverted surface. This resembled the

persistence of both oviducts in an ununited condition in the females of reptilia. 3. On one side the vas deferens opened into the ureter. This was a persistence of the primitive embryological condition in man, and it represented what was a permanent one in the males of lacertilia, where these canals opened together in the cloaca. There were in addition two blind sacs representing the anal pouches of reptiles. Mr. Shattock observed also that the extreme degree of hypospadias in the human subject, though usually regarded as strictly pathological, might really be viewed as a reversion to a reptilian type, for in the crocodile and tortoise the penis was single and the urethra represented merely by a groove on the lower or posterior surface, near the base of which lay the openings of the vasa deferentia in the cloaca.

Mr. DUNN showed a specimen of Adenoma of the Lip removed from a young adult who was admitted into Guy's Hospital in December. The growth had existed during the greater part of the patient's life. It was firm, elastic, encapsuled, rather soft at one part, and shelled out easily. Microscopically the tumour was composed of a large quantity of fibrous tissue and contained numerous spaces lined with one or two layers of epithelium. There was no cartilage.

Dr. N. PITT showed two specimens of Portal Thrombosis and Infarction of the Liver. The first specimen was removed from a man aged thirty-six, admitted into Guy's Hospital after an injury to the abdominal wall. He had a strangulated scrotal hernia, associated with bruising of the bowels. Death resulted from membranous enteritis and paralysis of the bowel. In the right lobe of the liver there was an infarcted area, with a thrombosed portal vein in its centre. Though the liver showed no bruising, yet probably the blow injured a branch of the portal vein and so gave rise to the thrombosis and infarction. Dr. Pitt showed a second specimen taken from a patient who had been under Dr. Washbourn's care. The man was aged forty-eight, and after recovering from an attack of hemiplegia he succumbed to a second seizure. Two patches of thrombosis were found in the aorta and other thrombi were present in the renal, splenic, and cerebral arteries. The greater portion of the portal vein and the right middle hepatic vein were thrombosed. The liver showed numerous infarcted areas, some being deeply engorged and others pale. Though the whole splenic artery was blocked, yet infarctions only occurred here and there in the spleen, and the same remark applied to the brain.—Dr. CYRIL OGLE said that in a similar specimen he had shown he attributed the infarction to a septic condition of the blood, which therefore extravasated readily.—Dr. ROLLESTON, in a case of occlusion of the main branch of the splenic artery, had found only disseminated infarcts in the spleen. A similar condition he had found associated with thrombosis of the splenic vein.—Dr. PITT, in reply, said that in one of the cases shown there were adhesions, and this permitted a considerable amount of collateral circulation.

The following card specimens were shown and described:—
Dr. W. W. ORD: Hydronephrosis due to Stricture of Ureter.

Dr. N. PITT: (1) Kidneys increased Fourfold by Acute Nephritis; (2) Renal Calculi in Infants.

Dr. C. ARKLE: Ulcerative Colitis.

Mr. Dunn: Uric Acid Calculi from a Child aged eighteen months.

Dr. CYRIL OGLE: Two specimens of Gastro-jejunostomy for Carcinoma.

HUNTERIAN SOCIETY.

Exhibition of Cases.

AN ordinary meeting of the Hunterian Society was held at the London Institution on Jan. 23rd, Mr. J. CHARTERS SYMONDS, President, being in the chair.

Sir HUGH BEEVOR showed a case of Tumour of the Left Loin.

Mr. OPENSHAW showed a case of Congenital Sacral Tumour in a child aged sixteen months, which projected backwards in the middle line over the coccyx as a globular swelling the size of a walnut, translucent, fluctuating, and unaffected by crying. Digital exploration showed that the tumour passed up in front of the sacrum nearly as high as its base. Mr. Openshaw also showed a case of Multiple Osteitis, affecting both tibiae, both fibulae, both ulnae, the left humerus, and the lower part of the shaft of the right femur in a boy aged ten, who presented no evidence of scrofula or congenital syphilis and who gave no history of injury.

Dr. WOODS showed three Choreic patients (females) aged seventeen, fifteen, and eight years and a half who had been much improved by hypnotism. He detailed the results of eleven cases of chorea which he had treated. Of these, nine have recovered, one has relapsed, and one was too recent to be of value.

Mr. POLAND showed a case of Excision of the Isthmus and (portion of) Lateral Lobe of the Thyroid. The patient, a woman aged thirty-seven, had noticed swelling of the right side of the neck about the middle of last August, but only lately had it become painful and "pressed upon her throat," as she described it. She also had pain during deglutition, or rather pain was present just on the commencement of this act. This interference with the oesophageal function was likewise marked by the desire to perform the act of deglutition, which was very frequent and at last became most distressing. There was at first but little difficulty in breathing—in fact, only a few days before she was first seen, at the commencement of last December, did any marked symptoms of interference with expiration present themselves. She had then only some occasional choking sensation. However, between that time and the date of the operation on Dec. 17th she had two or three bad attacks of dyspnoea, which were so severe that she thought she was about to be suffocated. The tumour then measured four inches obliquely from above downwards and three inches obliquely side to side. With a median incision three inches and a half in length in front of the trachea, which, together with the thyroid, was pushed over to the left side, it was possible to remove the whole of the enlarged isthmus and nearly two-thirds of the right lateral lobe. A notch indicated the junction of the hypertrophic isthmus and the left lobe. The thyroid tissue was divided at this point by a blunt director; a similar course was adopted to remove the mass on the right side; a large rounded portion was left behind for fear of any subsequent myxodematous changes. During the removal of the mass projecting behind the sternum a cyst one inch and a quarter in diameter was displaced from behind the bone, and ruptured during removal. It contained six ounces of brownish fluid. No ligatures were used either for the isthmus or lateral lobe, and there was no hæmorrhage. One or two small branches of the anterior jugular vein and a few other small vessels at the upper end of the tumour required to be tied. These were the only ligatures used, with the exception of the buried silk ligatures employed to bring the different fascial layers together. The wound was closed by silkworm gut without any drainage, and was found to have healed by first intention at the first dressing on the seventh day. The patient immediately after the operation lost all her distressing symptoms, and had remained well since. Mr. Poland thought this might be considered an ideal operation upon such conditions of the thyroid gland as were here to be dealt with, provided that the most rigid asepsis was carried out and the several layers of cervical fascia brought together in their normal relation carefully by deep sutures. By the latter means the cavity left after the removal of the tumour might be almost, if not entirely, obliterated (as in this case). The isthmus after removal was one inch and a quarter in width, and the left lateral mass rather more than three inches and a half. Microscopical sections made by Dr. W. Edmunds were exhibited. They showed normal thyroid tissue with normal vesicles.

Mr. HUMPHREYS showed a patient convalescent from Typhoid Fever complicated with Empyema.

Mr. SYMONDS showed a patient in whom he had Ligatured both Common Carotid Arteries. The history of the case briefly was that during an operation for the removal of the superior turbinated bone by a throat specialist profuse hæmorrhage occurred, which was arrested by firmly plugging the nares and nasal fossa. A few days subsequently he came under Mr. Symonds' care with excessive chemosis and proptosis, and with loss of vision in the left globe and a very loud bellows murmur over the whole of the left temporal and frontal regions. Traumatic aneurysm of the cavernous sinus was diagnosed and the left carotid ligatured, with marked improvement. At a later date the symptoms again increased in severity and the right common carotid was ligatured, with a perfect cure. No bruit was now audible and no symptoms were complained of. With the exception that vision in the left globe was lost the patient was perfectly well.

Dr. ARNOLD CHAPLIN showed a case of Morbus Cordis associated with Pulmonary Phthisis.

BRITISH GYNÆCOLOGICAL SOCIETY.

Presidential Address on the Evolution of Obstetrics and Gynæcology.—Exhibition of Specimens.

A MEETING of this society was held on Feb. 14th, Dr. CLEMENT GODSON, President, being in the chair.

The PRESIDENT delivered his inaugural address on the Evolution of Obstetrics and Gynæcology. At the commencement of his address Dr. Godson congratulated the society on having just entered its second decennial period, the foundation meeting having taken place on Dec. 27th, 1884, and the inaugural meeting on March 11th, 1885. He then passed in review the gynæcological references in the writings of Hippocrates, Celsus, Galen, Soranus, Paulus Aegineta, and Albucasis, and alluded to Philumenus, in whose work, quoted by Aëtius, occurs the first mention of a vaginal speculum. The instrument, however, is known to have been in use as early as the destruction of Pompeii, examples having been found in the course of recent excavations there. He described the imperfect knowledge of utero-gestation possessed by Hippocrates and Aristotle, who supposed that the womb was pouched, males being carried on the right side and females on the left. He continued:—

"In 1552 Thomas Raynald published in London 'The Byrth of Mankynd, otherwise named the Woman's Booke.' It is in reality a translation of the treatise, 'De Partu Hominis,' which appeared in 1532 and was originally written by Eucharius Rhodion. An earlier edition dated 1540 is ascribed to Richard Jonas, but this I have not seen. There are three or more editions of Raynald's book; I have the original one here. Our late distinguished Vice-president, Dr. Aveling, devoted considerable attention to it in his book on the 'History of Midwives.' Ambroise Paré, a noted French army surgeon in the sixteenth century, gives evidence in his writings that he was a practical obstetrician. Mauriceau, by his 'Traité des Femmes Grosses et de celles qui sont nouvellement Accouchées,' published in 1668, marked a new era in midwifery. He was the first to take notice of the obliquity of the womb as an obstacle to a speedy and safe delivery. The structure of the ovum and the problems of gestation fascinated the master mind of William Harvey, and claimed the attention of men worthy to rank with him, such as Naboth of Leipzig, Morgagni, Santorini, and William Hunter, the latter of whom was a learned and scientific rather than a great clinical obstetrician. In 1748 he was elected one of the surgeon men-midwives to the Middlesex Hospital, and soon afterwards to the British Lying-in Hospital. In 1764 he was appointed Physician Extraordinary to Queen Charlotte, and ten years later he published his great work, 'On the Gravid Uterus,' which had been twenty-four years in preparation. He died in 1783, aged sixty-five years. William Smellie, another famous accoucheur, was at first a general practitioner at Lanark, in Scotland, in 1716. Subsequently he studied midwifery for three months in Paris under Grégoire and settled in London. He did not become a fashionable physician, like his contemporaries, Hunter, Manningham, Manbray, or Douglas, but he did more for the advance of surgical obstetrics than any three men of his time. He is said to have first heard of the forceps in 1733. This instrument, however, is supposed to have been known to the Chamberlen family in the beginning of the seventeenth century, and to have been kept secret by them for nearly a hundred years. Prior to 1733 it was employed with great success by Mr. William Giffard, surgeon and man-midwife, for in this year Dr. Edward Hody, F.R.S., published a revised edition of Cases in Midwifery, 225 in number, 'which were for the most part attended with a great deal of danger and difficulty,' and to which Mr. Giffard was summoned by midwives. The dedication of the book bears date July 30th, 1733. In it are drawings of Mr. Giffard's 'extractor,' and also of an extractor as improved by Mr. Freke, surgeon to St. Bartholomew's Hospital from 1729 to 1755. This shows that in the early part of the eighteenth century midwifery was practised by surgeons on the staff of St. Bartholomew's Hospital. Mrs. Elizabeth Nihell, professed midwife, in her treatise on 'The Art of Midwifery,' published in London in 1760, says that Mr. Giffard's extractor is supposed by Levret and others to be nothing more than the 'windowed' forceps, which had long been known. Edmund Chapman, surgeon, also in 1733, published an essay 'On the Improvement of Midwifery,' in which he describes several forceps

of very dissimilar patterns, and claims for himself the credit of discarding the screw connecting the two blades. In 1724 appeared 'The Female Physician, containing all the Diseases incident to that Sex in Virgins, Wives, and Widows,' by John Maubray, M.D. Denman says that Dr. Maubray is reported to have been the first lecturer on midwifery in Great Britain. He gave lectures in his house in New Bond-street about 1724. Sir Fielding Ould, man-midwife, in a treatise on Midwifery in three parts, published in Dublin in 1724, was the first to describe the mechanism of labour in head presentation. The first lying-in hospital in London—viz., the British—was founded in 1749; the City of London Lying-in Hospital followed in 1750, Queen Charlotte's in 1752, and the General Lying-in Hospital in 1765. The first English obstetrical society was founded in 1825, with Sir Charles Clarke as its President, one of its objects being 'to raise to a proper and dignified station the practitioner in midwifery.' It had, however, to encounter strenuous opposition. Sir Anthony Carlisle, F.R.S., surgeon to the King and to the Westminster Hospital, published in the *Times* of May 1st, 1827, an 'Address to His Majesty's Judges, Coroners, and Justices of the Peace,' cautioning them against the worldly designs and the injurious practices of man-midwives. Similar arguments were used by other opponents, but the agitation was fortunately unsuccessful, and the first Obstetrical Society, after exertions continued during three years, secured the following points: (1) A recognition of the honourable position of obstetricians among the medical practitioners of the three corporate bodies; (2) an examination in midwifery by the Apothecaries' Company; (3) the admission of persons practising midwifery (being members of the College of Surgeons) to be eligible for a post on the Council; (4) the concession by the College of Physicians that Licentiates practising midwifery shall not be ineligible for the Fellowship of the College. The barriers to the undertaking of midwifery by men being thus removed, obstetric practice soon fell largely into their hands, as, in fact, had already been the case in France for more than a century. Midwifery and gynecology being essentially surgical, it is strange that those who profess and teach these subjects are ranked among the physicians in our great hospitals and medical schools. I referred to this anomaly in my presidential address in the Obstetric Section of the British Medical Association in Belfast in 1884, and I hope that the time is not far distant when the title of obstetric surgeon shall be substituted for that of physician accoucheur, and when the obstetrician shall be ranked on the surgical side of the hospitals."

The following specimens were shown:—

Dr. MACNAUGHTON JONES: An Intra-uterine Non-pedunculated Fibroid, removed from a patient, aged thirty-two years, recently married.

Dr. LEITH NAPIER: Senile Uterus, removed by vaginal hysterectomy for Procidencia.

HARVEIAN SOCIETY OF LONDON.

Relapsing Typhlitis.

A MEETING of this society was held on Feb. 7th, the President, Sir JOHN WILLIAMS, being in the chair.

Mr. TREVES gave an account of an additional series of eighteen cases of Relapsing Typhlitis in which he had removed the appendix during the quiescent period. He pointed out the morbid conditions of the appendix which are most commonly met with in this affection, and mentioned the fact that when once an abscess had formed the trouble very seldom indeed relapsed. The difficulties of the operation depended mainly upon adhesions. If no adhesions existed the procedure was most simple. In some of the cases in the series perforations in the caecum and in the ileum had been laid bare during the operation and had been closed by sutures. Many concretions had been removed, and in one instance the appendix was found firmly attached to the rectum. Mr. Treves alluded to the medical measures employed to ward off attacks and especially to the questions of diet, the avoidance of milk, the care of the bowels, the importance of perfect mastication, the use of such an intestinal antiseptic as salol (in a powder of ten grains), and the employment of massage.

The PRESIDENT inquired upon what grounds Mr. Treves maintained that the occurrence of an abscess tended to cure the condition, and, commenting upon the subject of diet, said that he was unable to join in Mr. Treves' strictures upon milk as a food for invalids.

NORTH-WEST LONDON CLINICAL SOCIETY.

Exhibition of Specimens and Cases.

A MEETING of this society was held on Feb. 13th, Mr. MAYO COLLIER, in the absence of the President, Sir R. Quain, being in the chair.

Dr. KNOWSLEY SIBLEY exhibited the Supra-renal Capsules of a woman in whom the symptoms of Addison's disease had developed rapidly, leading to death suddenly and by exhaustion.—Dr. HARRY CAMPBELL pointed out that the sudden death in this case was noteworthy.—Dr. GUTHRIE dwelt on the fact that the degree of pigmentation in Addison's disease was not a guide in prognosis. He related cases of Bright's and Graves' diseases in which very extensive pigmentation had been observed.

Dr. STOWERS showed a case of Lupus Erythematosus, and described the method of scarification.—Mr. Jackson Clarke, Dr. Wilbe, and Mr. Collier took part in the discussion.—Dr. STOWERS also showed a rare form of Tertiary Dermatosyphilis, simulating erythematous lupus.

Dr. HARRY CAMPBELL showed the Heart of a Man who had died from acute aortic obstruction, there being no evidence of regurgitation.—Dr. GILL related two similar cases occurring in one family.

Mr. MAYO COLLIER showed a case of Contracture of the Posterior Tibial Group of Muscles in a girl who had infantile paralysis and advocated division of the tendo Achillis in such cases as a complete and sufficient treatment.—Dr. CAGNEY objected that there were a great many cases in which much more should be done in order to develop the immature muscular fibres, and contended that in this respect the subjects of infantile paralysis were lamentably neglected.—Mr. COLLIER also showed a case of Flatfoot, and demonstrated the mechanism of its production upon the skeleton.—Mr. JACKSON CLARKE observed that he had found a system of gymnastic exercises of great service in flatfoot.

LIVERPOOL MEDICAL INSTITUTION.

Ligature of Right Femoral and Left External Iliac Arteries for Aneurysms.—Two Cases of Beri-beri.—Intussusception, successful approximation by Murphy's Button.—Carcinomatous Stricture of Transverse Colon, successful approximation by Murphy's Button.—Fourteen Cases of Excision of the Rectum for Cancer.

A MEETING of this society was held on Feb. 14th, the President, Mr. CHAUNCEY PUZEY, being in the chair.

Mr. ROBERT JONES showed a patient in whom he had tied the External Iliac Artery on the left side for Femoral Aneurysm, and also the Femoral Artery on the right side for Popliteal Aneurysm. He applied a double ligature on the external iliac by the extra-peritoneal method. The patient was able to resume his work in two months, and had had no circulatory disturbance.

Dr. ABRAM showed two cases of Beri-beri. The patients were the captain and mate of a Norwegian barque just arrived in Liverpool after being some two months on the coast of Brazil. The captain showed the typical signs of neuritis, most marked on the legs. The mate still had muscular tenderness in the calves, but the knee-jerks had returned. Both gave a history of oedema, which in the captain was limited to the legs and in the mate was general. Both had had palpitation and dyspnoea, and the captain had severe vomiting for five days. Inoculations from the blood were negative. No malarial organisms were found on examination of fresh blood. Rapid improvement was taking place under general tonics and regular massage.

Mr. BANKS related the case of a boy seven years of age who for some little time had suffered from irregularity of the bowels with abdominal pain after going to stool. A week before Mr. Banks saw the case the child complained of pains all over him and general malaise. Two days later he had severe abdominal pain and vomiting, and from that time no

¹ Obstetrical Society's Transactions, vol. 1.

proper motion or any flatus had passed. An enema was given which brought away blood and mucus. On admission into hospital four days later the abdomen was moderately distended, and there was complete obstruction. A fulness could be felt to the right of the umbilicus, which might be due to colitis or appendicitis, but with the history of the passage of bloody mucus it was thought to be an intussusception. The following day an anæsthetic was given; the abdomen then relaxed and a sausage-like swelling could be plainly felt to the right of the umbilicus. The abdomen was opened in the middle line and an intussusception of the ileum was found about eighteen inches from the cæcum. The bowel was black and gangrenous, so it was cut out, and the ends were joined by a Murphy's button. The boy rallied well and was able to take a fair amount of nourishment, his progress being slow but steady. The button was passed on the twenty-first day, and he returned home on the thirty-eighth day.

Mr. GEORGE HAMILTON related the case of a man aged thirty-three years who had suffered from symptoms of subacute Intestinal Obstruction due to a Carcinomatous Stricture in the centre of the Meso-colon. Four inches of colon were removed, the ends being approximated by the inch and a half Murphy's button. The patient made an uneventful recovery; the button was passed on the twenty-fourth day.

Mr. PAUL read a paper on Excision of the Rectum for Cancer based upon fourteen cases. Of these, three were examples of simple low excision as advocated by Mr. Harrison Cripps, two were the same with part of the vagina, three were high operations after Kraske with approximation, and the remaining six were high operations without approximation. The amount of bowel removed varied from two to eight inches. The mortality was 14 per cent. Six had died since operation, the average duration of life being one year and eight months. Six were living at periods varying from one year and a quarter to upwards of ten years. He thought the operation very much more successful than for advanced cancer of the month, and strongly recommended the high operation first suggested by Kraske, but independently performed a little later in this country by Alexander. Mr. Paul showed a new rectal truss which he had had made for patients who subsequently suffered from incontinence or prolapse.—Dr. ALEXANDER congratulated Messrs. Banks, Hamilton, and Paul on the advances in surgery indicated in their papers. He thought that Mr. Paul's results were excellent, and the prolongation of life undoubted, and not only was life prolonged, but it was life worth living. He thought that the patient was far more comfortable and more benefited by excision than by colotomy. He had a case working for ten years after Kraske's operation, and one patient rejected in London and sent home to die had nearly three years of comfort and was able to shoot and fish before recurrence carried him off. In his experience the disease was much more common in males than in females.—Mr. PAUL thought that many children could not bear the removal of a large piece of bowel as in Mr. Banks' case, and one usually had to choose between the establishment of a fecal fistula and the more simple and safe operation introduced by Mr. Barker. With regard to Mr. Hamilton's case Mr. Paul thought that there was reason to hope for a good result, not only in the first instance, but later, as these small ring strictures were less malignant than most other forms of cancer. He thought Murphy's button the best method of approximating large intestine, and would advise its employment in colectomy when the growth was small and the symptoms of obstruction not severe; but when the growth was advanced or the abdomen considerably distended he thought it much wiser and safer to bring the ends of the bowel out and approximate later.—Mr. BANKS said that the great advantage of Murphy's button is that time is saved, which is often the principal element in success.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Mania following Pleurisy. — Operations on the Mastoid Process. — Dilatation of the Cervix Uteri. — Flexor Spasm of Hand. — Exhibition of Cases and Specimens.

A MEETING of this society was held on Feb. 1st, Dr. E. WEST SYMES, President, being in the chair.

Mr. BATES read the notes of a case of Acute Mania following Dry Pleurisy in a girl aged twelve years.

The maniacal symptoms came on the day following the reduction of the temperature to normal. The maniacal symptoms quickly gave way to treatment with sedatives, but the delusions were a week before they disappeared. The family and previous history pointed out instability of the nervous system in the patient, and accounted for the post-febrile mania following what was only a mild attack of pleurisy.—Dr. BARRS thought that mental disturbances frequently followed febrile conditions, no matter from what cause arising, as also after surgical operations and in cardiac cases.—Mr. WARD, in discussing the analogy of Mr. Bates's case with cases following operations, noted the youth of the patient. He had never met with a case of mental disturbance in one so young.—Dr. CHURTON used morphia hypodermically unless contra-indicated, and then immediately administered chloroform for two or three minutes in cases of acute delirium, gradually increasing the dose of morphia until a continuous sleep of six or eight hours was obtained.—Mr. Godfrey Carter, Dr. Gordon Black, Dr. Mantle, the President, and Dr. Bedford Pierce (who mentioned a case of mania accounted for by constipation) also took part in the discussion.

Dr. ADOLPH BRONNER read a paper on the Various Methods of operating on the Mastoid Process and the Indications for the Same. He described the original operation of Schwartz, which was practised from 1873 to 1889, how Kustner modified the operation by removing also the posterior wall of the external meatus, and how Bergmann removed also the pars epitympanica, or upper wall of the external meatus. Stacke in 1890 altered the operation considerably. He pulled out the whole of the cutaneous external meatus and opened up the attic and mastoid antrum from the external meatus. He used a bent chisel and protector. The middle ear, attic, and mastoid antrum were thus made to form one large cavity. This cavity was then lined with the cutaneous external meatus. Schwartz modified this operation by opening the antrum first, and then from this cavity he removed the posterior wall of the external meatus and the pars epitympanica. He only removed the posterior part of the cutaneous external meatus, and lined the newly formed cavity with this part, cut into two flaps. In cases where the attic was diseased Stacke's or Schwartz's modified operation was the most satisfactory. The chisel and mallet were now universally used. Macewen preferred the rotatory burr.

Dr. BRAITHWAITE read a paper on a point in the Dilatation of the Unimpregnated Cervix Uteri. The point was that when the unimpregnated cervix was dilated (for whatever purpose), it was much easier and more satisfactory to do it on the last day of the menstrual period or when the discharge had just ceased. At this time the work was already done to some extent, and the tissues were so soft and elastic that dilatation could be accomplished to almost any extent in about twenty minutes, provided the patient was under an anæsthetic.

Dr. CHURTON showed a girl aged twenty, tall and well formed, but with small cranium and rather childish manner, not robust, who had constant Flexion of the Wrist and Fingers, the thumb being usually laid across the palm. Her father died from phthisis aged thirty-two, a sister aged twenty-two suffered from phthisis, and a sister aged eight from diabetes. During childhood she had frequent nightmare. After one of such dreams, followed by a severe screaming fit, at the age of ten, she was found to be hemiplegic on the right side, her mouth was twisted, it is said, and saliva ran from it. Speech returned next day. Chorea occurred on the left or sound side in a few days, and lasted some weeks. The right leg recovered in a few months. She could always move the right shoulder. When first seen the legs were equal, and she had slight right facial paralysis. The left part of the face was the first to move. The bones of the right arm and hand were equal to those of the left; the muscles were smaller, but reacted to weak coil shock, also normally to cells KCC > ACC. There were no tremors or athetosis. The flexion was easily overcome usually, but was maintained during sleep and when the wrist was forcibly flexed (not always). When asked to do so she extended the fingers and thumb, almost completely at first, and afterwards much less readily. The pupils showed the trace of dilatation often observed in functional cases.

The following cases, pathological specimens, &c., were shown:—

Dr. BARRS: 1. Primary Carcinoma of Liver. 2. Patient suffering from Paralysis of the Right External Rectus who had recently recovered from paraplegia following influenza.

Dr. ADOLPH BRONNER: Case in which the Carotid had been tied for Pulsating Exophthalmos.

Dr. TREVELLYAN: Case of removal of Malignant Growth from the Larynx. (Operation performed by Israel of Berlin eight months ago.)

Mr. MAYO ROBSON: 1. New form of Oesophageal Bougie. 2. Case of Caries of the Spine, with twelve months' Paraplegia. (Laminectomy three years ago.) Recovery. 3. Case in which the Radius had been removed for Necrosis. 4. A Pencil removed from a Girl's Bladder after a fortnight's impaction.

Mr. LITTLEWOOD: Hydronephrotic Kidney removed by Abdominal Nephrectomy.

Mr. JESSOP: Extensive Epithelioma of the Penis.

Mr. HARTLEY: Extensive Epithelioma of the Penis.

Dr. BAXTER TYBIE: Hydatid Cyst of Abdominal Wall with Microscope Preparation of Hooklets.

Dr. T. WARDROP GRIFFITH: Paralysis of Deep Branch of Ulnar Nerve.

EDINBURGH OBSTETRICAL SOCIETY.

Extra-uterine Gestation.—Methods of Artificial Respiration in the New-born.—The Mechanism of Labour.—Exhibition of Specimens.

A MEETING of this society was held on Feb. 13th, Dr. A. H. FREELAND BARBOUR, President, being in the chair.

Dr. HALLIDAY CROOM read a paper on Two Cases of Extra-uterine Gestation operated upon at the fourth month. The first case was that of a primipara aged twenty-seven years who had not suffered from any pelvic trouble previously to this illness. She began to suffer from irregular hæmorrhages with pain in the abdomen and gradual development of an abdominal swelling. On bimanual examination a hard mass was palpated lying to the left side of the uterus and immobile; the sound passed three and a half inches into the uterus. At the operation the abdomen was opened in the middle line (he would have now preferred a lateral incision) and the sac exposed. On touching this with the knife the bleeding was so profuse that it was evident this was the site of the placenta, and it was cut through with the thermo-cantery. The clot was cleared out and the placenta detached, but no fetus or cord could be found. On passing the finger towards the pouch of Douglas a second sac was found, but it only contained blood-clot, with no fetus. The sacs were washed out, the opening stitched to the abdominal wall, and the cavity packed with iodoform gauze. The patient suffered severely from shock, but afterwards made a good recovery. The placenta was found microscopically to have the villi very much enlarged and some with myxomatous degeneration. The case was one of tubal pregnancy, with rupture into the broad ligament; the fetus had disappeared owing to the myxomatous degeneration of the chorion, as similarly occurs in intra-uterine cases. The second case had suffered from pelvic trouble for two years and recently from premenstrual pain and also during the flow. She had missed two periods. When lifting a heavy weight she felt something give way and developed symptoms of collapse, with slight vaginal hæmorrhage. Two other similar attacks occurred. A swelling was found on the left side and behind the uterus; decidua membrane was passed from the vagina. As the patient was very weak the operation was delayed. Another attack of collapse occurred and the abdominal swelling now extended to one inch above the umbilicus. It was decided to operate, when the sac was found adherent to the abdominal wall and contained blood-clot, which was turned out, and a second sac found higher up. This contained the fetus, of three and a half to four months' development, and the placenta, which was easily stripped off. The sac was washed out and packed as before. The case was evidently extra-peritoneal. The patient succumbed.

Dr. R. C. BUIST read a paper on Methods of Artificial Respiration in the New-born. He analysed the different systems that have been advocated by different writers. Schultze's plan had been attended by fracture of the clavicle, and death had occurred during its demonstration on a fetus. Dr. Buist described a method which he had practised with success. The child was placed face downwards on the hand of the practitioner, with its head away from him, and artificial respiration was effected by rolling it on to the other hand, the head then hanging backwards, and the sides of the thorax being compressed by the fingers as the child was

being transferred from the one hand to the other. Perseverance was of great consequence. One case was resuscitated one hour after apparent death.—The PRESIDENT mentioned a case where fifty minutes elapsed before inspiration occurred and another twenty-five minutes before respiration was established.—Dr. FERGUSON advocated mouth-to-mouth insufflation (a handkerchief intervening), the nostrils being compressed and pressure kept up over the abdomen to prevent air from passing into the stomach.—Dr. CULLEN considered that pressure of the larynx backwards was sufficient to prevent this, and had seen cases where insufflation had quickly succeeded when Schultze's method had failed.

The PRESIDENT read a paper entitled a Study of the more recent Frozen Sections in their Bearing on the Mechanism of Labour and the Third Stage. Plates had been published of twenty-two sections showing the anatomy of labour, excluding pregnancies. In two cases of pregnancy the frozen section showed that the peritoneum did not descend into the pelvis in front. In two cases, also of pregnancy, the bladder was found to be partly above the brim of the pelvis. As regards the mechanism, it was found that some cases had the long axis of the uterus parallel to the spine, in others it was perpendicular to the axis of the brim. It seemed probable that the former position was that found in the intervals between the pains; the latter during the pain. Zweifel stated that the retraction ring coincided with the os internum, there thus being no lower uterine segment. But in order to form a bag of membranes these must be stripped off to a considerable extent. Zweifel's view seemed incorrect. In these frozen sections the retraction ring was not always recognisable. Zweifel, as a result of his study, considered that internal rotation was brought about by the varying thickness of the soft parts in the different planes of the cavity; but he made no reference to the direction given to the vertex by the pelvic floor. In all the sections with one exception the chin was apposed to the sternum, the exception being an occipito-posterior case, where there was divergence to one inch and a quarter. As a criticism it could be stated that flexion was not a motion, but an attitude, and that flexion was not an integral part of labour.—Discussion on this paper was deferred till the next meeting.

The following specimens were exhibited:—

Dr. KYNOCH: An Ovarian Fibroma with the Uterus and Appendages removed post mortem from a patient who died from another disease; microscopically the tumour was composed of white fibrous tissue.

Dr. R. C. BUIST: A Placenta with an Old Hæmorrhage between the Membranes and the Placenta in proximity to the Cord. There was no specific history in the mother, and no symptoms relating to the hæmorrhage could be found.

Dr. CROOM: A Myxoma of the Chorion removed from a patient aged fifty-four.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Case of Locomotor Ataxia from Injury.—Small-pox.—Some Small-pox Temperatures.

A MEETING of this Section was held on Jan. 11th, Dr. W. G. SMITH, President, being in the chair.

Dr. CRAIG exhibited a patient and read a short paper on Locomotor Ataxia due to Injury. A year ago the man fell while revolving on a horizontal bar and lost consciousness for about twenty minutes. Although the injury seemed slight, yet within a few months his arms and legs were markedly ataxic, cutaneous sensibility was lost in the limbs and, to a less degree, in the trunk, the knee-jerk was gone, and gastric and rectal crises were complained of, but no ocular symptoms appeared. In the absence of cerebral or ocular symptoms, and with a history of the rapid appearance of other symptoms, could the case, he asked, be called one of true locomotor ataxia?—The PRESIDENT said that this was a case in which the term "locomotor ataxia" was applied in a clinical rather than a pathological sense. It was hard to bring it into line with those cases commencing with affections of the cerebral nerves. The ordinary forms were cerebro-spinal, but in this case all the symptoms were spinal.—Dr. FINNY remarked on the rapid loss of sensation which happened in this case. One might suppose it to be a change in the

posterior columns of the cord also involving the posterior nerve roots. He thought that the wasting of the muscles was out of proportion to the length of time that the man had not used them.—Dr. PARSONS said that some of the patient's symptoms might perhaps be functional rather than organic. However, there was no doubt he had marked incoordination.—Dr. CRAIG briefly replied, stating he agreed with the President as to the difficulty of regarding this case as an ordinary one of locomotor ataxia.

Dr. O'CARROLL read a paper on the Diagnosis and Prognosis of Small-pox, based upon the experience of the cases treated in the Hardwicke Hospital during the present epidemic in Dublin and the much smaller epidemic of 1887-88. With regard to diagnosis the main difficulty occurred with cases of varicella simulating variola, or *vice versa*. In cases otherwise similar, and supposing the diagnosis to be made at one visit, the points which favoured the probability of the case being one of varicella were the following: the fact of the patient being a child (provided that good vaccination marks were present); the eruption being greater on the trunk than on the face; the eruption being more or less multiform, even in the same region, papules, vesicles, and crusts being seen together; the absence of papules on the horny skin of the palms and soles. As to prognosis, Dr. O'Carroll believed there was hardly any acute disease in which it was so uncertain until convalescence was established.

Dr. H. C. DRURY exhibited a series of Temperature Charts of Variola Cases. He divided them into three classes: (1) those with primary and distinct secondary fever; (2) those in which the initial fever was continued into a period of febrile state, of longer or shorter duration, but without any distinctive character; and (3) those in which the high initial temperature, lasting three or four days, was the only one seen. He pointed out that from a large number of observations he was unable to draw any conclusions from the temperature as to the severity of the rash, general symptoms, or length of time till convalescence was complete, as all three classes of temperature were seen in unvaccinated as well as vaccinated cases.—Dr. DAY said that in the early diagnosis between small-pox and chicken-pox the eruption of the throat was an important point. In the former a papule might be present on the soft or hard palate or on the tongue. In chicken-pox it was a vesicle.—Mr. HORNE said that he did not see why a patient suffering from small-pox should be any more liable to abortion than when suffering from any other fever. It was all a matter of temperature. Provided this did not exceed 104° F. the danger of abortion was not greater than in the other fevers. He thought that the eruption on the throat was a very important point in the diagnosis at an early stage.—Dr. PARSONS mentioned three cases. The first was that of a woman who had been treated for scarlet fever at the Cork-street Hospital, and who on recovery had been sent to one of the convalescent homes. Three days afterwards she fell ill again, and shortly after the eruption of small-pox appeared. Another was that of a little unvaccinated child who one morning was noticed to have a papular eruption on his body. The nurse stated that the child had seemed quite well on the previous day. He had considerable difficulty in deciding whether it was a case of chicken-pox or small-pox, but the abundance of the rash and the rise of temperature decided him in favour of the latter. The third case was that of a man who walked into the dispensary. He had been feeling unwell for three or four days, but did not give up work. He had a well-marked papular eruption but no rise of temperature, and affirmed that he then felt quite well. He had not been revaccinated, but had three distinct old marks.—Dr. J. W. MOORE said that the way the eruption appeared in varicella was important. Very often there was no papule, but within a few hours a clear vesicle appeared on the skin. He mentioned a case of scarlet fever which developed chicken-pox.—Mr. A. N. MONTGOMERY said he was pleased to hear that no well revaccinated case had been admitted to the Cork-street Hospital suffering from small-pox. He said that although the vesicle in a revaccinated person might, sometimes on the eighth day, resemble a primary vesicle, yet the material obtained from it should not be used for the purpose of vaccination or revaccination. As showing the necessity of a very careful search for vaccination cicatrices being made in patients suffering from modified small-pox before they were recorded as unvaccinated, he alluded to such a case which had come under his notice some years ago, in which he found a well-marked vaccination cicatrix on the posterior aspect of the arm which had been

overlooked.—The PRESIDENT said that the difficulties of the diagnosis between variola and varicella were perhaps exaggerated. He also said that it was quite well established that the vesicles of chicken-pox were multilocular and were often umbilicated. The greater frequency of umbilication in variola depended on, first, the less acuity of the pathological process, and secondly, because the epithelial cells were cedematous and underwent what was described as a "ballooning degeneration." They became distended and the nuclei were broken up.—Dr. O'CARROLL, in reply to a question, said that several cases of children under ten years of age had been admitted to the Hardwicke Hospital, but that none of the vaccinated ones had died. All the people connected with the hospital had been revaccinated at the commencement of the epidemic, but four months afterwards a laundry maid on whom the vaccination had caused a sore arm was admitted to the wards suffering from a rash he regarded as that of small-pox.

Reviews and Notices of Books.

Colour Vision. Being the Tyndall Lectures delivered in 1894 at the Royal Institution by Captain W. DE W. ABNEY, C.B., D.C.L., F.R.S. With Coloured Plate and numerous Diagrams. London: Sampson Low, Marston, and Co. 1895. pp. 231.

THE work is divided into fifteen chapters, of which the earlier are devoted to a very brief description of the Eye and of the Solar Spectrum, the account of the former referring chiefly to the retina, and of the latter to the circumstances which have led physicists to accept red, green, and violet as probably the three primary colours from which the rest can be formed, and to reject yellow and blue. The experiments of Clerk Maxwell and the hypothesis of Hering are given in some detail, and two chapters are devoted to the Modes of exhibiting Colour Blindness: first, by the spectrum, and secondly, by making mixtures of colours with rapidly rotating colour discs. The results of experiments in regard to some of these matches are very curious. Thus, it is found that both for normal eyes and for colour-blind eyes 118 parts of red with 146 of green and 96 blue give the same grey as results from a mixture of 75 parts of white and 285 parts of black; but in completely green-blind persons the following mixtures gave also the same tint of grey: 251 parts of red and 109 parts of blue were equal to 62 parts of white and 298 of black and 277 green + 83 blue = 107 white + 253 black. Captain Abney then discusses the luminosity of the spectrum in normal and colour-blind persons respectively, and shows that it is subdued in the latter group. The normal yellowish tint of the fovea centralis modifies the sense of colour to some extent, as may be shown by comparing exact matches at the point of fixation with those the images of which fall a few degrees towards the periphery. When the luminosity is gradually reduced the various colours in great measure disappear, a person with normal vision passing through a stage of red-blindness as the intensity is diminished before he arrives at absolutely monochromatic vision. Captain Abney points out that the curious colour of a moonlight landscape is entirely accounted for by this fact. White light becomes greenish-blue as it diminishes in intensity, and the reds and yellows, being reduced or absent, are not reflected by surrounding objects. Hence moonlight is cold, whilst the sunlight is warm owing to their presence. The loss of colours in flowers as night draws on may be easily followed. Thus orange-coloured flowers may be plainly distinguished, whilst a scarlet geranium appears black; green grass will be grey when the colour of yellow flowers may yet be just visible. The eye requires the lapse of a considerable period before it becomes accustomed to darkness and attains its highest degree of sensitiveness, and no experiments on the extinction of light, or rather on the perception of the feeblest amount of light, were found to be satisfactory till after ten

or twelve minutes had passed. In yet another set of experiments Captain Abney determined the distance at which, when cast on a white screen, the different colours of the spectrum of the same luminosity were no longer visible, and found that pure red was invisible at 58 feet, orange 142 feet, green 550 feet, and violet 1000 feet. In accordance with this the reduction of intensity of white light, which when of ordinary brightness is warm, would make it colder, for the red would disappear, and finally the residue of light just before extinction would become a cold grey, due to the absence of all colour. A chapter is devoted to Tobacco Blindness, and the author dwells on the circumstance that such blindness for colour may be the result of excessive consumption of tobacco at any period of life and consequently that those who are entrusted with the care of life through the recognition of coloured signals should be subjected to recurrent examination. The remaining chapters are chiefly devoted to Holmgren's Method of Testing Colour Vision by means of Wools, and to the consideration of Contrast Colours. Captain Abney declines to allow himself to be quoted as a partisan of either of the two rival theories of colour, but on the whole is inclined towards the Young theory. The treatise, brief as it is, may be regarded as supplying an interesting and valuable contribution to the difficult and complicated subject of colour vision. The simple forms of apparatus and general testing he employed in these numerous experiments are depicted, and it is obvious that there is ample scope for further research.

A Compend of General Pathology and Morbid Anatomy. By H. NEWBERRY HALL, Ph.G., M.D. Edinburgh and London: Young J. Pentland. 1894.

It is doubtless difficult to condense within a small compass the salient facts of a wide subject, and for that reason it is incumbent to exercise much discrimination when appraising the value of a book compiled with this intent. Indeed, the whole system of books of this class is open to grave objection, since it is a more or less direct encouragement to the student to rest content with the barest synopsis and does little to excite his interest or his reasoning powers. Nevertheless, such a synopsis drawn up with accuracy and on a definite plan may prove of advantage when used as a supplement to wider studies. The danger is lest it be substituted for the ampler text-book and laboratory guide. As regards the particular compend before us, although it is drawn up on systematic lines and includes a reference to every notable pathological condition, it is certainly lacking in accuracy in some of the descriptive matter. To describe "cancer" as "a system of channels in pre-existing connective tissue filled with continuous columns of epithelial cells," and to state that the "growths are of mesoblastic origin" can hardly be said to represent the teachings of science; whilst it is surely misleading to say that "pernicious anæmia" is a "condition resembling both chlorosis and leukæmia, there being the characteristic changes in the blood of chlorosis, while there is an increase in the number of white blood-cells and the changes in the bone marrow characteristic of leukæmia." Nor can we think the term "fibrous pneumonia" a good substitute for "interstitial" pneumonia. The illustrations are taken from the standard works of Rindfleisch, Billroth, Zeigler, Woodhead, and others.

The Year-Book of Treatment for 1895: a Critical Review for Practitioners of Medicine and Surgery. London: Cassell and Co.

THE eleventh issue of this valuable compilation of knowledge has made its welcome appearance. It is arranged on the same lines as the previous editions—i.e., it is divided into

sections, each section being separately treated by a special contributor. Three new names appear among the contributors to this year's volume: they are those of Dr. Coupland, Mr. Rose, and Dr. Whitelegge. In such a compilation as this book it would be impossible to more than superficially allude to the mass of valuable information which it contains. It is a collection in a readable form of all the chief advances which have been made in the medical world during the past year, thus concentrating a large amount of knowledge which would otherwise be scattered and unattainable by the majority of the medical profession. There is a general spirit of hopefulness imparted through the book which would lead us to believe that great advances are really being made against the diseases which surround us. In the chapter on General Medicine there is an interesting account of the treatment of cardiac disease by exercises and baths which was first introduced at Nauheim, but which has not until quite lately attracted much attention in this country. The tuberculin treatment of phthisis would seem to be flourishing in certain parts. It is said to have been used with success in Egypt, and Barbour of Monteagle, Tenn., is a strong advocate of this treatment, recording its effect upon himself as well as on numerous others; he gives good accounts in many cases, but wisely accords a large amount of credit to the climatic influences the patients were under and to the judicious hygienic and dietetic treatment they were submitted to. An important change in the treatment of Diabetes is taking place by allowing the patients to be on a less restricted diet than formerly. The chapter on Diphtheria is up to date with a full account of the antitoxin treatment, and although leaning largely towards its beneficial effects the author is wisely not dogmatic on the treatment, which may still be said to be in its infancy.

In the division on general surgery there is a good chapter on Surgery of the Spine and Spinal Cord, in which a short summary of Dr. Thorburn's lectures at the Royal College of Surgeons of England is given. There is also an interesting table of cases in which the Gaserian ganglion has been removed. In the department dealing with surgical diseases of children Mr. Edmund Owen believes brighter days to be in store for cases of Acute Intussusception, which at present have such a high fatality. He urges the expediency of considering the case as one for operation from its commencement, and discountenances the treatment by massage, inflation, and injection. By this superficial sketch of the book it will be seen that it is at once interesting and useful, and to the busy practitioner it is invaluable as an aid to keeping up with the times.

ROYAL INSTITUTION.—Lord Rayleigh, F.R.S., Professor of Natural Philosophy in the Royal Institution, will deliver a course of six experimental lectures on Waves and Vibrations, at the institution, on Saturdays, March 2nd, 9th, 16th, 23rd, 30th, and April 6th. The same lecturer will deliver the Friday evening discourse on April 5th, when the appropriate subject will be Argon, the newly discovered Constituent of the Atmosphere.

THE ÆSCULAPIUS LODGE OF FREEMASONS.—An ordinary meeting of the Æsculapius Lodge was held last week at the Café Royal, Regent-street, and notwithstanding the inclement weather there was a good attendance. Mr. Leonard Wilde, M.D. Durh., M.R.C.P. Lond., was admitted to the second degree. Mr. George Herschell, M.D. Lond., was duly proposed as a candidate. The lodge decided to entertain all medical masons that may attend the meeting of the British Medical Association in London in August next; a sum was unanimously voted for that purpose. Dr. G. Danford Thomas generously offered the lodge the use of the Portman Rooms, which offer was accepted.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 23, 1895.

THE annual report of the Local Government Board is becoming more and more bulky as the work of that department goes on increasing, and nothing more than a very summary account of it can be embodied in any ordinary review. Over fifty pages are now taken up with matter relating to county councils and to the Local Government Act of 1894, which is all comparatively new material. Coming next to questions of Poor-law, it appears that during 1893 there was an increase of 4·9 per cent. in the number of paupers as compared with 1892, the actual proportion of paupers being at the rate of 27·6 on every 1000 of the population for England and Wales as a whole; that rate varying in different counties from 45·8 in the agricultural districts of Norfolk to 19·4 in the busy manufacturing districts of Lancashire. At the close of the year guardians did not, with rare exceptions, anticipate any such increase in pauperism as to involve them in any difficulties. The expenditure on the relief of the poor during 1893 amounted to 6s. 3½d. per head of the population, and the cost during the year per head on the mean number of paupers was £12 2s. 11½d., a slight increase on previous years, the increase being mainly as regards in-door paupers. In the metropolis the corresponding amount was £25 8s. 2½d. Dealing next with the concerns of the Metropolitan Asylums Board, it appears that that body is receiving a steady increase in the number of notifications of infectious diseases. In 1891 the total notifications were 20,818 in number; in 1892 they rose to 37,784; and in 1893 they reached 56,425. The admissions to the Board's hospitals during 1893 numbered 18,674.

The year 1893 exhibited an astounding increase in the amounts borrowed with the sanction of the Local Government Board for purposes more or less directly concerned with public health administration. The highest amount hitherto borrowed by urban and rural authorities in any one year was some four millions sterling in 1892, but in 1893 the sum reached £7,266,516, not far from seven millions going to urban authorities alone. And, in addition to this, over four millions were raised by town councils and sanitary authorities under special Acts of Parliament. Local loans thus bid fair, even more than ever, to become a matter of Imperial concern. Already those sanctioned by the Local Government Board alone since 1871 exceed sixty millions. A substantial portion of this account will, however, have been paid off by now. Amongst defaulting authorities some have had to be summarily dealt with. Thus Mill Hill, in the Hendon district, has been required to provide a system of sewers within six months, and Cheam and Cuddington, both in the Epsom rural district, have been somewhat similarly dealt with. Local by-laws continue to be largely approved. In 1893 no less than 504 series of by-laws were made by sanitary authorities. If these authorities only insisted strictly on the terms of their codes being complied

with in such matters as building operations we could feel pretty sure that a golden era was before us in the matter of ordinary dwelling accommodation; but there seems to be no power to require the enforcement of by-laws, neither can the central authority compel authorities to make by-laws. Twenty additional authorities made new regulations with respect to dairies, cowsheds, and milkshops during 1893, a matter as to which we in England have much need to make further progress.

In the matter of the Sale of Food and Drugs Act it appears that during 1893 37,233 articles were submitted to analysis, and of these, 4793, or 12·9 per cent., were found to be adulterated. Spirits take the lead as regards the number of adulterations discovered per cent. of samples examined; next comes milk, 14·9 per cent. of the examples being adulterated; and drugs stand at 11·3 per cent. The question of milk adulteration is discussed at length in the report, and experiments carried out by the authorities at Somerset House show that a number of difficulties have to be contended with. In their experiments the officials always saw the cows milked, and yet milk that was thus genuinely the actual product of presumably healthy cows varied in many important respects. Thus, the total solids ranged from 10·3 to 17·2 per cent. Amongst the other subjects dealt with in the volume are those of vaccination, public health inspections, cholera, and London water-supply. These we shall either deal with separately, or reserve our comments until the issue of the report of the Board's medical officer, in which the several matters are dealt with more in detail.

THE International Congress to be held in Florence next year on the Protection and Management of Childhood is evoking, especially on the Continent, an interest not confined to the societies officially devoted to the subject. The public press, not only lay but medical, is rehearsing the more prominent aspects of the agenda, and already "quite a literature" is being amassed in preliminary discussions on the topics to be taken up. Books even are brought out in anticipation of the Congress, and among these there are some which cannot fail to have a wholesome influence on its deliberations. We may mention the "*Minorenni Delinquenti*" (juvenile delinquents) of the Cavaliere LINO FERRIANI, a distinguished Italian jurist, as covering nearly the whole ground to be occupied by the "Congressisti"; while a place even more authoritative in the same connexion must be given to the address recently delivered in Turin by Professor CESARE LOMBROSO on the "*Dimostrazioni Antropologiche applicante alla Pedagogia*" (Anthropological Demonstration applied to the Upbringing of Youth).

Signor FERRIANI approaches the subject from the forensic and magisterial side, and has much to tell us of the factors, moral and material, which poison the budding human organism on life's threshold. It is in the proletarian that these factors have most unrestricted play, and in which the inevitable results appear in their most significant colours. In the majority of cases the "minorenne delinquente" inherits a more or less absolute want of moral sense, a defect which is aggravated by the vagabondage, the idleness, the hand-to-mouth existence,

and the thousand and one disadvantages in which the "fight for life" in the lowest stratum of society is carried on. Of the 2000 juvenile delinquents who passed under his eye and whose careers, for a time at least, he was able to follow up Signor FERRIANI found the prehensile instincts those in which the vast majority became amenable to the law, crimes of violence, even to the shedding of blood, being next in frequency. Among the youth of the more favoured orders the same proportion between the two classes of offence prevailed, though from causes quite intelligible (the success of parents in hushing up the guilty act, for example) it was found difficult to arrive at anything like certainty as to the amount of criminality existing in that social stratum. Still, where it was detected the etiology was similar, if not identical, depraved organisation, inherited in the first instance and not duly controlled or antagonised in the second, being the *fons et origo mali*.

Crime having its root in psycho-pathological tendencies, conditioned by physical organisation and fostered by early influences or environment, Signor FERRIANI proceeds to review the traditional mode of dealing with it. The penal systems still in force he condemns absolutely, a condemnation coming with all the greater effect from one who does not profess to be a medically-trained anthropologist, but simply a lawyer and magistrate judging from experience. The moral rehabilitation of the "minorenne delinquente" he regards as impossible under the discipline of gaol or reformatory, particularly as practised abroad. The "first offender," after the judicial period served in these establishments, emerges a hardened and thorough-paced desperado, lost to all self-respect and full of vindictive feeling against the society from which he is excluded. Small chance has he of moral recovery or social rehabilitation if relegated back to the parents whose own depravity or culpable negligence drove him, or let him drift, into crime. Nay, Signor FERRIANI'S experience includes many cases in which the parents themselves exaggerate their child's offence so as to procure for him a more exemplary punishment and get him off their hands for a longer period. Either way, the future of the "minorenne delinquente" is the reverse of a hopeful one; and, while Signor FERRIANI cautions us against the roseate colours in which prison governors or penitentiary directors are apt to portray the effects of their discipline, he bids us hope for little improvement in the criminal classes, or in prevention of crime at its source, under any system which does not take account of physical organisation, psycho-pathological tendency, and early upbringing medically inspired.

At this point he practically makes over his case to Professor LOMBROSO, whose discourse—soon, we understand, to be published in a permanent form—attracted one of the largest and most intelligent audiences ever assembled in the sub-Alpine capital. Many of his hearers were school-masters, anxious to gather from him his suggestions as to the best mode of "educating" (not merely "instructing") the youthful mind. His standpoint was throughout the anthropological, illustrated by practical hints as to how to gauge the capacities, the strong faculties and the weak ones, of the young pupil. ANROSSI'S "anthropometer," he showed, could determine with minutely approximate accuracy the proportion constantly existing in normal individuals at successive

periods of life between stature and weight; while the dynamometer could measure the muscular force, and the spirometer give the quantity of air the individual can exhale—the "*capacità vitale*," as he termed it. On the more difficult ground of the cranial capacity he showed how, on the larger or lesser quantity of brain and on its distribution, depends the greater or smaller intelligence of the human subject, and demonstrated by a series of casts how the cerebral weight can be reached through measurement of the cranium itself. But he laid still more stress on the study of the face, from which, by training and experience, the anthropologist can form conceptions of character rarely, if ever, at fault. From the broad outlines of "physiognomic diagnosis," as Professor LAYCOCK used to term it, he proceeded to "facial anomalies," such as are met with in criminals or in moral weaklings—the "mandibole enormi," for instance, the ears like handles (*orecchie ad ansa*), the protruding zygomatics, the "faccia asymmetrica," the strabismus, the lips of exceptional thinness (*assottigliate*), and such like—and pointed out how the criminal is invariably "mancino"—wanting in something—even as a child: be it the sense of colour (*sensu cromatico*) or obtuseness to touch. From an analysis of physiological signs he entered on those in the moral sphere, and illustrated the common defects of juveniles—prone to fibbing (*bugia*), obstinacy, anger pushed to ferocity, overbearingness, idleness, and vanity—all defects which in the "bambino onesto" (morally sound child) disappear with age, while in the "bambino criminale" they remain. It is the latter that the duly qualified educator should separate from the others, so as to prevent the contagion that insensibly deteriorates the sound when associated with the unsound. Were such a sifting process universally practised, by the effective coöperation of the anthropologist with the educator, or by the educator anthropologically trained, the infiltration of society with criminal elements would be checked at its source, while the unsound juvenile would have a chance of being rescued before he drifted into the "minorenne delinquente." Simple moral inculcation, on which "pastors and masters" have hitherto relied for the rehabilitation of peccant youth, Professor LOMBROSO believes to be quite ineffective; but "*la morale pratica*"—the constant example and contagion of good conduct and sound initiative normally carried to healthy issues, such constituting the system of the new or anthropological education—could not fail to build up a generation morally superior to any that had gone before. Professor LOMBROSO, we are told, carried the feeling of his audience with him, and no doubt there is much to be said in favour of such an educational system as that which he has so ably outlined. One thing is certain: that far-reaching reforms must modify the traditional mode of educating youth—particularly proletarian youth—if deterioration, mental as well as physical, is to be obviated at its source. It is upon some such scheme of scholastic reform that debate will principally turn at the approaching International Congress. Finally we note with interest that, while Continental innovation will be directed mainly to the sifting process described by Professor LOMBROSO, the British contribution towards the same end will take the form of combating "over-pressure"—

the exaggeration of that discipline which abroad is found to err in other ways than "excess."

THE Parish Council elections have resulted in several instances in medical practitioners being chosen to occupy seats upon these newly formed bodies, and we welcome the fact, not only as evidence of the confidence and esteem in which our professional brethren are generally held, but also as an omen of good for the success of the new institutions. It is, we believe, in the power of medical men to contribute very largely to this success. There are special reasons for this opinion, for the medical practitioner established in a rural locality possesses qualifications which, speaking generally, may be said to be conspicuously lacking in the case of most of his neighbours. In the first place, he possesses an intimate knowledge of the circumstances of his poorer neighbours such as few among the local gentry can acquire, and he not infrequently enjoys their confidence in a measure that is denied to other residents of his own social position. In this sense he may be said to be one of themselves; but, on the other hand, he is free, as the result of his education and associations, from those prejudices and ties which make it difficult to understand how representative institutions are to take root in rural parishes. The want of initiative and the absence of a habit of coöperation which distinguish the dwellers in the country from the dwellers in the town must seriously impair the efficiency for the purposes of local government of the rural communities and of their representative bodies. Hence the importance of the influence which men trained in the habits of collective action may exercise upon the newly formed councils. They will be able to supply in an eminent degree precisely what is lacking to the parties who, by the new statute, have been forced into a novel partnership. The habits of independent thinking and concerted action, the power of interpreting to the one class the thoughts and feelings of the others, these are the aptitudes for service in this connexion which they may be expected to possess, and these should make their services indispensable to their localities. It is, therefore, matter for congratulation that not a few of our professional brethren have been found willing to assume the burdens of this office, and that their fitness has been promptly and effectively recognised by the new constituencies.

So far, we have dealt only with very general considerations. To the extent already indicated, the medical practitioner will be able to render valuable aid, not less in discussing the lighting of the roads or the diversion of the highways than the questions of sanitation which will claim the attention of the new boards; but it will, of course, be in connexion with matters bearing upon the public health that the benefit of the participation of medical men in the counsels of the parish will be most conspicuous. There are many questions, such as the draining of ponds and the utilisation of water-supplies, which have been specially entrusted to the new bodies. These are matters which in rural districts have a very special importance just because as matters stand at present their importance is but imperfectly recognised. Our village communities have grown accustomed to many seriously insanitary conditions which

would be easily amended if only the requisite criticism were brought to bear upon them and the village intelligence educated to a just appreciation of the inconvenience and risk which such nuisances entail; but for this preliminary process it is indispensable that these things should be regarded from a point of view wholly different from that to which the farmer, the labourer, or the other denizens of the village have grown accustomed. It is fortunate that in reference to such matters the local practitioner will naturally enjoy the prestige of a reputation for exact and scientific knowledge, for there will be no little weight of lethargy and prejudice to be dislodged before such matters as these can be usefully discussed. But, in point of fact, there is room for a very considerable extension of the powers of the parish councils beyond the limits of the matters expressly assigned by the Act to their jurisdiction, for they may receive a large accession of authority by delegation from the district councils appointed under the Public Health Act. These delegated powers have been heretofore exercisable by local committees, but henceforth they will devolve upon the parish councils. If any large use should come to be made of this power of delegation the functions of the parish councils as sanitary authorities may receive an almost unlimited extension and acquire significance quite out of proportion to the modest functions expressly assigned by the Act to the newly created parish authorities. There is thus a new and large demand made upon our professional brethren in rural districts, and we make no doubt that on this, as on many other occasions they will be found by no means wanting in the manifestation of public spirit.

Annotations.

"Ne quid nimis."

SUNDRY QUESTIONS AFFECTING MEDICAL STUDENTS.

NOT the least interesting of the publications of the General Medical Council is the Medical Students Register. The Register for the year 1894 has just appeared, and we may direct the attention of our readers to a few of the principal facts which it brings out. It is very important to know whether the excessive flow of students of medicine continues or not. The Register gathers together into a focus those of every school in the kingdom, and indeed in the empire, and includes, too, a dozen who have passed the examination in preliminary education of certain Continental bodies. In the year 1894 1671 medical students were registered as such. It is curious to notice the examining bodies whose examinations in preliminary education the principal groups of students passed. The University of London heads the list in point of numbers, and it is known to be not behind others in point of severity. No less than 265 medical students, about a sixth of the whole number registered in 1894, had passed the matriculation examination of this University. The next largest group (251) is that registered as passing the examination of the College of Preceptors. The University of Cambridge comes next, and accounts in respect of examination in preliminary education for 199. In Ireland the chief portal of the profession is the matriculation examination of the Royal University of Ireland, on which 102 students registered. In Scotland the examinations in preliminary education of the Universities of Edinburgh, Glasgow, and

Aberdeen had been passed respectively by 83, 93, and 51 of the students registering. The examination in Arts of the Apothecaries' Society was passed by 70 students who registered. Of non-medical bodies, the Educational Institute of Scotland ranks next in numbers to the College of Preceptors, having passed 95. Another table gives the places of medical study whereat the students registered commenced their work. Here the University of Edinburgh has the lead with 154 students but is very closely followed by the University of Cambridge with 153. The University of Glasgow follows with 96. Coming to the strictly medical schools, the greatest number of students—86 in 1894—commenced work at Guy's Hospital, at Owens College 66, and at St. Bartholomew's Hospital 65. The largest numbers in Ireland were in the Catholic University Medical School, Dublin, which had 50 entries, followed by 40 at Queen's College, Belfast. At the foot of p. 11 a note informs the reader that pupillage is no longer valid as a commencement of professional study. By a recent resolution of the Council registration as a student can only be effected on commencement at a university, a school of medicine, or a teaching institution, where physics, chemistry, and elementary biology are taught, recognised by a licensing body. Pupillage to the extent of six months is recognised by the General Medical Council, but at the other end of medical education—in the fifth year. A very important question, How does the whole number of commencing students compare with that of previous years? is answered by a table on p. 12. This shows 78 less than the previous year, but exactly the same number as in the year 1892. A valuable table gives the registration of students annually from 1865 to 1894. The average annual entry for the last ten years has been 1901. It is too soon to conclude that there is any adequate perception of the crowded state of the profession, but it is something to have had in two recent years an entry of 230 below the average of ten years. It appears that of 47,930 students registered in the three divisions of the kingdom in the twenty-nine years 23,906 (49.88 per cent.) were registered in England, 14,526 (30.30 per cent.) in Scotland, and 9498 (or 19.82 per cent.) in Ireland.

THE DANGERS OF STREET PENNY TOYS: A PROTEST.

FAR be from us the wish to add to the lamentably well-filled ranks of the unemployed, or to prevent any man from earning a more or less honest living. But he who would live must also let live, and not, as too often in the case of the street seller of penny toys, imperil the lives of others. We have often alluded to this very real danger. Our present protest is impelled by personal ocular demonstration. Beneath our windows stands an honest son of toil—who, to make a rough and ready diagnosis from inspection, is a veritable culture ground of tubercle bacilli and a fit subject for the hospitality of a hospital, "consumption" or otherwise—persistently and as energetically as his lungs will allow imitating the warblings of the feathered songsters who do not inhabit the Strand by blowing down the spout of an apparently rather pretty little imitation of a milk jug, numbers of which he carries on a tray. Unconsciously, no doubt, he makes his little effort towards antiseptics by transferring from a tin box to his mouth from time to time a portion of tobacco of Cimmerian hue. The disinfecting properties of tobacco are as yet not clearly proved—at all events as regards the bacillus of tubercle. The filthiness of the procedure is, in the present instance, undoubted, and will, we trust, when we make it known, act as a potent prophylactic by preventing people purchasing these dangerous toys. Another street vendor perambulates a limited

portion of pavement offering for sale what appears to be a grotesque doll of pantomimic aspect, whose head requires to be kept at hydrocephalic proportions by constant expirations from the lungs of its peripatetic proprietor. He happily presents no apparent signs of tuberculosis, but, alas, there is the possibility of other and even worse contagious diseases to be considered, not necessarily in him as an individual, but in his numerous *confrères* plying their trade along some miles of London thoroughfares. Let it be well taken to heart that these penny toys must be bought by a great number of persons and taken home to their children, a large proportion of whom may possess a "soil" richly prepared by heredity to receive and fructify the seeds of tuberculosis. Let the other horrible possibilities of the transference of disease be borne in mind, and it will be recognised that this is no mere passing "scare" that we raise, but a most serious danger to the health of the community worthy of the earnest attention of our legislators, engaged though they are with other matters of pressing importance. Trade such as this requires legal supervision. At any rate the element of personal infection should be discouraged. The possibilities of scarlet or other fevers from the housing of these wares at night are bad enough; the certainty of direct microbic infection is appalling.

THE BUDAPEST CONGRESS AND THE DRINK QUESTION.

It will take a considerable time before the official report of the Eighth International Congress of Hygiene and Demography, which met at Budapest last September, can be published. Indeed, considering the enormous number of subjects treated and papers read, the issue of anything like a complete report is a most formidable undertaking. In the meanwhile, the text of the resolutions carried has been issued in pamphlet form and in four languages, Magyar, French, German, and English. The moral value of these resolutions rests principally in the fact that they were adopted by the Sections in which they were discussed. As explained by our special correspondents who attended the Congress, the general meeting of the entire Congress which should have confirmed or rejected the resolutions carried in the Sections was a dismal failure. Though as many as 2500 persons were inscribed as members of the Congress there were never more than 120 persons present at the general meeting, and much of the work was done when only forty or so remained in the room. The resolutions accepted by this poorly attended general meeting were read out at the official closing ceremony of the Congress, where a far larger number of persons was present. But these resolutions were then read as a matter of form, and no discussion was either possible or attempted. For the most part they were described in the columns of THE LANCET at the time; but there are some few subjects which, from plethora of material, were omitted or but briefly mentioned by our correspondents. Among these we would mention the vexed question of alcoholism. Now that the Government of Great Britain is pledged to legislation on the liquor traffic it may be useful to see what resolutions were adopted on the subject by the last International Congress of Hygiene. In the Fourth Section a resolution proposed by Dr. Béla Axmann was carried, and it was confirmed at the subsequent general meetings of the Congress. It was to the following effect: "Considering that 61 per cent. [presumably in Austria] of the accidents happening in factories and workshops are caused by the use of alcoholic drinks, the attention of the Governments ought to be called to this fact. The Section proposes that the price of light beverages such as beer, which are less harmful, should be lowered as far as possible, whilst that of strong intoxicants should be raised

high enough to render their consumption more difficult." Again, in the Fourteenth Section, a resolution brought forward by Drs. Crocq, Witlaçil, and Eulenburg was adopted and confirmed by the general assemblies. It is thus worded: "The public authorities should be requested to combat the abuse of alcohol according to their position with all their power. The means for this end are the following—viz., temperance and abstinence associations; restriction of the sale of alcoholic liquors, especially that of brandy [presumably spirits generally]; supervision of the manufacture of brandy and assumption by the State of its monopoly; raising of the taxes on spirits and brandy, and lowering of the taxes on wine and beer; and establishing asylums for drunkards and placing habitual drunkards under legal guardianship." Professor Aglave, Doctor in Law of the Paris University, is in a great measure responsible for the above resolution. For many years he has travelled from country to country interviewing members of various Governments, and collecting a large amount of evidence for the purpose of proving that the best way of combating alcoholism is to ensure the sale of absolutely pure—that is to say, sufficiently rectified—alcohol, and that this result can only be attained by making the manufacture and sale of alcohol a State monopoly. The Swiss and the Russian Governments have already adopted this proposal, and there is, we believe, some prospect that the French Government will follow suit; while in Canada the Dominion Government exercises an absolute control over the manufacture and storing of alcohol.

THE RED CROSS IN ABYSSINIA.

WHETHER, or to what extent, the recent successes of the Italians on the Abyssinian frontier will encourage Signor Crispi in his African policy, and lead to the consolidation of that "Colonia Eritrea" which for the last ten years has been a burning question in Italy, is one of the interesting problems of the immediate future—interesting, indeed, to several other European Powers than the Italian, and not least so to our own. Meanwhile there is one cause which already sees an opportunity for development in those semi-civilised regions, and that is the Red Cross organisation. Of late years the European Powers have been engaged in a series of those "little wars" which in the Duke of Wellington's opinion are more costly than advantageous, but a redeeming feature of which is the extended usefulness they have given to the "care and cure of the wounded in battle." The conflict between Spain and Morocco brought back to life that Spanish Association of the Red Cross which had fallen into desuetude since the Carlist rising some thirty years ago, and now the campaign of General Baratieri on the Italo-Ethiopic frontier has aroused the "Croce Rossa Italiana" to seek a fresh field for its energies in the far east of the same continent. France and Belgium have already, in their respective "spheres of influence," awoken to their responsibilities in that direction, till we may fairly look forward, before the century closes to the establishment of as many centres of the Red Cross organisation as there are European nationalities effecting a foothold in "Darkest Africa." As becomes the Power which claims priority in the humanitarian idea which was embodied in the Geneva Convention, Italy has lost no time in making the extension of her military operations to the Soudan coincident with a transference of her Red Cross material and *personnel* to that region, and, with the coöperation of her War Office, she is organising throughout the more vulnerable tracts of the "Colonia Eritrea" a series of ambulance stations on the model of those which, of late years, have given so good an account of themselves in the autumn manœuvres of her army in the Alta Italia. In the hill country of Asmara, already utilised as summer quarters for the garrison at Massowah, she contemplates a convalescent

sanatorium in supplement to those frontier stations, and this may be regarded as the prelude to the opening up of that delightfully salubrious region to the service of other patients than those drawn from the army. Civilisation, indeed, has everything to gain in tracts stretching inland from the Red Sea littoral by the planting of hospitals and health resorts on the European model, and the energy with which the Italian initiative is being taken towards that end must act as a wholesome stimulus to other Powers whose colonial interests in the same continent are at once more extended and more menaced. The "Prefettura Apostolica," which, in coöperation with the Vatican, Signor Crispi has established in the Tigre and throughout the "sphere of Italian influence," is fitly followed by a "Prefettura Igienica"; and this, both for the work it is capable of doing and the example it holds out to other Powers similarly circumstanced on the same continent, will go far to reconcile the votaries of "peace at any price" to that forward movement in Africa to which, by the *force majeure* of competition and the need of Europe for an expansion of her "colonial outlet," nearly all the more enterprising nationalities see themselves inexorably committed.

IS IT INFLUENZA?

THE word "influenza" is rapidly approaching the status of Abracadabra or "that blessed word Mesopotamia," or the Ægean Sea, which latter was always the refuge of the school-boy geographer. Nor can we wonder at this when we remember the protean forms in which the disease did undoubtedly manifest itself from 1889 to 1892. At the present time there is certainly a widespread catarrhal affection of some kind which is generally called "influenza," though we rather doubt whether it always is. By influenza we mean an acute febrile attack, the incubation being very short and the onset of the disease being characterised by severe muscular aching, a rigor, a high temperature and intense headache, and sometimes vomiting and diarrhoea. All or most of these symptoms pass off in twenty-four to thirty-six hours, leaving the patient greatly prostrated and with a troublesome cough and some bronchial catarrh; but though there are certainly some sporadic cases of influenza about, we would issue a warning against the growing habit of calling every indefinite feverish attack by this name. That it is a temptation no one will deny, especially when we consider how anxious patients are that their disease should be named and how the practitioner is apt to be looked down upon if he says he cannot do so. But it must also be remembered that influenza is a serious disease, and it is therefore unwise to call any febrile catarrhal affection by this name, for these latter when properly treated never leave any serious sequelæ, whereas the former complaint, even though treated with every care, may, and often does, leave a large legacy of grave evils behind it.

RATIONAL DRESS.

AMONG the many definitions of man is one which defines him as the only animal that wears clothes. Now this would be correct if we added the word vertebrate, for several of the lower animals do wear clothes, and wear them, too, with a sense of their fitness and sensible use that puts the bimanous vertebrate to shame. Among these animals who have solved the problem of rational dress are the hermit crab, the larva of the caddis, and certain caterpillars. These clothes are rational in so far that they are fitting for whatever the wearers are doing (of course the problem is simplified when the day's occupation consists of little else than eating and sleeping); but how far below these creatures in our use of dress are we. Men have for ages scoffed at women for the vagaries and flights of fancy displayed in their dress, but there is really but little to choose between the sexes

except in the great matter of the pocket, for except a professional thief no mortal being, even the owner, can get at a woman's pocket. It is more, however, the weak points of men's dress to which we desire to draw attention, and specially to the fact that the lungs, as far as anatomy goes, are exposed at the back almost more than at the front. Yet man's clothing overlooks this fact. A man's shirt is at least three times thicker in front than at the back, his waistcoat is always a mere lining at the back, and if, as the majority of men do, he does not button his coat his back is sure to be much exposed. Take again the change from morning to night. During the day a man goes about with thick woollen clothes, thick socks, thick boots or shoes with spats. At night he puts on very thin clothes, a waistcoat which is no protection whatever, thin shoes, silk socks, without any spats, and sallies forth to dine, after which perhaps a dance or a theatre. When arrived he congratulates himself that he is not as those poor silly women who go about with the upper part of their chests bare. We are certain, however, that men catch cold from wearing evening dress far more than women do, and it behoves all who go out in the evening to keep the legs and feet warm as well as the upper part of the body, and to wear an extra vest to make up for the practical disappearance of the waistcoat.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

We would direct the attention of the governors and treasurers of the various hospitals and dispensaries of the metropolis, who desire that their institutions shall participate in this year's distribution, to the necessity for sending in their applications to the Secretary of the Fund, Mr. H. N. Cunstane, at the Mansion House, on or before March 5th. Applications must be accompanied by the income and expenditure account for the past year, printed according to the uniform system agreed upon and duly audited by a public accountant. The addition to Law IV. of the Constitution which came into force on Jan. 1st, 1893, making it compulsory that the accounts of each institution should be presented on a uniform basis, has greatly facilitated the labours of the Distribution Committee in comparing the relative merits of the respective institutions, and unless this rule is complied with no award will be made. We regret to have to call attention to a practice which cannot be too severely condemned—namely, that of issuing one report to the Hospital Sunday Fund satisfying these requirements and another to the supporters of the institution concerned. Such proceedings are not calculated to increase public confidence, and, it is hardly necessary to say, will not be recognised by the Distribution Committee, who require one form of account only. We regret that we should have to refer to this matter, and trust that Sir Sydney Waterlow—who we hope will be permanently restored to health and be able to move, as he has done for twenty-two years in succession, the adoption of the Distribution Committee's report this year—will not, as he did on the previous occasion, have to deplore such proceedings.

OPHTHALMOPLÉGIA AND WEAKNESS OF THE OCULO-FACIAL GROUP.

SINCE the experiments carried out by Mendel showing that in certain animals the orbicularis palpebrarum seems to receive its nerve-supply from the third cranial nerve nucleus a few noteworthy observations on the subject in man have been recorded. Drs. Tooth and Turner, in a valuable account of a case of bulbar paralysis, found that while the cells of the facial nucleus were completely degenerated the nerve itself had in it undegenerated fibres, and they thought that these were probably derived from the third nucleus and were for the supply of the orbicularis palpebrarum and frontalis, which had been found

functionally active during life. Dr. Hughlings Jackson has also recorded in the columns of THE LANCET his observations on cases of ophthalmoplegia, in which he found that when the eyes were as tightly closed as possible there was no difficulty, or comparatively little difficulty, in raising the upper eyelid. The other facial muscles being intact this weakness of the orbicularis was naturally regarded as a result of the impairment of the third nucleus, which presumably had led to the paralysis of ocular movements. Such an observation naturally lent considerable support to Mendel's hypothesis that the third nucleus supplied the nerve filaments to the orbicularis palpebrarum, just as the hypoglossal nucleus is supposed to be the source of the nerve fibres which supply the orbicularis oris. There can be no doubt that functionally the ocular movements and those of the orbicularis palpebrarum are very closely associated, just as those of the tongue and of the orbicularis oris are. In a recent number of the *Wiener Klinische Wochenschrift* Dr. Hanke records a case of congenital ophthalmoplegia, or of ophthalmoplegia occurring in very early life and affecting nearly all the ocular muscles of both eyes, in which in the twenty-sixth year of life a paralysis of the levator palpebralis superioris and also of the frontalis took place. The case, according to Dr. Hanke, supports Mendel's hypothesis that the oculo-facial group is supplied by the third nerve nucleus.

INTERNATIONAL CONGRESS FOR THE PROTECTION OF INFANCY.

WE announced in THE LANCET of Dec. 15th, 1894, that Florence would, within the coming year, be the seat of the International Congress for the Protection of Infancy, and we indicated the quarter from which its *personnel* would be most largely recruited, as also the tenour of the discussions, so far, at least, as the communications sent in enabled us to judge. Since then, however, the Italian organising committee, which has its headquarters in Florence (No. 7, Piazza d'Azeglio), has had intimation that another congress with the same object and on the same lines to be held in 1895 has been preparing in France, and so, to obviate the inconvenience of two such meetings occurring within the same twelvemonth, it defers its own meeting till the October of 1896. This is as it should be, and the loyalty with which the two committees are coöperating gives promise of a highly effective promotion of the interests both have at heart. The French Congress will meet at Bordeaux on Aug. 12th, and its work is divided into three principal sections. The first takes cognisance of Children Morally Abandoned, and will deal with the Decline of Parental Authority and the Delegation of this latter to other Hands. The second has for its main subject the Administrative Protection of Infancy. It will take up the well-known "Loi Roussel," which has aided considerably in diminishing the death-rate among children put out to nurse. The application of this law and its further extension to all children reared, gratuitously or not, outside the parental roof will form the theme of many important papers and discussions. The third section will concern itself principally with the Physical Protection of Infancy, under which head the question of the alimentation of the child from his first day of life to the close of its second year will be threshed out in all its ramifications. An elaborate monograph has been announced on the Means to be employed by Private Initiative to secure the soundest Methods of such Alimentation, the author's name being as yet withheld. From the programme now before us the Congress cannot fail to be an effective one, the Italian contingent having thrown itself with zeal into its proceedings; while there is every probability that the misguided patriotism which kept

France from being represented at the Tenth International Congress of Medicine and Surgery, which met in 1890 at Berlin, will arouse no German reprisals with regard to the meeting to be held at Bordeaux. French hospitality may be trusted to treat the delegates from the Fatherland with all courtesy and consideration, in harmony with the philanthropic motive which brings the Congress together. We may add that the provisions for the comfort and entertainment of the delegates from abroad are commendably liberal—*inter alia*, the entrance ticket being presented gratuitously to each on his announcing himself in Bordeaux.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

In the report of the London and Counties Medical Protection Society, Limited, for 1894, which we have just received, are some very interesting accounts of cases in which action has been taken by the society. The report refers to the Indian oculists prosecution, which has already been commented upon in our columns,¹ and expresses a hope that although the trial of 1893 did not end in a conviction it may lead to an amendment of the Medical Acts. Several instances are given of the successful prosecution of unqualified practitioners, and as regards the case of Mr. Anderson of Tobago the report intimates that it must be carried before the highest appellate tribunal in the realm. A short account of the abortive attempt at amalgamation with the Medical Defence Union is given, from which it would seem that at present there is not much hope of union.

THE DIFFUSION OF SMALL-POX.

THE fresh cases of small-pox in London were last week 8 in number, against 11 in the preceding week, and there was 1 registered death, that of an unvaccinated person belonging to the parish of Marylebone. Some anxiety has been caused in that parish owing to recent events in connexion with the occurrence of unremoved cases of small-pox. One house in the locality of Lisson-grove was the residence for ten days of a malignant case of small-pox, which proved fatal within a few hours of diagnosis and notification. During the next fourteen days fully a score of fresh cases arose in the parish which could be traced with certainty or great probability to infection derived at the house in question, occupied as it was by five families. Great activity has been manifested in dealing with the evil results of this case; but anxiety is not yet at an end, inasmuch as at least 3 additional cases have come to light after varying intervals of residence of unremoved small-pox patients in the midst of other susceptible persons, and mischief may, it is feared, yet result from these occurrences. We are glad to learn that the vestry have resolved to erect a shelter and baths for the use of persons who have been exposed to the danger of contracting infectious diseases, together with means for the disinfection of their clothing. In West Ham, where in the first week of February small-pox showed serious recrudescence, only 2 attacks were chronicled last week. At Birmingham, too, the attacks fell to half the previous week's record, only 6 being noted last week, with 1 registered death. At Liverpool and Bootle we hear of a dozen attacks. The Registrar-General for Scotland returns 8 deaths from small-pox in the great towns during January—namely, 2 in Glasgow, 5 in Edinburgh, and 1 in Leith. In Dublin there were admitted to hospital in the week ended Feb. 9th 60 small-pox cases, as compared with 61, 64, and 69 in the three preceding weeks, the discharges numbering 84 and the number remaining under treatment being 141, in addition to 142 convalescents at Kilmalham, or 283 in all. Seven deaths from small-pox

in the week occurred, 2 in vaccinated adults and 5 in unvaccinated persons, one a child aged five and the rest in adult life. Of the 68 persons dying from small-pox in Dublin in 1894, all in the last six months of the year, as many as 39 were unvaccinated; all the 16 children under five years of age dying from the disease belonged to that class.

ENDOCARDIAL LESIONS IN TUBERCULOUS SUBJECTS.

THE effects of endocardial lesions on the course of tuberculosis is an old and well-discussed subject, but in the *Annales de Médecine* of Feb. 8th we find it dealt with from rather the opposite standpoint—i.e., the effect of tuberculosis on diseases of the endocardium. The conclusions there given are those arrived at by Telsier in his work on the subject. Endocardial lesions due to tuberculosis are multiple in form and complex in pathology, the tubercle bacilli, toxins, and associated bacteria all combining to produce the disease. The bacillus acts locally by producing a specific lesion, and generally by its deteriorating effect on nutrition. The tubercule, on the other hand, is said to influence the vaso-motor system and so to be specially active in the sclerosing forms. The specific lesion showing itself as granular or caseating nodules is rare, being less frequent than tuberculous pericarditis. It is always a secondary lesion due to presence of bacilli in the circulation, and does not cause any characteristic cardiac signs. The sclerosing form is frequent and the result of slow tuberculous infection. It occurs in the course of chronic tuberculous cases, and shows itself by producing harsh cardiac murmurs. Many of the cases of valvular disease in scrofulous subjects are thought to be influenced by the presence of tuberculous toxins. An acute form due to secondary infection is also described, which appears to tally by its clinical course with infective endocarditis. It may, like infective endocarditis, take a vegetative or an ulcerative form, but more work has yet to be done before accurate conclusions can be drawn.

INSANITY AMONG THE NATIVES OF SOUTH AFRICA.

IN the January number of the *Journal of Mental Science* Dr. Duncan Greenlees, the Medical Superintendent of the Grahamstown Asylum, South Africa, has a very interesting paper on this subject. He has gone over the cases of natives admitted to the asylum in the last nineteen years, and has classified his results under several headings. In regard to age he finds that in males the most frequent age is between twenty-five and thirty years, while in females it is thirty to thirty-five years. By far the most common form of insanity is mania, melancholia being rare, and in the acute form in which it is found among white patients extremely uncommon. Epilepsy and epileptic insanity are not unknown among native races, even apart from traumatic cases, but general paralysis is so rare that amongst the pure natives it may be considered not to exist. It is difficult to get at the causes of insanity among natives, the history being, of course, necessarily imperfect. But Dr. Greenlees mentions two important causes—viz., excessive drinking of alcoholic beverages and the smoking of *dagga*, a plant almost identical, it is said, with Indian hemp, which produces temporary intoxication, ending sometimes in an outburst of maniacal excitement. As to the causes of death, the frequency with which chest diseases are the immediate cause is noteworthy, and also the rarity of actual gross brain disease as a cause. This last fact is probably explained by the absence of conditions of life likely to cause cerebral disease, while the former seems to indicate that the clothing of the native, with the liability to sit in wet clothes, &c., renders him liable to pulmonary affections.

¹ THE LANCET, Nov. 4th, 1893.

As to the nationality of the natives treated the great majority were Kaffirs and Hottentots, the two native races most closely associated with the white, and therefore presumably exposed to more nearly similar conditions than other natives would be living remote from civilisation and the deteriorating influences which the white man seems to carry with him to native races.

CLINICAL SOCIETY OF LONDON.

THE Council of the Clinical Society has unanimously resolved that, owing to the death of the late President, Mr. Hulke, F.R.S., the meeting arranged for Friday, Feb. 22nd, will be postponed to Friday, March 1st, at 8.30 P.M. The agenda will be the same as originally announced in THE LANCET of the 16th inst.

THE MEDICAL REGISTER.

THROUGH the courtesy of Mr. W. J. Miller, the Registrar to the General Medical Council, we have received a copy of the Medical Register for 1895. At the end of last year the total number of names on the Register was 32,637; at the end of 1893 the numbers were 31,644. If we mistake not the Register makes its appearance earlier this year—a fact upon which we congratulate Mr. Miller.

MORVAN'S DISEASE AND LEPROSY.

AS is well known some writers assert that not only Morvan's disease but also scleroderma and Raynaud's disease are merely varieties of leprosy. The position of the question has been considered by M. Gombault in the *Revue Neurologique*.¹ He asks if it would not be more prudent and at the same time more scientific to consider this as a hypothesis, seductive and fascinating no doubt, but still awaiting proof. M. Marestang, he says, has examined the question from the clinical point of view, and finds that even in this respect Morvan's disease and leprosy are by no means identical. Moreover, pathological anatomy does not furnish any confirmation of the view, for neither has the bacillus of Hansen been demonstrated in any of the cases of Morvan's disease examined by M. Gombault, nor have the changes in the peripheral nerves been found which are characteristic of leprosy; and as to the spinal cord this has only been twice examined in cases occurring in Brittany, and in both this organ was manifestly the seat of syringo-myelia—a condition which is in all likelihood the anatomical substratum in cases of Morvan's disease. This, of course, does not imply that cases of leprosy may not have symptoms closely analogous to those found in certain cases of Morvan's disease, but to acknowledge this and to claim that the diseases are identical are two very different things. Their identity could only be established by the demonstration of the bacillus of leprosy in an acknowledged case of Morvan's disease.

MIDWIVES AND THE DEATHS OF CHILDREN.

AN inquest was held at Woking recently by Mr. G. F. Roumieu, coroner for West Surrey, on two children aged two months and six weeks respectively, who both died from pneumonia attributed by the medical witness, Mr. Howlin, to blood poisoning produced by the midwife using her own appliances. The chief evidence in support of this view was the death of the two children within so short a time attended by the same midwife, who, instead of using materials and instruments supplied by the parent, is said to have used her own. Theoretically, of course, if midwives were well trained their instruments and materials should be safer than those of others. The midwife said she always disinfected her instruments with carbolic acid. And it

must be allowed that in a season of intense frost the occurrence of two cases of pneumonia is not in itself necessarily proof of fault in the nurse. But the coroner and the jury and Dr. Seaton, medical officer of health of the County Council of Surrey, and Mr. Wellington Lake, medical officer to the Guildford sanitary authority, all seemed to concur in the theory which traced the pneumonia to blood poisoning and not to cold. Dr. Seaton thought that such cases should be notified. All agreed that the midwife, Mrs. Lee, bore a good reputation, and the coroner said she left the court without any stain on her character. She said that between these two cases she had attended ten others without anything wrong occurring in the children. Dr. Seaton and Mr. Lake promised to draw up rules for the guidance of this midwife in future. Certainly midwives cannot be too particular in cleansing and disinfecting their hands, instruments, and clothing.

BACTERIOLOGY OF CHOLERA.

AS the result of some careful and extended observations upon cholera patients made at the Hygienic Institute of Königsberg, Drs. R. Abel and R. Clausen conclude¹ that : 1. Cholera vibrios in faecal matter as a rule die within the first twenty days; they seldom remain alive for thirty days; whilst the prolongation of their existence to fifty-two days, as has been noted by Karlinski and Dunbar, is quite exceptional. 2. In many stools cholera vibrios cannot be found after from one to three days; hence the necessity of examining the dejecta of cholera patients as soon as possible after they have been passed. In an appendix to this paper it is shown that cholera vibrios may occur in healthy individuals, and it is urged that isolation should not be discontinued until repeated bacteriological examinations have proved the bacilli to be absent. They give particulars of seventeen individuals, members of families in which cholera had occurred in Wehlau (Eastern Prussia) in the autumn of 1894. Of these seventeen persons, who did not sicken or only had slight transient diarrhoea, examination of the stools showed an exceptionally large percentage of cholera vibrios. In many cases, however, one or more days would elapse before any organisms were detected, and then they would again appear in abundance, showing that if the patients had been allowed out of quarantine on the first occasion that the stools were found to be free from bacilli they might have disseminated the disease. In one case it was possible to determine with fair accuracy the incubation period of cholera. This was the case of a man, a member of one of the infected families, whose stools daily examined yielded no bacilli; an examination on Oct. 1st of a stool passed on Sept. 30th yielded a like negative result, but he was attacked with cholera in the night of Sept. 30th—Oct. 1st, and died on the 2nd. Hence it is inferred that the time between infection and onset of symptoms in this case must have been between twelve and twenty-four hours.

DR. CURNOW will take the chair at the King's College Hospital past and present students' dinner, which is to be held at the Holborn Restaurant on Friday, March 1st. Any past students who wish to be present should apply for tickets at once to Messrs. J. Gott and A. H. Safford at the hospital.

A DISCUSSION is announced to take place on Tuesday evening next at the Royal Medical and Chirurgical Society upon Affections of the Nervous System occurring in the Early (Secondary) Stages of Syphilis.

SIR RICHARD QUAIN has accepted the office of President of the North-West London Clinical Society.

¹ Archives de Neurologie, January, 1895.

¹ Centralblatt für Bakteriologie, 1895, Nos. 3 and 4.

PROFESSOR CLIFFORD ALLBUTT will give a lecture before the Hunterian Society on Wednesday, Feb. 27th, at 8.30 P.M., in the London Institution, Finsbury-circus. He has chosen for his subject Senile Plethora: High Arterial Tension in the Aged. All members of the profession are invited.

ARMY MEDICAL DEPARTMENT REPORT FOR 1893, WITH APPENDIX.

[FIRST NOTICE.]

THE medical report on the health and sanitary condition of the army for 1893, making the thirty-fifth volume of these reports, which has just been issued, consists with its appendices of 397 pages. In the latter are included some interesting papers and reports, such as those on the Progress of Hygiene for 1894, and on the late International Congress at Budapest for the same year, by the Professor of Military Hygiene at Netley; a list of operations at Netley by the Professor and Assistant-Professor of the Army Medical School; a report on the Eighth Congress of the Association Française de Chirurgie, by Surgeon-Lieutenant-Colonel Pratt, and one by Surgeon-Major H. E. R. James, F.R.C.S. Eng., on the Late Epidemic of Bubonic Plague at Hong-Kong, together with papers by different members of the Army Medical Staff descriptive of surgical and other cases that have come under their observation or treatment.

The major portion of the volume, consisting of the official report on the health of the troops at home and abroad during 1893, gives the usual statistical data, tables, and summaries, with the necessary descriptive or explanatory comments and brief references to disease causes and sanitary conditions with which our readers are familiar.

The prefatory observations to the present volume sum up the general results so succinctly and well that we cannot do better than follow them pretty closely. The health statistics of the troops at home for the year under review are favourable. A serious outbreak of enteric fever occurred at Aldershot. Influenza was largely prevalent in 1893, but not quite to the same extent as in 1892. For all forms of venereal affection there was a slight decrease in the admission-rate, but a fractional increase in the constantly-sick rate. There is no other matter, it is stated, calling for special notice in regard to the health of the troops serving in the United Kingdom in 1893.

As regards the colonies, some of the notable points referred to are: the admission-rate at Gibraltar was higher than in 1892 owing to the prevalence of simple continued fever, and the sick-rate for venereal affections showed a considerable increase. At Malta there was an outbreak of enteric fever attributed to contaminated water. In Canada the health of the troops was excellent. Enteric fever was rather prevalent in Bermuda. Malarial fever of a severe and fatal type was very prevalent in the Mauritius in 1893, and it is remarked that residence there is either followed by an increased liability to this form of fever or by a general deterioration of health. In China, as in the Mauritius, much of the bad health of the troops was also attributable to the same cause—malarial fever. In Egypt, as at Cyprus and in the Barbadoes command, the chief cause of inefficiency is stated to have been venereal affections, nearly a third of the admissions to hospital having been due to these diseases. In India the health of the troops was fairly good. The increased prevalence of venereal affections in the three Presidencies is referred to. In Bengal enteric fever was not so prevalent in 1893, and cholera showed a marked decline; in Bombay the health of the troops was very good; and there was no special outbreak of sickness to be recorded among the troops in Madras in that year.

Turning to the statistical summaries shown in the tables on the second and third pages of the report, we find that the average strength of the troops at home and abroad was 202,125, and that 100,105 of this number were stationed in the United Kingdom and 69,865 in India, the remainder being distributed throughout the various other commands, and notably those of the Mediterranean. The hospital admission-rate of the troops at home and abroad for 1893 was 1010 5, the death-rate 8.30, and the number sent home as invalids was 24.21, of whom 13.30 were discharged as invalids, per 1000 respectively; the constantly non-effective from sickness was

60.90 and the average duration of each case of sickness was 22.01 days per 1000. The death-rate in the United Kingdom was 5.13 per 1000, at Gibraltar it was 2.74, in Cyprus 1.82, and in Canada 2.11; while at Malta it was 10.47 per 1000, in Egypt 13.60, in the Mauritius 18.14, and in India 13.15 per 1000 respectively.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6906 births and 5430 deaths were registered during the week ending Feb. 16th. The annual rate of mortality in these towns, which had risen in the three preceding weeks from 18.7 to 20.7 per 1000, further increased last week to 26.7. In London the rate was 29.3 per 1000, while it averaged 24.9 in the thirty-two provincial towns. The lowest rates in these towns were 14.5 in Croydon, 18.3 in Hull, 18.7 in Plymouth, and 19.8 in Derby; the highest rates were 27.2 in Manchester, 27.3 in Preston, 27.7 in Leeds, 29.2 in London, and 39.6 in Liverpool. The 5430 deaths included 315 which were referred to the principal symtotic diseases, against 297, and 312 in the two preceding weeks; of these, 93 resulted from whooping-cough, 64 from measles, 52 from diphtheria, 36 from scarlet fever, 35 from "fever" (principally enteric), 33 from diarrhoea, and 2 from small-pox. No fatal case of any of these diseases was recorded in Huddersfield or in Hull; in the other towns they caused the lowest death-rates in Brighton, Croydon, Nottingham, and Preston, and the highest rates in Wolverhampton, Sheffield, Manchester, and Burnley. The greatest mortality from measles occurred in Sheffield, Gateshead, and Plymouth; from scarlet fever in Burnley; from whooping-cough in Bristol, Norwich, and Birkenhead; and from "fever" in Bolton. The 52 deaths from diphtheria included 27 in London, 4 in Liverpool, 3 in Wolverhampton, and 3 in Birmingham. One fatal case of small-pox was registered in London and 1 in Birmingham, but not one in any other of the thirty-three towns. There were 67 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 16th inst., against 35, 58, and 56 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 8, 21, and 18 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1657, against 1662, 1653, and 1667 on the three preceding Saturdays; 159 new cases were admitted during the week, against 186, 160, and 149 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 324 to 480 in the three preceding weeks, further rose to 840 last week, and exceeded by 382 the corrected average. The causes of 131, or 2.4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Leeds, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Liverpool, Huddersfield, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23.9 and 26.2 per 1000 in the two preceding weeks, further rose to 35.1 during the week ending Feb. 16th, and was 8.4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 20.6 in Perth and 22.1 in Leith to 41.9 in Greenock and 43.0 in Glasgow. The 1013 deaths in these towns included 46 which were referred to measles, 33 to whooping-cough, 17 to diarrhoea, 6 to scarlet fever, 6 to diphtheria, 6 to "fever," and one to small-pox. In all, 115 deaths resulted from these principal symtotic diseases, against 89 and 81 in the two preceding weeks. These 115 deaths were equal to an annual rate of 4.0 per 1000, which was 2.5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had decreased from 42 to 26 in the three preceding weeks, rose to 46 last week, of which 23 occurred in Glasgow, 12 in Aberdeen, and 9 in Edinburgh. The deaths from whooping-cough, which had been 18, 25, and 27 in the

three previous weeks, further rose to 33 last week, and included 25 in Glasgow and 4 in Dundee. The fatal cases of scarlet fever, which had declined from 12 to 4 in the two preceding weeks, rose to 6 last week, of which 4 occurred in Glasgow. The deaths from diphtheria, which had been 5, 3, and 7 in the preceding three weeks, were 6 last week, and included 4 in Glasgow. The deaths from "fever," which had been 6 in each of the two previous weeks, were again 6 last week, and included 4 in Glasgow. The deaths from diarrhoea rose from 6 to 8 in the previous two weeks, and further increased to 17 last week, and included 9 in Glasgow and 4 in Greenock. One death from small-pox was recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 163 and 214 in the two preceding weeks, rose to 245 last week, and exceeded by 223 the number in the corresponding period of last year. The causes of 83, or more than 8 per cent., of the deaths in these towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31.9 per 1000 in each of the two preceding weeks, rose to 34.2 during the week ending Feb. 16th. During the past seven weeks of the current quarter the death-rate in the city has averaged 32.7 per 1000, against 20.5 in London and 23.7 in Edinburgh. The 229 deaths registered in Dublin during the week under notice showed an increase of 15 upon the number in the previous week, and included 17 which were referred to the principal zymotic diseases, against 16 and 19 in the two preceding weeks; of these, 8 resulted from small-pox, 5 from diarrhoea, 2 from "fever," 1 from diphtheria, 1 from whooping-cough, and not one either from measles or scarlet fever. These 17 deaths were equal to an annual rate of 2.5 per 1000, the zymotic death-rates during the same period being 1.7 in London and 2.5 in Edinburgh. The fatal cases of small-pox, which had been 7, 5, and 7 in the three preceding weeks, further rose to 8 last week. The 5 deaths referred to diarrhoea exceeded the number recorded in any recent week. The deaths from different forms of "fever," which had been 4 in each of the two preceding weeks, declined to 2 last week. The mortality from whooping-cough showed a marked decline from that recorded in recent weeks. The 229 deaths in Dublin last week included 27 of infants under one year of age and 79 of persons aged upwards of sixty years; the deaths of infants were below those recorded in any recent week, while those of elderly persons showed a marked further increase upon recent weekly numbers. Four inquest cases and 4 deaths from violence were registered; and 79, or more than a third, of the deaths occurred in public institutions. The causes of 16, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR MORRIS has left Bermuda on completion of a tour of service. Surgeon-Captain Kelly has arrived at Halifax. Surgeon-Captain Rawnsley has embarked for Malta on exchange, and Surgeon-Captain Tatham on troop duty. The following officers have arrived from India in the *Malabar*:—Surgeon-Lieutenant-Colonel Robinson, Surgeon-Major Le Moine, and Surgeon-Captains Elliott and Hassard. Surgeon-Major O'Sullivan has been transferred from Dublin to Belfast; Surgeon-Captain Browning, from Kilkenny to Limerick; and Surgeon-Captain McCormack, from Woolwich to Hounslow. Surgeon-Major Wilkinson has been posted to Aldershot on return from foreign service, and Surgeon-Major Hewett to the North-Eastern district.

ARMY MEDICAL STAFF.

The following appointments are gazetted:—Surgeon-Captains to be Surgeon-Majors: W. G. Macpherson, M.B.; R. J. S. Simpson, M.B.; E. V. A. Phipps; A. Baird, M.B.; F.R.C.S. Edin.; T. W. O'Hara Hamilton, M.B.; D. Sempie, M.D.; J. R. Stuart, M.B.; W. B. C. Deeble; R. P. Bond; G. T. H. Thomas, F.R.C.S. Edin.; G. M. H. Colman, M.B. Surgeons on probation to be Surgeon-Lieutenants: W. S. Harrison, M.B.; H. A. L. Howell; D. Lawson; E. B. Steel, M.B.; C. W. Profet, M.B.; F. Kiddle, M.B.; H. E. Staddon; J. H. Whitehead; J. A. Murison, M.B.; L. P. Tomlinson; S. J. C. P. Perry; and A. F. Heaton.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major F. A. Harris, A.M.S., has been appointed to the Medical Charge of the Station Hospital, Indore; Surgeon-Lieutenant William Carr Sprague having completed three years' full-pay service, to be Surgeon-Captain; Surgeon-Lieutenant H. W. H. O'Reilly, A.M.S., has been appointed to the Medical Charge of the Station Hospital at Calicut. The following appointments and transfers of medical officers have been ordered:—Surgeon-Lieutenant R. F. E. Austin, from the Bombay to the Sind district for general duty; Surgeon-Captain C. S. Sparkes, A.M.S., on arrival from England, to the Mhow district, for general duty; Surgeon-Captain B. D. Basu, I.M.S., to the Officiating Medical Charge of the 9th Bombay Infantry; and Surgeon-Captain T. W. Irvine, M.B., to the Officiating Medical Charge of the 7th Bombay Lancers.

NAVAL MEDICAL SERVICES.

The following appointments are notified:—Staff-Surgeons: M. O'Connell Macswiny to the *Barfleur*, and A. H. Miller to the *Mildura*. Surgeons: R. H. Nicholson, R. Hardie, and E. Cuffey to the *Scylla*; P. E. Maitland to Haslar Hospital; J. W. W. Stanton to the *Scylla*, and after to the *Pigeon*; G. T. Broatch to Yarmouth Hospital; J. W. O. Underhill to the *Barfleur*; and B. C. E. F. Gunn to the *Malabar*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain John Sutcliffe to be Surgeon-Major.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment): Surgeon-Major T. L. Gentles to be Surgeon-Lieutenant-Colonel. 4th (Perthshire) Volunteer Battalion, the Black Watch (Royal Highlanders): Surgeon-Lieutenant C. Brown, M.D., resigns his commission. 2nd London: Surgeon-Captain A. R. H. Oakley resigns his commission.

DEATH IN THE SERVICES.

Surgeon-Major Albert Richard Waghorn, M.D., Bengal Army (retired) at Redhill on the 6th inst. at the age of sixty-six. He served at the siege, assault, and capture of Delhi, 1857 (medal and clasp); and in the Bhootan Campaign, 1865 (medal and clasp).

ACCIDENT TO A NAVAL SURGEON.

We regret to learn that Surgeon Hugh St. David Griffiths met with an accident on Thursday, Feb. 14th, while travelling from Paddington in a corridor train. Through opening by mistake a door he was thrown on to the line, but fortunately was able to drag himself to a place of safety before the passage of an up train from Plymouth. The accident happened near Swindon, from which town assistance was promptly sent.

THE CANTONMENT BILL.

This Bill seems to have given rise to a great deal of discussion and consideration in India, if we may judge from the length of the speeches and the debate it caused in the Viceroy's Legislative Council, as reported in the public journals of that country. The Hon. Sir Griffith Evans made a long and weighty speech on the occasion, fully setting forth the history of the matter, which is a larger one than is commonly supposed, in that it affects the constitution of the Indian Government. A number of other speakers took part in the debate. The third section of the Cantonment Act Amendment Bill has been withdrawn, and very properly, for nothing could be said in favour of a most objectionable and unnecessary piece of legislation as far as the Government medical service of India is concerned. The second section stands, subject to such changes as may be made in it on the recommendation of a select committee to whom it was referred. It seems probable, however, that the matter will not end here should further experience prove that the prevalence of this class of diseases continues to increase and to cause even a greater amount of inefficiency than exists at the present time.

COMMISSIONED MEDICAL OFFICERS AND LOCAL GOVERNMENTS AND ADMINISTRATIONS.

The *Times of India* says: "With reference to a recent ruling of the Government of India, in which it was pointed out that commissioned medical officers whose services were placed at the disposal of local governments and administrations were sometimes thrown out of civil employment for short periods, the Government of India have decided to fix a definite maximum number of supernumerary officers which

each local government and administration (except Hyderabad assigned districts and Coorg, which it is considered should not be brought within the scheme) may retain in excess of those filling sanctioned appointments in the cadre of the Indian Medical Service. The following are the numbers that have been fixed: Madras, 4; Bombay, 4; Bengal, 4; North-West Provinces and Oudh, 3; Punjab, 3; Central Provinces, 1; Burmah, 2; and Assam, 1."

A GOORKHA ASYLUM.

A movement is on foot to establish near Simla an asylum for the maintenance and education of the orphan sons of Goorkha pensioners and for old soldiers in indigent circumstances. The proposal has received the approval of both the late and the present Viceroy, and many high officials in India. More than R.7000 have been collected in India, and the committee now ask for a similar sum from England. Donations should be sent to Messrs. H. S. King and Co., 45, Pall-mall, London.

INDIAN MEDICAL SERVICE DINNER IN WAZIRISTAN.

Members of the Indian medical service serving with the three brigades of the Waziristan field force made arrangements for a corps dinner at Ibandula, and accordingly on the 10th ult. twenty-eight medical officers, with a few of their combatant friends, dined together. Surgeon-Colonel Spencer, Principal Medical Officer of the field force, presided. Surgeon-Captain Gilbert managed the details with a successful result.

ALDERSHOT.

With reference to the rumours about the prevalence of enteric fever at this station, a correspondent, apparently acquainted with the facts, writing to the *Standard* says that there have been only four cases of that fever in the camp during the last six months in a military population of about 15 000. It seems, as he urges, unlikely that the water-supply or milk can have been the cause of the disease, otherwise cases would have occurred among the families and married people, or there would have been an outbreak of the disease on a larger scale; nor is it easy to explain how the water received its specific contamination.

MILK-SUPPLY IN INDIA.

The Government of India have deputed Veterinary-Major W. H. Kemp to inspect all dairies under military supervision, with the view of enabling the Government to arrive at a satisfactory conclusion on the question of the supply of pure milk to hospitals of British troops and troops generally in that country.

The *Broad Arrow* states: "It is notified in an Army circular just published that time on half-pay not exceeding one year shall be allowed to reckon as service in the case of an officer of the Staff Corps or of the Indian Medical Service placed on half-pay on account of ill-health contracted in the performance of military duty, and that such time shall also reckon as service for promotion. This period of one year's service on half-pay can only be reckoned by an officer on his restoration to full-pay, and he cannot be promoted whilst remaining on the half-pay list; but the period will reckon for pension, whether an officer retires direct from half-pay or after restoration to full-pay. Retrospective effect to the above concession will, where necessary, be given from Jan. 1st, 1887."

Advices from the West Indies station report an outbreak of yellow fever on board the ships of the British Training Squadron which were in quarantine at Bermuda. A number of cases have proved fatal, nine burials taking place within one week.

Brigade-Surgeon-Lieutenant-Colonel King, Superintendent of the Royal Botanical Gardens in Calcutta and Government Quinologist, has been granted an extension of service for two years in compliance with the recommendation of the Government of India.

Surgeon-Colonels Churchill and Maunsell, the Principal Medical Officers at Woolwich and Cork respectively, are held in readiness for service in India.

THE New Element will form the subject of a popular lecture at the Royal Victoria Hall on Tuesday, Feb. 26th, at 8.30 P.M. It is a sign of the times surely that scientific discovery should be expounded to the public at an admission fee of 1d.

Correspondence.

"Audi alteram partem."

"ANÆSTHESIA BY THE CHLOROFORM AND ETHER MIXTURE."

To the Editors of THE LANCET.

SIRS,—The article on this subject by Dr. Truman in THE LANCET of Feb. 16th is undoubtedly of great value, more especially as it opens up a field of research from which much useful information may be expected. With regard to this particular article, however, there are one or two points upon which I should like to be permitted to express some opinions. In the first place I think that attention should be drawn to the fact that the observations made by Dr. Truman apply to "a mixture of one volume of chloroform and two of ether," and cannot therefore be held to apply absolutely to what I believe is more usually referred to in England when we speak of "the" mixture; more often than not I fancy that this term is applied to the combination otherwise known as "the A.C.E.," containing one part by volume of alcohol to two of chloroform and three of ether. It is held by some that the addition of the alcohol is a most important factor in this particular combination, for it is maintained that not only does it tend to equalise the evaporation of the other constituents, but that it even retards the absorption of the chloroform. May I express the hope that at some future date, either through your columns or through the medium of the Society of Anaesthetists, Dr. Truman may give us his views upon these theories? The second point to which I would draw attention is that Dr. Truman speaks of the administration of his mixture by means of "Clover's inhaler"—i.e., an inhaler with a bag. Used in this way I quite agree with him that the proceeding would be most dangerous, for I take it to be one of the axioms of anaesthetics that closed inhalers (by which I understand any form of bag inhaler) are absolutely contra-indicated in the administration of any anaesthetic or combination of anaesthetics containing chloroform; not only is there the objection referred to by Dr. Truman of irregularity in evaporation, but there is also the still graver risk of the accumulation of a highly dangerous percentage of chloroform vapour in the bag. In the concluding sentence of his article Dr. Truman admits that by the open method the vapours would doubtless be more evenly distributed, and to my mind this very admission rather counteracts his previous deduction that when ether cannot be used unmixed chloroform should be employed. I quite agree with Dr. Truman in his preference for ether, but I hardly think that the observations recorded in his article justify the use of unmixed chloroform as the second string to one's bow. I think, however, that his observations are of the greatest value as emphasising the danger of administering chloroform in any shape or form by means of a closed inhaler.

I am, Sirs, yours faithfully,

J. FREDK. W. SILK.

Anæsthetist to Guy's and King's College Hospitals &c.
Weymouth-street, Portland-place, W., Feb. 18th, 1895.

To the Editors of THE LANCET.

SIRS,—I should like to make a few comments on the article on Anaesthesia by the Chloroform and Ether Mixture by Dr. Edgar Truman in the last issue of THE LANCET. His arguments against the use of this mixture are based on the rapidity of vaporisation of ether compared with chloroform, and hence, as shown by his analysis, that "the patient would be inhaling 100 volumes of ether to 0.953 of chloroform at the first, whilst..... at the last would be inhaling 100 volumes of ether to 75 of chloroform." Allow me to point out that from a practical point of view this is a desirable result, because it is the beginning of the administration which is the most dangerous time; therefore there is more safety at this period from the fact that the patient is chiefly breathing ether. When the patient is fully under, the increased proportion of chloroform in the vapour inhaled is of much less danger, and even at this period Dr. Truman admits that there is an excess of ether over the chloroform. In conclusion, I may state that the increased

safety of the mixture compared with the use of chloroform alone is obvious to anyone who has had experience of both.

I am, Sirs, yours faithfully,

C. F. MARSHALL,
Late Anaesthetist to the Hospital for Sick Children,
Great Ormond-street.

Charing-cross-road, W.C., Feb. 16th, 1895.

"THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—Dr. Lovell Drage has resorted to a common dialectic device and gone off at a tangent to discuss questions which were not raised in the letters written by Sir John Williams and myself—viz., the examination and registration of midwives. His views on these topics are well known, and I must beg him to excuse me if I do not follow him into so useless a controversy. So far as I know, the General Medical Council has expressed no opinion upon them, and there is no reason to suppose that it has formed one unfavourable to either. What the Council has done is to inform the Obstetrical Society that it has arrived at the conclusion, apparently formed after hearing one side of the question only, that its diploma is liable to the objection of being a colourable imitation of a "licence to practise medicine, surgery, and midwifery." As soon as possible after the receipt of this resolution the society resolved not to issue any more diplomas until a form was decided upon satisfactory to the Council. The society was not asked to discontinue its examinations, and I do not know what more it could have done; but the society may, I think, reasonably complain of the needlessly offensive and irritating terms in which the resolution was couched. I have been taken to task for calling the resolution "insulting"; but surely it is nothing less than insulting to a body of honourable men, banded together to promote the welfare and progress of an important department of medicine, to associate with its work such a formula as "infamous in a professional respect," hitherto restricted in its application to the most degraded and ignoble members of the profession? I have been informed by a member of the General Medical Council that this resolution was passed because the Council believed that repeated representations had been made to the society which had received no answer. No such repeated representations ever reached the society, and this plainly indicates very slipshod and ineffective business arrangements on the part of the Council. In any analogous case in private life should it be shown that action was taken on unfounded premises explanation would certainly be made. I do not see why the Council as a body should not be expected to respect the courtesies and amenities of life, which its members would certainly attend to in their private and individual capacities. Perhaps you could find space to print this famous diploma, of which I enclose you a copy, so that your more impartial readers may judge for themselves whether it is or is not a colourable imitation of a "licence to practise medicine, surgery, and midwifery."

I am, Sirs, yours truly,

W. S. PLAYFAIR.

George-street, Hanover-square, Feb. 16th, 1895.

[COPY]

OBSTETRICAL SOCIETY OF LONDON.

We hereby certify that
has passed to our satisfaction the examination instituted by the
Obstetrical Society of London, and is, in our opinion, a skilled midwife,
competent to attend natural labour.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—In replying to that part of Dr. Pavy's last letter which alone concerns me I will be as brief as possible; but to make the position clear I must begin by a somewhat long extract. After saying that it is the actual presence and not the quantity of sugar in normal urine that he has contended for, he proceeds to say: "Sir George Johnson has based arguments upon the quantity he says I have asserted to be present. I have not, however, committed myself to anything absolute upon this point. My statement contains

the provisional 'if' to meet the doubt that existed in my mind. It runs thus: 'If the cupric oxide reduction found to occur [after treatment with the neutral and basic lead acetate] be read off as produced entirely by sugar, the amount of this principle ordinarily existing in healthy urine may be said to stand at about 0.5 or a little over per 1000. As long as Sir George Johnson only quoted me imperfectly I did not consider it necessary to take any notice, but Dr. Halliburton at the end of his letter falls into the same imperfect representation.' It is remarkable that not only I and Dr. Halliburton, but Dr. Noel Paton¹ also, failed to discover how much was concealed beneath Dr. Pavy's "provisional 'if,'" and thus, not seeing what was in the author's mind, we are charged with having quoted him imperfectly. Let me remark in passing that Dr. Pavy, referring to Dr. Halliburton's admission that a small amount of sugar is obtainable from normal urine, omits to quote the following sentence: "Whether this is artificially produced by the method of analysis as suggested by Sir George Johnson is a subject that demands renewed research." I will not follow Dr. Pavy's example by suggesting that this omission is an "offence to literary probity."²

In a letter of mine which was published in THE LANCET of July 21st, 1894, occurs the following query: "Does Dr. Pavy still maintain, as he did in his paper in vol. lxiii. of the Transactions of the Royal Medical and Chirurgical Society, that while one-fourth of the reducing action of normal urine upon cupric oxide is accounted for by uric acid, the remainder of the reduction, which would amount to at least half a grain of glucose per ounce is 'due to the small amount of sugar naturally present in urine?' and, further, 'it is doubtful if there is any other body worthy of consideration to produce any reducing effect.'" To this question Dr. Pavy made no reply, his reason, perhaps, being that as "Sir George Johnson only" asked the question he "did not consider it necessary to take any notice." It is evident that when Dr. Pavy's paper was published in 1880 he knew nothing of the existence and the reducing power of urinary kreatinine. At that time this want of knowledge was excusable, but since then it has been proved that the removal of kreatinine from normal urine leaves no reducing agent in the filtrate; and yet further that the amount of reduction effected by normal urine having been accurately determined a solution of kreatinine of the same indicated strength causes an equal amount of reduction, whether determined by the cupric oxide or by the picric acid method. It is inconceivable that so accomplished a physiologist and chemist as Dr. Pavy can be ignorant of these now notorious facts, and it is probable that beneath the "provisional 'if'" there is concealed more than has hitherto been revealed to the ordinary reader. I venture to suggest that in the sentence which Dr. Pavy has quoted from his book if the word "kreatinine" were substituted for "sugar" the only inaccuracy would be in the estimated amount of reduction. Numerous careful observations have shown that the average amount of reduction in normal urine excluding uric acid is 0.8 grain per fluid ounce calculated as glucose, indicating in round numbers about a grain of kreatinine to the fluid ounce of urine, which is equivalent to 0.23 per cent. by weight of that substance.

I am, Sirs, yours faithfully,

Savile-row, W., Feb. 18th, 1895.

GEORGE JOHNSON.

To the Editors of THE LANCET.

SIRS,—I am sorry that my letter on this subject should have raised so much feeling on Dr. Pavy's part. The only point I feel bound to answer is Dr. Pavy's statement that I have misquoted him. At the conclusion of his account of the experiments I referred to Dr. Pavy writes: "The circumstances observed stand, it is to be remarked, in accord with the statement of Pasteur that acidity opposes, while alkalinity favours, the occurrence of fermentation." From this I somewhat naturally concluded that Dr. Pavy had been dealing with alkaline solutions. But even if the solutions were absolutely neutral it is difficult to understand how the neutralisation of strongly acid substances can be accomplished by sodium carbonate without the evolution of carbonic anhydride. If for no other reason than this I still feel bound to adhere to my previously expressed opinion that the use of sodium carbonate for neutralisation is a source of error in the fermentation test.

¹ Edinburgh Medical Journal, December, 1894.

² See Dr. Pavy's letter in THE LANCET of Feb. 9th, 1895.

Evolution of carbonic anhydride would occur even more rapidly if the solutions are neutral than if they are alkaline; for if the solutions are strongly alkaline there is a liability of sodium bicarbonate being formed, and thus little or no free gas makes its appearance.

Since the foregoing paragraphs were written I have learned, in conversation with Dr. Pavy, that he neutralised with sodium carbonate several hours, and in some cases days, before the application of the fermentation test. This, one must freely admit, alters the case, for one cannot but suppose that all decomposition in which sodium carbonate took place would be over by that time. It would perhaps have been well if Dr. Pavy had stated this originally, for observers who tried to repeat his experiments would otherwise have fallen into the source of error of which the first part of this letter speaks. For those who work rapidly, I think Dr. Pavy will himself admit that it would be wiser for them to adopt some other alkaline material for the purpose of neutralisation. The object of such a correspondence as this is, I take it, to get to the truth of the matter, and would it not assist us in so doing if Dr. Pavy would amplify his position in other directions also? For instance, in speaking of the detection of alcohol Dr. Pavy alludes only to the chromic acid test. Now this test is given by several volatile organic substances. It would, therefore, add to the value of this discussion if Dr. Pavy would state whether other tests were applied for the identification of alcohol. Then, too, there is the question of kreatinine. If Dr. Pavy would state definitely once and for all his opinion on this matter we should be nearer a solution of the difficulty between Sir George Johnson and himself.

I am, Sirs, yours faithfully,

W. D. HALLIBURTON.

Ridgmount-gardens, W.C., Feb. 18th, 1895.

"SCHOOL BOARDS AND MEDICAL CERTIFICATES."

To the Editors of THE LANCET.

SIRS,—The question of signing School Board certificates has been constantly before us in this district. I always refuse to sign them or allow my house surgeon to do so, telling the applicants that if summoned I will attend as a witness on their behalf. This would result in the cases being dismissed with costs against the School Boards, and consequently they never adopt this procedure. Recently one of them wrote to my committee requesting that it would direct these certificates to be signed. I explained that they were not wanted by the children or their parents, but by the School Boards, and as I was not a servant of the School Boards they were not entitled to my gratuitous services. My committee sent a reply to the effect that the question of certificates for School Boards had nothing to do with it, its duty being only to administer the hospital for the benefit of the poor. Surely School Boards ought to have paid medical officers to whom they could refer all such cases.

I am, Sirs, yours faithfully,

ROBERT W. DOYNE.

Surgeon, Oxford Eye Hospital.

Oxford, Feb. 18th, 1895.

THE ABUSE OF MEDICAL CHARITIES.

To the Editors of THE LANCET.

SIRS,—The following case is a good example of the above. Three weeks since a patient upon whom I had operated for ovarian disease eight years since came to me with a like tumour of the other ovary calling for immediate removal. The fee was arranged, after the now usual wish expressed (save probably in some special instances) to have this moderated to any possible extent, but the only reason the husband could offer was that his money was locked up in his business. As it was inconvenient that the operation should be done at her own house, which was also the place of business, it was arranged that it should take place at a nursing home where other of my cases have been, and the cost of such was not objected to. A few days later I received a note from the husband, enclosing a letter of admission to the paying wards of the Hospital for Women, Scho-square, and asking me to sign that portion of the form stating that the patient was from my "personal knowledge" a fit and proper person to be admitted to these wards at the payment of one guinea per week. This, I pointed out to the husband, I could not do. I wrote to the

secretary of the hospital stating that I had refused to do so, and adding that I was satisfied they would find on inquiry that the patient was not a proper person for hospital relief. I enclosed a printed memorandum heading showing that the husband was a partner in the firm, and giving the address. I would here add that on the earlier occasion of my operating, when my fees and those of a medical man whose immediate patient she then was were cheerfully paid, the husband was only a servant of the then existing firm. A few days later the secretary wrote me (Feb. 7th) that he had "laid my letter in reference to Mr. —'s case before the committee of management, and am instructed by them to inform you that after due inquiry they have satisfied themselves that the case is a proper one for admission to the hospital." Comment is needless.

I am, Sirs, yours faithfully,

Phillimore-gardens, W., Feb. 19th, 1895. WILLIAM TRAVERS.

"FEVER AND SMALL-POX HOSPITALS."

To the Editors of THE LANCET.

SIRS,—In connexion with the leading article with this title in THE LANCET of last week on a memorandum on isolation hospitals by the medical officer of the Local Government Board, in which you express your disagreement with those who seek to limit the power of diffusion of small-pox, I should like to say a few words.

In the paragraph of my report, which you quote, the extreme limit of diffusibility is put at 1000 feet. My reasons for this opinion were based upon one year's experience of the complete immunity of a considerable population residing in public institutions at about this distance from a small-pox hospital. The number of patients who passed through the small-pox hospital during the year was 1563, all of whom were admittedly in an undoubtedly infectious condition. There were good reasons for supposing that the inmates of the institutions referred to were on about the same footing as regards protection from small-pox as the general public. Why, then, should the question of vaccination and convalescence be used as arguments to invalidate the conclusion at which I arrived? The argument as to convalescence appears to me to be simply a begging of the question. Whatever sense is attached to this term by the officers of the Local Government Board, the fact remains that the patients were all infectious when admitted, and were discharged as soon as they were free from infection. The experience to which I drew attention in my report may or may not be solitary, but it is not capable of explanation, in my opinion, on the grounds given in your article; and it is opposed to the view of those who hold to any higher degree of diffusion than the 1000 feet limit.

I am, Sirs, yours obediently,

C. E. MATTHEWS.

Fountain Hospital, Tooting, Feb. 20th, 1895.

"AN APPEAL."

To the Editors of THE LANCET.

SIRS,—I was truly grieved to learn from Mr. Upton's letter in THE LANCET of Feb. 16th that the widow of Professor G. J. Guthrie is practically penniless. I do not know why she was left unprotected for; but I do know that every member of the profession, whether he is aware of it or not, is indebted to Guthrie for the work which he embodied in his "Commentaries on the Surgery of the Peninsular War"—especially on the subject of the treatment of hæmorrhage. Guthrie's work was almost always heavy and anxious; yet in spite of all difficulties, and often of danger, he went on collecting, examining, and describing the specimens which were to prove his views. "At Toulouse a large shot struck an officer and nearly tore off the right thigh. I saw him shortly afterwards every indication of approaching dissolution. The house being close to one of the French redoubts the fire of round shot and musketry was so severe as to induce me to remain until the battery should be taken by the troops then advancing upon our flank. To occupy my time usefully I returned to the officer and found he had just expired. Desirous of seeing by what means the hæmorrhage had been arrested I cut down upon the artery, took it carefully out, and found," &c. Thus Guthrie obtained the facts which definitely settled the principles of treatment in cases of hæmorrhage. Surely, Sirs, we as a profession will not allow the widow of such a worker to die of want. I trust that at least treble the amount asked for by Mr. Upton will

be promptly promised and in the form of annual subscriptions. A guinea or two a year from a few of us during the rest of Mrs. Gathrie's life is all that is wanted to enable her to end her days free from the terrible strain of pecuniary anxiety.

I am, Sirs, faithfully yours,
Harley-street, W., Feb. 19th, 1895. STANLEY BOYD.

"MEDICAL WITNESS AND JUDGE."

To the Editors of THE LANCET.

SIRS,—In an annotation under the above heading in THE LANCET of Feb. 16th the expression "there was no evidence that penetration had occurred" was a "correct phrase" and "logical inference" from the facts of the case—i.e., penetration may or may not have occurred, but if it had there was no proof or evidence of it. A purulent discharge is no proof of penetration, nor is semen, pus, and epithelial scales on the shirt of a prisoner. The prisoner was examined a few days after the alleged assault by the gaol surgeon and found to have no discharge. I was a scientific witness and had to deal with other conditions observed by myself, and not "presumptive evidence," that being a matter for the judge and jury. I based my opinion upon my examination and not upon the evidence of the prosecutrix.

I am, Sirs, yours faithfully,
Southsea, Feb. 16th, 1895. LYSANDER MAYBURY.

"THE CONSUMPTION SCARE."

To the Editors of THE LANCET.

SIRS,—Referring to the leading article under the above heading in THE LANCET of the 22d inst. I venture to ask your indulgence in order to point out one or two matters in connexion with this subject which are not commonly recognised, and which should rouse the public care and interest to preventive action.

We all have brought before us day by day the serious consequence of the marriage of phthisical persons; it may be the disease is not hereditary, but the predisposition is acknowledged to be hereditary, and I have seen whole families swept away miserably. I have seen others live, perhaps, more miserably; for instance, where both parents are phthisical and unable to gain a decent livelihood. I have seen a family growing up afflicted in all sorts of ways, with brain disease, mesenteric disease, and still increasing in numbers. I remember cases where whole families of eight or nine have died, chiefly from meningitis, and I feel sure that many of the parents would not marry if they knew clearly their responsibility and there were homes to which invalids could go. It is known that cows which are tuberculous exist in sheds, and there is no law by which they can be seized, although we are told by the best authorities that the milk of such cows is a chief cause of tuberculous disease in children. We can forbid the sale of the milk if we can catch people selling it, but we cannot touch the cow; then clearly power is wanted to destroy the cow and compensate the owner. Authorities tell us that 10 per cent. of cattle slaughtered are tuberculous, and we know that diseased carcasses of all sorts are sent off to towns, and there seems no protection against this if the viscera and ribs are kept back and sold in the country, where the inspector of nuisances is not often capable of detecting disease, nor is he likely to supervise properly 200 or 300 slaughter-houses scattered through his district—probably the police might be trained to do this. Rows of old, dark, dilapidated, damp, dirty houses with little air space continue to exist in spite of the attempts to abolish them when we know that sunlight and pure air, with strict cleanliness of floors, walls, and furniture, are necessary for protecting children from the attacks of this destructive disease.

Dr. Cornet points out that beds, especially at lodging-houses and hotels, are probably a source of danger, and this opinion has long been held in Malaga and other resorts of the phthisical, yet we all see day by day lodging-houses where lodgers follow one another for 3d. per night's accommodation, but the sanitary authority has no power to order the disinfection of the beds from time to time, while the practical remedy seems to be that the authorities should have some power to order spring mattresses to be covered with blankets and straw pillows, and the blankets to be boiled at defined intervals. As a rule, there is no proper steam disinfecting apparatus for beds in small places, though many decent people would like

their beds purified, after disease particularly. I know of no homes, excepting the cottage homes which Dr. Trudeau has established near the Adirondack Mountains, where a young man or young woman warned of tuberculous disease or tendency can go, and not one where they may live quietly and partly gain their independence by a pleasant easy occupation such as fruit, flower, rose, or vegetable growing under glass, or where, as in the highlands of the Cape, Australia, Peru, or California, they may in the bright, dry atmosphere of the mountain or near the sea hope to recover their health by occupation in the pure air. Monasteries and abbeys have been, and are, established for more or less useful purposes perhaps, but I am aware of no home, no wealth, no intelligent energy devoted to so noble an object as restoring health to the sick phthisical and partial independence to those in delicate health inherited from phthisical parents who ought not to marry and desire to engage in some useful healthy occupation. It seems as though we preferred to pay for crippled lives of children and slow deaths in preference to taking any trouble to prevent such things, or otherwise the subject is not understood by the public, and some scare seems wanted to rouse the public conscience to such dangers as exist.

I am, Sirs, your obedient servant.

M.O.H.

"THE REMUNERATION OF THE RESIDENT OFFICERS IN ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—With regard to the letter on this subject which appeared in THE LANCET of Feb. 9th, there is, I think, no doubt that payment of a fee or having to board oneself during a resident appointment may be to a few a positive hardship, coming as it does at the end of a long and expensive curriculum, when many feel the necessity of at least earning enough to help themselves; but at the same time "Fair Pay" is hardly in keeping with his title when he calls the system a sweating one and states that the resident gives time and health up for no return. The very fact of having held an appointment at a hospital belonging to a medical school is invaluable in after life. It brings a man into constant personal contact with some of the leading members of the profession; it gives him confidence in himself; it is the best stepping-stone to other appointments; and, in short, is the very best start a man can make after getting qualified. Surely, then, these are some returns for the time given, returns no doubt largely depending on the personal factor in the case, but in most cases incomparable to the small amount that may actually at the time be lost out of pocket. St. Bartholomew's is not the only hospital where a fee is charged. At Middlesex the fee is £10 10s. for a six months' appointment, but there the resident is boarded and lodged free of further charge, and I believe there are also other hospitals where a small fee is charged.

I am, Sirs, yours faithfully,

Feb. 18th, 1895.

LATE HOUSE PHYSICIAN.

To the Editors of THE LANCET.

SIRS,—It is because I am an old resident at other hospitals as well as at St. Bartholomew's, and because I know the difficulty in obtaining reforms from hospital committees, especially when it is a question of finance, that I broached the above subject in your columns. I admit with your correspondent, "An Old House Surgeon of St. Bartholomew's," that the experience gained as a resident there is invaluable, and that one has a "general good time"; but I do not think men join hospitals as junior officers for the latter purpose, nor should I think it worth while to pay £50 for it. The main point is that other hospitals not so well off can support their residents, then why not St. Bartholomew's. Personally I blush for my *alma mater* when I compare it with other institutions in this matter, and I feel sure that the present system must prevent some of its students who cannot afford a "good time" from applying for the various posts which would otherwise be open to them. I have not actually come across such a case, but I have not the least doubt that they exist. Your correspondent knows as well as I do that while men are resident in the hospital they have not the opportunity of broaching such a subject as this, nor would they be listened to if they did. Except as an old student of the hospital it does not concern me now; but it did very much once, and I venture to think that should this correspondence

help ever so little in hastening the better payment of these officers, which I am confident will be accomplished ere long, it will not have been in vain.

I am, Sirs, yours faithfully,

London, Feb. 16th, 1895.

FAIR PAY.

To the Editors of THE LANCET.

SIRS,—Many past and present students of St. Bartholomew's will agree with "Fair Pay" in his strictures upon the governing body of the richest hospital in London for making it necessary that a man should spend £50 (and this a minimum) if he obtains a house physician's or house surgeon's appointment. In my own case, after I qualified I was offered a house appointment at St. Bartholomew's at a definite date, and was unable to accept it owing to the expense involved. At the time I left the hospital—not more than four years ago—I knew of two or three men in a similar position to myself in this respect.

In his reply to "Fair Pay's" letter "An Old House Surgeon of St. Bartholomew's" asserts that this is a question of no concern to anyone unconnected with the hospital. His own letter shows why it is of interest to the profession in general, for it is important for the profession to see that house surgeons are taught by this improper system that their relations with other medical men are to be regulated by no other consideration than the "law of supply and demand" in its money sense, and that "An Old House Surgeon of St. Bartholomew's" has learnt his lesson so well that he allows himself to rejoice at having had "a general good time" at the expense of his poorer contemporaries.

I am, Sirs, yours faithfully,

Feb. 18th, 1895.

R.M.O.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary.

THE annual meeting was held the other week, and the report shows that this, the oldest medical charity of Manchester, is still growing and extending. During the year 1356 patients have been treated within its walls. There have been 33 889 out-patients, 970 have been treated at their own homes, 2633 have been received at the Monsall Fever Hospital, and 1610 have been sent to the Convalescent Hospital at Cheadle. The expenditure has been as follows: Royal Infirmary, £17,999; Convalescent Hospital, £5518; and the Monsall Fever Hospital, £13 865. The Infirmary, however, is not large enough for the demands made upon it, and there is much perplexity as to the best method of increasing the number of beds, of providing administrative requirements, and the means and appliances necessary for the complete equipment of a modern hospital. This difficulty is increased by a resolution of the trustees, passed in 1892, which forbade the covering of more land than is occupied by the present building. Strong objection has been expressed from time to time in the City Council to any further encroachment on the surrounding space, and on this point the Council may be taken as a reflex of public feeling. Various schemes for enlargement have been suggested, but two only seem feasible. The first and best would extend the front, and so form two additional wings, which would add 100 beds and give space for the other requirements; but it is blocked by the resolution of 1892. By the second another storey would be put on the present building. The adoption of either plan would be a mistake—indeed, a misfortune. Though the sanitary condition of the Infirmary is good and the patients do well, the perpetuation of antiquated structural defects, such as long gloomy corridors, which add greatly to the difficulties of ventilation, would be deplorable. Far better would it be to pull it down altogether. A new hospital might be built on the present site giving the required accommodation, and if necessary the nurses could be domiciled in the immediate neighbourhood.

Price of Gas and of the Electric Light.

A long discussion took place at the last meeting of the City Council as to the price of gas. The gas committee recommended the Council to abolish the charge for the hire of gas-meters and to reduce the price of gas used within the city for other than lighting purposes from 2s. 6d. to 2s. per 1000 feet. It was further recommended that "the price of

electric current be reduced from 8d. per unit to 6d. per unit," and to long-hour consumers that the present charge of 2d. per unit, with fixed charge equal to 4s. per quarter per lamp, be continued. In the end it was resolved that meter rent should be abolished and that the price of gas should be reduced to 2s. 3d. for all purposes. This will to some extent encourage the use of gas for domestic purposes and for gas-engines in place of small steam-engines, with a proportional clearing of the air from smoke. There remains the drawback, however, of a great excess of sulphur in the Manchester gas. It is a serious evil, towards the removal of which more ought to be done than is at present apparent. The reduction of 25 per cent. in the price of the electric light will tend to popularise it still more, and it is already becoming a serious rival to gas.

Manchester Hospital Work Society.

The above society held its sixth annual meeting recently, and the report shows how usefully it supplements in some directions the work of medical charity. It is mainly concerned in providing and distributing to the various hospitals articles of clothing corresponding as far as possible with the number of beds in the hospitals supplied. "The total number of beds in the sixteen hospitals is 1657, and the number of garments provided 1643. The committee continue to receive from the authorities of the different hospitals reports which abundantly testify to the beneficial effects resulting from the use of garments supplied for ward purposes by the society." It may be mentioned that the honorary treasurer and secretary are the wives of medical men.

Provident Dispensaries.

The working of these institutions as at present conducted may be illustrated by the report presented at the annual meeting of a branch dispensary in Salford. After expressing pleasure at there being a favourable balance the report proceeds as follows: "We also again beg to remind the members (and the public generally) that this dispensary is in no sense a charity, as each person pays for what they actually receive in time of sickness." The grammar may be passed over. It goes on to urge the members to request their friends and neighbours to join, for by so doing "they incur no heavy doctors' bills, and have no need to apply for free medical aid. There is no wage limit, so that application for membership is open to all." At the beginning of the year this dispensary, which is no charity, had 3074 paying and 3724 gross members. What gross members are does not appear, but the numbers had increased to 3214 paying and 4343 gross members. "During the year there have been 7765 consultations with the medical officers, in addition to many visits made at members' own houses." The gross profit for the year was £75 19s. 5d., of which £12 went to the Council of the Provident Dispensaries Association, "and the balance, £63 19s. 5d., was divided among the medical officers in proportion to the number of members attached to each." The dispensary has a reserve fund of £322 8s. 10d. It appears, therefore, that for each of the 7765 consultations a member of the medical staff was rewarded with something less than twopence, and the many visits to the members' homes were given in. If the value of the consultation is also less than twopence to the suffering member, it must also be remembered that he is in no sense a charity patient, "as each person pays for what they actually receive in time of sickness." Perhaps, however, the medical practitioner looks on it differently, and appraises the value of his services somewhat higher. It would seem a pitiful business. Anyone may join the dispensary, whatever his means, and may have a consultation for less than twopence.

The Clinical Hospital for Women and Children.

The annual meeting was held yesterday, and the report was an echo of those from most of the other charities. The out-patient department has been brought to the front of Cheetham Hill-road, with the result of very largely increasing the number of out-patients—viz., from 9517 in 1893 to 10,573 in 1894. The number of in-patients had been: women, 180; children, 725; somewhat fewer than in 1893. The Chairman said more money was wanted. They had spent £746 more than the income. The annual expenditure was £3000, and of this £1000 came from the Hospital Sunday and Saturday Funds, £1000 from investments, and for the other £1000 they had to depend on subscriptions and donations. A deficiency of £746 brings the amount derived from the last source down to £254, a somewhat sorry sum. In truth, the support of the various charities devolves on the few, who

give generously, and but little on the many, who give next to nothing. If those of the 700,000 inhabitants of Manchester and Salford who could without inconvenience give a small sum were to do so a different state of things would exist; but, it is to be feared, for a time only. There would still be the competition among the hospitals and the increasing willingness of the people—not of the poorest class only—to receive medical attendance without payment, so that the demands on the resources of the hospitals would increase apparently *pari passu* with their means.

Feb. 19th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Contract Bread.

AN action by a baker was recently brought in the County Court here against the King's Norton rural sanitary authority for £25 for breach of contract. There was a counter action for £55s. for breach of contract by the plaintiff. It seems that a contract was entered into for the plaintiff to supply the Infectious Hospital with bread made with best seconds flour at 4d. per 4lb. loaf. The evidence of the hospital steward showed that the bread was imperfectly made and unfit for patients, some of whom were paying patients; it was doughy, heavy, and not sweet. A medical man who happened to be a patient for six weeks gave corroborative testimony that the bread was dark in colour, coarse, and badly baked, but that the climax was reached when on cutting his bread one day he found the body of a cockroach inside. A verdict was given for the defendants on the claim, and for the plaintiff on the counter claim. Bread according to sample should evidently be looked after by the officers of such institutions.

The Dangers of Home-made Medicine.

A singular action was brought lately by a man against a firm of druggists to recover £50 damages alleged to have been sustained by the negligence of the defendants' servants in supplying to the plaintiff for the use of his wife a quantity of quinine greater than that demanded. The evidence went to show that at the defendants' shop was a notice "prescriptions accurately dispensed." The plaintiff's wife had neuralgia and he went to purchase five grains of quinine, for which he paid to a boy in charge of the shop 2½d. Having mixed the quantity given with port wine he gave some to his wife, who became very ill afterwards and remained so for some weeks. On returning to make inquiries it was found that five drachms had been given instead of five grains, the boy in charge admitting that he did not know the scales or the weights or the drugs. It was pleaded, in defence, that in law the defendants had no duty to the person to whom this drug was administered, and that there was contributory negligence on the part of the husband who had made the mixture. The judge summed up against the plaintiff both upon the facts and the law; he thought that there was contributory negligence on the part of the man, and he also held that there was no duty to the woman.

District Nursing.

The annual meeting of the District Nursing Society was held on the 14th inst. The report stated that the visits of the nurses had been 6000 in excess of the previous year. The expenditure had exceeded the income by £100. The usual votes of thanks were passed.

The National Society for the Prevention of Cruelty to Children.

The branch of this society located in this city is doing useful and valuable work in the direction of its aims. The annual meeting held on the 18th inst. showed that the number of cases dealt with was 425—namely, for neglect, 310; ill-treatment, 69; causing to beg, 17; assault, 12; exposure, 8; immorality, 3; other wrongs, 2. This is a lamentable roll in a civilised community, and worthy of the attention of philanthropists and benevolent people. It was stated that the National Society was £4000 in debt. Last year the branch sent £242 to the parent society, this year £101. The objects of the society were forcibly pointed out by different speakers and credit given to the officers for the careful manner in which the prosecutions had been conducted.

Feb. 19th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The University Court of St. Andrews.

A SPECIAL MEETING of the University Court of St. Andrews was held at the end of last week. The object for which the meeting was called was to reconsider the decision of a previous meeting respecting the Bill proposed to be introduced into Parliament having for its object to annul the affiliation of University College, Dundee, to the University of St. Andrews; and also to reconsider the decision regarding the foundation of two medical chairs out of the Berry Bequest, as has already been intimated in THE LANCET. Professor Purdie moved that the motion in favour of the Bill to annul the affiliation be rescinded, and this motion was seconded by Lord Provost Low. The amendment moved by Mr. Scott, and seconded by Dr. Balfour, was to the effect that it was undesirable to reopen the question. The motion was carried by 9 votes to 8. There was also read to the meeting an extract minute of the Senatus Academicus showing that the Senatus had by 11 votes to 4 passed a resolution disapproving of the proposed establishment of two additional medical chairs out of the Berry Fund. There was also read a communication from the Students' Representative Council stating that at a mass meeting of the students a resolution deprecating the decision of the court regarding the foundation of medical chairs had been carried by 93 votes to 3. Professor Knight moved: "That the University Court, having reconsidered the decision, do come to at its meeting on Jan. 26th, rescind the same, and refers the subject of the proposed medical chairs back to its business and finance committee, with instructions to bring up a report on the whole distribution of the Berry Fund at the earliest possible opportunity." Dr. Balfour moved and Dr. Dow seconded: "That the court adheres to the resolution as to the foundation of two additional medical chairs." This amendment was carried by 8 votes to 7.

Health of Edinburgh.

Small-pox still asserts itself in Edinburgh. Last week the fresh cases intimated numbered 12. The epidemic of measles also continues, 539 cases having been intimated last week, while there were 10 deaths. Thirty-seven fresh cases of scarlet fever were also intimated.

Economy at the Edinburgh Royal Infirmary.

At the meeting of managers of the Royal Infirmary on Monday it was intimated that there had been a decrease in expenditure for the quarter ending Dec. 31st of £876. As this does not seem to imply any diminished efficiency the result is most satisfactory.

Royal Edinburgh Hospital for Sick Children.

The annual report of this hospital shows that during the year 665 cases have been treated in the wards, while at the dispensary 8076 cases have been attended to. The income was rather more than £700 in excess of the expenditure. The amount received for the building fund was £6391, and it was intimated that the new hospital was expected to be ready before next winter. Money is urgently needed for carrying on to a satisfactory completion the erection and maintenance of this useful institution.

The Weather in Edinburgh.

The continued severe frost has led to much discomfort in Edinburgh, many houses having their water-supply entirely cut off by frozen water-pipes. At the end of last week, when there was a short thaw, much damage was done by flooding from burst pipes. People in many streets are being supplied with water in buckets directly from the mains. The continued frost has also told heavily upon the poor and the working classes, but measures are being taken to provide food and fire for the poorest.

Public Health of Glasgow.

During the past week the city death-rate has been exceptionally high, being at the rate of 43 per 1000 of the population per annum, a rate which has not been equalled for at least twenty years, though before that date such a mortality was not uncommon. In the previous week the rate was 32, while in the three preceding years during the periods corresponding to last week the rates were 20, 22, and 22. This alarming mortality does not seem to be due to any epidemic, though influenza has been very prevalent for at least a

fortnight; it is ascribed to the present extremely cold weather, many of the very young and very old, and those suffering from chronic chest ailments, being cut off. Small-pox has spread slightly, as was expected; three cases have been discovered during the week, and the number now in hospital is forty.

Association for Relief of Incurables, Glasgow.

From the report of this association it appears that its "Home" started last year with 94 patients, 16 were admitted during the year, and there had been 8 deaths and 6 removals, leaving 96 at the beginning of the present year. The number of those receiving out-door relief is 187. In the twenty years of its existence this association has given help to 850 out-door patients and 434 in-door, making a total of 1284. The financial year closed with a credit balance of £7 3s. 1d.

Feb. 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Regulations as to Revaccination.

AN Order in Council, published in the *Dublin Gazette*, defines the regulations that shall apply to revaccination by medical officers in dispensary districts in Ireland. The revaccination of persons applying for the purpose shall be limited by the following conditions: (1) that the person has attained the age of ten years, or if there be an immediate danger of small-pox the age of seven years; (2) that the person has not before been successfully revaccinated; (3) that there are no circumstances present which would render the operation undesirable; and (4) that the medical officer can afford lymph for the purpose without interfering with the performance of primary vaccination in his district.

Royal University of Ireland.

At a meeting of the Senate held last week the Royal warrant appointing Mr. M. F. Cox, L.R.C.S., a member of the Senate was received. The following medical gentlemen were appointed Fellows of the University:—George Sigerson, M.D., R. O. Cunningham, M.D., A. E. Birmingham, M.D., John J. Charles, M.D., Denis J. Coffey, M.B., Patrick J. Hayes, M.D., John J. Lynham, M.D., Joseph P. Pye, M.D., Wm. Thornley Stoker, M.D., and Johnson Symington, M.D. The following examiners were elected for the ensuing year:—In Medicine: Joseph F. O'Carroll, M.D. In Midwifery: John W. Byers, M.D., and Alfred J. Smith, M.B. In Medical Jurisprudence and Hygiene: Chas. Y. Pearson, M.D., and Antony Roche, M.R.C.P. In Materia Medica: F. J. Quinlan, M.D., and Wm. Whittle, M.D. In Ophthalmology: J. Walton Browne, M.D., and Louis Werner, M.B. In Pathology: James L. Smith, M.D., and Edmond J. McWeeney, M.D. In Sanitary Science: Sir Charles A. Cameron, F.R.C.S.I.

Sir Patrick Dun's Hospital.

A bazaar and *fête* will be held next May at Ball's Bridge in aid of the funds of this institution, which, in consequence of the land agitation, has had its endowment revenue permanently decreased by £1000 a year. This hospital was founded in 1800, and was partially endowed by Sir Patrick Dun. For many years it only admitted medical cases, and during the famine years of 1826-8 and 1846-8 upwards of 10,000 cases of fever were treated in the wards of the hospital. In 1866 it opened its doors for accidents and all sorts of cases—medical, surgical, and gynaecological. It now possesses isolation wards for the reception of cases of infectious fevers, and so the safety from infection of the inmates of the general hospital and of the public who visit them is provided for. Within the last ten years the number of accident cases admitted into hospital has more than doubled, and the total number of patients attended to in 1893 was 12,000, in which were included 5000 accidents. The staff of trained nurses have been very successful and their services are eagerly sought for; and it is interesting to note that Sir Patrick Dun's Hospital was the first institution in the country to establish in 1867 and develop the modern system of skilled and efficient nurses which has conferred such benefits upon society at large. I heartily wish the promoters of the bazaar (Ierne) every success, and I am confident that some thousands will be added to the funds of a well-managed and most deserving charity.

Dublin Branch of the British Medical Association.

The eighteenth annual meeting of the Dublin Branch was

held last week in the Royal College of Physicians of Ireland. The report of the council was chiefly taken up with the condition of affairs in Cork between the medical profession and the benefit societies. A deputation from the Cork Branch waited on the council, and having explained how matters were the latter unanimously passed a resolution expressing their hope that the medical practitioners in Cork would maintain a united front against the attempt of the said societies to impose unworthy and inadequate terms on their medical officers. Dr. Atthill moved the adoption of the report, which was seconded by Dr. W. G. Smith, President of the Royal College of Physicians of Ireland, who said he was sure that the members of the branch would be unanimous in backing the action of the council in supporting the stand which the Cork and Southern practitioners had made against what would be an intolerable tyranny and an insufferable degradation to the profession.

Pharmacy Prosecutions in Dublin.

At the Southern Police-court last week the Pharmaceutical Society prosecuted a firm for having sold Fellows' Syrup, which contains strychnine, without it being labeled with the name and address of the sellers, in contravention of the Sales of Poisons Act of 1870. They were also prosecuted for retailing and dispensing poisons contrary to the Pharmacy Act of 1875. The defendants were fined £4 with £3 costs in each of three cases.

The Battle of the Clubs at Cork.

Dr. O'Sullivan took out summonses against two of the students who snowballed him, with the result that the magistrates, after a short consultation, dismissed the case against one of the accused and fined the other ten shillings and costs "for throwing snowballs." *Parturiunt montes, nascitur ridiculus mus.* On the counts were conspiracy and assault. The decision was received with loud cheers, which were renewed and renewed again until all the students had left the court.

Small-pox in Newry.

The epidemic shows no signs of abating, and there are 41 patients in hospital. All the deaths which have occurred, with one exception, were among those who had not been vaccinated at any time.

It is rumoured that Dr. Pye of Queen's College, Galway, has been offered the Presidentship vacant on the 24th prox. The post is worth £1200 a year with residence.

Dr. Glascott Symes died on the 17th inst. at his residence, 2, Gresham-terrace, Kingstown, aged eighty-five years. He was one of the oldest, if not the oldest, Fellow of the Royal College of Surgeons in Ireland. He practised for many years in Kingstown.

Feb. 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Sale of Antitoxin.

SINCE the 10th inst. anti-diphtheritic serum is procurable only at druggists' shops, the price being marked on each wooden box enclosing the glass tube. A half tube (10 c.c.) costs 3 francs, and a full-sized tube (20 c.c.) 6 francs, 25 per cent. of this going to the druggist. Certain fussy and, it must be acknowledged, over-thrifty journalists having expressed their astonishment at any price at all being charged for a product towards the supply of which the *Figaro* collected from the public no less a sum than £24,000, Dr. Roux has condescended to furnish the following explanation of this very reasonable step. Part of the sum above mentioned was first devoted to the purchase of 100 horses, which are now located at Garches. The keep of each horse involves an annual outlay of 1000 francs, thus making 100,000 francs, or £4000, for the entire stand. A 5 per cent. interest on the capital of 600,000 francs would yield only 30,000 francs a year, leaving a deficit of 70,000 francs to be made up by the sale of the serum. But no fewer than 50,000 doses of serum have been gratuitously distributed. Now, as each dose costs the Institute 6 francs, it follows that 300,000 francs have been given away. Nor must it be forgotten that the hospitals, *bureaux de bienfaisance*, &c. will continue to be supplied gratis with serum. With these considerations in one's mind, how can a

reasonable being expect the whole supply of serum manufactured at the Pasteur Institute to be given away?

The Activity of the Paris University.

The total number of students inscribed in the various Faculties of Paris (law, sciences, medicine, &c.) was for the year 1894 12,325, as against 11,914 in 1893. The number of examinations undergone was 8340 at the Faculty of Medicine, as against 6064 at the Faculty of Law, 8108 at the Faculty of Sciences, 11,000 at the Faculty of Letters, and 1951 at the School of Pharmacy. The number of readers at the Library of the Faculty of Medicine was 158,754 and the number of volumes lent 275,000. At the School of Pharmacy the corresponding figures were 16,605 and 76,813 respectively.

Paris Sausages and Horseflesh.

The Comité d'Hygiène tells us that an inquiry recently conducted reveals a greatly increased consumption of horseflesh in Paris. Thus in 1892 there were killed for this purpose in the Paris abattoirs no fewer than 20,000 horses; but it must not be supposed that all this horse meat was sold by the 120 horse butchers found in Paris. The larger portion serves for the manufacture of sausages. Now the sanitary inspection of the abattoirs of Paris is so conscientiously conducted that it may safely be said that not a particle of horseflesh is exposed for sale that has not been carefully examined by a capable veterinary authority. The increasing popularity of the horse-sausage impelled the Syndicat de la Charcuterie de Paris to demand a compulsory declaration of the nature of the meat used for this purpose. But the difficulty was how to distinguish between the *chevaline* and the ordinary contents of sausages. Now it would appear that, thanks to two German investigators, MM. Edelmann and Brautigam, the problem is solved. The meat is thoroughly chopped up and boiled for thirty to sixty minutes in four times its weight of water. The bouillon thus obtained has added to it, after cooling, 5 per cent. of commercial nitric acid, and it is then filtered through paper. A few cubic centimetres of the filtered product are poured into a test tube, and a few drops of iodised water (saturated while hot) are allowed to flow down the sides of the tube. With the horse bouillon there is formed a violet-red-brown ring which is not developed in veal, beef, mutton, pork, dog, or chicken bouillon. The hot saturated solution of iodine may be advantageously replaced by Gram's solution, which yields a more pronounced colouration. The Comité d'Hygiène has, therefore, determined to give satisfaction to the Syndicat, and henceforth horse sausages will be labeled accordingly.

The Sore-throat of the Menstrual Period.

M. Raymond Petit¹ is disposed to consider the above curious ailment an outcome of the local activity of the streptococcus. He points out that although the prognosis is generally good an abscess may develop or erysipelas of the face appear. He recommends the use of antiseptic napkins during menstruation, and would have every menstruating woman employ systematically antiseptic gargles and mouth washes, woman constituting during her genital periods (accouchement, menstruation) a favourable medium for the growth of the streptococcus. I may add in support of M. Petit's contention that having recently to attend a young English girl for sore-throat during the menstrual period I succeeded in cultivating in serum colonies of the streptococcus, no other micro-organism being present.

Death of Dr. Dujardin-Beaumez.

This morning the largely attended funeral service of the above well-known physician took place at the ancient church of St. Germain-des-Près. This distinguished therapist died on the 15th inst., aged sixty-two, at Beaulieu-sur-Mer (Alpes-Maritimes), where he had gone to recruit his shattered health. I hope to be able to give next week a résumé of his scientific career.

Feb. 19th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Health of Leo XIII.

THE issues depending on the Pope's health are indeed momentous; his demise would bring to the front a question which has lain undisturbed since 1523. That year was the last in which a non-Italian Pope sat in the chair of

St. Peter; but for some time it has been seriously considered, in Italy as well as abroad, whether a departure from what is only consuetudinary law might not be taken. That a French, an Austrian, or a British cardinal might succeed to the Pontificate has but to be suggested to open up a battlefield of international jealousies. With this in prospect the wish that Leo XIII. may "see the years of Peter" or live to those of Pio Nono is sufficiently intelligible and explains the almost feverish anxiety with which reports as to his health are scanned and discussed. On Dec. 15th, 1894, I announced in THE LANCET the precautions taken by Dr. Lapponi in presence of the catarrhal symptoms under which His Holiness was labouring. On the 2nd inst. I described the return of the same symptoms between Jan. 10th and 16th, and to-day I resume the thread, *a titoli di cronista*, as Italians say. On the 10th inst., after celebrating mass in his private chapel before some twenty privileged persons, His Holiness held no audience, but retired to the seclusion of his apartments. He felt weary and worn out, and certainly looked more emaciated than usual. For some days previous the catarrhal symptoms, never wholly got rid of, had become aggravated, and his voice even on the 10th was still feeble and hoarse. Shortly before, during the religious function for the anniversary of Pio Nono's death, his exhaustion was manifest—his chanting the prayers of absolution being scarcely audible by those at a few paces from him. Dr. Lapponi is most vigilant as to the heating of the Pontifical apartments, and, on finding that the temperature had been raised above what His Holiness could bear with comfort, reduced it at once to a less relaxing degree. But with all his vigilance and authority it seems impossible to restrain the Pope from over-exertion, mental if not physical. He revels in work, and keeps in personal touch with high-placed ecclesiastics, Italian and foreign, and with the heads of the various Catholic congregations; while even at night he labours indefatigably in preparing documents for the guidance of his representatives in the two hemispheres. Such energy displayed by an octogenarian suffering from senile anemia and subject to a catarrhal cachexia increases the responsibility of his body physicians and quickens the anxiety of the diplomatists accredited to the Holy See, knowing as they do that in the event of the Pope's decease the fact will be kept undivulged till the cardinals present in Rome have completed certain acts preliminary to the Conclave—acts prescribed by a secret Bull issued four years ago by Pope Leo himself.

Cold and Famine.

The severity of the season has told heavily, particularly in the rural districts, all through Italy. A fuel famine has followed the food famine, and almost within the gates of Rome have been deaths from sheer cold accelerated by malnutrition. At Sambuci in the Sabine country the villagers have been subsisting on herbage and weeds, and even if wholesome food is forthcoming they have no fire with which to cook it. Too wretched and improvident to face any such visitation, the *adscripti glebæ* of Italy succumb to their fate with the helpless, hopeless submission of the fatalist, and, as at Sambuci, leave it to the chance-comer in their neighbourhood to reveal their misery to the great world. Since the confiscation of the conventual and monastic houses by the State the charity these used to dole out in their respective localities has had no adequate equivalent, and Parliament seems too engrossed with its own internecine quarrels, when not voting subsidies for Abyssinian campaigns, to attend to the far more pressing duties within its legitimate jurisdiction. Those contrasts are not hopeful for the Italy of the future, and the apathy of the upper and middle classes of the population must be replaced by a "sense of citizenship" if the country is to assert its claim to be a Great Power.

Death of Dr. Francesco Ziliani.

A striking personality has just left the stage in Dr. Francesco Ziliani of Brescia, one of Garibaldi's Thousand, who with Drs. Ripari and Boldrini constituted the sanitary corps of the romantic expedition which liberated the two Sicilies. Like Bertani, the General's body surgeon, whose *Codice Sanitario* has rehabilitated the public health of Italy, he was a man of austere virtue, carrying into public and professional life those moral standards to which he had conformed during the long years of silent preparation in the study and active service in the campaign. Italy is losing rapidly the few survivors of that heroic generation, and Dr. Ziliani's death on the 13th inst. makes her all too appreciably a man the poorer.

Feb. 17th.

¹ Gazette Hebdomadaire de Médecine et de Chirurgie, Feb. 2nd and 9th.

Obituary.

JOHN WHITAKER HULKE, F.R.S.,

PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

It is a singular and melancholy coincidence that in so short a space of time as fifteen months the titular heads in this country of the two branches of the art of medicine should have died in office. It is but fifteen months since we chronicled the death of Sir Andrew Clark, which occurred on November 6th, 1893, during his tenure of the Presidency of the Royal College of Physicians of London; and now the medical profession not only of this country, but of all countries, has learned with deep concern of the death of Mr. Hulke, the President of the Royal College of Surgeons of England, and senior surgeon to the Middlesex Hospital. The coincidence to which we have referred is accentuated by the curious fact that Sir Andrew Clark died on Mr. Hulke's birthday.

There are some men whose lives are the despair of their biographers, but this is not generally the case with the distinguished surgeon. Widely read the surgeon often is, cultured it is now the rule that he must be, but his scheme of life, the issues that he has at stake, the work that he does, and the work that he hopes to do are not usually complex, so that his public life is wont to be comparatively easy to write. It consists of a record of duties performed whose value is estimated by comparison with the performances of others. But this is not so in the case of Mr. Hulke. For Mr. Hulke was a many-sided man, so that to estimate him properly more than a mere regard to the particular eminence to which he attained in his branch of the science of healing is required. Viewed as a surgeon Mr. Hulke had a career of singular distinction as well as of wide range. But he was also one of the first geologists in England. He was a real linguist—one with the gift of tongues. While keeping up a more than ordinary acquaintance with the classics, he was a fluent and accurate French and German scholar, a learned Shakespearian, and possessed at the same time of a working knowledge of Italian. He was a first-rate botanist, both in lecture-room and field—as may sufficiently well be seen from the opening half of the Hunterian Oration, which we print in our issue to-day, but which his health did not allow him to deliver. He was a sportsman of the old-fashioned sort, making his pursuit of the prey with rod or gun subservient to his desire to acquire accurate knowledge. And he had acquired it to this extent, that he was a distinctly learned ornithologist. He was an excellent diagrammatic artist, painted in water-colours, and was not unskilled in plastic work. As we have said, it is not easy to write a biography of such a man, for he excelled in so many directions that to narrate them all must give to his biography an appearance of fulsomeness.

John Whitaker Hulke was born on Nov. 6th, 1830, being the elder son of a well-known and widely respected general practitioner at Deal. The original family name was Hulcher, his ancestors being Dutch by origin, who had escaped from Holland during the Spanish persecutions under Philip II. and Ferdinand, Duke of Alva, and settled on the Kentish coast. There for some two hundred years they have followed the vocation of medicine. He was educated at

King's College School, and after a sojourn in Germany entered at the age of nineteen the medical school of that institution, where he was dresser to Mr. (afterwards Sir) William Bowman, and house surgeon to Sir William Fergusson. It was while he occupied this position that he attended the Duke of Wellington in his last illness, his father being the Duke's regular medical attendant and obtaining leave to avail himself of his son's services as assistant. In 1854, when the Crimean War broke out, he was early to volunteer, and at the beginning of 1855 was appointed assistant surgeon to the British Civil Hospital at Smyrna. Thence he was sent to Sebastopol, and in that awful campaign of irremediable sickness, gross mismanagement, and gallantry as often as not ineffective, bore himself in the opinion of everyone as a soldier should bear himself. On his return from the East he became medical tutor of King's College Hospital, and having previously been made a Fellow of the Royal College of Surgeons of England was appointed in 1858 assistant surgeon to Moorfields Hospital, and in this early devotion to ophthalmology we can trace the influence of his distinguished master, Sir William Bowman. He had previously been elected assistant surgeon to King's College Hospital, under an absurd arrangement by which the term of office of the assistant staff was limited to five years. He duly served his allotted period, and was appointed, together with Murchison, a colleague at King's, to the Middlesex Hospital, of which institution he was the senior surgeon at the time of his death.

Such is the bare outline of Mr. Hulke's career as a surgeon; we now propose to consider this a little more in detail. His earliest mark was made in ophthalmology. He obtained the Jacksonian Prize of the Royal College of Surgeons of England for an essay on the Morbid Changes of the Retina; his treatise on the Use of the Ophthalmoscope, published as far back as 1861, formed an excellent introduction for most of the profession to the new system of intra-ocular examination; his *Arria* and *Gale* Lectures delivered before the Royal College of Surgeons of England, and subsequently published in our columns, dealt with the Minute Anatomy of the Eye; and, lastly, he was made a Fellow of the Royal Society in recognition of the value of his papers on the Anatomy of the Retina in Amphibia and Reptiles. But although



JOHN WHITAKER HULKE.

so highly and widely recognised as an authority on the eye, Mr. Hulke was no less esteemed by the profession as a general surgeon, and the record of his work in the wards of Middlesex Hospital remains a monument to his skill and patience. There are no brilliant departures associated with his name, but he was absolutely painstaking and wise, and quick to see what surgical movements would stand the test of time. He was a supporter of aseptic doctrines at a time when many surgeons of his date were but half converted to these doctrines, and he was to a certain extent a pioneer in cerebral surgery, though all the teaching of his masters must have biased him to look upon interference with the brain as a very serious matter. As an operator he was not showy, and perhaps not entirely free from the imputation of being a little slow, but he was admirably careful, and his intimate anatomical knowledge counted for something in the marked caution of his procedure. As a clinical teacher he had few, if any, equals in London. He was lucid, learned, and simple. Where a point required exposition he was certain to know everything that could be said, but he was never tempted into needless display of erudition, and never talked for talking's sake. He was a little intolerant of ignorance in his pupils, but the idlest and most irreverent student always saw in him a man who had a right to be intolerant if he chose.

We have briefly referred to Mr. Hulke's knowledge of botany, but his position as a geologist merits more extended mention. He was one of the first authorities in the world on vertebrate palæontology, and contributed many valuable papers dealing with the Iguanodontia, Ichthyosauria, and Crocodilia to the memoirs of the Geological Society. For three years, from 1882 to 1884, he was President of the Geological Society; in 1887 he received the Wollaston gold medal, which is the highest award it is in the power of the society to bestow; and in 1890 and 1891 he acted as the society's foreign secretary. He has left behind him a large collection of specimens, mostly excavated by his own hands from the Undercliff in the Isle of Wight.

Few men have held more official posts than Mr. Hulke. At the time of his death he was President of the Clinical Society of London. It may not be out of place to repeat here the words of the retiring President, Sir Dyce Duckworth, when inducting his successor: "You have elected to-night as my successor one whom we all respect and acknowledge as a master of the surgical art, one whose modesty, rectitude, and fearlessness are only equalled by his skill and kindness of heart. Mr. Hulke will, I feel sure, add lustre to the post he comes to fill." From 1886 to 1887 he was President of the Ophthalmological Society, and he had also been President of the Pathological Society of London, and had been for many years, and was at the time of his death, librarian of the Royal Medical and Chirurgical Society. He was elected President of the Royal College of Surgeons, England, in 1893, in succession to Mr. Bryant, having been a vice-president from 1888. He was a member of the Court of Examiners for ten years from 1880. His greatest work in connexion with the Royal College of Surgeons was undoubtedly the formation of the Research Laboratory of the Conjoint Board. The scheme for this was Mr. Hulke's, and he was chairman of the Joint Laboratories Committee from its foundation. The work that has been done and is now doing there speaks sufficiently for the wisdom of the scheme. At the Royal Society—of which he was elected a Fellow in 1867—he served on the Council during 1879, 1880, 1888, and 1889; and was also a member of the Scientific Relief Committee. His communications to the Transactions of the society were numerous, and the last of them was read before the society on May 12th, 1892. It was a paper on the Shoulder-girdle in Ichthyosauria and Sauropterygia, in which he controverted the views of Professor H. G. Seeley.

Such was his arduous and many-sided work, and on all of it he brought the same qualities to bear—punctuality, the prudence of critical insight, and extreme conscientiousness. As a hospital surgeon he was always in attendance, always in time, and always thorough in his ward work. At the College of Surgeons he was never known to miss a lecture or to be a minute late. He attended every sub-committee and with unflinching punctuality. He was a man of very strict character, exhibiting not infrequently an austerity that amounted to harshness. Deeply religious, his Protestantism was of an intolerant kind; and of a relentless probity of character, his judgments now and again seemed unnecessarily severe. Yet many knew that he had another side to his character, and that, in addition to the rectitude and energy which gained him the universal and marked esteem of the whole profession, he possessed softer and more endearing qualities. He was exceedingly gentle and sympathetic with his patients, never for a moment lapsing into the attitude of the operator towards the subject. His acts of great personal kindness were numerous and his charitable desire to do good undoubted. We came into contact with Mr. Hulke in the matter of charity not infrequently, as he acted as an Almoner to our Relief Fund, and we know him to have been deeply alive to the needs of his poorer brethren, and most earnestly anxious to relieve them.

His strict standard of duty for others he held up to himself, and devotion to duty was doubly answerable for his death. He took no holiday during the past year, his time being too occupied to permit him to do so, and the incessant and acute strain was telling upon him at Christmas. This much he admitted. On the night of Thursday, Feb. 7th, a terribly bitter night, he was summoned to the hospital to operate upon a case of strangulated hernia, from which he did not return until 3.30 A.M. On the following day he had a little bronchitis, but did not keep his bed. Indeed, he operated on Saturday at the Middlesex Hospital on a case of cerebral abscess, and went to the wards again on Sunday (Feb. 10th) and Monday (Feb. 11th). But later in the day he had to recognise that he was seriously ill, and the bronchitis

increasing, pneumonia supervened, and he died on Tuesday, Feb. 19th, about noon.

Mr. Hulke leaves behind him no children, but a widow, who, we regret to learn, is suffering from a serious attack of influenza, and two nephews, one of whom is a member of the profession.

A special meeting of the Clinical Society of London was held on Wednesday evening last to consider arrangements necessitated by the lamented death of the president of the society. The following resolution was passed, and a copy of it forwarded to Mrs. Hulke: "The Council of the Clinical Society of London has learnt with deep regret of the death of the President of the Society, John Whitaker Hulke, F.R.S., one of its original members, among its most earnest supporters, a highly gifted and very learned surgeon, who has filled the office of president with his wonted punctuality, urbanity, and zeal. The Council begs to offer its heartfelt and respectful sympathy to Mrs. Hulke in her great sorrow."

The interment will take place to-day (Saturday, 23rd) at Deal. A memorial service will be held at St. James's, Piccadilly, where the late Mr. Hulke was churchwarden, on the same day at one o'clock.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. A. L. Loomis, Professor of Medical Pathology in the University of New York.—Dr. Sancho Martin, Professor of Midwifery in Valladolid.—Dr. Regnaud, Honorary Professor of Medical Chemistry in Paris.

THE INDIAN MEDICAL CONGRESS.

THE SECTIONS.

MEDICO-LEGAL MEDICINE.

DEC. 26TH, 1894.

THE HON. W. R. KYNSEY, C.M.G., F.R.C.P. Irel., delivered his presidential address. After a few introductory remarks he said: "The title of the Section sufficiently indicates its scope and object, and all here will agree with me that there is no branch of our profession more neglected than medical jurisprudence. Its history in Europe and the East, while full of great triumphs, is also full of cases where most serious consequences resulted from inexperience and ignorance, due to the fact that few make the scientific questions involved the subject of definite and intelligent study. To no science are the remarks of Ruskin more applicable: 'The greatest thing a human soul ever does in this world is to see something and tell what he saw in a plain way. Hundreds of people can talk for one that can think, but thousands can think for one who can see.' In the relations which exist between medicine and law the testimony of experts is necessary for the purpose of arriving at truth, which is the ultimate object of the medical and the legal professions, a trial being merely a means for obtaining it. The interest of good government, the sacredness of human life, and the welfare of man demand that no one should be accepted as a medical witness who has not made a special study of the many sciences upon which medical jurisprudence is founded. Medical evidence is important in all countries, but in the East it is often the only evidence at all to be relied upon, and on it alone often hangs the liberty or life of a human being."

[Mr. Kynsey then drew attention to the increase in all countries of communications dealing with criminology and continued:]

"The term 'criminal anthropology' was first given by Lombroso to that branch of morbid psychology which is concerned with the study of the physical and psychical peculiarities found in criminals, and it deals with all the problems connected with the criminal as he is in himself and as he becomes in contact with society. He maintains that by its means it is possible to determine the probability of a prisoner's reformation and the best methods by which this can be effected; but it cannot, of course, be used to discover the author of a crime, although by means of measurements prisoners can be easily identified accurately." He next quoted how criminals had been classified by Benedikt upon a pathological basis, and by Enrico Ferries upon a clinical basis.

"The Italian school, and those who think with them, consider criminality from a scientific point of view, and assert that it is a neurosis originating either in an inherited or an

acquired condition of the brain, which may be actual disease resulting in degeneration, or the non-development of certain faculties, the existence of which would preclude the possibility of crime. Criminality is a sign of physical degeneration of the nerve centres, and crime its outward expression. Crime is not, then, the result of personal spontaneity, but springs from the secret forces of organisation, and is a symptom of moral alienation due to inherited vice of character over which the criminal has no more control than the lunatic. They answer the question, Why is a man a criminal? by replying: For the same reason that another man is a moralist or an honest, law-abiding citizen. A criminal inherits a brain incapable of generating moral faculties, or through the influence of his environments his mind does not evolve sufficient moral strength to control his appetites and passions. It is no more difficult to believe that brain development in the evolution of mind may stop short of completely unfolding the moral faculties than it is to believe that it may, as it certainly does in many cases, stop before high intellectuality is attained. Whether a man will commit crime at all will depend to a great degree on his constitutional characteristics and education, and the nature of his crime on his environment and inherited tendencies, or on both. It is difficult to say how much can be attributed to heredity and how much to environment, as the fall from virtue to vice in anyone is possible; but the number of healthy, carefully brought up children who adopt a career of crime is very small and such cases are generally curable. The habitual and instinctive criminal, on the other hand, comes from a family in which inebriety, insanity, and criminality are hereditary, and whose members are surrounded by physical and social defilement. As there are anomalies, monstrosities, infirmities, and natural imperfections in the physical and intellectual world, there are the same in the moral, and the criminal differs physically, mentally, and morally from the honest member of society as much as the imbecile from the genius."

[Mr. Kynsey referred to Maudsley's account of the characteristics of the criminal class, adding some remarks of his own upon the physical and mental peculiarities of the criminal, and proceeded:]

"The criminal is not necessarily diseased, but there generally exists a latent neurotic bias, if not actual neurotic disease, such as epilepsy, inebriety, or insanity; and he is frequently scrofulous or tuberculous, all indicating nervous and bodily degeneration. Mentally he can reason about the crimes committed, but he cannot comprehend any moral wrong, and, conscious of punishment for past offences and almost certain of it for future ones, rushes wildly, heedlessly, remorselessly, into the vortex of criminality, and never pauses until the arm of the law interferes to protect society. Despine, in his exhaustive study of the criminal's mental nature, says: 'There must be something abnormal in the disposition of criminals when they yield with the utmost facility to desires which would excite the strongest repugnance and horror in a truly moral man. Does not this abnormal state reveal itself in the clearest manner when, contrary to what poets and moralists have represented, we see the wretch who has committed a crime exhibiting no symptoms of remorse, but rather a disposition to repeat the same criminal act?' He drew from this the conclusion that the criminal is morally insane, usually incurable, and that he should be treated in the same way as the intellectually insane person. The heredity of specific characters is a well-established fact, and the transmission of individual form or external physical characters, and even peculiarities, is universally acknowledged. The child resembles either the father or the mother, or both, or some member of the ancestral line, in general form, features, and even in the colour of the hair and eyes, the tint of the skin, and in general expression. Even deviations from the normal type are handed down through several generations, and may possibly establish new species. The functions of the organism, instincts, natural and acquired, the perceptive faculties through which impressions of the outer world reach the brain and are there converted into conscious sensations, memory, emotions, reason, will, the appetites, passions, and moral impulses, normal and abnormal, and the pathological conditions to which physical and mental life are liable are all capable of transmission under the laws of heredity from parent to offspring. 'Like begets like.' The hereditary character of crime was recognised in remote antiquity. Aristotle tells the story of the man who, when his son dragged him to the door by the hair of his head, exclaimed, 'Enough, my son; I did not drag

my father beyond this.' Inebriety, insanity, and crime are closely related; each is the result of a pathological condition of the brain, each is a stage in the progressive degeneration of a family, all are hereditary, and undergo mutual metamorphosis during the stages of transmission."

[Statistics were quoted in support of this statement.]

"I have endeavoured to show that many eminent writers look on crime as the result of disease of the brain, and in consequence advise the treatment instead of the punishment of this morally diseased class, and urge that the problem of prison administration is how to treat prisoners with the least burden to the community and at the same time secure ultimately the best advantages to the criminal. 'The prison is the battlefield between vice and virtue, with the advantage of position and numbers on the side of vice.' The modern school on this vexed question have no faith in punishment as such, but believe in correctional treatment, their motto being that every prisoner carries with him the possibility of good citizenship. Prison treatment should be, no doubt, both punitive and deterrent, but should also have for its object the permanent improvement rather than the deterioration of the prisoner's character; and unless goals are properly managed on these principles the State practically undertakes the criminal education of the dangerous classes. Crime can never be diminished through fear of punishment; and the benefits to be derived from the conviction and imprisonment of criminals increase in proportion as penal and retributive methods give place to more enlightened reformatory methods. In America from 60 to 70 per cent. of juvenile prisoners are reformed. The causes of crime have been most carefully classified under *cosmic*, such as climate and diet; *biological*, such as personal peculiarities, anatomical, physiological, and psychical; and *social*, which includes economic perturbations, alcoholism, pauperism, &c.; but the chief factors have always been and ever will be heredity—a vicious life, alcohol, a woman, a knife, and caste, race, and religious prejudices. If it is admitted—as it must be, I think—that every truly criminal act proceeds from a person who is temporarily diseased the older views on punishment will have to be considerably modified. As it has hitherto been directed at the offence, and it was not considered necessary to take the offender into account at all, the result has been most unsatisfactory, as statistics on the phenomena of recidivism prove, and the main cause of recidivism is the failure of prisons to act as reformatories. Laloue, the Inspector-General of Prisons in France, says: 'With our existing system twenty-four hours' imprisonment suffices under certain circumstances to ruin a man.' As to the reformation of the criminal,' remarks Dr. Paul Aubrey, 'that is a myth; the prison is still the best school of crime which we possess'; and a young Italian thief said, 'The houses of correction are much more houses of corruption.' In this place, for obvious reasons, I can only very briefly allude to the main proposals of prison reformers. They are: 1. To remove the belief that the criminal is an average human being, but to look upon him as an abnormal member of society, and to make the prison 'a moral hospital' for his treatment and cure. Sir Thomas Moore long ago said that the end of punishment 'is nothing else but the destruction of vices and the saving of men.' 2. To abolish the definite and predetermined sentence, and to substitute for it an indefinite one. This removes from the judge, who must be ignorant of the nature of the individual before him, the power of definitely fixing the period of confinement in prison, and transfers it to the managers of the reformatory, who have the power, if they see fit, to let prisoners out on *parole* (ticket-of-leave) at any time after a probationary period. 3. To improve the prison staff, under the belief that the prison warder of to-day is as little fitted for the treatment of criminality as the hospital nurse of half a century ago was for the care of disease. No one should be appointed to the care of criminals who has not been specially trained for the purpose. 4. To educate the criminal physically, mentally, and industrially, by means of skilled teachers, so as to win him back from the anti-social to the social world, and to give him when he leaves the prison a trade or means by which he can earn an honest livelihood. 5. To introduce a sound system for the identification and registration of criminals. The recognition of the habitual criminal is one of the most delicate and difficult functions of the police; they are blamed if they fail in identifying, and doubly blamed if they mistake an innocent person for the real offender. Both identification and registration can be accurately and unimpeachably carried out by the anthropometric system of

Bertillon. It is worthy of note that the Japanese have had for ages a system of prison treatment very similar to that which our most advanced thinkers now recommend. 6. To deal with the occasional criminal by substituting 'liability to punishment' for actual detention in gaol. This Section is not the one to deal with the question of prison mortality, as its consideration would involve a history of the diseases of prisoners and many other points; but as it is a subject of the deepest interest to all engaged in gaol administration in the East I may be permitted to make a few remarks. Writers at home are very fond of contrasting the death-rates of British and Indian gaols, to the detriment of the latter from want of knowledge. I am certain everyone who has had the management of prisoners in the East will allow that mortality in prisons depends largely upon:—1. The class of prisoner admitted, whether he is selected, the nature of his occupation in the free state, and whether he comes from a malarious or healthy district. The enormous influence of malaria in augmenting Eastern prison death-rates has not been taken sufficiently into account, and it is a curious fact that the removal of prisoners from malarious districts to healthy ones is often disastrous. 2. The discipline and nature of his labour in gaol. The stricter the discipline and the more continuously prisoners are made to work, even irrespectively of its amount, especially if never accustomed to work before, or if they are employed at work to which they were previously unaccustomed, the higher the death-rate. 3. Diet, whether there is change to unaccustomed food and whether it is too much or too little. 4. The early detection and treatment of disease. My experience is that, as well as malingering, there is a good deal of concealment of disease and actual indifference about health. If Eastern prisoners could be treated as the following extract shows they are pampered in England I have no doubt their sick and death rates would be as low:—'The early average death-rate for the 160 years ending March, 1878, was 11.6 per mille, while for the ten years ending March, 1888, it was 8.1. The Commissioners state that imprisonment as now generally conducted in England is a condition more or less akin to physiological rest. The struggle for survival is suspended and the prisoner appears to feel that the prayer for daily bread is rendered unnecessary by the solicitude of his custodians. Tranquility of mind and freedom from anxiety are leading characteristics of his life.' The second subject I wish to say a few words about is insanity. There never was a period of human history when insanity did not exist, and it would be strange if this were not so with the brain, the organ of mind, liable to have its development arrested, its functions disordered, or its action suspended, and the type of mental and nervous disease which exists in different races and ages is exactly that form which is in accord with their respective mental development—the most common in the savage is imbecility, in children idiocy. There can be no moral insanity where there is no moral sense, and no ideational insanity in infants because they have no ideas. The period of the world in which we live is characterised by an enormous increase in frequency of neurotic affections, due to the unparalleled activity and progress, rush and worry of modern life, a life of anxiety and high tension. The rapid cultural development of our time, gratification of ambition, change in the whole style of existence, strife of competition, and the desire to grow rapidly rich have made nations and individuals discontented. Insanity, like criminality, waits on civilisation, which Carlyle says 'is merely a covering underneath which the savage nature of man burns with an infernal fire,' and the reason for this is not difficult to explain, as there can be no doubt that there is an increasing complexity of the brain, the result of this higher civilisation, march of education, and struggle for existence, and, like all machinery, the more delicate its mechanism becomes the more liable it is to get out of order and the more difficult it is to readjust it. One melancholy evidence of the increase of insanity is the increase in number and size of the asylums which Christian benevolence and statesmanship have established for the custody and treatment of persons mentally afflicted. In Ceylon the admission-rate continues to increase, the percentage of recoveries on this rate being about 52 per cent., and the cases are of the usual mental types. The uneducated brain of the native is not usually roused to excessive fabrication of ideas even by insanity, his mental symptoms being more a monotony of noise, bad language, and filthy conduct. In all delusional cases the patients are persons of education. The causes are even more difficult to ascertain than in Western countries,

but all experience is against the influence of opium as an important factor in its causation, but there is no doubt about *dhany* being morally and mentally injurious. In a recent inquiry into the question with the Inspector-General of Prisons, we found no satisfactory evidence that the abuse of opium as distinguished from its use was on the increase, nor was there any evidence to show that the abuse of the drug has extended beyond a very small section of the community, and the admission to hospitals and asylums has not been influenced to any appreciable extent thereby. We were convinced of the enormous benefits which resulted from its judicious use, and we had reason to believe that a not inconsiderable portion of the drug imported was used in the treatment of animals; further, that any considerable diminution in its importation would involve a considerable increase in human and animal suffering. We were strongly of opinion that the use, even the abuse, of opium had not tended in any way to increase crime or insanity, though in certain cases it may have exercised an enfeebling influence over mind and body. As regards *dhany*, we found many cases on record in which it had been the immediate cause of crimes of violence, and we advised that its use should be restricted as far as possible by means of a heavy import duty and the prevention of its cultivation in the island. My belief is that natives who use opium have selected the least harmful form of stimulant—one which rarely acts as a cause of crime, insanity, or disease—and that any unwise interference will practically substitute alcohol, with all its dreadful immediate and remote effects, for opium. The agitation against it seems to be the result of ignorance. I have seen a few cases of that curious and dangerous condition known as 'running amuck,' or 'amok,' among Malays, due to *dhany*, and, perhaps, to opium. It is, no doubt, a transitory form of madness closely related to the *epilepsia cursiva* of Bhoottius, in which the person commences to run and then falls down in a fit. Wallace suggests 'that it is a resort to what appears to a savage to be a kind of honourable suicide on the part of a man who for some reason is plunged in sorrow and dejection, thinks himself wronged by society, or to whom on account of misfortune life has become a burden.' Trusting that my remarks have not been too long, and thanking you for your attention, I now give place to those who have prepared papers which we have all come here to hear read."

PROCEEDINGS IN SECTION.

DEC. 26TH, 1894.

The following is an abstract of a paper read at the Congress:

The Necessity for an Act restricting the Free Sale of Poisons in Bengal.

Surgeon-Captain J. F. EVANS, M.B., and Assistant-Surgeon CHUNI LAL BOSE, M.B., F.C.S., Chemical Examiners to the Government of Bengal, contributed a paper on the Necessity for an Act restricting the Free Sale of Poisons in Bengal. After a very carefully prepared introduction, in which they entered exhaustively into the prevalence of poisoning in Bengal and the nature of the cases of poisoning, and gave a general summary of the history of poisoning in India, they proceeded to consider their proposals for restricting the sale of poisons. After passing in review previous recommendations for restricting the sale of poisons and their outcome they continued:

"The measures we propose may be summarised as follows: (a) an Arsenic Act; (b) the amendment of those sections of the Bengal Municipal Act and Calcutta Municipal Consolidation Act which relate to the sale of drugs; and (c) the amendment of those sections of the Opium Act I. of 1878 which relate to the retail sale of opium."

The Arsenic Act.

[Surgeon-Captain Evans and Assistant-Surgeon Chuni Lal Bose here brought forward a table showing the imports and exports of arsenic at Calcutta during the last twelve years, and continued:]

"From the table it will be seen that a very considerable quantity of arsenic remains in the country. Last year the quantity was 30 tons. The fatal dose of arsenic for an adult is two grains. How then, some might say, is the poisoning by arsenic to be prevented, when it is such a deadly drug and when such large quantities are annually imported. But thirty tons are a small quantity compared with the 2875 tons which constitute the average annual output of white arsenic

at the tin works of Tavistock in Cornwall; yet fatal arsenic poisoning of a criminal kind is not as a consequence frequent in the neighbourhood of Tavistock. The larger portion of the arsenic imported into India is used in trade for such purposes as the cleansing and preparation of hides, paper, paint, wooden posts, &c., and occasionally also for agricultural purposes. The yellow variety of arsenic, which contains from 20 to 30 per cent. of white arsenic, is used as a pigment and largely as a depilatory. Without presuming that the proposition is complete and free from defect, or couched in the proper legal phraseology, the regulations of the sale of arsenic which we would propose take the following shape:—

"That certain individuals or officials shall be entrusted by Government with the duty of granting licences for the import, sale, purchase, and possession of arsenic, after having ascertained to their satisfaction that the applicants for such licences are fit and proper persons to be granted the same.

"That no arsenic or arsenical preparation recognised as a poison shall be bought or sold without a licence except on the prescription of a licensed medical man, with certain exceptions relating to the practice of indigenous medicine to be hereafter specified.

"That persons desiring to import arsenic into the country must obtain a licence authorising its import, and must undertake to keep the arsenic in safe custody and to sell it only to persons producing a licence authorising them to purchase arsenic, all such sales being registered with an entry of the date, the quantity sold, and the name and address of the purchaser.

"That dealers in arsenic, whether wholesale or retail, must obtain a licence authorising them to buy, sell, and possess arsenic; that they must undertake to buy from and sell to licensed persons only, and to carry on their business generally under the same conditions as the importers except in so far as its sale on medical prescription is concerned.

"That persons requiring arsenic for manufacturing and other purposes not being those of sale, retail or otherwise, must obtain a licence authorising them to buy and possess arsenic for such purposes, and must be prepared to satisfy the licensing authorities that they are fit and proper persons to be entrusted with the possession of arsenic, and that they are in a position to make suitable provisions for its safe custody both during use and at other times.

"That in rural districts, and, where necessary, in towns, the practitioners of indigenous medicine, if of good character, may be licensed to buy and possess a limited quantity of arsenic only in each year and to dispense the same to patients.

"That pounded white arsenic, except in special cases hereafter to be determined, be sold mixed with soot or indigo in the proportion of one ounce to each pound of arsenic.

"Amendment of those Sections of the Bengal Municipal Act and Calcutta Municipal Consolidation Act which relate to the Sale of Drugs.

"That the drugs named in the following lists, to be known as Schedule A, European Poisons, and Schedule B, Indian Poisons, be considered as poisons for the purposes of the Act:—

SCHEDULE A. European Poisons.

1. Arsenic and its preparations.
2. Mercury and its preparations.
3. Antimonial preparations.
4. Strong ammonia.
5. Strong acids, such as concentrated nitric, sulphuric, hydrochloric, and oxalic.
6. Phosphorus.
7. Hydrocyanic acid and cyanides.
8. Opium, its alkaloids and preparations.
9. Belladonna, datura, hyoscyamus, their alkaloids and preparations.
10. Nux vomica, its alkaloids and preparations.
11. Aconite, its alkaloids and preparations.
12. Hydrate of chloral.
13. Chloroform.
14. Carbolic acid.
15. Cantharides and its preparations.

SCHEDULE B. Indian Poisons.

1. White arsenic (Senko, Semul-khar).
2. Red arsenic or realgar (Monchhal).
3. Yellow arsenic or orpiment (Harital).
4. Corrosive sublimate (Raskarpura).
5. Aconite (Mitabishi).
6. Datura.
7. Hyoscyamus (Khorasani Ajwan).
8. Nux vomica bark or seed (Kuchila).
9. Plumbago rosea (Lalchitra).
10. Croton seeds (Jaipal).
11. Yellow oleander (Kolika).
12. Cocculus indicus (Kakumari).
13. Nerium odorum (Karubi).

"That in the same manner as suggested for the sale of arsenic licences be granted for the sale and possession of poisons.

"That except under certain conditions and in certain quantities, to be specified in each case, no poison within the meaning of the Act shall be bought or sold without a licence, except on the prescription of a licensed medical man.

"That persons engaged in the merchandise of poisons as defined by the Act must obtain a licence authorising them to carry on such business, and must undertake to conform with the provisions of the Act and not to sell poison in any quantity larger than that permitted for its retail sale other than to duly licensed individuals, except on medical prescription.

"That every sale of poisons except on medical prescription, with certain exceptions relative to the practice of indigenous medicine, must be duly registered in the following manner:—(a) Name of purchaser; (b) residence of purchaser; (c) object of purchase; (d) authority for sale; (e) quantity sold; (f) date of sale; (g) signature of the seller; (h) signature of the purchaser.

"That no person shall be permitted to buy and possess poisons who is unacquainted with their nature, and is not in a position to make proper arrangements for their safe custody and sale.

"That in the shops of individuals licensed to sell poison, the poisons are to be properly labeled with the name of the poison and the printed word 'Poison' both in English and vernacular, and kept apart from other articles of merchandise.

"That in rural districts and, where necessary, in towns, practitioners of indigenous medicine, if of good character, may be licensed to buy and possess and dispense to their patients limited quantities of the poisons included in Schedule B.

"That all practitioners of medicine licensed to prescribe or dispense poison be registered.

"That the same regulations should apply to persons requiring poisons for manufacturing and other purposes not being those of sale, as were recommended in the case of arsenic.

"That it may be advisable to permit a limited retail sale of certain of the poisons included in the schedules for domestic and other purposes, and that the drugs which may be sold, the quantities to be sold, and the manner of the sale be hereafter determined.

"That all patent and proprietary medicines, if found to contain poison within the meaning of the Act, come within the operation of its provisions."

Amendment of those Clauses of the Board's Excise Opium Form No. 1 which relate to the Sale of Opium.

The authors then went on to consider the question of the retail sale of opium. The present largest quantity of opium that may be purchased on any one occasion by any single private individual is 2 oz. They propose to limit this quantity to grs. xx. (20), and this limit would quite satisfy the average opium-eater.

"At the present time opium-eating is not to be regarded as a vice in any sense of the term, but only as a habit, the excessive gratification of which engenders very serious dangers to the community at large if it requires that large and fatal doses of opium must be sold without restriction. It is not too much to require of the opium-eater whose daily dose has exceeded the retail limit that he should provide himself with a certificate to that effect, signed by a medical man or a respectable individual such as the headman of his village. We would suggest that such certificates should state the daily dose required and should be valid for one year only, and that the opium vendor on the presentation of a certificate of this kind should be authorised to sell the quantity intimated therein, provided it does not exceed five tolahs. The proposed amendment of the Board's Excise Opium Form No. 1 is accordingly as follows:—

"That he do not, except to a vendor of opium or of an intoxicating drug licensed by the collector or to a licensed druggist, sell more than one-eighth tolah of opium to any person at one time except on the production of a certificate stating that the purchaser is an opium-eater, signed by a licensed practitioner of medicine or a respectable resident of the locality, when the quantity specified in the certificate, provided it does not exceed five tolahs in weight, may be sold.

"All sales exceeding one-eighth tolah to be entered in a special printed record, giving in addition to the information required in Paragraph XIV. of Form No. 1, the name and residence of the purchaser, the authority for the sale, and the quantity sold.

[They then proceeded to consider the difficulties attending the working of this measure, and continued:]

"Without attempting to raise the question whether the policy of temporising with an admitted evil is correct we would at once ask, What are the poisons which may be expected to take the place of arsenic, aconite, opium, and other controllable poisons if these are rendered more or less inaccessible? If any such exist, they must naturally be sought among the indigenous drugs of the country which belong for the most part to the vegetable kingdom. That the country has many vegetable products endowed with poisonous properties is easily learned by reference to the Pharmacographia Indica written by Dymock, Hooper, and Warden. Fortunately, however, the knowledge of the poisonous properties of the majority of these substances is not yet by any means popular. They may in consequence be considered rather as potential rather than actual poisons at the present time, so far as the people generally are concerned. As judged from general information and from all the cases of poisoning which are reported, the number of indigenous vegetable poisons commonly known is very small. The following are the chief: opium, datura, aconite, nux vomica, oleander, and abrus precatorius. Opium heads the list, and is responsible for more fatal cases of poisoning than any other drug; but, as already shown, its accessibility can be controlled without imposing hardship on those who require it for a legitimate purpose. Successful interference with the possession of datura is apparently hopeless. Fortunately, the uncertainty of its action is tolerably well recognised. It is in consequence ill suited to the murderer's purpose, as great risk of detection would be incurred should the poisoned man recover. The murderer does not of necessity desire to leave the locality of the murder; the robber, on the other hand, administers datura to assist him in the act of theft and to cover his flight with the booty. Datura poisoning is chiefly non-fatal. Aconite, like arsenic, is an imported poison, and though its introduction

into the country cannot be so easily controlled as that of arsenic, yet as the channels of introduction are well-known, a feasible plan to prevent the widespread dissemination of the drug shall be practicable. The physiological symptoms set up by the chewing of even a small fragment of aconite root are a bar to its frequent use as a poison, and have frequently assisted in the discovery of the poisoner. Nux vomica trees can hardly be said to grow wild in this part of India in the same way as datura. They are to be found here and there and have generally been planted for some purpose. Nux vomica seeds can, however, be readily purchased in the bazaar. One seed is sufficient to poison an individual, and one tree may produce many hundreds of seeds. As nux vomica trees are not numerous and do not grow wild, their cultivation, except in certain recognised places and by authorised individuals, should be prohibited. The cases of poisoning which arise from the use of oleander are for the most part accidental. The plant is to be found in most gardens and, like datura, it is a poison which cannot be removed from the reach of the poisoner. Its poisonous properties do not seem to be very widely known, and its action is somewhat uncertain. The method of using *abrus precatorius* has already been referred to. These, then, are the poisons which have been in use for half a century and more. The accessibility of three of them—viz., opium, aconite, and nux vomica—can effectually be controlled. *Abrus precatorius* is seldom used, and then only as a cattle poison. Datura and oleander remain, but their use (oleander for homicide or suicide) is rare now, for the reasons already given, and for those reasons is not likely to become more prevalent. It is, of course, very difficult, if not almost impossible, to foretell what altered conditions may bring about; but as for many years there has been practically no apparent attempt among poisoners to strike out a new line, it may reasonably be hoped that the introduction of a restricted poison sale would for several years enforce a sensible diminution in this class of crime. It is of some interest to note that so long ago as 1843 Dr. Mouat, then Chemical Examiner, considered that the use of vegetable poisons was on the increase, and wrote as follows: 'The great majority of cases of the administration of poison had hitherto been arsenic. Lately, however, the exhibition of vegetable poisons has been more resorted to from its being known to *hakims* and native druggists that while minute traces of any mineral poison can be unerringly detected, most vegetable substances defy analysis in the present state of chemical science. Some check ought to be put to the amount of murder committed in this way, unknown and unrecorded, by legislative enactment punishing all vendors of drugs in whose possession those substances are found.' Dr. Mouat's apprehensions have, however, proved groundless, for Dr. Warden, referring to this statement, was able to state in 1886: 'The above was written about forty years ago; the fear expressed that vegetable poisons might supplant arsenic has not been verified. Arsenic is still the homicidal and cattle poison of India.' It will naturally be advanced that from Dr. Mouat's time up to the present arsenic has remained easily accessible, and the necessity for discovering suitable vegetable poisons has not arisen. But even should the properties of indigenous vegetable poisons become generally known, these substances could never compete with arsenic in fitness for the poisoner's purpose. A comparison of the properties of arsenic and vegetable poisons as a class will at once indicate the advantages which attend the use of arsenic.

"Properties of arsenic and vegetable poisons generally:—

Arsenic.

1. Tasteless.
2. Certain in action.
3. The fatal dose is a small quantity.
4. Stimulates in a remarkable manner the symptoms due to natural disease.

Vegetable Poisons.

1. Acrid, bitter, or unpleasant taste.
2. Uncertain in action, due to the varying quantity of the active principles present in different specimens of the same plant.
3. To cause death larger quantities are necessary of the majority of crude vegetable drugs.
4. Do not simulate the symptoms of disease to anything like a corresponding extent.

"The certainty of its action, its want of taste, and the smallness of its fatal dose (two to three grains) require no further comment. They alone would give to arsenic a place in the front rank of the poisoner's equipment in any country. But the similarity of its symptoms with those induced by disease

gives it in India a special value which is well illustrated by the following case:—'On Oct. 28th, 1894, a man was admitted into the Mayo Hospital, Calcutta, suffering from symptoms of choleraic diarrhoea. He arrived alone and stated that he had come from Moorshedabad by steamer, having purchased and eaten food in the bazaar before leaving. He became ill on board the steamer. After admission his symptoms were attributed by one of the medical officers to arsenical poisoning, but by three others who also examined the patient from time to time he was considered to be suffering from choleraic diarrhoea. The man died on the fourth day after admission and a post-mortem examination was held. The condition found was one of general congestion of the alimentary canal with ulceration of the stomach and ecchymosis over the columnæ carnes of the heart. Portions of the viscera were sent to the chemical examiner for analysis which revealed the presence of arsenic.' It is legitimate to expect that many similar cases occurring in the district are returned without challenge as cases of cholera, if such a diversity of opinion can arise in a hospital provided with an experienced and expert medical staff. We have reason to believe, as already stated, that acquaintance with the vegetable poisons of the country and knowledge of their properties are not by any means widely diffused even among the rural population. On the other hand, it is, of course, quite impossible to determine what the practical knowledge of *hakims* and native druggists may be as regards indigenous vegetable poisons. In 1843 Dr. Mouat suggested that the *hakims* and native druggists were beginning to put their knowledge to a criminal use. Whether this holds good at the present time, and to what extent, we are quite unable to say. In towns the practitioners of indigenous medicine are as a class a respectable body of men. No doubt here and there black sheep are found among the *hakims* who are not over scrupulous as to the methods in which they earn money. But should the scheme proposed be put in force the *hakim* will be dependent for a supply of drugs very important if not essential to him in his practice upon the evidence of good character and conduct which he can adduce. In future the *hakims* would possess a definite status. A recognised position and the discharge of responsible duties are often sufficient to deter criminal instincts from the abetment or commission of crime. Without implying that the detection of a vegetable poison is as certain as that of a mineral, it may yet be confidently stated that the chemical methods for detecting vegetable poisons have considerably improved since the time of Dr. Mouat's report already referred to. And though there is still room for further advance in this direction much has been done, and vegetable poisons can be detected by chemical analysis of viscera with a very considerable degree of certainty as compared with the results of fifty years ago. Should resort to indigenous vegetable poisons be stimulated by restrictive measures it is probable that chemical research into the nature of these poisons and the best methods of detecting them would also be stimulated. Much has already been done in this direction by Dymock, Hooper, and Warden. If the proposed measures be carefully reviewed it will be seen that special cognisance has been taken of customs and habits, and the measure so drafted that no undue interference with habits and customs can arise. In the measures to restrict the general sale of poisons a special clause is introduced to legalise a small retail sale to unlicensed persons, the provisions of the clause to be hereafter determined. The practitioner of indigenous medicine will not be interfered with in his practice, but will be recognised and registered, and will, so far as the general community are concerned, become a more important, a more responsible individual than heretofore. We are aware that the proposal to register the practitioners of the province has already been once made and that it was abandoned on account of the difficulties of the task. We are now, however, approaching the matter from a different standpoint. It is utterly impossible to conceive of any scheme for restricting the sale of poisons unless a register is kept of those persons to be entrusted with certain privileges with regard to poisons. A licensed or registered medical practitioner is the only individual in most countries who is allowed to prescribe, sell, or possess poisons without challenge and without having to keep a list of the quantity of poisons prescribed and sold by him in the discharge of his duties. The obligation to register his name and address is a very small matter indeed in return for such important privileges, nor need the act of registration be made unduly vexatious. All medical practitioners in the employment of Government are already registered by

the Imperial and provincial Governments, and there would be no necessity to trouble them in any way. In Calcutta all practitioners of medicine have to obtain a licence from the municipality permitting them to practise, and this would simplify the registration of medical practitioners in Calcutta very greatly. In small towns and rural districts registration must of necessity be a very gradual process. It would follow on the exhaustion of the stock of poison in the possession of the practitioner of indigenous medicine and the necessity of obtaining a licence before it could be replenished. A measure of this kind can only very gradually be brought into force among a population such as that of the province of Bengal. Numerous difficulties would no doubt be encountered in its introduction, and the full measure of benefit to be derived from its operation would only slowly be realised. But, on the other hand, without some such scheme of registration the restriction of the sale of poisons seems impracticable. The interference with trade will practically arise only from restricting the free sale of arsenic. The value of the average annual quantity of arsenic imported into the country at the port of Calcutta during the last ten years has been about £308 sterling, valuing the arsenic at £14 per ton. The value of the average annual number of animals poisoned by arsenic in the province of Bengal only during the same period may be calculated as about £180 sterling. A certain amount of annoyance must of necessity be experienced in certain trades and occupations on the introduction of a restricted sale. It is possible that certain individuals who are now in the habit of using arsenic in their trade may be unable to obtain it in the future. Such objections should not, however, be allowed to carry any force. The convenience of the few can hardly have weight when the interests of a population have to be considered. Those persons who are fit to be trusted with poison will be able to obtain it under conditions of restricted sale as readily as at the present time. They will, however, have opportunities of realising that they are responsible for the safe care of the poison which they are permitted to buy. The value of the arsenic imported into the country at the port of Calcutta does not indicate that any important industry would be injured by the proposed measures.

"We have now reviewed those objections to the introduction of measures restricting the free sale of poisons which appear to us to be the most important. For many years past the introduction of such measures has been frequently recommended. It is trusted that the sketch given in our paper of the present prevalence and nature of poisoning in the province of Bengal may serve to demonstrate that the necessity still exists. Without under-rating the difficulties attending the introduction and working of such a measure incidental to the special conditions prevailing in India, we are confident that its introduction would be attended by great reduction in crime. We do not pretend that the measures proposed by us are free from defect or incapable of improvement. The scheme, such as it is, is submitted for criticism. In conclusion, we have to thank Dr. Simpson, health officer of Calcutta; Surgeon-Major J. B. Gibbons, police surgeon, Calcutta; Dr. Sasibhusan Ghosh, assistant to the health officer, Calcutta; Babu Mohini Mohan Chatterjee, attorney-at-law of the Calcutta High Court; and Babu Surendra Nath Mitra, B.A., registrar, Bengal Secretariat, for information and assistance in the preparation of the statistics contained in this paper."

SURGERY AND OPHTHALMOLOGY.

DEC. 27TH, 1894.

The following are abstracts of papers read in the Section of Surgery and Ophthalmology:—

Radical Cure of Inguinal Hernia at the Hospital of Pondicherry (French Colony).

Dr. HENRY GALLAY, Surgeon-Major of the Colonies, read a paper upon the Radical Cure of Inguinal Hernia at the Hospital of Pondicherry. He said:—

"In the two years that we have had charge of the medical service at Pondicherry we have performed in the hospital thirty-eight times the radical cure of hernia inguinalis. The number of the operated cases is only thirty-six because twice we have had to operate for hernia on both sides of the same man. Our operations have been made thirty-one times on

the right side and seven times on the left. Twelve times our hernias have been found complicated and our surgical operation aggravated owing to the necessity of performing at the same *séance*—twice the amputation of a cancerous testicle, twice the radical cure of old hæmatoceles, and eight times the radical cure of old and voluminous hydroceles. Twice we were in the presence of adhesions of the intestine with the hernial sac; it was impossible to extirpate these adhesions, and we were obliged to reduce the intestine from the bag, from which it was impossible to separate it. Three times we noticed that the cæcum came down in the scrotum. Once the cæcum was accompanied by the upper part of the colon and by a lump of epiploic fringes abnormally swollen; the lump once pulled off weighed nearly 4 lb. Another time we saw the cæcum and the ileo-cæcal appendicula ruptured on the left side. On another occasion we found the hernial bag adhering to a doubled fatty tissue three inches thick. Thus it is seen that out of thirty-six operations eighteen were complicated, or 50 per cent. Notwithstanding the disadvantages of such a series we had but four fatal cases—that is, 11 per cent. One of the fatal cases which we had to record was caused by tetanus. The local hospital, where we operate, was formerly the hearth of tetanus. During the last years, although we have carried out upwards of 300 surgical operations, it was the first time that terrible infection occurred, and perhaps we would have as much right to accuse the flesh of our patient as the locality where we operate. The man was a farmer, living in contact with the soil; perhaps the assistant in charge of the antiseptic arrangements had not sufficiently disinfected the field of operation. On one occasion the hernial sac was doubled with a real sort of web from which it was impossible to separate it; it was strangled by two pieces of catgut crossing each other and then reduced; the thickness of the fatty tissue was no doubt such that a small artery was insufficiently strangled. A small adhesion was formed on the right side of the iliac pit; the hernia was then on the left, fever set in, and the patient succumbed after presenting the symptoms of peritonitis. At the necropsy it was noticed that the neck of the bag, which was on the left side, had gone, after its reduction, to the right, and that around it a little hæmorrhage had taken place and had served as the starting point of the inflammation of the peritoneum. The third death was owing to the prolonged suppuration which occurred in an old debilitated patient on whom we operated on the same day for the radical cure of an inguinal hernia on the right side and an old hydrocele on the left side. There was no serious accident on the side of the hernia, only a few drops of liquid collecting under the suture. On the side of the hydrocele there was also a little running in the lower part of the scrotum, and when the surgical wound was cicatrised by first intention we were surprised to find at the inferior and posterior parts of the scrotum a large piece of flesh gangrened. The elimination of the slough caused a suppuration of long duration, from which the patient did not recover, succumbing on the seventeenth day after operation. The fourth and last death was that of an old man in whose scrotum we found, not only the cæcum, but the greater part of the large intestine, with 4 lb. of the epiploic fringes abnormally swollen. The reduction of that mass of large intestine, which had since long ceased to lie in the abdomen, was very painful. However, everything seemed to have taken place normally. In the evening, twelve hours after the operation, the patient was well. In the night the stomach swelled with extreme rapidity, and he succumbed with symptoms of asphyxia before we could be sent for. A post-mortem examination was not permitted. As we have finished relating our failures, we will now proceed with our successes. Twelve times we have obtained the ideal result—that is to say, reunion by first intention, ablation of the sutures on the eighth day, and complete cure on the nineteenth. As a precaution the patients were kept in bed until the thirtieth day, when they left the hospital. Twenty times cicatrization was delayed, either because the sutures have cut the flesh, or because under the superficial sutures a little liquid has accumulated, which it was necessary to allow to fill up the cavity which was formed for that purpose. In two cases we found the cords of the testicles swollen with a profound suppuration. The patients kept in the hospital under small surgical complications stayed generally forty-five days; two stayed forty-eight days and only two left on the fifty-third day. Authors are willing to admit that relapses after operations for hernia occur before the sixth

month. We have met fourteen of our patients, who were operated upon on the following dates:—

Date.	Months after operation.	Date.	Months after operation.
Dec. 19th, 1892	... 21	Dec. 17th, 1893	... 9
Jan. 25th, 1893	... 13	.. 20th, 1893	... 9
Sept. 17th, 1893	... 12	Jan. 29th, 1894	... 8
Nov. 6th, 1893	... 10	Feb. 12th, 1894	... 7
.. 10th, 1893	... 10	.. 23rd, 1894	... 7
.. 24th, 1893	... 11	April 23rd, 1894	... 6
Dec. 8th, 1893	... 9	.. 26th, 1894	... 6

Among all the recovery has been perfectly well kept up. Among all the scar is soft, and the inguinal cord free from adhesion, and what makes the whole of these results interesting is that among the patients one happened to be an old weak-looking man sixty-one years of age, in whom the cure of a long-standing large-sized hernia has been completed by the excision of a cancerous testicle. Having regained his plumpness and alertness, this old man, formerly an invalid, now walks easily, two years after operation. The next were four sepoys, three of whom after one month's rest—the first thirteen months, the other two ten months since—resumed their military duties and bore all the hardship of them. There were three police peons who for ten, seven, and seven months respectively have been patrolling night and day, and on their legs from six to eight hours a day. One patient was operated upon on Dec. 20th. While he was a scholar he left the hospital to enlist himself as a sepoy, and for ten months has been well enough to perform the military gymnastics and other hard work, and bears without difficulty the painful period of the young soldier's instruction. Two are Europeans: one a medical man on board the steamer, has, six months since, resumed his duty on board and goes up and down the ladder, and supports the necessary muscular efforts to struggle against the rolling and pitching, and that without wearing a truss. The other one is a tramp; he was operated on more than ten months ago for a hernia about the size of an adult's head. He recommenced his old roving existence, living on the roads, wandering barefooted from Cuddalore to Pondicherry, even extending his begging trips to Trichinopoly, without being tired or threatened with relapse. In all cases I made use of Bassini's process, which, as everyone knows, consists in the reconstitution, by means of two whips with catgut, of the two partitions of the inguinal channel in their full length, while the deep orifice of the channel retains just the width sufficient for the inguinal cord to pass through. The therapeutic results I have just related allow me to conclude as to the excellency of this method; it gives to the reconstituted abdominal partition a perfect stability, allows the inguinal channel to be free to let the cord to pass through, and by shutting the deep opening of this channel prevents all opportunity for a relapse. The busy and tiring existence which since the operation has been led by the two European patients, four sepoys, three police peons, and the young recruit confirms the conclusions which Bassini himself, when publishing his surgical method, formulated—viz., that as soon as an inguinal hernia has been successfully operated on, when the reconstitution of the partitions of the channel has been methodically made, the patient can be considered as completely cured, go through the most arduous professions, and no longer bear any bodily defect on account of which he could be rejected from the military profession or exempted from the military service."

Contagious Pemphigus.

Assistant-Surgeon SOORJEE NARAIN SINGH, Teacher of Materia Medica and Therapeutics, Temple Medical School, Bankipur, read a paper on Contagious Pemphigus. He said: "Pemphigus is described in text-books as a non-contagious skin disease. I have, however, seen cases which occurred one after another in rapid succession in the same family, as also by communication in neighbouring families. In August, 1893, while in consultation with Surgeon-Lieutenant-Colonel E. Bovill in a case of clubfoot in a new-born child, I noticed pemphigus on the body of that child. Surgeon-Lieutenant-Colonel Bovill suggested to me the keeping of a record of such cases as could be found to have occurred in the same family. Since that time I have had opportunities of seeing cases of pemphigus in three families in which it affected several children in quick succession. In Family 1 there were seven cases, all occurring within a period of from Aug. 5th to 20th, 1893, and in children aged from fourteen days to six years. In these cases the bullæ varied in size from a large pea to a hen's

egg, containing a clear fluid which gradually became opalescent. Some of them burst in a day or two, sometimes earlier. In those that burst the cuticle would curl up, in places, exposing the red, raw surface underneath and forming a slightly yellowish crust. In those that did not burst the cuticular wall shrivelled up, forming a thin white crust, which in a short time withered away. The mark left on the body would be a faint pink white in colour for a few days, but afterwards there would be no trace whatever on the skin. There would be no pit or cicatrization. In the cases I examined I found that no sooner was one set of bullæ on the decline than another set would crop up, and so forth, for a week or two, sometimes extending to three weeks. The bullæ were all separate and none of them coalesced. The eruption at first appeared as small red spots, which rapidly formed into blebs. The bullæ were generally found on the hands, legs, and back. There was little or no fever, only a slight constitutional disturbance being present, such as loss of appetite, slight emaciation, and general uneasiness, probably from the pricking and smarting pain of the bullæ. In Family 2 there were three cases of pemphigus, also occurring in children aged from eleven months to seven years, and within a period extending from Sept. 10th to 26th, 1894. All these cases were of a similar nature to those in the foregoing family. In Family 3 there were two cases occurring on Oct. 19th and 29th, 1894, and in children aged two years and two months respectively. It is a remarkable fact noticed even by the lay members of the house that one of the three children of Family 2, the one aged eleven months, had been brought by her mother to the house, and a few days after the child aged two years of Family 3 (who in all appearance was a very healthy girl) was affected. This case was exactly similar in nature to those described in Families 1 and 2. The second case of this third family was, however, of a very grave nature and terminated fatally. The little infant, aged two months, had only been under homœopathic treatment for diarrhoea. When I was called to see it I found a big bladder filled with clear serum on the upper part of the abdomen, extending from the splenic to the hepatic region, and breadthwise from the epigastric to within an inch above the umbilicus. There were big bullæ also on the groins, the chin, back, arm, legs, and ankles all rapidly distending themselves and bursting, the surrounding skin remaining perfectly healthy. The child was in great agony, constantly crying; the fever was high—viz., 103° F. Some of the bullæ had burst, exposing the red corium. The discharge from the bullæ was of a fetid smell. In short, the child looked, as it were, scalded all over. It had been in a bad state of health from birth, suffering repeatedly from indigestion and diarrhoea. On the whole, if I am to analyse all the cases I saw during the last two years I am inclined to think that pemphigus, at least in the certain forms I have had opportunities of examining it, is of a contagious nature. In family No. 1 and in family No. 3 the disease could be traced to have occurred by communication with persons suffering from the same disease in the neighbourhood, whilst in the same family it spread amongst the children very rapidly. I cannot say that the disease could be in all these cases the result of a certain condition of the system, such as are occasioned from bad health or insanitary living. The cases I examined were, although not models of health, yet except one quite as healthy as native children ordinarily are, and living in houses and localities not particularly insanitary. While I was examining my cases I had my eye open regarding any mistake as to diagnosis. I was sure my cases could not be mistaken for a varicella. Even the smallest bullæ were larger than any varicella vesicle, and the large bullæ or the bladders in my cases have no comparison in varicella. The succession of crops of bullæ in the cases I examined continued to two or three weeks, whereas in varicella there is generally no fresh crop after a week. In varicella there is always left in the skin for a considerably long time a whitish blue stain, which may also be pitted or cicatrised. In my cases, after the cuticular wall crumbled, there was no pitting, and the pink white skin left, lasting only for a few days, would leave no mark whatever. In varicella, again, there is often an ulceration before cure. In my cases there was no ulceration, except in one pemphigus gangrenosus. My cases could not also be mistaken for varicella bullosa, because they had rapidly enlarged and fully distended before bursting; whereas in varicella bullosa the vesicles do not generally enlarge until they have burst, and they generally enlarge at the periphery of the crust. There was no case of chicken-pox in the neighbourhood at the time I saw the cases

of pemphigus. I find the question whether pemphigus is or is not contagious has of late attracted the notice of some medical men in Europe; and, in conclusion, I beg to apologise for making any assertion contrary to the teachings of the text-books, but I leave my experiences to the Congress with a view that the question may be investigated."

Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the Preliminary Scientific (M.B.) Examination in January, 1895:—

ENTIRE EXAMINATION.

FIRST DIVISION.

Keays, Lionel Francis, St. Paul's School and private tuition.
Kelly, Charles Ernest M., Owens College.
Manson, Patrick Thurburn, University Tutorial College.
Oswald, Felix A. Clair, B.A., private study.
Petch, Tom, B.A., private tuition.
Shopland, Thomas, B.A., University Tutorial College and private study.
Vernon, Ethel Miller, University Tutorial College.

SECOND DIVISION.

Coffin, Arthur Charles, B.A., private study.
Davies, David Leighton, private study and University Tutorial and University Colleges.
Easton, Harold Augustus, private study and University Tutorial College.
Ehrlich, Henry Albert, Owens College and private study.
Hoban, Thomas, private study and St. Thomas's Hospital.
Jarvis, George Charles, B.A., private study.
Jones, Wm., Henry Pryce, B.A., private study and University College, Liverpool.
Kevern, Samuel, B.A., Plymouth Technical School.
Raven, Eustace, St. Thomas's Hospital.
Ruckwood, David Pratt, University College and Gower-street Laboratory.
Smith, John Salmon, University College.
Spilsbury, Bernard Henry, Owens and University Tutorial Colleges.
Trumper, William Arthur, St. Mary's Hospital.
Woodcock, Louisa, University Tutorial College.

CHEMISTRY AND EXPERIMENTAL PHYSICS.

*Aldred, John White, Owens College.
Armitage, John James, School of Science, Cheltenham.
Beaumont, Noel Charles, St. Bartholomew's Hospital.
Beensley, Vernon Cyril, St. Mary's Hospital.
*Bernard, C. Constance, private tuition.
Billinghurst, Walter Brinsmead, Merchant Taylors' School.
Blythe, Thomas Thompson, University Tutorial College.
Boissière, Felix Anthony, King's College.
*Brown, Charles Richard, St. Bartholomew's Hospital.
*Burn, William Leopold, private study.
*Capper, Harold Selwyn, private study, and University Tutorial College.
*Dawson, William Collings, King Edward High School, Birmingham, and Mason College.
*Drake-Brockman, Henry George, University Tutorial College.
Ede, Alfred Gordon, Durham College of Science and St. Bartholomew's Hospital.
*Etheridge, Charles Edward, University Institute.
*Flint, William Henry, Mason College.
*Foster, Henry Bertram, private study.
*Goodman, Harold, St. Bartholomew's Hospital and private tuition.
*Gowland, Edward Lake, University Tutorial College.
*Green, Sydney Balch, St. Bartholomew's Hospital.
*Harrison, John Wilkins, St. Paul's School and University Tutorial College.
*Hickinbotham, Edward B., King Edward High School, Birmingham, and private study.
*Hildesheim, Oscar, St. Paul's School.
*Hilton, Charles Guy Salter, private tuition.
Hunt, Sydney, Merchant Taylors' School.
*Judson, Joseph Edward, Owens College and private study.
Leah, Thomas, St. Mary's Hospital.
Marshall, Charles de Zouche, Eastbourne College.
Morgan, Daniel Leigh, Guy's Hospital.
*Morris, Frank Mayo, London Hospital.
*Moss, Bertram Wilmore, Guy's Hospital.
Orford, Thomas Christian, Owens College.
*Pancriddle, William Pancriddle, University and University Tutorial Colleges.
Payne, William, Carlyon College.
*Peck, William Edward, University Tutorial College and private study.
*Robson, Isabel, University College, Aberystwith, and private study.
Stallard, Nigel Frampton, University Tutorial College.
*Stark, Arthur Campbell, private study.
*Stevens, Andrew Norris, University Tutorial College.
Taylor, William Benjamin Batchelor, Merchant Taylors' School and London Hospital.
*Wells, Albert John Walton, St. Bartholomew's Hospital.
Whale, George Harold Lawson, private tuition.
*Williams, Sydney Rice, Merchant Venturers' Technical College, Bristol.
*Wigram, Charles Wynn, University College and private tuition.
*Wynne-Edwards, Edith Anna, University Tutorial College and private study.

BIOLOGY.

Addison, Oswald Lacy, University College.
Bourke, Isidore McWilliam, St. George's Hospital and private tuition.
*Bailey, William Herbert, Queen's College, Cambridge.
Bridger, James Frederick Edmund, St. Mary's Hospital and private study.
*Chetwood, Thomas, Epsom College.
Eisenberg, Herman Bernard, University College, Bristol.
*Foster, Arthur Herbert, Epsom College and St. Mary's Hospital.
Holland, Laurence, Mason College and private tuition.
*Jones, Lawrence, St. Paul's School.
*Judson, James Douglas, Owens College.
Klein, Joseph, University Tutorial College.
Lowe, Otto William Axel, private tuition and University College, Liverpool.
*Mennell, Zebulon, University Tutorial College and private tuition.
*Miller, Ernest Alfred, Guy's Hospital.
Miller, Thomas Davidson, University and University Tutorial Colleges and private tuition.
*Murrell, Christine Mary, University College.
*Noall, William Paynter, Owens College and private study.
*Nutt, Harold Rothery, St. Mary's Hospital.
*Ormond, Sidney James, Guy's Hospital.
*Paramore, Richard Horace, University Tutorial College.
*Pearce, John Warwick Guy, The Leys School and private tuition.
*Pock, Lawrence, University Tutorial College.
*Pocock, Arthur Robt. George, University College and private tuition.
*Ransford, Alan Carpmal, Dulwich College and Guy's Hospital.
*Robinson, Henry, St. Paul's School.
*Serase, James John Sheat, St. Bartholomew's Hospital.
Serjeant, Edith, Somerville Hall, Oxford.
*Stedman, Percy Taylor H., private study and tuition.
Stevens, Stanley, Carlyon College.
*Swift, Eric Wilson Danby, Firth College.
*Turnbull, Robert Cyril, Yorkshire College and London Hospital.
*Van Praagh, Harold John, St. Mary's Hospital.
Wallbridge, Stephen Edwin Joseph, St. Mary's Hospital.
*Watson, William Bertram, St. Mary's Hospital.
*Wolstenholme, Henry, University College and private tuition.
* These candidates have now completed the examination.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin*: Dr. Weintraud of Strasburg has been recognised as *privat-docent* in Medicine.—*Kazan*: Dr. Fortunatoff has been promoted to the position of Ordinary Professor of Anatomy.—*Marburg*: Dr. von Büngner has been promoted to an Extraordinary Professorship of Surgery.—*Prague*: *Bohemian University*: Dr. V. Janovsky has been promoted to the position of Ordinary Professor of Dermatology and Syphilis. *German University*: Dr. Paul Dietrich has been promoted to the position of Ordinary Professor of Forensic Medicine.—*Tübingen*: Dr. Nagel has been recognised as *privat-docent* in Physiology.

PRESENTATION.—Dr. A. J. Helm Montague of Workshop has been presented with a case containing a pair of handsome electro-plated fish servers bearing the following inscription: "Presented to Dr. Montague by the St. John Ambulance class, Workshop, in recognition of his services as lecturer. February, 1895." At the same time Mrs. Montague received an electro-plated pickle fork from the same class.

THE Cambridge Medical Graduates' Club gave an informal smoking concert on Tuesday, Feb. 18th, at the St. James's Banqueting Hall, Regent-street, W. Each member of the club had the opportunity of introducing two friends, and the corresponding club, the Oxford Graduates' Medical Club, were invited as guests. There was no rigid programme, but most excellent music was kindly provided at intervals by Drs. Habershon, Shadwell, McCann, Fyffe, and Hayne, and Messrs. Burns, Gale and Marshall.

LITERARY INTELLIGENCE.—Messrs. J. & A. Churchill will publish next week a work entitled "The Insane and the Law; being a Plain Guide to Medical Men, Solicitors, and others," by Mr. G. Pitt-Lewis, Q.C., Recorder of Poole, Dr. Percy Smith, Medical Superintendent of Bethlem Hospital, and Mr. J. A. Hawke, B.A., late Scholar of St. John's College, Oxford. The same publishers have also nearly ready the second volume of "Chemical Technology," edited by Mr. C. E. Groves, F.R.S., and Mr. W. Thorp, B.Sc. This volume is devoted to Lighting by Candles and Oil, and is illustrated with nearly 350 figures. The section on Fats and Oils is contributed by Mr. W. I. Dent; Stearine, by Mr. John McArthur; Candle Manufacture, by Messrs. L. and M. A. Field; the Petroleum Industry, by Mr. Boverton Redwood; Lamps, by Mr. Redwood; and Miners' Safety Lamps, by Messrs. Redwood and D. A. Louis. The third volume of the same work, containing Gas Lighting, written by Mr. Charles Hunt of Birmingham; and Electric Lighting, by Professor Garnett, chairman of the Board of Technical Education, London County Council, is an advanced state.

FOOTBALL CASUALTY.—During a match at Bolton a player aged twenty-three years sustained "injuries to one of his legs." He was placed under medical treatment, but the injuries became more acute, and he died on the 15th inst.

ROYAL BRITISH NURSES' ASSOCIATION.—The third sessional lecture of the season was delivered at 17, Old Cavendish-street on Feb. 15th, before an appreciative audience, by Mr. W. Bezly Thorne, M.D., the subject being an Illustrated Explanation with Demonstration of the Physical Treatment of Heart Diseases. The chair was taken by Mr. J. Langton, F.R.C.S. At the conclusion the lecturer replied to the many intelligent questions raised on the various points of special interest to nurses.

A NEW WING of Weymouth Sanatorium was opened on Feb. 7th by Lady Ilchester, in presence of a large company. The Mayor, who presided, said that the sanatorium was founded in 1848 by the late Dr. Smith for the treatment of diseases of women and children. Originally there were six beds, but the applicants became so numerous that the committee acquired additional land and erected a detached wing containing three wards with accommodation for twelve patients.

THE OPIUM COMMISSION.—The report of this commission will be in the hands of Members of Parliament before Easter. The work of the commission has no doubt been unusually laborious and difficult, the evidence taken being very voluminous. The subject is one that gravely affects the habits and customs of the population of India for one thing, and the public finances of that country for another, consequently the publication of the results arrived at by the commission is anxiously awaited.

We learn from Bordeaux that a congress for the month of August next is being arranged for in that city under the auspices of the Société de Gynécologie d'Obstétrique et de Pédiatrie. The congress will be held upon the occasion of the thirteenth exhibition which the Philomathic Society of Bordeaux has organised. Professor Carnier will be the president of the whole congress, and the sectional presidents will be as follows: in Gynecology, Professor le Dentu; in Obstetrics, Professor Carnier; and in Pediatrics, Professor Lannelongue of Paris. The general secretary to the committee of organisation, to whom we owe the above information, is Professor Lefour.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 6th, Dr. Tew, President, being in the chair. Dr. Bell Taylor showed a man eighty years of age on whom he had successfully performed the operation of Cataract Extraction on the Left Eye without Iridectomy. He also showed: (1) three cases of Double Extraction; (2) a boy aged fifteen with Detachment of Retina, under treatment by galvanism; (3) a man aged forty-five who had been Blind for several months from disease of the Nerve, and whose sight had been restored by galvanism; and (4) a man aged forty-seven in whom Symblepharon of the Left Eye had been treated by a graft of skin transplanted from the right upper eyelid. Dr. Carroll showed a man aged forty-five who had been much benefited for Psoriasis by thyroid tabloids, four daily for nine months. Dr. William Ransom showed a woman aged thirty-four suffering from Acromegaly, associated with Glycosuria and Bi-temporal Hemianopia. Dr. Handford showed a man aged thirty-two with Splenic Leucocythæmia, who after the unsuccessful use of marrow tabloids and extract had improved greatly under arsenic. Mr. Anderson related three cases of Ligature of the Common Carotid Artery. In the first case the operation was done for aneurysm in the neck. Pulsation having returned, the sac was dissected out, and this was followed by death shortly afterwards. In the other two cases the carotid was ligatured in the course of the removal of malignant growths, and both cases recovered. Mr. Chicken showed the Vermiform Appendix removed post mortem from a male patient who had died from syncope occurring in the course of an acute abdominal illness. Two members of the same family had suffered from illness, in one case fatal, supposed to be due to disease of the same region. Specimens were exhibited: by Dr. Wm. Ransom, Actinomyces; by Dr. Handford, Leucocythæmic Blood; and by Mr. Anderson, Aneurysm of Common Carotid, and part of Prostate and Calculus removed by cystotomy.

The annual meeting of the East Grinstead Cottage Hospital was held on Feb. 12th at the Victoria Hall, East Grinstead, Mr. J. McAndrew presiding. During the year 1894 there were 43 patients under treatment; these included 28 surgical cases, of which 11 were of a serious nature. No death occurred during the year. The financial statement given in the committee's sixth annual report was satisfactory. A bequest of £45 was received from the executors of Mrs. Hort.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Infirmary for Waterford.

Mr. JOHN RILDON has introduced a Bill into the House of Commons for the establishment of a public infirmary in the city of Waterford. The Bill has been put down for second reading on Monday, March 4th.

Sanitary Registration Bill.

A Bill for the sanitary registration of dwelling-houses, schools, colleges, hospitals, asylums, workhouses, factories, workshops, hotels, lodging-houses, and other buildings within the United Kingdom has been introduced into the House of Lords by the Marquis of Ailesbury.

Burials Bill.

The Bill to amend the burial laws, introduced into the House of Commons by Mr. Caryell Williams, consists of nineteen clauses and a schedule. In the words of the memorandum, the main object of the measure is "to provide that while the consecration of parochial cemeteries may be permitted, consecration shall be regarded only as a religious rite, and shall create no legal rights or disabilities or claims to fees. The effect will be to give to burial authorities greater freedom than they now possess in regard to the laying out of cemeteries, the erection of mortuary chapels, &c." Clause 2 provides that where, after the commencement of the Act, any ground is appropriated as a public burial ground for a parish or district, the burial authority having jurisdiction over such burial ground shall sufficiently enclose and protect the same, but shall not permit any division to be made or other means to be taken of marking the boundaries of or distinguishing the consecrated and unconsecrated parts of such ground.

Certifying Surgeons under the Factory Acts.

The Departmental Committee of the Home Office on Factory Statistics have issued a long report in which they deal at considerable length with the examination by certifying surgeons of children and young persons. The committee find that in a certain number of instances annually the certifying surgeons fail to make any report and inasmuch as no remuneration is allowed for this part of their duty it is extremely difficult to secure compliance with the statutory obligation. In districts where young persons and children are rarely employed the return will necessarily be small, but the statistics cannot be regarded as complete unless a return, however limited the numbers concerned, be obtained from every certifying surgeon. To secure this end the committee say the question of remuneration ought to be considered. As to the medical reasons for rejection, these stated broadly, say the committee, are that the child is incompetent for the work in question or that owing to impaired health he would be likely to suffer ill consequences from the employment, or that his condition is such as to call for exclusion in the interest of his fellow workers. Some of the disqualifications which come under the first and second of these heads are relative only; that is to say, unsuitness for one particular kind of work does not of necessity mean unsuitness for all factory employment. Nor is it so regarded by certifying surgeons. It seems that in Lancashire deafness is held to be a ground of rejection, chiefly as regards employment in rooms where machinery is at work; but many children with imperfect hearing are passed on condition that they are employed in safe parts of the factory. Similarly the experience of some certifying surgeons has led them to regard carious teeth as a reason for rejection in lucifer match works. While regarding it as impracticable to institute any standard in such matters applicable to all industries in different parts of the country, the committee recommend that as a means to greater precision and uniformity, and also to more correct classification for the purpose of the annual report, a memorandum should be prepared with the assistance of some of the most experienced of the certifying surgeons embodying suggestions and instructions for the guidance of certifying surgeons generally.

BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Boulevard Saint-Germain, Paris.

Manuel de Percussion et d'Auscultation. Par le Dr. Paul Simon.

1895. pp. 256.

Petit Compendium Médical. Par le Docteur A. Bossu. Troisième édition. 1895. pp. 152.

- BAILLIÈRE, TINDALL, & COX**, King William-street, Strand, London.
A Practical Treatise on Diphtheria and its Successful Treatment. By Brownlow R. Martin, M.B. Dubl. Second Edition. 1895. pp. 64. price 6s.
- BLACKIE AND SON**, Old Bailey, London, E.C.
Blackie's Science Text-book: an Elementary Text-book of Anatomy. By Henry E. Clark, F.P.G.S. Glasg. M.R.C.S. 1895. pp. 283. Price 6s.
The Student's English Dictionary. By John Ogilvie, LL.D. New Edition. Edited by Chas. Annandale, M.A., LL.D. With extensive Appendices. Illustrated. 1895. pp. 864. Price 7s. 6d.
- BLAKINSON, P., SON, & CO.**, Walnut-street, Philadelphia.
Materia Medica and Therapeutics. By John B. Biddle, M.D. Thirtieth Edition. By Clement Biddle, M.D. Illustrated. 1895. pp. 714.
- CASSELL AND CO.**, London.
The Year-book of Treatment for 1895. pp. 490. Price 7s. 6d.
- CHURCHILL, J. & A.**, New Burlington-street, London.
Diseases of the Eye. By C. Edw. Shaw, M.A., M.D. Illustrated 1895. pp. 103. Price 3s. 6d.
- CLAY, WM. F.**, Teviot-place, Edinburgh.
On the Geographical Distribution of Tropical Diseases in Africa, with an Appendix. By R. W. Felkin, M.D., F.R.S.E., F.R.G.S. With Table and Map. 1895. pp. 79. Price 3s. 6d. net.
- DORMAN, W. J.**, Philadelphia.
Transactions of the American Gynaecological Society. Vol. xix. 1894.
Transactions of the American Surgical Association. Vol. xii.
- EYRE AND SPURDISWOOD**, East Harding-street, Fleet-street, London.
Army Medical Department Report for the Year 1893, with Appendix. Vol. xxxv. 1895. Price 2s. 5d.
- FROWDE, HENRY**, Amen-corner, London, E.C.
The Hospital Service Book and Supplement. By Chas. P. Baxter, M.A. 1895. Price 2s.
- KELLY AND CO.**, High Holborn, London.
Kelly's London Medical Directory. 1895. Price 6s. 6d.
- LONGMANS AND CO.**, Paternoster-row, London, E.C.
The Foundations of Belief: being Notes Introductory to the Study of Theology. By the Right Hon. Arthur J. Balfour. pp. 356. 1895. Price 12. 6d.
- PRYNELL, YOUNG J.**, Edinburgh.
Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. Fasciculus 8. Price 21s. net.
- SAMPSON LOW, MARSTON, & CO.**, Fetter-lane, Fleet-street, London.
Phrenology, or Heads and What they Tell Us. By W. Pugin Thornton. Illustrated. Fourth Edition. 1894. pp. 115. Price 1s.
- SAUNDERS, W. B.**, Walnut-street, Philadelphia.
Saunders' New Aid Series, Dose-book and Manual of Prescription-writing. By E. Q. Thornton, M.D., Ph.G. 1895. pp. 334.
- THE MEDICO-LEGAL JOURNAL OFFICE**, Broadway, New York.
Medico-Legal Studies. Vol. iii. By Clark Bell, Esq. 1893.
- THE NEW SYDENHAM SOCIETY**, London, and H. K. LEWIS, Gower-street, London.
An Atlas of Illustrations of Pathology. Compiled (chiefly from original sources) for the New Sydenham Societies. Fasciculus 9, Diseases of the Testis. Part I., plates 42 to 46. 1894.
- The Medical Magazine; February, 1895 (H. Sotheran and Co., 140, Strand, London).—Pocket Therapeutic Notes; second edition; 1894 (Ferris and Co., Bristol).—The Album: a Journal of Photographs of Men, Women, and Events of the Day (the "Illustrated London News" Office, 193, Strand, W.C.); price 6d.—Sell's Dictionary of the World's Press and Advertisers' Reference Book, 1895; by Henry Sell (Sell's Advertising Agency, Fleet-street, London).—Fifty Years of the Glass Bottle Trade; reprint from "The British Trade Journal," December, 1894; Messrs. Kilner Brothers' Jubilee, 1844-1894.—Jahrbuch für Kinderheilkunde und Physische Erziehung; Band xxxix.; Hefte 2 u. 3; February, 1895 (B. G. Teubner, Leipzig).—Transactions of the Cremation Society of England, No. 8 (The Cremation Society of England, New Cavendish-street, W.); 1895; price 6d.—Festschrift zum fünf-und-zwanzigjährigen Jubiläum des Vereins Deutscher Aerzte zu San Francisco, Californien, 1853-1894 (Schmidt Label and Litho Company, San Francisco, Cal.).—Sonderabdruck aus der Allgemeinen Medicinischen Central-Zeitung; von Oscar Coblentz, in Berlin.—Sonderabdruck aus der Pharmaceutischen Centralhalle; von Dr. H. Hager und Dr. E. Geissler (Pharmaceutische Centralhalle, Dresden).—Die Nichtpathologische Gynäkologie der alten Aegypter; Felix Oefele; Bad Neuenahr (Emil B. Nache, Berlin, S.W.).—The Natural History of Plants; Part 10 (Blackie and Son, London); price 2s. 6d. net.—The New Science Review; January, 1895 (Gay and Bird, Chandos-street, Strand, London).—Przegląd Chirurgiczny; tom. ii, zeszyt 2. (K. Kowalewskiego, Warszawa, 1894).—Das Fieber; von Dr. G. B. Ughetti (G. Fischer, Jena, 1895).—Rudolph Virchow und die Bakteriologie; von E. Braatz (G. Fischer, Jena, 1895).—Preventive Surgery; by George Wherry, M.C. Cantab., F.R.C.S. (Deighton, Bell and Co., Cambridge, 1895); price 6d.—Posological Tables; Appendix on Poisons, Index of Diseases; by Wm. Craig, M.D. Edin.; new edition, 1895 (E. and S. Livingstone, Edinburgh); price 1s. net.—The Dental Digest; January, 1895 (The Dental Protective Supply

Company, Chicago, Illinois).—Bulletin of the Psychological Section of the Medico-Legal Society; by C. Bell; June, 1894 (published at the Broadway, New York City).—The Medico-Legal Journal; September, 1894; by C. Bell, Broadway, New York City).—Reminiscences of Dr. J. Marion Sims in Paris; by R. Souchou, M.D.; reprint (Trow Directory Printing Company, New York, 1894).—Brewery Companies; reprint from "The Statist"; by H. S. ("The Statist" Office, Cannon-street, London, E.C., 1895).—Société d'Éditions Scientifiques, Paris: petite Encyclopédie Médicale; Lois de la Création des Sexes; des Moyens de s'assurer une Progeniture Male; par le Dr. A. Cleisz; vol. xxvi., 1895; pp. 163.—L'Hygiène et l'Assistance Publiques; l'Organisation et l'Hygiène Scolaires en Belgique et en Hollande; par le Dr. C. Deloaille; 1895; pp. 234.—Le Traitement de la Diphthérie; par le Dr. de Crézanstignes; 1886.—University of Edinburgh Examination Questions in the Practice of Physic, answered and annotated; by W. Rainey Smith, M.B., C.M., B.Sc. (Young J. Pentland, Edinburgh); price 1s. 6d.—University of Edinburgh Examination Questions in Surgery, answered and annotated by W. R. Smith, M.B., C.M., B.Sc. (Young J. Pentland, Edinburgh); price 1s. 6d.—Origen Polidrico de les Especies. Arturo Soria y Mata; Establecimiento Tipográfico (sucesores de Rivadeneyra), Madrid, 1894.—Die Diphtherie; von Dr. A. Baginsky (Urban und Schwarzenberg, Wien und Leipzig, 1895).—Clinical Sketches, illustrative of Practical Medicine and Surgery; February, 1895; edited by Noble Smith (published monthly by Smith, Elder, and Co., Waterloo-place, London); price 1s.—The Royal Natural History; vol. iii., part 16 (Frederick Warne and Co., Bedford-street, Strand, London); price 1s. net.—Wilson's Legal Handy Books: Treatise on the Law relating to the Validity of Contracts in Restraint of Trade; by Wm. A. Jolly, Barrister-at-law (Effingham Wilson, Royal Exchange, London); price 1s. net.—Monatsschrift für Geburtskunde und Gynäkologie; von Professoren Dr. A. Martin und Dr. M. Sänger; February, 1895 (Williams & Norgate, Henrietta-street, Covent-garden, London).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- ATKINSON, H. N. C.**, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Warneford Hospital, Leamington.
- BANKS, L. P.**, L.R.C.P. Irel., L.F.P.S. Glasg., has been reappointed Honorary Surgeon to the Mansfield and Mansfield Woodhouse District Hospital.
- BODINGTON, G. F.**, M.D. Durh. and Glessen, M.R.C.P. Lond., F.R.C.S., L.M. Eng., has been appointed Medical Superintendent to the New Westminster Asylum, British Columbia, Canada.
- BRIGGS, H.**, M.B., C.M. Edin., F.R.C.S. Eng., has been reappointed Honorary Surgeon to the Liverpool Hospital for Women.
- BURTON, J. E.**, L.R.C.P. Lond., M.R.C.S., L.F.P.S. Glasg., L.M., has been reappointed Honorary Surgeon to the Liverpool Hospital for Women.
- CHADWICK, C. M.**, M.D. Oxon., M.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to the Victoria Home for Invalid Ladies, Leeds.
- COCHRANE, ROBT. S.**, M.B. Dub. Univ., F.R.C.S.I., has been appointed Medical Officer to the Longford Union.
- CREST, G. I.**, L.R.C.P., L.M., L.R.C.S. Irel., has been reappointed Honorary Surgeon to the Mansfield and Mansfield Woodhouse District Hospital.
- CURRIE, J. M.B.**, M.S. Edin., has been appointed House Surgeon to the Beckett Hospital and Dispensary, Barnsley.
- DAVIES, E. T.**, M.D., C.M., F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Surgeon to the Liverpool Hospital for Women.
- EDIS, J. B.**, L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Honorary Surgeon to the Liverpool Hospital for Women.
- GODFREY, G. P.**, L.R.C.P., L.R.C.S. Edin., has been reappointed Honorary Surgeon to the Mansfield and Mansfield Woodhouse District Hospital.
- GRINSDALE, T. B.**, M.B. Cantab., M.R.C.S., has been reappointed Honorary Assistant Surgeon to the Liverpool Hospital for Women.
- HARPER, W. J.**, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the Barnstable Union.
- HARTLEY, R. N.**, M.B., B.S. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Victoria Home for Invalid Ladies, Leeds.
- JONES, E. L.**, M.D. Camb., B.S., has been appointed Pathologist to the Addenbrooke's Hospital, Cambridge.
- KAY, JOSEPH H.**, M.D., C.M. Edin., has been appointed Medical Officer for the Colne Sanitary District of the Burnley Union.
- KRITH, MRS. CAROLINE**, L.R.C.S., L.R.C.P. Edin., has been appointed Anaesthetist to the Chelsea Hospital for Women, Fulham-road.
- LANDER, H. W. G.**, M.B., C.M. Edin., has been appointed Assistant House Surgeon to the District Hospital, West Bromwich, vice O. H. Isard, resigned.
- MACGREGOR, G. S.**, M.B., C.M. Edin., has been appointed Examining Medical Officer to the Glasgow Convalescent Home.
- MACVICKER, C. G.**, M.B., B.S. Irel., has been appointed Medical Officer for the Eighth Sanitary District of the Newmarket Union.
- MILLS-ROBERTS, E. A.**, M.B., C.M. Edin., has been appointed Surgeon to the Penrhyn Quarry Hospital.
- PARKINSON, W. G.**, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Leeds Hospital for Women and Children.

PERRY, F. W., L.R.C.P., L.R.C.S., L.M. Irel., has been reappointed House Surgeon to the Pendleton Branch Dispensary, Salford Royal Hospital.

ROBINSON, F. G., M.B. Vict., L.R.C.P. Lond., M.R.C.S., has been reappointed District Medical Officer for the Broughton Branch, Salford Royal Hospital.

SMART, DAVID, M.B., C.M. Edin., has been reappointed Honorary Assistant Surgeon to the Liverpool Hospital for Women.

SMITH, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Mansfield and Mansfield Woodhouse District Hospital.

SMITH, W. B., L.R.C.P. Edin., M.R.C.S., has been reappointed District Medical Officer to the Salford Royal Hospital.

SPARKE, G. W., M.R.C.S., L.M., has been appointed Honorary Consulting Surgeon to the Mansfield and Mansfield Woodhouse District Hospital.

STEWART, MALCOLM, L.R.C.P. Edin., L.R.C.S. and L.M. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Parish of Eric and Rendall, Orkney.

STUCK, S. J., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Chelsea Hospital for Women, Fulham-road.

WORTS, E., L.R.C.P. Lond., M.R.C.S., has been reappointed Surgeon to the Essex and Colchester General Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

GURST HOSPITAL, Dudley.—Resident Assistant House Surgeon, for six months. Board, lodging, and washing in hospital provided.

HOSPITAL FOR WOMEN (the London School of Gynecology), Soho-square, W.—Clinical Assistants.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead, N.W.—Resident Medical Officer for one year. Honorarium £40 per annum, with board, rooms, &c., in the hospital. Applications to the Secretary. Offices: 41, Fitzroy-square, London, W.

NORTHUMBRIAN COUNTY LUNATIC ASYLUM, Morpeth.—Assistant Medical Officer, unmarried. Salary £120 per annum, increasing £10 yearly, to £150, with furnished apartments, board, and lodging.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London, N.W.—Resident Medical Officer for four months. Salary at the rate of £60 per annum, with board and residence.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.—Junior House Surgeon. Salary £80 a year, with apartments and rations (wines, spirits, and washing are not included).

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Board, residence, and laundry provided.

ROYAL INFIRMARY, HULL.—Senior House Surgeon, unmarried. Salary £100 per annum, with board and furnished apartments.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Golden-square, W.—Resident Medical Officer. Salary £100, with furnished rooms, fuel, light, and attendance.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer; unmarried. Salary commences at £100 per annum, with board, lodging, and washing. Applications to Dr. Cooke, The Asylum, Powick, near Worcester.

Births, Marriages, and Deaths.

BIRTHS.

PECK.—On Feb. 12th, at Ormskirk, the wife of Herbert Peck, L.R.C.P., L.R.C.S. Edin., of a daughter.

RAYNER.—On Feb. 18th, at 68, Porchester-terrace, W., the wife of Herbert E. Rayner, F.R.C.S., of a daughter (prematurely).

SELBY.—On Feb. 17th, at South-parade, Doncaster, the wife of E. W. Selby, M.B., B.S. Lond., F.R.C.S. Eng., of a daughter.

MARRIAGES.

DUKE—FITZROY.—On Jan. 26th, at the British Consulate General, Meshed, Persia, Surgeon-Captain A. L. Duke, I.M.S., to Frances Regina, daughter of the late Captain I. M. O. Fitzroy, R.A.

BLOOD—SCOTT.—On Feb. 18th, at St. Mary's, Chelmsford, Charles Reginald Elgood, M.D., B.S. Lond., of Windsor, to Edith Emma, only daughter of Charles Scott, of Chelmsford.

WALKER—HEYWOOD.—On Jan. 21st, at St. John's Church, Buenos Ayres, Henry Muirhead Walker, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of La Banda, youngest son of the late Dr. Arthur C. Walker, of Liverpool, to Lilian, youngest daughter of the late James Heywood, of Valparaiso, Chili.

DEATHS.

BLUETT.—On Feb. 18th, at his residence, Chesterfield, John Bluett, M.R.C.S., L.S.A., in his 80th year.

CHAMPNEYS.—On Feb. 11th, suddenly, at Hamilton House, Penge, Henry Montagu Champneys, F.R.C.S. Eng., in his 77th year.

HUBBERT.—On Feb. 16th, Philip Hubbert, M.H.C.S., L.S.A., of Meadow Bank, West Tarring, in his 81st year.

HULKE.—On Feb. 19th, at 10, Old Burlington-street, London, W., John Whitaker Hulke, F.R.S., President of the Royal College of Surgeons of England, aged 64.

TAYLOR.—On Jan. 11th, at Elmina, Gold Coast Colony, Wm. Taylor, M.D., Assistant Colonial Surgeon, late of the Jamaica Medical Service, aged 38.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 21st, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Feb. 15	30.27	E.	28	Fzn.	33	33	28	...	Overcast
" 16	31.39	E.	31	Fzn.	65	36	27	...	Cloudy
" 17	30.51	S.W.	31	Fzn.	47	36	24	...	Foggy
" 18	30.35	S.W.	31	Fzn.	46	39	26	...	Foggy
" 19	30.27	N.E.	34	35	59	41	31	...	Cloudy
" 20	30.35	N.E.	35	33	50	42	32	...	Overcast
" 21	30.31	N.E.	38	36	44	41	35	...	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), St. George's (1 p.m.), St. Mark's (2 p.m.), Chelsea (2 p.m.), Samaritan (Gynecological, by Physicians, 2 p.m.), Soho-square (2 p.m.), Royal Orthopaedic (2 p.m.), City Orthopaedic (4 p.m.).

TUESDAY.—London (2 p.m.), St. Bartholomew's (1.30 p.m.), Guy's (1.30 p.m.), St. Thomas's (3.30 p.m.), Westminster (2 p.m.), West London (2.30 p.m.), University College (2 p.m.), St. George's (1 p.m.), St. Mary's (1.30 p.m.), St. Mark's (2.30 p.m.), Cancer (2 p.m.), Gt. Northern Central (2.30 p.m.).

WEDNESDAY.—St. Bartholomew's (1.30 p.m.), University College (2 p.m.), Royal Free (2 p.m.), Middlesex (1.30 p.m.), Charing-cross (3 p.m.), St. Thomas's (2 p.m.), London (2 p.m.), King's College (2 p.m.), National Orthopaedic (10 a.m.), St. Peter's (2 p.m.), Samaritan (2.30 p.m.), Gt. Ormond-street (9.30 a.m.).

THURSDAY.—St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), University College (2 p.m.), Charing-cross (3 p.m.), St. George's (1 p.m.), London (2 p.m.), King's College (2 p.m.), Middlesex (2 p.m.), Soho-square (2 p.m.), North West London (2 p.m.).

FRIDAY.—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), Guy's (1.30 p.m.), Charing-cross (3 p.m.), St. George's (1 p.m.), King's College (2 p.m.), Cancer (2 p.m.), Chelsea (2 p.m.), Gt. Northern Central (2.30 p.m.).

SATURDAY.—Royal Free (9 a.m. and 2 p.m.), Middlesex (1.30 p.m.), St. Thomas's (2 p.m.), London (2 p.m.), University College (9.15 a.m.), Charing-cross (3 p.m.), St. George's (1 p.m.), Cancer (2 p.m.).

At the Royal Eye Hospital (2 p.m.), the Royal London Ophthalmic (10 a.m.), the Royal Westminster Ophthalmic (1.30 p.m.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 p.m. Mr. J. D. Malcolm: Some cases of Liver and Gall Duct Surgery.—Dr. Wallis and Mr. E. Cotterell: A case of Craniectomy (the patient will be shown).

FRIDAY.—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Miller Hospital, Greenwich).—8.15 p.m. Clinical Evening. Card Specimens and Cases by Mr. John Poland, Dr. Herschell, Dr. Tayler, Mr. J. P. Purvis, Dr. Ezard, and Mr. Ernest Clarke.

CLINICAL SOCIETY OF LONDON.—8.30 p.m. Agenda as announced in THE LANCET of Feb. 16th.

ÆSCULAPIAN SOCIETY OF LONDON.—9 p.m. Adjourned discussion on "The Action of Cardiac Tonics." Mr. H. P. Miller: A case of Diphtheria: Antitoxin and Tracheotomy.—Dr. J. W. Hunt: Synopsis of 1000 cases of Midwifery.—Dr. G. Elam: A case of Facial Paralysis (living specimen).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 p.m., Mr. A. S. Morton: Affections of Eyelids.—London Throat Hospital, Gt. Portland-st., W., 8 p.m., Mr. G. Stoker: Post-nasal Growths and Enlarged Tonsils.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 p.m., Dr. Percy Smith: Puerperal and Lactational Insanity.

ROYAL BRITISH NURSES' ASSOCIATION.—8 p.m. Dr. W. S. Colman: Convulsions and the Training of Weak-minded Children.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 p.m., Mr. A. S. Morton: Optic Neuritis.—Hospital for Skin Diseases, Blackfriars, 1 p.m., Dr. Payne: Eczema, its Varieties.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 p.m. Lecture by Dr. Gowers.

WEST LONDON HOSPITAL (Hammersmith-rd., W.).—5 p.m. Dr. W. Hunter: Pernicious Anæmia. (Post-graduate Lecture.)

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 p.m. Lecture by Prof. Clifford Allbutt on "Senile Plethora (High Arterial Tension in the Aged)."

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 p.m., Mr. Donald Gunn: Ophthalmia.—National Hospital for the Paralyzed, Bloomsbury, 2 p.m., Dr. Baastian: Cases in the Hospital.—Central London Sick Asylum, Cleveland-st., W., 5.30 p.m., Mr. Bryant: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 p.m., Prof. Crookshank: Tuberculosis and Leprosy.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 p.m. Mr. F. Bowreman Jessett: Cancer of the Uterus.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 a.m., Dr. Hyslop: Developmental Insanity; Circular Insanity.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

COUNTY COURTS AND MEDICAL CERTIFICATES.

THE medical profession will accept gratefully any reasonable suggestion from the authorities on the question of medical certificates. We notice one by Mr. Registrar Stone in the County-court, Tunbridge Wells. A defendant excused his non-attendance on a medical certificate. The Registrar demurred on the ground of the vagueness of the certificate—which only stated that the person "must not venture out"—and stated that reasons must be given for the non-attendance. Time was given for the defendant that he might obtain a more definite certificate. There is some reason in this, and medical men will do well to take notice and make their certificates more specific. It is conceivable that there are cases in which too much definition would be inconvenient and unjust; but the medical man must put his ingenuity to the test of meeting reasonable demands and yet not betraying professional confidence.

Mr. R. W. Carshall.—The question is a new one. We do not see that our correspondent need be deterred from conducting the business that he mentions, and therefore from duly advertising it in the medical press. We take it for granted that our correspondent intends to remain aloof from practice; for it would not be right to carry on both vocations.

Asterion has omitted to enclose his name and address.

APPOINTMENT OF PRISON SURGEONS.

To the Editors of THE LANCET.

SIRS,—Can you inform me where to apply for an appointment as colonial surgeon or surgeon to one of Her Majesty's Prisons? Is a married man eligible for either appointment?

I am, Sirs, yours faithfully,

Scarborough, Feb. 19th, 1895. H. Y. WALKER, M.R.C.S., L.R.C.P.

* Application for the appointment of prison surgeon should be made to the Prison Commissioners at the Home Office, Whitehall, S.W. (Secretary: Col. M. Clare Garsia), for English appointments, and the candidates are selected on their merits. Medical officers in Scotch and Irish prisons are appointed by the same department, but under separate regulations. The Secretary of State for the Colonies appoints the colonial surgeons and the surgeons and assistant surgeons to the convict prisons abroad. We believe that a married man is eligible for all these appointments; but no doubt the secretaries of the different Government bodies would answer all inquiries.—**ED. L.**

MEDICAL ADVERTISING IN THE UNITED STATES.

A CORRESPONDENT with British qualifications but long resident in the United States is much concerned at the methods of publicity used by even leading medical men in the States. The proceedings of medical societies are reported in the newspapers. A hysterectomy will be detailed for the gratification of their readers under the head of "A Most Delicate Surgical Operation," at which Dr. So-and-So exceeded himself, and was assisted by Dr. — of the Hospital &c., &c.; the operation lasted three hours and fifteen minutes. "So important and delicate was the operation that twenty-three doctors, not including those above mentioned, were present." This stroke reminds us of that touch of Addisonian humour in Sir James Paget's narrative of an illness of his own in our columns—that he had had eleven medical attendants, and that his was the only case he knew of recovery where so many had been consulted. The business columns will contain advertisements of Dr. —'s blood tonics, antiseptic solutions, &c. Another will tell the public that he will henceforth dispense his own medicines and have for sale a number of remedies prepared from favourite prescriptions of his, &c. The said Dr. — is a member of the local medical societies, and was formerly president of the Medical Society. Our correspondent thinks that these methods, so far from dying out, are on the increase. We regret to hear it. We are not without beams in our own eye; but it would be a new sight in English newspapers to see our medical societies' proceedings reported or hysterectomies described. We cannot doubt that our brethren in the States will come to see that such methods are best left to men without standing and without qualifications.

Nit Desperandum.—It is not usual to charge for death certificates supplied to the registrar, in accordance with the Registration Act.

"DEATHS UNDER ANÆSTHETICS."

To the Editors of THE LANCET.

SIRS,—May I venture to emphasise the comments you made on the death under chloroform which occurred at the Bristol Infirmary, reported in THE LANCET of Feb. 2nd. From personal experience of a considerable number of hospital cases I have come to the conclusion that by suddenly or violently moving a patient incompletely under the influence of an anæsthetic a very marked inhibitory influence to the cardiac centre is initiated. I have repeatedly noticed that immediately after lifting a patient on to or off the operation table, which is frequently done just before or just after total anæsthesia, there has been a marked fall in the pulse tension, with slowing of the respiration, these dangerous symptoms being absent if the patient is fully "under" whilst being moved. I have frequently observed the respiration become extremely shallow and the pulse fluttering during the manipulations necessary to apply a bandage to the abdomen or chest, the administration of the anæsthetic having been stopped some minutes before this was done. I should also like to bear testimony to the value of nitrite of amyl in cases of threatened cardiac failure during chloroform administration. The inhalation of three or four minims of this drug, together with the application of large hot sponges over the cardiac region, has acted as a most valuable circulatory stimulant.

I am, Sirs, yours truly,

Feb. 4th, 1895. J. H. MARSH, M.R.C.S., L.R.C.P. Lond.,
Senior House Surgeon, the Infirmary, Macclesfield.

"SAVE ME FROM MY FRIENDS."

OUR attention has been directed to the following editorial paragraph from the *Glasgow Evening News*:—

"Dr. John McIntyre, the well-known Bath-street specialist in throat surgery, was in the middle of an interesting limelight lecture to the Society of Musicians in the Philosophical Society's Hall on Monday night, when he was summoned to Hillhead to perform the operation of tracheotomy on a child in *extremis* from diphtheria. Permission to break off the lecture was cheerfully given by the audience. The doctor bolted, and within an hour was back at his residence, having performed the operation with success, and got the child out of immediate danger."

The paragraph is doubtless the work of some zealous, but very injudicious, friend, and will be deprecated and resented by Dr. McIntyre not less than by our correspondents and ourselves.

Mr. Alf. Back.—We do not act as assessors on medical treatment or diagnosis, and we do not give medical advice. We recommend our correspondent to consult his medical man as to the suitability of the treatment to which he alludes.

"SUCCOUS ALTERANS."

To the Editors of THE LANCET.

SIRS,—I should be thankful if any of your numerous readers could give their experience of a new drug called "succus alterans," an American preparation, I believe, which is recommended in tertiary syphilis, eczema, &c. I am anxious to know if there be any evidence of its efficacy in the later stages of syphilis.

Feb. 18th, 1895. I am, Sirs, yours faithfully,
CRUICK.

"WANTED, HISTOLOGICAL SLIDES."

WE have received from numerous correspondents the names and addresses of persons who supply histological slides. We recommend "Member" to apply to the leading opticians. A few surgical instrument manufacturers and a few chemists and druggists also keep histological slides in stock.

"A CASE OF DIPHTHERIA SUCCESSFULLY TREATED BY INSUFFLATIONS AND TABLOIDS OF PURE SULPHITE OF MAGNESIUM."

To the Editors of THE LANCET.

SIRS,—Dr. Brownlow Martin's article under the above heading in your issue of Feb. 9th reminds me of some interesting experiences I have had with this valuable drug since my letter to THE LANCET of Aug. 25th, 1894, on this subject. On Oct. 11th I saw a child suffering from sore-throat, who, the mother informed me, had been the previous week playing with two other children who had been attacked with diphtheria and subsequently succumbed to the disease. On examination I found a small greyish patch on the right tonsil. I prescribed tabloids of sulphite of magnesium, chiefly because the child had possibly been exposed to contagion, and the appearance of the throat, though not at all alarming, was somewhat suspicious. Next day the child was quite well. As the attack was slight and its nature doubtful, I sent no notification to the medical officer of health. On Oct. 15th I was again called to see two other children in the same house—an elder brother and sister of the first patient. There could be no doubt this time. Both children were suffering from diphtheria. The membrane was abundant enough to satisfy the most sceptic diagnostician. Four days after (on the 20th) the mother, who was *enclave*, contracted the disease in a rather aggravated form. The throat was enormously swollen; the membrane covered the fauces; there were high fever, marked prostration, and albuminuria, as well as symptoms of threatened miscarriage. All these cases were treated with insufflations and tabloids of sulphite of magnesium. All recovered. On the 27th of the same month a boy aged seven, living next door to these patients, had an attack of diphtheria. The disease at first yielded quickly to treatment, but the membrane rapidly reappeared in the pharynx, with hard, dry cough, hoarseness, and dyspnoea, showing that the larynx was attacked. The boy was very obstinate at first, and there was a good deal of difficulty in using the insufflator. He recovered after a hard struggle, and I am quite satisfied that with any other treatment I ever saw tried the result would not have been quite as satisfactory. Let me hasten to say that I have not tried antitoxin. For some time I have decided to do so on the first occasion that the sulphite was unsuccessful. The results I have had from this treatment have been so excellent that the occasion has not yet arisen. Even in the absence of bacteriological evidence there can be no reasonable doubt about the correctness of the diagnosis in these five cases. Besides these, I have, since I wrote to THE LANCET in August last (excluding some more or less doubtful cases) attended three others in which the disease was sufficiently marked to justify one in claiming to be clinically certain. In one of these there was slight albuminuria, as well as the characteristic membrane. In another the diagnosis was strengthened by a second medical opinion. In each of these cases the sulphite was used. The membrane quickly disappeared, and in each instance the attack was mild. If the results from sulphur be as satisfactory as those obtained from the use of sulphite of magnesium I can easily understand the enthusiasm of its advocates in recent issues of THE LANCET. If the treatment suggested by Dr. Brownlow Martin got as extensive a trial as that of M. Roux the death-rate from diphtheria might possibly be still further reduced.

I am, Sirs, yours faithfully,

W. G. NIALL.

Guildford, Feb. 10th, 1895.

THE EXPLOITS OF A BONESETTER.

To the Editors of THE LANCET.

SIRS,—I enclose two cuttings from the local press, which may be of interest to you. They recite the glorious achievements of the local bonesetter, who has been sufficiently fortunate to meet with three dislocations of the knee and one of the clavicle out of a total of fifteen cases of injury. You probably have no idea of the extent to which this sort of thing goes on here. We are constantly having it thrust before our eyes in glaring form. My object in writing is to get an expression of opinion from yourselves and also from members of the medical profession upon the following points. 1. What should be our attitude when requested to see a patient who is under the treatment of an unqualified bonesetter—whether to look after every other part of the patient's body except the bones, or simply to sign the club certificate and, if necessary, the death certificate? 2. Can nothing be done to compel these men to qualify? 3. Does it amount to "covering" if a medical man lends his presence, and perhaps his skill, in a case where the chief injury is being wholly treated by an absolutely unqualified man?

I am, Sirs, yours faithfully,

FAIR PLAY.

Feb. 5th, 1895.

"QUALIFIED DISPENSERS."

To the Editors of THE LANCET.

SIRS,—By the Apothecaries' Hall qualification is meant the certificate of qualification issued by the Apothecaries' Society to act as an assistant to an apothecary in compounding and dispensing medicines.

I am, Sirs, yours faithfully,

COLLOID.

Feb. 18th, 1895.

AMERICAN QUACKERY IN JOHANNESBURG, TRANSVAAL.

ONE of the most prodigious of the American advertisers in Johannesburg is Dr. Johnson—a specialist in all diseases that can be mentioned. The newspaper advertisements include the cure of gonorrhoea with two or three applications. Can the State University Medical College of Colorado, U.S., bring any influence to bear on such a public scandal? Another offender against professional morals is Dr. Strong of Johannesburg, who says his United States diplomas have been examined by the Board of Medical Examiners of the South African Republic, from whom he has received a licence to practise. Has this Board no control over its licensees? It is high time that some such control was shown to exist.

"SULPHUR P. ANTITOXIN IN THE TREATMENT OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—Dr. Hamilton, in THE LANCET of Feb. 2nd, replies to a letter of mine of the 26th ult., and states that he has used sulphur dusting for years in diphtheria, and still uses it in conjunction with antitoxin. As he still uses sulphur partially it must be difficult to say how far his good results are due to the one or the other of the remedies used. As long as the profession will persist in treating cases at one and the same time with two or more remedies it is impossible to say how far each individual remedy is responsible for the result obtained. That Dr. Hamilton's case of diphtheria began to improve after injecting antitoxin twenty-four hours previously really proves nothing, for many cases improve after four days' treatment without using either antitoxin or sulphur, or, indeed, any other drug. Sulphur, like every other remedy, must have time to act. The days of miracles have gone by. From my own personal inquiries and from consulting various authors, including Taylor, Fagge, and Lennox Browne, and finding no reference in Neale's Medical Digest, 1882, I have come to the conclusion that a very small proportion of the profession have given sulphur a fair trial. I am carefully watching the results of treatment by antitoxin, and as yet have seen none that are so good as those of others and my own who have given sulphur a fair trial. The bridge sulphur has carried me over so far without a fatality—a coincidence possibly. At the same time I think I should be deserving of a stronger name than "faddist" if I blindly deserted an old and tried friend which is harmless for an untried stranger which may or may not be harmless. I ask Dr. Hamilton to use sulphur both internally and locally in a given number of cases and antitoxin without sulphur in an equal number, and contrast the two results. I am certainly not a faddist, and am open to conviction when results justify that conviction.

I am, Sirs, yours faithfully,

Aberdovey, N. Wales, Feb. 11th, 1895.

W. HAWKINS CUTBERT.

"TREATMENT OF TAPEWORM."

To the Editors of THE LANCET.

SIRS,—Many years ago I was giving a patient a mixture as follows: Hydriodate of potash, gr. xxxvi.; iodine, gr. xii.; water, ʒi.—ten drops three times a day in water. The patient unexpectedly passed a tapeworm eleven yards long, dead, of which there were no previous symptoms. I have since given the same medicine successfully in two or three cases. The last patient came to me about three years since and stated that he had suffered from tapeworm for two years and was constantly passing tapeworm, but it always returned. I gave him the same medicine, and after a short time he passed a mass of tapeworm dead, and there has been no return. Perhaps "A.M.S." will give the result if he tries the same remedy.

I am, Sirs, yours obediently,

Tenterden, Feb. 5th, 1895.

JESSE H. NEWINGTON.

"THE EXHIBITION OF HYPNOTISED SUBJECTS."

To the Editors of THE LANCET.

SIRS,—In reference to the case of trance now exhibiting at the Royal Aquarium, Westminster, will you kindly allow me to call the attention of your readers to my papers on the relation of the sympathetic nerve to disorders of sensation and mentation? The first paper was published in THE LANCET of Sept. 26th, 1868, and other papers in the Medical Times and Gazette of Oct. 28th, 1871, and Dec. 16th, 1871, and Aug. 31st, 1872. I venture to think that this aspect of the pathology of sentience will throw some light on the subject.

I am, Sirs, yours faithfully,

Lancaster, Feb. 14th, 1895.

METCALFE JOHNSON.

During the week marked copies of the following newspapers have been received:—Birmingham Post, Torquay Times, Kent Herald, Brighton Gazette, Darwen Post, South Austell Star, Hereford Journal, Cambridgeshire Times, Scotsman, Bristol Times, Walsall Advertiser, Sussex Daily News, Truth, Evesham Journal, Le Temps (Paris), North Star, New York Herald, Rochdale Observer, Yorkshire Herald, Glasgow Evening News, Public Opinion, Dublin Evening Telegraph, Wigan Examiner, Manchester Courier, Huddersfield Examiner, Science Signings, Leeds Mercury, Horncastle News, City Press, Yorkshire Post, Isle of Man Times, Craven Herald, St. Bartholomew's Hospital Journal, Reading Mercury, Surrey Advertiser, Alliance News, North Devon Herald, Cumberland Packet, Waterford Mirror, Spalding Free Press, Huddersfield Chronicle, Hellenburgh Times, West Middlesex Advertiser, Lincolnshire Echo, Isle of Wight Mercury, Cornish Telegraph, Lynn News, Devizes Gazette, Kington News, Tottenham and Stamford Hill Times, &c., &c.

Communications, Letters &c. have been received from—

- A.**—Messrs. P. Alcan, Paris; Messrs. C. Ash and Sons, Lond.; Messrs. Allen and Hambury, Lond.; Messrs. Agar Bros., Manchester; A General Practitioner.
- B.**—Dr. P. Boohyer, Nottingham; Dr. Bateman, Lingfield; Dr. D. C. Black, Glasgow; Mr. L. A. Bidwell, Lond.; Mr. J. F. Bullar, Southampton; Mr. C. A. G. Browne, Lond.; Mr. W. H. Best, Ilford; Mr. J. A. Bartlett, Lond.; Mrs. E. J. Bellaser, Bath; Miss Baker, Reigate; Messrs. Blackie and Son, Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Burgoyne, Burdighes and Co., Lond.; Brit. Med. Assoc., Lond.; Librarian of; Biltor Co., Lond.; Baynam.
- C.**—Dr. E. K. Campbell, Lond.; Mr. R. C. Coward, Lond.; Mr. W. P. Clay, Edinburgh; Mr. A. J. H. Crespi, Wimborne; Mr. F. W. Chapman, Chester; Mr. R. A. Caldwell, Southampton; Rev. W. Conway, Connemara; Mr. Clark, Wolverhampton; Messrs. Catton and Puckey, Lond.; Messrs. J. and A. Churchill, Lond.; Messrs. T. and A. Constable, Edinburgh; C. T. W., Lond.
- D.**—Dr. C. J. Da Cunha, Daum, Portuguese India; Dr. Dale, Nottingham; Mr. F. Davis, Lond.; Mr. J. W. Davies, Elbow Vale; Mr. H. W. Deunely, Horsham; Dewsbury Gen. Infy., Sec. of.
- E.**—Mr. E. W. A. Elliott, Lond.; Rev. R. A. Edgell, Leamington; Messrs. Evans, Lescher and Webb, Lond.; Enquirer; Knquiry.
- F.**—Mr. L. A. Freeth, Woolston.
- G.**—Dr. J. Gordon, Aberdeen; Dr. Groedel, Bad-Nauheim; Mr. H. R. Greene, Woking; Messrs. C. Gradisky and Co., Salford; Gl. Northern Central Hosp., Lond., Sec. of; *Glasgow Herald* Office 7078; Dr. G., Grimsby.
- H.**—Sir F. Seymour Haden, Alfreton; Mr. A. Haviland, Buxton; Mr. A. H. Hawes, Bristol; Mr. J. J. Harding, Ballincollig; Mr. J. Heywood, Manchester; Mr. W. H. Haley, Lond.; Messrs. R. Kalford and Son, Lond.; Messrs. C. J. Hewlett and Son, Lond.; Hosp. for Women, Lond., Sec. of; Hull Roy. Infy., Sec. of; Home for Sick Children, Cheltenham, Hon. Sec. of.
- I.**—Inquirer, Tewkesbury.
- J.**—Sir George Johnson, Lond.; Dr. H. M. Jones, Lond.; Mr. M. Johnson, Lancaster; Mr. W. W. Jones, Lond.; J. P. S., Lond.
- K.**—Mr. C. Kunkler, Bonn; Messrs. Kenyon and Lord, Manchester; Keroula, Lond.
- L.**—Dr. W. Lowe, North Melbourne; Mr. W. A. Lane, Lond.; Mr. A. Lloyd, Birmingham; Mr. C. B. Lockwood, Lond.; Mr. T. Lancaster, Blackburn; Surg. Major A. Leahy, Calcutta; Surg. Lieut.-Col. E. Lawrie, Ramsgate; Messrs. T. H. Lloyd and Co., Leicester; Messrs. Lee and Nightingale, Liverpool; Liquor Carnis Co., Tring, London Hygiene Depot; L. M.
- M.**—Dr. Murray, Barraford-on-Tyne; Dr. J. Macfie, Lond.; Dr. D. MacGregor, Jedburgh; Dr. C. K. Matthews, Lond.; Dr. F. H. Marson, Stafford; Dr. J. Matheson, Belfast; Brig.-Surg. Lieut.-Col. T. J. McGinn, Bangalore; Mr. R. T. Morgan, Clevedon; Messrs. J. Mayhew and Son, Biggleswade; Med. Sec. of Lond., Hon. Secs. of; Maltine Manufg. Co., Lond.; M. E. C., Lond.
- N.**—Dr. E. Norton, Folkestone; Dr. von Niessen, Wiesbaden; Northumberland County Lunatic Asyl, Morpeth, Med. Supt. of; Nil Desperandum.
- O.**—Dr. H. Oppenheimer, Lond.; Mr. T. H. Openshaw, Lond.; Messrs. Oppenheimer, Son and Co., Lond.
- P.**—Mr. F. T. Paul, Liverpool; Mr. R. W. Pound, Malvern; Mr. R. F. Poole, Lond.; Mr. R. H. Plummer, Philadelphia; Mrs. Pattle, Lond.; Price's Patent Candle Co., Lond.
- R.**—Dr. L. Roberts, Liverpool; Mr. C. Ricker, St. Petersburg; Mr. D. B. Reid, Lond.; Mr. W. J. Robinson, Londonderry; Mr. H. D. Robertson, Lond.; Mr. H. D. Roberts, Lond.; Messrs. Richardson and Co., Leicester; Messrs. Reynolds and Branson, Leeds; Roy. Coll. of Surg. in Ireland, Registrar of; Roy. Meteorolog. Soc., Lond., Sec. of.
- S.**—Dr. J. Selkirk, Litcham; Dr. W. W. Smith, Lond.; Mr. Simon Snell, Sheffield; Mr. W. G. Spencer, Lond.; Mr. G. F. Stone, Bristol; Mr. F. H. Simmons, Hoptown; Mr. J. Smith, Matlock; Rev. S. Sunderland, Brecon; Messrs. Street and Co., Lond.; Messrs. Street

Bros. Lond.; Messrs. Stubbs, Lond.; Sanitar Co., Lond.; Sanitary Inst. Lond., Sec. of; Soloid, Lond.; Surgeon, Lond.

T.—Mr. F. Tennant-Pain, Lond.; T. E. H., Winchester.

Letters, each with enclosure, are also acknowledged from—

- A.**—Dr. E. Allen, Hawes; Mr. R. E. Archer, Cardiff; A., Lond.; Antiseptic, Lond.; Alpha, Lond.; A. Z., Lond.
- B.**—Dr. F. M. Black, Lond.; Dr. J. M. Barbour, Lond.; Dr. D. D. Brown, Burton-on-Trent; Mr. J. Baillie, Fochow; Mr. J. W. Broadbent, Newark; Mr. F. Broadbent, Newark; Mr. J. Bell, Carrickfergus; Mr. H. P. Butterworth, Lond.; Mr. A. M. Baird, Glasgow; Mrs. Budge, Crediton; Messrs. Blondeau et Cie., Lond.; Burnley Victoria Hosp., Sec. of; Bromley, Lond.; Bonus, Lond.; Bow E., Lond.; Biceps, Lond.; B. A., London; B. R., Lond.
- C.**—Dr. T. Colvin, Glasgow; Mr. F. W. Chapman, Chester; Mr. J. N. Creegan, Liverpool; Miss J. Chalmers, Liphook; Messrs. Caverdish, Edenborough and Co., Lond.; Messrs. Cassell and Co., Lond.; Coppice, The, Notts, Med. Supt. of; Chevron, Lond.
- D.**—Mr. W. Dand, Almondsbury; D. E. W., Lond.
- E.**—E. J., Lond.; E. S., Bradford; E. M. W., Lond.
- F.**—Dr. R. S. Ferguson, Chertsey; Dr. R. W. Fell, Waterhouses; Dr. Ferguson, Great Malvern; Dr. W. R. Fenton, Liverpool; Mr. N. H. Forbes, Tunbridge Wells; F., Lond.; Felix, Lond.; Forceps, Lond.
- G.**—Mr. T. H. Gillam, Bromyard; Mr. S. A. E. Griffith, Lond.; Graduate, Lond.; Genuine, Lond.
- H.**—Dr. E. R. Holmes, Shifnal; Dr. W. Hector, Shaftesbury; Dr. J. Holmes, Whitefield; Mr. J. H. Haywood, Nottingham; Mr. J. G. Howe, West Brighton; Mr. H. Hutchinson, Ecclestone; Mr. A. O. Honnywill, Blotchley; Messrs. J. Haddon and Co., Lond.; Holloway Sanatorium, Virginia Water, Clerk of; Hallstone, Lond.; Helmet, Lond.; H. G. P., Lond.; H. C., Lond.; Dr. H., Lond.
- J.**—Mr. G. H. S. Johnston, St. John, N.B., Canada; Jessop Hosp. for Women, Sheffield, Sec. of; Justitia, Lond.; J. N., Lond.
- K.**—Dr. F. J. Waldo, Lond.; Mr. C. Wells, Bristol; Mr. J. H. Walters, Reading; Messrs. Williamson and Sons, Lond.; W. Wood and Co., New York; W. H. H.
- L.**—Mr. A. Latham, Shillingstone; Mr. J. W. Lewis, Brynmant; Mr. S. R. Lane, Woodborough; Messrs. T. H. Lloyd and Co., Leicester; Lester, Lond.; Lapis, Lond.; Lamos, Lond.; Lev, Lond.
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Three Lectures

ON

TRAUMATIC INFECTION,

Delivered at the Royal College of Surgeons of England on
Feb. 25th and 27th, and March 1st, 1895.

By C. B. LOCKWOOD, F.R.C.S. ENG.,

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TO THE GREAT NORTHERN CENTRAL HOSPITAL.

LECTURE I.

Delivered Feb. 25th.

SOME LOCAL INFECTIONS.

Methods of Investigation.—*Cadaveric Bacteria a Source of Error.*—*Classification of Material.*—*Mycotic Peritonitis.*—*Diffuse Septic Peritonitis.*—*Lymphatic Glands in Diffuse Septic Peritonitis.*—*Operative Peritonitis.*—*Perforative Peritonitis.*—*Streptococcus Peritonitis.*—*Streptococcus Pleuritis.*—*Bacterial Invasion of the Peritoneal Lymph Paths in Septic Peritonitis.*—*Intestinal Bacteria in other conditions; in Hepatic Abscess; in Typhoid Abscess.*

GENTLEMEN,—For some years, with the help of friends and pupils, to whom I am deeply indebted, I have worked at various kinds of traumatic infection. The results are given in these lectures. It will be obvious, and I am fully conscious, that in many instances the inquiries are incomplete; nevertheless, I venture to hope that light is thrown upon some conditions, and that what has been done may be helpful to my fellow workers. Throughout these lectures the gaps which ought to have been filled are pointed out, and no attempt has been made to give an appearance of completeness.

METHODS OF INVESTIGATION.

My plan has been to choose cases of traumatic infection of which the clinical history and morbid anatomy were known and work out their morbid histology. Nearly all the cases were under my observation when surgical registrar in St. Bartholomew's Hospital, and of many of them I conducted the post-mortem examination. This order has not always been strictly adhered to, but, as an extra control, the clinical history and morbid anatomy were often purposely left unascertained until the morbid histology and bacteriology had been investigated. Although it may be rather tedious and prolix, I propose to illustrate each branch of my subject with these cases, giving the clinical history, morbid anatomy, morbid histology, and as far as possible the bacteriology of each. I venture to surmise that it must be advantageous to an audience of surgeons to be able to consider all of these together and in continuity. A short commentary follows each case, and in this some of the more recent researches bearing upon it are mentioned. I need not speak about the clinical and anatomical methods. For histological purposes the tissues were obtained as fresh as possible and hardened in alcohol. The sections were stained in various ways. Sometimes good results were obtained by Gram's method, but nearly all the best were got by using, upon Dr. Klein's advice, a staining solution which was used by Canon to demonstrate the influenza bacillus in blood, and which is called Czenzynke's solution.¹ This is a mixture made by adding together a concentrated watery solution of methyl blue 40 per cent.,² eosin solution (in 70 per cent. of alcohol), 20 per cent., and distilled water 40 per cent. The sections of the hardened tissues were soaked in the above solution for not less than seventy-two hours, and often for seven or eight days. The sections were mounted in the usual way. As the bacteria are stained blue and the tissues pink, their presence is easily ascertained; but we have found the pink ground most unsuitable for micro-photography. However, Czenzynke's solution has stained bacteria when nearly all of the ordinary methods have failed. Nevertheless, it has one great demerit. Many of the specimens fade and lose their brilliancy after a few months, so that it is necessary

to draw them at once. Micro-photography would be especially useful under these circumstances, but, unfortunately, it cannot be used for the reasons given. I have, therefore, been obliged to make drawings of the most instructive of the sections. These, together with the specimens themselves, are displayed for your inspection. The drawings have been made into lantern-slides by my friend, Mr. Cosens, to whom I am deeply indebted for invaluable assistance. My experience of Czenzynke's method shows that it should be used with caution. The protoplasm of the connective tissue cells often holds particles of the aniline blue, so as to simulate bacteria. However, the irregular shape and size of the particles, the absence of that peculiar translucent hue which dyed bacteria possess, and the presence of a nucleus, is enough to prevent an error. No material was discarded until all kinds of methods had been tried upon it. Many months were often devoted to these endeavours. The ultimate result was often highly satisfactory.

CADAVERIC BACTERIA A SOURCE OF ERROR.

In work like this there is great danger of mistaking bacteria which have grown in the tissues after death for those which may have existed during life. In hot weather these cadaveric bacteria grow very quickly, and material can seldom be obtained for histological examination until some hours after death. However, I trust it will be acknowledged that this source of error has been guarded against throughout these lectures. In doubtful cases the question is discussed in the commentary, and some material has been put aside because the tissue changes and bacteria were probably of post-mortem origin. An important rôle has not been ascribed to bacteria unless they were present in numbers and amidst tissue changes such as could only have occurred during life, and such as might reasonably be ascribed to their presence. The bacteria of putrefaction are distinguished by morphological peculiarities, by the situations in which they grow, and by the absence of pathological changes in their vicinity. But much work remains to be done at the cadaveric bacteria, and even with the greatest caution they remain an abiding source of error.

CLASSIFICATION OF MATERIAL.

The various cases which have been investigated fall naturally into the following groups. First, those in which the infection was local; second, those in which the infection had entered the blood, but had not passed any further; third, those in which the infection of the blood had passed into the tissues, producing changes there; and, lastly, some mixed infections. This classification of the cases is suggested more by convenience than scientific accuracy. Reasons will be given to show that even in the typical local infections there may have been some passage of bacteria through the blood to the kidneys, and perhaps to other organs.

MYCOTIC PERITONITIS.

I propose to begin the local infective diseases with acute inflammations of some of the serous sacs, commencing with septic peritonitis. And, first, a case will be given to show how easily peritonitis may be overlooked, and how bacterial invasion of the peritoneum may be unsuspected. In the following case I believe that an infection of the peritoneum had occurred, although during life no signs of it were recognised, and after death none were apparent to the naked eye.

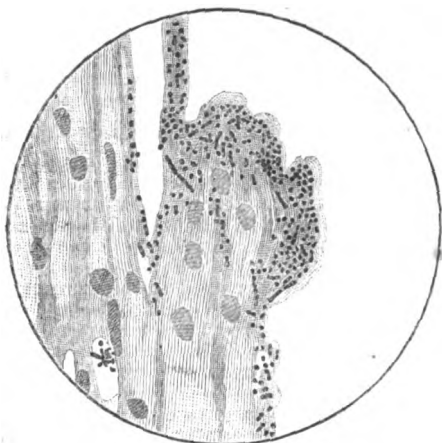
CASE 1.—The case was that of a woman aged sixty-nine years, who had had a multilocular ovarian cyst removed. The peritoneum was drained for forty-eight hours after the operation because blood oozed from some slight adhesions. She did well until the fifth day, but then her temperature, which had hitherto been normal, rose to 101° F., and remained about that height until the tenth day, when she died. During life the abdomen seemed free from inflammation, and the fatal issue was attributed to bronchitis. At the examination, which I made twenty hours and a half after death, the wound was almost healed, and I expressly noted that no inflammation, fluid, or lymph could be seen in the peritoneal cavity, but merely slight localised hyperæmias. Around the pedicle of the right ovary, which was secured with silk, I especially noted that there was hardly any inflammation or lymph. All the abdominal viscera were healthy except the kidneys, which were chronically inflamed. The left pleural sac contained three quarters of a pint of purulent fluid, and the parietal and visceral pleura were covered with flakes of lymph. The lower lobe of the left lung was pneumonic and sank in water. The stump of the ovarian pedicle was examined histologically. There was

¹ Centralblatt für Bakteriologie und Parasitenkunde, Band xi., 1892, p. 149.

² I am accustomed to add 5 per cent. of carbolic acid to the watery solution. It keeps longer and acts quite as well, if not better.
No. 3731.

slight hyperæmia and here and there on the surface small masses of lymph, composed of exudative cells and bacteria. Amongst the latter were long bacilli with rounded ends and usually in pairs, and almost as big as anthrax bacilli; also short ovoid and very thick bacilli, together with vast quantities of smaller bacteria which grew singly, in pairs, and short strings. There may have been micrococci, but so many were slightly elongated that it is possible that all of them were minute oval bacilli. (Fig. 1.) Many of the smallest bacteria had entered the lymph paths and had filled both those near

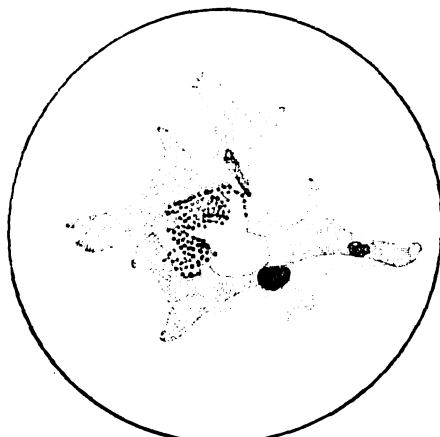
FIG. 1.



Mycotic peritonitis. Lymph upon ovarian pedicle. The bacteria are upon the surface and in the lymph paths.

the surface and many of those in the depths of the peritoneum. (Fig. 2.) Here they surrounded a nuclear cell, which suggested that they had either been carried into the lymph paths by a wandering leucocyte or had surrounded one after their entrance. If these bacteria-laden cells were phagocytes they must have been singularly inefficient. Some would say that the bacteria which were found in this case were mere saprophytes which had travelled from the intestines after death. But if this were so it seems strange that they should only be found in the lymph and in the

FIG. 2.



Mycotic peritonitis. Bacteria in lymph spaces in tissues of ovarian pedicle.

lymph paths leading from it. The uninfamed parts of the peritoneum had no bacteria either upon its surface or in its depths. The silk upon the pedicle contained no bacteria, and none could be seen in the lymph in its immediate vicinity. I should suppose that the chemicals in which the silk had been soaked may have preserved it from infection. If this be so it would help to explain those cases in which silk is not extruded from wounds which are obviously septic. Until the histological examination I had no suspicion that such numbers of bacteria would be found in the peritoneum.

The question arises as to the share they had in the fatal ending. They hardly seem to have compassed this by acting locally upon the peritoneum. During life the clinical signs of peritonitis were wanting. However, I have no doubt but that they were the cause of the pleuro-pneumonia, which will presently be described.

Pawlowsky³ has made an important observation which bears upon such cases as this. He describes a variety of acute peritonitis which he calls mycotic peritonitis, in which there are no macroscopic appearances, but in which microbes can easily be obtained by pressing cover glasses upon the peritoneum and afterwards drying and staining them in the usual way. But this form of peritonitis is very acute; and death occurs very early and before fibrinous effusion or pus have had time to occur; life is not prolonged as in the instance which has just been given.

The histological examination of the lungs showed catarrhal pneumonia and pleuritis, with more corpuscles than fibrin in the exudation. The methods of Gram and Loeffler give negative results. But after we had all failed Mr. Soff obtained for me beautiful specimens showing that the pleuritic lymph was crowded with bacilli. Many of these were the shape and size of tubercle bacilli; some were slightly curved and some might have contained spores. They were distributed indiscriminately in the lymph, but some grew in short leptothrix. The lymph also contained vast numbers of small, short, ovoid bacilli. Both of these varieties may have belonged to the same species, and were the same as some of those seen in the peritoneal lymph. I was uncertain of the presence of these bacilli in the pneumonic lung. It probably contained pneumococci. Pleuritic exudation is not very hard to examine. In three other cases I have found in it streptococci (Fig. 8), pneumococci, and septicæmic bacilli respectively. With pneumonic lung I have been most unsuccessful, and when pneumococci have been seen they have been in such small numbers as to excite doubts as to their being the cause of the pneumonia. Acute inflammations of the lungs are associated with various bacteria. In the 128 cases examined by Weichselbaum⁴ the diplococcus pneumoniae was found in 94; a streptococcus in 21; staphylococcus pyogenes aureus and albus in 5 cases of pneumonia secondary to typhoid fever and osteomyelitis; and a bacillus pneumoniae, similar to Friedlander's pneumococcus, in 15 cases. In 11 cases of pleuritis a chain coccus was found. In conclusion, this case suggests that surgeons ought to be very cautious in assuming the absence of peritoneal infection. Also, that much might be learnt by a more rigorous and scientific examination of fatal cases. Towards the end of these lectures I will instance other cases to show the fallacy of a mere naked eye examination of the tissues.

DIFFUSE SEPTIC PERITONITIS.

During the past year I have been so fortunate as to cure by operation three cases of diffuse septic peritonitis. When we consider the clinical history and morbid anatomy of these cases such a result could hardly be hoped for. I have therefore tried to ascertain what light morbid anatomy and bacteriology threw upon the possibilities of recovery. The material which was used had all been collected long before the successful results occurred.

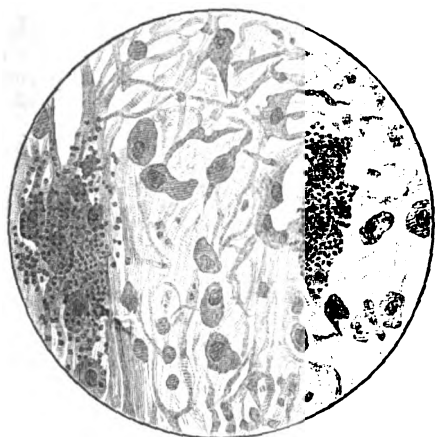
CASE 2 (Fig. 3).—To illustrate the rapidly fatal form of acute septic peritonitis I will give the case of a boy aged eight years, who was operated upon for the cure of a right inguinal hernia which he had had since his birth. At the time of operation there was an old septic sinus leading into the inguinal canal. This sinus was the result of a previous attempt to perform the radical cure. It led towards a ligature which, as afterwards appeared, had been placed upon the stump of a Meckel's diverticulum. It is unnecessary to give the details of the operation, but it will suffice to say that the boy died forty-eight hours after, with the usual signs of diffuse septic peritonitis. The highest temperature recorded was 102° F. At the examination the abdomen was distended, the viscera inflamed and coated with viscid lymph, and the pelvis and flanks nearly filled with purulent fluid. The chief focus of inflammation was around the right internal abdominal ring. No faecal matter could be found in the abdominal cavity. Twenty inches from the cæcum a Meckel's diverticulum grew from the ileum. It had been divided and encircled by silk

³ Centralblatt für Chirurgie, 1887, pp. 886 and 887.

⁴ Ueber die Aetiologie der acuten Lungen- und Rippenfellentzündungen. Wiener Medicinisches Jahrbuch, 1886, p. 433 et seq.

ligatures, which still fastened it to the abdominal wall. The sinus, which has been mentioned, ran towards these ligatures and opened into the abdominal cavity. It was evidently the centre of the septic peritonitis. The other end of the diverticulum was attached to the top of the right testicle. The microscope showed that all the peritoneal vessels were distended with blood, in which no bacteria could be found. In some places the blood cells were extravasated amongst the tissues, but otherwise the substance of the peritoneum had undergone hardly any alteration. Its surface, however, was covered with a thin layer of lymph, which was here and there crowded with swarms of small, short bacilli, growing in pairs and short chains. (Fig. 3.) The bacilli were confined to the surface lymph except in one

FIG. 3.



Diffuse septic peritonitis. Bacteria in the lymph upon the surface of the peritoneum and just within its substance.

place, where a single group lay about a hundredth part of an inch within the substance of the peritoneum. (Fig. 3.) Elsewhere the lymph paths contained neither pus cells nor bacteria. The inflammatory lymph consisted of cells with some fibrin. It is not certain, but probable, that these bacteria were intestinal in origin, and very likely the bacillus coli communis. The slightness of their penetration into the peritoneum may be explained by the very feeble mobility which the bacillus coli communis possesses, or by assuming that the swarms in which it grows are ill adapted to penetrate the tissues or to pass along the lymph paths. Therefore, in some kinds of diffuse septic peritonitis the peritoneum itself is not penetrated by the bacteria for many hours and its tissues are almost uninjured. Apparently, so far as the serous membrane itself is concerned, there is nothing to forbid recovery. Indeed, there is a close similarity betwixt the case which has just been described and one of my cases of diffuse septic peritonitis which did recover after laparotomy.⁶ In my case the peritonitis was of not less than forty-eight hours' duration, and was caused by a perforation of the ileum, which I found and sutured. At the operation the intestines were emptied of their fecal and gaseous contents and the peritoneal sac thoroughly washed out and drained. Whilst operating I observed that the mesenteric lymphatic glands were swollen to at least thrice their natural size. I did not then know what evil effects these inflamed glands might exercise. Fortunately, they seemed to depart without disturbance.

THE LYMPHATIC GLANDS IN DIFFUSE SEPTIC PERITONITIS.

Being inquisitive to know the characters of the lymphatic glands in diffuse septic peritonitis, I examined them in another case due to ulceration of the vermiform appendix.

CASE 3.—The patient was a boy aged seven years, whose illness began suddenly with a violent pain in the right side of the abdomen. This was soon followed by distension, inflammatory obstruction, and fecal vomiting. The abdomen was opened on the third day, and an inflamed and perforated vermiform appendix was removed. The peritoneal cavity was washed out and drained, but he died in four hours.

I obtained portions of the peritoneum and some of the swollen lymphatic glands within eighteen hours of his death. The appearances of the peritoneum were almost the same as in the previous case (Case 2, Fig. 3). The lymph upon the surface of the portions examined was scanty. It was composed of proliferated peritoneal cells, with hardly any fibrin. Amidst the cells were bacilli of various morphological varieties, but mainly short bacilli, singly and in pairs. In some places bacteria with morphological characters of cocci and diplococci were seen, and these coccus forms had begun to penetrate the substance of the peritoneum, although the bacilli were confined to the surface. The peritoneum itself seemed to have undergone hardly any alteration, except that its endothelium was proliferating. I have lately observed another case of septic peritonitis in which the surface lymph contained bacilli and micrococci, and the depths of the peritoneum micrococci alone. In this last instance the micrococci were in chains, and easy, therefore, to identify. The swollen lymphatic glands were more vascular than healthy ones, and the vessels in their hila and along their trabeculae were distended with blood. The lymph paths were very wide and had probably been distended with fluids; some of them, especially those of the cortex, were crowded with leucocytes which retained methyl blue. However, no bacteria could be found in any part of these lymphatic glands, and I think it doubtful whether any were present. I am indebted to Mr. Blandford for much patient labour at this material. Thus in rapidly fatal diffuse septic peritonitis neither the peritoneum nor the swollen lymphatic glands are for many hours in an irremediable state.

OPERATIVE PERITONITIS; PERFORATIVE PERITONITIS.

If my observation is correct—and I know how easy it is to be mistaken—that the peritoneum was infected with both bacilli and micrococci, a point of some interest arises. Waterhouse,⁶ Walthard,⁷ and others speak of "perforative peritonitis" and "operative peritonitis." In the first bacilli are found, in the second micrococci. This generalisation would have been more probable if Beinstock had been right in his assertion that the intestines were only inhabited by bacilli. Escherich has shown, however, by plate cultures that cocci also inhabit the intestines. Culture experiments might easily lead to the inference that the fluid of perforative peritonitis contained nothing but bacilli. On various occasions I have inoculated culture media from the peritoneal fluid in perforative peritonitis. Like others, I have obtained a growth of bacillus coli communis, not because it was the only microbe present, but because the media suited it best. In cover-glass preparations of the exudations in perforative peritonitis many more morphological varieties of bacteria can be seen than can be grown either in the presence or absence of oxygen; indeed, culture experiments taken alone abound in fallacies. In a case of diffuse septic peritonitis due to a perforating ulcer of the duodenum I could see in the exudation: (a) minute bacilli, singly and in pairs; (b) bacilli about the size and shape of tubercle bacilli; (c) short, plump bacilli of some magnitude; (d) cocci and streptococci; (e) saccharomyces; and (f) moulds. Inoculated into broth, this exudation grew short bacilli, in pairs and short chains. Some of the chains might have consisted of streptococci, some of which were seen in the exudation. In the case (Case 2) to which I have just referred we have to consider the possibility of the original infection having been one of micrococci. In this event the bacilli may have emigrated into the lymph which the cocci had produced from, the intestines and after the death of the patient. Before saying anything more about perforative peritonitis I propose to contrast a case of streptococcus peritonitis with those which have just been described.

STREPTOCOCCUS PERITONITIS.

CASE 4.—A girl sixteen years of age was admitted with inflammatory swellings about the right humerus, the lower end of the left radius and ulna, and of the left calf. She also had a distended and tender abdomen, but without sickness or obstruction. She had not been well for three weeks and attributed her illness to a wound of the thumb which she received whilst at work making lace. The scar of a recently healed wound was seen upon the thumb. The swelling about the right humerus was opened, and some greenish pus escaped.

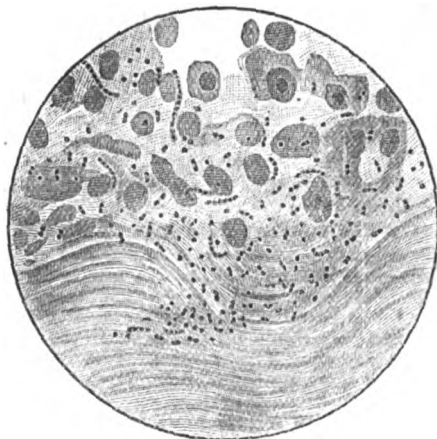
⁶ Prize Essay, Edinburgh. For abstract see Virchow's Archiv, Band cxix., Heft 2.

⁷ Archiv für Experimentelle Pathologie und Pharmacologie, 1892, p. 275.

⁸ Transactions of the Royal Medical and Chirurgical Society, vol. xxviii., 1895, p. 1 et seq.

Soon after the operation she began to vomit and speedily died. During her illness her temperature was usually about 101° F. At the examination, which was made in the winter twenty-six hours and a half after death, the swellings of the arms and legs were noted, and an abscess the size of a hazel nut was found near the root of the tongue, amongst its muscular fibres. The thoracic viscera were normal, except the bases of the lungs, which were congested. The peritoneum was much inflamed and contained a quantity of pus, some of which filled the pelvis. The vagina, uterus, and Fallopian tubes were healthy; but the left ovary contained an abscess as large as an orange, which had burst and, Mr. Berry believes, started the diffuse septic peritonitis. The spleen was large and soft, and the liver covered with punctiform hæmorrhages. The histological examination showed that the surface of the peritoneum was covered with lymph consisting mainly of corpuscles with very little fibrin. (Fig. 4.) This lymph

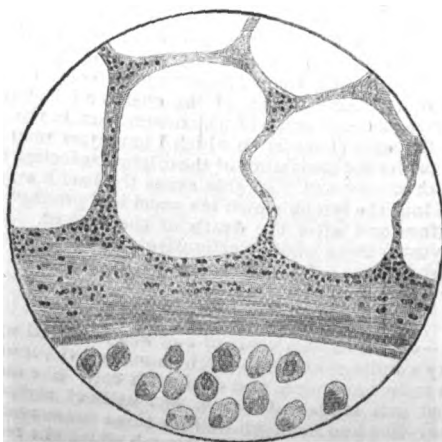
FIG. 4.



Streptococcus peritonitis. Lymph upon the surface of the peritoneum.

contained vast numbers of cocci, singly, in pairs, and in chains of various lengths. In places these cocci had penetrated far into the substance of the peritoneum and had reached the subperitoneal fat. Here they were thickly crowded in the connective tissue trabeculae between the fat cells. (Fig. 5.) Many of the lymph paths were crowded

FIG. 5.



Streptococcus peritonitis. Streptococci in the depths of the peritoneum.

with vast numbers of cocci, diplococci, and streptococci. The bloodvessels of the peritoneum were engorged with blood, but contained no bacteria. The substance of the peritoneum was comparatively free from cellular infiltration. Here and there the surface lymph had in it leptothrix of slender bacilli.

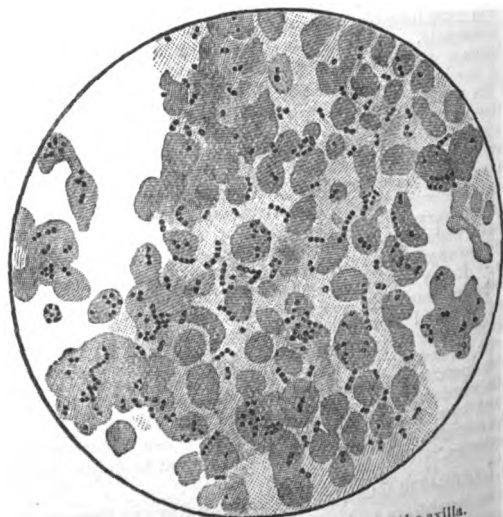
These were few and scattered, and, I believe, had grown after death. It is to be regretted that the liver, spleen, and other organs were not obtained for examination. Before the history of this case was known to me, and judging solely from the microscopical appearances, I had come to the conclusion that the peritoneum had been infected with streptococcus pyogenes. This is usually found in abscesses and suppurations about the female genital organs, and is also one of the commonest causes of pyæmia. Döderlein and others have shown that vaginal pus usually contains streptococcus pyogenes, often associated with other microbes. Thus the case may have been one in which an abscess of the ovary had existed for some time, and then suddenly burst and caused diffuse septic peritonitis, followed by pyæmia; or the original point of inoculation may have been the thumb; and the abscess in the ovary, like those of the root of the tongue and of the arm, may have been an ordinary pyæmic abscess. Whichever way the ovarian abscess formed, it seems to have been the source from which the peritoneum became infected. The histological appearances support the view that at first the micrococci grew upon the surface of the peritoneum, afterwards penetrated into its substance and into its lymph paths, and finally caused a general infection. It is unnecessary to point out that in such a condition as this our present surgical remedies would be of no avail. The histological examination of this case is, unfortunately, very incomplete. I was only furnished with some portions of the peritoneum. Further knowledge of these peritoneal infections is urgently needed, but it is doubtful whether culture media will supply what is wanted.

STREPTOCOCCUS PLEURITIS; STREPTOCOCCI AND BACILLI IN WOUND.

I have now described several cases illustrating the effects of bacteria upon the peritoneum. I next purpose to describe a case to show their effects upon the pleura, and incidentally their distribution in a large septic wound of the axilla.

CASE 5 (Figs. 6, 7, and 8).—A man aged thirty-nine years, who was strong and well nourished, and with nothing in his appearance to suggest a predisposition to infection, had a large lympho-sarcoma, which filled the right axilla. A severe operation was performed for its removal. At this operation a good deal of blood was lost, but not a very

FIG. 6.



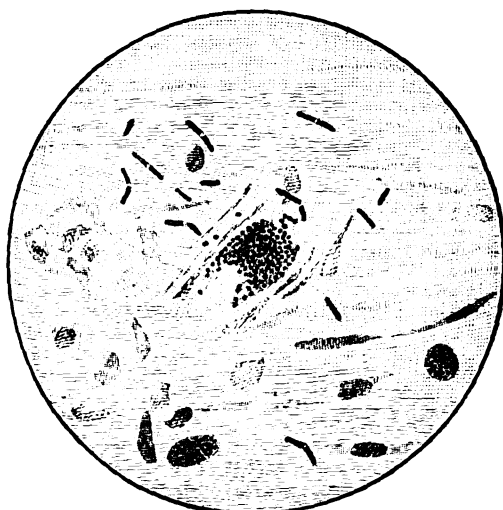
Streptococci in lymph of a septic wound in the axilla.

excessive or very dangerous quantity. Whilst attempting to dissect the growth from the chest wall the surgeon made a small puncture into the pleural cavity, and air was heard to enter and leave the chest. After the operation symptoms of infection soon became manifest. Upon the second day the temperature steadily rose to 102.2° F., with a rapid pulse and respiration, and he seemed much exhausted, but without suffering any pain. A quantity of blood-stained serum ran through the dressing of cyanide of mercury gauze. There was also emphysema of the cellular tissue of the neck and chest. He became gradually

worse and died upon the third day, all the symptoms having gradually become aggravated. The temperature rose during reaction to 104° and fell a little before the end, but rose again during the last hours. The examination showed that the tumour had been partially removed, and that there was a small puncture of the pleura in the third intercostal space. The axillary wound contained a few drachms of thin pus and was covered with a layer of ashen lymph. The whole pleura was covered with a layer of lymph and contained two or three ounces of blood-stained fluid, as did likewise the pericardium. In other respects the body seemed healthy, and no other signs of sepsis were found. The surface of the wound was covered with granular exudative cells, which had also infiltrated the underlying tissues. The exudation was full of cocci, diplococci, and streptococci. (Fig. 6.) Many cocci had passed along the lymph paths and vessels, which had been divided in the incision. Clots in the smaller vessels contained occasional cocci and diplococci, but in the deeper tissues many small vessels were packed with cocci. Amongst these many diplococci and occasional short strings could be made out. (Fig. 7.) The streptococci in the

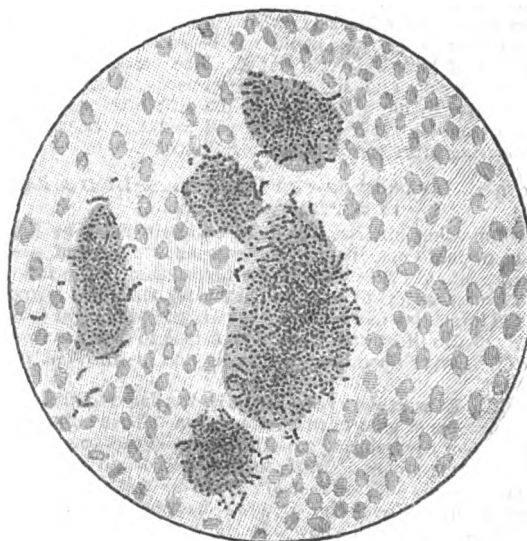
The lymph upon the surface of the pleura was from one to two millimetres thick. It was composed of exudative cells and fibrin, mixed with vast quantities of streptococci. The latter, unlike those in the axilla, grew in luxuriant chains entwined in dense and entangled masses buried in the lymph. (Fig. 8.) Many chains of cocci projected from the surface of the lymph into the pleural sac. The pleura had undergone the usual inflammatory changes, but these were confined to its surface and the lung was almost unaffected. The kidneys, liver, and spleen were examined for bacterial invasion but none was found. The fatal result was, therefore, caused by a local invasion of the axilla and pleura, and clearly the latter was enough to suffice. It is obvious that this infection might have been conveyed to the wound either during the operation or when the dressings became saturated. However, the temperature had begun to rise before the last event. It seems probable that both the wound and the pleura were infected at the same time, either by the instruments or by the atmosphere. The rapidity of the invasion, the high temperature, and the profound constitutional disturbance are all, I believe, ordinary features of virulent streptococcus invasion. The pro-

FIG. 7.



Septic wound of the axilla. Cocci in a vessel (? lymphatic). Bacilli in the depths of the tissues.

FIG. 8.



Streptococcus pleuritis. Entangled masses of streptococci in lymph upon the surface of the pleura.

axillary lymph were scattered indiscriminately, and not collected in dense masses such as were found in the pleuritic exudation which I am about to describe. For long I thought that cocci were the only bacteria in this wound; but after many attempts bacilli were found in the lymph and in the tissues next to the wound. These were about the size of anthrax bacilli (Fig. 7), but with rounded ends. They possessed no spores and grew singly and in pairs. They stained by Gram's method, but were seen best by Cenzynke's. The discovery of these bacilli raises several interesting questions. Some might consider that they may have been mere putrefactive bacteria which had grown after death. This may be the truth, but is a pure assumption. Indeed, they are not at all unlike bacillus septicus in their morphological characters, and they also seemed to resemble that anaerobic microbe in another particular. The lymph upon the surface of the wound, where presumably oxygen might be present, was almost free from them, although it contained quantities of streptococci (Fig. 6); the tissues, on the other hand, contained many bacilli, so that it looked as if the latter sought a habitat where there was little oxygen. To me the discovery of these bacilli is very interesting. After many examinations I had concluded that the wound was infected with nothing but streptococci. Probably culture experiments would have hardened me in this belief. It is improbable that a strict anaerobe, such as this bacillus seemed to have been, would have grown by the ordinary methods which I and most others have hitherto adopted. It is evidently rash to make positive statements about the bacteria of any wound upon the mere evidence of cultures.

duction of lymph in the wound and upon the serous membrane is also a common consequence of their activity. In the next lecture I shall describe a similar layer of pleuritic lymph which owed its origin, not to micrococci, but to bacilli. Had bacilli been found in the pleuritic lymph in this case the question would have been much more complicated. It seems reasonable to suppose that the comparative fewness of the streptococci in the axillary lymph and their luxuriance in that of the pleura is explained by the different conditions under which they grew. Various antiseptics were used for the wound, which was also drained; the pleura had none of these applications. In contrasting these two cases of invasion of the pleura and of the peritoneum by streptococci, the most striking difference is the small production of lymph in the peritoneum and its thickness in the pleura. Associated with this we have to notice that the streptococci had penetrated deeply into the peritoneum, whilst the pleura was hardly affected at all. Moreover, it is singular that the streptococci are irregularly scattered throughout the peritoneal lymph and in the substance of the peritoneum itself, but in the pleuritic lymph they are collected into entangled masses of considerable size. (Compare Figs. 5 and 8.) The lymph which covered the pleura had the same physical characters as the lymph which I have produced in rabbits by the subcutaneous application of unsterilised croton oil or unsterilised mercury. This septic lymph differs but little physically from that which is caused by sterilised croton oil, sterilised mercury, or pure carbolic acid. Biologically and chemically the difference is great because bacteria and their

products are present in one case and not in the other. The presence of the bacteria has, when critically examined, a slight but important effect upon the physical characters of the lymph; it is more fluid, its edges are ill-marked and shade off gradually into the surrounding inflammation, and, last, it has hardly any tendency to organise. The lymph which is caused by carbolic acid and mercury in the absence of bacteria is firm and consistent, its edges are abrupt and sharply defined, and if the rabbit be killed a week after the application of the chemical, and injected with carmine gelatine, it may be seen with the naked eye that numerous small vessels have begun to penetrate the lymph. The organisation of some kinds of aseptic lymph seems, as far as I can ascertain, to have been overlooked by those who have worked at this subject. It is, nevertheless, a point of some interest and importance. The conditions under which septic lymph organises or disappears are worthy of inquiry. Recently I opened the abdomen of a boy seven years of age, who had diffuse septic peritonitis due to a perforation of the ileum. The abdomen contained pus and lymph, and much of the latter was left behind. The child recovered, but I have often wondered what became of the septic lymph which was left behind. In another case an incision was made over the cæcum for the purpose of finding the vermiform appendix. This was prevented by recent adhesions, which were so abundant and bled so much that they could not be separated without a great risk of lacerating the bowel. The cæcum was accidentally opened, and six weeks afterwards, when I closed the opening, to my astonishment the adhesions which had been so troublesome had disappeared and the cæcum and neighbouring intestines looked almost normal.

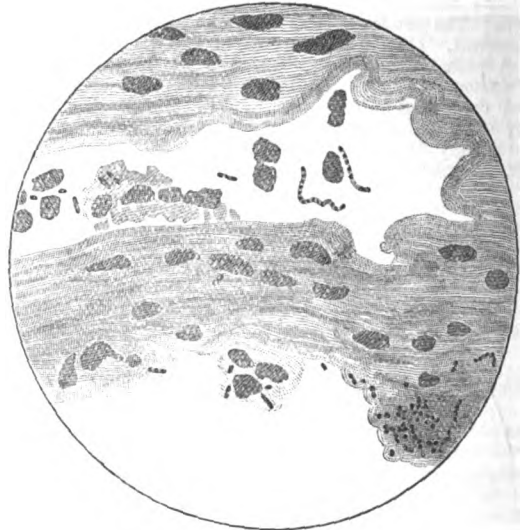
BACTERIAL INVASION OF THE PERITONEAL LYMPH PATHS IN SEPTIC PERITONITIS.

The foregoing observations tend to show that the intestinal bacteria do not, like the streptococcus pyogenes, easily penetrate into the substance of the peritoneum. The following, however, seems to suggest that after time has elapsed even the intestinal bacteria may invade the peritoneal lymph paths. It also illustrates how difficult it is in practice to distinguish betwixt operative peritonitis and perforative peritonitis.

CASE 6.—A man thirty years of age had suffered for five years with symptoms of gastric tumour or ulcer. These culminated in stricture of the pylorus, with dilatation of the stomach and its attendant troubles. To dilate the pylorus an abdominal section was done and an incision made in the front wall of the stomach. When the pylorus had been dilated this wound was closed with a row of sutures in the mucous membrane and another in the serous coat. For a few days the operation afforded some relief, and food was taken by the month. On the seventh day severe pain occurred in the region of the stomach, and upon the eighth day the patient died of septic peritonitis. This was not accompanied by any rise of temperature; indeed, his temperature was usually subnormal. I made an examination twenty-two hours after death, and found that the wound in the stomach had given way. The whole peritoneum was inflamed, with a quart of purulent fluid and stomach contents in the flanks and pelvis. There was much lymph around the wound in the stomach and about that in the abdominal wall, with some suppuration along the sutures. The piece of peritoneum which was examined was taken close to the wound in the abdominal wall. The ulcer in the stomach was not malignant⁸ and the body was healthy, with the exception of what has been described. Histologically⁹ the tissues of the peritoneum had not undergone much alteration. The surface-cells had proliferated and some inflammatory corpuscles infiltrated its substance, but this infiltration was not very marked. Nor was there much congestion of the bloodvessels. Amidst the lymph upon the surface were a great variety of bacteria, cocci, diplococci, and bacilli of various lengths and thicknesses. (Fig. 9.) Here and there the bacteria were collected into groups, and it was difficult to say whether there were swarms of short bacilli or clumps of staphylococci. Similar bacterial forms were seen in the adjacent lymph paths. But in these spaces chains of bacteria were conspicuous. It is difficult to say whether these chains consisted of cocci or of short bacilli. The lymph paths also

contained bacilli of considerable size (Fig. 9). In addition to bacteria they were partially filled with exudation corpuscles, and some material which looked like coagulated albumen, such as is often seen in the renal tubules in certain kinds of acute nephritis. In the depths of the peritoneum, as far as the subperitoneal fat, there were small, dense collections of bodies which had the appearance of cocci and diplococci. These were always arranged round a nucleus and were not contained in any space. I am ignorant of their meaning. Some, I believe,

FIG. 9.



Bacterial invasion of the principal lymph paths in diffuse septic peritonitis.

would call them phagocytes laden with bacteria.¹⁰ The liver and kidneys of this case were also examined, but no bacterial invasion was discovered.

The history of the case leaves a doubt as to whence these bacteria originated. It is possible that they came from the outside, for the wound was septic, or from the interior of the stomach. The contents of the stomach possess a luxuriant flora and could well furnish the bacteria which were found; various articles of diet, the saliva, and the pharyngeal and nasal mucous membranes supply it with a vast variety of bacteria. De Bary's¹¹ work has an important bearing upon this question. He examined the contents of healthy and diseased stomachs. The acid material from healthy stomachs contained hardly any bacteria in comparison with that from cases of cancer of the pylorus, stenosis of the pylorus, or of ulcer of the stomach. Gillespie¹² and Macfadyen¹³ found many varieties, including the bacillus coli communis. At the same time they note that healthy gastric juice has fair antiseptic properties; but Macfadyen and others have remarked that in the contents of the intestinal canal more bacteria can be distinguished microscopically than can be recognised in cultures inoculated from these contents. Barbacci has also tried to show that the bacillus coli communis is of less importance in causing perforative peritonitis than other bacteria which are present, but will not grow in cultures. Thus in the case just given either the stomach or the wound could furnish the bacteria seen in the lymph and in the lymph paths. The number of bacilli, however, suggests that they come from the stomach. The absence of any rise of temperature during the peritonitis also suggests that it was not caused by the ordinary pyogenic cocci. The presence of strings of bacteria in the lymph paths is consistent with what we already know of these kinds of organisms. In erysipelas, cellulitis, and lymphangitis the streptococci travel along the lymph paths, their passage being facilitated by their shape, which is well adapted for narrow channels; on the other hand, clumps of staphylococci

⁸ The specimen is in the museum of St. Bartholomew's Hospital. (No. 1861 b.)

⁹ I am indebted to Dr. Addison for much labour at these tissues. Our most successful specimens were stained with alkaline methyl blue.

¹⁰ These specimens were stained with alkaline methyl blue.
¹¹ Beitrag zur Kenntniss der niederen Organismen im Mageninhalt. Archiv für Experimentelle Pathologie und Pharmakologie, 1886, Band xx., p. 243.

¹² Bacteria of the Stomach: Journal of Pathology, vol. 1, p. 294.

¹³ Journal of Anatomy and Physiology, vol. xxi., 1886, p. 237.

or of bacilli would, it might be supposed, find it difficult to pass along the narrow channels of the tissues. Thus we find that such an organism as *staphylococcus aureus* is usually associated with acute localised suppurations or inflammatory wound gangrene (Ogston), and *streptococcus pyogenes* with spreading inflammations such as erysipelas or cellulitis.

INTESTINAL BACTERIA IN OTHER CONDITIONS: HEPATIC ABSCESS.

During these investigations I have met with intestinal bacteria in other diseases besides perforative peritonitis, and it may not be out of place to refer to these occurrences. For instance, the following¹⁴ illustrates their presence in abscess of the liver.

CASE 7.—A man who had lived six months in India and had had ague and dysentery there, returned to England, and had an attack of hepatitis in August, 1887. This seems to have subsided, and to have been followed by a second attack of dysentery and a fresh hepatitis in June, 1892. The abscess in his liver probably dates from this time. In February, 1893, Dr. Norman Moore diagnosed an abscess of the liver and obtained some pus from it with a sterilised needle and after proper disinfection of the skin. Having been called in to open the abscess, I performed laparotomy. As the liver was not adherent it was stitched to the edges of the wound, and forty-eight hours later the abscess was opened. The patient made a good recovery. Cultures inoculated from the wound before opening the abscess remained sterile; others inoculated from the pus grew the bacillus coli communis in pure culture. The pus was very thick and of a slightly greenish tinge, and occasional short bacilli could be seen in it, but living plasmodia were not looked for. The amoeba coli was not sought for in this pus when it was fresh, but none could be seen in stained specimens. My colleague Dr. Galloway,¹⁵ who has done good work at this subject, showed me the amoeba coli in the pus of a hepatic abscess which I opened for a patient of Dr. Clifford Beale. I have recently failed to find the amoeba coli in an empyema of the gall-bladder. The pus contained *streptococcus pyogenes*, and possibly other organisms.

The exact relation of the bacillus coli communis to hepatic abscess has been much debated by Kartulis, Councilman, Ostler, Manson, Galloway, and others, and will not, I venture to think, be decided by mere clinical or bacteriological evidence. Experimental pathology may, however, be expected to throw light on this question. Zancarol¹⁶ performed a series of experiments by injecting dysenteric evacuations, hepatic pus, and cultures from hepatic pus into the recta of cats. These are, so far as I can tell, the only direct experiments upon this disease. Zancarol claims that any of these may produce dysenteric ulceration of the intestine with accompanying abscess of the liver. He seems doubtful whether the amoeba coli causes abscess of the liver in dysentery. He attributes potent effects to streptococci. Although the following experiments performed upon rabbits teach but little, yet they show that the relationship of the intestinal bacteria to abscess of the liver is not so simple as at first glance it seems to be. I mention them here because they may be of help to others—at least by telling them what to avoid. Laparotomy was performed upon a healthy rabbit and a loop of intestine drawn out. Two cubic centimetres of a broth culture of bacillus coli communis, grown from the case of liver abscess which has just been described, were injected into the mesenteric vein. The animal died during the night, and slight peritonitis was found. The animal seems to have been poisoned by the culture. Next, the liver of another rabbit was exposed, and one cubic centimetre of a broth culture of the same bacillus was injected into it. At the end of a week the animal, which seemed to be fat and well, was killed. The injection appeared to have produced no result, but the presence of numerous psorospermal foci forbade any positive statements; at all events, no larger abscess or destruction of liver substance had occurred. The injection of a solution of rabbits' faeces in water into the mesenteric veins of another rabbit made the animal ill, and when it was killed at the end of a week there were found to be several small abscesses at the periphery of the liver; but here again the result seemed uncertain because so many

psorospermal foci were present. These experiments made me think that something more than intestinal bacteria were required to cause hepatic abscess.

INTESTINAL BACTERIA IN OTHER CONDITIONS: TYPHOID ABSCESS.

It is now so well known that the typhoid bacillus can cause abscesses that a case in which that occurred would hardly be worthy of record if it did not also illustrate another point—namely, that bacteria may continue to live in the human body for months or years. This is shown by a case in which I found the typhoid bacillus in an abscess a year and three months after an attack of typhoid fever. The interval which elapsed between the infection and the discovery of the bacillus in an abscess was, I think, clearly substantiated. The patient was a young woman aged nineteen years, who came with a subacute abscess over the front of the tibia. It contained ordinary thick, dirty-yellow pus. The cells of this pus were degenerated, and amongst them were some bodies which were taken to be short bacilli. These grew upon gelatine with all the ordinary characters of typhoid bacilli. The gelatine was not liquefied, and the bacilli grew upon its surface in greyish white layers with irregular edges. In the depths it formed fluffy colonies. The growth was slow at summer temperature. The bacilli were about four times as long as they were broad, with rounded ends and with spores which did not cause any bulging; they grew occasionally in short strings of four or five elements. This patient said she had been liable to abscesses ever since she had been in hospital for typhoid fever. Dr. Goodall has kindly informed me that she went into the fever hospital on April 4th, 1892, with typhoid fever, and that whilst there her case was complicated with abscesses in the axilla and neck. The abscess from which I obtained the pus was opened on June 17th, 1893—at least one year and three months after the onset of the disease. It is so unlikely that this patient could have had a fresh infection with typhoid bacilli that I think we must conclude that those found in the abscess must have lived in her body for at least a year and three months after their introduction. During the greater part of their sojourn they seemed to have caused but little inconvenience to their host. With the exception of the subacute abscess, her health was good. The bacilli seem to have been living for months at the place where they afterwards caused the abscess, and had not been recently deposited there from the blood. The note says that during the months which preceded the abscess its site was occupied by a painful swelling which appeared and disappeared several times.

The typhoid bacillus seems particularly fitted for throwing light upon the question how long bacteria live in the body. Its early effects are so palpable that there is seldom much doubt as to the approximate date of the inoculation. Instances similar to that which I have recorded have been published by Hintze¹⁷ and others, but none of the cases seem to have lasted so long after the fever. In Hintze's case the bacillus was found in an abscess of the chest wall two months after the fever; Werth found them in an ovarian cyst eight months after; Orloff found them in an abscess over the tibia six and a half months after; and others have found them at shorter times. It seems reasonable to suppose that other bacteria may lurk unnoticed long after their introduction. I ought to add that *staphylococcus pyogenes aureus* and the bacillus coli communis have been found in the abscesses which follow typhoid fever.

¹⁷ Centralblatt für Bakteriologie und Parasitenkunde, 1893, vol. xiv. p. 445 et seq.: Ueber die Lebensdauer und die Eiter-erregende Wirkung des Typhus Bacillus im menschlichen Körper.

THE Princess of Wales has sent £3 to the Rev. J. Trelawny Ross, D.D., Vicar of Paignton, for an old Irish woman, Mrs. Anne McLaughlin, of Limavady, who is 110 years of age, and whose husband served in the corps of yeomanry commanded by the Rev. Dr. Ross's grandfather in the beginning of the century.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—As St. Patrick's Day falls on a Sunday the annual meeting of this association will be held at 11, Chandos-street at 6 P.M. on Saturday, March 16th. The festival dinner will take place at 7 P.M. on the same evening at the Café Monico, Dr. H. Phillips-Conn in the chair. Application for dinner tickets should be made to Dr. Cagney, 93, Wimpole-street, W.

¹⁴ I am indebted to Mr. Poynder for very clear notes of this case, and to Dr. Norman Moore for permission to use them.

¹⁵ Brit. Med. Jour., March 31st, 1894.

¹⁶ Pathogénie des Abscès du Foie. Revue de Chirurgie, vol. xiii. 1893, p. 671 et seq.

The Arris and Gale Lectures

ON

THE CENTRAL NERVOUS MECHANISM OF THE RESPIRATION.

*Delivered before the Royal College of Surgeons on
Feb. 22nd, 1895,*

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MEDICAL SCHOOL.

LECTURE III.

THE RESPIRATORY CENTRE IN ASPHYXIA.

GENTLEMEN,—Carbonic acid excites the respiratory centre, at first causing hyperpnoea by over-action of inspiratory muscles, and later dyspnoea with over-action of expiratory muscles. But the third stage of asphyxia is not due entirely to carbonic acid poisoning. The centre is suffering from want of oxygen owing to the failure of the circulation. Carbonic acid first excites the vaso-motor centre to over-action, and the blood pressure rises. But it soon paralyses the vaso-constrictor influence, and the blood pressure rapidly falls. In the same way carbonic acid excites the cardio-inhibitory centre and the heart is first slowed; but subsequently it acts on the heart and weakens the muscles. The failure of the circulation is therefore due to a paralysis of the vaso-motor centre and of the heart muscle. If a dog be deprived of air for less than four minutes it may spontaneously recover. After this period the heart is found to be beating slowly and feebly, and the blood pressure has sunk very low. The heart may continue to beat for six minutes after the cessation of breathing. The ventricles cease to beat before the auricles, which may go on for a little time longer, the beats being irregular, intermittent, or periodic.

In connexion with this continuance of the heart beat in asphyxia I am happily able to quote some experiments made by a past President of this College, Sir J. Eric Erichsen,¹ which he carried out under Professor Sharpey. The thorax of a dog being opened and the beat of the heart watched, the restoration of the heart and blood pressure always followed upon inflation of the lungs so long as the ventricles had not quite ceased to beat. He never succeeded in restoring the circulation of the animal by artificial respiration of air alone when once the ventricles had definitely stopped. The auricles might start a rhythmic beat, but this did not lead to the ventricles doing so. Nevertheless, when the heart of an asphyxiated animal had quite ceased to beat the artificial respiration of air changed the colour of the blood in the pulmonary veins, the left ventricle, and the coronary arteries, so that it became red, whereas the blood on the right side of the heart and elsewhere remained black. Following the clue given by the last experiment he used oxygen instead of air for inflation. He watched the heart of an asphyxiated animal until all movements had entirely ceased for two minutes, and then commenced inflation with oxygen. The blood in the pulmonary veins, left ventricle, and coronary arteries, as in the last experiment, became red, and in some of the animals the heart began to beat and the circulation was restored. These are the only experiments with which I am acquainted in which the possibility of starting the heart after it has once ceased has been shown in a way which can be applied to man.

In a patient who has ceased to breathe, but in whom the pulse is of full tension, although it may be slowed in rate, we may direct our attention to the removal of the causes of inhibition. Inhibition by afferent stimuli practically occurs from the pharynx or larynx, and breathing may start on the removal of foreign bodies, mucus, blood, or on drawing forwards the tongue, which has fallen back. This inhibition may also be neutralised and overcome by an afferent stimulus

exciting inspiration. One of the most efficacious of these stimuli is that produced by drawing forwards the tongue, especially in rhythmic manner. Laborde² has recorded sixty-three successes by this plan. Presumably the effect is produced by the excitation of the fifth (lingual) or upper roots of the vagus (glossopharyngeal). There are also many other forms of excitation through sensory nerves which may evoke respiration; but if the patient has passed into the stage of asphyxia no effect can be expected from sensory excitation. In such a case artificial respiration and warmth offer the only means of improving the heart-rate and of increasing the force of the vaso-motor centre. When the vaso-motor centre has regained its control of the vessels it reacts to carbonic acid. On cessation of artificial respiration if the blood pressure rises one can with certainty predict that in a few seconds normal breathing will begin. Conversely, if on stopping artificial respiration the blood pressure begins to fall normal breathing will not occur. With regard to recovery in a person apparently dead, in whom breathing has not occurred for five minutes or more, we must conclude that the heart can in such cases only continue to beat when the production of carbonic acid in the tissues has been reduced to a minimum. Cases of recovery after long submersion can be explained by supposing an injury to the head, cold, shock, alcohol, or other cause to have greatly depressed internal respiration at the time of submersion. A man may thus remain under water reduced to the state of a cold-blooded animal. Very little carbonic acid passes from the tissues into the blood, and thus there is not sufficient carbonic acid to poison the heart muscle. Cases of submersion for as long even as half an hour have been followed by recovery.

Poisons other than carbonic acid may affect the respiratory centre, or their action may be combined with that of the carbonic acid imperfectly removed. Cocaine painted on the floor of the fourth ventricle³ paralyses the respiration, and, being washed away by salt solutions, its effect passes off and normal breathing is resumed. Chloroform and ether act in the same way when directly applied to the bulb.

[The lecturer here referred to the dangers of chloroform anaesthesia. He continued:]

There are more rapidly fatal poisons, such as hydrocyanic acid and carbonic oxide gas. Even in such cases recovery is possible if oxygen can be administered early enough and the carbonic acid got rid of. Haldane⁴ placed a mouse in a stream of carbonic monoxide. The animal became distressed, panted, and fell on its side, whilst the tips of its ears became brick-red in colour. If at this point a stream of oxygen were passed into the vessel containing the mouse the animal quickly gets on its legs and appears as well as before. Opportunities of applying artificial respiration and oxygen are, of course, not likely to occur frequently, for the man is generally burnt in the case of the carbon monoxide, and in suicide by hydrocyanic acid the person is alone. Opium, morphine, and chloral act more slowly, and therefore the application of means to excite the respiratory centre will be of much more service. There is a great resistance to these narcotics on the part of animals exposed to heat, and I need not remind you that it is of no use to administer oxygen in a case of failing respiration unless at the same time the carbonic acid be got rid of by artificially aiding the expiration. As to curare, when ozone is passed through a solution of it the substance loses its poisonous properties. It has, therefore, been conjectured that the action of curare may be to snatch oxygen from the nerve substance. A case is recorded of failure of respiration after a puncture by an instrument smeared with this drug. Recovery ensued after two hours of artificial respiration. Strychnine is no stimulant of respiration. When given in a sufficient dose it opposes inspiration by acting chiefly on the nerve roots of the spinal cord which supply the muscles of extraordinary expiration. It is the excessive and inordinate action of these muscles which opposes the inspiratory action. Thus the respiratory centre becomes asphyxiated by excess of carbonic acid, whilst the abdominal muscles are violently contracted in each spasm. The indications for treatment are therefore two—the depression of the over-action of the expiratory muscles by narcotics whilst the respiratory centre is prevented from being asphyxiated by artificial respiration with oxygen. This method of treating a case of strychnine poisoning or of tetanus is obviously a difficult matter.

¹ An Experimental Inquiry into the Pathology and Treatment of Asphyxia, second edition, 1847.

² Tractions Rythmées de la Langue. Paris, 1894.

³ Aducco: Archives Italiennes de Biologie, 1890, tome xiii., p. 89.

⁴ Proceedings of the Physiological Society, 1895.

THE RESPIRATORY CENTRE UNDER INCREASED INTRACRANIAL PRESSURE.

The circulation through the centre may be impaired by cutting off the main supply or by resisting its entrance to the bulb by increasing intracranial pressure. The result is the same in the two cases—at first excitatory and secondly paralytic phenomena. The first effects of severe hæmorrhage are panting and deep inspiration.⁵ Indeed, compression of the carotids is sufficient to cause quickening of the respiratory rate.⁶ The skull is a cavity which is closed except for veins, lymph channels, and the communication with the spinal cord. The subarachnoid space is continuous with the ventricles by the lymphatics of the pia mater and through the brain substance with the spaces in which the cells lie. It also communicates with the venous sinuses. The pressure of the cerebro-spinal fluid is therefore intermediate between the blood pressure in the capillaries and that in the veins—viz., about 10 to 15 mm. Hg; and it can be seen to form as beadlike drops upon the pia mater, which has been first dried. Salt solution infused into the subarachnoid cavity is rapidly absorbed. Respiration is unaffected by the free exposure of the subarachnoid space. A slight diminution in the contents of the cranium—e.g., by a blood-clot or foreign body—may be compensated by a displacement of an equivalent amount of fluid into lymphatics or into the spinal cord, the fluid being squeezed out of the brain as water from a sponge. If a little pressure be applied slowly it may be borne without causing symptoms. If the pressure be applied suddenly symptoms which at first occur may disappear as soon as fluid has had time to escape. When from previous disease the exit by the lymphatic channels has been partly blocked by some inflammatory condition the slightest increase of intracranial pressure has set up a severe obstacle to the circulation through the vital centres. The results of a series of experiments on intracranial pressure have been published in a paper by Mr. Horsley and myself.⁷ A classical experiment, which consisted in setting up intracranial pressure sufficient to affect the bulb, was made by Sir Astley Cooper.⁸ He trephined a dog and pressed with his finger upon the dura mater. The dog became insensible, then comatose, and the pulse slow. When the pressure was released the animal recovered. We employed chiefly a thin rubber bag inserted through a trephine hole which was then filled by mercury. By this means we could raise or lower the pressure, estimate the amount of diminution in the contents of the skull by the amount of mercury running into the bag, and regulate exactly the pressure required by the height of the mercury column above the level of the skull. In dogs of medium size we found with Duret⁹ that the cranial contents could be diminished as much as 5 c.c. without any marked symptoms except an increase in the anæsthetic state of the animal. Whatever may be the slighter effects of intracranial pressure in the direction of local excitation, they were practically excluded by the anæsthesia employed; indeed, they are unimportant for the subject under consideration as compared with the mass displacements of the brain. The pressure applied to any part of the cerebrum tended to displace it backwards upon the cerebellum and bulb. This could be lessened or avoided by removing part of the occipital bone. The cerebellum bulged through the hole and the symptoms of pressure were diminished. We obtained symptoms of an identical character by direct pressure on the bulb, and there we were able to differentiate the cardiac from the respiratory effect.

The effect of increased intracranial pressure was primarily excitatory, causing inspiratory spasm, and finally paralytic, as shown by a diminution in amplitude, a slowing of the rhythm, and finally by arrest of respiration. A similar excitation caused slowing of the heart with a fall of blood pressure. After the arrest of respiration the heart greatly slowed and tended to stop. If the intracranial pressure was immediately taken off recovery ensued in the following order: (a) recovery of heart-rate, (b) rise of blood pressure, and (c) starting of respiration. If the intracranial pressure was severe and rapidly applied, the heart might be momentarily checked as by a strong excitation of the vagus nerve. Then the heart recommenced by slow excursion, which died out as the carbonic

acid in the blood increased. If, however, artificial respiration was carried out the gradual paralysis of the cardio-inhibitory centre could be seen. The heart beat more rapidly and the blood pressure rose as if the vagi had been divided. This rise of blood pressure was due not only to the cardio-inhibitory paralysis, but also to excitation of the vaso-motor centre, for additional intracranial pressure caused a further rise; we obtained extraordinarily high blood pressure after the removal of the cardio-inhibitory influence. Frequently the blood pressure rose to 300 mm. Hg—i.e., was doubled; but the highest reached in several experiments in the dog was 400 mm. Hg. This rise of blood pressure acted as a direct stimulus to the respiratory centre. Breathing frequently began again in spite of the continuance of the intracranial pressure which had immediately arrested it when the blood pressure was at its normal level. But the rise of blood pressure was only temporarily maintained. If the intracranial pressure was continued the blood pressure soon fell to 30 mm. Hg, indicating paralysis of the centre. When pressure is applied directly to the upper end of the spinal cord there is arrest of respiration without the heart being affected, supposing artificial respiration to be soon begun. When the pressure is applied in the upper part of the fourth ventricle the heart may be slowed down, whilst the respiratory rate is retained or even accelerated—i.e., an excitation of both centres. When the pressure is applied to the lower part of the fourth ventricle the respiration tends to be inhibited and the heart slowed. This is the general effect of intracranial pressure by an excitation of the cardio-inhibitory centre with an inhibition of respiration. Collapse or shock was obtained not only as the effect of severe intracranial pressure, but also followed a number of the different kinds of excitation which I have described. Many of the animals have brought the experiment to a conclusion by more or less suddenly lapsing into a condition of low blood pressure, feeble heart, and a respiration characteristic of the third stage of asphyxia. But the condition differs from asphyxia in not being easily amenable to artificial respiration. We have here a rapidly occurring vaso-motor paralysis by means of afferent stimuli through the respiratory apparatus.

Many cases which have been described show the importance of the removal of intracranial pressure. Thus¹⁰ a man who had dislocated his atlas vertebra was found senseless with respiration slow and interrupted, the pulse scarcely to be felt, and paralysis of the spinal cord below. The dislocation being reduced with an audible snap the man soon got well. A similar case under Mr. Horsley of pressure on the upper part of the spinal cord from caries of the spine had not only paralysis of the spinal cord but stertorous breathing. After laminectomy respiration immediately became free, and the boy regained the power to walk. Other cases in which respiration only has failed would have been, as proved post mortem, amenable to surgical interference. Thus in one case artificial respiration was continued for twenty-four hours, during which the heart beat strongly, and it did so for a few minutes afterwards. On post-mortem examination a cerebellar abscess was found. In another case artificial respiration was kept up for six hours, and a cerebellar abscess was afterwards found. In a third artificial respiration was performed for eight hours and a half; the pulse, at first strong, gradually became feebler (vaso-motor paralysis) and finally ceased. A cerebellar cyst was found. I have mentioned these to emphasise the importance of surgical exploration in order to try to relieve the pressure.

Intracranial pressure may arise from hæmorrhage. If the hæmorrhage comes to a standstill a similar amount of cerebro-spinal fluid may be absorbed, and so the symptoms be relieved. It is, therefore, of the first importance to arrest the bleeding. A compression or ligature of the external carotid may stop extravasation of blood from the middle meningeal artery. In conjunction with Mr. Horsley I have published a paper,¹¹ in which it was pointed out that the circulation through the middle cerebral artery, and especially through the lenticulo-striate artery of the monkey could be so controlled by compression of the carotid that a clot soon forms and blocks the mouth of the artery. We pointed out that as the lenticulo-striate artery is practically the continuation upwards in a straight line of the internal carotid, it must receive more of the force of the blood stream than the rest of the circle of Willis. Herein lies the reason why it is so frequently diseased as to be the

⁵ Kussmaul und Tenner: Moleschott's Untersuchungen, 1855, i. p. 82.

⁶ Geppert und Zuntz: Pflüger's Archiv, 1888, Band xlii., p. 189.

⁷ Philosophical Transactions, 1891, p. 201.

⁸ Lectures on Surgery, 1824, vol. i., p. 300.

⁹ Traumatismes Cérébraux, Paris, 1878.

¹⁰ Ehrlich: Chirurgische Beobachtungen, vol. ii., No. 25.

¹¹ Brit. Med. Jour., vol. i. 1889.

cause of 70 per cent. of cases of apoplexy. Being therefore the continuation of the internal carotid the circulation through the vessel is particularly weakened by compressing the carotid. We suggested that these experiments might point to the employment of compression or ligature of the common carotid artery in cases of ingravescent apoplexy. The suggestion has been taken up in America, and one of two cases appeared to have been benefited; at any rate, the ingravescent apoplexy was cut short.¹² During this week Dr. Washbourne has sent me the notes of a case under his care in Guy's Hospital. The patient had the symptoms of progressive hæmorrhage from the lenticulo-striate artery, and Mr. Dunn ligatured the common carotid. The hæmorrhage was apparently arrested, but there were severe pulmonary and renal complications. Death ensued two days afterwards. Where hæmorrhage has already occurred from the middle meningeal, the clot has been forced out of the trephine hole, showing the great pressure under which it was placed. Whether the removal of an apoplectic clot will be found practicable I do not know. Until the mouth of the ruptured vessel be plugged hydrodynamical conditions keep the clot under the same pressure as that of the blood-pressure, the latter being in the early stages far above normal. In any case it must be remembered that it is the failure of respiration which first happens, and artificial respiration may keep the centre and the heart from asphyxia until sufficient fluid has escaped from the brain to compensate for the room occupied. In such cases not only may cerebro-spinal fluid be removed, but the blood serum may be gradually absorbed and the blood-clot occupy so much less space as to allow respiration to start again.

RHYTHMIC AND PERIODIC (CHEYNE-STOKES) RESPIRATION.

Spontaneous rhythmic movement is a fundamental property of protoplasm as seen in the pulsating vacuole of a protozoön. Nerve cells originate rhythmic movement—e.g., the ganglion cells in the margin of the bell of a medusa. The rhythmic respiratory movements in the larvæ of some insects—e.g., *Libellula*¹³—may continue in detached segments, provided that one pair of the ventral chain of ganglia be included in the separated segment. Sir James Paget long ago expressed the belief that rhythmic motion is an issue of rhythmic nutrition. Rhythmic movement becomes periodic when the nutrition of the cells is failing, and is thus seen in the dying heart. Periodic respiration may depend upon periodic variations in the blood-supply, or in a prolongation of the time taken for the building up of a hypothetical inogen before kinetic energy can be liberated in the shape of an inspiration. Periodic respiration is seen in the deep sleep of young children and animals after the administration of somnific doses of morphia and chloral. A small amount of intracranial pressure in an anæsthetised dog may cause the respiration to become periodic. This kind of periodic respiration may occur in patients, and forms an incomplete type of Cheyne-Stokes respiration without the apnoic pause. Marked cases of Cheyne-Stokes respiration¹⁴ have never, so far as I know, been produced experimentally. It is an extraordinary phenomenon, especially the placid, almost anæsthetic state of the patient during the apnoea, as compared with the excited, sometimes even distressed, state of the patient when respiration has reached its maximum. In producing periodic respiration in animals exaggeration of the vaso-motor or Traube's curves may be noted as occurring at the same time. This variation in blood pressure may be sufficient to influence a weak respiratory centre. Recovery may ensue even when Cheyne-Stokes breathing has existed for months. In asphyxia, exhaustion, or after partial destruction of the bulb, where the animal is dying and the respiration of the kind which occurs in the third stage of asphyxia, there may be seen a periodicity of short inspirations or gasps. This periodicity perhaps arises from delay in the building up of the hypothetical inogen.

In these three lectures, gentlemen, I have brought before you such parts of the subject as have appeared to me to yield matter of practical value. Lack of time, insufficient evidence, and difficulty in forming conclusions are my reasons for passing over the rest without reference. I have to thank the President and Council of the College and the Curator for the opportunities afforded me for lecturing on the subject.

¹² Dercum and Keen: THE LANCET, Oct. 13th, 1894.

¹³ Baudelot: Comptes-rendus de l'Académie des Sciences, 1864, tome lviii., p. 1161.

¹⁴ Dixon Mann: Brain, 1890, p. 178.

A CASE OF PERFORATION OF THE GALL-BLADDER FOLLOWING TYPHOID FEVER SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

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Remarks by Mr. Monier-Williams on the medical history of the case previous to operation.—I was called on Sept. 18th, 1894, to see a married woman aged thirty-one years. She complained of pains all over the body, especially in the legs, severe headache, sleeplessness, and great weakness. The family history was unimportant. In connexion with her previous health was noted the fact that in 1883 she had a very severe attack of sudden abdominal pain accompanied by shivering fits, for which she was attended by Sir Francis Laking. The present illness commenced on Sept. 13th with headache, sore-throat, aching of the limbs, and shiverings; and the same symptoms persisted until I saw her five days later, when she had taken to her bed for the first time. I then found the temperature 103.5° F., the pulse 120, compressible, and dicrotic, and the tongue moist with a thin white coating. There was profuse perspiration and intense weakness. Percussion and auscultation showed the heart and lungs to be normal. The respiration was 20 to the minute, and there was fair abdominal breathing. The appetite was bad, and there was great thirst and much flatulence. Slight distension of the abdominal walls was present, and there was some tenderness in the right iliac fossa, but no abdominal pain. The spleen was enlarged and tender, and could be felt below the costal margin. The bowels had been slightly confined since the commencement of the illness. The urine on examination was found to be normal. A small dose of calomel was ordered, and an effervescent citrate of ammonia mixture. The next day, Sept. 19th, the bowels were freely open, and the motions were loose, of a yellow ochre colour, and very offensive. During the next two or three days the temperature oscillated between 102.5° and 103.5°, the pulse remained at about 120, the bowels were open once daily, the motions being of the same character as above, and the diagnosis of typhoid fever was made. On Sept. 21st, the ninth day of the disease, three or four pink spots appeared on the abdomen, but they were not sufficiently characteristic of the rose rash of enteric fever. On Sept. 23rd, the eleventh day of the disease, the patient was seized early in the morning, quite suddenly, with acute pain in the abdomen, and I was at once sent for. On arriving I found her in a semi-collapsed condition, with feeble, fluttering pulse and cold, clammy skin, complaining of agonising pain in the abdomen. The temperature shortly before the commencement of the pain was 102.5°, but now, two hours later, had fallen to 99°. Abdominal breathing was practically absent. The pain was diffused over the upper part of the abdomen, a spot a little above the umbilicus being perhaps the seat of its greatest intensity, and there was considerable tenderness in this situation and over the region of the ascending colon. I considered the possibility of a perforation of the intestine, even at this early date, and ordered opium freely and stopped all food by the mouth. A little later in the day Dr. Isambard Owen kindly saw the patient in consultation with me. She was then much relieved of her pain, the tenderness was less, and there was some slight abdominal breathing. Dr. Owen thought that the case was probably one of typhoid fever, and that we had to deal with an intestinal perforation, though possibly not a complete one. Opium was now administered less freely, but the patient was still fed only by the rectum. Twelve hours after the onset of collapse the temperature rose to 104.5°, the highest point reached during the illness. In a few days' time all pain and tenderness had disappeared. Opium was discontinued, and on Sept. 27th, the fifteenth day of the illness, nourishment was taken by the mouth again in the ordinary way. The case was now taking the course of an apparently moderately severe case of typhoid fever without complications. There was a gradual fall of temperature towards the close of the second week, but a rise

again occurred, and during the third week the evening temperature varied from 102° 5' to 103° 5'. During this period of the illness the pulse kept at about 110, and was small and easily compressible; the bowels were inclined to be confined, the motions being sometimes quite loose and sometimes almost formed, but always very offensive and of a yellow ochre colour. The patient suffered from profuse perspirations, slept very little and occasionally wandered at night, and was much prostrated. The tongue was surprisingly clean and fairly moist, and was not like the dry-coated tongue generally seen in enteric fever at this stage. The treatment consisted of a pill of two grains and a half of thymol three times a day. My partner, Dr. Weldon, attended the patient for a few days at this time, and concurred in the diagnosis of typhoid fever. During the fourth week of the illness the temperature fell gradually by lysis, and at the end of the week reached the normal, where it practically remained for the ensuing fortnight except for a slight temporary rise towards the end of the sixth week due to faecal accumulation, and which subsided directly the bowel was thoroughly emptied by means of an enema. The stools were now much less offensive, but still rather light in colour. On Oct. 28th the patient was practically convalescent. The abdomen was natural in every respect, there being nothing abnormal to be made out either on palpation or percussion. The bowels were acting regularly, and the temperature having been normal for a fortnight, solid food was cautiously commenced. During the night of the 29th the patient experienced some slight abdominal pain, but not severe enough to keep her awake. On the morning of the 30th, however, I found her suffering from severe pain, which she referred to the region of the hepatic flexure of the colon, and here there was considerable tenderness. Later in the day the pain was much worse, shooting through to the back, and the temperature had risen to 101° 2'. The pain was still limited to the region above mentioned, and there was now an area of about the size of an orange decidedly dull on percussion and very tender. Opium was freely given and rectal feeding ordered. Later in the evening Dr. Whipham saw the patient in consultation with me, and the question of a possible intestinal perforation was again discussed. Dr. Whipham was not inclined at that particular moment, however, to take such a serious view of the case, and thought that faecal accumulation would account for the symptoms then present. The next morning (Oct. 31st) the patient was much worse. There was decided distension of the abdomen and signs of a localised peritonitis in the right hypochondrium. The temperature was 102° and the pulse 140, feeble and running in character. Later in the day the temperature had risen to 103°, and judging that abdominal section might be expedient I asked Mr. Sheild to see the patient with me. Before proceeding to the joint report of the subsequent surgical treatment of the case I would note the following points of interest. The temperature chart, although fairly typical of enteric fever, was not absolutely so, the morning remissions of temperature being greater than we are accustomed to see. The tongue, as above stated, had only a thin white coat and was moist; but this, experience shows, is not uncommon in typhoid fever. Finally, as to the sudden attack of abdominal pain with collapse on the eleventh day of the disease, are we justified in considering this to have been due to an incomplete intestinal perforation, or was it caused by some similar condition of the gall-bladder, which temporarily healed, but subsequently relapsed into the state shown by the operation to be present, and shortly to be described? An intestinal perforation as early as the eleventh day is rare, but Dr. Osler has recorded more than one case at the eighth day. It is also perhaps worth noting that the patient ate freely of oysters sixteen days before the onset of her illness.

Conjoint report by Mr. Monier-Williams and Mr. Marma-duke Sheild.—When we saw the patient together on the evening of Oct. 31st her condition was very serious. The abdomen was tympanitic and exquisitely tender, especially over the right side. The seat of most acute pain and tenderness was to the right and above the umbilicus. The temperature was 103° and the pulse 140, very weak and with that well-known running character which so often heralds approaching death. The extremities were not cold, the tongue was clean, and the patient was rational and could converse. The face was pinched and anxious, but lacked the appearance of death-like collapse so generally noticeable in perforation of the intestine from typhoid ulceration. Here it may be observed that the patient was well under the influence of opium. No flatus or faecal matter had lately passed per rectum. Every-

thing seemed to point to perforative peritonitis, but it seemed to us that to subject her to an abdominal section while the pulse manifested the symptoms above described was perilous in the extreme, if not hopeless. We also could not but reflect that she had recovered from a similar though, of course, less severe attack before, and we then determined to wait until the morning. Nutrient enemata with laudanum were given through the night. We saw her early on the morning of Nov. 1st. She then seemed somewhat better, and the pulse though rapid was stronger. The abdominal conditions were worse. The abdomen was more tympanitic, the abdominal walls being quite motionless. After anxious consideration it was now determined to operate, and we were inclined to the belief that a perforation in the small intestine would be found. The operation was performed at twelve o'clock on Nov. 1st. Mr. Arthur Ward assisted, and Dr. Grant Morris administered an anæsthetic mixture. It was difficult to carry out under the circumstances all the elaborate technique of an aseptic abdominal operation, but we aimed at doing our best. Very few instruments were employed, and these were boiled and immersed in 1 in 20 carbolic solution. The skin of the abdomen was cleansed with soap and water and sponged with the same lotion, and the limbs were swathed thickly with cotton-wool. Nine sponges only were employed to simplify counting and after recognition. A free abdominal incision was at once made in the median line commencing above the umbilicus, and the cavity was opened without delay. The distended intestines were received in a warm towel by Mr. Ward, and held over to the left side. It was at once obvious that the most acute focus of inflammation was situated in the right hypochondriac region. The intestines here were much blown up, red and congested, and covered with purulent lymph, while among their coils some free turbid fluid could be seen welling up posteriorly. The incision was extended upwards to the under surface of the liver, where was much purulent lymph matting the tissues together. Believing that a perforation existed towards the upper part of the intestinal canal, diligent search was made, but none could be detected, and while disentangling the adhesions and sponging away the soft lymph under the liver the gall-bladder came into view, and its appearance was peculiar and suggestive. This viscus was deeply inflamed, of a dark-plum colour, rigid, thickened, and adherent, but not much enlarged, though tightly distended. The source of mischief was soon apparent, for low down near the neck of the gall-bladder was a sharply circular, sloughy ulcer the size of a threepenny piece. Its floor was bright yellow, and it was surrounded by a vivid red zone of intense hyperæmia. On stroking it with the probe fluid escaped at one spot, showing that leakage of the contents had already occurred. A fine trocar was now introduced, but to our surprise nothing escaped, and the gall-bladder was opened at its fundus by a stroke from the scissors. About one and half ounces of thick, offensive pus, not mixed with bile, were evacuated into a glass held in the abdominal cavity, sponges being packed round to prevent further contamination of the peritoneum. The gall-bladder was obviously converted into a suppurating sac, probably cut off from communication with the biliary flow. The viscus was cleaned out with pledgets of wool held in the forceps, and a careful search made for a calculus by a probe internally and the finger externally. Nothing of the nature of a stone could be detected, and it was uncertain what caused the closure of the cystic duct. The tissues were so rotten that the probe was used with much caution, and no prolonged attempts were made to pass it into the common duct. The sloughy ulcer near the neck of the gall-bladder had now quite given way, and I (Mr. Sheild) tried to unite it after the Lembert method; but the stitches cut their way out persistently, though deeply placed. It was obvious that the gall-bladder was too soft and lacerable to deal with, still less to bring it to the surface the abdominal wound. So much time had already been expended that the idea of its complete removal was out of the question. The wound in the fundus was therefore attached to the parietal peritoneum, and the parts under the liver cleansed by flushing with warm water and repeated sponging. An incision was made at right angles to the former, reaching towards the right lower ribs, to allow of more dependent drainage. The next step was to deal with the intestine. A fine trocar was introduced into the enormously distended ascending colon. The puncture was made obliquely, running for some distance along the longitudinal bands before perforating the mucous membrane. A large quantity of flatus escaped, aided by

Mr. Ward manipulating the intestine towards the puncture. By this means the intestines were flattened, and after further cleansing were returned to the peritoneal cavity. A glass tube was now passed deeply into the lesser cavity of the peritoneum, and a long and liberal slip of carbolised gauze was firmly packed round it so as to flatten the now empty gall-bladder against the under surface of the liver, and shut off the intestine from contact. The abdominal wound was closed with all rapidity with fish-gut sutures and varnished over with collodion, being finally covered with a cyanide gauze dressing. The operation lasted exactly one hour, and at its expiration the condition of the patient was satisfactory; indeed, after the hot-water flushing the pulse somewhat improved.

In the after-history of the case we wish as far as possible to be brief, only mentioning the more important particulars and purposely omitting minute references to all the variations of pulse and temperature, and modifications in dietary, which are so essential to observe in the treatment of cases of abdominal section. On the evening of Nov. 1st we found the patient suffering from considerable collapse; she had vomited urgently several pints of greenish fluid. The pulse had fallen to 108 from 148 before the operation, and the temperature was reduced to 99.8°. Small nutrient enemata containing laudanum were ordered at frequent intervals and half-grain doses of opium by the mouth. The sickness continued through the night and the greater part of the next day, when it somewhat abated. On Nov. 3rd the symptoms were, on the whole, more favourable. The sickness was less troublesome and the wound was uniting well. The glass tube was washed out; there was only scanty discharge of bloody serum. The gauze was removed with some difficulty. It was firmly adherent and covered with healthy looking plastic lymph. All nourishment was given by the rectum. As there was slight abdominal distension and no flatus had passed we gave a saline purge in the evening, and the bowels were opened on the morning of Nov. 4th. The motions were darker in colour and partly formed. The sickness had now practically ceased, the patient's pulse and temperature were more satisfactory, and the chance of recovery seemed good. Nourishment was given by the mouth on Nov. 6th, and as more and more nutriment was taken by the natural channel the nutrient enemata were gradually lessened. On Nov. 7th a purulent discharge was observed from the tube for the first time. The discharge was sweet and quite devoid of bile. The tube was frequently filled with warm antiseptic lotion and aspirated. The wound, apart from the tube aperture, had now securely healed, and the bowels acted generally daily. All nourishment was now given by the mouth. The glass tube was removed and a rubber tube substituted. On Nov. 11th solid food was given for the first time. On Nov. 12th some severe pain was experienced of a colicky nature towards the right hypochondrium; this symptom persisted on the 13th. We were never able to explain it, and it passed away under subcutaneous injections of morphia. The tube, which had been gradually shortened, was entirely removed on Nov. 15th. About Nov. 17th the sinus had practically healed. The patient, who about this time was under the care of Dr. Weldon, got up on Nov. 24th, and went to Bournemouth on Dec. 18th wearing an abdominal belt. She is now well, but a small superficial sinus in connexion with a suture has lately been divided under nitrous oxide gas. A bacteriological examination was made of the pus by Dr. Slater of St. George's Hospital, and none of the ordinary organisms of suppuration were found, but antiseptics had been diligently used and might have modified the conditions really present. We regret that such an examination of the purulent contents of the gall-bladder was omitted amid the anxieties of a difficult operation.

In our remarks on this very interesting and important case we propose first to shortly review the literature of suppuration of the gall-bladder not dependent upon gallstones, and then we shall be in a better position to explain the probable nature of the case we have shortly narrated. We may at once say that suppurative cholecystitis apart from calculi is exceedingly rare. The English text-books except that of Murchison are silent on the possibility of suppuration of the gall-bladder occurring in connexion with typhoid fever. Osler¹ writes of "acute phlegmonous cholecystitis," and says "that it is a rare event; only seven instances of it have been recorded in the enormous statistics of Courvoisier. In a case which I

reported the patient died on the fifth day with symptoms of the most intense prostration, fever, and abdominal pain. Perforation may occur, with fatal peritonitis. Empyema of the gall-bladder is much more common, and in the great majority of cases is associated with gall-stones." Pepper² devotes a short article to inflammation of the gall-bladder and biliary ducts associated with pneumonia, typhoid and malarial fevers, and also in acute gastro-duodenitis from poisons and other causes. He mentions that when the cystic duct is obliterated and a suppurative cholecystitis present an empyema of the gall-bladder may burst and give rise to fatal peritonitis. He points out also that the patient may suffer from chills, recurring at irregular intervals and followed by sweating, the temperature being elevated to 103° and upwards. Murchison, in his well-known work on the continued fevers, alludes markedly to suppuration of the gall-bladder in association with typhoid fever. "The lining membrane of the gall-bladder," says this writer, "is very liable to become inflamed in enteric fever without producing any marked symptoms during life. Sometimes it is catarrhal, and the gall-bladder is proved to contain pus, as in the case related by Louis and in several which have occurred in my own practice." Murchison also refers to the diphtheritic form of inflammation as described by Rokitsky; and, lastly, he speaks definitely of the presence of ulcers in the mucous membrane of the gall-bladder, and refers to cases of this nature recorded by Andral, Jenner, and Trousseau. The same writer refers to a case which has many similarities to our own. A youth aged nineteen, in the London Fever Hospital, was seized with symptoms of peritonitis on the fifteenth day of enteric fever and died within twenty-six hours. The cause of the peritonitis was a perforating ulcer of the gall-bladder, which had allowed the bile to escape into the peritoneum. In connexion with this case reference is made to similar instances in the practice of Continental physicians and to a case of perforation of the gall-bladder in the practice of Dr. G. Kendal; but here gall-stones also existed. Drs. Gilbert and Girode, in the reports of the Biological Society of Paris for Saturday, Dec. 2nd, 1893, relate a case of purulent inflammation of the gall-bladder as a sequel of enteric fever. The pus, according to these authors, contained the "typhoid bacillus." The operation of cholecystotomy was performed five months subsequent to the typhoid attack, but the discovery of calculi throws doubt on the true nature of the case. Again, Gilbert and Dominici, writing in the reports of the Biological Society of Paris for Dec. 23rd, 1893, assert that they succeeded in producing suppuration in the gall-bladder and liver of rabbits by injecting a culture of the typhoid bacillus into the common duct. The gall-bladder was found thickened and full of pus, and foci of suppuration were scattered through the liver. Dr. Hale White, in vol. xiii. of the Pathological Society's Transactions, relates a case of fatal typhoid fever in a lad aged seventeen years. Characteristic ulcers were found in the liver and part of the ileum, and there was recent peritonitis round the gall-bladder, matting that organ and the lower edge of the liver to the intestines. The lymph was very soft, almost purulent. The gall-bladder was distended so that it measured 6½ in. in length and 3 in. across. Its walls were very thin, and in some places almost perforated. The bile which distended the gall-bladder appeared normal, and there was no obstruction to its flow. It will thus be seen that we have evidence to show that suppuration and ulceration of the gall-bladder do occur as a rare complication or sequel of typhoid fever.

As regards the case narrated by us, it is open to anyone to assert that it was not really enteric fever, but that the suppuration was due to some other cause, and the fever to septic absorption and pyæphlebitis. The diagnosis of typhoid fever was, however, at least as certain as is usually the case; the spleen was early felt to be enlarged, and the motions were characteristic. The bright yellow colour, sharply circumscribed margin, and vivid zone of hyperæmia which surrounded the ulcer were very suggestive of the enteric origin of the latter, and we are inclined to the belief that thus may be explained the nature of this remarkable case. Whatever was the exact origin of the ulcer it makes little difference to the surgical conduct of the case. We are inclined to lay stress upon the following points of interest in connexion with the surgical and after treatment. 1. The case affords an instance of the importance of abdominal

¹ Principles and Practice of Medicine.

² Text-book of the Theory and Practice of Medicine, vol. ii. p. 955.

section in grave and doubtful abdominal symptoms suggestive of perforation, and illustrates what may be accomplished by the aid of plenty of warm water and cleanliness. 2. The question of dealing with a sloughy perforated gall-bladder was the greatest point of importance and a matter of much embarrassment. Removal of the entire organ, with closure of the duct, was contemplated, but rejected on account of the time which had elapsed before the true nature of the case was recognised. We are inclined to lay great stress on the value of the gauze tampon in this case, and venture to express our belief that this valuable method hardly receives due recognition in cases where septic cavities communicate with the abdominal cavity. 3. The principle of drainage in a dependent position was also illustrated, and a posterior opening would probably be very advantageous in purulent collections between the stomach and the liver. The method of oblique puncture of the colon has already been alluded to by one of us in a debate at the Royal Medical and Chirurgical Society.³ 4. In the after treatment we need only allude to the rectal feeding, careful nursing, and the early opening of the bowels by saline purgatives.

Finally, we hope and believe that the condensed history of this case will be an important addition to the surgery of the gall-bladder, and we are of opinion that this is the first time that the operation of abdominal section has been successfully performed for so rare a condition as perforating ulcer of the gall-bladder not associated with calculous disease of that viscus.

COLITIS.

By W. HALE WHITE, M.D., F.R.C.P. LOND.,

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Two correspondents¹ have recently written to THE LANCET asking for information on the subject of colitis. As I have seen several cases of it both during life and in the post-mortem room, and have recently collected a number from the post-mortem records of Guy's Hospital and various publications, I thought it might serve a useful purpose if I briefly drew attention to the chief varieties. Much fuller details will be given under the heading "Diseases of the Colon" in the "System of Medicine" about to be published under the editorship of Professor Allbutt. The colon is affected by a number of well understood diseases, as dysentery, tuberculosis, cancer, and anthrax, and in the post-mortem room many other extremely interesting conditions—as, for instance, follicular and distension ulcers and the forms of colitis associated with pyæmia, Bright's disease, &c.—are seen; but, apart from all these, there appear to be three forms of colitis of clinical interest, which may be termed "simple colitis," "membranous colitis," and "ulcerative colitis."

1. *Simple colitis*.—The chief symptom of this is diarrhoea. The motions contain much mucus and usually small, but sometimes large quantities of blood, which is fluid and but little altered, having clearly come from low down in the bowel. Under the microscope unaltered red blood cells, some leucocytes, and triple phosphate crystals may be seen. Early in the case there is usually very little faecal matter. The onset is generally sudden; the bowels may be open many times a day, and in most cases there is some abdominal pain (for the most part along the course of the colon), especially during defecation, but it is not often excruciating, nor is tenesmus very marked. Abdominal tenderness is nearly always present, chiefly over the sigmoid flexure, but it may be over the whole colon or the whole abdomen. The rectum may feel a little rough, and may be injected and covered with mucus; the tongue is covered with a white fur, but is commonly free at the edges and tip. If the case is severe the temperature is raised, and if the diarrhoea continues the patient loses weight. Flatulence, abdominal distension, loss of appetite, nausea, and vomiting may all be present, but are not commonly very striking. There is nothing noteworthy about the pulse, for its characters are the same as are usually observed in any severe abdominal disease. The cases vary much in severity, and if untreated may drag on for some time, even proving

fatal. The patients are often of a depressed, hypochondriacal turn of mind. The most important part of the treatment is to put the patient to bed, to keep him warm, and to give him only small quantities of milk at frequent intervals. Opium, bismuth, and compound catechu powder are valuable for checking the diarrhoea, but directly it appears that this is about to cease astringents should be withheld, for the subsequent constipation is often very troublesome. It is best overcome by rectal injections of glycerine or warm olive oil. The hæmorrhage is rarely severe enough to call for special treatment; probably injections of equal parts of water and liquor ferri perchloridi thrown as high up the rectum as possible are the best remedy. Milk or at the most farinaceous diet and complete rest in bed must be continued till all the symptoms have disappeared, and the longer the case has been left untreated the longer will the treatment last. If the patient die, the mucous membrane of the colon will be found to be injected, red, or even livid; the submucous tissue is swollen; an excess of mucus can be seen on the surface; and there may, in an exceptionally severe case, be a few flakes of lymph or a few minute quite superficial ulcers.

2. *Membranous colitis*.—In this disease the patient passes from the rectum whitish membranous casts of the bowel. The subjects of it are mostly women over twenty years of age; they are anæmic, thin, complain of feeling cold, and suffer much from indigestion, often accompanied by some constipation. They are poor eaters, and the tongue is slightly covered with a white fur. Usually they are of a depressed melancholy turn of mind, and appear to get very little enjoyment out of life. This description applies in a well-marked case to the habitual state of health, but from time to time there are exacerbations during which all these symptoms become more severe, and in addition there is much gripping pain in the abdomen, commonly in the course of the colon, and for the most part bearing no relation to food, and there may be nausea or even actual vomiting. After this state of things has gone on for a few days the patient begins to pass membranes and often blood from the bowel; this is not clotted, and has clearly come from low down. The membranes, which some patients call "skins" and others compare to pieces of tapeworm, are greyish or yellowish white, of sufficient consistency to remain intact when held up, and they vary from being very thin to about an eighth of an inch thick. A good specimen forms a complete cast of the colon, with perhaps some faecal matter in its interior, and may be more than a foot long; but often only shreds, which are clearly fragments of larger pieces, are present, and these may have been rolled up into a tight ball by the movements of the colon. Under the microscope the membranes are seen to be structureless and somewhat transparent, with, embedded in them, a few minute pieces of undigested food, faecal matter and some crystals, chiefly triple phosphate. Fatty epithelial cells may also be seen, clearly suggesting by their collection together and their arrangement that they are the cast-off cells of Lieberkühn's follicles; and the inner surface of the membrane is marked by a number of pits which correspond to the mouths of these follicles. Several leucocytes may also be seen. Chemically, these membranes are albuminous. The duration of an exacerbation during which membranes are passed may be only a few days, or they may continue to be passed for several years. Some motions contain faecal matter, blood, and membrane; others contain only one or two of these three constituents. The faecal matter is usually in the form of hard scybala, and constipation is more common than diarrhoea. I have seen one fatal case. No membranes had been passed for some time before death, and the colon was thin and marked with slight patches of congestion. Otherwise the whole body was normal. Treatment is very unsatisfactory. No drugs are known to have any certain effect for good. The body and mind must be maintained in the best general health possible. The patient should take plenty of outdoor exercise of such a nature as to occupy her mind as well as her body. Her diet should be abundant and simple, but at the same time carefully prepared, so as to tempt her to eat. Often the patient imagines she cannot eat this and that, and so she becomes very fastidious. A firm attempt to break this bad habit must be made. She should have some definite employment to occupy her mind, and when not at work should associate with cheerful companions rather than be left alone. Purgatives are particularly to be avoided. Every attempt must be made to get the bowels to act regularly, and the patient should go to the watercloset every morning whether or not she

¹ THE LANCET, Oct. 27th, 1894.

² THE LANCET, Dec. 15th, 1894, and Jan. 5th, 1895.

thinks the bowels will be moved. Her meals should be regular and she should go to bed early. If the pain or diarrhoea is at all severe she had better remain in bed, and some astringent—as bismuth—may be necessary. Opiates may be required for the pain, but they should be given sparingly, lest the patient become a confirmed opium or morphia taker, and all astringents should be ordered in small quantities because of the subsequent constipation. This is best overcome by a rectal injection of warm oil or glycerine. It has been suggested that in a very intractable case it might be justifiable to open the colon high up and, by allowing the feces for some time to pass out through the artificial anus, to give it rest, and at the same time to flush it from the artificial opening to the natural anus with boracic acid lotion.

3. *Ulcerative colitis*.—This disease is about equally common in the two sexes, and the sufferers from it are usually between twenty and fifty years of age. It is ushered in by frequent attacks of pain, usually paroxysmal, severe, griping, and referred to the front of the abdomen. Between the attacks, of which there may be several in a day, there may be a slight dull pain, or even none at all. Severe diarrhoea is another early and constant symptom, and the bowels may be open five or six or more times a day. The act of defecation is accompanied by much abdominal pain, but marked tenesmus is rare. The motions are fluid, slimy, and foul smelling; usually some fluid blood—it may even be a large quantity—is present, and a few small lumps of feces may be seen. Mucus is never present in large quantities. There may be some shred-like looking material, very like sloughs. For a day or two between the periods of diarrhoea there may be periods of constipation, during which more solid motions are passed. Many patients, before they have been admitted to the hospital, have suffered from vomiting, but this usually ceases under dieting and careful rest. The tongue is covered with a dirty whitish fur; as the disease progresses it becomes red and dry, with a brown fur. The patient has the pinched expression often seen in abdominal disease, he is extremely anæmic, his abdomen is somewhat distended, peristaltic movements may be visible, and ulceration may occasionally be felt per rectum. As the case goes on the anæmia and weakness progress, the patient looks extremely ill, and his pulse is feeble. Generally there is irregular pyrexia during the whole of an attack, the temperature commonly ranging between 100° and 102° F. The prognosis is extremely grave—in fact, we have no convincing evidence that the disease is recoverable. The duration is usually less than eight weeks; the commonest cause of death is exhaustion, but some patients succumb directly to perforation. In this country acute dysentery is so rare that there is not likely to be much confusion between it and ulcerative colitis. The different character of the stools and prominence of tenesmus, the burning pain within the anus, and the very frequent evacuation of the bowels in dysentery would help to establish the diagnosis. The diseases that I have known to be confounded with ulcerative colitis have been phthisis, malignant disease of the colon, intestinal obstruction, and pernicious anæmia. Post-mortem examination of many cases shows that in a typical example the muscular coat is exposed by ulceration, which is often so extensive that only islets of mucous membrane are left here and there. These are often considerably swollen, and consequently they look taller than they otherwise would, and frequently they are more or less sessile because of the ulceration that undermines them. The result is that a careless observer concludes that the colon is covered with polypi. The ulcers may be very numerous, and they may run together to form large, irregular ulcerated areas, with here and there perhaps a sloughy floor. The vessels are usually dilated; it is rare to see any attempt at healing. If the patient die early in the course of the disease the ulcers may be superficial and the mucous membrane very soft and congested. Sometimes the small intestine is affected as well as the colon, but to a less extent. Histologically the process is the same as is usually seen in chronic ulcerations. About half of the patients who die from ulcerative colitis show no disease except that of the intestine. The associated diseases which in any way suggest a special connexion are Bright's disease, gout, and hepatic abscess. Among twenty-three cases of ulcerative colitis of which I have notes of the condition of kidney, chronic interstitial nephritis was present in six, and of the remaining seventeen two had urate of soda in their joints. The association with suppuration of the liver is very rare, but probably there are two distinct varieties of it, as there are of hepatic abscesses in association with dysentery—

namely, the small multiple pyæmic abscess and the large solitary abscess. Treatment, unfortunately, appears to have very little effect on the disease. Absolute rest in bed, with slop diet and opium, and hot fomentations if the pain and diarrhoea are very severe, probably afford the best chance, but the prognosis is exceedingly grave. Several cases will be found recorded in the Guy's Hospital Reports² and one showing the association with hepatic abscess in THE LANCET.³

Harley-street, W.

A REVIEW OF ONE HUNDRED ABDOMINAL SECTIONS.¹

By GEORGE ELDER, M.D. GLASG.,

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IT has seemed to me that the consideration of the results of my last 100 abdominal sections and comments would offer a sufficiently wide field for helpful criticism and discussion. They include all my operations of this class in the period from Feb. 23rd, 1893, to Nov. 17th, 1894, inclusive, and they are classified as follows:—

Operations.	No.	Results.	
		Recoveries.	Deaths.
Hysterectomy—			
Abdominal (for fibroids)	4	4	0
Vaginal (for cancer)	1	1	0
Ovariectomy—			
Single, 26	31	29	2
Double, 5			
Removal of the uterine appendages—			
(a) For inflammatory disease	33	32	1
(b) For uterine fibroids	4	4	0
(c) For tubal foetation (unruptured) ...	1	1	0
Cholecystotomy	5	5	0
Incision and drainage in tuberculous peritonitis	2	2	0
Incision and drainage of intra-peritoneal perityphilitic abscess	1	1	0
Incision and drainage of (?) pancreatic cyst	1	0	1
Intestinal obstruction	2	0	2
Resection of bowel	1	1	0
Exploratory incisions	14	13	1
Total	100	93	7

Looking at the list of deaths it will be seen that two followed ovariectomy. The first occurred in a woman aged sixty-four years—a patient of Dr. Carnelley of Ruddington—very stout and much troubled with chronic bronchitis; in fact, she was suffering from it on admission to the hospital. For several days treatment directed to alter this condition was tried unavailingly, and it was decided finally to perform the operation with the hope that the removal of the tumour-pressure would have a beneficial effect. Unfortunately, death took place four days subsequently from capillary bronchitis, there being no evidence of peritoneal inflammation. The second death took place ten days after a very simple double ovariectomy in an otherwise healthy woman forty years of age from an insidious and slowly advancing form of septic peritonitis rarely seen, and bearing a very striking resemblance in character to typhoid fever. This case certainly ought not to have died. One more favourable for operation could hardly be obtained, and during the progress of the case, and some time after, the manner of infection was to me a puzzle, until casually I learned that the medical man who assisted me had just before seen a case of scarlet fever. Possibly my ideas on this subject may be very extreme, but personally for years I have declined to attend contagious febrile maladies, solely on the ground that in operative procedures involving life the interests of the patient should be paramount. The third death followed in a married woman aged twenty-six years—a patient of Mr. John Hynes of Nottingham. For several years she had, both at home and in various hospitals, been treated for recurrent pelvic inflammation, undoubtedly due to leakage

² Vol. xlv.

³ THE LANCET, May 12th, 1894.

¹ A paper read at the Midland Branch of the British Medical Association, Grantham, on Nov. 29th, 1894.

from the pus tubes, until her health had become completely undermined. On abdominal section the tubes were found extensively and firmly adherent to intestine and broad ligaments, and their removal was a matter of extreme difficulty. Acute sepsis terminated the case forty-five hours after. Had I merely consulted my statistical record probably an examination of the difficulties of the case would have satisfied me, but the hopeless, dangerous condition into which the patient had drifted urged me to completely remove the diseased organs and give the woman the only chance she had of being restored to health. Whilst I think we ought not to operate on such cases too early—a mistake which can be nearly always avoided by a careful review of the history and symptoms of each case, assisted by a local examination—on the other hand, as is here well illustrated, the expectant treatment may be carried too far. The fourth fatality occurred in the person of an unmarried woman aged twenty-seven years, whom I first saw in consultation in June, 1893, with Mr. Walford of Stone Broom (to whom I am indebted for notes of the case, which I have to some extent used). This case is not only very unusual, but also instructive, and I may be pardoned in going somewhat into detail about it. The daughter of a publican, she had been credited for some time with pronounced alcoholic tendencies, and not, I think, without adequate grounds, although beyond occasional dyspeptic troubles her health had been good until Easter, 1893, when her fatal illness began. She then complained of pain on the left side of the abdomen, which suddenly took such an acute form on April 15th that Mr. Walford was sent for. The conditions then found were: distressing and foul vomiting, slight tenderness and resistance in the left iliac region, tongue clean and moist, pulse 150, thready, and temperature about 100° F. The bowels had acted the previous day, and the menstrual period was just over. The following are the notes taken at the time. "April 16th: Pain and sickness lessened. 19th: Temperature in the evening 102°; resistance in the left iliac region gone. 22nd to 23rd: A slight improvement in the general condition, yet there is constant abdominal pain now in the left hypochondriac region, accompanied by a 'distended feeling.' Is very restless, and sleep can only be obtained by narcotics. For fourteen days no properly formed motion was passed, but simply bile-stained mucus. Pulse rate lowered to 130 beats, irregular. Towards the end of this period a resistant mass, dull on percussion and tender, was noticed below the margin of the left ribs at a point about the junction of the hypochondriac and epigastric regions, and this slowly extended downwards to the right side. May 8th: As the patient was getting much worse Dr. Handford saw her in consultation, and thought the case possibly one of cystic tumour in the neighbourhood of the pancreas. May 16th: The tumour has kept steadily growing, especially towards the right side, its upper border being lost under the ribs; bulging is very noticeable. During the whole of the illness sickness had been almost constant, no natural sleep being obtained nor any proper evacuation of the bowels." The focal conditions at my visit were as follows: a prominent abdominal tumour could be seen and felt, extending from two inches and a half above the right nipple to within a hand's breadth of the iliac crest, only slightly encroaching upon the left hypochondr; dull to percussion, the dullness being continuous with that of the liver, and elastic. As it was obvious that an operation offered the patient her only chance, it was advised and carried out on June 8th. An incision being made above the most prominent part of the growth, and the peritoneal cavity opened, the stomach was found to be flattened out and adherent to the upper part of its surface; and, lower down, the omentum, much thickened with inflammatory exudate, adhered firmly to the parietal peritoneum and its inferior margin. On peeling this off the cyst lay exposed intimately connected with the colon and deeper parts, so that its precise origin could not be made out, nor was it deemed advisable to attempt its enucleation. From four to five pints of greenish-black or brownish liquid containing a few flocculi were removed by aspiration, and the cyst opening after irrigation was stitched to the parietes and a drainage-tube inserted. As some of the fluid had got into the peritoneal cavity a second (glass) tube was left in Douglas's pouch. The patient rallied well from the operation and seemed to be going on favourably until eighteen hours later, when suddenly she became cold, pulseless, and gasping for breath, dying in a few minutes. No necropsy was allowed, but, looking back at the history of her

eight weeks' illness from the light thrown upon the case by the operation, there seems to be little doubt but that it was an example of pancreatic cyst. The fifth and sixth deaths occurred after operations for the relief of intestinal obstruction. The first was that of a woman aged thirty-two years, who had been in ill-health since a miscarriage two years and a half before, and had gone to Matlock for change. Her chief symptoms had been frequently recurring attacks of "spasms" and obstinate constipation. On the evening of her arrival, after a journey of 130 miles, she was suddenly seized with abdominal pains, and early next morning Mr. Moxon was called in, and was able by hot applications and hypodermic injections of morphia to control the symptoms. Neither now nor subsequently was the vomit feculent. On the following day evidence of general peritonitis showed itself, and when I saw her with Mr. Moxon on the fourth day the abdomen was uniformly distended, tympanitic, and slightly tender, particularly high up on the left side. No cause of the trouble could be made out, although a careful examination of the usual seats of hernia, pelvic organs, and the lower bowel was made, and as it was evident that the patient's condition was becoming more serious, an operation was advised, and done on the following morning. On opening the peritoneal cavity a considerable quantity of serous fluid welled out, and it was noted how intensely congested the presenting parts were, especially about the cæcum and vermiform appendix, the latter, although somewhat thickened, being quite intact and containing no concretion. Neither by manipulation of the abdominal contents whilst *in situ* nor by touch could anything beyond the peritonitis be discovered, so it was decided to close the wound in the usual manner, providing for drainage. For three days the patient lived—neither the better nor the worse, in my opinion—for the operation. The distension day by day slightly increased, mainly in the upper half of the abdomen, although several times flatus was passed in large quantities after turpentine enemata; but, do what we would, no satisfactory evacuation of the bowels could be obtained. The other case of intestinal obstruction was due to volvulus of the large bowel in a boy aged seventeen years, whom I saw five days after the seizure with Mr. Howson of Snelton. He then had general peritonitis, and on opening the abdominal cavity the twisted portion quickly came into view, and was without difficulty rectified. The bowel was intensely congested, showing here and there patches of reddish-black discolouration; but in the hope that it would recover itself the bowel was returned, and the operation finished in the usual way. It would probably have been better surgery to have either made an artificial anus or attached the damaged bowel to the parietes and waited for further developments, but the result in this case, probably, would have been the same, as the boy never thoroughly recovered from the shock and died some nine hours afterwards. As is well known, such cases as the above are not very hopeful subjects for operation, partly owing to the uncertainty of their initial lesion, and also to the lateness as a rule at which surgical aid is called in. What the starting-point in the first case was it is impossible now to say, but it seems to me not unlikely that there was a slowly invading stricture of the small bowel which suddenly became occluded. This would account not only for the long illness the patient previously had, in which "spasms" and obstinate constipation were prominent symptoms, but also for the sequent train of events. The second case, as was to be expected from its nature, ran a more acute course. The last death in the series was operated upon by me in conjunction with Mr. A. E. Lyster of Long Eaton. The woman, aged forty years, had been bedridden for months with a pelvic growth, which when I saw her was accompanied by a large amount of ascites. Although there could be little doubt about the malignancy of the case the friends were anxious that an exploratory incision should be made, which was done, confirming our diagnosis. The woman died a few days afterwards, and the worst that the operation did for her was merely to antedate the events by a few days.

Singularly enough, six deaths happened in the first fifteen cases, so that there has only been one in the last eighty-five, viz., that occurring on March 13th this year, after the operation for volvulus. Amongst the thirty-one ovarian cystomata there were one dermoid, two papillomata (one suppurating), and two with twisted pedicles. As to age, three patients were sixty-four and one sixty-five years, one of the former, a patient of Dr. Macdonald of Crich, having a somewhat rare experience, inasmuch as she had removed by me

a large right multilobular tumour, and twelve years before Dr. Granville Bantock, at the Samaritan Hospital, London, removed one from the other side.

One of the most instructive cases of the series was that of a woman aged forty years, an inmate of the Belper Workhouse, sent to me by Mr. Allen. She had been tapped fourteen times for ascites, the last within a fortnight of her admission into hospital last April. So quickly had reaccumulation taken place that then her abdomen was much distended, and through the fluid could be felt, at the lower third of the abdomen, a fixed resistant mass, which per vaginam could be felt filling up the pelvic cavity. It was decided to open the abdomen, when the papillomatous nature of the growth revealed itself; and at first, on account of its adhesions, it was thought to be quite impossible to enucleate it, but ultimately this was done and an elastic ligature thrown round its base to control the very free hæmorrhage. The growth was then cut off, when it was found that what had seemed one homogeneous mass was in reality two growths springing from both ovaries which had met in the middle and overlapped the uterus. The stump was therefore disinfected, as in an ordinary hysterectomy, and treated extra-peritoneally, with the result that the patient made a very good recovery and has remained in perfect health ever since.* In treating the pedicle in the four supra-vaginal hysterectomies for fibroids the intra-peritoneal method was used in one case, and tying off the arterial supply and fixing the stump to the parietes, or what is known as the "mixed method," in the other three.

In the matter of the removal of the uterine appendages for inflammatory disease no operation was performed without ample justification in the clinical symptoms and local conditions of the case, supplemented, when necessary, by an examination under an anæsthetic, and also acquainting those concerned with the immediate and remote effects of the operation. Now one word as to the place of exploratory incisions in this branch of surgery. No hard-and-fast line can be laid down in this matter, inasmuch as what would be rash because dangerous in the hands of one surgeon is in the hands of another a safe and reasonable evolution of diagnostic methods. In saying this I am far from wishing to underrate the gravity of the procedure, but, whilst granting this, it seems to me that when we have exhausted all other available aids to diagnosis, and either completely or in some material point failed, or when with a full knowledge of the pathology of the case there is a doubt as to its operable character, then we are perfectly justified, after stating the nature and limits of the proposed operation, in counselling those concerned to run the very slight risk which is involved. I need hardly say that at such a time one ought to be prepared to undertake whatever operation the exigencies of the case demands, so that no one should perform an exploratory operation without being perfectly familiar with the technique of abdominal surgery.

Nottingham.

ON CYCLING AS A CAUSE OF HEART DISEASE.

By GEORGE HERSCHELL, M.D. LOND.,

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An Abstract of a Paper communicated to the Eighth International Congress of Hygiene and Demography, Budapest, 1894.

THE chief danger of cycling, or rather the reason why it may become more injurious than some other forms of exercise, is the fact that a cyclist takes much more exercise than he is aware of, and is very frequently tempted to overtax his powers. He starts off in the morning for a ride fresh and vigorous, having previously mapped out his course; but when the time arrives for his midday meal he may have some few miles yet to go. He has perhaps over-rated his capacity; or the condition of the roads renders it impossible to travel at the rate upon which he had based his calculations. But he is hungry, and so he redoubles his efforts to reach his destination and when he arrives there he is utterly fagged out and has lost his appetite. As an example of the facility

with which one may be led into taking more exertion than one has counted upon I may relate a case which came under my notice a few weeks ago. A gentleman who had not ridden for some time started out one morning for a run into the country, neglecting to take any lamp. When he arrived at his destination it came on to rain, and the friends whom he was visiting prevailed upon him to stay until late in the evening. At half-past seven he found himself still fifteen miles from home, and on that particular evening police regulations compelled the lamps to be lighted at a quarter past eight. It was now a race against time, but he succeeded in reaching home only a few minutes after that hour. I saw him at nine o'clock. His pulse was then 125, and he complained of thirst, restlessness, and a feeling of oppression at the chest. At 9.15 his pulse was 120. At ten it was 110. At eleven o'clock it had sunk to 100. He then retired to bed, but passed a sleepless night. On rising in the morning his pulse was 90, and it did not reach the normal 68 until the day after. The commonest way, however, in which the cyclist injures himself is in climbing hills. He is nearing the top of the hill, and the heart is dilated with the strain put upon it by the increased arterial tension. If the rider were now to stop and recover himself no harm would be done. But in too many cases he sees that only a few more revolutions of the wheel will be required to carry him to the top. So he redoubles his exertions, putting further strain upon a heart already taxed to the utmost limit of its capacity, and in those few moments damage has been done to the heart from which it perhaps cannot recover.

I believe that it is usual at the commencement of a club run for the riders to agree that they will adapt their pace to the slowest member. That is all very well in theory, but what really takes place is that after a time one of the faster riders unconsciously quickens his pace. The rest of the club follow suit, and before very long they are all travelling at a rate which is far beyond the capacity of a certain proportion of the set. To be unable to keep up with the rest of the club is a confession of effeminacy, and it would be morally impossible to get off your machine and walk up a hill which your friends are riding up. Another circumstance which increases the deadliness of the modern cycle is the fact that it is nowadays considered a point of honour, especially among novices, to ride with as high a gear as possible. It is, I am sure, no exaggeration to say that 90 per cent. of all riders are using a gear much too high for their strength. For the benefit of those who are not practical cyclists I will here explain what is meant by "gear." In the early days of cycling the pedals were attached directly to the axis of the driving wheel. The effect of this was that the largest wheel which could be used was determined by the length of the legs of the rider. And since the distance which a machine would travel with one revolution of the pedals depended upon the size of the wheel, tall men were at a great advantage over short ones when it came to racing. So every one rode as large a wheel as he could, and strictured urethra from perineal pressure was common. The introduction of geared machines altered all this. The pedals, instead of being attached to the hub of the driving wheel, communicate motion to a cog-wheel, and this in its turn, by means of a chain or other mechanical device, rotates another wheel rigidly fastened to the hub of the driving wheel. By varying the sizes of the respective wheels the driving wheel can be caused to rotate a greater number of times than the pedals. If, therefore, a driving wheel of thirty inches in diameter were caused to rotate twice for every once that the pedals went round, you would be securing all the advantage of a sixty-inch wheel as regards speed with half the weight. Of course the more a machine is geared up the harder work it is to push it. That is what is meant by a high gear. Machines for racing are geared up to seventy inches or more. Boys of fifteen or sixteen years of age boast that they ride machines geared up to sixty-three inches, whereas a fifty-six inch gear would be much more suitable for them.

The subject-matter of this paper is intended to apply to the thousands of every-day cyclists. I am not taking into consideration the path and road racers. These men are deliberately sacrificing their future health for the sake of winning a few prizes. What shall we say to 460 miles ridden in twenty-four hours at Herne Hill last year? At this race some of the men rode until they dropped off their machines. Another very reprehensible thing is what is known as a "hill-climbing contest." Everything that I have said with regard to riding up hills applies here with double force. Hills of the steepest gradient are purposely

* Feb. 26th, 1895: This patient still keeps well, having had no recurrence.

selected, and the competitors ride up them against time, trying to break existing records for that particular hill. Nothing more suicidal or more certain to produce heart disease can possibly be imagined.

The effects upon the heart of the strain of excessive cycling may be divided into four groups:—1. Simple hypertrophy of the heart. 2. Acute dilatation of the heart, ending either in recovery if the cause be removed or in death if it persists. 3. Chronic valvular disease of the heart. 4. Functional derangement of the heart.

GROUP 1.—SIMPLE HYPERTROPHY OF THE HEART.

This is apt to occur in well-trained riders who do a great deal of cycling, and may be looked upon as a compensatory effort of nature to enable the work to be performed. Cycling for extended periods of time at a great pace, like other forms of prolonged muscular exertion, enormously increases the blood pressure in the arteries. Hypertrophy of the heart follows the law which governs all muscles—that increased work is followed by increased growth if the nutrition is kept up. Moderate degrees of hypertrophy are quite compatible with health, and are usually unattended with symptoms. The danger, however, is in the ultimate effects which are liable to ensue. The heightened blood pressure in the arteries gradually produces a hard inelastic condition of their walls, which perpetuates and increases the hypertrophy. Moreover, these altered arteries are prone sooner or later to undergo degenerative changes, and, having lost their normal elasticity, to give way on some occasion of sudden strain. As a rule, the athlete enjoys vigorous health for the few years during which he is actively working, and his heart is only enlarged enough to meet the constant demands upon it; but when the cyclist, no longer in his first youth and unable to compete with younger men, relaxes his efforts, his heart is now too large for the work it is required to do, and the symptoms of hypertrophy soon make themselves felt. Hypertrophy following over-exertion may disappear under proper treatment if taken early and the cause removed, but when it has persisted for a number of years this is rarely, if ever, possible, and ulterior changes are apt to ensue. It is well known that athletes are liable to rapid deterioration of health when they relinquish their active exercises. It is also probable that a hypertrophied heart may undergo degenerative changes whilst in active daily work. This is rendered probable by what is known to happen in the case of flic-cutters, whose work consists in quickly flexing their biceps. The effect of this is to cause hypertrophy of that muscle, but after a few years it atrophies. This is so certainly known in the trade that flic-cutters receive very high wages, based upon the probable working life of their hypertrophied biceps. It is possible that in this way we may have an explanation of the well-known fact that compensatory hypertrophy of the heart cannot be preserved indefinitely, although the valve lesion may be stationary. Hypertrophy of the heart produced by cycling may terminate in one of these ways: (1) recovery; (2) valvular disease and disease of the aorta; (3) degeneration of the heart muscle.

GROUP 2.—ACUTE DILATATION OF THE HEART.

Until the individual first shows signs of being "out of breath" both ventricles are sending equal quantities of blood into the pulmonic and aortic systems respectively in equal periods of time. At each beat the left heart is withdrawing from the lungs exactly the same quantity of blood that has been forced into them by the right heart. And it is evident that the oxygen supplied to the blood is exactly equal to what the body requires. Respiration and the heart's action, although hurried by the exercise, are carried on normally and without unpleasant sensations. If, however, the exercise be continued, the heart is stimulated to contract at such a rate that the respiratory muscles cannot keep pace with it. Besides, the time during which it is possible for the blood to come into contact with the oxygen in the lungs is shortened. "Shortness of breath" is thus produced, the sensation being, as we all know, the cry of the blood for more oxygen. Accompanying this will be obstruction to the circulation through the lungs, and a small abnormal amount of residual blood will remain in the right ventricle. If the extreme muscular efforts are continued the excess of venous blood in the pulmonary vessels will increase with every beat and the right heart will rapidly dilate. At this stage the quantities of blood thrown out from the two ventricles are unequal. The heart continues beating and expelling the whole of its contents with the exception of the residual blood in the right ventricle. At last a moment comes when

from fatigue the muscles at the base of the ventricles are no longer able to adapt the ring to which the bases of the valves are attached so that the valves will efficiently close them. And since the whole of the valvular ring is expanded while the valves have retained their former size regurgitation must take place. If at this point the individual ceases his muscular efforts, in all probability the heart will quickly recover itself; but if the recovery is not complete there may remain permanent incompetence of the tricuspid valve. On the other hand, if the exertion is kept up, the heart, being unable to pass on the whole quantity of blood that reaches it at each beat, undergoes rapid dilatation of the right ventricle and death by *asthete* is the result. Of such a character doubtless are the cases of sudden heart failure which has occasionally caused the death of riders even in the course of a journey. The following fatal case of acute overstraining of the heart occasioned by cycling came under my notice in 1884, and the notes may be of interest as showing the symptoms which may be expected. A man aged forty-six years had lately taken to cycling and used a heavy tricycle. After having followed the sport for three weeks and made some short journeys he attempted to ride from Brighton, where he resided, to London, a distance of fifty-three miles. I was called to see him about seven o'clock in the evening at his hotel and found him cyanosed and very exhausted. There was intense dyspnoea, and his pulse was 144 per minute and very feeble. His heart's action was irregular and weak. Dulness extended transversely from a quarter of an inch outside the right parasternal line to the left mammary line. The apex was beating in the sixth intercostal space in the left mammary line. A systolic bruit was apparent both over the mitral and tricuspid areas, and there was pulsation in the veins of the neck. The urine contained a trace of albumen. Unfortunately, in spite of treatment, he gradually sank, and died early next morning. I was informed that the patient had never previously exhibited any symptoms which pointed to heart disease. The absence of marked hypertrophy of the heart would also negative the supposition. No post-mortem examination could be obtained. The case was evidently one of acute dilatation of the heart in a man not so young as to be able to undertake with impunity such a muscular task as a ride of fifty-three miles against time. The overstrained and distended heart was unable to contract vigorously enough to restore the equilibrium, and fatal syncope was the result. Acute dilatation of the heart produced by cycling, then, may terminate either—(1) in recovery; or (2) in the production of valvular disease.

GROUP 3.—CHRONIC VALVULAR DISEASE OF THE HEART.

I believe that the mechanism by which permanent valvular disease of the heart is produced by overstrain from exercises such as cycling is twofold: 1. As a sequel to acute dilatation of the heart. The ring to which the bases of the auriculo-ventricular valves are attached having been once stretched sufficiently to allow regurgitation to take place does not recover itself, but remains permanently enlarged. We shall thus have regurgitation into the auricle. The case will then pass through the usual stages of compensatory hypertrophy, with probably final breaking down of compensation. 2. As a result of hypertrophy. It is probable that the constant high tension in the arterial system with the resulting strain upon the valves occasions slight injuries to their surface with the subsequent production of sclerotic changes. In cases which have come under my notice I have found that the great majority suffered from lesions of the aortic valves, and I have reason to believe that the hypertrophy always ante-dated the valve mischief. This is only what we might expect. The aorta, unlike the heart, cannot strengthen itself against an excessive strain, as its activity is practically nothing more than the recoil of elastic tissue. Strain of such a structure will cause chronic endarteritis and loss of elasticity. If you examine such an artery with a microscope you will find small points of endarteritis upon the inner coat and patches of diffuse granular exudation in the middle one. The next step will be dilatation or pouching of the aorta just above the valves which are as yet competent. Many cases come under observation in this condition, and the following may be taken as a typical example. A man thirty-one years of age attended my out-patient department at the hospital in the autumn of 1892. He complained of palpitation and shortness of breath. During the summer he had been constantly riding the bicycle, going on an average sixty miles a day for three days a week. On examination there was evident hypertrophy of the heart, the apex beating

in the anterior axillary line. The right margin of cardiac dulness was half an inch to the right of the sternum. The arterial dulness over the upper edges of the sternum was decidedly wider than it should be, pointing to dilatation of the aorta. There were no bruits and no thrills, but there was marked accentuation of the aortic second sound. This would probably be the first stage in the production of valvular disease. As regards the further course of such a case we have three possibilities: (1) the aortic ring may be stretched by the pouching of the aorta and regurgitation may take place; (2) a valve may actually give way; (3) sclerotic changes may take place in the valves. In any of these cases the disease will follow the usual course of valvular mischief produced by other causes.

GROUP 4.—FUNCTIONAL DERANGEMENT OF THE HEART.

I believe that this condition as the result of cycling is much more common than is generally supposed. Many cases are but slight and quickly recover, so that they are overlooked or ascribed to other causes. Da Costa applied the term "irritable heart" to chronic cases of tachycardia which he observed amongst the men engaged in the American Civil War. This condition resembled in many respects the functional affections of the heart which we see as the result of strain when cycling. It is extremely probable that they are identical as regards pathology. I believe that these conditions always follow a temporary dilatation of the heart in the following manner. As we have shown, right-sided dilatation of the heart is invariably produced by the prolonged strain of too rapid cycling. This dilatation having subsided when the cause has ceased to operate, the heart remains irritable from the stretching that its muscular fibres have undergone. It would seem in these cases almost as if the inhibitory function of the pneumogastric nerve were suspended, for when the heart has so far recovered itself from the immediate effects of the strain that the pulse-rate has fallen to normal any slight exertion or emotion will bring the palpitation on again. The symptoms which I have observed in these cases have been chiefly the following.

Palpitation of the heart.—This is very distressing, and usually occurs on the slightest exertion or emotion. If not relieved by appropriate treatment it may possibly end in the permanent establishment of a "rapid heart." Dr. Bristowe has narrated a case in which paroxysms of extreme rapidity of the heart's action were probably initiated in a boy eight years of age from physical exertion in a paper chase. This ultimately became a case of confirmed "rapid heart," and ended in sudden death at the age of nineteen years.

Shortness of breath.—This usually accompanies the palpitation and comes on when the patient exerts himself even in a slight degree.

Sensation of sinking at the epigastrium.—In certain of my cases this has been one of the most prominent symptoms.

Subjective sensations in the region of the heart.—The patient is conscious of the heart's action, and often feels as if it were going to stop.

Intermittency of the heart's action.—I believe that I have traced the origin of this condition in several cases to a temporary dilatation of the heart as the result of hill-climbing.

Anginoid symptoms.—Two of my cases complained chiefly of pain in the cardiac region, coming on in paroxysms, running down the left arm, and accompanied by a sense of suffocation and impending death. They both completely recovered under appropriate treatment.

These, then, are some of the possible evils of excessive cycling. On the other hand, we have the undoubted fact that in moderation and under proper conditions it is one of the most health-giving forms of exercise. In established heart disease, strange as it may seem, it is one of our most potent remedial measures. Commencing with the lowest gearing for the shortest periods and along level roads, carefully graduated cycling is able to establish that compensatory hypertrophy which alone can enable the victims of valvular disease of the heart to live in comfort and usefulness. For this purpose I prescribe it largely.

Let us now turn to preventive measures and consider some precautions against the dangers of this fascinating sport. I would lay stress upon the following points:—

1. *The use of a low gear.*—This has been already described.

2. *The upright position in riding.*—The stooping posture, so habitual to the modern cyclist, by contracting the chest prevents the proper expansion of the lungs, and by interfering

with the aeration of the blood causes the condition of breathlessness to come on quicker.

3. *Adequate food when riding, and the avoidance of muscle poisons such as beef-tea.*—A badly nourished muscle gives way sooner than one which is well fed. As I have pointed out in a previous paper, it is probable that the digestive power of the stomach is inhibited during riding. From this it follows that the ordinary food taken by the cyclist on the track or road is not digested, and does not provide him with energy. In the paper alluded to I advocated the use of peptonised gruel or soup.

4. *The cyclist must avoid preparations of kola and coca.*—These by numbing the sense of weariness enable injuriously excessive work to be done almost without the knowledge of the rider.

5. *On no account should the cyclist continue riding after he has commenced to feel short of breath, or when there is the slightest sensation of uneasiness in the chest.*—This simple precaution is one which cannot be too earnestly recommended.

Queen Anne-street, W.

SUCCESSFUL OVARIOTOMY ON A PATIENT IN HER EIGHTY-SEVENTH YEAR

UPON WHOM OVARIOTOMY HAD ALSO BEEN PERFORMED WHEN SHE WAS NEARLY EIGHTY YEARS OF AGE.

By E. MATTHEWS OWENS, L.R.C.P. EDIN.,
M.R.C.S. ENG.

MANY of the readers of THE LANCET who are interested in gynecological matters will perhaps remember that a case was recorded by Mr. Lawson Tait at a meeting of the Gynecological Society in 1888 of a patient seventy-nine years and ten months who had been successfully operated upon by me for a large parovarian cyst by abdominal section. The case remained for some time as the oldest on record; but as time went on it was exceeded. Dr. Herbert Spencer¹ records one in a patient eighty-two years and two months old. Also there is one by Mr. Bush² in a patient in her eighty-fifth year. But any case in a patient over eighty years of age must still be considered as worth recording; otherwise Dr. Heywood Smith would not publish one in a patient eighty-one years of age.³ Hence it is that I feel rather proud in being able to put on record a successful ovariectomy in a patient in her eighty-seventh year.

A married woman who had been operated upon by me in December, 1887, being then aged seventy-nine years and ten months, remained quite well until the middle of 1893, when she noticed that her abdomen was swelling. It gradually increased until it prevented her from taking exercise. I was asked to see her in February, 1894, and diagnosed a fibro-cystic tumour of the ovary, evidently growing rapidly. From the history given me I am afraid I rather ridiculed any operative interference; but not so the patient, for when she distinctly understood that it was an ovarian tumour she called her family together, they acting as jury and she as judge, and the verdict being "that as her life had become a burden through the size of the tumour, and she had survived one operation, therefore she saw no reason why she should not survive a second." I was sent for, told the decision, and requested to operate as soon as possible, she and her friends accepting all responsibility. Under the circumstances I thought it well not to lose any time, so three days after the decision was arrived at—viz., on May 3rd, 1894 (that is, six years and three months since she had been previously operated upon, her age being thus exactly eighty-six years and one month)—I operated at her own house, Dr. Lillian Cooper giving chloroform. The operation was quite simple, but as in 1887 the parovarian cyst had been removed from the left side it was a fair deduction to make that the present tumour would arise from the right side. Therefore I made my incision to the right side of the 1887 one, but on opening the peritoneum I had to my astonishment to get over to the left side to reach the pedicle of the tumour, which proved to be, as diagnosed, fibro-cystic. The patient made an excellent recovery, without a bad symptom as

¹ Brit. Med. Jour., Dec. 9th, 1893.

² Ibid., July 14th, 1894.

³ THE LANCET, June 30th, 1894.

regards the operation, but some cystitis appeared, caused, I think, by over-anxiety of the nurse, who in order to make sure of destroying all septic germs soaked the catheter in too strong a solution of carbolic acid, which so softened the instrument that, I think, some bits of its covering were left adhering to the mucous membrane of the bladder. Perhaps also the mode of feeding aggravated matters; but I dared not and did not alter it, and with suitable treatment all cystitis gradually subsided. I need hardly say that it was not a case in which to rigidly adhere to gruel and sips of tepid or iced water. Instead, directly the operation was over, I commenced with nutrient enemata every two or three hours, and after twelve hours prepared essence of beef, brandy, zymised milk, &c., were given by mouth. Until she was convalescent I am afraid to say how much brandy, coca wine, and essence of beef she consumed; but it was a very large quantity. On one thing I was determined—namely, that if she died it should not be from exhaustion. There is also another part of treatment that was carried out in this case which I think I may pronounce as being of immense benefit—viz., hypodermic injections of sulphuric ether, not only during the operation, but also during convalescence. The nurse's instructions were to give the injections whenever she thought that the patient looked, or expressed herself as feeling, exhausted, even if she had had stimulants by the mouth only a short time previously. Exhaustion was to mean hypodermic injection at once. I must say that this treatment acted splendidly. She is now (Aug. 24th, 1894) in most robust health, driving, and walking, and looks as if she would live to be a hundred years of age.

Remarks.—The interest of this case lies not only in the extreme age of the patient, but also in that it clears up a doubtful fact, for it is proved to be quite possible to have a parovarian cyst removed and subsequently for a true ovarian cyst to be developed on the same side; and this opens up an important point—viz., whether it is good surgery to simply shell out a parovarian cyst, leaving the appendages, or whether it is not better to remove everything on that side. Had I done this in 1887 I should not now be in the position, for the time being, of holding the honour of having performed successful ovariectomy in a patient of the most advanced age.

Brisbane, Queensland.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CURIOUS CASE OF CARBOLIC ACID POISONING.

By W. H. BROWN, F.R.C.S. IREL.

A FEW days ago I was asked to see, in consultation with a medical man, a child three years of age. An hour prior to my visit an attendant had been directed to clean the child's head with carbolic oil. After she had been rubbing it for three minutes she discovered that in place of carbolic oil she had used pure carbolic acid. So soon as the mistake was noticed the head was promptly washed, but within five minutes the child lost consciousness. When an hour later I saw the child it was deeply comatose, in which condition it remained for five hours, when two ounces of olive-green-coloured urine were passed. The return to consciousness was very gradual, the child having for several hours a dazed appearance. At the end of three days the urine became normal, and the albumen, of which there had been a trace, disappeared. Seeing the frequency with which carbolic acid is used, I thought it right to mention this instance of its rapid absorption by the unbroken skin.

Leeds.

CALCULUS PASSED BY THE FEMALE URETHRA.

By J. GORDON SHARP, M.B., C.M. EDIN.,

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SUBSEQUENTLY to attacks of renal colic a woman between forty and fifty years of age passes calculi of a rich puce colour. The pigment is due to an organic compound of iron,

and an account of their physiological chemistry has been published by me.¹ Hitherto the stones passed have been small, with a few large ones weighing from five to six grains; but recently the woman passed a stone the length of which is $\frac{3}{4}$ in., and the circumference at the greatest part is $\frac{1}{2}$ in. The weight is exactly ten grains. Like all the others passed, this calculus is intensely hard, and it is highly polished and smooth. The wonder is that such a large stone could be passed with so little constitutional disturbance, for after she has had an attack of colic she enjoys fairly good health. For some three years the patient has, at intervals of four or five months, or occasionally longer, passed a number of stones of the character indicated, and, although none of them have been so large in circumference as the one described, still they are sufficiently large to occasion some surprise that they should have been voided with comparatively so little trouble.

Leeds.

AN UNUSUAL FORM OF HYMEN.

By C. E. PURSLOW, M.D. LOND.,

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THE patient, aged fifty-seven, unmarried, was admitted to the Queen's Hospital, Birmingham, on Jan. 3rd, 1895. Menstruation had never ceased, and as the hymen would not admit the finger it was considered advisable to examine thoroughly under chloroform. When she was anaesthetised it was seen that the hymen presented two separate, small rounded apertures, each just admitting the uterine sound. The finger was passed forcibly, and two small polyp were found to be protruding through the cervix; these were removed. The point of interest about the case is that the hymen approached to that variety described in the text-books as cribriform, and although almost all the text-books agree in stating that such a form of hymen may be found recent investigators have denied that any such condition of hymen ever does exist.

Birmingham.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

AN EXCEPTIONAL CASE OF EPITHELIOMA OF THE TONGUE
IN A WOMAN; REMOVAL; RECURRENCE;
DEATH IN TEN MONTHS.

(Under the care of Mr. WARRINGTON HAWARD.)

ALTHOUGH epithelioma of the tongue rarely attacks females, occasional cases such as the following remind us that they are not quite exempt from it and that it does sometimes occur in them; according to Mr. A. E. Barker this is in the proportion of 247 males to 46 females. This is probably above the average for true cancers. From the statistical reports of St. Thomas's Hospital for the years 1861-93 inclusive we learn that there were 160 cases of epithelioma of the tongue under treatment, of which number only sixteen patients were women. Cancer of any part of the body is rare at the age of this patient; it sometimes commences in the cervix uteri at even an earlier date, but is scarcely ever seen in the tongue. Gurli, who collected statistics of 11,131 cases of cancer, found that in 4789 in which the age of the patients was recorded, only 0.4 per cent. recovered under the age of twenty. We are inclined to the opinion that when epithelioma affects the tongue in women a larger proportion of the cases will be found to be under the age of thirty than obtains in the other sex. This case

¹ Journal of Anatomy and Physiology, July, 1894.

illustrates the statement in one of our text-books on surgery very vividly: "The age of the patient exerts a considerable influence on the growth and malignancy of the tumour. As a rule, the younger the patient the more rapidly does the tumour grow, the earlier does it affect the lymphatic glands, and the more widely disseminated are the secondary growths." For the notes of this case we are indebted to Mr. Arthur H. Ward, surgical registrar.

The patient was admitted into St. George's Hospital on Jan. 5th, 1894, under the care of Mr. Warrington Haward. She was a healthy looking woman, aged twenty-three years, with no history of tubercle or syphilis. Six weeks before admission she noticed a slight soreness and swelling on the right margin of the tongue. Carious molar stumps were removed from the right lower jaw about four weeks later. She had worn a tooth-plate on the upper jaw for two years. On her admission there was found to be an oval infiltrated area of the size of a shilling, which was situated far back on the right margin of the tongue. The surface was whitish, irregular, and raised. No glands could be felt in the submaxillary region. The dorsum of the tongue was normal. No signs of syphilis or tubercle were present. Carious stumps were removed from the right upper jaw, and iodide of potassium was given in ten-grain doses three times a day. Calomel was applied locally. A fortnight later a nodule the size of a split pea was found on the dorsum of the tongue, about half an inch from the original ulcer. A consultation was held, and the growth diagnosed as epithelioma. A small portion was removed and microscopically examined; it was a squamous-celled epithelioma. The right half of the tongue was then removed by the *chaine écarée*. In a fortnight an enlarged gland was felt near the angle of the jaw. The patient was sent to the convalescent hospital at Wimbledon for three weeks and then went home to the country. The cervical glands were then enlarging. Dr. Livingston reported that the growth recurred both in the scar and in the right tonsil. The mouth could not be opened. The cervical glands suppurated, and the patient became very anæmic. She died exhausted ten months after the operation, and just over a year since the first appearance of the disease.

SUSSEX COUNTY HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER TREATED BY LAPAROTOMY; RECOVERY; REMARKS.

(Under the care of Mr. R. F. JOWERS.)

We give with the account of his successful treatment of perforation of a gastric ulcer a table contributed by Mr. Jowers of published cases of operation for similar perforations, which will be useful for reference. There were several circumstances in his favour, as is pointed out by him in his remarks, but without the promptitude and skill in overcoming difficulties inherent in the case which the surgeon manifested a fatal termination must have ensued. In a paper recently read before the British Medical Association Mr. Gould made some remarks about the position of gastric ulcers, to which we refer. He said: "Only 2 per cent. of the ulcers on the posterior surface of the stomach perforate, and only very rarely is this perforation into the general peritoneal cavity; more commonly the ulceration extends into the pancreas and gives rise to abscess beneath the diaphragm, and often, also, to suppuration in the pleura and base of the lung, especially on the left side. Of the less frequent ulcers on the anterior wall of the stomach as many as 85 per cent. perforate, and most often into the general peritoneal cavity," &c. It is becoming more fully understood that without operation in cases of perforation of gastric ulcer death will ensue, and that speedily. When operation has been performed the result has been satisfactory, and about 35 per cent. of the patients have been saved. It is the physician who must recognise when surgical interference alone can afford safety, and it was owing to the rapid diagnosis and action of Dr. Gordon Dill that the surgeon was in this case enabled to operate under unusually favourable circumstances.

An anæmic-looking woman aged twenty-four years was admitted to the Sussex County Hospital on the evening of Sept. 5th, 1894. She had for two years suffered pain after food, and five weeks previously she had been sick three or four times, but never brought up blood. The sickness induced her to seek advice at a London hospital,

to which she was admitted and was told that she had gastric ulcer. She was kept in bed and placed upon milk diet, but for the last week of her stay there had been taking chicken and fish without pain. She left the hospital and went to Brighton on Sept. 5th. About 7 P.M. the same evening she drank a large cupful of cocoa and shortly afterwards, whilst walking, was seized with violent pain in the abdomen and vomited. She managed to get into a cab and was taken home. About 10 P.M. she was seen by Dr. Gordon Dill, who having diagnosed a perforated gastric ulcer ordered her immediately to the Sussex County Hospital, where she arrived soon after twelve o'clock. On being summoned to the hospital Mr. Jowers found the patient cold and collapsed, the face drawn, the pupils dilated, the temperature 97° F. and the pulse 100, and complaining of great pain at the epigastrium. There was no distension of the abdomen, but great tenderness about the epigastric and left hypochondriac regions. The knees were drawn up and abdominal respiration was absent. Having heard the history of her recent treatment for gastric ulcer and elicited the fact of the sudden pain almost immediately after drinking, Mr. Jowers determined to operate at once, six hours after perforation. An enema of two ounces of brandy with two ounces of beef-tea having been given and ether administered an oblique incision was made about an inch below the margin of the ribs, three inches in length, and commencing about an inch to the left of the middle line. Having divided the muscles and stopped the hæmorrhage, which was somewhat free, the peritoneum was opened; there was no rush of flatus and the organs below appeared to be quite natural. Having with some difficulty brought the stomach into view by gently pulling down the omentum, its anterior surface was carefully explored with the forefinger. Failing to detect perforation, the omentum was pushed aside and the posterior surface similarly examined. Here the operator could feel, high up and towards the cardiac end, an indurated patch with a central depression, but the posterior layers of the omentum prevented actual contact. Having thus made out the situation of the ulcer, the incision in the abdominal wall was enlarged to the left, the anterior layers of the omentum were torn through, and the lesser peritoneal cavity was opened. A distinct odour of cocoa was now detected. With considerable trouble the perforation, which was of the size of a threepenny bit, was brought into view by gently pulling down the stomach wall bit by bit. Pinching up the outer coats of the stomach first on one side and then the other side of the ulcer, a full inch from the edges of the perforation two sutures of medium-size silk were passed, to act as guides and to assist in holding the stomach. The anterior wall, which had protruded during the manipulations necessary to bring the perforation into view, having been returned into the abdomen, Dr. Black, who assisted, held the perforation well in view by means of the guides. Sponges being packed around, one blade of a pair of scissors was then introduced into the perforation, and the indurated tissues, which extended half an inch around the opening, were divided in a line with the external wound. Curved incisions with the scissors were made from the extremities of these so as to excise the ulcer. A small sponge on a string was introduced into the stomach through the opening thus left, while fine silk sutures were introduced after Lembert's method, fourteen in all being passed. After the sutures had been tied the abdomen was carefully flushed with boiled water at 100° and the abdominal wound closed with silkworm gut suture, no drainage-tube being employed. The operation took about two hours, the chief time being occupied in the passing of sutures in the stomach wall. For the first five days the patient was fed entirely by the rectum, the injections consisting of peptonised milk and beef-tea, one large warm-water injection being given daily, and a morphia suppository when in pain. On the first day (Sept 6th) she was sick four times, bringing up a dark-green watery fluid, with very offensive, almost fecal odour. The temperature was normal. On Sept. 7th she was very slightly sick and the odour had disappeared. On the 11th, five days after the operation, feeding by the mouth was commenced by teaspoonfuls of milk given at intervals of half an hour, but as she complained of slight pain in the evening the milk was stopped. On this day the wound was dressed and two stitches were removed. On the following day feeding was recommenced, but as she vomited it was suspended until the next day, and brandy added to the injections. On the 15th there was found to be

¹ Erichsen: Science and Art of Surgery, vol. i., 1895.

a little superficial suppuration about the wound, and a drainage-tube was inserted. All went well till twelve days after the operation, when she was taking three ounces of milk and three ounces of mutton broth alternately at intervals of two hours. In the morning of that day she complained of pain in the region of the stomach going through to the back, and smaller quantities of food were given. About 1 P.M. the patient suddenly complained of intense pain and vomited. Mr. Jowers was summoned to the hospital and found her cold, collapsed, and complaining of intense pain in the region of the wound and "spreading all over the stomach," as she expressed it. The abdomen was flat, but did not move with respiration. Mr. Jowers had seen her at twelve o'clock and had suggested a tablespoonful of hot

water instead of the food then due; this had been given, and a second one half an hour later. After giving a hypodermic injection of morphia, and learning that the patient had become considerably worse during the half-hour since he had been sent for, he decided to reopen the abdomen. An injection of beef-tea and brandy having been given and the patient anaesthetised, the wound was opened up. The stomach was found to be adherent to the anterior abdominal wall in the region of the wound, and had to be separated. The site of the gastric ulcer was adherent to the posterior wall of the lesser peritoneal cavity, and as no sign of extravasation of stomach contents could be seen it was not separated. Half a pint of milk was then injected into the stomach, and, no escape taking place, the

REFERENCES AND PARTICULARS OF TWENTY-FIVE CASES OF OPERATION FOR PERFORATED GASTRIC ULCER.

Name of operator.	Record.	Liver dulness.	Vomiting at moment of perforation.	Time of operation after perforation.	Situation of ulcer.	Method of treating ulcer.	Site of incision.	Result.
Page.	THE LANCET: Mar. 24th, 1894.	Absent.	—	40 hours.	Anterior.	Ulcer scraped and sutured.	Middle line.	Death, 34 hours.
Page.	THE LANCET: Mar. 24th, 1894.	—	—	18 hours.	Anterior, near cardiac end.	Sutured.	2 in. left of middle.	Death, 14 hours.
Morse.	THE LANCET: Mar. 17th, 1894.	—	Vomiting.	5 hours.	Anterior, near cardiac end.	Sutured.	Left of middle.	Recovery.
MacLaren's cases referred to by Mr. Page in discussion.	THE LANCET: Mar. 17th, 1894 (Case 1).	—	—	9 hours.	Anterior, midway between pylorus and cardiac end.	Sutured.	Through left linea semilunaris.	Death, 3 days.
	THE LANCET: Mar. 17th, 1894 (Case 2).	—	—	9 hours.	Anterior, 2 in. from cardiac end.	Sutured.	Through left linea semilunaris.	Recovery.
	THE LANCET: Mar. 17th, 1894 (Case 3).	—	—	4 hours.	Anterior, 2 in. from cardiac end.	Sutured.	Through left linea semilunaris.	Death, 3 days.
Godlee.	THE LANCET: Mar. 17th, 1894.	—	—	24 hours.	Near pylorus.	—	Middle line.	—
Bennett.	THE LANCET: July 7th, 1894.	Absent.	No vomiting.	10½ hours.	Posterior, 2½ in. from pylorus.	Sutured.	Middle line.	Recovery.
Swain.	THE LANCET: July 7th, 1894.	—	—	19½ hours.	Posterior, near cardiac end.	Excised and sutured.	Middle and transverse to left.	Death.
Eve.	THE LANCET: Nov. 10th, 1894.	—	—	61 hours.	Anterior, near cardiac end.	Sutured.	—	Death, 48 hours.
Eve.	THE LANCET: Nov. 10th, 1894.	—	—	80 hours.	Anterior, near lesser curvature.	—	—	Death.
Ewart and Bennett.	THE LANCET: Nov. 17th, 1894.	Absent.	No vomiting.	8 days.	(?)	—	Middle line.	Recovery.*
Pepper.	Brit. Med. Jour.: Oct. 20th, 1894.	—	—	36 hours.	Anterior, close to lesser curvature.	Pared the edges and sutured.	—	Death, 3 days.†
Morris.	Brit. Med. Jour.: Oct. 20th, 1894.	Absent.	No vomiting.	3 hours.	Anterior, close to the pylorus.	Sutured.	—	Recovery.
Althison.	Brit. Med. Jour.: Oct. 20th, 1894.	—	—	2 hours.	Posterior.	Sutured.	—	Death, 9 days.
Barling.	Brit. Med. Jour.: Jan. 9th, 1892 (Case 1).	—	Vomiting.	—	Anterior, midway.	—	—	Death, 24 hours.‡
Barling.	Brit. Med. Jour.: Jan. 9th, 1892 (Case 2).	—	Vomiting.	4 days.	Anterior, midway.	Sutured.	Middle line.	Death, 30 hours.
Barling.	Brit. Med. Jour.: Jan. 17th, 1893 (Case 3).	—	Vomiting.	3 weeks.	—	—	—	Recovery.§
O'Callaghan.	Brit. Med. Jour.: Oct. 28th, 1894 (Case 1).	—	—	24 hours.	—	—	—	Death within six hours.
O'Callaghan.	Brit. Med. Jour.: Oct. 28th, 1894 (Case 2).	—	—	24 hours.	—	—	—	Death within six hours.
Bourchier Nicholson.	Brit. Med. Jour.: Nov. 3rd, 1894.	Absent.	—	3 hours.	Anterior, near œsophagus.	Sutured.	Middle line.	Recovery.
Hastings Gifford.	Brit. Med. Jour.: May 6th, 1893.	—	No vomiting.	10½ hours.	Posterior, near cardiac end.	Sutured.	One inch to left parallel with the linea alba.	Death, 1 month.
Warrington Haward and Lee Dickinson.	Brit. Med. Jour.: May 6th, 1893.	—	—	14 hours.	—	Gastric fistula made.	—	Death.
Hassam.	Brit. Med. Jour.: Nov. 11th, 1893.	—	—	3½ hours.	Anterior, near cardiac end.	—	Linea semilunaris.	Death, 45 hours.
Jowers.	THE LANCET: Case related in the present issue.	—	Vomiting.	6 hours.	Posterior, near cardiac end.	Excised and sutured.	Oblique.	Recovery.

* Ulcer believed to be in upper part of stomach. Adhesions were so dense that actual perforation was not searched for.

† The necropsy showed that death was due to a second perforation on posterior of stomach.

‡ Operated on three weeks after perforation for a collection of pus in left hypochondrium.

stomach was re-emptied and washed out. The abdomen was washed out and the wound closed, a drainage-tube being this time employed. After this operation the patient was much collapsed. Nutrient enemata were continued and injections of strychnia resorted to, but for some days it was doubtful whether she could recover. She was, however, able to retain the enemata, and after the first day small quantities of food.

Remarks by Mr. JOWERS.—I am unable to account for the symptoms which led to the second operation unless they were simply due to colic or possibly the stretching of adhesions. I had no doubt at the time that leakage, either from the sutured opening or from the giving way of a second ulcer, had occurred. About a month later the patient had a similar attack. Shortly after a meal, consisting of scraped meat (peptonised) and toast, she was seized with violent pain and became cold and collapsed as before, the pulse rising to 120. The abdomen, however, moved with respiration, and after a hypodermic injection of morphia the pain was relieved. Two hours later she vomited (no blood) and was much better. She has had no sickness or pain after food for some weeks, and has been getting up and going out of doors. In this case there were three favourable points—viz., (1) a clear history of gastric ulcer; (2) the opportunity of operating early before peritonitis had set in; and (3) the fact that perforation took place into the lesser peritoneal sac, thus avoiding the soiling of the general peritoneal cavity. I think it must also be an advantage when the patient vomits, as happened here, and so empties the stomach of a great part of its contents, though Dreschfield has shown that vomiting rarely takes place in these cases. I have not seen the use of guides noted in the cases recorded. I found them of such help in holding up the stomach and keeping the perforation well in view during stitching that I would advocate their use when there is difficulty. Their employment involves less strain than the plan of bringing the organ out of the wound, and would prevent a perforation when once found being lost, as occurred in one case where the operation had to be abandoned and in which it was only found again post mortem. I have been able to find references to twenty-five cases of operation for perforated gastric ulcer, of which a brief abstract is appended. Of fifteen, in which the site of the ulcer is stated, ten were at the cardiac end, three at the pyloric, and two in the middle. I cannot help thinking that the oblique incision gives the best access to the cardiac end, which is the more fixed and where rupture has been shown to be most frequent. In cases where there is a history of gastric ulcer, and where symptoms of rupture follow immediately upon taking food or drink, I should be inclined to adopt it, but when in the absence of previous history the diagnosis had to be based upon collapse, distension, loss of liver dulness, &c. I should adopt the median, as the rupture might be intestinal. My best thanks are due to those in whose immediate charge the patient was for the indefatigable care taken of her, and to which she owes her recovery.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Discussion on the Affections of the Nervous System occurring in the Early (secondary) Stages of Syphilis.

AN ordinary meeting of this society was held on Feb. 26th, Mr. T. PICKERING PICK being in the chair.

A discussion on the Affections of the Nervous System occurring in the Early Stages of Syphilis was opened by the President, Mr. HUTCHINSON. He said that although the discussion was designed to afford opportunity for criticism and the expression of opinions, its principal object was the collection of facts. The recital of single cases was asked for, and contributions to pathological knowledge were more especially desired. By the term "early" it was designed to comprise the first two years. Attention was asked to the following topics:—1. The general differences between affections of the nervous system in late and in early stages of syphilis. 2. The state of general diminution of sensation which had been alleged (Fournier) to attend the exanthem stage of syphilis. 3. Certain rare cases of general paresis of both motion and sensation which were met with in secondary syphilis, and from which

complete recovery might take place. 4. The early occurrence of arterial disease which might influence the nervous system secondarily: (a) in reference to the brain; (b) in reference to the spinal cord. 5. A group of not very infrequent cases, in which a rapidly developed form of paraplegia occurred early in syphilis, and from which, although it might be for a time almost complete, partial recovery usually took place. 6. The occasional occurrence of paralysis of single nerves (unsymmetrically). 7. The influence of syphilis in producing recurring herpes. 8. The parallelism between certain affections of the brain and spinal cord in secondary syphilis, with acute inflammation of the eye and ear occurring in the same stage. 9. The parallelism between these syphilitic affections of the nervous system and those of somewhat similar character which had been observed after the acute exanthemata. 10. The occasional occurrence of a peculiar form of partial anaesthesia. 11. The affections of the nervous system occurring in early periods of syphilis did not, when once cured, tend to relapse. 12. The necessity for the full use of mercury. From the facts he brought forward Mr. Hutchinson drew the following conclusions, which he offered as the basis for discussion: 1. The nervous system might suffer in various ways during the secondary period of syphilis, and it was very important to recognise this fact since the affections were usually acute and destructive unless prompt treatment were adopted. 2. It was very exceptional that any disease of the nervous system occurred earlier than the sixth month. 3. Many, perhaps most, of the affections of the nervous system in the secondary period were secondary to disease of the bloodvessels. Under this head were included extensive implications of the minute arteries of the pia mater, whether of the brain or cord. 4. Amongst the diseases which were probably primarily of the nerve structures themselves we might recognise (1) acute affections of the eye and ear, of the latter sometimes attended by paralysis of the portio dura; (2) acute forms of polyneuritis, usually symmetrical and transitory; (3) a peculiar and very definite form of paraplegia due to transverse myelitis; (4) certain rare and peculiar forms of hemi-anaesthesia. 5. It was not disputed that at much later periods in the course of syphilis affections closely similar to the above might occur, but it was believed that when they did so they were much slower in onset, less severe and more chronic in progress, and less amenable to specific treatment. 6. The prognosis of these affections was good up to a certain point if efficient treatment were commenced early. 7. It was believed that these early affections of the nervous system in syphilis occurred almost invariably in those in whom the treatment in the early stages had been neglected.

Dr. GOWERS said that he felt under considerable obscurity, which was not due to any lack of lucidity on the part of the President in introducing the subject, but was rather due to the subject itself. Of secondary syphilis in the strict sense of the word he knew nothing; at any rate, as far as the nervous system was concerned. With regard to syphilis and the nervous system, he only knew from personal observation of syphilitic disease of the larger arteries of the brain. He knew of no disease of the arteries of the spinal cord that could be called syphilitic. With regard to syphilis of the smaller arteries of the brain, there was an observation by Dr. Barlow which established the fact that there might be a syphilitic disease of the minute arteries scattered throughout the whole substance of the brain. The disease of the large arteries occurred usually during the first seven or eight years after the acquisition of syphilis, and was absolutely identical in its characters and effects and distribution from first to last, affecting the middle cerebral and basilar arteries by preference, and producing the same effects at all periods. He thought it could not be distinguished in any case as secondary or as tertiary by naked-eye or microscopical evidence, though its aspect was materially changed when the patient had been subjected to a course of anti-syphilitic treatment. A fact of practical importance with which he had been much impressed was that the dose of iodide of potassium as usually given, say fifteen grains three times a day, after two or three months ceased to influence the disease, which again became aggressive. Though the microbe of syphilis had not been discovered, it was necessary in order to obtain a real grasp of the disease to conceive it to be due to a specific organism. Besides the arterial disease there was the gumma, which was certainly of less frequent occurrence than was the arterial disease during twelve years after the primary infection; for

one case of gumma there were three or four of arterial disease produced by syphilis. Gummata always sprang from the membranes, never from the brain substance or from the substance of the spinal cord, and when present in the cerebral substance they could always be traced to some fold of the membranes. It was probable that a similar inflammation of the membranes was the origin of the indurated form of pachymeningitis sometimes met with in the cord. Small gummatous growths had also been found upon the nerves. Though locomotor ataxy was a sequel of syphilis in such a vast proportion of cases that there must be a causal relationship between them, yet the ataxy could not be cured by anti-syphilitic treatment. If locomotor ataxy were compared with the effects of alcohol upon nerves or of other chemical poisons, such as arsenic and lead, or those produced by diphtheria, there could be no doubt that the ataxy was the result of a chemical poison left behind by syphilis. The condition of inflammation might be associated with gummatous deposit in very varying degree, and the more acute the condition the more would the inflammatory phenomena preponderate. In the cases of acute cerebral meningitis which were sometimes checked or ended by mercury the inflammation was very acute, and there was little or no time for the production of characteristic gummatous tissue. He doubted at the present time even more than he did in 1880—when he published his work on "The Diagnosis of Diseases of the Spinal Cord"—whether syphilitic arterial disease played any part in the production of acute spinal myelitis. The fact that acute transverse myelitis was frequent in the subjects of constitutional syphilis had long been a familiar fact; but there was also this conspicuous fact about these cases, as about all cases in which inflammation preponderated over tissue production, that in proportion as this was the case anti-syphilitic treatment failed. Who that had kept in touch with the therapeutics of the past could have any doubt regarding the influence of mercury upon simple inflammation, and who was there who could place any confidence whatever in mercury as a test of the syphilitic nature or otherwise of acute inflammation? These cases, treated as energetically and promptly as possible, ran a course absolutely indistinguishable in every case from that of cases of transverse myelitis in which syphilis could be absolutely excluded. The syphilitic and non-syphilitic cases ran a parallel course. The same applied to arterial disease of the brain. It was only in the cases in which there was not the tendency to recovery which all acute processes involved that we could place any confidence whatever in the significance of the anti-syphilitic treatment. He quoted the case of a patient who had an indurated cellulitis in the region of the spine, who was not benefited by iodide of potassium, but who recovered under mercury. He found it difficult to judge whether to class this as a secondary or a tertiary lesion. From the therapeutical effect one should say it was secondary, but from the lapse of time since infection it should perhaps be declared tertiary. The President had suggested that gonorrhoeal myelitis might be the result of syphilis. So far as he knew, only two cases of gonorrhoeal myelitis were on record—one in a German journal and the other recorded by himself in the *Clinical Journal*.

On the motion of Sir WILLIAM BROADBENT, seconded by Dr. ALTHAUS, the debate was adjourned till the next meeting.

MEDICAL SOCIETY OF LONDON.

Cases of Liver and Gall-duct Surgery.—Craniectomy.

AN ordinary meeting of this society was held on Feb. 25th Mr. FREDERICK TREVES, Vice-President, being in the chair.

Mr. MALCOLM related in detail all the cases of Liver and Gall-duct Surgery that had come under his care—namely:—

1. A case in which by exploration he failed to make out exactly what was the nature of the disease. This case was illustrated by another in which no operation was performed, but malignant disease was diagnosed and verified by post-mortem examination. 2. A case in which by exploration he found malignant disease of the lower surface of the liver. 3. A case in which he performed ovariectomy and found malignant disease of the pancreas and duodenum, causing obstruction of the common bile-ducts. These patients had died from the natural progress of their diseases, and the surgical treatment could not be said to have hastened the results. 4. A case in which he operated three times for numerous hydatids of the liver and sub-

peritoneal connective tissue on Feb. 17th and Dec. 2nd, 1891, and on March 12th, 1894, the patient having borne a child between the second and third operations. She was reported to have recently shown signs of the development of another cyst. 5. A case of a child five years and a half old from whose liver he removed two hydatid cysts. 6. A case in which he removed 789 stones from the gall-bladder. 7. A case in which Mr. Doran opened an abscess over the gall-duct on Nov. 7th, 1893. Mr. Malcolm extracted 134 stones on Dec. 2nd, 1893, and Mr. Doran extracted three more stones on May 26th, 1894, after which the wound healed. 8. A case in which he removed four stones from the gall-bladder, cystic duct, hepatic duct, and common bile-duct. The last five cases had all recovered and were alive. The difficulties of diagnosis and manipulation were commented on, and the necessity of operation whenever gall-stones caused serious trouble was urged. It was pointed out that in liver surgery the dangers of septicæmia and of irritation and obstruction of the intestines could usually be avoided, and that the disposition of the colon and its mesentery facilitated drainage. An opinion was expressed in agreement with that of König¹ that the duration of an operation was not so important in causing shock as the nature of the manipulation performed. The following points were suggested for discussion. 1. The evidence by which a diagnosis can be made between gall-stones and cancer of the liver. 2. The possibility of gall-stones being overlooked in the ducts, and the possibility of their collecting in the ducts within the liver substance, and rapidly descending after other stones had been cleared out of the gall-bladder or liver ducts. 3. The length of time after infection at which a patient may be considered safe from a further development of hydatids. 4. The fact that in the third operation on the fourth case related there were removed a number of hydatids in which the daughter cysts were shrivelled up as if dead, although the tumour had been growing very recently and had shown no signs of diminution in size immediately before the operation.—Mr. DORAN thought that the gall-stones he removed passed down from the liver since Mr. Malcolm's operation. He asked for information as to the length of time it took for a gall-stone to form. If the stones could form in the bladder it might be advisable to perform a secondary cholecystectomy in some cases. This was not very difficult, because the procedure was practically extra-peritoneal, the gall-bladder being simply peeled out of its adhesions.—Mr. ARBUTHNOT LANE said he had operated upon a large number of cases in which the trouble was directly or indirectly due to gall-stones. His conclusions were that in these cases the diagnosis was comparatively easy and the results good if operation were not deferred until too late. As this form of surgery was still in its infancy surgeons were apt to be called upon to act at a stage in the case so late that the patient's condition gave little or no hope of success. The same was true of vermiform appendix cases and of cases of acute intestinal obstruction. He then gave details of four fatal cases in which he had operated. The first occurred four years ago, when he operated upon a female patient who had a stone of large size impacted in the common bile-duct. He incised the duct, extracted the stone, and afterwards attempted to close the incision in the duct, but he could only do this imperfectly. The patient died on the third or fourth day afterwards, probably from peritonitis. This death might probably have been prevented if he had used gauze packing. His second fatal case was that of a man who for fifteen years had suffered from jaundice with occasional exacerbations accompanied by fever and prostration. He found the gall-bladder and the ducts stuffed with calculi, and as the condition of the patient did not permit of a long operation, and as there was a fair quantity of bile in the gall-bladder he established a communication between that viscus and the duodenum by means of Murphy's button. The patient died two months later, when a small perforating ulcer was found in the duodenum proximal to the artificial opening. At the necropsy the ducts within the liver were found filled with calculi. The third case was that of a woman who entered Guy's Hospital in a feeble and delirious state, stating that she had been deeply jaundiced for four years. The colon was found fixed to the gall-bladder by adhesions, and in the common bile-duct were several stones, which were removed. The patient never recovered from the delirium and prostration. In the fourth case a woman, who had been jaundiced for five

¹ Brit. Med. Jour., Epitome, vol. i., 1895, p. 26.

months, when straining at stool felt a tearing pain in the region of the gall-bladder, and a tumour developed in that situation. She was nearly moribund on admission, the gall-bladder was found distended with clot, and a rupture extended through into the substance of the liver. She did not recover. In these four fatal cases he thought that his own surgery was responsible for but one death. He had operated successfully on a very large number of other cases.—Mr. HENRY MORRIS referred to a case in which he had dealt with multiple abdominal hydatids. Three times they were attacked by operation, and yet a large number were left, and they appeared to disturb the health of the patient very little, who followed an arduous occupation as a baker. His conclusions were that these cases of multiple hydatids were unfavourable for surgical interference. He once had to operate on a case of abdominal hydatid in which the tumour was very large and simulated ovarian dropsy, and had been treated elsewhere by tapping. He cut down in the middle line, and found the cyst to be connected with the under surface of the liver. He evacuated an enormous number of daughter cysts, removed the greater part of the parent cyst, but was obliged to leave the upper portion, which was too firmly adherent to be removed. The patient died from shock. There was still a great deal to be learnt concerning the development of gall-stones. He believed it depended greatly upon obstruction to the flow of bile. Many stones were formed in the ducts of the liver itself, others in the gall-bladder, and their formation was promoted by any cause interfering with the production of cholesterol, or of the bile acids which were the solvents of cholesterol. He had removed a number of stones from the gall-bladder of a woman, and the calculi were as tightly packed as were the bricks of a wall. After emptying the gall-bladder he probed the bile-ducts, but could feel no calculi. Some time later she passed two or three stones, and on one occasion he picked out eleven calculi from the sinus, which afterwards healed firmly. He believed that these latter stones were formed in the gall-bladder. The faceting of a calculus did not of necessity indicate that it must have been packed tightly with other stones; it might be produced by the churning up of a larger stone with smaller stones in the mucus of the gall-bladder. When gall-stones were impacted in the common bile-duct and there was long-standing jaundice, and if the gall-bladder were shrunken and contracted, the prognosis was unfavourable and convalescence after operation was slow; hæmorrhage was obstinate and death likely to occur from shock and peritonitis. But operation was more successful in cases in which the gall-bladder was distended with fluid so as to form a tumour.—Mr. GODLEE said he once opened a tropical abscess in the liver and found in it some small faceted gall-stones. Some years ago at Brompton Hospital he cut down upon an obscure tumour in the right lumbar region of a female patient. He found the transverse colon adherent, and there was a tumour in the gall-bladder and another in the liver. He gave a bad prognosis and closed the wound, but two years afterwards the patient passed a large gall-stone.—Mr. MALCOLM, in reply, said he thought that in Mr. Doran's case there was persistent obstruction in the cystic duct. It was curious that in the cases of multiple hydatids the tumours were usually confined to the abdominal cavity and the organs within it.

Dr. WALLIS ORD and Mr. EDWARD COTTERELL then related a case of Microcephalus treated by Linear Craniectomy. The patient was a female child aged nineteen months, who was first seen by Dr. Ord on July 28th, 1893, at the West-end Hospital for Nervous Diseases. The child was born at full term, there was no difficulty at birth, and no instruments were used. She was a healthy and well-nourished child until thirteen months old, when she had influenza, which was followed by "gastric fever." At the age of sixteen months she was suddenly seized with fits, which appeared to be general convulsions marked with an extreme degree of opisthotonos. She was said to have had sixty fits in five days. After the fits passed off the child began to waste and lose power in her limbs, and not to notice what was going on. Upon admittance the child was in a very feeble condition and quite unable to maintain a sitting position for more than a moment, quickly tumbling over. The normal relation of size between the face and the skull was reversed. There was no trace of fontanelles. The child was dull and apathetic and easily roused by loud sounds. She was not attracted by objects moved before her in order to catch her sight unless they were of a very bright

or luminous character. She was unaware of the presence of anyone approaching her cot quietly. Mr. Work Dodd examined the eyes, but could find nothing to account for the condition, and the loss of sight appeared to have been due to a weakness of the power of perception analogous to the weakness elsewhere in the body. In consultation with Mr. Edward Cotterell, linear craniectomy was advised, as the child appeared to be steadily losing ground. The operation was performed in sections, the dates when the bone was removed being Aug. 9th, 1893, Aug. 23rd, Sept. 4th, and Sept. 13th. Improvement began after the second operation and was steadily maintained, until she became like an ordinary child, running and walking about, and with every indication of very good eyesight. In these cases the bones of the skull were found to be much thinner than normal, and there was often little or no diploe to be found. When bone was removed the dura mater usually bulged into the groove. In performing linear craniectomy it was necessary to avoid hyperpyrexia and shock. Hyperpyrexia might be usually prevented by only taking away a small piece of bone at each sitting and by using care not to bruise the subjacent brain. Shock might be prevented by the above-mentioned means and also by applying an improvised Esmarch's bandage to prevent hæmorrhage.—Dr. SHUTTLEWORTH had had under his care three cases of microcephalic idiots which had not improved at all after operation. The first was a child three and a half years of age with a head circumference of fifteen inches. It had been operated on by Mr. Horsley, at first by longitudinal incisions and afterwards by transverse. Six months after the second operation it was noted that there was no mental improvement, though the child had ceased to beat its head. The second case, also operated on by Mr. Horsley, was the son of a medical man and had a head circumference of seventeen inches, and there were paralytic symptoms. One year after operation the child was worse, both physically and mentally. The third case was operated on by a Newcastle surgeon and remained a speechless idiot. In these cases there was an arrest of development of the brain at the fifth or sixth month of fetal life, and union of the bones followed this arrest of cerebral growth.—Mr. LANE asked if the case shown were really one of microcephalus.—Dr. ORD, in reply, said the case had been regarded as one of microcephalus or synostosis of the sutures. There was no evidence of tumour or of meningeal trouble. The case was not extreme; it was an instance of primary mischief in the bones of the skull, and not of primary atrophy of the brain.

HARVEIAN SOCIETY OF LONDON.

Syphilitic Diseases of the Brain.

A MEETING of this society was held on Feb. 21st, Sir JOHN WILLIAMS, Bart., President, being in the chair.

Dr. JAMES TAYLOR read a paper on Syphilitic Diseases of the Brain. These were classified in three groups: (1) meningitis, (2) gummata in the membranes with secondary affection of the brain proper, and (3) changes in the bloodvessels—endarteritis and periarteritis—and combinations of two or more of these. The symptoms commonly present in these three forms were briefly described, and also the symptomatology of another class of case characterised by considerable mental change similar to that occurring in general paralysis together with optic neuritis, but no distinct paralysis of the limbs. Dr. Taylor had no knowledge of the pathological changes underlying this clinical state, but suspected affection of the meninges and vessels. In two cases which he had seen, marked improvement, with subsidence of optic neuritis, had followed the energetic use of anti-syphilitic remedies, although some degree of mental change still remained. The treatment called for when syphilitic disease of the brain had been diagnosed was touched upon, and the extreme importance of using mercury freely, as well as iodide of potassium, instead of the latter alone, was insisted upon. Dr. Taylor, in conclusion, described the clinical condition in two cases which he had observed through the kindness of Dr. Hughlings Jackson and Dr. Ferrier, and also the results of post-mortem examination. One was a case of gummata in the membranes and the other of widespread disease—endarteritis and periarteritis—of cerebral vessels. Illustrative sections with a drawing and photograph were also shown.

The PRESIDENT related a case of syphilitic hemiplegia during pregnancy accompanied by thrombosis of the veins of

the chest. The condition was cured by mercurial inunction. He discussed the question of temperature in syphilitic meningitis.

Dr. GUTHRIE referred to the importance of certain minor manifestations of cerebral syphilis, and in particular of states of transitory aphasia and of ophthalmoplegia. He gave his experience of these in several instances.

Dr. CAGNEY spoke of the difficulty of recognising meningeal gummata at an early stage, and gave the history of a case in which the resulting abscess had extensively destroyed the inner tables of the skull and perforated the scalp, while the symptoms throughout had been ambiguous.

Dr. SHUTTLEWORTH stated his experience of congenital syphilitic brain disease in children. The symptoms began at the period of the second dentition. Dulness of intellect was followed by paralysis and later by imbecility with a proneness to use bad language and an ultimate breakdown. The necropsy showed an atrophied brain with thickened meninges.

Mr. Brodie, Dr. Hazell, and Dr. Macevoy also spoke, and Dr. Taylor replied.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held at the Great Northern Central Hospital on Feb. 14th, the President, Dr. J. G. GLOVER, being in the chair.

Mr. G. MOWER WHITE showed an infant the subject of Bilid Cranium with Meningocele or Encephalocele, or a combination of both conditions. The tumour, which was situated in the occipital region, was the size of a hazel nut and was reducible; the child was well developed in every other way and quite healthy. After discussing the condition, especially from the point of view of prognosis, Mr. White pointed out that this was a favourable case for operative procedure. In the first instance, however, he intended to apply an apparatus so as to protect the tumour, and at the same time to exert pressure on it in hopes that the condition might improve. If that failed he described an operative method which he had devised.—These remarks were discussed by Dr. GALLOWAY and Mr. CRESSWELL, who were opposed to surgical interference, as the tumour was small and unlikely to increase or come to harm.

Mr. BRYCE ORME showed the specimens from a case of Spontaneous Comminuted Fracture of the Femur in a patient aged thirty-six years, the subject of general paralysis. Suppuration ensued in the thigh and death resulted.—Dr. BAILEY mentioned a similar case from his own experience and remarked on the rarity of such cases.

Dr. EDWARD S. TAIT and Dr. LINDLEY SCOTT showed cases of Albuminuric Retinitis, and a discussion arose on the prognostic value of this condition occurring during the course of Bright's disease. The opinion generally held seemed to be that in most cases the condition was of grave import, betokening a serious degree of arterial degeneration, probably generally diffused; but cases were quoted which tended to prove that so far as any time limit was concerned little confidence was to be placed in its import. Cases occurred in which it appeared only a week or two before death in subjects apparently comparatively in good health, whereas in other cases it remained with little alteration for long periods, the patients remaining well.

Dr. JAMES GALLOWAY showed a man aged forty-six years who had been the victim of a severe accident in 1857, involving fracture of the frontal and parietal bones, followed by hemiplegia and other severe nerve lesions. Since that time he had worked in lead, and was subject to gout, lately having developed albuminuria. Having both these degenerative influences at work many complicated nerve lesions had resulted. He was shown on the present occasion on account of the striking alterations in certain associated movements of his eyes. It was found in any associated movement of the eyeballs to the right or left that the pupil nearest the object looked at dilated, and the other pupil contracted—that is to say, the pupil of the eye in which contraction of the internal rectus occurred also contracted, while the pupil in the eye of which the external rectus was in action dilated.—Considerable discussion resulted on this case, but no distinct explanation was forthcoming.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Osteomalacia subsequent to Scirrhus of the Mamma.—Exhibition of Specimens.

A MEETING of this society was held on Feb 13th, Professor SHERRIDAN DELEPINE, President, being in the chair.

Mr. C. E. RICHMOND related a case where Osteomalacia and Spontaneous Fracture of the Femur occurred in a patient who was the subject of a Scirrhus of the Mamma. The breast and axillary glands and fat were thoroughly cleared away, and there was no local recurrence. Visceral deposits, however, followed very rapidly, and the patient succumbed just over five months after operation. Before this, bony softening was observed in the pelvis, and the left femur (the diameter of which was much increased) snapped across when the patient was getting into bed. Fair union was obtained in four or five weeks, with disappearance of much of the thickening. Sections of the original breast tumour, of the liver, and of the iliac crest were shown, all exhibiting cancerous growth. The fractured femur also was shown, and a decalcified section taken from the site of bony union entirely negatived the presence of cancer at this spot, and merely showed the ossification of fibrous callus. Reference was made to a similar case in the Museum of University College, London.

Mr. J. W. SMITH showed a specimen of Fistula between the Gall-bladder and Duodenum, and a Gall-stone 1½ in. in length and 3½ in. in circumference, from a woman aged sixty-three who was admitted to hospital with a history of five days' acute intestinal obstruction, with stercoraceous vomiting. Laparotomy was performed and the gall-stone removed from the intestine. Death occurred seven hours later. The point of impaction was about the middle of the jejunum, the bowel above being greatly distended and congested. The cystic duct was obliterated, the hepatic and common bile-ducts remaining patent. The gall-bladder contained two smaller stones.

Dr. DRESCHFELD also showed a specimen in which a gall-stone had set up Ulceration of the Gall-bladder, with secondary biliary duodenal fistula, arrest of the gall-stone in the jejunum, and intestinal obstruction.

Card specimens were shown by Dr. Enrich, Dr. Helme, Dr. Kelyack, and Mr. Littler.

KIDDERMINSTER MEDICAL SOCIETY.

Castration for Enlarged Prostate.—A Case of Enterostomy.—A Case of Cerebral Abscess, Operation, Death.—Malarial Fever.—Exhibition of Cases and Specimens.—Fees under the Notification Act

A MEETING of this society was held on Feb. 8th, Mr. S. STRETTON being in the chair.

Mr. J. L. STRETTON read notes of a case of Castration for Enlarged Prostate. A man aged sixty years had had difficulty in passing urine for some months, and on the advice of Dr. Suckling of Birmingham had been using a catheter. For six weeks he had been much worse and had not passed any urine except by the catheter. He was first seen by Mr. Stretton on Jan. 4th. He was a healthy looking man. A No. 8 catheter entered the bladder easily, per rectum the prostate could be felt as large as a hen's egg, the right testicle was enlarged and nodular in places, and the urine contained a considerable quantity of pus and debris. On Jan. 15th the bladder was washed out three times daily, but the urine still contained pus and he was unable to dispense with the catheter. Both testicles were removed through a single incision. Ten days later he passed urine naturally for the first time. On the 28th he passed eight ounces at one time. The wound healed. He developed delusions and became very troublesome, and passed his urine in bed. This condition lasted for about a week or ten days, and he then began to improve. He could sit up and passed his urine naturally; its condition had improved, but the bladder was still being washed out with nitrate of silver solution. The prostate was about half its previous size. In the discussion which ensued several of the members were able to confirm the shrinking of the prostate. The report on the right testicle showed it to be tuberculous, and this, it was pointed out, rendered the case more unfavourable, but apparently did not interfere with the process of the operation. The

fact of one or both testicles being diseased certainly confirmed the desirability of their removal.

Mr. J. L. STRETTON also read notes of a case of Enterostomy. A man aged fifty-five years was sent by Mr. D. Fitch. He had always enjoyed good health. The day before being seen he was seized with pain in the abdomen, after a meal of bread and cheese the previous night; he endeavoured to evacuate the bowel without success; he had vomited constantly, and when first seen the vomited matter was faecal; he had passed no flatus. Rectal injections, castor oil, and opium had been tried without effect. The abdomen was distended and boardlike. On opening the abdomen there was evidence of slight peritonitis and a small quantity of fluid. The small intestine was much distended and congested; this was traced in both directions with a negative result. As the patient's condition was bad a coil of distended gut was opened and stitched to the abdominal wall. A copious discharge of liquid faeces followed. The following day he was much more comfortable, the distension had disappeared, and he had no pain, but his pulse was bad. During the next four days he several times became collapsed, and in spite of the free use of stimulants he died in this state on the sixth day. At a necropsy twenty-four hours after death the bowels were found to be nearly empty. No cause of obstruction could be discovered, and there were no signs of peritonitis. Mr. Stretton pointed out the difficulty of diagnosis in such cases, and maintained that the operation performed offered the best chance of recovery.

Dr. EVANS read notes of a case of Cerebral Abscess which he had operated upon. A girl aged sixteen years was admitted to hospital on Oct. 11th, 1894. She had always had fairly good health and no definite disease except ear trouble, which began two or three years ago without any known cause, and has since "run matter." One month previously, whilst at work, the patient was suddenly seized with a "fit," in which she remained insensible for two or three hours. The left side of the face and the left arm and leg twitched during the fit (this was corroborated by the medical attendant). Since this time she had been laid up. Headache began three or four months ago and had been "on and off" ever since, but after the fit and since had become more intense. Right internal strabismus had come on since the fit. The patient had been peculiar and strange in manner for about two years. The bowels were regular. She had only menstruated once about two years ago. The patient's mother had been in a lunatic asylum for twelve years, also her mother's brother. Her mother had had several children and no miscarriages; some of the patient's brothers were considered "queer" by their neighbours. On admission the patient appeared to have lost flesh, and stated she had. She lay on her right side and took no interest in her surroundings, not, as a rule, speaking unless spoken to, but would then give an intelligent answer. Cerebration was slow and she was very drowsy, but this was probably due to the bromide she had taken. The pupils were widely dilated, equal, and reacted to light and accommodation. She stated that sometimes she saw double with the right eye. Her expression varied sometimes; her face expressed pain; at other times there was a far-off, dreamy look about the eyes. She complained very much of pain in the frontal region, also of shooting pain down the right arm and sometimes in the left arm; the pain in the head was always worse at night and she often cried for some time with it. There was no loss of power in any of the limbs, and sensation was normal. The plantar and knee reflexes were absent; there was no ankle-clonus. Well-marked optic neuritis was present in both eyes, but the sight was normal with the exception of the double vision already mentioned. The sense of smell and taste was normal. There was a slight discharge from the right ear, a few drops of thin pus in the twenty-four hours, and this had remained the same since the first on-set according to the patient's statement. She heard the ticking of a watch one yard from the left ear, but could not hear it when placed close to the right ear; when placed on the skull in the neighbourhood of the right ear she could hear it. The temperature was normal and the pulse 72. Eight days after admission to hospital the patient vomited two drachms of clear fluid; the pain in the head and left arm continued to be severe. Seventeen days after admission she suffered from delusions and thought the nurses were black. These continued for two or three days, together with severe pain, preventing sleep at night. The hypodermic injection of one-sixth of a grain of morphia relieved these symptoms and she slept better. Loss of power in the left arm gradually supervened,

and much difficulty was soon experienced in getting her to take nourishment. She gradually became drowsy and semi-comatose. On Nov. 3rd a consultation was held on the patient, and it was decided that she was suffering from cerebral abscess, probably in the temporo-sphenoidal lobe, and that an attempt should be made to evacuate its contents. The patient was accordingly anaesthetised with chloroform and a semilunar scalp flap dissected down over the region of the lower part of the right fissure of Rolando. The periosteum having been raised from the bone, the trephine was applied over the region of the motor centre for the face. On the dura mater being exposed it was seen to bulge into the trephine opening, and there was complete absence of brain pulsation, the dura mater being very tense. The dura mater was opened by a crucial incision, and the brain substance probed in several directions with a fine aspirating needle; the needle was eventually introduced in a forward direction for a distance of about two and a half inches, when pus was seen to be exuding from the end of it. The abscess cavity was then aspirated and about three and a half ounces of oily and very offensive pus were evacuated. The opening in the brain was then enlarged by means of a long pair of sinus forceps introduced by the side of the needle, and the little finger was passed apparently into the abscess cavity. A small drainage-tube was next passed down to the bottom of the opening and the parts well washed with boracic acid lotion. The semilunar flap was replaced and fastened in position with sutures, an opening being made in its centre for the passage of the drainage-tube. After the operation the patient was at first very restless, crying out with pain in the head and moving the right arm. The restlessness continued through the night, gradually subsiding towards the morning, when she seemed fairly comfortable and inclined to sleep, and took her nourishment better. The wound was dressed the next day; there had been a good deal of oozing. On the second day after the operation the note was that the patient had been drowsy the greater part of the night after a hypodermic injection of one-eighth of a grain of morphia, and had taken six ounces of milk, one ounce of brandy, and some meat juice. This morning she looked bad and had a dusky complexion. The pulse was 168, weak, the respiration 40, and the temperature 100.2° F. She had coughed several times during the night. After this the patient gradually became comatose and sank and died on the morning of Nov. 7th, the fourth day after the operation. Previously to operation the temperature never rose above normal. On making a post-mortem examination an abscess the size of a large hen's-egg was found occupying the right frontal lobe; the abscess had a well-defined wall about an eighth of an inch thick, and in it was found the opening that the aspirating needle had made, but no other opening. Dr. Evans considered that there were several points of interest connected with the case. In the first place, as to the cause of the abscess, he could only suppose that the condition must have arisen from the ear disease. It seemed to him strange that the abscess should be situated in the frontal lobe so far from the seat of the original trouble; but in the absence of any history or sign of syphilis, tubercle, or other disease he could attribute the abscess to nothing else. The symptoms, too, were not very pronounced, at all events at first; the loss of power in the arm and leg was not at all well marked, and the headache was only severe at times. Of course there was the history of the fit—a solitary one—followed by slight strabismus, though the optic neuritis was well marked all the time the patient was under observation. There was very little vomiting and later some mental disturbance, as evidenced by illusions and hallucinations, but otherwise the faculties and intelligence of the patient seemed little disturbed. It seemed curious that so large an abscess, which—judging from the thickness of its wall—must have been in existence for some time, should have produced such a comparatively small amount of trouble. The diagnosis of the case, too, was thus rendered somewhat difficult, and the fact of the mother and uncle being insane was misleading. Dr. Evans stated that in future operations he should use an aspirating needle to search for the abscess, as in this case, but having struck the abscess he would pass a sharp-pointed bistoury down by the side of the needle in order to make sure of opening the wall, and so allowing a free escape for the matter. In the discussion which followed, it was suggested that had the operation been performed sooner the patient would have had a better chance of recovery.

Dr. EVANS also showed the case of a man who had fallen

from an apple tree and sustained a Compound Fracture of the Thigh, the bone projecting through the trouser, and also considerable injuries to the shoulder, probably fracture of the surgical neck of the humerus, with fracture of the acromion process of the scapula and of the neck of that bone as well. At the time the patient left the hospital he could walk with the aid of a crutch, and there was about three-quarters of an inch shortening of the injured leg. He could move his arm in almost any direction, placing his hand on his head without difficulty.

Dr. EVANS showed a Uterus he had removed per vaginam for Malignant Disease, having first ligatured the broad ligaments through an abdominal incision. The patient died from shock about twelve hours after the operation.

Mr. BETHUNE showed a large Fibroid about the size of a lemon removed from a multipara aged thirty-seven immediately after the birth of her ninth child. It was attached to the anterior uterine wall immediately within the cervix, and caused considerable obstruction to the birth of the child. It was ligatured and removed with scissors, and no bad symptom supervened.—Mr. HODGSON MOORE thought it would be better to wait until the uterus had resumed its normal condition unless the tumour prevented delivery.

Mr. M. JOHNSTON read a paper on Malarial Fever.

Mr. J. L. STRETTON brought forward the form of account demanded by the local authority for Notification Certificates. He doubted whether this, which was in reality a second report of each case, could be legally enforced. Since the meeting he has informed the members that his objection had been brought before the town council, and that their clerk had stated that the form could not be legally insisted upon, and it has therefore been withdrawn.

MANCHESTER MEDICAL SOCIETY.

Analysis of Fifty-five Cases of Carcinoma of the Breast.—Exhibition of Cases.

A MEETING of this society was held on Feb. 20th, the President, Mr. F. A. SOUTHAM, being in the chair.

Mr. C. E. RICHMOND showed a case following Destruction of Lymphatics from Lupoid Ulceration. Allusion was made to the compound character of the enlargement, consisting primarily of distension of lymph spaces due to absence of drainage by lymphatics, and secondarily to hyperplasia of areolar tissue caused by the irritation of such lymph accumulation.—Mr. C. E. Richmond also showed a case where he had performed Abdominal Section for a large Cyst probably splenic in origin.

Dr. BRAZIL brought forward two cases in which the symptoms of Appendicitis and Rheumatism were present simultaneously, and in which complete and rapid recovery took place under salicylate of soda. After referring to the literature of the subject Dr. Brazil discussed the relation between the two disorders.

Mr. JONES read a paper on an Analysis of Fifty-five Cases of Carcinoma of the Breast, based on an analysis of fifty-five operations for the removal of mammary cancer. The mortality attending the operation was under 2 per cent., and the proportion of recoveries was given as 12.6 per cent. Mr. Jones laid stress on the importance of a routine examination of the axilla through the operation wound, even although no obvious enlargement of the glands could be detected. In 48 of the 55 cases the axilla was thoroughly cleared out, and this with care need not add much, if at all, to the risks of the operation.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

The Adjourned Discussion on Cardiac Therapeutics.

A MEETING of this society was held on Feb. 28th to continue the adjourned discussion on Cardiac Therapeutics, Dr. CLOUSTON, President, being in the chair.

Dr. BYROM BRAMWELL, continuing the discussion, considered the general aspect of cardiac therapeutics. He dwelt on the difficulty of ascertaining the exact condition of the myocardium. He laid special stress on the reserve force of the heart and how important it was to note how it responded to tonics. The success of the treatment depended on the regulation of the minute details of the life of

the patient as much as on the giving of drugs. In neurotic, functional, or curable cases it was necessary first to remove the cause; secondly, to correct by appropriate treatment any deranged or abnormal condition which appeared to be present in the heart or in any of the other organs; then, if the patient were anæmic, to treat the anæmia; thirdly, to regulate the whole mode of life of the individual; fourthly, to reassure the patient as to the curable nature of the condition; fifthly, to administer remedies to soothe the irritable heart and to tone it up when in a condition of irritable weakness. In organic cases, such as acute simple rheumatic endocarditis, much might be done to limit the severity of the lesion by appropriate treatment. He emphasised especially the importance of rest in removing valvular strain. At the same time the heart muscle must be kept in good condition during convalescence by the use of tonics, as iron, arsenic, strychnine, &c. In chronic cases it was important to avoid strain, either muscular or arterial, to keep the heart muscle in the highest possible state of health and efficiency, and to protect the patient from everything which was likely to exert an injurious influence on the heart. In chronic cases, when compensation was well maintained, it was inadvisable to administer powerful cardiac tonics. When compensation broke down the treatment must be guided by the nature of the lesion and the condition of the cardiac muscle. In fatty degeneration due to deficient hæmoglobin large doses of iron should be given; in pernicious anæmia, arsenic. In cases of flabby and dilated heart Schott's plan of graduated exercise was very efficacious. Caution, however, should be used. In cases of senile heart in mitral regurgitation with high arterial tension the cardiac strain should be removed by reducing the blood pressure and the heart toned up. In those cases strophanthus was preferable to digitalis. He had found *exercise* a valuable means of treatment in neurotic affections, fatty infiltration, many gouty conditions, and many valvular lesions if the myocardium was healthy. Oertel's plan of treatment was chiefly useful in cases of fatty infiltration, Schott's in the same group of cases, and in valvular lesions provided the muscle was reasonably sound.

Dr. STOCKMAN remarked that with regard to the action of cardiac tonics they were as a rule used when the heart was exhausted and beating more rapidly and less forcibly than normal, and hence the amount of blood discharged at each pulsation was less, the arterial system became depleted and the venous engorged. The primary effect of a cardiac tonic was to alter the elasticity of the muscular fibres so that they expanded and contracted more completely without, at first at least, becoming more active. Thus the heart took longer to dilate, contracted more thoroughly and so filled better and threw out a greater amount of blood. The blood pressure rose and the heart became better nourished. The diuretic effect of tonics was due to the fact that the veins and lymphatics were able to absorb effused fluid and the kidneys discharged the extra water. Thus it was improbable that one member of the same group was a better diuretic than another. The action might commence more quickly and continue longer with one than with another, but the action was the same. He had seen a good deal of the action of strophanthus, digitalis, adonis vernalis and convallaria, and had got much the same results with all. Sometimes the drugs were strikingly successful, sometimes they failed. With regard to iodide of potassium pharmacologists differed considerably. That it dilated small vessels and caused a fall in blood pressure had been denied. Small doses were said by present authorities to act like digitalis, and larger doses to diminish blood pressure. The last case on which he (Dr. Stockman) had made observations was that of a man with spinal sclerosis, who was taking 300 grains per diem without any alteration in the pulse as shown by finger or sphygmometer. It did good in aneurysm, possibly because the disease might be syphilitic in many cases. He laid stress on the purgative treatment of cardiac cases with much dropsy. With regard to tapping the pleura he cautioned against what was practically starvation, brought about in this way by the abstraction of albumen.

Professor GREENFIELD said that he intervened in this discussion solely in order to bear testimony to the enormous value of strophanthus, which he regarded as one of the most important therapeutic agents discovered of late years. As he had not been present at the first meeting, his position as to the debate was that of the vast majority of medical practitioners, who would be influenced only by the necessarily brief abstracts in the medical journals. It would be

disastrous if the impression were conveyed that the leaders of medical opinion in Edinburgh regarded strophanthus with distrust, and as only applicable to critical conditions. He felt it a duty to give his emphatic testimony to its value, not as an exceptionable, but as the most commonly applicable of all the group of special cardiac agents. To its use he owed the life of many patients and friends, in conditions which before its introduction he would have regarded as hopeless, and in cases where all known remedies, including digitalis, convallaria, &c., had absolutely failed. For nine years he had used it in a large variety of conditions of cardiac failure, including cases of all forms and combinations of valvular disease: dilatation from senile degeneration and from acute strain or disease, as in acute pericarditis in pneumonia; in acute pneumonia, including influenzal, where cardiac embarrassment was so often the cause of death; in severe prostration from hæmorrhage; after severe operations, including those where peritonitis was present, &c., and in febrile conditions with consequent rapid action and tendency to failure of the heart; in febrile delirium tremens, &c. In the severe forms of acute dilatation, senile and other, its effect was most striking. And if only for its value in severe cases of acute pneumonia it would rank as an agent of unsurpassed value. He had, on a rough estimate, used it in about 400 cases of these diseases in hospital practice alone, apart from other cases. He need hardly say that it was used in conjunction with all other suitable remedies appropriate to special conditions—such as rest, or, in some cases, moderate exercise, posture, relief of bronchitis or other associated conditions, attention to food, condition of stomach and bowels, removal of dropsical effusions, &c.—on which he supposed all agreed. Nor need he mention further the value of combination with other drugs, as nitrites, alcoholic and other stimulants—tonics, such as arsenic, iron, strychnine, &c. He had frequently alternated its use with that of digitalis, in order to judge of their comparative value in various conditions. The result had been that whilst in some cases, especially in certain well-defined conditions with which all are familiar, digitalis proved equally or more efficient, in the vast majority strophanthus was safer, more certain, and less attended with danger, and succeeded where digitalis proved useless. Objections had been made to the want of uniformity of strophanthus preparations. This was no doubt true to some extent. But the defective action was soon perceived, and a better supply could be readily obtained. This fact pointed only to the necessity for proper pharmacological experiment before allowing its sale, for the defects were due mainly to the use of bad or used-up material, and the vendors should be prosecuted for the sale of bad preparations. But could anyone say that digitalis was better in this respect? All pharmacologists agreed that the preparations of digitalis were most uncertain in the amount of the various active ingredients contained in them. Moreover, its tendency to cumulative action, the uncertainty of the time of the appearance of dangerous symptoms, &c. rendered it necessary to restrict the employment of large doses to a limited period. On the contrary, the action of strophanthus was so rarely attended with this risk that it could be given continuously in large doses where needed. In only one case, the first in which he used it, had any serious toxic symptoms appeared, probably as the result of idiosyncrasy, and no such case had since come under his notice. In some critical cases, where there appeared to be almost no hope of recovery, he had given very large quantities—ten, fifteen, and even twenty minims every two hours—and with resulting cure. In such cases it was necessary to give it with the finger on the pulse, diminishing or increasing the dose as it appeared necessary. From the remarkable results of cure in formerly hopeless cases he was convinced that neglect of this remedy would result in the loss of many valuable lives. Hence he would urge those of his colleagues who were doubtful of its utility to try it again.

Dr. JAMES RITCHIE thought that drugs and exercise came a long way after rest as therapeutic agents in cardiac cases. He did not think cardiac tonics were necessary so long as compensation was maintained. He found strophanthus best for obtaining rapid action in serious cases, but he thought the action not so long continued as with digitalis, whose action lasted a long time after the drug had been discontinued. He thought digitalis gave a distinct tonic action on the heart which was not obtained with strophanthus.

Dr. WILLIAM RUSSELL remarked that what struck him most on the first night of the discussion were the omissions.

He thought they would have heard about the unsuccessful cases as well as the successful. There were, he said, cardiac cases which required no special cardiac treatment, as when there were no symptoms referable to cardiac insufficiency and the cardiac lesion was discovered accidentally, or perhaps when the symptoms complained of had no possible connexion with the cardiac lesion. Such cases were very common, and the existence of the cardiac lesion was apt to obscure the diagnosis or to mislead entirely. This was the more unfortunate as the essential cardiac tonics were contraindicated. The second class of cases were those in which functional cardiac trouble was a marked feature, and had to be dealt with at the same time, treatment being directed to the fundamental or primary conditions. Such cases were the anæmias, general debilities, and neuroses. In the same group might be included cases of heart overstrain in youth, with dilatation and apical and basic murmurs. In such cases digitalis was useful, with, of course, prohibition of the cause. In organic cases he thought nothing should be done for the heart directly unless there was evidence of insufficiency. Especial care should be taken to remove all cause of strain, both direct and reflex, especially digestive troubles, which were often erroneously attributed to the cardiac lesion. Of all the lesions aortic stenosis, in his experience, least required therapeutic interference when there was not cardiac insufficiency. It was extraordinary the amount of stenosis which might be present without apparently disturbing the individual. When aortic stenosis was accompanied by incompetence the conditions, as a rule, were different. He did not find digitalis applicable in all cases of double aortic lesion with want of compensation. He did not think with regurgitation digitalis was applicable when the pulse-rate was only from 60 to 70. Digitalis prolonged the diastole, and so led to greater regurgitation and over-distension of the ventricle. On the other hand, aortic regurgitation with a quick pulse, which could be slowed to 70 to 80, was benefited by digitalis. In cases of slow pulse he had found marked benefit from belladonna, probably from the drug relieving spasm in the smaller arteries and their capillaries, the spasm not only causing increased obstruction, but also anæmia of the heart muscle. He thought iodide of potassium, which produced considerable benefit in some cases, probably acted in the same way. In mitral incompetence digitalis acted admirably when the heart-rate was rapid. When the heart-rate was slow, iron and strychnine did better. In mitral stenosis the relation of heart-rate to treatment was the reverse of what it was in aortic or mitral regurgitation. A prolonged diastole was to be aimed at. When the heart was rapid good results might be obtained from digitalis. When anasarca was present it was better given hypodermically. He regarded, then, the heart-rate as the chief index to cardiac therapeutics. In addition, however, to rate, there was pulse tension. Where the tension was high, digitalis was contraindicated. His chief hope regarding strophanthus was that it might prove useful in cases where digitalis seemed to be contraindicated. He had had some cases which tended to encourage this hope.

Dr. CLOUSTON said that in certain cases of mania there was a very rapid heart action, running up to 130 or 140 per minute; the cause was probably central. He had had three cases of melancholia with a pulse never under 120. He had used digitalis with iodide and bromide of potassium in addition to the ordinary mental treatment. In other cases the opposite condition existed—stupor with œdema. Here cardiac tonics were useful. Cardiac derangements were very common in the insane.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Microscopic Sections of the Central Nervous System.—Topographical Anatomy of the Pancreas.—Cold-water Staroh as a Basis for an Injection Mass in Dissecting-room Work.

A MEETING of this section was held on Feb. 1st, Mr. FRASER, President, being in the chair.

Professor SYMINGTON gave a Microscopic Demonstration of a series of Sections of various parts of the Central Nervous System, stained by Golgi's method, which he had made last summer in Professor Kölliker's laboratory in Würzburg. Most of the specimens were hardened and stained by the

rapid method—viz., small pieces of fresh tissue were put into a mixture of one part of a 1 per cent. solution of osmic acid with four parts of a 3.5 per cent. solution of bichromate of potash. After being a few days in this mixture it was transferred to a 0.75 per cent. solution of nitrate of silver. All the sections were mounted in xylol balsam, and so far they had kept perfectly. He had found the method easier and more reliable than it was generally supposed to be in this country. He must, however, warn beginners that they need not expect to get such perfect pictures as those given in Golgi's great work, "Untersuchungen über den feineren Bau des centralen und peripherischen Nervensystems." The illustrations in this book were obviously diagrammatic and constructed from numerous sections.—Professor PURSER said that this method had entirely revolutionised our ideas of nervous physiology. Formerly it was thought that there must be complete structural continuity between cells for an impulse to pass; now it was believed that no cell was in structural continuity with another cell, but only in contiguity. Several difficulties occur in connexion with Golgi's method. The chief objection was that some cells stained and some did not. One could not say that where the staining stopped the process of the cell also stopped. It was necessary to work with young animals to get good results. His preparations were made from rats killed the day they were born.—Professor McWENNEY did not think it so very difficult a method. He did not find that it made any difference if he left the preparations in the solution some time longer than necessary. To clear the sections he first placed them in creosote, then in xylol and carbolic acid, and then in xylol. Finally, he mounted in Canada balsam, without using a cover glass. He found that there was a tendency to the deposit of a coarse granular precipitate on the physiological surface of the section.

Professor SYMINGTON read a paper on the Topographical Anatomy of the Pancreas. He had investigated the subject by hardening the abdominal viscera *in situ* by the injection of a 1 per cent. solution of chromic acid. The results differed in several respects from those of His. He thought that the pancreas was more easily investigated by the chromic acid method of His than by frozen sections.

Professor SYMINGTON also read a note on the use of Cold-water Starch as a basis for an Injection Mass suitable for ordinary dissecting-room work.—Professor CUNNINGHAM thought that for immediate use the addition of spirit to it was an improvement, as it could both preserve and inject at the same time.

SECTION OF PATHOLOGY.

Retro-peritoneal Rupture of the Duodenum. — Crystalline Branched Renal Calculus removed by Nephrolithotomy. — Fracture of the Sacrum.

A meeting of this section was held on Feb. 8th, Dr. J. A. SCOTT, President, being in the chair.

Dr. TAYLOR read a paper on Retro-peritoneal Rupture of the Duodenum. The patient was a drayman who was crushed between the point of the shaft of his own dray and the projecting hinder end of the shaft of another dray as he was walking backwards endeavouring to lead his horse through a narrow passage. He walked about half a mile to Sir Patrick Dun's Hospital, and asked the resident medical officer on duty to give him something to relieve his pain so that he might continue his work. No symptoms of severe internal injury being apparent he was allowed to proceed back to his work. The pain, however, increased considerably, and he went home and lay down. His condition became gradually worse, and next day he passed into a state of collapse, and died about thirty-six hours after the injury. The post-mortem examination revealed evidences of recent peritonitis in the region of the ascending colon and neighbouring coils of small intestine. Behind the colon were found considerable quantities of flatus and a watery faecal-coloured fluid. A rupture of the duodenum near the termination of its second stage was found. The edges of it were lacerated and somewhat swollen. It measured about an inch in its greatest diameter. There was considerable difficulty in finding out where the rupture had taken place, and it was only after a protracted search that its exact site was determined.—Dr. BENNETT thought, from the fact of the very rapid peritonitis, that there must have been an opening into the peritoneum. He had seen a case of retro-peritoneal urinary extravasation lasting six

weeks without producing peritonitis.—Mr. W. J. THOMPSON remembered a case which was taken into St. Vincent's Hospital. As there were symptoms of rupture the abdomen was opened. There was an escape of faeces, but no flatus. No trace of any rupture could be found, but after death a rupture the size of a threepenny bit was discovered at the junction of the second and third stages of the duodenum.—Dr. TAYLOR, in reply, said that as the subject of his paper showed no symptoms beyond what one would expect to find in any mild form of injury, and as he was himself anxious to go away, he was not detained. He had searched very carefully for any rupture into the peritoneum, but could find none. He agreed with Mr. Thompson as to the great difficulty of finding the rupture. When the abdomen was opened in the middle line it was extremely difficult to examine the duodenum. When he had the abdomen freely opened post mortem it took him nearly an hour to find the rupture.

Dr. C. YELVERTON PEARSON read notes of a case of Nephrolithotomy, and exhibited the Stone which he had removed from a man aged thirty-two years by the lumbar incision. The specimen was a branched calculus of oxalate of lime, weighing 200 gr. A great portion of its surface was covered with beautiful crystals of ammonio-magnesian phosphate.—Dr. ROCHE wished to know what were the points which would help to make the diagnosis between stone and tuberculous pyelitis.—Dr. BENNETT said that the diagnosis could be made by means of a microscopic examination for the tubercle bacillus. With regard to the structure of the stone he differed from Dr. Pearson, and thought it consisted of crystals of ammonio-magnesian phosphate.—Dr. ROCHE stated that he had the urine twice examined for tubercle bacilli by Professor McWenney, but none were found.—Dr. PEARSON, replying, said he attached great importance to the presence or absence of tubercle bacilli in making a diagnosis. He thought it was very rare, however, to have tuberculous disease of the kidney without having it also in the genital organs.

Dr. E. H. BENNETT exhibited a United Fracture of the Sacrum, in which the line of fracture was oblique. The lower fragment, unlike the transverse fracture of sacrum, was displaced upwards and to the left. Dr. Bennett discussed the question as to whether the injury in this case had been caused by a violent kick delivered from behind with the right foot.

THE HUNTERIAN SOCIETY.—The seventy-sixth annual general meeting of the Hunterian Society was held at the London Institution on Feb. 13th, Mr. Charters J. Symonds, president, being in the chair. Mr. Thomas Rushbrooke, M.A., L.R.C.P., &c., was proposed for election as an Ordinary Fellow. Mr. Cotman and Dr. Arnold Chaplin were appointed to act as scrutineers of the ballot. The report of the council for the past year was then read by the senior honorary secretary, Dr. Hingston Fox, and adopted upon the motion of Mr. Cotman, seconded by Dr. F. J. Smith. The financial report and balance sheet and the report of the Library Committee were read and adopted. It was proposed by Dr. A. T. Davies, and seconded by Mr. Cotman, that a hearty vote of thanks be tendered to the president for his valuable services during the past year, which had contributed so much to the success of the society. It was proposed by Dr. Pitt, and seconded by Mr. Ratter, that the thanks of the meeting be accorded to the vice-presidents, honorary treasurer, and honorary librarian for their services during the past year. A vote of thanks was passed to the council, the honorary secretaries, and the auditors. A ballot was then taken and the following gentlemen were appointed officers of the society for the ensuing year:—President: Charters James Symonds, M.S., M.D. Vice-presidents: Henry J. Thorp, John S. E. Cotman, R. Hingston Fox, M.D., and T. Mark Howell. Treasurer: F. Charlewood Turner, M.D. Trustees: H. I. Fotherby, M.D., and F. M. Corner. Librarian: Arthur T. Davies, M.D. Orator: G. Newton Pitt, M.D. Secretaries: T. H. Openshaw, M.S., and Fred. J. Smith, M.D. Council: Sir Hugh R. Beevor, M.D., T. H. Arnold Chaplin, M.D., Louis A. Dunn, M.S., Hope Grant, Francis R. Humphreys, Patrick Manson, M.D., John W. Oliver, M.D., George W. Potter, M.D., Henry J. Sequeira, St. Clair B. Shadwell, R. G. Tatham, and John F. Woods. Auditors: F. Gordon Brown, Hope Grant, Francis R. Humphreys, and Thomas Glover Lyon, M.D.

Reviews and Notices of Books.

An American Text-book of Gynecology, Medical and Surgical, for Practitioners and Students. By Various Authors. Edited by J. M. BALDY, M.D. With 360 Illustrations in text, and 37 coloured and half-tone Plates. Philadelphia: W. B. Saunders. 1894.

THIS text-book has been prepared by various American authors, all of whom are teachers of this branch of surgery in leading medical schools and hospitals, with the view of presenting a picture of gynecological surgery and treatment as they are practised in America. The work is essentially of a practical character, and is intended to be a working text-book for physicians and students. The list of authors consists of ten names—Drs. Baldy, Byford, Cragin, Etheridge, Goodell, Kelly, Krug, Montgomery, Pryor, and Tuttle. It is stated in the preface that the work embodies as nearly as possible the combined opinions of all the authors, although it is understood that each individual author must be free from absolute responsibility for any particular statement; the editor states that all extraneous matters and discussions have been excluded, and that he has attempted to allow nothing unnecessary to cumber the text, which he claims as thoroughly up to date. In reading this, as is the case with many similar American text-books, it strikes the English reader as being wonderful that patients should not be unwilling to submit to examination on some of the complicated couches, or, rather, so-called "chairs," such as the Indianapolis gynecological chair (Fig. 3). As a matter of good taste, we are ourselves inclined to think that, if it is considered necessary to figure the proper position for the dorsal examination, the genu-pectoral position, the lateral position, as well as the lithotomy position and the position of the patient on Trendelenberg's table, the necessary information might be conveyed by diagrams and descriptions rather than by actual photographs of naked women in these various positions. In the chapter on the Technique of Gynecological Operations a good deal of space is devoted to a description of the procedures necessary to render the hands of the operator aseptic, and to a description of the other precautions which it is the duty of those engaged in gynecological operations to observe. But we think it is a pity not to distinguish between what is really essential and what is not, for the more complicated the system the less likely is it to be practically carried out. Thus what is the use of advising gynecologists to avoid touching unhealthy or suppurating wounds, when they are daily making vaginal examinations by which the hands are necessarily frequently contaminated with all kinds of septic matter? A typical instance is the vaginal examination of an advanced case of cancer of the uterus. And, again, we do not see that it is of much practical use to advise operators only to wear gloves that can be washed. All such advice tends to divert attention from what is essentially necessary in order to avoid conveying septic infection, whether in the case of midwifery or of operative work. This we take to be the most thorough cleansing of the hands and nails with soap and water and a nail-brush, followed by thorough disinfection in a 1 in 1000 solution of corrosive sublimate immediately before touching the patient. The account given of the plastic operations required for ruptures of the perineum is clear and easily followed. It is noteworthy that the author of it is not greatly impressed with the advantages of the flap-splitting operation except in a limited proportion of cases. As regards the radical treatment of carcinoma of the cervix, in those cases which appear to be not too far advanced for operation the authors prefer total extirpation to the supra-vaginal amputation, on the ground that it is the more thorough of the two operations and

because they think the operator cannot tell whether the cancer is limited to the cervix or has extended to the body of the uterus. The question as to which is the better operation is a very difficult one, and it can only be settled by comparing a large number of cases in which extirpation has been performed with a large number in which only the supra-vaginal amputation has been performed, the disease being in an early stage in both sets of cases, and seeing whether recurrence is less frequent in the one series than in the other. One of the best sections in the book is that dealing with Fibroid Tumours of the Uterus. Speaking of the electrical treatment of fibroids the authors say "the percentage of cures about represents the possible percentage of errors of diagnosis." The account of the surgical treatment of fibroids by hysterectomy, with intra-peritoneal treatment of the pedicle, is excellent, and better than that to be found so far as we have seen in any other text-book. It appears to us that the operation (Daer's) by which all the uterus is removed, with the exception of the vaginal portion of the cervix, is preferable to the removal of the entire uterus in these cases. The steps of both operations are carefully described.

The book is well printed and beautifully illustrated, and will be more especially valuable as a work of reference for information on special points in the technique of many gynecological operations.

Edinburgh Hospital Reports. Published under the supervision of the Editorial Committee of the Royal Infirmary, the Royal Hospital for Sick Children, and the Royal Maternity and Simpson Memorial Hospital. Edited by G. A. GIBSON, M.D., D.Sc., C. W. CATHCART, M.A., M.B., JOHN THOMSON, M.D., and D. BERRY HART, M.D. Illustrated with Coloured Plates and Engravings. Vol. II. Edinburgh and London: Young J. Pentland. 1894.

THIS volume sustains in every respect the position taken by its predecessor, which it resembles in arrangement of contents, the first part comprising contributions from present and past members of the Edinburgh School, with a short but useful index; and the second statistical tables of the patients under treatment in the wards of the Royal Infirmary and the Royal Hospital for Sick Children, Edinburgh, from Oct. 1st, 1892, to Sept. 30th, 1893. The papers deal with a wide range of subjects in various departments of medical science, and are so numerous that we cannot do more than refer to those which appear to us to be of the greatest importance. Dr. John Wyllie writes on the Diagnostic Value of Patterns of Abdominal Tumidity and of Visible Peristaltic Spasm in cases of Chronic Obstruction of the Bowels and Chronic Obstruction of the Pylorus. Dr. R. A. Fleming contributes some Notes on the Physical Examination of the Intestines by the Method of Combined Percussion and Auscultation. Dr. D. Noel Paton has a contribution to the Study of the Influence of Fever on Hepatic Glycogenesis. Dr. Muir writes on Suppurations in Internal Organs. One of the most useful papers is that by Dr. Claud Muirhead on the Treatment of Enteric Fever. We hope this has been reprinted, so as to reach a larger section of the profession than those to whom this volume, however excellent, can be accessible. Dr. Affleck supplies clinical notes on cases of Gastric Ulcer, and Dr. R. F. C. Leith writes on Acute Perforating Ulcer of the Stomach, with some comparative references to the chronic form. Professor Sir T. Grainger Stewart and Dr. G. A. Gibson contribute a paper on Bulbar Lesions in Graves' Disease: a contribution to the Morbid Anatomy of Exophthalmic Goitre; the former also gives a study of a case of Nervous Disease exhibiting some features not hitherto described. Dr. Gibson and Dr. R. Muir write on Cardiac

Fibrosis as a result of Coronary Obstruction; Dr. J. Thompson on two cases of Valvular Heart Disease resulting from Fœtal Endocarditis; Dr. James Carmichael on Congenital Heart Disease—patent ductus arteriosus—Mitral Stenosis; Dr. James Mackenzie on Tricuspid Stenosis; Dr. Gibson on the Diagnostic Signs of Incompetence of the Pulmonary Valve. Dr. Lockhart Gillespie gives the cases of Organic Cerebral Disease admitted to the medical wards of the Royal Infirmary during the years 1892-93; Mr. Mowatt and Dr. Abernethy give the results of treatment in the ward for acute nervous diseases during the past year. Amongst the surgical contributions are Hints and Suggestions on the Practice of Surgery, and on the Intra-peritoneal Ligature of the Iliac Arteries, with notes of a successful case, by Professor Thomas Annandale; Practical Observations in Surgery, by Professor John Chiene, continued from the first volume; Notes on Operative Surgery, by Mr. Rutherford Morrison; on the Electrolysis of Vascular Tumours, by Dr. John Duncan; Tuberculosis of the Tunica Vaginalis Testis, with a clinical and pathological report of two cases, by Mr. Harold J. Stiles; Excision of the Ankle by External Incision, by Dr. James W. B. Hodsdon, also a case of Double Amputation for Senile Gangrene; the After-results of Simple Separation of the Epiphyses, by Mr. Charles A. Sturrock; and Notes on certain Groups of Cases of Surgical Disease, by Dr. Kenneth M. Douglas. Professor A. R. Simpson writes on Cancer in relation to Proliferating Ovarian Cystomata; Dr. D. Berry Hart, on the Pathological Classification of Diseases of Women with a Plea for a Revision of Current Views; and Mr. John Orr, on Abdominal Palpation and Auscultation in Obstetrics. The plates and figures in illustration of the text are clear and well executed.

From the medical report by Dr. A. Lockhart Gillespie we learn that 4243 patients were under treatment in the medical wards, the percentage of mortality on the total number of patients discharged was 9.59 per cent. and the average stay in hospital 30.6 days.

From the surgical report by Dr. Kenneth M. Douglas it appears that 4342 patients were under treatment, that the percentage mortality was 4.08, and the percentage mortality arising from 2469 operations was 5.4 per cent. This would be much diminished if septicæmia and erysipelas were banished from the wards—there are at least eighteen cases of the former recorded, of which sixteen proved fatal. In both these excellent statistical reports unnecessary labour is thrown on the registrars by the compilation of the column showing the average number of days spent by each group of patients in the wards, and it renders the table more confusing to the reader.

Mr. John Pirie supplies a short report of the cases treated in the Royal Hospital for Sick Children and in the Dispensary in Lauriston Lane.

LIBRARY TABLE.

Text-book of Hygiene. By GEORGE H. ROHÉ, M.D., Professor of Therapeutics, Hygiene, and Mental Diseases in the College of Physicians and Surgeons, Baltimore. Third edition. Philadelphia: The F. A. Davis Co.; London: F. J. Rebman. 1894.—While we fully admit the thoroughly reliable nature of the information recorded in this volume and the terseness and clearness of the literary style, we do not think the arrangement of the matter is always as happy as it might be, or the treatment of some subjects quite as full as they deserve. For instance, in the first two chapters the author deals with the hygiene of air and water and during the course of his remarks touches upon the analysis of these bodies, although a later chapter is specially devoted to this subject, in which the author is necessarily obliged to travel over some of the same ground again. In describing the different methods for the removal of sewage, while privies,

pails, earth closets, and the pneumatic system of Liernier are explained, water-closets are reserved for the chapter on "Construction of Habitations." Ventilation is dismissed much too briefly, and vital statistics are disposed of in thirteen pages; while quarantine is treated with extreme exhaustiveness. The remarks on School Hygiene are excellent; and in the chapter on Marine Hygiene several valuable food tables are introduced. The author is an advocate of earth burial and thinks that the possibilities of cemeteries becoming centres for the spread of infectious disease, or the means of polluting water supplies, have been much exaggerated. Against cremation he urges medico-legal objections and expense. At the end of each chapter is appended a list of questions, which will be found to be of service to students and others.

Diagnostik der Inneren Krankheiten auf Grund der heutigen Untersuchungs-Methoden. Ein Lehrbuch für Aerzte und Studierende. Von Dr. OSWALD VIERORDT. Vierte verbesserte und vermehrte Auflage. Mit 180 Abbildungen im Text. Leipzig: Verlag von F. C. W. Vogel. 1894. Preis 10 Mark. (*Diagnosis of Internal Diseases according to Modern Methods of Examination.* A text-book for physicians and students. By Dr. OSWALD VIERORDT. Fourth edition, improved and enlarged. With 180 illustrations in the text. Leipzig: F. C. W. Vogel.) London: Williams and Norgate. 1894. Price 10s.—This admirable and exhaustive work of the Professor of Medicine at the University of Heidelberg is already familiar to English readers in the translation of a previous edition published by Mr. Pentland. There is, then, no need to dwell on its special merits. It forms one of a large and increasing class of text-books, which are intended to systematise the study of clinical medicine. It is only when the reader comes to peruse such books that he can appreciate the notable extension made of late years in the methods and resources that are available to the physician in his investigation of disease. This extension has been mainly due to the aid derived from instruments of precision and the application of chemical analysis to the examination of secretions and other fluids. Professor Vierordt states in the preface that there is no chapter of the book which has not been revised in the present edition, and he justly draws especial attention to the number (and we would add the excellence) of the illustrations, many of which are coloured. He acknowledges his indebtedness in this respect to the excellent Atlas of the Clinical Microscopy of the Blood by Dr. Rieder, whilst the figures representing micro-organisms are credited to Herr Honsell, one of his students. The work is planned on comprehensive lines, and we have failed to detect any omissions of importance in its very complete scheme. It is, in brief, a book which cannot fail to be of the greatest utility, not only to the clinical student, but also to the teacher and to the practitioner of medicine.

Bégaiement et autres Défauts de Prononciation. Par le Dr. CHERVIN, Directeur de l'Institut des Bègues de Paris. (*Stammering and other Defects of Utterance.* By Dr. CHERVIN, Director of the Paris Institution for the Treatment of Stammering.) Paris: Société d'Éditions Scientifiques. 1894.—About the year 1846 the author's father devised a method for the relief of stammering, based essentially on the cultivation and maintenance of due coordination between the nervous centres and the vocal organs. His analysis of the act of phonation recognises three separate periods or stages—viz., formation of ideas; putting of the ideas into words; and, lastly, vocal utterance of the words. Stammering may be caused by failure in any one of these three, but principally in the third. Dr. Charvin's course of treatment is continued for three weeks, the first being devoted to such vocal exercises as do not involve stammering, and to the cultivation of a methodical regular respiration. All this time the pupil is bound to absolute silence, except while practising with the

teacher. During the second week ordinary conversation is permitted, but only in a very slow, somewhat drawling manner, incessant attention being given to the respiration and the orderly movements of the tongue and lips. The division of the syllables must be carefully observed, but without interruptions or jerkiness. In the third week these aids are partially dispensed with, and a natural, easy diction is practised. In 1874 this method was favourably reported on by a Commission of the French Academy of Medicine. Dr. Chervin strongly opposes surgical procedures and hypnotism. Stammering (or rather stuttering) is much more common in males than in females, but this order is reversed in the case of lisping (*blésité*), or the faulty pronunciation of certain consonants. It seems that in French there are at least fourteen words denoting this condition. It is not due to organic causes and yields to the treatment already described. The book well deserves the attention of sufferers from these complaints.

Klinische Abbildungen. Sammlung von Darstellungen der Veränderung der äusseren Körperform bei inneren Krankheiten. Herausgegeben von Dr. H. CURSCHMANN. 57 Tafeln in Hellogravüre. (Clinical Appearances Illustrated: Changes of Configuration produced by certain Internal Diseases. Edited by Dr. CURSCHMANN of Leipzig. 57 Photogravure Plates.) Berlin: Julius Springer. 1894.—The majority of these plates represent visible deviations from normality produced in the living subject by diseases of the nervous system. Some of them contain several figures showing the consecutive stages of a given act or movement. Thus Nos. 8 and 9 consist of eleven figures representing the transition from the reclining to the erect posture in a case of infantile dystrophia muscularis progressiva. No. 11 has two views (side and back) of the same disease in a man aged twenty-two years. No. 10 shows the pseudo-hypertrophic form in a boy aged eleven years. Nos. 18 to 23 represent syringo-mylitis; some of them show full length figures, others are restricted to the head and shoulders and the hands. Plates 28 (three figures, three-quarter length) and 29 (hands only) illustrate athetosis. Plates 30 and 31 give four consecutive three-quarter-length views of the same person, showing the position of the head and the successive facial efforts during speech in a case of sclerosis multiplex cerebro-spinalis. Plates 41, 42, and 43 represent Basedow's disease (exophthalmic goitre). The last of the plates shows pseudoleukemia lymphatica in a boy thirteen years of age, whose axillary glands, and more especially those of the left side of the neck, are enormously enlarged. All the plates are most effective both in execution and in selection of subjects. A copious explanation, in German, accompanies each of them. No. 27, representing paralysis agitans, is the only one which seems to convey but little information, as was perhaps unavoidable from the nature of the case. The plates and explanatory text, bound together, form a substantial and handsome volume. The plates are also published unbound, so that they may be conveniently handed round among an audience.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held on Wednesday, Feb. 20th, at 5.30 P.M. Mr. George Pollock, the President, occupied the chair. The following resolution was unanimously passed: "The committee of the Association of Fellows of the Royal College of Surgeons of England beg to express their deep regret at the loss which the Council of the College and the profession generally have sustained by the death of the President, Mr. Hulke, whose conduct in his distinguished position has earned the respect of all the Fellows of the College." The honorary secretary was asked

to forward the resolution to the Council of the College and to send a copy to Mrs. Hulke.

The meeting had been summoned especially to take into consideration the resolutions which the Council of the College at their last meeting passed in answer to the request of the meeting of Fellows in January for the appointment of a joint committee of the Council and the Fellows to consider the question of obtaining a new Charter. In substance the reply of the Council was that there were objections to the formation of such a joint committee, but that they had appointed a committee to receive deputations from the Fellows of the College in reference to the subject of the resolution. The committee of the Association decided to urge the programme which they had recently put forward, and nominated twelve members of the committee and Association as a deputation to the committee of the Council. This concluded the business of the meeting.

THE PAY SYSTEM AT THE GREAT NORTHERN CENTRAL HOSPITAL.

THE annual meeting of governors was held at this hospital in the Holloway-road on Feb. 22nd, Mr. C. T. Murdoch presiding. The committee's report stated that the pay wards were opened on Oct. 1st, and that the committee, after careful consideration and full discussion of the subject with the medical committee, had taken means to restrict the use of these wards to patients of moderate incomes who were desirous of contributing to the cost of their maintenance while in the hospital. In order to protect the interests of medical men in private practice, the patients' circumstances were inquired into, a certificate signed by the ordinary medical attendant had to be produced, and full particulars of every application were considered by the house committee. The maximum payment was two guineas per week, and this might be reduced at the discretion of the house committee; it only met the actual cost of patients in these wards, and there was no intention of making a profit.

The CHAIRMAN, in moving the adoption of the report, said that at the present time the hospital had accommodation for about 100 patients and had cost nearly £100,000. A small number of "pay beds" had been provided in accordance with the constitution of the charity, to which they were obliged to conform, whatever their individual views might be. Moreover, in raising funds for the hospital it was clearly stated in all the public appeals that a certain number of "pay beds" would be established. These, however, bore but a small proportion to the free beds.

The report having been adopted, Dr. GLOVER moved: "That this meeting of governors of the Great Northern Central Hospital regrets the recent changes in the administration of the hospital, by which pay patients have been admitted to its wards to be attended gratuitously by the honorary staff, and is of opinion that such a system is not likely to conduce to the welfare of the hospital or the advantage of the poor, for whom such institutions exist, and should without further delay be abandoned." He believed that the opening of these pay wards was not only detrimental to the local practitioners, but would tend to reduce the subscriptions contributed by the public.

Mr. GRAHAM seconded the motion.

Mr. BURDETT then moved as an amendment: "That with the twofold object of loyally administering the affairs of the Great Northern Central Hospital on the lines of its constitution, and of reducing to a minimum the competition between the hospital and private practitioners, it is desirable that the system of pay wards now in operation be so modified that the patients in these wards may, if they desire it, be attended in the hospital by outside practitioners of their own selection; that the pay system, thus modified, be continued for an experimental period of five years; and that a committee of governors be appointed to prepare a detailed scheme on these lines, and to report to a meeting of the whole body of governors, to be convened for this special purpose in June next."

Dr. POTTER seconded the amendment.

The CHAIRMAN having stated that the committee and the members of the medical staff would regard the amendment as a vote of censure on them, it was put to the meeting, but only Mr. Burdett and Dr. Potter voted for it.

The resolution of Dr. Glover having also been lost, the meeting shortly afterwards separated.

THE LANCET.

LONDON: SATURDAY, MARCH 2, 1895.

ONCE more London is visited by an outbreak of this mysterious disease—the fifth in as many years. Few, if any, previous epidemics are recorded in which the country was visited in so many successive years. The epidemic last year was comparatively mild and half-hearted, but it has now suddenly assumed all the vigour of its earlier performances in 1889-90. Although isolated cases have been met with in London since November they were mostly mild, and showed little tendency to spread through a house and were accompanied by few complications. During the last week, however, a change has come over the scene. The disease has spread rapidly over the metropolis and many other towns, and rarely enters a house without attacking more than one of the inmates, and, most serious of all, unless the utmost prudence be observed bronchitis and pneumonia of a serious form are apt to supervene, and in not a few cases have proved fatal. We have spoken of the affection as a mysterious disease because, although it has been watched by a host of accurate observers—most of whom have had personal experience of its effects,—we are still in the dark as to its causes, as to the conditions which influence its outbreak in epidemic form, and as to the change of type from year to year which is such a singular characteristic of its natural history. Dr. CREIGHTON finds this change of type in previous epidemics clearly described by MOLYNEUX in the seventeenth century and by WARREN of Boston in the eighteenth, the latter stating in a letter to LETTSOM that the symptoms in two successive years were so dissimilar that it seemed as if two different diseases were in question. The Local Government Board report of Dr. PARSONS and the able monograph of Dr. RICHARD SISLEY both deal in a masterly way with the natural history of the disease and its mode of spread; and these and a host of other publications have detailed the clinical symptoms and the sequelæ of the disease. With regard to the symptoms, the most striking feature of the mass of literature on the subject is the variability of the symptoms and the absence of any constant characteristic. This applies even more markedly to the sequelæ, but the pulmonary conditions, which differ little from those excited by other causes, are probably the most common and next to them various nervous affections. Prolonged debility, muscular pains, and indefinite functional nervous symptoms grouped under the convenient term “neurasthenia” were particularly frequent; but except for the history of a previous attack of influenza there was nothing about the symptoms themselves to distinguish them from those met with in patients who had not suffered from influenza. So with regard to insanity. Undoubtedly an attack of influenza has in many cases brought about an acute attack of insanity, but in a recent discussion on the subject those best qualified to judge were of opinion that no form of insanity had come under their notice which was pathognomonic of influenza.

With the extension of work such as that of Dr. PARSONS and Dr. SISLEY much may yet be discovered as to the origin of the epidemics and the means of preventing them. The alleged discovery of a micro-organism as the cause of the disease has lacked general confirmation and has led to no fruitful developments. As to the question whether we have any effective prophylactic to protect the individual during an epidemic the reply must be in the negative. Quinine has been highly vaunted, but while by its tonic action it may help to resist infection, its action is far too uncertain and too occasionally successful to enable us to regard it as a specific antidote. During the first year much was heard—and smelt—of eucalyptus. Blotting-pads were saturated with it, hosts sprayed their guests with it as they entered the house, but influenza made its way into the houses that reeked of eucalyptus with as little ceremony as into those where things were left to take their course. We do know, however, that any depressing influences, such as a chill, indiscretions of diet, overwork or emotional conditions, especially dread of infection, not merely render a person liable to fall a victim to the complaint, but also tend to make the attack more severe, and common sense would suggest at such a time more than ordinary prudence in observing the laws of health. The rapid increase in the death-rate in the last few weeks warns us that the disease is not to be trifled with. There is this year a notable tendency to relapses, often accompanied with serious pulmonary symptoms, and the utmost caution should be observed before allowing patients to return to their ordinary occupations. By neglect or imprudence a trivial attack which would otherwise pass away in a few days may develop into a severe illness which may jeopardise life and incapacitate the patient from active work for many weeks.

DR. F. T. ROBERTS, in his Lettsomian Lectures on Combinations of Morbid Conditions of the Chest, easily makes good his contention that such combinations are very common and that their importance and significance are inadequately recognised. The error of fixing the attention upon one morbid state or one prominent clinical symptom is very general, and to immature minds and unskilled observers is practically irresistible; but we all need occasional reminders that there are no hard-and-fast lines in nature, and that the elaborate classifications and hard-and-fast distinctions so usual in text-books, though often practically useful, give an erroneous impression of a fixity and precision which as a matter of fact do not exist. Disease is not mathematical or mechanical. It is fluid, mobile, easily passing from one transition to another, incapable of precise definition, obeying general laws and definite principles, but not to be confined within the limits of rigid rules or unvarying formulae. Specialism in medicine is always open to the reproach that disease refuses to recognise the limits of the specialist's domain. Dr. ROBERTS wishes to utter “an emphatic protest against the absurd development of specialism in relation to this region—i.e., the chest—which at the present day is working so much mischief”; and he gives it as his opinion that “the practice of dealing with each thoracic organ as if it were entirely separate and distinct, or, still more, of making a

speciality of different complaints, is both dangerous and absurd." It is evident, we think, that any attempt to study pulmonary disease apart from morbid conditions of the heart must be doomed to failure; and to this extent, at all events, we entirely concur in Dr. ROBERTS'S *caveat* against excessive specialism. But we must beware of running from one extreme to another.

After a passing notice of the importance of conditions of the chest wall and diaphragm Dr. ROBERTS proceeds to discuss a group of cases characterised by a combination of conditions difficult to define, but of great practical importance. "In these cases the superficial structures are more or less wasted, it may be considerably; the chest walls are obviously rigid; localised pleuritic adhesions can be made out, it may be in several spots; there are no gross lesions to be detected in the lungs, but these organs are evidently wanting in normal elasticity and tending towards degeneration, perhaps also exhibiting limited areas of emphysema, or there is a suspicion of a fibrotic change here or there; sometimes there are indications of commencing atheroma of the aorta, or the heart is feeble in its action and is probably of actually small size." Everyone is familiar with these cases which, as the lecturer says, do not belong to the chronic emphysematous or phthisical groups, and are often, for want of a better title, simply labeled cases of "weak chest." The important practical point about such cases is that they do well by using suitable precautions and having an occasional change of climate; but that even a slight bronchial attack is a serious matter for them and that they die readily from pneumonia or other grave acute affection. The prognosis and treatment of such cases require to be regulated by a due recognition of the fact that symptoms trivial in themselves acquire a serious gravity when viewed in relation to this peculiar type of patient. Dr. ROBERTS protests against the crude and superficial way in which many of the laity talk of phthisis, as if the mere recognition of the bacillus explained everything. He points out the absolute necessity of recognising the numerous grave organic changes wrought by the disease, such as consolidations, tuberculous, inflammatory, caseous, or mixed; milky tubercles, diffused or in groups; softening of these structures; cavities, reparative changes, the formation of fibroid tissue, bronchial inflammation, compensatory emphysema, and the like. Cases of chronic pneumonia, in whatever way arising, "in time assume a decidedly complex character. The fibroid change is limited in most cases mainly or entirely to one lung, or a portion of it, which is thus hardened and contracted, the involved structures being rendered quite useless; it is also often accompanied with the remains of phthisical cavities, and still more frequently with dilated bronchi, while unaffected areas of the same lung, as well as the opposite one, become the seat of compensatory distension, which may ultimately terminate in true emphysema. There is an exceptional class of chronic pneumonic cases which may prove very puzzling. In these one lung is absolutely solid, either throughout or over a large extent, but instead of being contracted it is more or less enlarged. The opposite lung becomes greatly distended, and also in some instances the seat of dry bronchial catarrh; so that the general aspect of the patient, as well as the prominent symptoms may

resemble closely at first sight those of an extreme case of emphysema and bronchitis, with an asthmatic tendency."

Asthma and angina pectoris afford Dr. ROBERTS good instances of the necessity of a comprehensive view of chest ailments. In a large majority of cases asthma "supervenes upon distinct and obvious morbid changes associated with the chest, which tend to become more and more pronounced as the case progresses. The cases in which asthma occurs are usually more or less of the emphysematous and bronchitic type; but rigidity of the chest walls, adhesion of the upper part of the lung, and other factors are often of much importance in these cases in relation to asthmatic attacks." Angina pectoris "usually complicates more or less definite morbid conditions of an organic nature. Those which are most likely to be overlooked are atheroma or calcification of the aorta and coronary arteries, and cardiac degeneration not of a pronounced character." Dr. ROBERTS'S concluding remarks on the treatment and general management of combined chest cases are wise and judicious, but do not present any novelty. He is emphatic on the importance of recognising what may fairly be expected from treatment and what it is folly to attempt; on the necessity of wisely adapting our measures to acute conditions supervening on chronic; on the need for grappling promptly with grave conditions readily amenable to treatment—e.g., effusions into serous cavities; on the value of rest and the simpler drugs; on the impolicy of fussy therapeutics and routine symptomatic treatment; and on the wisdom of being on our guard in relation to new "cures" and vaunted specifics.

It is, we think, impossible to read these lectures without a heightened sense of the complexity of many chest cases, and the absolute necessity of viewing them in all their bearings and relationships before venturing upon either prognosis or treatment.

WE have frequently called attention to a subject which recent occurrences in India have again forced upon our notice—viz., the very serious amount of inefficiency caused in the European army of that country by the prevalence of a certain class of diseases. The Commander-in-Chief in India, speaking quite recently on the Cantonments Acts Amendment Bill in the Legislative Council at Calcutta, said that practically 50 per cent. of the strength of the army were admitted into hospital in the year 1893 for these diseases, and that he believed the record for 1894 would be found to be worse. There cannot be any doubt, therefore, about the extent of the evil. The Commander-in-Chief added that neither personally nor as representing the army was he in favour of the removal of what he believed to be most useful restrictions; but he considered that it was his duty to support the mandate of the House of Commons, however much he differed from the policy enforced. We have no sympathy with that class of people who, persistently shutting their eyes to the magnitude of the evil, have fanatically opposed every attempt to check or limit its spread by legislative means. We set aside the question of whether these attempts, either in this country or India, practically effected their purpose, as this touches upon contentious matter about which there may be room for difference

of opinion. For the moment we confine ourselves to the question of the principle involved. We hold that it is the duty of the State to do all in its power to check and mitigate the evil, for the same reason and on exactly the same grounds that the State recognises the dangerous nature of other contagious disorders and tries by every means in its power to check the spread of such a disease as small-pox, for example. We cannot shut our eyes to a fact that we encounter in the history of every past civilisation, and can any day see with our eyes in the streets of any city and large community at the present time. Prostitution forms a trade or calling which, under certain conditions, is a most dangerous one to the community at large. The results are not simply restricted to those who, by yielding to temptation, expose themselves to the risk of infection, but perfectly innocent and unoffending people in this respect are notoriously frequently involved in the consequences. In order to safeguard the public health against accident or injury we do not hesitate to impose laws and restrictions in the matter of dangerous trades and infectious diseases. The world cannot be governed on abstract principles of right and wrong without reference to the constitution and frailties of human nature; the conditions of society as it exists now, and probably always will as long as human nature remains what it is, must be taken into account. It seems to us ridiculous to characterise measures for the limitation of the spread of contagious disease as State regulation of vice, for they are nothing of the sort. Whether the measures that had been adopted have succeeded or failed, been adequate or inadequate for the end in view, the practical tendency of them was, it seems to us, to check indecency and open prostitution, to deter young, vain, and thoughtless girls from being led away by temptation and dissipation from fear of being discovered, and by affording succour and aid to those "unfortunates" who were diseased it placed them under conditions favourable to the access of kindness and moral influences, and in that way added to their chances of abandoning their mode of life. All this appears to us to be the very reverse of a State regulation of vice. With regard to the means by which the spread of venereal diseases can be checked, the question is admittedly one of great practical difficulty. The Contagious Diseases Acts hospital system in this country and the Cantonment Act system in India have not, it is urged, as a matter of statistics and experience, been productive of all the good that was anticipated; but that does not at all prove that they were inherently wrong. It only shows that they were inadequate to effect all they were intended to do. There are many reasons why this should have been so into which it is needless to enter now. Of one thing there can be no doubt — namely, that according to official returns the inefficiency in the army in India from these causes has greatly increased of late. The extensive prevalence of these diseases is a very serious matter, the consideration of which, however much it may be put off for the present, must ultimately compel attention. The voluntary lock hospital system is evidently not calculated by itself to effect much good, and sooner or later some additional practical means will have to be devised for dealing with this subject, based presumably upon the principle that those who are known to be suffering from a highly contagious

disease should not be allowed to follow a vocation which endangers all those with whom they consort. In the present state of the political temper any attempt of the kind would be but "ploughing the sand of the seashore," but we have confidence in time, reason, and common sense.

It may or may not be a matter for regret that the question of London's future water-supply will have brought to bear upon it the influence of party differences of opinion; it is, at any rate, not a question that will admit of precipitate action. The subject, especially in regard to increasing the supply and to the municipal acquirement of the existing undertakings, is being pressed home upon us at the present moment with a zeal which possibly exceeds wisdom, and which may possibly also be lacking the ballast which is the *sine qua non* of sound and healthy legislation. On the one hand, the London County Council have decided to apply for powers for obtaining additional supplies. Their case is that the scheme of a system of storage reservoirs, coupled with the proposal to abstract large additional quantities of water from the rivers, is not the proper method of meeting the future wants of London, and that any further capital expenditure on works in the Thames and Lea valleys should be regarded as of a temporary character, and should be restricted to such improvements as may be for the time indispensable; and finally, that the true solution of the problem is the obtaining of the necessary additional supplies from a purer source. On the other hand, there are the conclusions of the Royal Commission of 1892, which, seeing that they were based upon the evidence of leading experts in the engineering, geological, bacteriological, and chemical sciences, and upon the evidence of experience, cannot be ignored. On the question of the desirability of the acquirement and management by the municipal authorities of the supply of the "first necessity of life" there can be no divergence of opinion. The lesson taught on this head by the experience of Birmingham, Glasgow, and other large towns is conclusive. It may not follow, however, that the practical administration of water distribution will be any better for municipal control, except in so far as it will be influenced by public opinion; whereas at present the consumer is left largely dependent upon the resources and decision of private bodies. We know even in these days that although such matters of importance as highway maintenance, street lighting, and the removal of dust are in the hands of public authorities, yet in some cases their administration has fallen short of what the public have required in regard to comfort and even to health. It is, however, most probably the question as to what will constitute fair and reasonable terms for the acquirement of the present companies' undertakings which will give rise to the widest dispute and dissension, and which will be the chief source of delay before the transference of the water administration to the municipality becomes an accomplished fact. It is clearly a matter for arbitration which ought to be perfectly fair and open, and in which all the points in favour of either side should be considered by the arbitrators so that they may give both for seller and buyer a reliable and fair estimate.

What this estimate may be it is, of course, impossible to judge; but, even assuming that it is likely to be favourable to the purchaser—i.e., the public—it must necessarily mean a heavy impost upon the rates for some time to come. It will involve, according to the County Council's own estimate, a certain expenditure of £33,000,000, and when to this is added their proposal to obtain a fresh supply from Wales at an additional estimated cost of £20,000,000 the London ratepayer may well take breath. He may reasonably ask, Is the enormity of the proposed scheme consistent with our present needs, or is this gigantic financial undertaking an immediately necessary step? The conclusions of the Royal Commission, to which we have already referred, would reply distinctly in the negative, and the reports issued from time to time in the annual Blue-book of the Local Government Board by General SCOTT in regard to supply, and by Professor FRANKLAND in regard to quality, have to some extent anticipated these conclusions. The report of the last official year (1892-93) has been recently published, and the section relating to water-supply is dealt with in another column of our present issue, from which it will be seen that both the adequacy and the efficient purity of the supply are maintained according to the opinion of these experts.

The Royal Commissioners calculated that the present resources, aided by increased storage, would be sufficient "to supply thirty-five gallons a head to a population of 12,000,000, which is about 750,000 in excess of what the total population of Greater London, together with the outlying parts of water London, will have become in 1931 even if the ratio of increase in the decennial period from 1881 to 1891 is fully maintained." The conclusions as to its fitness for drinking purposes are couched in equally optimistic terms. Thus they say: "Having regard to the experience of London during the last thirty years and to the evidence given to us on the subject (which includes 'the unanimous testimony of medical officers of health, water analysts, bacteriological experts, and others'), we do not believe that any danger exists of the spread of disease by the use of this water, provided that the water is *efficiently filtered*, before delivery to the consumers." (The italics are ours.) That we do not go so far as to accept unreservedly the conclusions of this report may be gathered from an article on this subject in THE LANCET of March 10th and 24th, 1894, in which we traversed several vital points; but we may reasonably submit that the conclusions to which the Royal Commission came after a most careful, laborious, and prolonged inquiry deserve very serious deliberation before we are asked to embark upon an enterprise the avowed aim of which is admirable, but the immediate necessity of which seems to us to require further evidence. In the meantime we may urge again, as we have urged before, that, inasmuch as the purity of the present supply depends most seriously upon the efficiency of filtration, it is extremely desirable that provision should be made with not a moment's delay for an administration to fully secure and maintain such efficiency. In regard, however, to the powers which the County Council are seeking from Parliament, we doubt not the benefits of the scheme; but have the financial effects been really seriously considered?

Annotations.

"Ne quid nimis."

FEVER AND SMALL-POX HOSPITALS.

OUR issue of last week contains a letter from Dr. C. E. Matthews, who takes exception to our comments in a leading article, published in THE LANCET of Feb. 16th, on the subject of "Fever and Small-pox Hospitals." Dr. Matthews begins by stating that we express disagreement with those who seek to limit the power of diffusion of small-pox. We are not aware that we have done so. All we did was to point out that the evidence on which Dr. Matthews based his views as to a definite limit was not such as to warrant his conclusion. To quote Dr. Matthews' own words, he has laid it down that "the extreme limit of diffusibility" of the small-pox infection is "1000 ft." This is based on the negative evidence that whilst 1563 small-pox patients passed through his hospital in certain months of 1893, the inmates of a fever hospital and of the Darenth Asylum and schools, situated "about 1000 ft." distant, did not contract small-pox. We indicated that two points at least having an all-important bearing on the question had been ignored. One was the condition of the "school inmates" as to vaccination. Dr. Matthews answers that the inmates of "the institutions" referred to—three in number—were on about the same footing as regards protection from small-pox as the general public. But the speciality of "school inmates" is again ignored. The inmates of public schools are generally protected by vaccination to a degree of efficiency altogether unknown as regards the general public, and, being largely composed of young children, they afford a double test by reason of age, which is altogether special to them. If they are unvaccinated they fall an exceptionally easy prey to small-pox; if vaccinated they have had the benefit of the comparatively recent operation and, as the Registrar-General has shown, of a protection against that disease which is also altogether exceptional. Dr. Matthews wonders that we ask as to the vaccination of the school children, and yet he made it a point in his report to tell us of the fever patients, who likewise escaped, that "special precautions" were taken to transfer from London "only patients who showed evidence of previous vaccination." The fact that special precautions in the selection of these patients were deemed necessary indicates pretty well that the managers and their advisers were not content to put to the test the amount of protection against small-pox possessed by "the general public." The next point which we set out as having an important bearing on the case was the stage at which the small-pox patients arrived in the hospital, and we emphasised the fact that Dr. Matthews said nothing as to the proportion of convalescents to total small-pox patients. We had very good reason for indicating this further flaw in his evidence. In the first place, there is a very general conviction that it is acute cases of small-pox, and not convalescents, that give rise to the diffusion of the infection from the hospitals in which the patients are aggregated. Secondly, in the celebrated Fulham case, which was thrashed out before a Royal Commission, it was shown that, notwithstanding the admission of large numbers of convalescent small-pox patients, there was no evidence of the diffusion of the infection to houses around; whereas directly the admission of acute cases commenced there were "manifestations of excessive small-pox in the neighbourhood." And thirdly, we noticed that Dr. Matthews himself took pains to explain in his report that from June 29th, when the Lower Hospital was opened for the fever patients, the hospital as a whole "was used simultaneously for the reception

of convalescent small-pox and fever patients." (The italics are ours). He also pointed out that of the 1563 small-pox patients in question no less than 1552 were transferred from the hospital ships to his hospital, and he emphasises the peculiarity of his patients by pointing out that they had a fatality-rate of 0.32, or only $\frac{1}{31}$ th of that for the ordinary small-pox patients in the ships, including deaths at "the convalescent hospital." Why Dr. Matthews should, therefore, now tell us that the argument as to convalescence is "simply a begging of the question" we cannot understand. Under any circumstances we trust that we have answered Dr. Matthews when he asks, Why should the "question of vaccination and convalescence be used as arguments" in the matter? and that we have shown that the points to which we have adverted are of such importance as probably to govern the whole question at issue. So long as we have so much positive evidence in exactly the opposite direction we cannot accept a single instance of negative evidence and incomplete data as affording "sufficient evidence" for assuming that the diffusion of small-pox through the air does not extend to a distance of 1000 ft."

PAYING PATIENTS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

THE question of paying patients in general hospitals was distinctly advanced by the discussion at the annual meeting of the governors of the Great Northern Central Hospital, a report of which is published in another column of our present issue. Dr. Glover's motion—condemning the system adopted under which paying patients are attended gratuitously by the honorary staff and asserting that our voluntary hospitals are meant essentially for those who cannot pay—was not, indeed, carried, but it was significantly supported by independent governors and by the whole of the honorary staff that were present. It is understood that a very importunate canvass had been made by the committee, who only got 7 votes more than were given for Dr. Glover's motion. A motion by Mr. Burdett to throw the wards open to paying patients who might be attended by their own medical men received only 2 votes—those of the proposer, and the seconder, Dr. Potter. It was resented, too, rather warmly by the treasurer. The two points insisted on by Dr. Glover are unanswerable—first, that the hospital with its 155 beds is practically the only hospital in the midst of a population of between 300,000 and 400,000, and is too small for the demand of the classes for whom hospitals exist; and that therefore the appropriation of beds under such circumstances for patients who can pay or whose friends can pay for them is calculated to discourage subscriptions. The second point was that there was no precedent in any general hospital in London for placing paying patients on gratuitous terms under the care of the honorary staff. Mr. Burdett said that this was contradicted by the case quoted by Dr. Glover from THE LANCET of last week, in which a lady had been admitted into the wards of the Hospital for Women, Soho-square, to be attended by the honorary staff for a guinea a week against the testimony of her medical man. Though the committee have secured a majority at the annual meeting in favour of their new-fangled system, they cannot fail to see that it is distasteful to many of their subscribers and to their own honorary staff. It represents a new departure—an attempt to cater for another class than that for which hospitals exist. It will be time enough to undertake this new kind of business when they have met the wants of the really poor. It is pleasant to be able to say that in other respects the hospital is well managed and worthy of the support of charitable persons. In the out-patient department the numbers for 1894 were 25,083, being 1207 less than in the previous year. No doubt many were included in this number who should not be

hospital patients at all, but the reduction shows that the inquiry system in force has some effect.

EXPOSING AN INFECTIOUS PERSON IN THE STREETS.

AT Bow-street Police-court on Tuesday, Feb. 26th, Mr. W. E. Taylor of Kilburn was summoned before Mr. Vaughan by Dr. Allan, medical officer of health for the Strand district, to answer a complaint that, contrary to the provisions of the Public Health (London) Act, Sec. 68 (b), he had caused his servant while suffering from scarlet fever to walk from Kilburn to the office of the Metropolitan Asylums Board in Norfolk-street, Strand, on the evening of Saturday, Feb. 16th. After hearing the evidence of a clerk in the employ of the Asylums Board, who was in charge of the office when Mr. Taylor arrived with his servant, and of Dr. Stewart, of the South-Western Fever Hospital, the magistrate found the charge proved and inflicted a penalty of 40s. and costs.

OUR "GIDEON GRAYS."

THE rural practitioner's lot is, as we all know, a stern and, so far as emolument goes, a very inadequately rewarded one; but certainly he has his *revanche* at the hands of our best men of letters. In the few strokes of a master Sir Walter Scott introduces us to the country medical practitioner, than whom "no creature works harder or is more poorly requited, unless, perhaps, it may be his horse"—the type of a class "from whom," he adds, "Scotland reaps more benefit and to whom she is, perhaps, more ungrateful than to any other class of men, excepting her schoolmasters." Since "Gideon Gray" the world has had many portraits of the sagacious, skilful, self-reliant, courageous, and nobly philanthropic rural practitioner—none, however, that come so near that master-work as the "William Maclure" of the Rev. John Watson ("Ian Maclaren"). In a little volume of sketches of Scottish country life, a volume which in a few weeks has had a circulation of nearly 30,000 copies, he gives a series of singularly graphic pictures of the daily and nightly experience of this "doctor of the old school," and with true artistic instinct chooses the episodes which bring the virtues of the class most vividly into play. For dramatic power there are fewer finer situations in fiction than the night journey through the flood undertaken by Maclure and the eminent surgeon from Glasgow to perform laparotomy on a poor peasant woman, for whom a less scantily provided neighbour had subscribed to procure the intervention of the great expert. "Four times," we read, "they left the road and took their way over fields, twice they forced a passage through a slap in a dyke, thrice they used gaps in the paling which Maclure had made on his downward journey," until they reached the winter-swollen Tochty. "With the first plunge into the bed of the stream the water rose to the axles, and then it crept up to the shafts, so that Sir George [the surgeon, a fine character sketch of the late Sir G. B. Macleod of Glasgow] could feel it lapping in about his feet, while the dogcart began to quiver, and it seemed as if it was to be carried away by the mass of black water racing past beneath." The passage once made, thanks to Maclure's sturdy mare Jess, the cottage is reached and, not a minute too soon, the operation is begun, with a head unperturbed and a hand unshaken by the series of hair-breadth escapes just effected. The successful result and the noble generosity of Macleod, seconding that of Maclure, in the matter of the fee are told with a simple directness that implies a knowledge of similar occurrences in real life. Then, again, in illustration of the humour that coexists with his humanity and aids the practitioner in reconciling himself to his

stern lot, we would place Maclure's observations on the homœopathic medicine chest beside the most caustic remarks of Baillie Nicol Jarvie or Richie Moniplies. The doctor has been summoned by a dapper, self-sufficient stranger to attend his boy labouring under surfelt-colic, and has lost much valuable time in obeying the trivial call. "You see, Dr. Maclure," says the parental Hopps, "we're homœopathists, and I have my little chest here." "Let's see it"; and Maclure takes out the little bottles and reads the names. "Belladonna; did ye ever hear the like? Aconite; it covers a'. Nux vomica! What next! Weel, my mannie," he says to Hopps, "it's a fine ploy, and ye'll better gang on wi' the nux till it's dune, and gie him ony ither o' the sweeties he fancies." The character sketch of Maclure, however, culminates in the closing chapter, entitled "The Doctor's Last Journey," which for power and pathos surpasses anything recently given forth by the Scottish school of fiction. There is nothing in Barrie or Crockett to equal it, and the deathbed scene with the good doctor's incoherent wanderings back to his patients and to the more trying episodes of his dramatic career cannot be read with dry eyes. Such tributes as this of Mr. Watson to the heroism and nobility of which our "Gideon Grays" are the exemplars go far to compensate us for the unworthy success of "My Novel," in which the practitioner Squills is made ridiculous by his want of Latin, or for the more unworthy satire of "In a Children's Hospital" of the late Poet Laureate. The world is not slow to sift the grain from the chaff in contemporary literature, and apportion their respective places to the author who can recognise true merit under external roughness, and to him, on the other hand, who is so impressed by the shagginess of the outer coat as to have no thought for the noble heart that beats under it.

ELECTROCUTION.

IN connexion with the process of killing criminals by means of electricity—"electrocution"—our American brethren are becoming alive to the fact that a shock, or series of shocks, given to a man or an animal may produce all the appearances of death without actually causing death—that is to say, the animal may lie insensible for a time and yet recover. Hence the possibility that a criminal executed by the electrical discharge might not be killed, but might only be stunned by the shock administered. This fact seems to have been considered as a novelty on the other side of the Atlantic. Here it is a piece of information that has for a long time past been understood. It has been observed that persons stricken by lightning, and apparently dead, have recovered during blood-letting, and it is a well-known fact that some years ago a large dog was struck down with an electric shock derived from a Franklin battery in cascade; an operation was performed upon it while it was unconscious and apparently dead, and it afterwards made a good and rapid recovery—an illustration of a painless operation with electricity as a mode of producing anaesthesia. It is also known that the observer who recorded the above, in using electricity as a means for killing animals intended for food, saw so many signs of recovery from the stroke after what at first seemed to be death that he abandoned the use of electricity for the object he had in view. Of course, a mistake arising from this circumstance and occurring in a human subject condemned to death would be amongst the most calamitous brutalities even an uncivilised community could be guilty of. It might lead practically to burying a man alive. Dr. Gibbons, an American writer who does not appear to have studied the experiments that have been made in this country, has been making research on the matter, and has actually come to the conclusion "that more murderers have paid the penalty

for their misdeeds on the dissecting-table than in the electric chair." He considers that a murderer named Taylor, who was presumed to be executed by electricity, was alive when supposed to be dead, and adds that "during my years of practice I have had three cases of persons struck by lightning who were supposed to be dead. They showed all the symptoms of death. They were entirely unconscious, and the accepted signs of life were suspended; yet they revived." It is said also that he—Gibbons—gave a convict named Wilson the offer that he would be present at his execution, and that after the convict had suffered the penalty of the law in the electric chair he would make an attempt to bring him back to life; but the convict demurred, on the ground that he would not care to expiate his offence a second time in the event of the complete success of the resuscitation—a very natural demurrer. The questions here considered have excited a singular inquiry in America. It has been asked, If a man is sentenced to death by the electric chair, and after the current has been applied the medical man in attendance pronounces him dead, should his friends revive him through any method, does he regain his liberty, must he serve the rest of his time in prison, or, we would ask, must he be executed again? The answer to this question by the *New York Sun*, as quoted by the *New York Medical Journal* of Feb. 16th, is as follows: "The execution under the present law in this State is not completed until the doctors have performed a necropsy. In other words, the doctors are executioners. After they have cut up the criminal there is no doubt about his being dead." "This has an ugly sound," says our medical contemporary, "but who can demonstrate that the *Sun* is wrong?" We agree with our contemporary to a certain extent, for it would certainly be very wrong if members of our profession, engaged naturally and honourably in the art of saving life, were brought to be employed as the final executioners by the work of the scalpel on the dissecting-room table. It is time that the whole profession of America should raise its voice against a possibility so awful, so dangerous to civilisation in general, and to one of the noblest professions in particular.

CONVICTIONS FOR DRUNKENNESS.

UNDER the title, "Drunkenness (England and Wales)," a return has just been issued by the Home Office showing the number of convictions for offences under the several enactments against drunkenness committed in England and Wales during the year 1893. The aggregate number of these convictions shown in the return is 153,072, being in the proportion of 5 per 1000 of the population of England and Wales enumerated in 1891. It should be noted, however, that there are blank returns for the three boroughs of Newcastle-upon-Tyne, Barnstaple, and Carmarthen; no explanation of this omission is given in the return, although it appears impossible to assume that no conviction for drunkenness occurred during the year in any of these towns. It is well to bear in mind that local convictions for drunkenness do not necessarily bear any constant relation to the local prevalence of drunkenness, since police regulations and their administration, and even the action of magistrates, vary widely in different localities. It may, at the same time, not be without interest to point out the extremely wide variations between the proportions of these convictions in different parts of England and Wales. It may first be noted that while the convictions were equal to 5 per 1000 of the population in England, they were 7 per 1000 in Wales. Speaking generally, the main excess of convictions both in England and Wales occurred in the towns, and was not by any means invariably greatest in the largest towns. In the most thoroughly rural counties, such as Bedford, Berks, Buckingham, Cambridge, Essex, Hertford, Huntingdon,

Oxford, Somerset, Suffolk, Norfolk, Sussex, Westmorland, and Wilts, the convictions did not number 3 per 1000, and were in many cases under 2 per 1000. The county of Salop, also mainly rural, forms, however, a striking exception, as the proportion of convictions was 7 per 1000, and equal to the proportion in Wales, where the high rate appears to be due to the prevalence of drunkenness among the miners of South Wales, as the rate among the population of nearly half a million in Glamorganshire was no less than 12 per 1000, while in North Wales the proportion did not exceed 5 per 1000. When we come to examine the returns from the various boroughs and to calculate the proportions of convictions to the population, it is impossible not to be startled at the extent of the differences and to wonder whether these proportions give any real indications of the varying proportions of prevalent drunkenness, and if so, how such local variations are to be explained. The proportion of convictions was under 1 per 1000 in Norwich and Coventry, and under 2 per 1000 in Bradford, Colchester, Peterborough, Tiverton, Banbury, and Winchester. Within the Metropolitan Police District, having a population of more than 5,500,000, the convictions averaged 5 per 1000; while the proportions in the other largest towns were Liverpool, 14; Manchester and Salford, 11; Leeds, 4; Sheffield, 3; Bristol, 5; Leicester, 4; Nottingham, 5; and Sunderland, 7. The county of Durham shows among the miners a similar excess to that noticed in the case of Glamorganshire, the proportion being 14 per 1000, while in Hartlepool it was 15, and in the city of Durham 16. Among the smaller towns the following excessive proportions may be noted: Blackpool, 12; Bath, 11; Wakefield, 10; Berwick-upon-Tweed, 12; Grimsby, 11; and Tynemouth, 28. Exceptional mention should be made of Newcastle-under-Lyme, which is debited in the return with 4758 convictions in a population of only 18,452, equal to 264 convictions per 1000 of the population, a proportion fifty-three times greater than the mean proportion in England and Wales. If this remarkable record of convicted drunkenness is not the result of a misprint it would be interesting to have some other explanation of the startling figures.

DEATH UNDER CHLOROFORM.

A DEATH under chloroform occurred recently at St. Bartholomew's Hospital. We have been favoured with the following particulars by the house-surgeon in charge of the case. The patient, a man aged forty-three, but looking much older, was admitted into St. Bartholomew's Hospital on Jan. 23rd for treatment of retention of urine caused by a stricture of the urethra. His general condition was bad; he had phthisis, both apices being affected. To pass a catheter it became necessary to anaesthetise the patient. Ether being contra-indicated by the condition of his lungs, chloroform was selected as being the best anaesthetic for the case. He took the chloroform badly, coughing and struggling a good deal. These complications rendered it difficult to keep the patient fully under the anaesthetic, but beyond these circumstances nothing occurred, and no really alarming symptoms were present. During the ensuing week the patient's condition remained very unsatisfactory, his temperature ranging at night to 102° or 103° F. On Feb. 1st, further operative measures being deemed advisable, chloroform was again required. The anaesthetic was given on lint, half a drachm being poured on it from time to time. The lint was held about four inches from the face and approximated by degrees. The struggling stage was again severe and prolonged, and, to avoid too much vapour being inhaled, the lint was repeatedly removed from the face. In about ten minutes from the commencement of the inhalation, about three drachms and a half of chloroform having been poured upon the lint and the patient apparently just

"going under," the temporal pulse suddenly failed and the patient grew pale. Respiration continued quite regularly. No radial pulse was to be felt nor was the precordial beat perceptible. The breathing remained regular for some two minutes, when it grew slow and laboured. The pupil of the left eye never dilated (the right eye was affected with old iritis). The usual restorative measures failed to save the patient. The necropsy showed extreme fatty degeneration of the myocardium. Tubercle existed in the lungs and kidneys. The careful report before us seems to indicate that this patient died from cardiac failure, no doubt determined by the depressing effect upon the heart of the prolonged struggling and the anaesthetic. The influence of dyspnoea and the cough—i.e., violent expiratory effects upon a fatty and therefore weakened heart—can readily be gauged, even without the primary depression of circulation usual under chloroform, and these appear to have been the factors at work in this case.

REPORTERS IN HOSPITAL WARDS.

THE daily newspapers in Brussels having from time to time published accounts of hospital cases supplied to them by reporters who in their search for copy had managed to get into the wards and operating theatres, mingling with the students and hearing the remarks of the professor, a strong feeling has been aroused in professional circles that some steps should be taken to put a stop to unauthorised communications of this kind appearing in the lay press. A meeting was therefore held a short time ago of the members of the various hospital staffs, under the presidency of M. van Schoor, at which it was resolved that all non-medical persons should be forbidden to go round the wards with the physicians or surgeons. One of the speakers remarked that he had already frequently turned reporters out of his wards, that one must have the courage to do so always and to turn a deaf ear to their requests for information, and that he had, moreover, intimated to such of his students as were in the habit of adding to their resources by writing for the papers that if ever they dragged his name before the public he would take very good care that they should no longer have the privileges of medical students.

THE HISTORIC WINTERS OF EUROPE.

FOR the duration and severity of its wintry weather the year now passing stands out as an *annus mirabilis*. Among its predecessors similarly notable was 1402, when the Venetian lagoons were frozen over for many weeks, and 1441, when Lionel d'Este entertained on the frozen Po a numerous company of banqueters. In 1493 not only the Venetian lagoons, but the port of Genoa, were one mass of solid ice—a state of things repeated in 1503, when Marseilles Harbour was also frozen. In 1594-95 the Mediterranean was frozen at Marseilles, and the Adriatic at Venice, and on Jan. 23rd and 24th, 1665, the Arno at Florence was a racecourse bearing not only the competitors, but innumerable spectators. In 1657-58 nearly all the Italian rivers were flooded with ice, and Rome was well-nigh buried under snow, while in Sweden King Charles X. crossed the Little Belt on foot at the head of 20,000 soldiers, though at the close of the march the ice gave way and some squadrons of cavalry perished. The winter of 1705 was terribly severe, as was also that of 1709—the year of the battle of Poltava, when for three months all the European rivers were frozen over, as well as those of North America, and at Paris the thermometer sank to 23° below zero. In 1740 there was constructed at St. Petersburg a vast ice palace, in front of which was planted a park of artillery made of ice, which, charged with shot, pierced at sixty paces an axis of 54 millimetres. In 1776-77 all the Italian rivers were frozen—a state of things repeated with still more severity in

1789-89, when the deepest lakes were floored with thick ice, and the temperature from the south to the north of Europe descended from 20° to 40° below zero. Again, in 1794-95 the French cavalry, by a brilliant operation on the frozen Texel, captured the Dutch fleet. Similarly severe was 1798-99, the thermometer registering 17° below zero at Lodi. The winter of Napoleon's retreat from Moscow was *an annus mirabilis* for rigour; that of 1819-20 was remarkable for many successive weeks of unbroken frost, as was also that of 1829-30, so disastrous to agriculture. In the Alta Italia in 1844-45 sentinels on duty were frozen at their posts, while hardly less painfully memorable were 1849-50, 1853-54, and 1867-68. Few can have forgotten the terrible winter of 1870-71, from which all Europe suffered, notably the troops besieging and defending Paris. Long and rigorous was the frost of 1879-80—the thermometer marking at Piacenza 18° below zero. Very heavy and persistent snowfall characterised 1887-88, while between that and the present the most severe winter was undoubtedly that of 1890-91.

THE VALUE OF BACTERIOLOGICAL EXAMINATIONS IN DIPHTHERIA.

DR. THRESH in his annual report for 1894, which we hope to notice more fully later, draws attention to the danger of placing too much reliance upon the negative results of bacteriological examination in diphtheria. Although, as Dr. Thresh observes, the discovery of the diphtheritic bacilli is sufficient to establish the diagnosis, their non-discovery does not justify the declaration of the case from which the membrane or secretion was taken as not diphtheria. We have already drawn attention to this question in the columns of THE LANCET, and we are glad to see that Dr. Thresh has also been led, as a result of his experience, towards the same conclusion. As he remarks, the utility of this method of diagnosis is limited, as the examination of the throat may at one time show no bacilli, while at another some may be detected. The result, no doubt, depends in a measure upon the manipulative skill possessed by the observer who procures the specimen, but certainly it appears to us that negative evidence should only be acted upon after repeated examinations. To say this, however, is equivalent to depreciating in some degree the value of the method from the standpoint of the diagnostician, inasmuch as a busy practitioner can but ill afford the time necessary for collecting and despatching specimens of membrane. These remarks, however, in no wise militate against the great value of positive results or the importance of repeated bacteriological examination where practicable.

"PHRENOSIS PELLAGRÆ."

IN medico-psychological classification this term is peculiar to Italy, as the thing signified is almost exclusively Italian. It signifies the mental degeneration due to pellagra, that erythematous affection so common in the delta of the Po and due to the consumption of unsound maize. Hebetude resulting in absolute dementia represents the initiatory and the closing symptoms of the malady, though there are cases in which hallucination, prompting to eccentric and even violent, not to say lethal, acts, is the outcome of the progressive degeneration of the sensorium. A grave recrudescence of this disease is reported from Rovigo, and the Italian Government is actively subsidising the provincial council in combating it on the one hand and adopting prophylactic measures on the other. The houses in which the victims to the "frenosi pellagrosi" are under treatment are being reinforced in *personnel* and in the alimentary as well as therapeutic means of cure; while all the syndics (mayors) of the towns have received an official circular indicating the hygienic,

and especially the dietetic, *régime* to be applied to the peasantry of the affected or threatened districts. "Locande sanitarie" (sanitary stations) are established at the more severely visited centres, amply provided with wholesome, sustaining food, and in addition to these the "cucine economiche" (cheap kitchens) are open to all who can afford to avail themselves of the same, or to whom the charitably disposed have furnished tickets admitting to them. The water-supply—an important factor in combating pellagra, particularly in the marshy levels of the Polesine—is being attended to in the communes, and the dwellings of the labourers ("case coloniche") are periodically inspected and put in order. All this, be it noted, is inspired by the exacerbation of a malady epidemic in that region, and illustrates once more the fatal policy of so many southern provinces in waiting till the enemy is attacking in force instead of forestalling him by carrying the war into his camp.

SELF POISONING.

MAX NORDAU in his interesting work "Degeneration," says that the poisoning of civilised peoples continues to increase. He is referring chiefly to alcohol and tobacco; but, as a correspondent reminds us in a letter which will be found in another column, there is a widespread and dangerous tendency among the public, especially during an epidemic like the present, to fly to the indiscriminate use of drugs. We are sorry to see in a lay contemporary a summary of treatment, not only hygienic but therapeutical, culled from various sources. Dover's powder and salicylate of soda are mentioned, and no doubt these are valuable drugs when employed under medical supervision; but we wonder how many people after reading the article we refer to will take either or both on their own responsibility, possibly with serious results. Our object is not to deprecate therapeutic medication, but only to warn the average citizen that if he thinks he has influenza he should call in his medical man to prescribe for him and not dose himself. Dover's powder is poison, and the responsibility assumed by our contemporary in recommending to its numerous readers the use of the powder indiscriminately is very considerable. Another paper enjoying a well-deserved reputation has published the recipes of three London physicians against influenza. No doubt this was well meant; but it would have been, had the recipes been correctly given, a dangerous inducement to mischievous self-drugging. As the doses, however, are all wrong the advice gratis may prove especially pernicious.

THE PURIFICATION OF THE AIR BY SNOW.

AFTER the hardships we have endured through the late severe frost—which we trust is now a matter of history, though its demise would appear to be slow—it is pleasant to reflect that in some respects possibly there were influences for good at work. Thus, it seems that the snow which fell during the severe season was characterised by an unusual porosity and a regularity of crystalline form, indicating its formation in a calm atmosphere, which endowed it with distinct purifying powers upon the air through which it descended. That the imprisonment of suspended impurities in the air in the pores of the falling snow takes place is clear from the following analysis of a sample of melted snow collected on Jan. 30th last in the quadrangle of Somerset House. It contained in grains per gallon, according to Mr. John B. Coppock, F.C.S.: total solid matter, 17.32; mineral matter, 6.25; carbonaceous matter, 11.07; free ammonia, 4.65; and albuminoid ammonia, 6.50. It is suggested that these results would indicate the value of a fall of snow, not only from an agricultural point of view, but also from a hygienic standpoint. We may accept the former as probable, since

¹ Chemical News, Feb. 22nd, 1895.

and especially the dietetic, *rigine*, to be upon the penantry of the affected or threatened in "Locande sanitarie" (sanitary stations) are within the more severely visited centres, supply patients with wholesome, sustaining food, and in addition with the "caccine economiche" (cheap tickets) as all who can afford to avail themselves of it, or to whom the charitably disposed have tickets admitting to them. The water-supply is another factor in combating pellagra, particularly in the levels of the Polesine—is being attended to in the and the dwellings of the labourers ("case colonie") periodically inspected and put in order. All this, we are inspired by the exacerbation of a malady against the region, an illustration once more the fatal policy of southern provinces in waiting till the enemy's force instead of forestalling him by carrying the war camp.

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J. Chemical News, Feb. 2nd 1880

obviously snow carries ammonia with it to the ground, where it may slightly enrich the soil, although it is to be observed that these nitrogenous impurities probably only exist in the impure air of towns; but, in regard to the latter hypothesis, we may reasonably, we think, entertain a doubt, inasmuch as the severe weather, accompanied as it was by heavy falls of snow, has unfortunately proved to be the forerunner of another serious outbreak of influenza and a decided increase in the mortality from diseases of the respiratory organs.

THE POWER OF THE ASSISTANT SANITARY INSPECTOR.

A CURIOUS, but not unimportant, case has just been decided by the magistrates of Portsmouth. It appears that on Dec. 15th, at about 9.30 in the evening, one of the assistant sanitary inspectors seized some meat exposed in a butcher's shop and took it to the medical officer of health for him to see before it was taken to a magistrate to be condemned. Whilst the medical officer of health was filling up the usual condemnation form the manager of the shop at which the meat had been seized took the meat from the cart and disappeared. The manager was subsequently prosecuted by the sanitary authority for impeding the assistant sanitary inspector in the execution of his duty. For the defence it was claimed by counsel that the meat was not lawfully in possession of the inspector, it having been proved that he was appointed by the authority as assistant sanitary inspector and not as an inspector of nuisances. The court adjourned for three weeks, and then gave a decision in favour of the defendant, holding that the assistant sanitary inspector had no power to seize. It appears from Section 189 of the Public Health Act that the sanitary authority has power to appoint only one inspector of nuisances, but may appoint as many assistants "as may be necessary and proper for the efficient execution of this Act" (Public Health Act, 1875). Should this decision be upheld in the higher courts it will seriously impede the inspection of meat, as an assistant-inspector may at any time be refused admission to slaughter-houses; and should such an assistant discover any meat exposed for sale he will seek the medical officer of health or inspector of nuisances instead of seizing the meat himself at once. Such a delay will give butchers ample opportunities to remove the meat, of which they will not be slow to take advantage.

THE CANAL BOATS ACTS.

In the twenty-third annual report of the Local Government Board, which has just been issued, will be found an interesting account by Mr. John Brydone, the inspector under the Acts, as to the condition of the canal boats during 1893. As an instance of the amount of work which a proper inspectorial control necessitates, Mr. Brydone mentions the case of one local inspector who saw but seven boats in the course of 119 visits to the waterways of his district, while two others are reported to have made no less than 68 and 138 visits respectively without encountering a single craft. It is satisfactory to note that Mr. Brydone has met with but few cases of overcrowding in the period under review ; and in reference to an inspection made by himself of the boats trading on the Medway he states that he was greatly pleased with the excellent condition of every one examined. Cases of infectious disease were apparently more numerous during 1893 than formerly, and they consisted of 18 cases of small-pox, 13 of scarlet fever, 10 of typhoid fever, 2 of diphtheria, and 1 of erysipelas. The coal strike imposed, Mr. Brydone states, great hardships on the boat population, as they had to maintain their horses as well as their families during the absence of work. In some districts it appears that boats were lying idle from

August to December. Mr. Brydone gives a list of the inspections made in the various districts and of the infringements of the Acts which were observed ; and he also gives an idea of the extent of the canal population by telling us that during 1893 there were 12,479 boats on the books of the registration authorities. In concluding his report Mr. Brydone affirms emphatically that the Acts continue to exert the most beneficial influence upon the boat population, and that they have operated in a high degree in reducing the number of women and children travelling with the boats. The women are, he reports, feeling more and more that the canal boat employment is not a fitting one for them, and that the cabin homes are not proper places for the rearing of young children.

THE BARKER ANATOMY PRIZES.

THE Royal College of Surgeons in Ireland offer two prizes of £26 5s. each, open to any student whose name is on the anatomical class-list of any school in the United Kingdom. The subjects for competition are two dissections—one of the kidneys, the other of the rectum—both as seen from behind, and prepared with a view to demonstrate the surgical relations of the organs, the exposure of the rectum having special relation to its removal by the trans-sacral method. The conditions of the competition may be obtained from Mr. J. Alfred Scott, M.D., F.R.C.S. Irel., Curator of the Museums, Royal College of Surgeons, Dublin.

PROFESSOR W. R. SMITH AND THE MEDICAL
SUPERINTENDENTS OF THE HOSPITALS OF
THE METROPOLITAN ASYLUMS BOARD.

In the *Times* of Monday, Feb. 4th, a brief report was published of a speech made by Professor W. R. Smith, M.D., at the meeting of the Metropolitan Asylums Board on Saturday, Feb. 2nd. It is there stated that Professor Smith concluded his remarks "by referring in strong terms of censure to the action of some of the medical superintendents of the board, who had communicated unofficial and unauthorised statistics to the leading medical journals." Being desirous of learning more particularly the circumstances which Professor Smith thus condemned, we wrote on Feb. 6th begging him to be so kind as to furnish us either with a copy of his remarks or a reference to any source where those remarks were fully and correctly reported, for we felt that if he were correctly reported Professor Smith had taken upon himself a task that sat exceedingly badly upon him in thus appearing as a sort of impeacher of his professional brethren, and we were anxious to give him an early opportunity of repudiating a wrong interpretation of his words. We received no reply, and the statement of the *Times* that Professor Smith had used "strong terms of censure" remained uncorrected. On Feb. 21st we again wrote to Professor Smith to remind him that so far he had not favoured us with any reply to our inquiry with reference to his speech, and on Feb. 27th we received a call from Professor Smith in reference to the matter. He then repudiated the word "censure" as applied to his remarks. This we are glad to learn, for it could obviously be no part of Professor Smith's duties to sit in judgment upon the attitudes of the medical superintendents of the hospitals under the jurisdiction of the Metropolitan Asylums Board. As a member of that board his public duties would make it necessary for him to take notice of any existent abuses. That is undoubted. But he must feel that it is no part of his duty to suggest the passing of votes of censure on his professional brethren, and we are glad to be able hereby to state that he did not intend to do so. We feel sure that Professor Smith, who himself fills several official posts, has no wish to add to the difficulties of other members of his

profession who are somewhat similarly circumstanced, or as an individual to usurp the functions of the Board, as would have appeared by the uncorrected report of his speech.

LORD ROSEBERY.

WE are glad to say that the Premier is now practically recovered from his attack of influenza, but the sleeplessness is still extreme, and so in some measure retards his progress to recovery. The attack has been from the first of an asthenic character, but not otherwise severe; there have been no complications. On Wednesday his lordship was able to see his private secretary for the first time since his illness and give him a few directions, but he is still quite unfit to transact any public business.

DIPHTHERIA IN LONDON.

DURING the two weeks ended last Saturday the deaths from diphtheria in London have maintained a steady decline on recent preceding weeks—namely, 27, or 4 below the corrected average, in the week ended Feb. 16th, against 29, 45, and 34 in the three weeks immediately precedent; followed by 29 last week, a number still below the corrected average by 2. Of the total of 56 deaths in the two weeks, 36 were in children aged from one to five years, this being 64 per cent. of the total. Of the 56, Poplar is credited with 6, as is also Camberwell, Greenwich with 5, St. Pancras and Battersea each with 4, Plumstead with 3, and Paddington, Islington, and Hackney each with 2 deaths. In Greater London in the fortnight there were 17 registered deaths from the disease, of which 8 belonged to West Ham and 2 each to Edmonton and Brentford districts.

"THE LAW'S DELAYS" IN VACCINATION.

IT has in time past been repeatedly, and with good reason, asserted that radical changes are called for in regard to the administration of the law of vaccination. One of the changes should assuredly be to vest local health bodies with the powers now vested in the guardians of the poor. An instance of the folly of the present system is recorded in the report of Dr. Wm. Brown, the health officer of the Stapleton urban district, as having occurred during the past year. Small-pox having been imported into the district, the patient was promptly removed to hospital on receipt of the certificate of notification. But meanwhile four persons resident in the invaded house had been exposed to the risk of the introduced infection, and the fact of their need of revaccination was accordingly at once made known to the Barton Regis Poor-law body as the "vaccination authority." Nevertheless, eight days later no action had been taken towards administering the needed prophylactic, because, forsooth, "it was not the month for vaccination." Dr. Brown hereupon himself, at his own cost, procured calf lymph and performed the operations, but too late to avert danger, as two of the four inmates contracted small-pox. Dr. Brown, like many another medical officer of health in like case, took upon him a duty imposed by law upon other authorities in his efforts to stay the spread of a disease by the best-known remedy, and one which could have been promptly administered in legal fashion by the officers of the board of guardians—it may be to the prevention, almost to certainty, of the two cases of small-pox which developed in the house. Ample powers are granted to Poor-law bodies for immediate action in emergent circumstances like the one in question; and the excuse for inaction which Dr. Brown chronicles only serves to exaggerate the neglect displayed. Only when the State remedies for the prevention and stay of disease are in the hands of the bodies charged with the function of safeguarding the public health can we hope to see prompt and efficient measures adopted. The need for prompt revaccination in such cases as

the above is often recognised by the sanitary authority which indemnifies the medical officer for carrying it out; and surely, if this be so, in time of epidemic it would naturally fall to the duty of the guardians of public health to supervise vaccination in general, as a potent safeguard to the community.

AN AMATEUR.

MISS MARGARET LUCY TYLER of Pymmes Park, Edmonton, is a fortunate woman. A baby of eighteen months being ill was confided to her untutored care; she prescribed for it and it died. We say that Miss Tyler is a fortunate woman, for although it appears that she meddled in the grossest way with what did not concern her, and with what she could not possibly understand, it does not appear that she actually gave the unfortunate child anything that could do it any harm. The evidence of the practitioner who had seen the child before it fell under Miss Tyler's medical care proved that the lady's prescriptions were harmless, and so saved her from an exceedingly awkward position; but we hope that the sad issue of the case will keep Miss Tyler from dabbling in medicine, lest her next appearance in a coroner's court be less agreeable to her.

THE DIFFUSION OF SMALL-POX.

SMALL-POX last week showed some disposition towards recrudescence in the metropolis, where 21 fresh cases were recorded, the major portion of them being, however, due to the renewed prevalence of the disease in the parish of Marylebone. The sanitary officials have been severely handicapped in that parish by the occurrence of cases in crowded localities and under circumstances which have put all their well-laid plans for dealing with the disease in the background, for the reason that occurrences have remained unnotified, and therefore unremoved, with consequent resulting danger to surrounding populations. The single death from small-pox in London last week was in an unvaccinated infant belonging to Marylebone. Elsewhere in the metropolis there is nothing to report of any moment. The removals to the institutions of the Metropolitan Asylums Board during the week numbered 19, against 21, 18, and 18 in the preceding three weeks; whilst at the close of the week the patients remaining under isolation were 75, the number having been steadily increasing since the week ended Dec. 22nd, when it was 15, four weeks later it was 32, and four weeks still later 67. In the remainder of the country the news is much more reassuring, there having been only a case or two at Birmingham and a few other midland towns, and three or four attacks and one death registered at Derby. In Lancashire we hear of a small invasion at Burnley and of a case or two at Liverpool; but the provinces just now appear to be fairly free from the disease. At Edinburgh some dozen cases have been reported in the second week of February. In Dublin in the same week some slight decrease in the admissions to hospital was manifested, these having fallen from 64, 69, and 60 in the preceding three weeks to 56, the discharge, however, showing no corresponding increase; whilst the patients left in hospital at the close of the week were 149 in number, in addition to 115 convalescents at Kilmainham, making a total of 264, a decline on previous totals. Of the 8 deaths in the week, 3 were in vaccinated and 3 in unvaccinated adults, no statement being forthcoming as to the condition as to vaccination of the remaining deceased persons.

THE next meeting of the Pathological Society of London will be devoted to a discussion upon the Bacteriology and Pathological Chemistry of Diphtheria and its Antitoxin. The subject will be introduced by Dr. Bertram Hunt. Several

the above is often recognised by the sanitary authorities, and indemnifies the medical officer for carrying out his duty. If this be so, in time of epidemic it would naturally be the duty of the guardians of public health to suppress vaccination in general, as a potent safeguard to the community.

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MISS MARGARET LUCY TYLER, of Pymme Park, is a fortunate woman. A baby of eighteen months was confined to her untutored care; the practitioner was called in, and the child died. We say that Miss Tyler is a fortunate woman, although it appears that she meddled in the process of what did not concern her, and with what she was not ably to understand, it does not appear that she was any unfortunate child anything that could do it any harm. The evidence of the practitioner who had seen the child fall under Miss Tyler's medical care proved that the prescriptions were harmless, and so proved to be an exceedingly awkward position; but we have no issue of the case will keep Miss Tyler from any medicine, lest her next appearance in a court be less agreeable to her.

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members of the society who have been working at the subject have promised to take part in the discussion.

At a meeting of the council of the Mason Science College, Birmingham, on Feb. 23rd, Mr. Oliver Pemberton, F.R.C.S. Eng., was for the third year elected President.

Pharmacology and Therapeutics.

A RETROSPECT.

THE therapeutics of the past year are remarkable for the enormous extension of serum therapeutics—i.e., the therapeutic use of bacterial products—and also for the increase of organic extracts. Perhaps, after all, our ancestors were not so very far out when they filled their books on natural history with long accounts of the medicines to be derived from various animals. To this day, in the peninsula of Athos, oil in which a new-born rat has been macerated to solution is esteemed a sovereign remedy for all pains; while in Russia tinctures prepared from toads and cockroaches are used by the peasantry with apparent success in the treatment of cardiac ascites and œdema. The list of coal-tar derivatives still lengthens, and in the new Year-book of Treatment we find eight new preparations.

A NEW MANUAL OF PRESCRIPTION.

America has long been famed for the "elegance" of her pharmaceutical preparations, and it should be the aim of every practitioner to make his prescriptions pleasant as well as scientific. A new Manual of Prescription Writing, published in Philadelphia, gives a number of wise cautions to the prescription writer. A number of prescriptions are given to instance incompatibles and a full dosage table is given in both metric and ordinary systems of measures and weights.

PATENT MEDICINES.

In the February number of the *Druggists' Circular*, a trade journal published in New York, there is an admirable little article upon a Bill recently introduced into the Lower House of the Alabama Legislature. This Bill makes it unlawful to sell or give away any patent or proprietary medicine unless the formula of such medicine is shown on the label of the packet containing the same. The *Druggists' Circular* does not seem to have much expectation of this Bill passing, but its introduction is a good sign of a more healthy feeling prevailing as to nostrums. The old adage, however, we suppose will still hold good, "Populus vult decipi, et decipitur," and if a similar Bill were introduced in this country we suppose there would be the same doubts as to its success. We have no intention of giving the proprietors of quack medicines gratuitous advertisement, but we do not think it right that the people of this country, "mostly fools" though they may be, should be given the opportunity of letting diseases run on till they get too far advanced for even relief, while they waste valuable time in buying and using aloes pills, yellow oxide of mercury ointment, iodide of potassium, and sarsaparilla or "electricity" at some 800 per cent. over cost price. The way in which religious papers advertise these wares is disgraceful, and so-called cures are generally certified by ministers of religion as being due to the effects of Podger's Pills or Hookey's Elixir. In a good many instances patent medicines are harmless, but there are two notable exceptions, chlorodyne and neuraline. The former is undoubtedly a very valuable preparation, and very dangerous if taken recklessly. It contains at least three most powerful poisons, and yet there is absolutely nothing to prevent anyone, however ignorant, from buying as much as he likes, while, were he to try to purchase the ingredients separately, the illogical Legislature would step in and prevent him. Neuraline contains, we believe, aconitine, perhaps the most virulent poison known, and the sale of this is safeguarded by no restriction whatever. As long as this kind of thing can go on the Sale of Poisons Act is simply useless.

HÆMOSTATICS.

A correspondent from Cannes informs us that he has tried with great success a new haemostatic—ferripyrrin—a compound of chloride of iron and antipyrin which has the great advantage of being non-caustic. He found that pro-

longed application by means of tampons left only a slight anæsthesia of the mucous membrane. The hæmostatic properties of antipyrin have also been made use of in uterine hæmorrhages by Dr. Labadie-Lagrave of l'Hôpital de la Maternité, Paris. The method used, as described by *La Revue Médicale* is as follows:—Equal parts of salt- and antipyrin are put into a tube and heated over a spirit lamp. The mixture soon melts into a liquid of a slight brownish colour, but must not be yet used, as at this stage it again rapidly solidifies, but heat must be continued until the colour is a pronounced brown. When this stage is reached the mixture is introduced into the uterus by means of cotton-wool on probes (care being taken that the liquid is not applied too hot). One or two applications are then made according to the severity of the hæmorrhage, which is said usually to cease very quickly. The operation is simple and free from danger, and has proved useful in cases of fungating endometritis, fibromyomata, and other tumours.

THE THERAPEUTIC USES OF STRONTIUM.

The *Tribune Médicale* in discussing the treatment of convulsions recommends strontium bromide internally. This salt, which is very soluble in water, has also been given instead of potassium bromide in epilepsy, in some cases of which it is better borne over a long period than the potassium salt. It has also been given in cases of dilated stomach with some success. The dose is five to thirty grains. The lactate of strontium has been found serviceable in checking albuminuria in cases of parenchymatous nephritis, but is said to be of no use in the interstitial variety.¹ Wood² found that strontium bromide was less prone than the potassium salt to produce acne and other disagreeable symptoms, but that it also had less control over the epileptic paroxysm.

THE ESSENTIAL OILS OF THE BRITISH PHARMACOPEIA.

In connexion with the proposed revision of the Pharmacopœia we have received a copy of a *brochure* by Mr. Helbing and Dr. Passmore, which contains the results of their experience of a large number of essential oils, from which they have been able to define the limits of variation in genuine oils of good quality. The results appear to be based for the most part upon physical tests, boiling points, freezing points, optical activity, &c. The chemical method recently suggested for standardising eucalyptus oil, depending upon the formation of eucalyptol phosphate on the addition of syrupy phosphoric acid, is not viewed with favour, and it is remarked that the method of fractional distillation is preferable and affords constant results. Some twenty types of essential oils are dealt with, each section concluding with practical suggestions bearing upon future pharmacopœial requirements. The essential oils belong, of course, to an important group of bodies in the Pharmacopœia, and there is little doubt that they have frequently been the subject of considerable adulteration, especially as the means of detection is not easily or conveniently carried out. The value of this contribution is therefore obvious, and the results are such as to merit the careful attention of those who are about to consider the much-needed revision of the British Pharmacopœia.

THE TREATMENT OF DYSENTERY.

Surgeon-Major S. T. Aretoon, of the 1st Baluch Battalion, L.I., sends us the following communication:—"I wish to bring to the notice of the profession a new treatment for acute dysentery. It is not original, but was obtained from a medical work in Persian. This is what the book stated (I translate):—"Treatment for acute dysentery: Reduce cinnamon bark to a fine powder, take one and a half drachms, mix it with a little "mullai" (the cream which gathers on the top of boiled milk after it is allowed to settle and cool), and administer in the morning on an empty stomach. The patient will be cured.' I have made a slight alteration in the above. The powdered cinnamon is given in drachm doses only, mixed with a few drops of water and made into a ball, which is given to the patient to eat, washed down by a mouthful or two of water. This quantity is repeated again in the evening, and so on, morning and evening, until a cure is effected. It is a little over two years since I started this method of treatment, and have cured about thirty cases of the disease. Often patients have been cured by only one or two doses of the drug, while my worst case was cured after five doses only, but a sixth was given to make quite sure. This method of treatment is vastly superior to

¹ Germain Sée and others.

² Therapeutics: Smith, Elder & Co., London, 1894.

the ordinary ipecacuanha treatment in that the medicine is pleasant to take and causes no nausea or vomiting, and acts, if anything, quicker and better than ipecacuanha. If the drug were given in drachm and a half doses as recommended in the book, most probably cures would be effected more quickly, but my method has been quite quick enough. The earlier the treatment is begun the quicker the cure."

THE LOCAL GOVERNMENT BOARD REPORT (1893-94) ON FOOD AND WATER-SUPPLY.

IN view of the unfinished labours of the Select Parliamentary Committee on Food Products Adulteration—which will probably soon be reappointed now that Parliament has met again—the section of the report of the Local Government Board relating to the working of the Food and Drugs Act possesses more than ordinary interest. At the outset it may be stated that the present Blue-book shows distinctly that very little improvement has been effected in this section of State administration since the issue of the last Blue-book. Indeed, there is a remarkable analogy in the conclusions between the reports of this and the last official year. Thus in the 1892-93 Blue-book we read that the extent to which the Acts were utilised varied considerably, while they were absolutely ignored in four administrative counties and twenty-seven boroughs, and in other districts with the population ranging from 299,000 to 88,000 the number of samples taken for analysis varied from 35 to 8. The Board expressed surprise in 1893 that "the local authorities were content to leave the inhabitants without that protection against fraud by the sale of adulterated food which the exercise of the statutory powers conferred on the authority would be likely to ensure. So in the present report we read that within the jurisdiction of the County Councils of Hereford and Montgomery, and of the town councils of sixteen boroughs not one sample was taken for analysis during the year, while in the jurisdiction of nine other county councils and in eighteen other boroughs, including largely populated districts, the number of samples taken "was so small as obviously to afford no security against adulteration." And yet it happens that 37,233 samples were examined this year against 29,028 last year, the result of this slight increase being to show an increase of adulteration by 0.5 per cent. This is one point surely which is worthy the notice of the Food Products Adulteration Committee. In a table in the appendix we find that whereas 240 samples were taken in a certain district, the result showing an adulteration of 26 per cent., in the district of an adjoining vestry, returning below 9 per cent. of adulteration, only twenty-four samples during the year were taken. It might well happen, therefore, that the administration of the Act is efficient at one end of a street and not at the other, or even on the one side and not on the other. This is not only against the interests of the public, but unfair to tradesmen. The inadequacy of fines and the leniency of magistrates formed another subject of comment in last year's Blue-book, and still we read in the report before us that "the fact remains that in the majority of cases the fine has not been sufficient to deter a dishonest dealer from repeating his offence." Here is another point which should receive the attention of those who are called upon to effect reform where it may be necessary. No article of food requires more careful consideration, perhaps, than milk, which, "as usual, formed the chief subject of analysis" during the past year, and out of 15,543 samples analysed no less than 2310, or 14.9 per cent., were reported against. With the exception of spirits, the extent of adulteration of which (chiefly with water) was 19.7 per cent., milk proved to be the article most extensively sophisticated. As, however, numbers of samples are reported as "poor," "very poor," "of doubtful genuineness," "probably slightly watered," it is probable that even this large proportion does not adequately represent the full extent of adulteration. With the view of placing the detection of watered milk on a more satisfactory basis Dr. Bell has made a great number of analyses, which included the milk of 273 individual cows and the mixed milk of fifty-five dairies. The results apparently show that while there has been a sensible improvement in the quality of milk since a previous investi-

gation ten years ago, as regards the proportion of fat, the non-fatty solids are in substantial agreement with the results obtained from the samples previously analysed. This improvement, we suggest, is not improbably due to improved methods of analysis for the more complete extraction of fat. An important observation is made in regard to the sale of milk on Sundays, on which day it is more frequently found to be watered than on week days, while again the milk supplied by contract to various large institutions is in many instances grossly adulterated. This attempt to evade the Act should be narrowly watched by the governing bodies of such institutions. Next to milk butter appears to be the subject of considerable adulteration (with water or foreign fat), the proportion of adulteration being 13.7 per cent., and in London, as in previous years, it is nearly twice as high as in the country. The adulteration of coffee has decreased sensibly; while in regard to other articles there is little important change to report except in the case of beer, the adulteration of which has diminished from 16.8 to 4.4, and in drugs from 20.4 to 11.3 per cent. Lastly, it appears that of the samples purchased privately 27 per cent. were reported against, or more than double the proportion of those purchased officially. This difference may be due to the fact that private purchasers will not incur the expense of analysis unless they have *prima facie* grounds for suspecting adulteration. At any rate, this is another fact which can scarcely escape the attention of those who may be led to recommend the revision of the Acts, especially in regard to the present system of inspection and the purchase of samples.

The recent Blue-book shows, therefore, that the defects of the present Act, in spite of having been indicated with emphasis from time to time in the Local Government Board reports, still exist; while it is important to observe that as the result of submitting a greater number of samples for analysis last year a higher percentage of adulteration has been reported.

Perhaps one of the most important statements contained in the Blue-book of 1893-94 in regard to water-supply is that relating to the quantity of water abstracted from the Thames by the metropolitan companies. It appears that the daily discharge of the Thames, including the amount withdrawn for water-supply, averages about 1,300,000,000 gallons, and that the maximum amount of water which the companies are collectively empowered to withdraw in twenty-four hours is 130,000,000 gallons, and from this it is concluded that the water daily extracted from the Thames for the use of the metropolis "is but a small fraction of the average amount of water discharged by the river." It must be remembered, however, that the quantity of water passing over Teddington weir varies enormously at different seasons. Thus, while in February, 1893, the average daily discharge was 3021.4 million gallons, the daily figures for September, 1893, averaged only 298.3 million gallons; while the lowest gauging occurred on Aug. 21st, when only 141.3 million gallons passed over the weir and 110 million gallons—nearly a half of the total flow—were abstracted for water-supply before reaching the weir. It was this fact which led the engineer of the London County Council to remark in a report¹ drawn up by him in 1891 that "it would be most dangerous to abstract any larger quantity." With regard to the quality of the Metropolitan water-supply, Professor Frankland's figures show that the Thames water distributed during the year 1893 was of a much better average quality than that sent out during the previous two years, although "it still fell short of that supplied during 1886 to 1890 inclusive." Speaking generally, the Lea water is superior to that of the Thames and the water in the upper reaches of the Lea is purer than that in the lower; but on the other hand it was found that the Lea water at the East London intakes contained twice as many bacteria as the Thames intakes, so that obviously the chemical quality of water is quite another thing from its bacterial quality. Professor Frankland's remarks upon the purifying influences of flow, insolation, efficient sand filtration, and of storage are in substantial accord with the conclusions contained in the report of the Royal Commission on Metropolitan Water-supply.² "It is gratifying to find," he says, "as the result of recent researches that the zymotic poisons are rapidly destroyed in running water exposed to sunlight, so that the most minute microscopic inspection of the water at the intakes of the various companies has hitherto failed to discover a single

¹ THE LANCET, Dec. 12th, 1891.

² THE LANCET, Sept. 30th, 1893.

boats. So far as invalids are concerned, the only route remaining that could be recommended was the second or eleven o'clock day service, when the passage could be effected in the big ships. Troubles, however, did not end here. Some weeks ago a very violent storm entirely destroyed the head of the eastern pier of Calais and carried away the lighthouse. Consequently, when the *Empress* was entering during a violent easterly gale an exceptionally large wave dashed her against the western pier, which in its turn was considerably damaged. It will be remembered that the *Empress* had one of her paddles smashed and was thrown on the sands, where her passengers in due course landed safe and sound. This has led to yet another restriction. The big ships are now not only withdrawn from all service after sunset, but they must no longer attempt to cross when there are easterly gales.

blowing, as the broken end of the eastern pier at Calais no longer affords sufficient protection. Nor is this all; some fishermen tried to bring into port an abandoned sailing-vessel, with the result that she was wrecked on the broken stump of the eastern pier. In a little while the wreck, beaten by heavy seas, snapped in two, and one half of the ship rolled over into the harbour entrance between the two jetties. The navigable space remaining was so narrow that the service of the big Channel steamers had to be abandoned altogether, no matter how favourable the weather might be. Fortunately the wreck has now been blown up with melinite, and the big ships are once more carrying passengers across.

From all this it will be seen that when advising patients how to cross, with the least possible exposure, the eleven o'clock day route can alone be recommended, and this only when there is no prospect of an easterly gale. For invalids such restrictions are really very serious. So far as the hale and strong are concerned the dangerous condition of the entrance of Calais Harbour need not be a matter of much concern. There are no rocks near Calais, and apparently the worst that can happen is that the ship might be stranded upon the soft sands and the passengers made to wait till the tide has gone down so as to land over the ship's side. Such an experience, however, while only constituting an exciting adventure to a vigorous traveller, might have very serious consequences for an invalid. It is therefore most urgent, not only from the general point of view, but more especially with respect to the many thousand patients who are yearly sent to winter abroad, that the entrance of Calais Harbour should not be allowed to remain in its present condition.

Of course, the vast harbour works, on which so much labour and money have been expended, include a new and better entrance; only this is the portion of the scheme which, instead of being first taken in hand, has been left to the very last. The eastern jetty is to be demolished and a new jetty built in its stead. The entrance will then be 430 ft. instead of 328 ft. wide. But, what is more important, the foundations of the new jetty will be perpendicular, with the woodwork on the inner side of the harbour. Ships will therefore be able to come up along side of the jetty without the fear of grounding upon its foundations. Further, the jetty, instead of running parallel with the western jetty, will widen out like a sleeve, thus facilitating the manœuvres of ships entering. Of this new jetty the foundations of the first half, that nearest to the shore, are completed, and the upper or wooden part is finished for only a quarter of the total length. For the remainder thirteen metallic caissons have to be sunk under water in the sands, which will then be filled with masonry and constitute the foundations. Eight of these caissons are already in position; but the thirteenth, which is double the size of the others and will serve as the foundation of the new pierhead, is by far the most important and difficult to place. It has been ready since last September; but, as a fortnight's fine weather is necessary to sink it in the sands, it has been impossible, as yet, to attempt the operation, and a favourable opportunity is scarcely likely to occur before May or June next.

Altogether, the new jetty will not be completed and the foundations of the old jetty dug up and cleared away for about another two years. Happily, so far as the running of the larger steamers between Calais and Dover is concerned, the completion of these works is not necessary. The entrance to the harbour will be safe for the largest Channel passenger steamers when protection from the easterly winds and waves is secured by the construction of the foundations of the new pierhead, and when the entrance is widened by the removal of the foundations of the old and broken pierhead. The remains of the old jetty will then serve as an effective protection till the whole of the new pier is constructed. It is thought that this much at least of the works will be done by next autumn. Patients returning to England next spring will have to suffer from existing inconveniences, but no effort should be spared to secure a safe entrance in all weathers into Calais Harbour for the big steamers, who will convey patients travelling south at the end of this year. By dealing with the two pierheads, the old and the new—removing the one, building the other—this security can be ensured, and the work can easily be done during the summer if sufficient energy and determination are displayed. The reputation and the material interests of the town of Calais largely depend on the successful fulfilment of this task.

MASON COLLEGE ANNUAL DINNER.

THE annual dinner in commemoration of the founder of Mason College (who was born on Feb. 23rd, 1795) took place on Saturday night, at the Great Western Hotel, Birmingham. Professor Clifford Allbutt, M.D., F.R.C.P., F.R.S., Regius Professor of Physic in the University of Cambridge, presided over a large gathering, which included the Mayor (Alderman Fallows), Sir Walter Foster, M.P., Mr. Oliver Pemberton (President of the College), Dr. J. Gibbs (Vice-President), and the other trustees; the Principal (Dr. R. S. Heath), the Dean (Dr. Windle), and the members of the College staff; and about forty medical men from Birmingham and the midland counties.

The loyal toasts having been honoured, "The Memory of the Founder" was drunk in silence.

The Chairman, in proposing "The College," spoke of the munificence of wealthy men who in the past had founded such colleges as theirs, and, in alluding to Sir Josiah Mason, said he considered him a very remarkable man, for the reason that he not merely devoted large sums of money to very interesting and useful purposes, but in the development of those schemes he followed the advice of others as well as his own opinion. He was not in any way wedded to the primary and original scheme upon which he founded the college, and he enlarged the scheme twice in the life of the college after its original foundation. In the first instance, he understood that Sir Josiah Mason's idea was that the college should be limited to the giving of a rather narrow technical education; that he thought, and thought quite rightly, that there was very great need for that kind of education in certain crafts. He, however, soon seemed to recognise the advisability of putting into the work a spirit of a broader kind, and consequently he developed the college and brought it under the terms of a university college. He (the chairman) ventured to suggest, although to give degrees was a matter of legitimate ambition, that they might call Mason College a university college independently of it. The giving of degrees was not really a definite mark of a university college; it was, he thought, a secondary matter entirely. He deprecated the idea of degrees being given because of their commercial value, and said they should only be regarded by their possessors as indicating a good and useful training. He considered it rather an advantage that a college such as the Mason College and those of Yorkshire, Lancashire, and Manchester, placed as they were, should have begun as technical schools. It was sometimes said the character of the teaching in a technical college must be something baser than that which began in large and abstract studies. But that was a point of view which was very much weaker than formerly, one from which he absolutely dissented, and one which those colleges in the provinces were strong witnesses against. They could not teach anything in general unless they began by teaching something in particular, and he did not think it mattered what they taught so long as it was taught in a university spirit. Touching upon the subject of degrees, the chairman deprecated their use as advertisements, and said they merely signified two things. They signified the grade of an interior function within the university, and, therefore, were a matter of internal convenience; and also indicated that the teaching in the school where they were given was free, and so long as their students had to be examined by somebody else their teaching was not free. To have to cut and dry a Birmingham examination to please a London examiner, or a Liverpool examination to please a Cambridge set of examiners, was fatal to anything like variety and freedom within the walls of those colleges themselves. Therefore he hoped on their own behalf most sincerely that the time would come when Mason College would be able to give degrees, not because they wanted them for advertisement, but because they wanted to indicate the kind of training to which their own people had been put. They might place the work of a college of this kind in three stages: first for adapting a man for the duties he had to perform; then to go on to a wider knowledge, to general cultivation of the mind; and, thirdly, the ideal that they might pursue knowledge entirely for its own sake—what Milton called "for the contemplation of the sweet countenance of truth," and that he would call illumination. If they got those three degrees, in fact, then he did not care much when the time came for getting nominal degrees, except that it would free them to give their teaching in the best way they could.

MASON COLLEGE ANNUAL DINNER

THE annual dinner in commemoration of the late Mason College (who was born on Feb. 23rd, 1786, and died on Saturday night, at the Great Western Hotel, London) was held on Saturday night, at the Great Western Hotel, London. Professor Clifford Allbutt, M.D., F.R.C.P., F.R.S., was the guest of honor, and was accompanied by a large gathering, which included the Mayor (Mr. Walter Foster, M.P.), Sir Walter Foster, M.P., Mr. Oliver Pemberton, President of the College, Dr. J. Gibbs (Vice-President), the other trustees; the Principal (Dr. R. S. Hutt), and the members of the College and about forty medical men from Birmingham and its counties.

The loyal toasts having been honored, "The late Founder" was drunk in silence.

The Chairman, in proposing "The College," paid tribute to the munificence of wealthy men who in the past had founded such colleges as theirs, and, in alluding to Sir Josiah Mason, said he considered him a very remarkable man, for that he not merely devoted large sums of money to interesting and useful purposes, but in the execution of those schemes he followed the advice of as well as his own opinion. He was not a mere benefactor, but a founder of the primary and original scheme, and he enlarged the college, and he enlarged the scheme. In the life of the college after its original foundation, in its instance, he understood that Sir Josiah Mason's idea of the college should be limited to the giving of a medical technical education; that he thought, and that he thought, that there was very great need for this education in certain crafts. He, however, soon recognised the advisability of putting into the hands of a broader kind, and consequently he developed it, and brought it under the terms of a university (the chairman) ventured to suggest, although it was a matter of legitimate ambition, that they should make Mason College a university college independent of the University of London, and not really a department.

Principal Heath, in responding, observed that they owed a great debt of gratitude to the universities, but the problem they had to face in a busy city like Birmingham was different *totò cœlo* from that of the ancient universities. They were in the middle of great industrial enterprise, and the training they had to give had to bear relationship to that industry. The quality of breadwinning demanded a great deal more serious attention from them than it did from the University of Oxford or Cambridge. At the same time, they had had pointed out to them how technical education was not inconsistent with a liberal education, and how a lofty ideal and a high plane of intelligence were necessary and also attainable, although their training had to bear close relationship to the practical issues of life. They had great cause for gratitude in having received considerable sums during the year from generous friends. In that respect the year had been a favourable contrast to many years that had preceded it. They had received this year no less a sum than £17,000. The late Alderman Avery left them by will £2000, and just recently that had been supplemented by a gift of £2000 from the executors of his estate. An endowment of £5000 for the maintenance of the physical laboratory had also been anonymously contributed during the year. To endow the new department of education for elementary teachers Mr. George Kenrick had conveyed to the council securities producing an income of £200 a year, and that had been supplemented by a further gift from Mr. George Dixon, M.P., of £1000 for the same purpose. Lastly, Mr. John Corbett of Droitwich had founded scholarships with a capital sum of £1000, to bear his name. That was very encouraging, and it was to be hoped that a tide had set in in their favour that would lead them on to fortune.

Professor Windle also replied. He said that in Birmingham they had nothing to complain of with respect to the clinical field provided for the students. In addition to the General and Queen's Hospitals, at which the ordinary course of instruction was followed, students were able to attend the Fever Hospital and Lunatic Asylum, which were corporation institutions, and also by the kindness of their staffs the Eye, Orthopædic, and Ear and Throat Hospitals, at which they were able to follow some of the more important special branches of the profession. Nor had Birmingham anything to complain of in the medical school. It provided at present more than 50 per cent. of the honorary and paid staffs of the hospitals, a fact which was an eloquent vote of confidence in the school on the part of the managers of those institutions. The presence of medical students, moreover, at the hospitals had a very important bearing on the prosperity, of those institutions. He thought it was hardly recognised what a difference it would make to the managers if there were no medical students in the city, and if the work which they gratuitously performed in the hospitals had to be carried out by paid officers.

Professor Lapworth proposed "The City," to which the Mayor responded.

Professor Barling gave the toast of "The Visitors."

Sir Walter Foster, M.P., in response, spoke of the educational facilities of Birmingham, which had been largely brought about by the munificence of its citizens. He trusted that the example set would be followed by others, for there was nothing a man could do better than distribute his wealth while he lived. He was glad to know that in Birmingham one of its foremost citizens had founded an institution by which a child could climb to the highest position of culture and learning, and having that heritage the need for leaving him piles of wealth was taken away. Referring to the medical school, from his position on the General Medical Council he was able to say that the high standard of passes for which the Birmingham Medical School had always been distinguished was maintained, and more than maintained. Although no longer directly connected with the school he was still deeply interested in its prosperity.

Mr. Oliver Pemberton, in submitting "The Chairman," said in him they had one of the most brilliant examples of the union of science with the practice of medicine.

The Chairman briefly replied, and the proceedings terminated.

AN APPEAL.

WE have received the following letter from Mr. Henry Morris. It has reference to a sad case which we also desire to urge upon our readers as an exceedingly deserving one. We have been able to be of some temporary service, but some

time must elapse before the bread-winner, struck down so sadly while employed in charity, is in a condition, if ever, to earn his living again, and during that time help is and will be urgently needed. We desire to supplement Mr. Henry Morris's generous appeal.

"SIRS,—I hear that the merit of this case is known to yourselves, but I desire to make it known also to the profession through your columns.

"Charles Bryan Townshend, L.R.C.P., L.R.C.S. Irel., aged forty-two, was until recently in practice in King's-road, Chelsea. The work was hard, the patients poor, and bad debts prevented him from saving. His health requiring a change from Chelsea he sold his practice as a going concern of £500 a year and with the proceeds of the sale started in practice in Richmond-road, Kingston. In April, 1891, in attending a poor woman—a gratuitous patient—in her confinement he became inoculated with syphilis on the forefinger of the right hand. He did not realise the nature of the sore, and had no general treatment until he came under my charge in June, 1891. He then underwent a prolonged specific treatment. Shortly after Christmas last he became affected with spinal disease. For this I recommended him to consult Dr. Buzzard, which he did. Mr. Townshend is now seriously ill with complete paraplegia. He is a married man, with six children between the ages of ten and eighteen years. He had formed a nucleus of practice at Kingston, but by his present illness, which quite incapacitates him, he and his family are entirely deprived of any means of subsistence. Neither Mr. Townshend nor his wife, who has also been in very bad health, have any prospect of assistance from their own immediate relatives, and for this reason I have decided to appeal for him in his sad condition to his professional brethren. Subscriptions will be received and duly acknowledged by his brother, the Rev. Horace Townshend, M.A. Dub. and Camb., Chaplain of Islington Workhouse, 41, King Henry's-road, South Hampstead, and I am authorised by Dr. Buzzard to say that he will start this list with a donation of five guineas, and I shall be happy to give a similar sum myself.

"I am, Sirs, yours faithfully,

"Cavendish-square."

"HENRY MORRIS.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6866 births and 6014 deaths were registered during the week ending Feb. 23rd. The annual rate of mortality in these towns, which had increased in the four preceding weeks from 18.7 to 26.7 per 1000, further rose last week to 29.6. In London the rate was as high as 34.0 per 1000, while it averaged 26.5 in the thirty-two provincial towns. The lowest rates in these towns were 17.4 in Gateshead, 19.8 in Derby, 19.9 in Leicester, 20.3 in Oldham and 20.5 in Hull; the highest rates were 31.5 in Cardiff, 34.0 in London, 35.2 in Nottingham, 38.0 in Plymouth, and 46.1 in Liverpool. The 6014 deaths included 317 which were referred to the principal zymotic diseases, against 312 and 315 in the two preceding weeks; of these, 94 resulted from whooping-cough, 70 from measles, 55 from diphtheria, 43 from diarrhoea, 33 from scarlet fever, 20 from "fever" (principally enteric), and 2 from small-pox. The lowest death-rates from these diseases were recorded in Leicester, Sunderland, Bristol, Swansea, and Birkenhead; and the highest rates in Norwich, Sheffield, Burnley, Manchester, and Salford. The greatest mortality from measles occurred in Bolton, Sheffield, and Gateshead; from scarlet fever in Wolverhampton, Salford, and Huddersfield; and from whooping-cough in Norwich, Manchester, and Burnley. The mortality from "fever" showed no marked excess in any of the large towns. The 55 deaths from diphtheria included 29 in London, 4 in Leeds, 3 in West Ham, and 3 in Sheffield. One fatal case of small-pox was registered in London and 1 in Derby, but not one in any other of the thirty-three large towns. There were 75 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Feb. 23rd, against 51, 56, and 67 at the end of the three preceding weeks; 19 new cases were admitted during the week, against 18 in each of the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1658, against 1653, 1667, and

1657 on the three preceding Saturdays; 152 new cases were admitted during the week, against 160, 149, and 159 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 324 to 840 in the four preceding weeks, further rose to 1119 last week, and were as many as 615 above the corrected average. The causes of 107, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Oldham, Leeds, Gateshead, Newcastle-upon-Tyne, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Huddersfield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 23·9 to 35·1 per 1000, further rose to 41·1 during the week ending Feb. 23rd, and exceeded by 11·5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 24·0 in Perth and 24·9 in Aberdeen to 38·0 in Edinburgh and 51·0 in Glasgow. The 1186 deaths in these towns included 51 which were referred to measles, 36 to whooping-cough, 11 to diarrhoea, 7 to diphtheria, 4 to scarlet fever, 4 to "fever," and 2 to small-pox. In all, 118 deaths resulted from these principal zymotic diseases, against 81 and 115 in the two preceding weeks. These 118 deaths were equal to an annual rate of 4·1 per 1000, which was 2·5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 26 and 46 in the two preceding weeks, further rose to 54 last week, of which 22 occurred in Edinburgh, 18 in Glasgow, and 12 in Aberdeen. The deaths referred to whooping-cough, which had increased from 18 to 33 in the four preceding weeks, further rose to 36 last week, and included 30 in Glasgow. The 7 fatal cases of diphtheria differed but slightly from the numbers recorded in recent weeks, and included 4 in Glasgow. The deaths referred to different forms of "fever," which had been 6 in each of the three preceding weeks, declined to 4 last week, of which 3 occurred in Glasgow. The 4 fatal cases of scarlet fever were within 2 of the number in the preceding week, and included 2 in Glasgow. The 2 deaths from small-pox were recorded in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 214 and 345 in the two preceding weeks, further rose to 517 last week, and were more than four times the number in the corresponding week of last year. The causes of 96, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31·9 and 34·2 per 1000 in the two preceding weeks, further rose to 35·1 during the week ending Feb. 23rd. During the past eight weeks of the current quarter the death-rate in the city has averaged 33·0 per 1000, against 22·2 in London and 25·5 in Edinburgh. The 235 deaths registered in Dublin during the week under notice showed an increase of 6 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 19 and 17 in the two preceding weeks; of these, 6 resulted from small-pox, 1 from diphtheria, 1 from whooping-cough, 1 from "fever," 1 from diarrhoea, but not one either from measles or scarlet fever. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·5 in London and 5·1 in Edinburgh. The fatal cases of small-pox, which had been 5, 7, and 8 in the three preceding weeks, declined again to 6 last week. During the past eight weeks of the current year as many as 59 deaths from small-pox have been registered within the city. The mortality from "fever" showed a further decline from that recorded in recent weeks. The 235 deaths in Dublin last week included 41 of infants under one year of age and 70 of persons aged upwards of sixty years; the deaths of infants showed a marked increase, while those of elderly persons showed a slight decline from the number recorded in the preceding week. Eight inquest cases and 8 deaths from violence were registered; and 82, or more than a third, of the deaths occurred in public institutions. The causes of 22, or more than 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR ROCHE has been posted to the Western district, and Surgeon-Major Beatty to Belfast. The following officers have embarked in the *Malabar* for India:—Surgeon-Major Dempsey, Surgeon-Captains Sexton and Nicoll, and Surgeon-Lieutenant Farmer. Surgeon-Major Babbie and Surgeon-Captain Burnside have proceeded on a tour of service to Malta.

ARMY MEDICAL STAFF.

Surgeon-Colonel William Christy Robinson retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain D. W. Scotland, Officiating Superintendent, Central Prison, Benares, on being relieved, is appointed to officiate as Civil Surgeon, Jalaun. Surgeon-Lieutenant Bruce Gordon Seton, who has completed three years' full-pay service, is promoted to Surgeon-Captain. Surgeon-Lieutenant-Colonel H. Boyd retires from the service. *Bengal Medical Establishment*: The Queen's approval to the promotion of Surgeon-Lieutenant-Colonel A. B. Seaman to Brigade-Surgeon-Lieutenant-Colonel is announced in the *London Gazette* of Feb. 22nd. The Queen's approval of the retirement from the service of the undermentioned officers is also officially announced:—*Bengal Medical Establishment*: Brigade-Surgeon-Lieutenant-Colonel John Burke Gaffney, Surgeon-Lieutenant-Colonel Andrew McMaster Paterson, Surgeon-Lieutenant-Colonel Horace Parr Yeld.

NAVAL MEDICAL SERVICES.

The following appointments are notified:—Fleet-Surgeons: W. R. White to the *Eagle*; E. W. Luther to the *Durham*. Surgeons: A. O. Bobardt to the *Dart*; H. Meikle to the *Rainbow*.

VOLUNTEER CORPS.

Artillery: 3rd Kent (Royal Arsenal): Luigi Walter Alfred Keiffenheim-Trubridge, M.D., to be Surgeon-Lieutenant. 1st North Riding of Yorkshire (Western Division, Royal Artillery): Henry George Outram Collett, Gent., to be Surgeon-Lieutenant. *Rifle*: The Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment): The undermentioned gentlemen to be Surgeon-Lieutenants: Alexander Macdonald, M.B.; Claude Buchanan Ker, M.B. 1st Volunteer Battalion, the Royal Warwickshire Regiment: Surgeon-Captain E. L. Freer to be Surgeon-Major.

VOLUNTEER MEDICAL ASSOCIATION.

At the quarterly meeting of this association, held on Jan. 28th, at 20, Hanover-square, it was decided that the next Ambulance Challenge Shield competition should take place on Saturday, June 15th. Squads intending to compete should apply to the Hon. Secretaries, 20, Hanover-square, W., for the conditions regulating the competition, in which some slight alterations have been made. The new regulation by which regimental bearers are no longer allowed to wear the Red Cross badge was discussed, in consequence of numerous representations from members of the association. The conclusion arrived at by the council was that the regulation was necessary in order that the Red Cross may continue to serve as a protection to non-combatants on active service. The wearing of the badge by men in the ranks was really an infringement of the Articles of the Geneva Convention. The annual dinner will take place on April 24th, the date fixed for the annual meeting of the association.

THE ARMY MEDICAL STAFF EXAMINATION.

The following is a list of the successful candidates for commissions in the Medical Staff of Her Majesty's Army at the recent examination in London:—

Names.	Marks.	Names.	Marks.
L. F. Smith	2580	G. T. K. Maurice	2172
S. H. Fairrie	2410	F. E. Gunter	2077
R. J. Blackham	2382	J. H. Campbell	1819
J. V. Forrest	2245	J. Grech	1761
H. W. Graham	2185	P. Dee	1756
R. Fawcett	2175	E. G. E. O'Leary	1611

INDIAN MEDICAL SERVICE EXAMINATION.

The following were successful at the recent examination

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR ROCHES has been posted to the 1st District, and Surgeon-Major Beatty to Baluchistan. Surgeon-Major Dempsey, Surgeon-Captain Seram, and Surgeon-Lieutenant Farmer. Surgeon-Major had Surgeon-Captain Barnside have proceeded on a tour to Malta.

ARMY MEDICAL STAFF.

Surgeon-Colonel William Christy Robinson has retired pay.

INDIA AND THE INDIAN MEDICAL SERVICE.

Surgeon-Captain D. W. Scotland, Officer in Charge, Central Prison, Benares, on being appointed to officiate as Civil Surgeon, Jaipur. Lieutenant Bruce Gordon Seton, who has completed his full-pay service, is promoted to Surgeon-Lieutenant. Colonel H. Boyd returns to service. Bengal Medical Establishment: The approval to the promotion of Surgeon-Lieutenant A. B. Seaman to Brigade-Surgeon, Lieutenant-Colonel announced in the *London Gazette* of Feb. 22. Queen's approval of the retirement from the service of Surgeon-Lieutenant Colonel John Burke Gaffney, Surgeon-Lieutenant Colonel Andrew McMaster Paterson, Surgeon-Lieutenant Colonel Horace Parr Yald.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—*Forster* W. R. White to the *Eagle*; E. W. Luther to the *Surgeons*: A. O. Bobardt to the *Dart*; H. MacRae to the *Rainbow*.

VOLUNTEER CORPS.

Artillery: 3rd Kent (Royal Arsenal): Lieut. Col. Keiffenheim-Turnbridge, M.D., to be Surgeon-Lieutenant, 1st North Riding of Yorkshire (Western Division). Artillery: Henry George Outram (Lieut. Col. Surgeon-Lieutenant. Rifle: The Queen's Buffs (Rifles), the Royal Scots (Lothian Regiment), the mentioned gentlemen to be Surgeon-Lieutenants. Surgeon-Major MacDonald, M.B.; Claude Buchanan Begg, M.B.; Surgeon-Major, the Royal Warwickshire Regiment; Captain E. L. Freer to be Surgeon-Major.

VOLUNTEER MEDICAL ASSOCIATION.

At the quarterly meeting of this association, Jan. 28th, at 20, Hanover-square, it was decided that an Ambulance Challenge Shield competition should be held on Saturday, June 15th. Squads intending to compete should apply to the Hon. Secretaries, 20, Hanover-square, by the conditions regulating the competition. It was decided that slight alterations have been made. The new regulations which regimental bearers are no longer allowed to wear the Red Cross badge was discussed, in consequence of representations from members of the association. A resolution arrived at by the council was that the association should apply to the War Office for a decision on the wearing of the badge by men in the ranks. It was also decided that the annual dinner will take place on April 24th, 1895, for the annual meeting of the association.

THE ARMY MEDICAL STAFF EXAMINATIONS.

The following is a list of the successful candidates in the Medical Staff of Her Majesty's recent examination in London:—

Names.	Marks.	Names.	Marks.
L. F. Smith	280	G. F. E. Moore	280
S. H. Fairlie	240	P. E. Gerner	240
R. J. Blackham	232	J. H. Campbell	232
J. V. Forrest	226	J. Grev	226
H. W. Graham	218	P. Doe	218
R. Fawcett	215	E. G. R. O'Brien	215

INDIAN MEDICAL SERVICE EXAMINATIONS.

The following were successful at the examination in London:—

held in London for commissions in the Indian Medical Service:—

Names.	Marks.	Names.	Marks.
J. Stephenson	3104	R. F. Standage	2250
F. N. Windsor	2811	F. L. Blenkinsop	2229
F. F. Chapman	2796	J. E. Watson	2155
W. B. Turnbull	2779	H. A. F. Knapton	2118
A. Hooton	2678	C. G. Webster	2004
J. M. H. MacLeod	2653	A. A. Gibbs	1964
E. E. Waters	2518	A. Moore	1963
A. Leventon	2487	G. E. Bensley	1962
A. F. W. King	2374	E. M. Kiewicz	1959

MEDICAL STAFF CORPS IN INDIA.

With regard to the proposed introduction of the Medical Staff Corps into India, put forward in a communication to one of our service contemporaries, we may remark that it is not the first time such a proposal has been made—not that it is any the worse on that account. There is no doubt that it would greatly add to the efficiency in hospital nursing and administration, and at the same time increase the fighting strength of the army in India by not withdrawing soldiers from the ranks (without any hospital training) to act as special orderlies over very sick men. But we are afraid that the military department of the Indian Government are not likely to give practical effect to the suggestion, especially at the present time, on account of the expense. Moreover, the provision of a detachment of the Medical Staff Corps at every military station would require the presence of a considerable strength of that corps in India, with probably a greater liability to sickness and inefficiency than obtains among the native corps and ward servants.

THE FRENCH MINISTER OF WAR AND FRENCH BARRACKS.

The *Army and Navy Gazette* says: General Zurlinden, the French Minister of War, was recently questioned in the French Chamber respecting the outbreak of influenza in Dijon Barracks. He acknowledged that out of 2700 soldiers there had been eighteen deaths, and that 159 men were now in hospital, but he contradicted the rumours of unusual mortality at other places. Here and there he said there were cases of scarlet fever and typhoid fever, but the health of the troops was satisfactory and the army doctors were devoted to their duty. General Zurlinden acknowledged that the allowance of fuel was not sufficient for exceptional winters. He cited a circular issued twelve months ago, in which officers were directed to take precautions to prevent night marches from being detrimental to health.

THE ARMY IN INDIA.

According to the Sanitary Commissioner's Report for 1893 there were only 16 cases of cholera, with 10 deaths, in the whole European army in India in that year; 9 of the cases occurred in Bengal, 6 in Bombay, and 1 in Madras. The year was also about the healthiest on record as far as the native army was concerned; the cholera mortality was only 0.20 per 1000. The chief causes of death were, as usual, in the native army from respiratory diseases.

THE CONTRAST BETWEEN CHOLERA AND NON-CHOLERA YEARS IN INDIA.

There is nothing more remarkable than the contrast which is exhibited in respect of cholera in India between one year and another. The fall that took place in the prevalence of this disease in 1893 was general in almost every Indian province; the mortality from cholera declined from 762,695 in 1892 to 218,113 in 1893. In the case of the Punjab the contrast is very striking. In 1892 the cholera deaths registered amounted to 75,959, whereas in 1893 they only numbered 639.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF ACUTE INTUSSUSCEPTION IN INFANTS: EARLY LAPAROTOMY v. INJECTION AND INFLATION.

To the Editors of THE LANCET.

SIRS,—In your last issue you were good enough to publish the report of a case of acute intussusception in an infant upon whom I performed laparotomy with success. In my concluding remarks I urged "that immediate operation should be performed in all cases of twenty-four or more

hours' duration." In your introductory remarks you say: "We are strongly of opinion that these measures [injection of air or fluid] should be tried in all cases where the symptoms have been in existence for less than forty-eight hours, and that laparotomy should be recommended if injection has failed." As these views are somewhat opposed to each other I should be glad if you would permit me to state the reasons for the practice I advocate. I have carefully studied the published reports of twenty-six fatal laparotomies for acute intussusception in children of two years or younger. From these accounts it appears that the average duration of the symptoms before operation was three days and a half. In only five cases was the duration of symptoms two days or less. It is instructive to notice the causes of death in these cases. They are as follows:—

Cause of Death in Five Fatal Cases of Laparotomy.

No.	Date.	Surgeon.	Age and sex.	Duration of symptoms.	Cause of death.
1.	1877	Beck	F. 8 months	26½ hours	Acute peritonitis. ¹
2.	1882	Marsh	" "	2 days	Death two days after operation; temperature 106° F. ²
3.	—	Jacobson	F. 11 months	24 hours	Irreducible; operation abandoned. ³
4.	1885	Horsley	M. 5 months	19 hours	No shock; died cyanosed; lungs congested. ⁴
5.	1894	Barker	" "	2 days	Local peritonitis; temperature 107° F. ⁵

¹ Brit. Med. Jour., vol. i. 1894, p. 346. ² St. Bartholomew's Hospital Reports, vol. xxviii. ³ THE LANCET, June 11th, 1887, p. 1179. ⁴ Brit. Med. Jour., vol. i. 1894, p. 346. ⁵ Brit. Med. Jour., vol. ii. 1894, p. 1237.

I have also found records of sixteen successful operations for the same condition.

Successful Laparotomies for Acute Intussusception in Infants.

No.	Date.	Surgeon.	Age and sex.	Duration of symptoms.
1.	1875	Marsh	7 months	13 days (acute 12 hours) ¹
2.	1877	Sands	6 "	1 day ²
3.	1881	Godlee	9 "	4 days ³
4.	1888	Snowball	8½ "	24 hours ⁴
5.	1889	Barker	F. 5 "	2 days ⁵
6.	1890	Marsh	9 "	20 hours ⁶
7.	1890	Kammerer	6 "	60 "
8.	1892	Pollard	6 "	15 "
9.	1892	Bruce Clarke	6 "	24 "
10.	1892	Godlee	4 "	26½ "
11.	1893	Lockwood	8 "	28 "
12.	1893	Barker	F. 7 "	36 "
13.	1893	Pollard	F. 7 "	22 "
14.	1893	Barker	M. 4 "	24 "
15.	1893	Verrall	6 "	24 "
16.	1893	Roughton	F. 4 "	24 "

¹ THE LANCET, June 11th, 1887, p. 1178. ² THE LANCET, June 11th, 1887, p. 1178. ³ THE LANCET, Nov. 3rd, 1888, p. 888. ⁴ Brit. Med. Jour., Feb. 17th, 1894. ⁵ St. Bart's Hosp. Rep., vol. xxviii. ⁶ St. Bart's Hosp. Reports, vol. xxviii. ⁷ Med. Record, 1890, p. 114. ⁸ THE LANCET, Oct. 15th, 1892, p. 880. ⁹ St. Bart's Hosp. Reports, vol. xxviii. ¹⁰ Brit. Med. Jour., Feb. 17th, 1894. ¹¹ THE LANCET, June 3rd, 1893, p. 1303. ¹² Brit. Med. Jour., Feb. 17th, 1894. ¹³ THE LANCET, Feb. 24th, 1894. ¹⁴ Brit. Med. Jour., Dec. 1st, 1894. ¹⁵ Brit. Med. Jour., Dec. 23rd, 1893. ¹⁶ THE LANCET, Feb. 23rd, 1895.

From this table it appears that the average duration of the symptoms in the successful cases was only thirty-two hours, in no less than 10 of the 16 cases it was twenty-four hours or less, and in only 3 cases was it two days or more. These facts, I think, fully justify my contention, and prove, as far as they can, that if laparotomy is to be attempted with any reasonable chance of success it must not be deferred longer than twenty-four hours from the onset of the disease. I cannot help thinking that the amount of shock caused by abdominal section in these cases has been confounded with that produced by the disease itself, and by the previous unsuccessful attempts at reduction by inflation and injection. I do not

think that the shock of a skilfully and rapidly performed laparotomy is greater than that produced by injection when sufficient force is used to disengage the invagination. The dangers and uncertainty of inflation and injection have been well shown by Lawford Knaggs¹ and Mortimer.² I am convinced that a wider appreciation of the dangers of injection and the success of early laparotomy will do much to reduce the mortality of the disease; and this, Sirs, I must ask you to accept as my excuse for having had the temerity to question the views you have expressed.

I am, Sirs, yours faithfully,

Westbourne-terrace, W., Feb. 25th, 1895. E. W. ROUGHTON.

* * We print Mr. Roughton's interesting letter with pleasure, but we still consider that our recommendation of a trial of the injection of air or fluid in these cases previously to abdominal section, where the symptoms have been in existence less than forty-eight hours, a sound one. In careful hands these measures are comparatively unattended with risk, and are likely to be successful in a majority of cases treated within the specified time. We do not recommend that operation should be deferred after an unsuccessful attempt has been made at reduction by other means, no matter how recent the symptoms may be.—ED. L.

THE FEVERS OF INDIA AND THE MEDITERRANEAN.

To the Editors of THE LANCET.

SIRS.—I have read with much interest in THE LANCET of Jan. 19th last the Presidential Address in Medicine and Pathology at the Indian Medical Congress by Surgeon-Lieutenant-Colonel Crombie, I.M.S. In attempting to classify the "fevers of India" into specific groups and varieties he has grappled with a question which for years has been a stumbling block in our official nomenclature of diseases, not only in India but in the Mediterranean and elsewhere. In this nomenclature we find: 1. Malarial fevers, subdivided into (a) intermittent fever; (b) remittent fever; and (c) malarial cachexia; a subdivision founded in the two former cases on a single clinical characteristic not confined to any individual specific fever. 2. Enteric fever well known and carefully defined, but having a subheading termed "typho-malarial fever," a combination of malarial and enteric fever. 3. Simple continued fever defined as "continuous fever, having no obvious distinguishing character." Paludism, which has now been fairly proved to be the result of Laveran's hæmatophyllum, is the condition at present commonly accepted as true malarial fever. According to the variety, quantity, or quality of the virus in given cases, so it is believed the pyrexial curve becomes intermittent, remittent, or continuously high, but the disease is of a paroxysmal nature and amenable to quinine. Malarial cachexia is accepted as the result of the prolonged action on the body tissues of the same parasite. Enteric fever, though a well-defined specific fever, frequently runs a most remittent course, while cases of tuberculous suppuration may be most intermittent in type, yet no one would dream of diagnosing either of these pyrexial conditions as "malarial fevers." The greater part, however, of the remaining fevers of tropical and subtropical regions which have not yet been definitely named must, if of a remittent or intermittent character, be classified either with paludism, as malarial fevers, or as simple continued fevers, however many obvious distinguishing characters they may possess. Surgeon-Lieutenant-Colonel Crombie deals with four such types of non-malarial fevers occurring in India, two of which he ventures to think are specific forms. Three types are especially interesting to medical officers serving in Malta, as very analogous forms of fever exist and are endemic in that and other places in the Mediterranean, which for want of better names are in the army with sad irony diagnosed as "simple continued fever" in spite of most obvious distinguishing characters and a difference in duration of any time between two and 200 days' stay in hospital. Paludism these cases certainly are not, as this form of fever is not endemic in Malta, and occurs only in the form of relapses in men who have previously suffered from the disease in Cyprus, India, Mauritius, or elsewhere. They may, however, be intermittent, remittent, or continuously high in

pyrexial type, but are non-paroxysmal in nature and unamenable to quinine.

1. The first of these is "simple ardent fever" or febricula, a short fever of from three to six days' duration met with in almost every country, and doubtless specific. 2. Next there is an acute fever of about fourteen days' duration, similar to the form termed "Calcutta or Bombay fever" by Surgeon-Lieutenant-Colonel Crombie. Though diagnosed simple continued fever, it is usually said to be abortive enteric, and in pyrexial curve it resembles a case of enteric fever telescoped into a fortnight. It is, however, devoid of any other clinical resemblance and has every appearance of being a distinct fever. To my knowledge it occurs in Malta, Gibraltar, and Egypt. 3. Thirdly, there is a low form of fever varying between 99° and 101.5° F. (when taken morning and evening), never being normal, and occasionally remaining for from four to six weeks continuously between 99° and 100°. This is generally associated only with anorexia, anæmia, and debility, but may also be combined with neuralgic or rheumatic symptoms. It is not common, and is generally merged into the next class of fevers. Whether it is similar to the "low fever" of Surgeon-Lieutenant-Colonel Crombie and a specific disease I cannot say. 4. Lastly, there is the fever known as Malta, Rock, and Mediterranean fever, pseudo-typhoid, fæco-malaria, &c. It has an irregular course, an indefinite duration, may vary in pyrexial type, but is characterised more especially by its length, tendency to relapse, constipation, anæmia, and rheumatic and neuralgic complications. In severe cases the temperature becomes continuously high, and, combined as they then are with a tendency to the "typhoid state," lead to a similarity in clinical characters to enteric fever. Other cases may in pyrexial curve almost seem to be enteric fever, followed by five or six relapses. The majority, however, are clearly and definitely distinct, and in the few fatal cases (under 2 per cent.) not only are Peyer's patches unaffected, but a characteristic micrococcus, capable of producing a similar fever in monkeys, replaces Eberth's bacillus. Certain cases, again, become intermittent in type, but non-paroxysmal, and resemble the hectic pyrexia of phthisis. Cases of this fever, though diagnosed as simple continued fever in the army, are by the naval and civilian medical men diagnosed as "remittent fever," and together with remittent paludism, and under the heading of malarial fevers.

The time appears to have come when malarial fevers and malarial cachexia should be classified as one group, under such a name as paludism, and be recognised as the results on the body tissues of Laveran's amœbe, any necessary subdivisions being based on more scientific data than one clinical feature common to many fevers. Let "typho-malarial fever" be also abolished, and such conditions be diagnosed according to the disease at the time the more serious, as would be done in the event of enteric fever occurring in a patient already suffering from constitutional syphilis. This will leave a number of fevers at present termed "continued" without definite names, but these forms will, on account of their obvious distinguishing characters, soon find names when the vague terms "intermittent" and "remittent" fever are abolished. More accurate clinical observation and epidemiological and biological research must soon settle the question, as has been done in the cases of typhus, enteric, and paludic fevers, for every year the circle is closing in. In conclusion, let us hope, with Surgeon-Lieutenant-Colonel Crombie, that England will not yield the palm of discovery to Germany or France in this matter.—I am, Sirs, yours faithfully,

M. LOUIS HUGHES.
Surgeon-Captain, A.M.S.

Malta Jan. 28th, 1895.

THE TREATMENT OF INFLUENZA.

To the Editors of THE LANCET.

SIRS.—As we are in the midst of another widely spread epidemic of influenza I should like to call attention to the routine and somewhat reckless use of such drugs as salicin and antipyrin, which I observe is still common in the treatment of this malady. After between four and five years' experience and observations of the effects of various methods of treating influenza I have been unable to resist the conviction that these drugs, while they doubtless relieve some of the most distressing early symptoms, possess no real

¹ THE LANCET, June 4th, 1887.

² THE LANCET, May 23rd, 1891.

¹ THE LANCET, Dec. 12th, 1892, and Annales de l'Institut Pasteur, August, 1893.

erial type, but are non-paroxysmal in nature, and amenable to quinine.

The first of these is "simple ardent fever" which is short fever of from three to six days' duration, and is met with in every country, and doubtless specific. It has an acute fever of about fourteen days' duration, and is termed "Calcutta or Bombay fever" by Surgeon-Lieutenant-Colonel Crombie. Though diagnosed as ardent fever, it is usually said to be abortive, and its pyrexial curve it resembles a case of enteric fever, and lasts for a fortnight. It is, however, devoid of any enteric resemblance and has every appearance of being a simple fever. To my knowledge it occurs in India, China, and Egypt. 3 Thirdly, there is a low fever varying between 99° and 101.5° F. (when taken in the morning and evening), never being normal, and continuing for from four to six weeks, commencing between 99° and 100°. This is generally associated with anorexia, anemia, and debility, but may be combined with neuralgic or rheumatic symptoms. It is common, and is generally merged into the next fever. Whether it is similar to the "low fever" of the Lieut. Colonel Crombie and a specific disease, Surgeon-Lieutenant-Colonel Crombie and a specific disease, it has an irregular course, an indefinite duration, and is pyrexial type, but is characterised more especially in length, tendency to relapse, constipation, and rheumatic and neuralgic complications. In several cases the temperature becomes continuously high, and then they then are with a tendency to the "typical" curve, to a similarity in clinical characters to enteric fever. Cases may in pyrexial curve almost seem to be entered, followed by five or six relapses. The majority, however, clearly and definitely distinct, and in the few cases (under 2 per cent.) not only are Peyer's patches absent, but a characteristic micrococci, capable of passing a similar fever in monkeys, replaces Eberth's bacilli. In cases, again, become intermittent in type, and paroxysmal, and resemble the hectic pyrexia of phthisis. Cases of this fever, though diagnosed as simple, are by the naval and civil medical officers in the army, are by the naval and civil medical officers, and under the heading of malarial fever, paludism, and have come when malarial fever. The time appears to have come when malarial fever should be classified as one of the malarial fevers, and be recognised as such, such a name as paludism, and be recognised as such, the body tissues of Laveran's amoebae, any malarial divisions being based on more scientific data, clinical feature common to many fevers. "Malarial fever" be also abolished, and malarial fever diagnosed according to the disease at the time of diagnosis, as would be done in the event of malarial fever occurring in a patient already suffering from syphilis. This will leave a number of fevers termed "continued" without definite names. Forms will, on account of their obvious characters, soon find names when the names "remittent" and "intermittent" fever are abolished. I rate clinical observation and epidemiological research must soon settle the question, as the year the circle is closing in. In conclusion, I am with Surgeon-Lieutenant-Colonel Crombie, the fever not yield the palm of discovery to Germany or France.

Malta Jan. 25th, 1895.

THE TREATMENT OF INFLUENZA

To the Editors of THE LANCET.

SIRS,—As we are in the midst of another mild epidemic of influenza I should like to call attention to a routine and somewhat reckless use of such drugs as antipyrin, which I observe is still common in the treatment of this malady. After between four and five years' experience and observations of the effects of various treatments of influenza I have been unable to perceive any advantage in the use of these drugs, while they do cause some of the most distressing early symptoms, such as

antitoxic influence over this affection, and not only leave the patient exposed to all the serious after-effects of the influenzal intoxication, but even render him more susceptible to some of them. The drugs, which I notice are now often prescribed in combination, are all the more dangerous, because their immediate effects are usually pleasant both to the patient and the practitioner. The patient is pleased to have the more painful symptoms speedily relieved and the practitioner is pleased to have the credit of being able to relieve them. But patients who have been thus treated often have a tedious convalescence, and are very subject to recurrent attacks of cardiac debility as well as to other serious sequelae. I have often been struck with the pale, exhausted, worn, and shrunken aspect of some of these "convalescents." On the other hand, both clinical and experimental evidence point to quinine as a true antitoxin in influenza. No doubt many persons complain much of certain disagreeable effects which full doses of quinine occasionally produce; but these should, in most cases, be looked upon as a small evil compared with the grave after-effects which are especially apt to occur when quinine has not been adequately or suitably administered. In malarious countries no medical practitioner would feel justified in withholding quinine because of any supposed "intolerance" of that remedy. I have elsewhere pointed out how much better quinine is tolerated by many persons, and how much more beneficial its action appears to be when given in combination with an alkaline saline; but my object now is to point out that the use of such drugs as salicin and antipyrin should be restricted to two or three doses given simply for the relief of the pains attending the onset of the disease; that they are harmful if given freely and as a matter of routine; and that we should rely mainly upon quinine as a proved antitoxic agent in this disease. The present widely diffused outbreak on the cessation of the protracted frost seems to point to the sudden mobilisation of the imprisoned bacilli, or possibly to the suspension of their infective activity during the prevalence of the very low temperature.

I am, Sirs, your obedient servant,
I. BURNETT YEO, M.D., F.R.C.P.,

Professor of Clinical Therapeutics in King's College.
Hertford-street, Mayfair, Feb. 25th, 1895.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—The only comment necessary upon Sir George Johnson's last letter is to remark that the words following Dr. Halliburton's statement about there being enough to convince the impartial observer that a small quantity of glucose is obtainable from normal urine did not stand in the position of being held back by me, inasmuch as the text in full had been the previous week before your readers. Passing to Dr. Halliburton's letter, I am asked to amplify my position with respect to the detection of alcohol by the chromic acid test. This matter was incidentally introduced in a quotation from the Guy's Hospital Reports for 1876 detailing the application of the fermentation test at a meeting of the Royal Medical and Chirurgical Society in 1875. It is perfectly true, as stated by Dr. Halliburton, that a number of volatile organic principles react with chromic acid in the same manner as alcohol; but I doubt not that Dr. Halliburton will admit that to get the reaction one or other of these principles must be present, and that for their presence there must be a source for them. Now, the product submitted to the action of the fermentation test consisted of an aqueous solution of the extracted sugar obtained by liberation from its lead compound, and the solution had been previous to employment concentrated by evaporation in an open capsule. Hence, if it had been possible—and I contend it was not—for one or other of these principles to be present it would have been dissipated in the process of evaporation, leaving the alcohol generated by fermentation as the only agent permissible to look to for the reaction that was observed. Dr. Halliburton's invitation to enter upon a discussion of the question of kreatinine I am not tempted to accept.

I am, Sirs, yours faithfully,
Grosvenor-street, Feb. 27th, 1895. F. W. PAVY.

* * This correspondence must now cease. If none of the parties to it have exactly convinced each other, they have made sufficiently clear the points at issue between them, and

it is possible that the debate between authorities so well qualified to hold strong opinions on the subject will stimulate others to assist the profession at arriving at a definite conclusion on a very interesting point.—ED. L.

"THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—Dr. Lovell Drage has hitherto written so ably on the question of midwives' registration that I was disappointed on reading his letter to find only a *réchauffé* of the old stock arguments. However, the very pertinacity of their appearance demands a categorical answer. We are apparently now all agreed that something must be done, but to be effectual what is done must be done with the consent of the great majority of the profession, and must have its cordial support. Again, we are mostly agreed that proper education and efficient control are the points aimed at. The Obstetrical Society have endeavoured to fulfil the first condition, but are absolutely helpless as regards the second, and it is with a view to obtaining this power of control that registration is asked for. I admit that the present method of granting diplomas by the Obstetrical Society has great drawbacks, but accept it on the principle that half a loaf is better than none. It would be surprising if no fault or omission could be found in the regulations for an examination, but in the instance quoted the society have evidently very properly shown their appreciation of the defect by the issue of the circular mentioned. Dr. Drage complains that certain representations on the subject have been unheeded. I thought they were old and well-known friends. The first statement as to mortality statistics is weakened by the want of a full knowledge of all the factors, without which any figures become little more than decorations for a discussion. We want to know the rates before there was State control. We want the rates both in those cases attended by registered midwives and in those attended by uneducated midwives. We at least should know the proportion of cases attended by the State-controlled midwives, especially as we are told in the next paragraph that the system has not resulted in removing the unqualified practitioner. It must be remembered that it is not only or chiefly mortality-rate, but sickness-rate, both direct and indirect, that we have to consider. Registration, I admit, will not immediately or absolutely remove the unregistered practitioner. We are reluctant to interfere with vested interests, so the continuance and maintenance of untrained midwives constitute one of those difficulties that are inseparable from the establishment of a new system. How long it will last and how much it will flourish will depend on the support which any new system receives from the profession whose duty it will be to educate the people to an appreciation of their danger and the ways of safety; therefore am I most anxious that some means may be found of settling this vexed question. That midwives do not send for the surgeon for the repair of the perineum must be a fault of education and training, but one that may apply to not a few qualified medical men in large practice; but, even admitting this fault, the midwives at any rate know the danger, and are in a better position to rectify it than a nurse without any education. Secondly, it is objected that of the 2000 diplomates of the Obstetrical Society few are found practising among the poor except as the employees of institutions or charities. This is surely the best thing that could be wished for; here we have the desired condition of control, and very efficient it is, and what, may I ask, could these charities have done without the much-reviled society to select efficient midwives for them to employ? It is doubtful whether a trained midwife in a country district would be able to earn a sufficient competence to make it worth her while to go through a comparatively expensive training. And I believe that a solution will be found in the village nursing associations that are now coming into existence in so many places, and which guarantee the expenses of a nurse who is both district nurse and midwife, and I trust that the time may come when the guardians of the poor may see fit to act in the same capacity as the nursing associations. But we shall never get out of the difficulty if we wait for the perfection that is shadowed in Dr. Drage's third statement, that midwives shall not be certified because "certified midwives have been found guilty of criminal practices"; surely not our own or any other profession or any class of society in this.

world can claim the required maiden record of virtue and blamelessness. Whatever may be done, I trust the little help we have in the finding of efficient midwives for the poor may not be taken from us until something better is provided.

I am, Sirs, your obedient servant,
Freshford, Feb. 25th, 1895. CHAS. E. S. FLEMMING.

To the Editors of THE LANCET.

SIRS,—Dr. Playfair, in his letter in THE LANCET of to-day, has appended the form of "diploma" issued to midwives by the Obstetrical Society of London, but he has not informed us how the women obtain their knowledge of the art to be considered by the society skilled midwives "competent to attend natural labour." At our lying-in hospitals in London, and at the celebrated Rotunda in Dublin, their certificated midwives are required to undergo practical training &c. in the wards before they are considered eligible to offer themselves for examination, which necessarily goes very far to render them "competent." But if the respective candidates for the Obstetrical Society's "diploma" are relieved from this highly essential mode of acquiring experience in this most important branch of the medical profession, but are simply admitted to examination after "cramming" from one of the smaller manuals upon the subject, that is quite another matter, which, I maintain, would be insufficient to make them competent "to deal with a natural labour," for even this natural process would assuredly mislead them sooner or later. Wherefore is there any need for the "diploma" of the Obstetrical Society of London at all—excepting from a purely financial point of view—when the above recognised excellent institutions grant them after a searching ordeal? We may yet look forward to the Medical Society of London awarding to candidates a diploma in medicine and the Royal Medical and Chirurgical Society a diploma in surgery! Undoubtedly these societies have quite as much power to do so.—I am, Sirs, yours faithfully,
Putney, S.W., Feb. 23rd, 1895. J. FRENCH BLAKE.

To the Editors of THE LANCET.

SIRS,—Dr. Playfair is apparently content with the policy of evasion so characteristic of the friends and allies of the Midwives' Institute. He will perhaps pardon me for stating that it is not a question of my views, it is a question of facts. As he cannot upset the facts put forward, he talks of dialectic devices. The plain truth of the matter is, the Midwives' Institute and its confederates, not being able either to show in any way that the Continental system of midwifery practice is anything but a bad one, or to support their views in public successfully, are attempting to introduce this system by subterfuge. The action of the General Medical Council, if justified by nothing else, is so by the slipshod method of examination carried out by the Obstetrical Society. The council of that society intend by their diploma to show that the holder is fit to practise ordinary midwifery. That it is used as a diploma for practice was demonstrated to that council. If the intention of the majority on that council is not to induce their licensees to practise ordinary midwifery, why will it not agree to make it quite plain that the certificate or diploma does not entitle the holder to practise midwifery? Their policy is one of evasion; they intend to issue such a certificate with definite intention; they procrastinate so as to bring a little lobbying influence to bear on the members of the General Medical Council. Wrapt up in true College of Physicians dignity, Dr. Playfair is quite content to tell the House of Commons that he has not paid the same attention to the subject as he did twelve years ago, but that his impressions are those of the profession; that his opinion is that because midwives are recognised by the State in some countries therefore they should be so in this country. In fact, like the College of Physicians practitioner of 150 years ago, he conceals ignorance by an outward appearance of great wisdom.

I am, Sirs, yours faithfully,
Feb. 25th, 1895. LOVELL DRAGE.

"LIFE ASSURANCE SCHEMES."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 16th, in an annotation entitled "Life Assurance Schemes," a comparison is instituted between the Royal Exchange Company's new policy and the debenture policy of the Mutual Life Insurance Company of New York. I venture to suggest that the writer has not

made himself acquainted with the nature of that policy as issued by this company. He asserts that under our policy "part benefit only is enjoyed" during the first twenty years, whereas, as a matter of fact, if the death occurs after payment of the first premium the whole of the benefits vest at once. It is also his mistake to suppose that "one-half only of the sum assured becomes payable" at death, "the payment of the other half being deferred for twenty years upon payment in the interval by the company of interest on the withheld balance at the rate of 5 per cent." The policy is much more simple. It provides that whenever death occurs the beneficiary becomes entitled to 5 per cent. upon the full amount insured for twenty years, and the capital amount assured at the end of twenty years. The assured may, in addition, contract for a guaranteed progressive bonus during the first twenty years, but this is an option not confined to our debenture policy. It is not my suggestion that this is a policy in anywise comparable with that issued by the Royal Exchange. We seek to give an increasing insurance for a fixed annual payment—that office offers what appears to be decreasing insurance. I may, however, be allowed to point out that when the writer says the object of the English company is "to give as large an immediate return as possible upon the premiums charged, and for this purpose the distant future is sacrificed to the near," it is only by the immediate death of the assured that an immediate return can be had, the argument being that the assured must die to gain. We seek to make his assurance valuable, whether he lives or dies. The writer says: "It is a grievous mistake to be led away by the prospect of personal advantage in the distant future from making the largest possible provision for the contingencies of the near future." Now, the function of the medical officer in life insurance is to make the "contingencies of the near future" available only to the few, while the distant future is certain. The advice given would mean that a man should make up his mind to die in the near future, and fix a term within which it should occur, and then insure for that term—e.g., a man aged thirty, believing he will die within five years, if he can get assured would have to pay us only £13 15s. 10d. for £1000. If he died before his second premium fell due his estate would gain £986 4s. 2d. Under the Royal Exchange policy he would be charged £15 5s., and his estate would gain only £978 1s. Thus the Royal Exchange method is not the cheapest for a man who is prepared to back his early death. But this is not pure life insurance. It is a gamble.

If it be true, as stated, that the Royal Exchange method "may probably have the effect of cancelling the insurance in the case of persons who live to extreme old age," I can only say that my company would not compete for such a result. Our policies are "very distinct in character," as you truly state.

I am, Sirs, yours truly,
D. C. HALDEMAN,
General Manager of the Mutual Life Insurance
Company of New York.

Cornhill, London, Feb. 25th, 1895.

* * It is odd that our correspondent should complain. We said that one-half of the sum assured remained on credit with the company for twenty years after the death of the life assured. He says that the whole amount is so withheld. Be it so. The correction is material, but does not make the scheme of assurance in question any more attractive, for a round sum of money in hand is often in the circumstances contemplated a priceless boon to widow and orphans, against which a 5 per cent. investment simply does not count. The very old gibe that a temporary life assurance is "a gamble" ought really to be superannuated now. It has been so often refuted and is so obviously devoid of point as to be no longer fit for work. Of course, Mr. Haldeman's company may refuse to compete for such business—that is a question for his directors,—but he assumes too much when he assumes to scold at the customers of other companies who, knowing what they want in the way of life assurance, elect to go where they can get it.—ED. L.

COLOUR VISION AND ACCIDENTS.

To the Editors of THE LANCET.

SIRS,—For many years keen attention has been paid to this question and examinations instituted. Has any accident

Volume 13

while himself acquainted with the nature of the business transacted by this company. He asserts that while no part benefit only is enjoyed "during the first twenty years," whereas, as a matter of fact, if the death occurs before the end of the first premium the whole of the sum assured is paid. It is also his mistake to suppose that "one-half of the sum assured becomes payable" at the expiration of the first year; the other half being deferred till the second year. Payment in the interval by the company does not mean that the withheld balance at the rate of 5 per cent. "is much more simple." It provides that where it occurs the beneficiary becomes entitled to receive the full amount insured for twenty years after the amount assured at the end of twenty years has been received may, in addition, contract for a small progressive bonus during the first twenty years. This is an option not confined to our defective policy, but I do not miss the suggestion that this is a policy in agreement with that issued by the Royal Exchange Assurance Office offering insurance for a fixed annual premium which appears to be decreasing every five years, however, be allowed to point out that what we say the object of the English company is to give an immediate return as possible upon the premiums paid for this purpose the distant death of the insured near," it is only by the immediate death of the insured that an immediate return can be had. But in making that the assured must die to gain, he makes his assurance valuable, whether he lives or dies. The writer says: "It is a grievous mistake to be guilty of prospect of personal advantage in the case of making the largest possible provision for the near future of the near future." Now, the fraction of the life insurance is to make the "contingent future" available only to the few who die in the near future is certain. The advice given would be to should make up his mind to die in the near future term within which it should occur, and the best term—e.g., a man aged thirty, believing he will live five years, if he can get assured would have to pay £13 15s. 10d. for £1000. If he died before the end of five years full due his estate would gain £868 10s. 10d. The Royal Exchange policy he would be charged £13 15s. 10d. for £1000. If he died before the end of five years his estate would gain only £973 10s. 10d. Thus his estate would gain is not the cheapest method of securing back his early death. But this is a gamble.

If it be true, as stated, that the British Insurance Company probably have the effect of excluding persons in the case of persons who live to extreme old age, only say that my company would not care to result. Our policies are very distinct in character. I am, Sirs, yours truly,
D. C. HANCOCK
Secretary to the National Life Insurance Co., Ltd.

Queen Anne-street, W., Feb. 26th, 1895. W. R. GOWERS.

To the Editors of THE LANCET.

Sirs,—Under the above heading at p. 361 of THE LANCET of Feb. 9th you refer to the occurrence in 1893 of two cases of small-pox amongst the patients in the scarlet fever pavilion of the Stockport Isolation Hospital, the first of which was primarily attributed to the fact that a cat secretly kept in the scarlet fever pavilion had visited the small-pox pavilion, though both cases were ultimately believed to be the result of direct communication between these pavilions by means of a tunnel or subway, 77 ft. in length, for the heating pipes, the existence of which was subsequently discovered. In questioning the soundness of this conclusion you object that: 1. "Nothing is said as to the condition of the patients as to vaccination." Your point is not quite clear to me, but the facts are as follows:—Case 1: Aged two years and a half; admitted Jan. 13th; papular rash Feb. 15th. Two rather faint vaccination marks on the left arm, each slightly smaller than a threepenny piece. Small-pox well marked and ended fatally on Feb. 18th. This child had a tuberculous knee-joint with sinuses. Case 2: Aged seven years; admitted Jan. 23rd; papular rash Feb. 28th; three good vaccination marks on left arm almost exactly the size of a sixpenny, a shilling, and a halfpenny piece respectively. This patient on admission was suffering from diphtheria, and was isolated in a separate small ward of the scarlet fever block. This small ward freely communicated with the scarlet fever ward proper, and this child when convalescing from diphtheria developed scarlet fever, and was then put in the scarlet fever ward in which Case 1 and several other children were under treatment. Upon the occurrence of Case 1 all children over seven years of age in the scarlet fever pavilion were at once revaccinated, with the single exception of Case 2, whose marks were so large and good that her revaccination was not considered necessary. 2. You suggest that Case 2 may have derived its infection from Case 1. This is of course possible, and even probable judging from the dates, but it does not, I submit, in any way weaken my contention as to the mode of primary introduction of infection to the pavilion. 3. You say: "And, again, may not both cases have derived their infection aerially?" Certainly, I have not the least doubt that they did so—Case 1 directly from the small-pox pavilion through the underground passage, and Case 2 either in the same way or from the air of the ward infected by Case 1. The odour of oil of peppermint poured with boiling water into the aperture of exit of the heating pipes in the small-pox pavilion quickly pervaded the whole of the scarlet fever pavilion, and this, together with the significant fact that no further case of secondary small-pox occurred after two brick partitions faced with cement concrete had been built across the tunnel of communication, leaves no doubt whatever in my mind as to the part played by the tunnel in question.—I am, Sirs, yours faithfully,

Stockport, Feb. 20th, 1895.

CHARLES PORTER.

To the Editors of THE LANCET.

SIRS,—Allow me briefly to reply to the kindly comments on my paper with the above heading made by two skilled anaesthetists. I have repeatedly heard it alleged that in giving a mixture of ether and chloroform in an inhaler you are working with a vapour composed of the same proportions of its constituents as exist in the liquid form. It was to show the fallacy of this belief that I made the researches detailed in my paper. I there proved that in working with such a mixture you were giving an inhalation varying continually in the relative percentages of its constituents, and I

expressed my belief that to use such a mixture was unscientific and unsafe. When dealing with lethal weapons let us know at least what we are using. I should not like your readers to infer that this mixture is, as one of your correspondents suggests, my mixture at all. I have seen it much used here and I have heard of it being largely used elsewhere, but, of course, the A.C.E. mixture is the much more commonly used one. I had this mixture in my mind's eye, but expressly avoided examining residues from such for the following reasons.

1. If variations in the strength of inhalations were shown to result from mixing two liquids, *a fortiori* would you get such variations from mixing more than two together? Let us always begin by the simpler hypothesis.
2. As algebraists well know, to calculate values of X and Y is an easy matter; to calculate values of X, Y, and Z is far more arduous. The relative amount of ether and chloroform can be easily calculated from the specific gravity. In the case of three liquids soluble in each other it is possible, perhaps, to calculate the percentage of each from the volume and density, but it is a task beyond my powers. The three might be separated by fractional distillation; or an estimation might be made by distilling off the ether by a gentle heat and oxidising in half the residue the alcohol into acetic acid and titrating with alkali, whilst in the other half the chloroform would be converted by boiling with caustic potash into chloride and formate of potassium. These methods would take a considerable time—much more than I could well spare.

As to what would most likely take place with the A.C.E. mixture in a Clover's Inhaler, the relative rate of the three constituents are : alcohol 100, ether 78.7, and chloroform 62. Ether boils at 35°C. (95°F.), and will generally be gently boiling in a Clover if the room is warm—warm as operating rooms usually are. The boiling points of chloroform, 62.7°C. (145°F.), and alcohol, 78.5°C. (173°F.), are too high to enter into the question. The low boiling point of the ether would probably compensate for its less diffusion power as compared with alcohol, and the two vapours might to some extent correspond in amount to each other. The chloroform, handicapped by its low diffusion rate and having no low boiling point to help it onwards and upwards, would linger longer, becoming stronger and yet stronger, until at last, like Astræa, "ultima terras relinquat." My conclusion is that when mixtures are administered homogeneity of inhalation is only possible when the anæsthetic is added by drops on to the face of an open mask; that, in fact, mixtures should not be given in a closed inhaler.

I am, Sirs, yours faithfully,

Derby-road, Nottingham, Feb. 23rd, 1895. EDGAR B. TRUMAN.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow us to inform your readers that the subscription list of the above will be closed next month, and that it has been decided to spend part of the money in the erection of a memorial tablet in Guy's Hospital Medical School and to hand the balance to Dr. Rake's widow and children. It may have been supposed that the latter were sufficiently provided for under the will of the elder Dr. Rake; we therefore wish to say that the small extent to which they become beneficiaries was known to us, and that the whole question was considered at two meetings of the committee before the appeal was drawn up which you kindly inserted in your columns. The treasurer of the fund, Dr. Pye-Smith (48, Brook-street, W.), will still be glad to receive contributions from other friends who appreciated the character and work of the late Dr. Beaven Rake, but who have not yet subscribed to the memorial.

We are, Sirs, yours faithfully,

PHIN. S. ABRAHAM

GEORGE A. BUCKMASTER } Hon. Secs.

ALFRED RAKE.

To the Editors of THE LANCET.

SIRS.—Not having been re-elected to the post of anaesthetist to the Chelsea Hospital for Women, I feel I should like, with your permission, in justice to myself to state the circumstances of the case. When the staff resigned in consequence of the report of the Committee of Inquiry, as no questions of the anaesthetic work of the hospital had been raised it did not seem necessary for me to resign my post. In December,

General Insurance Company.
Cornhill, London, Feb. 25th, 1880.

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refuse to compete for such business—that is
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what they want in the way of life assurance
where they can get it.—E. L.

—DIVISION AND MISCELLANEOUS—
—LAW—

COLOUR VISION AND MORE
To the Editors of THE LANCET
has been attended to

however, the treasurer represented to me as everyone had resigned it was desirable that I should do so, and I fell in with his suggestion. In due course the applications for the in- and out-patient staff were advertised for, but the post of anaesthetist was not advertised for till Feb. 2nd. My application therefore did not come before the Medical Selection Committee in the early part of January. Although the board advertised that candidates must not be engaged in general practice I applied for re-election, stating I had served the hospital as anaesthetist for three and a half years and that I had had no fatal case. There has never been any fault found with my work. I claim to take all necessary care as regards antiseptic precautions, and I fail to see that my work as a practitioner should disqualify me for a post which I have held with success for so long. I am, Sirs, yours faithfully,

ANDREW FAUSSET, B.A., M.B., B.Ch. Dub.

Belgrave-road, S.W., Feb. 25th, 1895.

"THE DANGERS OF STREET PENNY TOYS: A PROTEST."

To the Editors of THE LANCET.

SIRS,—With reference to your annotation concerning the danger of cheap toys and the possibility of diffusion of disease by the mouth, allow me to remind you of an instance of the kind reported in the French press somewhere about 1877. A number of persons having become infected with syphilis by the mouth, an inquiry was made which led to the discovery that they had all been in the habit of smoking cigars from the same manufactory, where the finishing touches (adjusting the edges of the outside leaf, shaping the point, &c.) fell to the share of some young women suffering from specific disease of the mouth or lips. The conclusion is obvious. I am, Sirs, yours truly,

Feb. 25th, 1895.

X.

"THE REMUNERATION OF THE RESIDENT OFFICERS IN ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—I am sorry that my expression "a good time" should have clashed with "Fair Pay's" idea of why one tries to get on the junior staff. I quite agree with him that one does not do so with the object of having a good time. I was thinking that a year on the junior staff at St. Bartholomew's is worth four or five at a small hospital, for in the former case one learns how to work with colleagues of many and varied temperaments; in the latter, one has at the most two colleagues and often only one. To go back to the point of pay. The resident officer is in residence for six months—say, twenty-six weeks—and pays about £1 per week for his food. Therefore in twenty-six weeks he pays £26 for food.

Now, as far as I can see (my authority is the advertisements at the end of the Medical Directory), no single hospital with a school attached pays its junior residents any salary, though they feed them, and most of the appointments seem to be for only three or six months. The St. Bartholomew's junior officer is in office twelve months and in residence six. In those six he pays £26, and for his year's work he receives £25. This works out to much the same as if he got no salary and was boarded. Again, "Fair Pay" says that I know that men resident in a hospital have no opportunity of broaching the subject, nor would they be listened to. I know nothing of the kind, but I do know that when I was in residence I and one of my colleagues initiated several reforms affecting the junior staff, and that the committee were uniformly courteous and obliging, and that about a year after we left the reforms were completed. As to "R.M.O.," what does he mean by saying that I have learned that relations with other medical men are to be regulated by supply and demand in its money sense? The only meaning I can attach to his words is that the senior members of the staff have a pecuniary interest in their house physicians or surgeons not being paid more. If I have put a wrong construction on his words I will apologise in advance, but I can attach no other meaning to them. I cannot see that it is more expensive to be on the junior staff of St. Bartholomew's than that of any other hospital with a school; and not only the experience, but the

fact of having held such an appointment is invaluable. If the hospital were to pay the junior staff the full value of their services it would get off cheaply at £2000 or £3000 each, for the hospital work could simply not go on without them, but the same might be said of the cook or the porters.

I am, Sirs, yours faithfully,

AN OLD HOUSE SURGEON OF ST. BARTHOLOMEW'S.

Feb. 25th, 1895.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Date of Hospital Sunday at Liverpool.

MUCH difference of opinion prevails as to the proposal to alter the date of Hospital Sunday from the second Sunday in the year to another one later in the year, when the weather may be expected to be less wintry. On the one hand it is contended that the result could not be worse and might be better, that the present Sunday is too near the Christmas and New Year's festivities, and also too soon after quarter-day and the inevitable quarterly bills; and on the other hand it is urged that the present date has been followed for twenty-four years, during which period a sum of £167,508 has been raised by the Sunday collections alone, an average of £6979 annually; and such being the happy result it would be better to leave well alone. Although the weather this year was exceptionally severe and the depression of trade worse than it has ever been before, the collections are expected to reach £6000, the unfavourable circumstances just noted having combined to raise much sympathy towards the hospitals and other medical charities. Then there is the risk of dislocating a custom of such long standing, and the fear that it may cause some permanent defaulters. The matter will be fully considered by the committee before the next anniversary comes round.

The Weather and the Distress.

Within the last few days the severity of the weather has considerably abated, and consequently the distress among the poor has been less acute. Nevertheless, the stream of benevolence still flows on, large numbers of persons being relieved, mostly in food, coals, &c. The distribution of money through the police and through the Central Relief and Charity Organisation Society prevents it being squandered on undeserving persons, of whom there must always be a large proportion in such a city as this. There are always benevolent persons ready to give alms to any applicant, and as a natural consequence there are always beggars. Organisation and charity are perfectly compatible, and no one can know better than medical men what are the evils of indiscriminate almsgiving.

Lord Chief Justice Russell.

The Lord Chief Justice is expected to preside in the Crown Court at the Assizes to be held here next month. As is well known, his lordship—first as Mr. Charles Russell and subsequently as Sir Charles Russell—was for many years attached to the Northern Circuit, and in no part of it was he better known than in Liverpool, which has been the scene of many of his forensic triumphs.

An Atrocious Murder.

At an early hour one morning last week a boy seriously wounded came out of a house and gave the alarm to some men that an old man in the same house had been murdered. The boy then fainted, and was conveyed to the Northern Hospital, where he still remains in a somewhat critical state under the care of Mr. Damer Harrison. The old man was found dead, having received very severe wounds, causing great hemorrhage. The inquest has been opened by the City Coroner and adjourned, Mr. Frank T. Paul, lecturer on medical jurisprudence, having made the examination of the body at the request of the coroner, together with the examination of the blood-stained weapons found by the police. The injured boy recovered consciousness and was able to give a description of his assailant and to identify a man whom the police arrested later as the man who assaulted him. The case has naturally attracted much excitement, but further comments must be left till after the inquest and magisterial investigation.

Feb. 26th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Egremont.

MR. SAMUEL BRAITHWAITE, J.P., has been elected first chairman of the Egremont Urban District Council. Mr. Braithwaite studied medicine at the University of Durham College of Medicine at Newcastle-upon-Tyne, and has been in practice at Egremont since 1876, in which year he succeeded Dr. Lawson. Since 1885 he has filled the post of chairman of the local board. He is surgeon to the local rifle corps, and has been lieutenant and captain; he is also member of the West Cumberland Fishery Board, and director of the Gas Company, and he was Master of the Egremont Otterhounds. He is, besides, a hard-working medical practitioner. No man in the district is held in greater esteem than the chairman of the Egremont Urban District Council.

Durham.

The University Journal, which has hitherto consisted of some six or eight pages, is to be enlarged to thirty pages, and is to be run on somewhat different lines. The College of Medicine and the College of Science at Newcastle are each to have an editorial staff, and in the journal will now appear all matters of interest and importance to those two institutions. Professor Glines, the new principal of the College of Science, has taken great interest in promoting this movement. It is hoped that this journal may become the official gazette of the University. It will be subsidised by the colleges at Durham and at Newcastle.

The Heath Surgical Scholarship.

The late president of the College of Medicine, Professor G. G. Heath, left in trust the sum of £4000 for the purpose of founding a scholarship in surgery to be awarded every second year. The value of this scholarship will be some £200, and regulations are about to be issued by the trustees. The competitors must be graduates of Durham University. It is anticipated that there will be keen competition for this valuable prize. This will be the first competition.

The Newcastle College of Medicine.

The office of secretary has become vacant by the resignation of Mr. H. Fox, R.N., and the appointment will be advertised at once. The Council of the College has recently introduced the electric light into the building, and the dissecting-room, lecture theatres, council chamber, and the corridors are now all illuminated by electricity.

The Cumberland and Westmorland Asylum.

Carlisle is a city constantly referred to in old ballads by the epithet "merry." I am reminded of this by the report of a speech made by Mr. Carrick of Scooby in his candidature for the county council. Mr. Carrick is a member of the Lunacy Committee, and in his speech made some very remarkable and interesting statements. For the last two years the recovery-rate at the Carlisle Asylum had been—for 1893 45·5 per cent., as against the average in English county and borough asylums of 39 per cent.; and for 1894, 47·9 per cent., as against 37·3. The average rate of recovery on total admissions for the last twenty-two years had been 45·7 per cent. The committee had considered the 4s. grant for pauper lunatics, and had applied to have it extended to pauper patients outside the workhouse, as in Scotland. A large building for private patients, who would otherwise have to pass through the asylum as nominal paupers, is in course of construction, and altogether Carlisle seems to be exceptionally fortunate in her treatment of lunatics and her choice of those who look after them.

Feb. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medico-Chirurgical Society.

THE discussion at this society on cardiac therapeutics was resumed last Wednesday before a considerably smaller audience than on the first night of the discussion. Dr. Bramwell opened in a long and somewhat too exhaustive paper on the whole subject, which occupied the first hour. He was followed by Dr. Stockman, who took a somewhat negative line of criticism. Professor Greenfield extolled in

the highest possible way the value of strophanthus as against digitalis. Dr. James Ritchie referred to various points which he had gleaned from his experience in general practice. Dr. William Russell aimed at delimiting the sphere of applicability of digitalis and strophanthus. Dr. Clouston referred to the circulatory troubles in some forms of insanity, and indicated the treatment he adopted for these cases.

Influenza in Edinburgh.

There has been quite an outbreak of influenza in epidemic form in Edinburgh. It first made its appearance some ten or twelve days ago, when the first indications of it was appeared. It is very prevalent amongst all classes. The seizures are, as a rule, quite typical, although it is at the same time accompanied by such mild cases that, occurring alone, they would be classed as febrile catarrhs. Fortunately, the lung complications do not, so far, appear to have been serious. Bronchitis is common, but pneumonia not so common or so fatal as it was a few winters ago. Still, the death-rate is high, and the number of deaths from disease of the chest is large.

Health of Edinburgh.

The death-rate last week was 36 per 1000. Out of a total death-roll of 188, 115 were due to chest diseases. Amongst the deaths were 20 cases from measles and 2 from small-pox. The intimations for the week included 683 cases of measles, 1 of small-pox, and 35 of scarlet fever.

Royal Edinburgh Asylum for the Insane.

The annual meeting of the corporation of the Royal Edinburgh Asylum for the Insane was held on Feb. 25th, Lord Provost McDonald presiding. The treasurer read a report showing that the institution had a surplus of £4717 14s. 6d. The physician superintendent (Dr. Clouston) read his report. He drew attention to the increase of general paralysis, but on the whole mental disease was not increasing. He also referred to Dr. Bruce's investigations as to the treatment of certain kinds of mental disease by thyroid feeding, and he looked forward with much confidence to the good which this plan of treatment would accomplish.

Recent Medical Appointments in Glasgow.

Certain medical appointments have recently been made in Glasgow under circumstances which have not given universal satisfaction. The University Court has instituted two new medical lectureships, and has filled them without advertising for candidates. The directors of the Western Infirmary have filled three vacancies in their staff, and, without disparaging the merits of the successful candidates, it seems to me that certain of the unsuccessful candidates had higher academical claims. It is always a pity when appointments can be made the subject of this sort of comment. It places the new holders of the posts in an unpleasant position and exposes the other gentlemen to an imputation of jealousy. The most obvious remedy would be that the meetings of the Glasgow University Court and of the board of directors of the Western Infirmary should be held in public, as is already the case as regards the meetings of the University Court of Aberdeen and those of the directors of the Royal Infirmary of Edinburgh.

Feb. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dublin Sanitary Association.

AT the annual general meeting of this association the incoming president, Dr. J. W. Moore, in the course of his address referred to the outbreak of small-pox in Dublin, and said that the public at large do not appear even yet to realise the priceless boon which vaccination has conferred upon mankind since the memorable day—May 14th, 1796—on which Edward Jenner vaccinated a peasant lad whom he failed to inoculate with small-pox two months afterwards. Before the introduction of vaccination the annual mortality from small-pox in England and Wales was at the rate of 3000 deaths in every 1,000,000 of the population. In 1891 the population was 29,081,047 and the death-rate from small-pox would represent an annual loss of some 87,000 lives. What were the actual facts? In 1890 small-pox caused only 15 deaths in England, while the annual number from this disease in the ten years 1881-90 inclusive was 1327—that is, one-eightieth only of the death-rate of pre-vaccination times. Dr. Day, resident medical

LIVERPOOL

(FROM OUR OWN CORRESPONDENT)

The Date of Hospital Sunday at Liverpool

MUCH difference of opinion prevails as to the year after the date of Hospital Sunday for the next time in the year to another one later in the year, viz. that it may be expected to be less windy. On the one side it is contended that the result could not be more successful than the present, and on the other that it would be better, that the present Sunday is too near the Christmas and New Year's festivities, and also too soon after the payment of the inevitable quarterly bills; and on the other side it is urged that the present date has been followed for nearly four years, during which period a sum of £167,581 has been raised by the Sunday collections alone, as against £100,000 annually; and such being the happy result it would be to leave well alone. Although the weather this year has been exceptionally severe and the depression of the market more than it has ever been before, the collections are expected to reach £60,000, the unfavourable circumstances having combined to raise much sympathy for the hospitals and other medical charities. The desirability of dislocating a custom of such long standing is a matter which it may cause some permanent objection to, but it will be fully considered by the committee at the next anniversary comes round.

The Weather and the Distress

The Weather and the District.

Within the last few days the severity of the has considerably abated, and consequently it is among the poor has been less acute. Numerous stream of benevolence still flows on from all persons being relieved, mostly in food, such as the tribution of money through the police and the Central Relief and Charity Organisation Society, it being squandered on undeserving persons. There are always a large proportion in this. There are always benevolent persons who aim to any applicant, and as a natural consequence are always beggars. Organisation and charity are compatible, and no one can know better this what are the evils of indiscriminate almsgiving.

Lord Chief Justice Russell.

Lord Chief Justice Russell...

The Lord Chief Justice is expected to preside at Court at the Assizes to be held here next month. Known, his lordship—first as Mr. Charles Russell—subsequently as Sir Charles Russell—was for many years to the Northern Circuit, and in no part of it so well known than in Liverpool, which has been the scene of his forensic triumphs.

An Atrocious Murder.

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of his forensic triumphs.

An Atrocious Murder.

At an early hour one morning last week a big wounded came out of a house and gave the some men that an old man in the same house murdered. The boy then fainted, and was conveyed to Northern Hospital, where he still remains in a critical state under the care of Mr. Danneberg. The old man was found dead, having received very serious internal injuries, and the cause of death was a cutting great hemorrhage. The inquest has been held by the City Coroner and adjourned. Mr. Pack has been called on for medical jurisprudence, and has examined the body at the request of the coroner, together with the medical officers of the hospital. The examination of the blood-stained weapons has been completed, and the police are now endeavoring to give a description of his assassin, and to find a man whom the police arrested later as having assaulted him. The case has naturally attracted much public interest, but further comments must be left to the press and magisterial investigation.

Feb. 25th.

officer of the Cork-street Fever Hospital, had recently stated that in not one of 488 patients suffering from small-pox, who had been admitted to the wards of that hospital from the beginning of the present outbreak in Dublin in July, 1894, up to Dec. 31st, was there the smallest evidence that revaccination had been successfully performed within twelve months previous to the development of the disease. The most noticeable feature and the strongest point in favour of vaccination is that, of the 37,000 children in the Dublin Registration District under five years of age, the vast majority of whom are known to be vaccinated, only 22 have died from small-pox during the present epidemic, and none of these 22 were protected by vaccination.

Mischiefs of Medical Charity in Dublin Hospitals.

At the recent meeting of the Dublin Branch of the British Medical Association Dr. H. C. Tweedy read a paper on the above subject. In the course of his remarks he said that the medical press had been lately dealing with the question of hospital abuse. The discussion of such a topic should be productive of good results, and it showed that the public were taking an increased interest in the hospitals, and were determined on rendering them as perfect as they might be in their general working. A comparison of the minute books of hospitals of the past with those of the present day gave striking illustrations of how in the matter of order and management hospitals had advanced during recent times. No longer now did they find the governors mere figureheads who never attended when any useful business was to be done, but turned up with unflinching certainty when some job was to be perpetrated. In other respects, also, hospital management had advanced greatly, and the hospital patient had a far better time of it than his brother or sister of days gone by. But there was a danger that the tide might overstep its natural bounds. The title of "hospital patient" had of late become abnormally elastic; the general public had been developing a tendency to avail themselves of the use of the hospitals to such an extent and in such a manner as were never contemplated by the pious intentions of the founders. In the two departments of the hospital—in the pay wards, and to a great extent in the extern dispensaries—were to be found as patients persons who could not be considered as having reasonable claims on public charity. The pay wards were originally established to meet a great want for the needs of a large class of people, such as ladies in reduced circumstances, who could not be expected to pay a large fee. But now the privilege was being usurped a good deal by a class of patients not having the most remote claim on public charity. Officers, country gentlemen and their wives, and others such as these were availing themselves of these pay wards. Their presence in the hospital at all as patients was strongly to be deprecated, for not only were they getting beds intended for a deserving and suffering class of people, but a great injustice was also inflicted on the medical and surgical staff, who had to attend them gratuitously. If pay patients were to be taken into hospitals at all their circumstances should be rigidly inquired into, and none taken except those who could not otherwise pay for the advice and nursing that they needed. Dr. Tweedy advocated the establishment of a private hospital in Dublin of the type found in Berlin and other places, and he believed that such would work with profit. The district which made up the Dublin hospital district had a population of 356,240 persons, and they found that the total number getting medical relief through the hospitals during the year was 171,897 persons, or 482 out of every 1000 of the population of the district, nearly one-half of the whole.

The Battle of the Clubs at Cork.

Large posters announced that a meeting of citizens was to be held on Thursday, Feb. 21st, for the purpose of "considering the crisis created by the doctors' circular." Members of benefit clubs and their friends were invited; for others admission was regulated by ticket. The janitors discharged their discriminating duties efficiently, and the proceedings inside were harmonious. The list of notabilities published in the morning papers showed that it was a representative meeting of the clubs and nothing more. The attempt to give the meeting the appearance of a general gathering of citizens by bringing the Mayor there to preside proved a failure. A deputation waited upon the civic authority, but he could not see his way to identifying himself with the proceedings. The chairman told his audience that they found it necessary to put on a levy of 6d. per member, but he did not add that the rich man with £800 a year paid the extra 6d. just the

same as the poor man with £1 a week, neither more nor less, which makes those of us who know wonder when the rank-and-file of the clubs will see how completely they are made cat's paws of by their wealthy brother members. Two of the speakers at the meeting happened to be paid secretaries of clubs whose income would be likely to go down if the clubs were pruned of the wealthy members. After mutual congratulations, taking the form of a vote unanimously passed commending the dignified attitude of the clubs, the attention of the meeting was directed to the decision of the magistrates in the recent snowballing case. It was felt that the student who threw the snowballs should have been more severely punished, but the lenient magistrates were held to have been terrorised by the Cork medical men!

The Norwegian barque *Mauranger* is quarantined in Valentia Harbour. Shortly after leaving Mexico the master died from yellow fever, and before the voyage commenced one of the crew died from the same affection.

The following gentlemen have been admitted Fellows of the Royal College of Surgeons in Ireland—viz., Richard B. McCausland, George R. P. Burton, and Henry Stoker.

Feb. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The late Dr. Dujardin-Beaumetz.

GEORGE SAINFORT DUJARDIN-BEAUMETZ, whose death I chronicled in my last letter, was born in 1833 at Barcelona of French parents, and commenced his medical studies in Paris in 1853. *Interne* in 1857, M.D. Paris in 1862, then successively *chef de clinique* and (in 1870) *médecin du Bureau Central*, he took his place at the front on the declaration of war, and his bravery and devotion procured him a mention in despatches and the Cross of Chevalier of the Legion of Honour. It is stated that when in the thick of the fight at Montretout he was seen to be coolly engaged in picking up the wounded. Someone reminded him of the danger he incurred. He replied, alluding to his myopia, "Les balles! mais je ne les vois pas." Appointed physician to the Hôpital Saint Antoine in 1876 he there delivered before large audiences his *Leçons de Clinique Thérapeutique*, read since by thousands of students and practitioners. In 1882 he left Saint Antoine Hospital for Cochin (in the Rue Saint Jacques), of which hospital he remained physician until his death. There he continued his clinical teachings, set up two laboratories (therapeutics and bacteriology) which became great centres of activity, numerous pupils such as Dubief, the bacteriologist &c., being "turned out" by this Dujardin-Beaumetz school. His wide-world renown as an authority in the field of therapeutics rendered his wards a familiar rendezvous for students of this faculty and visitors, and a run up to Dujardin-Beaumetz's wards became almost as much an institution as a visit to the Salpêtrière in Charcot's time. Elected Member of the Academy of Medicine in 1880, he became a frequent speaker at the meetings of that learned assembly. As a member of the Conseil d'Hygiène his enthusiasm in sanitary reform and preventive medicine soon brought him to the front. When cholera made its unwelcome appearance in 1884 and 1892 he was the most valued counsellor of the Prefecture of Police, and the city of Paris owes him a debt of gratitude for the energy and success with which he stemmed the tide of the epidemic on those occasions. In 1892 he instituted two most precious departments—viz., the Comité Permanent and the Service des Épidémies, both of which have proved a blessing to this vast population. In 1893 the Government showed its appreciation of his worth by bestowing on him the Cross of Commander of the Legion of Honour. He was a prolific writer, his chief works being, in chronological order, "*Leçons de Clinique Thérapeutique*," "*Dictionnaire de Thérapeutique*," "*L'Hygiène Prophylactique*," "*Hygiène Alimentaire*," "*Les Plantes Médicinales*," "*Les Nouvelles Médications*," "*Le Formulaire*" (in collaboration with M. Yvon), and "*Traité des Maladies de l'Estomac*." Recently he started the publication of a library of medicine and surgical therapeutics and contributed the first volume, "*L'Art de Formuler*." He was besides the editor-in-chief of the *Bulletin de Thérapeutique*, and contributed countless valuable reports to the Conseil d'Hygiène on various sanitary questions as they cropped up. He was also the founder and Honorary President of the Société de Médecine et de Chirurgie

Pratiques. Some idea of his intellectual activity may be gathered from the fact that on the day of his death (Feb. 15th) a paper dictated by him appeared in his journal, the *Bulletin de Thérapeutique*. It was always a matter of regret and surprise that the efforts he made to enter the conservative precincts of the Faculty as Professor remained fruitless. Instead, however, of retiring in disgust he manfully set about instituting a series of independent lectures, with the result that his works became more widely read than those of any professor of therapeutics at the exclusive faculty of which he would have been one of the chief ornaments. He was adored by his pupils, and his cheery presence in his wards was ever welcomed by his poor patients. His health had for the last few years been far from satisfactory, but in September, 1893, he reappeared apparently quite restored after having undergone an operation (laparotomy) at the hands of Professor Terrier. During the respite of seventeen months he continued to work, and when at last constrained to leave Paris he repaired to the south; his habitual cheerfulness of disposition never left him, and he died the same bright being he always had been. In the late Dr. Dujardin-Beaumetz we may salute in all sincerity a true searcher after truth, the students' friend, and an *homme de bien*.

Death of M. Alphonse Guérin.

Yet another ornament of the profession has just disappeared in the person of Alphonse Guérin. The life work of this distinguished surgeon deserves more than a passing notice. I, therefore, make no apology for deferring until next week an account of his career, which will be read with interest by all students of surgical progress. Suffice it to say that he was buried with military honours yesterday at the Church of St. Pierre de Chaillot, the pall-bearers being Dr. Empis (President of the Academy of Medicine), Dr. Anger (President of the Société de Chirurgie), Dr. Bergeron (Permanent Secretary of the Academy of Medicine), Dr. Peyron (Director of the Assistance Publique), and Drs. Merklen and Lucas-Championnière. After the ceremony the remains were conveyed, *en route* for Brittany, to the Gare Montparnasse, where several speeches were delivered.

Sterilisation of Water.

M. Frémont¹ has succeeded in proving experimentally that water maintained for twenty minutes at a temperature of 80° C. loses all the pathogenic micro-organisms it may have contained without being deprived of its gases and without involving any precipitation of the contained salts. It is stated that the flavour of the water is in nowise modified by the process—a most important consideration.

Which is, Ophthalmologically, the best Artificial Light?

Dr. Trousseau, surgeon to the Quinze-Vingts Eye Hospital, gives² the preference for innocuity to incandescent electric light, and assigns the second place to petroleum lamps, which may advantageously be employed for ordinary purposes. He condemns *in toto* the light yielded by oil, and more particularly that given by candles. The gas-jet is the most hurtful to the eye, its only recommendation being its convenience.

Feb. 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Leyden on Hospitals for Consumption.

At a meeting of the National-Verein für Hebung der Volksgesundheit (National Health Association), Professor Leyden read a paper on Hospitals for Consumption. The meeting was well attended, and among the distinguished guests were the Chancellor, Prince Hohenlohe, and several gentlemen representing the Cabinet. Professor Leyden first mentioned the fact that in Germany 120,000, and in Berlin not less than 20,000, people suffered from phthisis, and one-seventh of all deaths in Germany is attributed to tuberculosis. The poor sufferers either remained at home, where they do not obtain the necessary care, or are sent to the general hospitals, which are not fitted for this class of patient, and where the phthisical have to be dismissed now and again too early, when their room is wanted for more urgent cases. What is wanted in Berlin, Professor Leyden showed, is special hospitals where poorer sufferers can be treated prin-

cipally from the hygienic and dietetic point of view, the existing institutions being fitted by their prices only for the more wealthy class. Professor Leyden alluded to England, where the first consumption hospital was opened in 1814, and where now more than 4000 phthisical people can be attended in special institutions. In Germany there exist only very few of these hospitals, one in Malchow, near Berlin, belonging to the municipality of the metropolis, where eighty patients can be received; one in the neighbourhood of Frankfurt; and two small houses in Andreasberg in the Hartz Mountains and in Görbersdorf, both of which are maintained by charitable contributions. Professor Leyden hoped, however, that matters would soon be changed for the better. A rich banker had in what he (Professor Leyden) termed the "tuberculin era" made a donation of £50,000 to the city of Berlin for the construction of a hospital where the tuberculin treatment should be adopted. When tuberculin appeared to be a failure, the money was not used according to the will of the donor, and now the town council intends, Professor Leyden understands, to spend this sum upon a hospital where the sufferers will not be treated by Koch's remedy, but by hygienic measures. If only patients in the first stages of the illness were received an average sojourn of three months would suffice. Professor Leyden hoped that not only would the hospital be opened to the indigent, but also to the middle classes, who were unable to pay the high pension prices required in the existing private establishments. He closed his address with the remark that a southern climate and the air of the mountains were a great advantage, but not a strict necessity for the phthisical; and that they could be cured if they had good food, a well-ventilated room, and plenty of fresh air. After the discussion a committee was elected to take practical measures to propagate the idea of the construction of hospitals for phthisical patients.

Accidents and Ambulance Organisation in Berlin.

In Berlin the ambulance organisation has been, till recently, very deficient. If, for instance, a person is run over in the street by a carriage the proceedings are as follows. At first a great many people assemble round the victim to give their opinion of the matter. Then several run to the houses of the surgeons in the neighbourhood, who probably are not at home. Finally, a policeman with the assistance of some of the more intelligent of the crowd place the injured man into an ordinary four-wheeler and take him to a hospital. Very often this want of ambulance organisation has led to serious results, numerous examples of which I could narrate. For night accidents, it is true, there are the Sanitäts-Wachen dressing-rooms in several quarters of the town, where from 10 P.M. to 6 A.M. a medical man and an assistant are on duty. These are maintained by the contributions of the inhabitants of the quarter, and their medical officers have to attend casualties in the waiting-room or to go into the houses if their help is wanted. Their necessity has been often disputed by the profession, for in the night medical men are usually at home and can be found without difficulty. Besides, very often people go to the Sanitäts-Wachen who have not met with an accident, but have some other complaint for which they hope to be treated free of charge. As in the night all the manufactories are closed the sufferers from really grave accidents derive no advantage from these waiting-rooms, and the *habitués* are principally rowdies who have been wounded in night rows. Notwithstanding all this, the Sanitäts-Wachen have existed nearly twenty years, and now get an annual subvention from the town council of 40,000 marks. They are rather insufficiently furnished with litters and have no ambulance carriages; but not even the great general hospitals possess ambulance carriages. The only ambulance carriages that exist belong to private undertakers, who also transport sick people and are in emergency cases difficult to obtain. During the past year a great improvement has been made in this matter by a private society. This society has established at different points of the town Unfall-Stationen (accident stations). There are four principal stations and eight branch stations. At the principal stations there are newly constructed horse ambulances which are ready to start immediately in case of alarm; the principal stations are connected with accident wards of thirty or forty beds, where the injured can be attended till they recover. The branch stations consist of a dressing-room with the necessary instruments and dressing materials, and a room with one or

¹ Journal de Médecine de Paris, Feb. 17th.

² France Médicale, Feb. 15th.

two beds where the wounded can rest some time. At all the stations surgeons and assistants are on duty day and night. They have telephonic communication, so that in cases of accidents the ambulances and surgeons can easily be called. The new organisation has already been found to be of the greatest practical use.

Feb. 26th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Closing of the Universities.

DR. BACCELLI is to be congratulated on his academic *coup d'état*. No man is a greater friend of the student than his Excellency, but there are limits even to his forbearance, and these have long ago been reached. The undergraduates of Rome, acting in a spirit of solidarity with their brethren of Naples, held a "sympathy meeting" in the quadrangle of the *Sapienza* and denounced his Excellency's measures in language quite unbecoming the scene and its subject. Even this might have been connived at, but when from words the speakers and their audience proceeded to riot the *carabinieri*, in behalf of public order, had to intervene and tried to enter the quadrangle. The students at once assumed the defensive, and by dint of numbers bore back the invading force and shut the great doors in its face. This success, however, was but short-lived. Eight of the ringleaders, by order of the *Senatus Academicus*, were next day suspended from their studies, but without appreciable effect in restoring calm. A mass meeting of some 800 students was held in the Colosseum, where the proceedings recalled the violence and tumult of the gladiatorial arena rather than the decorum of academic discussion, and again the *carabineers* had to interpose. The struggle that ensued was a determined one; three of the most turbulent of the students were arrested and subsequently recaptured by their friends, till the *Senatus Academicus*, impotent to restore order, appealed to the Minister of Public Instruction, at whose instance the University was closed for the year. Meanwhile the epidemic of insubordination has spread throughout the kingdom, and even such staid and dignified seats of learning as the *Istituto di Studi Superiori* at Florence have been beset by the mutinous spirit. It is, indeed, a declared war between the *Burschenschaft* of Italy and the academic authorities, and nothing short of disaster would ensue if the former were victorious. Of that, however, there is no danger. Dr. Baccelli, one of the most genial, is also one of the most resolute of men, and the interests of education in general and medical education in particular are too dear to him to tolerate for an instant the postponement of either to undergraduate importunities. When tranquillity has been restored and the young mutineers have quietly resumed their work the commencement of a new era in university life will be felt. Dr. Baccelli's academic policy will have been advanced several stages towards its embodiment in the Statute-book, and a salutary reform will have begun in the academic system of Italy. High time is it that such should become *un fait accompli*. For the thirty millions of Italians there are twenty-one universities. The higher education is so cheap and graduation so easy that the country swarms with unemployed professional men too proud to enter a business, but not too proud to become political agitators, in the press or on the platform. The commercial and industrial life of Italy is thus impoverished for the repletion of a pseudo-professional class, and politics are infected with place-hunters too numerous and too clamorous to make sober, steady legislation possible. Of all this no man is more cognisant than Dr. Baccelli, and he has long been maturing innovations which shall restore the healthier academic life of the Renaissance. His views on this subject, however, have too often been put before the readers of THE LANCET to warrant recapitulation here.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Cholera.

CASES of cholera are on the increase in Constantinople and its suburbs. From 15 to 25 cases are recorded daily, the mortality ranging from 3 to 8. The disease has disappeared from the other parts of the country with one exception, but

fresh cases are reported from Adalia, in the province of Koniah. The Board of Health has taken every trouble and care for the protection of the health of the capital and of all the provinces, and the Admiralty is sending gunboats to the lazarettos of Tonzla, a small port on the Asiatic coast of Marmora, and Kavak, at the mouth of the Black Sea, to watch over the vessels undergoing quarantine in those two lazarettos. The Servian Board of Health has decreed a quarantine of five days on travellers arriving from Constantinople; and a recent telegram from Sofia says that the Bulgarian authorities, foreseeing that in consequence of the imposition of five days' quarantine at Tobataldja on arrivals from Constantinople travellers will take the sea route, have decreed medical inspection with disinfection of luggage at Varna and Bourgas, and eventually a term of quarantine against travellers coming direct from Constantinople.

Small-pox.

The bulletin published in the *Gazette Médicale d'Orient* registers 277 deaths in Constantinople between Jan. 21st and 28th. Of these, thirty-three were due to small-pox. The disease has already spread all over the city irrespectively of class. The Government has been very energetic in combating the spread of the disease, and has supplied vaccine to a number of public and military schools. Most of the vaccine now used in the country is prepared at the Imperial School of Medicine. Free dispensaries are opened in the poor and crowded districts. The epidemic is unfortunately raging in many provinces at the same time.

The Sultan and Phthisis.

The Sultan has charged his personal physician, Dr. Mavrogény Pasha, to bring before the Imperial Society of Medicine the following question for discussion: "Is pulmonary tuberculosis contagious; if so, to what degree is it contagious?" The society, after expressing its thanks to the Sovereign, entered the question into the order of the day. The discussion will commence within a week.

New Buildings.

The ceremony of laying the foundation-stone of the Imperial School of Medicine at Haïdar Pasha, Constantinople, took place on the 12th ult. on the occasion of the anniversary of the Sultan's birthday. The Hall for Surgical Operations, built in the park of the Military Hospital at Haïdar Pasha, was also inaugurated on the same day.

Feb. 19th.

Obituary.

WILLIAM HENRY DAWSON, M.D. DURH.,
M.R.C.S. ENG., L.S.A.

DR. WILLIAM HENRY DAWSON, whose sudden death from heart disease was recorded in THE LANCET of Feb. 16th, was the son of Mr. R. H. Dawson, an Exeter merchant, and was born in that city on Nov. 17th, 1837. Dr. Dawson was educated at Christ's Hospital, which he left well up on the list of "Grecians," and subsequently served his apprenticeship with Mr. E. P. Pridham, a well-known surgeon of Exeter and a pupil of Abernethy. At St. Bartholomew's Hospital he attained some distinction among the pupils of his time, gaining, among other prizes, that in anatomy. Immediately on taking his diploma he went to Malvern as assistant to the late Mervin Coates, who at once recognised his ability, and it was with his sanction that after a few years he commenced to practise independently in the town, where he continued for thirty-five years. From the first he met with marked success, and was appointed surgeon to the Malvern Lying-in Hospital, which led to a large development in his midwifery practice. He was one of the prime movers in establishing the Cottage Hospital, and became its first superintendent surgeon, a position he held till within a few years of his death. He was also one of the medical officers to the dispensary, and for the past three years had been medical officer of health to the district, offices which he discharged with great assiduity and distinction. To various charitable institutions he gave valuable assistance. He was one of the first to recognise the importance of the Volunteer movement, and was for a considerable period a member of the local rifle corps. Dr. Dawson had a large private practice, and his skill in surgery had more than local renown. To the poor he was always the

kindest of friends, rendering them professional and other assistance, often when his only reward could be their gratitude. By his removal the town has been deprived of a zealous and most efficient public servant, while a large circle of friends will mourn the loss of one who was regarded by all who knew him as a man just and upright in all his dealings. The very general sorrow felt at his death cannot but be a solace to Mrs. Dawson and her family in their hour of heavy bereavement.

HENRY MONTAGU CHAMPNEYS, F.R.C.S. ENG., L.S.A.

HENRY MONTAGU CHAMPNEYS was a son of the Rev. Charles Champneys, Minor Canon of Windsor, Rector of St. Botolph's in the City. He was born in 1818 at Bow in Middlesex, and studied at Guy's Hospital. He became M.R.C.S. in 1841 and L.S.A. in 1844, and was elected F.R.C.S. in 1858 at the instance of Mr. Cooper and Sir Henry Pitman. He practised first at Slough, where he was surgeon to the police and Great Western Railway Provident Society. There being no hospital at that time between Reading and London, and the railway between Slough and Windsor being in course of construction, severe surgical cases were treated at the Eton Union, to which Mr. Champneys was surgeon. In 1861 he went to Battle in Sussex, and in 1867 moved to Penge, where he remained in practice till the time of his death, after a few hours' illness, on Feb. 11th. The cause of death was angina pectoris and syncope. A few years ago he was elected to the Court of Assistants of the Apothecaries' Company. One of the most interesting episodes of Mr. Champneys' earlier life was the trial of the Quaker, John Tawell, who was eventually hanged for the murder of Sarah Hart by prussic acid poisoning. Mr. Champneys was first called to the woman at Slough in January, 1845, and throughout the subsequent trial his medical evidence was of no little importance. The case will be remembered from the fact that the defence put forward the theory that some apple pips found in the stomach were sufficient to account for the presence of the amount of prussic acid found.

JOHN ROSE, M.R.C.S. ENG., L.S.A.

MR. ROSE was one of the oldest—perhaps the oldest—practitioner in Islington. He was in his early days a pupil of the late Mr. Freeman of Spring-gardens, and so came into professional contact with historical persons and historical members of the profession. He commenced practice in the neighbourhood of Liverpool-road, later removing to Canonbury-lane, and finally to Parkhurst-road, where he died. He took the licence of the Society of Apothecaries in 1839 and eight years afterwards the Membership of the Royal College of Surgeons of England. Mr. Rose was a sound practitioner and an upright and God-fearing man. He was greatly respected by a large number of friends and patients. His health had been failing for some time with renal and other troubles, from which, however, he was partly recovering when the prolonged and intense frost caused congestion of the lungs and quickly extinguished his life. Mr. Rose, who was a bachelor, was in his eighty-second year at the time of his death.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the under-mentioned subjects:—

Surgery.—L. M. Breton, St. Thomas's Hospital; W. J. Gillespie, St. Bartholomew's Hospital; D. W. Jones, Charing-cross Hospital; S. E. Price, London Hospital; H. Roberts, St. Mary's Hospital; W. Sutcliffe, Birmingham; M. M. Townsend, King's College Hospital.

Medicine, Forensic Medicine, and Midwifery.—A. F. Blake, London Hospital; W. Mettam, Sheffield; H. H. Thomas, Charing-cross Hospital.

Medicine and Forensic Medicine.—W. E. Bremner, King's College; R. Keatinge, London Hospital.

Medicine and Midwifery.—H. G. C. Hardwick, St. Thomas's Hospital.

Medicine.—H. Roberts, St. Mary's Hospital.

Forensic Medicine and Midwifery.—S. S. Wallis, Guy's Hospital.

Forensic Medicine.—J. C. G. Reed, Guy's Hospital; and G. Lowsley, St. Bartholomew's Hospital.

Midwifery.—A. H. Wade, St. Bartholomew's Hospital.

To Messrs. Jones, Keatinge, Mettam, Price, Roberts, and Sutcliffe was granted the diploma of the society.

UNIVERSITY OF EDINBURGH.—The degrees of M.B., C.M. were conferred on the following six gentlemen on Jan. 26th:—

W. G. Alexander, Selkirk; G. H. Drury, Halifax; Malcolm McLarty, Edinburgh; A. J. M. Paget, London; Thomas Roberts, Carnarvon, North Wales; and J. M. Taylor, Edinburgh.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following gentlemen have obtained the Diploma in State Medicine:—

George O. E. Burditt and Henry Stoker.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following gentlemen, having passed the necessary examination, have been admitted Fellows of the College:—

Richard Bolton McCausland, Dublin; George Rooke Penrose Burton, Westmorland; and Henry Stoker, Dublin.

NEWSVENDORS' BENEVOLENT AND PROVIDENT INSTITUTION.—The Hon. W. F. D. Smith, M.P., will preside at the annual dinner of the above association on Tuesday, April 23rd, at the Grand Hotel. The claims upon the funds of the association exceed considerably the amount of its available income, and an earnest appeal is made for public support.

PRESENTATION.—Dr. Thomas Jackson of Whitehaven, a zealous supporter of the temperance cause in Cumberland, and well known to all adherents of the movement in the North of England both as a medical man and as a citizen, has just been presented by his fellow-townsmen, in recognition of his steadfast and valuable services in the cause, with a complete edition of the Encyclopædia Britannica and bookcase, accompanied by a solid silver tea service and an album containing the names of the subscribers.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session was held on Feb. 13th. Mr. A. W. Prichard and Dr. Edgeworth brought before the society a case of intestinal obstruction from congenital malformation; Dr. Harrison, Mr. Munro Smith, and Dr. Aust Lawrence discussed the case. Dr. J. E. Prichard read a case of unusual development of intestine, and also showed specimens of an anencephalous monster, and horseshoe kidney; Dr. Harrison, Dr. Aust Lawrence, Mr. Ewens, and Dr. J. G. Swayne discussed the cases. Dr. Aust Lawrence read a paper on some cases of inversion of the uterus; Dr. J. G. Swayne, Mr. Paul Bush, Dr. W. C. Swayne, Dr. Steele, and Dr. Harrison spoke on the subject. Mr. Ewens described a case of multilocular parovarian cysts of both ovaries, in which he had performed a successful operation; Mr. Morton, Dr. W. C. Swayne, and Dr. J. G. Swayne commented on the case.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 20th, Dr. Tew, President, being in the chair. Dr. Watson read a paper, illustrated by drawings and lantern slide photographs, on the Calcareous Corpuscles of Tapeworms: What are they? He gave the history of the subject and alluded to the views of von Siebold, Goodsir, and others. The bodies were invariably present in tapeworms and echinococci, but could not be studied in the tissues of the *conurus cerebralis* from the sheep. Here they could be seen as round or oval bodies with a capsule and well-defined nucleus, which latter might be divided into two or more parts. After discussing the views of various writers, the speaker expressed the opinion that the bodies might be parasitic protozoa. He referred to the bodies he had seen undergoing fission as evidence of this, and to their apparent independence of the tissues in which they lay. In some respects they resembled coccidia, but at present they could not be classified in any known species. The President and Dr. Ransom having made some remarks, Dr. Cattle showed on the screen some drawings and photographs of rabbit's coccidia and of cancer bodies. With regard to the bodies described by Dr. Watson he remarked that they did not appear to have an intra-cellular stage, as always appeared to be the case with the growing forms of parasitic protozoa, and further that no development appeared to have been observed in them after their removal from the body. Mr. Chicken showed a Pedunculated Tumour removed by means of the écorseur from the upper part of the rectum of a woman of middle age. Dr. Wm. Ransom showed microscopic sections of Hypertrophic Cirrhosis of the Liver and Spindle-celled Sarcoma of the Kidney.

LITERARY INTELLIGENCE.—We are asked to announce that with the first number of the thirteenth volume of the *Bristol Medico-Chirurgical Journal*, which will appear this month, an addition will be made to the editorial staff of the journal. Dr. Bertram Rogers of 11, York place, Clifton, will act as editorial secretary.—The Secretary of State for India has a limited number of copies of the "Nature of Cholera," by the late Dr. Bellew, which he will be glad to distribute amongst such medical institutions and hospitals as may desire to have them. Applications should be addressed to the Under Secretary of State for India, India Office, London, S.W.

ROYAL METEOROLOGICAL SOCIETY.—The usual monthly meeting of this society was held on Feb. 20th at the Institution of Civil Engineers, 25 Great George-street, S.W., Mr. R. Inwards, F.R.A.S., President, being in the chair. Mr. W. Marriott gave an account of the thunderstorm and squall which burst over London so suddenly on the morning of Jan. 23rd. It appears that this storm passed across England in a south-east-easterly direction at the rate of about forty-seven miles an hour, being over Northumberland at 4 A.M., and reaching the English Channel by 11 A.M. Thunder was first heard in the vicinity of Leeds, and accompanied the storm in its progress across the country. One of the most remarkable features of the storm was the sudden increase in the force of the wind, for in London it rose almost at one bound from nearly a calm to a velocity of thirty-six miles an hour. This sudden increase of wind caused considerable damage, and at Bramley, near Guildford, twenty-eight trees were blown down along a track 1860 yards in length.

SANITARY ASSURANCE ASSOCIATION.—The fourteenth annual meeting of the Sanitary Assurance Association was held at the offices of the association, 5, Argyll-place, W., on Monday, Feb. 11th, Mr. Henry Rutherford, barrister-at-law, in the chair. Mr. Joseph Hadley, secretary, read the annual report, which stated that the work of the association continued to be carried on in accordance with the plan initiated by it in 1881. County councils, schools, and other authorities continued to seek the services of the association and to act on the advice given in the reports, plans, and specifications of works furnished by its officers. The council stated that, while recognising to the full the excellent work done by the local authorities in carrying out the Public Health Acts, nevertheless, bearing in mind the deadly nature of sewer air and the suffering still ensuing from unhealthy conditions, they feel that such an organisation as the Sanitary Assurance Association continues to be indispensable. The income for the year had been £404, and after meeting all liabilities a balance was carried forward. On the motion of the chairman, seconded by Dr. K. Macleod and supported by Dr. Willoughby and Mr. Mark H. Judge, the report was unanimously adopted. Mr. Roger Smith, Professor of Architecture at University College, and Mr. Henry Rutherford were re-elected members of the executive committee. Dr. K. Macleod was elected president of the association for the year; and Sir Joseph Fayrer, F.R.S., Surgeon-General Cornish, and Mr. Andrew Stirling were elected vice-presidents.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Frozen Meat.

Mr. T. D. SULLIVAN has given notice of the following question for a day next week—viz., to ask the President of the Board of Agriculture whether, previously to the slaughter in Australia and other places of sheep and cattle whose flesh is converted into frozen meat and sent to this country for human food, they are examined by competent inspectors, with a view to ensure that no animals suffering from disease shall be used for that purpose.

The Superannuation of Poor-law Officers.

Mr. Walter Long, who held office under the late Administration as Parliamentary Secretary to the Local Government Board, has introduced into the House of Commons a measure to provide superannuation allowances for Poor-law officers. At present these officers possess an equitable statutory claim to a superannuation allowance after not less than ten years' service upon becoming incapacitated from the performance of their duties by reason of permanent mental or bodily infirmity or of old age. The allowance, however, is dependent upon the discretion of boards of guardians, and while during the

last thirty years the majority of boards have recognised the claims of the officers there have been many cases where grants have been refused. Mr. Long's Bill proposes that in return for a percentage contribution from their salary and emoluments every Poor-law officer shall be entitled to a superannuation allowance when he becomes incapable of discharging the duties of his office by reason of permanent infirmity of mind or body or of old age. The Bill also proposes to give power to the boards of guardians to require an officer who has attained the age of sixty-five years to retire when they are of opinion that his retirement is desirable in the interests of the public service.

The Pistols Bill.

We have repeatedly called attention to the unsatisfactory state of the law with regard to the sale and use of pistols and toy firearms, and several attempts to deal with the matter have been made both in the House of Commons and in the Upper Chamber. In 1893 Mr. Asquith brought in a Bill which embraced suggestions frequently advanced in THE LANCET, and last year Lord Stanley of Alderley proposed a measure making the sale of toy pistols illegal. This Bill was so mauled in committee that the noble Lord disclaimed responsibility for the changes. On Wednesday last Lord Carmarthen introduced a Bill into the Commons which is virtually the proposed measure of Lord Stanley as amended. With the object of preventing the sale of toy pistols a clause has been inserted providing that a licence of £1 shall be required from vendors of pistols. The motion for the second reading was carried by 204 against 85 votes.

The Influenza.

Replying to a question by Mr. Aird in the House of Commons on Tuesday last, Mr. Shaw-Lefevre said the inquiries instituted by the Local Government Board in 1890-91 and in 1892-93 dealt with the epidemic of influenza from a statistical and general aspect, and with its clinical and bacteriological features. The results of the inquiry were embodied in two large reports and presented to Parliament. In 1892 a memorandum was issued by the Board suggesting advisable prophylactic measures, and there was no reason to vary those suggestions. With regard to the recirculation of the memorandum, not only in the metropolis but also in the districts where the epidemic prevailed, the President of the Local Government Board said he would see what could be done in the matter.

Accidents in Industrial Employments.

It is the intention of the Government to introduce another Bill this session to make provision for public inquiry in regard to fatal accidents occurring in industrial employments in Scotland.

The Walthamstow Inquiry.

On the motion of Mr. George Russell, an address has been presented to Her Majesty for copies of the report of the Commissioner appointed by the Home Secretary to inquire into allegations made regarding the treatment of children in the St. John's Industrial School for Roman Catholic boys at Walthamstow, of the evidence taken, and of the letter addressed to the managers of the school by the Home Secretary at the close of the inquiry.

The Public Health Acts.

Sir Albert Rollit has prepared a Bill to amend the Public Health Acts with respect to sewers.

HOUSE OF COMMONS.

THURSDAY, FEB. 28TH.

A New Mines Bill.

Mr. John Ellis asked the Secretary of State for the Home Department whether, having regard to the proved danger to life of the manner in which shot-firing is now carried on in many coal mines, and the investigation, report, and recommendations of the Royal Commission on Explosions from Coal Dust in Mines, he is prepared to introduce and press forward a Bill dealing with the subject.—Mr. Asquith said he had prepared a Bill dealing with fiery and dusty mines, and with the precautions to be taken in firing shots in mines. The recommendations of the Royal Commission had been attended to in framing the Bill, and he hoped to introduce the measure on an early day.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BAUCHOP, W. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator for the Lumsden District, New Zealand.

BOBART, A. O., M.B., Ch.B. Melb., has been appointed a Surgeon to Her Majesty's Fleet, Victoria, Australia.

BYERS, ALFRED, M.B., Ch.B. Vict., B.S. Lond., has been appointed Junior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester.

DENNIS, O. A., L.D.S.R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the Nottingham General Dispensary.

FAVELL, RICHARD, M.R.C.S., has been reappointed Surgeon to the Jessop Hospital for Women, Sheffield.

GERATY, THOS., L.R.C.P. Irel., M.R.C.S. Eng., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

GIBLIN, E. O., M.D. Aberd., M.R.C.S. Eng., has been appointed Surgeon-Major to the Tasmanian Rifle Regiment, Tasmania.

GRACE, H., L.R.C.P. Lond., L.R.C.S., L.M., has been reappointed Medical Officer of Health for Kingswood.

GRAHAM, A. W., M.B., L.R.C.P. Lond., M.R.C.S., has been appointed an Additional Public Vaccinator for the District of Rivoton, New Zealand.

GRANT, A. A. C., M.B., M.S. Glasg., has been appointed House Surgeon to the Maternity Hospital, Glasgow.

HINCKELL, JAS. S., M.D. Camb., M.R.C.S., has been appointed Assistant Medical Officer to the Suffolk General Hospital.

HOGG, R. B., M.R.C.S. Eng., has been appointed Public Vaccinator for the Timaru District, New Zealand.

HOWATSON, C. W., M.B., C.M. Edin., has been appointed Medical Officer for Danblane Prison, vice Brown, resigned.

JACOBSON, G. OSCAR, M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Pembridge District of the Kingston Union, vice R. C. Williams, resigned.

KENDALL, H. W. M., M.R.C.S. Eng., has been appointed Honorary Surgeon to the First Westland Rifle Volunteers, New Zealand.

McBRARTY, JAS., L.F.P.S. Glasg., has been appointed Public Vaccinator for the District of Brunner, New Zealand.

MACDONALD, THOS., M.B., C.M. Edin., has been appointed Parochial Medical Officer for Kiltarity.

MACDONNELL, JAS. A., M.B., C.M. Aberd., has been appointed Public Vaccinator for the Buller District, New Zealand.

MARTIN, J. W., M.D., M.Ch. Irel., has been reappointed Honorary Medical Officer to the Jessop Hospital for Women, Sheffield.

MILES, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent to the Hospital for the Insane at Newcastle, New South Wales, and also Health Officer for the Port of Newcastle, vice Ross.

MILLARD, R. J., M.B., Ch.M. Syd., has been appointed Medical Officer to the Hospital for the Insane at Callan Park, New South Wales.

MENCHIN, E. J., L.R.C.P. Lond., L.R.C.S. Irel., has been appointed a Public Vaccinator in South Australia.

MORRICK, GEORGE GAVIN, M.A., M.D. Camb., M.R.C.P., has been appointed Physician to the Salisbury Infirmary.

NIX, H. W., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer of the Pillbara District and also Public Vaccinator for the Urban and Suburban Districts of Marble Bar, and the Rural District of Pillbara, Western Australia.

PARKINSON, WALTER GEORGE, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Hospital for Women and Children, Leeds.

PIERCE, WM., M.D., L.R.C.S. Irel., has been appointed Assistant Health Officer at Watson's Bay, New South Wales, vice Sibbey, retired.

PROUDFOOT, R., M.B., M.C. Edin., has been appointed Resident Medical Officer at the Prince Alfred Hospital, Sydney, New South Wales.

PRYCE, F. D., M.R.C.S., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

ROBIN, V. J. R., L.R.C.P. Lond., has been appointed Surgeon to the Port Douglas Hospital, Queensland, vice Bowser.

ROSS, C., M.D. Syd., M.B., Ch.M. Edin., has been appointed Medical Superintendent of the New Hospital for the Insane at Kenmore, near Goulburn, New South Wales.

TAYLOR, G. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Superintendent at the Coast Hospital at Little Bay, near Sydney, New South Wales.

TAYLOR, SHEPHERD THOMAS, M.B. Lond., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer of Health to the Chingford Urban District Council.

TEALE, J. W., M.A. Oxon., F.R.C.S., C.M., has been appointed Honorary Consulting Surgeon to the Royal North Sea Bathing Infirmary, Scarborough, vice Cooke.

THOMSON, JOHN B., M.B., C.M. Edin., has been appointed Public Vaccinator for the District of Arrow, New Zealand.

TRUMAN, E. B., M.D. St. And., M.R.C.S., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

WEBSTER, F. R., M.R.C.S., has been appointed Honorary Consulting Surgeon to the St. Albans Hospital and Dispensary.

WELLS, T. P. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Honorary Medical Officer to the St. Albans Hospital and Dispensary.

WHITE, G. B., M.R.C.S., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician, for six months. Board and residence and allowance for washing provided. Applications to the Secretary, office, 24, Finsbury-circus, E.C.

FISHERTON ASYLUM, Salisbury.—Assistant Medical Officer, single. Salary £100 per annum, with board, lodging, and washing.

ISLE OF AXHOLME RURAL DISTRICT COUNCIL.—Medical Officer of Health for the District. Salary £35 per annum. Applications to the Clerk to the Council, Epworth, Doncaster.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer, unmarried, at the North-Western Hospital for Fever Patients, Havestock-hill, N.W. Salary £160 per annum during the first year, £180 during the second year, £200 during the third and subsequent years of service, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Norfolk-street, Strand, London, W.C.

MIDDLESEX HOSPITAL, W.—Vacancy on the Honorary Staff and Election Committee.

NORTHUMBERLAND COUNTY LUNATIC ASYLUM, Morpeth.—Assistant Medical Officer, unmarried. Salary £120 per annum, increasing £10 yearly to £150, with furnished apartments, board, and lodging.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.

ROYAL INFIRMARY, Hull.—Senior House Surgeon, unmarried. Salary £100 per annum, with board and furnished apartments.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon, for six months. Salary £50 per annum, with board, lodging, and washing.

SUNDERLAND BOROUGH ASYLUM, Ryhope, Sunderland.—Assistant Medical Officer for three years and may be renewed. First year £100, second year £125, third year £150, with quarters, board, washing, and attendance.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, unmarried. Salary not exceeding £30 per annum, with board, residence, and washing.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Medical Registrar and Pathologist, for one year. An honorarium of 50 guineas voted at the end of that term.

THE HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNECOLOGY), Soho-square, W.—Clinical Assistants.

VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Edinburgh.—Resident Physician, for six months. Apartments, board, and washing, with allowance of £2 monthly for conveyance in connexion with out-door department. Applications to the Hon. Secs., 1, North Charlotte-street, Edinburgh.

Births, Marriages, and Deaths.

BIRTHS.

HENDLEY.—On Feb. 23rd, at Dharmasala, Punjab, India, the wife of Surgeon-Captain Harold Hendley, I.M.S., D.P.H., Civil Surgeon, of a daughter. (By telegram.)

JESSOP.—On Feb. 24th, at Fitzjohn's-avenue, N.W., the wife of Edward Jessop, M.R.C.S., L.R.C.P., of a daughter.

STEVENS.—On Feb. 27th, at Springfield, Tulsa-hill, S.W., the wife of A. B. Stevens, M.B. Oxon., of a daughter.

WILLIAMSON.—On Feb. 22nd, at Eldon-square, Newcastle-on-Tyne, the wife of G. E. Williamson, M.A., F.R.C.S., of twin sons; one was stillborn.

WRIGHT.—On Feb. 22nd, at Leinster-square, W., the wife of Dudley D.A. Wright, Esq., M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

ATTERBURY—HILL.—On Jan. 2nd, 1895, at Napier Cathedral, Hawke's Bay, New Zealand, Walter Atterbury, M.D., of Akaroa, Canterbury, to Ethel Jane Foster, third daughter of Thomas Hill, late Collector of Customs, Auckland.

FORSYTH—ACKERMANN.—On Feb. 26th, 1895, at the Parish Church, St. Austell, Cornwall, by the Vicar, the Rev. Canon Hammond, LL.B., Charles Forsyth, M.D., and B.S., of Middleton, Manchester, to Beatrice Mauel, youngest daughter of the late George Ackermann, London, and of Mrs. Ackermann, Brisbane House, St. Austell.

GROSE—BALSDON.—On Feb. 26th, at Wear Gifford, John Sobey Grose, M.R.C.S. Eng., L.R.C.P. Lond., of Bideford, to Mabel E. Balsdon, of Wear Gifford.

HANNAN—CLAYTON.—On Feb. 23rd, at St. John's, Southwick-crescent, W., by the Rev. C. F. Clayton, M.A., assisted by the Rev. W. C. Heaton, M.A., Vicar of Holy Trinity, Gough-square, and the Rev. A. P. Clayton, M.A., Vicar of Holy Trinity, Ventnor, I.W., Francis J. Hannan, M.D., 29, Camden-road, Regent-park, N.W., to Ada, youngest daughter of the late S. W. Clayton, Esq., and of Mrs. Clayton, Eastfield, Hyde, I.W.

HILLIER—SHUTTLEWORTH.—On Feb. 26th, at Dallington Church, by the Rev. P. Ward, Curate of St. Mary's, East Moulsey, assisted by the Rev. T. C. Beasley, M.A., Vicar, Sidney Hillier, M.D. Edin., of Stowmarket, Suffolk, to Mary Ethel, youngest daughter of Joseph Shuttleworth, of Elmleigh, Dallington, Northamptonshire.

DEATHS.

BULTEEL.—On Feb. 21st, at Looseleigh, Devon, James Courtney Bulteel, M.D. Edin., in his 86th year.

CLARENDON-SMITH.—On Feb. 23rd, at Royal-crescent, W., Henry Clarendon-Smith, M.R.C.S., aged 86 years.

CLARKE.—On Feb. 23rd, suddenly, while on a visit at Leura, Toorak, Melbourne, Surgeon-General Jno. Jas. Clarke, of Vernon-terrace, Brighton. (By cable.)

CREIGHTON.—On Feb. 21st, at Derryree House, Lisnaken, Ireland, Robert Creighton, M.R.C.S., J.P., Deputy-Inspector-General, R.N., retired, aged 68 years.

DOUGHTY.—On Feb. 24th, at his residence, Philbeach-gardens, S.W., Edward Davidson Doughty, M.R.C.S., aged 83 years.

GEORGE.—On Feb. 24th, at Eastfield House, Horncastle, Lincolnshire, Hugh George, M.D., aged 67.

GILBERT.—On Dec. 23rd, at his residence, Brooke, Norfolk, George Gilbert, M.R.C.S., L.S.A., aged 76.

GOOD.—On Feb. 22nd, at 13, Rothery-place, Edinburgh, Fannie Russell, dearly beloved wife of J. Ernest Good, M.B., C.M.

HIGGINBOTTOM.—On Feb. 24th, at Shakspeare-street, Nottingham, Marshall Hall Higginbottom, Surgeon, aged 72.

JONES.—On Feb. 15th, at King-street, Regent-street, John Jones, M.R.C.S., aged 58.

LYALL.—On Feb. 25th, at Priory-parade, Cheltenham, David Lyall, M.D., F.L.S., Deputy-Inspector-General of Hospitals and Fleets, aged 77.

MACNAMARA.—On Feb. 26th, at Cambridge-street, Hyde-park, John MacNamara, K.S.S., M.D., aged 75 years.

MAUNSELL.—On Feb. 21st, at his residence, Cromwell-road, South Kensington, Henry Widenham Maunsell, M.A., M.D., aged 48.

PHIPPS.—On Feb. 24th, at his residence, Oxford-street, Manchester, George Constantine Phipps, M.D., F.R.C.S. Edin., in his 61st year.

SUTTON.—On Feb. 25th, at The Hollies, Holmes-Chapel, Cheshire, from pneumonia, Charles Frederick Sutton, L.R.C.P., M.B. C.S., aged 23 years, only son of Charles Frederick Sutton, Surgeon. No cards.

TOWNE.—On Feb. 23rd, at his residence, Clissold-road, Stoke Newington, N., Alexander Towne, M.R.C.S. Eng., L.S.A., in his 92nd year.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.). At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. E. Lloyd-Williams: Some Experiments with Plastic Filling Materials. Casual Communications.—Mr. Harry Rose: On Taking Impressions of the Mouth.—Mr. J. F. Colyer: Some cases of Open Bite.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Bertram Hunt: On the Pathology of Diphtheria.—Dr. John A. Hayward: Cultivation of Diphtheria Bacilli in Antitoxin Serum and in Hydrocele Fluid.—Dr. C. P. White: Growth of Diphtheria Bacilli in Hydrocele Fluid. Specimens illustrating the Bacteriology of Diphtheria will be shown.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Inaugural Address by Dr. Champneys. Dr. J. Inglis Parsons: The Disintegration of Organic Tissue by High Tension Discharges.—Dr. Leonard Remfry: List of Ovariectomies in Women over Eighty; a Case aged Eighty-three complicated by Epithelioma of the Vulva.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Handford: A case of Cerebral Tumour following Injury.—Dr. Karl Grube: Cases illustrating the Association of Psoriasis with Diabetes.—Mr. Arbuthnot Lane: Rupture of the Gall-bladder and Liver produced by Violent Straining in a Patient suffering from Obstructive Jaundice.—Mr. Walter Spencer: Traumatic Cystic Lympho-sarcoma of the Shoulder removed after Five Years' Growth by Amputation of the Right Upper Extremity, the Flap being taken entirely from the Upper Half of the Arm.—Dr. Wallis Ord: A case of Complete Unilateral Arrest of Development with Arcus Senilis and without Hemiplegia in a Girl aged twelve years.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Corneal Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Aural Polypi.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Alcoholic Insanity.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (VIII).

ROYAL BRITISH NURSES' ASSOCIATION.—8 P.M. Dr. W. S. Colman: Bedsores, Bladder Troubles.

SOCIETY OF ARTS.—8 P.M. Sir Charles M. Kennedy: Colonies and Treaties.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Lichen Planus and Scrofulosus.

WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Mr. Dunn: Eye Cases. (Post-graduate Course.)

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Glaucoma.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Treatment of Eczema.

SOCIETY OF ARTS.—8 P.M. Mr. C. W. Radcliffe Cooke: Cider.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. S. H. Gardiner: Three Periods of Seventeenth Century History—I. The Stuart Monarchy.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Arthur Voelcker: Infant Feeding.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Gowers: Clinical Lecture.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. C. Theodore Williams: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. F. Bowreman Jessett: Cancer of the Breast.

ROYAL INSTITUTION.—9 P.M. Prof. A. W. Rucker: The Physical Work of von Helmholtz.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Climacteric and Senile Insanity.

ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Waves and Vibrations (II.).

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Erythema.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 28th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Feb. 22	30.31	N.E.	38	36	64	43	38	...	Overcast
" 23	30.30	W.	39	37	59	47	37	...	Cloudy
" 24	30.04	W.	39	37	63	47	37	...	Cloudy
" 25	29.88	N.E.	36	35	43	38	35	0.06	Cloudy
" 26	29.94	N.E.	33	30	66	43	30	...	Overcast
" 27	29.75	N.E.	36	33	74	43	33	...	Cloudy
" 28	30.02	W.	35	35	65	43	35	...	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

MUST THE RETIRED MEDICAL MAN SERVE UPON A JURY?

To the Editors of THE LANCET.

SIRS,—I have just retired from general medical practice, and do only consultations occasionally. Am I still exempt from being called to serve upon a jury or to hold the office of overseer? Your opinion will oblige,

Yours faithfully,

Feb. 25th, 1895.

MEDICO.

* Our correspondent still enjoys, we believe, the right of exemption. The 35th Section of the Medical Act exempts every person who is registered under the Act, who shall so desire, from serving on juries and inquests, and all corporate, parochial, hundred, and township offices, and from serving in the militia.—ED. L.

J. B. Lofthouse.—We never recommend individual practitioners; our correspondent's regular medical attendant is the person to give him the advice he seeks.

Inquirer.—Our correspondent would do well to decline to give such a certificate.

THE MEDICO-BOTANICO SOCIETY.

To the Editors of THE LANCET.

SIRS,—Can any of your readers let me know where to refer for information about the Medico-Botanico Society of 1830, run by a certain Mr. John Frost, whose doings are alluded to in the Memoir of the Rev. R. H. Barham at the beginning of the third volume of the 1847 edition of the "Ingoldsby Legends" (chap. vi.)?

I am, Sirs, yours truly,

Feb. 21st, 1895.

QUESTOR.

A CENTURY'S "BUTCHER'S BILL" IN WAR.

A highly interesting study of what a hundred years of war have cost France in human life has just been made public by Dr. Lagneau, Member of the Academy of Medicine of Paris. When the Revolution broke out France's effective army was only 120,000 men. For the wars waged during ten years in Belgium, on the Sambre, the Meuse, the Rhine, the Alps, the Pyrenees, in the Vendée, and in Egypt there were called out 2,800,000. At the census made in the ninth year of the Republic there remained of these only 677,598. In killed and in dead by disease the wars of the First Republic cost France 2,122,402 men. From 1801 to Waterloo 3,157,398 men scarcely sufficed to fill the blanks which in an incessant war against combined Europe France incurred at Austerlitz, Jena, Auerstadt, Friedland, Saragossa, Tengen, Eckmühl, Sactie, Essling, Wagram, Taragona, Smolensk, Schwarbine, Moscow, Lützen, Bautzen, Dresden, Lepsic, and Waterloo. Under the Restoration, Louis Philippe, and the Second Republic, in spite of the war in Spain (1823), the conquest of Algiers (1830), and the taking of Antwerp, France passed through a period of comparative calm. The army numbered about 213,748, and the mortality averaged 22 per 1000. In 1853-5 recommenced the epoch of the great wars—the Crimea, Italy (1859-60), China (1860-1), Mexico (1862-6), and the disasters of 1870. In the Crimea, out of 300,268 men 95,615 succumbed; in Italy, out of 500,000 there died 13,673; in China 950 and in Cochin China 48 per 1000. The Second Empire cost France the lives of about 1,600,000 soldiers. According to Dr. Lagneau's demographic tables, the century from 1795 to 1895 witnessed the death in battle or by disease of 6,000,000 French soldiers.

Sitius.—It cannot be well that young men should attempt to obtain such information from books. Moreover, the treatises written in non-scientific language are without exception misleading and generally gross and mischievous. The usual questions which arise on this topic can be answered, and constantly are answered, by the family medical man, to whom we advise our correspondent to apply.

E.R.C.S. Edin. writes: Will you please allow me to ask through your columns what books it is best to read on the subjects required for the Fellowship of the Royal College of Surgeons of Edinburgh?

Mr. J. J. Brown.—We do not see that our correspondent's communication is particularly medical in character.

"SULPHUR v. ANTITOXIN IN THE TREATMENT OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS.—Since your correspondent, Mr. Hawkins Cuthbert, has mentioned my name in his letter, which you print in your current number, will you permit me to offer a few words of comment on his contribution. No one who has had any experience of diphtheria can doubt that the remedies in which both Dr. Brownlow Martin and Mr. Hawkins Cuthbert are so much interested have any other than a good effect as local germicides. But the former is not to be blamed because he gives iron and chlorate of potash in combination with the sulphite of magnesium internally and insufflation of the same remedy locally; nor need there be any imputation on the efficacy of antitoxin because Dr. Hamilton simultaneously used sulphur locally in a case of his own. Mr. Hawkins Cuthbert says: "As long as the profession will persist in treating cases at one and the same time with two or more remedies, it is impossible to say how far each individual remedy is responsible for the result obtained." I venture to think this is comparatively unimportant so long as a patient's life is saved, for with a disease such as diphtheria, of local origin but with rapid systemic infection, it appears imperative on us to combine the best local with the best general measures in its treatment. I trust the day is far distant when in this or in any other disease a remedy will be applied to the human subject as if he were a rabbit or a guinea-pig, with the main object of obtaining mathematical results. The wonderful success achieved by antitoxin treatment at the North-Western Hospital, where that remedy—used as an auxiliary and not as a substitute for other measures—has given a mortality of under 5 per cent. (THE LANCET, Feb. 2nd, p. 305), is an object lesson of which all should take heed.

I am, Sirs, yours faithfully.

Mansfield-street, W., Feb. 23rd, 1895.

LENNOX BROWNE.

Lieutenant-Colonel.—The committee will do well to settle this question in friendly conference with A and B. They only can say when a case is sufficiently beyond the line of common practice and experience to require the opinion of a specialist. The limits of specialism are always varying.

Enquiry.—The advertisement of the lecture is not in good taste. Some licence is allowed to those who give lessons to intending missionaries, but it may easily be abused. It is more difficult to define the offence of covering in regard to midwifery than to the other branches of practice.

A *Sufferer* will probably find the information he requires in chap. iii., Part II., of Dr. Burney Yeo's work on "Food in Health and Disease," published by Messrs. Cassell and Co.

SOME POINTS IN DEATH CERTIFICATION.

To the Editors of THE LANCET.

SIRS.—I am anxious to have your direction in the following matter. Again and again when I have been called to cases where I found the patient dead on my arrival I have refused a certificate of death, and I have written to the coroner to notify him of the fact. Almost invariably that is the end of the incident. I get no acknowledgment of my communication. I have no idea as to whether the body has been buried or not, and although in many cases the information would be most interesting to me, I never hear what cause, if any, has been assigned for the death. My queries are:—1. Is this the usual practice of coroners? 2. Am I obliged by law to communicate with the coroner or his officer in cases where I refuse a certificate of death? 3. In cases where I am not satisfied with the surrounding circumstances and where the coroner, as usual, declines to hold an inquest, is there a superior authority to whom I can appeal? I may mention that the coroner for my district is not a medical man. I am, Sirs, yours truly,

Feb. 20th, 1895.

INQUISITIVE.

* 1. No.—2. No.—3. If the case is sufficiently grave, it is open for our correspondent to make application to the Lord Chief Justice of England to order an inquest.—*Ed. L.*

G. J. C. asks: Will any brother practitioner give his opinion of the probable result to be obtained by forcible manipulation under an anæsthetic of the limbs of a sufferer from chronic rheumatoid arthritis whose legs have become semiflexed at the knees?

Bayham.—The question is too large a one to be answered in the way our correspondent invites. The general principles of cardiac pathology and the peculiarities of each case must be taken into account.

Perplexed is advised to apply to her medical attendant for directions as to dissection.

"A QUESTION OF DOOR-PLATES."

To the Editors of THE LANCET.

SIRS.—In reply to a question in reference to the use of unregistrable degrees alone on the door-plates of medical men you hardly cover the point of interest, which is: Is a medical man entitled to place "M.D." on his door-plate when such degree is a foreign and unregistrable one, and under cover of this impose himself on the public as an M.D. presumably of the United Kingdom by omission of any distinguishing affix, and thus offer himself to the public as being on a par with other and registrable degrees of "Doctor of Medicine"? On this, Sirs, we ask for a definite reply as to its legality. On its honesty and honour we do not ask your opinion; but should you decide against the adverse impression many of us have formed as to the legality, I would ask you—Why open your columns to or invite comment from those who are desirous of easily attaching a coveted M.D. to their names by the addition of a new degree-granting body to the metropolis when the distinction (?) can be obtained for a few pounds?

I am, Sirs, yours faithfully,

H.

Feb. 25th, 1895.

Esculapius asks for information respecting any town or village within twenty-five miles of London, near a Great Northern or Midland railway station, having a sandy soil, pine woods, &c., suitable for an elderly patient with bronchitis.

Mr. L. A. Freeth.—To our correspondent's first question we regret we are unable to give any reply. Common lodging-houses and seamen's lodging-houses in the city of London are under the control of the Commissioners of Sewers.

Cliftonville.—We do not answer the kind of query our correspondent puts to us.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—Kent Coast Times, Sussex Daily News, Birmingham Gazette, Bradford Daily Argus, Scotsman, North Middlesex Chronicle, Truth, Manchester Courier, Brighton Argus, Leicester Post, Swansea Journal, Rugby Advertiser, North Star, Newcastle Chronicle, Liverpool Courier, Modern Society (London), Kidderminster Sun, Warwick Times, Wishaw Herald, Bristol Times, Glasgow Ballie, Heywood News, Southampton Echo, Cornish Telegraph, Shrewsbury Chronicle, Irish News, Daily Chronicle, Bedfordshire Mercury, City Press, Reading Mercury, Morning, Surrey Advertiser, Kighley News, Leeds Mercury, Citizen, Hertfordshire Mercury, South Middlesex Standard, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Courrier de la Presse, Guy's Hospital Gazette, Alfreton and Belper Journal, Australasian Medical Gazette, Local Government Journal, Northampton Mercury, Referee, Carpenter and Builder, Cincinnati Tribune, Sun, Architect, Cork Constitution, Nursing Record, Builder, Pioneer Mail, Banbury Advertiser, Times of India, Coventry Times, Isle of Ely Advertiser, Rochdale Observer, Weekly Herald and North Middlesex Advertiser, Eagle and County Cork Advertiser, Carlisle Journal, Western Daily Mercury, Answers, &c., &c.

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V.—**Victoria Med. Soc.**, Melbourne, Hon. Sec. of.

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U.—**Univ. Coll.**, Dundee, Treas. of.

W.—**Dr. H. Whitmore**, March; **Dr. F. H. Worswick**, Manchester; **Mr. J. Walser**, Hove; **Mr. Wright**, Coventry; **Mr. W. W. Williams**, St. Davids; **Mr. W. A. Warters**, Alfreton; **Mr. T. F. Wyse**, Barnabrow, Cloyne, co. Cork.

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The Milroy Lectures

ON

THE NATURAL HISTORY AND AFFINITIES
OF RHEUMATIC FEVER: A STUDY IN
EPIDEMIOLOGY.¹Delivered at the Royal College of Physicians of London on
March 5th, 7th, 12th, and 14th, 1895,

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LECTURE I.

Delivered on March 5th.

MR. PRESIDENT AND GENTLEMEN.—My first duty is to express my thanks for the honour conferred upon me by the Royal College of Physicians in electing me Milroy Lecturer for 1895. The subject selected by me for these lectures has rendered the honour one involving arduous and protracted research; and the conclusiveness of my results is necessarily limited by the imperfections of the data with which I have had to deal. If, however, in such an inquiry one were to wait until the statistical data available were perfect and complete there would be but little hope of new light; and it is, I think, the duty of the medical statistician and epidemiologist to use to the best advantage the imperfect materials in his possession, as by so doing he will at least learn how the materials may be rendered more useful for his special purposes. He will also advance the subject by paving the way for further inquiries, and may with due caution (and with full confession of the defects of his own data) hope to throw some new light on important questions of causation.

Dr. Farr early in his official life included rheumatic fever among zymotic diseases, thus formally stating his adhesion to the view that it was due to a *matcries morbi* introduced into the blood from without and leavening the whole circulating fluid. On Dr. Farr's death the Registrar-General relegated rheumatism to the class of constitutional diseases, where it still remains. In the second edition (dated 1885) of the Nomenclature of Diseases of the Royal College of Physicians, the joint committee, with greater caution, have placed it in the fourth order of general diseases, among "Morbi non in Classes Distributi." The influence of the nervous system on the joints has been investigated by Charcot, Ord, Buzzard, and many other observers, and appears to be foreshadowed in the old classification of rheumatism among the dolores. In view of the close association existing between Charcot's joint disease and definite lesions of the nervous system, and surmised to exist in rheumatoid arthritis, if not also in gout, it is not surprising that there are many who still hold that rheumatic fever is due to reflex nervous irritation, a view which is endorsed by Dr. Donkin in his recently published scholarly treatise on Children's Diseases. Dr. Donkin regards rheumatic fever as "in all probability essentially due to a faulty condition of the nervous system, for the most part inherited, which expresses itself in various inflammatory and other modes in ready reaction to diverse impressions upon the nervous periphery, among which 'chill' is probably to be regarded as chief." He adds: "It must be admitted that its clinical facts and conditions seem highly unfavourable, if not contradictory, to any hypothesis of germ origin."

In investigating the history of rheumatism it is plain that much mental confusion has arisen from the absence of a rigid definition of the word. The etiological elements proper to gout have been confused with those peculiar to rheumatism; and when this phase had been theoretically passed—practically we are still involved in it—there remained the common use of the word "rheumatism" for such diverse conditions as—(a) acute articular polyarthritis; (b) chronic articular rheumatism; (c) painful affections of the fibrous sheaths of muscles and nerves; (d) rheumatoid arthritis, and possibly several other morbid conditions of joints which

are not yet clearly differentiated. I propose to restrict myself strictly to rheumatic fever (acute and subacute rheumatism), at least until the affinities of the disease come to be considered; and by rheumatic fever I mean a disease in which there are pain and swelling of the joints, preferably of the larger joints, accompanied by fever, the joint affection having a migratory character, and usually yielding rapidly to treatment by salicylates, but liable to complicating inflammation of the pericardium or other visceral serous membranes.

Having given a definition which sufficiently indicates the scope of our inquiry, we are in a position to pursue that inquiry. The thesis, which will be advanced and supported by such evidence as is available, is that rheumatic fever is a specific febrile disease, caused by the introduction from without and multiplication in the system of a pathogenic micro-organism; that it is endemic in Europe and America and other parts of the world, but at varying intervals becomes excessively prevalent, in a manner which can only rightly be described as epidemic and even pandemic. Such a view of the causation of rheumatic fever does not cover the entire ground. Assuming that rheumatic fever only occurs when a special pathogenic micro-organism is introduced into the blood, its causation is by no means exhausted. It occurs chiefly or only in predisposed persons, in certain states of health, and under the influence of certain excitants—as fatigue, injury, and chill, the exact value of which in its causation will be hereafter discussed. Further, it occurs by preference at certain seasons of the year, in certain localities, or perhaps on certain soils. It has probable relationships with weather, climate, and ground water. We have to consider, on the one hand, the influences determining an individual attack of rheumatic fever; and, on the other hand, the wider influences determining the extent of its varying prevalence in different countries in successive years. A neglect of any of these factors will give but a distorted view of the true causation of the disease. Bacteriological studies, far from being the negation of traditional etiology, are but the logical outcome of it; and secondary causes, especially in such a disease as rheumatic fever, still maintain their traditional value as the indispensable concomitants of microbes. We have to consider not only the essential *causa causans* but the *causa efficiens*, consisting of the combined favouring influence of personal constitution and conditions of environment, which Colin has named "le milieu épidémique."² Mr. Justice Fry says: "There is, so far as I know, no physical or logical distinction between principal and minor causes or between cause and conditions in the case of two or more constituent parts of a cause, each of which is necessary, and none of which is by itself sufficient."³ This is particularly true of rheumatic fever, in which the intracorporeal condition or personal constitution and the extracorporeal conditions or environment loom larger in our mental vision than the actual infection. It would be difficult to conceive any natural condition of personal resistance or environment that would prevent a person inoculated with the virus of anthrax from being attacked by the disease. This disease and rheumatic fever may be regarded as typifying the terminal items in a long list of diseases, in which (x) infection, (y) personal resistance, and (z) environment play rôles of relatively greater or less importance. Suffice it for our present purpose that the real cause of rheumatic fever is the resultant of a combination of causes, which must all engage our attention. They may be classified as follows:—

I. *The active infective agent.*—Evidence derived from (a) epidemiology; (b) clinical history and analogies; and (c) bacteriology.

II. *Conditions of environment.*—Climate, geography and geology of the disease, season, weather, and ground water.

III. *Personal factors.*—Age and sex, constitution, temperament, heredity, previous disease, injury, fatigue, chill, occupation, diet, and race.

THE EPIDEMIOLOGY OF RHEUMATIC FEVER.

Various epidemics of rheumatic fever have been described by Pringle in the campaigns in Flanders and Holland in the middle of the eighteenth century, by Stoll in Vienna, 1776-79; by Mertens, 1782-83, and by others. Besnier,⁴ however, thinks that these epidemics may have been influenza in which rheumatic symptoms occurred, and it cannot be said that the descriptions of them leave no doubt as to their

¹ Dr. Newsholme's lectures were copiously illustrated with diagrams which we do not reproduce, as his figures and deductions tell the tale sufficiently.

² Article on *Épidémie*: Dictionnaire Encyclopédique.

³ Nature, Nov. 1st, 1894.

⁴ Article on *Rheumatisme*: Dictionnaire Encyclopédique des Sciences Médicales, p. 463.

nature. The tendency of modern observation has been distinctly to deny the occurrence of such epidemics. Thus Kelsch⁵ says these "accidental excesses do not evolve like true epidemics, not having their amplitude or cyclical regularity or course," though he admits that, falling true epidemics, "rheumatism shows oscillations independent of atmospheric influences." Professor Senator of Berlin⁶ notes that "in certain years the disease is so unusually prevalent in a particular country as to assume the character of an epidemic." He adds that "some of the older writers on medicine actually speak of 'epidemics of rheumatism,' though the essential feature of an epidemic disease—infective power—is wanting in rheumatism." Dr. Longstaff⁷ has noted the occurrence of four periods of excessive mortality from scarlet fever in England and Wales, which are shared more or less by "rheumatism accompanied with heart affection," erysipelas, pyæmia, puerperal fever, and five other diseases. Lange in Copenhagen, Chomel and Hirsch in Berlin, Fieldler in Dresden, and Lebert at Zürich among others have described local outbreaks which appeared to deserve the designation of "epidemic." There has, however, so far as I am aware, been no wide and thorough investigation of the epidemiology of rheumatic fever. It becomes necessary *in limine* to define the meaning we attach to the word "epidemic." Senator evidently regards "infective power" as an essential element in the definition; and this limitation has the highest authority in medical works. We propose, however, to use the term as applied to rheumatic fever simply to designate its relative prevalence. When it is prevalent above the average amount the disease is epidemic, though for convenience we shall arbitrarily only speak of an epidemic when the excess above the preceding minimum is at least 40 per cent. It must be left to this audience to decide from the evidence to be adduced whether in the more restricted sense of possessing infective power rheumatic fever is worthy to be described as an "epidemic" disease, or whether climatic or other causes account for the variations in its prevalence in different years. The difference between "epidemic" and "pandemic" is obviously simply one of degree. We naturally turn first to our national death returns to ascertain whether they show any evidence of epidemicity. The excess or deficiency from the mean death-rate from rheumatism in England and Wales for the whole period 1851-92 has been plotted out, so that the percentage excess or deficiency of the death-rate for any one year can be seen at a glance. The same method has been adopted in nearly all the subsequent diagrams, and they are all thus reduced to a common scale. The method of reading the diagram may be thus illustrated. In 1875 the curve was at 142—i.e., 42 per cent. above the mean line. The next preceding minimum was in 1873, when it was 90, or 10 per cent. below the mean line. The range between these two was therefore 52 per cent.

The mean death-rate from rheumatism in England and Wales during the whole period 1851-92 was 119 per million persons living. In the diagram it will be seen that the death-rate in 1855 was 15 per cent. higher, that in 1859 it was 18 per cent. higher, that in 1864 it was 23 per cent. higher, that in 1869 and 1870 it was 18 per cent. higher, and that in 1875 it was 52 per cent. higher than in the respective minimum years next preceding the above years—viz. in 1854, 1857, 1862, 1867, and 1873 respectively; and that in 1885, in 1887, and in 1890 there was evidence of smaller rises in the rheumatismal death-rate. We are not concerned at present with the general advancing wave of rheumatismal mortality from 1851 to 1875, nor with the question as to how far improved certification of deaths accounts for it; nor are we concerned with the receding wave from 1875 to the present time. The oscillations alone concern us. It cannot be maintained that varying accuracy of death certification would account for these, as any alteration in this respect would be gradually effected and not by fits and spurts. It may, however, be objected that the curve deals with "rheumatism" and doubtless includes several diverse diseases. This is so; but from 1881—when in the official reports "rheumatism" was subdivided into (a) rheumatic fever and rheumatism of the heart, and (b) rheumatism—until 1890 the first of these formed 73.5 per cent. of the whole number. It is evident therefore that rheumatic fever is the predominant partner, and we may reasonably assume that the oscillations shown in the diagram approximately correspond with, though they are less marked

than, the variations in the death-rate from this disease. The curve for rheumatism in London shows similar maxima to that for England and Wales in 1864, 1868, 1875, and 1884. The 1868 maximum takes the place of the 1869-70 maximum for England and Wales, and a maximum for 1884 that of 1885. The curves for provincial towns like Birmingham and Salford resemble the above. Among foreign death returns we may select Paris and Berlin for comparison. Both these agree with the English returns in showing a high maximum in 1875. The Berlin curve, which relates to rheumatic fever alone, runs nearly parallel with that for London, which includes all forms of rheumatism, the chief difference being that the zig-zags, as might have been expected from the smaller scale of the statistics, are more violent in the Berlin than in the English diagram. It would be easy to give other curves similar to the preceding, but I refrain from further pressing the evidence so far as it relates to deaths from rheumatism, even in towns where rheumatic fever can be accurately separated from other forms of rheumatism. Rheumatic fever is a disease with a very small case mortality. From a paper by Dr. Bryant on Hyperpyrexia in the Guy's Hospital Reports we quote the following evidence on this point: "Dr. Pye-Smith⁸ states that the average mortality in acute rheumatism from all causes is 3 to 3.7 per cent. Of 400 Guy's cases collected by him the mortality was 3.75 per cent. Of the 655 cases collected by the Investigation Committee⁹ in 1888, 22, or 3.3 per cent., died. Peacock¹⁰ collected 394 cases from the St. Thomas's Hospital Records, of which 6, or 1.5 per cent., were fatal. Syers¹¹ collected 500 cases, of which 15, or 3 per cent., were fatal."

The above percentages seem somewhat high, and they are not confirmed by Dr. Southey's cases in St. Bartholomew's Hospital in the years 1861-75 inclusive.¹²

Age.	Number of cases.	Number of deaths.	Deaths per cent.
Under 10 years	88	3	3.4
10-15 years	399	6	1.5
15-25 "	2051	30	1.4
25-35 "	1203	11	0.9
35-45 "	698	5	0.8
Above 45 years	469	2	0.4
Total	4908	57	1.16

It is probable that the fatality varies in different years; it is evident that it varies greatly with the age of patients attacked. There is, furthermore, evidence that the tendency to complications varies in different epidemics and at various seasons. For these, among other reasons, it is desirable to base conclusions as to the yearly prevalence of rheumatic fever on cases of the disease rather than on deaths from it. In most countries this can only be done through hospital records. The value of this mine of information for epidemiological research is not yet appreciated as it deserves. In connexion with the present inquiry I have collected for a long series of years the statistics of rheumatic fever in the chief general hospitals of Great Britain, and of some of the European and American cities. A few remarks must be made as to the method of employing these statistics. (a) The population of the towns from whose hospitals the returns were secured was usually an increasing one; and it was not certain that the available hospital beds would increase in the same proportion, though this was usually the case. In order to overcome this difficulty it was assumed that in any well-regulated hospital a case of rheumatic fever would always be admitted as soon as application was made; hence the proportion between the number of cases of rheumatic fever and the total medical admissions in each year would form a trustworthy index of the amount of rheumatic fever in the given town or district, assuming the social conditions of the population to remain fairly constant. It is easy to carp at this assumption, but I think it is perfectly justifiable; and although I shall not trouble you with these minute details I may state that its substantial accuracy in all doubtful cases has been confirmed by comparing the curve

⁸ Fagge and Pye-Smith, op. cit.

⁹ Brit. Med. Jour., 1888, vol. i., p. 401.

¹⁰ St. Thomas's Hospital Reports, 1879, vol. xi.

¹¹ THE LANCET, 1883, vol. i., p. 1232.

¹² St. Bartholomew's Hospital Reports, 1878, vol. xiv.

⁵ Kelsch, p. 316.

⁶ Ziemssen's Cyclopaedia, 1887, vol. xvi., p. 11.

⁷ Transactions of the Epidemiological Society, 1880.

secured by this method with the curve based on the original figures, and with a curve based on the ratio between the admissions for rheumatic fever and the population of the town. As we proceed I shall have to show curves constructed by each of these three methods in illustration of this point. (b) A more serious difficulty is to secure hospital returns in which the cases are uniformly classified throughout the whole period. Resident medical officers and registrars frequently change, and their methods of classification vary. One of the greatest difficulties has been to determine how to tabulate "subacute" rheumatism. Whenever there has been doubt experimental curves have been made, and by this means it has been possible to detect—when subacute rheumatism was absent from the return—whether it had been diverted into the column of "chronic" or "acute" rheumatism. Due weight has been given to all these factors, and it is believed that the curves on which my main conclusions are based approximately represent the truth. It must be remembered that in the present connexion we have nothing to do with the actual amount of rheumatic fever in a given hospital as compared with other hospitals. Each hospital is considered by itself, the records only being trusted in respect of the excess or deficiency of the case-rate in this hospital from the average case-rate for the same hospital over a whole series of years. The return supplied by Dr. Herringham from St. Bartholomew's Hospital, London, gives an excellent sample of the difficulties connected with classifying the returns, though I think that any competent person will confess that the truth would be equally reached, were one to take the total rheumatism curve or the curve for acute and subacute rheumatism, or that for acute rheumatism only. It will be found later that by having returns of both rheumatic fever and total rheumatism it has been possible to fill in blanks in curves of the former with a fair degree of accuracy. (c) It may be questioned whether as large a proportion of the cases of rheumatic fever occurring in the community find their way into hospitals as formerly. Dr. Warren, according to Watson, when asked what was good for rheumatic fever, said "six weeks." Now the pyrexial stage of rheumatic fever may under the salicylate treatment be brought to an end in seventy-two hours and the patient be discharged within two or three weeks. The shorter duration of treatment has probably enabled a larger proportion of patients to be nursed at home, and may explain a large share of the decline in hospital incidence of rheumatic fever in London shown by the curves. Whether this is so or not, such a gradually operating cause will not invalidate conclusions that may be drawn from the oscillations displayed by the downward curve. (d) As many of the returns go back as far as 1865, it is probable that in the early years there was some confusion with gout and rheumatoid arthritis. These errors would only serve to diminish the apparent oscillations of the curve and to affect the relative position in regard to the mean line for the whole period, and would not invalidate conclusions drawn from these oscillations.

We now proceed to discuss the hospital curves, starting first with those for London.

The curve for St. Bartholomew's Hospital shows a steadily increasing amount of rheumatic fever from 1867, when the record commences the maximum year 1874 (= 224), after which it declines to a minimum of 83 (mean = 100) in 1879. Between these two points, in 1871 there was a temporary ebb in the advancing tide (132 as compared with 160 in 1870). The marked decline in the curve from 1877 onwards, broken only in 1881 and 1885 by minor rises, may indicate that we have not reached the time for another great epidemic of rheumatic fever, or, as previously suggested, that hospitals are not used to so great an extent as formerly by rheumatic fever patients. The latter supposition would, I think, only explain a portion of the decline; the former supposition is favoured by the fact that the death-rate from rheumatism in London has never since risen so high as it was in 1875. We are bound to conclude that since 1875 in the districts from which St. Bartholomew's Hospital draws its patients there has been a much smaller amount of rheumatic fever than in the nine preceding years.

The statistics from St. Thomas's Hospital are somewhat confused owing to the fact that between 1862 and 1871, when the new hospital on the Thames embankment was opened, the establishment had to be carried on temporarily in Surrey-gardens. It is possible that under these circumstances more urgent cases, including rheumatic fever, were preferentially admitted, and this may partly account for the

very early maximum attained by the rheumatic fever curve at this hospital. The statistics for rheumatic fever separately are unfortunately wanting for the years 1869, 1870, 1871, and 1875. By constructing a curve for the same years for all forms of rheumatism we can, however, supply the missing links with a moderate degree of accuracy. Without laying stress on the early maximum in 1868-70 (for the reasons already stated), it is evident that, as at St. Bartholomew's Hospital, rheumatic fever was excessive in amount from 1866 to 1877, there being a slight lull in 1872 instead of in 1871 in St. Bartholomew's Hospital. Smaller rises above the mean line occurred in 1881 and in 1884, since which time there has been an uninterrupted drop.

The Westminster Hospital records only begin with 1870, and there is the further complication that subacute rheumatism is sometimes classed with acute and sometimes with chronic rheumatism. It is probable also that the rise in 1877 is exaggerated, as the total number of medical patients in that year was only 518 as compared with 878 in the preceding and with 836 patients in the succeeding year. Apart from this, the teaching of the curves, of which the one for total rheumatism is the most trustworthy, is obvious. It will be seen that there was an epidemic of rheumatic fever in 1870, which continued with the remission shown in the preceding curves until the end of 1875. A further rise occurred in 1884 of sufficient magnitude to be dignified by the name of an epidemic, and there was some evidence of a later increase of rheumatic fever in 1887. The rise in 1884 was greater in the experience of Westminster Hospital than of St. Thomas's Hospital, and at St. Bartholomew's Hospital it did not occur (and then only to a slight extent) until 1885. Judging by the rheumatic fever curve, this disease was more prevalent in the district served by the Westminster Hospital in 1884 by 60 per cent. than in the preceding minimal year (1882), and by 95 per cent. than in the succeeding minimal year (1886). At St. Thomas's Hospital in 1884 rheumatic fever was 40 per cent. higher than in the preceding minimal year (1883) and very much higher than in any succeeding year.

The Middlesex Hospital curve begins in 1867. It is characterised throughout by smaller amplitude than those already considered, though resembling them in essential particulars. The maximum, like that for St. Thomas's Hospital, was reached in 1868. Next year there was a fall, which is seen in a minor degree in the curves for St. Bartholomew's and St. Thomas's Hospitals. There was a second drop in 1872-3 from the peak of 1871, a third peak being reached in 1874, and a fourth in 1877. A further rise occurred in 1880 of 39 per cent. above the minimum of 1879; and in 1884 the amount of rheumatic fever was equal to that of 1820, but without a very great depression in the interval.

The University College Hospital curve begins in 1872 above the mean line. It touches it in 1873, and then rises rapidly to a maximum in 1876, two years later than in the more southern and central hospitals. At the Middlesex Hospital, which is nearest to it, there were maxima in 1874 and 1877. This later maximum in the University College (or North London) Hospital would lend itself to the hypothesis of an advancing northern wave of infection, very slow travelling, which started south of the Thames and probably (as we shall shortly see) in the East of London. The minimum of the University College Hospital curve following on the great epidemic occurred in 1879, as in all the other metropolitan hospitals where the records for this year are obtainable. The corresponding minimum in the metropolitan death-rate from rheumatism was in 1878-9. The 1884 rise is shown by the University College Hospital, as well as by the St. Thomas's, Middlesex, and Westminster Hospitals.

In the London Hospital curve the years 1867, 1869-70, are missing; but there was an excess of 90 per cent. in 1868 over 1866,¹³ while the 1874 rise was a comparatively small one. Unless some unknown details of hospital administration (as at St. Thomas's Hospital) account at least in part for this, there was an early maximum in 1868 (as also in the Middlesex and St. Thomas's Hospitals) as contrasted with the later maximum in 1874 in most other metropolitan hospitals. Stress need not be laid on this point, but it is evident that in all the metropolitan hospitals there were two chief maxima in the period 1866 to 1878—viz., in 1868 and in 1874-5—some having one and some the other. These obviously correspond with similar maximum death-rates from rheumatism in London in 1868 and in 1875. The London Hospital curve further differs

¹³ Since the above was written I learn that for several months in 1866 the only medical cases admitted to the London Hospital were cases of cholera. This would vitiate the ratio for that year.

from all the other curves in showing no general decline in the ratio of admissions for rheumatic fever. Whether this is due to social conditions or to a diminution of rheumatic fever in other parts of London which is not shared by the London Hospital, I am unable to say.

The St. George's Hospital curve has been constructed from the rheumatic fever cases without reference to any deviation from an average line or to the total number of medical cases each year (the latter not having been secured). It is interesting to find that, thus formed, the curve confirms the general accuracy of the preceding curves. There is a maximum of rheumatic fever in 1868, another in 1874-5, and another in 1884. The curve is further interesting as showing an earlier maximum in 1865, which probably represents a portion of an earlier epidemic of rheumatic fever in London indicated by a high death-rate from rheumatism in 1864-5.

Having now examined the curves for individual metropolitan hospitals (such as had available statistics), we are in a position to combine the picture without risk of losing the lessons derivable from its individual parts. It is impossible to make a continuous curve for all the preceding seven hospitals. The combined curve therefore represents the experience of a varying number of hospitals as stated at its foot. Beginning in 1865 with a smaller amount of rheumatic fever than the recent epidemic year of 1893, the curve at once begins to rise rapidly, reaching its chief maximum in 1868 (St. Thomas's is one of the three hospitals concerned in this part of the curve, and the fallacy in connexion with its records must be remembered). A remission in 1869 was followed by a second maximum in 1870. In 1871 occurred a second remission continuing to a less degree in 1872-3, a third maximum being reached sharply in 1874. Then followed an uninterrupted decline to the minimal years of 1878 and 1879. After this there occurred at shorter intervals the lower maxima of 1881, 1884, 1887, 1890, and 1893, with the intervening minima in 1883, 1886, 1889, and 1891. From 1889, when the amount of rheumatic fever was lower (as measured by hospital cases) than in any other year on the chart, there has been a somewhat steady rise. A general inspection of the chart appears to show an elevated plateau with minor undulations from 1868 to 1874, and then a sloping declivity, also with minor undulations, from 1874 to 1889. The London death-curve shows a similar, though less pronounced, direction; but there is a more marked valley between 1869 and 1875 than in the hospital curve. It may be surmised that we have since 1889 commenced the upward gradient of a second similar long wave; but whether this is so or not time alone can tell.

[Dr. Newsholme went through the records of many of the most important provincial hospitals in a similar manner, pointing out that in many cases statistical data were very imperfect. No distinction at some institutions had been made between acute and chronic cases, and the records in some extended much further back than in others. Records, however, from Bath, Bristol, Cambridge, Leicester, Birmingham, Sunderland, Newcastle, Liverpool, Manchester, Sheffield, Leeds, Bradford, and Hull, among others, afforded useful, if sometimes contradictory, information. In Scotland some of Dr. Newsholme's curves were based on a larger number of cases. From Ireland the information was meagre.]

LECTURE II.

Delivered on March 7th.

MR. PRESIDENT AND GENTLEMEN, — Having exhausted Great Britain and Ireland, we next consider the incidence of rheumatic fever in foreign countries, so far as trustworthy data are forthcoming. The returns from Scandinavian countries are exceptionally complete, as medical practitioners in these countries are required periodically to report to the authorities on the nature of the cases of illness coming under their charge. Dr. Beutzen, the Stadtphysikus for Christiania, has supplied me with the very valuable statistics for that city, and I have extracted the cases notified in the whole of Norway from the yearly volumes of the *Beretning om Tundhedsstilstanden og Medicinalforholdene i Norge*. The return from Christiania deals with 8577 cases of rheumatic fever compulsorily notified in the thirty-three years 1861-93. All cases are thus compulsorily notified by the medical attendant. The curve shows that there was a first epidemic reaching its maximum in 1864, when the amount was 70 per cent. above the preceding minimum in 1861. From the minimum of 1866 there was a second rise of 46 per cent.

to a maximum in 1870; and then occurred a rise of 83 per cent. from the minimum of 1873 to the maximum of 1875. After this came a steadier and slower rise of 90 per cent. from the minimum of 1878 to the maximum of 1885, the next minimum not being reached until 1890. The curve of admissions to the Christianian hospitals tells the same story as the total case curve, except that the maximum of the hospital cases occurred three years later in the epidemic than the maximum of total cases. The death-rate curve for the whole of Norway, based on 1580 deaths in the twenty-nine years 1863-91, is consistent with the corresponding case-rate curve, which is based on 67,909 cases of rheumatic fever in the same period. A comparison of the rheumatic fever case-rate of Norway with that of its capital brings out several important points. The maximum of the first epidemic is reached in Norway in 1866 instead of in 1864 in Christiania, of the second epidemic in 1871 instead of in 1870, of the third in 1876 instead of in 1875, and of the fourth and greatest epidemic in 1888-89 instead of in 1885. There is a further difference in the shape of the two curves. The Christiania curve is sharp and angular, each epidemic reaching its maximum more rapidly than the epidemics shown in the Norwegian curve. The curve for the whole of Norway runs more gradually and smoothly, corresponding with the scattered nature of the population from whose experience it has been constructed. Another suggestive feature of the two curves, so far as it relates to the most recent and greatest epidemic, cannot fail to attract attention. With epidemics starting in the same year (1883) the curve for Christiania falls to the mean line in 1889 and to its absolute minimum in 1890; while the curve for Norway, although declining in 1891, was still 20 per cent. above the mean line. Does this point to a gradual and slow spread by infection or merely indicate climatic or other differences between the capital and provincial parts of Norway? In Sweden it appears that rheumatic fever is only compulsorily notified among the poor, and unfortunately I have only been able to secure from Dr. Linroth, the health officer of Stockholm, returns for the ten years 1884-93, though he has kindly supplemented these by returns of the total number of cases of acute and chronic rheumatism in the Swedish hospitals since 1861. The notifications among the poor in Stockholm relate to 3116 cases of rheumatic fever in ten years, the return of cases in the communal hospitals to 2519 cases in the ten years 1884-93; while the return of total rheumatism in Swedish hospitals relates to 49,601 cases in the thirty-two years 1861-92. The maximum of 1886 in all these curves corresponds to the maximum in 1885 in Christiania; and if we may judge from the Swedish hospitals' curve for total rheumatism the epidemic reached its end sooner in Sweden than in Norway.

Dr. Carlsen of Copenhagen has supplied me with information as to Denmark. In this country medical practitioners are obliged to report every case of rheumatic fever that occurs in their practice. The curve for the whole of Denmark (not including the Farø Islands and other dependencies) relates to 104,999 cases in the twenty-four years 1870-93; that for deaths in towns to 928 cases; and those for Copenhagen to 24,654 cases and 429 deaths in the same period. The most peculiar feature about the case-rate for both Copenhagen and Denmark is the small range of variation in amount of rheumatic fever. In Copenhagen the absolute maximum in 1871 only differed by 63 per cent. from the absolute minimum in 1892; while for the whole of Denmark the absolute maximum of 1883 only differed from the absolute minimum in 1892 by 45 per cent. In Christiania the corresponding difference is 117 per cent., and in Stockholm (among the poor) 45 per cent. I am inclined to think that the real facts of the case are best displayed by a conjunction of the death and case curves. On this supposition there was a first epidemic, reaching its maximum in 1871 instead of in 1870, as in Christiania; a second, with a maximum in 1873 instead of 1875 in Christiania; and a third epidemic stretched from 1883 to 1888 as in Christiania.

Dr. Palmberg has furnished returns from Helsingfors, Finland, which deal with 3015 cases of rheumatic fever in the thirteen years 1881-1893 in the general population. The notification of rheumatic fever along with that of bronchitis, pneumonia, pleurisy, and peritonitis, as well as of the common infectious diseases, was made compulsory in Finland in 1880. The curve shows a minimum in 1884, which was an epidemic year in Norway, Sweden, and Denmark. In 1885 an epidemic began at Helsingfors which reached its maximum in 1890, 90 per cent. above the preceding minimum in 1884. The next minimum was in 1892, as in Copenhagen, that of

Christiania being reached in 1890. Before leaving the Scandinavian curves, two further points may be noted. The heights of the death-rate curves and of the case-rate curves appear in nearly every instance to be in an approximately inverse relationship to each other. Thus, although a high case-rate curve always corresponds to a high death-rate curve, the highest death-rate curves correspond to the *lowest* of the high case-rate curves, and the lowest death-rate curves to the *highest* of the high case-rate curves. There is some evidence of the same kind in London, where the death-rate from rheumatism was higher in 1874 than in 1868, though the case-rate was apparently lower. Are the intensity and virulence of the specific contagion of rheumatic fever in inverse relationship to the extent of its distribution? The general upward tendency of the Norwegian case curves will be noted, as contrasted with the fairly stationary character (allowing for epidemic variations) of the curve for Denmark, and with the downward tendency of the case curve for Copenhagen. In Swedish hospitals there appears to be a fairly steady increase. If more complete and perfect notification of cases explains the steady rise in Norway it can hardly be supposed that the same cause has not been operating in Denmark and in Sweden. We may compare with the above the general tendency to decline observable in the English curves and to ascend observable in the Scotch curves. It may be that we have here not merely accidental variations caused by the information from different sources being more or less trustworthy, but rather instances of countries involved in either the ebbing or flowing tide of this disease; for there are numerous indications that in addition to the epidemics at intervals of a few years there are larger epidemic waves which represent a wider and larger variation of the prevalence of the disease.

Leaving the Scandinavian returns we have next to consider others which are less complete, though they furnish valuable indications. For a valuable return from the Naval and Military Hospital of Cronstadt at the head of the Gulf of Finland in Russia, I am indebted to Dr. F. Clemow, to whom Dr. Akinkief, the senior physician of the hospital, has furnished the statistics. The curve shows the actual number of cases of rheumatic fever admitted into the hospital each year—altogether 3853 cases in twenty-nine years. The population of Cronstadt in 1893 was reckoned at 44,000, and it does not appear to have increased during the period embraced in the curve. Civil as well as military patients are admitted to this hospital. Three great epidemics are manifest—viz., in 1866–69, in 1887–88, and in 1893. Through the kindness of M. Bertillon I have received returns from Paris, relating to 3938 deaths from “rhumatismes” in Paris in the twenty-two years 1872–93, and 60,281 cases in all the Paris hospitals in the fourteen years 1879 and 1881–93. The main features of the curves based on these returns are the epidemic of 1874–75–76, which, judging by the deaths, had a maximum of 82 per cent. above the preceding minimum. Then followed an epidemic in 1880–81–82, the maximum of which was 38 per cent. above the preceding minimum in 1878 and 61 per cent. above the next minimum in 1888. The hospital cases also show evidence of the 1881–82 epidemic. The Brussels return relates to 488 deaths in the thirty-one years 1862–92. Up to the end of 1874 “rhumatisme aigu” is alone tabulated, after that “rhumatismes.” Allowing for this discrepancy, there is evidence of an epidemic lasting from 1865–72, the maximum being in 1866, and a remission occurring in 1870. After two years’ interval came the epidemic of 1875–76–77, a year later than the corresponding epidemic in Paris. A third epidemic had its maximum in 1882, and a fourth in 1888. In Berlin, during the twenty-four years 1869–92, 967 deaths from rheumatic fever were recorded. In 1879 were commenced the most valuable series of weekly returns, in which, *inter alia*, the weekly admissions for rheumatic fever into nine large general hospitals in Berlin are given. From these the hospital case-rate (in terms of total population of Berlin), based on 15,715 cases in fifteen years, has been calculated. The death-rate curve shows that 1879 was an epidemic year; that a second epidemic started in 1873, lasting, with the exception of 1876, until 1878. The death returns indicate small increases of rheumatic fever in 1884–86 and 1889; and the case returns show excessive prevalence of the disease in 1886–89 inclusive and 1884–89. For Munich I have received from Professor Dr. Ziemssen a statement of the cases of rheumatism in the Stadt Krankenhaus since 1867, which enables me to give curves of 8894 cases of rheumatism in the twenty-eight years 1867–94, stated in proportion to total medical

cases and to the population of Munich. From Dr. Aub I have obtained a statement of the yearly number of cases of rheumatism in Munich and in the whole of Bavaria for five years. These are supplied by voluntary notification on the part of medical practitioners, carried out under the auspices of a medical society. The hospital curves show that the proportion of rheumatism to total medical admissions has increased. There was a slight excess of rheumatism in 1875–76 as compared with the previous minimum in 1872, but no marked epidemic until 1878–81. After a minimum in 1882 a third epidemic reached its maximum in 1887. This, after a fourth minimum in 1892, was succeeded by an epidemic in 1893, which had not completely subsided in 1894. The curve for all cases in Munich in the five years 1889–93 (7080 in number) confirms this general conclusion, as does also the curve for total cases in Bavaria. The Prague returns supplied by Dr. H. Fabor relate to 4163 cases of rheumatic fever in its public hospitals in the ten years 1884–93. An excess is seen in 1884–85 and again in 1889–90. The returns from Vienna deal with 12,061 cases of rheumatic fever in the Kaiserlich-Königlichen Allgemeinen Krankenhaus, one of the three largest hospitals in Vienna, during the twenty-three years 1869–91, and with 30,493 cases of total rheumatism during the forty-five years 1847–91 in the same institution. The official return deals with 34,268 cases of acute and subacute rheumatism in the three chief hospitals of Vienna in the twenty-nine years 1865–93. From the first of these three curves it is not difficult to state the epidemic years for rheumatic fever in Vienna. First, there was an epidemic in 1850–51; next in 1855–56–57 (cf. a similar excess of rheumatism deaths in England in 1855–56); in 1859 a third epidemic occurred, as also in England; in 1868–69 a fourth epidemic, also seen in the English curves; and similarly in 1874–75–76, in 1882, and in 1887–88–89. The curve for rheumatic fever in the same hospital is, so far as it goes, completely confirmatory of the above; so, also, is the rheumatic curve for the three chief hospitals, except that it appears to show a steady increase from 1882–85, instead of two separate years of excess, 1882 and 1885.

The available returns from hospitals in the American continent may be next briefly passed in review. From Montreal I have returns from the General Hospital, to which English Canadian patients, and the Hôtel Dieu of St. Joseph, to which French Canadian patients are chiefly admitted. The curves show an epidemic lasting from 1870–76, but the remission occurring in 1874 in the experience of the Hôtel Dieu was the maximum in the experience of the General Hospital. In 1878 there was a great increase at the General Hospital which was almost entirely absent at the Hôtel Dieu. The next maximum is in 1883 at the Hôtel Dieu and in 1884 at the General Hospital. The fact that 1883 was a year of minimal rheumatic fever will be noted. From the Pennsylvania Hospital, Philadelphia, is a record of 2572 cases of total rheumatism in the twenty-nine years 1865–93, and of 1220 cases of rheumatic fever in the eighteen years 1876–93. The curve for total rheumatism shows maxima in 1870, in 1875–76–77, in 1884–87, and in 1890. The Bellevue Hospital, New York, furnishes 3370 cases of acute and subacute rheumatism and 6208 of total rheumatism in the seventeen years 1877–93. After a high point in 1877 come five exceptionally low years, the minimum being in 1880 as in Philadelphia. A rise occurred in 1883, which was maintained, with an intermission in 1886, until 1889. The rise in 1893 was almost unshared by Philadelphia. The Massachusetts General Hospital, Boston, had 1780 cases of total rheumatism in the twenty-four years 1870–93. The first maximum was reached in 1871 instead of in 1870 as in Philadelphia. After a remission in 1874 as in Philadelphia the rise was maintained until 1876, and was quickly followed by a second rise in 1879–80–81, only shown in 1879 in Philadelphia. The 1887 rise in Philadelphia occurred in 1888 in Boston.

I have now exhausted the available materials as to the epidemiology of rheumatic fever. In completing our survey of the field it is a pleasant duty to express my deep obligation to numerous physicians, hygienists, and resident medical officers of hospitals both in this country and abroad who have undertaken oftentimes most laborious work in securing for me the returns which I have now submitted to your attention. It is obviously impossible at the present time to enumerate those who have helped, but my sense of indebtedness is by no means diminished by the fact that the materials in many cases are necessarily fragmentary and imperfect. Before the natural history of rheumatic fever can be written in full a complete and accurate notification and tabulation of cases for

a long series of years on the system already adopted in Norway, Denmark, and Finland will be necessary. With our present imperfect information my attempt to describe the natural history of rheumatic fever is not unlike that of the palæontologist who from a few fragments of bones attempts to build up the skeleton of an ichthyosaurus. The data already given, however, enable us safely to reach certain general conclusions. 1. All the hospital records, all the Scandinavian Imperial returns of cases, and all the death returns agree in manifesting very great irregularities in the yearly incidence of rheumatic fever, the excesses of prevalence in certain years being so great as to merit the name of "epidemic." 2. A general survey of the curves indicates that there are two kinds of epidemics, which may be designated "explosive" in one case and "protracted" in the other. The explosive epidemics terminate in one or at the most three years. The protracted epidemics are seen chiefly in large centres of population or when we are studying the statistics of an entire country. It is not unlikely that these represent in reality the fusion of two or more of the explosive epidemics, which do not exactly coincide with each other in point of time. 3. There are certain favourite years for epidemics. Thus in England these are 1855-56, 1859, 1864-65, 1868-71, 1874-76, 1884-85, 1888, and 1893. In other countries the same years are frequently characterised by epidemics, but it will have been noted that in some instances there is an anticipation of or lagging behind the favourite years for England. 4. While there is no regular periodicity in the epidemic years, epidemics are apt to recur at intervals of three, four, or six years. At the same time it will have been noticed that there is in many instances a regular alternation between the explosive and the protracted epidemics, two of the shorter and smaller epidemics commonly occurring before the return of an epidemic of the protracted variety. This rule is not universal, so far as can be judged from the available data.

The great variations seen to exist in the yearly prevalence of rheumatic fever will be differently explained according as it is assumed that rheumatic fever is a constitutional disease or a specific febrile disease. If the former, variations of climate and weather, or possible variations in the susceptibility of entire populations to the disease, will be invoked in explanation. If the latter, while variations of climate or weather, or even of individual or collective susceptibility, may be admitted as secondary favouring factors, the chief explanation will be based on the presence of a greater or less amount of the specific *materies morbi*. Supporters of the former view would doubtless quote bronchitis, which causes a very variable annual mortality according to the character of the year's weather. This involves the possibly fallacious assumption that bronchitis is not a specific febrile disease, however much it may be affected by weather influences. It will be well, however, before considering the evidence of analogy, therapeutics, and bacteriology in favour of the view that rheumatic fever is a specific febrile disease, to consider the influence of climate, weather, season, and ground water on the disease.

CLIMATE AND GEOGRAPHY.

Climate may greatly affect the prevalence of rheumatic fever without affecting the question as to whether it possesses infective power. Yellow fever, although a specific febrile disease, is perhaps more directly controlled by climate than any other disease, as it can only prevail during hot and moist seasons, and is arrested by a heavy rainfall, or cold winds, or frost or snow. Rheumatic fever is probably a ubiquitous disease. So much can be said. But when we come to measure its relative amount in different countries or in different districts of the same country we are at once beset with difficulties. Deaths from rheumatic fever, even when separately tabulated, do not enable us in the present imperfect condition of death certification to form definite conclusions even in this country; and in other countries even less so. It is only in those countries in which cases of rheumatic fever are compulsorily notified by the medical men in attendance that we can obtain a fairly accurate knowledge of the total amount of this disease. In Norway in the twenty-nine years 1863-91 the annual sickness-rate from rheumatic fever was 1270 per 1,000,000 persons living, the maximum being 1866 per 1,000,000 in 1888 and the minimum 579 per 1,000,000 in 1863. The completeness of notification has doubtless improved with the lapse of time. In Denmark, where also there is universal notification, in the twenty-four years 1870-93 the sickness-rate was 2183 per 1,000,000 persons, varying from a minimum of 1600 per 1,000,000 in 1892 to a maximum

of 2800 in 1883. It will be observed that the minimum of Denmark is almost as high as the maximum of Norway. In Copenhagen the sickness-rate averaged in the same period 4030 per 1,000,000, varying from 2720 in 1892 to 5280 in 1871. It was also high in 1883 (5040) and in 1880 (5140). These rates show a still higher amount than in the whole of Denmark. In Christiania the average sickness-rate for the thirty-three years 1861-93 was 2590 per 1,000,000, varying from 1380 in 1866 to 4000 in 1885. In both Christiania and Copenhagen the notified sickness from rheumatic fever was in excess of that notified in the whole of Norway and Denmark respectively; but it is impossible to state definitely whether this is owing solely to more complete notification in these towns, or in part at least to a greater incidence of the disease on urban communities, of which there are a few indications in England. In Helsingfors there has been compulsory notification of rheumatic fever since 1880, and in the thirteen years 1881-93 the sickness-rate was 4500 per 1,000,000, varying from 2300 in 1884 to 6700 in 1890, an even higher sickness-rate than in Denmark.

Place or country.	Years of observation.	Average case-rate per million.	Minimum case-rate per million.	Maximum case-rate per million.
Norway ...	29 years 1863-91	1270	579	1866
Christiania ...	33 years 1861-93	2590	1380	4000
Denmark ...	24 years 1870-93	2183	1600	2800
Copenhagen	do.	4030	2720	5280
Helsingfors ...	13 years 1881-93	4500	2300	6700

Death returns for recent years, though not so trustworthy as sickness returns, may afford some indication of relative prevalence. In Berlin from 1869-92 the deaths from rheumatic fever are separately stated. They give an average death-rate of 35.2 per 1,000,000 persons living, varying from 25 per 1,000,000 in 1876 to 55 per 1,000,000 in 1869. In Vienna they are similarly separated in the years 1867-93, and the death-rate for the whole period averages 27.4, ranging from 8.56 in 1867 and 9.90 in 1889 to 37.20 in 1882 and 40.60 in 1870 and 47.3 in 1877. The average rate appears to be smaller in Vienna than in Berlin. In London during the twelve years 1882-93 the death-rate from "rheumatic fever and rheumatism of the heart" was 99 per 1,000,000, varying from 80 in 1889 to 120 per 1,000,000 in 1893. This is much higher than in Vienna and Berlin, in part at least owing to the unfortunate inclusion of "rheumatism of the heart" under the same heading. This renders the comparison useless, even if we supposed that the certification of deaths was equally accurate in the three capitals. In Paris and Brussels all forms of rheumatism are now tabulated together. In Paris in the twenty-two years 1872-93 the death-rate averaged 83 per 1,000,000, varying from 72 in 1892 and 59 in 1891 to 130 in 1875 and 110 in 1880. In Brussels since 1874 the death-rate from "rheumatism" has averaged 94 per 1,000,000, varying from 154 in 1875 and 164 in 1877 to 56 in 1881 and 35 in 1885. It is useless to continue the list. From the preceding figures it would be impossible to say with certainty in which of the cities enumerated rheumatic fever is really most prevalent, the data not being sufficiently precise for this purpose. It may be interesting, however, before leaving these death returns to compare the above with the corresponding death-rates for the capitals in which cases of rheumatic fever are compulsorily notified. In Norway the death-rate from rheumatic fever averaged 29.5 per 1,000,000 in the twenty-nine years 1863-91, varying from 45.4 in 1876 and 47.0 in 1874 to 19.1 in 1868 and 13.7 in 1864 (possibly imperfect certification). In Christiania the average death-rate in 1861-93 was 54 per 1,000,000, varying from 10 in 1891 to 170 in 1874 and 180 in 1878. In Stockholm the death-rate from rheumatic fever in the ten years 1884-93 varied from 51.5 per 1,000,000 in 1886 to 4.1 in 1893. In Copenhagen in the twenty-four years 1870-93 the death-rate averaged 70.1 per 1,000,000, varying from 87.9 in 1884 and 84.6 in 1876 and 153 in 1871 to 31.7 in 1890. In the whole of Denmark the death-rate in 1870-93 averaged 64.9 per 1,000,000, varying from 30.1 in 1888 to 94.5 in 1875. One fallacy running through these statistics, if comparisons are made, must be noted. Rheumatic fever varies greatly in prevalence and in mortality at different periods. An average death-rate for a number of

years is only comparable with another average death-rate if both populations concerned have had a common experience as regards epidemics, a condition which is difficult to fulfil. Hence the extremes in the preceding statement are of greater importance than the averages.

Indications as to number of cases of rheumatic fever in England.—A rough estimate as to the average annual number of cases of rheumatic fever in London may be made from the preceding data and the notification data for Christiania. We may assume that about half the mortality from "rheumatic fever and rheumatism of the heart" is due to rheumatic fever, so as to bring the English figures into comparison with the Norwegian. Probably this is too generous an allowance, though even then the average death-rate from rheumatic fever is 50 per 1,000,000 as compared with about 37 for Christiania. In the thirty-three years 1861-93 the average rheumatic fever case-rate was 2590 per 1,000,000. Assuming that a similar case-rate held good in the twelve years 1882-93, and that the case mortality in London was identical with that of Christiania, it follows that the average annual case-rate in London was 3500 per 1,000,000, or 3·5 per 1000. This is almost certainly an under-estimate. At least 4 persons in every 1000 are on the average attacked annually by rheumatic fever. If to this we add the number of cases of cardiac disease which were rheumatic in origin, although the articular inflammation was inconspicuous, it is evident that we have to deal with the chief cause of English mortality. Taking the case-rates as they stand, it appears that among American hospitals Chicago had much more rheumatic fever in 1886-90 than the eastern hospitals showed over a longer period. At Montreal the proportion of rheumatic fever admitted into the French Canadian was larger than into the English hospital, but whether this is a true race difference or ascribable to differences of administration is doubtful. In both of the Montreal hospitals the proportion of admissions from rheumatic fever does not amount to more than half the same ratio in the States' hospitals. Among foreign hospitals it is only possible to contrast Prague and Vienna, the proportion of rheumatic fever admissions being much larger in the latter than in the former. The Irish hospitals of Wexford and Belfast show a fairly uniform proportion of admissions in the south-eastern and north-eastern parts of Ireland. It would appear from the Scotch returns that there is more rheumatic fever in Aberdeen, judged by hospital incidence, than in Kilmarnock, more in Kilmarnock than in Glasgow, more in Glasgow than in Paisley (only a few years' records for the latter), and more in Paisley than in Edinburgh (here again only a few years' records). In the London hospitals rheumatic fever forms 8·43 per cent. of the total medical admissions (1865-93), varying from 6·41 per cent. at University College Hospital (1872-90) and 6·91 per cent. at the Westminster Hospital (1870-78, 80-93) to 10·7 per cent. at the Middlesex Hospital (1867-93). In the southern districts of England the admissions from rheumatic fever vary from 7·02 per cent. in Brighton to 10·1 per cent. in Chatham; in the midlands from 3·94 per cent. from acute rheumatism only in a short period, to 10·8 per cent. in Derby and 10·4 per cent. in Leicester from acute and subacute rheumatism; in the western counties from 12·5 per cent. in Reading and 9·71 per cent. in Queen's Hospital, Birmingham, to 5·47 per cent. in Oxford and 5·82 in Cardiff; in the north-eastern counties from 2·06 per cent. at Stoke-on-Trent and 4 per cent. at Liverpool to 5·69 at Manchester and 10·7 at Stockport; in Yorkshire from 2·12 per cent. in Huddersfield and 2·15 per cent. in York to 9·19 per cent. in Leeds; and in Northumberland from 2·83 in Newcastle to 11·6 in Durham. Now, do these differences express real differences, or is the varying proportion of rheumatic fever to total medical patients due to varying systems of hospital administration? There can be no doubt that the latter cause of variation is largely in operation, and that much of the difference shown by the previous rates must be ignored. Hospitals where no medical school exists, and more particularly hospitals in smaller towns, are apt to be used largely by the surgical staff almost to the exclusion of the medical element. The percentages of all except the largest hospitals must therefore be accepted with great caution. Furthermore, it is evident that the social conditions of towns vary enormously, and consequently any statement of rheumatic fever hospital patients in terms of total population would not be a fair criterion of the amount of this disease in two such towns, for instance, as Brighton and Leeds. The ratio between rheumatic fever hospital patients and total medical patients is much more justifiable. It is probable that in a hospital admitting all

urgent cases the percentage of rheumatic fever cases to total medical cases would fairly compare the poor of one town with the poor of another, even though in the former the poor who seek admission to hospital might form only one-thousandth part of the total population, and in the latter one-hundredth.

Having admitted to the full the scope of action of accidental and extrinsic causes of variation, there still remain certain differences of incidence of rheumatic fever which cannot be thus explained. It can scarcely be due solely to differences of administration that in Edinburgh in 1889-94 rheumatic fever formed only 2·09 per cent., in Glasgow in 1870-93 only 4·35 per cent., and in Aberdeen in 1865-93 7·21 per cent., while in London in 1865-93 it was 8·43 per cent. of total medical admissions to hospitals. At Queen's Hospital, Birmingham, the case-rate (1876-93) was 9·71 per cent., which is even higher than in the metropolitan hospitals, in Reading it was 12·5 per cent., in Bristol it was only a little lower than in London, in Manchester down to 5·69 per cent. (1870-93), in Liverpool only about 4 per cent., in Sheffield 7·08 per cent. (1887-93), and in Leeds 9·19 per cent. (1880-93). I must again draw attention to the fact that, not being able to compare exactly the same years, or, even when the same years are taken, not being certain that each town had the same range of epidemic prevalence during the period, the above results are open to criticism. Hitherto our statements as to the geographical distribution of rheumatic fever are admittedly defective. The disease is ubiquitous, but it is difficult to express numerically the varying degree of its prevalence in different districts compared with each other.

The Army figures for the United Kingdom show an excess in England over Ireland, and a still greater excess over Scotland, as in the hospital returns previously considered. In the Mediterranean Gibraltar is most subject to rheumatism, Cyprus least so. The amount among the black troops in the West Indies, and still more in West Africa, is terribly high, the sickness among blacks in the West Indies exceeding that among white troops. South Africa has a high case-rate, while in Canada the amount is about equal to that in Ireland and Gibraltar. The amount in China is low, in the Straits Settlements least of all, in Egypt it is moderately high, in Madras and Bengal high, and in Bombay about equal to Egypt. In different parts of India there are striking variations in the different military districts, which would deserve much more careful study were the data for this study extant. In the Bengal district the admissions for rheumatism per 1000 of strength vary from 48·4 in Quetta, to 21·4 in Allahabad, in the Madras district from 56·3 in Rangoon to 16·1 in the southern district, and in the Bombay military district from 66·7 in Nagpur to 15·8 in Sind.

Before leaving the question of geographical distribution of rheumatic fever I may give the results of a laborious attempt to state it accurately for the counties of England and Wales. The deaths from "rheumatic fever and rheumatism of the heart" are given separately for each county by the Registrar-General for the ten years 1881-90. The mean population of the same period having been ascertained for each county, it was possible to calculate the corresponding death-rate from rheumatic fever and rheumatism of the heart. The death-rate from rheumatic fever and rheumatism of the heart at each group of ages (0-5, 5-10, 10-15, 15-20, 20-25, 25-35, &c.) in England and Wales as a whole in the same period having been separately obtained, it was possible to apply these death-rates to the population of each county at the various groups of ages, and thus ascertain the number of deaths that would have occurred in each county from rheumatic fever and rheumatism of the heart, assuming that the deaths occurred in each county at the same rate as in England and Wales as a whole. The proportion between this total and the actual deaths in each county from rheumatic fever forms a factor of correction for age-distribution. Subsequently, the death-rate for England and Wales being taken as 100, each county was stated in proportion to this. Berkshire has the lowest death-rate of all the counties; Lancashire the highest. Lincoln is very low, which does not support the view that rheumatism has taken the place of malaria in the death returns, or that there is a close etiological relationship between malaria and rheumatic fever. London is near the average (109), Cornwall is not much below the average (93), which does not support the statement that, like the Isle of Wight and Guernsey, Cornwall enjoys immunity from rheumatic fever, as stated by Hirsch

on the authority of Forbes.¹⁴ For the rest the order of the counties is very puzzling, and it is doubtful if it represents the true order of rheumatic fever prevalence. One thing is certain—there is abundant rheumatic fever in all of them. The extreme difference is between 71 and 123, England being taken as 100. Most of the eastern counties appear to be lower than the western, but some of the western counties are also below the average. The figures, I think, bear one conclusion. Rheumatic fever is an urban disease more than a rural. The counties containing the largest and most numerous towns have with one exception the highest rheumatic fever death-rate. Thus Lancashire occupies the highest position (123); the West Riding (114) is much higher than the East Riding (85). Hereford does not agree with this result, and Cumberland decidedly not. Apart from the statements already made, the results as to county incidence of rheumatic fever are not very trustworthy. It will be impossible to speak very precisely as to the relative amount of rheumatic fever in different counties until there is a general notification of all such cases. Until that time arrives it will be impossible also to solve the problems as to the possible influence of character of soil. An attempt to classify the counties according to relative porosity of their soils was inconclusive, and a more exact attempt of the same kind for the statistics of West Sussex produced contradictory results. Climate may be described as the composite result of the interaction of temperature, rainfall, and soil. Before discussing the influence of each of these chief factors it will be convenient to discuss—

THE INFLUENCE OF SEASON.

Here we are on much firmer ground, as there is abundant evidence of the seasonal incidence of rheumatic fever. The most complete information on this point is from the countries in which rheumatic fever is compulsorily notified. The monthly curve based on 8577 cases in Christiania in the thirty-three years 1861-93 shows that the minimum number of cases occur in August, after a gradual decline to this point; and that from August onwards there is a more rapid rise, the average line for the whole year being passed in November, and 26 per cent. above this line being reached in December and 55 per cent. in January, the maximum month. The difference between January and August is 104 per cent. For the whole of Norway the seasonal curve is similar, though a little retarded, the minimum not being reached until September, and the amount in December not being much above the average for the year. The cases at Stockholm (3116 in the ten years 1884-93) also show a minimum in August and a maximum in January; but the difference between the January and August curve is only 64 per cent., as against 104 per cent. in Christiania. Further, the fall from January to August is broken in March and April, and the November rise is higher than in December. The last may possibly be owing to inaccurate data. At Helsingfors (based on 3030 cases in thirteen years) the minimum is in July instead of August. The winter rise is small, the three maximum months being March, April, and May. The difference between the maximum and minimum is 60 per cent.

Adding together the experience of the fifteen years, 1879-93, in Berlin it is evident that there is much more rheumatic fever in the first than in the second half of the year. In this respect the Berlin agree with the Scandinavian curves. They differ, however, in the fact that the amount of the rheumatic fever in Berlin remains above the mean line until midsummer, while in Stockholm and Helsingfors May is the last month much above this line, and in Christiania May already shows evidence of the summer fall. The rise in November and December is not so marked in Berlin as in Stockholm and Christiania. The slight fall in the last lunar month may be ascribable to fewer admissions to hospital about Christmas time. At Munich 2589 cases of rheumatic fever admitted to the Stadt-Krankenhaus in the six years 1889-94 show that March and May were the maximum months as in Helsingfors; but the minimum was in September instead of July as in Helsingfors, or August as in Christiania and Stockholm. Two additional curves, one based on the total cases of rheumatic fever voluntarily notified in Munich (7078 in the five years 1889-93) and in Bavaria (31,028 in the four years 1890-93), are like the hospital curve, only smoother and showing a maximum in April. Edlefsen's statistics for Kiel show out of 800 cases in 1861-84 a maximum in January,

December next approaching it, also minima in August and in February. Dr. August Stoll¹⁵ gives a maximum of 12.6 per cent. in April and 12.4 per cent. in May, next coming March with 10.9 per cent., February 10.8 per cent., June 9.5 per cent., January 8.1 per cent., July 7.7 per cent., December 6.7 per cent., August 5.9 per cent., October 5.7 per cent., November 5.29 per cent., and September 4.07 per cent. The total number of cases was 491. In Philadelphia, on the basis of 673 attacks in the years 1879-90, Dr. M. J. Lewis¹⁶ states that the maximum of 16.5 per cent. was in April, falling to a minimum of 5.1 per cent. in September. In London, judging by the weekly death-returns for the eleven years 1883-93 (4482 in number), which have been arranged in four-weekly periods, the maxima were in the eleventh, twelfth, thirteenth, and first and second periods, and the minimum in the seventh period. It does not follow that this represents the true proportion of seasonal prevalence, as there is evidence that the case-mortality and the character of complications vary in different seasons. It will be well, therefore, to take such evidence as to hospital admissions as can be obtained. Dr. H. S. Gabbett¹⁷ gives the monthly admissions to the London Hospital for the nine years 1873-81, based on 2000 total cases, or 738 first attacks of rheumatic fever. These curves both show a maximum in November. They also appear to show traces of a second maximum in July. From the Middlesex Hospital reports I find that there were 801 admissions for rheumatic fever in the six years 1874-79. These show a maximum in November and December, and a minimum in July. The Westminster Hospital returns for the thirteen years 1880-92 show that of 1116 admissions for rheumatic fever the highest number occurred in the first quarter of the year. I have extracted from the case-books the returns for Guy's and St. George's Hospitals for 1874-75 and 1892-94. The former, based on 594 cases, show that the maximum 129 occurred in the tenth four-weekly period, ending Oct. 8th, and in the twelfth, ending Dec. 3rd, the eleventh and thirteenth periods coming next to this. The minimum was in the eighth period. The first and second periods had ratios of only 96 and 98 (mean = 100). It is possible that in this curve we have to deal with the complicating effect of the London epidemic of 1874-75, which may have disturbed the regular seasonal incidence. The curves for Guy's Hospital in 1892-94 show, however, the same excess of rheumatic fever in the autumn; and this is confirmed by the London Hospital returns already quoted and by the curve of death-rate. The Berlin and Munich curves of monthly cases show the modifications to which the seasonal prevalence of rheumatic fever is prone.

Three Lectures

ON

TRAUMATIC INFECTION,

Delivered at the Royal College of Surgeons of England on Feb. 25th and 27th, and March 1st, 1895,

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LECTURE II.

Delivered Feb. 27th.

SOME INFECTIONS OF THE BLOOD; SEPTICÆMIAS.

Definitions.—*Septicæmia* and *Sarcosepsis*.—*Method of Investigation.*—*Bacillary Septicæmia* with *Sarcosepsis*.—*Cancerous Ulcers a Source of Infection.*—*Bacterial Invasion of the Heart in Septicæmia*; *Illustrative Cases*.—*The Distribution of Bacteria in Septicæmia.*—*The Varieties of Septicæmia: Streptococcus Septicæmia.*

DEFINITIONS.

GENTLEMEN,—In its strictest acceptation the term "septicæmia" should, I think, apply to conditions in which bacteria flourish in the blood without passing through the walls of the vessels into the tissues. At the same time the bacteria may be present, and even multiplying, at the original seat of

¹⁴ Hirsch's Geographical and Historical Pathology; Translations of the Sydenham Society, vol. III., p. 756, and Transactions of the Provincial Medical Association, 1836, vol. IV., p. 174.

¹⁵ Deutsches Archiv für Klinische Medicin, 1893, p. 51.

¹⁶ International Journal of the Medical Sciences, September, 1892.

¹⁷ THE LANCET, Oct. 20th, 1883.

inoculation. Koch's¹ mouse septicæmia is a disease of this type. In it the bacillus multiplies at the point of inoculation and invades the blood, but is not given up by the blood to the tissues. Whilst the animal is alive, and after it is dead, the bacilli are found in its blood, and also in various bloodvessels throughout the body. Hitherto it has been difficult to demonstrate the occurrence of pure septicæmia of this type in man.

SEPTICÆMIA AND SARCOSEPSIS.

There ought, theoretically, to be a converse condition to septicæmia—one in which the bacteria flourish in the tissues, but refuse to enter the blood. Malignant oedema, or, as English surgeons more often call it, diffuse spreading traumatic gangrene, seems to be such a disease. It is well known that in it the bacillus septicus spreads along the lymph paths and shuns the blood. This peculiarity is perhaps explained by the profound aversion which the bacillus has for oxygen. After death the bacillus septicus may spread into the blood, which has then presumably lost its oxygen. Thus we may have a true sepsis of the blood or septicæmia, and a true sepsis of the tissues or sarco-sepsis. Most often, however, these two are combined.

The study of the human septicæmia is surrounded by many difficulties. Everyone has seen in histological sections of organs the blood coagulated in the larger vessels, and when this work was begun I thought it might be possible to see bacteria in this coagulated blood in cases of septicæmia. However, I have been most unsuccessful in finding bacteria in the blood of these so-called natural injections, and it seems clear that as yet nothing can be hoped for from this source. This absence of bacteria from the blood of the larger arteries and veins of men and animals who have died from septicæmia is rather mysterious, but even in such a marked septicæmia as anthrax the bacilli are not at all easily seen in the blood of the larger vessels.² Perhaps streptococci ought to be excepted from this assertion. Cornil and Babes³ found streptococci in these natural injections, and I shall allude to a case of streptococcus poisoning in which cocci and diplococci were seen in the blood and also in the smaller hepatic veins. I have, however, more than once found bacilli in the blood-clot in vessels not far from septic wounds in cases of septicæmia. (*Vide* Fig. 13.) Here, however, the mycosis may have been local and not general.

It is by no means easy to demonstrate any kind of bacterial invasion of the blood in human beings. To begin with, it is not always right or expedient to obtain specimens of blood during life or to obtain them from favourable sources. I myself have always failed to see anything definite in blood obtained by puncturing the fingers of septicæmic patients. Culture experiments with blood obtained in like manner may also be fallacious, because, to mention only one objection, of the impossibility of always disinfecting the skin. There still remain, however, the tissues and organs for examination, and they afford, I hope to show, signs as unmistakable as in mouse septicæmia or anthrax.

Great difficulties have been experienced in discovering any bacteria whatever in septicæmic tissues. Experimental pathologists are quite familiar with the occurrence of bacterial emboli in the capillaries of animals after the intravenous injection of pyogenic cocci or of other bacteria. Also, since the investigations of Recklinghausen, Klebs, Hueter, and of many others, bacterial emboli have been repeatedly described and figured in the organs of men and animals who died from pyæmia,⁴ and I could adduce many examples of my own; but hitherto the occurrence of similar emboli in septicæmia hominis has hardly been recognised, although the need of objective evidence of the kind has been severely felt. Indeed, in its absence there can be no doubt whatever that many cases of septicæmia have been thought to have been toxæmias, septic intoxications, or sapræmias. The importance of being able to determine the true cause of death in septicæmia and toxæmia by the examination of the tissues hardly requires to be mentioned. Writing in 1890, Baumgarten⁵ said that,

although bacteria have been found during life by Ogston and Rosenbach in the blood of those suffering from septicæmia, nevertheless direct evidence of their presence in the internal organs was wanting. He himself made the attempt to demonstrate their presence, but failed to do so. Cohnheim,⁶ who has done so much to elucidate embolism, says nothing concerning bacterial emboli in the capillaries in septicæmia hominis. Von Eiselsberg⁷ and many others have both before and after death demonstrated bacteria in the blood in a variety of septic conditions by using culture media. This method, however, is not always possible, and is apt to be fallacious. Von Eiselsberg and the authorities whom he quotes do not seem to have seen bacteria in the bloodvessels or capillaries after death. In one of our most recent and best works upon pathology⁸ the author, speaking of septicæmia, says: "We are peculiarly ignorant of what the organisms are which grow in the blood of man as a result of putrefaction." But in pathological literature are to be found brief references to the occurrence of bacterial emboli in the capillaries of those who have died from septicæmia. Dr. Klein⁹ says that in several cases of human septicæmia he found large numbers of minute bacilli in the bloodvessels of the lymphatic glands, and he figures such a vessel distended with bacilli. Cornil and Babes¹⁰ say that Ziemacki examined a larger number of those who had died from septicæmia, and always found zooglia of micrococci in the organs. These micrococci or zooglia were always the same, and were more numerous in acute than in chronic septicæmia. The micrococci were never found in non-infectious maladies. Klebs¹¹ has also described and depicted proliferation of micrococci in the pulmonary capillaries in puerperal septicæmia, following septic thrombosis of the internal spermatic vein. Leber and Wagenmann¹² have described an invasion of the vascular system by streptococci, but their attention is chiefly devoted to a local invasion at the point of inoculation, and they say little concerning the internal organs. I propose to refer to their observations when describing emboli in the capillaries of the liver in streptococcæmia. Cornil and Babes in their work on Bacteria depict the capillaries of the lung of an infant, the minutest vessels of which were filled with bacilli which resembled those of rabbit septicæmia. These authors also describe and depict bacteria and cocci in the capillaries of the skin of a child which died from septicæmia. Doubtless other references are to be found, but enough has been said to show that little is known concerning the occurrence of capillary bacterial emboli in septicæmia hominis.

BACILLARY SEPTICÆMIA WITH SARCOSEPSIS.

I long thought the following was a case of septicæmia such as came within my definition of that disease; but after many searches bacteria were at length discovered in the pneumonic exudation. Whether these were merely cadaveria or whether they were pathogenic I do not know. So little, however, seems to be known about septic pneumonias that it is better to describe what was found rather than to assume something which may be false. I shall, however, presently describe cases of septicæmia in which there seems to have been a true infection of the blood, such as occurs in mouse septicæmia. The case I am about to describe has a melancholy interest for me, as it is the only one of its kind I have ever had.

CASE 8 (Figs. 10 and 11).—A woman aged sixty-two years had a rapidly growing and ulcerated carcinoma of the breast, with involvement of the axillary lymphatic glands. Although the tumour had only grown for four months it was of large size, and the skin over it was cancerous in an area five inches long and three broad. In the centre of this area, in the region of the nipple, the skin had ulcerated and the cancer

⁶ Vorlesung über Allgemeine Pathologie, Berlin, 1877.

⁷ Beiträge zur Lehre von den Mikro-organismen im Blute, &c. Wiener Medicinische Wochenschrift, 1886, p. 133. Also: Nachweis von Eiterkokken im Blute als Diagnostische Hilfsmittel. Wiener Klinische Wochenschrift, 1890, No. 38, p. 731.

⁸ Hamilton: A Text-book of Pathology, vol. ii., Part II., p. 1019. Published 1894.

⁹ Micro-organisms and Disease, third edition, 1886, p. 120, Fig. 55.

¹⁰ Les Bactéries, p. 464. Paris, 1890. Ziemacki's original work is entitled "Beiträge zur Kenntniss der Mikro-organismen bei Septicæmia." I regret I have been unable to obtain it. A reference is given in the Zeitschrift für Hygiene, 1883, Part II.

¹¹ Die Allgemeine Pathologie, Part I., pp. 300 and 301, Fig. 50 Jena, 1887.

¹² Infantile Necrose der Bindehaut mit letalem Ausgang durch allgemeine multiple Streptokokken-Invasion des Gefässsystems. Von Graefe: Archiv für Ophthalmologie, 1888, vol. xxxiv., p. 250 et seq. These authors give references to similar observations in children who died from congenital syphilis and other diseases.

¹ Traumatic Infective Diseases, Translations of the New Sydenham Society, 1890, p. 33 et seq.; also Baumgarten, loc. cit., p. 496.

² See also Flugge: Micro-organisms in Disease. Translated by Watson Cheyne. New Sydenham Society, 1890, p. 238.

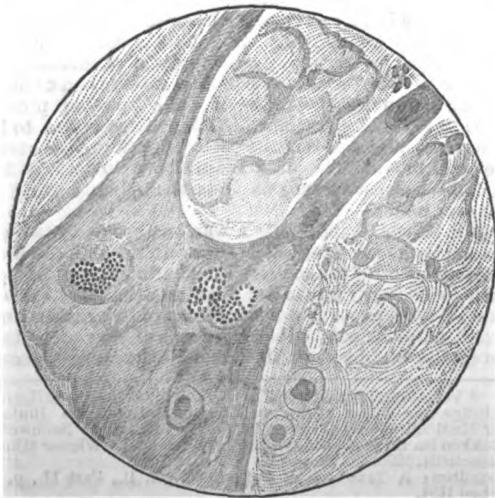
³ Les Bactéries, Fig. 206, vol. i., p. 536.

⁴ Fraenkel und Pfeiffer: Atlas der Bakterienkunde, Parts XII. and XIII., Fig. 126 et seq. Also Koch: Etiology of the Traumatic Infective Diseases, 1879. Bowby: Surgical Pathology, 1887, p. 60, Fig. 5. Ziegler's Pathological Anatomy, Part II., 1886, p. 55, Fig. 212, &c.

⁵ Lehrbuch der Pathologischen Mykologie, p. 362. Braunschweig, 1890.

was fungating. After consultation with my colleagues I removed the whole of this extensive disease, together with the axillary glands. The wound was brought together with difficulty, a drainage-tube was placed in the axilla, and many pints of sublimate lotion (1 in 2000) were used for irrigating the wound and the axilla. The skin was dusted with iodoform and a dressing applied. After the operation the patient was very restless and delirious and unable to understand what was said. These symptoms began with reaction and became progressively worse. After a while the restlessness and delirium were followed by apathy and stupor, and she died on the seventh day. Her temperature was highest on the last day, when it rose to 102.4° F.; the day before it had been 101°, and it was the same the third day; but with these exceptions it remained somewhere near 99°. The wound was painful from the beginning. About forty hours after the operation a little fluid soaked through the dressings, so they were changed. There was some redness of the skin, but the incision looked well. The drainage-tube was blocked with greyish blood-clot which had a peculiar odour, but not that of putrefaction. No bacteriological examination was made at this time, because the symptoms were thought to be due to iodoform; but the general and local conditions speedily became worse. The wound emitted a fetid odour and was covered with ashen lymph without pus. Therefore, the whole wound was opened and swabbed with tincture of iodine and fomented. The fetor abated, and the wound afterwards underwent no alteration. General infection had, however, obviously supervened from an early stage. The macroscopic appearances were, as usual in septicæmia, far from characteristic, and taken alone would have left the nature of the disease in doubt. There was a large and fetid wound due to the removal eight days previously of a large ulcerated carcinoma of the breast, together with secondarily infected axillary glands. The liver, spleen, and kidneys were normal, and no abscess or thrombus could be found anywhere. Both lungs were engorged with blood.¹³ Secondary nodules of carcinoma were met with in the liver, kidneys, and lungs. Portions of these three organs were histologically examined by various methods of staining, together with blood from the heart and fluid from the wound. The microscopic examination of the tissues yielded the following results. Pathologists have always laid great stress upon the condition of the spleen in septicæmia hominis, but its tissues were normal and no bacteria were seen, although several methods of staining were employed. The same applies to the liver. In the lungs, however, numbers of the capillaries were filled with small, non-spore-bearing bacilli with rounded ends, and usually in pairs. (Fig. 10.) At first glance the

FIG. 10.

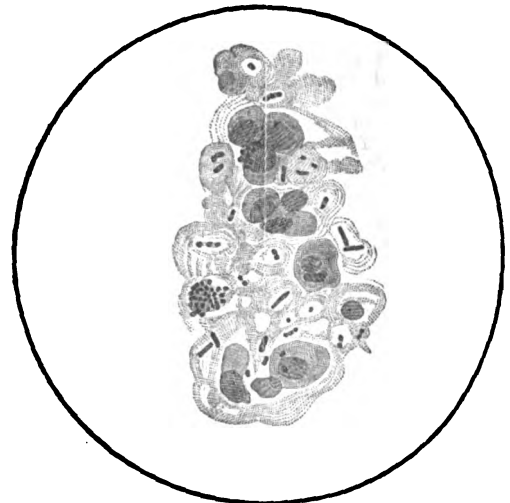


Bacillary septicæmia. Short bacilli in the capillaries of the lung.

capillaries looked as if they were filled with micrococci, but in many of the emboli separate short bacilli could be discriminated, and occasionally chains of three or four. (All of this work was done with Zeiss $\frac{1}{2}$ in. oil immersion

and No. 3 eye-piece.) The bacilli were lodged in the smallest capillaries, oftenest in those which had a diameter equal to one coloured corpuscle, but seldom in those which had a diameter equal to two. Many of the smallest capillaries of the air vesicles were filled with bacteria, but the vasa vasorum of the smaller pulmonary vessels were clearly their favourite seat. They stained rather more purple by Czenzynke's method than some other bacteria which I am about to describe. The lungs themselves were engorged with blood, and many of the air vesicles were full of exudation, with large nucleated and granular cells in its midst. (Fig. 11.) A number

FIG. 11.



Bacillary septicæmia. Exudation into air vesicles in pneumonia complicating septicæmia.

of different kinds of bacteria were growing in this exudation. The most numerous were small, almost round bacteria, which grew in dense swarms, or in pairs, or chains of three or four elements. They were the same as the bacilli in the capillaries; where they grew in swarms within the tissues of the lung their resemblance was exact. The pairs had no capsules. Here and there the bacilli lay within the exudation cells. Like those in the capillaries, they did not stain by Gram's method, but did by Czenzynke's. Along with these small bacilli were others which were long and rather slender, and not unlike tubercle bacilli. I thought, as intermediate grades were present, that they might be the mature stage of the small bacilli. In the exudation were also numbers of big, thick bacilli of variable length. These stained by both Gram's and Czenzynke's methods. The more healthy parts of the lung contained none of these bacteria, except the small kind, which filled some of their capillaries. When pyogenic cocci are introduced into the circulation of animals the vessels of the kidneys are usually the seat of bacterial emboli; in this instance of bacillary septicæmia, however, only a few of the smallest capillaries of the kidney were filled with bacilli. These were situated in the cortex, immediately beneath the capsule, and in the walls of the straight arteries and veins of the medulla. Presently other instances will be given of bacterial emboli in the vasa vasorum of the renal vessels. Doubtless some of the bacteria in the pulmonary exudation may have been cadaveric, but others closely resembled those in the capillaries, and were probably pathogenic. It is not at all easy to think that the bacteria in the capillaries did not get into them during life. I have no hesitation in believing that they were carried there by the blood stream, and that they are evidence of the septicæmia from which the woman was thought to have died. I have examined the organs of those who died from burns, fractures, cellulitis, bronchitis, pneumonia, pleurisy, and other diseases by the same methods, and have never met with similar appearances in the capillaries. Nor have I been able to find them in kidneys or lungs which were beginning to putrefy. Moreover, the presence of bacteria in the capillaries is consistent with the clinical history and with the bacteriological investigation of the wound, heart's blood, and tissues. Bacteria with the same morphological characters as those in the capillaries of the lung were found in the fluids of the

¹³ From the notes of Mr. Berry, surgical registrar in St. Bartholomew's Hospital.

wound and in the blood of the auricle. In both, however, they were mixed with other kinds of bacteria, so that a satisfactory investigation was difficult and uncertain. The sanious and fetid fluid from the axilla contained cocci, diplococci, and staphylococci, and staphylococcus pyogenes aureus was separated from it by plate cultures. It also contained quantities of small, oval, sporeless bacilli similar to those in the capillaries of the lungs and kidneys. These also grew in short chains and occasionally looked not unlike diplococci, their ends staining more than the centre. An attempt was made to identify some of the bacteria in the wound. The earlier cultures had the same odour as the fluids of the wound and grew bacteria with similar morphological characters. Mice, rabbits, and pigeons died two or three days after inoculation with cultures from the axillary fluid. Their blood contained small oval bacilli, usually in pairs. This bacillus grew rapidly at 20° C. or 35° C. upon the surface and in the depths of culture media. The growth upon the surface was smooth and white, with abrupt, irregular edges. That in the depths consisted of small delicate white dots. Gelatine was not liquefied. The agar-agar acquired a greenish opalescent tinge. No gas was produced, and odour was absent from the older cultures. Mice died about forty-eight hours after inoculation. This bacillus was also separated from the juice of the spleen and liver. Some of the foregoing characters are like those of a bacterium which Pasteur found in fowl cholera, *Gamalela* in septicæmia of birds, and Koch in rabbit septicæmia. The opalescence of agar-agar is, however, a peculiar feature. It has been observed by Babes in cultures of his proteus septicus. The wound contained other kinds of bacilli. Some were straight with rounded ends, and about the size of tubercle bacilli; others, with sharp, indistinct ends, grew in long chains; others were short and plump; whilst others were large and grew in pairs, and looked like kidneys lying with their hilum towards one another. The bacilli with sharp ends I have seen in the pus of acute septic meningitis caused by otitis media. I cannot say to what extent these various forms represent distinct species of bacilli. Malvoz, in his admirable monograph,¹⁴ claims that the colon bacillus is extremely polymorphic. In the same culture he has seen ovoid forms, almost like cocci, a small bacillus with rounded ends, and, last, a long filamentous bacillus. By adding naphthol, alcohol, bichromate of potash, or boric acid to the media in which it is growing the bacillus pyocyaneus assumes the form of bacillus, of long bacillus, of leptothrix, of spirillum, or of spirochaeta.¹⁵ From the pus of a case of septicæmia occurring after parturition Karlinski¹⁶ obtained a pleomorphic bacterium closely allied to the proteus varieties of Hauser. It assumed coccus, bacillus, or spirillum characters according to the ways in which it was grown, and was pathogenic for white mice. No details are given of any other examination of the pus, blood, or tissues of the person from whom Karlinski obtained the bacterium.

It is quite a usual circumstance to have several kinds of bacteria in the wound and for only one kind to invade the body. For instance, in the profoundly septic wound of a patient who died after internal urethrotomy I found bacilli and cocci of various kinds. But the pus of a pyæmic abscess only contained streptococci. The bacilli did not seem to have passed beyond the wound. The blood of the auricle in this case of septicæmia also contained numbers of the small oval bacilli, usually in pairs, and many large straight, round-ended bacilli. The latter were, I think, cadaveric. Nevertheless, when some of this blood was inoculated into a rabbit, it died from peritonitis, and similar bacilli were found directly after its death in the lymph.

Although so many bacterial forms were present in this case, yet the septicæmia seems to have been caused by the small oval bacillus. My reasons for thinking so are as follows: (1) a small oval bacillus was found in the capillaries of the lungs and kidneys; (2) the same bacillus was found in the blood of the heart; (3) the same bacillus was found in vast numbers in the fluid of the wound; and (4) it was highly pathogenic for animals. Babes¹⁷ concluded from his systematic work that there were several kinds of septicæmia. In one kind all the organs contained a special non-saprogenous bacterium of a highly pathogenic type; in another the

bacilli were less pathogenic and saprogenous; and, lastly, there was septicæmia produced by pus bacteria of exceptional virulence. Babes also adds that most septicæmias are caused by several associated species of bacteria. I endeavoured to find out whence the bacillus had come which had caused this septicæmia. All the usual precautions of aseptic surgery had been used in the operation. Just before the incision the skin of the breast and the ulcerated surface were finally washed with a solution of sublimate, 1 in 1000 parts of water, although it had previously been washed and soaked in the same solution; but on reflection it seemed highly improbable that this was an efficient disinfection, and, therefore, the fatal infection may have come from the ulcer.

About this time I had under my care another patient who had a cancerous ulcer of the breast. The discharges from this had the same odour as those of the previous case. Cultures inoculated from the ulcer had the same odour and killed white mice in forty-eight hours. Their blood contained small ovoid bacilli, usually in pairs. Some were not easily distinguished from diplococci. A small ovoid bacillus was separated from the cultures which killed the mice. It was the same as that grown from the wound and organs of the case of septicæmia which I have just described. The greenish opalescent tinge which the growing bacilli imparted to agar-agar was very striking.

Hitherto, so far as I can tell, no bacillus with pathogenic properties has been found in cancer juice or cancerous ulceration. Scheurlen's¹⁸ so-called "cancer bacillus" was the bacillus epidermidis,¹⁹ and had no resemblance to the small ovoid bacillus which produced an opalescent substance; nor can I find any reference to a pathogenic bacillus²⁰ in the writings of others.

From what has been said it is clear that the secretion of cancerous ulcers would repay study by a competent bacteriologist. It is not sufficiently recognised that these cancerous ulcers are such a dangerous source of infection. Quite apart from operations, they frequently give rise to sapræmia, septicæmia, or pyæmia. That precautions ought to be taken to avoid infection from cancerous ulcers during operations is obvious. It is less clear what those precautions should be. When last I had to operate upon an ulcerating scirrhus the whole surface of the ulcer was swabbed with pure carbolic acid. This succeeded, and the wound healed by first intention under a single dressing. However, recently one of my colleagues who knew of my experience and experiments had a death from septicæmia after the removal of an ulcerating carcinoma, although pure carbolic acid had been used and every other precaution taken. This case will be described next. Upon another occasion of the same kind I should begin by destroying all the ulcer with an actual cautery.

BACTERIAL INVASION OF THE HEART IN SEPTICÆMIA.

CASE 9.—Another case of septicæmia similar to the last occurred in the same ward a year and five months later. There is the closest similarity in the clinical history, morbid anatomy, and morbid histology of the two cases, and therefore I will mention it next. The patient was a woman fifty-five years of age, who came into the hospital because of a scirrhus cancer of the right breast. The tumour had grown for more than a year and had involved the axillary glands. In its centre the growth had ulcerated over an area as large as a half-crown, and some very foul discharge was secreted by the raw and fungating surface. The operator was acquainted with the history of the previous case, and therefore extra care was taken to disinfect the ulcer and the surrounding skin. The latter was, as usual, washed with soap and water, its sebaceous matter removed with ether, and then it was disinfected with a solution of biniodide of mercury, 1 part in 500 parts of water. Also carbolic gauze soaked in a solution of biniodide of mercury was kept applied to it for many hours. Just before the operation the surface of the ulcer was brushed over with pure carbolic acid, and covered with a layer of alembroth gauze fastened on with collodion. At the operation the breast, pectoral fascia, and the axillary lymphatic glands were removed. The wound, which was very large, was closed with flaps of skin, drained, and dressed in the usual way. Nothing can be said with certainty about this patient's mental state, because she

¹⁴ Le Bacterium Coli Commune comme Agent Habituel des Péritonites d'Origine Intestinale. Archives Expérimentales et d'Anatomie Pathologique, 1891, p. 696.

¹⁵ Macé: Traité Pratique de Bactériologie, p. 512. Paris, 1891.

¹⁶ Centralblatt für Bakteriologie und Parasitenkunde, vol. v., 1889, p. 193.

¹⁷ Cornil et Babes: Les Bactéries, p. 466. Paris, 1890.

¹⁸ Deutsche Medicinische Wochenschrift, 1888, p. 1033.

¹⁹ Kanthack: Brit. Med. Jour., Aug. 2nd, 1891, p. 478.

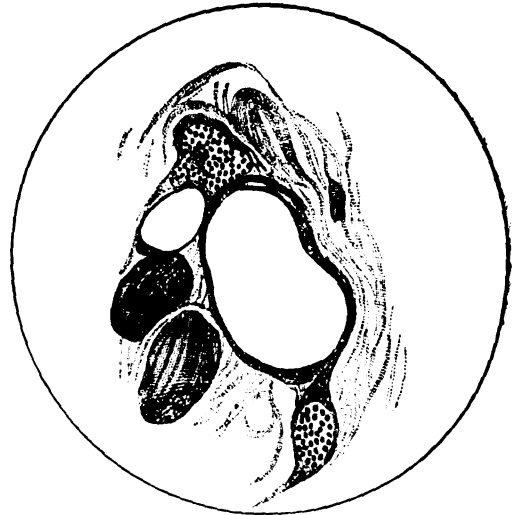
²⁰ See also Baumgarten: Lehrbuch der Pathologischen Mykologie, p. 729.

had delusions before the operation; but she became violent directly after the operation and was never afterwards rational. She remained weak, restless, and sleepless, and after some hours of delirium was semi-comatose and collapsed, and died on Oct. 10th, the sixth day after the operation. During the last forty-eight hours it is expressly said that her pulse was extremely feeble, and was only maintained by the continual administration of brandy and of other cardiac stimulants. From having been 80 in the minute the pulse rose to 130 towards the end. The respiration hardly altered, but kept from 24 to 30 per minute. Her temperature was not much raised at first. On the fifth day it reached 102.6°F .; and on the sixth and last it rose to 103° and then to 106.6° , when she died. As a rule it ranged about 100°F . Albumen was found in the urine, but blood corpuscles and bacteria were not sought for. The wound during this illness became red and inflamed, but the edges did not come apart. Blood-stained fluid escaped by the drainage-tube, but this contained no pus, nor had it the odour of putrefaction. It seemed to me to possess a peculiar faint odour. When the flaps were opened to avoid retention of discharges a large raw surface was exposed, from which blood-stained serum exuded. This exudation contained vast numbers of small ovoid bacilli. Their average length was about 1μ , and their average breadth about 0.75μ ; but some were nearly twice as long. These bacilli multiplied by fission, and were usually in pairs. Occasionally chains of four occurred. Although there were differences in the morphology of these bacteria, nevertheless I am inclined to think they all belonged to one species.

The naked-eye examination did not give much information. The axillary vein was not thrombosed, but some of the veins of the neck were full of gas. The heart was flabby and dilated, and weighed twelve ounces; it was not otherwise diseased. The lungs were oedematous and congested at their bases. The kidneys were greatly congested and studded with small hæmorrhages. The spleen weighed five ounces, and was not diseased. Histologically, the lungs had undergone very slight alteration. Their smaller vessels were distended with blood cells and many acini full of catarrhal cells; but the evidences of bacterial invasion were either absent or not clear enough to be spoken of with certainty. I think it is probable that the small, slightly oblong bacteria had lodged in some of the minuter capillaries of the smaller pulmonary vessels and bronchioles. In the kidneys the vascular engorgement was very marked, and most of the vessels were packed with blood corpuscles, and, as usual, no bacteria could be seen amongst them. A great deal more hæmorrhage was found with the microscope than was apparent to the naked eye. Some of the extravasation was recent, some was older—perhaps a week old—and beginning to undergo the usual alterations. The renal epithelium was cloudy and desquamated in places. Some of the tubules were filled with albuminous exudation. These morbid conditions were accompanied by hardly any bacterial invasion. Occasional bacterial emboli were found in the minute vessels near the capsule and in the vasa vasorum of larger vessels near the hilum. These emboli were widely scattered and most difficult to find. They were composed of small bacteria which were very slightly oblong. The same kind were found in much greater profusion in the heart. (Fig. 12.) To the eye the heart was merely flabby and dilated, and histologically its structure was not much altered. The muscular striations were quite clear. Some of the smaller vessels were dilated and full of blood, with here and there small inter-muscular hæmorrhages. But the evidences of septicæmia were unequivocal. Many capillaries and small vessels were filled with bacteria. These were small and almost round, being about 1μ long and 0.75μ wide. They grew in swarms, in pairs, and in short chains. In some places they seemed to have begun to emigrate into the inter-muscular spaces. These small oblong bacteria have the closest morphological resemblance to the bacilli in the vasa vasorum of the vessels of the last case, and I think that they belonged to the same species. It is to be regretted that no histological examination was made of the heart in that instance. The cells of the liver had undergone fatty infiltration, but no bacteria could be found in that organ. The vessels of the brain were dilated, and many of the smaller ones stuffed with blood corpuscles. The cerebral tissues had undergone no obvious alteration, and no bacterial emboli could be found. The relationship betwixt the bacteria and the morbid process was rather unexpected. The chief morbid changes were seen

in the kidneys, but nevertheless bacterial emboli were very hard to find in these organs. In the heart, where so many emboli were found, the morbid changes were quite trivial. It seems as though there might have been a relationship betwixt the hæmorrhages and the vascular engorgement of the kidneys, the latter being due to ptomaines or toxins circulating in the blood and not to the direct agency of localised bacteria. This is also the only case in which the brain was searched for bacterial invasion. Although the result was negative it is merely an isolated and imperfect observation. I should expect that bacteria would lodge in the brain in some cases

FIG. 12.



Bacillary septicæmia. Vessels of the heart filled with short bacilli.

of septicæmia, just as they do in the heart, kidneys, liver, lungs, or other organs. The histological examination throws a certain amount of light upon a point in the clinical history. Towards the end of the disease it may be remembered that the pulse beat rapidly and the heart's failure was so marked that cardiac stimulants were given for its relief. The accumulation of bacteria in the cardiac vessels may help to explain these cardiac symptoms.

BACILLI IN THE BLOOD DURING LIFE.

I have reason to think that small short bacilli, such as were found in the foregoing cases, may be seen in the blood of living patients. Mr. Maxwell has given me preparations of blood which certainly contain bacilli with similar morphological characters, and which were made under the following circumstances.

CASE 10.—A man aged twenty-three years was admitted into the medical wards of St. Bartholomew's Hospital in November, 1894, with ulcerative endocarditis and septicæmia. The endocarditis was probably an acute attack which had supervened upon an old disease. Twice before the patient had had rheumatic fever, and once before an attack of chorea. The acute endocarditis was accompanied with aphasia, paralysis of the right side, and double optic neuritis. Although the signs of septicæmia were not of the acutest kind, nevertheless they were very clear. The temperature was raised, and usually ranged betwixt 100° and 103°F . A hæmorrhagic rash appeared upon the buttock. Delirium was almost constant at night, and towards the end he became restless and unconscious. The urine contained a trace of albumen, but was not examined for bacteria. The duration of the septicæmia may have been a little over a month. When the disease was at its height Mr. Maxwell obtained blood from the finger which contained small short bacilli singly, in pairs, and in small swarms. Their size was variable, some being as big as staphylococcus aureus and others thrice the size. They all, however, belonged to the same species, and the large elements were simply those which were in the act of division. The specimen which contained such an abundance of bacteria was obtained after the skin had merely been washed with soap and water; but four days later some blood was obtained after the skin had been scrubbed with soap and water, rubbed with ether, and disinfected with a 5 per cent. carbolic lotion. The blood still contained the same bacteria;

but in much fewer numbers. Attempts to grow these bacteria upon culture media ended in failure.

Experimentalists are quite familiar with the disappearance of bacteria from the blood after massive doses have been injected. Saprophytes disappear the most quickly, and in a few hours none survive; but even pathogenic bacteria soon diminish in numbers, and may entirely vanish.²¹ Thus there is nothing surprising in the occurrence of many bacteria upon one day and their diminution upon another. Dr. Kantback, our pathologist, has of late had no difficulty in finding staphylococcus aureus and streptococcus pyogenes in the blood during life in pyæmia and ulcerative endocarditis. In cases of so-called septicæmia none were found, and these all recovered.

SEPTICÆMIA WITH BACTERIAL INVASION OF THE HEART, PERICARDIUM, AND PLEURA.

CASE 11 (Figs. 13 to 16).—One of the cases of septicæmia (Case 8) which has been described died on May 19th, 1893. It was preceded by another in the same ward which died rather less than a month before, on April 26th, 1893. The two cases resemble one another in some particulars, but differ widely in others. They will be contrasted after I have given the details of this, which was the first to occur. The patient was sixty-five years old and had been a widow for two years. In August, 1890, a small carcinoma was removed from the right breast, together with some enlarged axillary glands. This operation was followed by no recurrence *in loco*, but in April, 1893, the left breast was amputated for the same disease, and the axillary lymphatic glands, being enlarged, were removed. The day after the operation the woman was quite comfortable, without pain, and with a normal temperature. Upon the third day her temperature had risen to 102° 2' F., and on the fourth she was very ill with a temperature of 102° 3', an inflamed throat,

The examination was made twenty-five hours after death. The operation wound was said to have appeared healthy. The brain and organs were normal, with the exception of those in the thorax. The surface of the pericardium was covered with a thin layer of recent lymph, and contained about an ounce of purulent fluid. The lungs were slightly congested and the pleurae universally adherent by a thick layer of recent yellow lymph. There was very little fluid in the pleural cavities. Recent thrombi were found in the anterior jugular and in some of the neighbouring veins. As a rule, bacteria are hard to find in blood-clots, but in this instance the firmer and most fibrinous part of the clot from the anterior jugular vein contained numerous groups of short bacilli with rounded ends, and often in twos. (Fig. 13.) In some parts of the clot they grew in leptothrix of some length. This is not seen in the part of the clot which has been drawn. It is shown, however, in Fig. 16. The bacilli were in vast numbers amongst the fibrin, but in places where the blood corpuscles predominated none were seen.

The present seems to be a favourable opportunity for showing a micro-photograph which Mr. Cosens has made of a clot from the femoral vein of another woman who died from septicæmia after an operation for necrosis of the femur. The bacteria in the clot are short bacilli, the same morphologically as those which I have just described. The patient died forty-eight hours after the operation with coma and high temperature. But to return to the case under consideration, the lymph which covered the visceral layer of the pleura was in places a quarter of an inch thick. Mixed with its cells and fibrin were bacilli of more than one morphological variety. By far the most abundant were small oval bacilli 1.5 μ to 2 μ long and 0.75 μ wide, which occurred chiefly in pairs in short chains of from four to eight or ten elements (Fig. 14), and in small irregular groups. Here and

FIG. 13.

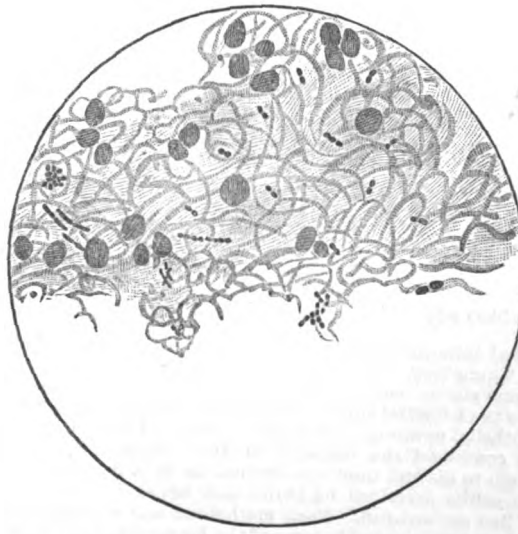


Bacillary septicæmia. Bacilli in blood-clot in the anterior jugular vein. In some parts of this clot the bacilli grew in leptothrix.

and some redness of the wound, unaccompanied with discharge or suppuration. Upon the fifth day, although she felt better, there was some fulness in the axilla, with tenderness about the shoulder. The mind was quite clear except at night, when she was slightly delirious. The urine was acid, with a specific gravity of 1022, and a cloud of albumen when heated. Upon the seventh day she died with failure of the heart's action; her pulse, which had been at the rate of 118 to 120 per minute, fell to 112 and then to 60. The respiration, too, was rapid, having risen from 27 to 42 during the course of her illness. The temperature, which had averaged 102°, fell to 99° 8' on the day she died. There was never any coma, and the mind was clear throughout.

²¹ Numerous references are given by Thomas in Neubauer and Vogel's Harnanalyse; also by Wyssokowitsch in the Zeitschrift für Hygiene, 1886.

FIG. 14.



Bacillary septicæmia. Pleuritic lymph containing a variety of bacilli.

there, especially near the free edge of the lymph, were a few short and thick round-ended bacilli in pairs. It seems probable that this was a bacillus which occurs in dead tissues, and is called by Sternberg the "bacillus cadaveris."²² I cannot speak so confidently about another bacillus which also was present in considerable numbers. It was about the size of the anthrax bacillus, but with oval ends; it grew in pairs, or in short chains with ill-marked intervals between the elements. The pleura was acutely inflamed with engorgement of its vessels and proliferation of its endothelium. Its tissues were interspersed with bacilli the same as those which have been described. Here, again, the small oval bacilli in pairs and chains were by far the most numerous. These filled many of the smallest bloodvessels and lymph spaces, but were absent from the blood which distended the larger arterioles and venules. Most of the air-vesicles beneath the pleura were filled with pneumonic

²² Manual of Bacteriology, p. 4

exudation, which contained numbers of the small oval bacilli. Bacilli were most numerous near the pleura, but both they and the exudation diminished in the vesicles further removed from the pleura. The tissues of the lungs also contained the two other kinds of bacilli seen in the pleuritic exudation. The pneumonia was the same as that in Fig. 11. No bacterial emboli were found in the capillaries of the pleura. The description of the pleural lymph applies to that which covered the pericardium. It likewise contained numbers of bacilli with similar morphological characters. Slight histological differences were also observed. For instance, the pericardial lymph was thinner and more villous and the subjacent endothelium detached in places as if by vesication. Thus the pericardial and pleural lymph probably contained three kinds of bacilli. The two largest are common in cadavers and may have been saprophytes. The small oval bacillus may also have been of the same nature, but the examination of the tissues of the heart, and, I might add, of the other organs, suggests that it played a much more important part and was the cause of the septicæmia. Many of the capillaries and smaller bloodvessels of the heart were filled with these small oval bacilli. (Fig. 15.) In many places the

condition was characterised by apathy, stupor, and coma; in the second the mind was clear throughout, with only slight delirium at night. In the first the temperature was low, averaging 99° F.; in the second the temperature was high throughout, usually 102°, and only fell as the patient was dying. In the first the chief morbid appearance was pneumonia, in the second pleuritis and pericarditis. In both, these diseases were associated with, and probably due to, a small oval bacillus; but in the first case this was almost quite confined to the vessels, and in the second it had passed from the vessels into the tissues. Indeed, the only point of close similarity between these two cases was the morphological resemblance of bacteria found in them. The circumstances that both patients were women of nearly the same age, that both had had the same disease, and that both had had the same operation done in the same ward and almost at the same time, suggested that they had both incurred the same kind of infection; however, the differences which have been pointed out do not, in my opinion, permit such a simple hypothesis.

CASE 12 (Fig. 17).—The following seems also to have been a septicæmia in which sarcosepsis was beginning.²⁴ It differed, however, in important particulars from the pre-

FIG. 15.

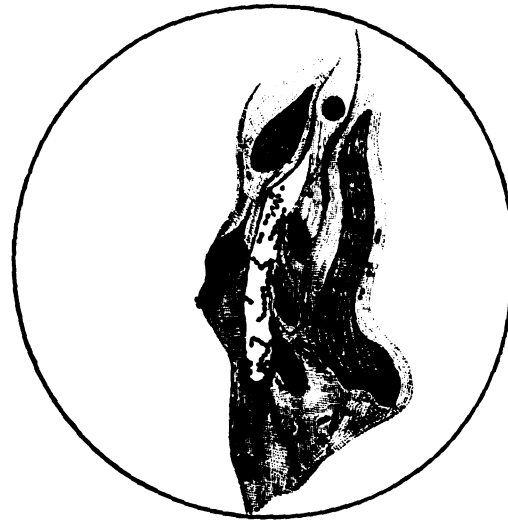


Bacillary septicæmia. Short bacilli in the bloodvessels of the heart.

dilated inter-muscular lymph spaces were also full of them, and where they were not crowded together the usual chains of from six to ten elements were seen. (Fig. 16.) Here and there the bacterial emboli filled minute bloodvessels beneath endothelial covering of the heart. Some of the muscle fibres also contained the bacteria in their substance, but not enough to distend their sarcolemma as in a case of pyæmic myocarditis described by Cornil and Babes.²³ The kidneys, too, had not escaped. Their epithelium was slightly cloudy, and had desquamated in some of the larger collecting tubules. Some of the smaller tubules contained albuminous casts. The bacterial invasion of the kidneys seemed to have been but slight. With much trouble it was ascertained that some of the smaller capillaries and vasa vasorum of the bloodvessels and connective tissue of the medulla contained bacterial emboli. It is to be noticed that the histological examination throws light upon two features in the clinical history. Apart from the pericarditis the bacterial invasion of the muscular substance of the heart is, I think, sufficient to account for the failure in the action of that organ, which seems to have been the immediate cause of death. Next, the bacterial emboli in the kidneys must have had a relationship to the presence of albumen in the urine. The association of pleuritis and sub-pleural pneumonia with rapid respiration hardly requires comment.

If we contrast this case of septicæmia with another (Case 8) which occurred in the same ward, the following differences in their clinical symptoms, morbid anatomy, and morbid histology are to be noted. In the first the mental

FIG. 16.



Bacillary septicæmia. Short bacilli in the inter-muscular and sub-pericardial lymph spaces of the heart.

ceding. A man aged seventy-four had had varicose veins for forty years; these were followed by ulcers, which became septic and caused cellulitis of the leg and thigh. Free incisions were made into the suppurating areas, but his general condition became serious and such as is often seen in the septicæmias, from which disease he was thought to be suffering. His mind became dull and apathetic, he was drowsy and had to be roused to take his food, and he was delirious at night. His thigh was amputated through the upper third, and the operation was well borne. He died, however, twelve hours afterwards from syncope. During his last illness his temperature was usually between 99° and 100° F. It once reached 101° soon after the cellulitis set in. His urine contained no albumen and had an acid reaction and a specific gravity of 1022.

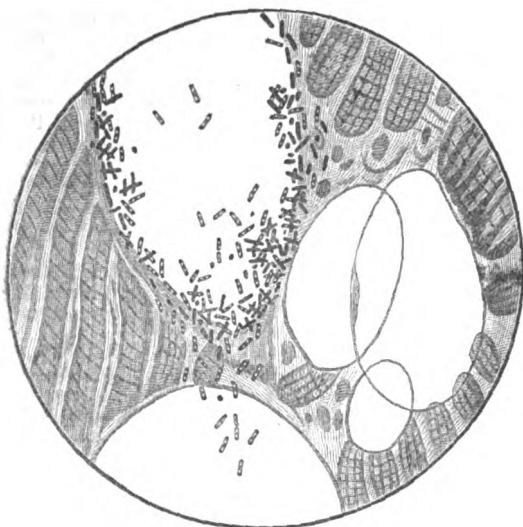
Mr. Shuter made an examination twenty-six hours after death; the weather was cool at the time. The brain, spleen, and kidneys were normal. The liver was cirrhotic, with stones in the gall-bladder. The lungs had scars and calcareous nodules at their apices, and were congested at the base. The heart was thick, soft, and with fatty walls; the tricuspid valve was ulcerated; the mitral valves were thickened and covered with vegetations; one cusp was almost non-existent. The great vessels were atheromatous. The ulceration was recent, but the other valvular changes were of long standing. Thus there was in the heart enough to explain the fatal syncope. But most of the disease was not of recent origin, and therefore we have to

²³ Les Bactéries, third edition, vol. i., p. 540 (Fig. 211).

²⁴ I am indebted to Mr. Groves for much assistance in the investigation of this case.

try to find out what precipitated the sudden failure of the heart's action. The main histological evidence of septicæmia was in the heart. The muscular substance had in places undergone slight fatty degeneration, but looked equal to its duties. There was a good deal of fatty infiltration. The venules and intramuscular capillaries were greatly dilated. Some of the capillaries were full of blood, but the veins contained none. The heart had evidently been engorged with blood. Some of the smaller venules had clearly been plugged with bacilli. (Fig. 17.) Vast numbers of bacilli still adhered to

FIG. 17.



Bacillary septicæmia. Large bacilli in bloodvessels of the heart.

their interiors, although it looked as if the bulk of them had been dislodged when the section was cut. These bacilli had slightly rounded ends. They sometimes occurred in twos, but not in strings. They were almost 1.5μ wide, and their length was twice, thrice, or four times their width. They were as long as, but thicker than, anthrax bacilli. They had evidently multiplied by fission, but some of the larger bacilli had two or more clear spaces in their substance, which suggested the development of spores. In size and appearance these bacilli were exceedingly like the common and harmless hay bacillus (*Bacillus subtilis*). Although grouped in the interior of the venules, some of the bacilli had penetrated the walls of the vessels and entered amongst the fat and muscular fibres. In places they had clearly been dragged amongst the muscular fibres and fat by the process of section cutting; but elsewhere some of the fat was infiltrated with vast numbers. The lungs were slightly hyperæmic, with catarrhal proliferation of their epithelium. Some of the vessels contained blood-clots, but no bacilli could be seen in these, or, indeed, in any other part of the lungs. The kidneys had merely undergone senile changes; they contained no bacteria. The liver likewise contained no bacteria; it was cirrhotic, but not in an advanced degree. The spleen was soft and pulpy, but no bacteria could be found in either its bloodvessels or tissues. If I am right in inferring that the heart had been engorged with blood, we would have some kind of explanation of the localisation of the bacilli in its venules and tissues. Karl Huber²⁵ has shown by an ingenious experiment that bacilli circulating in the blood localise themselves in hyperæmic areas. He inflamed the ears of rabbits with croton oil and then inoculated the tail of the animals with anthrax. The accumulation of anthrax bacilli in the inflamed ear was very decided. Thus the engorgement of this patient's heart may have determined the localisation of bacilli in the vessels. Beyond this it would be rash to go. If we suppose that the disease of the heart constituted a *locus minoris resistantie*, at which the bacteria congregated, it must not be forgotten that no bacteria were found in the liver, which was cirrhotic and, I ought to add, congested in places. Judging from their drawing, Cornil and

Babes²⁶ seem to have met with a bacillary invasion similar to this in the case of a child twelve years old who died from a subacute septicæmia following cutaneous ulcerations. The bacilli were found in the vessels of the kidney, lungs, pleura, and in those of the skin. They were accompanied by a coccus infection, probably *Streptococcus pyogenes*.

THE DISTRIBUTION OF BACTERIA IN SEPTICÆMIA.

The unequal distribution of the bacteria is a feature of these cases of septicæmia. They seemed to have congregated in a single organ, such as the heart, lungs, or kidneys, in preference to the others. Whether this is an accidental or constant feature my cases are too few to decide; nevertheless, the possibility of its occurrence ought to be taken into consideration. Clearly the absence of bacteria from the body cannot be inferred from their absence from one or more of the organs. This congregation of bacteria in particular organs has struck other observers. Cornil and Babes²⁷ refer to it particularly under the heading of "primary bacterial nephritis." It is probable that when bacteria are circulating in the blood conditions of which we as yet know little determine their arrest in particular regions.

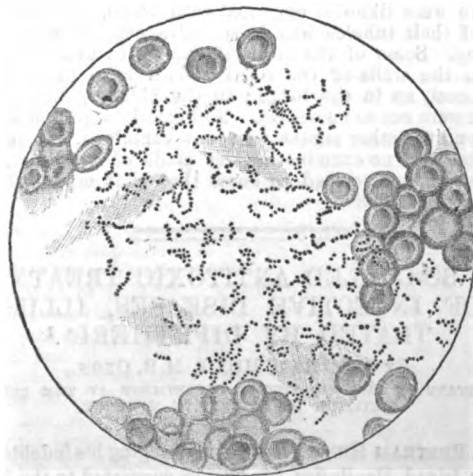
THE VARIETIES OF SEPTICÆMIA: STREPTOCOCCUS SEPTICÆMIA.

That septicæmia is not always a bacillary invasion of the blood, as might be inferred from the foregoing, was, I think, clearly shown by the following case of septicæmia following erysipelas.

CASE 13.—A stout woman aged fifty-five years was admitted into the isolation ward with cutaneous erysipelas of the right arm. There were the usual redness, swelling, and bullæ, with enlargement of the axillary lymphatic glands. The general symptoms were severe, with rigors, nausea, and a temperature of 104°F . The erysipelas spread from the arm to the back, shoulder, chest, and abdomen. It was still spreading on the seventh day, and upon the eighth she became restless and collapsed, with a feeble pulse. She died exhausted on the evening of the ninth day. Before the end the bases of her lungs, especially the left, became pneumonic, and her death was attributed to this complication and to septicæmia.

The examination disclosed nothing beyond what has been stated. There was much oedema of the cellular tissue of

FIG. 18.



Streptococcus septicæmia. Streptococci in the blood of the right auricle. From a micro-photograph by Mr. Cosens. The lecturer is indebted to Messrs. Cassell and Co. for this figure, which is from his forthcoming article on Erysipelas in "A System of Surgery," edited by Mr. Treves, and now in the press.

the arm, axilla, and chest, with swelling of the lymphatic glands. The left lung was congested, but not solid; the right lung was also congested. The kidneys were much congested and swollen. The serum of the inflamed cellular tissue contained cocci, singly, in pairs and short chains. These were seen in cover-glass preparations. Sections of the inflamed tissues were crowded with cells, and the cocci

²⁵ Experimentelle Untersuchungen über Localisation von Krankheitsstoffen; Virchow's Archiv, Band cxi., 1886, p. 142.

²⁶ Les Bactéries, vol. i., p. 476 et. seq. (Fig. 167).

²⁷ Ibid., vol. i., p. 545.

could not be seen with certainty. As the disease was of some days' standing this was not unexpected. The blood of the right auricle contained vast numbers of streptococci in short chains and entangled into masses. (Fig. 18.) Here and there the blood contained rather long, straight, or slightly curved bacilli, which were probably cadaveric. The lungs were enormously engorged with blood, and the air cells full of catarrhal exudation. Numbers of the smaller capillaries were plugged with micrococci. The emboli occurred in the capillaries of the walls of the air cells, and also in those in the walls of the pulmonary vessels and bronchi. (Fig. 19.) No chains could be discerned in these emboli, but none can be seen, as a rule, in similar emboli produced artificially by injecting streptococci into the circulation of rabbits. The

FIG. 19.



Streptococcus septicæmicæ. Micrococci in capillaries of the lungs. Two cadaveric bacilli are shown in the upper part of the figure. The blood contained others of the same kind.

kidneys were likewise engorged with blood, and the epithelium of their tubules was in an advanced state of cloudy swelling. Some of the smallest capillaries near the cortex and in the walls of the renal vessels were plugged with micrococci, as in the lungs; in the kidneys, however, the emboli were not so numerous. No bacteria were found in the liver, and the other organs were not examined. It is to be regretted that no examination was made of the heart. The clinical history seemed to show that that organ had not escaped the infection.

THE SO-CALLED ANTITOXIC TREATMENT OF INFECTIVE DISEASES, ILLUSTRATED BY DIPHTHERIA.¹

By BERTRAM HUNT, M.B. Oxon.,

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DR. BERTRAM HUNT, after acknowledging his indebtedness to his friend Dr. Ruffer for having suggested to the Pathological Society that he should open the discussion, stated that he would deal with the subject in the following order: (1) a short glance at the history; (2) the bacteriology only so far as was necessary to a proper understanding of the production and nature of the toxin; (3) the result of introducing this toxin into animals with the production and nature of antitoxin; and (4) the pathology so far as it affects the prognosis of the treatment. The history divides itself into the prescientific and the scientific ages. The latter period may be said to have commenced with Pasteur, who discovered that protection could be conferred by artificial mitigation of

virus, the honour of which discovery is fully shared by Koch. In 1887 Salmon and Smith proved that not only mitigated bacteria but their products were able to confer protection, Sewall that immunity was possible to cobra poison, and Fodor that the blood was able to destroy bacilli. In 1891 Behring showed that if immunity to tetanus or diphtheria had been conferred upon animals their blood or serum was found not only able to protect other animals against either the bacteria or their soluble specific poisons, but even to cure them if injected subsequently to the virulent matter; and as a mixture of the serum with the toxin *in vitro* was found to be quite innocuous he called the serum "antitoxic," and the unknown substance in the same "antitoxin." In 1891 was published, too, what might be regarded as the first reading-book on this subject—namely, Ehrlich's work on the immunity conferred by feeding on animals against the vegetable poisons ricin and abrin. There are, therefore, two methods known of protecting against infective disease: (1) active immunity (more or less permanent) by the Pasteur method of introducing mitigated virus, with consequent slight illness, recovery, and protection against a virulent virus; (2) passive immunity (temporary only) by the Behring method of introducing mitigated bacteria or their products, with slight illness, recovery, and protection against a virulent culture or toxin, and the transference of this immunity to another animal by the injection of blood or serum taken from the first. In the first method the animal forms its own antitoxin; in the second it is previously formed in another animal and transferred as a therapeutic agent.

Production of the toxin.—Roux and Yersin noticed that a certain supply of oxygen to the bouillon culture increased the virulence of the toxin, which depended chiefly on the alkaliescence of the medium. It being troublesome to pass air through a culture, he (Dr. Hunt) had devised methods of obtaining bouillon surface growth whereby a virulent toxin is quickly attainable by floating powdered cork or little rafts made of cork wrapped round with wool and muslin, which serve as nutrient islands. The bacilli have an inveterate predilection to spread over a surface. The question of the action of oxygen on a pathogenic bacillus is extremely important and interesting. The virulent bacillus renders its culture media acid in twenty-four to forty-eight hours; the toxin is only found in an alkaline culture—and is, as he would suggest later, only soluble in an alkali. The action of the oxygen, in his opinion, was to prevent the acidity altogether, and although its free admission tends to encourage a merely saprophytic or non-pathogenic growth of bacilli, this disadvantage is more than counterbalanced by the maintenance of an alkaline reaction. Dr. Ruffer has found that cultures exposed freely to a supply of air do remain alkaline. Pasteur's classical experiments with yeast cells form an interesting comparison, for he found that surface cultures freely exposed to the air developed a vigorous yeast; yet there was little or no fermentative action, this only taking place when some of the aerobic cultures were afterwards cultivated anaerobically. There is no evidence that this exuberant aerated growth of bacilli has acquired any accession of virulence. In fact, as he (Dr. Hunt) had shown as regards methylene blue and the diphtheria bacillus a constant supply of oxygen, allowing of permanent reduction, is soon fatal to them. A free admittance of oxygen to the culture promotes, therefore, the growth of the bacilli, and leads to an early formation of the toxin, suggesting that the specific poison is some constituent of the bacterial protoplasm. Bacterial specific poisons were at first supposed to be ptomaines, and, although bacteria do many of them produce alkaloidal and other poisons, they are of no importance to the subject under consideration that evening, nor, indeed to any problem of immunity, in that they are not specific. Brieger and Frænkel described a poisonous proteid which they called toxalbumen or proteid poison—an excellent name, as it implied a specific nature. In this country Hankin and Dr. Sidney Martin described the formation of albumose. The choice of the word albumose was unfortunate, for it was necessary to distinguish carefully between the vital chemical processes of the bacteria and of the action of these on their environment. Buchner had succeeded in growing tetanus bacilli in a solution of asparagine and in obtaining by precipitation a most virulent toxin. Experiments showed that toxin was elaborated not in the media but in the protoplasm of the bacteria—a proteid poison being formed in a solution containing no albumen, and that the production of bacterial poison was due to synthetic and not fermentative action. He would define, then, the diphtheria toxin as a specific proteid poison. But it must

¹ Abstract of a paper read before the Pathological Society on Tuesday, March 5th.

be clearly understood that it was not necessarily the proteid which was the poison, but what might perhaps be described as its disposition, its active and specific quality. Such active proteids had been called living proteids, and if this were adopted, then the toxic quality must be defined as the life in the proteid. The proteid having adherent to it this toxic quality is probably the myco-nucleo-albumen described by Gamaleia, a substance soluble only in alkaline media. This toxin, this vital chemical quality of bacterial protoplasm, was concerned in the metabolism of the bacteria, but it also constituted the offensive and defensive weapon of the microbe in its struggle for existence. He would say that in all living cells the protoplasm had this vital function. It was necessary, he thought, to regard the animal organism as a collection of pure cultures of cells of various types living together in harmony and in a state of complete chemical compatibility; as the forms of life fittest to survive in that particular environment the animal body; as resisting the intrusion of foreign substances, whether alive or dead, and with offensive and defensive weapons to maintain their existence, these weapons being chemical ones. In short, applying Darwinism to this question of immunity, we may consider the strife between the cells and the bacteria as a struggle for existence fought out between the synthetic vital processes arrayed on both sides. In animals which had a natural immunity to any infective disease it was obvious that the specific myco-proteid elaborated by the bacteria causing that disease must be either inoffensive or easily destroyed by the cells, and that it would occasion no struggle, no additional chemical activity in the animal cells—i.e., no constitutional or local disturbance. It ought not to be expected that such a body should be modified in any way, but merely excreted or quietly and quickly destroyed. In susceptible animals, on the other hand, there was a struggle, for a foreign proteid was introduced that was offensive and harmful to the animal organism, which organism, if it gained the upper hand, was able to yield us a substance of the highest therapeutic value.

Behring enunciated certain laws which must be obeyed in the process of immunisation. 1. It was absolutely necessary to wait until the animal had completely recovered before a fresh injection was given. 2. That the antitoxic value of the blood reached a maximum coincidently with this return to perfect health and then fell somewhat to a more or less constant level for a time. 3. That any fresh injection of toxin was best made when the antitoxin value was at its highest. 4. That the more susceptible the animal the greater the degree of immunity finally attainable and the more antitoxic the blood. 5. That the immunisation could be carried too far and a condition allied to natural immunity or a poison-proof state brought about. Behring chose the sheep, but their immunisation is a tedious process, and consequently Aronson and Roux chose the horse. Antitoxin was very different in its action to that of any modification of toxin as yet known to us. For it was therapeutic, whereas toxin mitigated by any of the ordinary methods if injected simultaneously with virulent toxin was found to accelerate the fatal termination. Antitoxin was, moreover, perfectly harmless, and the immunity which it conferred was immediate and temporary. Buchner had settled once for all time that direct antitoxic antidotal action of the antitoxin to the toxin neither took place *in vitro* nor in an animal organism, as had been maintained at first by Behring. The two substances—antitoxin and toxin—existed side by side, and no neutralisation occurred. Antitoxin, moreover, acted merely as a stimulus to the chemical processes of the cells, and if these cells be enfeebled in any way and their vitality lowered, the stimulus failed to rouse them and the antitoxin was of no avail. Just as in animals immune to diphtheria a curative substance was found in the blood, so presumably a similar curative substance must be obtainable in the case of all diseases caused by the invasion of the animal organism by any kind of cell foreign to it. A law, therefore, might be laid down that, whenever disease is set up by the invasion of any other form of life into the animal organism, immunity to such disease would confer curative properties on the blood of the immune animal. This curative quality of the serum in immunity to diseases had been designated as antitoxic only in tetanus and diphtheria, and not in the others, because the bacteria concerned in their production did not produce any definite specific poison for the serum to have been erroneously supposed to be able to neutralise. It had not been called

antibiotic because it was far easier to show that such serum possessed no antibiotic power than that so-called antitoxin had no antitoxic power. Hence, antitoxin has not been invented to describe such curative agents. It must not be supposed, however, that any possible increase of the natural germicidal power in the blood of the immune animal was denied, but it was only maintained that the substance here designated antitoxin had no antibiotic qualities in itself, and, as Buchner had pointed out, the serum of an animal might be deprived of its antibiotic or bactericidal quality by heat, and yet could retain its specific curative quality. In order to prove that antitoxic treatment was in reality a rapid process of immunisation it was only necessary to compare the action of these antitoxins with diphtheria antitoxin. (Reference was here made to Pfeiffer's experiments on the blood of animals immune from cholera.) The treatment of guinea-pigs with curative serum in experimental cholera injection might be defined as being merely a rapid immunisation method, so rapid as to be practically instantaneous, and there was no reason to doubt but that the action of antitoxin in diphtheria was precisely similar. The best way, therefore, to express the method and meaning of this process of protection was by calling these protective and curative qualities of the blood of immune animals specific immunising or curative agents.

Attention might now be drawn to the rapidity of the immunisation in diphtheria. In an ordinary poisoned wound of the finger the absorption of the poison could be traced along the lymphatic system. In simultaneous injection of diphtheria toxin and antitoxin the mixed solution must pass through the lymphatic glands, and in the presence of the antitoxin the cells were able to deprive the toxin of its injurious character, and, therefore, no illness resulted, and there might be no local reaction—in other words, a condition of immediate immunity would seem to be conferred on the tissues in which the injection was made. Buchner would seem at one time to have thought that antitoxin might be obtained directly from the bacterial protoplasm, but it must be considered, he (Dr Hunt) thought, to be either a direct or indirect product of the animal cells, either as a secretion or as an excretion. Buchner had given a valuable comparison between the bactericidal substance present in serum—namely, alexin, which was a direct product of the animal cells and the so-called antitoxin. Alexin was able to destroy bacilli, was very unstable, and varied with the species. Antitoxin, on the other hand, had no bactericidal action, could withstand a temperature of 70° to 80° C., was unaffected by sunlight or putrefaction, and never varied with the species of animal, but always with the species of bacteria through whose agency it was formed. Tetanus antitoxin cured tetanus, but not diphtheria, and *vice versa*, which was strong proof that these specific curative agents found in the blood of immune animals could not be direct products of the cells. Further experiments of Pfeiffer were adduced to show that the specific nature of the curative agents militated strongly against the assumption that antitoxin was a direct product of the cells. Moreover, natural immunity was not transferable, and it was impossible to bestow bactericidal power on the blood of one animal by the introduction of an efficacious alexin from that of another. A well-recognised direct secretion of cells was therefore not transferable. Antitoxic treatment of diphtheria was the successful transference of some curative agent and this distinction between alexin and antitoxin suggested that antitoxin was some foreign matter circulating in the blood of the immune animal. He defined antitoxin and the specific curative agents found in the blood of animals immune to infective diseases as being the specific proteids of the bacteria to which immunity had been attained, modified and digested by the cells, and that whatever their chemical nature was they must be considered as derivatives from such myco-proteids, still possessing some degree of their specific nature, but with a wholly beneficent character. To regard specific curative agents as being of this nature was to find an explanation of many otherwise most puzzling facts. If the conclusions arrived at were correct it should follow that if a series of animals was taken of all degrees of susceptibility, from one possessing a natural immunity up to an animal of the most extreme susceptibility, the further removed the animal was from the condition of natural immunity the more antitoxic the serum should prove; for in the very susceptible animal no destruction but only the requisite beneficent mitigation of the poison would take place. This was one of Behring's laws. One observation that militates against this conception of

antitoxin had been reserved because the answer to it afforded a clue to the way in which it was formed. Roux discovered that if a highly immunised horse was bled, and then subsequently bled without any intermediate injection of toxin, the second bleeding yielded serum with an antitoxic value equal to that yielded by the first bleeding. He (Dr. Hunt) thought the explanation of this was to be found in the phenomenon of cumulative poisoning (as for example strychnine), and cited a paper by Metchnikoff giving the results of experiments carried out at Dorpat in support of this. The cells of the horse become accustomed to the toxin, they begin to take it up and to slowly excrete it in the form at present known as antitoxin; but this process was a constant one, and much toxin was kept stored up in the cells, so that even if no fresh introduction of toxin was made the blood might yield antitoxin for a considerable time. Finally, antitoxin had certain physical similarities to the toxin which produced it, both being precipitated by entanglement, and both soluble only in an alkaline solution.

If antitoxin was merely toxin altered and excreted by the cells, how is its action as an excito-cellular stimulus to be explained? Buchner had shown that the injection of any proteid matter, foreign to an animal organism, increased the anti-biotic power of the blood, and Rumpf obtained distinct therapeutic results in typhoid fever by the injection of the dead bacilli of blue pus. Klein also found many dead bacteria protective against cholera. He suggested as an explanation that the specific myco-proteids had a quality or disposition hostile or injurious to animal cells. This quality might consist of some particular molecular arrangement or vibration. If the cells succeeded in conquering, in digesting, this proteid poison, they would effect this by causing an alteration of such molecular arrangement. This altered arrangement being the result of a cellular effort of a particular kind, and possibly bearing the mark of that effort stamped upon it, it might be conceived that whenever this altered substance was brought into contact with cells similar to those which had bestowed the fresh molecular arrangement upon it, a cellular effort identical with that originally excited would be instantly induced.

Dr. Hunt concluded by a reference to the pathology of diphtheria, and stated that the essential factor in prognosis is the amount of damage already done before treatment is commenced. He had found an extremely early fatty degeneration of muscle structure, and in particular of the muscles having most work to do (the heart and respiratory muscles), in guinea-pigs infected with diphtheria. The early appearance of this degeneration in experimental diphtheria was very important to the prognosis of antitoxin treatment, and explained how the best results were obtained by its early exhibition and how a larger dose may be necessary, if given later, to effect the necessary excito-cellular stimulus.

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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AND CHILDREN, AND TO THE NEW HOSPITAL FOR WOMEN, AND
THE GROSVENOR HOSPITAL FOR WOMEN.

(Continued from p. 338.)

CASE 33.—A woman aged thirty years, single, was placed under my care by Mr. Malcolm Morris. The family history was a bad one; her father died from phthisis; her mother was alive, but sickly; two sisters were living, one sickly; all the other children, six in number, died young. The patient had been strong and healthy. Five years ago she began to suffer with pain over the left kidney, and had ever since had an attack about every six months, each successive attack being more severe than the former one. The last six months she had begun to lose health and feel unfit for her work. She never passed blood or matter in the urine. The urine examined on several occasions was normal, except that it contained a good many oxalates and a great deal of renal epithelium. There was on examination very marked tenderness over the left kidney, but I could not define the organ. The right kidney was large, smooth, and somewhat too mobile. Just

before I saw her she had begun to suffer with pain in the right side also, but it never began in the right side only when the pain in the left was severe. It was decided that I should explore the kidney, and I operated on Feb. 19th, 1890, and found a sacculated kidney, the cortex much thinned and pale, the pelvis and calyces much dilated, the ureter healthy, but so small as to be obviously inadequate. I removed the kidney, tying the vessels separately and ligaturing the ureter low down towards the bladder and dropping the stump in. The right kidney was large, smooth, and somewhat globular, but appeared to be quite healthy. The removed kidney weighed 2½ oz. This, again, appears to be a case of gradual destruction of the kidney from inadequate size of the ureter. The patient made an uninterrupted recovery, and I heard quite recently from Mr. Malcolm Morris that she remains in excellent health.

CASE 34.—A married woman aged forty-three years, the mother of thirteen children, the youngest sixteen months old, four of them dead, was placed under my care at the Samaritan Hospital by my friend and then colleague, Dr. Prickett. In the right side of her abdomen, in the situation of the right kidney, was an irregularly oval, smooth, and not very tender tumour about four inches long. She had never had any urinary trouble. The urine examined was of low specific gravity, but otherwise normal. Her father died from stone in the bladder; her mother was alive and healthy, aged seventy-four years; eight brothers and sisters were alive and well, some more had died from acute diseases. One aunt died from mammary cancer. Before the last confinement, twins, she was very large, and then first began to have pain in the right side, and when she got up noticed a lump there. I operated on May 28th, 1890, and found a sarcoma growing from the middle of the convex border of the kidney and not affecting the pelvis at all; it was apparently covered by the capsule of the kidney, and was separable from the kidney tissue, not infiltrating. Unfortunately, through press of work at the time I did not get it examined microscopically. The patient was suffering before the operation from advanced phthisis, and this was, I think, rather accelerated by the operation, and she died at the end of July with a large cavity in the left lung and the right also beginning to break down.

CASE 35.—This patient was a woman aged forty-two years, but looking much older, single, and very delicate. She had never had any serious illness till April, 1889, when she had a severe attack of influenza, which laid her up for several weeks. The pain first appeared during this attack in the right side and hip, and then, while lying in bed, she noticed a considerable swelling in that side. When she got up she suffered much pain in the back on the right side, which was increased by walking. I found a large fluctuating tumour in the right renal region, which I believed to be a hydronephrosis, and advised its removal. The operation was performed on Dec. 1st, 1890, and I could find nothing to account for the hydronephrosis. The ureter appeared quite normal in size and arrangement. I tied the vessels separately and pinned the ureter out in the lower angle of the wound. She made an uninterrupted recovery, and remains well. In 1891 she wrote to me that she was feeling better than she had done for a long time. The pathology of a case of this kind is obscure. I think there must be some abnormality in the ureter which is not recognisable when the abdomen is opened—for example, undue length leading to kink in certain positions of the body. This would, of course, become accentuated when once the pelvis of the kidney began to distend, till at last it might be so bent upon itself that no urine escaped at all. Seeing, as I now do, a large number of renal cases in consultation, I am strongly impressed with the close association of the uterine displacements with renal troubles, and I hope before long to call the attention of the profession more decidedly to this subject. I have long been convinced that many healthy ovaries have been removed for pains which were really renal or ureteral; and I am sure there is another side to the picture, and that in a certain number of cases the whole attention is fixed on the kidney when the heavy displaced uterus is the primary ailment.

CASE 36.—A woman forty-nine years of age, a widow, was placed under my care by my old friend, Sir Joseph Lister. She had ceased to menstruate suddenly seven years earlier, and then began to have hæmaturia with pain in the right

¹ The specimen was sent quite fresh to the Royal College of Surgeons of England, but unfortunately does not appear to have been examined or kept.

kidney. The attacks only came once in twelve or six months, usually without warning and at night. There were blood and clots at the end of the act of micturition, then pain in the back and the loins, with frequent micturition. I found a firm, smooth, elastic, and very mobile tumour in the situation of the right kidney, and advised its immediate removal. There were small pea-like glands in both groins. The operation was performed on Dec. 11th, 1890, and was troublesome on account of the large size of the vessels in the capsule. The renal artery and vein were also greatly enlarged, and the former had a strong thrill in its pulsation. I found one much enlarged gland behind the kidney and removed it, but it was unfortunately lost. The left kidney appeared to be quite healthy. The growth chiefly affected the front and lower end of the kidney, the upper part of the organ being large and normal. The growth was at one point clearly fungating through into a large vein or venous sinus. Small fragments from this projecting portion were like granulation tissue, and corresponded exactly with minute fragments found by Mr. Malcolm in the urine before the operation. The main mass of the tumour was firm and glistening on section, and was made up of bundles of fusiform cells, with spaces in which were masses of small round cells. The patient made a very smooth recovery, but in May, 1893, came to me complaining of pain in the right side of the head and behind the ear, with retching in the early morning, and she died a few months later with distinct evidences of secondary deposit in the brain.

CASE 37.—The patient was a woman aged forty-two years, married; it was a case of removal of a large suppurating kidney with an enormous retro-peritoneal abscess, probably tuberculous. The patient was in a very exhausted condition before the operation, with severe sweating and high temperatures, and immediately after the operation began to have offensive diarrhoea, with dark green sickness. The discharge from the drainage-tube became also quickly offensive, and she died just forty-eight hours after the operation, with a falling temperature of 99.6° F. and a rising and finally uncountable pulse and complete suppression of urine. The patient's condition before operation was such that it was merely a forlorn hope which failed. I think that the surgeon is bound to give the patient the chance if it is desired, though such cases make sad work of statistics, and make it difficult to estimate the true mortality of an operation. Cases 12 and 20 in my table² are of the same class, the latter being curiously like this case, as the patient was a married woman aged forty-two with a large perinephric abscess round a suppurating kidney, also probably of tuberculous origin, and she also died in much the same way in forty-eight hours. As I said then I repeat now, if such cases would only come to the surgeon earlier the results would be very different.

CASE 38.—A married woman aged thirty-eight years, the mother of several children, was sent to me early in 1892 by Mr. Crew of Thrapston. In the previous April she had had a sudden attack of pain in the left loin and had never been quite free from pain since, though it was sometimes more severe than at others. On talking it over with me she remembered a similar attack nearly two years before, which had come on after severe straining at stool, and lasted nearly a week. Menstruation was regular. There was no nausea or sickness and no distinct history of any hæmaturia. Before coming to me she had been seen by Dr. Ralfe, who thought she had renal calculus. The only noteworthy points about the urine were a slight trace of albumen, a few oxalates, and an excess of renal epithelium. The left kidney was markedly tender, especially towards the pelvis. It was decided that I should explore it. I operated on March 16th, 1892. The right kidney was rather large, but healthy; the left had a number of tense cysts about the size of marbles projecting from its lower end, and in its pelvis a small, hard body, which I at first thought was a stone, but afterwards found to be a similar cyst projecting into the pelvis. It was decided to remove the kidney, and during enucleation a vessel was torn and slipped back into the retro-peritoneal cellular tissue, and a large thrombus formed so rapidly that I was obliged to tie the renal vessels and ureter *en masse* and remove the kidney. I passed a rubber tube out through the loin, and there was a good deal of dark fluid oozing from it for the first forty-eight hours. She made a very

smooth recovery, but in October, 1893, she came to see me complaining of pain over the left iliac crest, with occasional throbbing exacerbations, accompanied by pus in the urine. On making a careful bimanual examination I could distinctly detect the remains of the ureter swollen and tender, and I have no doubt that it has suppurated, a condition I have before noted when I have not been able to bring the cut end up into my abdominal incision. The kidney, after removal, was found to contain a considerable number of cysts at its lower part varying in size from a large marble to a small pea, and so very tense and hard that one could easily understand that they were a constant source of pain, and that this would be likely to be increased by anything like severe straining at stool. The small cyst projecting into the pelvis was the only one above the lower third of the kidney, the rest of the organ being healthy. This case adds another pathological condition of the kidney difficult or impossible to differentiate from calculus without exploration.

CASE 39.—On March 16th, 1891, I explored the kidney of a married woman, a patient of Mr. Ray of Dulwich. She had long suffered with abdominal pains in various situations, and before I saw her Dr. John Williams had removed her ovaries, and Mr. Durham had operated for a curious warty condition of the vaginal mucous membrane. When I first saw her at Mr. Ray's request I found her very ill in bed, with high temperature, rapid pulse, much emaciation, and constant pain over the left kidney, with occasional severe exacerbations down the ureter, and she was passing the most horribly offensive urine I have ever seen, loaded with blood and pus. The warty condition of the vagina had also returned and there were occasional hæmorrhages from it. I came to the conclusion that she was suffering from pyelitis, and that it was probably from calculus, and that the stone was very likely in the ureter. The latter condition was suggested by the fact that while passing the horribly offensive and bloody urine she would suddenly pass a specimen or two quite clear and acid. It was, therefore, decided that I should explore the abdomen. I found two minute stones embedded in the ureter rather more than half-way down; they were both quite small and very angular, the lower one being the larger one, and this probably accounted for the long stick they had made. They were quite immovable, and as it would obviously be extremely dangerous to open the ureter for their removal with the knowledge of the fetid material penned up behind in the kidney, and the husband was not prepared to assent to the removal of the kidney, I closed my incision, the hope being that they might still gradually find their way into the bladder. We waited a little over a year, and her condition was then so extremely grave that it was decided that I should remove the kidney, leaving the stones in the ureter to take care of themselves, as in Case 19, already recorded, in which the stone in the ureter never gave any serious trouble after removal of the kidney. On proceeding to operate on March 31st, 1892, I found that the stones had moved down fully an inch, and that, instead of being close together, there was now a slight space between them. The operation was prolonged by the separation of a good deal of omentum and a coil of small intestine which had adhered to my former incision. The anæsthetic was also very badly taken, the patient being several times in great danger; special care was also necessary in enucleating the kidney in view of its foul contents. This was accomplished satisfactorily, and the vessels ligatured and divided apart from the ureter; and I was then able to extract the kidney from the abdomen, attached only by the ureter, the division of the latter being made altogether outside the abdomen. I carefully cleaned the opened end with a strong solution of corrosive sublimate, and then pinned it out through a small hole in the skin of the loin. When I was sponging out the peritoneum I found a coil of gut firmly adherent to the under-surface of Dr. John Williams' colporrhomy incision and thought it advisable to free it. This was only accomplished by long and careful dissection, and the patient was on the operating table two hours and a quarter. She made a good recovery, and, as I had hoped, the warty condition of the vagina rapidly subsided when it ceased to be irritated by the foul urine. There was such a mass of hard, cracked, and bleeding warty tissue on the anterior vaginal wall near the urethra that it might well have been thought to be malignant disease. The after-history of this case has not been so satisfactory as I could have wished; there have been periods of good health, but from time to time suppuration

² Transactions of the Royal Medical and Chirurgical Society, vol. lxxii.

evidently occurs in the remains of the ureter above the calculi, and when the pus is discharged into the bladder a condition of things is produced almost as bad as when the kidney was still in work.

THE PRESYSTOLIC APEX MURMUR OF AORTIC REGURGITATION: WITH NOTES OF A WELL-MARKED EXAMPLE.

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A LOW-PITCHED presystolic murmur may occasionally be heard over a small area immediately around the impulse in cases of aortic regurgitation. The high-pitched, blowing, diastolic murmur is possibly audible from the base to the apex and even outwards into the axilla, but just at the point of the heart's impulse a rumbling sound takes its place. Such a low-pitched sound will probably be made to disappear by slight pressure of the stethoscope, and may thus be overlooked. Cases, however, have been recorded by Austin Flint, Gaiteras, Gairdner, Osler, Maguire, Lees, and others in which a more or less well-marked presystolic apex murmur was present where aortic valve disease was the only heart lesion. The following case is an example of that curious occurrence of the murmur. In this instance the presystolic bruit was not low-pitched and rumbling, but of that loud, rolling character that reminds one of the sound produced by a flapping sail as it is filled by a puff of wind. Well marked though the murmur was, the mitral orifice proved to be of natural size.

CASE 1.—A man thirty-two years of age was admitted into the Bristol General Hospital on Aug. 28th, 1894, under the care of Dr. George Parker, who has kindly given me permission to publish the case. The patient was a thin, wiry, rather short man. He was markedly cyanosed, and although there was no orthopnoea he was in great distress. He generally lay on the right side with his head resting upon his right forearm, but quickly rose to the sitting posture at the onset of a frequent short cough. There was slight oedema of the legs, but no swelling of the abdomen. The history was interesting, but need not be given here; it may, however, be mentioned that he apparently had not had rheumatism, and there was no evidence of syphilis. The heart's impulse was in the fifth space in the nipple line, where it was accompanied by a distinct presystolic thrill. The cardiac dulness was very slightly increased on the left, but was well marked at the fourth and fifth spaces to the right of the sternum, extending about two inches outwards in the latter space. There was a loud presystolic apex murmur of rolling character, which increased in intensity as it approached an abrupt termination. Although, however, the termination was abrupt and loud the first sound was not distinct, and the notes state: "There is nothing that can be called a first sound; what appears to be the first sound has a broken character." The area over which the murmur was well marked was small and situated immediately around the impulse, but a duller rolling sound was heard more widely. In addition to this murmur a *bruit de galop* was heard in a somewhat unusual position below and outside the impulse. Three separate sounds were there distinctly audible. There was no systolic murmur at the impulse, but between that point and the sternum a high-pitched systolic bruit became audible, and was heard from the fifth to the second right and left spaces. A diastolic murmur of high-pitched blowing character was audible down the left of the sternum. Behind the sternum another murmur, loud and half-squeaking, half musical, was sometimes heard. This the patient said that he had noticed. The pulse was regular, 100 small, but aortic in character (see Chart). The patient steadily grew worse and died on Sept. 24th. Nothing fresh of importance developed except moderate effusion into the right pleura, which was twice aspirated. On the day of death it was noticed that a systolic murmur was audible at the impulse, and that the triple sound formerly heard outside the apex had disappeared.

Necropsy.—At the post-mortem examination the situation of the apex was found to be at the sixth rib

in the nipple line, and the right auricle extended three inches to the right of the sternum. The pericardium was healthy. The heart was enlarged and weighed twenty-two and a half ounces, the enlargement being mainly in the left ventricle, the wall of which measured from three-quarters to seven-eighths of an inch in diameter. There was comparatively little dilatation. The mitral valves were perfectly healthy, and the orifice of normal size. It measured four inches. The tricuspid valves were also healthy. The orifice measured four inches and a half. The main feature of interest was in the aorta. Immediately above the valves the vessel was surrounded by a raised area varying in breadth from three-quarters to one inch and a half. The upper border was serpiginous and the surface irregular and pouched. The post-mortem examination did not take place until forty-four hours after death, and the thickened area was deeply blood-stained, but seen earlier it would no doubt



Pulse tracing.

have presented the grey appearance of the aortitis generally attributed to syphilis. The aortic valves were slightly thickened, but only one, the right posterior, was deformed, and that was retroverted. The endocardium over the septum ventriculorum was greatly thickened where the regurgitant stream had impinged. The orifices of the coronary arteries were not obstructed and the vessels themselves were quite healthy. The heart muscle looked normal and the portion microscopically examined showed no pathological changes. Microscopic sections of the affected aorta gave evidence of active disease. There was fibroid thickening of the greater part of the intima and media, but groups of leucocytes were scattered through the outer half of the vessel and through its sheath.

Remarks.—In this case a well-marked presystolic murmur and a presystolic thrill existed in association with incompetence of the aortic valves, but with a perfectly normal mitral orifice. It is now well known that the physical signs of mitral stenosis may occasionally be present in cases of disease of the aortic orifice; and in examining the records of a large number of cases of death from various forms of heart lesion at Guy's Hospital I discovered several more or less well-marked instances of a presystolic apex murmur where the aortic orifice alone was affected. The following single example may be briefly referred to by kind permission of Dr. Hale White.

CASE 2.—A man forty-five years of age was admitted into Guy's Hospital under the care of Dr. Hale White in 1892. The heart's impulse was in the sixth space, three inches outside the nipple line. There was a presystolic thrill at the apex, and the notes state: "There is a harsh presystolic murmur at the point of impulse in the sixth space. At the base there is a to-and-fro murmur." The pulse was "solashing," being 92 to the minute.

Necropsy.—At the post-mortem examination the mitral orifice was found to measure four inches and a half, and the valves were quite normal. The aortic valves were also quite healthy; but there was pouching of the sinuses of Valsalva, with dilatation of the first part of the aorta, which led to regurgitation through the aortic orifice. There was a thickened patch of endocardium on the septum ventriculorum where the regurgitant stream had impinged. Dr. E. W. Goodall, then medical registrar, adds a note at the end of the clinical report. He says: "As regards the presystolic thrill and bruit, they were marked, and mitral stenosis was diagnosed as existing. The thrill and bruit may perhaps be accounted for by Austin Flint's hypothesis."

Remarks.—There is one point of morbid anatomy I should like to draw attention to in this case and in the one that precedes it—that is, the situation of thickened endocardium upon the septum ventriculorum showing the point of impact of the regurgitant stream. This is of some interest since it negatives the explanation Dr. Sansom has suggested for the presystolic murmur of aortic regurgitation. He has thought it probable that the regurgitant stream, impinging upon the anterior mitral flap, may set up vibrations that lead to the production of the presystolic sound.

These two cases show that the regurgitant stream need not be directed upon the valve, and one other case that may be briefly noticed seems to show that a presystolic murmur may exist in association with aortic valve disease without any regurgitation being present.

CASE 3.—A man aged forty-seven years was twice admitted to Guy's Hospital under the care of Dr. Pavy in 1879, and on both occasions a presystolic apex murmur was noted by different clinical clerks. The medical registrar also heads the report: "Well-marked presystolic bruit." At the post-mortem examination, however, the mitral orifice was found to admit four fingers. The aortic valves were adherent half way up their edges, but were considered by Dr. Goodhart to have been competent. Allowing Dr. Goodhart's conclusion to be correct, it is obvious that not only need the regurgitant stream not impinge upon the anterior flap of the mitral valve, but that no regurgitant stream need be present for the production of a presystolic apex murmur.

This leads us to a form of presystolic murmur in which I am somewhat interested, a murmur occurring in dilatation of the heart in which neither mitral stenosis nor aortic disease is present, but the most common lesion is adherent pericardium. A paper upon this subject was read by me at the last meeting of the British Medical Association. A copy of this paper sent for abstract to a foreign journal fell into the hands of the conductors of the *Medical Press and Circular*, and was published by them without my knowledge in the number for Oct. 10th, 1894. That being the case, I must refer any interested reader to that periodical for detailed information. Brief notes of twelve cases of diastolic or presystolic apex murmur occurring without mitral stenosis or disease of the aortic valves are given. Ten of them are from the Guy's Hospital records. Of the twelve cases, in eight the pericardium was universally adherent, and in only two the pericardium was healthy. In five other cases of general adhesion of the pericardium a presystolic apex murmur was heard, but they have been excluded because the pathologist thought the aortic valves probably incompetent. The existence of a presystolic murmur in the above cases was noted not only by the clinical clerks but also in the majority of instances by the physician or medical registrar. Thus, Dr. Goodhart adds marginal notes in two instances. In one, a girl aged eleven years in whom the mitral orifice was found to measure four inches, he describes "a distinct presystolic thrill and a rumbling, long, diastolic murmur in the fifth and sixth spaces." In another case, a boy aged nine years, where the orifice measured four inches and a half, Dr. Goodhart mentions "a short, roaring, diastolic sound," and calls it "a diastolic mitral." Dr. Frederick Taylor also noted a large diastolic thrill and a diastolic rumbling sound where the mitral orifice was perfectly normal. Dr. Pye-Smith and Dr. Hale White both diagnosed mitral stenosis incorrectly from the presence of a presystolic murmur, and Dr. Newton Pitt also noted a presystolic apex murmur where the mitral orifice measured four inches and seven-eighths.

In all these cases there was adhesion of the pericardium. It is therefore evident that there are two entirely different pathological conditions that will give signs simulating those of mitral stenosis—namely, disease of the aortic orifice and adherent pericardium. Such being the case, it is reasonable to conclude that some condition common to both must be concerned in the production of the murmur. The most obvious feature is dilatation of the left ventricle, and it may be supposed that the mitral orifice is small compared with the size of that cavity and thus produces a virtual stenosis. The large size of the orifice, however, in some of the cases of adherent pericardium excludes the possibility of such an explanation, and curiously enough it was in those forms of heart disease in which a virtual stenosis probably exists that, with one exception, I failed to find instances of a presystolic apex murmur having been noted. I refer to cardiac dilatation due to chronic Bright's disease, and to less definite but probably not infrequent causes such as alcohol and overwork. Since we reject a virtual stenosis as an explanation we must consider what other conditions may be present in a dilated left ventricle. It may have been noticed in the post-mortem room that when a dilated ventricle is present the large anterior flap of the mitral valve may be held taut by columnæ carneæ and chordæ tendinæ that have not fully shared in the dilatation. During life, as the ventricle becomes filled during diastole this state of tension must be present in the large mitral flap, which, held out in the moving blood currents instead of falling against the

septum, may be left free to vibrate. Dr. Stacey Wilson in his interesting lecture upon Dilatation of the Right Side of the Heart gives a similar explanation for the diastolic murmur sometimes heard over the right ventricle.¹ On endeavouring to accept such a view we, however, again meet with difficulty. If such an explanation were correct one would expect a presystolic apex murmur to be common in dilatation of the heart from any cause and especially in those cases of dilated heart in which the mitral valves remain healthy—for example, those consequent upon Bright's disease and other causes affecting the heart muscle. In the Guy's Hospital records for twenty years one instance only, however, was discovered in cases of that nature, and that, curiously enough, was a well-marked example. It was in a man aged forty-six, admitted three times, and on every occasion mitral stenosis was diagnosed. The last admission was under Dr. Pavy in 1879. At the post-mortem examination a large heart was found but no definite cause for hypertrophy discovered. The mitral orifice admitted three fingers. The absence of mitral stenosis struck the medical registrar—I think Dr. Mahomed—who heads the clinical report: "Presystolic bruit heard in this case, but no stenosis found." Although a presystolic murmur was noted in the above case of cardiac dilatation in which neither adherent pericardium nor disease of the aortic orifice existed, we are obliged to admit that it is a remarkable exception, and that there is virtually no evidence to prove that simple dilatation of the heart will give rise to a presystolic murmur. That being the case, we are driven to consider whether there is anything else in common between enlarged hearts due to disease of the aortic orifice and to adherent pericardium. Possibly in both the innervation may be affected. In the pericarditis that precedes adhesion of the pericardium it is difficult to understand how the nerves coursing superficially over the bloodvessels can entirely escape, and in cases where aortic regurgitation is due to aortitis, causing dilatation of the aortic orifice, the nerves passing downward in the sheath of the aorta may possibly be affected, as Lanceraux has long believed. In Case 1, for example, leucocytes scattered through the sheath of the aorta were often aggregated around the nerves, and although it was not evident that the nerves had materially suffered, toxins may have been present and have caused functional disturbance. In cases, however, where the rumbling apex murmur is associated with disease of the aortic valves and not of the aorta we can hardly suppose that any affection of the nerves is present, yet the frequency of cardiac pain suggests that in some obscure way the innervation of the heart is affected or that the heart muscle is functionally disturbed. The first case in which I heard a presystolic murmur that was proved to have been unassociated with mitral stenosis, the cardiac failure was of the nature that seems to me to point to disturbed innervation. In a boy aged nine, without œdema or liver enlargement, there was orthopœa, great distress, and a rapidly acting heart beating with sufficient force to cause visible vibration of the whole body. On recently looking again at the microscopic sections of the heart muscle pathological features previously overlooked were noticed—viz., some proliferation of the endothelial cells of the pericardium and groups of leucocytes in the subserous tissue. In other words, the boy appears to have died in a very early stage of pericarditis. Since there is no evidence of myocarditis we may suppose that death occurred from functional disturbance of the nerves of the heart muscle or by toxins. Allowing that in some cases of presystolic murmur occurring without mitral stenosis there is a deranged nervous mechanism or some unusual alteration in muscular action, the question of the mode of production of the murmur still remains to be explained. Possibly there is a loss of muscular tone and vibrations of the muscle wall are set up by the inrush of blood on contraction of the auricle. But whatever the explanation of the murmur may be the fact remains that mitral stenosis is not the only heart lesion that will give rise to a presystolic murmur.

In closing, reference may be made to a case that Dr. Perry has kindly given me permission to mention. This case presents an additional feature of interest in that it bore resemblance to some cases of mitral stenosis in another particular. Of every four cardiac beats only two were felt at the wrist. The case was a woman aged twenty who was admitted under the care of Dr. Wooldridge

¹ THE LANCET, Sept. 15th, 1894.

in August, 1888. She had been seen by him as an out-patient, when a well-marked presystolic murmur and a soft systolic murmur were present at the apex. After admission, however, the presystolic murmur seems to have disappeared and a diastolic murmur was audible between the nipple and the sternum. In August, 1892 the patient was again admitted under the care of Dr. Perry. Over the mitral area a "rough rumbling presystolic murmur" was then heard, as well as one systolic and more blowing in character. A presystolic thrill was also present. As already mentioned, it was thought that only two pulsations were felt at the wrist to every four cardiac beats, and sphygmographic tracings seemed to support that view. The patient died.

The clinical clerk gives an abstract of the result of the post-mortem examination, after which he somewhat cautiously remarks: "The diagnosis of mitral constriction that was fairly confidently made in the ward was thus proved to be apparently a mistake." The heart was a peculiar one; it was large, weighing eighteen ounces. The apex was formed mainly by the right ventricle, which was greatly hypertrophied, the muscle wall measuring three-quarters of an inch in diameter. The tricuspid orifice measured five inches and the mitral three inches and three quarters. The aortic valves were healthy, but the pulmonary had a few small vegetations upon them. The most curious feature was the marked atheroma of the pulmonary artery, which extended into its small branches. Apparently the hypertrophy and dilatation of the right ventricle were due to obstruction in this vessel.

The case affords fresh evidence of the possibility of the existence of a presystolic murmur apart from mitral stenosis, but apparently does not throw much light upon the production of such a murmur. In all probability the murmur was produced in the right ventricle, and the great thickness of the wall is worthy of note—a feature one would think must have been in some way connected with the production of the abnormal sound. Common though a dilated right ventricle is, a rumbling sound sufficiently loud to attract the attention of most observers is rarely heard in association with such dilatation. A previous suggestion has, however, been made—namely, that disturbed innervation enters into the etiology of these anomalous murmurs. Possibly the curious and extensive atheroma present in the pulmonary artery in this case followed an arteritis that had affected all the coats of the vessel and its sheath, leading to injury of some nerves of the cardiac plexus.

Since writing the above Dr. Audeoud of Geneva has kindly sent me his paper upon "Le Rétrécissement Mitral Fonctionnel." He has noticed diastolic and presystolic apex murmurs which have disappeared. Dr. Audeoud speaks of a functional stenosis which he considers to be due to temporary spasm of the mitral orifice. The results of necropsies in two cases are given. One of the cases resembles one under Dr. Perry above mentioned. In a man aged sixty-two in whom a diastolic apex murmur had been present nothing was found but a large heart. The mitral orifice admitted three fingers, and the valves were healthy.

NOTE ON "THE SURGICAL SIGNIFICANCE OF SMALL CALIBRE RIFLES."

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THREE very valuable and interesting articles on the above subject have recently appeared in the *United Service Gazette*.¹ They are based on a paper by Lieutenant H. R. Stiles, Assistant Surgeon, United States Army, which appeared recently in the journal of the Military Service Institution, New York, and presumably the views put forward in them are those held by that officer.

In the first article Lieutenant Stiles' opinion of the cause of the occurrence of those frightfully lacerated and destructive injuries produced by rifle bullets at short ranges, to which the term "explosive effects" is commonly applied, is stated. He considers that they are to be explained by what has been called by Continental surgeons the "hydraulic theory." Upholders of this theory of the production of these

extensive injuries look upon a limb or a part of the body as a sealed vessel containing liquid, or an almost liquid substance, and consider that when it is penetrated by a projectile possessed of high velocity, the liquids of the tissues produce within it similar effects to those seen in a tin can filled with water or a moist substance, and sealed, under like circumstances. In the latter case the bullet produces, besides the entrance and exit holes, numerous ruptures in the sides and in the top and bottom of the vessel quite unconnected with the actual perforations due to the bullet itself. The edges of these rents in the metal are turned outwards, and it is evident that they are the result of some powerful agency acting from within other than direct impact of the bullet. Here, no doubt, the "hydraulic theory" is sufficient to account for what is found; the enormous additional pressure suddenly exerted by its fluid contents in all directions on the inner surfaces of the closed vessel causes ruptures to occur at the points of least resistance, and this pressure expends itself in all directions. Naturally, therefore, it is found that ruptures are as likely to occur on the entrance side as on any other, whereas "explosive effects" on living tissues are almost confined to the exit side of the part struck. To account for these injuries by the aid of this "theory" is to overlook the simpler explanation and to adopt the more complex one. If the sudden increase of pressure on the liquids of the part penetrated by the bullet were the cause of the great disorganisation found in these cases it should be expected that the destruction would be most marked up and down the limb—that is, on either side of the direction of the bullet track; but quite different conditions are always found. "Explosive effects" are very seldom seen except where bone is traversed by the bullet. Delorme states that they are very exceptional where soft parts alone are implicated, and both cases are open to the same explanation. When a rifle bullet produces these so-called "explosive effects" on living tissues the track it makes is somewhat funnel-shaped, and that portion of its course from the aperture of entrance to the near side of the bone represents the tube of the funnel and from that point to the exit side represents the expanded portion of the funnel. In its passage through the soft parts, where the resistance it meets with is but slight, it makes a track apparently of less diameter than its own; but from the point at which the bone is fractured, and where real opposition is first met with, splinters and fragments of the harder substance are driven forwards with enormous energy acquired from the projectile, and proportional to the amount which the latter has lost, and these, as well as the particles of the soft tissues and even of the fluids themselves, act as secondary missiles on all the parts in their immediate vicinity, causing destruction in ever increasing severity until the exit side is reached, where it is greatest. Fragments of bone are driven violently forwards, and escape at the exit wound or through the other rents in the skin made by their passage; muscles and tendons, nerves and vessels protrude from the exit wound, which itself may be almost of any dimensions, whilst the seat of fracture is quite cleared of fragments, showing considerable loss of substance between the broken ends. Splinters are also often found embedded in the muscles and other soft tissues at some considerable distance. The destructive effects of the bullet are seen to have been expended in a direction mostly corresponding with its forward motion, not upwards and downwards, and on the entrance as well as on the exit side, as would have been the case had they been due to hydraulic pressure, and as is seen to occur in the experiment on the tin can filled with water. In a word, the so-called "explosive effects" seen in rifle-bullet wounds produced at short ranges are due directly to the projectile and indirectly to the action of the particles of the tissues themselves (bones, soft parts, and liquids), which are driven forwards with great velocity, and possessed, therefore, of great energy and destructive power. This view is held by Sir Thomas Longmore.² In like manner, Delorme states that too much importance has for many years been attached to the hydraulic theory in this connexion; it does account, he says, for extensive injuries in the hollow viscera (bladder, stomach, intestine, heart); here it is indisputable: "but in the case of solid organs filled with liquids (brain, spleen, liver, kidneys) it is not the sole cause, because, for these latter, it is necessary to have great regard for the effect of the solid particles projected forwards. For the other soft tissues it has no importance whatever."³ Paul Bruns has directed his attention

¹ Dec. 29th, 1894, and Jan. 5th and 12th, 1895.

² Gunshot Injuries, p. 127.

³ Chirurgie de Guerre, vol. ii., p. 996.

to this matter and has made numerous experiments. He also, while upholding the "theory" to a great extent, makes the very similar remark that "until lately too much importance has been given to it." One of Bruns' conclusions is that "the destructive effects of hydraulic pressure on the human tissues are greater as the walls surrounding them are stronger." In cases of head injury by rifle bullets it is probable that the "theory" is sufficient to explain the numerous fractures found. When a bullet perforates the cranium the bony sutures are found to have been burst apart and fissures are seen extending in all directions, many of them being quite unconnected with the apertures of entrance and exit. The brain being practically a liquid, the skull is in this case in a similar condition to that of the experimental tin can, and precisely similar results are produced. This is well shown in a specimen lately presented to the museum of the Army Medical School, Netley, by Surgeon-Colonel R. V. Ash. A Lee-Mitford bullet, accidentally discharged, perforated a soldier's head at four yards range. Numerous and extended fissures, the great majority of which were not connected with either aperture, traversed the calvarium in all directions, and the sutures were separated. In this class of case the "hydraulic theory" is no doubt the correct explanation of the violent bursting apart of the bony covering of the almost liquid brain; but in all other cases "explosive effects" are due to the action of the particles of the tissues themselves propelled forwards as secondary missiles. Lieutenant Stiles states that "there must be moisture present to bring about explosive effects." Delorme, on the other hand, shows that this condition is not a necessity, for it is seen when a bullet at the highest rate of velocity is fired into such absolutely dry substances as a block of lead or a book; and Bruns points out that the greater the deformation a bullet is capable of undergoing in its passage through the tissues the more extensive are the explosive effects produced by it. He therefore concludes that as bullets with hard metal envelopes seldom deform against human tissues, so this severe class of injuries will be less often produced by the modern projectile than was the case when only soft leaden ones were used.

In the second article the differences which Lieutenant Stiles has observed in the wounds produced at various ranges by the new rifle about to be introduced into the United States army (one of 0.3 calibre) are detailed. His experience quite agrees with that obtained in this country and on the Continent with very similar weapons, and his record is a valuable addition to our previous knowledge of the subject. He alludes to the curious fact that, whereas the amount of injury produced in bone by small-calibre, hard-mantled bullets steadily decreases as the range increases (and the velocity and energy of the bullets lessen), up to 2000 yards, at distances beyond this range "the new bullet loses a little of its favourable character, and extensive fissuring and comminution again begin to appear." He suggests that the reason of this is that, as at these extreme ranges the bullet is travelling over the most inclined portion of its trajectory—as it is, in fact, falling more nearly perpendicularly—it strikes an object more obliquely and with more of its side, and therefore with a larger area of its surface; and again he says: "The ball has lost the greater part of its progressive velocity at these ranges, whilst its velocity of rotation is as great as ever; a torsional effect is thus produced by the ball, and increased splintering is thus brought about." The first of these two explanations for the unexpected increase of bone injuries at extreme ranges may be accepted as possible and even probable; but as regards the second this cannot be said. There is a direct and constant relation between the motions of translation and of rotation of rifle bullets—as the former is rapid or slow so is the latter. This must be so, for the velocity of rotation depends upon the speed at which the bullet travels up the barrel of the rifle. Both motions steadily decrease as the bullet travels along its course, and both probably cease at about the same time. The unexpended spin of the bullet when it lodges would be far more likely to cause comminution of bone at shorter ranges than at very extreme ones. But there is another explanation which may be considered, one which tends to show a greater probability of bullets striking objects at very long ranges with their sides—that is, with larger surface areas. It has been found that a modern rifle bullet, because of its great length as compared with its weight and diameter, commences to wobble towards the end of its flight, and has a motion comparable with that of a peg-top when its spin is nearly expended—that is, that its long

axis rotates round a point somewhere behind its apex. The effect of this would, of course, be to permit it to strike an object with its side, and therefore with a larger surface of impact. This may possibly be considered as effective in producing an increase of splintering and comminution at long ranges, when the opposite condition might have been naturally expected, had not experience demonstrated its existence.

The "surgical significance" of the new rifle is summed up in the third article. "It [the modern bullet] produces clean-cut, slightly lacerated wounds of soft parts, exerts less explosive action, and splinters and displaces bones less (except at short ranges); its wounds offer the best possible conditions for rapid and perfect healing, being small, clean-cut, and aseptic as a rule, but they are prone to bleed freely and at once." These conclusions are very favourable to the new bullet from the humanitarian point of view, but it is an open question whether or not Lieutenant Stiles' account of the bone injuries produced by it, and detailed in the second article, bears them out. Undoubtedly simple wounds of the soft parts do heal rapidly; but in the others the damage from the extensive fissuring and comminution is most severe, and considerable actual experience will yet be required before we can know the value of Bruns' statement that "the new arm of small calibre is not only the best, but also the most humane, in that it lessens the horrors of war as far as possible." At the same time, it cannot be denied that our earlier conclusions on this subject, derived from experiments on horses made both in this country and in France, did give us exaggerated notions of the effects of small bullets on animal tissues. The extent and severity of a bullet injury are always in direct proportion to the resistance the missile meets with, so long as it has sufficient energy to overcome that resistance. In drawing conclusions from the experiments on horses the far greater strength of their bones over that of human bones was not properly allowed for, and experience has now shown that they were incorrect. Actual wounds on living men and experiments on dead bodies made by Lagarde in America and by others on the continent have proved this. Another class of experiments from which inaccurate ideas were formed was that of firing at human bodies at fixed ranges with reduced charges, the amount of powder in the cartridges being calculated so as to impart to the bullet the velocity it would have at any desired actual distance. M. Demosthen, an army surgeon, has made experiments with the new weapon of the Roumanian Army—a Mannlicher rifle of 6.5 mm. (about 0.26 in.) calibre, the bullet of which is composed of a core of hardened lead covered with a plated steel envelope, firing at human bodies at actual ranges with full service charges, and the results were different from those obtained by the other method. M. Demosthen's report was published and presented to the Paris Academy of Medicine in 1894. It contains much evidence that bone injuries produced by a small bore under the ordinary conditions of its use are more severe than those seen when reduced charges are had recourse to. Demosthen says that the shafts of long bones are fractured with much splintering and comminution, and this at long as well as short ranges, for he found but little difference in this matter between one humerus hit at 1400 metres and another at 100 metres; that the statements of Bruns, Habart, Seydel, and others that long bones may be expected to show clean-cut perforations without actual fracture at such distances as from 1000 to 1200 metres are not correct; that simple tunnelling of even the epiphyses of long bones is exceptional, and that he has never seen it occur at ranges under 600 metres; that in 65 cases of fracture of bones (human) of all sorts, at ranges of from 5 metres to 1400 metres, he has never seen simple perforation without fragmentation and splintering; and, finally that the clean-cut character of wounds in vessels is in favour of severe hæmorrhage even when only small arteries are injured. Demosthen does "not hesitate to admit his difficulty in agreeing with those who are disposed to accord a humane character to the modern projectile." "Wounds of the head, of the chest, of the abdomen, and of the long bones fail to bring into prominence this attribute in connexion with it." Another point, the importance of which must in future be acknowledged, is the impossibility of carrying out the regulations now existing in European armies regarding "first assistance" in the field. Under present arrangements (working so close to the fighting line) the medical personnel would themselves soon be in as great need of help and surgical treatment as those they went out to succour.

Speaking of wounds of the abdomen, Lieutenant Stiles remarks that these will be the most fatal ones produced by the modern bullet. No doubt they will be very fatal ones; but as experiment has shown that the perforations made by it in the intestines are similar to those made in the skin—small, clean-cut, and less in diameter than the bullet itself (about one-third of an inch)—they will on this account be all the more suitable for the only treatment which can offer any hope of success in cases where penetration is found to have occurred—viz., laparotomy with a view to suture of intestinal wounds and of controlling hæmorrhage, which in this situation shows peculiarly little tendency to cease spontaneously. Delorme points out that the minuteness of the intestinal perforations will be favourable to successful suture. Wounds of the lung also may be expected to show better results of treatment. In the late Chilian War, where a small-bore Mannlicher rifle was used, these gave a lower mortality rate than any previously observed. A comparison of statistics of the numbers of killed and wounded in battle when smooth-bore muskets were used with those experienced in later campaigns since rifles were invented might, at first sight, lead one to imagine that the more far-reaching and accurate the military weapons become the fewer will be the number of casualties which occur. The killed, wounded, and missing in the English army after Waterloo amounted to 23 per cent., while in many of the important fights during the war of 1870-71 this ratio came as low as 4 per cent. to 13 per cent. But Lieutenant Stiles rightly remarks on this question that trustworthy statistics of casualties in battle should in these days be based only on the ratios of killed and wounded to the numbers of those actually engaged and under fire. In former days, taking the whole strength of the armies as the basis, the calculation was accurate enough; but latterly this has not been the case, because the forces present have been so large that they were not all engaged, and the percentages of casualties have therefore been apparently smaller. Guessing at the probable numbers of killed and wounded in future wars is mere waste of time, but we may rely on the general truth of the statement that the proportion of casualties amongst those actually engaged will be greatly increased.

The articles in the *United Service Gazette* were probably written by a surgeon, and they would have been much more useful to our profession if they had appeared in a medical journal. They are able contributions to our present knowledge of an interesting subject about which little is known from actual experience. The strictly surgical matter in them is, for the most part, in agreement with the opinions of the best authorities of the day.

CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

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I RECENTLY had an interesting case of hepatic disease which appears to me to have been one of acute yellow atrophy of the liver, although I am sorry to say I could not gain permission to verify my diagnosis by a post-mortem examination. About a month ago the patient consulted me; he was a tall, slimly built man with a slight stoop, and sixty years of age. He presented rather a wasted appearance, his cheeks were hollow and his eyes sunken; he was of a despondent, timid temperament and altogether gave one the impression that he had a somewhat serious affection. He consulted me on account of some diarrhoea, pain after taking food, and flatulence; otherwise he stated he was well. There was no history of hæmatemesis or melæna, although he stated he had vomited some "green matter." Physical examination revealed nothing beyond his lean condition, a flatulent distension of the abdomen, and a slight hepatic enlargement. His pulse was rather slow and feeble, and he seemed generally debilitated. I considered that the above condition was due to dyspeptic troubles and treated him accordingly, and planned a dietary for him. In about five days he told me he was better and that he thought he would go to the seaside for a rest. A week or ten days elapsed, when he sent for me hurriedly one morning. I examined him again thoroughly, and found the liver on this occasion rather less than normal,

and the stomach appeared to be somewhat dilated. His temperature was normal, the pulse 80 and weak, and the abdomen distended, but only with flatus. He complained of slight headache and drowsiness with slight pain in the hepatic region. His bowels were constipated. On the following day he vomited everything that was given to him. There was pain in the hepatic region upon pressure; he was restless and irritable. The temperature was 100.5° F. and his pulse 90. The tongue was dry and furred brown. The vomiting was eased on the following day only by peptonised milk diet; he was still constipated and slightly delirious at night; there was a slight tinge of jaundice. The temperature was 101° and the pulse 110. The stools were of a clay colour, mixed with a little blood. On the next day (the fourth of acute onset) the patient was decidedly weaker. The liver dulness had further diminished; and jaundice was fairly well marked. The temperature was 99.5°; the pulse still rapid, but feebler. He was in a semi-somnolent state and very delirious at night. On one occasion he jumped out of bed and dictated incoherent commands respecting Parliament, local boards, business, &c. A little ascites was now detectable and also some oedema of the legs. The urine contained a small quantity of blood, bile, and leucin and tyrosin. The patient gradually became weaker, refused all food except a little wine and beef-tea, and the last day or two had periods of a comatose state alternating with those of a low muttering delirium; on the morning of the eighth day from the acute onset he was in a comatose condition, with stertorous breathing and abdomen retracted, and died on that day. The liver dulness in the mammary line was about one inch and a half.

The above case seems to me to have been one of acute yellow atrophy of the liver, but there were never any convulsive twitchings or epileptiform convulsions. There were no petechial hæmorrhages under the skin, and the pulse was quick throughout; the jaundice was never so very well marked and there was no history of poisoning by phosphorus or arsenic. He had reasons for mental worry.

Granby-fields, Queensbury.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

DEFICIENT DEVELOPMENT OF AN UPPER EXTREMITY IN CONSEQUENCE OF PRESSURE EXERTED UPON THE AXILLARY VESSELS AND NERVES.

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ASSISTANT SURGEON TO GUY'S HOSPITAL AND THE HOSPITAL
FOR SICK CHILDREN, GREAT ORMOND-STREET.

THE patient, a woman aged twenty-one years, had a number of exostoses about her body. These had apparently ceased to increase in size. Two bony growths were felt projecting from the inner aspect of the upper part of the shaft of each humerus, that on the right side being small and inconspicuous, while the one on the left side was long and prominent, and caused her so much discomfort and limitation of movement that she was desirous of having it removed. She was admitted into Guy's Hospital under my care. The piece of bone was narrow and elongated, measuring about one inch and a half in length. It was so placed that it carried the third part of the axillary vessels with the branches of the brachial plexus forward in advance of the position they normally occupy. Any moderate amount of pressure on the upper aspect of the growth controlled the circulation in the arm and caused a sensation of numbness and pain in it. It seemed that in some positions of the arm enough pressure was exerted upon the vessels and nerves to render the arm and hand cold and numb. This took place frequently when she was asleep. How much of this was due to pressure on the vessels and how much to pressure on the nerves I was unable to decide, but both structures appeared to suffer. Her arms were said to be of equal length up to eight years of age. She first noticed the presence of the exostosis on the left side at twelve years of

age, and since that period it had grown steadily and had caused her progressive pain and discomfort, both locally and by the disturbance of the circulation and innervation of the whole upper extremity. When she was sixteen years of age it was found that the left arm was shorter than the right by about an inch, and that it was also less developed muscularly. At the present time the difference in measurement is more than 1½ in. The measurement of the right arm from the acromion to the external condyle is 10½ in., while on the left side it is 9½ in. From the external condyle to the styloid process of the ulna on the right side there is an interval of at least 8 in., and on the left side about 7½ in. The length of the right ring-finger is 3½ in., and of the left 2½ in. The circumferences of the right arm and forearm are respectively 9½ in. and 8 in., and of the left 9¼ in. and 7½ in. Though the power which could be exerted by the several muscles of the left arm was slighter than that possible on the right side, the deficiency was proportional to their difference in development, and to the fact of the affected arm being the left one. There was no evidence of any paralysis of the part.

St. Thomas's-street, S.E.

SEVERE VOMITING ACCOMPANIED BY TETANY.

BY GEORGE WALTER BARBER, M.R.C.S., L.R.C.P. LOND.,
SURGEON P. AND O. SERVICE,

I AM induced to send this account of the following case after reading in THE LANCET of Oct. 20th Dr. Soltan Fenwick's cases of tetany described by him at the London Clinical Society.

At Aden on Sept. 4th, 1894, a man came to me complaining of neuralgia in the temporal region (right). He had felt unwell during the last few days, and had had diarrhoea for two days, which he ascribed to the excessive heat of the Red Sea. This evening the diarrhoea became severe, with abdominal cramp, but was completely stopped by thirty grains of aromatic powder of chalk. On Sept. 5th the patient began to vomit, and this was accompanied by tetanic spasms lasting from five to ten minutes, affecting the abdominal recti, the upper extremities (the elbow being slightly flexed, the forearm adducted, the hands bent on the wrist, and the fingers flexed and pressed into the palms with the thumbs), and the lower extremities (the foot being extended on the leg and in a position of equino-varus, and the toes being flexed). These paroxysms occurred just before and during the vomiting of a little bile-stained fluid every fifteen minutes, and were attended with free perspiration. The face was cyanosed and the breathing hurried. The heart, lungs, abdominal viscera, optic discs, and patellar reflexes were normal. The urine was diminished and high coloured; there was no albumen or sugar. Effervescing mixtures with morphia and also a large dose of bromide were tried without avail, and nothing was retained on the stomach. On Sept. 6th the paroxysms continued, and the pulse was weak and irregular. Everything by the mouth was stopped, and I gave beef-tea and brandy enemas every four hours, and injected half a grain of morphia in two doses at intervals of two hours. The temperature was 101° F. The abdomen was painful and tender. On Sept. 7th the paroxysms occurred at intervals of an hour and were not so strong. The patient slept a little. The temperature was normal and remained so. A quarter of a grain of morphia was injected. On Sept. 8th the patient still vomited, but the spasms had stopped. The facial appearance and the pulse were better. An enema of soap, twice repeated, was followed by a copious, dark, fetid motion. Twenty grains of sulphonal powder were given to obtain sleep. On Sept. 9th the vomiting and spasms both stopped. A small amount of milk and soda was allowed every two hours. Twenty grains of sulphonal powder were given. After this the patient made an uninterrupted recovery with the exception of a crop of boils. On Sept. 15th he was allowed full diet and given tonics, and on Sept. 23rd he resumed duty. He has never had any symptoms of gastric ulcer and showed no signs of dilatation of the stomach, but had a very similar attack four years ago, lasting eight days, while voyaging between Calcutta and Aden.

Brindisi.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

TWO CASES IN WHICH SMALL SUPPURATED OVARIAN CYSTS WERE EASILY ENUCLEATED AND REMOVED ENTIRE.

(Under the care of Dr. HERMAN.)

AT the present time with ordinary antiseptic precautions the operation of removal of simple ovarian cysts has become practically almost free from risk, but when suppuration has occurred in the cyst the danger from sepsis is much increased. The formation of extensive adhesions greatly interferes, as a rule, with the removal of the tumour, and the operation is thereby rendered exceedingly difficult. In the cases reported below, though suppuration had existed in the cysts for a lengthened period, in the first case probably for many years, it was found possible to shell out the cysts from their surrounding adhesions without rupture. The small size of the cysts may have contributed somewhat to the ease with which they were removed. The final result in each case was extremely satisfactory, and sufficient time has elapsed since the operation to enable us to feel sure that the cure is permanent. For the notes of the first case we are mainly indebted to Dr. H. G. Lys, formerly resident accoucheur.

CASE 1.—The patient was married on July 23rd, 1871, at the age of eighteen. She had had good health until her marriage. For the first six weeks after her marriage she was quite well, but did not menstruate. She then had violent shooting pain in the lower abdomen, which swelled; she vomited, and there was vaginal hæmorrhage lasting three or four weeks. She was then in the London Hospital, at first under one of the general physicians and then under the care of the late Dr. Head. The abdomen got smaller, hæmorrhage and vomiting ceased, and she left the hospital well. The records of this illness have not been preserved. After this she became pregnant, and was delivered of a living child on Jan. 26th, 1873, after an instrumental labour. She got up on the tenth day, but fainted, and had to go to bed again. She was in bed six weeks with what the medical man in attendance called "inflammation and low fever," its chief symptom being pain in the lower abdomen. She did not go out for three months. At the beginning of April, 1874, she was again seized with violent pain in the abdomen, which was tender, and in May she was again in the London Hospital under the care of Dr. Head. Notes were then made to the effect that there was a hard firm mass surrounding the uterus and fixing it, and that there was a profuse discharge from the os uteri, after which the uterus became more movable. The diagnosis then was "pelvic cellulitis." In February, 1876, she came back to the hospital, stating that she had been getting ill for six months, with wasting, pain in the lower abdomen, pain on defecation, and dyspareunia. She was admitted under the care of the late Dr. Palfrey. She went out only a little better, and then became an out-patient under the care of Dr. Herman. On Nov. 13th, 1876, a note was made that there was "a distinct tender mass to the left of the uterus." She attended for many months without much improvement. On Jan. 5th, 1880, she again came to the hospital, stating that in April, 1879, she had had another acute illness, keeping her in bed seven weeks. Since the illness in 1874 she had never menstruated without pain, and had been always in more or less pain. In 1885 she had another acute attack, laying her up for three months; but for this she did not come to the hospital. Soon after this she became a widow. In November, 1888, she fell down on her back, and this was followed by aggravation of her customary pelvic pain, which brought her to the hospital. She was admitted on Nov. 17th. On Nov. 20th it was noted that the uterus was fixed, that there was a hard lump to the left of it, and some thickening to the right. The possibility of cure by operation was now put before the patient by Dr. Herman, but she, thinking of the many years her ailment had lasted,

was unwilling to run any risk for a possible, but not certain, cure. She left the hospital on Dec. 18th, being somewhat better for her stay in it. Early in 1889 a prospect of re-marriage offered itself to her, and this brought her back to the hospital, anxious to have anything done which could put her in health. She was admitted on March 4th, 1889, and on March 8th Dr. Herman opened the abdomen. On passing the fingers down and tracing outwards the left uterine appendages, a piece of tissue was detached and brought up through the wound; it looked like a piece of cyst wall. Passing the fingers down again Dr. Herman was able to detach, lift out of its bed, and bring out a cyst the size of a large walnut. It was very tense and contained pus. There was no hæmorrhage. There was no disease of the Fallopian tubes appreciable by the fingers except thickening of the peritoneum over and around them. The patient recovered without any bad symptoms and went home well on March 27th. In January, 1895, it was noted that the patient had attended at the hospital from time to time since the operation to report her condition. She had been quite well ever since. She had remarried, but had had no sign of pregnancy. She had menstruated regularly and without pain. There was no dyspareunia. She had gained flesh, and her appearance was in striking contrast to her worn and emaciated aspect during the years of illness.

CASE 2.—A woman aged twenty-five was admitted into the London Hospital on April 3rd, 1889. She first menstruated at thirteen; the flow was moderate in quantity and from the beginning attended with pain. Since the age of eighteen the pain had been so bad as to lay her up for a day or two each month. For the last three or four years she had had fainting fits during the day of menstruation on which the pain was at its worst. For the last twelve months she had had pain in the inter-menstrual period as well as during menstruation. She was married at twenty. Dyspareunia had been present from the beginning, and for the last twelve months had been very severe. Six months previously to admission she had had a thick yellow discharge, which began a week after menstruation had ceased and lasted a fortnight, then getting better. Her appetite had been bad for twelve months; there had been nausea and often vomiting. She had lost flesh. She was anæmic, and complained of shortness of breath, pain in the chest, and cold hands and feet. She slept badly, being kept awake by the pain, which for the last five weeks had been continual and worse at night. On examination the vaginal portion of the cervix was found to be quite absent, the os externum being flush with the vaginal wall. The uterus was fixed by induration on each side of it. On the left side there was a distinct lump, extending from the uterus to the pelvic wall. The patient was much wasted. She was kept in bed, and laxatives and counter-irritation were employed; but after twenty-four days of this treatment the pain was not at all better, the lump was not smaller, and the patient's general condition was not improved. Therefore, on April 27th Dr. Herman opened the abdomen. The uterine appendages on both sides were found to be embedded in adhesions. The right ovary and tube were separated and removed. The tube was thickened and studded internally with warty growths. In attempting to free the uterine appendages on the left side a cyst about the size of a hen's egg was separated, being shelled out of its bed without difficulty and without hæmorrhage. It was brought out entire, and when cut open was found to contain thick pus. Nothing else was removed on this side. A drainage-tube was put in (Dr. Herman now thinks that this was unnecessary). The patient recovered without hindrance, except that the track of the drainage-tube continued to discharge for three months, when a ligature came away, after which the sinus healed. On this account she was longer than usual in the hospital, which she left on July 9th. She came back to report herself in April, 1890. She was fat, and had a good colour. She menstruated regularly, and had no pain either during or between menstruations. There was no dyspareunia. The patient remained in perfect health until January, 1892. She then began to suffer from great pain in the abdomen and back and down the left leg. She lost flesh and again became anæmic. She was readmitted on May 13th, 1892. Her aspect and behaviour showed that her pain was severe. The abdomen was tender. The uterus was fixed, and there was a swelling on each side of and behind the uterus. She was kept in bed, and medical treatment was used without any improvement either in the symptoms or general condition until June 7th, when an aspirator needle was put into the part of the

tumour which closest approached the vagina; but no pus was extracted. She still did not improve, and on June 17th Dr. Herman again opened the abdomen. The bowels above the pelvic brim were found to be matted together by adhesions; and on separating these a collection of pus, thought to be in the broad ligament, was opened in front of and to the left of the uterus. This was emptied of pus and a drainage-tube put in. For about a month after this operation the patient improved. There was free discharge from the wound, the pain got better, and the patient gained flesh. Then, as the wound healed, she began again to complain of pain and to lose flesh, and the evening temperature to rise, ranging from 100° to 101.5° F. Cystitis developed, culminating in the passage by the urethra of a slough of the mucous membrane of the bladder on Aug. 18th. On Aug. 30th some pus was passed with the feces. Pain, wasting, and slight fever continued although the cystitis got better, and as there was still a mass behind and on each side of the uterus, and pus from time to time came away with the feces, Dr. Herman on Oct. 18th made a free incision with scissors through the vagina behind the cervix, and then with the fingers broke down the tissues so as to thoroughly open up the broad ligaments. No distinct cavity or large collection of pus was opened into. The cavity made was stuffed with iodoform gauze. This operation was followed by rapid improvement. The temperature afterwards did not exceed 100°. No more pus was passed by the bowel. The pain ceased. The patient gained flesh rapidly, and she was discharged well on Nov. 13th. She last reported herself at the end of 1894. She was then fat, florid, free from all pain, and considered herself as in all respects quite well.

Remarks by Dr. HERMAN.—These two cases are both alike in that in each there was a small suppurated cyst in the ovary, very loosely connected to its bed, and easily shelled out without hæmorrhage. This is an unusual form of ovarian suppuration, and they are the only cases of the kind that I have seen. In such cases as this the simplicity of the operation makes it not more dangerous than the removal of normal ovaries. The first case shows how very chronic suppuration in the ovary may be. There can be little doubt that the recurrent attacks of pelvic inflammation and the persistent pain between them were due to the continued presence during fifteen years of the disease discovered and removed by the operation—viz., an ovarian abscess. It is a gratifying illustration of the progress in our therapeutic power. At the time the patient was in the London Hospital, under Dr. Head and under Dr. Palfrey, chronic suppuration in the uterine appendages had never been either diagnosed with any certainty or cured, and in diagnosing this case as pelvic cellulitis, and treating it by expectant methods alone, these two physicians applied the knowledge of the time; but had our present knowledge been available this patient might have been cured then. It is to be regretted that many lists of operations on inflamed uterine appendages contain so little information as to the after-history of the patients. Ovarian suppuration is due to the entry of microbes: if these have got to the ovary by way of the tubes some may remain in the stumps of the tubes; if through the broad ligaments inflammation-producing matter may remain in them. It is known that in a certain proportion of cases pelvic inflammation recurs after inflamed tubes and ovaries have been removed. For this reason I did not immediately publish the above cases. In the second of them it seems to me probable that the ovarian cyst was infected through the cellular tissue in the broad ligament, and that the subsequent suppuration was a residual abscess. It is in such cases as this, in which the broad ligament is riddled with suppuration, that the Continental practice of removing the uterus (Péan), or the uterus and appendages (Leopold and Landau), seems to have some justification; but it seems to me to be possible, as in this case, to open up by the vagina and drain pelvic suppurated cavities, even when multilocular, without removing either the uterus or the ovaries.

BASINGSTOKE COTTAGE HOSPITAL.

A CASE OF LAPAROTOMY; REMARKS.

(Under the care of Dr. C. F. WEBB.)

WHEN, after the reduction of a hernia, symptoms suggestive of obstruction occur the treatment to be followed presents some difficulties. In the following case the symptoms were very indefinite; they never amounted to those of strangulation, a little nausea and slight distension being

all that could be observed; yet, though the constriction had apparently not yet become sufficient to cause much interference with the circulation in the herniated bowel, at the operation it was felt to be tense, and the peritoneal coat of the intestine had been damaged. The displacement of the testis was an interesting complication. The only operation admissible under the circumstances was a laparotomy, as thereby the bowel could be much more easily got at than by any incision over the site of the hernia.

A man aged forty years was engaged as a waiter on the evening of Oct. 31st, and while in the act of stretching across a table to lift a tray of glasses felt a sudden sharp pain in the left inguinal canal. He put down the tray and placed his hand on the spot, and found that an old hernia which had not protruded for several months had again come down. At once, in great haste, he, to use his own words, "squeezed it all up," which caused him considerable pain and slight faintness. He afterwards felt sick and went home. On arriving at his house the bowels acted freely for the second time that day, and while adjusting his dress he noticed that the left testicle was not in its usual position in the scrotum, nor could he feel it anywhere. He was first seen on Nov. 1st, and complained of bilious vomiting with nausea and some retching, not severe, and took only water. There was no meteorism, no collapse, no suppression of urine, and very trifling pain, with no local tenderness. The inguinal canal, which was large, easily admitted the finger, but no trace of the testicle could be found. On Nov. 2nd there were no fresh symptoms. There was very slight pain occasionally radiating towards the umbilicus. The patient had slept well. The urine was normal and in good quantity. On the 3rd there was very slight distension, no pain, no sickness, and no tenderness. The patient had passed no flatus since the evening of Oct. 31st, but said he felt very well. On the 4th he was free from pain, and slept soundly. The urine was normal, the pulse was good, the tongue was slightly furred, not dry, and there was no distension, and no sickness or nausea. On the 5th there was no sickness, pain, or tenderness, and rather more distension; the urine was normal, the pulse good, the patient was taking iced milk and complained of hunger. On the 6th there was no sickness, pain, or tenderness; the urine was normal and the pulse good, and the patient said he felt very well. On the 7th at 9 A.M. there was considerable nausea, but no vomiting or retching; the patient slept well, urine was passed in quantity, there was no pain, the pulse was good, and there was no tenderness. Dr. Webb here determined to wait no longer, but performed laparotomy. Accordingly, at 10 A.M., chloroform alone being administered and the catheter passed, the abdominal wall was carefully washed and afterwards swabbed with a perchloride of mercury solution (1 in 1000). An incision, commencing just below the umbilicus and carried downwards to the extent of three inches, was made in the mesial line down to the linea alba, all bleeding being arrested by torsion. The linea alba was divided on a director, and the peritoneum in the same manner. On passing into the wound two fingers of the left hand considerable matting of the intestines was found towards the left iliac fossa, and so firm was this that great difficulty was experienced in reaching the fossa. It being found necessary to introduce the whole hand, the wound was enlarged and the hand introduced, which encountered below the internal abdominal ring on the left side a large oviform swelling. On following the bowel towards this swelling it was found that the bowel was continued on into it, and on further examination a tight, tough stricture was found; this was divided, and from eight to ten inches of bowel were gently drawn out. On examining this portion of the bowel at the spot where the stricture had grasped it the peritoneal coat was found to be peeled off to the extent of an inch. A chromicised gut suture was put in to strengthen the bowel. On passing the fingers through the opening that had constricted the bowel the testicle was found below the internal abdominal ring, and was carefully replaced in the ring and gently passed down the inguinal canal to the scrotum. The wound was dressed in the usual way. The bowels acted naturally on the fourth day. The catheter had only to be used on the fifth and sixth days. Delirium was present on the seventh and eighth days. The bowels continuing to act once or twice a day, he made an uninterrupted recovery, and was convalescent on the twentieth day.

Remarks by Dr. WEBB.—This case is peculiar in that so

long a portion of intestine was strictured with so very few bad symptoms, and that the force used in returning the hernia was so great that the bowel was burst through the hernial sac and the testicle pushed clear of the internal abdominal ring at one and the same time. It also illustrates well how useless it is to trust to even favourable symptoms when grave injury of some kind has happened to the bowels, and how important it is to explore as early as possible.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Annual General Meeting.

THE annual general meeting of this society was held on March 1st, the President, Mr. HUTCHINSON, being in the chair.

The report of the council was read. In order to increase the usefulness of the society the following changes in connexion with the method of accepting papers and publishing the Transactions have been adopted:—1. Papers accepted for reading are thereby accepted for publication, either in the Transactions or in the Proceedings, as may be determined by the council. 2. Papers will be printed before being read, and be obtainable (in proof) on application at the society's rooms. 3. Fellows may read their own papers. 4. The Transactions are to be published in three parts (in paper covers) during the year—viz., on Feb. 1st, May 1st, and Aug. 1st—as well as annually (bound as heretofore); and Fellows are free to choose in which form they will receive them. 5. Papers are to be issued separately for sale (by the society only) as early as possible after the issue of the part, at a price to be affixed to each. 6. Some of the ordinary meetings are to be devoted to discussions and demonstrations on special subjects, to be introduced by a short paper or papers by Fellows of the society, or others, at the request of the council.

The alterations in the by-laws rendered necessary by these changes were submitted for confirmation. The council trusted that these changes would be appreciated by the Fellows, and would attract a larger number of communications on subjects of immediate interest from authors who hitherto might have hesitated to present their work to the society in consequence of the lengthened period that had often elapsed between the reading and the publication of papers.

The honorary librarians reported that the library had never before been so largely used. A new supplement to the catalogue had been issued, which contained all the books added to the library during the year 1893, and also some donations of tracts and books which had been received during the building operations, and which it had been impossible to catalogue during that busy time. During the year 526 new books and pamphlets had been added to the library exclusive of the large number of volumes of periodicals. The first volume of the report of the Committee on Climatology and Balneology was in the press, and would shortly be published by Messrs. Macmillan. This volume included the medical climatology of the south coast of England and the Channel Islands and the more important mineral springs and baths of England and Scotland. It was proposed that a second portion of the report should deal with the climatology of the remainder of England and Wales and also of the minor spas.

The honorary treasurers reported that the finances of the society were in an improving and thoroughly satisfactory condition. The whole of the expenses incurred on account of building, altering, and moving into the present premises had now been paid off, with the exception of the small sum of £20, which had been retained as a guarantee for the due fulfilment of a contract. The roll of the society now contained the names of 503 resident Fellows, 279 non-resident Fellows, and 17 honorary Fellows.

The PRESIDENT then delivered his annual address. Alluding first to the late Sir Andrew Clark's scheme for the organisation of an Academy of Medicine, he said that his ambition for the society did not soar so high, and he thought that neither the smaller societies nor the Royal Medical and Chirurgical Society itself would be the gainers by the proposed amalgamation. It was also open to doubt whether it would be wise, as

wished by some, that the society should become a power in the State. He himself thought it would be better to leave questions of medical education and medico-legal problems to such bodies as the Royal Colleges, the General Medical Council, the British Medical Association, and the medical press. While he was glad to congratulate the society on their present position, which was more satisfactory than of old in spite of the greater expenditure, yet it could not be denied that there appeared to be a diminution of interest in the meetings. This was in part due to the springing up of new societies which had cultivated specialist topics and offered a specialist audience. In order to adapt the society to the changing conditions of the times the new regulations detailed above had been framed. Pre-arranged discussions on topics of interest would be held, the exhibition of patients and specimens encouraged, and the detailing of new facts would be hoped for quite as much as the expression of opinion and criticism. Certain topics of great general interest might thus come up which otherwise might not be brought forward in an original paper. Arrangements might possibly be made with sister institutions in other cities by which their members would, when visiting London, have an equal footing with the Fellows of the society. The President then proceeded to allude to the losses the society had sustained by death during the year. Two honorary Fellows had passed away—Hannover and von Helmholtz. Among the six ordinary Fellows were the names of Barnard Holt, an ingenious practical surgeon; of Octavius Sturges, whose works on pneumonia and chorea were classics; and of John Whitaker Hulke, whose varied powers, clear judgment, and uprightness of character caused him to be held in high estimation by his colleagues. The fact that many were taken from us before their full time should cause us to lay to heart the uncertainties by which we were surrounded, and so live our lives without hurry but without loitering, that if death cut short an unfinished career we should leave our wealth of knowledge on record, and thus what we had toiled to gain would not be lost to our heirs. In a literary sense those who had been mentioned had made their wills, and posterity would realise their generous bequests.

The following were elected to serve as officers during the ensuing year:—President: Jonathan Hutchinson, F.R.S. Vice-Presidents: Charles John Hare, M.D., John Harley, M.D., J. Warrington Haward, and John Langton. Honorary Treasurers: William Selby Church, M.D., and John Ashton Bostock, C.B. Honorary Secretaries: John Mitchell Bruce, M.D., and Robert W. Parker. Honorary Librarians: Samuel Jones Gee, M.D., and Rickman J. Godlee, M.S. Members of Council: Francis Charlewood Turner, M.D., Frederick Thomas Roberts, M.D., Frederick Taylor, M.D., Felix Semon, M.D., William Ewart, M.D., John Hammond Morgan, Arthur Edward J. Barker, Reginald Harrison, Frederick Treves, and Thomas FitzPatrick, M.D.

The usual votes of thanks to retiring officers closed the proceedings.

PATHOLOGICAL SOCIETY OF LONDON.

The Pathology of Diphtheria.

AN ordinary meeting of this society was held on March 5th, Dr. PAVY, President, being in the chair.

Dr. BERTRAM HUNT introduced a discussion by his paper on the Pathology of Diphtheria which we print in another place (p. 604).

Dr. HAYWARD had found hydrocele fluid a most useful nutrient medium for cultivating the diphtheria bacillus. He had first been led to adopt it on account of the difficulty in preparing good ox serum tubes free from the discolouration produced by diffused hæmoglobin, and to save the inconvenience of attending slaughter-houses and removing the collected serum, a proceeding which involved much waste of time and energy in the absence of skilled attendants, and when only small quantities were required from time to time. In preparing the fluid it was drawn off into a sterile flask and decanted into tubes, and these were subjected to a temperature of 55° C. for a period of three or four hours on three successive days, the tubes in the interval being kept in the warm chamber at 37° C. This method of fractional sterilisation had been found quite satisfactory. Finally, the tubes were placed on the slant in the hot air incubator and kept at a temperature of 65° or 69° C.; in a short time the fluid coagulated, forming a pale, greenish-yellow,

almost transparent, and sufficiently firm medium. At a higher temperature the albumen was thrown down in white, flaky masses. The diphtheria bacillus grew readily on this solidified hydrocele fluid; small white colonies appeared within twenty-four hours; the maximum growth was attained in three or four days; the colonies were not so large as those grown on serum; the bacilli retained their characteristic form and virulence. The special advantage of hydrocele fluid rested in the fact that it was inimical to the growth of many of the organisms found in diphtheritic membrane, hence the labour of recognising the bacillus and obtaining pure subcultures was rendered easier. *Streptococcus pyogenes* grew on this medium, but *staphylococcus albus* and *aureus* had not been recognised, although growing abundantly on nutrient agar tubes inoculated from the same membrane. Not infrequently pure cultivations had been obtained directly from the membrane. Experiments were quoted to illustrate the relative growth of a mixture of diphtheria bacilli, streptococcus pyogenes, and staphylococcus respectively on hydrocele fluid, serum, and nutrient agar, and comment was made on the infrequency of suppuration after tapping for hydrocele in the days before aseptic surgery. Dr. White had greatly simplified and accelerated the preparation of the hydrocele fluid by a method which he described. (*Vide infra*.) As regarded its use it was claimed: 1. It was easy to obtain and prepare, and formed a clear, firm, solid nutrient medium. 2. The diphtheria bacillus grew readily upon it, and could be recognised within twenty-four hours. 3. It was inimical to the growth of many of the organisms found in diphtheritic membrane, and thus rendered a separation of the bacillus easier. On antitoxic horse serum, obtained by Dr. Klein's permission from the Brown Institute, it was found that the bacillus grew readily if tubes were prepared by Dr. Lorrain Smith's method, which involved sterilisation at a high temperature. If the serum was rendered solid by mixture with 2 per cent. agar, the temperature not being raised above 40° C., the bacillus grew very feebly, no definite colonies appearing in streak cultures within forty-eight hours; but both in the fluid and solidified antitoxic serum it remained active at least for three days (and subcultures were made which grew readily on other media). An experiment was quoted which appeared to show that the antitoxic serum retained its property of protecting guinea-pigs even when the serum had been inoculated with the bacillus and incubated for forty-eight hours. It was suggested from this that the antitoxin when injected in diphtheria could have little or no effect *per se* on the membrane or the bacillus; it must either neutralise directly the chemical products formed or by acting as a stimulus to the natural antagonistic forces at work render the best of all charitable aid in helping the tissues to help themselves. Remarks were also made on cases in which the bacilli had been detected in membrane occurring on the conjunctiva and in the stomach; on the clinical significance of different varieties of the bacillus and its association with other micro-organisms; and on the length of time during which its presence could be detected after disappearance of the membrane.

Dr. C. POWELL WHITE referred to the cultivation of bacillus diphtheriæ on hydrocele fluid. He said that in October last he undertook the bacterioscopic diagnosis of the cases of diphtheria admitted to St. Bartholomew's Hospital. Hearing from Dr. Hayward of the use of hydrocele fluid as a culture medium for the diphtheria bacillus, he, at Dr. Kanthack's suggestion, applied to it the method introduced by Dr. Lorrain Smith for solidifying blood serum, and published by him in 1894.¹ This method consisted in adding to the medium a certain proportion (for ox serum it was 0.1 to 0.15 per cent.) of caustic soda, and afterwards heating the tubes in a sloping position in the autoclave to a temperature of 120° C. for at least twenty minutes. After several trials he found that the amount of caustic soda to be added to the hydrocele fluid was about 0.07 (0.06 to 0.09) per cent. The exact amount must be determined for each specimen by trial tubes containing 10 c.c. each of the fluid. The caustic soda was used in the form of a 10 per cent. solution. The resulting medium was as clear as nutrient gelatine. On this medium the bacillus diphtheriæ grew better than any of the organisms usually associated with it. He had obtained a distinct growth after only seven hours' incubation. Streptococci grew on it, but much more slowly than the diphtheria.

¹ Brit. Med. Jour., June 2nd, 1894.

bacillus. *Staphylococcus aureus* grew very slowly on this medium, and did not produce its yellow pigment. In order to separate the bacilli he inoculated one of these tubes directly from the false membrane. Examination eighteen to twenty hours afterwards revealed the presence of the diphtheria bacillus, often without any associated organisms. The advantages of this hydrocele fluid medium were—(1) it was (in hospital practice) easy to obtain; (2) it was perfectly transparent; and (3) it was especially suited for the separation of the diphtheria bacillus.

Dr. KANTHACK showed a specimen of Diphtheria Bacilli found in the alveoli of the lung in a case of diphtheritic broncho-pneumonia. He remarked on the rarity of finding the diphtheria bacillus so far down; for in the alveoli in these cases streptococci alone were usually found. Another specimen showed the presence of active phagocytosis in a guinea-pig which had been acutely infected with diphtheria. The guinea-pig died within twenty-four hours and nearly every leucocyte was found filled with diphtheria bacilli. This showed that phagocytosis was not the sole explanation of immunisation, though it was a phenomenon of it. If the animal body were able to neutralise the poison generated by the bacilli it would live, notwithstanding the presence of the bacilli themselves. In discussing these questions of immunity it was necessary not to generalise too much; the same process was not true of all diseases. He agreed with Dr. Hunt as to the specificity of the immunising serum. If the bacillus prodigiosus was itself injected into the peritoneal cavity immunisation not only against that bacillus but also against other organisms would be conferred. But if, on the other hand, instead of the bacillus itself the serum of the immune animal was injected, then immunity would be conferred only against the bacillus prodigiosus alone. From this it followed that it was not right to argue in the reverse direction. For instance, we could not say that because the serum of a patient recovered from cholera would immunise against a vibrio of cholera that therefore that vibrio was the cause of the disease. The serum of certain naturally immune animals could confer immunity on others. Metschnikoff had shown that it was easy to immunise against a living bacillus, but it was often difficult to immunise against its toxine: it was certainly not easy to immunise an animal against pure tetanus toxine, and it was extremely difficult to immunise an animal against pure cobra poison. From the animals inoculated with cobra poison he had not yet succeeded in obtaining an immunising serum, though it was stated that this had been obtained by others. The albumoses were first investigated in England by Hankin; the name tox-albumen was not a good one, because the albuminous or proteid matter could be removed from the poison—they should rather be called toxines or tox-albuminoids.

The debate was then adjourned till the next regular meeting of the society on March 19th.

CLINICAL SOCIETY OF LONDON.

Unusual Case of Diphtheria in the Air Passages.—Case of Malformation of Heart, with Hæmophilia.—Case of Gangrenous Umbilical Hernia; Successful Resection with use of Murphy's Button.—Hysterical Contracture of Legs.

AN ordinary meeting of this society was held on March 1st, Mr. LANGTON, Acting President, being in the chair.

Mr. LANGTON said that his presence in the chair indicated the loss the society had sustained by the death of Mr. Hulke, who was an original member. The late President, strong in individual personality and convictions, was a many-sided man and an able and successful worker in many branches of science. He was singularly wanting in self-interest. The profession had lost a cultivated and learned surgeon, the Clinical Society an able and wise President, science an ardent and enthusiastic worker, and the world a Christian gentleman actuated in all things by a high standard of duty. Mr. Langton added that he had been nominated by the council as senior surgical Vice-President to act for the remainder of Mr. Hulke's term of office.

Sir DYCE DUCKWORTH, in moving the subjoined resolution, recorded his own sense of the loss the profession had sustained by Mr. Hulke's death. The late President showed modesty combined with fearlessness; he had strong opinions, and had the courage of them when occasion required. The resolution, seconded by Dr. GLOVER, and carried *nem. con.*,

was as follows:—"This meeting desires to record its sense of the great loss the Clinical Society of London has sustained by the death of its President, John Whitaker Hulke, F.R.S. One of its original members and serving on its first council, he helped to start the society on its successful course, and from its formation to the present time Mr. Hulke has taken a leading part in its scientific work. His fourteen papers in the Society's Transactions are of lasting value, and they testify to his keen critical faculty, great learning, and wide experience; while his many interventions in the discussions of the papers of others never failed to add greatly to the value and interest of the meetings. As President of the society he was uniformly courteous, sagacious, and unfailing in the prompt and punctual discharge of all his duties. In him the society has lost not only its President, but one of its chief supporters and most brilliant ornaments."

Dr. GOODALL read a paper on an unusual case of Diphtheria in the Air Passages. The patient was a boy aged four, who was admitted into the Eastern Hospital with faucial diphtheria. On the ninth day after admission he expectorated a cast of the trachea, and during the next week he brought up several casts of the trachea or bronchi and several shreds of membrane. There was albuminuria lasting for about a month. At the end of three weeks from admission paralysis of the palate, ciliary muscles, and lower extremities supervened. The boy recovered and left the hospital quite well at the end of another seven weeks. The point of interest in the case was that, in spite of the extensive formation of membrane in the trachea and large bronchi, there were never signs of laryngeal obstruction. Only during the expulsion of the largest casts was there dyspnoea. It was reasonable to suppose that in this case the larynx was unaffected. Three somewhat similar cases had come under his observation—a boy aged four, a girl aged four, and a young woman aged eighteen. All were in the first instance cases of faucial diphtheria. The young woman died, after having expectorated several casts of the trachea. There was no dyspnoea, and she apparently died from the severity of the disease. The Klebs-Löffler bacillus was found in the faucial exudation. The two children coughed up casts of the trachea, but had no symptoms of laryngeal obstruction. Both were subsequently paralysed and both recovered.—Mr. W. G. SPENCER said that the cases related were interesting in that they showed that cases of plastic bronchitis in children were identical in origin with diphtheria and ought to be classed as such. He remarked that it was unusual for a boy aged four to cough up shreds of membrane, and inquired if the Klebs-Löffler bacillus were found in the first case.—Dr. SIDNEY PHILLIPS said that occasionally cases were seen in which casts were coughed up with but few signs of obstruction, the latter symptom not being present because the casts were so loosely attached. In plastic bronchitis the casts could be seen to be laminated under the microscope and were quite different from diphtheritic membrane. The clinical course of plastic bronchitis was also different and the condition might continue for years.—Mr. SPENCER added that he was referring to some museum specimens of casts from children.—Sir DYCE DUCKWORTH said that plastic bronchitis was a disease attacking middle-aged or elderly people and could not be confounded with diphtheria. The casts of plastic bronchitis were difficult to find and required much searching for. They involved the smaller bronchi, and this explained the asthmatic symptoms and paroxysmal cough. He believed that plastic bronchitis did not occur in children at all.—Dr. SANSON said that patients with plastic bronchitis frequently suffered from profuse hæmoptysis, which, in addition to the other symptoms mentioned, served to differentiate this disease from diphtheria.—Dr. GOODALL, in reply, said that he did not look for the bacillus in the first case, but it was followed by typical paralysis.

Dr. LEE DICKINSON recorded a case of Malformation of the Heart associated with Hæmophilia. The patient was a girl aged eight with pronounced congenital heart disease and hæmophilia, and Dr. Dickinson asked how far these diseases were related. He reviewed the opinions held in the early part of this century as to a developmental connexion between cyanosis and hæmophilia, and regretted the obsolescence into which they had fallen. A hæmorrhagic tendency had often been noted in cases of malformation of the heart, and was sometimes partly explainable by venous congestion or venosity of the blood; but in cases like the one brought forward, without either clubbing of the extremities or cyanosis, there was an unequivocal hæmorrhagic diathesis. Some degree of

malformation of the heart had been found in a few cases associated with hæmophilia, but apart from this the two diseases might be related in a developmental peculiarity of the blood. There were exact observations to show that the blood in congenital heart disease was in a state of concentration, especially as regarded the number of red corpuscles, which might explain its cyanosis; and there was reason to suppose that in hæmophilia the blood was in a somewhat similar state.—Dr. SANSOM questioned whether the case could be correctly called hæmophilia. The patient was a female child with signs of cardiac anomaly—probably a perforation of the inter-ventricular septum without pulmonary stenosis—and the hæmorrhage might be explained by the cardiac lesion. Cases of hæmophilia were very rare in the female, hæmophilia usually following the male line. The pathology of the affection was obscure, but in one case a condition of the arterial walls was observed which might be termed imperfect muscular adaptation.—Sir DYCE DUCKWORTH remarked that, though hæmophilia was much commoner in males, yet females might be the victims of it. He did not think that children with morbus cæruleus were more liable to bleed than others.—Dr. SIDNEY PHILLIPS inquired if any other members of the family suffered from hæmophilia.—Dr. DICKINSON, in reply, said that the cardiac condition was not severe enough to explain the hæmorrhages, for the child was never cyanosed. There was no family history of hæmophilia.

Mr. GILBERT BARLING (Birmingham) read notes of a case of Gangrenous Umbilical Hernia in which a successful result followed Resection with use of Murphy's Button. The patient, a female aged forty-nine years, was admitted to the Birmingham General Hospital four days after strangulation commenced. On the day of admission the symptoms ceased suddenly. The strangulation was caused by a severely constricting band which involved about five inches of small intestine, and the upper or entering portion was gangrenous at the point of constriction. The patient's general condition being good, the strangulated gut, with a V-shaped piece of mesentery, was removed, and the divided ends of the intestine approximated by a Murphy's button one inch in diameter. Recovery was uneventful, but the button was not passed until the twenty-fourth day, two days after the patient had been allowed to get up. It gripped a ring of necrosed gut.—Mr. PEARCE GOULD remarked that though the gut had been tightly strangulated for three days, yet it was not associated with signs of marked collapse. He asked if the pulse was soft, if the features were blue, the extremities cold, or if there was any distension of the abdomen. The occurrence of this condition at the umbilicus was more favourable than at the inguinal or femoral rings, for the gut could be more readily delivered and the necessary manipulations could be more easily performed. There was a great tendency for these artificial communications to become narrowed. He asked if there was any evidence that the indigestion which the patient had complained of could be due to the lodging of the button at the ileo-cæcal valve.—Mr. LANGTON admitted that certain disadvantages attached to the use of these buttons, but he had also seen stenosis after enterectomy when end-to-end approximation had been done and when Senn's plates had been used.—Mr. BARLING, in reply, said that the good condition of the patient accounted for the success of the operation. The difference in the results of these cases as recorded by different surgeons was perhaps partly due to a different appreciation of the term "gangrene of the gut," and then again patients reacted to infection in a widely different manner. There was no distension of the abdomen because the obstruction was high up. The indigestion occurred on the fourth day, before the button separated, and was due to the administration of food. Though these buttons had sometimes dalled in the intestine and had gone up the canal instead of down it, yet on the whole their use would probably be followed by a better result than other methods. The operation lasted fifty minutes, but most of this time was spent in ligaturing the numerous cut vessels in the mesentery.

Dr. HECTOR MACKENZIE detailed the notes of a case of Hysterical Contracture of the Legs. The patient, a young woman, had first come under his care at the age of twenty for symptoms which suggested gastric ulcer. She was at that time much emaciated, and suffered from gastric pain and vomiting. Some time after this she had some disappointment, lost power in her legs, and took to her bed; the legs soon became contracted, and remained so. When she came under treatment a second time the legs had been contracted for two years. She was now twenty-three years of age. Her

emaciation was great; her weight was five stones. Under the deepest anaesthesia it was impossible to extend the legs on the thighs beyond a right angle; flexion could, however, be performed up to the normal limits. The flexor tendons were hard and rigid. The patient was depressed, and dwelt much on her troubles. There was marked anorexia. From the history, the mental and physical condition, and the character of the contracture, Dr. Mackenzie concluded that the case was hysterical in origin. It seemed likely, however, that structural changes in the flexor muscles had supervened, and it was at first doubtful whether it would be possible to straighten the legs without performing tenotomy. It was considered that the first thing to be done was to improve the general nutrition and to cure the morbid mental condition. The case was treated in the general ward of the hospital with massage and high feeding. Letters and the visits of friends were strictly forbidden. At the end of five weeks the patient had gained a stone in weight and was much more cheerful. She was soon made to get up and was encouraged to use her legs a little. The contracture gradually but surely gave way. At the end of nine weeks the legs were nearly straight, and the patient had gained two stones in weight. She was discharged at the end of thirteen weeks well able to walk, with her legs quite straight, her weight nearly three stones more than when she came in, and in a cheerful frame of mind. She had now for two years been perfectly well. Dr. Mackenzie said that although such cases were not very often seen in hospital practice it was possible they might be met with more commonly by general practitioners or in infirmaries. As they were generally considered incurable they were not very likely to be brought to a hospital. It was very satisfactory to know that in such a well-marked and long-standing case ordinary methods of treatment had proved sufficient to establish a complete cure.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL MEETING of this society was held on March 1st, the President, Dr. R. J. BANNING, being in the chair.

Mr. BALLANCE showed a woman aged fifty-six years on whom he had performed Cholecystotomy during an acute attack of gall-stone colic. Eighty-five gall-stones were removed, and the mucous membrane of the gall-bladder was found to be ulcerated. The gall-bladder was stitched to the skin and the patient made an uneventful recovery.—Mr. BIDWELL remarked that in most cases of cholecystotomy it was preferable to stitch the gall-bladder to the peritoneum and not to the skin.—Mr. BALLANCE also showed a boy aged fifteen years on whom he had operated for Cerebellar Abscess. The patient had suffered for nine years from otorrhoea and for five weeks from headache, staggering, vertigo, vomiting, and nystagmus. The temperature was subnormal. Operation was performed immediately after admission, and half an ounce of pus evacuated from the anterior part of the left lateral lobe of the cerebellum; blood-clot subsequently formed in the site of the abscess and caused a return of his symptoms, but on removal of this a complete recovery ensued.—Dr. ALDERSON remarked that the symptoms produced by cerebellar abscess were often quite indefinite and resembled those of typhoid fever or meningitis. He referred to a case which was diagnosed as typhoid fever, but at the post-mortem examination a cerebellar abscess was found.—Mr. MADDLOW, Dr. PEGHIER, Mr. ECCLES, and Mr. LAKE also took part in the discussion.

Dr. BUCKLAND showed a case of a young man suffering from Progressive Muscular Atrophy, which was improving under electrical treatment. The muscles of the forearm and front of the legs were alone affected.—Dr. EDDOWES suggested that the case might be syphilitic in origin.

Mr. EDWARDS showed two cases of Fracture of the Patella which he had wired four and six weeks ago respectively. He operated by a lateral flap and hammered in the ends of the wire. The splint was removed at the end of a fortnight. The movement of the joint was excellent in each case.—Mr. ECCLES noticed that in both these cases the injury was due to a fall on the knee, and stated that transverse fractures with separation of the fragments followed much more often than was formerly supposed.—Mr. EDWARDS also showed a boy with Epispadias affecting the Glans and a portion of the

Corpora Cavernosa. He regarded the condition as congenital, but suitable for operation.—He also showed a Ruptured Kidney which he had removed from a man aged fifty-five years who had fallen on a spiked iron railing. The kidney had been transfixed by the spike and was ruptured completely. It was removed by a lumbar incision, and the patient was doing well.—Mr. KNETLEY referred to a case of laceration of the kidney where he had removed the lower half of the organ; the bleeding was controlled by packing the wound with sponges, which were removed on the day after the operation.

Dr. BALL showed a man aged forty who was suffering from Bradycardia. He had been under observation since December, during which time his pulse-rate varied between 26 and 30 per minute. At times a systolic murmur could be heard. The patient had enjoyed good health until one year ago, when he had influenza; he used to drink rather freely.—Dr. CHAPMAN considered that there was fatty degeneration of the heart.—Mr. Maidlow, Dr. Weber, and Mr. Lloyd also made remarks.

Dr. ABRAHAM showed a patient with a Tertiary Syphilide which suggested a mixture of syphilis and eczema seborrhoeica. The itching was intense, and the eruption had an annular margin.—Messrs. Lloyd and Eccles discussed the case.

Dr. CHAPMAN showed a girl aged twelve years with Displacement of the Heart to a point three-quarters of an inch outside the right nipple. The right chest measured half an inch less than the left, and there was some spinal curvature. There was bronchial breathing on the right side. Dr. Chapman considered that the condition was the result of contraction of the lung from old fibroid disease.

Mr. KEETLEY showed a case of Primary Chancre of the Upper Lip in a girl aged eighteen. There were some enlarged glands, but no rash or sore-throat. The patient was improving under mercurial treatment.—Mr. KEETLEY also showed a woman aged fifty years who came under his care with Eczema of the Nipple and a Chronic Abscess in the Breast. The abscess was surrounded by cicatricial tissue, which resembled scirrhus; it was dissected out and the breast was now quite free from disease.

Mr. BIDWELL showed a girl aged nineteen suffering from Myxedema, together with considerable enlargement of the hands. The enlargement was apparently due to repeated attacks of erythematous inflammation. Symptoms of myxedema had existed for two years.

ÆSCULAPIAN SOCIETY OF LONDON.

The Action of Cardiac Tonics.—Diphtheria treated with Antitoxin.—Facial Paralysis.—Synopsis of 1000 Cases of Midwifery.

A MEETING of this society was held on Feb. 22nd, the President, Dr. A. G. BARTLEY, being in the chair.

Dr. A. K. CHRISTIE gave a brief summary of observations on the Action of Cardiac Tonics—namely: (1) digitalis, which caused a long systole by stimulating the cardiac muscular fibres, a long diastole by acting on the vagus, and vascular contraction by its effect on the vaso-motor centre—in spite of this triple action he considered it inferior to (2) strophanthus, which affected almost solely the cardiac muscle fibres, and was more persistent and more rapid in effect than digitalis; (3) convallaria, resembling strophanthus in action, and best given as an infusion, its most useful principle, convallamarin, being soluble in water, in which convallarin, a gastro-intestinal irritant, was insoluble; (4) caffeine, another of the same group as 2 and 3, was best used as a soluble salt (the sodio-salicylate)—its decided antagonism to morphia interfered very materially with its general utility. A series of sphygmograms illustrating this paper was shown at a former meeting of the society.

Mr. H. P. MILLER gave notes of a case of Diphtheria treated with Antitoxin in which Tracheotomy was performed. Three days after the disease was observed in the fauces the breathing became difficult, and on the fourth day 12 c.c. of antitoxin were injected. Next day tracheotomy was performed, and membrane was coughed up from below the opening. Later, 6 c.c. of antitoxin were injected, and next day (sixth day of disease) 6 c.c. more. The urine was albuminous. The tube was removed on the tenth day after operation. It was noted that this case, in spite of very insanitary surroundings, did exceptionally well and that the expectoration soon became fluid instead of membranous.

Mr. G. ELAM showed a case of Facial Paralysis apparently peripheral, and due to cold. There was no evidence of a central cause. Mercury with iodide of potassium, and electricity had been used, but with little or no effect.

Dr. J. W. HUNT gave a Synopsis of 1000 Cases of Midwifery. In these primiparæ numbered 289 (29 per cent.), arm presentations 4 per cent., breech ditto 2 per cent., and face, 3 per cent. The occiput was posterior to the last in 3.5 per cent. There were 4 cases of funis presentation, 1 of placenta prævia, and 1 of craniotomy. Post-partum hæmorrhage occurred in 6 cases. Forceps cases numbered 188. The head was high in 47, intermediate in 101, and low down in 40. The percentage of forceps cases was about 30 for primiparæ and 14 for multiparæ. Foetal deaths amounted to 6 per cent. Dr. Hunt advocated the use of forceps in all cases of delay, and usually gave ergot (about two drachms) as a preliminary.—Dr. CHRISTIE considered ergot to be a much overrated drug. He had given one ounce without exciting uterine contraction.

CAMBRIDGE MEDICAL SOCIETY.

Antitoxin Treatment of Diphtheria.—Laryngeal Growths.

A MEETING of this society was held on Feb. 1st, the President, Professor CLIFFORD ALLBUTT, M.D., F.R.S., being in the chair.

Dr. LATHAM, after giving a short history of the serum treatment of diphtheria and describing the method by which Behring's antitoxin is prepared and the way in which the strength of the preparation is determined previously to its use, reported five cases which had been treated under his directions by the remedy. Two of the cases presented points of special interest, tracheotomy having been performed, the membranous exudations extending into the trachea and bronchi, and both patients recovering. A number of microscopical specimens and cultures from each of the cases were shown by Dr. COBBETT, John Lucas Walker Student of Pathology in the University.

Mr. WHERBY showed a lad who had suffered from aphonia and stridor, his breathing being seriously affected. Dr. Laurence Humphry, under whose care the boy was in Addenbrooke's Hospital, had discovered papillary growths obscuring the greater part of the vocal chords, and advised their removal. Mr. Wherry performed preliminary tracheotomy, and after a few days opened the larynx by median section of the thyroid cartilage. He removed a large quantity of papillomatous growths from the interior of the larynx and also from the region of the false chords. The growths bulged into the incision as soon as the thyroid cartilage was cut, and they were cleared away by Löwenberg's forceps and by sponging. No after application was needed. The case did very well and both voice and breathing were unimpaired.

LIVERPOOL MEDICAL INSTITUTION.

Mycosis Fungoides.—Pneumonia with Relapse.—An Unrecognised Danger in the Administration of Chloroform.—Course and Treatment of Acute Rheumatic Endocarditis.

A MEETING of this society was held on Feb. 28th, Mr. CHAUNCEY PUZEY, President, being in the chair.

Dr. LEALIE ROBERTS read a paper on a case of Mycosis Fungoides. He pointed out that the symptoms in the early stage simulated eczema and other inflammatory eruptions, but were in reality neoplastic in nature. The tumours were infective, but there was no evidence at present of the action of micro-organisms. The necropsy showed the presence of tubercle bacilli in the left lung. The consideration of the histo-pathology of the disease was deferred to the pathological section of the society.

Dr. GLYNN related a case of Pneumonia with Relapse. He said that there was a great divergence of opinion as to the frequency with which relapse occurred, some authorities considering that a relapse was extremely rare, whilst others found it in from 15 to 25 per cent. of their cases. A man was admitted into the Royal Infirmary who had been ill three days; he convalesced on the tenth day, and remained well for eleven days; he then had a distinct relapse. The pneumonia was at both bases of the lungs. A very favourable point in the case was that the respiration never rose above 30 per minute; this showed that the rapidity of the breathing did

not depend altogether on the physical condition of the lungs, but probably on the presence of toxines circulating in the blood and affecting the respiratory centre. The first sign of improvement (which occurred a few days before the temperature dropped) was an increase in the quantity of urine secreted; Dr. Glynn considered that this was a most important sign of recovery. The case was treated by two drachms of infusion of digitalis given every two hours. Dr. Glynn considered this a most valuable remedy in pneumonia, and said that it would produce sleep and quiet the patient when other drugs failed to do so. It was stated, however, that cases treated with digitalis were liable to relapse.

Mr. C. G. LEE read a short paper descriptive of the Spasmodic Cough and Laryngeal Irritation that often occurs to the operator and his assistants when Chloroform is administered in an ill-ventilated room in proximity to a gas flame. The only record of such cases that he had been able to discover was to be found in a paper published in vol. xiii. of the *Practitioner* by Dr. Paterson of Cardiff. Here, however, the patient, as well as the surgeon, suffered from the violent cough and irritation, rendering it dangerous to proceed with the operation. In none of Mr. Lee's cases had the patient suffered. The exact nature of the irritating substance was discussed, and Dr. Paterson's view that it was probably carbon oxychloride or phosgene gas was favourably commented on; at the same time it might be due to free hydrochloric acid, as suggested by Dr. Carter. Several speakers pointed out that the same symptoms of irritation occurred when ether was administered in the neighbourhood of a coal-gas flame.

Dr. CATON read a paper on the Course and Treatment of Acute Rheumatic Endocarditis. Whilst treating 300 cases of acute and subacute rheumatism during the last thirteen years, he had observed the occurrence of 51 cases of valvular disease of the heart. The early signs of cardiac complications were described, and also the means employed to prevent them. Thirteen of the cases received no special treatment beyond that appropriate to the rheumatism and were kept in hospital on an average for twenty-five days. Of these, 12 left the hospital with a bruit and 1 without. Thirty-eight cases were treated by repeated blistering over the cardiac region and by the administration of potassium iodide. Treatment was continued for an average of forty-one days. Of this latter number 28 left the hospital without any bruit and 10 with a bruit.—Drs. Glynn, Barr, P. Davidson, and Logan discussed Dr. Caton's paper.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Gall-stones successfully removed by Cholecystotomy.—Encysted Empyema.—Tuberculous Abscesses of the Liver.—Lymphoma of Eyelids.

A MEETING of this society was held on Feb. 15th, Mr. MAKEIG JONES being in the chair.

Dr. HELLIER showed eight Gall-stones successfully removed from a woman by Cholecystotomy. The case was interesting because there was present the condition which Riedel has described under the term "linguiform appendage of the liver." Before operation a movable solid tumour near the umbilicus had presented a diagnostic riddle which was only solved by exploratory incision.

Dr. CHURTON showed a case of Encysted Empyema on the Internal Surface of the Right Lung. The patient, a boy aged four years, in November, 1894, had diarrhoea for a fortnight; he then began to cough. On Jan. 5th, 1895, the usual signs of fluid were found in his right chest; he came into the Leeds Infirmary a week later; ten ounces of pus were obtained by incision. No improvement followed. On Jan. 29th the morning temperature was 100° F., evening 100° 6'; pulse, 144; respiration, 40. There was no dulness over the right lung except near the heart (supposed to be the margin of unexpanded lung adherent to the chest wall); no breath sounds in it. Bronchial râles were heard in both lobes of the left lung; variable dulness at base in axilla; the presence of fluid was doubtful; on exploration none was found. The heart was in the normal site, with perfectly normal sounds. There were signs of pericarditis with effusion. At the necropsy, four days later, upon removal of the sternum pus flowed from an accidental incision in what at first seemed to be the pericardium, but this membrane was found

to be perfectly healthy internally; externally it formed part of the sac of an empyema containing about an ounce and a half of pus, the opposite wall being the inner face of the right lung. The base of the lung was rather strongly adherent to the diaphragm. In the left lung there was bronchitis with a few red pneumonic patches, and there was a layer of semi-purulent exudation on the lower part of both lobes (outer aspect). Suppurative peritonitis (recent) and caseous mesenteric glands were also found. The superficial dulness presented by the internal empyema during life did not much exceed half an inch; the coexisting diseases in the abdomen and opposite lung prevented this sign from receiving sufficient attention. The cavity of the external empyema was smooth and contracting.

Dr. CHURTON showed a Liver in which there were Abscesses of various sizes, from a pea to a small orange. The large cavities contained pus, with shreds and bands of necrosing tissue. The patient, a woman aged thirty-six, had had a cough for two years, with little expectoration. During the last six months she had passed several gall-stones, with pain and transient jaundice; the last attack occurred two months before death. During life the liver was somewhat enlarged and the edge rounded; there had been no jaundice recently. Tuberculous fibrosis was found in the upper lobes of the lungs, and miliary tubercles in the lower lobes. There were no intestinal ulcers; three or four small, hard, calcareous glands were found in the mesentery. The gall cyst was small; there were no calculi. Mr. Stott, pathological curator, found tubercle bacilli in pus from the liver.

Dr. ADOLPH BRONNER showed a microscopic specimen of Lymphoma of the Eyelid. Seven years ago an oblong elastic growth ($1\frac{1}{2}$ in. by $\frac{1}{2}$ in.) was removed from the left lower eyelid. There was no recurrence for three years; then all four eyelids, right hard palate, and right sub-maxillary gland became affected. The internal use of arsenic reduced the growths, but as soon as the arsenic was discontinued they increased in size. Slightly similar cases had been recorded by Goldzieher, but these were lymphadenomata and unilateral. The case, with photograph, was described in the Transactions of the Eighth International Ophthalmological Congress.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Chronic Stricture of the Urethra.

A MEETING of this society was held on Feb. 14th, Mr. RICHARD FAVELL, Vice-President, being in the chair.

Mr. ATKIN showed a girl from whom he had removed the Shaft of the Ulna for Necrosis without Suppuration.

Mr. PYE-SMITH showed three boys on whom he had recently performed Excision of the Hip by Anterior Incision, and advocated this operation as giving better results than that of external incision.

Dr. MARTIN showed: (1) an Ovarian Cyst and Cystic Ovary from a patient twenty-four years of age; (2) an Ovarian Cyst with a Twisted Pedicle from a patient thirty-four years of age; and (3) a large Fibroid measuring $12\frac{1}{2}$ in. by $11\frac{1}{2}$ in., which he had removed from the vagina of a patient aged fifty. All the patients made good recoveries.

Mr. KILHAM read notes of: (1) Accidental Vaccination by bathing a small wound on the cheek of a boy three years of age with a sponge which had just been used to wash the arm of an infant vaccinated on the previous day; (2) unusually large Child stillborn; weight $17\frac{1}{2}$ lb., length 25 in., and with the arms to the sides 11 in. across the shoulders; and (3) a curious Bicycle Accident, causing Rupture of the Urethra without any skin wound.

Mr. W. H. BROWN (Leeds) read a paper on Some Points in the Treatment of Chronic Stricture of the Urethra. In the presence of cystitis in at all a severe form or with an abnormally sensitive urethra he considered the treatment by dilatation, either rapid or gradual, decidedly dangerous. Internal urethrotomy he condemned, but external urethrotomy on the lines laid down by Mr. Wheelhouse he regarded as a safe and efficient method of dealing with chronic stricture. One advantage of this operation was that it afforded the operator an opportunity of exploring the bladder, which in one of his own cases led to the discovery of two unsuspected

calculi. It also provided for efficient drainage of the bladder subsequently, which no other plan of treatment did. Mr. Brown said that he always varied Mr. Wheelhouse's method of procedure by the insertion of a perineal tube into the bladder, allowing it to remain there for four or five days; and in bad cases he washed the bladder out with solution of quinine. With regard to the risk of serious hæmorrhage, which had been alleged as an objection to this operation, he said he had only once met with any trouble from this cause, and he had never known suppression of urine to follow external urethrotomy, as had been the case after dilatation several times in his experience. In conclusion, he strongly deprecated undertaking such an operation as external urethrotomy without at least three assistants—in fact, with as many assistants as would be present if the operation were performed in a hospital.—The Vice-President, Dr. Keeling, Mr. Pye-Smith, Dr. Sinclair White, Mr. Atkin, and Mr. Snell joined in the discussion which followed.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

The Adjourned Discussion on Cardiac Therapeutics.

THE adjourned meeting of this society for the conclusion of the discussion of Cardiac Therapeutics was held on Feb. 26th, Dr. CLOUSTON, President, being in the chair.

Dr. G. A. GIBSON wished to speak of the relief of cardiac pain, which was a subject of the highest importance, especially in the senile heart. He could draw no hard line between the different forms of cardiac pain. The pain was a central discharging lesion. It was usually connected with some area of hyperæsthesia. The pain of "impending sense of dissolution" was not specially cardiac, but seen in ovarian and other abdominal lesions. He agreed with Dr. Balfour when he said there was no angina without cardiac failure of some sort. The vaso-motor form would not hold water. To relieve the pain the nutrition of the circulation and primarily that of the heart must be improved. As drugs we must give the first place to the iodides, especially iodide of potassium. Iodide of ethyl was considerably more active, less evanescent in its action, and more certain than nitrite of amyl. The nitrites were more useful in asthmatic than cardiac conditions. Of other drugs, opium was a sheet-anchor in painful conditions in old people, and if used with ordinary precautions there was really no risk. The diathesis of the patient must be considered. In gouty people alkalies and colchicum were of use. Cardiac pain signified cardiac failure. He doubted if anemia of the cardiac muscle could produce them, or neuralgia, or neuritis. Probably they were due to local irritation of sensory nerves. He dwelt on the usefulness of distilled water as a drink in senile cases.

Dr. ALEXANDER JAMES expressed some doubts which he had in the treatment of cardiac cases. Were we really husbanding the strength of the heart when we reduced its rate and increased the blood pressure with drugs? Did we not give the heart more work to do? Did our fathers not rather husband the strength of the heart in the early stages of the disease by lowering the blood pressure by means of antimony, venesection, &c. Again, could we not do more good by getting the patient to sleep instead of giving tonics? During sleep the heart got slower.

Dr. GEORGE BALFOUR desired to make some supplementary remarks on the present question, rather than discuss the merits of certain drugs. Exercise he thought only applicable in the early stage of gouty heart. Excessive exertion tended to promote irremediable failure of the heart. In young people especially the nutrition of the skeletal muscles could be promoted by massage. He next glanced at the diet of a cardiac case, which he regarded as of very great importance. Of the drugs employed in cardiac cases nuxvomica was of value in all cases where the cardiac energy was defective, and could be continued for a long time. Five minims of the liquor strychninæ every twelve hours were a dose which did not produce cumulative effects, but marked and steady improvement due to the energising of the heart muscle, the cardiac ganglia, as well as the vaso-motor centre. Arsenic was also a valuable tonic; though it was difficult to understand how it acted there could be no doubt as to the benefit resulting. Of all cardiac tonics, digitalis was paramount. It was an indigenous drug of the highest value, which

gave its name to a whole group of remedies of similar action, of which only one came within measurable distance in the possession of valuable qualities—namely, strophanthus. The active principle of strophanthus was soluble, it acted with great rapidity, and so might occasionally be used with advantage in cases of cardiac collapse. The defect of strophanthus was that though it forced the heart to contract it had no tonic action on it, and did not promote the nutrition, which digitalis did. This was a special disadvantage in cases of senile heart. Digitalis produced the desired action on the heart with certainty and without risk. Digitalis might be given—(1) to improve the nutrition of the myocardium and so augment the force of its contractions; (2) to contract dilated ventricles; and (3) to remove dropsy. In using it as a tonic saturation must be avoided; thus a grain of powdered leaves or the equivalent might be given in twenty-four hours. This might be continued for months or years. In flabby or dilated heart larger doses might be used to contract the organ. In aortic disease where the ventricle was beginning to fail large doses at considerable intervals were required. For removal of dropsy a degree of saturation was required. When blood pressure was high purgatives were of the greatest use. In lowering blood pressure for a lengthened period without bad effect iodide of potassium was best, and was most useful in combination with digitalis. Referring to the statement that there was not always high blood pressure in angina, Dr. Balfour said he had at one time held that view, but he was now satisfied that there was always an initial rise, though it rapidly fell from the failure of the heart to keep the pressure up. In conclusion he glanced at the use of narcotics in cardiac cases.

Professor FRASER, replying, said that it had not been his intention in the remarks with which he opened the discussion to specially emphasise the merits of any one remedy, but to demonstrate the remarkable therapeutic value of a pharmacological group, which he illustrated in connexion with one member because his experience with it had been greater than with any other member. This group of remedies had a direct action on the muscle of the heart, increasing the strength and efficiency of the contractions with a power unequalled by any other remedies. Time alone had prevented him making more than incidental mention of secondary remedies, such as rest, diet, arsenic, nitrites, morphia, strychnine, measures for removing fluids and increasing elimination, &c. In conclusion, Professor Fraser, after ably and impartially reviewing the expressions of opinion of those who had joined in the debate, expressed his great gratification at the amount of interest the discussion of this important question had raised.

Reviews and Notices of Books.

Meteorology: Practical and Applied. BY JOHN WILLIAM MOORE, B.A., M.D., F.R.C.P. (Irel). London: F. J. Rebman. 1894.

DR. MOORE was so recently before the profession as the author of an important work on Fevers that it is something of a surprise to find him so soon again in the field with a volume upon Meteorology. But, as he informs us in his preface and as is well known, he has long taken an interest in questions of weather and climate, and these subjects have afforded him "the needful foil to his more serious professional studies and pursuits." Hence he enters this new field not as a mere amateur, but "has been able to bring no small practical experience of meteorology to bear in the writing of the following pages." Dr. Moore holds, and we think with justice, that the practical physician, although subject to numerous distractions which impede the systematic pursuit of pure scientific work, has many advantages in approaching the problems of climatology. "The physician, of all men, has the fullest opportunities of observing the far-reaching influence of weather and climate upon human health, happiness, and longevity." Our readers do not need to be reminded that a careful study of the weather and seasons, and the doctrine of "epidemic constitutions" founded on this study were

cardinal features in the system of Hippocrates. The present work has not much pretention to originality of fact or theory; but may be taken as a full, lucid, and satisfactory exposition of the present state of knowledge regarding the subject of which it treats. Dr. Moore does not presuppose much knowledge on the part of his readers and does not disdain to enter into minute details on the elementary laws of physics, the different kinds of thermometer, the history and principles of the barometer, and such like. Many of such details would, perhaps, be more proper to a school manual on physical geography than to a formal work on meteorology addressed to the medical profession; but, on the other hand, there is something to be said for the author making his ground secure as he goes along. We think it was Faraday who was once asked to explain the wonderful success of his popular lectures at the Royal Institution, and, in particular, how he was able to assume the amount of knowledge possessed by his auditors. His reply was that "the only safe course was to assume that they knew nothing." Dr. Moore acts upon this principle and does not credit his readers with even an elementary knowledge of meteorology. After a general account of the scope and aim of meteorology and the properties and composition of the atmosphere, the author proceeds to give a very full account of the various methods of practical weather observation adopted at the chief British and American meteorological stations. There is much in this part of the work that is interesting, and the facts will be new to many readers; but it is with some sense of disproportion that we find forty-five pages in a work of a little over 400 pages devoted to a minute description of the history, organisation, and work of the United States Weather Bureau. To take one instance of what seems to us superfluous material, the English reader can hardly be expected to take a deep interest in the number of books and pamphlets added to the library of the Washington Weather Bureau from its foundation down to 1893. Yet these facts are set forth in fullest detail, and we are further informed: "In addition to these various sections of the Bureau there is a large mass of correspondence to be cared for. This comes under the direct cognisance of the chief clerk, who has a small staff of clerks under him to perform this work. The letters received are assigned to the various divisions or individuals most competent to answer them. The replies are drawn up by these divisions or individuals with the aid of stenographers &c." Padding of this kind might profitably disappear from a second edition. We cannot leave this part of the work without expressing our admiration for the thoroughness with which the task of recording meteorological phenomena is discharged by our contemporaries in America. They have special advantages for the organisation of a complete and efficient national system of weather observation, and it is only just to acknowledge that these advantages have been utilised in a highly satisfactory and creditable manner.

After a full exposition of the general facts relating to such subjects as atmospheric pressure, the aqueous vapour of the atmosphere, winds and wind gauges, and atmospheric electricity, Dr. Moore proceeds in Part III. of his work to consider some of the general problems of climate and in more detail the climate of the British Islands. The factors of climate are stated to be the following: latitude, altitude, relative distribution of land and water, presence of ocean currents, proximity of mountain ranges, soil, vegetation, rainfall, and prevailing winds. The author's description of the winter climate of the British Islands is worth quoting. "During the earlier winter months a great stream of warm, very moist air, as a rule, flows north-eastward and northward over these islands round the Atlantic depression, the centre of which lies near Iceland. But this stream does not flow evenly. Along its eastern edge it is in continual conflict with the cold anticyclonic air which is travelling westward

from Russia and Siberia, and immense volumes of the latter are frequently rushing in to supply the place of those volumes of the warm air which, owing to their low density, have presumably risen from the earth's surface towards the higher strata of the atmosphere. This conflict between two such opposite currents of air causes our storms and those violent and rapid alternations of temperature which are so prejudicial to health in the winter months."

The fourth and concluding portion of Dr. Moore's work is devoted to the influence of season and weather on disease. No attempt is made to deal exhaustively with this large subject, but the leading facts are marshalled in a clear and interesting way. The chief points emphasised are that influenza is absolutely independent of season and weather, that cholera tends to prevail in the warmer months of the year, that diarrhoeal diseases belong to summer and autumn, that enteric fever is most prevalent in autumn and early winter, that typhus fever is a disease of winter and spring, small-pox belongs also to these seasons, that measles is most prevalent in the spring and autumnal quarters of the year, and that scarlet fever, though little dependent on climatic causes, tends to increase in the fourth quarter of the year. As regards pneumonia Dr. Moore draws a distinction between ordinary pneumonia and "pythogenic" pneumonia, the former being specially prevalent during a continuance of cold, dry weather, with high winds and extreme variations of temperature, while the latter reaches its maximum during tolerably warm weather, accompanied with a dry air, deficient rainfall, hot sun, and rapid evaporation. With this disease the writer ends, though it cannot be said that the subject was worked out; but he would be the first to disclaim completeness for a work which proceeds, on the whole, upon elementary lines. We may say, in conclusion, that the work is well printed and handsomely illustrated.

Transactions of the Pathological Society of London. Vol. XLV. London: Smith, Elder, and Co. 1895.

ALTHOUGH less bulky than many of the preceding volumes of these invaluable Transactions—which form a rich storehouse of pathological facts that has been often drawn upon by authors in all parts of the world,—nevertheless, the forty-fifth volume contains many valuable contributions to knowledge. Dr. Tooth records the results of his examination of the nerve trunks in a case of alcoholic paralysis, important from the examination having been made in an early stage of the disease and from the lesions being degenerative rather than inflammatory. Dr. Semon and Mr. Shattock record the sequel to a case of "anomalous tumour of the larynx," first brought forward three years previously. The interest of the case lies in the growth being proved to be of malignant nature, although clinically the case did not run the course of malignant disease. The somewhat rare condition of diphtheria of the stomach is described by Dr. W. S. Fenwick, the case lacking, however, a bacteriological examination and being remarkable from the freedom of the pharynx and œsophagus from exudation. Two cases of general ulcerative colitis by Dr. Tooth are illustrated by excellent photographs, recalling those in the late Dr. J. J. Woodward's memoirs on the intestinal affections observed in the American War of the Rebellion. Dr. Newton Pitt shows how aberrant renal vessels may cause hydronephrosis; and Mr. Shattock describes some new facts in the anatomy of epispadias and extroversio vesicæ. Some specimens of bone disease described by Mr. Clutton (syphilitic osteitis) and Mr. Davies-Colley (syphilitic disease of the knee-joint) are admirably shown in photographs; indeed, almost all of the plates are of the photo-lithographic order. There are several contributions to the subject of Rodent Ulcer, notably an analysis of sixty-six cases by Mr. Bowlby and a detailed histological report by Mr. F. T. Paul. The

subject of mammary carcinoma is studied by Mr. Cecil F. Beadles; but the question of sporozoa and cancer, which barely a year since was a burning one, seems to have received but scant attention during the last session of the society.

MAGAZINES FOR MARCH.

Westminster Review.—The current monthly number contains several articles of considerable interest and is not quite so strictly instructive without being recreative as usual. In the annals of the Modern Novel we have a decidedly bright and entertaining article and one that has a distinct interest for all medical men. It is no use blinking the fact that the majority of our better-class patients nowadays depend on their fiction for much of their knowledge and most of their estimates of personal theories and things, so that it is not an unusual thing for the medical man to find himself face to face with a case where many of the symptoms and possibly many of the evil practices that have determined the symptoms or the condition are directly or indirectly dependent upon the patient's taste in fiction. Mr. Hannigan's very short paper advocates chiefly the abolition of the controversial novel, and winds up with the dictum that Mr. Thomas Hardy is the only English novelist who never forgets his true vocation "to write a natural story of human life." Now, although Mr. Thomas Hardy displays none of the repulsive realism of Zola or Sereno and is free from the nastiness of what may be termed "the yellow school," he has more than once introduced episodes into his books which cannot have been calculated to do the greatest good to the greatest number by giving them the healthiest pleasure. We do not enter into the wider question of whether this is the legitimate aim of fiction, rather than what Mr. Hannigan considers the novelist's vocation; we speak only for medical men when we say that the tyranny of the modern novel is certainly excessive, and that Mr. Thomas Hardy is not the most pleasing exponent of English manners. In the same magazine there is an able defence of modern private asylums, which in view of the serious charges about to be investigated at one of the best known of these institutions, and in view also of the sensational recrudescence of attacks upon institutions for the insane, makes very appropriate reading.

The *Contemporary Review* contains a paper of particular interest to us all in a quasi-defence of the late County Council in respect to the music-halls from the well-instructed and vigorous pen of Mr. William Archer. It would appear from a careful study of the results of the County Council election that the Moderate party do not owe their success to any popular resentment of the action of the Council in the Empire case, and so far it would seem that the "shriek of indignation and terror" which "went up to high heaven from a thousand journalistic throats" (Mr. Archer's expression) has had exceedingly little influence upon lower earth as represented by the London voter. But none the less the question of the position of municipal bodies as moral guides is a particularly interesting one at the present juncture.

The *English Illustrated Magazine* contains, amidst a wealth of short stories by popular authors, an interesting account of the foundation of Messrs. Bass's Brewery. The whole article is interesting from the popular point of view, and we wonder how many people believe that the water of the Trent plays an important part in the production of Burton ale. As a matter of fact, it is only used for washing the casks and similar purposes, while the water which is made into beer is drawn from wells varying from 20 to 130 feet in depth deriving their supply from the springs in the hills on the other side of the valley.

The *Pall Mall Magazine*, like the *English Illustrated*, is largely given over to fiction, and very well chosen and brightly written fiction too. But among the serious articles there is a paper by Mr. W. H. Mallock which we recommend

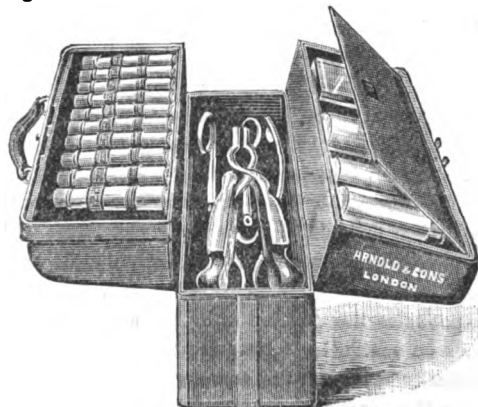
to the attention of our readers. Mr. Mallock is one of the few people who can write upon political economy and make the subject readable and even piquant, and students of his novels know this. In this article, cleverly adorned with illustrative diagrams, he makes clear the condition of the people in respect to the census in a very remarkable manner.

The *Humanitarian* has a short article from the pen of Mr. W. S. Caine, M.P., upon the Gothenburg Liquor System, which should go far to damp the ardour of enthusiasts for that system.

New Inventions.

"COMPACTUM" MIDWIFERY BAG.

THE above illustration shows a very portable midwifery bag, which has been brought before the notice of the profession by Messrs. Arnold and Sons of West Smithfield. It only measures 10 in. by 8½ in. by 3½ in., but nothing is lost in variety of contents by the limited size of the bag. It contains Barnes' long forceps, metal handle (folding), craniotomy forceps and perforator to fit into the same handle, blunt hook and crotchet (jointed), frenum scissors, and female catheter. All the instruments are nickel plated, and fit in the base of the bag. The left side holds one bottle each of Messrs. Burroughs and Wellcome's tabloids in a morocco leather



case, containing the following drugs: ergotine (3 gr.), anti-pyrin (5 gr.), chloral hydrate (5 gr.), Warburg's tincture (30 m.), opium (½ gr.), ammon. carbonate (3 gr.), hydrarg. perchloridum (solids, one solid in one pint of water, 1 in 1000), and potassii permanganas (solids, 5 gr.). The right side contains a morocco leather hypodermic case, with silver-plated syringe, two needles, and one tube of each of the following tabloids: atropine (½ gr.), caffeine sodio-salicylate (½ gr.), cocaine hydrochlorate (½ gr.), digitalin crystalline (½ gr.), ergotinlin citrate (½ gr.), pilocarpine hydrochlorate (½ gr.), strychnine sulphate (½ gr.), eserine salicylate (½ gr.), hyoscyne hydrobromate (½ gr.), morphine sulphate (½ gr.), morphine sulphate (½ gr.), atropine sulphate (½ gr.), sclerotinic acid (½ gr.), one collapsible tube of lano-creolin, one collapsible tube of hazeline cream, and one capped, stoppered bottle for chloroform. The price of the bag, complete with instruments, drugs, &c., is £6 15s.

PILL BOX SHOOT.

THE illustration shows a very handy and cleanly way of keeping pill boxes for immediate use. The appliance hangs on the wall, where it takes up very little room, the size being 37 in. long by 7 in. wide, and it projects only two inches. It holds three dozen one-ounce boxes, four dozen half-ounce, four dozen two-drachm, five dozen one-drachm, and six dozen half-drachm; and it is impossible for the practitioner to run out of stock without warning. The saving of time and temper thus ensured warrants us in thinking that this little apparatus will be well thought of in every pharmacy, surgery, and dispensary. The price is 10s. 6d., and the makers are Messrs. Reynolds and Branson, 13, Briggate, Leeds.



THE LANCET.

LONDON: SATURDAY, MARCH 9, 1895.

IT must at once be gratefully acknowledged that Mr. ASQUITH'S Factory Bill is a very satisfactory measure. Reforms on which for years we have insisted are here accorded, so far, of course, as factory legislation is concerned. It is, indeed, difficult to find fault with the proposals laid before the House. The most that can be said is that they perhaps need here and there a little strengthening and elaboration. The Bill has truly been defined as being framed in the spirit which animated the whole of our factory legislation; the difficulties in the past have arisen from the difference between the spirit and the letter of the law. We trust that the Bill now under discussion will prevent such constant misinterpretation of the spirit of the law. Thus, as Mr. ASQUITH very truly pointed out, overcrowding is illegal, but, as overcrowding has never been defined, of course the law could not be effectively applied. Now it is proposed to define overcrowding as less than a minimum of 250 cubic feet of space for every person in a factory or workshop, and 400 feet when overtime is worked. This minimum is further to be increased when artificial light is employed. This will not only help to improve sanitary conditions, but it will tend to lessen the abuse of overtime. Of course, these stipulations do not solve the question of overcrowding in so far as it depends on ventilation. Naturally, where the ventilation is scientifically managed, the amount of space required per person for the preservation of health need not be so high. This is well illustrated in the case of theatres; for instance, the ordinary London theatre does not compare well with the Vienna Opera House, which is one of the European models of good ventilation. No Bill, however, could prescribe measures of ventilation, and it was much easier to decide that there should be no overcrowding.

With regard to the prevention of accidents, "young persons" as well as children are not to be allowed to clean machinery in motion, and in new factories more space is to be provided between the various machines. We have been in mills where we had to take the utmost care not to be caught in the machinery, so narrow was the space which formed the passages. Then there is to be better provision against fire, and against defective or dangerous machinery, a court of summary jurisdiction being empowered to require that such machines shall not be used. Occupiers of factories or workshops will have to keep a register of all accidents that occur for the inspectors or the certifying surgeons to view, and the Secretary of State will be able to direct that inquiries shall be made. Thus what is done now when accidents happen in coal mines will be done when accidents occur in other occupations, and it should also be noted that a Bill has been introduced by the Lord Advocate, Sir GEORGE TREVELYAN, and the Solicitor-General for Scotland to make provision for public inquiry in regard to

fatal accidents occurring in industrial employment or occupations in Scotland.

With regard to the important question of "sweating," Mr. ASQUITH pointed out that it was not practicable to make the giver-out of work responsible for the sanitary condition of the place where the work was done. The work was sometimes given out in London and done in Scotland. It is proposed that factory inspectors, having ascertained that outwork is being done under unwholesome conditions, shall give notice to the employer and prosecute him if a month after the notice is served the work is still given out. Such measures are to be taken "where the evil is supposed to exist and in certain areas to be prescribed." This sentence is really mischievous, for it suggests that action is only to be taken in certain localities and under certain circumstances; but the evil is widespread. It may be intensified in some localities; it exists everywhere. Undoubtedly there are more sweating dens in the East-end than in the West-end of London, but there are a large number of sweating dens in the best quarters of the town. There is no need to pick out a special area; there are overcrowded insanitary workshops all over England. A list of every place where work is done should be kept and such places subjected to inspection. If it is not practicable to make the giver-out of work responsible for the sanitary condition of the place where his work is done, he must in any case supply the inspectors with the addresses and let them see to the sanitary conditions; and this should be obligatory all round in every trade and in every district. Nor would such control apply only to sanitary conditions, but also to the question of the hours of labour for women, children, and young persons. In the matter of overtime a great deal too much latitude has been allowed. Why should cigar makers, envelope folders, and such persons be allowed to work overtime? That overtime should be worked to preserve perishable articles—fruit, fish, and the harvest—is to the advantage of mankind; but need young women be kept toiling through the night because some fashionable lady wants to go to a ball in a new dress? It is quite right to pay respect to the dead, but many delicate, under-paid, and under-fed women have been brought early to the grave through the constant overstrain arising from the hurried execution of orders for suits of mourning. Fortunately the grievance of overtime will be to some extent mitigated by Mr. ASQUITH'S Bill, for he proposes to reduce the overtime allowed from forty-eight to thirty-eight days per annum and from five to three days per week, and for perishable articles from ninety days to sixty days per annum. It is to be hoped that, though Mr. ASQUITH was not ready to risk the fate of the Government on the subject, the House will assent to raising the minimum age for the employment of children from eleven to twelve years, and thus place us in accord with the Berlin Conference on Labour, where the representatives of the British Government assented to this proposal.

In dealing with laundries Mr. ASQUITH has repeated all that we have said in these columns as to their insanitary and unsafe condition, and he proposed to bring them all under the Factory Act. "The Act should apply," he said, "only to laundries carried on by way of trade, and not to laundries where the persons employed were members of the same family." We trust we do not misunderstand

this sentence. It should mean that, while persons may do their own washing in their own house without interference, they must not take in other people's washing. In the latter case washing is a trade and the Factory Act should apply. As for persons employed being members of the same family this is a very unfortunate sentence. It might mean that a family may not wash their own linen at home if they employ their own private domestic servant to aid in the work. If, as we very much fear, it is meant that persons may wash for others so long as they do not employ hired assistants the law will be constantly evaded. In sweating dens girls found there after hours are frequently represented as members of the family who have come up from the country to see the sights of town; and in the face of their employers they dare not deny these falsehoods. Besides, evil sanitary conditions are not made any better because the workers are all of the same family.

Mr. ASQUITH also includes bakehouses in his Bill. Those bakehouses that at present escape from the law because they existed before 1883, or are in towns of less than 5000 inhabitants, will now be included, and no exception will be made. There are also excellent clauses by which it is proposed that the temperature in workshops and factories where clothing is made should be kept up to 60° F.—a rule which might with advantage be extended to many other trades—that every workshop must be registered, and that docks, harbours, and the construction of buildings shall be brought, for the first time, under the scope of the law. We cannot, for the moment, do more than thus briefly scan the main provisions of the proposed measure. That it is a good Bill—we may say the best Bill that has been introduced in the House on the subject—will be very generally admitted. Still, as we have pointed out, there are one or two clauses that must be more fully explained, notably with regard to home washing and to the giving out of work. This, doubtless, will be made more clear in the course of the discussion on the future stages of the Bill, and we trust this project may soon become the law of the land.

A VERY interesting and important paper on "Thyroid Feeding in Insanity," by Dr. LEWIS C. BRUCE, of the Royal Edinburgh Asylum, Morningside, appears in the last number of the *Journal of Mental Science*. Dr. BRUCE says that he was first led to try the effect of thyroid feeding on the insane by noting that in various cases of myxœdema described as treated in this way the temperature rose from subnormal to normal and even became feverish, while the pulse-rate also was quickened. Bearing in mind the low temperatures and slow pulses often noticed among the insane, it appeared feasible that if one could induce quickened pulse-rates and higher temperatures there might be corresponding mental or physical improvement. Two cases of extreme mental deterioration were selected as trial cases, and the administration of thyroid to those produced such an effect that a trial of the treatment on a much more extensive scale was adopted. The method of observation employed was both elaborate and scientific. A careful record of the condition of the various organs and of the pulse, temperature, &c. was made before the treatment

was commenced, and the record was continued during treatment. The drug in most cases was administered until a feverish condition was induced for two or three days, and it was considered that when the pulse became rapid, soft, and compressible the limit of safety was reached. Mental and physical changes were recorded on the chart from day to day. The following is a brief *résumé* of the various effects on the different systems. In the circulatory system there was among the symptoms at times a tendency to faint when the patient was in an upright position. One patient did actually faint. The pulse changes were the first indication of the effect of the drug. These were increased rate, increased volume, and lessened tension. Later, irregularity, intermission, and compressibility were induced, and the time it took the pulse to become normal after cessation of the treatment varied very much. In regard to the respiratory system, the rate of respiration was increased proportionately to the pulse-rate. One curious phenomenon was noticed—viz., that among five patients who had traces of dormant phthisis symptoms and signs pointing to a lighting up of the activity of the disease were induced by the administration of thyroid. The tongue usually became furred, the appetite diminished, thirst usually increased if the temperature rose, and nausea and vomiting occurred in several cases. In regard to the condition of the blood, in eight cases in which thyroid was the only drug administered, there was a reduction in the numbers of the red corpuscles and in the amount of the hæmoglobin, in all except one. The other seven cases took Bland's pills or a solution of citrate of iron and ammonia as well as the thyroid. In two of these there was a gain of hæmoglobin, in three a loss. Four gained in corpuscular richness, two showed a loss, and one neither gained nor lost. It thus seems, as Dr. BRUCE points out, that the effect which the administration of thyroid has in impoverishing the blood can be, in some measure at least, prevented by the simultaneous administration of iron. Integumentary changes were also observed during the treatment. The skin became moist and at times the perspiration was profuse. Flushings were also frequently present, the pigmentation of the skin was diminished, and the complexion became soft and delicate looking. Desquamation occurred to a greater or less degree in every case after the treatment was stopped. A careful examination and estimation of the amount of urine showed that thyroid produced no diuretic action, at least in the large doses in which it was given. This may be accounted for by the profuse diaphoresis which was produced. As regards nervous symptoms, no sensory disturbances were observed, nor were organic reflexes altered in the great majority of cases. In many instances the voluntary muscles showed symptoms of over-action, and fine tremors were present in the tongue, lips, facial muscles, and limbs. Headaches were frequently complained of, and the mental condition under treatment varied greatly. Some became depressed, some emotional and others irritable; while, on the other hand, the irritable, morose, and bad-tempered became placid and amiable. In some the improvement in the mental condition was noted while thyroid was being administered; in others this was only noticeable when the period of reaction was well advanced. All the patients slept well. The temperature seemed to vary

considerably according to external conditions. Twenty-three cases were treated, eight men and fifteen women: two men recovered, three were relieved, and three were not improved; of the fifteen women, thirteen recovered and two were not improved. Amongst the patients treated were cases of mania, melancholia, syphilitic insanity, puerperal insanity, lactational insanity, climacteric insanity, and general paralysis. From a careful perusal of Dr. BRUCE's paper it would seem that in thyroid extract we have a means of distinctly influencing certain cases of insanity. Even from the experience so far obtained by Dr. BRUCE he is able to furnish suggestions as to the kind of case in which it is likely to be beneficial, without effect, or harmful, and it may be that the future will furnish even clearer indications.

UNDER the heading of "Parliament and Prison Reform" we publish in another column a statement sent to us by a correspondent who attacks in unmistakable language the present administration of English local prisons. His allegations are of a serious nature, and we feel it to be our duty not to pass them over without observation, but rather in general terms to call the attention of the profession to the more prominent among them. The two main subjects of unfavourable criticism are the prevalence of insanity and the death-rate. The prevalence of insanity in English prisons is said to have doubled, and the death-rate is stated to be much higher than in Irish prisons, although there may be a semblance of its having decreased in English prisons. Our correspondent points out that prisoners committed in a moribund condition are not now sent to gaol, a fact which contributes to reduce the death-rate. Also it is now, he says, more generally the practice to release prisoners who are in a dying condition before the expiration of their term. 'All this naturally very materially contributes to reduce the death-rate, but it does not mean that the prisons are more healthy or that the system of management is more conducive to the preservation of life. On the contrary, since the centralisation and the more bureaucratic management of prisons we have had a rigorous assimilation of *régime*, which is certainly contrary to all physiological facts. It is preposterous to suppose that identically the same quantity and quality of food, clothing, and exercise will suit equally well an agricultural labourer and the weak, degenerate worker from a sweating den or an unwholesome and overcrowded slum of a big city. Formerly, when the prisons were under local management, there was a much greater elasticity in the rules applied, and there were modifications in diet and clothing to suit special local and individual conditions.'

No doubt the Prisons Act of 1877 was the means of shifting the responsibility for the management of prisons from the magistrates to the Central Prisons Board at the Home Office, and it would appear that it is to this centralisation of authority that our correspondent attributes all the evils of the existing prison administration to which he refers. Although his figures may appear in themselves to warrant the construction that he puts upon them, we are bound to say, in all candour, that we are not prepared to go the length that he does in condemning upon them alone the present management of our prisons. For instance, with

regard to the death-rate our correspondent says that "there must be something radically wrong in the management of English local prisons will be admitted when the death-rate is compared with that of the Irish prisons." To make this an effective argument against the present system it would be necessary to show, as a preliminary to the consideration of the question, that during the antecedent period of magisterial management the death-rate in English prisons was not higher than in Irish prisons, or, at any rate, that the difference was less marked. Another point that our correspondent does not appear to have given effect to in the conclusions at which he has arrived is that his allegations apply in all their seriousness to a body of individuals who did not change with the transfer of power from the magistracy to the Home Office—viz., to the medical officers of the prisons. The questions of mal-administration which our correspondent raises are essentially physiological and pathological, and we must say candidly that we have every reason to think that the medical officers of prisons accept the responsibilities placed upon their shoulders, and that, generally speaking, they endeavour to carry out their duties honestly and fearlessly. Very large discretionary powers are in the present, as they have been in the past, entrusted to prison medical officers in the matter of the health of the inmates of our gaols; and this is both unavoidable and a matter of necessity. If magistrates in old days altered diet, clothing, &c., it was on the recommendation of their medical officers; if a central authority, as alleged, does not modify diet, clothing, &c., it is because the medical officers do not recommend it. We feel bound to say this, for if it were not so our prison system would be an atrocity and a farce.

But a prison system has an existence not merely with regard to its internal life and administration. It must be regarded as having a wider scope and purpose in its relation to the reduction of the amount of crime and to the better safeguarding of life and property in our midst. It is abundantly clear that a penal system which tended to encourage individuals to go into prison rather than seek to earn a livelihood by honest labour is faulty and worse than useless; and, on the other hand, it must not be forgotten that many individuals find a *régime* in prison life which, apart from the loss of "liberty," compares favourably with the miseries which it is often the lot of wretched and unwholesome members of the community to undergo.

To whatever cause or causes the fact may be attributed it is surely most significant, and not altogether unhelpful as to results on the criminal classes, that the population of our local prisons has decreased since the passing of the Prisons Act in 1877 from 20,833 to 13,850 in 1894, the lowest point having been reached by a steady decrease in 1892, when the number was 12,663, and that, too, notwithstanding the increase in the general population. We agree with our correspondent in his outspoken statement as to the importance of the questions which he has raised, and we trust that these questions will be fully inquired into by the Prisons Committee now sitting. We shall look forward to their report with much interest, not to say anxiety, for we feel assured that they will deal with the complicated subject of prison administration, not only in so far as it concerns the

well-being of the inmates of our gaols, but also in its wider relations as an integral and most important part of the legislative effort to protect the community and secure the highest public good.

Annotations.

"Ne quid nimalis."

ANTITOXIN AS A PATENT MEDICINE.

A MATTER of great importance was raised on Monday evening last in the House of Commons by a question addressed by Dr. Farquharson to the President of the Board of Trade respecting the production of antitoxin serum. The question ran thus:—"Whether his attention had been called to the fact that a specification for the preparation by a German method of remedial substances, and in particular diphtheria antitoxin in a concentrated form, was accepted by the Patent Office on Jan. 26th; whether such patent would hamper the production of the serum in a concentrated form in this country for the use of public infectious and other hospitals and in the military and naval hospitals; and whether it was the intention of the Government to permit such a patent to be granted." Mr. Bryce replied to the effect that the application in question had been received at the Patent Office, and that, apart from opposition, a patent would be granted in due course; but he at the same time reminded his questioner that the Patent Act of 1883 contains provisions by which a patentee can, if necessary, be compelled to license the use of his process upon reasonable terms. The question of granting monopolies for such things as medicines is one which, as we have repeatedly pointed out, deserves to be considered quite apart from the general question of patents for inventions, the interest of the public in the subject matter being of so very special a character as it is. In the case referred to by Dr. Farquharson there is undoubted reason for a protest in the fact that the intending patentee is, we believe, a medical practitioner, who therefore is bound by the traditions of our profession to give freely to the public the benefit of his scientific discoveries or invention. It can be no reason for relaxing this rule that the medical man in question is not a British subject, for the ethical rule for which we have always contended is not of any merely local application. Even if it could be shown that the powers of the Board of Trade to control the exercise by a patentee of his monopoly were sufficient to secure the public against being prejudiced by the monopoly we should be in no wise reconciled thereby to the introduction of commercial methods into the practice of medicine. As in this matter we are convinced that we express not merely our own opinion but that of our professional brethren throughout the British Isles, we trust that our protest will be supported also by the public opinion of the profession in Germany.

THE PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS.

THERE is a singular resemblance between the circumstances attending the recent death of the President of the Royal College of Surgeons of England and those connected with the only other occasion in which the President of the College has died during his term of office. Mr. J. W. Hulka was to have delivered the Hunterian Oration on Feb. 14th, but was prevented from doing so by illness; on Feb. 19th he died. In 1831 the Hunterian Oration was delivered on the same day, Feb. 14th,

by Mr. (afterwards Sir Anthony White), and the chair was to have been taken by the President, Mr. Headington, but illness prevented him from being present, and Mr. Keate presided at the meeting. Within a very few days Mr. Headington's illness proved fatal. When an office like the presidency of the Royal College of Surgeons is held for only one or two years, it must happen but seldom that the holder of it dies; and, indeed, sixty-four years have elapsed since this contingency first occurred. The meeting above mentioned at the College of Surgeons on Feb. 14th, 1831, was remarkable as being one of the earliest attempts of the Members of the College to hold a meeting within the walls of the College. Half-an-hour before the delivery of the Hunterian Oration was announced to commence the Members present held a meeting, in which the chief subject of discussion was the recent exclusion of the surgeons of the Royal Navy from the levees of the king. When the chairman, Mr. Keate, entered, he suggested that the meeting should continue after the delivery of the Hunterian Oration, and this was done, and two resolutions were carried; the chairman had, however, laid aside his robes of office, and he announced that he was not acting in his official capacity. Nothing came of the attempt, and the Council declined to consider the resolutions, as the meeting was irregular.

MILK-BORNE INFECTIOUS DISEASE.

THE control of the milk traffic is a subject which is daily receiving more and more attention, both at the hands of the public and the profession, and we imagine that ere long the necessity of extending, and perhaps even of compelling, the execution of the powers possessed by sanitary authorities will have to be considered in a practical spirit. The subject is beset with difficulties, as attempts to saddle a specific industry with limitations and liabilities not inflicted upon other food-preparing industries would be naturally much resented; and it is certainly not in the interests of public health to render the conditions of any trade so irksome as to encourage the concealment of infectious disease—a result which the too rigid application in practice of the theoretical aspects of infection would be not unlikely to bring about. The establishment of creameries drawing their milk supplies from farms in the vicinity, and the mixing at the creamery of the several supplies obtained, has introduced into the milk trade a comparatively new source of danger. Obviously the mixture of infected milk with milk not infected is a step calculated to specifically contaminate the whole; and the risks thus incurred both to the consumers of the separated milk and even, perhaps, of the cream and its products, must be patent to all. In THE LANCET of April 21st and Nov. 10th of last year we published some interesting articles by Dr. J. J. Welply¹ of Bandon, Ireland, on the subject, in which he described an extensive outbreak of enteric fever due to the consumption of separated milk from a creamery, and indicated some of the restrictions necessary to prevent these occurrences. These articles, which have certainly added materially to our knowledge of the manner in which milk-borne disease may be spread, have now been reprinted from our columns and published in pamphlet form, and although Dr. Welply's remarks apply more particularly to Ireland, the laws relating to the milk trade in that part of the United Kingdom are so similar to those in force here, that his suggestions may be taken as applying with equal force to England. *Appropos* of milk-borne typhoid fever, we notice that Dr. P. Q. Karkeek, the medical officer of health of Torquay, relates in his current annual report an outbreak of the disease in question due to the consumption of milk from a farm situated outside his own district. In commenting upon this Mr. Karkeek points out that when notification is not in

¹ Creameries and Infectious Diseases, by J. J. Welply, M.D., M.Ch. Q.U.I.

force the occurrence of cases of enteric fever amongst the milk consumers may be the first intimation that the disease exists at the farm or dairy from which the milk is derived; and even when notification is in force the obligation to notify does not extend to the districts in which the endangered milk is distributed. As a partial remedy for this state of affairs Mr. Karkeek recommends a system of compulsory cross notification—i.e., that the medical attendant shall notify to all the districts in which the milk from his patient's premises is distributed. We are afraid this suggestion would hardly be found to work in practice, more especially when applied to large towns where milk is frequently hawked about the streets and sold to persons whose names or addresses are quite unknown to the vendor. However, a discussion of the improvements which might be effected in the laws relating to the milk traffic would involve more space than we can at present devote to it. In regard to compulsory notification, it seems to us that its application to infectious disease occurring among the employes of dairies &c. would be but a partial solution of the problem, and that any additional legislation should extend to the notification of tuberculosis and eruptive diseases amongst the cows supplying the milk.

TWENTY YEARS AFTERWARDS.

MR. GAYLOR of Belper has for more than twenty years been medical officer of health for the Alfreton urban district. For looking after the sanitary status of 16,000 people he receives the by no means excessive remuneration of £50 per annum, and that he does his work well may be gathered from the fact that he has been re-elected annually since first appointed. However, *autres temps, autres mœurs*. The advent of the District Council has changed all this, and we learn from the *Alfreton and Belper Journal* that a member of the majority proposes to elect a new medical officer; also that before advertising the post the medical men in the town have been canvassed to know if they will be willing to stand for the post. Mr. Gaylor may say with the rejected suitor—

"Perhaps it was right to dissemble your love,
But why did you kick me downstairs?"

It is not alleged that he has neglected his duties in any way, and a more flagrant piece of injustice cannot be imagined. Here is a man who for twenty-two years has performed an arduous duty faithfully, and now he is to be superseded for what reason no one knows. That the other medical men in the town will reject the overtures of the council we feel certain, and we hope that the sense of fair play which is always said to be the characteristic of Englishmen will prevail and spare the Alfreton Council from being a by-word for injustice.

A REMINISCENCE OF THE FOUNDER OF "THE LANCET."

THE Speaker of the House of Commons has lately been appealed to with reference to the practice of members securing their seats by depositing their hats upon them at prayer time. A "political note" in the *Times* of March 5th recalls the fact that so long ago as fifty-three years a complaint was made with regard to the subject by a member of the medical profession, and our readers may be interested in knowing that the member of Parliament in question was the Founder of THE LANCET, "Thomas Wakley, Surgeon, M.P. for the Metropolitan District of Finsbury." (We quote from the title page of THE LANCET of 1842.) The following is the note in the *Times* which refers to Mr. Wakley: "Fifty years ago the securing of a seat at prayer time did not safeguard a member for the whole evening. On April 14th, 1842, Mr. Wakley publicly complained that, on returning to the House after an absence of two or three minutes, shortly before midnight, he found his seat occupied by an hon. member, who abruptly refused to give it up to

him; whereupon Speaker Shaw-Lefevre explained that any member, being at prayers, had a right to the seat he then occupied, but if he left it and went out of the House any hon. member might take it, and if it were given up it was a matter of courtesy, not of right. To remedy this anomaly a standing order was passed on April 28th, 1858, to the effect that any member having secured a seat at prayers be entitled to retain the same until the rising of the House. In 1880, Mr. Mitchell Henry having raised the question as to whether the putting of a hat on a seat did not mean 'a real working hat and not a colourable imitation,' Speaker Brand said the practice of placing a hat on the seat before prayers had prevailed for a considerable number of years, and the idea had always been that when so acting the member was in immediate attendance upon the House or on a committee. With regard to the retaining of seats with papers or gloves that had never been allowed." It will be noticed that the subject was reopened in 1880 by Mr. Mitchell Henry, who was also, curiously enough, a well-known medical man, being a Fellow of the Royal College of Surgeons of England.

A LAMENTABLE MISTAKE.

A SAD CASE of poisoning occurred last week at Skelmersdale near Ormskirk through the mistake of a druggist's apprentice. A woman went to purchase for her brother a black draught and received one ounce of tincture of opium in mistake, with the consequence of the death of the patient in about three hours. It appeared from the evidence at the inquest that the tincture of opium bottle was next to the black draught on the shelf in the shop, and the manager of the shop said so far as his experience went there was nothing unusual in keeping the opium next to the black draught or other harmless mixture and in a bottle of the same style and label as the rest. He said it would spoil the appearance of the shop to have bottles of different sizes and patterns, and appearance was of some importance, eliciting the appropriate remark from the coroner that "the lives of people are of some importance as well as the symmetry of a shop." There can be no doubt that if such customs do prevail in the ordinary druggist's place of business accidents or mistakes like this will take place. Surely a cupboard or shelves should be set apart, and could be, without spoiling the symmetry of a shop; and, besides, every bottle containing poison, such as tincture of opium, should have a distinct "poison" label on it. If this bottle had had such the purchaser would have seen the mistake being made. If it is requisite to dispense strong poisons in fluted bottles and label them "poison" it is equally requisite to adopt some plan by which mistakes such as that recorded above can be prevented.

CRIME AND ITS FACILITIES.

ON another page we publish the remarkable life history of a Spanish family, four members of which out of eight died violent deaths, either by their own or their neighbours' hands, while of the rest one only died "in his bed." We need hardly feel surprised if this catalogue of disaster should be regarded as suggesting the existence of a criminal constitution or family type. It is encouraging to find, however, that there is even among the class of experts devoted to the study of "crime" a divergence of opinion respecting the question of heredity in this relation. The resultant of such opinion amounts to a verdict of not proven and not probable. Mental and physical weakness, the depressing effect of poverty, numerous defects and frailties of character having a general significance, and climatic and racial variations even may exercise a certain influence upon character, but the true criminal type has not so far been plainly revealed as part of the mode and custom of moral evolution. Defective education has much to do with the matter, idleness

even more, nor should we omit to mention yet one other contributing factor—namely, the habit of carrying, needlessly in many cases, and using as freely, weapons of offence. The Spanish knife, indeed, may not always come under condemnation on this ground, and it is doubtless useful for many better purposes. Nevertheless, it is probably much less essential than it is believed to be by those who wear it. It has not been found to be equally indispensable by most other civilised peoples. Among ourselves there exists a no less indefensible custom, that of carrying superfluous firearms. Again and again have we been reminded of the reckless abuse associated with the pocket revolver, and the facts related by our correspondent and already commented on have a special interest as bearing upon this now familiar evil. We sincerely trust that the restrictive measure to which we alluded last week will before long be added to the Statute-book, and that it will by its practical success commend the principle of a general disarmament in regard to all similarly unnecessary weapons.

DIPHTHERIA IN LONDON.

THE deaths registered from diphtheria in London last week were 31 in number, an increase from 27 and 29 in the preceding two weeks. The corrected decennial average for the particular week is 29.6, exceeded last week by one. Only one of the deaths was in a person aged over twenty years, and 20 of them were in children aged from one to five years. Six were credited to Camberwell, 3 to Greenwich, and 2 each to St. Pancras, Islington, and Poplar sanitary areas. The removals to hospital numbered 43, less than half the cases having freshly arisen; and compare favourably with 49, 55, and 54 in the three preceding weeks. There were 463 patients suffering from the disease in hospital last Saturday, as against 500, 498, and 486 on the three Saturdays immediately preceding. In Greater London 9 deaths from diphtheria were registered, including 3 each in West Ham and Edmonton districts.

THE MUTILATION MARKET AND THE BUSINESS OF MENDICANCY.

AUSTRIA-HUNGARY is acquiring an evil pre-eminence in the manufacture of deformity and "lusus naturæ." Some eighteen months ago¹ we commented on the discovery made by the Croatian police of a regular mutilation den, where boys and girls of tender years were distorted or maimed to supply the mendicancy market—a den where by fracture or by continuous pressure between boards tightened by screws the legs and arms and spinal columns of these poor little victims were made to assume monstrous shapes—where even the eyes were gouged out and artificial sores created—all to provide the traffickers in street-begging with "objects" wherewith to solicit the alms of the benevolent. The arrest and severe punishment of these purveyors of deformity seems, however, to have put no effective stop to the practice, for we read in a Hungarian journal that "at Prague a man, Proschaska by name, was taken into custody charged with selling to the firm of Ritter and Munster of Holstein a number of children who, by means of specially contrived alimentation, had had their growth arrested for exposure as 'Lilliputians' in itinerant exhibitions." For every child so stunted and maltreated the sum of 300 florins was paid. We further read that not only were the authors of the "Lilliputianising" system brought to justice, but also the unnatural parents who consented to its being applied to their offspring and who received money for doing so. This is, of course, quite commendable on the part of the law, but we fear its heaviest punishment will have small deterrent force so long as the

public do not coöperate in suppressing the "business of mendicancy." Indiscriminate almsgiving lies at the root of the whole evil. Rather than take the trouble to ascertain where relief can most worthily and effectively be bestowed the so-called "benevolent" man will lavish his small change on every beggar who crosses his path, thereby creating half a dozen similar beggars for every one he subsidises and depriving the really well organised charities of the funds of which they are sorely in need. One of the most large-hearted economists of his generation, Archbishop Whateley, congratulated himself at the close of his life that he never gave a penny to a beggar, but that the money withheld from such objects had been profitably bestowed on the institutions, medical and other, where succour was vouchsafed only to the deserving. If the public acted with equal wisdom and stiffened its back against the professional mendicant while relaxing its pursestrings in support of well-accredited charities, an end would speedily be made of the "business of beggary" with all its concomitants of "mutilation dens" and "Lilliputian farms," and "lusus naturæ" manufactured and supplied to order. We hope the subject will be adequately discussed at the International Congress for the Protection of Infancy which will meet next July at Bordeaux.

THE UNIVERSITY OF CAMBRIDGE AND THE EXTENSION OF SCIENCE TEACHING.

PROFESSOR CLIFFORD ALLBUTT, in a letter published in another column, calls attention to a very reasonable method of extending university teaching which is contemplated this summer by the University of Cambridge. Members of the medical profession are invited to attend courses of lectures and demonstrations upon the scientific side of their professional work, and facilities are to be granted to them which should make their visit to the university town not only instructive but inexpensive and pleasant, as an insight into Cambridge collegiate life will certainly be among the things to be gained in a programme which provides for residence in college. The question of the advantages and disadvantages of the extension of university teaching is a very large one, into which we do not propose to enter; but the departure for which the various professors of science at Cambridge are responsible seems to us not only free from all objection but worthy of all praise, and we are certain that their invitation will be promptly replied to.

OYSTERS AND TYPHOID FEVER.

AN interesting note on this subject appears from the pen of Mrs. Percy Frankland in *Nature*.¹ She points out that De Giaksa some years ago found that in ordinary sea water the typhoid bacillus suffered very considerably in the competition with the numerous other water bacteria present; but it was still identified on the ninth day, and in other specimens it could be detected on the twenty-fifth day after it was introduced. Cassedebat, an investigator in the same field, found, however, that whilst many pathogenic bacteria, including anthrax and cholera, lived for many days, typhoid bacilli were destroyed in the course of forty-eight hours in sterilised sea water. On this point Professor Percy Frankland has made some interesting observations to the effect that the addition of 1 and 3 per cent. of common salt to ordinary Thames water into which typhoid bacilli were introduced acted very prejudicially on the latter, although it stimulated the multiplication of many forms of water bacteria. De Giaksa also experimented with fish, introducing pathogenic microbes by the mouth; but he selected only cultures of cholera and anthrax bacilli for this purpose, with the result, however, that in both cases these micro-organisms were entirely destroyed in a few hours. In the greater bulk of the

¹ THE LANCET, Aug. 26th, 1893.

¹ Feb. 28th, 1895.

experiments made with oysters and some varieties of mussels, replaced in sea water after inoculation through a hole in the shell which was afterwards sealed up, he found that the pathogenic microbes (cholera and anthrax) had entirely disappeared in six hours, whilst in only two instances were they detected in small numbers at the end of twenty-four hours, and in no case were they identified after forty-eight hours. From these results there would appear to be no evidence that these pathogenic microbes are capable of being transmitted by means of these shell-fish; but, as the writer suggests, the subject might well claim reinvestigation, especially in regard to oysters as possible transmitters of typhoid fever.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

DR. ARTHUR NEWSHOLME will deliver the third and fourth Milroy Lectures on Tuesday, March 12th, and Thursday, March 14th, respectively, on the Natural History and Affinities of Rheumatic Fever. The first two lectures we are pleased to be able to reproduce in full in our columns this week. Dr. H. D. Rolleston will deliver the Goulstonian Lectures on the Suprarenal Capsules on Tuesday, March 19th, Thursday, March 21st, and Tuesday, March 26th, respectively. Dr. G. Fielding Blandford will deliver the Lumleian Lectures on the Diagnosis, Prognosis, and Prophylaxis of Insanity on Thursday, March 28th, Tuesday, April 2nd, and Thursday, April 4th, respectively. All the lectures will be delivered as usual at the College, Pall Mall East, at 5 P.M.

THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

WE have received from Mr. J. Wickham Barnes the following copy of a petition, which is to be presented to the House of Commons shortly:—"To the Honourable the Commons of Great Britain and Ireland. The humble petition of the Poor-law Medical Officers' Association. Sheweth: That your petitioners are an Association representing the Poor-law medical officers of Great Britain. That notwithstanding the present equitable claims of Poor-law medical officers to superannuation under existing Acts of Parliament, your petitioners are ready to contribute a percentage deduction from their salaries and emoluments in order to secure certainty of superannuation to every Poor-law medical officer." All Poor-law medical officers who have not yet sent in their petitions to Mr. Wickham Barnes, hon. secretary of the Association, are earnestly requested to forward them to the Member of Parliament of their district for presentation before March 15th. We trust that the House will see their way to grant so reasonable a petition, feeling sure that they must see, as we do, that in every branch of public service the most obvious method of raising the standard of the officers—and so ensuring the best work—is to give to these officers that stability of position which can only be ensured by security as to their pecuniary future.

THE LATE MR. HULKE.

THE funeral of the late President of the Royal College of Surgeons of England took place on Saturday, Feb. 23rd, at Deal. Mr. Alfred Willett and Mr. Cowell represented the Royal College of Surgeons of England; Dr. J. Kingston Fowler, Mr. A. Pearce Gould, and Mr. G. H. Lock (house surgeon), the Middlesex Hospital; Dr. Sims Woodhead, the Laboratory Department of the Conjoint Board of the Colleges of Physicians of London and of Surgeons of England; Mr. Reginald Harrison, the Royal Medical and Chirurgical Society; Mr. John Langton and Dr. C. Holman, the Clinical Society; and Mr. Lydekker, F.R.S., the Geological Society. The service at Deal was conducted

by the Rev. Bruce Payne. Simultaneously a service was held at St. James's, Piccadilly, at which the Royal College of Physicians of London and other institutions with which the deceased was connected were officially represented. Among those present were Sir William Savory, Bart., F.R.S., the life-long friend of the deceased, so soon, alas, to follow him; Sir James Paget, Bart., F.R.S.; Sir William MacCormac, Mr. Birkett, Mr. Bryant, Mr. Butlin, Mr. Andrew Clark, and Mr. Trimmer, the secretary of the Royal College of Surgeons of England. The Royal College of Physicians was represented by the President, Sir J. Russell Reynolds, Bart., F.R.S.; the Censors, Dr. Pye-Smith, F.R.S., and Dr. T. T. Whiphram; and the Treasurer, Sir Dyce Duckworth. Among those present, but in unofficial capacity, were Sir George Johnson, F.R.S., Sir William Priestley, Sir George Buchanan, F.R.S., Dr. Allchin, Dr. Norman Moore, Dr. Pavy, F.R.S., and Dr. Douglas Powell. The Rector (the Rev. J. E. Kempe) conducted the service and gave a short address, in which he referred sympathetically to Mr. Hulke's long connexion with the parish.

THE WATER-SUPPLY OF CHESTER.

THE report of the Special Committee of the Chester Town Council, which was issued two months since, has not long been allowed to go unchallenged. Dr. W. M. Dobie, in an interesting and exhaustive letter in the *Chester Courant*, traverses many of the important conclusions to which the committee came. After indicating some of the defects in this report he expresses the opinion that an adequate supply of pure water from wells beyond the city and also from a point in the river above Farndon could most probably be obtained. While we agree with Dr. Dobie in his general remarks upon the value of chemical and bacteriological analysis of water, we must point out that the example of a chemical analysis of water which he quotes is hardly fair, since it does not contain a single item upon which a trustworthy opinion, from a sanitary point of view, could be based. His statement also in regard to the vitality of the bacillus typhosus in sewage water would appear to require modifying in view of the results of recent research. Taking it as a whole, however, Dr. Dobie's letter seems to us to establish a pretty fair case.

THE NEW (P) STREET DANGER: A CURIOUS POSSIBLE CAUSE.

A VERY remarkable observation, which may throw light upon the cause of the recent explosions in electric light boxes in the streets, appears in a letter addressed to the chairman of the St. Pancras Electric Light Committee by the Board of Trade. It is that Major Cardew, the electrical adviser of the Board, has discovered in his investigations that a remarkable deposit on some of the insulators contained a considerable quantity of the metal sodium. In the absence of further evidence upon this point it is impossible to account for this singular occurrence; but, of course, the electrolysis of a sodium salt is indicated, and it would be interesting to know whether the materials used in insulation contained any fusible salt of sodium such as, possibly, borax. At any rate, the manufacture of sodium under the pavements of the streets in this perfectly indiscriminate way is exceedingly dangerous, and demands prompt repression. To this end we are glad to learn that the Board of Trade have asked the assistance of the Royal Society and of the Institute of Electrical Engineers in order to investigate the causes leading to the formation of this substance, and thus to set at rest what at first sight appears to be a chimerical view. In the meantime the primary cause of the recent explosion cannot be accepted as having been satisfactorily decided. It may be coal gas, or it is just possible that the gas is derived from the distillation of gases out of the bituminous insulating material by the over-heating of the

cable. In one instance (at Leicester on Feb. 13th) the electric gas engineer attributed the explosion to the oil used in the insulating material having become "gasified" by the electric arc. In any case the boxes should be properly ventilated, and the air space reduced as far as practicable by filling them up with some inert material, much in the same way as the culverts built over high pressure gas mains for the purpose of getting to the mains and clearing them of obstructions are filled. If, again, it is shown to be due to defects in the gas main, pressure should, of course, be brought to bear upon the gas companies to have these defects remedied. It is reasonable, however, to suppose that the gas companies are just as anxious to prevent leakage and waste of their gas as everyone must be to learn of the discovery of an effective provision against any future occurrences of this kind, which experience has shown may imperil life and limb.

NIGHT SHELTERS FOR THE DESTITUTE.

THE recent exceptionally severe and prolonged frost has caused intense suffering among the unemployed and destitute classes, who will probably for some time yet be unable to resume their uncertain and precarious occupations. Philanthropic workers among these unfortunates recognise the primary necessity of protecting them from the inclement weather during the night as well as of providing a small allowance of food. Such a free refuge for the hopeless and despairing has been established in Phoenix Hall, Carlton Vale, in the north-west of London, and each night it affords a shelter to about 600 men. Financial help is greatly needed, and subscriptions will be thankfully received by Miss F. Ashdown, 27, Kilburn-park-road, N.W. Two Sisters of the Church attend at the hall every night to receive the applicants for admission, many of whom are in a truly woeful state.

THE MEATH HOME FOR FEMALE EPILEPTICS.

THE second annual report of the Meath Home of Comfort for Epileptics at Godalming will be read with interest by all who are seeking to benefit this unfortunate class. At this home only female epileptics are admitted, the limits of age being two years and thirty-five. The plan of treatment is to provide bright and healthy surroundings and suitable useful occupation, treatment by drugs taking a secondary place. Needlework, knitting, and basket-work are the occupations which are chiefly followed, and the proceeds of the sale of the manufactured articles form an important item in the receipts of the home, amounting, together with those from the sale of garden produce, &c., to upwards of £100. The report by the medical officer shows a marked improvement in the health of most of the cases admitted. We regret to see that the home is crippled for want of funds. Six inmates had to be discharged in consequence of fees falling, there being a very limited number of free beds. It is to be hoped that so excellent a movement will not fail to receive warm and generous public encouragement. All subscriptions may be sent to Colonel Clarke, R.E., Uphill, Warren-road, Guildford.

THE DIFFUSION OF SMALL-POX.

THROUGHOUT the United Kingdom the news coming to us in respect of last week concerning the prevalence of small-pox is of a most reassuring character. In London there were but 8 new cases and 1 registered death—namely, that of a person between the ages of twenty and forty belonging to the Newington sanitary area, and as to whose vaccination no statement is forthcoming. All the 8 cases were removed to hospital, the institutions of the Metropolitan Asylums Board containing at the close of the week 68 patients, as compared with 58, 67, and 75 on the three preceding Saturdays. One or two cases in suburban districts are recorded. In the rest of

England there were a few attacks at Birmingham, Liverpool (where also 1 death was registered), and at a small number of other Lancashire towns. In the third week of February there were 2 deaths from small-pox in Edinburgh, and in the same week there were 6 deaths in Dublin. Of these, 2 were in vaccinated persons, aged respectively eighteen and thirty-eight years, and 4 in unvaccinated individuals, aged twenty days, twenty-one days, twenty-eight years, and thirty-three years respectively. The admissions to hospital, which had been 69, 60, and 56 in the three preceding weeks, fell further to 37, and were exceeded by the discharges, which were 44; the patients remaining under treatment being 135, in addition to 119 convalescents at the South Dublin Union small-pox hospital at Kilmmainham. The total of 254 thus made compares favourably with recent records.

PROPOSED ASSOCIATION OF QUALIFIED MEDICAL ASSISTANTS, JUNIOR MEDICAL OFFICERS, AND LOCUM-TENENTS.

WE are desired by Mr. T. Howard Brocklehurst, who is acting as organising secretary, to announce that a meeting in connexion with the proposed Association of Qualified Medical Assistants, Junior Medical Officers, and Locum-tenents will be held on Monday next, the 11th inst., in the Examination Hall, Victoria Embankment, at 3 P.M. Dr. J. G. Glover will preside, and all interested in the matter are invited to attend. In announcing this meeting we beg to refer our readers to a letter from Mr. Brocklehurst which appeared in our columns on Jan. 5th of this year, and to our leading article in the same issue. Mr. Brocklehurst's letter gives the reasons for his belief that the new departure would work for general professional good, and our article endorses, with certain limits, his views. We are happy, therefore, to assist the movement by recommending to all concerned that they should attend the meeting and assist in placing the proposed association upon a definite basis.

THE COUNTY COUNCIL ELECTION.

THE medical profession of London was by no means unrepresented at the election for the London County Council, which took place on Saturday last; but we should have been glad to see our professional brethren in larger numbers before the constituencies. Seven medical practitioners presented themselves as candidates for election, and of these no fewer than five were returned. The seats so filled are Bermondsey, occupied by Mr. G. J. Cooper; Greenwich, by Dr. Ralph Gooding; North Hackney, by Dr. E. B. Forman; West St. Pancras, by Dr. W. J. Collins; and Wandsworth, by Dr. G. B. Longstaff. In every one of these constituencies, as, indeed, throughout the metropolis, there was a contested election, and in every instance the medical practitioner came in at the head of the poll. Four of the five, that is to say all save Dr. Gooding, sat upon the last County Council, so that they were known to their constituents and will be familiar to their work. Dr. Gooding was a candidate for a constituency within which he is resident, and has received the suffrages of his neighbours. We congratulate both him and them upon his accession to this new sphere of usefulness. The medical element in the County Council has not received any increase of strength on the present occasion, for the addition of Dr. Gooding to its ranks is balanced by the loss of Mr. H. Harris who sat for Brixton in the last Council, and whose name, as well as that of Mr. Gibson Bott, we regret to miss from the new muster-roll. We should have been glad, as we have said, to see a more adequate representation of the art of medicine in the ranks of the councillors, for, having regard to the very large proportion of the Council's work which bears directly or

indirectly upon the public health, we cannot regard the proportion of five members out of 118 as at all adequately representing the interest which the medical profession takes, and is bound to take, in the management of London municipal affairs. This becomes very evident if a thought is given to the immense amount of work which devolves upon the committees of the Council—work which, although done in comparative obscurity, is of the greatest importance to the community and makes proportionate demands upon the time and attention of the members. At present the institution is new, and can hardly be said to have got into steady working order. Practical aims and practical men are elbowed aside to some extent by politicians and theories; but as time wears on, and the functions of this body become more clearly defined and its ambitions more circumscribed, we confidently expect to see medical practitioners taking a growing share in its labours, and, we may add with equal confidence, in its successes.

SIR FRANCIS WYATT TRUSCOTT.

By the death of Sir Francis Wyatt Truscott the City of London has lost one of its representative public men. The deceased knight suffered from bronchitis and asthma, and died on March 3rd after a short illness. Born in Truro in 1824, he was admitted to the Corporation of London as a Common Councilman in 1853, and in 1871-72 he and Sir John Bennett were sheriffs. As many of our readers will remember, it was during this period that the Prince of Wales safely passed through his very severe attack of enteric fever, and the national thankfulness for this happy result found expression in various ways, which in the City took the form of a Thanksgiving Service in St. Paul's Cathedral, attended by the Queen and the Royal Family, and followed by a display of illuminations in the evening. Both sheriffs were knighted in recognition of their services on this occasion. In 1871 Sir Francis Truscott became Alderman of Dowgate Ward, and in 1879 he was elected Lord Mayor, his term of office being marked by several important civic events, and by his elevation to the office of Grand Warden of Freemasons, in which capacity he entertained the Prince of Wales, the Grand Master, and other dignitaries of the craft at a Mansion House banquet. Sir Francis Truscott was a member of the firm of Messrs. James Truscott and Sons, printers and stationers; besides his services to the Corporation he filled many public positions of honour and responsibility. He rendered great services to the cause of the Metropolitan Hospital Sunday Fund, and it is for this reason more especially that we feel that his death should be not unrecorded in the columns of THE LANCET.

THE INFLUENZA EPIDEMIC.

It may reasonably be hoped that the influenza epidemic prevailing in London is now on the decline, although the character of the disease and its obvious relationship to grave pulmonary affections will, we fear, be evidenced in the heightened death-rate for a few weeks to come. One feature of the present recrudescence of the disease—for it has not been entirely absent from this country since its appearance at the end of 1889—is the irregularity of its incidence, contrasting with the far more orderly march of the great pandemic wave which traversed the globe five years ago. We hear of its appearance in certain great Continental cities, but without any evidence of its being conveyed from one to the other. This would accord with the view that the influenzal germ or virus still persists in places where it was introduced at the time of the pandemic, and that some local conditions have served to bring about its renewed activity and virulence. Here in England the phenomenal frost, which has coincided with the out-

break, suggests a heightening of individual susceptibility to the disease from the depression of vital powers produced by the influence of cold. But hitherto no concordance has been established between the prevalence of influenza and exceptional climatic conditions, at least in the manner suggested by the above hypothesis. In his admirable study of the mortality from influenza which appears in the current volume of the Epidemiological Transactions, Dr. Franklin Parsons shows that since the disease reached this country from the East at the close of 1889 there have been in all five epidemics, notably in London—namely, (1) in the winter of 1889-90, (2) in the spring and summer of 1891, (3) in the winter of 1891-92, (4) in the spring of 1893, and (5) in the winter of 1893-94. Each of these outbreaks arose with marked suddenness and rapidly culminated, although the later ones declined more slowly than the earlier. As Dr. Parsons points out, the character of the disease in this respect has been approaching rather to that of an endemic disease with seasonal prevalence. We would, however, fain hope from what epidemiology teaches that influenza has not come to stay as an endemic in these islands. It is true that it has already persisted longer than previously recorded outbreaks would suggest, and there is, indeed, no *a priori* ground for rejecting the notion that it may become as fixed a habitant as measles or scarlet fever, having, like them, periods of epidemic prevalence, governed doubtless by some laws or conditions as yet unknown. As regards the mortality attributable directly to influenza, we would remark that when, as at present, the outbreak coincides with states of weather favourable to respiratory disease, there is risk of attributing to influenza itself a far greater virulence than it actually possesses. The advent of more genial weather will operate in diminishing the mortality from respiratory affections, and in hastening the convalescence of those who have been subjected to the depressing action of the virus of influenza.

THE LATE PROFESSOR BLACKIE.

EDINBURGH and her school have sustained a severe loss in the death of this kindly scholar and brilliant man of letters. "An Old Pupil" writes:—"For thirty years John Stuart Blackie held the Greek Chair in our University, and if he did not turn out a generation of Porsons and Hermanns he certainly threw the charm of Hellenic literature and art round the mental equipment of thousands of young aspirants to all the professions. More a man of letters than a philologist, though by no means inadequate on this latter side, he sought to make Greek a living influence even in the case of those who had no leisure or capacity for the language. He was the life and soul of that private symposium peculiar, I believe, to Edinburgh, at which old pupils and advanced professional men assembled in rotation at each other's houses to read and discuss the master-works of Greek poetry or speculation. The medical calling was largely represented on those occasions, and the genial friction of mind with mind which the readings called into play had a wonderful effect in relieving the restrictive influences contracted by absorption in purely professional work. Of no calling was Professor Blackie more cordially enamoured than the medical, constantly attending the meetings of the Medico-Chirurgical Society and interesting himself with something more than the enthusiasm of an enlightened amateur in the great problems emerging from time to time in the development of the healing art. The last time I met him was in London, when he surprised and delighted the company with his exposition of the Hippocratic treatise on Air, Water, and Locality, and made himself instrumental on the occasion in bringing to the notice of the medical scholars present the recently published biography of the

great critic and physician, Adamantios Koraïs, the modern Greek who graduated in medicine at Montpellier and left an epoch-making mark on Hippocrates and other classics. He was at the head of every liberally devised scheme for university extension, and the Edinburgh school owes it largely to him that it keeps so vigilantly in touch with academic progress, not only in literature but in science, particularly as reinforced from abroad."

DEATH OF DR. HACK TUKE.

WE regret to have to announce the death of Dr. Hack Tuke, which took place at his residence, 63, Welbeck-street, on March 5th, from cerebral hæmorrhage. Owing to the extreme pressure on our space this week we are compelled to defer the publication of an adequate biographical notice until our next issue.

A MEMORIAL of the late Dr. Francesco Gasco, Professor of Comparative Anatomy and Embryology in the University of Rome, whose brilliant career we sketched in THE LANCET of Nov. 3rd, 1894, is in active progression. Its promoters include the most distinguished names among his colleagues, as well as those of many old pupils now holding professorships in the various Italian schools. It will take the form of a monument to be erected over his tomb in the Campo Verano.

OUR special articles dealing with the Difficulties under the Infectious Disease (Notification) Act have been reprinted in pamphlet form, and the pamphlet will be sent post free at a charge of sixpence upon application to the office. The reprint has been undertaken as a practical response to the many questions which have reached us concerning the points raised by the articles.

HIS ROYAL HIGHNESS THE DUKE OF CAMBRIDGE has consented to take the chair at the festival dinner of the National Hospital for the Paralysed and Epileptic, Queen-square, which is to be held on Tuesday, April 2nd, in the Whitehall Rooms of the Hôtel Métropole at seven o'clock.

MR. S. L. HINDE, L.S.A., who so ably assisted in a recent campaign against the Arab slave raiders on the Upper Congo, will lecture on his three years' travelling and fighting experiences in the Congo Free State before the Royal Geographical Society on Monday next, March 11th.

WE regret to learn the death of Mr. Charles Edward Armand Semple, M.B. Cantab., M.R.C.P. Lond., Physician to the Royal Society of Musicians and Secretary to the Court of Examiners and Board of Examination in Arts of the Apothecaries' Society of London.

WE are sorry to announce that Dr. R. C. A. Prior, the Senior Fellow of the Royal College of Physicians of London, is suffering from a very severe attack of influenza.

WE have heard with deep concern of the death of Mr. Charles H. Robinson, M.R.C.P., F.R.C.S. Irel., of Kingstown, who was a frequent contributor to our columns.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—The annual meeting of governors was held on March 1st at the hospital in the Marylebone-road, Major McMahon presiding. The committee's report stated that H.R.H. the Duchess of York has graciously consented to become a vice-patron of the hospital. During 1894 there had been 1079 in-patients and 1318 out-patients. The expenditure had exceeded the income by £1571.

PARLIAMENT AND PRISON REFORM.

(FROM A CORRESPONDENT.)

FOR some time past much dissatisfaction has been expressed concerning the administration of English local prisons. There have been deputations to the Premier and to the Home Secretary from representatives of societies that seek to assist discharged prisoners, and articles have appeared in the magazines and the newspapers. As a result of these complaints Parliament appointed last summer a committee to inquire into the matter. This committee, under the presidency of Mr. Herbert Gladstone, has already held about a dozen sittings. Among its members we note the names of Dr. Bridges and Sir John Dorington, M.P. The latter gentleman is a county magistrate, and this is important, because the Prisons Act of 1877 has always been looked upon with considerable disfavour by county magistrates. This Act completely deprived them of all responsibility in the management of prisons, yet it left them a semblance of power by giving them the right of inspection &c. All real power was centralised by the Act at the Home Office. Such centralisation has naturally destroyed the local interest formerly felt in the fate of prisoners, with, it is maintained, very disastrous results on the health of the inmates of local prisons. The prevalence of insanity in English prisons has doubled and the death-rate is much higher than in Irish prisons. These are weighty facts and alone suffice to justify the holding of a Parliamentary inquiry. It may, nevertheless, be urged that the death-rate in English prisons has decreased. In reality, however, the facts may not be what the figures seem to indicate. On p. 24 of the seventeenth report of the Prison Commissioners we find allusion to a circular from the Home Secretary to the magistrates, and it will be seen that formerly a large number of prisoners were committed in a moribund condition. Now such cases are not sent to gaol, and this contributes to reduce the death-rate. Also it is now more generally the practice to release prisoners who are in a dying condition before the expiration of their term. All this naturally very materially contributes to reduce the death-rate, but it does not mean that the prisons are more healthy or that the system of management is more conducive to the preservation of life. On the contrary, since the centralisation and the more bureaucratic management of prisons we have had a rigorous assimilation of régime, which is certainly contrary to all physiological facts. It is preposterous to suppose that identically the same quantity and quality of food, clothing, and exercise will suit equally well an agricultural labourer and the weak degenerate worker from a sweating den or an unwholesome and overcrowded slum of a big city. Nor is the climate of every part of England so identically alike that exactly the same food and clothing will do for every prison. Also there are the sanitary conditions, the soil, the drainage, the warming, the ventilation, which differ in the various prisons; and a prison dress which is ample in a dry well-warmed prison is quite insufficient where dampness prevails and the warming methods are defective. Formerly, when the prisons were under local management, there was a much greater elasticity in the rules applied, and there were modifications in diet and clothing to suit special local and individual conditions.

That there must be something radically wrong in the management of English local prisons will be admitted when the death-rate is compared with that of the Irish prisons. The average annual death-rate in the Irish prisons during the ten years 1883-84 to 1892-93 was equal to 4.15 per 1000, while in the English local prisons it amounted to 7.7. The report of the Parliamentary committee should explain why there is so notable a difference between the Irish and English prisons. It certainly will be urged that the treatment of the Irish prisoners is at once more humane and more in keeping with physiological laws. There is one fact that stands out in bold relief—namely, that the punishment-rate is much lower in the Irish than in the English prisons, and furthermore, that in Ireland there is no corporal punishment inflicted for offences committed while in prison. In England, in 1893-94, no less than 98 prisoners were flogged for bad conduct while in prison, and 87 were put in irons. In Ireland there are no irons, though sometimes leather straps or a sort of muff are used, but even this milder form of punishment is not so frequently employed as the irons in England. The question

arises whether there is not some connexion between the high rate of punishment and the high rate of mortality in English local prisons. It must be borne in mind that ordinary imprisonment is, at best, a very severe physical trial. When, however, this is aggravated by a large amount of prison punishment the consequences may be serious. Punishment involves confinement in cells, reduction of diet, and loss of stage privileges; it means solitary confinement in dark cells and no exercise. Assuredly this sort of punishment must reduce the vitality of the prisoners, and there were upwards of 30,000 such penalties inflicted in the English prisons during the year 1893-94.

Some attempt has been made to show that the prison treatment cannot be so very bad, as it is not the old prisoners who commit suicide. Nothing can be more erroneous than this statement. It is said that in the five years ending March, 1893, there were in all 43 suicides in the prisons. Of these, 16 occurred within one week of imprisonment, 9 within two weeks, 5 within a month, 5 within two months, 3 within three months, and only 2 after twelve months' imprisonment. From this one is led to believe that suicides are much more frequent among persons condemned to short terms, or who have not yet acquired any experience of prison life, and who kill themselves from apprehension of what it may be rather than from actual knowledge. Yet any statistician must know that such matters must be judged, not by the actual number of suicides, but by their proportionate relation to the number of persons concerned. Thus, for instance, in the year 1893-94, there were 161,641 persons sentenced to imprisonment. Out of this number, however, only 680 were sentenced to terms of over a year. Two suicides out of 680 persons is a much higher proportion of deaths than 41 out of the remaining 161,161. From the 43 suicides must be deducted not only the 2 suicides that occurred after a year's imprisonment, but also 19 suicides of prisoners under remand awaiting their trial. These latter were not exposed to the full rigor of prison discipline and diet. There thus remain 24 suicides committed by convicted prisoners before they had undergone twelve months' imprisonment, as opposed to 2 suicides after twelve months; and these two suicides, as compared to the very small number of persons in prison for more than twelve months, represent much the highest death-rate from suicide. As for the ordinary death-rate, it will be found that probably more than half the prisoners who die in prison are old offenders. The proportion is greater than that shown by the actual figures given, for in some cases previous convictions are successfully concealed. In 1894 there were 111 prisoners died, and 69 or 70 had undergone previous sentences of imprisonment. This seems to indicate the fatal effects of repeated imprisonment.

With regard to the very alarming increase of insanity among prisoners, it is remarkable that, though the number of previous convictions is given in the death-rate, no similar figures exist relating to the number of convictions in cases of insanity. It is, therefore, not possible to check the assertion made that, out of 354 prisoners declared to be insane in 1893-94, only 20 had been previously imprisoned. This seems most unlikely, for it so happens that the cases of previous imprisonment are incidentally recorded in the report received from Holloway Gaol. There we find that, of the prisoners who became insane in Holloway Gaol, 15 had been in prison before. Thus, if the number 20 is correct, this only leaves 5 prisoners for all the other prisons of England who can be described as having undergone previous imprisonments and as having become insane. Again, the question might be asked why is there not a comparative summary of insanity among prisoners during the different years? It is only by looking at the judicial statistics that one discovers the frequency of insanity has doubled under the present centralised system of management. In the face of such circumstances it may be asked whether the prison authorities have consulted experts on mental disease. It is understood that Mr. Lewis of the Wakefield West Riding Asylum and Dr. Claye Shaw have been before the Parliamentary committee. Evidence has been taken on the cellular system, the restriction of prison industries and their effect on the increase of insanity. From my knowledge of the subject, and what such authorities as the above medical witnesses are likely to think, I feel convinced that they will have condemned the present manner of applying the cellular system.

A great deal of valuable evidence has been obtained by the Parliamentary committee. Their labours are not likely to terminate soon, as the scope of their reference has been

extended. Under these circumstances would it not be well to publish the evidence already collected? The public have good reason to be anxious about the matter, and perhaps fuller information would be forthcoming if more was known of what is now being done. So far as the inquiry has actually gone, the results, we have good reason for believing, seem to point to the probable breaking down of the bureaucratic system at the Home Office. Then efforts will be made to introduce a different method of dealing with juvenile offenders, to establish a more rational classification of prisoners, to extend industrialism, and to relax the rigidity of the cellular system. It is also well nigh certain that improved and more varied diet will be proposed, more especially in the earlier stages of imprisonment. What with the very scanty diet and the further reduction in the amount of food as a form of punishment for breach of prison discipline, the prisoners, it is maintained, are reduced to such a state of weakness that it often happens they leave prison physically unfit for work. This, in any case, is the opinion of such authorities on the subject as Mr. Wheatley of the Brook-street St. Giles Mission to Discharged Prisoners and of the officers of the Salvation Army barracks, who are constantly seeking to assist discharged prisoners. These men come out of prison in a dazed condition and are too often totally unfit for work. Consequently many are driven by sheer necessity to steal and thus again fall into the hands of the police. This explains the great increase of recidivism, which is another cause of complaint against the present system of prison administration. Certainly reform as well as punishment should be the object of imprisonment, and reform which is unmindful of physiological laws cannot be effective. If a prisoner when discharged is to earn an honest livelihood he must have the health and intelligence to work. Neither the one nor the other can be engendered by solitary confinement and insufficient food and exercise. It is difficult to say how far a criminal is responsible for his actions or how far he is the victim of inherited tendencies and vicious surroundings. To reform such persons great powers of observation, a quick appreciation, and deep knowledge of human character, combined with infinite tact, are necessary. These rare qualities are not easily found, and certainly the ordinary prison gaoler cannot be expected to display such subtle understanding. For the most part gaolers are old soldiers. They are not well paid, and sometimes they are very much overworked. It is natural that they should occasionally vent the ill-humour these hard conditions engender on the prisoners in their charge. Perhaps if the truth could be ascertained it would be seen that many a prisoner has been punished for infringing prison discipline or for committing some other offence of which he would not have been guilty if he had been treated in a more judicious manner by his gaoler. It may also happen that prisoners fail to obey rules &c., not from malice prepense, but because they are in a semi-demented condition. But the gaoler who is a mere military martinet is not able to distinguish between a weak-minded and rebellious or disobedient prisoner. The gaoler does not pause to make psychological studies, he just carries out the rules with rigid inflexibility, as if every human being was identically alike. As a result, evil dispositions are aggravated instead of being checked and modified. Then follows punishment upon punishment, notably solitary confinement, with the encouragement it gives to the secret vices that lay the foundation of insanity. Thus, under the present system of management, as already stated, the prevalence of insanity in local English prisons has doubled, the death-rate is nearly twice as high as in Irish prisons, and recidivism is on the increase. Evidently there is urgent need of reform, and it is desirable that the Parliamentary Committee should press forward its inquiry and suggest practical remedies.

ARMY MEDICAL DEPARTMENT REPORT FOR 1893, WITH APPENDIX.

[SECOND NOTICE.]

It is of course impossible to do more than refer to some of the more salient points in noticing a voluminous official report of this kind, and while that for 1893 may be said to be, upon the whole, of high average merit, there is happily no important epidemic or serious outbreak of disease recorded

for that year, or any subject of such special interest as to claim particular attention. The health of the troops serving in the United Kingdom was favourable. The most important statistical ratios of sickness and mortality are shown in the following table, calculated as regards deaths and invaliding on strength including men detached:—

	Ratios per 1000 of strength.			
	Admissions.	Deaths.	Invaliding.	Constantly sick.
England and Wales...	790.8	5.43	16.14	46.90
Scotland	628.5	6.11	18.06	26.92
Ireland	652.5	4.13	14.11	38.21
United Kingdom...	751.6	5.13	15.70	44.10

Compared with 1892, the admission-rate in England and Wales shows a decline of 1.6 per 1000, the death-rate an increase of 1.00, and the constantly-sick rate an increase of 1.95. While the admission-rate has declined by 13.2 per 1000, the death and constantly-sick rates show a fractional increase as compared with the average ratios of the preceding seven years. The admission, death, and constantly-sick rates in Scotland are all rather higher than those of the previous year, but less than those of the preceding seven years, except the death-rate, which shows an increase of 0.59 per 1000. In Ireland there is a decline in the admission, death, and constantly-sick rates of 48.5, 0.09, and 0.93 per 1000 respectively, and there is also a decrease in the admission, death, and constantly-sick rates in 1893 as compared with those for the previous seven years. Taking the United Kingdom as a whole, the admission-rate shows a decline of 9.7 per 1000, as compared with 1892; the death and constantly-sick rates have, however, slightly increased—0.75 and 1.35 respectively; but there is a decrease in all these rates as compared with the previous ten years.

In England and Wales there were 103 admissions and 16 deaths in 1893 from enteric fever; in Scotland only 3 admissions, and in Ireland 45 cases and 6 deaths. The largest number of cases in any station was at Aldershot—49 cases and 9 deaths. Most of the cases arose in the Marlborough lines, and their occurrence, we are told, became the subject of investigation by a special committee. Out of 45 cases reported in Ireland 25, with 3 deaths, occurred in Dublin. "The exact cause is not known, but Dublin, as stated in last year's report, is notoriously unhealthy where enteric fever is concerned."

Taking all forms of venereal disease together the admissions from this cause were 19,484, and the average number constantly sick 1670.02, the total admission ratio being 194.6 per 1000, and the constantly-sick rate 16.63. This represents a very large amount of inefficiency, but as compared with previous years the rates seem to have, on the whole, decreased. The greatest prevalence of these diseases was in the Channel Islands, the Home, Eastern, Woolwich, Western, and Dublin districts. The lowest rate was in the Cork district—86.3 per 1000. An increase in the admission-rate, as compared with last year, is observed in eight districts, especially in Belfast, Dublin, and Aldershot.

We need not do more than refer to the tables which have been prepared to show the influence of age and length of service on sickness, mortality, and invaliding among the troops in the kingdom. The following table shows the rates of sickness and mortality of troops quartered in the large camps at Aldershot, Colchester, Shorncliffe, the Curragh, &c., as compared with those of troops stationed in thirty-seven large towns:—

1893.	Average annual strength.	Ratio per 1000 of mean strength.		
		Admissions.	Deaths.	Constantly sick.
Camps	24,733	783.0	3.92	48.32
Towns	53,282	802.2	5.36	48.26

At p. 13 there is a table showing the vital statistics of each arm of the service, in which the relatively high admission, invaliding, and constantly-sick rates of the Foot Guards are apparent.

There is not much to detain us in the sanitary reports of the home stations. The principal medical officer, Aldershot, considers that the occurrence of enteric fever at that camp was connected with faulty drainage, more especially in the North Camp, where several of the cases appear to have been due to sewer air, and the insanitary state of some of the huts. These huts are stated to be fast disappearing, and with this and the remodelling of the whole system of drainage consequent on the completion of the new brick barracks and married quarters it is hoped that local insanitary causes will be removed. The new Tournay barracks are, it seems, temporarily used as a hospital pending the construction of the new one that has been authorised. The medical officers' quarters in these lines have, it is stated, been condemned, and the present sewage farm is to be closed and a new one at a greater distance from the camp is to be provided. The drainage of Wellington lines was being completely reconstructed. *En passant* we may remark that the coir mattresses in use are stated to have been unfavourably reported on, as they are more difficult to clean than the straw palliasses. There is one subject alluded to in some of the sanitary reports which we regard as highly important for the health and comfort of the soldier—viz., the provision of rooms for drying his clothing when saturated with wet, as it often is; and we think, too, that there should be a sufficient supply of hot water for baths and ablution rooms in barracks and camps to enable soldiers to have a warm bath periodically during the cold weather. It is not at all likely that soldiers will use the kind of baths provided at present during such Arctic weather as we have recently had, for example.

Turning to the health of the troops serving in the Mediterranean, there is not much to be said. The results as regards Gibraltar, where the average strength was 4743, are satisfactory; the mortality was only 2.74 per 1000, which shows a decrease on the average for the previous ten years, although the admission and constantly-sick rates were somewhat higher in 1893. Whenever a case of enteric fever occurs the system uniformly adopted is for the medical officer in charge of the barracks, in conjunction with an officer of the Royal Engineers, to endeavour to trace out its cause. The great sanitary problems in Gibraltar are the prevention and mitigation of the overcrowding of a dense population, the provision of a good and adequate water-supply, and an improved system of drainage. The project of constructing a sewage outfall on the eastern beach, the principal medical officer tells us, has been abandoned, and a new scheme, with outfall at Europa Point, is likely to be adopted. A large non-dieted hospital has been opened at the Town Range Barracks. The disinfection of clothing and bedding is carried out by the Colonial authorities under a fixed scale of charges, and there is no doubt that this is by far the simplest and most economical method of procedure for the troops wherever the means are already available.

Malta with an average strength of 7161, had a death-rate during 1893 of 10.47 per 1000. An outbreak of enteric fever took place at Pembroke Camp chiefly among the men of the 1st Gloucestershire Regiment, recently arrived from England. A commission reported, after careful investigation, that the outbreak was attributed to contaminated water. There were 171 admissions for ague, 121 for remittent fever, and 2 for malarial cachexia, but no deaths. Ague is not a disease of Malta, and the prevalence of this fever in the command was attributable to the arrival of a regiment from Mauritius and troops from India, who brought the disease with them. During the summer months halt the troops, we are told, sleep under canvas—an excellent practice, which would do no harm if extended to all of them. Cyprus, which is now given up as a military station, was healthy, and has always proved so during our occupation of it, except at first, when the great sickness was mainly attributable to the exceptional character of the season, and still more to our own want of care and forethought in making proper provision.

Passing over Canada, the West Indies, and Western and South Africa, we come to the Mauritius, where the average strength of the garrison was happily small (551), for it is a most malarious and unhealthy station, especially as far as Port Louis is concerned. Malarial fevers, which have been for many years past very prevalent, gave rise in 1893 to no less than 607 admissions and 5 deaths, giving ratios of 110.6 per 1000 admissions and 9.07 deaths. Of the 607 admissions, 447 were cases of remittent fever and 160 cases of ague. There were 82 invalids sent home during the year, amounting to 148.82 per 1000 of strength; of these, however,

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APPENDIX

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only 15, or 27.22 per 1000, were finally discharged. The greatly increased prevalence of malarial fever in 1893 is attributed to the severe rainfall and mass of vegetable debris washed down by the hurricane in the preceding year. There is probably no place that affords better opportunities for the study of the relation of Laveran's parasite to malarial fever than the Mauritius, and we trust that we shall be furnished later with the results of the examination of the blood of patients exhibiting the phenomena of these fevers. The pathological cause should be determined beyond all doubt, and it should also be ascertained whether the cyclical growth and development of the parasite correspond with the cyclical periodicity of the fever, and whether the appearance of the young *anetæ* in the corpuscles and that of their sporulation correspond with the apyrexial and fever accession periods of the disease.

A considerable part of the report is, of course, devoted to the health statistics and sanitary state of the European troops in India. The prevalence of venereal diseases and the grave amount of inefficiency to which they give rise, as well as the prevalence of enteric fever among our troops moving in India, naturally receive a good deal of attention.

The average strength of the warrant officers, non-commissioned officers, and men in India for 1893 was 69,865; the admissions into hospital were 98,983; and the deaths 919, of which 881 took place in India, and 38 (being those of invalids) on the passage to or after arrival in England. The rates of sickness for each of the three commands is shown in the following table:—

	Ratio per 1000 of mean strength.			
	Admitted.	Died.	Invalided home.	Constantly sick.
Bengal	1468.4	14.95	26.07	90.63
Madras	1232.2	9.81	26.22	85.01
Bombay	1434.8	10.73	22.04	75.34
Total	1416.8	13.15	25.32	86.60
Ten years, 1883-1892.	1448.3	15.21	25.51	76.22

The section of the report devoted to Egypt is interesting. The general health of the troops in this command during the year was not very satisfactory and compares unfavourable with that of the previous year. There was a slight decrease in the death-rate, but the sick-rates are increased, more especially at Cairo. The greater part of the troops had only arrived in the country during the year. The sanitary state of the barracks and hospitals was well attended to and satisfactory, which cannot be said, however, of places outside them in their vicinity.

We have only a very brief space left for the papers in the appendix to the report. That on the progress of hygiene is well worth reading, as it briefly summarises the chief points which have attracted attention during the year and furnishes the reader with a good deal of useful information concisely stated; and the report on the Congress at Budapest also contains a large amount of valuable material, not only about the congress, but about the systems of water-supply and sewage disposal &c. of various places which the Professor of Military Hygiene visited *en route*. Brigade-Surgeon-Lieutenant-Colonel Stevenson, Professor of Military Surgery, and Surgeon-Major Whitehead, the Assistant Professor, contribute an excellent paper on the operations performed at the Royal Victoria Hospital, Netley, during 1894, accompanied with a description of, and comments upon, the more interesting and striking cases. Surgeon-Lieutenant-Colonel W. S. Pratt, gives a good and instructive report of the Eighth Congress of the Association Française de Chirurgie, held at Lyons in September last, with a set of diagrams. Surgeon-Major James, contributes a very full and elaborate report, illustrated by diagrams, of the late epidemic of bubonic plague at Hong-Kong, which seems to have been very carefully and well prepared; and the volume contains, in addition, several papers of surgical interest by other members of the Army Medical Staff.

VACCINATION GRANT.—Mr. James T. T. Ramsay, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., public vaccinator for Witton and Livsey, Blackburn Union, has been awarded the Government grant for three years' efficient vaccination.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6678 births and 6683 deaths were registered during the week ending March 2nd. The annual rate of mortality in these towns, which had increased in the five preceding weeks from 18.7 to 29.6 per 1000, further rose last week to 32.9. In London the rate was as high as 38.5 per 1000, while it averaged 28.9 in the thirty-two provincial towns. The lowest rates in these towns were 15.1 in Derby, 16.1 in Norwich, 17.0 in Sunderland, 18.5 in Gateshead, and 19.1 in Leicester; the highest rates were 38.5 in London, 39.2 in Plymouth, 43.4 in Halifax, 49.2 in Nottingham, and 55.5 in Liverpool. The 6633 deaths included 330 which were referred to the principal zymotic diseases, against 316 and 317 in the two preceding weeks; of these, 113 resulted from whooping-cough, 67 from measles, 47 from diphtheria, 36 from diarrhoea, 35 from "fever" (principally enteric), 30 from scarlet fever, and 2 from small-pox. No fatal case of any of these diseases occurred last week in Swansea, Derby, or Huddersfield; in the other towns they caused the lowest death-rates in Hull, Bristol, and Bradford; and the highest rates in Liverpool, Manchester, Bolton, Salford, and Brighton. The greatest mortality from measles occurred in Plymouth, Bolton, Preston, and Sheffield; from whooping-cough in Brighton, Cardiff, Birkenhead, Manchester, and Halifax; and from "fever" in Salford. The mortality from scarlet fever showed no marked excess in any of the large towns. The 47 deaths from diphtheria included 31 in London and 2 each in West Ham, Birmingham, Manchester, Salford, and Oldham. One fatal case of small-pox was registered in London and 1 in Liverpool, but not one in any other of the thirty-three large towns. There were 68 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 2nd inst., against 56, 67, and 75 at the end of the three preceding weeks; 8 new cases were admitted during the week, against 18, 18, and 19 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1621, against 1667, 1657, and 1653 on the three preceding Saturdays; 143 new cases were admitted during the week, against 149, 159, and 152 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 430, 840, and 1120 in the three preceding weeks, further rose to 1449 last week, and exceeded by as many as 945 the corrected average. The causes of 122, or 1.8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Bolton, Oldham, Bradford, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Halifax, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the four preceding weeks from 23.9 to 41.1 per 1000, further rose to 42.8 during the week ending March 2nd, and was 9.9 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 24.9 in Aberdeen and 26.0 in Greenock to 39.1 in Leith and 53.6 in Glasgow. The 1236 deaths in these towns included 51 which were referred to measles, 30 to whooping-cough, 10 to scarlet fever, 9 to diarrhoea, 8 to "fever," 5 to diphtheria, and 2 to small-pox. In all, 115 deaths resulted from these principal zymotic diseases, against 115 and 118 in the two preceding weeks. These 115 deaths were equal to an annual rate of 4.0 per 1000, which was 2.4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 26 to 54 in the three preceding weeks, were 51 last week, of which 21 occurred in Edinburgh, 15 in Glasgow, and 13 in Aberdeen. The 30 deaths referred to whooping-cough were within 6 of the number in the preceding week, and included 18 in Glasgow and 4 in Leith. The fatal cases of scarlet fever, which had been 6 and 4 in the two preceding weeks, rose again to 10 last week, of which 4 occurred in Glasgow and three in Edinburgh. The 8 deaths referred to different forms of

"fever" exceeded those recorded in any recent week, and included 2 each in Edinburgh, Dundee, and Paisley. The fatal cases of diphtheria, which had been 6 and 7 in the two preceding weeks, declined to 5 last week, of which 3 occurred in Glasgow. The 2 deaths from small-pox were recorded in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 214, 345, and 517 in the three preceding weeks, further rose to 544 last week, and exceeded by as many as 426 the number in the corresponding week of last year. The causes of 111, or 9 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 31.9 to 35.1 per 1000, declined again to 32.7 during the week ending March 2nd. During the past nine weeks of the current quarter the death-rate in the city has averaged 33.0 per 1000, against 24.0 in London and 26.8 in Edinburgh. The 219 deaths registered in Dublin during the week under notice showed a decline of 16 from the number in the previous week, and included 6 which were referred to the principal zymotic diseases, against numbers declining from 19 to 10 in the three preceding weeks; of these, 4 resulted from small-pox, 1 from whooping-cough, and 1 from "fever," but not one either from measles, scarlet fever, or diphtheria. These 6 deaths were equal to an annual rate of 0.9 per 1000, the zymotic death-rate during the same period being 1.5 in London and 5.9 in Edinburgh. The fatal cases of small-pox, which had been 8 and 6 in the two preceding weeks, further declined to 4 last week, a smaller number than in any week since November last. The mortality from whooping-cough and "fever" corresponded with that recorded in the preceding week. The 219 deaths in Dublin last week included 40 of infants under one year of age and 66 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a slight decline from the numbers in the preceding week. Nine inquest cases and 5 deaths from violence were registered; and 69, or nearly a third, of the deaths occurred in public institutions. The causes of 17, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

Surgeon-Captain James Rocheid Forrest from half-pay, to be Surgeon-Captain, vice J. G. Deacon, M.D., retired.

INDIA AND THE INDIAN MEDICAL SERVICE.

The *London Gazette* announces the Queen's approval of the following admissions to Her Majesty's Indian Medical Service: To be Surgeon-Lieutenants: *Bengal*: Charles John Milne; Algernon Francis Stevens; Clement Henry Bensley; Francis Hammond Watling; John Duncan McMillan; Arthur Gwyther; Edgar John Morgan; Alfred Edward Joseph Ward; William Carr; John Archibald Hamilton. *Madras*: Frank Wall; Charles Montague Mathew. *Bombay*: Samuel Evans; James Haldane McDonald. The services of Surgeon-Captain W. Vost, M.B., C.M., I.M.S. (Bengal), are placed permanently at the disposal of the Government of the North West Provinces and Oudh. Surgeon-Captain C. H. Bedford, M.D., I.M.S., Bengal Establishment, is appointed to be Medical Officer, Lawrence Military Asylum, Sanawar, vice Surgeon-Lieutenant H. M. Earle, who has vacated.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon John Stephen Dobbins, M.D., has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. The undermentioned Surgeons have been promoted to the rank of Staff-Surgeon in Her Majesty's Fleet:—Timothy Joseph Crowley, M.D.; Baskett Charles Edward Fitzgerald Gunn; Donald Templeton Heskyn, M.B.; John Evans Penn; Robert Howard Nicholson; John Leslie Barrington.

The following appointments are notified:—Fleet-Surgeons: R. Grant to the *Crescent* and R. D. White to the R. M. Division, Portsmouth. Surgeons: G. G. Barrett to the *Pembroke*; E. E. P. Tindall to the *Hamble*; K. C. Munday to the *Defiance*; H. W. G. Doyne and J. B. Jameson to the *Crescent*; A. G. Willey to the R. M. Depot, Walmer; C. H.

Upham to the *Virid*, for Plymouth Hospital; and W. Bowden, D.S.O., to the R. M. Division.

VOLUNTEERS.

Rifle: 1st Volunteer Battalion, the King's Own (Royal Lancaster Regiment): Richard Oxley Bowman, M.D., to be Surgeon-Lieutenant. 1st (City of Bristol) Volunteer Battalion, the Gloucestershire Regiment: James Young, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion, the Duke of Cambridge's Own (Middlesex Regiment): Surgeon-Lieutenant H. G. G. Wilkins, to be Surgeon-Captain. 9th Lanarkshire: Charles Symington, M.B., to be Surgeon-Lieutenant. 1st Dambartonshire: Surgeon-Captain J. McLachlan, M.B., resigns his commission. 1st Cadet Battalion, the Buffs (East Kent Regiment): Charles Walter Scott, M.B., to be Acting Surgeon.

VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the undermentioned Officers of the Volunteer Force. *North-Western District: Engineers*: 2nd Lancashire (the St. Helens) Volunteer Engineers: Surgeon-Lieutenant-Colonel Egerton Francis Hall, M.D. 2nd Cheshire (Railway) Volunteer Engineers: Surgeon-Lieutenant-Colonel James Atkinson. *Southern District: Rifle*: 1st Wiltshire Volunteer Rifle Corps: Surgeon-Major (ranking as Lieutenant-Colonel) George Christopher Tayler, M.D., retired. *Scottish District*: 4th Volunteer Battalion, the Cameronians (Scottish Rifles): Surgeon-Major Johnstone Macfie, M.D.

DEATHS IN THE SERVICES.

Deputy Inspector-General Lyall, R.N.

By the death of Dr. David Lyall, Deputy Inspector-General of Hospitals and Fleets, at Cheltenham on the 25th ult., at the age of seventy-seven, the naval medical service has lost an officer of scientific attainments and reputation. The deceased officer entered the navy in 1839, after having passed the Royal College of Surgeons, Edinburgh, and taken the M.D. degree of the University (King's College) of Aberdeen, and was soon appointed assistant surgeon and botanist of the Antarctic Expedition under Sir James Ross. He was also surgeon and naturalist in the Arctic Expedition under Sir E. Belcher in 1852-54, for which he had the medal, and subsequently served in the Baltic campaign in 1855 (medal). Dr. Lyall was a Fellow of the Linnean Society. He was in due course appointed Fleet Surgeon, and in 1873 Deputy Inspector-General of Hospitals and Fleets, when he was placed on the retired list. In 1884 he was awarded a Greenwich Hospital pension.

Surgeon-General Clarke, I.M.S.

We regret to announce the death of Surgeon-General J. J. Clarke, Bengal Medical Service (retired list), on Feb. 23rd last, whilst on a visit at Leura, Toorak, Melbourne. The deceased officer entered the Indian Medical Service in 1853, and retired with the rank of surgeon-general in 1884, after a distinguished military career during the Indian Mutiny, throughout the whole of which he had served with the force under Generals Havelock, Outram, and Neill. He was with the Artillery and attached to the battery commanded by Sir William Olpherts, V.C., which won great distinction for its services. The late Surgeon-General Clarke was present at numerous actions, the relief and defence of Lucknow, the engagements under Sir James Outram and Lord Clyde, and rendered gallant services at Mungulwar, at Alumbagh, and at the Motee Mahal; he also served as principal medical officer in the Akha Expedition and was mentioned in despatches. In 1882 he was awarded a good service pension.

Surgeon-Major-General Thomas Rudd.

Surgeon-Major-General Thomas Rudd, M.D. Edin., died at San Remo on Feb. 24th. He served with the 8th Hussars during the Indian Mutiny in 1857-58, and was present at the capture of Kotah and at the battles of Kotaria and Khooshana (medal with clasp). He also served in the Afghan War of 1878-80 (medal).

PROPOSED TESTIMONIAL TO SURGEON-GENERAL SIR JOSEPH FAYRER, K.C.S.I., Q.H.P., M.D. EDIN., F.R.S.

As we have already announced, a movement is on foot to present a testimonial to Sir Joseph Fayrer on his retirement as Physician to the Indian Council, President of the Indian Medical Board, and Member of the Senate of the Army Medical School. The testimonial is to take the form of a portrait to be painted by an eminent artist, to be placed in the officers' mess at Netley, with a replica for Lady Fayrer. Should the fund permit, a reproduction of the portrait will

be sent to each subscriber. Subscriptions, limited to 10s. 6d., may be sent to Surgeon-Captain W. W. Webb, M.D., the honorary secretary, at Odstock, Netley Abbey, Hants.

THE OPIUM COMMISSION.

The report of this Commission will soon be in circulation. Its publication is no doubt anxiously awaited in India, as the subject is one gravely affecting the social life, habits, and customs of the native population and the finances of that country. Meanwhile, it must be very satisfactory to the Government of India to have the assurance of the Chancellor of the Exchequer that the cost of the Commission is to be borne by the English and not by the Indian revenue. We think that most people will concur in the justice and expediency of this decision.

THE ARMY MEDICAL STAFF IN INDIA.

In future medical officers proceeding to India will receive intimation of the command to which they will be posted for service in that country. It will be remembered that some time ago it was a subject of complaint that they were put to inconvenience by not knowing the presidency in which they would have to serve. This has now been rectified by the Secretary of State for War and India Office.

THE ARMY ESTIMATES.

The Navy and Army Estimates for the year have just been issued. We hope to be able next week to give a brief statement of these estimates as regards the medical services.

INFLUENZA AT ALDERSHOT.

The troops at Aldershot, as might have been expected, have not escaped the prevailing epidemic. A large number of sufferers from influenza have been under treatment as well as cases of disease of the respiratory system.

The hired transport *Victoria* arrived at Portsmouth on the 27th ult. She brought home 300 patients for the Royal Victoria Hospital, Netley.

Correspondence.

"Audi alteram partem."

THE UNIVERSITY OF CAMBRIDGE AND THE EXTENSION OF SCIENCE TEACHING.

To the Editors of THE LANCET.

SIRS.—May I call attention to an advertisement, which appears in the columns of THE LANCET of this date, of an invitation to qualified medical men to come up to Cambridge for a course of demonstrations and lectures. It seems to us there must be many men resident out of reach of large schools who would derive much advantage from seeing the work done in our laboratories and hearing what is going on in modern medicine and the ancillary sciences. The fees, including board and lodging (probably in college), are fixed as low as possible. The University professors have generously offered their services, and will open their laboratories for the demonstrations, and some cases of special clinical interest will be shown by members of the honorary staff of the hospital. It will not be possible, of course, to arrange for private workers on such an occasion, but if the opportunity seems to be valued we hope to repeat the invitation in future years, and perhaps to extend the time a little.

Believe me, Sirs, yours faithfully,

T. CLIFFORD ALLBUTT,

Regius Professor of Physic in the University of Cambridge.
Cambridge, March 5th, 1895.

P.S.—It is of great importance to us to receive early applications that we may know how to prepare for our visitors.

"THE TREATMENT OF INFLUENZA."

To the Editors of THE LANCET.

SIRS.—In THE LANCET of March 2nd Dr. Burney Yeo directs attention to the value of quinine in the treatment of influenza. May I venture to suggest that since quinine is not completely excreted from the tissues for some days, it is not necessary, in order to produce its specific effect, to give the

drug in such large doses as to produce cerebral symptoms? Three to five grains given in an effervescent draught every three or four hours markedly controls the course of the disease and rarely gives rise to "cinchonism." The large doses of quinine given on the continent in this disease appear to be quite unnecessary and not altogether devoid of danger, for I have seen fifteen grains given every three hours produce marked cardiac depression, particularly in elderly people. Thus, whilst quinine given in these comparatively small doses in the form of an effervescent saline draught undoubtedly in many cases exercises a controlling influence on the course of the disease, yet the pyrexia with its attendant symptoms may be but slightly relieved, and for this purpose three to five grains of phenacetine combined with a few grains of citrate of caffeine acts as a safe and efficient antipyretic and anodyne.

I am, Sirs, yours faithfully,

J. H. MARSH, M.R.C.S., L.R.C.P. LOND.

The Infirmary, Macclesfield, March 2nd, 1895.

To the Editors of THE LANCET.

SIRS.—I read with much interest Dr. Yeo's valuable letter on the Treatment of Influenza in last week's issue of THE LANCET, and should like to endorse what he says in reference to the deleterious effects of antipyrin in the treatment of this scourge. In comparing notes of the cases which have presented themselves for treatment during the past five years it has forcibly struck me that the mortality has been gradually diminishing, and the period of convalescence shortened in each successive epidemic. I do not consider this due to any lessened virulence of the much-maligned bacilli, but to the fact that antipyrin and similar depressants are being withheld in the treatment of this disease. During the first epidemic five years ago I noticed the great prominence given to pneumonia as a complication by all writers on influenza. My own firm conviction is, and has been all along, that the antipyrin treatment was entirely responsible in many cases for the onset of the pneumonia, and that ordinary cases of influenza with bronchitic trouble ended frequently in broncho-pneumonia when antipyrin was administered. During the past three epidemics I have not seen a single case of pneumonia complicating influenza excepting in asthenic cases in very old persons. So long as we have therapeutic agents such as quinine and alcohol we need not be afraid to combat this year's epidemic.—I am, Sirs, yours faithfully,

FRANCIS WILLIAM GRANT, M.D., B.Sc., C.M. Edin.

Elgin, March 4th, 1895.

"PROFESSOR W. R. SMITH AND THE MEDICAL SUPERINTENDENTS OF THE HOSPITALS OF THE METROPOLITAN ASYLUMS BOARD."

To the Editors of THE LANCET.

SIRS.—My attention has been drawn to certain editorial remarks in THE LANCET of the 2nd inst. dealing with a report in the *Times* of a speech made by me as a member of the Metropolitan Asylums Board on Saturday, Feb. 2nd. I regret that you have considered it necessary to allude to the subject, but as your remarks may give an erroneous impression as to the facts of the case I shall be obliged by your kindly inserting this letter. In the first place it is true that I called upon you on Feb. 27th, and this to express my regret that I had not received your letter of Feb. 6th, and further to state that your letter dated Feb. 21st I had only received that morning, consequently I had not been able to reply to them. I think these facts should have been mentioned, as otherwise some discourtesy on my part would be inferred. The main point at issue cannot I think be properly appreciated unless considered in the light of a knowledge of the action of the Metropolitan Asylums Board relative to the diagnosis and treatment of diphtheria, in which I have taken a somewhat prominent part. The managers have made arrangements by which a bacteriological examination shall be made of all cases of diphtheria, both upon their admission and before their discharge from their hospitals, and in addition—with the object of providing a proper supply of antitoxic serum—have placed stabling &c. at the disposal of the director of the Research Laboratories of the Royal

Colleges of Physicians and Surgeons consequent upon an arrangement made between the Asylums Board and the committee of management of the Laboratories. Further, to ensure that proper statistical information should be forthcoming at the proper time, the medical superintendents of the hospitals and the director of the Research Laboratories of the Royal Colleges were requested to submit a form upon which such records should be kept. This they did, and the same was approved by the subcommittee, to whom the whole matter has been referred. Throughout, as I think is known, great opposition has been shown to these projects, on the one hand by those who adopt the views of the Anti-Vivisection Society, and by others who wished the services of a particular institution to be engaged. In January notice was given of a motion relative to statistical returns on the subject of the antitoxic serum treatment by a gentleman who had throughout in this particular assumed an antagonistic position to the action of the Board; the motion came on for discussion on Feb. 2nd, and at the same time an amendment to the proposition of which I had given notice. Upon entering the council chamber my attention was at once drawn to THE LANCET, which published that day what purported to be a report from the director of the institution to which I have alluded, and which report embodied certain statistical returns in the form of reports from some of the hospitals of the Asylums Board. These returns had never been before the subcommittee before mentioned, and of which I am a member, nor had they been placed before the committees of the various hospitals concerned; in short, information which many members of the Board were most anxious to obtain could only be elicited from an official report of a body with which the Asylums Board had no connexion.

If I remember rightly, the words I used on Feb. 2nd were to the effect that I felt great regret that such information had been given, that in my judgment such action was not only most indiscreet but tended to give the impression of disloyalty to the Board. These words rightly express my feelings to-day. Of course, as must be obvious, every individual member of a board is responsible alone for any expression of opinion to which he may give utterance; but in this particular case it should now be known that at the first meeting of the General Purposes Committee after Feb. 2nd—a committee consisting of the whole of the members of the Board—it was unanimously decided to send a letter to the medical superintendents on the subject, and with their replies I think it would have been prudent to have allowed the matter to rest.

It is true, as you have rightly pointed out, that I myself fill certain public positions, and consequently I cannot be unmindful of the difficulties and responsibilities of others similarly placed; but in these positions I recognise a duty to the authorities I serve, and I at the same time do not ignore the fact that members of public bodies have duties to discharge, not alone to those who elect them, but also to themselves if they ever hope to exercise any proper influence.

I am, Sirs, yours faithfully,

WILLIAM R. SMITH.

The Metropolitan Asylums Board, Norfolk House,
Norfolk-street, W.C., March 6th, 1895.

To the Editors of THE LANCET.

SIRS,—The annotation under the above heading in THE LANCET of March 2nd has considerably surprised me, and I feel it demands some further comment, though, no doubt, the Times reporter is quite able to take care of himself. I can only say that Professor Smith must have a very short memory regarding his own speeches, for not only am I quite positive that he "censured" the action of some of the medical superintendents, but also that he did so in very measured language, and so much did it impress me that I rose in my place immediately after he had spoken and stated that I did not think these officers were deserving of censure by him, considering the circumstances under which they had given some information on antitoxin, not to the leading medical papers, as stated by Professor Smith, but, as I understood, to the superintendent of the British Institute of Preventive Medicine.

I am, Sirs, yours faithfully,

A. B. R. MYERS,
Brigade-Surgeon-Lieut.-Colonel; Manager,
Metropolitan Asylums Board.

March 2nd, 1895

THE STORAGE OF ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—It seems to me that much unnecessary trouble is being taken in the storage and distribution of diphtheria antitoxin by the elaborate precautions which are required so long as it continues to retain its liquid form. I would suggest that in future the liquid antitoxin should, as soon as it has been obtained, be evaporated *in vacuo* over sulphuric acid and stored and distributed in the form of a dry powder, whose exact quantitative relationship to the liquid antitoxin or to the toxin itself could easily be ascertained and stated. There can be no doubt that in this dry form diphtheria and all other antitoxins will retain almost indefinitely their original effects. Were this plan adopted it would also be possible considerably to reduce the bulk of liquid injected under the skin.

I am, Sirs, yours faithfully,

Edinburgh, March 5th, 1895.

THOMAS R. FRASER.

THE TREATMENT OF MEMBRANOUS COLITIS.

To the Editors of THE LANCET.

SIRS,—In an interesting paper on Colitis, which appeared in THE LANCET of March 2nd, Dr. Hale White says, when considering the treatment of the membranous form of the disease: "It has been suggested that in a very intractable case it might be justifiable to open the colon high up." In June of last year I performed an inguinal colotomy in the right side on a patient who was passing large quantities of blood with membrane, one complete cast of the bowel being twenty-two inches in length. A month ago I closed the colotomy opening, and later propose to report the case in full. So far the success is complete.

I am, Sirs, your faithfully,

Charles-street, W., March 6th, 1895.

SKENE KEITH.

REPORTS OF THE MEDICAL OFFICERS OF HEALTH: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—Year by year are published valuable reports by the medical officers of health of the various urban and rural sanitary authorities. Many of these reports contain important information and suggestions, the result of practical experience, on the causation and prevention of disease, histories of epidemics, difficulties in carrying out sanitary laws or reforms, and interesting statistical returns. Much of this good work is lost to those interested in sanitary science owing to the difficulty of obtaining such reports, and the time that would be occupied in reading them. No doubt your valuable journal frequently gives extracts from the leading reports upon points under discussion, but I would suggest the publication yearly of a volume giving a *résumé* of all the reports of that year. Such a book would confer great benefit on medical officers of health and those interested in public health. It would form a sanitary history of the year, would show the sluggard what the advanced were doing, and would supply material for the advocates of sanitary reform. I need not go further to prove the practical use of such a publication. The information should be carefully condensed and classified, and advances in sanitary science abroad could be included. This compilation would involve considerable labour and expense, and could hardly be undertaken by a private publishing firm with any prospect of financial success. But as such a publication would be a public gain it might reasonably be brought out by the Local Government Board as a part of the sanitary administration of the country. That Board, too, has special sources of information which could be utilised.

I am, Sirs, yours faithfully,

ANTONY ROCHE, M.R.C.P.I.,

Professor of Hygiene, Catholic University; Examiner, Royal University of Ireland; Fellow of the Sanitary Institute, &c.
91, Stephen's-green South, Dublin, March 2nd, 1895.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

To the Editors of THE LANCET.

SIRS,—We are instructed by the council of the London and Counties Medical Protection Society to inform you that

the letter which appeared in the *Echo* of the 1st inst. under the heading of the "London and Counties Medical Protection Society," and signed "G. B. Mead," was wholly unauthorised by the council, and that in consequence of such letter Dr. G. B. Mead's connexion with the society has been determined.

We are, Sirs, your obedient servants,

LE BRASSEUR AND OAKLEY.

Solicitors for the London and Counties Medical Protection Society, Limited.

12, New Court, Lincoln's-inn, W.C., March 6th, 1895.

* * The following is the text of the letter referred to by Messrs. Le Brasseur and Oakley :—

To the Editor of the *Echo*.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

President: Jonathan Hutchinson, LL.D., F.R.S.

Treasurer: Dr. George A. Heron, F.R.C.P., 57, Harley-street, W.

Hon. Secs.: Dr. George B. Mead, L.R.C.P., Mentmore, Newmarket, Suffolk; Dr. Hugh Woods, B.A., 11, Archway-road, Highgate, N.

Financial Sec.: A. G. R. Foulerton, M.R.C.S., 22, Ovington-gardens, S.W.

Registered Offices: 12, New-court, Lincoln's-inn.

SIR,—It has often struck me what a good thing it would be if the medical profession had a sort of understanding with the editor of a paper like yours that its columns should be open to the discussion of medical questions of a medico-political or ethical character, and both the paper and profession would, I am sure, benefit thereby. The medical papers—*Lancet*, *Medical Times*, *Gazette*, *Press* &c.—all are crammed with cases, papers, and contributions of the most deadly-lively and useful character, to the exclusion of important and personal matters. More than half these so-called contributions are mere pulls of medical notoriety seeking to prey upon the rich public; a large proportion are simply a tissue of lies, and inserted by the editors knowing them to be lies, but being over or under well-known names are inserted. The principal portion of the medical press obtains its income from the sale of these precious papers and from the insertion of quack advertisements of preparations mostly useless and mostly of American origin.

I asked an American the other day if the medical and other papers of America were stuffed with advertisements of drugs, &c., of English origin. "Our people are not such fools as to swallow them," was the reply. If you entertain this idea I should be glad to discuss the matter with you personally.—Yours, &c., G. B. MEAD.

1, Oakley street, London, S.W., Feb. 27th.

We were perfectly aware that such a letter could not have been authorised by the society, although it was written apparently in the form of an official communication.—ED. L.

To the Editors of THE LANCET.

SIRS,—In consequence of Dr. Mead having ceased to be one of the honorary secretaries of this society, the council request that those having business with the society will kindly address all communications to Dr. Woods, honorary secretary, 11, Archway-road, Highgate, N., excepting communications relating to the payment of subscriptions, which should be addressed to Mr. A. G. R. Foulerton, 22, Ovington-gardens, S.W.—I am, Sirs, yours faithfully,

HUGH WOODS, Hon. Sec.

March 6th.

DUNKLEY v. LANGLEY.

To the Editors of THE LANCET.

SIRS,—A meeting of some of the medical friends was held here on Thursday to sympathise with Mr. Langley in the unjustifiable action brought against him by the plaintiff for neglect in an obstetric case in which the jury, without hearing all the evidence for the defence, returned a verdict that there was no neglect. A subscription was also started to help to recoup Mr. Langley for the heavy legal expense incurred in defending himself. As it is a case in which all medical men are liable to a similar action being brought against them, Dr. Shaw, of 10, St. Thomas's-street, S.E., will be happy to receive subscriptions, or they may be sent to me.

I remain, Sirs, your truly,

Surrey-square, March 6th, 1895.

W. RUMBOLL.

The following subscriptions have been received or promised for the Langley defence fund :—

	£	s.	d.		£	s.	d.
Mr. Collymore	Dr. Baldwin	...	...	...
Dr. Milson	Mr. Jacobson	...	...	...
Mr. Rumboll	Mr. Arlbutnot Lane	...	...	...
Dr. Shaw	Dr. McBride	...	...	...
Dr. Williams	Dr. F. Taylor	...	...	...
Dr. Wills				

"LIFE ASSURANCE SCHEMES."

To the Editors of THE LANCET.

SIRS—I am indebted to you for courtesy in allowing me to reply in your columns. May I once more trench upon your kindness for space in reference to your note added to my letter, whence it might be assumed that this office offers no other policy than the one to which you refer? The contrary is the fact. We seek to meet the wants of everyone—those who "want a round sum in hand" as well as those who, being unable to use the "round sum" advantageously, are better protected by an income for a given period, and then the "round sum in hand." The following instance is a striking comment on your remarks as to the value of a "round sum" in hand, and shows that it is not always "a priceless boon." We paid a claim of £2000 to a widow properly entitled. On leaving our office she met a friend, whom she told that she had just received a "round sum" and was desirous of making the best of it. The friend was ready to advise her. He had a good investment, and a certain income. She endorsed our cheque to him. The speculation was so unfortunate that she has never since received any interest and has lost the capital. Thus the care and forethought of the husband were nullified by the money being paid in full to the widow. Would not our debenture policy have proved better in this case? There are all kinds of cases to be met. The pride of this office is that it meets the wants of all, and is ready to facilitate a change from one method to another when changed circumstances render it desirable; and the very objection you make to our debenture policies is provided for in that very contract—e.g., suppose a man with a debenture policy finds that from different causes his estate would be better protected by payment of the full sum assured at death, a simple request to that effect and the office would very readily comply with his wishes and pay his representatives a round sum at his death. I hope you will absolve me from even the spirit of scolding; I only ventured to suggest with the meagre facts before you in relation to our debenture policy you did not quite grasp its provisions. For a man who simply wants temporary cover the debenture policy would not suit his requirements. I ventured to point out in my previous letter that even the scheme to which you alluded was not as cheap as what is known amongst all insurance companies as "term insurance" for those who merely wished temporary insurance.—Thanking you for your courtesy, I am, Sirs, yours truly,

D. C. HALDEMAN,

General Manager of the Mutual Life Insurance Company of New York.

March 5th, 1895.

"REMUNERATION OF RESIDENT OFFICERS AT ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—Under the above heading you are permitting a discussion in your columns of what I have always regarded as my one grievance against St. Bartholomew's Hospital. The question is a perfectly simple one: Does the present system secure for the resident appointments the men most fitted to hold them—that is, does it always secure men likely to carry out their duties to the greatest advantage of the sick poor who seek relief at the hospital, and does it secure the men who are most likely to avail themselves of the opportunities for knowledge and skill which these appointments so abundantly afford, such experience being acquired for the future benefit of the public at large? To both these questions I answer emphatically, No. The best men may be, and not rarely are, excluded solely by reason of their poverty. I know of several instances directly to the point, but the question must be largely decided by statements of personal experience. I will state, therefore, that I am one who was excluded from resident appointment of St. Bartholomew's Hospital solely by reason of the *res angusta domi*; while, as evidence that my professional attainments were at any rate equal to those of some of the men who held the appointments, I may, under the veil of anonymity, state the fact that the examiners at the London University (of whom one was the most distinguished physician and teacher at the hospital in question) considered me to be sufficiently qualified in professional work to deserve a gold medal in medicine both at the M.D. and M.B. examinations, with first-class honours in both the other subjects of examination. Like many another, I had to

seek refuge in the provinces, where a comfortable emolument was added to opportunities for practical work perhaps not inferior to those at my *Alma Mater*. The strangest contribution to the discussion is that of the plutocratic "Old House Surgeon," who says that the post being a coveted and a valuable one, the wage is simply a question of supply and demand! Of course, if the intention of the hospital authorities is to make a profit out of these appointments, this is perfectly true and sound economy; but why not put them up to public auction and get the full market price? If, however, the intention is to get the men best fitted to superintend the care of the sick and most likely in later life to apply their opportunities of experience to the public good, then it is difficult to see how the longer purse helps to differentiate the fit from the unfit. Rather would it appear that the one is able to pay for the privilege of acquiring his experience, perhaps at the cost rather than to the advantage of those who seek for aid through the portals opened by R. here.

I am, Sirs, yours truly,

GOLD MEDALIST BUT NOT HOUSE PHYSICIAN.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Hospital for Consumption and Diseases of the Throat and Chest.

THE annual meeting was held on the 20th ult., and the financial statement was of a character only too common. The calls on the resources of the hospital were heavy, and the income was not sufficient to meet them. This is the only institution in Manchester where provision is made for the treatment of phthisical cases. The *Manchester Guardian* says: "If there is one district in England in which a charity of the kind has special claims on the practical sympathy of the benevolent it is that which includes Manchester." The deficit on the year amounts to £478 5s. 10d., and besides this there is a debit balance of £1098. Limitation of the work was foreshadowed as necessary unless the subscriptions were increased. This would lead to closing some of the wards of the in-patient hospital at Bowdon. It has forty-eight beds and is ten miles from the city, where the air is purer and the climate somewhat more genial than in Manchester. Last year 256 patients were admitted, and the average stay in hospital was sixty-six days. The hospital is well arranged, situated in its own grounds, and freely exposed to the sun; patients in the early stages almost invariably improve, sometimes most notably; and cases of arrested phthisis are not rare. The out-patient department is in Manchester, and last year 9373 cases attended, more than three times the number in 1884. The chairman, in calling attention to the critical financial condition of the institution, said he feared drastic steps would have to be taken to limit the scope of the work; but "he was sure nothing of the kind would be necessary if the public knew the good work the hospital was doing, and particularly in the case of young people, whom they tried to help when the disease was in its early stages."

The Children's Hospital.

The annual meeting of this important institution was held the other day, and the report showed that this popular and well-supported charity was to some extent feeling the pressure of hard times, and that £575 19s. 3d. were owing to the bankers. At the out-patient department 10,004 cases were treated, while 1164 were admitted to the hospital at Pendlebury. The medical report drew attention to some important points as to infant mortality. In Norway, in rural England, and among the well-to-do populations of our suburbs it averaged 100 per 1000 births, "while in Manchester it amounted to 203 per 1000; and if they took the infant mortality in some of the most congested districts, where poverty, drunkenness, and vice were the commonest, they would find death-rates amounting to 300 and even 500 per 1000. One of the most immediate and efficient causes was the substitution of artificial foods for the mothers' milk." Another was the quality of the milk supplied to our towns. "In many cases it was not merely stale but it came to them contaminated by farm-yard refuse and was swarming with more or less injurious organisms." The report goes on to say that the subject of infant life insurance had been carefully inquired into as it affected the out-patients, and that "of the 155 who died no

fewer than 105 were insured. The sum insured for was ascertained in 77 cases and amounted to £244 10s., or an average of £3 3s. 6d. per head. In two cases the sum was as high as £9. In 11 cases only was it stated that some part of the payment consisted of spirits or drink of some kind; but as 22 other children were insured in public-house clubs that were known to give drink in part payment of the claims there could be little doubt that such payment was made in all the 33 cases." And the report very properly goes on to say: "Whatever might be thought of the general question of child-life insurance, this special feature admitted of no defence."

Extension of the Royal Infirmary.

A special meeting of the trustees was held on the 26th ult. to consider this question. Dr. Renaud, the senior consulting physician, proposed a resolution embodying in the main the views of the board of management, of which he is an influential member, in favour of building two lateral extensions, not from the front of the building, as was contemplated in a former scheme, but from half-way down the sides. This would involve encroachment to a considerable extent on the open space round the infirmary, in contravention of the resolution of July, 1892, which said that no such encroachment should take place, and the retention of the somewhat antiquated and objectionable features of the present infirmary. An amendment was proposed to the effect that it was advisable that the increased accommodation required should be provided by the gradual rebuilding of the infirmary on the present site, and that plans should be prepared and submitted to a special meeting of trustees to be held within three months from that date. After considerable discussion the amendment was carried by a large majority, but the seconder of the resolution, on behalf of the board of management, demanded a poll. This does not seem wise on the part of the board, for if it went in favour of the scheme proposed by Dr. Renaud the feeling against covering any more of the ground is so strong that it would most probably have to be abandoned. The architectural effect would be bad, and the scheme is one of inartistic, inefficient patchwork. It is unfortunate also that the amendment requires plans to be so hastily provided by the board. The infirmary stands on the finest site in the city, and the plans for rebuilding, which in the end will be required, should be thrown open to competition under conditions which would lead the most eminent architects to compete. It is believed that almost the whole of the medical staff would prefer reconstruction on the present site, but one or two are in favour of an annex nearer to Owens College. In time that may be required, but at present the urgent need is that the infirmary should be made equal to the demands on it and worthy of its well-earned prestige.

Manchester and Salford Provident Dispensaries Association.

This is the central body with which all the various branches are associated, and its twentieth annual meeting was held on the 26th ult. From the report it appears that there are 22,464 members (the highest number yet recorded) on the books of the different branches, and that during the year £4043 had been received in subscriptions from the members. "The council again express their acknowledgment of the services which are so efficiently rendered by the medical staff at the various dispensaries," and they hope that any difficulties between the staff of any dispensary and the committee and council may be satisfactorily removed. Nothing appears in the newspaper report of the meeting about the resignation of the whole of the staff of the Pendleton branch, so it does not seem as if in that branch their differences had been adjusted. The chairman described the association as "an institution to give a little help to those who wanted help, and who did not want charity in the sense in which that misused word was generally applied"; and he held that it had greatly lessened the abuse of the out-patient department of the hospitals. He did not touch on the fact that the present working of these dispensaries had estranged the great body of general practitioners, who were at first generally favourable to them; nor did he mention the various departures made from the original scheme, such as the doing away with a wage limit and the admission of all comers, whatever their income; nor did he allude to the recent severance of the connexion between the provident dispensaries and the Infirmary, at the urgent representation of the medical staff, on account of the unfair advantages their members had over all other poor deserving persons. It is strange that the

gentlemen interested in this movement and affording it their patronage and support do not see that these dispensaries are really sweating agencies for obtaining cheap medical attendance for all who choose to join them at the cost of the general practitioner, and that their vicarious philanthropy consists in exploiting the same unhappy person.

March 5th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Queen's Hospital.

THE annual meeting of the governors of this institution was held on Feb. 27th under the presidency of the Earl of Dudley. The meeting was a large and representative one, the interest of the occasion being the presentation to Mrs. Johnson of a replica of the portrait of her husband, Alderman G. J. Johnson, hung in the board-room of the hospital, in recognition of his services to the institution. The President alluded to the mention in the report of the nursing scheme originated three years ago, and congratulated the committee upon its success. Dr. Carter supported the resolution adopting the report, and stated that it was now nearly twenty years since he became connected with the hospital. In his time unprecedented progress had been made; they had to deal with 20 per cent. more in-patients, and the out-patient department had nearly doubled. The mortality was now 5 per cent., as against 14 per cent. in the earlier period of operative work; the nursing department was also a great benefit. Sir James Sawyer spoke in high terms of the progress made and on the efficiency of the duties performed by all the staff. Alderman Johnson sketched the advance made by the hospital since his first connexion with it thirty-two years ago, and in fitting terms acknowledged the honour done to him and the compliment paid to his wife by the presentation of his portrait. Mr. Burdett, in moving a vote of thanks to the chairman of the committee, laid stress upon the fact that the training of nurses, as it was understood and known in this country and in America at this day, originated in its present form in the Queen's Hospital, Birmingham.

The Countess of Warwick on Nursing.

At a meeting of the Warwick board of guardians held on Feb. 23rd the Countess of Warwick moved the following resolution: "That immediate steps be taken to provide a competent night nurse for the workhouse infirmary, and that it might be well for her to take one or two months' duty in turn with the head day nurse." At present she stated that the nursing at night was left in the hands of the paupers; the result was that the helpless and sick were left very much to the tender mercies of uninstructed inmates for the night—a very unsatisfactory state of things. She mentioned that she had recently visited the Birmingham workhouse infirmary, which was conducted like a hospital, with 1500 beds and splendid arrangements, and had studied the paper which the matron had read at the conference the previous week. The Mayoress of Leamington (Mrs. Thursfield) seconded the resolution. A long discussion followed, and ultimately the motion was carried, it being decided to advertise for a night nurse with a midwifery certificate at £30 a year and rations.

A Novel Excuse for Adulteration.

A milkman was recently summoned for selling milk unusually diluted with water. The excuse given was that the snow had fallen from some roof into his cans and so caused the additional water to be present. He failed to convince the magistrates of this ingenious defence and was duly fined.

Birmingham General Dispensary.

At the annual meeting of subscribers held on Feb. 27th the committee reported that the income in 1894, including a balance of £69 14s. 11d., amounted to £11,868 8s. 7d.; the expenditure was £11,469 18s. 5d. The total number of patients admitted by tickets was 32,097, showing a decrease of 1150; the average cost of patients was the same as in 1893—viz., 3s. 11½d. Of the cases and accidents treated without tickets there were 4471. The total number was 36,568. The Mayor, Alderman Fallows, was elected President, Dr. Rickards consulting physician, and Mr. Barling consulting surgeon. The various votes of thanks were passed.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medico-Chirurgical Society.

THE third night of the discussion at this society was on Feb. 26th. The meeting was held in the Royal College of Physicians, as the hall in which the society usually meets was not available. Dr. G. A. Gibson opened the discussion, and confined his remarks to the treatment of cardiac pain. Dr. James gave expression to doubts he had on the treatment of cardiac cases. Dr. G. W. Balfour was given another opportunity of speaking, and dwelt upon the more general aspects of cardiac treatment. Professor Fraser replied, and expressed his gratification at the interest which the discussion had raised.

Health of Edinburgh.

The death-rate of Edinburgh is again high, reaching 34 per 1000, while in Leith it is over 39 per 1000 for the past week. Of the deaths 2 were from small-pox. The intimations included 9 cases of small-pox, 42 of scarlet fever, and 569 of measles. Influenza is still very prevalent, and while, as a general rule, it is comparatively mild, it has brought in its train pneumonia and bronchitis, and these are claiming their victims, especially amongst the aged.

Death of Professor Blackie.

By the death of Professor Blackie Edinburgh and the University, and, indeed, Scotland, have lost one of their most unique figures and most prominent personalities. He was as well known in medicine as in arts, and when he was in the active performance of his duties as Professor of Greek there was not a more generally known figure about the University than his. He is to be accorded a public funeral, and the University shuts its class-room doors for the day.

High Death-rate in Glasgow.

In the past fortnight the death-rate of the city has reached the highest point for many years: 54 per 1000 last week, and 51 per 1000 the week before, while the figures for the three preceding weeks were 43, 32, and 26. As a contrast, it may be noted that the rate in the week of 1894 corresponding to last week was only 19, and in 1893 it was 27. Dr. Russell ascribes this excessive mortality to the severity of the winter, diseases of the lungs being responsible for 40 per cent. of the total deaths, while zymotic diseases have diminished rather than otherwise. We have recently had exactly the climatic conditions which always increase the Glasgow death-rate enormously—namely, a temperature continuously below the freezing point, accompanied by a dense fog, which was only dispelled from time to time by a bitter east wind, the cold period also being preceded by a four-week period in which the temperature was rarely more than one or two degrees above freezing point. All past experience shows how such conditions tell on the public health of Glasgow. In the week ending Dec. 6th, 1894, the rate was 37·3; in the fortnight ending March 31st, 1893, it was 36; in December, 1892, it was 37·5; and in the week ending Jan. 29th, 1881, after conditions exactly like those recently experienced, it was 46. But to appreciate the possibilities of a continuous frost and fog in Glasgow the winter of 1874-75 must be quoted: in the week ending Jan. 9th, 1875, being the seventh week of frost and fog, the mortality rose to 67. In such circumstances ordinary sanitary measures fail to touch the cause of public suffering; these can be dealt with only by such benefactions as are now being so freely and judiciously distributed by the Lord Provost's relief organisation, the funds at the disposal of which now reach about £10,000. The only possible palliative is warmth—the warmth of food, fire, and clothing. Small-pox continues to spread, though slowly, there being now 43 cases in hospital.

Aberdeen Royal Lunatic Asylum.

The mason work of the new hospital has been finished and the whole of the different blocks and corridors roofed and made watertight, while the plaster work is completed except a small portion. The buildings will be occupied by October next. The new hospital will accommodate 150 patients. The extreme length east and west is 526 ft. The administrative block, to serve the whole institution, occupies the central position; the other blocks extend symmetrically on the two sides—the female department on the east, and the male on the west—all connected by an amply lighted and ventilated corridor running from end to end of the

buildings, and opening into the central common dining hall. On each side of the administrative block is a department for the reception of cases of a recent hopeful variety—in other words, a mental observation block—each connected with the central by: (1) the main corridor in the rear; and (2) an exercise corridor in front—the space between the two being occupied by a glass-roofed conservatory for the recreation of the inmates in cold or wet weather. Beyond the observation block, and connected with it by the general corridor, is a hospital block at each end for the reception of sick from all parts of the institution. These are each furnished with a small kitchen for special needs. Beyond each hospital block, and disconnected from it, is a small block for the isolation of infectious disease. In the rear of the administrative block stands the block for heating and ventilation on the mechanical propulsion system by the Sturtevant Engineering Company. The lighting is to be solely electrical. The administrative block is three storeys in height, the mental observation blocks two storeys, and the hospital blocks one storey. The bath-room and lavatory accommodation is mostly contained in annexes to the main buildings. All the external walls are of granite. The engineering department will be contracted for forthwith.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Mr. Charles H. Robinson, F.R.C.S. Irel.

MR. CHARLES H. ROBINSON of Kingstown died on Friday, March 1st, after but two days' illness. He had been an examiner in anatomy, physiology, materia medica, and botany at the Royal College of Surgeons in Ireland; and a lecturer on several of these subjects in the Ledwich School of Medicine, Dublin. He had been for many years one of our special correspondents in Ireland, and was deeply and universally respected.

The Battle of the Clubs at Cork.

How will the dispute between the Cork medical men and the clubs end? This is a question asked by many people. My answer is that the medical men need only preserve their present passive yet determined attitude and the gradual disintegration of the clubs must result. Many indications point in that direction. I know one practitioner who last week attended three or four club patients, and each patient represented a different club. I could quote several instances of the same kind, and, what is more remarkable still, some of the most pugnacious members of the clubs have acted similarly. The wives of members in many instances decline to be treated by any but their previous medical advisers, and those members will soon commence to ask themselves whether it is wise for them to continue to contribute to clubs from which they derive no immediate benefit. So the very existence of many of the clubs is threatened, and the members have only their own perverseness to blame. The following subscriptions are announced by Mr. D. D. Donovan, the hon. treasurer of the Cork Society Medical Officers' Indemnity Fund:—Surgeon-Lieutenant-Colonel McCreery (Isle of Wight) £2 2s.; Dr. Oakshott (Cork), £3 3s.; Surgeon Foott, R.N. (H.M.S. *Lapping*), £1; Dr. John B. Isaac (Broadmoor Asylum), £2 2s.; and Dr. H. Macnaughton Jones (London), £3 3s.

Death of the Professor of Modern Languages in the Queen's College, Cork.

The Queen's College has sustained a great loss by the death of Professor Owen O'Ryan, who for a number of years with much distinction occupied the chair of Modern Languages. He was originally a student of the college, and afterwards resided for a considerable time in Germany, France, and Italy. He gained an intimate knowledge of the languages of those countries, and when the death of M. De Vericour created a vacancy the Government of the day unhesitatingly appointed Professor O'Ryan to the chair of Modern Languages. He afterwards became an Examining Fellow of the Royal University of Ireland, and was always most courteous and conscientious in the discharge of his duties. About two years ago incipient hemiplegia set in and some time later a severe attack of influenza caused the paralytic symptoms to develop more rapidly. He had twelve months' leave of absence from the college and the long-expected end came last Friday week. The many medical students who passed

through his class at the college or were examined by him at the University will hear of his death with unfeigned feelings of regret.

Some months ago a bazaar on a gigantic scale was organised for the purpose of procuring funds for the building of a new ophthalmic hospital. The committee of the bazaar met last week and announced that after defraying all expenses they had in hand the handsome sum of £4000.

March 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The late M. Alphonse Guérin.

THERE has just disappeared, in the person of Alphonse Guérin, one of the most prominent representatives of the old French school of surgery. Born on Aug. 9th, 1817, at Ploermel, in Brittany, he, at the early age of seventeen, embraced a medical career, much against his own wish, which inclined towards the profession of arms. It came about in this way. One of his cousins, a sister of charity at the Hospital of Bourbon-Vendée, wrote to his mother, a poor widow, offering to bring up Alphonse as a medical man. Yielding to the solicitations of his mother, he had no sooner reached the hospital than he had to assist at the gruesome operation of phlebotomy, performed by his relative, the sister of charity. The embryo surgeon promptly fainted away, but next morning he had to repeat the operation on the person of his teacher. He missed the vein, whereon his petticoated mentor and patient calmly remarked, "C'est ce qu'on appelle une saignée blanche; recommence de ce côté," offering the other arm. The blood flowed, and his cousin said, "Tu sais faire une saignée; tu peux être médecin." Other venesections and minor operations successfully performed imparted confidence to the beginner, and he then entered on that career of tenacious labour for which he was ever after renowned. Removed to Paris, we find him an "interne des hôpitaux" in 1840, "aide d'anatomie" in 1843, M.D. in 1847, "prosecteur des hôpitaux" the succeeding year, and "chirurgien des hôpitaux" in 1850. Like the late Dr. Dujardin-Beaumetz, his attempts to join the professorial staff of the Faculty ended in failure, the disappointment being due entirely to his uncourtier-like honesty of purpose and not to incapacity. His first wards were at Louraine Hospital in 1857. In 1862 he was transferred to Cochin, and in 1863 to St. Louis, where he remained for nine years, when he became attached to the Hôtel Dieu. Here his hospital career expired in 1879, he having attained the age limit for retirement. Elected a Member of the Academy of Medicine in 1868, he became President of that society in 1884, after having already filled the same dignified position at the Société de Chirurgie. At his death he was a Commander of the Legion of Honour. There was one other honour he coveted and never obtained, and that was a *fauteuil* at the Institut. And yet, who among his colleagues merited it more? His contributions to surgical progress were numerous and important, comprising as they do two works on diseases of women and one on operative surgery, which was in its day held in great esteem by a previous generation of students. But his chief title to fame is based on his advocacy of the *pansement ouaté* (cotton-wool dressings). As Professor Terrier remarked in his introductory lecture in 1893, the researches which led to the devising of this form of wound dressing marked an epoch in surgery intermediate between the old ideas and Listerism. As Professor Terrier says, it is the *pansement ouaté*, improved by modern discoveries, which will be the best practical method of treating wounds in the next big war. In 1870, while soldiers operated on by others died like flies, it was remarked that Guérin's patients recovered, thanks to the application of his method, in the invention of which he was inspired by the following considerations. The great desideratum in wound dressing was the filtering of the air from its contained germs, the maintenance of a uniform temperature and of a certain degree of elastic compression, and perfect rest of the wound secured by infrequent dressings. Alphonse Guérin very ingeniously applied wool for this purpose, and that his ideas are still in favour is shown by the large and universal use made of his method in combination with Listerism in the treatment of wounds in the Paris hospitals. We may therefore willingly accord to Alphonse Guérin the credit of having been a pioneer in surgical methods, and as such he is and will continue to be

honoured in his own country, if not out of it. As a man he was distinguished by a rigid sense of duty. Although on the honorary staff of hospital surgeons for the last fifteen years, he sat only a fortnight before his death as President of the Board of Examiners at the examinations for the place of *Interne*. He was also to have presided over the deliberations of the next French Surgical Congress. It will be remembered that he was vice-president of the last gathering held in October, 1894, at Lyons. Dr. Laborde has said of him: "Franche et loyale nature, d'une grande finesse d'esprit, maniant comme pas un le trait sarcastique qui parfois emportait le lambeau; mais au fond plein de cœur, de bonhomie, et de bonté, Guérin eût dû certainement avoir sa place à l'Institut si cette attribution n'eût dépendu et ne dépendait que de la justice distributive," which says much to the credit of Guérin and little to that of the body from which he was excluded. Fortunately, his claim to gratitude on the part of humanity will not be diminished by his failure to obtain an ephemeral honour of that kind. A Breton bretonnant (a Breton of Bretons), his purse was ever open to his needy compatriots, and he died full of love for his native department, where now lie his remains.

Drugs contraindicated during Pregnancy.

This very debatable question is settled in the following sense by M. Huguenin.¹ At the head of dangerous substances for the pregnant woman he places sodium salicylate, ergot of rye, salicylic acid, and salol. Then come purgatives. He cannot regard antipyrin and cocaine as inoffensive. But is it not possible to pronounce too absolutely on this point? Surely there are pregnant women and pregnant women. *Après* of the employment of drugs at this period of the woman's life, I have often thought that an authoritative statement regarding the drugs dangerous to the child when given to the nursing mother would be found useful. No practitioner would, I imagine, be content to combat syphilis in the child by prescribing mercury to the mother.

March 5th.

THE INDIAN MEDICAL CONGRESS.

PROCEEDINGS IN SECTION.

MEDICO-LEGAL MEDICINE.

DEC. 26TH, 1894.

The following are abstracts of papers read in the Section of Medico-Legal Medicine:—

On Some Cases of Poisoning by Scopolia Lurida.

Surgeon-Captain ALLAN MACNAB L.R.C.P. Lond., read a paper on Some Cases of Poisoning by *Scopolia Lurida*, in which he said:—

"Believing that few, if any, cases of poisoning due to this plant have yet been recorded, and in view of the possibility of an occurrence of the same kind as that which I am about to relate under similar circumstances, I am led to think it worth while to give the following account of an incident that occurred during the Black Mountain campaign of 1891 and to furnish a description from notes made at the time of a series of serious symptoms that rapidly supervened after the leaves and succulent stalks of *scopolia lurida* had been eaten in mistake for a very similar and quite harmless plant known to Ghoorkas as 'tambaku sag' or 'taringa.' It seems to be an accident that might well happen again, for, from the account of the men who, deceived by its similarity to the herb which they are accustomed to gather and eat with their food in their native hills of Nepal, partook of the plant in question and were poisoned, there is a very great resemblance between the two. On the night of May 20th, 1891, I was summoned by the hospital assistant of my regiment, then in camp at Seri on the Black Mountain, to the lines of No. 5 Company Ghoorkas, being told that seven or eight men were lying in various degrees of delirium and unconsciousness, which had come on shortly after they had eaten their evening meal. On reaching the tents I found a havildar and seven men, all Ghoorkas, suffering from a series of symptoms which were very distinctive of belladonna poisoning—viz., marked dilatation of the pupils, a feeling of constriction in and dryness of the throat, a peculiar variety of fussy delirium, with hallucinations, and the loss of power of coördination in the lower extremities. Ascertaining that all had eaten the leaves

and stalks of a plant they called *tambaku sag*, which had been given them by some men of their own company on picquet some 1500 feet higher up the hill, whom they had that afternoon been to visit, I examined at once a specimen of the plant lying near, and from a certain resemblance of the leaf to that of belladonna and that of the symptoms to those of belladonna poisoning I first thought it might be a variety of that plant, and after giving each man sixty grains of lime sulphate, which produced emesis in every case, I administered morphine hypodermically to the two worst cases, and had all taken to the nearest field hospital. Arrived there, the next three hours were employed in giving ammoniac carbonas to induce emesis and then in keeping the men constantly moving. This treatment answered very well, and by 2.30 A.M. all were in a condition which permitted of their being put into tents, a careful watch being maintained upon them. The havildar, who throughout seemed least affected, returned to the regiment next day and the remaining seven men the day following. I examined all in the day on which they returned to the regiment and found they were still suffering from various degrees of dilatation of the pupils, inability to accommodate, and giddiness. All these symptoms, however, entirely disappeared in a day or two, and the men were sent back to duty. Their symptoms from the beginning and more in detail were as follows. Some fifteen minutes after first eating the herb they said that they began to experience a feeling of constriction in and dryness of the throat, soon amounting to an inability to swallow, rapidly succeeded by a sense of muscular weakness and tremors so marked that they found themselves without sufficient strength to continue to break and eat their chapatties; giddiness and inability to stand upright were next experienced, and finally the condition of delirium and semi-consciousness supervened in which I found them. To this it may be added by way of fuller description that most of them were unable to answer when spoken to, and those who could had forgotten their own names. Some lay on the ground in a dazed condition others sat up constantly making fidgety movements with their fingers, picking up small particles of sand or pebbles from the ground, or appearing to be searching for something they had lost, and occasionally looking up with a half vacant, half wild expression. In none was there anything approaching a state of collapse; the pulse was good if a trifle rapid; in all respiration was never stertorous; no pain was complained of save the dryness of the throat and the painful sense of constriction. The mouth was dry and salivary secretion arrested. They exhibited all varieties of gait, from trifling unsteadiness to complete loss of control over their lower limbs. It being dark and all quiet in camp and the men being together, their condition for some time escaped notice, and it was not until nearly three hours had elapsed after eating the herb that I was called to them. It seemed fortunate, therefore, that their condition had not become more serious. Four had vomited before the emetic was given them; only one had passed urine before losing consciousness, and then in small quantity and with some amount of strangury. I very much regret that I am unable to show a specimen of the plant, which, however, was submitted for identification at the time, and presumed, without much doubt, by an experienced botanist to be *scopolia lurida*. The plant grew very locally at an elevation of from 7000 to 8000 feet, and occurred rarely. The plant for which it was mistaken is, the men say, very similar in appearance, and is known by them in Nepal as 'taringa' or 'tambaku sag.' There is said to be this important difference—viz., that the stalk of *tambaku sag* is hollow, while that of *scopolia lurida* is certainly solid and succulent; but, never having seen the plant, I am unable to speak with certainty on the point, and had I thought of it before I would have tried to procure a specimen for comparison, and much regret that the interest, if any, that the note has should be so greatly lessened by the want of specimens both of *tambaku sag* and *scopolia lurida*."

A Remarkable Case of Quinine Poisoning.

Surgeon-Captain A. ERNEST ROBERTS, M.B., Civil Surgeon, Aligarh, North-West Provinces, read a paper upon the following case of Quinine Poisoning, saying:—

"As far as I can ascertain, the subject of poisoning by quinine has not received much attention from medical authors—at any rate, I have not been fortunate in my researches into medical literature in obtaining light and leading upon this subject. I am therefore impelled to put the following case on record as one of remarkable interest in many ways. An Eurasian woman, aged thirty-five, married,

¹ Archives de Toxicologie et de Gynécologie, February, 1895.

no children, in comfortable circumstances, had always enjoyed good general health, but had been troubled for nearly two years with menorrhagia associated with slight uterine retroflexion. This local trouble had been temporarily overcome by treatment, and she had normal periods for three months, when at noon on a certain day in November, 1893, I was suddenly summoned to her bedside, as she was declared to be dying. On my arrival I heard that she had swallowed a very large dose of sulphate of quinine an hour or so before, and from the evidence available, which I carefully and critically weighed, I believe the quantity to have amounted to about six drachms. There is no doubt in my mind that she managed to swallow fully five drachms, and there were traces of a little in the vessel from which she drank it, and on her lips, at the time I first saw her. She was lying upon her bed totally unconscious—an inert paralysed mass. The whole surface of her body was deadly cold and blanched, or, rather, livid; her temperature (axilla) was 95° F., breathing almost imperceptible, shallow, and slow, and the pulse was 45 thin and small. Her eyes were closed, and the pupils were considerably dilated, there being no response to light; no tendon reflex was obtained and there was no response to external stimuli, and save that she at long intervals uttered a low groan she appeared to her friends to be dead. My own anticipations were not cheerful. There was little, if any, change in her condition for several hours, during which she vomited 'coffee-ground substance' several times. Indeed, definite and obvious signs of rallying were deferred until the early hours of the next day, and it was then ascertained that, in addition to slight deafness, she was 'stone blind,' even to total non-appreciation of strong sunlight. The deafness gave no trouble; perfect hearing was restored within a week, with the gradual return of general functional activity, but it was long ere all traces of the tremendous shock to the general system had disappeared, and doubtless the demoralisation induced by the blindness and the terrible circumstances served to accentuate the profound debility. I have said that at first the pupils were widely and equally dilated, and did not respond to the stimulus of light; the blindness was the dense, uncompromising darkness of atrophy. It was not until forty-eight hours had elapsed that I found an opportunity of using the ophthalmoscope, and the picture I obtained was definite and well marked. There was a blur or haze over the whole perceptible retinal field, there was a distinct deepening of colour (congestion), especially concentrated in the macula; the discs were not definitely altered in colour, but, if anything, perhaps also of a slightly deeper tint than normal (I speak under reserve, as I am not very familiar with the exact shade of the Eurasian disc), but hazy and with ill-defined margins. I can think of nothing more suggestive as an indication of the impressions I received during the first examinations than a rather highly coloured and crude water-colour sketch which had been very slightly smudged, perhaps I may call it 'smoky,' so that the contours of the vessels were blurred and not well defined. However, this stage was of short duration. The tint of congestion and the blur alike disappeared, and in a week from the onset I began to fear that optic atrophy would close the scene. The retinal vessels, both veins and arteries, became well defined and contracted, and the optic discs became distinctly pale; the pupils remained widely and equally dilated and insensible to light. I made frequent and regular examinations, but my powers of observation did not avail to detect any very decided change in the ophthalmoscopic appearances during a period of quite three months. The general retinal ischæmia and disc pallor did indeed quickly become decided, and remained thus with no perceptible change for about six weeks, when a very slight improvement set in. During the fourth and fifth month a certain distinct but small improvement could be noted at considerable intervals, but when I left my charge for six months' leave the retinal anæmia was still the notable objective sign, the disc having fairly regained its normal tint. So far for the objective signs. As regards the subjective I may briefly add the following particulars. The absolute 'stone blindness' lasted, I believe, for fully two weeks; the first perception after that was the flash of light from the ophthalmoscopic mirror, but there was no perception of external objects until the third or fourth week, when certain things—a small bright metal time-piece, the looming figure of an individual—were seen at a distance of four to eight yards. This distant vision was a marked feature of the case for two or three months, and though it gradually gained in distinctness of outline and

detail was a blurred impression on a dim and hazy background. A noticeable point during the fourth week also was her perception at a distance of dark linear objects—e.g., the parallel beams of the roof of the bungalow and the cross bars of the windows in the doorways. Here also the definite objective points were lost in an indefinable haze. It was somewhat surprising that she could occasionally read the dial of the clock before mentioned at four or five yards distance, but could distinguish no neighbouring object. Colour blindness was marked from the first, but about the sixth week she noted the dark blue of my necktie; red and yellow were, and are still, best distinguished. From the sixth to the eighth week onward, with occasional relapses synchronous with a return of the menorrhagia and other disturbances of the general health, she gained ground in all points, very slowly but surely, and in April last she could write a letter and read large type, the effort being exhausting to her visual faculty, and consequently not persevered in. At this stage I lost sight of the case owing to my departure on leave, but I have recently heard from my patient that, although much better in most respects, there is much left to be desired in her visual powers; she gets about, reads and writes, and uses her mirror satisfactorily for toilet purposes, but her colour vision is defective, red and yellow being still most easily distinguished, and these at a distance, nearness of approach causing objects to appear black, the general hazy blur of the background of the visual field being also a trouble to her."

[Surgeon-Captain Roberts does not say what treatment (if any other than expectant) he employed.—ED. L.]

DEC. 27TH.

Strychnine in Cases of Snake-bite.

Surgeon-Captain J. J. PRATT, I.M.S., civil surgeon, Gonda, read a paper upon Strychnine in cases of Snake-bite. In this paper he said:—

"During the past two years I have had the opportunity of applying the method of treatment recommended by Dr. Mueller in cases of snake-bite on two occasions. The first case occurred at Fyzabad and was treated by Surgeon-Major Cadge, I.M.S., and myself. The particulars are as follows: A Hindu male aged twelve years was admitted into the Fyzabad Sadr Dispensary about 7 A.M. on the morning of July 26th, 1892. Patient was accompanied by his father, who stated that half an hour previously, when the boy was seated at his morning meal, a snake suddenly appeared and bit him on the great toe of the left foot. He (the father) at once enveloped his hand in a cloth, seized the snake close to its head, tore it from the boy's foot, and hurled it some distance, where it was promptly killed by a police constable. This statement was confirmed by other spectators. The snake, which was brought to the dispensary with the boy, was a cobra 3 ft. 3 in. in length and of dark-grey colour. The boy on admission complained of pain, tingling, and numbness in the left foot. The surface of his body was cold and he appeared to be a little drowsy, but there were no marked general symptoms. On examination of the foot a distinct puncture was found on the upper and inner surface of the great toe about an eighth of an inch from the edge of the nail. There was slight bleeding from the puncture and the skin immediately around it was ecchymosed. The toe was distinctly swollen. No second puncture could be discovered, this being probably due to the horny nature of the thickened epithelium of the part. A crucial incision was at once made at the site of the puncture, the wound washed with a strong solution of permanganate of potassium, and a bandage tightly applied round the leg above the ankle. Five minims of the ordinary pharmacopœial solution of strychnine were then injected hypodermically, and the injection repeated every five minutes. After the seventh injection the patient was seized with tetanic spasms and vomited. Treatment was then suspended for the space of an hour and a half, when drowsiness became very marked. The injections were accordingly resumed at intervals of ten minutes, and after the sixth dose (being the thirteenth in all), when a total of sixty-five minims had been injected, a severe spasmodic fit came on. This was at 11.10 A.M. Between 11.15 and 11.45 A.M. a succession of severe tetanic spasms occurred, the muscles of the abdomen, back, and thighs being chiefly affected. The pulse became feeble and fluttering—140 to the minute—and respiration almost ceased. For a short time it almost appeared as if the patient were about to succumb to the effects of the 'remedy.' Small quantities

of brandy and extract of chicken were administered and swallowed with difficulty. The temperature was found to be slightly above the normal. Between noon and 1 P.M. patient's condition improved, the spasms being few and slight. In the course of the following hour they ceased entirely. The temperature at 3 P.M. was 103° F. The patient was perfectly conscious and complained only of the tightness of the ligature on his leg; the foot was much swollen. Nourishment was taken in small quantities. At 6.30 P.M. the ligature was removed without causing any untoward symptoms. At 6 A.M. on the 27th the temperature was 101° and fell to normal in the course of the day; the pulse was good; there was no pain. The swelling of the foot rapidly subsided; no further symptoms appeared and the boy left the dispensary on the morning of July 29th in perfect health, with the exception of a trivial wound on his toe. The second case occurred in my own compound at Gonda, and was treated by my assistant surgeon and myself. A Hindu female aged twenty-five, the wife of one of my servants, was bitten by a snake about 2 A.M. on June 15th, 1894, whilst lying asleep on the floor of her house. The snake, described by the woman's husband as 'kala,' escaped. Assistance was not applied for until 3.30 A.M. (an hour and a half after the infliction of the bite), by which time the patient had developed marked general symptoms, notably drowsiness and loss of power in the legs, being unable to walk or stand by herself. Great pain was complained of at the seat of the bite, which was found to be the inner side of the left arm close to the posterior axillary fold. Two distinct punctures were visible about three-quarters of an inch apart. The surface of the skin was cold and clammy, the pulse feeble, and respiration slow and sobbing. At 3.45 A.M. one-fifteenth of a grain of strychnia was injected hypodermically, and the patient sent on to the Sadr Dispensary for treatment to be continued. At 4 A.M. the patient arrived at the dispensary insensible, with profuse salivation, hands and feet cold, conjunctivæ congested, pupils normal, and pulse feeble. Fifteen minims of the B.P. solution of strychnia were at once injected. At 4.15 A.M. there was no improvement; the pulse was feebler and slower, breathing stertorous, and the face was becoming cyanosed. The injection was repeated. At 4.30 A.M. the face and hands were markedly cyanotic, the pulse being feeble and at times intermittent, the surface of the body cold, and the respiration 6 to the minute. The injection was repeated. At 4.45 A.M. the patient died. Three days later a large cobra was killed in the hut in which the woman had been bitten. The first of these cases is complete as far as it goes. The snake was produced with the patient; strychnia was administered in what under ordinary circumstances would be regarded as dangerous, perhaps deadly doses; the symptoms produced by the drug were for a short time alarming but soon passed off, and the boy made a rapid recovery. The only element of doubt attaching to the case is whether the bite inflicted by the snake was really an effective one. Only one puncture was discovered, and the quantity of venom injected may have been small, or one may go even further and suggest the possibility of the cobra having bitten the boy without injecting any poison at all. It is possible that many authentic recoveries, supposed to be due to the administration of antidotes, are really due to the bites not having been vicious. The second case was unsatisfactory from the commencement. The period which had elapsed before medical aid was sought and the position of the bite in close proximity to the trunk were unfavourable to the successful adoption of any line of treatment. No ligature could be applied above the bite, and the patient's condition showed it to be certain that local treatment would be of no avail. Within the short period of an hour more than half a grain of strychnia was administered without the slightest sign of even temporary improvement. Perhaps the doses should have been larger. My mind remains open on the question of the efficacy or inefficacy of Mueller's method of treatment. I always look forward with interest to accounts of cases in which it has been adopted by other medical men, and shall not hesitate to give it a further trial myself should the opportunity offer. In view, however, of the many doubtful cases which have been published, I wish to close my paper with a humble expression of opinion to the effect that the great majority of cases of so-called 'cure' of snake-bite, in which the offending reptile has neither been killed nor captured and subsequently identified by a competent authority, are of absolutely no scientific value."

SURGERY AND OPHTHALMOLOGY.

DEC. 27TH, 1894.

The following are abstracts of papers read in the Section of Surgery and Ophthalmology:—

Conjunctivitis in Gaols.

A. RAGASINGHAM, M.B., C.M., Assistant Medical Officer, Convict Hospital, Colombo, read a paper upon Conjunctivitis in Gaols. In this paper he said:—

"The following notes were compiled from the cases of conjunctivitis treated at the Convict Hospital, Colombo, from Jan. 1st, 1894, to Nov. 7th of the same year. This gaol is the largest in the island, and the cases treated here may be taken as a fair type of the disease as met with in the Ceylon prisons. Some of the cases treated here were extremely mild, while others were of the most severe type, and a very large number may be assigned to the class of considerable severity. Almost all the cases treated in this gaol were in males, and the females, though few in number comparatively, were almost exempt from this disease; and hence it would be reasonable to conclude that male prisoners, from hard work, exposure to the sun, and the intrinsic nature of their occupations, are more liable to this disease than females. It would hardly be necessary to premise here that among the gaol population all diseases, especially conjunctivitis, would be brought under treatment from the very onset; and hence the relative value of the following figures, and the conclusions drawn from them must be placed on a somewhat different footing from the statistics of the civil hospitals and private practice. By careful calculation the average stay in hospital of an individual is found to be 5.37 days, the maximum being 76 days and the minimum 1 day. But when a patient had stayed in hospital more than 16 days, some other complication or intercurrent disease must be searched for. It is almost self-evident that certain trades and occupations, such as masonry, lime-making, stone-cutting, stone-polishing, sledging, brick-making, would predispose labourers to conjunctivitis, and these presumptions are fully borne out by figures. The annexed table would make this plain:—

Occupation in Gaol.	No. of cases.
Mason's party	374
Husk-beating	128
Sand party	32
Levelling party	18
Latrine party	15
Fencing party	14
Cleaners and sweepers' party	10
Cabbok-cutting party	7
Stone-cutting and breaking party	6
Hospital attendants	3
Lamp lighter	1
Other parties	—

"I should not omit to mention here that trachoma forms an important factor both in causing this disease and in bringing on unfavourable results, and it is in such cases that general ulceration and sloughing of the cornea are liable to supervene owing to the nutrient material failing to reach the corneal cells. If trachoma and oedema of the lids should exist simultaneously the unfavourable termination would be brought on much earlier. The various seasons of the year exert a powerful influence both in predisposing to and exciting this disease. Thus April shows the largest number and October the smallest according to the statistics of the hospital. The following table illustrates this point.

Number of Cases treated in the Various Months.

January	40	August	64
February	101	September	53
March	110	October	51
April	121	November	16
May	57		
June	70	Total	745
July	62		

In a gaol where the number of inmates is limited, it is not an uncommon thing for one person to be readmitted again and again, at short intervals, for the same disease, and conjunctivitis is no exception to this rule; and the annexed table and chart show how many times certain number of men were admitted for this disease. I should not omit to mention in this connexion that in gaols a certain number of cases of conjunctivitis are self-induced, and are to be attributed to malpractices, such as the application of the juice of the croton seeds, lime, seeds of the castor-oil plant, emplastrum cantharidis, when applied externally for the legitimate purpose of causing a blister. Except in the early stages such cases cannot be diagnosed from the genuine conjunctivitis. I have also noticed that in tropical climates, such as those of Ceylon and India, hypertrophy of the follicles of the eyelids are much more common than in temperate climates like

Scotland and England; and I cannot but attribute this disorder mainly to any other influence but heat and direct exposure to the burning rays of a tropical sun. When applied to the head ice relieves the feeling of oppression and weight in the head, and tends to reduce the oedema of the lids. It relieves insomnia in certain cases of acute conjunctivitis. As a rule, preparations of opium are freely used internally, but chloral and bromide are used if insomnia is troublesome. I have noticed that a favourable position would tend to reduce the excessive oedema of the lids, especially in old, weak, and debilitated subjects. Thus, if a patient should sleep on the unaffected side the swelling would tend to decrease, and *vice versa*. It is routine practice to administer a drastic purgative like magnesium sulphate at the commencement of all cases of conjunctivitis provided that there are no contra-indications, and I have some faith in this preliminary procedure. Of the 750 cases treated all invariably recovered except one, an old emaciated individual about sixty-five years of age suffering from trachoma. In this case swelling of the lids was excessive, and in two or three days sloughing of the conjunctiva set in, and the patient lost the sight in this eye almost completely. Here strong solutions of nitrate of silver proved of no avail, and every other mode of treatment failed. The age of the patient and the condition of the lids would explain the cause of failure."

Some Difficult Cases of Chloroform Administration.

Mr. ARTHUR NEVE, F.R.C.S. Edin., in a paper upon Some Difficult Cases of Chloroform Administration, said:

"The fact that for all practical purposes ether is not available as an anæsthetic in India should enable the profession here to regard the chloroform controversy from an unbiased standpoint. Here it is not a matter of choice; but it is not reasonable to declare that because chloroform is the only available general anæsthetic in India, therefore it is the best in a cool climate. Nor, if it could be proved that it is absolutely safe in this country, should we settle the controversy in that way. India could contribute two important facts, which perhaps may be elucidated at this great gathering. First, the relation of race to anæsthetics, and this might include the question of racial habits, such as vegetarian diet and abstinence from alcohol. Secondly, the effect of temperature and altitude upon chloroform anæsthesia. Can any clinical difference be established between the administration to natives of India of chloroform in hot weather with a mean temperature of over 85° F., or in cold weather with a mean temperature of 50° or lower at such stations as these temperatures exist, and does an altitude of 6000 or 8000 feet affect the question clinically? These practical contributions to debatable points might reasonably be speedily expected from Indian surgeons. A New Zealand surgeon claims that careful study of cases shows that the aborigines there are less liable to suffer from shock, and that Europeans, if insufficiently anæsthetised, are apt to die from inhibition of the action of the heart. Does Indian experience homologate this view? Could an Indian committee be formed to investigate all fatal cases occurring in this country? I published a case in THE LANCET¹ in which partial anæsthesia *plus* shock caused very serious symptoms. It referred to a strong Kashmiri who required castration for sarcoma of a testicle. Owing to vomiting the anæsthetic was insufficiently administered; and at the moment of applying a clamp to the cord the patient became rigid, as in a tetanic spasm, and the heart's action stopped; the wound ceased to bleed. With difficulty—after inversion, injection of ammonia, and also per rectum of hot water, together with steady artificial respiration—the pulse began to flicker, the chest heaved, and the patient was restored. As he was sensitive to the knife I then rapidly administered two drachms of chloroform, which the patient inhaled quietly, and the operation was finished deliberately and safely. I am convinced of the importance of this and similar cases. One which I narrated at the meeting of the British Medical Association at Bournemouth has the same lesson. A patient suffered both from severe heart disease and from stone in the bladder. Chloroform was timidly given, and as the staff was inserted the patient gave a gasp and fainted. He was with difficulty restored to consciousness. A fortnight later I arrived in the town and was consulted. I offered to administer chloroform myself. Two drachms were given and the operation was begun. As the patient had taken chloroform quietly all seemed well, and I was asked to assist in the operation, leaving the house surgeon to continue the administration. Scarcely two minutes had passed before the breathing

appeared to stop. What was the cause? An overdose? No, for no more chloroform had been added. It was the shock acting reflexly on a heart neither protected by consciousness nor by full anæsthesia. I append two cases of faulty administration that have occurred this year out of over 500 chloroformisations under my care. In both cases I was summoned from an adjoining room where I was operating. In one a native assistant of considerable experience was operating while another, who has chloroformed thousands of patients, gave the anæsthetic. When I entered the patient had been partially inverted, the operator was performing artificial respiration, while the other drew on the tongue with the head back; but observing that the lips were purple, which was evidence of continued action of the heart, I at once put my finger down behind the tongue and raised the epiglottis. Immediately one heard the air rush into the chest, and in less than a minute a sighing inspiration showed that natural respiration was recommencing. In this case I think an overdose had been given and the tongue had fallen back, and the traction upon it did not suffice to open a flaccid epiglottis. The other case was one in which chloroform had been badly taken, the patient struggling a little and afterwards incessantly spitting. Anæsthesia was pushed to stop this annoying reflex symptom and the moment it ceased the respiration also stopped and the patient turned pallid. When called in I lifted him on to the ground with his feet and body up and began artificial respiration; the air entered the chest, but for a few seconds the absolute pallor remained. Then there was a slow, natural inspiration; recovery was slow for a minute, and then, with a heave of the body, vomiting began, and the stomach emptied itself of two pounds of semi-digested rice. Here, as in other cases, the syncope was connected with a full stomach and was premonitory of the vomiting. There were two other cases very noteworthy. One was a woman with a gumma over the thyroid cartilage, with considerable dyspnoea, and a constant spasmodic cough. I administered chloroform myself, and began with a dose of ten minims on a towel. There was a moment of struggle, then she lay senseless, and the operation was begun. Her breathing was almost imperceptible and the pulse thready. No more chloroform was given, and the operation (which lasted about twenty minutes) was completed without a sign of consciousness, but soon afterwards she came slowly round. The other case was that of a lad with very great dyspnoea from the pressure of a goitre which with each inspiration was sucked down behind the sternum. As in the earlier case only a few drops of chloroform were given, Mr. W. F. Adams kindly taking charge of its administration. I had well begun the operation when breathing stopped, and also the bleeding except some venous oozing. No more chloroform was given. The legs were raised and artificial respiration began &c. I went on with the operation and removed the portions of the goitre resting over the trachea. Still he remained unconscious, with great dyspnoea, owing to the flattened and infantile condition of the trachea, so I proceeded to open the trachea below the cricoid cartilage. An ordinary tracheotomy tube gave no relief, so I inserted a gum elastic catheter for three inches down the trachea. Shortly after this the patient began to show symptoms of returning consciousness. In both these cases the blood was very venous, and the poisonous effect of the chloroform upon the medulla oblongata was at once manifested even in minute doses. There have been upwards of six thousand administrations of chloroform since 1875, without a single direct or indirect death, in the Kashmir Mission Hospital, though not a year passes without dangerous symptoms occurring in a few cases. We have seen (1) primary syncope from fear, and also from (2) laryngeal spasm; (3) secondary syncope from shock due to insufficient chloroform, and also from a proper dose acting on non-oxygenated nerve centres; (4) tertiary (sometimes secondary) syncope connected with vomiting; (5) apnoea from (a) mechanical causes, (b) spasm of the larynx, and (c) from the toxic action of an overdose (relative or absolute) on the nervous centres. In any of these ways life may be lost. The surgeon must hold clear views on the method of administration, so as to steer as clear as may be practicable in any given case of these various dangers; and he must be prompt to recognise the danger signals of a dilated pupil, or gasping or stertorous breathing, or change of colour in the lips. He must also be thorough as well as prompt in his method of restoration. If he have fewer accidents than his fellows let him not attribute any special credit to himself, still less apportion blame to his neighbours, for the time may be near when he will himself meet with a fatal case due to idiosyncrasy of the patient."

¹ THE LANCET, Dec. 17th, 1892.

Obituary.

SIR WILLIAM SCOVELL SAVORY, BART., F.R.S.,
LATE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND;
CONSULTING SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

"THE angel of death has passed over this land; you can almost hear the beating of his wings." These words of one of England's greatest orators must be in many men's minds to-day, and to our profession they must appeal with special force, since in the short space of fifteen days two of the foremost in the realm of surgery have ended their labours. Scarcely had John Whitaker Hulke been laid to his rest than he is followed by his intimate friend and fellow worker, William Scovell Savory.

William Scovell Savory was born in 1826 on Nov. 30th (St. Andrew's Day). He was educated at a private school at Ramsgate, under Mr. Darnall, whose name is inseparably connected with copy-books. Whilst at school he already showed signs of the declamatory and oratorical powers which were so noticeable in his after career, it being on record that on one occasion he took the part of Cato in Addison's tragedy with great success. Several years afterwards he could repeat many of the lines, and was specially fond of quoting those two lines so appropriate, as future events showed, to himself:

"Tis not in mortals to command
success,
But we'll do more, Sempronius,
we'll deserve it!"

He entered as a student at St. Bartholomew's Hospital immediately after leaving school, and was a most regular attendant at lectures, so much so that once when later in his life he was speaking to some students about irregular attendance, he said that he never remembered missing one of the lectures of Sir James Paget, which began with the utmost punctuality every morning at nine; nor was he ever late, though living at that time at Oakley-crescent, in the City-road. His work in the out-patient room and in the other practical departments of his hospital education was not less systematic. He dressed for Sir William Lawrence and clerked for Sir George Burrows, both of whom entertained a very high opinion of his abilities. At a very early period Mr. Skey formed a strong attachment to him, and took him to most of his operations; while in his "Treatise on Surgery" the same surgeon paid a tribute to his pupil's knowledge and predicted his future success. Mr. Savory read and materially modified the proof-sheets of this work, and wrote the whole of the chapter devoted to the diseases of the eye, which is sufficient testimony to the position of esteem which he occupied in his senior's mind. From student days he was a born orator and debater. At the Abernethian Society of St. Bartholomew's Hospital he always argued well. If in the chair he could always sum up better than any other member, while in discussion he could take either side with equal ease, often opposing for the mere love of argument. His scholastic career was brief and creditable, as would be expected from a student possessed in so marked a manner of the virtues of industry and punctuality and the talent of a lucidity amounting almost to genius. In 1847 he was admitted a Member of the Royal College of Surgeons of England, and in 1848 he graduated as Bachelor of Medicine at the University of London, where he was University Medical Scholar. In 1852 he was admitted a Fellow of the Royal College of Surgeons, from which date he

devoted himself entirely to surgical teaching and practice. His first teaching appointment was that of Demonstrator of Anatomy at St. Bartholomew's Hospital, and this was followed by his succeeding Sir James Paget in 1859 as Demonstrator and Lecturer in Physiology. He was elected assistant surgeon to the hospital on April 24th, 1861, and full surgeon on the same day in 1867. This latter position he held until Nov. 12th, 1891, when he resigned, and was at once elected consulting surgeon, which office he held until his death. In May, 1869, he was appointed Joint Lecturer on Surgery with Mr. Coote, and ten years later, on the death of Mr. Callender, was made sole lecturer, which position he retained until 1889, when he resigned his post.

As a lecturer Sir William Savory was a worthy successor of Lawrence, Paget, and West, resembling in manner and delivery Lawrence the most. His lectures were absolute models. Clear, lucid, every sentence weighed and polished, with diction perfectly distinct, the mobile, sensitive face would brighten with a singularly charming smile as he referred to his great predecessors in the field of surgery; all this made his lectures appear something very different to the ordinary routine of the work of a medical school, and so they were felt to be by all his pupils. Not only did the students of the hospital—sometimes, it must be said, slow to recognise an intellectual treat—attend and listen, but many a man from the staff of

other hospitals came and profited by the great teacher's clear logic and intense sympathy with his subject. In his visits to the wards he was sparing of speech and the value of his clinical teaching was more in what he did than in what he said. Those who took the pains to watch his practice could always draw from it clear rules and close reasonings. But he was not a popular bedside teacher. His extreme modesty, so graceful in one possessing such splendid endowments, repressed the outpouring of his abundant thoughts and gave to his public manner a certain degree of severity. In the student he oftentimes inspired something akin to awe, which was due to his impressive demeanour and eagle glance (it is a hackneyed phrase, but the only one that really expresses the quality of his acute gaze), a glance which inspired an uneasy consciousness that ignorance under its influence



SIR WILLIAM SCOVELL SAVORY, BART., F.R.S.

was certain to betray itself. But he was always ready to impart information and would take much trouble to discuss any subject of interest propounded by an intelligent questioner, pouring forth for his benefit a flood of light and knowledge. Perhaps he was seen at his best in the operating theatre on consultation days, when, in the discussion of an obscure or doubtful case, no one could excel him in the manner in which he would state the possible causes of the symptoms observed or in explaining the reasons which made him take up the particular view he held. Without being a brilliant operator he had the advantage of being ambidextrous, a faculty that on occasion served him well. Like that of his master, Lawrence, his surgery was eminently sound, and his results compared favourably with those of others both before and after the introduction of rigid asepsis. If he was slow to adopt innovations, it was the effect of a righteous desire not to endanger the patient's chances by anything in the nature of an experiment. As an operator he trod the highways of surgery. He was very sure in all that he did, and the patient ran no risk of injury in addition to that pertaining to the operation. With a nervous system highly strung it was no wonder that at times during an operation he should show signs of the strain, but he never lost his self-possession, and in moments of the greatest excitement, even of dire emergency, his intellect maintained its sway and directed his hand aright.

The position that he gained in the medical profession would have been his, we believe, in that of the law. His clear and subtle as well as logical mind would have found a congenial field in summing up an intricate chain of evidence. He would have shone on the bench. He had a singular faculty of unfolding an argument in a calm judicial manner, his ideas flowing in due sequence, the language being always equal to the occasion, and the opinions delivered with a voice of skilled modulation and without the slightest hesitation. His opinion consequently carried great weight with it. He was ready, too, in debate, carrying out his early promise to which we have referred. No one could be more prompt to detect a flaw in an opponent's argument or quick to expose it with pitiless sarcasm and ridicule; yet he was not easily put out of temper, and bore buffeting with a smile. This dialectic facility showed itself to great advantage in the somewhat heated debates which took place at the Royal College of Surgeons of England during his Presidency with reference to reforms in the government and constitution of that body. For though many a time he stood almost alone as regarded his views in the presence of a large body of opponents, he seldom failed to make his point or to keep matters in the paths which, rightly or wrongly, he regarded as the safest and best for the interests of the College.

In every branch of learning he was capable of making the best of what he knew. On one occasion he had just laboriously, with dictionary in hand, gone through the book of the "Odyssey," then required by the regulations for the preliminary examination for the Fellowship, and in a circle of some half-dozen men, the late Professor Rolleston, a most accomplished Greek scholar, made a casual remark to the effect that there was no example of a word with a certain number of feet at the close of a line in Homer. Savory objected, and, to Rolleston's intense astonishment, quoted the line he had only the previous evening read, in refutation of the really learned classic's view. He had a great faculty for criticism, and enjoyed nothing more than to discuss and comment upon the characters and situations in the books he read. He was not a voluminous writer, but his essays on Pyæmia, which appeared in the St. Bartholomew's Hospital Reports, and his scholarly "Lectures on Life and Death," delivered at the Royal Institution, are classics. He was very reserved, and modest to a fault, a thorough and sincere Christian, though he never paraded his religion.

These are the main facts in Sir William Savory's career, and the salient qualities of his character. They tell a simple, straightforward story of honesty, industry, and high intellectual endowment meeting with their due rewards, and as such require no commentary from our pen. The unique esteem in which he was held by the surgeons of his time is testified by the fact that he was President of the Royal College of Surgeons of England for five years in succession, an absolutely unprecedented occurrence; while the royal favour of a baronetcy was not without special features in his case, as it is an open secret that he had refused lesser honours. So passes a great man, not only from his professional ability, but from his hatred of shams and self-advertisement—one who, like his great master, John Hunter, was, to use his own words, "tempted by no seductive theory into undue haste, was hardly ever lost in an unsound conclusion. A man of indefatigable industry, of unquenchable energy, of singleness of purpose, and unbounded sacrifice."¹

A few details of his last illness will be read with melancholy interest. On Thursday, Feb. 21st, he complained of not feeling well and consulted Dr. Habershon, who took him on the next day to see Dr. Pavy. Some slight improvement was manifest until the 28th, on which day he visited St. Bartholomew's Hospital. There were several cases of influenza in the house, and on the morning of March 1st his temperature, which was subnormal on the previous day, was found to be elevated, though beyond a slight bronchial catarrh none of the specific symptoms of influenza were present. Sir William Savory was, however, kept to his room, and on the following day symptoms of bronchitis supervened, though at no time severe, and his strength was well maintained until the afternoon of Sunday, the 3rd inst., when for the first time signs of prostration and cardiac failure appeared. At night there was a decided rally, with improved pulse and lower temperature. During the early hours of Monday morning, the 4th inst., the temperature again rose, sudden and profound collapse set in, and in spite of all that the most active

stimulation and the most assiduous care could do, he sank at 10.30 A.M. During his illness he was under the care of Dr. Pavy and Dr. Habershon, and was nursed by his daughter-in-law and Sister John from St. Bartholomew's Hospital.

Sir William Savory married in 1854, on his birthday, the daughter of William Borradaile. She died in 1863. By her he had one son, who succeeds him in the title and is incumbent of St. Bartholomew the Great, Smithfield.

A memorial service was held on Thursday in St. George's, Hanover-square, at 1.30 P.M., and the interment took place in Highgate Cemetery on the same day.

SAMUEL HOPPER ADAMS, M.D. LOND., M.R.C.S.

DR. ADAMS, who died on the 1st inst. after a final illness of a few hours' duration, was educated at the Bedford Modern School, whence he proceeded to University College Hospital. He matriculated at the same time at the University of London, obtaining high honours in Botany, a love of which science he retained throughout life. Professor Hillhouse of Birmingham and Professor Green of the Pharmaceutical Society owe, we believe, their first botanical training to Dr. Adams. He had a distinguished career at the University of London, where he took his M.B. in 1859 as a medalist, and proceeded to the M.D. degree in 1861, having become M.R.C.S. in 1858. At an early period of his professional life he served as a surgeon in the Peninsular and Oriental Company. During this time he had an attack of sunstroke in the Red Sea, to which may be traced the weak state of his health in after years. He settled in Bedford, where for several years he was in partnership, but afterwards practised independently. He was greatly esteemed by his patients and by his medical brethren. His unobtrusive and kindly manner, together with his knowledge of many scientific subjects, procured him many friends. His position as surgeon to the Bedford Provident Dispensary brought him in contact with a large number of the humbler classes, to whom he greatly endeared himself, and who showed their appreciation of his faithful services by following his remains to the grave. He was buried according to the rites of the Moravian Church, of which he was a member and a churchwarden. He leaves a widow and three children.

SAMUEL CHARLESWORTH HIRST, M.D. ST. AND., M.R.C.S. ENG., L.S.A. LOND., J.P.

GENERAL regret has been caused among a large circle in Bradford by the announcement of the death of Dr. Hirst, late of Planetrees House, Laisterdyke, Bradford, who passed away at Southport on Feb. 27th. It is only about eighteen months since he left Bradford, where he had practised for more than twenty years and had made many friends by his benevolence and zeal for good works. Having studied at the Leeds School of Medicine he qualified as M.R.C.S. in 1861 and as L.S.A. in 1867. In 1887 he graduated as M.D. at St. Andrews University. He was a consistent but not an aggressive politician, and was one of the Bradford borough magistrates.

MARSHALL HALL HIGGINBOTTOM, M.R.C.S. ENG., L.S.A. LOND.

THE death is announced of Mr. Higginbottom of Nottingham, who succumbed on Feb. 24th to an attack of pneumonia. The deceased gentleman, who was born in 1822, was a son of Mr. John Higginbottom, F.R.S., of Nottingham, and a nephew of the celebrated Dr. Marshall Hall of London. He was a student at Guy's and St. Thomas's Hospitals, and after having obtained the diploma of the Royal College of Surgeons of England in 1844, and that of the Apothecaries' Society in 1845, he travelled to Constantinople and other parts of Eastern Europe. Returning to England he went into partnership with his father, and lived to be one of the oldest members of the medical profession in Nottingham.

¹ The Hunterian Oration, 1887.

Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the Intermediate Examination in Medicine in January, 1895:—

ENTIRE EXAMINATION.

SECOND DIVISION.

Arthur, Joseph Hugh, London Hospital.
 Bell, William Blair, King's College.
 Bennett, Harry Charles Plant, St. Bartholomew's Hospital.
 Bergin, William Maraduke, University College, Bristol, and Clifton Laboratory.
 Brown, Robert Pollock, St. Bartholomew's Hospital.
 Chennells, Ernest Philip, University College.
 Christian, John Beresford, St. George's Hospital.
 Clegg, William Wheelwright, Leeds, and Middlesex Hospital.
 Clifford, Frank Charles Weeks, King's College.
 Cobbletick, Arthur Stanley, Bristol Medical School.
 Evans, Evan, Guy's Hospital.
 Fitz-Hugh, Richard Truman, Guy's Hospital.
 Harris, Lucy Elizabeth, London School of Medicine and Birkbeck Institute.
 Hasselacher, Francis Joseph, King's College.
 Hodgson, Curtis Rawsthorne, Guy's Hospital.
 Knowles, Beatrice, London School of Medicine and Birkbeck Institute.
 Lewin, Octavia Margaret S., London School of Medicine for Women.
 Lucas, Joseph John Scammell, B.A., Bristol Medical School.
 Lynch, Stephen Frederick, King's College.
 Maxwell, Richard, London Hospital.
 Mayston, Robert William, Guy's Hospital.
 Michol, Frederic Archibald Hope, St. Mary's Hospital.
 Moore, Julius, Guy's Hospital.
 Mortimer, William Gradson, London Hospital.
 Payne, Alfred Ernest, St. Mary's Hospital.
 Phipps, John Hare, Owens College.
 Pritchard, Frank, Owens College.
 Starling, Hubert John, Guy's Hospital.
 Varley, William Crowther, Owens College.
 Walker, William Percival, Owens College.
 Walter, Albert Elijah, Middlesex Hospital.
 Webb, Bertha Margaret, London School of Medicine for Women.
 Wernet, August Joseph, Guy's Hospital.
 Wilshaw, Robert Heywood, Owens College.
 Woolcock, Harold Brookfield, Owens College.

EXCLUDING PHYSIOLOGY.

SECOND DIVISION.

Baker, Alfred Eaton, Middlesex Hospital.
 Bletchly, George Playne, Middlesex Hospital.
 Durrant, Charles Edwin, St. Thomas's Hospital.
 East, William Norwood, Guy's Hospital.
 Gunther, Hermann Arthur, University College.
 Hall, Edmond Stokes, Guy's Hospital.
 Hunt, Edward Lewis, St. George's Hospital.
 Marriage, Herbert James, St. Thomas's Hospital.
 Maxwell, James Laidlaw, St. Bartholomew's Hospital.
 Moore, Percy, Guy's Hospital.
 Northcote, Percy, St. Thomas's Hospital.
 Smith, Daniel Lloyd, Guy's Hospital.
 Thornton, Jeremiah, London Hospital and Birkbeck Institute.

PHYSIOLOGY ONLY.

FIRST DIVISION.

Scatchard, James Percival, St. Thomas's Hospital.
 Smith, Stanley Francis, St. Bartholomew's Hospital.

SECOND DIVISION.

Emms, Harry Robert, University College.
 Goode, Henry Norman, St. Thomas's Hospital.
 Greenwood, Frank Redmayne, Mason College.
 Harcourt, John Charles, St. Thomas's Hospital.
 Mantell, Hugh Fraser, St. Mary's Hospital.
 Mundy, Herbert, St. Bartholomew's Hospital.
 Read, Charles Stanford, University College.
 Riviere, Clive, St. Bartholomew's Hospital.
 Seal, Francis Montgomery, University College.
 Shepherd, Ernest, St. Mary's Hospital.
 Sibley, Reginald Oliver, St. Mary's Hospital.
 Sugden, Henry, St. Mary's Hospital.
 Trimble, Charles Edward, University College, London, Edinburgh University, and Extramural School.
 Whrangham, William, St. Bartholomew's Hospital.

LITERARY INTELLIGENCE.—The following works are announced by Messrs. J. & A. Churchill as nearly ready for publication:—"Mental Physiology, especially in its relation to Mental Disorders," with Illustrations, by Dr. T. B. Hislop, Assistant Physician, Bethlem Royal Hospital; "Elements of Health, an Introduction to the Study of Hygiene," with twenty-seven Illustrations, by Dr. Louis C. Parkes, Medical Officer of Health for Chelsea; and a "Manual of Botany," based on that of the late Professor Bentley, containing many new illustrations: Vol. I. "Morphology and Anatomy," by J. Reynolds Green, Sc.D., M.A., F.L.S., Professor of Botany to the Pharmaceutical Society of Great Britain and Examiner in Botany to the Universities of London and Glasgow.

HUNTERIAN SOCIETY.—At the first general meeting of the session for 1895-96, held at the London Institution on Feb. 27th, Mr. Charters J. Symonds, President, being in the chair, Professor Clifford Allbutt, Regius Professor of Medicine in the University of Cambridge, delivered the Hunterian Society Lecture. Professor Allbutt chose as his subject Senile Plethora or High Arterial Pressure in Elderly Persons. He first narrated several cases typical of the condition. They all presented the same features, "symptoms obscure in so far as any particular parts or organs were concerned, but obvious and miserable enough otherwise"; the patients were sluggish, sleepless, wretched on awaking of a morning, nervously perturbed, with "some of the classical symptoms of hysteria." In all there was a remarkably hard pulse with "thudding" aortic valve sound, and none of them showed any feature in the urine leading to any suspicion of incipient or established renal disease. All of them were relieved by drugs adapted to lower blood pressure, and relieved most strikingly. Occasional mercurial and saline purges and a course of iodide of potassium, pushed freely, the lecturer had found to give almost complete relief; nitro-glycerine was also useful. Professor Allbutt then proceeded to discuss the meaning and pathology of the condition. He had found it commoner in women than in men; gout, either declared or suspected, was much oftener absent than present, and renal disease and arterial degeneration were conspicuous by their absence also; and even "renal inadequacy" could be excluded; that the blood in senile plethora is at fault, primarily or secondarily, is probable; and that it is altered in some way which sets up peripheral arteriolar contraction was the conclusion, but "beyond this I feel unable to proceed, if, indeed, I ought to go so far." Notwithstanding his declared inability to elucidate completely the pathology of the condition, Professor Allbutt concluded his lecture with some most thoughtful and thought-arresting considerations of its possible etiological factors of such intense interest to his audience that a unanimous wish was expressed to see them published in full. After a hearty and sincere vote of thanks to the lecturer the meeting adjourned.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—The sixty-seventh annual court of the governors was held on Feb. 27th, under the presidency of Sir Julian Goldsmid, Bart., M.P., one of the Vice-Presidents of the hospital. There was a good attendance of governors, amongst whom were the following: Sir Gainsford Bruce, General Gordon Pritchard, C.B., Mr. Edward Masterman, Colonel Montefiore, Mrs. Garrett Anderson, M.D., Mr. A. Boyce Barrow, Mrs. Stanley Boyd, Mr. Holroyd Chaplin, Mr. Robert Hampson, Dr. T. Crawford Hayes, Mr. J. Miley, Mr. J. Grosvenor Mackinlay, Mr. F. G. Pridaux, Mr. G. F. Sheppard, J.P., and Mr. Henry Silver. Owing to the prevalence of influenza many governors were prevented from attending, among others being Sir Charles Hall, Q.C., M.P., Right Hon. James Spensfeld, Sir Henry Oakley, Dr. Alex. E. Marsden, and Mr. H. N. Custance. The report for the past year was read by Mr. C. W. Thies, the secretary. Sir Julian Goldsmid, in moving the adoption of the report, stated that the new front building completed the work of reconstruction commenced forty years since, and provided greatly improved accommodation for casualty patients, dispensary, resident medical officers and servants, also much needed isolation wards; and that many other important and necessary improvements had been carried out in various parts of the hospital. The total cost of the works had been about £30,000, towards which the sum of £24,000 had been raised, leaving a deficit of about £6000. The chairman appealed to the public to help the committee by providing the sum still needed, so that the new buildings might be opened free from debt. The medical reports showed that the number of patients treated during the past year was 30,337, as compared with 28,274 in the preceding year. The total ordinary receipts for 1894 (exclusive of legacies) had been £5255 13s. 9d., against expenditure amounting to £9758 7s. 6d., the deficiency having been met partly by the legacies received and partly by encroaching upon the small reserve funds. The chairman strongly urged the claims of the charity upon the benevolent public, and stated that the small income derived from annual subscriptions was most inadequate, and he trusted that this would be augmented in the future. The committee of management, finance committee, treasurer, and auditors were duly elected, and a vote of thanks to the chairman closed the proceedings.

MEDICAL MAGISTRATES.—Dr. Alexander Macgregor of Aberdeen, and Dr. John Charles O. Will of the same city, have been placed on the Commission of the Peace for the county of Aberdeen.—Mr. Adam Wilkinson, M.D. Brux., F.R.C.S. Edin., &c., Shaftesbury, has been placed on the Commission of the Peace for the county of Dorset.

THE annual meeting of the East London Nursing Society will be held (by kind permission of the Lord Mayor) in the saloon at the Mansion House on Tuesday, March 12th, at 3 P.M. The chair will be taken by the Right Hon. the Lord Mayor, who will be supported by the Rev. Canon Elwyn (Master of the Charterhouse), Dr. Clement Godson, the Rev. J. F. Kitto (Vicar of St. Martin's, Charing-cross), the Rev. E. Hoskyns (Rector of Stepney), the Rev. F. Gurdon (Rector of Limehouse), and the Rev. Prebendary Harry Jones (Chairman of the Executive Committee).

MIDDLESEX HOSPITAL.—The annual meeting of the governors of the Middlesex Hospital was held on Feb. 28th, Mr. A. Pearce Gould presiding. The 150th yearly report was presented, and showed that the expenditure had exceeded the receipts by £1995. Sympathetic references were made to the death of Mr. J. W. Hulke, senior surgeon of the hospital, and President of the Royal College of Surgeons of England; the resignation of the chairman, Lord Sandhurst, in consequence of his important duties in India, was also a subject of regret, and his lordship was unanimously elected a vice-president. A new operating theatre has been built and will be completed in a few weeks.

WEST LONDON HOSPITAL.—The annual meeting of the governors of this hospital was held, on March 4th, at Hammersmith, Mr. W. Bird presiding. The thirty-eighth yearly report was presented, and made grateful mention of the Royal Charter of incorporation granted to the hospital last November. The extension of the hospital premises is making satisfactory progress, and when complete will enable eighty beds to be added to the present accommodation. The cost of these buildings is estimated at £20,000, of which £3500 have been already received. The expenditure for 1894 had exceeded the income, notwithstanding an increase of £39 in subscriptions, of £616 in donations, of £70 in the grant from the Metropolitan Hospital Sunday Fund, and of £740 in legacies.

ROYAL SURREY COUNTY HOSPITAL.—The Bishop of Winchester presided on Feb. 23rd at the annual court of governors of the Royal Surrey County Hospital, Guildford. Lord Middleton, the Hon. W. St. John Brodrick, M.P., Canon Haig-Brown, Headmaster of Charterhouse, Mr. E. J. Halsey, Chairman of the Surrey County Council, and the Mayors of Guildford and Godalming were also present. The annual report of the committee showed improvement in the financial position. The county meeting held at Guildford last October, under the presidency of H.R.H. the Duke of Connaught, with the object of obtaining £3300 to defray the expenses of new drainage and to build a new block for nurses, resulted in £1473 being raised, but before the building of the new block could be commenced a further sum of £1780 was required. Several subscriptions were announced at the meeting, among others £500 from a gentleman who remained anonymous and sent his donation through Mr. St. John Brodrick.

FOOTBALL CASUALTIES.—On the 23rd and 27th ult. and the 2nd inst. the following accidents occurred. While playing a match between the Aldershot Division and Blackheath a sergeant of the Royal Scots Greys fractured one of his legs, and was removed to the hospital.—During a match at East Acton between the Shepherd's Bush and Hammersmith Athletic Clubs, a player of the latter club fractured his leg and was taken to the West London Hospital.—A youth aged seventeen years, while playing a game on Southwark Park, fractured his right leg and was admitted to Guy's Hospital.—At Sunderland, in a match between Sunderland and Sheffield United teams, a player dislocated his humerus.—While playing a match at Cambridge for his College a player fractured his leg.—At Doncaster, during the Midland League match between the Doncaster Rovers and Kettering teams, one of the latter team "headed the ball while he had his tongue out of his mouth, and bit it so badly that it was nearly severed."—In the course of an English cup tie, for Middlesbrough against Darlington, a player sustained "a serious fracture of the hip-bone," and was conveyed to the North Riding Infirmary, Middlesbrough.—

During a game at Arundel a player fractured his leg, "the lower part of which was completely shattered and splintered." During a match at Hexham on Saturday last, between the Tynedale and Northern second teams, a player aged twenty-three years of the Tynedale team, received serious injuries, from which he died on the 5th inst.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Factories and Workshops Bill.

MR. TOMLINSON has given notice that when the Factories and Workshops Bill is read a second time he will move "that it be an instruction to the Committee that they have power to insert in the Bill provisions for extending its operation to post-offices and Government factories and workshops, and for prohibiting or restricting the importation into the United Kingdom of goods manufactured or treated in foreign countries otherwise than in accordance with the provisions of the Bill."

HOUSE OF COMMONS.

THURSDAY, FEB. 28TH.

The Drainage of the Tower of London.

Mr. Campbell-Bannerman, replying to a question, said that a thorough investigation of the drainage system of the Tower was completed last month, with the result that the system generally was not found to be defective. Some minor defects were found, and they were receiving attention.

THURSDAY, MARCH 7TH.

The Tuberculosis Committee.

Replying to a question put by Sir Matthew White Ridley, Mr. Shaw-Lefevre, President of the Local Government Board, said he trusted that the labours of this Committee might soon be concluded.

The Chicago Meat Factories.

In reply to Mr. Jeffreys, Mr. Herbert Gardner said he had read the article in the *Times* giving details concerning the preparation and packing of diseased meat at Chicago for export to England, and he proposed to make inquiry through the Foreign Office respecting it, and as to the arrangements in force in the United States for the prevention of the spread of disease. He should be very happy to bring under the notice of the President of the Local Government Board any information which might reach him as to the existence of danger to public health arising from the importation of diseased food products.

The Marking of Foreign Meat.

Mr. Jeffreys asked the President of the Board of Agriculture whether he was prepared to introduce a Bill for the purpose of registering dealers in foreign and colonial meat, and of inspecting retail butchers' shops under the Food and Drugs Act by duly qualified inspectors? Mr. Gardner called the attention of the hon. member to the amendment made last year in the Merchandise Marks Act, and said that the law as it now stood seemed to be sufficient to deal with the evil, and no further legislation was required.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- ADAMS, A. S., M.B., C.M. Aberd., has been appointed Parochial Medical Officer for the Parish of Alness.
- ALDRICH, A. W., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer for the Worlington Sanitary District, and the Workhouse of the Mildenhall Union.
- ARNOLD, G. J., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.
- BARKING, H. GILBERT, M.B. Lond., B.S., F.R.C.S., has been appointed Honorary Consulting Surgeon to the Birmingham General Dispensary.
- BLACKER, A. BARRY, M.D., B.S. Durh., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Department for Diseases of the Throat at St. Thomas's Hospital.
- BOYD, JOHN J., M.B., C.M. Glasg., has been appointed House Surgeon to Grey's Hospital, Pietermaritzburg, Natal.
- BRACKENRIDGE, F. J., L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.
- BRYCE-ORME, WM., has been appointed Senior Assistant Medical Superintendent at St. Pancras Infirmary by the St. Pancras Board of Guardians.
- CARTER, ALFRED H., M.D. Lond., M., F.R.C.P., M.R.C.S., has been appointed Visiting Medical Officer of the Workhouse, Parish of Birmingham.
- CRAW, JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Higham Ferrers Urban Sanitary District, vice Clark, resigned.
- DAVIS, H. J. B.A., Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Department for Diseases of the Ear at St. Thomas's Hospital.
- GENCK, G. G., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

GOSAGE, A. M., M.B., B.Ch. Oxon., M.R.C.P. Lond., has been appointed Assistant Physician to Westminster Hospital.

HALLIWELL, T. O., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Department for Diseases of the Throat at St. Thomas's Hospital.

HARDING, H. W., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

HAWARD, H. H., L.R.C.P., M.R.C.S., B.A. Cantab., has been reappointed Clinical Assistant in the Department for Diseases of the Skin at St. Thomas's Hospital.

HEGIBOTHAM, H. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Wymswold District of the Loughborough Union, vice John Bostock, M.R.C.S., resigned.

HOME, A. L., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

JACOBSEN, G. OSCAR, M.R.C.S., L.R.C.P., has been appointed Medical Officer of Health for Presteign.

LAVER, J. W., L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.

MATTHEWS, JAS. F., M.R.C.S. Eng., L.S.A., has been appointed Officer of Health for the Yea Shire, Victoria, Australia, vice Lang, resigned.

MCDUGALL, P., M.B., B.S. Vict. Univ., has been appointed House Surgeon for six months to the Manchester Royal Infirmary.

MILWARD, F. V., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Department for Diseases of the Ear at St. Thomas's Hospital.

MONCKTON, W., L.R.C.P. Edin., L.M., M.R.C.S., has been reappointed Medical Officer of Health to the Port-head District Council.

O'BRIEN, J. W., M.B., Ch.B. Dubl., L.R.C.S. Irel., has been appointed Officer of Health for the Warrnambool Shire, Victoria, Australia.

ODELL, R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the third Sanitary District of the Hertford Union, vice Wylie, resigned.

FLOWMAN, SIDNEY, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Officer of Health for the Frankston and Hastings Shire, Victoria, Australia, vice Wilson, resigned.

POMFRET, H. W., M.D. Vict., Ch.B., L.R.C.P. Lond., F.R.C.S., has been reappointed Surgical Registrar, Manchester Royal Infirmary.

PRAIN, J. L., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Department for Diseases of the Throat at St. Thomas's Hospital.

RICKARDS, E., M.B., Oxon., L.R.C.P. Lond., M., F.R.C.S., has been appointed Honorary Consulting Physician to the Birmingham General Dispensary.

RICHARDSON, S. W. F., M.B., B.S., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

RUSSELL, A. E., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

SAUNDERS, E. A., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

SYMONS, R. FOX, L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

THURSTON, E. O., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

TINLEY, W. E. F., L.R.C.P., M.R.C.S., M.B., B.S. Durh., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

THOMSON, J. A. M., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer of Health by the Rural and Urban Districts Councils, Bradford-on-Avon.

WALLACE, L. A. R., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Department for Diseases of the Skin at St. Thomas's Hospital.

WELLAND, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician for six months to the Manchester Royal Infirmary.

WILLIAMSON, H. M. L., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Northern Sanitary District of the Lancaster Union.

WILLIAMSON, R. T., M.D. Lond., B.S., M.R.C.P., M.R.C.S., has been reappointed Medical Registrar, Manchester Royal Infirmary.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary £100 per annum.

LOYDON MALE LOCK HOSPITAL, 91, Dean-street, Soho, W.—House Surgeon, out-patients' department. Salary £50 per annum, with board, lodging and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, and Assistant House Surgeon. The appointments tenable for six months. Salary House Physician and House Surgeon, each at the rate of £60 a year.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.

PARISH OF BIRMINGHAM.—Resident Assistant Medical Officer for the Workhouse Infirmary. Salary £100 per annum, with furnished apartments, rations, &c. (which do not include alcoholic liquors), coals, gas, washing, and attendance. Applications to the Clerk to the Guardians, Parish Offices, Edmund-street.

RADCLIFFE INFIRMARY, Oxford.—Honorary Physician.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon, for six months. Salary £80 per annum, with board, lodging, and washing.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Medical Registrar and Pathologist, for one year. An honorarium of 50 guineas voted at the end of that term.

VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Edinburgh.—Resident Physician, for six months. Apartments, board, and washing, with allowance of £2 monthly for conveyance in connexion with out-door department. Applications to the Hon. Secs., 1, North Charlotte-street, Edinburgh.

WESTERN GENERAL INFIRMARY, Marylebone-road, N.W.—Junior House Surgeon, unmarried. Salary £50 per annum, with rooms and board.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

BARTER.—On Feb. 28th, at Manningtree, Essex, the wife of W. Whittington Baxter, M.R.C.S., of a son.

BRAND.—On Feb. 25th, at St. Paul's-road, Northampton, the wife of G. H. Brand, Surgeon, of a son.

BURNS.—On Feb. 19th, at Hamslade, Sweyn-road, Margate, the wife of Alfred Hugh Burns, L.R.C.P., L.S.A., of a son.

CASSIDY.—On Feb. 4th, at Purneah, Bengal, the wife of Surgeon-Captain C. Clemons Cassidy, Indian Medical Service, of a son.

FAWSETT.—On Feb. 25th, at High-street, Lewes, Sussex, the wife of Frank Fawcett, M.B., B.S. Lond., of a son.

FOX.—On March 3rd, at Brislington House, near Bristol, the wife of Bonville Bradley Fox, M.D., of a daughter.

HETLEY.—On March 5th, at Beaufort House, Church-road, Norwood, the wife of Dr. Henry Hetley, of a daughter.

PASSMORE.—On March 4th, at Tennyson House, Gainsborough, Lincs., the wife of John B. S. Passmore, M.R.C.S., L.R.C.P., of a son.

PHILLIPS.—On March 1st, at Grosvenor-street, W., the wife of John Phillips, M.A., M.D., F.R.C.P., of a son.

STURROCK.—On March 2nd, at Arima, Broughty Ferry, N.B., the wife of J. F. Sturrock, M.B., L.R.C.S.E., of a daughter.

THATCHER.—On Feb. 22th, at Melville-residence, Edinburgh, the wife of Charles H. Thatcher, F.R.C.S.E., of a daughter.

WILSON.—On Feb. 25th, at Goldhawk-road, Shepherd's Bush, London, W., the wife of Dr. James Wilson of a daughter.

MARRIAGES.

GREEN—HODGKINSON.—On Feb. 20th, at Holy Trinity Church, South Crosland, by the Rev. W. Le Neve Bower, Vicar, Thomas Arthur Green, M.B., C.M., eldest son of John Green, Heselaker, Skipton, to Selena, daughter of John Hodgkinson, Woodlands, Honley. At Home, Netherlerton, March 13th, 14th, 20th, and 21st.

DEATHS.

BROUGHTON.—On Feb. 26th, at Fyning, Guilford, James Wardlaw Broughton, M.D., aged 82.

CHANCE.—On Feb. 25th, at his residence, Russell-square, London, W.C., Edward John Chance, F.R.C.S. Eng., F.G.S., F.L.S., formerly of Old Broad-street, City, late Consulting Surgeon to the Metropolitan Hospital, Kingsland-road, N., and Senior Surgeon and Honorary Secretary to the City Orthopaedic Hospital, Hatton-garden, E.C., aged 88.

DE CRESPIGNY.—On Feb. 15th, at Crowcombe, Beckenham, Eric Champion de Crespiigny, M.D., of the Bombay Medical Service, aged 72.

GILCHRIST.—On Feb. 28th, at Alverstoke, Rochester, Surgeon-Major W. Gilchrist, M.D., late H.E.I.C.S., aged 88.

KING-PEIRCE.—On Feb. 27th, at Mentone, France, Richard King-Peirce, M.R.C.S., aged 72.

ROGERS.—On March 4th, at the Royal Naval Hospital, Stone-house, Edward Allan Rogers, Surgeon, R.N.

RUPP.—On Feb. 24th, at San Remo, Italy, Surgeon-Major General F. Rudd, M.D.

SATORY.—On March 4th, at Brook-street, W., Sir William Savory, Bart., F.R.S., in his 65th year.

SEMPLE.—On March 5th, Charles Edward Armand Semple, M.D., M.R.C.P. Lond., of Marlborough-hills, Harrow, and Torrington-square, London, W.C., aged 50.

TAKE.—On March 5th, at Welbeck-street, W., Daniel Hack Take, M.D., LL.D., F.R.C.P., aged 68, after a very short illness.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN.—House Surgeon. Board, lodging, fuel and light provided. Applications to honorary secretary at the hospital, 79, Gloucester-street, S.W.

CAMBERWELL HOUSE, 33, Peckham-road, Camberwell.—Assistant Medical Officer in a large Metropolitan asylum, unmarried. Salary to begin at £100 per annum, with board, lodging and washing. Applications to the Medical Superintendent to Camberwell House, 33, Peckham-road, Camberwell.

CITY OF GLASGOW DISTRICT LUNACY BOARD.—Medical Superintendent to the New Asylum at Gartloch, near Glasgow. Salary at the rate of £450 per annum, with free house, coal, gas, &c. Applications to the Clerk to the Board, 318, Parliamentary-road, Glasgow.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician, for six months. Board and residence and allowance for washing provided. Applications to the Secretary, office, 24, Finsbury-circus, E.C.

COTTAGE HOSPITAL, near Loughton.—Medical Officer. Small honorarium, £20. Applications to the Secretary of "Oriole," care of 163, Queen Victoria-street, London, E.C.

FISHERTON ASYLUM, Salisbury.—Assistant Medical Officer, single. Salary £100 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopedic (2 P.M.), City Orthopedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.). At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hector Mackenzie: A case of Hysterical Deafness successfully treated, with some Remarks on the Diagnosis and Treatment of this Affection.—Mr. Bruce Clarke: Thirty cases of Nephrorrhaphy, with their results.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Adjourned Discussion on "Affections of the Nervous System occurring in the Early (Secondary) Stages of Syphilis," to be opened by Sir William Broadbent and Dr. Althaus.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Discussion on "The Diagnosis and Treatment of Empyema of the Antrum of Highmore." (Members of the Odontological Society have been invited to take part.)

HUNTERIAN SOCIETY (London Institution).—8.30 P.M. Mr. Hope Grant: Stricture of Oesophagus.—Dr. Fred. J. Smith: Cerebral Tumour.—Dr. Hingston Fox: Gall Stones.—Mr. Openshaw: (1) Gall Stone removed by operation from Ileum; (2) Congenital Sacral Tumour.

THURSDAY.—BRITISH GYNECOLOGICAL SOCIETY.—Specimen by Mr. Bowreman Jessett.—Dr. Macnaughton Jones: The Dangers of Morphia in Gynecological Practice.—Dr. Wm. Walter: Notes of a case of Leakage of a Multilocular Ovarian Cyst in a Girl aged thirteen.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—5 P.M. Dr. Waldo (Clifton): Notes of Cases. Exhibition of Patients, &c.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Great Northern Central Hospital).—8 P.M. Papers by Mr. Charles King, Dr. Christie, Dr. Burnett, and Mr. Macready.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8 P.M. Card Specimens by Messrs. S. Stephenson, A. Bronner, G. Hartridge, and Devereux Marshall. Papers.—Dr. G. Ogilvie: A case of Double Optic Atrophy with peculiar Visual Fields.—Dr. Argyll Robertson: A Female Filaria Loa.—Mr. Spencer Watson: A case of Foreign Body removed with a Traumatic Cataract.—Dr. Brailley: On a form of Iritis not usually recognised.—Mr. E. Treacher Collins: Blood-staining of the Cornea.

SOUTH WEST LONDON MEDICAL SOCIETY ("Stanley's," 235, Lavender-hill, Clapham-junct.).—8.30 P.M. Dr. Corfield: Foul Air and Disease.

FRIDAY.—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square).—8 P.M. Dr. Joseph Priestley: The Value of Eucalyptus Oil as a Disinfectant in Scarlet Fever.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Iritis.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Whistler: Syphilis as it affects the Larynx.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. Charles Stewart: A Revision of the Endoskeleton in the Physiological Series in the Museum of the College.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Hyslop: Insanity with Cardiac Disease, Phthisis, Gout, &c.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (IX.).

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. Arthur Newsholme: Natural History and Affinity of Rheumatic Fever. (Fourth Milroy Lecture.)

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. Charles Stewart: A Revision of the Endoskeleton in the Physiological Series in the Museum of the College.

LONDON SKIN HOSPITAL.—8 P.M. Dr. Sanctuary: Eczema.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Ocular Paralysis.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Impetigo and Contagious Suppuration.

SOCIETY OF ARTS.—8 P.M. Mr. E. Montague Nelson: The Meat Supply of the United Kingdom.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. A Discussion will be opened by Dr. James Niven on "Back-to-Back Houses, with Illustrations of various types of Back-to-Back Houses met with in practice, and the methods adopted for dealing with this class of property, by Mr. Thomas De Courcy Meade.

WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Dr. Turner: The Electrical Treatment of Nervous Diseases. (Post-graduate Course.)

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. S. R. Gardiner: Three Periods of Seventeenth Century History.—II. The Commonwealth.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. L. Hudson: Spinal Rotation Curvature.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Ormerod: The Gait in Various Forms of Paralysis.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Barwell: Cases in the Wards.

SOCIETY OF ARTS.—4.30 P.M. Prof. Hubert Herkomer: Art Tuition.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. Arthur Newsholme: Natural History and Affinity of Rheumatic Fever. (Fourth Milroy Lecture.)

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. W. H. Elam: Malignant Disease of the Thyroid.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. Charles Stewart: A Revision of the Endoskeleton in the Physiological Series in the Museum of the College.

ROYAL INSTITUTION.—9 P.M. Prof. Roberts-Austen: The Rarer Metals and their Alloys.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: Insanity with Syphilis; Insanity with Organic Brain Disease.

ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Waves and Vibrations (III.).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 7th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Mar. 1	29.79	S.W.	43	41	57	48	35	...	Cloudy
" 2	29.75	N.E.	36	34	73	41	34	0.05	Cloudy
" 3	29.67	W.	29	Fzn.	68	39	27	...	Cloudy
" 4	29.76	N.E.	30	Fzn.	69	40	28	0.01	Cloudy
" 5	29.81	N.	35	33	69	42	30	0.07	Cloudy
" 6	29.83	S.W.	38	36	54	44	35	...	Cloudy
" 7	29.82	S.W.	39	38	44	40	36	0.09	Overcast

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

BOOKS ABOUT MEDICINE.

To the Editors of THE LANCET.

SIRS,—In Cordy Jeaffreson's "Book about Doctors," in the chapter about fees, I find: "Dr. Doran, with his characteristic erudition, says, 'Now, there is a religious reason why fees are not supposed to be taken by physicians. Amongst the Christian martyrs are reckoned the two eastern brothers Damion and Cosmas,' &c. He goes on to say that they refused money, and were called "anargyri." I shall be much obliged if you or your readers can give me the title &c. of the work this is quoted from. I should also be glad to know what is the best modern general history of medicine in English. By this I mean a history

through all time and amongst all nations—not like Fort's Middle Ages or Wise's, the most modern I am acquainted with, but which is incorrectly entitled a "History of Medicine," as it deals merely with Asiatic developments. I do not want a translation. The only work I have at my disposal later than Hamilton is Meryon, but of this I have never been able to procure more than the first volume. Is any more published?

I am, Sirs, yours truly,

Paris, March 3rd, 1895.

ENQUIRER.

. The words are unfamiliar to us, but perhaps some of our readers may recognise them. They may possibly be found in Tuckerman's "Collector"—a series of essays upon, among other things, authors, medical men, divines, and actors, which was for a time edited by Dr. John Doran. The most recent general history of Medicine is a small but wide-ranging work by Dr. Edward F. Withington, entitled "Medical History from the Earliest Times." Dr. C. L. Meryon's book, "Memoirs of Lady Hester Stanhope, as related by herself in Conversations with her Physician," was originally published in three volumes, but we are uncertain if this is the work to which our correspondent refers.—ED. L.

"SAVE ME FROM MY FRIENDS."

To the Editors of THE LANCET.

SIRS,—Illness prevented me seeing your issue of the 23rd ult. for some days after its publication, and on perusal I found that you had copied a paragraph which appeared about me in the *Glasgow Evening News* some time ago. Had reference been made to the subject in question in the lay press I should probably have thought it better to let it pass unnoticed. Seeing, however, that it has found its way into the columns of a medical journal of such high standing and repute as THE LANCET I think it due to myself to make the following explanation. Briefly stated, the facts which gave rise to the paragraph are these. When delivering a lecture to the Glasgow Society of Musicians I was interrupted by a gentleman who desired me to proceed at once to meet my friend, Dr. Anderson Robertson, in consultation. Unfortunately, the gentleman—the father of the patient—in his excitement did not send in a message, but interrupted me while speaking, and under the awkward circumstances I requested permission of the audience to speak to him in the side-room. There I learned the facts of the case, and sent to three surgeons in the neighbourhood in the hope that I might find a substitute. No one could be got, and I was therefore compelled, seeing the case was one of urgency, to go myself. I operated in the usual way, injected antitoxin, and left the case in the hands of my friend. I heard nothing whatever about it for some time afterwards, when Dr. Anderson Robertson called to say that the child was making a very good recovery. In the interval, by some means or other, the facts had become known to the editor of the *Glasgow Evening News*, and the paragraph which you copied in THE LANCET was the result. I have to thank you for assuming without explanation, as you do in your footnote, that I would regret the appearance of the article in question, and that it was not my own doing. I was in no way responsible, directly or indirectly, for this paragraph. It appeared in the *Glasgow Evening News* nearly three months ago, and even at this moment I am quite unconscious of any channel by which the newspaper received information upon the subject. I am, Sirs, yours faithfully,

Glasgow, March 5th, 1895.

J. MACINTYRE.

. We print Dr. Macintyre's letter with pleasure and note with equal pleasure that he recognised that we knew him to be no party to the unfortunately worded paragraph.—ED. L.

CRIME AND ITS FACILITIES.

To the Editors of THE LANCET.

SIRS,—The following is an interesting history of fatality occurring in a family. Some months ago a man was admitted into this hospital having been impaled on a steel drill on which he had fallen in a sitting position. He died two days after admission. I give very briefly his family history:—1. Father stabbed and killed in a quarrel. 2. Mother some twenty years after was murdered on the same spot with a stab from a knife. 3. Brother stabbed in the chest, and died some years after from the effects of it. 4. Brother killed by accident in the mine. 5. Brother found dead in the country; cause unknown. 6. Brother died from chest affection. 7. One brother alive, but lame as result of accident. 8. A cousin committed suicide by shooting himself. 9. The mother, while a widow, had a sweetheart who was murdered.

I am, Sirs, yours faithfully,

ROBERT J. MARSHALL, M.B., C.M.

Hospital, Rio Tinto, Spain, Feb. 25th, 1895.

MEDICAL FREEMASONS.

To the Editors of THE LANCET.

SIRS,—I observe from a paragraph in THE LANCET dated Feb. 23rd, that the *Esculapian Lodge* has decided to entertain all medical masons that may attend the British Medical Association in August next. As one of the committee of the forthcoming meeting of the Association I look upon this masonic invitation as a most considerate, wise, and auspicious event. Let us as masons from all parts congregate together and strike a decisive blow which will tell the tale to the other members of our profession, and show them the firm basis, the true foundation, on which the order is built and the good fellowship that exists amongst us.

I am, Sirs, yours truly,

J. NOBLE BREDIN.

Martins, Boughton Monchelsea, Kent, Feb. 23rd, 1895.

THE CASE OF MR. C. BRYAN TOWNSHEND.

THE following subscriptions have been received or promised, and are hereby acknowledged with grateful thanks:—

Mr. Henry Morris (London) £5 5 0	Mr. Williams (Sherborne) £1 0 0
Dr. T. Buzzard (London) ... 5 5 0	Dr. H. Atwood (Beaver (Worcestershire) ... 1 0 0
Dr. Herbert R. Spencer (London) ... 2 2 0	Mr. W. Adams Frost (London) ... 1 1 0
Dr. Calthrop (London) ... 2 2 0	Dr. Turtle (Woodford) ... 1 1 0
Mr. F. Vacher (Birkenhead) ... 2 2 0	Dr. R. Hill (Western Hospital, Fulham) ... 0 10 0
Dr. Elliott (Bodmin) ... 1 0 0	

Further subscriptions are earnestly requested, and will be received and acknowledged by Rev. H. Townshend, 41, King Henry's-road, London, N.W.

F. V. D. is advised to apply to the deans of the schools of all the large hospitals. Bacteriological instruction is part of the curriculum at every school now, although the subject is not yet made compulsory in all examinations.

Mr. C. J. Lucas.—Only an experienced and skilled analyst and microscopist could undertake the inquiry, and even then the mode of preparation of the article, which is equally important, may defy discovery.

THE INFLUENZA EPIDEMIC.

To the Editors of THE LANCET.

SIRS,—I should be very much obliged if anyone could inform me whether in the present outbreak of influenza they have noticed that a great number of cases have presented very marked throat affections. A great number have lately come to me complaining of headache and pains in the back and limbs, often of a very severe character. On examining the throats in these cases I have found one or both tonsils to be frequently very enlarged and inflamed, and in many cases resembling somewhat a follicular tonsillitis. The uvula in nearly all cases has been markedly elongated, the soft palate highly inflamed, and the pharynx of a very dark red colour and usually dry. The tongue at first is coated with more or less greyish-white fur; but in twenty-four or forty-eight hours it has cleaned at the tip and edges, and presents a great many enlarged and prominent dark-red fungiform papillae, giving the tongue a strawberry appearance. The temperature for the first forty-eight hours or less ranges between 100° and 103° F. After this it generally quickly subsides to normal or subnormal, and the patient feels quite well, with the exception, however, now and then of rheumatic-like pains occurring in the back and limbs. The throat lesions, however, last from two to three weeks or more; but, curiously enough, in the majority of cases there is no pain on swallowing—in fact, the patient often does not complain of his throat at all, and inflammation there is only found on examination. Now and then there is a little pain and tenderness in the glands of the neck. In about one quarter of the cases there has been a rash, usually of a roseolous or erythematous character, sometimes, however, resembling urticaria. Its usual position is on the chest and arms, and often on the knees and outsides of the legs; it is of a very evanescent character as a rule. The chest may be a brilliant red at one time, and an hour or two later this redness may have quite disappeared, perhaps, however, to show itself on another part of the body. I have been so struck with the similarity of the throat and mouth affections &c. in so many cases that I should like to hear whether other observers have noticed the same signs &c.

I am, Sirs, yours faithfully,

JOHN TERRAT.

Guildford, March 4th, 1895.

"THE MEDICO-BOTANICO SOCIETY."

To the Editors of THE LANCET.

SIRS,—Your correspondent "Questor" will find an account of the "Royal Medico-Botanical Society" in Clarke's "Recollections of the Medical Profession," pp. 240, 267. He may also like to have his attention drawn to the notice of John Frost in the "Dictionary of National Biography."

I am, Sirs, yours truly,

March 4th, 1895.

JAS. B. BAILEY.

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent's question in your issue of March 2nd in reference to the Royal Medico-Botanical Society, there is a good account in Chapter 22 of the late Mr. J. F. Clarke's "Autobiographical Reminiscences of the Medical Profession," London, Churchill, 1874, and of Dr. Sigmund in the "Pettigrew's Medical Portrait Gallery," vol. iii., as well as in Forbes Winslow's "Physic and Physicians," vol. ii., London, second edition, Longmans, 1840.

I am, Sirs, yours faithfully,

D.A.P.

March 5th, 1895.

A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—Allow me to propose that there should be a gathering of the London and provincial octogenarians and upwards of the medical profession. Such a reunion would form an epoch in medical history. I would suggest a soirée, where we might agreeably discuss the past and present.

March 2nd, 1895.

I remain, Sirs, yours faithfully,

OCTOGENARIAN.

P.S.—I have been a reader of THE LANCET since 1836.

. We have much pleasure in printing our correspondent's suggestion: the nature and risks of their calling give to the octogenarian practitioners the right to be proud of their age. But if he desires to be a nonagenarian he had better not travel about to meetings until the weather is a little milder.—ED. L.

UNREASONABLE CHARGES AGAINST MEDICAL MEN.

THE *Western Mail* describes a very unseemly scene—or, as the coroner said, “a disgusting and disgraceful scene”—at an inquest at Cardiff on the body of Amelia Crago, aged thirteen. The mother of the child raged furiously at Dr. Milward for not going to see her child, and maintained that had he gone the child's life would have been saved. It was necessary finally to expel the woman from the court, when Dr. Milward explained his action to the satisfaction of the court. He advised at once, speaking from his bedroom through the tube, what should be done. In a few minutes he got a message of the death of the child. The jury found that the child had died from natural causes, and that no blame attached to him. The coroner was surprised at the violence of the attack on Dr. Milward, and said that in some of these cases there was no use in getting the people to give evidence until after the funeral. It is not necessary to judge too harshly a woman under poignant parental grief, especially when a coroner and jury combine to protect the medical man; but, all the same, it is hard on our profession to be so unjustly blamed.

Mr. Joseph W. Asprey.—A long report dealing exhaustively with this subject was published in THE LANCET of Nov. 25th, 1893, by THE LANCET Special Analytical Sanitary Commission. Copies of the reprint of this report may be had on application to the publisher.

F. D.—We regret to be unable to oblige our correspondent. It is a rule in our procedure from which we never depart that we do not recommend individual practitioners. But our correspondent's family medical man could give him the information he desires.

J. J. W.—We do not think there can be any objection taken to the proposal

“THE EXPLOITS OF A BONESETTER.”

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 23rd I see a letter concerning the “Exploits of a Bonesetter,” which has very much surprised me, because of the fact that it was written by a professional medical gentleman. What has been said concerning the “bonesetter” is, unfortunately, of frequent occurrence almost everywhere in the provinces, and as no good has ever come from our noticing such matters, or is ever likely to come from our doing so while the law acts so as to partially cover such practice, I should have thought that no medical man would have needed even the least hint as to his guidance on the points referred to by your correspondent, “Fair Play.” I fail to understand how there can be the slightest doubt in any reasonable brother's mind upon the matter of his “attitude” towards all “unqualified” persons presuming to practise medicine or surgery; but lest “Fair Play” has failed to appreciate fully his professional position and privileges, I would reply to his queries:—1. Adopt neither of the alternatives mentioned, which are unprofessional in every respect. 2. There is no law to “compel” any agricultural labourer or other individual to leave his ordinary avocation in life and “qualify” to practise medicine or surgery. Why should there be? Far too many of such enter our medical schools in order “to qualify” without any compulsion. 3. I shall leave this question to the General Medical Council to answer. Enough has been said by me to indicate my own personal opinion on this point.—I remain, Sirs, yours faithfully,
Feb. 26th, 1895.

S. W. W.

WANTED, A UNIVERSITY DEGREE.

To the Editors of THE LANCET.

SIRS,—Is there any university in the old country where a man who has been in practice ten years, holding double Royal English qualification, could obtain a degree upon passing a more or less purely practical examination? By way of Arts qualification the London University Matriculation Certificate is held.

I am, Sirs, your obedient servant,

Feb. 10th, 1895.

TRANSVAAL.

* No. The Students' Number of THE LANCET, published in the first week of every September, will give our correspondent full information on the subject, and he will there see exactly what facilities one or two universities offer.—ED. L.

THE JOURNAL OF COMPARATIVE PATHOLOGY AND THERAPEUTICS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers tell me in what library I might hope to find a serial entitled “Journal of Comparative Pathology and Therapeutics”? It is not in the library of the Royal College of Surgeons of England or in that of the Royal Medical and Chirurgical Society. In what year did it first come out? I am, Sirs, yours truly,
Feb. 27th, 1895.

F.R.S.

WANTED A CONVALESCENT HOME FOR A SMALL-POX PATIENT.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me of a convalescent home where a small-pox patient would be received, and tell me at the same time the charges that would be incurred and the formalities that must be gone through?

March 5th, 1895.

I am, Sirs, yours faithfully,

A. N.

DEATH OF THREE OCTOGENARIAN BROTHERS.

THERE have just occurred, says the *Liverpool Daily Post*, at New Brighton three deaths which, by virtue of several circumstances, are worth more than a passing notice. Mr. Richard Owen Coulborn died on Saturday, the 23rd ult., in his eighty-third year. On the following Thursday his brother, Mr. Edward Warburton Coulborn, departed this life in his eighty-fifth year; and on the following Saturday a third brother, Mr. William Rushton Coulborn, was gathered to his fathers in his eighty-sixth year. All three brothers, who were the late owners of a ferry-boat service, lived and died in the same house, forming a remarkable example of a fact that is frequently seen—that where people have spent their lives together, in their death they are often not divided.

Inspector-General, R.N.—The success of the holders of the diplomas of the Conjoint Board of the Royal College of Physicians, London, and the Royal College of Surgeons of England has been made the subject of comment in our columns. Our correspondent's communication should, we think, have been signed.

W. H. H.—We cannot answer our correspondent's question; but his medical attendant would probably oblige him in the matter.

Temperance.—The Pasteurising process was inspected and examined by our Commissioners at 20, High Holborn, W.C.

Inquirer.—Finkler's papain was, we are informed, used in most, if not in every, case to which the paper refers.

CLINICAL INSTRUCTION FOR THE GRADUATE.

To the Editors of THE LANCET.

SIRS,—I beg to call your attention to a want which has been in existence for a great many years. After wandering about or resting in some isolated spot for ten or fifteen years, the zealous practitioner finds that it is desirable and often essential that he should return to his studies and regain some knowledge *in statu pupillari*. As an invariable result, however, such an individual will find himself regarded and tolerated as a sort of harmless lunatic. Such, at all events, has been the experience of myself and others who have endeavoured to take up work again. For instance, one man wished to go over the operations on the cadaver in order to give him some idea as to how the major operations are performed, another was seeking for instruction in the practical and theoretical subjects found in the examination for an M.D.'s degree, and again another required to work up for the Final M.B. Lond. I am quite sure that this want has only to be made known in order that provision may be made for men of maturer years, and thereby they may be able to profit to the fullest extent during the limited months or years which they may be able to set aside. Trusting that this letter may elicit some suggestions.

I remain, Sirs, yours faithfully,

March 4th, 1895.

1st M.B.

* The post-graduate lectures meet some of our correspondent's wants. For the rest his old hospital would surely welcome him back on payment of the usual fees, and it is hard to believe that either students or teachers would look upon his return to study as other than a very reasonable and praiseworthy course.—ED. L.

MRS. GUTHRIE RELIEF FUND.

To the Editors of THE LANCET.

SIRS,—I have to acknowledge with most sincere thanks the following donations and subscriptions:—

Sir Joseph Lister, Bart....	£10 0 0	Mr. C. J. Woollett ...	£1 1 0
Sir Jas. Paget ...	2 2 0	Rev. C. W. Bond, M.A.,	
Mr. R. J. Godlee* ...	1 1 0	St. Nicholas, Brighton	1 1 0
Mr. Stanley Boyd† ...	1 1 0	Mr. J. H. Morgan ...	1 1 0

* With a promise of £1 1s. each half-year if required.

† And £1 1s. each half-year during Mrs. Guthrie's lifetime.

I am, Sirs, your obedient servant,

March 6th, 1895.

M. R. BRANDRETH.

During the week marked copies of the following newspapers have been received:—*North British Daily Mail, Brighton Argus, Hornsey Journal, Merthyr Express-News, Bedford Standard, Salisbury Journal, Brighton Post, Bridge of Allan Reporter, Wigan Examiner, Essex Telegraph, Ipswich Post, Leicester Post, Newcastle Chronicle, Bristol Times, Eastern Morning News, Liverpool Courier, Cincinnati Tribune, Yorkshire Post, Times of India, Citizen, Liverpool Daily Post, Builder, City Press, Bristol Mercury, Architect, Sanitary Record, Leeds Mercury, Pioneer Mail, Mining Journal, Local Government Chronicle, West Middlesex Standard, Hertfordshire Mercury, Christian World, Reading Mercury, Weekly Free Press and Aberdeen Herald, South Lambeth Monthly, Surrey Advertiser, Local Government Journal, West Middlesex Advertiser, Wellington Post, Dover Express, Hereford Times, Kent Messenger, Bath Chronicle, Scotsman, Express and Star, Norfolk Standard, Carpenter and Builder, Levant Herald, Man of the World, Woodbridge Reporter, Lincolnshire Chronicle, Lincoln Gazette, Carlisle Journal, Australian Medical Journal, Nursing Record, North Cheshire Herald, Blackburn Telegraph, Galignani Messenger, Madras Times, Cape Argus, Mayo Examiner, Rosshire Journal, Westmorland Gazette, Oldham Evening Chronicle, &c., &c.*

Communications, Letters &c. have been received from—

- A.**—Dr. T. Clifford Allbutt, Lond.; Mr. H. Alston, Trinidad; Dr. B. J. W. Alexander, Rainhill; Rev. J. W. Atkinson, Lond.; Alliance Assur. Co., Lond., Sec. of; Alpha, Lond.
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ON

THE NATURAL HISTORY AND AFFINITIES
OF RHEUMATIC FEVER: A STUDY IN
EPIDEMIOLOGY.*Delivered at the Royal College of Physicians of London on
March 5th, 7th, 12th, and 14th, 1895,*

By ARTHUR NEWSHOLME, M.D. LOND.,

MEDICAL OFFICER OF HEALTH OF BRIGHTON.

LECTURE III.¹*Delivered on March 12th.*

THE INFLUENCE OF AIR AND EARTH TEMPERATURE.

MR. PRESIDENT AND GENTLEMEN,—To ascertain whether the temperature of the air or soil has any essential relationship with the origin of rheumatic fever we must learn whether variations in temperature are accompanied by variations in the prevalence of the disease, and whether modifications in these seasonal changes of temperature are accompanied by corresponding modifications in the amount of rheumatic fever. Taking the mean annual temperature at Greenwich since 1866, we find that in 1866 and in 1868-69, years in which rheumatic fever was excessive in London, the mean temperature was from 1 to 5 per cent. above the mean for the whole period 1866-93; in 1874-75, which were epidemic years, it was at the mean line. In 1879, a minimum year for rheumatic fever, the mean temperature was also low (6 per cent. below the mean), and in 1884, with a temperature 4 per cent. above the mean, rheumatic fever was again excessive. In 1893 there was the same association of high temperature and excessive rheumatic fever. On the whole, therefore, it would appear that a high temperature is in England favourable to an increase of rheumatic fever, though the experience of 1874-75 shows that there is no definite proportion between the two. In order to exhaust the possibilities as to the influence of the temperature of the air, the weekly maximum and minimum temperatures in 1874-75 were contrasted with the corresponding weekly admissions to Guy's and St. George's Hospitals for rheumatic fever, with no more definite result than could have been inferred from the statements already made as to the seasonal distribution of rheumatic fever. In 1893, owing to the marked drought in the second quarter of the year, the atmospheric conditions were exceptional, but a comparison of these with the weekly admissions to Guy's Hospital during the same period shows no such marked variations as might have been expected if atmospheric temperature were a very pronounced element in the causation of rheumatic fever.

Records of the temperature of the earth, so far as they are obtainable, show that in years in which rheumatic fever is exceptionally prevalent the earth temperature is unusually high. From a record of the temperature of the soil at 9 A.M. at four feet below the surface, kept at Regent's Park since 1871, I have been able to obtain the mean earth temperature for every year since 1871 excepting 1877-79, and the maximum and minimum temperatures since 1880. The record shows that in 1871-74 inclusive the mean earth temperature of the year was always at or above 50° F., a temperature which was not again reached except in 1884 and 1893 (which were also epidemic years). In 1875 the mean earth temperature was 49.4° and in 1876 it was 49.7°, temperatures which were not equalled except in 1882 and 1883 and in 1894. A comparison of the extreme with the mean temperatures of the earth, and of the mean temperature of the earth in 1871-76 with the corresponding mean temperatures in later years, shows that during the period in which comparison is possible in London great epidemics of rheumatic fever occur only when the mean temperature of the soil is exceptionally high—i.e., over 50° F.—and that the greatest epidemics occur when the mean temperature has been thus high for two or more years in succession.

Humidity of air may be similarly tested. On plotting

out the mean dew-point temperature of the first and fourth quarters of each year there is no consistent result, the indications pointing in opposite directions both in epidemic and non-epidemic years. No relationship can be traced for the years 1874 and 1875 between the weekly admissions to Guy's and St. George's Hospitals, London, and the dryness of the air as indicated by the difference between the dew-point temperature and the air temperature in the corresponding or the preceding weeks. It would be unwise to conclude that the meteorological factors just mentioned have no influence. Hospital patients with rheumatic fever are not admitted until a variable period from the onset of their illness. Gull and Sutton give the average duration before admission as nine days. Then, again, we do not know how soon the climatic conditions, if operative, produce rheumatic fever, or, accepting the infective theory, we do not know the period of incubation of the disease. It is possible that daily observations of barometric pressure if compared with the daily number of cases of rheumatic fever would furnish valuable indications; but these will be impracticable in this country until or unless a general system of notification of the disease is introduced. Mean barometric pressures for weeks or months have comparatively little value, as they give but a feeble notion of the range of pressure, which is the all-important point.

THE INFLUENCE OF RAINFALL.

Rainfall might be expected to have a much closer association with the prevalence of rheumatic fever than any other meteorological condition, as it has become almost accepted as an axiom in medicine that damp air and damp soil are provocative of rheumatic fever. Even on this point the observations, as summarised by Dr. A. E. Garrod in his "Treatise on Rheumatism," are hopelessly at variance. Hirsch at Würzburg and Edlefsen at Kiel found that the amount of rheumatic fever was inversely as the rainfall, while the report of the Collective Investigation Committee of the British Medical Association shows that most cases begin in damp or wet, or cold or cloudy weather; and Dr. Gabbett² on the strength of the London Hospital statistics for 1873-81 says there is, if anything, a tendency for the prevalence of rheumatic fever to vary directly with the rainfall. Dr. Longstaff³ classifies rheumatic fever with scarlet fever, erysipelas, &c., as a "dry disease"—i.e., checked by rainfall, especially frequent rainfall.

Observations on rainfall in London.—In 1867 the rainfall at Greenwich was 17 per cent. above the average, and in 1868 4 per cent. above the average, and yet 1868 was marked by a large epidemic. In 1870 with a deficiency of 25 per cent. of rainfall there was a smaller epidemic, and in 1874 a large epidemic of rheumatic fever corresponded with a small rainfall, the epidemic continuing in 1875 although the rainfall was in that year 12 per cent. above the average; 1872 and 1879 with the highest rainfalls in the whole period had a small amount of rheumatic fever. The relationship may be examined more closely in the rainfall for each quarter, but this does not appear to alter the rule that may be laid down that a heavy annual rainfall is usually associated with a low amount of rheumatic fever, and a small rainfall with a large amount of rheumatic fever, though there is no exact proportion observable between the two. It is certain, however, that two or three years of deficient or excessive rainfall are more potent than a single year. The rainfall of Hertfordshire is recorded for a very long period, arranged in a manner very convenient for our present purpose;⁴ it is here employed, therefore, for comparison with the annual amount of rheumatism in London as well as that at Greenwich. It will be seen that in 1861-2-3-4 the rainfall was much below the average, and that the deaths from rheumatism in London, which had begun to increase in 1862, were still more excessive in 1863-4-5. In 1865 the rainfall reached its next maximum, but the deaths from rheumatism did not reach their minimum until 1867. In 1868, when rheumatism was again in excess, rainfall was about the average amount, as also in 1867. In 1873-4 with deficient rainfall there was an increasing amount of rheumatism, which culminated in 1875 although in that year the rainfall was excessive. In 1881, 1884, 1887, and 1890 small rainfall corresponded with minor increases of rheumatism. The summer (April to September) and winter (October to March) ratios of rainfall

¹ THE LANCET, Oct. 20th, 1893.² Studies in Statistics, p. 370.⁴ Appendix to Report of Royal Commission on Metropolitan Water-supply.¹ Lectures I. and II. appeared in THE LANCET of March 9th, 1895. No. 3733.

for Herts confirm the results of the years' ratios. With an excess of rheumatism both winter and summer ratios of rainfall were nearly always below the average. Observation of the number of rainy days in each year confirms the preceding results. In only one instance was the number of rainy days above the average in a year in which the deaths from rheumatism in London were slightly excessive—viz., in 1890. The inquiry may be pursued in other places besides London. In Brighton the rainfall in 1873 and 1874 was much below the average; in 1875 it was 1 per cent. above the average. In 1874-75 occurred a large epidemic of rheumatic fever. From 1877-81 rainfall was above the average, and so was the rheumatic fever in three out of the four years. In 1884, again, there were deficient rainfall and little rheumatic fever. In 1888 there was a large amount of rheumatic fever; the rainfall was a little below the average. In 1891 very little rainfall and excessive rheumatic fever. In 1893 a small increase of rheumatic fever, with deficient rainfall.

At Glasgow the record of rainfall is unfortunately broken at intervals, but it is possible to form a fairly accurate idea from the separate curves for the rainfall of each quarter of the year. Thus 1873 and 1874 were epidemic years. In 1873 the rainfall was at or above the mean line in the first three quarters, and only just below it in the fourth quarter, although the total rainfall of the year was 45 per cent. below that of the preceding year. In 1874 the rainfall of the first and second quarters was below the mean line, of the third and fourth quarters above it, and the total rainfall of the year was about equal to that of 1873. In 1880, judging by the records of the second, third, and fourth quarters (that for the first quarter is wanting), the rainfall was much below the average, and in 1881, in which there was an excessive amount of rheumatic fever, the rainfall was defective in the first and fourth quarters of the year. The chief interest, however, centres about the year 1888, in which year the great epidemic of 1887-89 reached its climax. It will be noted that in the second quarter of each year the rainfall was much below the average from 1884-88 inclusive, in the third quarter at least from 1885-89, and in the fourth quarter from 1885-90. In the first quarter of 1885-86 and of 1888-89 rainfall was also deficient (1887 is missing). It is evident, therefore, that this great epidemic in Glasgow had been preceded by a deficiency of rainfall for four or five years.

THE INFLUENCE OF GROUND WATER.

We have now completed our attempt at the analysis of climate in its relation to rheumatic fever prevalence, excepting the conditions of soil. Geologically, as already stated, the data do not exist for a statistical statement as to the relative influence of different soils on this disease. Inasmuch, however, as the influence of soil upon health is probably determined chiefly by its temperature and degree of moisture, and as the temperature is determined by its porosity and the degree of moisture, we may be able where subsoil water observations are extant to ascertain if there is any relationship between it and the amount of rheumatic fever. The height and the degree of oscillation of the ground water are the two chief factors concerned. It is generally agreed, as stated by De Chaumont,* that "a persistently low ground water, say 15 ft. down or more, is healthy; that a persistently high ground water, less than 5 ft. from the surface, is unhealthy; and that a fluctuating level, especially if the changes are sudden and violent, is very unhealthy." According to Pettenkofer the most unhealthy time is during the fall of the ground water. Dr. Copeman* (p. 355) says: "It is well known that the disease [rheumatism] evinces a preference for open basins and plateaux exposed to the wind, for damp and deeply cleft valleys, and for sea coasts or the shores of great rivers. Dampness of soil may, however, predispose to the disease from the fact that it renders it cold, and this will be the more likely to be the case at low elevations and where there is an impermeable subsoil such as clay; but no sweeping assertion can be made on this point, as the necessary data for the institution of the comparative frequency of the disease on different kinds of soil are unfortunately wanting." This sentence fairly represents the present state of our knowledge on this subject, and brings out the association between dampness of soil and excess of rheumatism, which has become accepted as indubitable. That such an association is more than dubious we shall presently see. It may be further

added that there is probably no association between an impermeable clay subsoil and rheumatism such as is indicated above. All that follows tends to the conclusion that porous soils, being more subject to variations of humidity and temperature and containing a much larger proportion of ground air, are more prone than impervious soils to be the medium from which such telluric contagia as that of rheumatic fever are received. The greatest difficulty in investigating this problem has been the dearth of regular and long-continued ground water observations in this country. The records of the Lewes-road well at Brighton form an unbroken series of almost daily observations since 1867. From the curve of monthly maximum and minimum levels it will be seen that the minimum depth of water in the well was 50 per cent. higher in 1894 than in 1864. The water is pumped from the well almost daily, but owing to the opening of new wells in other parts of the watershed this well is not now worked more than formerly. The levels may, therefore, be fairly taken as representing the influence of seasonal and climatic factors practically undisturbed by variations in pumping.

Mean = 100.			
The years of greatest range of ground water were	In which ratio of acute plus subacute rheumatism was	Acute rheumatism =	
1877	97	.....	111
1887	148	.....	141
1883	94	.....	94
1873	62	.....	71
The years of smallest range of ground water were			
1874	117	.....	131
1884	87	.....	68
1885	103	.....	88
1893	122	.....	129
1889	118	.....	129
1890	154	.....	103
The years of highest level were			
1877	97	.....	111
1873	62	.....	71
1883	94	.....	94
The years of lowest level were			
1887	148	.....	141
1875	126	.....	144
1888	165	.....	113
1890	154	.....	103
1891	106	.....	74
1892	145	.....	116

The years of highest level of ground water coincide with three out of the four years in which also the greatest range of ground water occurs. In these three years the amount of rheumatic fever was below the average. In the fourth year (1887) in which there was a great range of ground water, but at a much lower level, there was a severe epidemic of rheumatic fever culminating in 1888, in which year the range of ground water was much smaller. The range in 1887 was 68 ft. 9 in., as compared with an average range of 66 ft. 5 in. in the three other years of greatest range, 1873, 1877, and 1883; but the minimum depth of water in the well in 1887 was 1 ft., as compared with an average minimum for 1873-77-83 of 12 ft. 3 in. That a great range of ground water has no essential relationship with rheumatic fever is further shown by the years of smallest range. In four such years (1874-89-90-93) there was a great excess of rheumatic fever. In two other years of small range (1884-85) there was little or no excess of rheumatic fever. How do these two years compare with the preceding four as to level of ground water? The average of the minimum levels in 1874-89-90-93 was 8 ft. 7 in.; in 1884-85 it was 8 ft. 4 in.—practically no difference. It would appear, therefore, that smallness of range of ground water is not a necessary concomitant of excessive rheumatic fever, though the two usually coexist. Looking next at the question of simple level of ground water we find that the years of lowest level are associated with excessive rheumatic fever, and that the years of highest level are always associated with a small amount of rheumatic fever.

A general inspection of the curve of monthly levels of ground water shows a series of regularly and continuously high levels each year from 1867 to 1872, culminating in an exceptionally high level in the spring of 1873. Now the curve alters in character. In October-December, 1873, the rainfall was only 7.84 in. The total rainfall in 1873 was 25.42 in., as compared with 36.90 in. in 1872; and following on this condition of things in 1873, the ground water in 1874 failed to

* Stevenson and Murphy's Hygiene, vol. II., p. 324.
* Lectures on State Medicine, 1875.

show more than half the normal spring rise. The sum of the monthly maximum levels of the well for this year was 375 ft., as compared with 568 ft. in 1873. Corresponding to this fall in the level of the ground water came with rapid onset the epidemic of rheumatic fever in Brighton in 1874. The epidemic continued in 1875, when the ground water had risen considerably, though it was even now lower than in several preceding years. In 1876 the ground water had about the same level as in 1875, but the epidemic of rheumatic fever had ceased.

Between 1877 and 1880 occurred another fairly steady fall of ground water from a maximum at the beginning of 1877, and accompanying this there was (so far as can be judged from the imperfect records) a rise in the amount of rheumatic fever, reaching its maximum in 1880, when the spring rise in the level of the ground water almost failed as in 1874. As on the previous occasion, rheumatic fever then fell slowly in amount, reaching a minimum in 1884. In 1884 an exceptionally low level of ground water was again reached, but rheumatic fever was now also very low in amount. A study of the preceding table will prove that the anomaly cannot be explained on any difference between 1884 on the one hand and 1874 and 1880 on the other hand in regard to the amount of variation of the ground water level. It may be surmised that the time of year at which the tide of ground water turned has some influence. In 1874 the ground water was receding right on to December. In 1880 the following tide only began in November, while in 1884 the flow commenced in August. I have been unable to obtain any monthly statement of cases of rheumatic fever in 1884 with which to check my hypothesis. Whether we take the view that deficient rainfall is a condition directly favouring excess of rheumatic fever or only indirectly through the agency of a lowered ground water, the events of 1884 and the next three years are somewhat puzzling. In 1884-85 the rainfall and the aggregate level of the ground water were deficient in the first year, and still more deficient in the second year. Rheumatic fever was 34 per cent. below the average in 1884, and 12 per cent. below the average in 1885. In 1886 the rainfall had increased, so also had the height of the ground water, and so also had rheumatic fever (to 8 per cent. above the average). The chief rainfall of 1886 (13.61 in. out of a total of 33.25 in.) occurred in the fourth quarter. In the first quarter of 1887 5.06 in. of rain fell, but the total amount in 1887 was only 23.14 in., and the ground water therefore rapidly fell. The increase of rheumatic fever in 1887 was great, it being now 141 per cent. of the average amount. In 1888 no spring rise of ground water occurred, and the rheumatic fever in that year increased to 173 per cent. of the average, an amount greater than in any other year. In July, 1888, there were 4.26 in. of rainfall, and in November 4.81 in., and the total rainfall in 1888 was 28.16 in. Hence the spring rise of ground water reappeared in 1889, and with it the rheumatic fever declined to 129 per cent. of the average amount. In the years 1890 and 1891 the level of ground water was low, and in 1891 lower than in 1888; and yet if we take the acute rheumatism curve, as heretofore, its prevalence was at or below the average. A reference to the original documents, however, shows that while in 1889 the number of cases of acute rheumatism in the County Hospital was 39 and of subacute 2, in 1890 the numbers were 32 and 23, in 1891 they were 24 and 15, in 1892 they were 28 and 12, and in 1893 they were 41 and 3. It is evident, therefore, that there has been some transference, and that for this period the curve for acute and subacute rheumatism is the most trustworthy. Accepting this fact, it may be said that rheumatic fever in Brighton in 1890 and 1891 was much above the average. Looking at the whole period—August, 1887, to September, 1891—it is evident that the ground water was persistently low, and it is equally evident that rheumatic fever was during the same period generally excessive, with minor variations.

Mr. Baldwin Latham, C.E., who has made the subject of well levels a special study, has kindly furnished particulars of the maximum and minimum levels of the well water at Wickham Court, Kent, in the chalk three miles from Croydon. From 1866-72 the level did not vary very greatly. In this respect it greatly resembled the Brighton well, both being in the chalk. In 1873 a marked disturbance of the level of the well occurred, both maximum—in the fourth month—and minimum—the twelfth month—being higher than in the preceding years. In the same year an epidemic of rheumatic fever began, the admissions to the General Hospital for acute and subacute rheumatism being 16, as compared with 9, 10,

and 8 in 1870, 1871, and 1872 respectively. In 1874 they were 20, and in 1875 they were 27, but in 1876 they had again fallen to 14. In 1874 the maximum of the ground water for the year was in January, and was extremely low, and it evidently went steadily down, as the minimum level was recorded in December. So low a maximum level appears to me to indicate that the fall had already begun in the latter part of 1873, thus partially accounting for the fact that the commencement of the epidemic appeared to precede the fall in ground water level. I have been unable to obtain a monthly tracing of the ground water. In 1875 the ground water reached its very low highest level in April, and then fell to its minimum in December. In 1876 the water appears to have been rising until June, and reached a rather higher level than in April of the preceding year. The epidemic of rheumatic fever in this year greatly subsided; and in 1877, when the ground water had risen enormously even in January and attained its maximum in May, the epidemic had entirely disappeared. In 1878 occurred a small increase of rheumatic fever, with some fall in ground water level. In 1881 there is no similar correspondence between the two. In 1883 there is a repetition of what happened in 1873, there being a higher maximum ground water level than in 1882 with a considerable increase of rheumatic fever. The maximum of ground water in 1883 was, however, in April, and from that time there was a great fall to December. Between April, 1883, and April, 1884, a greater fall of ground water level occurred than at any previous time since 1873-84. The low level of ground water in 1884 does not appear to have been associated with an excess of rheumatic fever. The total number of rheumatic fever patients in 1884 was 11, as compared with 21 in 1883. It is noteworthy as bearing on this point that the total number of medical and surgical patients in 1884 was 208, as compared with 304 in 1883 and 339 in 1885. It is probable therefore that there were some special administrative causes at work in 1884, which prevented the rheumatic fever admissions to the hospital from being an accurate index of the total rheumatic fever in Croydon during that year. From 1885 onwards a disturbing influence comes into operation. The Croydon waterworks at Addington commenced work; and it has been recently stated in evidence before the Royal Commission on the Metropolitan Water-supply that the amount of water pumped out of the chalk is beyond the capacity of this water-bearing stratum. Although the curve for the Croydon well since that date shows some oscillations, they cannot therefore be regarded as natural in character. A fall of ground water occurred in 1885 and 1888, and in both these years there was some excess of rheumatic fever. In 1891 another fall occurred, greatest towards the end of the year, and this was accompanied by a slight increase of rheumatic fever in 1891-2.

I have now exhausted the English well levels so far as they relate to places in which corresponding information as to rheumatic fever is available. There is a great poverty of records in this most important field. Mr. M. A. Adams of Maidstone has since 1885 kept a very valuable record; but the hospital records for Maidstone are unfortunately too scanty to enable one to utilise his observations for rheumatic fever. Our next endeavour will be to collect such information as is available with respect to ground water in or about London in connexion with its annual prevalence of rheumatic fever. London, as will be seen from the geological map, lies chiefly on the London clay, which overlies to a great depth the chalk, the latter cropping out north and south of London, in Hertfordshire and Surrey. Over the clay is at parts a variable amount of gravel, and at certain points, as on Hampstead Heath, patches of Bagshot sands. Shallow wells in the gravel formed the chief source of water-supply to old London, and for some centuries the direction of the growth of London was determined by the possibility of obtaining such water. Hence districts like Kilburn and St. John's-wood, lying directly on clay, are necessarily of modern growth. There are no continuous records of levels of water in the surface gravel, though a few isolated observations are given in vol. ii. of Whitaker's "Geology of London." These are mostly notes of trial borings &c., and are not repeated.

In 1885 a valuable report⁷ on the Decrease of Water-supply was issued by a committee of the Royal Meteorological

⁷ Quarterly Journal of the Royal Meteorological Society, vol. xi, No. 55, July, 1885.

Society. So far as can be judged from the investigations of this committee 1859 and 1860, years of low and high water respectively, corresponded with a rather low death-rate from rheumatism. The high water in 1861 and in 1866 corresponded with a low death-rate, and the low water in 1864 and 1865 with a high death-rate, from rheumatism. Low water in 1871 corresponded with a death-rate just below the average and a rather high hospital case-rate for rheumatism; and in 1873, with high water, the amount of rheumatism had not varied greatly, though rather in the direction of increase than of decrease. In 1874 and 1875, and again in 1884, low water was associated with excessive rheumatic fever, while in 1877, 1879, 1881, and 1883 high ground water accompanied a small amount of rheumatic fever. The series confirms the rule that low ground water is more favourable to the prevalence of an excess of rheumatic fever than high ground water. There is not wanting collateral evidence on the same point which can be brought up to the present date. At Barley, near Royston, in Hertfordshire, is a deep chalk well, from which records from 1864 onwards are available.⁸ This may be taken as approximately indicating 'the variations in level of the ground water to the north of London. In 1864-65 the well was low for the whole of the year. Then from a maximum reached in April, 1867, the level fell until the end of 1868, the spring rise of 1868 being very small. There were corresponding maxima of rheumatism in London in 1864-65 and in 1868.

In 1869 the ground water rose, and rheumatism in London declined. Between the latter half of 1870 and the end of 1871 the ground water was lower than it had been since 1864-65, and with this there was a considerable increase of rheumatic fever, shown better by hospital cases than by the death returns. In 1873 the ground water was again high at Barley, and from then was very low throughout 1874 and 1875, rheumatic fever being at the same time exceptionally prevalent in London. The next minimum amount of rheumatic fever in London was reached in 1879, and in the same year the maximum level of the ground water was reached. In 1880-81 there was some increase of rheumatic fever in London with a slight lowering of ground water. In 1883 the ground water was very high, and rheumatic fever reached its next minimum. In 1884-85 the ground water was very low and rheumatic fever very high. The records for 1887-88 are unfortunately wanting.

The water levels of a chalk well at Cow Roast in Berkhamstead run practically parallel with those for the well at Barley and need not therefore be given in detail. Several points of difference between the curves of ground water at Barley and at Brighton and Croydon will be evident. 1. The low levels in 1870 and 1871 are unrepresented at the two latter places, whereas the 1874 and 1875 low levels are common to all. In 1870 there was an epidemic of rheumatic fever in London which did not occur in Brighton or Croydon; whereas the 1874-75 epidemic was common to all. 2. The 1884-85 low level was shared by Brighton and Barley; but as we have already seen there was, if the data are to be trusted, no epidemic of rheumatic fever in 1884 in Brighton, while there was some excess of rheumatic fever in London. Will the difference in the two curves explain this? At the Barley well in 1883 there was no autumn flow of water; but from that point a steady and almost uninterrupted drop progressed right to the end of 1885; while at Brighton in each year the normal ebb and flow occurred in both 1884 and 1885. It will now be seen why I lay stress on lowness of ground water as well as on deficiency of rainfall in connexion with an excessive prevalence of rheumatic fever. It is true that the level of the ground water is, in the absence of varying degrees of obstruction to its outflow, dependent chiefly on the rainfall; but it is possible that local circumstances of geology &c. may cause a dry year to have a different effect or an effect to a different degree in two districts. This will be evident from a comparison of the Hertfordshire and Greenwich rainfall with that of Brighton.⁹ Thus in 1868, although the Greenwich rainfall was 4 per cent. above the average, and the Herts rainfall only 1 per cent. below the average, the ground water at Barley was low, and rheumatic fever was epidemic in London. In 1871 there was a greater deficiency of rainfall in Brighton than at Greenwich and in Herts, and no epidemic occurred in Brighton, while there was an epidemic in London. This was evidently associated with the fact that in 1870 the deficiency of rainfall in Brighton was

not so great as near London, and consequently there was not the same fall in ground water in the following year. In 1884 the deficiency of rainfall was 12 per cent. at Brighton, as compared with 13 per cent. in Herts and 25 per cent. at Greenwich, so that in this instance one might have anticipated from the rainfall alone a greater epidemic in London than at Brighton, but not that the epidemic would be entirely absent from Brighton, as was apparently the case. The same general results are obtained when the rainfall is split up into that of summer and winter. It may safely be asserted that there is a closer correspondence between low ground water and excessive rheumatic fever than between deficient rainfall and excessive rheumatic fever, and that deficient rainfall probably only operates when it produces a decided effect on the level of the ground water. If deficient rainfall were directly operative in producing excessive rheumatic fever it might reasonably be expected to produce its effect in the course of a few weeks. If so the year 1893, which was distinguished by a remarkable and protracted drought, lasting in London from the tenth to the twenty-fourth week of the year, might be expected to show its effects in a very perceptible form. I have plotted out the weekly admissions to Guy's Hospital during each week of 1893 in comparison with the weekly rainfall. There was no excess of admissions in the first half of the year, the number up to March 25th being 25 March 26th to June 24th 24, from June 25th to Sept. 30th 42, and from Oct. 1st to Dec. 30th 39. It is evident that the drought was not followed by any great excess of cases until the autumn, there being no rapid increase of cases during the long-continued drought. The levels of the chalk wells at Barley and Berkhamstead cannot be regarded as exactly indicating the degree of dryness of the subsoil in London. In the absence of direct well observations some further indications may be obtained from records of the amount of water passing down the rivers Lea and Thames in each year. When the river is in flood the ground water is undoubtedly high, and the indications of river gaugings may be regarded as intermediate between rainfall and well observations, the river being fed both from surface drainage and from ground water. Felde's Weir is situated on the river Lea below Ware at the junction of the Lea and Stort. The minimum flow was in 1864 (in August of that year). The next minimum flow was in September, 1865, the years 1864 and 1865 being the driest known in the neighbourhood of London. In 1864-65 there was an epidemic of rheumatic fever which, measured by the death returns, was only exceeded in magnitude in 1874-75. The year 1874 showed an almost equally small flow of water over the weir, and in 1884 and 1887-88 and 1890 the flow was below the average. In each case deficient flow over Felde's Weir was associated with some excess of rheumatic fever in London.

Summarising the conclusions which may be legitimately drawn from the facts already stated, there is a close relationship between rainfall, level of ground water, and amount of rheumatic fever. In Brighton, in which we have been able to compare the three with some degree of accuracy, the rheumatic fever curve follows more closely the curve of ground water than that of rainfall. Thus in the years 1869-70-71 there was deficient rainfall, which did not markedly affect the level of the ground water, and no increase of rheumatic fever occurred. In 1888 the rainfall was above the average, but the well level was low owing to the defective rainfall of the preceding year, and there was an excess of rheumatic fever. Similarly in London the excessive rainfall in 1875 was not followed by an immediate and sudden fall in rheumatic fever prevalence, which may be explained on the supposition that it did not raise the ground water sufficiently high after the drought of 1874. It was not until after the steadily increasing rains of 1877-78-79 that rheumatic fever in London again reached its minimum. Similarly in 1884 there were deficient rainfall and high rheumatic fever, but the high rheumatic fever continued in 1885 notwithstanding an increased rainfall. It is evident that the effect of deficient rainfall is not produced immediately. It takes time to develop; and it is warrantable to assume that the influence of deficient rainfall is exerted as the result of its effect on the subsoil, this effect usually showing itself by a marked lowering of the ground water.

Low ground water must be regarded as leading to excessive rheumatic fever not by any essential causative relationship between the two. The low ground water is an indication of certain conditions of dryness and temperature of the subsoil which greatly favour the growth of the telluric contagium of

⁸ Appendix to Report of the Royal Commission on Metropolitan Water-supply, p. 641.

⁹ *Ibid.*, p. 667.

rheumatic fever. This being so, it is conceivable that low ground water, when through collateral circumstances it is unassociated with the required conditions of temperature &c., may not be accompanied by an increase of rheumatic fever, though conversely we never find a high ground water accompanying excessive rheumatic fever.

[Dr. Newsholme concluded by summarising certain foreign returns as to ground water, his information on the point as regards Berlin and Munich being particularly exhaustive.]

LECTURE IV.

Delivered on March 14th.

ARGUMENT AS TO THE INFECTIVE CHARACTER OF RHEUMATIC FEVER.

MR. PRESIDENT AND GENTLEMEN,—Having stepped aside to consider the influence of climate, season, weather, and ground water on the prevalence of rheumatic fever, we can now resume the argument in favour of the view that rheumatic fever is a specific febrile disease. We have seen that rheumatic fever shares its greater prevalence in winter and spring with several other specific febrile diseases, and that its marked association with deficient rainfall is shared by enteric fever, scarlet fever, erysipelas, &c. In the case of rheumatic fever there is reason to believe that deficient rainfall is provocative of an increased prevalence of the disease, only after the effects of this deficiency have been produced on the subsoil; and it is probable that the same relationship holds good for the other diseases just named.

We may next consider how far the clinical features of rheumatic fever and its analogy with recognised specific febrile diseases confirm the view that it partakes of the same nature.

1. *The mode of onset*, with shivering, general aching, &c., is strongly suggestive of the invasion of the system by micro-organisms. It resembles most closely, perhaps, the onset of influenza. *Sore-throat* is an initial symptom in a large proportion of cases. Dr. J. K. Fowler estimates the number of cases in which throat symptoms are present as not less than 80 per cent. The throat symptoms, as in scarlet fever, may be extremely slight, but they probably form an essential part of the disease. Mr. C. R. Straton of Wilton, Salisbury, has described pathognomonic greyish-yellow sores on the mucous membrane of the throat or nose, which may be followed by rheumatic fever or chorea or may have no sequel; but so far as I know no other observer has remarked these.

2. *The progress of the illness* is very like that of a specific febrile disease. The continuous fever, the frequent simultaneity of articular and visceral lesions, the occurrence of epistaxis, and the protracted curve of the temperature all indicate an infective disease; while the general aspect of the patient gives the same impression. The tendency to hyperpyrexia, as in scarlet fever, enteric fever, and puerperal septicæmia, forms another point of analogy. The occurrence of endocarditis is suggestive of microbic action. With the possible exception of chorea, all the diseases in which endocarditis is known to occur are infective in character. It is true that the fever has no such definite duration as in scarlet fever, enteric fever, pneumonia, &c.; but this is largely due to secondary serous inflammations. In the atypical character of its temperature curve rheumatic fever resembles erysipelas rather than typhus or enteric or scarlet fever.

3. *The tendency to relapse* is another feature characteristic of the disease. This by no means negatives the hypothesis of infectivity. Relapses are common in erysipelas. Relapsing pneumonia is described by Dr. Sturges; relapses of influenza and of enteric fever are common; recrudescences of diphtheria not infrequently occur within a few days of the first attack, or when the patient is about to be discharged from hospital. A similar phenomenon has occurred in my experience in a small percentage of scarlet fever cases; the patient, while desquamating from scarlet fever, has developed a second typical attack, beginning with sore-throat, scarlet rash, and elevated temperature, and followed by a second desquamation.

4. *The liability to second and later attacks*.—There is a regular scale of immunity among the diseases admittedly infective. Perhaps a second attack of small-pox is less common than of any other infectious disease, but it does occur. Third attacks of scarlet fever are known. Diphtheria appears to confer very slight immunity against subsequent attacks. Erysipelas predisposes to subsequent

attacks, and we have in this respect an additional point of analogy between erysipelas and rheumatic fever.

5. *The influence of the personal equation* varies greatly in different instances. An unvaccinated person definitely exposed to the infection of small-pox seldom escapes. It is difficult to believe that any persons receiving the anthrax bacillus into a scratch would escape; but there are families—of one of which I am a member—in which no cases of scarlet fever have occurred for at least three generations, notwithstanding repeated opportunities of infection at susceptible ages; and there are conversely families in which scarlet fever occurs with a frequency (and sometimes a malignancy) quite disproportionate to the opportunities of infection. The proclivity of certain families to diphtheria and to enteric fever is notorious, though their members are living under the most diverse conditions. Hay fever might be taken as the type of a local infective disease in which a special personal proclivity—described by some as an idiosyncrasy and by others (as Hirsch) as some anatomical peculiarity of the organism—is required for the production of the disease; while small-pox might be taken as the type of an infectious disease in which personal proclivity or immunity (apart from vaccination) has but little influence. Rheumatic fever, like erysipelas, comes much nearer to hay fever than to small-pox. It is almost certain that the number of persons receiving the streptococcus of erysipelas into abraded points is much greater than the number developing erysipelas thereafter, and it is almost certain that more persons receive the rheumatic infection than there are rheumatic fever attacks.

6. *The method of infection* in enteric fever and cholera is almost always *viâ* the alimentary canal; in scarlet fever and diphtheria the infection may enter by the alimentary canal or be implanted by inhalation directly on the throat. In erysipelas it is doubtful whether the infection is always received at the point of traumatism or whether, as in the case of acute periostitis,¹⁰ the micrococci have reached the specifically inflamed part *viâ* the blood circulation. In the majority of cases an abraded surface is the point of inoculation of erysipelas, and idiopathic erysipelas may be regarded as non-existent. In rheumatic fever it is probable that the specific infection enters the system at the tonsils or some other part of the naso-pharynx.

7. *The degree of infectiousness*.—Here again there is a scale of decreasing infectiousness from such diseases as small-pox and measles at one end of the scale, to enteric fever and cholera, which are only infectious by their intestinal discharges, and to erysipelas, which is only infectious to pre-disposed persons and probably only when an abraded surface exists. Rheumatic fever comes last in the series, the exact degree of its infectiousness being unknown. Assuming that rheumatic fever is due to the multiplication in the system of a specific micro-organism there can be no doubt that the chief seat of its multiplication is in the affected joints. Now infection is greater or less in proportion to the exposure of the affected parts. The exanthemata are typically infectious; enteric fever less so, though its specific discharges gain exit from the body. The rheumatic fever infection is deeply buried in the joints; we have little or no positive evidence that its micro-organisms ever escape by any of the emunctory organs. It may be that they pay for their hardihood in invading the system by securing a sepulture in its cells.

8. The fact that the joints are the seat of the trouble in rheumatic fever itself favours the infective theory. The "vessels of the synovia of the joints appear to have some special proclivity to form a nidus for the wandering germs of disease," as of gonorrhœa, pyæmia, and we may add rheumatic fever. Dr. Payne surmises that probably mechanical causes produce this determination of bacteria, as in gout they produce the determination of urate of soda.

So much for the clinical and analogical aspect of the case. Next as to the *therapeutics* of the disease. The specific power of salicin and salicylic acid to speedily terminate this disease forms one of the most remarkable conquests of modern medicine. It is comparable with the specific power of quinine in malaria and of salts of mercury and iodides in syphilis. Although the specific organism of syphilis has not been satisfactorily isolated, its existence is generally admitted; and the pathogenic importance of Laveran's

¹⁰ Mr. A. H. Tubby, M.B., in Guy's Hospital Reports, suggests that the skin is the main portal through which the staphylococci pyogenes aurei producing this disease enter the circulation. He found the sweat ducts in a case of acute periostitis more dilated than usual and crowded with micrococci.

protozoal organism appears to be fairly well established. We may, therefore, fairly argue on the grounds of analogy that rheumatic fever belongs to the group of specific febrile diseases.

It is not necessary to enter in great detail into the dubious evidence which *bacteriology* has hitherto supplied. Cornil and Babes have described two organisms, bacilli and micrococci, in this disease. Wilson¹¹ found in the pericarditis of one case and the pneumonia of another case of rheumatic fever micro-organisms which he was able to cultivate. In 1887 Dr. Mantle isolated bacteria from the synovial fluid and cultivated them.¹² Petrone in three cases of rheumatic fever found in the serum taken from the knee of a rheumatic fever patient organisms similar to those described by Klebs as present in rheumatic endocarditis.¹³ Dr. J. P. Popoff, house physician to the Marine Hospital in Nicoläev, stated in a preliminary note in 1887 that he had isolated the microbe of rheumatic fever, but nothing further has been heard of it.¹⁴ Birch-Hirschfeld, at the Wiesbaden Medical Congress in 1888, reported five cases of rheumatism in which he found staphylococci or streptococci in the joints and on the cardiac valves. Bouchard and Charrin state¹⁵ that they have frequently found the staphylococcus albus in the pure state in the articular fluids in sub-acute and chronic rheumatism. Triboulet¹⁶ obtained negative results during the life of the patient from the synovial fluid in a case of chorea and rheumatism; but post mortem obtained colonies of staphylococcus albus and aureus on gelatine from the pericardial fluid and from the blood of the heart and vena cava. Sahli,¹⁷ in a case of rheumatic fever complicated by pericarditis, double pleurisy, and recent endocarditis without any trace of suppuration, found in the joints, pericardium, and on the vegetations on the endocardium and in the blood a microbe like the staphylococcus aureus. Dr. C. Sacaze,¹⁸ Chef de Clinique Médicale à la Faculté de Montpellier, describes the case of a man admitted to hospital for rheumatic fever eight days after he had abraded his foot. Pus from the sore foot showed abundant staphylococci albi. Dr. Sacaze thinks the foot may have been the focus from which the system was inoculated. M. L. de Saint Germaine¹⁹ has produced joint effusion as the result of the intravenous injection of staphylococci of feeble virulence. He points out, moreover, that in blennorrhagic arthritis, admittedly due to infection, the synovial fluid is sterile and no germs are found in the blood; we need not, therefore, be surprised at the lack of success in examination of the blood and synovial fluid for germs in rheumatic fever. Professor E. Leyden,²⁰ in a communication dated December, 1894, says he has isolated a particular form of diplococcus in certain cases of rheumatism which presents the peculiarity of not growing on ordinary culture media like gelatine, but only on human blood serum. It is, he states, quite different from a staphylococcus in its mode of growth. It may, however, be stated in short that the evidence in favour of any one of the above-cited organisms being the *materies morbi* of rheumatic fever is incomplete and unsatisfactory. *Experimental evidence* is wanting. There has been, so far as I know, no case of inoculation of rheumatic fever in the human subject by the blood of a rheumatic patient, so that the link in the evidence which has been supplied for malaria is still wanting for rheumatic fever. It is somewhat doubtful whether *comparative pathology* will be able to assist in the investigation. Professor MacFadyen, of the Royal Veterinary College, Camden Town, informs me that "nearly all veterinary authors describe both acute and chronic rheumatism as now and again attacking the domesticated animals, and some (Friedberger and Fröhner) regard the disease as due to an infection. I do not know of any experimental evidence for or against this. My own opinion is that much of what has been described under the head of acute articular rheumatism in the lower animals ought to be classed as pyæmia or septicæmia. I have never in the lower animals seen a case clinically

identical with rheumatic fever of the human subject. I have seen many cases of acute arthritis with several joints simultaneously affected, but only in young animals, and always traceable to infection at the umbilicus and demonstrably caused by bacteria."

DIRECT EVIDENCE OF INFECTIVE CHARACTER.

The epidemics of rheumatic fever in the eighteenth century are too distant and too vaguely described to be regarded as authoritative. The more recent epidemics described in previous lectures furnish more exact evidence, and I venture to say that in view of the mass of evidence now collected it will be difficult to deny the infective character of rheumatic fever. Infection may be conveyed (a) directly from person to person, or (b) indirectly from infective discharges, which gain access to soil, water, or milk, or other foods, or become desiccated in inhabited rooms. If in the years in which rheumatic fever is excessively prevalent it is communicated from person to person it is remarkable that so few instances in which this has been apparently noticed are on record, though this does not necessarily negative the occurrence of infection. We have a possibly analogous case in phthisis, the infective character of which, although until recently it was not suspected by the majority of physicians, is now well recognised.

The most striking of the observations favouring the view that rheumatic fever is directly or indirectly infectious may now be quoted. Dr. Ch. Fieissinger²¹ states that in the village of Oyonnax there are about 500 houses. In a dozen dry and well-aerated houses in one street of this village 10 out of a total of 21 cases of rheumatic fever in recent years have occurred. Of these 10, 4 were in the same house and 2 in the same room. In the last instance there was a year's interval and members of different families were attacked. Edlefsen²² at Kiel found that 728 cases occurred in 492 houses, or 100 houses for 148 cases. He had—

2 cases in one house	100 times.
3 " " "	27 " "
4 " " "	5 " "
5 " " "	5 " "
6 " " "	1 time.
7 " " "	1 " "

Two cases in the same house were observed 21 times in the same year, and 7 times in the same month. Three cases in one house in one year were observed 6 times. In 1883 out of 140 cases there were forty-nine houses in which previous cases had occurred. Friedländer of Leipzig, in the discussion on Edlefsen's paper, stated that out of 357 cases he had two houses with 8 cases, one with 7 cases, one with 5 cases, eight with 4 cases, ten with 3 cases, and eight with 2 cases. In one large corner-house he saw 12 cases of rheumatic fever in the years 1872-74, of which 7 occurred in April, 1873. In two other houses in one street he had 18 cases, 11 in the years 1870-71, and 7 in 1870. Port has shown the predilection of certain garrisons in Bavaria to suffer to an exceptional extent from rheumatic fever, and certain barracks of the same garrison. In this country there are also a few recorded cases indicating that the infection of rheumatic fever may *cling about certain houses* in a manner which strikingly reminds one of the same characteristic in diphtheria. Dr. Mantle²³ describes multiple cases in the same house. He describes particularly the case of a girl whom he attended for erythema nodosum. During her convalescence the mother developed her first attack of rheumatic fever, and in another week the father, who had been nursing his wife, had rheumatic fever for the first time. Scarlet fever and erythema nodosum were prevalent at the time in neighbouring houses.

In our review of the epidemicity of rheumatic fever one of the most remarkable features was the indications which it furnished of the *gradual spread of the disease*. In London, in Yorkshire towns, in Norway, and possibly elsewhere there were clear indications that the entire susceptible population was not attacked at the same time, but that the infection progressed from place to place, apparently the more remote parts (as in Norway) suffering at a later period than the nearer parts. This might, as already indicated, be explained on the supposition that the disease is directly or indirectly infectious; or it may be that the necessary reaction of environment to the specific virus, always endemic in each district, occurs in different years in different localities, or that the susceptibility of populations varies at different times.

¹¹ Edin. Med. Jour., June, 1885.

¹² Brit. Med. Jour., June, 1887.

¹³ Article by M. Jaccoud, Gazette des Hôpitaux, 1882, p. 881.

¹⁴ M. J. Pribavlenia k' Morskoniū Sborniku, November, 1887, p. 401 (quoted in London Medical Recorder, p. 303, 1888).

¹⁵ Association Française pour l'Avancement des Sciences, Session de Marseille, 1891.

¹⁶ Revue des Maladies de l'Enfance, 1891.

¹⁷ Zur Aetiologie des acuten Gelenkrheumatismus (Correspondenzblatt für Schweizer Aerzte, No. 1, p. 22, 1892).

¹⁸ Rôle des Staphylococcus dans l'Étiologie du Rhumatisme (Archives Générales de Médecine, November, 1894).

¹⁹ Étude Clinique et Expérimentale sur la Pathogénie du Rhumatisme articulaire aigu (Thèse de Paris, 1893).

²⁰ Deutsche Medicinische Wochenschrift, Dec. 6th, 1894.

²¹ Gazette Médicale de Paris, No. 14, p. 160, April, 1892.

²² Zur Statistik und Aetiologie des acuten Gelenkrheumatismus.

²³ Brit. Med. Jour., June 25th, 1887.

The first supposition makes the method of spread of rheumatic fever very analogous to that of diphtheria. This disease has for some years been slowly creeping over England. Unlike measles or influenza, the outbreaks of which owing to their rapid infectivity have an explosive character, diphtheria progresses with remarkable slowness. Some large centres of population have hitherto almost entirely escaped; while London and the towns and districts within easy touch of it have suffered severely. It takes several years to obtain full grip of a population, and it dies out slowly. Not only is infection from patient to patient required, but a large amount of infection must be present before the disease assumes epidemic proportions. It is more probable that the *materies morbi* of rheumatic fever is omnipresent, but requires certain favourable conditions of environment before it can assume sufficient malignancy to fit it for aggressive parasitic life. These conditions of environment are especially related to deficient rainfall and low ground water, and a certain temperature of the soil. This probably does not exhaust the environmental conditions favouring the spread of rheumatic fever, but of others we know little or nothing.

It will be seen that, on the whole, we incline to the view that rheumatic fever is caused by a saprophytic organism having a tendency to assume a parasitic life; that in most years only a small proportion of these organisms survive to the stage of parasitism, owing to the activity of their natural enemies in the struggle for existence; but that in dry years associated with low ground water and an optimum soil temperature the growth of these organisms is favoured more than that of countervailing organisms, and an abnormally large number of them are released into the atmosphere in a desiccated condition and become parasitic in persons whose vital processes do not enable them to resist the invasion. In the present state of our knowledge the gradual extension of the disease appears to be best explicable on the supposition that local geological and meteorological conditions cause the difference in time at which the reaction between special subsoil conditions and the vital activity of the rheumatic fever virus occurs.

Incubation period.—Our investigation into the origin of individual cases of rheumatic fever would be greatly facilitated by a knowledge of its exact period of incubation. Whether, like scarlet fever, it is only a few hours or may extend to months like hydrophobia or malaria is unknown. It is not unlikely that in this disease there may be a "latent parasitism," the organism already housed in the system waiting for its development until the personal factors to be next considered come into play.

The *chronic character* of some forms of rheumatism may be used as an argument against its infective character. It is not certain that chronic and acute rheumatism are the same disease; but if they are we have the analogous cases of chronic and recurrent forms of diphtheria and of the long-continued life in the individual of the malarial poison.

[Dr. Newsholme then briefly reviewed the element of idiosyncrasy in rheumatic fever, remarking that the degree of personal resistance was probably more important than either infection or environment in determining an attack.]

It is conceivable that the susceptibility to rheumatic fever of an entire population will become greater at intervals. We have already seen that some of the curves show a tendency to *alternation of greater and less epidemics*. Districts suffering severely in 1868 had the 1875 epidemic slightly, and districts having the 1875 epidemic badly escaped lightly in 1884 to have a severe outbreak in 1888. This is by no means generally the case, though it is frequently seen in the curves for large communities. It might be argued that most of the susceptible persons had rheumatic fever in the greater epidemic, and that this accounted for the smaller dimensions of its successor. There is, however, no evidence that one attack of rheumatic fever confers even temporary immunity against a second, and we must carefully distinguish between the comparative immunity of an entire community and that of an individual. The community is, however, made up of individuals, and it is highly probable that the apparent comparative immunity of a community is really a question of temporary comparative barrenness of the soil in which the *materies morbi* grows.

Metschnikoff has described an immunity of the population of Versailles against cholera, even when their drinking water contains the cholera vibrio.²⁴ He ascribes this immunity to

the absence of "favouring organisms" in the alimentary canals of the Versailles. On this hypothesis the absence or presence of rheumatic fever in a locality may be a question of the "microbial flora" of the mucous membranes of its inhabitants. Rather than accept the notion of complete immunity of an entire population in presence of cholera infection by means of inhibitory microbes in their intestines, it is easier to doubt the identity of the cholera vibrio found in the Seine water supplying Versailles, or in the alternative to deny the pathogenic relation of the comma vibrio to cholera.

There can be little doubt that the influence of *heredity* in relation to rheumatic fever has been much exaggerated owing to its common confusion with gout. There appears to be but a slender foundation for the notion that there exists what is called by Charcot an "articular disposition," a sort of parent stem from which issue two primary branches, gout and rheumatism, or what is called an "arthritic diathesis," from which, according to J. Hutchinson, develop gout under the influence of dietetic causes and rheumatism from exposure. Yet it appears impossible to treat of rheumatism without the use of the words "diathesis" or "disposition," notwithstanding Dr. Pye-Smith's eloquent *caecat* against their use.²⁵ He asks, How are we to define a rheumatic disposition? "If the disposition is not carried out it remains an unproved assertion." It matters little, however, whether we regard the members of a rheumatic family as inheriting a special *disposition* to the disease, or the members of a non-rheumatic family as inheriting a special *immunity* from it—either hypothesis would be tenable—the result is the same. If under certain conditions a person of one family will develop rheumatic fever, while under identical conditions a person of another family will not develop rheumatic fever—and this must, I think, be admitted—we must acknowledge a special personal factor which in certain cases favours, or at least fails to prevent, an attack of rheumatic fever.

Injury has an important influence in causing rheumatic fever. It may occur in the form of actual mechanical injury or be produced by former disease, as erysipelas, or be the result of fatigue or exposure to inclement weather.

The fact that rheumatic fever occurs in a predominantly large number of cases in dry, hot seasons does not exclude the operation of the conventional "chill." The influence of cold is a question, not only of actual temperature, but of variations of temperature, which in this country are greater in summer than in winter. Pasteur has shown how artificial refrigeration makes the hen subject to anthrax; Platania that it renders animals more receptive to the pneumococcus. It is not necessary further to pursue the *modus operandi* of cold, though it is not unlikely that it may be by affecting the tonsillar structures and deteriorating their functions, thus rendering them unable to resist the invasion of buccal microbes.

In connexion with chill we may mention the *lactic acid theory* of origin of rheumatic fever, associated more particularly with the names of Prout, Todd, and Richardson. It is still doubtful if lactic acid is excreted by the skin, and there is no positive evidence that there is an excess of lactic acid in the blood of rheumatic fever patients. Richardson's experimental results are somewhat dubious. The only positive evidence in favour of the lactic acid theory is Foster's observations on two diabetic patients²⁶ in whom the prolonged administration of lactic acid produced rheumatic fever. Dr. A. Harkin²⁷ has suggested that Foster's cases were gout, as the small joints were chiefly attacked. The association of gout and diabetes is furthermore common. It is not necessary to deny that lactic acid is developed excessively in rheumatic fever. We simply maintain that if this is so the agent concerned in its production is a micro-organism which is the essential cause of this disease.

Corporeal over-fatigue undoubtedly opens the gate to rheumatic fever. This is in accordance with what we know of other diseases. It is probable that protracted labour predisposes to puerperal fever, and the influence of forced marches on the origin of enteric fever and dysentery is well known. Charrin and Roger increased the susceptibility of rats to anthrax and to symptomatic anthrax (Rauschbrand) by making them run a treadmill several hours a day. Fatigue probably favours rheumatic fever by causing temporary

²⁴ Brit. Med. Jour., June 2nd, 1894.

²⁵ Synthesis of Acute Rheumatism: Brit. Med. Jour., Dec. 21st, 1871.
²⁶ Pathology and Treatment of Acute Rheumatism: Dublin Journal of Medical Science, vol. lxxii., 1881, p. 312.

²⁴ Annales de l'Institut Pasteur, 1893, p. 691, and Public Health, vol. vii., pp. 15 and 36.

accumulation of effete matter and by causing nutritive modifications owing to the mechanical attrition. It is fairly certain that fatigue affects the localisation of rheumatic fever, and that this is the rational explanation for the exceptional frequency with which the knees and ankles are attacked. According to Lebert and Gerhardt more than two-thirds of the attacks of rheumatic fever begin in the lower extremities, the exceptions being among those who use their arms more than their legs. According to Kelsch,²³ from 80 to 85 per cent. of the cases begin in the legs, and next by preference the right arm.

There are certain facts which appear to point more definitely to the influence of traumatism in causing rheumatic fever. Many surgeons have had experience of an attack of rheumatic fever following attempts to reduce an old dislocation or to release old adhesions about a joint. M. Verneuil gave an account of several cases to the French Academy of Medicine.²⁹ In one case a woman aged twenty-five years was six months in hospital with an attack of rheumatic fever, which ended in a stiff ankle-joint. Two months later she returned to the hospital, and the actual cautery was applied. This was followed by an attack of rheumatic fever, beginning in the affected foot and spreading to other joints. In another case a girl aged eighteen years had a tooth extracted. On leaving the dentist she suffered from torticollis. This was followed by pain in the shoulder, and then a definite attack of rheumatic fever set in. In other cases the traumatism attending accouchement has appeared to be the starting point of rheumatic fever. Such cases as the preceding, indicating the possibility of traumatic infection, appear to increase the probability of a close affinity between rheumatic fever and erysipelas, on which we have already touched. It is impossible to say more than a few words as to the influence of race, diet, and occupation on rheumatic fever, as there is a dearth of trustworthy facts on these points.

As to race there is no evidence, so far as we know.

The same remarks applies almost equally to occupation. The only statistics which would settle this question would be those dealing with the total rheumatic fever patients in a given community, classified according to age and sex, in proportion to the total population of the same community. Such statistics would obviously be unobtainable except where, as in Norway, rheumatic fever is universally notified.

Diet possibly has some influence, though exact facts are wanting. With one clinical fact every practical physician is acquainted—viz., the frequency of relapses when animal food is given too early after an attack of rheumatic fever. There is, however, no evidence on a large scale that omnivorous or chiefly carnivorous races are more prone to rheumatic fever than vegetarians.

[Dr. Newsholme then discussed at length an important aspect of his exhaustive study of rheumatic fever—viz., the affinities of the disease. In his summary of the points of contact and contrast the lecturer compared rheumatic fever with chronic rheumatism, when he alluded to the confusion of ideas which by calling all sorts of arthritic and gouty conditions "rheumatism" had led to the idea that rheumatism was caused by damp; with muscular rheumatism; with chorea, stating that the statistics of St. George's Hospital showed a remarkable similarity in seasonal and annual curve between the two diseases; with epidemic cerebro-spinal meningitis; with epidemic pneumonia; with erysipelas, in connexion with which he pointed out at length the striking resemblance between the curves of rheumatism, erysipelas, and puerperal fever, and gave his grounds for believing that sepsis as a common cause did not wholly account for the similarity; and with scarlet fever, where the occurrence of scarlatinal rheumatism furnished an obvious point of contact. He continued:]

The conditions of soil producing rheumatic fever and malaria appear to be almost exactly opposed to each other. It would appear that a moist soil which has been previously saturated with water, associated with a soil temperature of about 65° F., is most favourable to the development of malaria. It is true that the conditions of soil under which malaria may develop appear to be somewhat discrepant. In the Campagna it prevailed in an uncultivated soil which was dry and free from stagnant water; and the same applies to some parts of the Deccan. As a rule, however, it occurs in

marshy ground which has become superficially dried, and is intensified by any obstruction to the outflow of the ground water. In rheumatic fever we have seen that the greatest amount of rheumatic fever usually corresponds with the year of, or immediately following the year of, smallest rainfall, in which the ground water is exceptionally low, and that the least rheumatic fever corresponds with the years in which there is the shallowest layer of dry earth between the ground water and the external atmosphere. The seasonal distribution of the two diseases is dissimilar. In temperate climates malaria has a maximum prevalence in spring and in autumn, and a minimum in winter, when rheumatic fever is most prevalent. In the most intensely malarious spots of the tropics the maximum prevalence of malaria is markedly associated with the rainy season; if the rainfall is not excessive the malaria usually reaches its maximum when the rain ceases. Alternations of drought and moisture with a moderately high temperature seem most favourable to malaria; whereas rheumatic fever is most abundant when the deficiency of rainfall has been exceptionally protracted and has produced a marked and exceptional drying of the subsoil.

We are now in a position to take a general survey of rheumatic fever and the diseases with which it is most closely allied. We have shown by evidence derived from death returns and hospital returns in various countries and from the notification returns in Scandinavia that at intervals of a few years rheumatic fever prevails epidemically, though in the intervals it is never entirely absent from any community from which we have been able to obtain returns. Some of these epidemics have been so widespread as to deserve the name of pandemics, among which we may specially mention those occurring in 1868, in 1874-75, and in 1884.

The epidemic prevalence of rheumatic fever has always occurred, so far as this country is concerned, in years of exceptional scarcity of rainfall. Judging by the evidence in this country, the deficient rainfall appears to produce this effect by causing an exceptionally dry and warm subsoil, which is usually associated with low ground water. In the instances where records were available it has been found that when deficient rainfall was, owing to its seasonal distribution, not accompanied or followed by exceptional lowness of ground water there was no epidemic prevalence of rheumatic fever. It is probable that mere lowness of ground water is not the only factor concerned in favouring rheumatic fever, but this along with some other hitherto unknown factor of temperature of soil or rate of flow of ground water. Whether this is correct or not, it is certain that dryness of soil is favourable to the occurrence of rheumatic fever to an epidemic extent.

We have some difficulty in placing rheumatic fever in its exactly appropriate place among the specific febrile diseases, though of its claim to a place among them there can be no doubt. Is it an infectious disease like whooping-cough or measles? If so, it has hitherto succeeded admirably in concealing its true character. Direct infection if it occurs is exceptional. Is it a purely miasmatic disease like ague? We have already given reasons for regarding the poison of ague as absolutely distinct from that of rheumatic fever. They may both, however, be miasmatic diseases in the sense that the virus is formed in the soil and is not transmissible directly from patient to patient. Or it may be miasmatic-contagious like enteric fever or cholera, one phase of its existence being passed saprophytically in the soil and the next in the human organism. Whichever of these latter hypotheses is correct, we have no doubt that it is essentially a soil disease. It is impossible in the present state of our knowledge to be certain whether rheumatic fever is due to an organism which is usually solely saprophytic and only becomes parasitic when its habits of life are altered by the stimulating effects of dryness and warmth of soil, or, to put it in another way, only migrates into parasitic life when extra-corporeal food is deficient; and whether this organism after its rapid multiplication in the system is eliminated therefrom and subsequently infects the soil, or whether each case of the disease involves a fresh infection from contaminated soil, we cannot at present state. There are many points of analogy with tetanus and erysipelas, more particularly the latter. The virus of tetanus inhabits the soil, and can only become parasitic when directly inoculated. It is highly probable that the same is true for erysipelas; it may also be true for rheumatic fever.

²³ Kelsch: *Traité des Maladies Épidémiques*, p. 322.

²⁹ *Gazette des Hôpitaux*, Aug. 26th, 1876.

PROPHYLAXIS.

A disease like rheumatic fever, which certainly occurs chiefly in dry soils, appears to afford but little scope for preventive measures. It would appear at first sight to strike at the root of the hygienic axiom that a dry soil is the most healthy. It is probable that a distinction must be carefully drawn between dryness of soil due to its drainage, to the removal of locks, mill-ponds, &c. from the neighbouring streams, and dryness of soil due to a series of hot and dry seasons. The latter would be associated with a higher temperature of the soil than the former, and would undoubtedly have a different effect on the biological quality of the soil.³⁰

A CASE OF SARCOMA OF THE BRAIN SUCCESSFULLY REMOVED BY OPERATION.

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The following case is published as an example of the good results which may be obtained by the removal of a cerebral tumour, even when it has attained a considerable size.

The patient was a married man aged thirty-six years. Before the commencement of the present illness he had always enjoyed good health, and was well able to do hard work. He had never had any severe illness or injury, nor could any history of syphilis be obtained. Soon after the beginning of February, 1894, and as far as can now be ascertained on the 11th of that month, he was suddenly seized with a slight attack of Jacksonian epilepsy. He stated that in this attack the left elbow was raised from the side, and that the forearm was pronated and supinated in the flexed position several times in rapid succession. The attack was limited to the left arm, and he was perfectly conscious all the time. Nine days later, on Feb. 20th, he had a similar attack, again involving the left arm only, but accompanied by a tingling sensation, which was felt all over the left side of the head. Four days after this he had a third attack similar in all respects to the second. Since then he had had no general or localised convulsion. He did not notice any loss of power in the left arm immediately after these attacks. He continued at his work for another week, till one day he felt cold and was seized with nausea, which was followed by a severe attack of vomiting. The next day (March 4th) he found that he had lost some power in the left arm, and since then he had been unable to work. The left arm gradually became weaker till it finally was almost completely paralysed. About a fortnight after he left his work he felt that he was beginning to lose power in the left leg, but there had not been any convulsive seizure involving the leg. Attacks of vomiting occurred regularly two or three times a week. About the beginning of April he began to complain of an aching pain in the right temporal region. The symptoms all gradually became more marked up till the middle of May, when Dr. Murray first saw the patient in consultation with Dr. H. S. Baumgartner of Newcastle and Mr. Yoakley of Heaton. At that time the patient complained of headache on the right side and severe attacks of vomiting. There was paralysis of the left arm, with considerable loss of power in the left leg, so that he could only get about the house with difficulty by the help of a stick. There was well-marked double optic neuritis, the neuritis being rather more advanced in the right eye than in the left. The symptoms pointed clearly to the presence of a cerebral tumour, which we concluded primarily involved the cortex of the middle third of the ascending frontal and ascending parietal convolutions, and was extending upwards towards the longitudinal fissure. It was determined to administer full doses of potassium iodide for a few weeks in the first place, and, if no improvement took place, to have the tumour removed. Fifteen grains of potassium iodide were given three times a day.

Beyond a temporary diminution in the frequency of the attacks of vomiting no improvement took place, and the condition of the patient became worse, so that at the end of six weeks we decided that the tumour should be removed without any further delay.

Condition of the patient at the time of operation.—The patient complained of headache which was always confined to the right side of the head. The pain, however, appeared to shift from one part of this side of the head to another, and was sometimes felt in the temporal and at others in the occipital region. He also complained of feeling as if he had received a blow on the head in the right parietal region. He frequently heard noises in the head, which at one time sounded like an engine at work and at another like a bell ringing. He had severe and prolonged attacks of vomiting almost every other day. The speech was clear and the memory unimpaired. His temper had become irritable, but in all other respects his mental condition was unaffected. On tapping the right side of the head there was found to be a small tender area surrounding a point situated one inch from the middle line on a line drawn at right angles to it and passing down through the right external auditory meatus. The eyes were examined by Dr. Archibald Percival, who reported their condition to be as follows. Vision was nearly $\frac{1}{2}$ with either eye. The fields were normal. In each eye the colour sense was good and the colour field normal. Light sense was impaired slightly. There was pronounced optic neuritis in both eyes. Left disc: $\frac{1}{2}$ mm. swelling. There was a small amount of hæmorrhage near the lower and outer margin of the disc. The vessels were partly obscured by the œdema in places. Right disc: the swelling was estimated at 1 mm.; a few fine vitreous opacities were occasionally and with difficulty seen. The tension was the same in both eyes. Elevation and depression were good. Conjugate movements were rather jerky, ranging to the extreme right or the extreme left. The pupils acted, but not very briskly, to light and accommodation. The other cranial nerves were unaffected. The left arm was almost completely paralysed, as the patient was unable to raise the arm by means of the shoulder muscles, and the movement which he made in endeavouring to raise the arm was due to rotation of the scapula. In the sitting position, with the arm hanging down, he was unable to execute the slightest movement of the forearm, hand, or fingers. When he was lying on his back in bed with the arm at his side he was found to have still some slight power in the flexors and extensors of the elbow-joint. There was a slight amount of rigidity of the biceps and supinator longus muscles. There was scarcely any diminution in the size of the muscles of the left arm and forearm. The thenar and hypothenar eminences were rather soft and flattened owing to some wasting of the intrinsic muscles of the hand; the interosseous spaces were more conspicuous than on the right. The triceps, the supinator longus, and the other muscles of the forearm were in a marked condition of myotatic irritability, and responded actively to mechanical stimulation. The patient could just walk across the room without support, but as a rule used a stick or supported himself by the furniture. The left leg dragged considerably as he walked; when sitting he could cross the left leg over the right knee. The power of flexion and extension of the left thigh was much less than on the right side. The extensor muscles of the left knee-joint were also less powerful than on the right, but the flexors were much weaker. He was unable to execute any movement of the foot or toes. Sensation to touch, pain, heat, and cold was unaffected. The muscular sense was lost for the left arm, as he was unable to tell the position of the limb unless he was aided by visual or sensory impulses. The knee-jerk was much exaggerated on the left; it was also more active than usual on the right. Ankle-clonus could be obtained on the left side, but not on the right. The superficial plantar reflex was exaggerated on the left. On pricking the dorsum of the left foot a reflex flexion of the foot took place, but only after an unusually long interval. The limbs of the right side were unaffected. Micturition and defæcation were carried out normally, and in all other respects the patient was healthy.

In this case the presence of headache, vomiting, and double optic neuritis associated with unilateral paralysis clearly indicated that the diagnosis of a cerebral tumour was correct. The localised epileptic attacks affecting the left arm, followed by progressive loss of power of that arm, and later by loss of power in the left leg, showed that the tumour was situated in the right half of the brain, and that it primarily involved either the cortical motor centre for the

³⁰ We regret that exigencies of space have compelled us to omit paragraphs here and there of Dr. Newsholme's interesting lectures, but though the points of disconnexion are here and there apparent the argument has not, we trust, suffered.—ED. L.

arm or the fibres passing down from that centre in the internal capsule. As localised convulsion of the left arm was the first symptom of the tumour which appeared, we concluded that the tumour primarily involved the cortex. As the facial muscles were unaffected it appeared most probable that the tumour had first of all involved the middle third of the right ascending frontal and ascending parietal convolutions, and had subsequently extended upwards and inwards towards the longitudinal fissure, affecting either the cortical leg centre or the fibres passing down from it, but to a less extent. We agreed, therefore, that it would be advisable to expose the surface of the brain at a point corresponding to the junction of the upper and middle thirds of the fissure of Rolando.

Operation by Mr. RICHARDSON.—Two days before the operation the head was shaved and washed with soft soap and then with turpentine. The day before the head was treated in the same way. In the forenoon the right side of the head was marked out with an aniline blue pencil with Reid's lines. A mark was made at the junction of the upper and middle thirds of the line corresponding to the fissure of Rolando. This point was exactly on the part of the scalp which was tender to per-

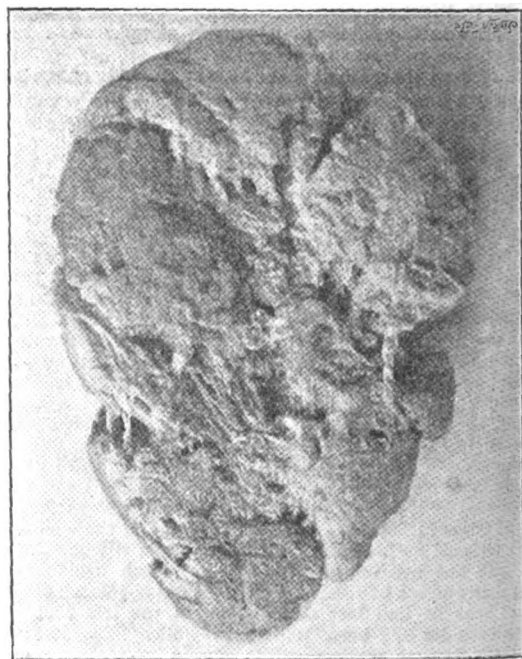
exposed surface were seen to be brain, but the major part was tumour, which was easily distinguished from the adjacent brain substance by its uniform bluish tint. The opening in the skull was then enlarged, chiefly forwards and upwards, by cutting away the bone with punch forceps, the dura mater was divided until the whole surface of the tumour was exposed surrounded by brain except at the upper part where the tumour was attached to the dura mater. The exposed area of the tumour was about the size of a penny (the part which was seen is indicated as a circular patch in the engraving of the upper surface of the tumour). It was readily separable from the surrounding brain by a director, but it was then found that about half an inch from the surface the growth expanded in all directions. As the upper part of the tumour was attached to the dura mater this point was untouched until the body of the growth had been cleared. By enlarging the opening in the bone, by incising the dura mater when necessary, and by carefully working with a flat periosteal elevator, the tumour was lifted out of the brain and then only remained attached to the dura mater. It was not found necessary to damage the brain in any way. By working with the elevator on the denser new growth

FIG. 1.



Upper surface of tumour (natural size).

FIG. 2.



Under surface of tumour (natural size).

cussion with the finger tip. In the evening the whole head was again washed with soft soap and then with turpentine, after which a dressing of lint soaked in a 1 in 1000 solution of corrosive sublimate was applied over the whole scalp and was left on until the time of operating. The operation was performed on July 1st, 1894, at 11 A.M. Immediately before the administration of chloroform a quarter of a grain of morphia was injected hypodermically. A horseshoe incision was made from a point two inches behind and above the right ear to a point two inches behind and above the external angular process of the right orbit, the convexity of the incision reaching to the sagittal suture. The scalp and periosteum were raised in one sheet, the vessels being caught in clip forceps. A one-inch trephine was applied at the point overlying the junction of the upper and middle thirds of the fissure of Rolando, and a crown of bone was removed. The same trephine was again applied a little above and in front of this hole and another crown was removed. The two trephine circles overlapped, forming one opening. On removing the crowns of bone the pulsations of the brain were observed. The dura mater was incised along the posterior and lower margins of the opening about a quarter of an inch from the edge of bone. On raising the dura mater the cranial contents bulged up and the lower and back parts of the

the elastic tumour came out of its bed and through a comparatively small aperture in the surface of the brain. The cavity in which it had lain slowly closed as the tumour was removed. There was not much bleeding from the cavity, and what there was very soon ceased. One cortical vein was ligatured. The tumour was then taken away along with the dura mater, and in separating the latter a vein was cut across close to its point of entry into the longitudinal sinus. This vein was caught in clip forceps and ligatured with catgut. The shallow cavity now left was filled with corrosive sublimate gauze, the tail of which was brought out at the posterior part of the scalp wound. The scalp was sutured with silk and a dressing of corrosive sublimate gauze and wood-wool was applied. The operation lasted about an hour. The patient was returned to bed considerably collapsed, the pulse feeble, extremities cold, and general sweating. At 3 P.M. he was still unconscious. Respiration was 14 per minute; the pulse 100 per minute. The pupils were very small; conjunctival reflex returned. The extremities were warm. The patient moved his head. At 6 P.M. the patient regained consciousness and felt comfortable. He vomited once or twice.

Except from the diploe there was very little bleeding. From the diploe more than a pint of blood was lost, and this

was much the most serious contingency. During the operation the brain was not handled, all the manipulations being on the tumour, the flat surface of the periosteal elevator alone coming in contact with the brain. The instruments and sponges were kept in a 1 in 40 carbolic lotion. There was very little sponging, and all things were kept as dry as possible. There was never any free lotion in the wound. The dura mater having been removed on account of its attachment to the tumour, the pieces of bone were not replaced; a permanent opening is thus left in the skull, measuring two inches and three-quarters by two inches and a quarter.

Description of the tumour.—The appearance presented by the tumour is well shown in the two plates, which represent the actual size of the growth. It measured 3 in. in length, 2 in. in breadth, and 1½ in. in depth. On microscopical examination the tumour proved to be a sarcoma.

After-progress.—The progress of the patient after operation was in every way most satisfactory. The temperature only once reached 100° forty-eight hours after the operation; on four other occasions only did it rise above 99°. After the first forty-eight hours the pulse ranged between 72 and 88. As an immediate result of the operation the vomiting and the noises in the head ceased, the pain in the head was relieved, and the irritability of temper disappeared. With the exception of the night after the operation, when sleep was broken, the patient slept about eight hours each night. For the first twelve days the wound was dressed daily on account of the large amount of cerebro-spinal fluid which saturated the dressings. On the third day the gauze plug was removed. This was not accompanied by any hæmorrhage, but a small fusiform piece of brain substance, one inch in length and a quarter of an inch in diameter, came away with it. On the fourth day the entire scalp and face were very much swollen and cedematous, especially on the left side, on which the patient had been lying. This swelling, which continued during the fifth day and gradually subsided on the sixth without having produced any ill-effects, appeared to be entirely due to extravasation of cerebro-spinal fluid into the subcutaneous tissues. The wound united by first intention with the exception of the small opening, through which the cerebro-spinal fluid continued to leak for about three weeks. There was profuse diuresis during the whole of the third week. For five days six pints of urine were passed in the twenty-four hours. On the sixth and seventh days of the third week nine and a half pints of urine were passed. The urine was clear and did not contain either sugar or albumen. The muscles of the left arm and leg rapidly regained power in the following order. On July 3rd there was already some increase in the power of the extensors and flexors of the forearm. The patient could extend and invert the left foot and flex the great toe to a very slight extent. On waking on the morning of the 7th the patient stretched himself, and the nurse noticed that he stretched out the left arm as well as the right, and also extended the fingers of the left hand, movements which he was quite unable to execute voluntarily while fully awake. On the 9th the power of flexion and inversion of the left foot and of flexion of the great toe had increased. The associated movements of the left arm occurred each morning when the patient stretched on waking. On the 12th he got out of bed and walked across the room. In doing so he was able to carry the left leg forward more strongly than before the operation. On the 17th the patient could abduct and raise the left arm a little. In the erect position he could fully flex the elbow, and the rigidity of the biceps had diminished. There was a distinct increase in power in both the flexors and extensors of the hip-joint and of the knee-joint. When lying on his back he could flex and invert his foot and flex the toes to a slight extent. In walking the left foot was no longer dragged, but was carried forward with a semicircular sweep, and when planted showed a tendency to assume a position of slight equino-varus, with the toes spread out. The reflexes had not changed in character since the operation. On the 20th the fingers were voluntarily flexed for the first time. On the 28th there was considerable power of flexion in the left thumb and index finger. He could walk about the house without any support. On the 30th the thumb and all the fingers of the left hand could be feebly extended. On Aug. 1st the left wrist could be slightly extended. On the 10th the wrist and fingers could be fully flexed and extended and a stick could be grasped in the left hand. The optic neuritis had very much diminished since the removal of the tumour. On the 13th the hand could be pronated and supinated. On Sept. 3rd

all the muscles of the left upper limb could be made to contract voluntarily and all movements executed, though much less strongly than on the right. He could walk two miles with the help of a stick. On Oct. 10th the patient felt well. There was no headache, pain, or noise in the head. He slept and ate well, and his general health was excellent. He could walk as many as five miles with the help of a stick. He could use the left arm for many purposes. He could touch the back of his head, take off his cap, and use a fork with the left hand. There was, however, some rigidity of the muscles of the arm. The muscular sense was still deficient, but not to such an extent as it was three months before. He still walked with a limp, but could advance the left foot fairly well, and there was less circumduction than there had been. The reflexes remained just as they were before the operation. Only slight traces of the optic neuritis could now be seen. There was slight bulging of the scalp over the site of the tumour, but now that the hair had grown again this showed but little.

Remarks.—The improvement which had taken place in the condition of the patient within three months of the removal of the tumour was very considerable. From being unable to lift the arm or walk further than across the room, the patient could use the arm for many purposes and walk five miles without fatigue. The headache, vomiting, and noises in the head were removed at once by the operation. The optic neuritis steadily subsided after it. The after-progress was as straightforward as it usually is after quite a minor operation. The treatment was carried out in an ordinary bedroom, and, except at the operation itself, without the aid of skilled nursing. The improvement has been fully maintained, and the patient is now (March 5th, 1895) in excellent general health. He says that he can walk "any distance." The grasp of the hand is as strong on the left as on the right side.

Newcastle-on-Tyne.

CASE OF A GIRL SAID TO HAVE BEEN MIRACULOUSLY CURED OF PARALYSIS AT ST. WINEFRIDE'S WELL, NORTH WALES.

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THE publicity given in the daily and weekly press to the "miraculous cures" that have been effected at Holywell, the pictorial representations of St. Winefride's Well in several of the illustrated papers, and the fact that for several weeks past I have been the recipient of letters of inquiry from various parts of England, most of them hitherto unanswered, must be my excuse for placing in THE LANCET the medical facts of a case already encircled by the halo of romance and round which is being thrown an air of mystery. For some time past Holywell has been the resort of an increasing number of invalids, each hoping by immersion to be suddenly relieved of his or her infirmity. If the stories of the "miraculous cures" thereof accomplished can be accredited the Well of St. Winefride bids fair to rival Lourdes, whose grotto is now world-known, and of which and the hordes of human wrecks that besiege it Zola has given us a marvellously realistic delineation. Holywell claims its cures not less truly though less pretentiously than the little French town that nestles in the Pyrenees; and, as one of the recent cures that have taken place at Holywell concerns a patient who was formerly under my care in the Newcastle Infirmary, I shall briefly state the history of her case before her visit to the Well of St. Winefride and since her return from it, simply introducing here and there relevant facts that have been supplied to me by the patient or the mother, who accompanied her to North Wales.

The patient, a young woman aged seventeen years, was admitted to the Royal Infirmary, Newcastle-upon-Tyne, on April 28th, 1894, complaining of curvature of the spine, pain in the legs and of difficulty in walking, pains in the head, and occasional dimness of sight. Her father died fifteen years ago from typhoid fever; her mother is still living and healthy. She has five brothers and one sister, all of whom are rather delicate. At the age of eleven patient left school, but owing to ill-health did nothing until

she was fourteen years of age, when she entered domestic service, leaving it a year afterwards on account of sore-throat. She began to menstruate at the age of sixteen and has been regular. The patient stated that her spine had been bent as long as she could remember, and that she has always walked with her head fixed and thrown a little forward. During June, 1893, she had left-sided pleurisy without effusion, and was in bed for a month with it. On recovering she noticed that she walked more bent than formerly, and that she had pain in the head and neck; but it was not until eight months after this that the pain affected her legs and knees. The pain is described as having been constant and more of an aching character, aggravated by walking or if the limbs were touched. Her condition on admission was as follows. **Alimentary system:** the lips were normal and the teeth fairly good; the tongue was large, pale, and coated with white fur. She had some dysphagia owing to enlarged tonsils. The palate was highly arched, which caused the patient to speak rather indistinctly. Her appetite was poor and the bowels were constipated. **Circulatory system:** the pulse was 84 and feeble; the heart sounds were normal; the lungs were healthy; the pupils were fully dilated and equal; they reacted to light and accommodation. **Nervous system:** there was slight angular curvature of the spine, most pronounced in the dorsal region. There was marked hyperæsthesia on touching the skin over the spine, and on percussing it pain was felt particularly in the lower dorsal region. On pressing the head down towards the spine pain was felt in the cervical region. On pricking the sole of the left foot with a pin no pain was experienced at all, but there was hyperæsthesia of the right sole. Sensation was normal in the front of both legs. Ankle clonus was present. The knee-jerk was normal on engaging the patient's attention. On asking her to walk it was noticed that the head was thrown forward and that she somewhat dragged the left foot. On May 5th, 1894, the borders of the optic disc were even and the retina was healthy. There were still analgesia of the left foot and excessive knee-jerk in both legs. As the case was regarded as neurotic or one of a functional character in a girl the subject of a slightly curved spine of old standing and unaccompanied by any symptoms of increasing cord pressure, it was not considered necessary to retain her as an in-patient in the infirmary. Here it may be stated that prior to coming under my care the patient had been treated by one of my surgical colleagues, who regarded the case as one of hysterical spine.

I saw nothing more of the girl until, receiving several letters in regard to her "miraculous cure" at Holywell, I wrote to the mother asking that her daughter might be brought to me at the infirmary for examination. This was done on Feb. 7th of this year, and the following statement was supplied to me by the mother. In November, 1894, her daughter was lying in bed a perfect cripple. She was quite unable to stand. She had not been out of bed for seven months, hence the fact of her not appearing at my out-patient department at the infirmary. Mr. Galbraith of Gosforth had attended her from time to time. Owing to information of a friend in the county of Durham "having been miraculously cured of lameness at Holywell," it was arranged that the patient in question should visit the sacred well. Accordingly, in the early morning of Nov. 27th she was dressed, lifted from bed, and taken by a cab to the railway station, placed in the recumbent position in a third-class railway carriage, and conveyed to North Wales, reaching Holywell station in the evening of the same day. Thence she was carried by the porters to an omnibus and thus driven to the hospice, a distance of one mile and a half. The hospice is stated to be a receiving home for Roman Catholic patients visiting Holywell, and is superintended by two nuns. It is not, however, confined exclusively to Roman Catholics. Protestants are equally admitted, provided they give some indications of their faith in the virtues of the water. The patient was one of several inmates, male and female, and at ten o'clock on the morning following her arrival at the hospice she was wheeled to St. Winefride's Well, where she was stripped. She put on a bathing dress and was carried by her mother and another woman who was staying at the hospice into the well. Shortly after her immersion the patient is stated to have fainted, but in spite of this she was retained in the water. There was no religious service going on at the wellside, nor had there been any special service that morning at the hospice before leaving—nothing but the ordinary service, which, however, the patient had not attended. The patient, I may remark, is a Roman

Catholic. It appears that after the immersion no immediate effect was noticed. She was therefore wheeled back to the hospice and placed in a chair in the general ward. After sitting in a bent position for an hour the mother states that her daughter sat upright, and maintained this position more or less all that day, but made no attempt to walk. Next morning at the same hour the patient was wheeled to St. Winefride's Well and again immersed. After a few moments she is said to have moved both legs, and to have raised herself up the steps out of the well. She subsequently walked back to the hospice—a distance of about half a mile—supported between her mother and another woman. On the day succeeding this the patient walked to the well in company with, and supported by, the same two friends, and was again immersed. When in the water she is credited with having said, "Mother, what a queer sensation; there is a burning heat in my back." To which the mother responded, "Oh, Hannah, pray, you are going to be cured." The patient immediately afterwards walked out of the well to the dressing-room, where "steam was noticed rising from her body," and a feeling of tingling and heat complained of in her spine, and the mother on examining the back uttered, "Oh, Hannah, your bones have gone in." She walked back to the hospice, where she was examined by a medical man, who pronounced her a marvellous cure. That evening she walked to the town and for the next three days strolled about. Exactly one week after their admission the patient and her mother left the hospice, the daughter sitting bolt upright in the omnibus. To the surprise of the porters at Holywell station she walked into the train. She reached home on the evening of Dec. 4th, walking at the end of her long journey from the tramway terminus to Corlodge, a distance of nearly a mile. Her condition on Feb. 7th, 1895, was as follows. There was still slight inclination of the head to the right, causing an apparent shortening of the right side of the neck. There was also slight lateral curvature of the spine in the dorsal region, the inclination being to the right, with distinct prominence of the two lower dorsal spines. No pain was complained of on percussing the spine. On bending it was noticed that the column moved *en masse*, with a tendency for the body to be deflected to the left. There was slight hyperæsthesia of the skin of the back, the prick of a pin and the application of the blunt point of a pencil being evidently followed by exaggerated impressions. The knee-jerks were excessive; there was slight ankle clonus. The patient walked remarkably well and was evidently proud of being able to do so. There was no halting or dragging of the limbs. When walking it was noticed that her head was thrown forwards and with a distinct inclination to the right side. She still wore a poroplastic jacket which was supplied to her in the early part of 1894, and on the recommendation of the medical practitioner who saw her at Holywell was going to wear it all the winter. Her heart and lungs were healthy. Menstruation was regular.

These, then, are briefly the medical facts of the case. A girl who was recognised by myself in April, 1894, as a neurotic, with slight spinal curvature but without evidence of increasing pressure on the cord, and by one of my colleagues at the infirmary as suffering from hysterical spine, subsequently developed paralysis of the lower extremities, which lasted for six months. There is no need to doubt the paralysis any more than there is to question her present ability to walk. The patient left home in November for Holywell strongly buoyed up with hope and with great expectations in regard to her recovery, having received the Holy Communion in bed on the day before starting. The charge at the hospice is 7s. a week for each inmate. This, with the railway and other incidental expenses, made it absolutely necessary, as the family belonged to the labouring classes, that the visit to North Wales should not be unduly prolonged. It is difficult to appraise at its proper value the effects of immersion of the whole body in an exposed well of cold water in the early morning of a November day upon one unaccustomed to such a proceeding, but at any rate they must be considerable. What want of will caused and what strength of will failed to accomplish in our patient strong physical and mental impressions overcame. It is not the first time that cold water suddenly applied to the external surface—over a large area and nearer home than Holywell—has roused up dormant nerve energies and been followed by results as satisfactory and permanent as the cure of the patient in question "miraculously" accomplished by dipping in the Well of St. Winefride.

Newcastle-upon-Tyne.

TROPHIC INTESTINAL AFFECTIONS IN THE INSANE.

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FROM time to time cases of diarrhoea arise in insane people which are not due to any specific cause. This "simple" diarrhoea usually occurs in one or other of what Kraft-Ebing¹ calls the "organic psychoses," and in general paralytics for the most part. It is of comparatively long duration, and is very often fatal. The necropsy reveals an enteritis or a colitis, which is often ulcerative, or both combined. The causes of these intestinal affections are not at all evident. None of the ordinary causes are present. The clinical and pathological accounts are in all strikingly similar, and it is most probable that all these cases have a similar origin. There are two varieties of this simple diarrhoea, although the more serious one is probably only an advanced stage of the milder variety, and not a distinct type. 1. A very watery alvine flux, very frequently repeated, without passage of blood or excess of mucus; usually without any pyrexia or marked general symptoms. This may be fatal, but is often recovered from. Obvious intestinal lesions are rarely observed. 2. A frequent diarrhoea, with vomiting, pain, often tenesmus, and with marked constitutional symptoms. The stools often contain blood, excess of mucus, and slime occasionally. This affection is usually fatal. The necropsy shows an inflammatory affection of the ileum or colon, and often marked ulceration of the mucous membrane. We have had under our care in the asylum at Prestwich, Manchester, a fair number of such cases. During the last three years thirty-two cases have thus arisen which have proved fatal. (See table below.) It will be seen from this table that the greater proportion occur in males and in those suffering from general paralysis of the insane. The remainder occur in either stuporous melancholia or in dementia of an incurable type. Most of the cases occurring are of the second variety.

Clinical history.—Twenty-two cases are in males and ten in females. The age varies from twenty-six to sixty-eight years, but most of the patients are over forty. The duration of the illness varies from three days to as many months. The onset may be sudden or gradual, the mode of onset varying with the acuteness of the attack. The symptoms vary somewhat with the situation and extent of the lesions. Diarrhoea is usually the earliest and most striking symptom. Vomiting occurs at times, but not invariably so, being often absent. Abdominal pain is a very variable quantity, some appearing to suffer pain, but this is not common. The demented condition of most of the patients of course renders them less susceptible to, and less apt to complain of, pain. Distension of the abdomen occurs but rarely. The stools are generally loose, small in quantity, but frequently passed. Tenesmus is at times present, especially when the lower bowel is affected. Blood is often found in the motions and often unmixed. Slime, shreds of tissue, or even sloughs are at rare intervals seen. The stools have a very offensive smell usually. There is excess of mucus at times. Perforation with resulting peritonitis is rather rare. Pyrexia is moderate, irregularly manifested, and often absent. A fatal result is the rule, but a few do undoubtedly recover, although presenting serious symptoms.

Pathological Appearances found.

	Cases.
Patchy congestion of ileum and colon	3
" " " " " " + enlarged solitary follicles ...	1
" " " " " " + submucous hæmorrhages ...	3
Subacute enteritis	2
Acute enteritis and colitis	2
Follicular ulceration of the ileum	3
" " " " " " colon	4
Ulcerative enteritis (ileum)	3
" " " " " " colitis	7
" " " " " " enteritis and colitis	4
	32

The amount and extent of the congestion of the mucous membrane are very variable. It usually affects both the small and the large intestine, but is more general in the ileum. The patches are small and discrete as a rule, but they may coalesce, forming largish areas of congestion. The colour varies from the bright red of inflammation to the dull red of

passive congestion. If the congestion become extreme there is a tendency for submucous hæmorrhages to occur. One form of ulcer is probably produced by the abrasion of the already damaged mucous membrane superficial to one of these hæmorrhages. The solitary follicles are very often enlarged. This condition is usually found in the colon, although by no means uncommon in the small intestine. Peyer's patches are rarely affected. The follicles are swollen and softened, and there is a tendency to their disintegration forming small rounded ulcers and leaving patches of healthy mucous membrane. This follicular ulceration of the intestine is fairly common, seven cases of the thirty-two showing this condition markedly. In two cases perforation had occurred (Nos. 3 and 12); in both the ulceration was confined to the ileum. The ulcers had extended in depth, forming punched-out conical cavities through the peritoneum forming the floor, of which an opening had formed with resulting peritonitis. In the colon the follicular ulcers, while remaining of small size, showed much variety in their depth, and often extended down to the peritoneal coat of the bowel. This was well seen in Case 8. Follicular ulceration is, we think, essentially different to the next form—ulcerative enteritis and colitis. This ulcerative process is more common than the follicular one, and is *sui generis* apparently. The ileum and lower part of the jejunum in the small, and the ascending and transverse colon in the large, intestine are the parts affected usually, but no part is exempt. The mucous membrane of those parts is congested, swollen, and softened. Here and there, in a mild case, are irregular ulcerations, often with yellow adherent sloughs in parts. The ulcers are of various shapes and sizes, and in a severe case tend to run together so as to form an irregular network of ulceration, leaving islets of sodden and congested mucous membrane in their meshes. The bases of the ulcers are but little thickened. The floor may be formed by submucous tissue, by muscular fibre, or by the sub-peritoneal tissue. Perforation may occur, but in our experience is not common. The solitary follicles may be swollen, are rarely ulcerated, and not seldom are normal in appearance where they can be distinguished. Peyer's glands are commonly unaffected or but slightly swollen. The mesenteric glands are at times enlarged and softened. The acute inflammatory affection of the intestine present the usual appearances of acute enteritis or colitis. The inflammation is often intense and quite localised, but without any local causation within or without the bowel. An intense phlegmonous enteritis may even thus arise without any evident cause. In the case described in association with a dorsal myelitis, the inflammation of the upper part of the rectum was most intense, the inner coats having sloughed out. In a few cases evidences of diseased bloodvessels were found (atheroma), but whether this had any part in the degenerative process is doubtful. Microscopically, the usual signs of inflammation were present, but nothing specific was made out. The organisms present were those usually found in the intestine, but the bacillus coli communis was especially common. An inoculation of some of the contents of the gut on nutrient media often yielded an almost pure culture of this organism. In all these cases there was a total absence of any specific disease. In fact, we have excluded all cases in the records in which there was the least suspicion of tubercle, typhoid fever, dysentery, Bright's disease, or syphilis.

These are the facts. How can they be explained? Writers on medicine describe, but as a rarity, a simple ulcerative enteritis or colitis. Fagge² says: "Apart from typhoid fever and tubercle the small intestines are very little liable to serious primary diseases, and the jejunum particularly is remarkably exempt." Hale White³ describes a most interesting series of twenty-nine cases of "simple ulcerative colitis and other rare intestinal ulcers." He, however, throws no light on their origin, which he says is extremely obscure. In asylum practice these simple ulcerations and inflammations are by no means infrequent, and this is shown by the fact that in our practice during the last three years at the Prestwich Asylum, Manchester, thirty-two such simple uncomplicated cases have been examined after death. We venture, therefore, to put forward the proposition that these intestinal lesions form a part of the general degenerative process, and that they owe their origin to a nervous perversion. The only term that expresses this perverted nervous action is the rather vague one of a trophic or a dystrophic affection. The

¹ Fagge's Medicine, third edition.

² Guy's Hospital Reports, 1883.

³ Lehrbuch der Psychiatrie, fourth edition, page 325.

reasons for such an opinion are: (1) the rarity of such lesions in the sane; (2) the comparative frequency in the degenerate insane; (3) negative evidence as to causation; (4) their association with other trophic lesions; and (5) the association of such lesions with disease of the central nervous system.

The mental and nervous affections associated with these lesions are, as has been shown, of a markedly depressive or degenerative nature. It is not at all unusual in the degenerate insane, and more especially in general paralysis of the insane, for trophic lesions to occur—e.g., atrophies of skin, muscles, and bones; acute sloughings of tissues, as seen in acute bedsores and herpetic and bullous eruptions in the so-called "insane abscesses"; a peculiar low form of pneumonia, which is probably of nervous origin; and acute cystitis of so-called trophic origin. Some of these lesions occur in the same patients in whom the intestinal affections arise later. In fact, one or other of these tropho-neuroses is always present. In one man trophic ulcers of the legs were present (Case 4). Dr. Hale White⁴ describes a case of "intense colitis" associated with disease of the central nervous system (double descending lateral sclerosis). Dr. Acland⁵ "raises the question whether in diseases of the spinal cord we may not get an ulceration of the intestine comparable to other trophic lesions, such as acute bedsores. He records two cases of disease of the spinal cord, in both of which small ulcers are found in various parts of the bowel." Curiously enough, a short time ago a similar case arose in this asylum. A localised phlegmonous inflammation of the large intestine occurred in association with a transverse myelitis in the dorsal region. (See notes.) In this case there was no local cause for the affection of the gut, and the only explanation valid was that the lesion was a trophic one.

We may thus explain the causation of the two varieties of "diarrhoea" first described: 1. The watery alvine flux frequently seen in general paralytics is due apparently to centric irritation of the vagus nerve. Buzzard⁶ regards a similar condition met with in certain cases of tabes as dependent upon irritation of the vagal nucleus in the medulla. "In these cases the flux is probably the result of paralysis of the splanchnics—the vaso-motor nerves of the intestines—and to the resulting transudation of fluid from the blood-vessels into the bowel, with the accompanying increased peristalsis."⁷ This vaso-motor paralysis gives rise probably to the varying patchy congestions and hæmorrhages. 2. The ulcers found are very often of the round, punched out appearance which is usually held to be of dystrophic origin, and seen *par excellence* in the gastric ulcer.⁸ The other variety of ulceration, as best seen in the ulcerative colitis, is probably due to the same influence—i.e., to a further extension of irritation of the nuclei in the medulla, causing a trophic inflammation and ulceration of the intestine. The ulceration once started is probably extended by the influence of the intestinal microbes on tissues of lowered vitality and powers of resistance. The bacillus coli communis is most potent for evil in this respect. Subjoined is a summary of the fatal cases with fuller reports of nine of the most typical cases. In conclusion, the tropho-neurotic origin of these intestinal affections seems to us the only possible explanation of their occurrence in the present state of our knowledge. Little notice seems to have been taken up to now of these neuropathic lesions, and there are but few and scanty references to them in the journals and text-books. We think, therefore, that some description of these very interesting cases should be published, so that they may be more generally recognised and investigated. We wish to thank Mr. H. R. Ley, the medical superintendent, for his kind permission to use the notes of the cases.

Phlegmonous inflammation of the large intestine, associated with myelitis of the dorsal cord.—A man aged thirty-four years was admitted in 1886 suffering from acute mania. He never improved, but became after a while feeble-minded with a few fixed delusions. His bodily health remained good until March, 1892. He was then found to be suffering from a gradually increasing weakness of the legs. This weakness rapidly increased until he became almost completely paraplegic (both of sensation and of motion). The knee-jerks were absent. There were retention of urine and incontinence of feces. He complained of girdle pains at the level of the

ninth dorsal vertebra. Early in April, 1892, he began to suffer from vomiting, abdominal pain, and diarrhoea. There was no rise of temperature. The stools contained blood, but the blood was not mixed with the feces. On April 20th he passed a cast of the intestine two inches long, which was evidently the mucous membrane and part of the muscular wall of the gut. Examination per rectum was negative. The diarrhoea persisted, but at intervals only. Later he developed cystitis with irregular rises of temperature. He had a small bed sore. He died from exhaustion on May 18th, 1892. The necropsy showed a transverse myelitis at the level of the eighth and ninth vertebrae, with a spinal meningitis also localised. There were thickening and roughening of the vertebrae at this level, but no definite tuberculous lesion existed. There were evidences of old tubercle at the left apex (of lung). Cystitis and pyelitis with commencing abscesses in the kidneys were present. There was an intense proctitis, but of limited extent, affecting the middle part of the rectum. The inner coats had sloughed away, leaving a rough, shreddy surface. No evidences of any local origin of this rectal affection were found. The rest of the bowel appeared to be fairly healthy. The intestines were moderately distended.

Trophic Intestinal Affections in the Insane.

No.	Sex.	Age.	Mental disorder.	Intestinal lesion.
1	M.	68	Senile mania.	Patches of congestion throughout entire tract.
2	M.	44	General paralysis.	Patchy congestion; solitary follicles of colon enlarged.
*3	M.	50	Do.	Follicular ulceration of ileum; perforation.
4	M.	37	Chronic mania.	Patchy congestion of colon with superficial ulceration.
*5	M.	34	General paralysis.	Patchy congestion of ileum and colon with submucous hæmorrhages.
*6	M.	57	Do.	Ulcerative colitis; follicles enlarged.
*7	M.	55	Do.	Enteritis.
*8	M.	47	Do.	Follicular ulceration of the colon.
9	M.	34	Do.	Patchy congestion of ileum; follicles enlarged.
10	M.	26	Epileptic dementia.	Follicular ulceration of colon.
11	M.	43	General paralysis.	Ulcerative colitis; submucous hæmorrhages.
12	M.	68	Chronic melancholia.	Punched-out round ulcer in ileum, which had perforated; ulcerative colitis.
13	M.	43	General paralysis.	Patchy congestion of ileum and colon.
14	M.	43	Do.	Patchy congestion of ileum; ulcerative colitis.
15	M.	51	Chronic mania and dementia.	Patchy congestion of ileum; ulcerative colitis (superficial and deep rounded ulcers).
16	M.	48	General paralysis.	Patchy congestion and superficial ulceration of ileum.
17	M.	63	Secondary dementia.	Ulcerative enteritis and colitis; follicles enlarged.
18	M.	33	General paralysis.	Ulcerative enteritis; follicles enlarged.
19	M.	40	Do.	Ulcerative enteritis; congestion of colon.
20	M.	50	Do.	Patchy congestion of colon; enlarged follicles.
21	M.	49	Do.	Follicular ulceration of colon; congestion of ileum.
*22	M.	54	Melancholia attonita.	Ulcerative enteritis and colitis.
23	F.	34	Do.	Subacute enteritis; submucous hæmorrhage.
24	F.	29	Do.	Follicular enteritis.
*25	F.	28	General paralysis.	Ulcerative colitis.
*26	F.	35	Do.	Patchy congestion of ileum; ulcerative colitis.
27	F.	28	Do.	Patchy congestion of ileum and colon.
28	F.	50	Acute melancholia with stupor.	Enteritis and colitis; enlarged follicles.
29	F.	46	Chronic melancholia.	Inflammation of ileum and ascending colon.
30	F.	38	Epileptic dementia.	Patchy congestion; superficial ulceration of ileum.
31	F.	40	Secondary dementia.	Ulcerative enteritis and colitis.
32	F.	50	Chronic melancholia.	Ulcerative colitis.

* The cases marked (*) are described more fully.

CASE 3. *Follicular ulceration of ileum in a general paralytic.*—A man aged fifty years was admitted on April 11th,

⁴ Ibid.

⁵ Transactions of the Pathological Society of London, 1885.

⁶ Diseases of the Nervous System.

⁷ Bevan Lewis: Text-book of Mental Diseases.

⁸ Cf. Dr. W. M. Ord, St. Thomas's Hospital Reports, 1892.

1892. He was in the second stage of general paralysis. He had already become demented, but still retained his old exalted delusions. His muscular power was feeble and his muscles were shrunken. His skin was greasy and shiny. He was wet in his habits. On May 5th he was found to have slight right hemiplegia, which passed off in a few days. On July 8th he complained of abdominal pain and tenderness about the umbilical region. He vomited several times and was evidently very ill. There was slight looseness of the bowels. Previously there had been constipation for a few days. The temperature was normal. The stools were dark coloured, but did not contain blood. On July 9th the vomiting and abdominal pain continued. There was dullness on percussion in the left iliac fossa. There was marked tenderness of the abdomen which was slightly tympanitic. The stools were liquid, but did not contain blood or slime. The temperature was subnormal. There was evidently peritonitis. On the 10th he died, collapsed, early in the morning. The necropsy showed marked congestion of the mucous membrane of the last four feet of the ileum. The solitary follicles were enlarged and in a few ulceration had begun. Six rounded punched-out ulcers were found in the above area and in two cases perforation had occurred with resulting peritonitis. There were no other lesions found anywhere, and no tubercle or other specific disease.

CASE 5. *Patchy congestion of ileum and colon with submucous hemorrhages in a general paralytic.*—A man aged thirty-four years was admitted on March 19th, 1892, suffering from general paralysis of the insane in its second stage. He presented the usual physical signs of that disease. Mentally, he was demented, irritable, and childish. He rapidly got worse and was bedridden in the course of the next six months. At times he suffered from looseness of the bowels, which alternated with constipation. Towards the end the diarrhoea became more marked. The motions were yellow, liquid, but never contained blood. Signs of hypostatic pneumonia developed during the last week. On Sept. 7th he died from exhaustion. The necropsy showed marked patchy congestion of the ileum and colon, with submucous hemorrhages. The solitary follicles were not enlarged. There was no ulceration of the intestine or sign of tubercle. The lungs showed hypostatic congestion of the bases.

CASE 6. *Ulcerative colitis with general paralysis of the insane.*—A man aged fifty-seven years was admitted on Oct. 25th, 1892, suffering from general paralysis of the insane with exaltation. The case was a typical one in onset and course. The only symptom of intestinal trouble was the occurrence of rather severe diarrhoea, from which he suffered off and on during the last month of his life. The stools were watery, pale yellow, and did not contain blood or mucus. There was no vomiting. No pyrexia was present. Treatment was of no avail. He died exhausted about three months after admission. The necropsy showed the usual changes in the nervous system found in general paralysis. There was slight hypostatic pneumonia of both lungs and marked atheroma of the arteries. There was commencing granular change in the kidneys. The mucous membrane of the descending colon and sigmoid flexure showed several very congested and inflamed patches. Towards the centres of these patches, which were of limited extent, the surface of the mucous membrane was abraded, leaving small shallow ulcers. The solitary follicles were enlarged, but none showed any ulceration. There was some thickening of the wall of the gut opposite to these patches. The bowel was not distended. The small intestine appeared to be normal.

CASE 7. *Catarrhal enteritis in a general paralytic.*—A man aged fifty-five years was admitted on Oct. 31st, 1892, suffering from general paralysis of the insane with melancholia. He had marked delusions of obstruction of the bowels, and was at one time very suicidal. About a week before his death he began to suffer from diarrhoea. He did not complain of pain, but there was some tenderness over the lower part of the abdomen. No vomiting occurred. There was moderate pyrexia, the temperature rising and falling irregularly, but not rising higher than 102° F. He died rather suddenly in a sort of faint. The stools were loose, yellow, and contained much mucus, but not blood. At the necropsy patchy congestion of the lower part of the ileum and cæcum was found. The congested surfaces were rough and granular, but showed no definite ulceration. The solitary follicles were not affected.

CASE 8. *Follicular ulceration of the colon in a general paralytic.*—A man aged forty-seven years was admitted on Dec. 8th, 1892, suffering from general paralysis of the insane with delusions of exaltation. He presented the usual

symptoms of that disease, which ran its usual course, until the onset of intestinal troubles. He began to have diarrhoea on March 7th, 1893, with vomiting and pyrexia. The temperature rose to 103.6° F. There was some pain in the abdomen, which was at first "board-like," without tenderness. The stools were yellow, liquid, and very offensive. During the next week the pyrexia continued, the temperature varying from 99° in the morning to 102° in the evening. The diarrhoea continued, the bowels acting very frequently. There was no marked tenesmus. The stools were yellow, almost like "pea-soup," and at times contained shreds of tissue and blood. There was also occasional vomiting. The abdomen towards the last became distended and tympanitic. There was some tenderness over the left side of the abdomen. Treatment was of no avail. He died from exhaustion on March 12th, 1893. The necropsy showed extensive changes in the large intestine, the whole of the colon and part of its sigmoid flexure being affected. There was much congestion of the mucous membrane in patches. The solitary follicles were greatly swollen, and many of them presented punched-out ulcers. In some the ulcerative process had only just begun, but in others the ulcers had nearly extended to the peritoneal surface of the bowel. None had actually perforated. The mucous membrane between these ulcers was darkly congested and superficially abraded. The wall of the bowel was distinctly thickened. The small intestine appeared to be normal. The brain showed the marked changes found in general paralysis. There were marked atheroma of the large vessels and considerable emphysema of the lungs.

CASE 22. *Ulcerative enteritis and colitis in a case of melancholia with stupor.*—A man aged fifty-four years was admitted on Dec. 11th, 1893, and died on Sept. 11th, 1894. He was tall, stout, but unhealthy-looking. He suffered from melancholia attonita. He used to sit in one position for hours, seeming quite crushed down by an overpowering weight of woe. He remained in the same dull, stuporous condition during the remainder of his life. He often had to be fed with the stomach tube. On Sept. 4th, 1894, there was slight pyrexia. Diarrhoea set in, with some abdominal pain. There was no vomiting. The stools were loose, yellow, and did not contain blood, slime, or mucus. On Sept. 5th the temperature in the morning was 100° F. and in the evening 100.6°. He passed frequent loose motions in small quantities. The abdomen was rather retracted. He did not complain, but this was probably due to his stuporous state. On Sept. 6th he was much the same. The tongue was dry, brown, and cracked. There was moderate pyrexia. The diarrhoea continued. On Sept. 8th streaks of blood and shreds of tissue were noticed in the stools. The looseness of the bowels continued. He was weaker. There were no fresh physical signs. The patient's condition steadily grew worse. The abdominal symptoms were persistent. The diarrhoea was as before. Death occurred on Sept. 11th from exhaustion. The necropsy showed marked ulcerations of the lower part of the ileum, and almost the whole length of the colon. The mucous membranes of the ileum and the colon were darkly congested, swollen, and superficially ulcerated. The solitary follicles were somewhat enlarged, but not ulcerated. Peyer's patches were unaffected. The ulceration of the ascending and transverse colon was most extensive, leaving here and there isolated patches of swollen but otherwise normal mucous membrane. The edges of the ulcers were sinuous, cleanly cut, and in the floor muscular fibres were exposed; none had, however, perforated. The other organs were healthy. The liquid faeces in the intestine were yellow, blood-stained, and most offensive. A growth was obtained from the intestine on agar-agar and on potato, which consisted of an almost pure culture of bacillus coli communis.

CASE 25. *Ulcerative colitis in a general paralytic.*—A woman aged twenty-eight years was admitted on July 7th, 1893, suffering from general paralysis with melancholic symptoms. She fancied that she had committed some dreadful crime and was eternally damned. There were typical physical signs of general paralysis. Her bodily health was fair. On Aug. 16th, 1893, vomiting and diarrhoea occurred for the first time. There was pain in the abdomen without tenderness or distension. The stools were loose, offensive, and contained a little blood. These symptoms persisted until the death of the patient, which occurred from exhaustion on Aug. 24th, 1893. There was slight pyrexia on the last two days. At the necropsy all the organs were found to be healthy except the colon. The brain presented the usual changes due to general paralysis. There was marked congestion of the cæcum and the ascending colon, with several

superficial ulcers of irregular shape, but rounded for the most part. The solitary follicles were not markedly enlarged.

CASE 26. *Ulcerative colitis with general paralysis of the insane.*—A woman aged thirty-five years was admitted on June 13th, 1893. She suffered from general paralysis with melancholia. She also had delusions of great sins committed and of eternal perdition. On Oct. 22nd, 1893 she began to suffer from diarrhoea, which persisted for two months. There was no vomiting, and pain was rarely complained of. There was no abdominal distension. The temperature at times rose to 100° F. The stools were loose, frequent, and contained at times blood, but never slime or shreds of tissue. Death occurred from exhaustion on Dec. 20th, 1893. The necropsy showed patches of congestion in the lower part of the ileum, and a rather chronic colitis. The mucous membrane of the colon was softened, thickened, and superficially ulcerated. The bases of the ulcers were thickened, and the floor was ragged and uneven, and stained a dark yellow by adherent faeces.

THE TRANSFER OF FEVER CONVALESCENTS, AND ITS EFFECT UPON THE OCCUR- RENCE OF ALBUMINURIA.

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DURING the year 1894, 1219 scarlet fever convalescents were transferred by road ambulance from the London hospitals of the Metropolitan Asylums Board to the Gore Farm Fever Hospital at Darenth. The patients were transferred at various stages of the disease, from the seventeenth day after admission onwards, and in all weathers and seasons. The object of this paper is to show what effect the transfer had upon the occurrence of albuminuria amongst those transferred.

Albuminuria, systematically examined for, was observed in thirty-nine patients within the first twenty-four hours of their arrival at the Gore Farm Fever Hospital. A trace of albumen is here excluded from consideration, unless proved by subsequent observations to have had clinical significance. The albuminuria observed in the thirty-nine patients referred to was for the most part considerable in amount—e.g., one-sixth to one-half albumen—and in at least six cases was accompanied by more or less hæmaturia, the more representing porter-coloured, the less smoky urine. Inquiry as to the previous history of these patients elicited the fact that five of them were under treatment for albuminuria at the time of transfer. These five will not again be referred to. The remaining thirty-four cases were either known or presumed to be free from albuminuria at the time of transfer. In nine of them an intermittent trace had previously been observed, but in none of them the considerable degree of albuminuria found after transfer to Gore Farm Fever Hospital. It is probable, therefore, that the transfer determined the onset of albuminuria in 34 out of 1219 patients transferred (2.78 per cent.), though it is possible that in some of these the albuminuria was not of fresh onset, but of greatly increased degree. The clinical course of the cases was remarkable, and may be illustrated by reference to the case of a male aged eight years. He was presumed to have no albuminuria at the time of his transfer. The urine passed during the night after his arrival at Gore Farm Fever Hospital was heavily laden with albumen, and gave blood reaction. During the next three days a trace only was observed. The urine then became entirely free, and remained free from albumen during the several weeks this patient continued under observation. While the case may be taken as typical, in some the trace of albumen persisted much longer than three days, and in four cases it persisted throughout the patients' stay in hospital. The rest were, at the time of their discharge, in perfect health and quite free from albuminuria. Thus the features which the 34 cases had in common were—(1) absence, or presumable absence, of albuminuria at the time of transfer; (2) a large amount of albuminuria immediately after transfer; (3) rapid subsequent disappearance or great diminution of the albuminuria. These striking facts would seem to establish

fully the connexion between the transfer and the albuminuria. Assuming this connexion to be established, some points of interest arise which may be referred to. 1. Out of the total number of patients dealt with during the year 128 were transferred, in three weeks or less from the dates of their admission, to the acute hospitals; they include 6 albuminuric cases, an incidence of 4.6 per cent. upon such cases. 735 patients were transferred after a stay in the acute hospitals of four weeks or more; they include 22 of the albuminuric cases, an incidence of 2.9 upon such patients. The chance occurrence of a case or two so appreciably alters the percentage that comparisons cannot fairly be based upon such small figures. Were any inference justifiable it would support the natural conclusion that early transfer involves a greater risk of precipitating albuminuria. 2. The incidence of the attacks did not appear to increase with the mileage traversed. Thus 653 patients were removed a distance of about fifteen miles, the incidence upon these patients being 3.51 per cent.; 394 patients were removed a distance of about eighteen miles, the incidence upon these being 3.04 per cent.; 172 patients were removed a distance of about twenty-two miles, the incidence upon these being 0.58 per cent. It must again be pointed out that when split up into several groups the number of cases becomes too small to form a safe basis for statistical inferences. It may be that a few miles more or less are immaterial. If any inference is to be based upon the figures it is that the occurrence of the attacks depends not upon the distance traversed but upon the attendant circumstances of the transfer. 3. With regard to the nature of these albuminuric attacks, I have no doubt that they would be rightly called nephritis. From the results it would appear that they are a form of nephritis which is of less serious consequence than that which attacks a scarlet fever convalescent who has never left the shelter of the sick-room. This fact is, after all, only an example of a clinical truth, namely, that organs which become inflamed from some definite external cause show more reparative power than those which develop inflammation independently of apparent external cause.

Gore Farm Hospital, Darenth, Kent.

NOTES ON PULSE-RATE AND BODY TEMPERATURE.¹

BY WILLIAM CECIL BOSANQUET, M.A.,
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THESE few notes on the above subjects are taken from a series of observations made on myself during a period of three years, extending from June, 1891, to June, 1894, and may possess some interest owing to the fairly long period of time over which they extend, even though the results do not present any striking novelty, but merely confirm in the main the accepted statements on these subjects. These observations on both pulse and temperature were taken—regularly as circumstances allowed—four times a day—viz., after breakfast, after lunch, before dinner, and at bedtime—corresponding in the main to about the hours of 9 A.M., 2, 7, and 10 P.M. The figures thus obtained weekly for each time of day were reduced to an average, and these averages to a general weekly average. Finally, an average for the whole year at each time was struck, and these last were taken together for the three years. This calculation gave the following results: temperature in the rectum at 9 A.M. 98.7° F.; at 2 P.M. 98.9°; at 7 P.M. and at 10 P.M. 98.8°—showing on the whole a scarcely perceptible difference for the different times of the day, such slight difference as was noted being in accordance with the accepted doctrine of a rise in temperature towards the middle of the day, and a fall towards night; but the evening temperature (7 P.M.) was not so high as that at two o'clock. A reason for this may be looked for in the fact that the latter time was after a meal; but the effect of so slender a meal as lunch must have been very small indeed, since on several occasions when observations were taken before and after dinner (a heavier meal, but without alcohol) the difference of temperature was only 0.2° (0.3° in the month). On the other hand, the difference of the rectal temperature before and after breakfast was 0.4° in the month, the difference rising to 1.1°.

¹ A paper read before the Physiological Society on Jan. 26th, 1895.

Taking now the three yearly averages for the different weeks separately, and so forming an annual temperature curve, a similarly slight degree of total variation is seen. It appears that the highest sustained average temperature occurred in the winter and early spring months, as may better perhaps be seen by taking four weeks together, when we obtain for these lunar months, commencing in the middle of June, the figures 98.75°, 98.75°, 98.80°, 98.72°, 98.80°, 98.89°, 98.92° (December), 98.90°, 98.97°, 98.90°, 98.95°, 98.82°, and 98.85°. This result is in agreement with what we might perhaps expect, since in cold weather loss of heat must be more rapid, and so a higher level of temperature should be maintained to compensate for increased radiation, just as small animals, which lose heat more quickly in proportion to their bulk than large ones, have generally higher temperatures. Before leaving this part of the subject it may be noted that the temperatures in the mouth and rectum respectively bore to one another a very variable ratio, the latter being almost invariably the higher, with an average difference of 0.8°. Thus on some occasions, as immediately after eating, the temperature in the mouth exceeded that in the bowel; while on others, as during vigorous exercise, the heat of the mouth sank considerably—e.g., to 96°—that of the rectum rising to 99.8° or 100°.

Coming to the pulse-rate, one fact which was well marked was the regular fall in frequency throughout the day, the average number of beats at each of the four times of observation mentioned being respectively 88 (72), 86 (71), 80 (67), and 77 (64), the numbers in parentheses being those taken in the sitting position, the others standing. A steep rise in pulse-rate appeared to occur at breakfast time, the average rate before this meal being, on the few occasions when it was observed, 80 (64), and after breakfast 89 (73). The heart would thus appear to tire slightly with its work during the day and to recover its energy by the night's rest, being thus at its best in the morning, as seems to be the case with the mental faculties and perhaps with all the functions of the body; one might even suggest a causal connexion. The ratio between the pulse-rates taken in the sitting and standing positions respectively varied within very wide limits, the difference being on some occasions not more than three or four beats and at others as many as thirty, without any apparent reason. The average difference for the whole time was fifteen beats. It occurred to me that atmospheric pressure might have some influence on the rate of beat, but a comparison of the pulse-rates for the different weeks with the readings of the barometer did not give any definite result, though during a sojourn in Norway, when staying at very different altitudes for successive weeks, there appeared to be a tendency for the pulse-rate to fall with the barometer, very low frequencies being found at high altitudes, and also on many occasions very low temperatures; but this correspondence may well have been a mere coincidence.

On hearing the above notes Professor Burdon Sanderson was good enough to call my attention to the observations of Professor Jürgensen² on body temperature, and also to lend me the paper in which these are published. These experiments were carried out under very different circumstances from my own. Several different subjects were taken; they were kept in bed for the most part during the course of the experiments made, and other observations were made at very frequent intervals throughout the day, often several times in a single hour. They thus afford a very exact record of the normal body temperature, free from all disturbing influences such as the ordinary business of life introduces, but it was obviously not feasible to keep a healthy man in bed for experimental purposes for any considerable length of time, so that each series of observations was confined to a space of a few days, and the whole were comprised within one year. Comparing Professor Jürgensen's results with my own, it appears that the average figures obtained by him for the four times of day at which my observations were taken are 37°, 37.3°, 37.5°, and 37.3° C. respectively, or approximately 98.6°, 99.1°, 99.5°, and 99.1° F., showing a rather higher level sustained throughout and a maximum towards evening, corresponding to the familiar fact in clinical observation where the conditions are similar. These observations were all taken per rectum.

In conclusion, I may perhaps mention that the times chosen for taking observations in my own case were not ideally the best, but were such as a more or less busy life

rendered possible. It is unnecessary to emphasise the fact that such observations as these made on only one individual can have but a limited value for establishing any general rule, while fallacies owing to the "personal equation" may lurk in making experiments on oneself. My best thanks are due to Dr. Mott for kindly looking through these notes, and for affording me the opportunity of submitting them to the distinguished society before whom they were first produced.

Charing-cross Hospital.

A CASE OF EQUINIA (GLANDERS); RECOVERY.

BY T. W. H. GARSTANG, M.R.C.S. ENG.

THE rarity of the occurrence of recovery from equinia is my excuse for recording the following case. The patient, a veterinary surgeon fifty-four years of age, concluded a period of attendance on a certain horse suffering from "nasal catarrh" of a suspicious type on March 22nd, 1894. On April 4th the animal, having had a relapse, was brought to his house. He administered a "drench" on the spot, and whilst doing so the horse coughed, and a quantity of sputum bespattered his arm and face. This was at 10 A.M., and he, being pressed for time, set off on a professional journey without washing. The arm felt "uncomfortable" the same night, and the patient had "felt ill" ever since. It was not until April 12th that I was called in, and on this date I was consulted for a pustular rash on the right arm, said to have appeared the day before. The above history was not at that time given to me. The case was treated with compound sulphur ointment. On the following day the patient reported his arm as "better." On the 14th he had gone out when I called, and I did not see him; but he had left a message that he was still "better." On Sunday, the 15th, I was sent for at midday, and was then for the first time able to make a complete examination. The man was practically covered with pustules from head to foot. The face and scalp had a few, the chest and back more; but the extremities suffered most; the inner surfaces of the arms and thighs were very bad, but the right thigh was the worst of all. Here the skin was completely covered with pustules in the following stages: small, hard lumps forming subcutaneously, the size of a pea or bean; similar lumps burst and discharging pus; others scabbed over; and, finally, foul ulcers of various shapes and sizes where the scabs had separated. The most intense burning and itching were complained of. The extremities were said to feel as though "wrapped in blankets through which scalding water was being poured." Rubbing and scratching were incessant, although that only aggravated the pain. The pustules were appearing in rapid successive crops, about twelve hours sufficing for a given one to run through the whole of the stages mentioned above. The patient, though much prostrated, refused to go to bed, and managed to keep on his feet. I gave him a strong dose of iron and quinine, and feeling sure that he had not more than a few days to live arranged that Dr. D. J. Leech of Manchester should see him on the following day. On this day, the 16th, there was a discharge from the nose and eyes, and the legs were so greatly swollen that the patient said "they felt as if they would burst." Boric acid dissolved in Carron oil was ordered locally, with a nasal douche of Condy's fluid, and the iron and quinine were to be continued. On the following day the patient appeared slightly easier. During this time he was taking a large quantity of brandy, and by the 20th I had to administer large doses of bromide. Improvement, however, continued slowly in the local symptoms, though the patient still refused to go to bed and was very obstinate about treatment of any kind. Sometimes he would refuse to take his medicine or to obey orders in any way. By the 24th the rash had disappeared from the arms, leaving only red and purple stains to show where it had been, and the legs were improving. On the 25th a large quantity of pus was expectorated from the lungs; also on the 26th. The nasal discharge had increased. His strength was greatly impaired. On the 28th a quantity of sputum was collected and sent to Dr. Leech for bacteriological examination. By May 2nd the rash had disappeared everywhere, and the nasal discharge and expectoration of pus had ceased. On the 11th I

² Die Körperwärme des gesunden Menschen; Studien von Professor Dr. Jürgensen. Leipzig, 1873.

discontinued my visits, as he would do nothing he was told. From the 17th to the 22nd he resumed his professional work, getting about with some difficulty in his gig. On the 23rd I was sent for again. I found the patient suffering from nasal discharge and a rash on the arms and body, very much like that first seen on April 12th, with some pustules and ulcers on the legs. The original treatment was resumed, and by the 28th the symptoms were all abating. Finally, on June 4th, he expressed himself as "quite well," although a few scattered spots still remained; but they were causing him no trouble or inconvenience. Since that date I have not seen him professionally; but he has resumed his ordinary work. The bacteriological examination resulted negatively.

Remarks.—I attended a fatal case of farcy in August, 1885, which was reported in THE LANCET of Oct 24th, 1885; and although there is a sharp contrast in the clinical histories of the two cases there are one or two points of agreement. The causation was the same—viz., the contact of the virus of a diseased horse with the unbroken skin of the right arm, and the omission to wash the arm immediately afterwards. The period of incubation in this case was seven days exactly; in the previous case the patient was also ill in seven days, though nasal trouble did not supervene for sixteen days more, and it was twelve days after that that the first "farcy bud" formed. The patient in the first case died in forty-eight days; the patient in the present case was convalescent in thirty-seven days, with a relapse on the forty-eighth day, and final convalescence in sixty days. I am convinced from observation that the eruption in both cases was of an identical nature, although in the one it was scanty and slowly developed, in the other profuse and running a rapid course. The patient in this case was a veterinary surgeon in large practice. He diagnosed glanders for himself, and abandoned all hope of recovery. It will be interesting to record his own opinion of the disease in the horse. He said it always commenced in "nasal gleet," from which the animal might recover; but that when the gleet "ran on" to glanders or farcy recovery was impossible. The horse which is supposed to have infected this patient recovered. On this argument being used in objection to his diagnosis, he said that a horse suffering from nasal gleet may be placed in a stable with two healthy horses, and one of them may immediately develop glanders and the other farcy, and both die, while the horse suffering from nasal gleet will recover, never showing anything more than that discharge. In other words, a non-fatal case of gleet may be the immediate and direct cause of a fatal case of either glanders or farcy; and this, he declared, was well known among veterinary surgeons. My patient was seen by Mr. Parcell, M.R.C.S., of Ballyneen, co. Cork, on May 1st (an accidental visit by an old personal friend), who agreed with the diagnosis, and candidly informed his friend that recovery was impossible. He was also seen during the course of his illness by others qualified to form an opinion—e.g., horse-dealers and persons who had had practical experience of glanders in the horse; and they all took the same view as Mr. Parcell. I showed the patient to a medical confrère on April 18th and to the medical examiner of an insurance society on April 28th; these gentlemen had not seen a case previously, so their opinions may perhaps not carry much weight, and I will therefore only say that they expressed full agreement with the view of the case which I put before them. Moreover, Dr. Leech on March 16th had no doubt of the nature of the case, and quite agreed with me that the prognosis was most unfavourable. I am careful to place on record the whole of this indirect evidence, because the failure of the bacteriological examination may seem to place the case among those considered "doubtful"; but it must be remembered that the sputum examined was collected only on April 28th, when there was to the naked eye already great improvement on the purulent condition which had existed on the 25th and 28th, and when the general condition of the patient had been steadily improving for twelve days. When I first saw him on April 12th I was only shown the right arm, and the rash was very like one which had puzzled me a fortnight previously, and which turned out to be scabies; hence the first prescription of compound sulphur ointment. For the remainder of the time the treatment was never varied from that ordered on April 16th, except by the vagaries of the patient, who occasionally refused his medicine, but on his own account consumed large quantities of brandy. The urine was non-albuminous throughout. Headache was for many days intense. There was no vomiting. The nasal discharge was troublesome for about a fortnight. The sputum

for a few days seemed to point to the formation of pustules similar to those in the skin in the internal mucous surfaces. There was threatened erysipelas of the face, but it subsided. The genuineness of the case is certain to my own mind after watching it closely. The recovery is undoubted. If it was probably spontaneous rather than due to the remedial treatment employed, still, as there is no specific known, I shall, if I ever have to treat a third case, use the treatment here detailed, not forgetting a free allowance of alcohol.

Knutsford.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF OBSTINATE PLEURITIC EFFUSION WITH
NEGATIVE PRESSURE IN THE PLEURA; ACCIDENTAL
PNEUMOTHORAX; RECOVERY; REMARKS.

(Under the care of Dr. SAMUEL WEST.)

A YOUNG WOMAN aged nineteen years was admitted into St. Bartholomew's Hospital on Dec. 13th, 1894, with a history of occasional sharp pain in the left axilla, which she had felt for a fortnight. About ten days later she felt ill and shivered several times, and since then had had a cough with a little expectoration. She had been confined three months before, and had suckled her child till the day before admission. She looked poorly, but not ill. Her temperature was 100° F., and she presented the physical signs of a small pleuritic effusion at the left base. There was no bulging of the side or displacement of the heart. By Jan. 2nd, 1895, the fluid had increased so much that the lower two-thirds of the chest, back and front, were dull, and the heart was displaced so that the cardiac dulness extended an inch and a half to the right of the sternum. Paracentesis was performed with an ordinary trocar and long tube to the floor. Manometer pressure indicated four inches negative pressure of water with half-inch respiratory oscillation. No fluid was obtained, although the needle was evidently in a cavity. Air gained access to the pleura, and as the aspirator was not employed no fluid was removed. On Jan. 5th the patient was not so well, being depressed, nervous, slightly feverish, and with a good deal of dyspnoea. The physical signs were those of pneumothorax, the heart being displaced still further to the right and the stomach resonance absent, and a well-marked succussion splash obtained. Paracentesis was again performed in the same way. The manometer registered this time a positive pressure of four inches and a half of water, with a respiratory oscillation of an inch and a half. Ninety-seven ounces of clear serous fluid passed through the tube into a vessel placed on the floor about eighteen inches below the level of the puncture in the chest, with great relief to the patient. On removal of the cannula pressure was applied with strapping to prevent subcutaneous emphysema. The fluid was nearly solid with albumen and formed a little clot on standing. From this time recovery was rapid. The fluid did not form again and the air was very rapidly absorbed, so that five days later, except for a little dulness at the left base behind and slight hyperresonance over the upper parts in front, there was little to note. The breath sounds, though not equal to those on the opposite side, were distinct. By the 14th she was allowed to get up, and on the 21st she was ready to go out. The physical signs had completely disappeared, except for slight impairment of percussion at the base behind.

Remarks by Dr. WEST.—The case is interesting as showing how rapidly air is absorbed from the pleural cavity even when it has been some time inflamed, and how rapidly the lung may re-expand. The pleural pressures are interesting. That a negative pressure of as much as four inches of water should exist with an increasing effusion is, I confess, to me almost inexplicable. I was, unfortunately, not myself present

when the paracentesis was performed. Still I have no reason to doubt the statement made that that was a correct reading, and I record it as what must be accepted. I think, as a fact. It is certainly confirmed by the failure to obtain fluid and by the passage of air into the side. This could not have happened with a positive pressure of such an amount. That the negative pressure of four inches should be converted into a positive pressure of four inches and a half is due to the rapid increase in the amount of the fluid after the first dry puncture, as was shown by the fact that three days later ninety seven ounces of fluid besides much air were removed without suction from the side. I suppose that this acted as a mild irritant to the pleura, much as iodine does. It for the time excited fresh inflammation and effusion, which, however, were followed by very rapid resolution of all, both recent and prior, mischief. Although the introduction of air in this case was accidental, while in other cases its introduction has been intentional, the rapid resolution of what appeared to be an obstinate effusion shows that the admission of aseptic air into the pleura may be in certain cases not only a justifiable but even a very successful method of treatment of chronic effusion.

SAFFRON WALDEN HOSPITAL.

A CASE OF LEFT PYONEPHROSIS; INTESTINAL OBSTRUCTION;
UNUSUAL SYMPTOMS; NEPHRECTOMY; RECOVERY;
REMARKS.¹

(Under the care of Mr. HEDLEY BARTLETT.)

THIS case is one which presents many points of interest to the surgeon. The hydro-nephrosis appears to have followed cicatricial contraction after injury in the neighbourhood of the pelvis of the kidney, but the exact nature of this injury remains uncertain. The reason for the comparatively sudden increase in size and formation of pus in the large cyst is not clear, but the change was attended with very acute abdominal symptoms. It was a case in which the destruction of the kidney had been so extensive and complete that nothing would have been gained by any attempt to drain the cyst; all renal tissue had been destroyed, and drainage would only have resulted in a further loss of strength on the part of the patient.

The patient, a girl aged seventeen years, was admitted into the Saffron Walden Hospital on March 26th, 1894, with the history that in March, 1893, she fell from a horse and injured her left side, and had had pain ever since. During the last three months this pain had increased; she had also noticed a swelling in the left loin, which during the last month had gradually increased, until on March 25th it suddenly enlarged still more. Vomiting set in, and shortly afterwards the whole of the abdomen became very distended. She had had no action of the bowels for five days, and complained of difficulty in passing urine. On admission to hospital the temperature was 102° F., the respiration hurried, the pulse 100, and the skin sweating. The patient was a strong, healthy looking girl; she was lying on her back suffering from paroxysms of pain, and vomiting a biliary material. The whole of the abdomen was much distended, and in the left side, extending posteriorly into the left ilio-costal space and downwards to the left iliac fossa, was a very large, hard, nodular, semifluctuating swelling, which was dull on percussion and could not be easily moved as it was fixed in the ilio-costal space. The dulness was not quite so perfect anteriorly as in the space owing to the colon being distended with flatus. There was a line of resonance between the spleen and the tumour; the hand could also be dipped down between the lower limit of the swelling and the pelvis. Pressure over the swelling in front gave pain, but pressure behind in the ilio-costal space gave marked relief. On vaginal examination the ovaries were found to be normal, and the sound passed into the uterus the normal length. On sounding the bladder no stone could be felt. Dysuria was present; the urine was scanty and alkaline, containing a large quantity of pus. The catamenia were regular. The nature of the swelling was obscure. Was it a tumour from accumulation of fecal matter in the colon or sigmoid flexure? Were the abdominal pain and colic intestinal or nephritic? Was the swelling a large fecal abscess? Mr. Hedley Bartlett considered that if the nature of the tumour had been either of these there would have been more marked febrile

disturbance, the intestinal symptoms would have been better marked, the position of the swelling would have been more iliac than in the ilio-costal space, and the vomiting more troublesome, probably stercoraceous in character. Was it an ovarian tumour? Was it a large lumbar or peri-nephritic abscess? There were no signs of spinal trouble, thus excluding lumbar abscess. All the physical signs pointed to pyonephrosis, hydro-nephrosis being at once excluded by the presence of pus in the urine. The diagnosis was that of pyonephrosis. The sickness continued, and as the bowels were not relieved a large enema was administered. The patient's condition was such that an operation was recommended and agreed upon. The usual lumbar incision was made, and a large, tense, hard, bulging cyst exposed. This was tapped; the contents were first a small quantity of pale limpid urine, followed by sixty ounces of pus and urine having a distinctly fecal odour, suggesting that the colon had been opened. The finger and then a probe were introduced into the kidney cyst to explore for a stone, but the result was negative. The cyst being in such an advanced condition of disease, it was thought best to remove it instead of using drainage. The remains of the kidney cyst were carefully dissected from the surrounding structures to which it was adherent, the ureter was tied, and then the kidney vessels. A large drainage-tube was inserted into the space occupied by the tumour anteriorly, and another in the direction of the pedicle posteriorly. The wound was then sutured. The patient went on well for two days; on the third day, March 29th, she was very sick and became jaundiced. She had passed very little urine since the operation, the skin was dry, and the temperature normal. She was very thirsty and drowsy. On the 30th unusual symptoms set in. The patient was quite insensible and more jaundiced; the pupils were dilated; the tongue was dry and furred, and the breath offensive. She had slight convulsions and vomiting; the bowels were not yet relieved. The temperature was subnormal; she had a distressing hiccough. She passed about twenty-five ounces of urine. On the 31st the patient was still in much the same condition. She was fed on nutrient enemata and suppositories every two or three hours. The temperature was still subnormal; coma was well marked and the skin deeply jaundiced. About thirty ounces of urine were passed. As there was no improvement the patient was placed for from ten to fifteen minutes in a very hot bath and then in hot blankets, and pilocarpine injections administered. Half an hour after the bath she began to sweat profusely, and about an hour after it began to rally. The temperature went up to 103° 6'; the convulsive twitchings lessened; the patient moved when spoken to, but was not yet sensible. An hour later she recovered consciousness. The patient now made a rapid and uninterrupted recovery with no further complications. By the end of April the wound had healed and the urine was normal.

Remarks by Mr. HEDLEY BARTLETT.—The cause of the pyonephrosis in this case was probably some injury to the upper end of the ureter or pelvis of the kidney, causing hydronephrosis, and then pyonephrosis due to intestinal flatus diffusing into the cyst. The sudden onset of urgent symptoms was probably due to some sudden blocking of the ureter, with rapid distension of the cyst. The five days' constipation before the operation was probably reflex in origin (not due to pressure). The ureter was evidently patent at times, otherwise there would have been more inconvenience and ill-health. The vomiting before the operation was also probably due to some form of intestinal poison circulating in the blood, not due to any mechanical pressure on the intestine. The symptoms after the operation were as follows: For two days there was satisfactory progress, between twenty-five and thirty ounces of urine being passed daily. There was no shock. The jaundice and vomiting developing on the third day after the operation and lasting three days were probably due to some form of poison being absorbed secondary to the constipation (? ptomaine poisoning). The coma was not uræmic in origin, as the patient both before and after the operation passed between twenty-five and thirty ounces of urine. The convulsions were also due to the same cause. It is an interesting point that the jaundice, the vomiting, the coma, and the convulsions all came on the third day after the operation and lasted three days. All these symptoms were relieved by purgation, enemata, and a hot bath with hot packing; clearly the symptoms were not uræmic in origin. It is also worthy of notice that the menstrual period had been over a week before the patient was taken ill. The

¹ Read before the Cambridge Medical Society, Nov. 2nd, 1894.

patient continues in good health. The specimen removed, when examined, showed simply a large suppurating cyst; there were so many adhesions round the upper end of the ureter that it was difficult to ascertain the nature of the injury.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on Affections of the Nervous System occurring in the Early (Secondary) Stages of Syphilis.

AN ordinary meeting of this society was held on March 12th, Mr. LANGTON, Vice-President, being in the chair.

Before the adjourned discussion was commenced Mr. HUTCHINSON said that he desired to bring before the meeting some pathological observations which had recently been published by Dr. Laing of Paris on the acute form of paraplegia occurring early in syphilis. The patient was a workman aged fifty, who was admitted with paraplegia of a fortnight's duration. He had still the syphilitic eruption fully out over his body and the history was that infection had taken place a year previously. Weakness in the legs developed suddenly, and fourteen days later the paraplegia was complete and absolute, involving both bladder and rectum, and bedsores developed rapidly. He died suddenly, and the spinal cord was examined at once. A picture of a section of the cord in the dorsal region was shown. The investing membranes appeared normal to the naked eye. There was a development of colloid masses in the substance of the grey matter in the perivascular spaces around some of the larger vessels. In addition there were small, narrow areas of the cord which were undergoing degeneration, and these areas radiated inwards from the cortex towards the centre of the cord. The vascular meshwork of the pia mater was found on microscopical examination to be infiltrated with inflammatory cells; in the arteries there were signs of disease, one showing a small gummatous nodule around it, containing a myeloid cell, while others showed thickening of the coats with infiltration around. But the stress of the disease had fallen on the veins, there being large accumulations of inflammatory cells round them, and one was found to be thrombosed. Dr. Laing found these changes in the whole length of the spinal cord. Since the last meeting he (Mr. Hutchinson) had collated the notes of many other isolated cases, and in nearly all they occurred within a year of the infection. So far as his own notes were concerned, he had found a few cases which occurred at a later period of syphilis, but almost all of these were not typical instances of paraplegia. His main point was that the nervous symptoms, like the dermatological manifestations, should be classified according to the date or period at which they occurred.

Dr. ALTHAUS said that the paper which they had met to discuss and which dealt in a broad and comprehensive manner not with isolated facts, but with whole series of important clinical phenomena, had been very much wanted, because the possibility of the early occurrence of such nerve troubles as had been brought under their notice by Mr. Hutchinson was not yet thoroughly realised by the profession. He had met with such cases in which an erroneous diagnosis had been made because it was believed that specific nerve lesions occurred only four or five years after the primary affection. He related a case of hemiplegia which had come on eight months after infection, and had been diagnosed and treated as hysterical, and got steadily worse until specifically treated; and referred to a discussion at a sister society some years ago, in which two years was mentioned as the earliest period when specific brain lesions would become developed. He had himself seen a characteristic form of headache, followed presently by epileptiform seizures and hemiplegia, three months after infection; and related a case in which extensive disease of the cerebral arteries, with softening of brain tissue and other characteristic nerve lesions, had become developed three months after infection. He had met with several cases of analgesia in the secondary stage, and thought that this would be more frequently found if it were looked for. Acute multiple neuritis was no doubt sometimes the cause of the more or less general paresis with anaesthesia which was seen in the secondary stage,

but acute encephalitis, ascending myelitis, and poliomyelitis might also occur during that period. He related a case of tabes which had become acutely developed seven months after infection, and where the patient made a very fair recovery under specific treatment. Early neuritis of single nerves was not uncommon, and he had found that the portio dura was more apt to suffer thus early, while in the tertiary stage the third nerve was more frequently affected. He had also seen neuritis of the sixth and of the ulnar nerves four and six months after infection. He then discussed the question whether there were any predisposing or exciting causes of early nerve syphilis, and said that he had seen it where the primary and secondary symptoms had been unusually mild, and also where they had been severe, so that the greater or lesser virulence of the initial symptoms did not seem to be of much influence. Specific treatment was, however, apt to be unduly neglected in mild forms of the disease. The two principal predisposing causes had appeared to him to be youth, for all his cases had occurred in young people, chiefly between eighteen and twenty-nine, and injury to the head, whether received previously or subsequently to infection. Other predisposing causes were neurotic inheritance, sexual and alcoholic excesses, and undue strain on the mind. The chief differences between early and late nerve syphilis appeared to him to lie neither in the nature of the lesions, for arteritis and syphiloma occurred both early and late, nor in their seat, as no portion of the nervous system appeared to be safe from the inroads of the virus at either period. Early nerve troubles were, however, more acute in their appearance, and more amenable to specific treatment, while tertiary affections had a slower and more insidious course, with a tendency to end in general paralysis. Nervous affections after the acute exanthemata, such as paralysis, the delirium of collapse, &c., might appear at a still earlier period—that is, before or immediately after defervescence; while a considerable interval between the cessation of the fever and the appearance of nerve troubles was exceptional. Influenza stood very much in the same line with the eruptive fevers in this respect. He had seen a few cases of what he might call tertiary nerve affections after influenza, but in no case had the interval between their appearance and the primary attack exceeded six months; while insanity, general paralysis, encephalitis, myelitis, and neuritis had frequently followed the attack at a very short notice. In conclusion, Dr. Althaus spoke strongly about the necessity of the full use of mercury in the cases under consideration. He preferred the hypodermic use of the metal, and injected the soluble perchloride, which was readily absorbed and eliminated, in acute and threatening cases, and an insoluble preparation, where the mercury was rubbed up with carbolioil and lanoline, in the more chronic forms of the disease. The latter preparation was slowly absorbed and eliminated, and need only be injected once a week, while the perchloride should be injected daily for some time. No other remedy could be relied upon with such confidence in the gravest emergencies of this kind which might come under our notice, although even mercury was not infallible.

Sir WILLIAM BROADBENT said that his own contribution to this debate would be a very modest one. Though none who had heard the speech of Dr. Gowers could regret that it had been delivered, yet it had ranged wide of the subject matter laid down for debate in the introductory remarks of the President. The President had done well to rehearse the important clinical facts of the second and third stages of syphilis and the effects in these stages of iodide of potassium and mercury in treatment. He did not think that morbid anatomy could ever have convinced us that the manifestations of the third stage of syphilis belonged to the same disease and were produced by the same poison as the manifestations of the first and second periods; and if we extended our definition of the tertiary stage to include locomotor ataxy and general paralysis of the insane pathological anatomy would have been still more at fault. He agreed with Dr. Gowers that the ultimate clue to the diversities in this disease would eventually be found by an inquiry into the causative microbe or microbes and their toxins. The secondary lesions were characterised by their symmetry; the tertiary by their want of symmetrical grouping. The secondary lesions were caused by a disturbance of nutrition on the side of the blood; the tertiary lesions, on the other hand, were tissue changes initiated by blood changes, but which had ceased to have any immediate relation to blood changes. With reference to the production of therapeutic effects,

at present we had to rely merely on the observed effects of drugs, but later remedies would be applied not merely from a known experience of the effects of the drugs, but there might be an actual biological explanation of their action. He confessed that from his early work he had been of opinion that the effects of secondary syphilis were manifested upon the skin, mucous membranes, and bloodvessels, and were seldom of a destructive character. The tertiary lesions, besides involving the tissues in these situations, also involved the deep-seated viscera and nervous system. The late manifestations of syphilis were attributed either to the results of damage to the vessels done during the secondary period or to gummatous growths. Hence when he came across paraplegia during the first two years of syphilis he had been in the habit of looking upon it as a precocious tertiary manifestation. He referred to the case of a patient aged twenty-four who came under treatment last October, six months after the chancre signs of paraplegia began to show themselves. Another man, aged forty, came under treatment in July, 1894, with definite signs of paresis; he had acquired syphilis a year previously. These cases were clearly due to the effects of secondary syphilis upon the spinal cord, and he regarded it as really a myelitis and not a primary affection of the vessels. He had seen epilepsy in the second stage of syphilis which had yielded to treatment, and there was no recurrence after twenty years. Certain cases of spinal meningitis he had also attributed to secondary syphilis. In one such case there were pain and ataxic gait in the legs and in the arms rapid wasting of the muscles; the meningitis seemed to have affected the posterior aspect of the cord at the lower part and the anterior aspect of the cord at the upper part. Recently he had seen two cases in which a zone of anaesthesia rapidly developed.

Dr. FERRIER said that all neurologists looked upon syphilis as one of the most potent factors in diseases of the nervous system. The lesions might occur at any time; those which came under his notice were usually in the later stages of syphilis. He was not prepared to admit that syphilitic diseases of the nervous system should be separated into a distinct—a nosological—group. Jacksonian epilepsy was frequently caused by syphilis; so were hemiplegia, hemianesthesia, and Bell's paralysis; and so also were the affections of the spinal cord which had been recently erected into a special group by Erb. He knew of no way of distinguishing these cases from others which were not syphilitic. He quoted five cases of the gradual type described by Erb. The first was a man aged thirty-five years who developed the symptoms two years after the chancre; the second, in a man aged forty-four, began a year after the chancre; the third, in a man aged forty-four, began ten years after the chancre; the fourth, in a man aged forty-four, began six months after the chancre; and the fifth, in a man aged forty-one, began thirteen years after the chancre. He then referred to five cases of sudden acute paraplegia. The first, in a man aged twenty-five, began six months after the chancre; the second, in a man aged twenty-five, began eighteen months after the chancre; the third, in a man aged about thirty, began eight years after the chancre; the fourth, in a man aged thirty-two, began two years after the chancre; and the fifth, in a man aged twenty-three, began three years after the chancre. He then mentioned three other cases in which the disease was of the gradual type and in which there was no history of syphilis, the first being in a man aged forty, the second in a man aged thirty-three, and the third in a man aged sixty-one. These three last cases corresponded precisely with Erb's syphilitic group. Sudden paraplegia occurring in syphilitic individuals might turn out to be only the preliminary stage of a disseminated sclerosis; and he referred to two instances, both males, aged thirty and thirty-eight respectively, who illustrated this point. So far as the symptomatology of the spinal lesions went he was unable to distinguish the syphilitic from the non-syphilitic cases.

Dr. GEORGE OGILVIE quoted a number of statistics to show that the lesions of the nervous system to which Mr. Hutchinson had alluded had been recognised for more than twenty-five years as occurring in connexion with syphilis; that the symptoms often came on within a few months of infection, and hence belonged to an early stage of the dyscrasia, and all alleged that the disease showed a tendency to improvement, if not to recovery. He gave a list of the single cases of nervous disease occurring early in syphilis which he had been able to collect, and he referred to large series of figures by Fournier and others showing that a considerable percentage of the

nervous troubles ensued within a year from infection. The specific dorsal myelitis which had been described was only one of the many nervous manifestations of syphilis that might occur early, and though the myelitis was more common in the early stage, yet it might occur also later. It had been said that these early lesions were symmetrical, but the symmetry was due to the seat of the affection; it was symmetrical because it was spinal rather than because it was secondary. The affection of the brain and of single nerves showed no tendency towards symmetry. There were two other transitory nervous symptoms often observed besides the analgesia which Mr. Hutchinson had described—an increased irritability of the superficial and deep reflexes, and a hyperæmia of the optic discs; the latter was said to occur in 30 per cent. of syphilitic patients. The irritability was probably to be explained by an alteration in the blood-supply of the nervous system similar to that to be witnessed in the optic disc. The analgesia, he thought, might be of hysterical origin.

Mr. COTTERELL said that the primary infection might be so mild that it would escape notice and the patient would then deny the history of syphilis. A man aged twenty-seven, giving no history of syphilis, presented in 1890 nodes on the clavicle. In 1894 he had an epileptic fit, there was blurring of the left optic disc, and the left lower extremity was weak. He thought that locomotor ataxy and general paralysis were not truly placed in the tertiary stage of syphilis, but really should be regarded as forming a fourth stage.

Dr. F. J. SMITH mentioned the case of a man aged twenty-eight who had suffered from a chancre eighteen months before the appearance of the symptoms. In July last he was stunned after a fall from a cart; later he developed a condition of typical paraplegia. The symptoms appeared to be due to neither a vascular nor a gummatous change, but were probably produced by a diffuse infiltration of leucocytes. He should describe Dr. Ferrier's cases of disseminated sclerosis as typical of syphilis; certain damaged areas had gone beyond the reach of iodide of potassium and mercury, but had not been absolutely killed; in these areas a slow sclerotic change had occurred, producing the symptoms complained of.

Dr. MOTT described a case which had been admitted into Charing-cross Hospital six years ago, the microscopical sections from the spinal cord of which were precisely like the drawings which had been shown. The patient was a man aged twenty-three, who was admitted with a typical "focal" myelitis; he had had syphilis less than two years before the onset of these symptoms. He died from an acute spreading bed sore, and at the necropsy myelitis was found, there being congestion of all the vessels with leucocytes in the perivascular spaces.

Dr. PARKES WEBER mentioned the case of a man aged forty-two who was admitted to the German Hospital in September, 1894. There was a history of chancre one year before, and on examination paraplegia was found, but it was unaccompanied by loss of sensation. He died from a large bed sore, and at the post-mortem examination the substance of the cord in the lower dorsal region was found to be softened.

Mr. HUTCHINSON, in reply, commented on the interest of at least three observations to the effect that in cases of paraplegia in which sensation was not lost nevertheless bed sore developed. One outcome of the debate was a strong emphasis of the fact that a majority of the cases of the nervous manifestations of syphilis did occur in the early periods. He knew that many such cases had been recorded, but they had nearly all been described as precocious tertiary manifestations. If we attempted a natural definition of syphilis we should describe the second stage as the blood stage, during which the patient should not marry, as he was still liable to infect his wife and his offspring. If this definition were accepted, then what Fournier and others regarded as manifestations of a tertiary stage we would call secondary, or at any rate "blood stage," cases. Dr. Gowers appeared to regard the tertiary phenomena as due to a chemical poison left behind by the syphilitic microbe. He himself regarded the tertiary phenomena as local phenomena due to an implication of cell structures and leading to cell growth; but this did not imply the existence of a poison still circulating in the blood; he did not believe that the blood was infected in any way in tertiary syphilis. Dr. Gowers had implied that the syphilitic remedies were not so useful in the purely inflammatory manifestations of syphilis, but in the inflammatory affections of the skin mercury certainly was

very useful. Dr. Ferrier's more typical cases of acute paraplegia appeared to occur during the early period of syphilis. The advisability of forming a special group of these syphilitic nervous manifestations had been doubted; there was no doubt that they were not absolutely special to syphilis, for he had often held that syphilis imitated but did not create, yet, nevertheless, as with skin syphilitic troubles, there were peculiarities about them which enabled skilled observers to say that they were probably syphilitic, and for that reason they were worthy of being put in a separate class. He had seen very few cases of acute paraplegia which were non-syphilitic and which recovered.

MEDICAL SOCIETY OF LONDON.

Hysterical Deafness.—Thirty Cases of Nephrorrhaphy.

AN ordinary meeting of this society was held on March 11th. Mr. H. H. CLUTTON, Vice-President, being in the chair.

Dr. HECTOR MACKENZIE read a paper on a case of Hysterical Deafness, with remarks on the diagnosis and treatment of this affection. He said little was to be found on the subject in the ordinary text-books, and very few cases had been recorded. Some authorities were sceptical as to the real existence of the malady. He thought it was important, therefore, to bring forward a case which did not admit of doubt, to refer to the points of importance in arriving at a diagnosis, and to call attention to the mode of treatment which had proved successful. There was a pretty general agreement in the accounts of the malady given by Politzer, Gruber, Hartmann, Briquet, &c. to the effect that hysterical deafness did exist, but was decidedly uncommon, and that it was usually unilateral, accompanied by hemianæsthesia, transferable from one side to the other, and of variable intensity. Jolly was almost alone in allowing that it might affect both ears, which was the case in Dr. Mackenzie's patient. The question of bone conduction of sound was one of great importance in the diagnosis. Hartmann and Walton observed greater impairment of bone than of aerial conduction. In Dr. Mackenzie's case both were equally affected, and this was what would *a priori* be expected in a malady where the impression-receiving and interpreting brain was at fault and not the organ of hearing itself. A case published by Ouspensky of Moscow seemed to show, however, that sometimes the bone conduction was not impaired. The important points in making the diagnosis of hysterical deafness were these: (1) the association of deafness with undoubted symptoms of hysteria; (2) the sudden development of the deafness after some emotional disturbance or shock or after trauma; (3) the absence of any sufficient cause for the deafness in the auditory apparatus itself as shown by the ordinary methods of examination; (4) the impairment of bone conduction of sound to at least as great an extent as aerial; and (5) the frequent coexistence of anæsthesia of the pinna and external meatus. The history of the case was as follows. The patient was a girl aged sixteen years. In November, 1891, she had a sore-throat during an undoubted outbreak of diphtheria at a boarding school. At the end of January, 1892, she had a slight attack of influenza. As she was suffering from earache after this attack her medical attendant Politzerised her. The girl screamed, and from that moment was extremely deaf. The medical attendant said he had perforated the drum. For some days the left ear discharged copiously a green fluid. About a week later the girl was taken to see an aural surgeon in London, who said he could see where the ear had been perforated, but that it was then healed. Galvanism was ordered locally and strychnine internally. Presently numbness in the limbs set in, so that the girl was anæsthetic all over except on the head and neck. She also lost power both in the legs and arms. For six months she was treated in London with massage and electricity, and gradually recovered sensation and power until she could use her hands perfectly and sew and write. She continued unable to hear, to raise herself, and to use the legs. The treatment was continued at Droitwich and Weston for two months longer without further improvement. From October, 1892, to March, 1893 she was at her home in Wales and remained in the same condition. In March, 1893, she was admitted to St. Thomas's Hospital. She then underwent a course of Weir-Mitchell treatment for ten weeks, with the result that she gained 22 lb. in

weight, but without any impression either on the paralysis or the deafness. At the end of the time it required about six assistants to prop her up in the upright position, and to drag and push her in this position across the floor. As she had some power in her arms a gymnasium suit was obtained for her and she was taught by degrees to walk on her hands while the legs and body were supported. After a great deal of perseverance and the contrivance of various exercises, she gradually regained the use of her legs and recovered strength in her back. Progress was interrupted by an attack of scarlet fever in October, but on recovery from that none of the ground gained had been lost. The deafness at this time still remained unchanged. With the right ear the patient could hear nothing, but with the left she was able to hear a very little. Nothing abnormal could be detected on examination with the speculum. Bone conduction was apparently absent in the right and nearly absent in the left ear. The treatment of hysterical deafness recommended in most of the text-books was electricity locally. Briquet had said he had never known this to fail. It was said by some, Cure the other symptoms and the deafness will disappear, but others said it tended to remain unless treated. Here the other symptoms had been cured, and in spite of local blistering and galvanism the deafness still remained. Seeing it had been set up by Politzerisation local treatment did not seem advisable. Everything recommended in the text-books had thus been tried without effect and the deafness had lasted nearly two years. The mode of treatment which in the end proved successful was one which had been previously suggested in the *Marseille Médical* by Dr. Gilles. The attempt was made to re-educate the sense of hearing much in the same way as she had been re-educated in walking. The patient was made to listen to and to try to count the ticking of a clock at increasing distances, to listen to and attempt to repeat words and sentences spoken, first close to the ear and then at greater distances. The treatment was commenced on Dec. 21st, 1893. At the first trial the patient could not count the ticks of the clock even close to the ear. Gradually she succeeded and the clock was placed at greater distances. As the hearing improved in one ear, so it did in the other. The same was done with the spoken voice. At first a word was spoken near the ear, and was not heard until repeated six or seven times. After practising ten days in this way she had so far recovered as to be able to carry on an ordinary conversation. A week or two later the hearing had become of normal acuteness. The recovery of hearing was accompanied by great improvement in her mental condition. She became as bright and lively as she had previously been the reverse. It was now more than a year since she had regained her hearing; the restoration of hearing had been permanent and she had continued in excellent health.—Mr. CLUTTON said he had seen cases of hysterical deafness associated with hemianæsthesia.—Dr. HILL said that the diagnosis of functional deafness should not be accepted without great caution. In the instance related there was a strong suspicion of diphtheria, and he thought that perhaps it might be a case of diphtheritic paralysis. There was also a distinct history of traumatism, and the inflation of the tympanum might have been performed in such a way as to cause concussion of the labyrinth and temporary anæsthesia of the auditory nerve. This condition, added to the neurotic element, would serve to explain the symptoms. It should also be remembered that the auditory education of deaf-mutes had been most successful, and that in many of these there was organic disease.—Dr. TURNER said that he was strongly under the impression that the case was one of hysterical deafness. The general paralysis was not of diphtheritic character; it was a case of typical functional general paralysis. It was also interesting to note that the same treatment—namely, education—which had been applied with success to the general paralysis had likewise proved successful in the ear, in which there was no sign whatever of organic disease. The recovery was too rapid to allow of any other diagnosis but that of functional disease. He added that in the majority of cases of hysteria the Weir-Mitchell treatment with isolation was sufficient to cure without a course of physical education.—Dr. SYMES THOMPSON, whilst fully admitting the immense value of the educational treatment in functional cases, yet wished to point out that in real disease of the ear steady systematic education had proved very successful.—Dr. MACKENZIE, in reply, said that it was improbable that the patient had ever had diphtheritic paralysis. Traumatism was a common cause of hysterical affections, but it was doubtful if concussion of the

labyrinth would last two years and then suddenly yield to such treatment as had been described. Dr. Thompson's remarks bore out his contention that cases of functional deafness were really more common than had been generally believed.

Mr. BRUCE CLARKE then read a communication on Thirty Cases of Nephrorrhaphy with their results. He said that the value of operation in this class of cases had sometimes been called in question, and he was anxious therefore to record with the after-history the ultimate results of these thirty operations. Two years ago he drew attention at the Royal Medical and Chirurgical Society to a class of cases of movable kidney which had previously attracted very little notice in this country, cases in which severe pain was a prominent symptom. The pain and other acute symptoms seemed to point to "acute renal dislocation" as the likeliest determining cause. Such cases were only one variety of floating kidney. His experience had shown him that it was rare to come across any case of the kind in which pain had been completely absent throughout, and as to the reality of these attacks of pain when they occurred no one who had seen them could have any doubt. The question to be determined was what was the probability of a successful result after operation. In his own cases the immediate result was successful in every instance, all the patients being alive at the present time. In by far the greater number pain was the prominent symptom, and the severity of the pain had led to the demand for relief. The pain usually came on suddenly, sometimes after a strain or severe exertion, sometimes after injury. It was often attended by vomiting, and later usually gave rise to local abdominal tenderness. The duration varied from a few hours to a day or two, and in some instances it might be cut short by manipulating the affected kidney—in other words, by reducing the dislocation. The condition of the urine during and shortly after the attack varied greatly; it might be scanty and bloodstained or almost porter-coloured, while in the less severe cases it was more commonly unaltered. In some of his cases the pain did not amount to more than an ache aggravated by exertion of any kind. In many cases during the intervals between the attacks the kidney was unduly tender to palpation. The first two cases were the only two instances in which the kidney was surrounded by a well-marked mesonephron, and in which therefore it was necessary to open the peritoneum in order to fix them firmly in position. In the first case the patient fifteen months later stated that she had not had any further pain in the loins. In the second the pain ceased for a few weeks and then returned with greater severity than before, so six months after the first operation he cut down and removed the offending organ in which, after removal, a small calculus covered with minute spicules was discovered. The patient made a rapid recovery and had since had no further trouble. The next case presenting special points for consideration was that of a woman who for over three years had suffered from movable kidney, having been quite invalided in consequence of the pain. The right kidney could be felt at times to be larger than the left. Mr. Bruce Clarke operated on the right kidney and fixed it securely in position. She had also complained of some pain in the left kidney, but this cleared up, and she ultimately recovered perfect health. Four other patients had at some time passed pieces of calculous material.—Mr. CLUTTON said that in some of the cases related it was open to doubt whether the calculus was really secondary to the movable kidney or had preceded that condition.—Mr. LOCKWOOD said that two years since he performed nephrorrhaphy on a woman, who had suffered so much pain from the movable kidney that she became pale and perspired profusely when she exerted herself. Three or four sutures were passed deeply into the kidney, and the patient was at present quite well. A great many of these cases were better treated with a horseshoe pad and abdominal belt, and those suitable for operation were not common.—Dr. H. MACKENZIE said that in the majority of cases the pain was neurotic, and the patients were not benefited by operation. He asked what cases were really suitable for surgical measures.—Mr. WALLIS said that a plea for early operation was to be found in the fact that if the patients were left till late some form of degeneration of the kidney was usually found to have occurred. Mechanical supports were difficult to adapt satisfactorily.—Mr. CLUTTON added that he preferred to use kangaroo tendon for suture, as in cases where silk had been used it had led to an obstinate sinus from the bottom of

which a silk ligature ultimately came away. In the large majority of cases he found that the adaptation of an abdominal belt was successful, and he would only operate in cases where this measure failed.—Mr. BRUCE CLARKE, in reply, said he had adopted suture in cases where much pain was complained of, but nearly all had been previously treated by belts. He cut down, removed the perinephric fat posteriorly, passed a long curved needle through the lumbar fascia and renal substance, and scarified the posterior surface of the kidney to promote adhesion. In all cases he opened the renal pelvis to search for the cause of pain, and passed a bougie down the ureter to the bladder. He believed the condition of movable kidney was the first stage of many cases of hydronephrosis, though he admitted that a large number of these movable kidneys gave rise to no further symptoms.

CLINICAL SOCIETY OF LONDON.

Cerebral Tumour following Injury.—Association of Psoriasis with Diabetes.—Rupture of Gall-bladder and Liver produced by violent Straining in a Patient suffering from Obstructive Jaundice.—Traumatic Cystic Lympho-sarcoma of Shoulder removed by Amputation after Five Years' Growth.—Complete Unilateral Arrest of Development in a Child with Arous Senilis and without Hemiplegia.

AN ordinary meeting of this society was held on March 8th, Mr. LANGTON, Acting President, being in the chair.

Dr. HANDFORD read the notes of a case of Cerebral Tumour following Injury. The patient, a man aged forty-three, had been injured by falling out of a cart upon his head. For the first fortnight he had no definite symptoms; afterwards he became mentally depressed, and experienced gradually increasing failure of muscular power. On admission to hospital four months after the accident there were general muscular enfeeblement, loss of control over the sphincters, and marked mental hebetude. Complete paralysis of the left face, arm, and leg supervened somewhat rapidly, with very extensive optic neuritis. There was headache, but never vomiting or local spasm. From the very close resemblance to a previous case recorded at length in *Brain*¹ a diagnosis was made of tumour, probably sarcoma, arising in the injured tissues and situated on the right side close to the motor tract. The patient was trephined, but the tumour was not found, and at the necropsy shortly afterwards a tumour was discovered 4 in. by 7½ in. in size, firm in consistence and dark in colour, situated behind and to the outer side of the right corpus striatum. Microscopically it was a vascular sarcoma, containing some spindle cells and in places a coarse meshwork filled with uninjured blood corpuscles. Dr. Handford expressed the opinion that the causal relation between the injury and the new growth was undoubted in each case, and that the frequency of such occurrences was somewhat underestimated.—Mr. W. G. SPENCER said that he had read of a case in which a blow on the left side of the frontal lobe caused deviation of the eyeballs and weakness of the shoulder, which developed immediately after the accident and then disappeared. Six months later these symptoms returned and went on to the development of a cerebral tumour. Such a case was an instance of development of malignant tumour in a scar, and it perhaps went some way in confirming Hunter's view that tumours occasionally developed in blood-clot.—Mr. ARBUTHNOT LANE referred to a case showed two years ago by Dr. Pitt and himself. The patient struck the top of his head violently against the corner of a table. Later he felt that the spot on the top of his head was becoming soft. A malignant growth of the dura mater was diagnosed and the growth removed. Up to the present the patient had remained free from recurrence.—Dr. HALE WHITE had recently seen a man with a cerebellar tumour which developed at the site of a blow. Cerebral tumour was more common in males than in females, and it had been asserted that this was due to the greater frequency of blows in the male sex. But an examination of the records of the Children's Hospital showed that in children under five the excess of males over females affected with cerebral tumour was precisely the same as in adults, and therefore the excess was not presumably due to the greater liability of males to injury.—Dr. HANDFORD, in reply, said that his cases resembled each other and differed from those quoted in that

¹ P. 296, 1891.

the symptoms were more or less continuous from the time of the injury and then began rapidly to progress.

Dr. KARL GRUBE (Neuenahr) gave the particulars of cases illustrating the Association of Psoriasis with Diabetes. The first case was that of a man aged thirty-nine years suffering from the hereditary form of diabetes. The psoriasis had existed since his boyhood. It was observed that the psoriasis was less troublesome when the general condition of the patient improved, but while this improvement of the psoriasis lasted the diabetes advanced and death occurred at last from coma. The pancreas was found to be normal; there were secondary changes in the nervous system. In Case 2, the brother of the former patient, aged thirty, the patient had been suffering from psoriasis for many years; the diabetes was only discovered last year. It advanced very rapidly, and now there were the symptoms of the severe form; the psoriasis, on the other hand, had nearly disappeared. The third case was that of a man aged forty years with a history of gout. The patient had been suffering from very troublesome psoriasis for many years. When the diabetes set in some few years ago the psoriasis showed great improvement. Case 4 was that of a man aged fifty-five, who had suffered from psoriasis since 1865. In this case an alteration in the intensity of the psoriasis and diabetes could be observed at two periods. The psoriasis was very bad in 1890 and 1891, then it got better again, but it was found in the spring of 1892 that the patient, who complained of general weakness and loss of flesh, passed much sugar. An improvement of the diabetic condition was attained in the summer of 1892 and lasted for two years, but the skin affection became worse again. Having been treated for the latter in the summer of 1894 with good result, the amount of sugar had increased again since last October, and the patient had to be more careful with his diet. Dr. Grube did not believe that this combination was a mere coincidence.

Mr. W. ARBUTHNOT LANE read notes of a case of Rupture of the Gall-bladder and Liver produced by violent Straining in a patient suffering from Obstructive Jaundice. The patient was a woman aged fifty-four who was under the care of Mr. Reginald Clarke of Lee Park. Apparently in consequence of her having administered to herself an excessive purge, she was attacked with profuse diarrhoea on Dec. 16th, and during a violent expulsive effort she suddenly exclaimed that something had given way in the region of the gall-bladder. This was followed at once by pain, which became rapidly intense. Mr. Clarke found a large rounded tumour projecting the abdominal wall forward and having the relations of the gall-bladder. The motions passed during the day after the onset of the pain consisted almost entirely of blood, being later of what was apparently digested blood. The friends made no mention of this circumstance till after the operation. Mr. Clarke in consultation with Mr. Burroughs urged operative interference as the patient was becoming rapidly worse, and the patient consenting she was removed into St. John's Hospital, Lewisham, for the purpose. Mr. Lane saw her on the 21st, and though she was practically moribund agreed with Mr. Clarke that a relief of the distended condition of the gall-bladder might, even at this period, be of service to the patient. Consequently the greatly distended gall-bladder was exposed, the tumour at once projecting through the incision. It was incised and more than three-quarters of a pint of blood-clot was removed. As it was then found that the common bile and common hepatic ducts were enormously distended by the same material nothing further was done. Dr. Shaw examined the parts and found that the hepatic aspect of the gall-bladder, together with the adjacent portion of the liver, was rent, and that all the ducts in the liver also were filled with clot. In support of his explanation that the rupture had resulted during violent straining Mr. Lane quoted from a paper by Dr. Willard² a case in which death appeared to have resulted from rupture of a distended gall-bladder and from hæmorrhage into the peritoneal cavity. He considered his case to be of sufficient rarity and interest to place before the society. For many reasons it was very difficult to obtain from the friends of the patient any definite details prior to the operation.

Mr. W. G. SPENCER related a case of Traumatic Cystic Lympho-sarcoma of the Shoulder removed after Five Years' Growth by Amputation of the Right Upper Extremity, the flap being taken entirely from the upper half of the arm owing to the skin being widely involved. The patient lived in New

Zealand and was now twenty-one. In 1889 he bruised the right shoulder, which remained painful, and in a few months a soft swelling slowly formed above the clavicle. During more than three years repeated incisions were made and drainage-tubes inserted, the interior of the cysts scraped, and the clavicle removed. He was attacked several times by inflammation, the right arm became swollen, and his general health suffered so that in June, 1894, it was stated to him that an early fatal issue was to be feared. During his voyage to England all the incisions healed, leaving the skin over the tumour marked by scars. All swelling of the arm disappeared, and upon arrival he was in robust general health. He was taken by Dr. Frederick Mounat to see Mr. Macnamara, who, being about to leave town, called Mr. Spencer in. Covering the right shoulder was a tense elastic tumour, which extended from the third rib in the anterior nipple line to the spine of the scapula behind and from the inner border of the sterno-mastoid muscle to the point of the shoulder. It projected upwards from the shoulder to the level of the angle of the jaw, and caused a bulging in the axilla below. All the central dome of the tumour was covered by scars, and there the tumour was more adherent and contained solid matter. At the periphery the skin and deep structures were free and no solid matter was to be felt. The arm was quite natural. In consultation it was agreed that the disease was probably an encapsuled cystic sarcoma, and that it was possible to remove it provided that the encapsulation was confirmed and that the vessels could be ligatured beforehand. Mr. Spencer first made an incision below, raised up the tumour from in front of the upper three ribs, cut across a partially reformed clavicle, and, by taking the third rib as a guide, ligatured the subclavian vein and artery on the first rib. The flap was fashioned by raising all the skin and fascia of the upper part of the arm, the pedicle of the flap being formed by the skin of the armpit and by the posterior axillary fold. The flap thus depended for its nutrition upon posterior cervical and dorsal vessels. The tumour was removed with the scapula, to which it was intimately attached, by shelling out. This exposed the internal jugular vein, the dome of the pleura, which bulged in the root of the neck internal to the scalenus owing to the atrophy of the clavicular portion of the sterno-mastoid after the excision of the clavicle. The main floor of the wound was formed by the sterno-mastoid, scaleni, the cut ends of the scapular muscles, and the upper two ribs. The skin flap from the arm covered in the wound and healing took place well as far as it was concerned; but the skin which had covered the spine of the scapula and acromion, naturally thin, had been in part undermined by the tumour, and this skin slowly became gangrenous. *Pari passu*, however, with the removal of the slough the muscles in the base of the flap atrophied, hence there was enough to make good the loss of skin at the upper and back part of the neck. The intracystic material proved to be a lympho-sarcoma. As shown in the microscopical specimens and drawings the contents of the cystic lympho-sarcoma, cystic from the first, with only a small amount of intracystic material, was excessively rare. It was difficult to understand how the growth could have been otherwise treated even at an early stage; if the skin could have been supplied by transplantation the involvement of the large vessels of the neck in the growth would have led to their ligature, and so probably to gangrene of the arm, had removal of the tumour only been attempted. The patient was about to return to New Zealand and the prognosis appeared to be quite favourable.

Dr. WALLIS ORD related a case of Complete Unilateral Arrest of Development with Arcus Senilis and without Hemiplegia in a girl aged twelve years. There was nothing in the history of the case that suggested any cause for this condition, except that the mother had suffered during her pregnancy from extreme mental anxiety due to nursing an elder child who died from hydrocephalus. The whole of the right side of the body below the level of the eyebrows was distinctly smaller than the left, bones and soft structures being alike affected. Above that level the conditions were reversed. There was no paralysis, rigidity, or contraction; ordinary sensation and faradaic sensibility were unimpaired, and the child's intellect was good. In the right eye there was a thin, sharply defined arcus above and below, and there was also considerable myopic astigmatism. Reference was made to a very similar case published by Dr. J. S. Bury, with very marked hemiatrophy of the tongue. The pathology of the case seemed to be obscure, but Dr. Ord suggested that it was an extremely mild form of the condition known as

² The Transactions of the American Surgical Association, 1893.

infantile spastic hemiplegia.—Dr. J. TAYLOR said that the patellar reflex was usually more active on the hemiplegic side if there was an intracranial lesion of a definite character. He regarded the case rather as a general defect of development of the nervous system.—Dr. WALLIS ORD, in reply, said that he looked upon the case as one of the class of spastic hemiplegia though no actual spasm was present.

OBSTETRICAL SOCIETY OF LONDON.

President's Address.—The Disintegration of Organic Tissue by High Tension Currents.—Exhibition of Specimens.

A MEETING of this society was held on March 6th, Dr. G. E. HERMAN being in the chair.

Dr. F. H. CHAMPNEYS, in his presidential address, made a spirited defence of the action of the society in granting certificates to midwives after examination. He argued that the society only endeavoured to protect their poorer countrywomen from the risks incidental to the employment of ignorant and irresponsible midwives, and that this troublesome and thankless task had been undertaken by them solely in consequence of the apparent non-existence of any authority competent for the duty. He pointed out that the usurpation of medical functions by the women who possessed their certificate could easily be repressed by reporting the facts to the society, as the offenders would be deprived of their certificates in accordance with the undertaking signed by each of them. He said that if the General Medical Council, before formally condemning the work of the society, had explained that the form of the certificate was open to objection the necessary steps would have been taken for its modification and amendment.

Dr. WATT BLACK proposed that the President be requested to allow his address to be printed in the Transactions of the society.

Dr. HERMAN seconded this, and it was carried with acclamation.

Dr. GRIFFITH proposed that a number of copies be printed, so that the address might be circulated among the Fellows of the society, and, at an appropriate date, among members of the General Medical Council and members of Parliament. (The address dealt with the subject of Midwives and their Relations to the Public and the Medical Profession.) This was seconded by Dr. POTTER, and carried.

Dr. J. INGLIS PARSONS read a paper on the Disintegration of Organic Tissue by High Tension Currents. He said that these investigations were undertaken to ascertain the capabilities of electricity as a destructive agent in the treatment of malignant disease. He had found from former investigations that the constant current was only effective at the poles for this purpose even with powerful currents. By using powerful interrupted voltaic currents a much greater area was injured, apparently by the force of the impact. He had some success with this method, but the results varied, some cases being more resistant than others. If the strength of the voltaic current was raised to meet this too much heat and caustic action were developed. It became necessary to investigate further. Having noticed the disruptive effects produced by currents of high electro-motive force, it was decided to have a transformer made to a special design. By this means quantity was turned into pressure, heat and caustic action were reduced to insignificance, while the destructive action was enormously increased. The transformer was capable of working up to 150 000 volts, and could be graduated from zero to the pressure required within certain limits. The resistance of the transformer was kept low, so that as large a proportion of energy as possible might be expended on the organic tissue when in short circuit. The primary coil was supplied by six accumulators. A manual rheotome was used so that the operator had perfect control over his instrument. Freshly killed beef was chosen as the best organic tissue upon which to try the discharges, because its structure would easily show any alterations that might take place, and it could be obtained in sufficient mass to allow the current to diffuse. Great difficulty was experienced in cutting sections from the beef after the current had passed through it. Even when frozen or mounted in paraffin it crumbled away into débris. By lowering the pressure in the transformer some sections were obtained and the muscular fibres were found to be broken up throughout the path of the

current. (This was well illustrated by magic lantern slides and micro-photographs.) The destruction was found to extend throughout the path of the current, and was not confined to the poles like the constant current. The sections showed no evidence of heat or caustic action. Some experiments were then tried with an air gap in the circuit, instead of connecting the beef directly to the transformer. The destruction was nothing like so great, probably on account of the high resistance of the air gap. The diffusion of the current was then worked out as nearly as possible by cutting sections from different parts of a thick piece of beef after the passage of the electricity. The area broken up was found to correspond very nearly to the shape of an elliptic spindle. When the poles were not always placed at the same distance apart it was necessary to know the proportion between solid elliptic spindles of different sizes. With the poles six inches apart the solid contents were twenty-seven times greater than at two inches, consequently a corresponding increase or decrease must be made in the pressure of the current or the number of interruptions according as the needle points were moved further apart or brought nearer together. Finally, a Leyden jar acting as a condenser was then introduced into the circuit. The character of the discharge was altered. It took place with far greater rapidity. The maximum pressure was lowered to about 20 000 volts, with a corresponding increase in quantity. The sections taken showed an utter destruction of the beef. Apparently very little diffusion occurred; the discharge made only a narrow lane from one pole to the other. Dr. Parsons gave some demonstrations illustrating the paper.

Dr. LEWIS JONES said that he had made similar experiments on the disintegration of tissue by means of high tension discharges, using a transformer. He was astonished that Dr. Parsons should speak of the destruction of tissue as being produced by the "force of impact," such an expression being vague and meaningless. The destruction of the flesh was due simply to the heat produced by the discharge; indeed, there was no other possible way in which the electrical energy could expend itself on such a conductor as a piece of flesh. In his (Dr. Lewis Jones's) experiments the piece of meat quickly became heated, and if the operation was continued it soon emitted steam and smoke, and finally flame. To say that there was no heat because a thin platinum wire was not heated by the coil discharge was most misleading. Of course, under the conditions of the experiment shown the platinum wire could not possibly have been heated appreciably. The destruction of tissue was much greater round the poles than in the interpolar area, and this point should have been mentioned more clearly by Dr. Parsons.

Dr. HORROCKS said that if it could be shown that living cells, either normal or pathogenic, could be broken up by an electric current, then it was conceivable that this method had a future before it. It had long been known that a simple fracture of a bone united aseptically. Similarly, if one could break up the tissue of, say, a tumour or an inflammatory mass by electrical currents one might succeed in setting up changes which would result in the absorption of the tumour or the exudation. He (Dr. Horrocks) drew attention to the kind of current employed—namely, the faradaic or induced. He could not quite understand how Dr. Parsons had arrived at the conclusion that none of the effects produced were the result of heat. Certainly the sparks shown that evening were very much like lightning flashes, and it was a well-known observation that in death from lightning there was evidence of the effect of heat, especially at the entrance and exit of the electrical fluid.

Dr. ROUTH said that Dr. Parsons had shown how completely the interrupted current could destroy tissues. He asked whether Dr. Parsons was acquainted with the experiments of Sir Benjamin Ward Richardson, which showed that simple non-electrical vibrations changed and reconstructed tissues in various ways. The experiments alluded to were performed on blood taken from the finger, and the products after the shock examined under the microscope. It should not be forgotten that the action of the interrupted current might be influenced in some instances by a neighbouring vibratory wave, and the results be modified.

Dr. PARSONS replied.

The following specimens were exhibited:—

Dr. LEWERS: Tubal Mole removed by Abdominal Section.

Dr. ROBERT WISE: A Couch Table.

Dr. MACNAUGHTON JONES: Uterine Polyp, Vaginal and Uterine Insufflator, and Vaginal and Uterine Stem.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Ruptured Tubal Gestation.—Enteric Fever complicated by Phlebitis and Pleuro-pneumonia.—Traumatic Gluteal Aneurysm.—Exhibition of Cases and Specimens.

A MEETING of this society was held on March 1st, Dr. J. E. EDDISON being in the chair.

Dr. HELLIER showed Marchand's Lacto-butyrometer. This is a quick and simple means of estimating the amount of fat in breast milk. The process consists essentially in dissolving the fat with ether and then throwing it out by admixture with absolute alcohol. The specific gravity of the milk is also taken. In good milk the specific gravity and fat percentage are correspondingly high, but when the specific gravity is high and the fat percentage low infants will not thrive well upon it, and the milk must be looked upon as abnormal.

Mr. W. A. STOTT read a paper on a case of Ruptured Tubal Gestation. Special mention was made of an anomalous sign which was elicited about twenty-four hours after the rupture and which gave rise to an appearance of perforated gastric or duodenal ulcer. The patient was thirteen weeks pregnant, and her symptoms of severe peritoneal hæmorrhage followed immediately an act of micturition. When first seen, nine hours after the onset, everything pointed to ruptured tube, although retroversion and fixation of the uterus, together with great thickness and rigidity of the abdominal walls, prevented a satisfactory bimanual examination. Fifteen hours later it was found that the liver dullness had vanished. In addition all pain had become localised over the stomach and was rendered intense by anything swallowed. Pain had entirely left the pelvic region, and slight abdominal distension had come on. So soon as permission could be obtained the abdomen was opened, twenty-seven hours after onset. The plan intended was to make two incisions: (a) a median hypogastric one, to allow of free washing out from above and then to be used for draining, and (b) an epigastric incision to deal with the stomach lesion. The first-mentioned incision was made, and exploration proved the absence of free gas or food in the peritoneum and the correctness of the original diagnosis. The left Fallopian tube and nearly three pints of blood were removed. The middle portion of the tube was distended and showed a large T-shaped rent. The patient made a rapid and perfect recovery.—The paper was discussed by Dr. Hellier, Dr. Kilner Clarke, Dr. Churton, Mr. Littlewood, Mr. Croft, Dr. Eddison, and Dr. Griffith.

Dr. CHURTON read notes of a case of Enteric Fever complicated by Phlebitis and Pleuro-pneumonia, and followed by Tonsillitis and Peripheral Neuritis. A stout but not very strong girl aged twenty-four was ailing on Sept. 20th, 1894, but continued at work for eight days. On Sept. 29th the temperature was 105° F., pulse 108, respiration 32; a dusky flush on face; diarrhoea; the colon, dull and apparently full, was washed out with warm water. For a week the temperature varied from 103° to 105°.—Oct. 6th: Swelling of right leg; tenderness over popliteal vein. Dulness over lower lobe of right lung; pulse 120, respiration 44; motions still rather frequent and offensive; colon resonant. Salol, ten grains, every six hours.—10th: No diarrhoea; salol omitted; after this date there was constipation.—15th: Signs of pleurisy and pneumonia in left lower lobe.—22nd: Friction sound over right lower lobe, with pain relieved by dry cupping and small doses of morphia. The temperature was normal on Nov. 1st. A week later strict milk diet was stopped.—13th: Sore-throat after chill from an open window; pyrexia for four days.—19th: Pain in right leg, gradually increasing for a week, then "pins and needles" in the toes, chiefly in fourth and fifth; numbness and aching in leg and ankle; nerves tender. The neuritis lasted six weeks. The patient was very sensitive to cold and attributed each additional disorder to a definite chill—turning upon cold sheet and mackintosh after being washed; draught from a window; cooling of room in early morning for stove-cleaning &c.; application of methylated spirit to the back. No antipyrin or cold sponging or baths were used. Quinine, ten grains, was given once; calomel, half a grain, several times. The intestines were cleared as far as possible of "culture media" and kept clear. The case looked serious from the first, and complications began early. The source of the fever could not be found. A nurse attending this patient, after slight malaise for a week or two, was decidedly ailing

on Nov. 28th; went off duty on Dec. 2nd; next day had temperature 105°, with delirium and signs of pleuro-pneumonia in right lower lobe; rose spots in second week; troublesome constipation possibly the cause of a relapse from Dec. 19th to 31st, with renewal of pleurisy; convalescent on Jan. 27th, 1895. She had tepid sponging once, but afterwards declined it when offered.—The paper was discussed by Dr. Eddison, Dr. Solly, Dr. Kilner Clarke, Dr. Chadwick, Mr. Brown, and Mr. Hartley.

Mr. W. H. BROWN read notes of a case of Traumatic Gluteal Aneurysm treated by the old operation of turning out the clots and sac and ligaturing both openings of the vessel. He drew attention to the small number of recorded cases, to the advantages of a very free incision, and to the absolute necessity of a trustworthy surface marking in this case, that of Lizar's having been used.

Mr. ATKINSON related the case of a corpulent middle-aged man admitted under him some years ago with a large Hæmatoma of the Buttock caused by a blow. Three weeks' rest in bed with evaporating lotions reduced the swelling so much that, at his request, he was allowed to go home, but returned next day with a tumour larger than ever. Rupture of the gluteal artery being diagnosed, a long incision was made over the swelling, the clots turned out, and the torn vessel found; this was with difficulty ligatured.—Dr. EDDISON referred to Syme's classical case of gluteal aneurysm. He was present at the operation.

The following cases, pathological specimens, &c., were shown:—

Dr. GORDON SHARP: Upper Jaw from a case of Chronic Glanders.

Dr. CHURTON: (1) Case of hemiplegia from Thrombosis of Middle Cerebral Artery, subsequent Neuritis in Cervical and Brachial Nerves; (2) Patient with Two Abdominal Tumours—(a) Movable Right Kidney and (b) Pyloric Cicatricial Growth.

Mr. W. H. BROWN: (1) Case of Supra-pubic Lithotomy in Adult in which Bladder was sutured; (2) Calculus removed from the Urethra behind a Stricture.

Mr. HARTLEY: Congenital Dislocation of Radius (patient, cast, and photographs).

Mr. LEE WELLS and Dr. T. WARDROP GRIFFITH: Muscular Atrophy after Injury. (The patient has a symmetrical abnormality of the muscles of the arm.)

Mr. LITTLEWOOD: (1) Epithelioma arising in Sebaceous Cyst; (2) Destructive Arthritis of Ankle-joint removed from a Woman aged fifty-six; (3) Hydrocele of Cord removed from a boy.

Dr. T. WARDROP GRIFFITH: Case of Raynaud's Disease affecting the Ears.

Mr. MAYO ROBSON: Case of Pyloroplasty.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

A Review of the last Twenty Years at the Worcester County and City Lunatic Asylum.—Atrophy and Sclerosis of the Cerebellum.—Influenza as a Factor in the Increase of Insanity in Ireland.

A GENERAL MEETING of this association was held at the Powick Asylum, near Worcester, on Feb. 21st, under the presidency of Mr. CONOLLY NORMAN.

The proceedings commenced with an address delivered by Dr. COOKE, medical superintendent, entitled "A Review of the last Twenty Years at the Worcester County and City Lunatic Asylum, with some conclusions derived therefrom." After briefly describing the asylum in the year 1875, Dr. Cooke indicated the additions and alterations that had been made in the accommodation provided for the patients, and the improvements that had taken place in the sanitary and heating arrangements since that date. During the period under review there had been an increase in the number of the patients, due partly to an addition to the population, partly to a decreasing death-rate, and partly to the fact that a number of imbeciles formerly kept in the workhouse are now sent to the asylum. Everything possible had been done to ameliorate the condition of the patients and to promote their cure, and by more systematic training and in various other ways every effort had been made to render the nurses and attendants fully capable of discharging the important duties imposed upon them.—A discussion followed, which was entered into by the President, Dr. Nicolson, Dr. White, Dr. Spence,

Mr. Whitcombe, Dr. Fletcher Beach, Mr. Brinton (member of committee), and others.

Dr. BOND read a paper on Atrophy and Sclerosis of the Cerebellum. An account was given of the clinical history and post-mortem appearances of a well-marked case occurring at the Banstead Asylum. The chief features of the case were the long duration (marked ataxia had been noticed for fifty-three years—i.e., since the age of seven), the practically total destruction of the organ by conversion into fibrous tissue, and the fact that during life very pronounced mental deficiency had existed, at least from the age of seven years, though at death but little cerebral atrophy was found. Allusion was made to several other published cases of cerebellar disease, and by a comparison of them certain deductions were attempted. The microscopical appearances were illustrated by a photo-micrograph.—Dr. Bond's paper was discussed by the President, Dr. Cowan, and Dr. Fletcher Beach.

The General Secretary then read for Mr. McCLAUGHRY a paper entitled "Influenza as a Factor in the Increase of Insanity in Ireland." He first gave a history of influenza, in which he showed that it was known and written on as far back as the fourteenth century, and was first mentioned by Hippocrates. Passing on to the present day, he said we find that the etiology of the disease has for the past two years absorbed the attention of eminent medical men, and, according to the report of Drs. Parsons and Klein to the Local Government Board, there seems no doubt as to the influence of a bacillus which causes the disease. Mr. McClaghry had addressed a series of questions to the medical superintendents of the various asylums in Ireland, and he analysed and made remarks upon their replies. It seems that in forty-nine cases the apparent cause of insanity was influenza, and that the most common type of the former disease was melancholia. Although most of the medical superintendents did not believe that insanity was directly or indirectly due to the disease, he thought that, taking the aggregate number of cases admitted during one year into the twenty asylums from which he had received replies, influenza was as powerful a cause as tea drinking, tobacco smoking in youth, and ether drinking, all of which have been assigned as potent factors in the increase of insanity in Ireland.—A discussion followed in which the President, Dr. Cooke, Dr. Fletcher Beach, and Dr. Seymour Tuke took part.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Etiology of Tumours.

An ordinary meeting of this society was held on March 6th, Mr. T. F. CHAVASSE, President, being in the chair.

The PRESIDENT showed a Uterine Myoma weighing nine pounds which he had removed by abdominal section from an unmarried woman aged thirty-five years. The history of growth extended back four years. Numerous adhesions existed, and the pedicle, which was broad, was treated extra-peritoneally by a wire constrictor. Recovery was uninterrupted.

Mr. GEORGE HEATON showed a boy aged twelve years with a large Valvular Growth growing from his left false cord and causing much inspiratory dyspnoea. In addition to the main growth there were several smaller ones growing from the mucous membrane on the inter-arytenoid space. The boy had suffered from frequently recurring attacks of croup, and a year previously had had tracheotomy performed for laryngeal obstruction, and wore a tube twelve days. Mr. Heaton proposed to remove the growths by laryngotomy, and gave his reasons for preferring this method.

Dr. FOXWELL exhibited a man with a New Growth originating in the Posterior Mediastinum, which had compressed the main bronchus of the right lung and also that supplying the lowest lobe. The superficial veins of the lower half of the thorax were dilated, especially on the left side (probably from pressure on the smaller azygos as it crosses the spine to join the larger). There was also a large mass of glands in the right supra-clavicular fossa. The first symptom of ill health was noticed at the end of November, 1894.—Dr. FOXWELL also showed a boy aged three with a large Liver of very dense consistence, which he considered to be Cirrhotic owing to alcohol, with which he had been regularly dosed by his parents.

Dr. MORRIS showed a Brain from a case of Cerebral Hæmorrhage. A large hæmorrhage in the left hemisphere

had burst into the lateral ventricle and passed downwards into the medulla. The symptoms were apoplexy, slight rigidity of all the limbs with occasional unconscious movements, no strabismus, facial muscles equally inactive, inability to swallow, Cheyne-Stokes respiration, equally contracted pupils, polyuria, and glycosuria. The case was first diagnosed as diabetic coma, and subsequently as hæmorrhage into the pons or medulla.

Dr. LESLIE PHILLIPS showed three patients—(1) a case of Chronic Pemphigus of eight months' duration noteworthy from the very small size of the great majority of its bullæ; (2) a case of Phagedænic Ulceration of the Penis in course of repair after the free application of the Paquelin cautery; and (3) a man discharged from the army in India on account of Syphilis. One side of the nose had been lost nineteen months after the primary sore, and much destructive ulceration had attacked the lesions in other parts of the skin. Dr. Phillips directed attention to the occurrence in his practice at the present time of many cases of syphilis of a severe and intractable type.

Mr. CHRISTOPHER MARTIN showed a Sarcoma of the Ovary removed successfully from a woman.

Dr. O. J. KAUFFMANN then read a paper on the Etiology of Tumours.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases.—Treatment of Suppuration in certain Osseous Cavities.

THE eighth meeting of the seventy-fourth session of this society was held on March 6th, Mr. JOSEPH BELL, Vice-President, being in the chair.

Dr. A. L. GILLESPIE showed three patients: (1) a young man with Deformity of Both Hands, only the thumb and two fingers being present; (2) two sisters with Goitre and Rapid Pulse in whom marked improvement had taken place under the administration of bromide and iodide of strontium; and (3) a child with Persistence of the Anterior Fontanelle. Dr. Gillespie also gave an exhibition of Lip-reading in the Deaf and Dumb.

Dr. NORMAN WALKER showed a peculiar case of Eczema exhibiting a Linear Eruption, which had commenced on the wrist and extended up the arm and down the chest. He also showed a case of Lichen Spinulosus.

Dr. WILLIAM RUSSELL showed: (1) a Malignant Ovarian Tumour; (2) the Lungs from two fatal cases of Influenza Pneumonia; (3) an Aneurysm of the Abdominal Aorta; and (4) an Impacted Gall-stone, the gall-bladder having been tacked to the hepatic flexure of the colon and the abdominal wall, and so rendered functionless.

Dr. LEITH showed: (1) a Pancreas with Abscesses in the head, tail, and body; there were impacted gall-stones in the bile-duct; and (2) photographs of an Aneurysm opening into the Superior Vena Cava.

Dr. McBRIDE read a paper on some questions with regard to the Diagnosis, Prognosis, and Treatment of Suppuration in certain Osseous Cavities. He divided his subject into—(1) suppuration of the middle ear; and (2) suppuration of the nasal accessory cavities. 1. In suppurative ear disease, more particularly when chronic, the great desideratum was free drainage. He first sketched the various operative methods for gaining access to the middle-ear cavities. Recent cases of middle-ear suppuration where no great amount of destruction of the drum had taken place were usually curable with Schwartz's operation alone. It was a question, therefore, whether in subacute cases threatening to become chronic the mastoid antrum should not be opened more frequently than was at present customary. In chronic cases it was rare to get a cure. It was recommended by surgeons to drain through the mastoid in cases of chronic suppuration which had resisted treatment for a year. His own experience had made him an opponent to this view. 2. Suppuration of the nasal accessory cavities. If in a patient we had arrived at the conclusion that the antrum, anterior ethmoidal cells or frontal sinus were at fault it was usual to suspect the antrum first, and by various methods—e.g., posture, transillumination, introduction of a tube into the natural opening, and exploration—we could determine whether or not it contained pus. If it did not we were driven to the conclusion that either the anterior ethmoidal cells or the frontal sinus gave origin to the discharge. He thought it doubtful if even the most skilled rhinologist in

that case could do more than express an opinion and explore. Having sketched the treatment of such a case he dwelt on the difficulty of diagnosing suppuration of the frontal cavity. In empyema of the posterior ethmoidal cells and sphenoidal sinus diagnosis became still more difficult. In treatment of empyema of the antrum a great deal depended on the duration of the affection. Opinion was generally in favour of making an artificial opening. In recent cases it was best to open through the socket of a tooth. In chronic cases, where drainage was required for months or years, opening through the alveolus was best. He deprecated opening through the meatus as the orifice was difficult to maintain. In cases which resisted all other efforts Jansen's operation might be employed. In view of the extreme obstinacy of these antral cases if allowed to remain for years, he thought they ought to be opened early, when the extraction of a tooth and the introduction of a vulcanite plug with regular washing would effect a speedy cure.—Mr. JOSEPH BELL quite agreed that they should not be in too great a hurry to open the antrum in chronic middle-ear suppuration, especially in children. With reference to the different methods of operation, he thought the great thing was to get into the antrum and then work one's way upwards and backwards, cutting away all the softened bone and not removing more healthy bone than was necessary.—Dr. MACKENZIE JOHNSTON thought cases of middle-ear suppuration would undoubtedly benefit by opening, but he thought patients would not submit to the operation till the surgeon was prepared to say that it was necessary. At present they were not in a position to say whether a case should or should not be operated upon simply because the discharge did not stop in twelve months. When a case lasted longer were they to operate or await symptoms? He would rather open at the earlier stage if one could get the sanction of the patient and the practitioner.—After some remarks by Mr. WALLACE, Dr. MCBRIDE replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Intra-ligamentous Cyst.—Ovary and Tube removed for Pyosalpinx.—Leucorrhœa: its Causes, Varieties, and Treatment.

A MEETING of this Section was held on March 1st, Dr. R. D. PUREFOY, President, being in the chair.

Dr. SCOTT said: "The specimen of Intra-ligamentous Cyst described by Dr. Macan at a former meeting was placed in my hands by the Reference Committee for examination. It consists of the greater portion of the uterus and the appendages of both sides. In the cervical portion of the uterus I found the cavity to be one inch deep, while the body contained three myomata about one and a quarter to one and a half inches in diameter and some about half an inch in diameter or less. The total uterine mass measured about four inches antero-posteriorly and about two inches laterally. The Fallopian tube on the left side measured about three inches, and with the ovary was apparently normal. On the right side the broad ligament was distended by a large sac measuring about four and a half inches antero-posteriorly and about six inches laterally. The Fallopian tube was stretched by the cyst until it measured eight inches, and was so very closely incorporated with the cyst wall at its uterine end that microscopical sections had to be made to trace its position. The right ovary was rather smaller and more elongated than the left. The ovary and Fallopian tube lay at opposite sides of the sac. The position of the sac in the broad ligament, filling up the space between, and attached to both the ovary and Fallopian tube and its epithelial lining, would point to an origin from the remains of that part of the Wolffian body known as the parovarium, or from the small portion of the Wolffian duct which is sometimes attached to the tubular portion of the parovarium."

Dr. F. W. KIDD exhibited an Ovary and Tube removed for Pyosalpinx. One week after operation the stitches were removed, and there was perfect union of the abdominal incision.

Dr. MORE MADDEN said that the subject of Leucorrhœa is deserving of fuller consideration than is generally accorded to it. The term should be restricted to such non-hæmorrhagic or mucoid discharges from any portion of the genital lining

membrane as contain morphological or other elements foreign to healthy mucus, and are of pathological significance. Vulvar leucorrhœa is most frequently brought under notice in pædiatric practice, and more usually is of constitutional or strumous origin, although it not infrequently arises from topical causes, whether catarrhal, or simple inflammatory, traumatic, or specifically infective, such as gonorrhœa. Vaginal leucorrhœa may be caused either by any of the local exciting causes of genital hyperæmia or by any abnormal constitutional condition by which the tenuity of the vaginal vessels is so impaired as to give rise to non-hæmorrhagic exudation therefrom. The most common of the former causes are catarrhal and simple inflammatory vaginitis; and next in frequency is gonorrhœal infection. The distinction between these is generally a matter of difficulty and is often an impossibility in actual practice; in many instances the physician must rely more on the history, symptoms, and probabilities of the case than on any differentiation from the readily ascertainable presence or absence of gonococci in the discharge. Whether specifically infective or not, however, the treatment of these cases is practically identical. In either instance the primary object should be to secure as far as possible the asepsis of the affected parts by the free use of warm antiseptic injections, such as lysol or boric acid (1 in 25), or corrosive sublimate (1 in 2000), so as to sterilise and cleanse the vaginal surface from the discharge which, even if not specifically infective, when allowed to accumulate or decompose must act as a direct source of irritation, as well as a possible nidus for pathogenic micro-organisms by which the entire genital tract may be infected. In the second place, the same indications may be carried out most effectually immediately after each douching by vaginal insufflations of loletin, salol, or boric acid powder, or so-called "dry treatment." For the relief of pruritus of the pudendum Dr. Madden suggested the application of the methylene blue lotion, which he has recently recommended as one of the best of all local analgesics in pruritic affections generally. Cervical leucorrhœa is very frequently of special importance in connexion with the causation of obstructive dysmenorrhœa and sterility, in which cases the cervical canal may be so sealed by an abnormally viscid and hyper-alkaline exudation from the Nabothian follicles and cervical endometrium as to interpose mechanical obstacles to either menstruation or conception. In the local treatment of such cases chief reliance should be placed on the free use of the cervical curette, before which Dr. Madden recommends the thorough dilatation of the canal by means of his rapid dilator, and immediately after curetting he applies iodised phenol or salol bougies to the affected surfaces.—Dr. TWEED thought that leucorrhœa was a symptom of almost every disease of gynecology. He wanted to know some diagnostic difference between simple vaginitis and that due to gonorrhœa. For some time he had been using the microscope to distinguish between them, but was sorry to see that Dr. Madden threw some doubt on the bacteriological examination. He placed a little of the pus on a slide, pressed out with a cover-glass, removed the latter, and applied an aqueous solution of methyl violet. In a few minutes he washed it with water and replaced the cover-glass. The whole thing did not take more than two minutes.—Dr. ALFRED SCOTT said that if the pus was stained with methyl violet it was almost impossible to miss the micrococci. Unfortunately, there were about eight micrococci which belonged to the same class. The most convenient check was to stain by Gram's method. If they stain by this method they are not gonococci. Cultivation was much more difficult, and took from one to two months.—Dr. MORE MADDEN, replying, said that he was glad his paper had given rise to so much discussion, but doubted the ready diagnosis of gonorrhœal from ordinary leucorrhœa by the immediate recognition of the gonococcus.

YORK COUNTY HOSPITAL.—The annual meeting of the York County Hospital was held on March 12th. The Dean of York presided, and the 154th annual report was presented. The income of the hospital has suffered considerably through the depression in trade, but an increase of £31 in the workmen's collections was commented on with satisfaction. The Earl of Faversham contributed £250, which was employed in laying out the grounds in the rear of the hospital, where a very pleasing ornamental effect has been produced by planting evergreens and forming grass plots.

Reviews and Notices of Books.

Physiologie. Travaux du Laboratoire de M. CHARLES RICHEL.
Tome III. Avec 25 figures dans le texte. Paris: Félix Alcan. 1895. Pp. 577.

THIS volume embraces, amongst numerous others, the following subjects: 1. Chloralosis. 2. Serotherapeutics. 3. Tuberculosis. 4. Defences of the Organism. Chloralose is the body which results from the action of anhydrous chloral on glycose. It is crystallisable, being soluble in boiling water from which it is deposited in crystals on cooling. It has a disagreeable taste. In dogs, in doses of about three grains per pound weight of the animal, it has little action for about three-quarters of an hour. The muscles then appear to become rigid, with fibrillar contractions, and the movements become slow; intelligence is preserved, but there is somnolence; the animal lies down and the eyelids tend to close; there is at the same time an increase of reflex excitability, the animal trembling at the slightest sound. The movements of the heart and respiration are unaffected. At the expiration of an hour and a half sleep is profound, but the excitability is greatly augmented. The slightest touch causes almost a tetanic convulsion. The sleep, therefore, differs from that produced by morphia because the animal does not dream, and from that of chloral because the spinal cord is wide awake when the brain slumbers. It has been employed by M. Ch. Féré in cases of epilepsy, hysteria, and chorea. Another paper, by MM. J. Héricourt and Charles Richet, deals with Transfusion of the Blood of the Dog into the Peritoneal Cavity of the Rabbit. It is very remarkable that the injection of twelve cubic centimetres of the blood into the veins of a rabbit will cause its death in a few minutes, whilst it will readily bear the injection of 120 cubic centimetres into the peritoneum. After such an injection the animal crouches on its belly, and usually soon passes a large quantity of limpid urine. The temperature falls, and in the course of a week's time there is a notable loss of weight. An important point was also noticed—namely, that after the injection the virulence of the staphylococcus septicus was greatly diminished when the animal was infected with it, the blood of the dog absorbed by the rabbit appearing to possess the power of resisting the pathological influence of the staphylococcus. Guinea-pigs are more easily poisoned by the transfusion of dog's blood than rabbits. The introduction of twenty-five grammes of dog's blood per kilogramme was almost certainly fatal. The blood of the duck is even more poisonous than that of the dog; in the case of the rabbit seven grammes appear to be a toxic dose. A single gramme of the blood of the eel will kill a vigorous rabbit in the course of a few minutes, but a rabbit survived after the injection of five grammes of the blood of a carp. The authors of the paper have satisfied themselves that the injection of the blood of the dog into the rabbit, whether into the blood or into the peritoneum, retards the supervention of tuberculosis under conditions in which it would otherwise take place.

M. Richet has an interesting article on Functions of Defence in Man and Animals, dealing, amongst other things, with the power warm-blooded animals have of resisting exposure to cold. In the dog exposure to a cold of -91°C . for half an hour was accompanied by a rise in the rectal temperature, and it resisted the effects of that degree of cold for two hours. Shivering on exposure to cold may be contrasted, he remarks, with the beneficial effects of sweating on exposure to heat. He points out the advantages of the sentiment of fear which is inspired by so many animals and circumstances, and which saves us often from ourselves. The same may be said of the feeling of vertigo. M. Richet maintains that were it not for the sensation of

vertigo falls and serious accident would be of much more frequent occurrence. Pain, too, or the anticipation of it, has its protective influence. Under pain the respiration quickens, the heart beats more rapidly, the arterial blood pressure rises, the glands secrete more abundantly—all conditions that tend to the reinforcement of the biological activity of the organism. As Brown-Séquard would have said, there is dynamogeny of the whole body. Finally, he considers the remarkable means of defence we possess in our leucocytes and phagocytes against the multiplication of microbes in our system. The volume contains several other valuable articles.

LIBRARY TABLE.

Elements of Surgical Pathology. By AUGUSTUS J. PEPPER, M.S., M.B. Fourth Edition. London: Cassell and Co. 1894.—In a notice of the first edition of this book we expressed the opinion that it supplied a real want and supplied it well; and though in the twelve years that have elapsed since then great advances have been made in surgical pathology, we cannot but acknowledge that the work before us is still fully worthy of being recommended to the student as a trustworthy guide to the subject of which it treats. The present issue has been brought up to date, the original text having been entirely rewritten, and several new subjects being treated which were unnoticed in former editions. The book is remarkably free from mistakes of all kinds, but occasionally we find a sentence in which an alteration is desirable. The illustrations are numerous and good. Altogether the book is a worthy member of the excellent series of student's manuals to which it belongs.

Atlas of the Human Brain and the Course of the Nerve Fibres. By EDWARD FLATAU. Translated by WM. NATHAN and JOHN H. CARSLAW. Berlin: J. Karger. Glasgow: F. Bauermeister. 1894.—It is a difficult thing adequately to appreciate such a work as this. The result in the actual number of plates of what must have been a very great expenditure of time and care and industry may seem to be small, yet in this atlas we have presented to us all the important aspects of the brain in a sufficient series of the most beautifully executed plates. If anything can be substituted for the actual brain in the course of anatomical study, we should imagine that such plates as these could, and in one particular this atlas is peculiarly valuable—viz., the diagram which is given of the course of the nerves and tracts in the spinal cord. A short but sufficient explanatory text is furnished, and we congratulate the author on the completion of a work upon which he must have spent much pleasant labour, and the translators on the enterprise which has led them to render the atlas available to English students.

Diphtheria and its Successful Treatment. By BROWNLOW R. MARTIN, M.B. Dub., L.R.C.S. Irel. Second Edition. London: Baillière, Tindall, and Cox. 1895.—This little work of sixty-four pages is essentially an earnest recommendation of sulphite of magnesium as a reliable agent in the treatment of diphtheria. This sparingly soluble salt is to be applied locally by free insufflation, so that "about the sixteenth part of an inch deep of powder should be dusted all over the surface of the mucous membrane wherever the diffuse redness extends." At the same time, tabloids containing each five grains of the salt are to be sucked constantly, and perchloride of iron is to be administered, either alone or in conjunction with chlorate of potassium. The author records numerous cases, both in his own practice and in that of others, in which this treatment has been attended with success.

The Phonographic Record of Clinical Teaching and Medical Science. No. 4. London: Sir I. Pitman and Sons.—In accordance with an announcement already made the scope

of this publication has been widened, and the current number, in addition to two short clinical lectures, contains articles on the Use of Digitalis, by Dr. James Little, and on the Quenching of Thirst by the Use of Enemata, by Mr. C. W. Cathcart, F.R.C.S. The clinical lectures, which deal with the Backward Displacement of the Gravid Uterus, and with Chancres in Women, are respectively by Dr. Thomas Wilson and Prof. H. R. Spencer. We are pleased to note that the "Evercirculators," to which we referred last month, have commenced, and they should prove of great educational value to the members of the Society of Medical Phonographers, of which the "Record" is the official organ.

Respiration in Singing. By Dr. JOAL. Translated by R. NORRIS WOLFENDEN, M.D. London: F. J. Rebman. 1895.—This little work, although intended primarily for singers, contains many observations on respiration which are of interest both to the physiologist and the physician. The object of the book is to advocate the importance of costal respiration and its superiority over purely diaphragmatic respiration for ordinary purposes, and especially for the production of voice by singers. Dr. Joal makes out a strong case, but both the body of the work and the translator's preface are disfigured by the introduction of personal controversy.

Analytical Records

FROM

THE LANCET LABORATORY.

WYETH'S WINE OF TAR.

(JOHN WYETH AND BROTHER, PHILADELPHIA, AND W. F. HORTON, 30, SNOW-HILL, E.C.)

THE method adopted for the manufacture of this preparation is interesting. A solution containing malt and hops and a small quantity of honey is first made, which is then allowed to ferment for from four to six weeks at between 98° and 100° F. in the presence of tar specially selected for the purpose. When alcohol has been produced to the extent of between 7 and 8 per cent. the liquid is filtered and bottled. It is a dark-brown, alcoholic solution, possessing a not unpleasant smell and taste referable to tar constituents. It is said to be useful in bronchial and gastric catarrh, moderating the cough and promoting expectoration. Wyeth's wine of tar is certainly an advance on ordinary tar-water, which is unreliable, because very variable in composition, while it would appear that by the adoption of fermentation and subsequent filtration in the course of its preparation the irritating and acrid principles commonly present in tar, and which are to be found in the ordinary aqueous extract, are excluded. In addition, it obviously possesses nutritive properties, since it is in part prepared on the same lines as beer.

VARIOUS COMPRESSED TABLETS.

(PARKE, DAVIS, & CO., DETROIT, MICHIGAN, AND 451, OXFORD-STREET, LONDON, W.)

A useful series of compressed drugs, based upon more or less novel formulæ, which are worthy the attention of the profession, has recently been submitted to us by these enterprising pharmacists. We have subjected most of them to careful analysis, and in nearly all cases we have succeeded in getting reactions in response to the presence—although in some cases quite minute—of the various medicaments contained in them. Thus the saline and chalybeate tonic tablets are of somewhat complex composition, but we obtained distinct evidence of each constituent. The formula (after Dr. Flint) is as follows: sodium chloride, 3 grains; potassium chloride, 32 grains; potassium sulphate, 1·10 grains; potassium carbonate, 1·20 grains; sodium carbonate,

3·5 grains; magnesium carbonate, 1·2 grains; calcium phosphate, 1·2 grains; iron reduced by hydrogen, 9·20 grains; and carbonate of iron, 1·20 grains. That the reduced iron was present as such was proved by the fact that the residue left undissolved by water evolved hydrogen on the addition of dilute sulphuric acid. Of other compressed tablets the following appear to be worthy of mention: trifolium comp. (alterative), containing the extracts of red clover, stillingia, xanthoxylum, lappa, phytolacca root, and iris; acetanilide comp., containing acetanilide in conjunction with camphor monobrom., and citrate of caffeine; ergotin comp., composed of ergotin (Bonjean), tinct. foxglove and quinine sulph.; compressed tablets (anodyne) composed of camphor ext. henbane, morph. acetate, and capsicum; cubeb tablets, containing besides powdered cubebs, sulphate of iron, copaiba, Venice turpentine, sandalwood oil, and oil of wintergreen; tablets of Dover's powder; compressed tablets (chlorodyne) consisting of morph. hydrochlor., ext. cannab. Indica, nitro-glycerine, ext. hyoscyamus, and oleoresin capsicum; aphrodisiac tablets, composed of ext. damiana, nux vomica, zinc phosphide, and cantharides; tablets containing equal amounts of the bromides of sodium, potassium, and ammonium; and lastly, tablets (damiana comp.) composed of ext. damiana, phosphorus, and ext. nux vomica. They all serve as excellent illustrations of progressive pharmacy.

AUSTRALIAN BRANDY.

(JOSHUA BRUCE, MELBOURNE. LONDON OFFICE: 26, MARK-LANE, E.C.)

An analytical notice of this interesting and important colonial product appeared in THE LANCET of July 2nd, 1892, since which, however, we learn that it has been considerably improved; while in order to further guarantee its genuineness it is now being bottled in London under the personal supervision of the above firm. We have submitted a new sample to examination, with the result that, although we find a small diminution in the proportion of spirit, yet in every other respect its excellent quality is maintained. It is a pure product, possessing a blandness of flavour, and is well suited for medicinal purposes.

CASCARINE (LEPRINCE) LAXATIVE PILLS.

(MAURICE LEPRINCE, PARIS; LONDON: F. NEWBURY & SONS, 1 & 3, KING EDWARD-STREET, NEWGATE-STREET, E.C.)

The extract of "cascara sagrada" is a well-known valuable addition to modern aperients, but as ordinarily prepared it contains certain constituents which, if not irritating or giving rise to other objectionable results, are at least inert. In the above preparation M. Leprince claims to have separated a distinctly definite chemical product—cascarine—the administration of which secures the beneficial action of the "sacred bark," while it excludes the irritating effects which with some individuals are known to follow the use of this drug. The pills are neatly coated and contain a brown, brittle mass which dissolves completely in water. We find that the claims advanced in regard to their uniformity and ease of action are not without foundation.

MARROL.

(THE LIQUOR CARNIS CO., 28A, FARRINGTON-STREET, E.C., AND ASTON CLINTON, BUCKS.)

This is one of those valuable and interesting preparations belonging to a useful series of foods made by the Liquor Carnis Co., in which the ordinary physical conditions of fat are modified by the peculiar action of the enzyme of malt, by which it is held ready for immediate absorption and appropriation. Thus under the microscope the fat in Marrol, consisting of the yellow marrow of ox bone, appears to exist in true solution, but when a drop of water is added, immediately myriads of tiny fat globules are seen to separate. At the same time, the digestive activity of the diastase is not impaired, since an aqueous solution of Marrol rapidly converts starch into soluble carbohydrates.

According to our analysis the composition of Marrol may be thus represented: moisture (loss at 100° C.), 18.10 per cent.; mineral matter, 2.07 per cent.; fat, 10.43 per cent.; proteids, 2.31 per cent.; malt extractives, sugars, &c., 67.09 per cent. We may regard it broadly, therefore, as consisting of one part of marrow fat held in the state of emulsion by nine parts of pure active malt extract. Both, of course, introduce valuable proteids and mineral constituents into the compound, the former contributing compounds of phosphorus and iron (from the hæmoglobin and the fat of the marrow), and the latter the extracted phosphates of malt. Marrol is, therefore, of peculiar and undoubted value, therapeutically as well as dietetically. An important feature is its attractive flavour, which is partly referable to the delicate bitter of the hop contained in the malt extract.

"FOOTBALL" OATS.

(ROBERTS, SIMPSON & CO., 46, STANLEY-STREET, LIVERPOOL.)

This preparation consists of the berries of the oat rolled and flattened into wafers, by which, doubtless, it is rendered dietetically more acceptable. Prepared in the manner directed, a porridge of rich oaten flavour is obtained. This product is, of course, of the same high nutritive value as the oat itself, the proportion of nitrogenous matters and phosphatic constituents in which is well known to exceed all other cereals.

PILL FERRUGINOUS WITH CASCARA SAGRADA AND NUX VOMICA.

(W. H. SCHIEFFELIN & CO., NEW YORK. POTTER & SACKER, 80, FENCHURCH-STREET, E.C.)

Apart from the excellent formula of these pills they readily break up and diffuse their contents in water at the temperature of the stomach. Each contains sulphate of iron, 2½ grains; carbonate of potash, 2½ grains; extract of cascara, 1 grain; and nux vomica, ¼ grain—a combination which is designed to obviate the constipation associated with anæmic conditions, while securing the beneficial effects of the proto-carbonate of iron, which is formed on the interaction of the carbonate of potash with the proto-sulphate of iron.

MONTE FIANO (ITALIAN WINE).

(AGENTS: MORRISON, POLLEXFEN & BLAIR, 34, LEADENHALL-STREET, E.C.)

This wine is said to be grown under favourable environments both of soil and aspect, which doubtless would account for its freedom from that roughness upon the palate which characterises many Italian wines grown probably under less favourable conditions. As the following analysis indicates, it is a light, sound wine, well adapted for table use: alcohol, by weight 7.93 per cent., by volume 9.86 per cent., equal to 17.29 per cent. proof spirit; extractives, 2.03 per cent.; mineral matter, 0.18 per cent.; total acidity reckoned as tartaric acid, 0.42 per cent.; sugar, 0.10 per cent. Thus it is free from excessive acidity and contains practically no saccharine matters.

WINTER STOUT.

(BRATBY, HINCHCLIFFE & CO., LIMITED, SANDFORD-STREET, GREAT ANCOATS, MANCHESTER.)

This beverage closely resembles stout in appearance and tastes like home-brewed ginger-beer. Ginger, sugar, and a brown colouring agent—possibly derived from burnt malt—are probably, therefore, the chief ingredients of the preparation. On distillation it proved to contain 1.25 per cent. by weight of alcohol, equal to 1.57 per cent. by volume, or 2.75 per cent. proof spirit. In the light of this result it may be regarded as a temperance, and probably wholesome, beverage. It appears, however, to be liable to excessive and persistent frothing, which forms not a small drawback to a drink of this class.

COGNET'S CAPSULES (IODOFORM CREASOTED).

(LONDON AGENCY: ROBERTS & CO., 76, NEW BOND-STREET.)

The excellent formula of the fluid contained in these neat capsules is as follows: absolute eucalyptol, 0.10 gramme; pure creasote, 0.05 gramme; chemically pure iodoform, 0.01 gramme. On immersing a capsule in water at 100° F. the oily contents soon burst through the envelope, imparting the distinctive taste of each medicament to the water. The materials employed are evidently of the purest possible kind. The capsules are recommended in chronic bronchitis, laryngitis, and in other affections of the respiratory tract, as well as in phthisis.

New Inventions.

THE STANDARDISATION OF EUCALYPTUS OIL AND A NEW METHOD FOR THE SEPARATION OF EUCALYPTOL.

OIL OF EUCALYPTUS has of late years come largely into medicinal use, chiefly as an agreeable and effective antiseptic, and its purity is therefore of considerable importance. It is generally admitted that the oil best suited for medicinal purposes is that which contains the highest proportion of eucalyptol, which in genuine eucalyptus oil is the chief constituent. Other oil constituents have been known to be a source of irritation when the oil has been employed for the purposes of inhalation. Hitherto the standardisation and assay of eucalyptus oil have not been placed upon a very satisfactory basis, certain results of greater or less value being afforded by making observation of the boiling point and specific gravity, and by separating the eucalyptol by crystallisation in the cold. These physical methods promise now to be superseded by a well-understood chemical method, which is much more conveniently carried out and which is calculated to give a better estimate of the medicinal worth of the oil. The method alluded to is the precipitation of the eucalyptol in the form of a crystalline phosphate and its consequent complete separation in a pure state from foreign oils. Apart from the value of this discovery in affording a ready means of assaying eucalyptus oil, it enables the preparation of an article containing a perfectly definite and standard amount of true eucalyptol, so that standardised oil of eucalyptus may now be demanded. The process consists of the addition to the essential oil of eucalyptus or other volatile oil containing eucalyptol of a solution of phosphoric acid. For this purpose the oil to be treated should be at an ordinary temperature and not higher than 60° F., and the solution of phosphoric acid is best when it is of a specific gravity of not less than 1.750. The effect of this addition is to produce or precipitate a crystalline compound of "eucalyptol phosphate." The crystalline compound so formed is separated from the other constituents of the oil by any known process—such as pressure or centrifugal action—and the salt is subsequently decomposed by hot water for the production of a fluid absolute eucalyptol, which floats over the phosphoric acid solution and may be separated by decantation. This interesting discovery is due to Mr. L. R. Scammell, a member of the firm of Messrs. F. H. Faulding, of Adelaide and 9, South-street, London, E.C., who are placing standardised oil of eucalyptus on the market. We have recently examined in the Laboratory specimens of pure eucalyptol obtained in the manner indicated, and also a specimen of standardised oil stated to contain 50 per cent. eucalyptol. We found that the latter, when treated with syrupy phosphoric acid, turned into a semi-solid mass of crystals. On pressing the crystals between bibulous paper several times a clean and perfectly white cake of crystals was obtained, which on solution in hot water yielded a volume of eucalyptol exactly equal to a half of the volume of the original oil. This result is in perfect agreement, of course, with the statement that it contains 50 per cent. eucalyptol. Similarly the specimens of pure eucalyptol turned completely solid on stirring strong phosphoric acid with it, which on pressing and drying gave precisely the same volume as the original eucalyptol. The process is evidently a valuable discovery, and there can be little doubt of its importance, since it ensures the production of a pure and reliable agent for all medicinal purposes.

THE LANCET.

LONDON: SATURDAY, MARCH 16, 1895.

THE official roll of the profession, the Medical Register for 1895, is now before us, and calls for some analysis at our hands. We have already congratulated Mr. MILLER, the Registrar, on its early appearance.

The most interesting part of the volume to the profession is Table F., which shows the number of persons whose names were entered in, added to, or removed from the Medical Register, not only during the last year, but during the last twenty years. The names and addresses in the Register are only an approximation to the actual constitution of the profession at any given moment. There are constant sources of error in the migratory habits of a certain proportion of the profession, and in the unreported deaths of others. At special times, when the Registrar has wished to make sure of the accuracy of the addresses by letters of inquiry, five or six hundred of these letters have been returned unopened to the office. In one year no less than 618 names were removed from the Register because the persons whom they represented made no reply to such letters. In the last year this cause of error in the Register has only been ascertained in thirty-three cases, so that the statistics are unusually free from error on this score. There is another source of error which it is found difficult to eliminate—the number of deaths. This very table shows one of two things—either that the deaths in the profession are very inadequately ascertained, or that the members of the profession are getting healthier and less liable to death. All the deaths in 1894 that could be ascertained by the Registrar—and it is known that great pains are taken for this purpose—were 458. The deaths in the previous year were 546. Not only were the deaths during 1894 less by eighty-eight than those in 1893, but the average annual number of deaths of medical men for the last five years is much less than in the preceding five years. For the later period the average annual deaths were 522, whereas for the earlier, and with a smaller profession by thousands, the annual deaths were 582. The mortality of the profession is considered by statisticians to be excessive; it is therefore the more satisfactory to have this evidence that it is diminishing, but we cannot help fearing that a considerable proportion of such deaths are not reported to the Registrar of the General Medical Council. The profession is a scattered one; many of its members practise and die in remote places—on the sea, in colonies, and in foreign countries. We must not flatter ourselves that the 458 deaths in this table represent the total mortality of the profession.

But the most important figures in this table are those which give us the total numbers of the profession and enable us to judge of their tendency to increase or diminish. We may first notice the new names added to the Register. These numbers in recent years have been formidable. In 1887 1531 were added by registration to the profession, in 1892 1513, and in 1893 no less than 1579. In the year 1894,

with which we are now dealing, after the bloated figures of the two previous years, it is a relief to find that there was a fall to 1426 registrations, or 153 less than those of the year before, in which the numbers were the largest on record. To show with what rapidity the numbers of the profession have lately tended to rise, we may say that, whereas the average additions to the Register for the last nineteen years were 1259, for the last five years they have been 1426, which we have seen is exactly the number added in the year 1894. Coming to the total number on the Register for this year, we find it to be 32,637, as against 31,644 for 1893, or an increase of 993. As we have said, this can only be an approximative number, being liable to various errors; but it is doubtless correct enough for all purposes. One proof of this is its close correspondence with the numbers in the Medical Directory obtained by other methods, which are 32,590, or 47 less than those given in the Register.

There is silent evidence even as to character in the figures of this table. A line is given to removals from the Register under the penal clauses of the Medical Act. Twelve removals of this sort are tabulated in 1894, and this is the largest number—twice the average number—in the history of the Council. We have no wish to make light even of such a number; but distributed over 32,637 it is not very serious, amounting to 1 in 2719. In the majority of these the transgressions which led to removal were not such as courts of law would take notice of, but offences under the Medical Act, such as covering, &c. Students of the Medical Register will find much other material of interest in this volume on which we cannot now dwell. Every member of the profession can add to its accuracy and its value by sending the Registrar early information of changes in his own titles or address, or of the death of medical men on the Register.

NUMEROUS as have been the researches on the mechanism of accommodation in the eye, none of the theories that have hitherto been advanced seem to be able to satisfy all the conditions; and from time to time fresh researches are made essaying to afford a solution of physiological or of pathological phenomena not accounted for or not being capable of explanation on existing theories. The most recent investigation and discussion on the subject are to be found in the current number of *Pflüger's Archiv*, from the pen of Dr. WILHELM SCHOEN, who has long been engaged upon it. The physiological problem of accommodation as propounded by AUBERT was: How can the increase in the convexity of the anterior curvature of the lens in accommodation of the eye for near objects take place without change of curvature of the posterior surface of the lens and without change of place of the lens itself? Dr. SCHOEN thinks the question to be solved would be better put in these terms: How can the increased curvature of the anterior lens surface in accommodation of the eye for near objects occur without change of place, without material alteration in the curvature of the posterior surface of the lens, without forward movement of the whole lens, and without increase of tension in the anterior chamber? The first two postulates and the last may be regarded as settled, for that there is no augmentation of tension in the eye as the result of the act of accommodation has been proved in a very practical manner

by FORSTER, who noticed that in a case of conical cornea which had been punctured to allow of the escape of part, but by no means of the whole, of the aqueous humour the cornea became concave on fixing a near object and convex on looking at a remote one. In a second case of perforating ulcer of the cornea, after abscission of the projecting portion of the prolapsed iris the corneal reflection became distinctly larger when near, and smaller when distant, objects were looked at.

The anatomical data given in many text-books are, Dr. SCHOEN thinks, incorrect, but he supports the views of DONDEERS and of HENLE. He holds that the free part of the zonula or wall of the canal of Petit is composed of three fasciculi—an anterior, a middle, and a posterior—which separate from each other just behind the ciliary process. The anterior of these is identical with the anterior wall of the canal of Petit, and extends, forming arches with their concavities looking forwards upon the ciliary processes, to the anterior capsule of the lens, into which it is inserted tangentially about one millimetre in front of the equator of the lens. The middle fasciculus consists of a few fibres which are attached vertically to the capsule immediately behind the equator. The posterior cord is in close contact with the hyaloid, forms arches with their convexities forwards, and is inserted tangentially into the posterior capsule one millimetre behind the equator. Each of the cords is composed of separate fibres closely applied to each other. The canal of Petit is consequently bounded behind by the hyaloid membrane and in front is open to the posterior chamber by the spaces between the fibres of the anterior cord. Behind the ciliary process the fibres of the zonula decussate. The zonular fibres do not coalesce with the ciliary process, but extend over it for a considerable distance backwards, and they, with their epithelial investment, are continuous behind with the retina. The hyaloid membrane is quite independent of the fibres of the zonula. Much confusion has resulted from the non-recognition of this fact. At the ora serrata the retina becomes reduced to a single layer of columnar epithelium, which covers the choroidal epithelium as far as to the iris. Each of these columnar cells gives off a process which associates itself with that of the neighbouring cells. These collections of fibres gradually swell out to become zonular fibres and form the deeper layer of these fibres. At the ora serrata, in the eyes of the young and healthy, the retina slopes gradually into the ciliary epithelium. It consists here of supporting tissue only, or, more correctly speaking, of several rows of closely applied matted cells, the nuclei of which form two rows converging towards the ora. Here and there groups of cells form small villi which project from the retina. All of these cells send out processes like those above described, which run forward together and form the upper fibres of the zonula. The zonular fibres are thus nothing else than the elongated supporting fibres of the retina. In fact, the capsule of the lens is a continuation of the retina. It is doubtful whether the teeth—which, estimated at about forty in number, have given their name to the ora serrata—exist in the normal eyes of the child; macroscopically the ora forms a straight line, but there are many small villous processes at this part, and the name of ora serrata may be retained if no confusion is made between the above-named forty teeth well described by

HENLE and the 800 small toothlets formed by the villous processes. The microscopic teeth are gradually formed in association with the exercise of the power of accommodation as age advances. As the zonular fibres, which proceed from the retina, run chiefly to the anterior surface of the lens capsule, whilst those arising more anteriorly from the ciliary epithelium run chiefly to the posterior surface of the lens capsule, a decussation takes place which is seen at the internal angle of the ciliary body. The zonular fibres do not coalesce with the ciliary process, but are so interwoven with it that they are not easily detached. Seen on the flat surface of the process they form a kind of trellis-work of parallel fibres which stain easily with hæmatoxylin eosin.

The fibres of the ciliary muscle are divisible into three groups: the circular fibres at the inner angle of the ciliary process; the internal meridional fibres which take origin at the root of the iris and the angle of the ciliary body; and, lastly, the external meridional fibres which arise from the canal of Schlemm. Both of the groups of meridional fibres end in tendinous fibres, which are identical with the elastic lamellæ of the lamina fusca and suprachorioides. They penetrate the sheath of the optic nerve between the choroid and the retina. The anterior and posterior insertions of the external meridional fibres are relatively fixed. Their contraction causes an increase of pressure on the vitreous. The posterior attachment of the internal meridional fibres is relatively fixed, and the anterior relatively mobile. Their contraction draws the internal angle of the ciliary process backwards. The function of the external meridional fibres is chiefly to regulate the tension of the eye. The internal have the same action, but in addition keep the inner angle of the ciliary process in the right position and the lens at a proper optical distance.

After criticising the generally received theory of HELMHOLTZ to the effect that accommodation for near objects is effected by the contraction of the meridional fibres of the ciliary muscle, which relaxes the zonular fibres and thus permits the lens to become more convex, and those other theories which attribute accommodation to the action of the circular fibres of the ciliary muscle, to blood pressure exerted on the lens through the iris or the ciliary processes, to increased tension of the zonular fibres, and to change in the hydrostatic pressure in the anterior chamber, Dr. SCHOEN advances his own theory, which he thinks can best be understood from the following illustration. An elastic ball is to be grasped with both hands, the wrists being kept together. The ten fingers are then bent in so as to be applied to the ball along a line that, if the ball represented the globe, would correspond to the Arctic circle. If pressure be now made with the tips of the fingers the free part of the ball will bulge forwards. Now the finger-tips represent the ciliary processes and circular fibres of the ciliary muscle, the palms of the hands the meridional fibres of the ciliary muscle, and the two wrists the optic nerve. The anatomical relations, he contends, correspond completely to his theory for the anterior capsule. The zonular fibres and the retina form an investment to the vitreous humour and to the lens that are quite analogous to the elastic ball. The fibres of the ciliary muscle and choroid lie on the outside of the investment just as the palms of the hand are external to the elastic ball, and the ciliary processes form a similar groove, and exert the same kind of pressure

as the tips of the fingers in the above illustration. The depression caused by the ciliary process is always slight, never exceeding one millimetre.

IN accordance with the request of Her Majesty's Secretary for Scotland conveyed to them last May, the General Board of Commissioners in Lunacy for that country have furnished a special report respecting the Alleged Increasing Prevalence of Insanity in Scotland. This report has been published as a supplement to their last annual report. The Board at the outset say that no trustworthy information is obtainable in regard to assigned causes of insanity. They quote the following passage from their third report, published in 1861: "We should have been glad could we have presented a reliable statement of the causes of lunacy, but the information at our command on this subject is altogether untrustworthy." They go on to say that their experience subsequently to 1861 has not led them to modify in any degree the opinion then formed, that statistical tables founded upon the answers to the queries referred to (as to "supposed cause") would not only be quite valueless in throwing light upon the causes of insanity, but would be misleading. In addition to the natural disinclination to answer such queries, and to the impossibility of answering them where a patient's previous history is unknown, it may be observed that it is often impossible to say with certainty whether the supposed cause of the malady is really its cause or its effect; and that even when willingness to answer questions is present, when opportunities for observation are exceptionally good, and when the fullest knowledge is possessed of the patient's private history the true origin of the disease must often remain a mere matter of speculation. The Board go on to say that they do not know of any way in which it would be possible to obtain information as to the origin of the insanity of the patients on their register which would be of the smallest statistical or scientific value, and they have not therefore thought that any useful purpose could be served in dealing with the question from this point of view. The Board have from a very early period of their existence held and expressed the opinion that there is no statistical evidence that insanity is increasing. They state that they have dealt fully in their annual reports with many of the influences which they believe to have been sufficient to account for the increase of registered lunatics, and they allege that "none of them are such as involve the supposition that the increased number of registered lunatics is due to an increased liability to insanity in the community." In an appendix (E) the Board reprint the portion of their thirty-fourth annual report which deals with this question. Therein the following conclusions are drawn:—

1. That the increase of pauper lunacy is much beyond what would naturally result from the increase of population.
2. That it cannot be attributed to accumulation resulting from longer periods of residence of pauper lunatics in asylums.
3. That it is only in a very slight degree due to a lowering of the death-rate.
4. That there is no reason for believing it to be due to an increased tendency to insanity in the community.

5. That it is not due to any one cause.

In this same appendix they enumerate the following as among the causes of the increase of which they had spoken in former reports:—

1. The erection of new asylums for pauper lunatics, specially affecting localities in which no asylum accommodation for pauper lunatics previously existed.
2. The readier means of access to asylums due to increased facilities for travelling.
3. The gradual dying out among the public of feelings of dislike and suspicion towards asylums—a change which has resulted from an increasing recognition on the part of the community of the humane and enlightened methods of modern treatment and of the protection, comforts, medical treatment, and curative influences generally which modern asylums afford.
4. The greater readiness among the poorer classes to send relatives to asylums as pauper lunatics, which is due in part to the cause just mentioned, but also in part to a strengthened conviction of the difference which exists between the acceptance of parochial relief in cases of insanity and its acceptance under other conditions.
5. The growing unwillingness of the poorer classes to submit to all that is involved in keeping an insane relative at home (discomfort and expense, &c.).
6. The greater willingness of parochial authorities to recognise claims to parochial relief on the ground of insanity.
7. The stimulus, both to the readiness to seek relief and to the willingness to afford it, which has resulted from the giving of a State grant-in-aid towards the cost of maintenance of pauper lunatics.
8. The widening of medical and public opinion as to the degree of mental unsoundness which may be certified to be lunacy.

Three important memoranda are published as appendices to the special report. The first is by Sir ARTHUR MITCHELL, and deals with the Increase of the Number of Registered Pauper Lunatics, giving the results of the study of the statistics of the pauper lunacy in a locality specially selected as being best calculated to give an accurate view of what is really happening—viz., the Barony Parish, Glasgow.

ARTHUR MITCHELL'S conclusions are as follows: (1) that during the ten years 1883-92 there has certainly been no increased production of pauper lunatics; (2) that notwithstanding this the total number of lunatics chargeable to the parish has undergone a steady and considerable increase from year to year; and (3) that this has been due to an accumulation which results from the number of recoveries, deaths, and removals of unrecovered patients from the poor-roll being every year less than the production or crop of pauper lunatics.

The second paper, by Dr. SIBBALD, is a memorandum on the Increase in the Number of the Insane on the Register of the General Board of Lunacy for Scotland, with special reference to the allegation that it indicates an increased prevalence of insanity. This paper gives a historical summary of the conditions of the insane in Scotland prior to the passing of the Lunacy Act of 1857 and of the attitude of public opinion in regard to insanity during the first half of the present century. It then deals, among other points, with the influences upon the increase of numbers due

to the effects of the Act of 1857, the change in the character of asylums, the change of public opinion in regard to insanity, and the change of medical opinion in regard to the degree of mental unsoundness which justifies certification and the giving of the grant-in-aid. The conclusion which Dr. SIBBALD arrives at, from a study of the statistics, in the light of all the subjects referred to, is that they afford no evidence that mental unsoundness is to-day more prevalent in Scotland than it was. That no increase of insanity has taken place in that class of the community which is sufficiently wealthy to maintain its insane at its own cost is demonstrated by comparisons instituted by Mr. SPENCE, the secretary to the Commission, in the third paper, which is a memorandum on the Bearing of the Statistics relating to Registered Private Patients upon the Question as to whether Insanity is increasing.

The Board state that these three inquiries have been made in entire independence of each other, and have proceeded upon altogether different lines, and that all of them reach similar conclusions—conclusions which bear out their opinion, as expressed time after time, that the facts and figures, so far as they have been already collected and studied, afford no ground for a belief that insanity is to-day more prevalent in Scotland than it was thirty-six years ago, when the Board entered upon their functions.

Annotations.

"Ne quid nimis."

EPIDEMIC INFLUENZA : OFFICIAL MEMORANDUM.

WE publish elsewhere an official memorandum issued by Dr. Thorne Thorne, as medical officer of the Local Government Board, on certain preventive measures to be adopted against epidemic influenza. It is not difficult to see that the memorandum has been issued without much hope of preventing the recurrence of a disease which has already afflicted this country six times since the winter of 1889-90. When Mr. Shaw-Lefevre was asked in the House of Commons to issue a memorandum on the subject he cautiously replied that he would consider the matter; and when a second time Sir Walter Foster was questioned on the subject he frankly announced the views of the Board's medical department to the effect that not much good could be anticipated to result from the mere issue of a memorandum. And in the issue now made in deference to requests in the House of Commons it is easy to see that the medical officer has no great hope in any general measures of prevention. He refers to the facts that influenza is often infectious before it is recognised, that it is often never diagnosed at all, and that its incubation period is of the shortest. These conditions alone make the disease a most difficult one to grapple with from the preventive point of view; and when it is further remembered, as Sir George Buchanan put it in 1891, that owing to the brief incubation period one case of influenza can "give rise to some thousand attacks in the time that small-pox or typhus had taken to produce ten" it will be evident that the mischief is generally produced before the prevention can be applied. Then, again, the number of mild, but still infective, cases in which any sort of preventive control becomes impracticable is such as to make the question one of exceptional difficulty. If, however, aged and infirm people take note of the precautions suggested some fatality at least will be saved. And if in acute cases, where some control can be exercised,

isolation of the sick and disinfection of sputa be insisted on, further diffusion of the disease may to some extent be arrested.

THE PERILS OF FOOTBALL.

AN inquest was held at Hexham on Friday, March 8th, on the body of a player, who died on March 5th from injuries received in a football match, played under Rugby Union rules, on the previous Saturday. On a verdict being returned in accordance with the medical evidence, which showed that the unfortunate man had died from the effects of a collision between his head and the hip of an opponent whom he was attempting to "collar," the jury added a recommendation that a revision of the Rugby Union rules to make the game less dangerous was necessary. With this sentiment we are in accord, but we should like to see the suggested revision of the rules of either code; we should like to read some serious proposals for lessening the perils of the game which had emanated from players thoroughly familiar with all the details of both codes. If the recommendation of the Hexham jury brings such a revision into the sphere of the practical politics of the football world it will have done a great thing, but we fear that to this we cannot look forward. It has been our practice to issue now and again a summary of the severer accidents that have come under our knowledge as having occurred in the football field, and as the result of much practical experience we have been unable to see in what direction the rules of either code could be revised so as to lessen the dangers without spoiling the game. And whoever spoils the game places himself in the responsible position of depriving an enormous number of his fellow-citizens of the incalculable benefits to be obtained from a form of exercise which appeals by its splendid athletic possibilities as much as by the moderation of its demands on their time and purse to the whole of the younger generation. Though we do not think that the recommendation of the Hexham jury will have practical effect in leading to a revision of the rules—because we do not see in what way such revision is to be made—we think that it cannot but have a distinct value in one direction. It will cause the public to see that it is possible to raise a voice against the obvious perils of football without being necessarily a namby-pamby sentimentalist or desirous to keep the youth of the country permanently swaddled in cotton-wool. Great things are not to be expected from revision of the rules; for though we have heard the opinion expressed freely and frequently that such revision should be at once effected, we have never been able to find any practical player who could suggest any changes, either by altering or rescinding existing clauses, that would obviate any of the perils of the game. But great things may be expected if the mass of players can be compelled by a severer penal code to preserve a better spirit. The powers of the referees must be further extended, and the penalties for foul play and insubordinate behaviour made prohibitive. A verdict of manslaughter brought in against the whole of both sides is but one step in advance of the verdict, with its rider, that we chronicle above. When this occurs the authorities in the football world will recognise that an unchecked evil has grown up amongst them. Why do they not see it now? We appeal to all right-minded players. There is nothing effeminate in putting down brutality with a strong hand. Why not begin?

ELECTRIC LIGHT MAINS AND THEIR DANGERS.

AN accident occurred at Bristol on Feb. 25th which resulted in the death of a workman and was probably due to a momentary inadvertence on his part. It appears that it was the duty

of the man in question to remove the dust from a high tension fuse board, and whilst doing this with the right hand covered by an indiarubber glove the left hand (bare) seems to have touched a fuse terminal, and thus his body made contact to earth with the 2000-volt main (the second condition of contact referred to at p. 281 of *THE LANCET* of Feb. 2nd). It appears from the evidence of the corporation engineer that there were no printed regulations for the guidance of workmen employed on this particular duty, but it was the rule that when engaged on high tension work one hand only should be used, and that hand covered by an indiarubber glove. The story of this accident is no doubt the old story of carelessness; but there may be room for doubt as to whether this carelessness was entirely on the part of the workman who suffered. Assuming that it was necessary to clean this apparatus whilst the electric current was passing over it, were the insulation precautions adequate? As a matter of fact, ought this man to have been at work on this "live" high tension apparatus without being duly insulated from the earth? Might he not have been provided with an indiarubber mat and boots as well as with gloves for both hands, with at the same time an imperative caution staring him in the face never to relax the paramount rule of working only with one hand?

THE RAM, THE BULL, THE HEAVENLY TWINS.

A CORRESPONDENT, writing from that grave haunt of learning, the *Athenæum*, makes a suggestion which, although admirable in itself, savours rather of the philosophy of Laputa than of present-day science. Since, he says, twin calves are sterile, if the same condition obtains among human beings a wide field is open to twins in the nursing of phthisical patients, for it is a well-known fact that patients recovering from illness are more apt to fall in love than at any other period of their life, and thus the baneful disease of phthisis might not be handed down to posterity more than is absolutely necessary. Now, if we allow the premisses, the conclusion is excellent; but, unfortunately, the theory does not fit in with the facts. Twins of the bovine species undoubtedly often are sterile, some of them are generally more or less hermaphrodite. But it is far from being the rule, as numerous instances are on record where twins of both sexes have proved fertile. Amongst sheep, generally uniparous animals, it is not uncommon for an ewe to have two, three, four, or even five lambs at a birth, but no complaints have been made as to their being sexually defective, and in the human race twin children, even when boy and girl, are no more impotent or sterile than other children. We are afraid, therefore, that our correspondent's well-meant suggestion for checking the hereditary transmission of phthisis is impracticable, but it may comfort him to know that statistics show the percentage of phthisical cases who have a family history of the disease is only 33 to 36 per cent., so that, roughly speaking, even under his régime, there would still be left some 65 per cent. of cases.

DIPHTHERIA IN LONDON.

FOR the fourth week in succession diphtheria in London showed a rise in the matter of fatality, the deaths having been in the past five weeks 34, 27, 29, 31, but last week 34. Thus the disease would appear to have reached a stage at which it is difficult to improve its fatal aspect. Nevertheless, the decennial average for the particular week was exceeded by 9, though, on the other hand, all the deaths were in persons aged under twenty years, pointing to school influence in the cases. As many as 26 cases were in young children under five years of age. Of the total, 4 belonged to St. Pancras and 4 to Greenwich, 3 each being credited to Hackney, Bethnal Green, Battersea, and Camberwell sanitary districts. There were in the hospitals of the Metropolitan

Asylums Board on Saturday last 454 cases of diphtheria, there having been a continuous fall since the week ending Jan. 26th, when the number stood at 528, but the admissions do not appear to be any accurate criterion of the actual amount of the disease in London. The admissions last week numbered only 55. In Greater London there were 11 deaths registered from diphtheria, of which 4 belonged to West Ham and 2 to Edmonton districts.

HOSPITAL SATURDAY AND SUNDAY IN MARYLAND.

THE Hospital Saturday and Sunday Association of Baltimore was instituted in 1882 by the Hospital Relief Association of Maryland, U.S.A., and has recently issued its thirteenth annual report. In 1894 the collections were made on consecutive days—viz., on Nov. 24th and 25th, the amounts contributed being \$590 on the Saturday and \$1280 on the Sunday; the total was therefore \$1880, or about £384, in which fifteen hospitals and homes were entitled to share. The Hospital Relief Association, although closely connected with the Saturday and Sunday Association, publishes a separate annual report, which shows that its philanthropic operations are mainly carried on by lady workers, and that its financial position is very satisfactory.

MYSTERIOUS DISAPPEARANCES.

THE heading "Mysterious Disappearance" is not at all an unusual one in the pages of our contemporaries, morning and evening. As a rule the heading is the introduction to an account of the sudden and unaccountable disappearance of some man or woman, occasionally on the eve of some important event, but more frequently under circumstances which do not present even that excuse for an explanation. Doubtless it occasionally happens that some sufficiently strong reason for the disappearance in the shape of financial or other embarrassments is discovered in the course of days or weeks; but even after all allowance is made for such presumably intentional disappearances a certain number remain unexplained and inexplicable. We have often wondered what the sequel to such an occurrence is, but if ever there is a sequel it must occur when the memory of the mysterious disappearance has faded from the minds of all except an interested few; and even if the reappearance is occasionally chronicled it has nothing like the dramatic significance which the disappearance had, and but rarely evokes comment or excites interest. Yet to the psychological student these events present a most interesting problem, and a recent article by Dr. Osborne in the *Medical-Legal Journal* on People who Drop out of Sight appears to afford food for thought, not only to the student, but even to the proverbial "man in the street." The first case mentioned is that of a man, thrifty and industrious, prosperous in his business, and exemplary in his family relations, who left his house one Sunday afternoon to have a short walk, being reminded by his wife as he went out not to be late for dinner, which was to be ready in a few minutes. He did not return, no trace of him could be found, and no reason for his disappearance was discovered when his affairs came to be wound up, as they had to be in the course of time. Two years later, in a shop in one of the southern States of America, a man who had been known as an industrious, although taciturn, workman suddenly seemed to wake up and asked where he was and how he had got there. Gradually things came back to him; he remembered leaving his house in the north on a Sunday afternoon two years before, but everything that happened subsequently was as if it had not been. Nothing of his wanderings could be discovered further than that some months before he had appeared in the town in which he came to himself, and had asked for and obtained work, which he had performed diligently and

efficiently. He was restored to his family, and at the time the article was written had resumed his former life. Another and even more striking case is related—that of a lawyer, a well-known public man and politician, of more than usual ability and in a prominent social and professional position. One day, while in the midst of some intricate and important legal work, he stepped outside for a few minutes. He also disappeared. The most vigorous and thorough search failed to discover him, dead or alive. Streams and reservoirs were dragged, woods were searched, and every means at the disposal of wealth and influence were used to discover his whereabouts. He was known to be abstemious in his habits and happy in his home, and a searching examination of his business affairs failed to reveal the slightest irregularity in them. Several months passed, when at length word came through Government channels that the missing man was in Australia and was applying for means of establishing his identity and procuring his transportation home. He was successful in satisfying his friends of his identity, money was transmitted to pay for his passage, and in due time he arrived. After a short period of rest he resumed his professional work and has since continued to be just as he was before his sudden and quite unaccountable disappearance. It is an interesting question, How are such cases to be accounted for? The suddenness of the disappearance, the absence of motive, and the utter inability of the patients to give even the slightest account of their experiences during the time which elapses between their disappearance and their coming to themselves, all give a certain weird character to these aberrations. Are they of the nature of post-epileptic phenomena? Are they lapses into an *alter ego*, and if another such lapse occurred would the patient take up the thread of this second existence where he had dropped it to resume his, what we may call, ordinary identity? These are interesting questions. Unfortunately they are unanswerable. All that we can say is that these disappearances partake of the character of post-epileptic phenomena, and that in some patients who have suffered from lapses similar to, if not so severe as, those just described a more or less definite history of true fits of epilepsy has been obtainable. And another thing is also significant—viz., the very close resemblance that these attacks bear in their character, if not in their duration or severity, to somnambulism, while the relation which this bears to epilepsy, if not very definite, is certainly close. Yet whatever theory is put forward to explain such phenomena as those just referred to, they remain striking and mysterious, interesting in their psychological aspect, but in their concrete form full of practical and medico-legal difficulties.

SOME AUSTRALIAN DANGERS TO LIFE.

SYDNEY SMITH once said that Nature, having made all sorts of useful animals and birds for other parts of the world, seemed determined, when supplying organic life for Australasia, to give free play to her fancy. "Accordingly she made cherries with the stones outside, a monstrous animal as tall as a grenadier, with a tail like a bed-post, hopping along at the rate of three hops to a mile, with several young ones looking out of its false uterus, and a kind of mole with webbed feet and the bill of a duck, which agitated Sir Joseph Banks and rendered him miserable from his utter inability to decide whether it was a bird or a beast." We are led to quote these somewhat frivolous remarks by having just received a very interesting anniversary address, delivered before the Royal Society of New South Wales by Dr. Anderson Stuart, in his presidential capacity, on May 2nd, 1894. The animal which agitated Sir Joseph Banks was the *Ornithorhynchus paradoxus*, a curious survival of a very primitive type of animal. For a long time it was considered to be quite harmless and destitute of any weapon of offence,

although the hind legs of the males were armed with a powerful spur, apparently connected with a gland. Then the opinion was advanced that this might be a weapon allied to the poison armoury of snakes, scorpions, and bees, all of which possess a sort of hypodermic poison syringe. Though one set of observers asserted that this was the case another set denied it, and so Dr. Stuart determined, if possible, to solve this question. He received two independent accounts, which coincided perfectly, and from them he concludes that at certain seasons, at all events, the secretion is virulently poisonous. The mode of attack is not by scratching, but by lateral inward movements of the hind legs. Two cases are reported in dogs. One dog was "stung" three times, the symptoms much resembling those from bee or hornet poison. The dog was evidently in great pain and very drowsy, but there were no tremors, convulsions, or staggering. It is worthy of note that a certain immunity seems obtainable, for the dog suffered less on the second occasion and still less on the third. Two cases of men being wounded are reported, in both of which the animals were irritated, one by being shot and handled, the other by being handled only; the symptoms were the same as in the dog. No deaths are reported in human beings, but four in dogs. Another poisonous animal is the red-backed spider—*Lathrodectus*—though the Sydney variety does not seem so virulent as *Lathrodectus decempunctatus*, from which Professor Kobert obtained a poison so powerful that $\frac{1}{2}$ gr. would kill a man twelve stones in weight. Many instances of fatal results from the bite of these spiders are recorded. Another pest very fatal to dogs is a bush tick. In this case also one attack confers immunity from a second, and in districts where they abound dogs are frequently immunised by letting the tick remain until the first symptoms appear and then removing it. Upon complete recovery this is repeated. Other portions of Dr. Stuart's highly interesting address dealt with vaccination for anthrax, most successful in the case of sheep, disposal of sewage, and sanitary legislation.

A PERAMBULATORY KITCHEN FOR THE POOR.

IN the current number of the *Nineteenth Century* Miss Sellars makes an appeal for the establishment in London of people's kitchens as in Vienna. Mr. Frederick Greenwood, commenting on this in the *Pall Mall Gazette*, makes the very sensible suggestion that the stationary kitchen should be supplemented by a "flying one," to use a military term. "Suppose," says Mr. Greenwood, "a kitchen built of fair amplitude, and with every appointment of economy and cleanliness visible at a glance. From this kitchen (or from a dozen such) a smart van starts off at the midday hours to go its rounds. The van is broad and deep, like those employed for moving furniture from one house to another. Glaringly clean, it is fitted up with trays and other receptacles heated by mineral oil or portable gas. The various receptacles contain three or four kinds of food appropriate to the dinner hour; which kinds are not the same every day, but are always wholesome, always savoury, and such as are well liked of those for whom they are provided. Milk is distributed from door to door in cans, as beer used to be: why not close-covered cans of hot, strong, newly-made soup, or of 'Irish stew'? Small puddings—meat puddings, plum-puddings; fish fresh drawn from the bubbling pan; roast potatoes; potatoes fried; portions of well-cooked beef; portions of mutton stewed in rice: such viands as these might be carried round, hot and good, with dishes of cold meat and salad in the summer time." We most cordially endorse this suggestion. The mere fact of giving the poor an opportunity of choosing from a variety of dishes would be an inestimable boon. Anyone who has been in and out of the homes of the poor will remember that they

have but one way of cooking things—i.e., they are “done” in a frying-pan, not properly fried—that is, boiled in fat—but burned and made greasy. Any kind of stew or tasty compound of scraps of meat and vegetables with rice is unknown. On Sundays they have a bit of baked meat with potatoes under it. Soup is never made. The experiment of taking food to workers who have neither the time nor the place to prepare it has been tried on a small scale with great success by the Sisters of the Church Extension Association with their food truck at the Docks. The expense of starting one of these kitchens would not be very great and it would be well worth the while of the various charitable societies to combine and make the experiment.

REGISTERED DENTISTS.

THE Dentists' Register for 1895 shows that there are 4874 registered dentists in the United Kingdom. Of these the great majority, 3479, practise with no special qualification, but on the strength of their own declaration that they were engaged in the practice of dentistry before the passing of the Act. A few of these have taken qualifications. The new registrations during last year of dental practitioners have been 84. Of those on the Register 1363 hold a licence in dental surgery; they are distributed among the following colleges as follows: the Royal College of Surgeons of England, 663; the Royal College of Surgeons of Edinburgh, 133; the Faculty of Physicians and Surgeons of Glasgow, 113; and the Royal College of Surgeons in Ireland, 454. There are eleven doctors of dental medicine of the University of Harvard on the Register, and sixteen doctors of dental surgery of the University of Michigan. Our readers are aware that the registration of the degrees of these universities has been for the present discontinued.

THE LATE SIR WILLIAM SAVORY.

WE have been favoured by Mr. Oliver Pemberton, F.R.C.S. Eng., with an inspection of a letter written to him by the late Sir William Savory on Feb. 25th with reference to Mr. Hulke's death. It is interesting to record Sir William Savory's words, written as they were little more than a week before his own death: “Hulke was the most accomplished man in the profession, and the loss of him the greatest that could have befallen it; and this not from his great learning, but because of his integrity and honour.” After referring to Mr. Hulke's somewhat reserved nature and to the long and intimate friendship which existed between Mr. Hulke, Mr. Oliver Pemberton, and himself, he closes his letter with the words: “Personally I cannot measure the loss.” The friendship between Sir William Savory and Mr. Pemberton was accentuated by the fact that in “college politics” certainly, and on many other subjects probably, they held very divergent views.

Previously to the interment of the remains of the late Sir William Savory at Highgate Cemetery on Thursday, March 7th, a memorial service was held at St. George's Church, Hanover-square, the Rev. David Anderson officiating. The chief mourners were Sir Borradaile Savory, son of the deceased baronet, and his wife, Lady Savory; Dr. Savory, brother of the deceased; Mr. Henry Morris; Mr. Green-side; and the Rev. Dr. Cosmo Gordon. Among those who attended the service were Sir James Paget, Bart., F.R.S.; Sir William Broadbent, Bart.; Sir William Flower, F.R.S.; Sir William MacCormac; Dr. Habershon; Lieutenant-Colonel Moon; Mr. Howard Marsh; Sir Trevor Lawrence, Bart., treasurer of St. Bartholomew's Hospital; Sir Dyce Duckworth and Lady Duckworth; Dr. Constantine Holman; Dr. Thorne Thorne, C.B., F.R.S.; Mr. Thomas Bryant; Professor Stewart; Mr. Thomas Smith; Canon Elwyn, Master of the Charterhouse; Sir Henry Edwards, Bart.; Mr. Reginald

Harrison; Mr. Alfred Willett; Canon Phillips; Colonel Black; Dr. Shore, Warden of St. Bartholomew's Hospital; Mr. Dickins; and Mrs. Walter Spencer, on behalf of the Royal British Nurses' Association. The floral tributes were very numerous, amongst them being one from the students of St. Bartholomew's Hospital with the arms of the institution wrought in primulas and violets. The floral offering of the matron and sisters consisted of lilies of the valley tied with black ribbons, representing the well-known magpie colours of the hospital. A wreath was also sent by Princess Christian, President of the Royal British Nurses' Association, in which the deceased surgeon took a very great interest. The Rev. Dr. Cosmo Gordon officiated at the graveside service.

THE FOOD AND DRUGS ACT IN THE CITY OF LONDON.

IN his capacity as public analyst for the City of London Dr. Sedgwick Saunders reports that 161 analyses were made in 1894 with the result that in no case was it deemed necessary to institute any prosecution, although some of the articles examined were perilously near adulteration. These included several milks which were “below the standard of every analyst in the kingdom excepting those who direct the chemical work at Somerset House, who still refuse to adopt the standard fixed by the Society of Public Analysts.” Whilst the number of samples taken for analysis during the year in England and Wales was equal to one for every 779 of the population, in the City of London one sample was examined for every 347 persons, so that the conclusion that “the articles supplied by retail traders throughout the City are fairly genuine on the whole” is based upon a higher proportion of articles analysed per head of the population than in most other districts. As in previous reports, Dr. Saunders calls attention again to the necessity of improved administration of the Act, as illustrated in the question of standards (for milk principally), the mode of collecting samples, the inadequacy of fines, and the leniency of magistrates in dealing with proved offences. These points each and all were discussed in an article in THE LANCET of March 2nd, 1895, and we are glad to find that the analyst for the City of London is using his influence towards effecting much-needed reforms on the lines we have again and again indicated.

THE DIFFUSION OF SMALL-POX.

THE record of small-pox occurrences in London was last week identical with that of the preceding week, the fresh cases having been 8 in number. No death from the disease was registered, and all the new cases were removed to hospital, the number of patients remaining under treatment last Saturday being 54, a decrease of 14 on the total of the previous week. In the six weeks ended last Saturday there have been notified in London 83 cases of small-pox, and 8 deaths have resulted, nearly 10 per cent. of mortality. In the four weeks ended with the 23rd ult., of a total of 67 notified attacks, no less than 57 belonged to the parish of St. Mary-lebone. It is, at any rate, satisfactory to see that a recrudescence that augured so badly for that parish has been controlled in such a manner as the recent data would appear to indicate. The only news of any account coming from the home counties in respect of last week is concerning a few cases of small-pox at Bedford, but not of much moment, we trust, for that borough. In the Midlands there were again but very few cases at Birmingham, this continued record of slight invasion of that city as compared with previous months seeming to point to permanent abatement of the disease. Northward, however, the borough of Derby registered another death from small-pox last week, and several attacks are chronicled. The disease

seems to have been smouldering there for some little time past, but the sanitary department is actively engaged in dealing with the present reappearance of the infection. Reassuring news comes from Liverpool and its suburbs, the small-pox of last week having been insignificant in amount in the city and surrounding districts. The last week of February witnessed 2 deaths from small-pox in Edinburgh, where 4 deaths from the disease were registered in the month, Glasgow having had 2 deaths registered in the month. In Dublin in the week ended March 2nd, the admissions of small-pox cases to hospital numbered 31, a decrease of 6 on the number of the preceding week, and of 25 on the week ended Feb. 16th. The discharges again outnumbered the admissions, having been 52, and the deaths were 4, all in unvaccinated persons, 2 at ages between five and twenty years, and 2 at ages from twenty to forty. At the close of the week the acute cases under treatment were 110 in number, as compared with 135 on the previous Saturday, and with the convalescent patients at Kilmainham the total still under isolation was 235. During the nine weeks of the present year the admissions were 537 and the registered deaths 63, a percentage of mortality of nearly 12 on the admitted cases; but everything points to a steady decline in the epidemic.

THE STANDARD AGE FOR CHILD LABOUR.

It is significant of an increasing perception of the value of education that many persons in the present day are dissatisfied with the standard age limit which regulates the labour of children in this country. The allotted minimum of eleven years is represented in France and Germany by that of fourteen, and in other countries of twelve years. A system which allows of earlier occupation has about it a certain aspect of commercial convenience. We are not, however, disposed to defend it on this ground. We cannot but think that any such apparent advantage is likely to be rather dearly purchased at the cost of other present and solid advantages and likewise of ultimate efficiency. The work a boy will do in the first year, or indeed in the first two or three years, after leaving an elementary school must be of comparatively small consequence either to himself or his employers. The same period spent in learning would very materially add to his intelligence when at its close he entered the working ranks. It might, and in our opinion should, be spent partly, if not entirely, in acquiring some technical knowledge with a view to later and more intimate acquaintance with the trade to be pursued through life. By such an arrangement we might expect to increase the most justly valued class of workmen in this or any other country—namely, those thoroughly versed in a professed calling—and to reduce the numbers of the comparatively aimless and inefficient "Jacks" who are masters of none.

ISOLATION ACCOMMODATION IN CHESHIRE.

UNDER the provisions of the Isolation Hospitals Act, 1893, Mr. Francis Vacher has recently made for the Cheshire County Council a full report upon the isolation provision at the present time possessed by the several sanitary authorities throughout the administrative county. Although Mr. Vacher's report has reference, in the first instance, to those districts to which the Isolation Hospitals Act more particularly applies, he has embraced in it a description of the accommodation possessed by the county boroughs in Cheshire, as also by the municipal boroughs, whether or not they possessed at the last census 10,000 persons. Mr. Vacher gives a short history of each hospital, an account of the building, the number of diseases and patients for which provision is made, and much other useful information. After making certain deductions in regard to the population of the administrative county, Mr. Vacher concludes that on

a basis of one bed per 1000 of the population the urban and rural districts of the county should provide 533 beds. At present there are but 238, and, many of them being in temporary buildings, Mr. Vacher reckons that the number of beds actually needed is some 370. Having arrived at this estimate, he thence proceeds to discuss in what portion of the county additional accommodation is required and in what positions hospitals can conveniently be erected. For the purpose of the report the county is divided into an eastern, central, and western portion, and suggestions are made in each case for the provision of certain joint hospital boards.

FINES UNDER THE MARGARINE ACT.

AN important concession in regard to the working of the Margarine Act is being sought by the vestry of Shoreditch. It appears, according to a letter in a morning contemporary from Mr. Harris, the medical officer of health for Islington, that hitherto the invariable practice of magistrates has been to refuse to hand over the fines inflicted under the Margarine Act to the sanitary authorities, upon whom all the expenses incidental to the enforcement of the Act devolve. We quite agree with Mr. Harris that the Margarine Act would receive a healthy stimulus if the resulting fines could be handed over to the prosecuting authorities, as is the case with the Food and Drugs Act. Both Acts have practically one common object in view—viz., the prevention of fraud and adulteration—and their administration should surely, therefore, be placed upon the same basis. We trust the Home Secretary will use the powers he possesses to sanction the request which, as it seems to us, the authorities are reasonably urging.

THE EAST-END MOTHERS' HOME.

WE have received the report of the East-end Mothers' Home for the year ending Dec. 31st, 1894, with an intimation that the annual meeting of those interested in it will be held on the 18th inst. It appears that the in-patients during the year were 218, and the patients attended at their own homes were 284, in both cases marking an increase on the numbers in the previous year. We see that there were two deaths among the out-patients, and one among the in-patients. In order, however, for statistics on this matter to have scientific value it would be necessary to know at what period patients are discharged after confinement, and also in what condition—that is to say, were any patients discharged who could not be fairly classed as quite well? And, still further, were any patients who were seriously ill either sent to their homes or sent to some general hospital, as we are informed has been done on some occasions? and if so, did any such cases die, or only recover after a longer or shorter illness of more or less gravity? Two other points occur to us after reading the report and balance-sheet. One is that apparently the women attended at their own homes are charged a fee of 3s. 6d. each for such attendance. This certainly appears to us undesirable in many ways on the part of a charitable institution appealing to the public for support, and receiving, as we see it does, grants from the Hospital Sunday and Saturday Funds. Moreover, it appears contrary to the design of the home itself, as given on p. 3 of the report, which is "to maintain in the east of London a home for the treatment of poor married women during childbirth, free of any charge to the patients, also for training midwives and nurses for attendance on the poor at their own homes." The other point is that apparently the whole of the regular work of the institution, both as regards in-patients, out-patients, and instruction given to the midwives, is performed by one medical man. If we remember rightly there were formerly two visiting medical officers; and for many

reasons it appears desirable that an institution such as the East-end Mothers' Home should have an active staff of not less than two medical men. With only one medical officer the efficiency of the institution is obviously at the mercy of chance. Unavoidable absence and illness occur to every man. There could be no difficulty in obtaining the services of at least one other medical officer, as there are plenty of well-qualified men in the district, some one of whom would no doubt be willing to serve.

PREVENTIVE LAW.

THE Leyton Local Board has been condemned by Mr. Justice Cave in the Queen's Bench Division to pay Mr. Henry Eustace, a carpenter, damages to the amount of £100. It appeared that at the rear of the plaintiff's house there was a pit into which the local authority shot a quantity of refuse. There had been cases of illness both in the plaintiff's family and in houses close at hand, but there were also infectious fevers throughout the neighbourhood, and there was no evidence whatsoever to prove that this particular accumulation of rubbish had been the cause of disease. The whole of the medical evidence went to show that the nuisance in question had not caused any outbreak of illness. Nevertheless the jury, without even leaving the box, found for the plaintiff with £100 damages. This verdict, we take it, means that dust and refuse must not be shot near dwelling houses. Undoubtedly there can be no objection to such a regulation. It is something to know that what is likely to cause disease must be removed, and that, if it is not removed, damages can be obtained, even though no damage has been done. We hear a good deal about preventive medicine, but this is truly preventive law. It is not every day that we find juries, in so emphatic and unhesitating a manner, establishing this principle of prevention. The refuse, it was pretty evident, had done no harm; still, it might have done harm or might do harm in the future if allowed to remain there, therefore the verdict was for the plaintiff, and the local board was punished for its neglect by having to pay a handsome sum in damages.

THE INFLUENZA EPIDEMIC.

As influenza does not appear in the list of notifiable diseases it is not possible to obtain any accurate notion of the extent of the present visitation; but there seems little doubt that the disease is being widely diffused throughout the country. The mortality from respiratory diseases remains exceptionally high, for although the Registrar-General's returns showed a slight diminution in the total deaths from this cause in London during last week—viz., 1366, as compared with the preceding week's return, 1448—yet it is noted that the corrected average was exceeded by 842. It is remarkable, on the other hand, that the deaths "attributed directly to influenza" should have risen from 296 in the week ending March 2nd to 473 in the following week, and as in all probability these cases due to influenza were mostly diseases of the respiratory system their subtraction from last week's return would reduce the mortality of the latter to very nearly the corrected average. As stated last week, we believe there is no doubt that the epidemic, so far as London is concerned, has subsided very materially in extent; but if anything approaching these high death-rates continues to be maintained it would prove that it is increasing in intensity. It must, however, be remembered that arguments on this score based on death returns alone are open to fallacy, since they by no means coincide with the epidemic wave. We shall be surprised if the returns of the present week do not show a very marked diminution in the mortality from influenza. It may be observed that the estimated annual death-rate in the thirty-three great towns of England and Wales amounted

last week to 35.0 per 1000 of their aggregate population, a rate exceeded by Brighton (40.1), Halifax (42.8), Liverpool (45.2), London (41.2), Nottingham (37.7), Plymouth (48.0), and Preston (35.2). These rates, it is needless to say, are considerably above the mean rate at this period, the variation being notably so in some of these towns.

THE CARE OF AND ATTENDANCE ON THE INSANE.

WE learn that the Medico-Psychological Association of Great Britain and Ireland is about to hold an examination with a view to granting a certificate of proficiency in nursing and attending on the insane. The next examination will be held on Monday, May 6th, 1895. Schedules to be filled up by the candidates can be obtained from the registrar (Dr. Spence, Burntwood Asylum, near Lichfield), and the schedules, duly filled up and signed, must be returned to him at least four weeks before the date fixed for the examination. Monday, April 8th, will be the last day upon which, under the rules, candidates can enter their names for examination.

THE UNIVERSITY OF CAMBRIDGE AND THE EXTENSION OF SCIENCE TEACHING.

WITH reference to our remarks last week on the extension of science teaching, Dr. Joseph Griffiths, the hon. secretary of the Cambridge Summer School of Medicine for Qualified Practitioners, has supplied us with the following programme in advance. During the week beginning Monday, July 1st, and ending Saturday, July 6th, 1895, there will be clinical demonstrations at Addenbrooke's Hospital from 10 A.M. to 11.15 A.M. by members of the honorary medical and surgical staff; demonstrations with experiments illustrating subjects of clinical interest on alternate days from 11.30 A.M. to 1 P.M. in the Physiological Laboratory by Professor Foster and in the Pathological Laboratory by Professor Roy; and demonstrations in the afternoons daily in the Medical Schools by Professor Sir George M. Humphry, F.R.S., Dr. Annington, Dr. Joseph Griffiths, and Mr. E. H. Douty, M.B.; in the Anatomical Department by Professor Macalister, F.R.S.; in the Pharmacological Laboratory, Downing College, by Professor Bradbury. There will also be lectures on special subjects in the evenings, at 8.30 P.M., by Professor T. Clifford Allbutt, F.R.S., Dr. Norman Moore, and others. On the Monday night, at nine o'clock, a conversazione will be held in the Physiological Laboratory, New Museums, when a short address will be given by Professor Sir George M. Humphry. For those accommodated in college, breakfast, lunch, and dinner will be provided in hall; and for those not accommodated in college, dinner (and it may be lunch) will be provided in the hall of one of the colleges. On one afternoon a garden-party will be given in the Fellows' Garden at King's College by Sir George and Lady Humphry. On other afternoons parties of visitors will be conducted round certain of the colleges. It should be noted that this programme is necessarily subject to revision in detail.

THE PEABODY TRUST.

THE trustees of the Peabody Donation Fund have recently issued their annual report for the year 1894, which contains the usual record of useful work and judicious management. The fund, which was founded by Mr. Peabody in 1862, and was afterwards increased by him from time to time to the magnificent total of half a million sterling, has, under the careful stewardship of the trustees, been more than doubled, and was valued at the end of last year at considerably more than a million pounds. The Peabody Buildings included at the end of the year no fewer than 11,261 rooms, besides bathrooms, laundries, and lavatories, in which resided 0

Dec. 31st last 19,918 persons. The average rent of each dwelling was slightly less than 5s., and of each room rather more than 2s., the rent in all cases including the free use of water, bathrooms, laundries, and sculleries. The births among the resident population of these buildings in 1894 were equal to 36.3 per 1000, which was 6.3 per 1000 above the aggregate rate in London. The rate of mortality was only 15.7 per 1000, and 2.0 below the average rate in the whole of London. This death-rate includes 49 deaths of residents of these buildings that occurred in various hospitals, but it does not appear to include any correction for deaths of residents who drift into the workhouses and workhouse infirmaries, and this undoubtedly explains, at any rate in part, this remarkably low death-rate in a distinctly working-class population. The trustees of this fund have not made much addition to their buildings for several years, but have been employing their surplus revenue in repaying the sum of £390,000 borrowed from the Public Works Loan Commissioners, which has thus been reduced to £111,000. It is stated in this report, moreover, that since the beginning of this year two new blocks of buildings in Stamford-street, containing 110 rooms, have been occupied, which must have raised the resident population above 20,000 persons. The housing of this large population in improved and sanitary dwellings is a grand result from the operation of the Peabody Fund, and it is inevitable that the scope of its benefits will be very considerably increased in the not distant future.

THE BUCKINGHAMSHIRE SANITARY CONFERENCE.

THE report of the proceedings of this Conference, which was held at Aylesbury on Oct. 31st of last year, has recently been issued in pamphlet form, together with an introduction by Miss Florence Nightingale. Our readers will remember that in THE LANCET of Nov. 10th we gave a short account of the eminently successful Conference, and we are glad now to have an opportunity of drawing attention to the report. The Conference was held under the presidency of Mr. Frederick Verney, chairman of the sanitary committee of the Bucks County Council, and we believe we are right in saying that at the time of the Conference the relations between the sanitary committee and the council as a whole were such that many members of the council were desirous of terminating the existence of the committee. Fortunately, however, the very influential conference which Mr. Verney was instrumental in calling together, and the publicity which was given to its proceedings, succeeded in bringing home to the council the advantages from an administrative standpoint of a sanitary committee, and we are now able to chronicle that the life of the committee has been prolonged and received fresh vigour. Miss Florence Nightingale, in her introduction, points out that "money would be better spent in maintaining health in infancy and childhood rather than in building hospitals to alleviate and cure disease," and in saying this she places her finger upon a great blot in preventive medicine—our heavy infantile mortality. We can but feel that the Bucks Sanitary Conference has done well to publish its proceedings in their present form, as the circulation of the pamphlet cannot fail to assist in bringing about that popular education in sanitary matters to which one of the speakers more especially drew attention. We again congratulate Mr. Verney upon the success of his enterprise, and trust that all newly elected district councillors in Buckinghamshire will make themselves familiar with the contents of the report. There are few counties in our knowledge where there are better opportunities for sanitary reform than Buckinghamshire, and more especially is this the case with regard to isolation accommodation and the housing of the working-classes.

IN consequence of the recent indisposition of Sir John Erichsen (from which he is, we are glad to say, rapidly recovering) the complimentary dinner to him and his distinguished colleagues Sir J. Russell Reynolds and Sir John Williams, which we announced would take place on Wednesday, March 13th, has been postponed to Wednesday, March 27th.

AT the Council held on March 13th, the resignation of Alderman Vaughan Morgan as treasurer of Christ's Hospital was accepted, but he will continue to act until a successor is appointed. Alderman Vaughan Morgan remains treasurer under the old governing body of the endowments excepted from the scheme.

DR. LIDDELL, the former Dean of Christ Church, Oxford, presided at a meeting held in the Sheldonian Theatre, Oxford, on Friday, March 8th, to consider the proposed testimonial to Sir Henry Acland. It was resolved that the testimonial should take the form of a benefaction in connexion with the Sarah Acland Home for Nurses.

THE debate at the Pathological Society of London on the Pathology of Diphtheria will be resumed at the meeting on Tuesday, March 19th. Mr. W. Robertson will read a paper upon the Immunisation of Horses. Dr. Washbourn, Dr. Sims Woodhead, and others have promised to take part in the discussion.

MR. FRANCIS GOTCH, M.A. Oxon. (Hon.), B.Sc. Lond., F.R.S., Holt Professor of Physiology in University College, Liverpool, and late a Lecturer on Physiology at Oxford, has been elected Waynflete Professor of Physiology in the University of Oxford, in the room of Dr. J. Burdon Sanderson, now Regius Professor of Medicine.

WE learn with pleasure that Dr. R. C. A. Prior, the Senior Fellow of the Royal College of Physicians of London, is making a satisfactory recovery from the severe attack of influenza from which we reported him to be suffering last week.

MR. FREDERICK WEBB, M.R.C.S., L.S.A., of 113, Maidavale, has presented to the Medical School of St. George's Hospital the sum of £1000 to found an annual prize in bacteriology.

SIR JOSEPH LISTER has accepted the Presidency of the British Association during the meeting which will be held at Liverpool in 1896.

THE THEORY AND PRACTICE OF PROTECTIVE INOCULATIONS.

BY E. E. KLEIN, M.D., F.R.S.

DR. KLEIN delivered a lecture on this subject at the London Institution, Finsbury-circus, on Monday, March 4th. Starting with the axiom that "the more accurately we know an enemy, the more easy it is to overcome him," Dr. Klein said it nowhere more adequately applied than in the prevention and treatment of disease. Since it had been conclusively shown that communicable diseases were caused by specific parasites which elaborated within the body specific poisons called "toxines," causing the particular symptoms of the disease, it had become possible to study more accurately these causes of disease and devise better means by which the life of the parasites and the action of their toxines might be inhibited or altogether destroyed. The treatment of infectious disease had been greatly advanced, and although some of these disorders were still in a stage of generalities far-reaching changes had taken place in others. The system of antiseptic surgery discovered and applied by Sir Joseph Lister—instrumental in reducing the mortality of

surgical operations, once very high, to an almost nominal figure—and the exact knowledge we now possessed of the propagation and spread of cholera and typhoid fever by means of water, milk, and other articles of food were cases in point. Scientific medicine, in contradistinction to empirical medicine, had acted on the more rational axiom that “he who cures may be the cleverer, but he who prevents disease is the safer physician,” and had gradually unravelled the complex problems of the nature and cause of disease, and in many instances devised means of preventing communicable disease. Dr. Klein then referred to the remarkable achievements that had been made in general sanitation and in the direct prevention of disease by means of protective inoculation, of which Jenner’s discovery of vaccination was the earliest example. In all civilised countries and among all civilised peoples the protective power of vaccination against small-pox had been amply confirmed and established. Two points were particularly worth considering—(a) was vaccinia or cow-pox a modified or attenuated form of human variola? or (b) was it a separate and specifically different disease? With regard to the first point, most pathologists and sanitarians agreed with the original proposition enunciated by Jenner—namely, that vaccinia or cow-pox was a mild form of small-pox in the cow, and just as an individual who had passed through one attack of small-pox was furnished with resistance and immunity against a second attack, so also an individual who had been successfully vaccinated has practically passed through a mild attack of localised variola, was therefore possessed of immunity against a second attack, and was protected against small-pox. In some other infectious diseases—scarlet fever, measles, and whooping-cough—one attack, however mild, furnished, as a rule, immunity against a second attack. This was acquired immunity, as distinct and different from natural immunity, as, for instance, the natural immunity of most young children against typhoid fever or cholera, and of many adult persons against measles. With regard to the second point, many pathologists, while recognising the protective power of vaccinia against small-pox, did not admit that cow-pox was an attenuated form of the human small-pox, but that it was a specifically different disease. This belief was based chiefly on the many failures which experimentalists had incurred in trying to produce cow-pox in the cow by inoculation of this animal with human small-pox. It was equally true, however, that there had been many positive results, inasmuch as in a few instances there had been produced in the cow by inoculation of matter derived from the vesicles of human small-pox typical cow-pox, which on transmission to the human subject produced vaccinia and not variola, and on further transmission from human being to human being continued to produce vaccinia in all its typical characters. Thiele, Ceely, Badcock, and in more recent times Voigt, Fischer, King, Simpson, Hime, he (Dr. Klein) himself, and Copeman had had unmistakable positive results. The argument which maintained that vaccinia was of a specifically different nature from human variola was faulty for two reasons. First, as a matter of actual experience vaccination was now and then followed not simply by the production of a vaccine vesicle at the seat of insertion, but there appeared other additional vesicles even of the character of a general eruption; this, though of rare occurrence, was nevertheless a strong argument for its derivation from variola. Secondly, the “breeding true” of vaccinia in the human subject through however many transmissions and the failure of a reversion of vaccinia into variola were completely paralleled by what occurred in a disease occurring in the sheep, and was in all respects homologous to variola—namely, variola ovina or sheep-pox. Protective inoculation was used against this disease with large success in the South of France, Austria, and Germany. The lymph was “nursed” by local insertion through a succession of sheep, always producing a large local vesicle with mild constitutional symptoms. Such local inoculations had been practised over and over again, and as a general rule only at the places of insertion did a vesicle become formed; there was no general eruption, and therefore no reversion to the original type. It was clear from this that lymph derived originally from a vesicle of true variola of the sheep “bred true”—i.e., produced on transmission from sheep to sheep only local protective vesicles. If, however, this lymph were injected into the vascular system of a sheep true variola might be the result. Cheauvau, he (the speaker), and others had had cases of this kind. But while the inoculation was made by cutaneous insertion local vesicles only resulted. From this it followed that the argument because lymph derived from the cow and transmitted through

human beings did not ultimately revert to variola, but produced a local vesicle only, in no way justified the conclusion that the two diseases, variola and vaccinia, were specifically different. The conclusion to be drawn from this was that Jenner’s original contention was established. Dr. Klein then briefly referred to the work of Pasteur on anthrax and fowl cholera—a work which had been made possible by the discoveries of Koch. Satisfactory results in protective inoculations on the same lines as those pursued by Pasteur had been obtained in several—swine fever, swine erysipelas, &c.—but not in all infectious diseases. Unfortunately not in all infectious diseases did one attack protect, although a first attack furnished, for a time at any rate, a certain resistance; such was the case in diphtheria. In cases of acquired resistance or acquired immunity a condition was produced by the first attack by which the body was rendered unfit for a second attack. This sometimes happened after a mild first attack, but in other instances this only furnished a slight resistance and in still others no resistance. In these two latter cases the resistance could be increased by repetition of the mild attack and by using the second time a somewhat stronger virus and producing a somewhat stronger effect, but still only a passing one; and after many repetitions in these cases the resistance thus acquired could gradually be increased to a high degree. It had been shown, both for animals and for man, that the immunity produced by artificial inoculation of attenuated culture or acquired in the natural manner by a first attack of the disease was due to the presence in the blood of chemical substances produced in the course of the first attack; these substances were capable of neutralising the activity of the specific microbes. Moreover, it was found by Behring that the injection of blood serum of an immunised animal was capable of protecting an otherwise susceptible animal and of furnishing it with immunity, so that infection with the microbes of the particular disease was prevented. The degree of this protective or immunising power of the blood of an immunised animal stood in direct proportion to the degree of immunity or resistance which that animal had acquired by the previous injection or by the previous attack. That in diphtheria the blood of an immunised animal possessed an immunising or protective property in other animals had been fully proved, but it must be added at the same time that the protection thus produced was only of comparatively short duration. In the experiments in which the immunising and protective action of the blood serum of an animal artificially immunised against diphtheria or tetanus respectively was ascertained another important fact was elucidated by Behring, afterwards confirmed by a large number of workers—viz., that this serum not only possessed protective potency when injected into an otherwise susceptible animal, but that if injected into an animal in which the disease had already made its appearance (the disease) could be cut short and the animal would recover. The serum, therefore, acted as a curative agent. Such serum had been applied both in diphtheria by Behring and Roux, as also in tetanus by Tizzoni and Centanni, with striking success in the human subject; and the published accounts of the cases so treated in Germany, Austria, France, Italy, and England placed it beyond doubt that in a large percentage of cases the disease was cut short and even in severe cases recovery achieved. A question of great scientific interest was the manner in which the serum of animals immunised against diphtheria or tetanus acquired its protective and its curative potency. Looked at from a theoretical point of view this double action might be due to either of two things: (a) the serum might contain one substance which had both these actions, or (b) it might contain two different substances, one for each separate action. The whole subject was only at the commencement of being understood, but this much was already certain, that the work on a sound experimental basis had already been productive of good results and was likely to be productive of still greater achievements in the field of protective as well as curative practice.

MEMORANDUM ON EPIDEMIC INFLUENZA.

WE have received the following memorandum from the Local Government Board, which will be read with interest at the present time:—

Influenza became epidemic in England in the winter of

1889-90; it recurred in epidemic form in the spring of 1891, and was maintained up to June of that year; a third epidemic took place in the winter of 1891-92, and after a minor recrudescence in the spring of 1893 a fifth prevalence on a wide scale took place in the winter of 1893-94. England is now passing through a sixth epidemic period. Two detailed reports have been issued by the Board on the subject. The first was by Dr. Parsons, on the Influenza Epidemic of 1889-90, with an Introduction by Sir George Buchanan, M.D., F.R.S., the Board's medical officer at that date.¹ The second was a Further Report on Epidemic Influenza, 1889-92, by Dr. Parsons, with papers on the clinical and pathological aspects of the disease by Dr. Klein, F.R.S., and an Introduction by myself.²

A "Provisional Memorandum upon Precautions advisable at times when Epidemic Influenza threatens, or is prevalent," was also drawn up by me in January, 1892, and was issued by the Board to local sanitary authorities.

The further study made by the Medical Department as to the natural history of influenza and as to its clinical and bacteriological characteristics goes to show that it is a disease against which it is most difficult to apply measures of prevention with any substantial prospect of success.

Influenza is highly infective from person to person; its infectious quality is often manifested before the disease is fully recognised; its incubation period is one of the shortest of all infectious diseases; it varies so much in intensity that many cases are never diagnosed at all; one attack confers no marked immunity against another; and the infection is largely eliminated by means of the lungs, the sputa of the sick being invariably charged during the acute stage of the disease with its pathognomonic micro-organism. The disease calls primarily for measures of isolation and of disinfection, but there are difficulties in making any such measures universally applicable. Wherever they can be carried out the following precautions should, however, be adopted.

1st. The sick should be separated from the healthy. This is especially important in the case of first attacks in a locality or a household.

2nd. The sputa of the sick should, especially in the acute stage of the disease, be received into vessels containing disinfectants. Infected articles and rooms should be cleansed and disinfected.

3rd. When influenza threatens, unnecessary assemblages of persons should be avoided.

4th. Buildings and rooms in which many people necessarily congregate should be efficiently aerated and cleansed during the intervals of occupation.

It should be borne in mind that the liability to contract influenza, and also the danger of an attack if contracted, are increased by depressing conditions, such as exposure to cold and to fatigue, whether mental or physical. Attention should hence be paid at epidemic periods to all measures tending to the maintenance of health, such as the use of clothing of suitable warmth, and a sufficiency of wholesome food.

Persons who are attacked by influenza should at once seek rest, warmth, and medical treatment, and they should bear in mind that the risk of relapse, with dangerous complications, constitutes a chief danger of the disease.

Local Government Board,

Medical Department, March 6th, 1895.

R. THORNE THORNE.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary meeting of the Council was held on the 7th inst., Mr. Reginald Harrison, the Senior Vice-President, being in the chair. The secretary reported the death on Feb. 19th of the President, Mr. John Whitaker Hulke, F.R.S. The following vote of condolence was passed: "The Council hereby record their deep regret at the death of their late colleague and president, Mr. John Whitaker Hulke, F.R.S., and in marking their sorrow for the loss of one so lately associated with them in all the duties and responsi-

bilities of office express their most sincere sympathy with Mrs. Hulke and the other members of the family in their affliction. The Council feel that the College has lost one of its most distinguished Fellows—one who conferred honour on the College and the whole profession of surgery, not only by his admirable skill in practice, but by his eminent position among men of science to which his varied and rare knowledge so justly entitled him. The Council also record their appreciation of Mr. Hulke's services to the College while President, and in the several offices filled by him, and their respect for his exemplary rectitude and unselfish devotion to duty."

The Senior Vice-President then declared the office of President vacant, and the Council appointed the quarterly meeting on April 4th for the election of a new president.

The Secretary reported the death, on the 4th inst., of Sir William Scovell Savory, Bart., F.R.S., past President and past member of the Council and of the Court of Examiners of the College, and the following vote of condolence was passed: "The Council hereby record their deep regret at the death of Sir William Savory, Bart., F.R.S., and desire to express their very sincere sympathy with his family in their loss. The Council gratefully remember Sir William Savory's services to the College, and the records of the Council bear witness to the many and important instances in which the best interests of the College, and of the whole surgical profession, were promoted by his energy and wisdom. The Council call to mind the many rare qualities which won for him the admiration and esteem of all who knew him, and are assured that for these, as well as for his eminence as a surgeon, his name will ever be remembered with respect and honour."

A report, dated March 4th, was read from the Committee of Management:—"The Committee of Management have, in accordance with the request of the Royal Colleges, considered the report on the examinations for the Diploma in Public Health of the inspector (Dr. G. F. Duffey) appointed by the General Medical Council. They notice in the general conclusion that the inspector states that 'the examinations give evidence on the part of candidates passing such examinations of a distinctly high proficiency, scientific and practical, in each and all branches of study which concern public health in which they are examined.' The inspector, however, in his observations, calls attention to the fact that there was no examination in bacteriology nor any clinical examination in infectious diseases. The committee desire, therefore, to point out that questions on bacteriology have frequently been given during the *visu voce* examination, and bacteriological specimens under the microscope and cultures of bacteria have been shown to candidates, and they doubt whether it is practicable to do more than test the general knowledge of the candidate in bacteriology in this manner. With regard to the remarks of the inspector in reference to the clinical examination in infectious diseases, the committee would further point out that in London the institution of such an examination would be attended with great difficulties, having regard to the large number of candidates and to the distance of the infectious diseases hospitals from the examination hall. Moreover it may be doubted if permission could be obtained for the examiners to conduct clinical examinations at the hospitals in question. It should be remembered, however, that the regulations require attendance on the practice of a hospital for infectious diseases, and this, if supplemented by a general knowledge of the subject shown by the candidate during his examination, is, in the opinion of the committee, a sufficient guarantee of his proficiency. It may also be doubted whether anything more than a superficial examination could be conducted at the bedside of patients with many of the infectious diseases."

The report was approved.

Mr. T. Pickering Pick was appointed a member of the Committee of Management and Mr. H. G. Howse a member of the Laboratories Committee in the vacancies on those committees occasioned by the death of the President.

A letter was read from Mr. Wilde on behalf of the Society of Members, which stated that the society did not wish to oppose the suggested alterations in the by-laws referring to the voting papers and the fee for the dental diploma.

A letter from the Home Secretary was read, asking Messrs. Wilde, Berger, and Moore to transmit to the Council copies of the letters from the Society of Members, and to move the Council to favour him with their observations thereon. The subject was referred to the Vice-Presidents and Mr. Bryant past President, and they were requested to draw up a reply.

¹ Report on the Influenza Epidemic of 1889-90, by Dr. Parsons, with an Introduction by the Medical Officer of the Local Government Board. (C., 6387), pp. 324. Eyre and Spottiswoode, East Harding-street, E.C.

² Further Report and Papers on Epidemic Influenza, 1889-92, with an Introduction by the Medical Officer of the Local Government Board. (C., 7051), pp. 154. Eyre and Spottiswoode, East Harding-street, E.C.

A letter was read from Mr. H. Percy Dunn forwarding, by direction of the committee of the Association of Fellows, a resolution expressing regret at the death of the President. The letter was acknowledged with the thanks of the Council.

The Senior Vice-President reported, on behalf of himself and the Junior Vice-President, the delivery of the Hunterian Oration on the 14th ult., the oration being read by Mr. T. Bryant on behalf of the late President, Mr. J. W. Hulke, who was at that date unable through illness to attend. It was resolved to request the permission of the executors of the late President to publish the oration at the expense of the College.

THE NAVY AND ARMY ESTIMATES.

WITH regard to the naval estimates, it is clear that the Government is fully alive to the vital importance of preserving our supremacy at sea, and the Admiralty have redeemed their promises as regards an increase in ships, men, and works. The medical establishments and services, in regard to which our readers are more especially interested, are provided for in Vote 3. The estimate of the sum that will be required in the year ending March 31st, 1896, to defray the expense of the medical services, including the cost of medical establishments at home and abroad, amounts to £151,400, which shows a net increase of £7500 over the estimates of last year (1894-95). The salaries and allowances amount to £35,643, a slight decrease on last year. Under the head of medicines and medical stores we find that £80,000 are required for hospital and infirmary provisions and stores, medicines, and instruments; and the contributions in aid of lock hospitals at Portsmouth, Devonport, and Hong-Kong amount to £2350. The *personnel* of the Naval Medical Service seems to have undergone little or no change since last year. There are 2 Inspectors-General of Hospitals, 8 Deputy Inspectors-General, 10 Fleet Surgeons, 6 Staff Surgeons, and 27 Surgeons, 3 head sisters, 21 sisters, and 14 dispensers. A statement showing the number, salaries, and allowances of officers and clerical staff &c. at each establishment is also given in detail in another part of the estimates.

With regard to the army, we may say that the explanatory memorandum which it is now the practice of the Secretary of State for War to issue with the Estimates greatly facilitates the comprehension of their object, scope, and arrangement, the results of the figures, and the proposed changes, and, to a certain extent, the policy that will be followed is indicated. These are matters of general interest, and we may consequently advert to a few points. Although there has been a fall in the price of supplies the saving from this source, we are told, has been absorbed by the increase of the sinking fund to repay the loan for barrack reconstruction and by the necessity for increased expenditure in order to put many old buildings into a satisfactory sanitary condition. It is hoped that a battalion will be withdrawn from Egypt during the year, but judging from the present political aspect of affairs in that country we may add that this hope does not seem likely to be realised. Passing over the proposed augmentation of artillery so as to increase the proportion of field guns to men of other arms, in which respect the British is at present dangerously below Continental armies, we come to the remarks on the report of the Inspector-General of Recruiting. Speaking generally the results are very satisfactory. The short service system, we are assured, has at length been brought to as good a state as was anticipated when it was instituted by Lord Cardwell. The army is, we think, on the whole growing in popularity as a calling and means of livelihood. We wish, however, that we could see a larger number of recruits drawn from rural instead of urban populations, and that the artisan and labouring classes, rather than the clerks of our cities and towns, enlisted more frequently than they do. The troopships hitherto at the disposal of the army, of which most medical officers have had personal knowledge and experience, are worn out and have been abolished in favour of a system of hired vessels as transports. The new system will be practically tested before any decision is finally arrived at as to whether the old troopships will be replaced by new vessels or not. The vote for works is that which shows the largest increase in the Estimates. Of the increased expenditure upon new buildings the whole of that for

barracks—viz., £58,000—is for hospital and urgent sanitary services, and even of the increase for store buildings half the sum is taken to further the scheme of the corporation of Dublin for improving the sanitary condition of that city. The progress of the works under the Barrack Act, 1890, we are told, continues to be satisfactory, the average annual expenditure being a little over £600,000. Up to the present time the sum of £3,000,000 has been authorised, and nearly £2,400,000 actually paid.

Passing to Vote 2 in the Army Estimates—that for medical establishment, pay, &c.—we find that the estimated sum required for the year ending March 31st, 1896, to defray the expense of the pay and allowances of the medical establishment and cost of medicines, &c., is £292,000, being an increase of £2000 over 1894-95. The pay &c. of the medical staff are estimated at £229,500; that of Militia medical officers and civilian practitioners amounts to £10,600; the cost of the Medical Staff Corps, nurses, clerks, and other subordinates is estimated at £37,000, and the cost of medicines &c. at £15,000, which is £1000 less than for 1894-95. A statement showing the rates of pay &c. and the allotment of the staff to the various districts and stations at home and abroad is given in Appendix No. 8. The total of the medical staff on the British establishment is 614, and that on the Indian establishment is 335. The estimated sum required for the Army Medical School, Netley, is £7,600.

Vote 14 gives the non-effective charges for officers; the total estimate for medical officers for 1895-96 amounts to £198,000.

THE PROPOSED ASSOCIATION OF QUALIFIED MEDICAL ASSISTANTS, JUNIOR MEDICAL OFFICERS, AND LOCUM-TENENTES.

A MEETING for the purpose of organising the proposed Association of Qualified Medical Assistants, Junior Medical Officers, and Locum-tenentes was held at the Examination Hall, Victoria Embankment, on Monday last, March 11th. Dr. Glover presided, and was supported by Mr. T. Howard Brocklehurst, the organising secretary, and Mr. C. Legg.

Dr. J. G. GLOVER said the cause they had met to promote was in itself a good one, and was really called for. The qualified assistants of the country were a numerous and important body, numbering perhaps 3000 or 4000. These gentlemen were of the same professional status as their principals, but in a different position. Personally, he (Dr. Glover) did not think it a dishonourable position, although an old practitioner had recently expressed the opinion that the work of breaking stones or the occupation of a navy was better than that of a qualified assistant. To be under the eye and to coöperate with a good principal was, he thought, one of the best possible things for a man just entering the profession. At the same time, the position was not a strong one and contained some disadvantages. Firstly, the qualified assistant had to contend with the competition of unqualified assistants, of whom there was a large number in England, especially in the north; secondly, they were a detached body of men, and their position could be strengthened only by organisation, which was, however, costly, and assistants were not rich. There were bodies already existing that had done much to improve the position and status of the qualified assistant. Speaking as a member of the General Medical Council he could assure them that from one-half to one-third of the time of the Council was occupied in dealing with men who employed unqualified assistants. The two medical defence unions had also done much in this direction, and he thought in taking the steps contemplated the meeting should consider how far they ought to go and how far they should combine with the existing organisations of the profession. It would be rash for them to set up as a separate organisation without duly considering the matter. The days of the unqualified assistant were over, and the qualified man should be supported, not only as a duty to the profession, but also as a duty to the public.

Mr. BROCKLEHURST announced that the following gentlemen had, in answer to the letter which appeared in THE LANCET, signified their willingness to join such an association:—Dr. W. R. Fenton, Liverpool; Mr. C. E. Moffatt,

Beverley; Mr. R. J. Farman, Longford; Dr. J. Morgan Rickey, Cork; Mr. A. Rastaub, Essex; Dr. W. Jamison, Dromore; Mr. Whitmore, Rutland; Mr. C. E. Bucknill, London; Dr. Swindells, Essex; Dr. R. L. Shaw, New Mills; Mr. E. C. Drake, Grantham; Dr. J. J. Brown, Grantham; Mr. C. J. A. Coates, Monmouth; Dr. J. W. Oliver, London; Mr. Probyn, London; Mr. W. B. Orme, London; and Dr. Marcus Quarry, London.

Mr. C. LEGG then put before the meeting the various advantages that would accrue from membership, the most important of which was the formation of a central bureau where the status of the assistant and principal could be accurately determined.

On the motion of Mr. W. B. ORME, seconded by Dr. MARCUS QUARRY, it was decided to form a committee to receive communications on the subject and to take any further steps in promoting the association.

With the usual courtesies to the Chairman the meeting was brought to a close.

We are requested to state that the subscription proposed, which is one guinea per annum, should be sent to Mr. T. W. Brocklehurst, 1, Ilchester-villas, Westham, Weymouth, Dorset, or to Mr. C. Legg, 50, Deauville-road, Clapham, London.

CIVIL RIGHTS' DEFENCE COMMITTEE.

WE have received the following report of proceedings in the Anderson appeal case from the Civil Rights' Defence Committee, with a request for its publication:—

The Anderson (Privy Council) Appeals.

The Civil Rights' Defence Committee begs to append a further list of subscribers to the Anderson (Privy Council) Appeal Fund, together with extracts from the minutes of a meeting of the committee of March 1st, 1895.

The committee is much encouraged and strengthened by the action of THE LANCET and of those branches of the British Medical Association which have voted subscriptions from the branch funds in aid of the defence entrusted to it of the professional and public rights involved in Mr. Anderson's appeals and of those branches of the British Medical Association and divisions of the London and Counties' Medical Protection Society and of those gentlemen who have kindly taken charge of lists and collected subscriptions. Time is, however, passing, and a considerable further sum—about £850—is, as has been already stated, necessary for the conduct of these appeals to the Privy Council to a satisfactory issue, and of this at least £100, but to move to the best advantage £150 are required before the special leave to appeal can be applied for. The papers and proceedings up to this stage, including many office copies from, and searches in, Trinidad, have been prepared and taken and paid for out of the funds raised, and there is at present, when all subscriptions promised are received, a balance of £45 available.

If a uniform subscription of 5s. could be obtained from one-tenth part of the medical profession of the empire, or of 2s. 6d. from one-fifth part, or of 1s. each from one-half of the profession, the defence of rights declared by all public bodies, journals, and individual members of the profession that have expressed themselves to be essential to the practice and existence of the profession need no longer be left open to question and subject to encroachment.

The committee begs to invite coöperation in organising a general uniform subscription of 5s. or 2s. 6d., and to appeal to public bodies the committee represents and to the divisions and branches of those bodies to aid in this work and to subscribe such sums as they can devote to it and as will express their sense of the importance to the profession of the rights involved.

Copies of the *interim* report will be sent to branches about to hold meetings and, as far as possible, to the members of those branches, but the committee will be very much obliged if honorary secretaries of, and of branches and divisions of, the bodies represented on the committee and members of the profession willing to assist in the collection of subscriptions will apply for such numbers of copies as they may require.

The Incorporated Medical Practitioners' Association has kindly promised to distribute at the cost of this committee the *interim* report to its members.

In continuing and renewing its appeal the committee conveys to each member of the bodies represented on it the appeal of each of those bodies to its own branches or divisions and to its own members; and, in bringing this application urgently before public bodies and individuals that have not as yet had the appeal brought to their notice, the committee earnestly invites consideration of the several votes adopted and opinions expressed by public bodies and men of high standing in the profession to the effect that, deprived of the rights which Mr. Anderson is defending, the practice of the profession as a means of livelihood would be (as it was rendered to him) impossible, and the position of medical men one of intolerable degradation.

Lord Stamford and the committee feel, therefore, the greatest confidence in appealing to every feeling of public spirit and of personal generosity for the aid necessary to enable Mr. Anderson to bring to a successful issue his difficult and meritorious defence of most valued professional and public rights.

Extract from Minutes of Meeting of March 1st, 1895.

The following extract from the proceedings of the Victoria Branch was laid upon the table:—

"The hon. secretary read a letter received from England, asking for assistance towards the appeal of Mr. Anderson of Trinidad to the Privy Council. An appeal is being made to the Privy Council, and as their decision will be law in this colony members were requested to consider the advisability of the branch voting a sum to assist the appeal.

"An expression of opinion from the branch was also asked for.

"It was resolved to vote £10 10s. towards the appeal. The branch also passed the following resolution: 'That it has been the custom in this colony, and the custom meets with the approval of the branch, for medical men when they think fit to demand payment before rendering services.'"

The following resolution of the Yorkshire branch was laid upon the table:—

"The Yorkshire branch of the British Medical Association, feeling that a great injustice has been done to Mr. Anderson, that the matter is of serious importance to the medical profession, and that it sympathises sincerely with Mr. Anderson in his difficulty, hereby resolves to contribute the sum of £10 towards his expenses."

Votes of thanks as follows were unanimously adopted:—

"That the very cordial thanks of the Civil Rights Defence Committee be tendered to the Messrs. Wakley, the Proprietors and Editors of THE LANCET, for their very powerful support and coöperation and appeal to the medical profession and for their very liberal contribution heading a special 'LANCET Fund' for the Anderson Privy Council appeals. To the Halifax (Nova Scotia), Yorkshire, and Victoria branches of the British Medical Association for expressions or resolutions of sympathy and approval and for votes from the funds of those branches to the Anderson (Privy Council) appeals.

"To the councils, secretaries, and members of the Burma, East Anglian, Lancashire, and Cheshire, South Midland, and Gloucestershire branches of the British Medical Association and to the North London and Croydon divisions of the London and Counties' Medical Protection Society for votes and expressions of sympathy, and for having taken charge of lists and raised subscriptions amongst their members.

"To the North of Ireland and Shropshire and Mid-Wales branches of the British Medical Association for their votes and expressions of sympathy with and approval of the work and objects of the committee, and of the defence by Mr. Anderson of the professional and public rights involved in his appeals, and to Dr. Barnes, Dr. C. J. Evans, Dr. J. B. Lawford, Dr. Barr, Mr. Parakh, Dr. Pruett, Dr. Lloyd Smith, Mr. Knaggs, and Mr. Whishaw for their kindly expressions of sympathy and for having taken charge of lists and collected subscriptions."

The following resolutions were unanimously adopted:—

"That a letter with the *interim* report be sent to each branch or division of the bodies represented on the committee and about to hold meetings, and as far as possible also to members of such branches or divisions, inviting their coöperation.

"That it be arranged as early as possible for a deputation, consisting of as many members of the committee as may

accept an invitation to attend, to wait upon the editor of the *Times* and other leading newspapers to invite their aid by advocating a public meeting or otherwise, and in organising a committee and raising funds to enable Mr. Anderson to carry his appeal in the case of *Anderson v. Gorrie* and others on to the House of Lords; and, in the event of failure in such appeal, to carry on the matter with a view to legislation on the subject, and to obtain an indemnity for Mr. Anderson from Parliament; that members of the Civil Rights' Defence Committee be especially urged to attend the deputation; that the president be invited to introduce the deputation; and that Mr. Anderson be invited to state his case.

"That Mr. Anderson's case, and the civil rights involved, be strongly represented to the City Guilds, and that they be asked to take part in a requisition to the Lord Mayor to convene a public meeting at the Mansion House for the purpose of organising a committee and raising funds to enable Mr. Anderson to carry his appeal in *Anderson v. Gorrie* and Others to the House of Lords."

ANDERSON (PRIVY COUNCIL) APPEAL FUND.

Further subscriptions up to Feb. 28th, 1895.

Dr. Barnes, hon. sec., East Anglian Branch of the British Medical Association, collected as per list—			
Mr. C. E. Addison, Colchester	£0 5 0	£ s. d.	
Dr. E. G. Barnes, Eye	0 5 0		
Mr. W. W. Baxter, Manningtree	0 2 6		
Dr. M. Beverley, Norwich	0 5 0		
Dr. Browne, Ipswich	0 4 0		
Dr. T. Carr, Braintree	0 5 0		
Dr. F. W. Clark, Lowestoft	0 5 0		
Mr. M. J. Doidge, Haverhill	0 5 0		
Mr. S. O. Eades, Ipswich	0 5 0		
Mr. Branford Edwards, Ipswich	0 5 0		
Mr. S. Evans, Harwich	0 5 0		
Dr. W. F. Fryer, Ipswich	0 5 0		
Mr. C. G. Havell, Felixstowe	0 5 0		
Dr. G. F. Hulme, Felixstowe	0 5 0		
	3 6 6		

Dr. James Barr, Liverpool, hon. sec., Lancashire and Cheshire Branch, British Medical Association, collected as per list—			
Dr. James Barr, Liverpool	0 10 0		
Dr. W. M. Campbell, Liverpool	0 10 6		
Dr. E. H. Dickinson, Liverpool	1 1 0		
Mr. J. Earle, Manchester	0 10 0		
Dr. Massiah, Didsbury	0 10 6		
Mr. Puzey, F.R.C.S., Liverpool	1 1 0		
Dr. E. Rayner, Stockport	1 1 0		
Mr. G. E. Walker, F.R.C.S., Liverpool	1 1 0		
	6 5 0		

Mr. C. Biddle, Merthyr Tydfil, per Dr. Greenwood	1 1 0		
*Dr. T. Bowen, Barbadoes	1 1 0		
Mr. H. D. Brook, Fareham, collected as per list—			
Self	0 10 6		
Mr. G. H. Case, Fareham	0 10 6		
	1 1 0		

Messrs. Jonas Brown and Sons, London	1 1 0		
C. S. W., per <i>British Medical Journal</i>	0 10 6		
Mr. Cadge, Norwich	1 1 0		
Dr. Cant, Colchester	0 10 6		
Dr. Cleveland, London	1 1 0		
Mr. Corbin, Guernsey	0 10 6		
Surgeon-Major J. R. Dodd, Lucknow	1 1 0		
Dr. Dukes, Rugby	1 1 0		
Eastbourne Medical Society	3 3 0		
Mr. C. J. Evans	1 1 0		
Dr. A. C. E. Harris, Birkenhead	1 1 0		
Dr. Huggard, Davos Platz, further subscription	1 1 0		
*Dr. John Hutson, Barbadoes	1 1 0		
Dr. Johnson, British North Borneo	1 1 0		
Mr. Keeling, Sheffield	1 1 0		
Mr. S. Knaggs, F.R.C.S., Huddersfield, collected as per list—			
Dr. R. C. Brown, Holmfirth	0 10 6		
Mr. T. Kilner Clarke, Huddersfield	0 10 6		
Mr. L. Demetriadi	0 5 0		
Dr. J. Dickson, Lindley	0 10 6		
Mr. A. Doughton, Huddersfield	0 10 6		
Mr. J. W. Draper, Almondbury	0 10 6		
Mr. S. Knaggs, Huddersfield	1 1 0		
Mr. W. H. Lord, Huddersfield	0 10 6		
Mr. P. MacGregor, Lockwood	0 10 6		
Dr. F. L. Mackenzie, Lockwood	0 10 6		
Mr. W. L. W. Marshall, Huddersfield	0 10 6		
Dr. J. Martin, Huddersfield	0 10 6		
Dr. F. W. Robinson, Huddersfield	0 10 6		
Mr. W. Robinson, Huddersfield	0 10 6		
Dr. T. Smailes, Holey	0 10 6		
	8 2 6		

*Mr. J. B. Lawford, London			
Collected as per list—			
Mr. James James	1 1 0		
Dr. James Taylor	1 1 0		
	2 2 0		
Mr. Lloyd, Surbiton	0 10 0		
Mr. D. MacAllan, London	0 10 6		
Mr. Rutherford Morison, Newcastle-on-Tyne	1 1 0		
Dr. E. Nash, London, per Dr. Bullock	0 10 0		
The Proprietors of THE LANCET	10 0 0		
Mr. E. Nettleship, F.R.C.S., London	5 5 0		
	15 5 0		

Mr. N. N. Parakh, hon. sec. Burma Branch of the British Medical Association, as per list—			
Surgeon-Lieutenant-Colonel J. Backhouse,			5 Rs.
Rangoon			5 Rs.
Surgeon-Lieutenant-Colonel O. Baker			5 Rs.
Dr. C. F. Britts			5 Rs.
Dr. W. E. Godber			5 Rs.
Dr. B. Day			5 Rs.
Surgeon-Colonel S. B. Hunt			5 Rs.
Brigade-Surgeon-Lieutenant-Colonel H. Johnston			5 Rs.
Mr. N. N. Parakh			5 Rs.
Dr. T. F. Pedley			5 Rs.
Dr. E. M. de Souza			5 Rs.
			50 Rs.

Less exchange (£2 5 9)	2 14 3		
Dr. S. T. Pruett, hon. sec. Gloucestershire Branch British Medical Association, collected as per list and remitted per Mr. I. A. Cardew:—			
Mr. E. D. Bower, Gloucester	1 1 0		
Mr. W. K. Buckell, Cheltenham	1 1 0		
Mr. O. H. Fowler, Cirencester	1 1 0		
Dr. S. T. Pruett, Cheltenham	0 10 6		
Dr. G. T. B. Watters, Stonehouse	1 1 0		
Dr. E. T. Wilson, Cheltenham	0 10 6		
	5 5 0		

Mr. A. B. Smith:—			
Hulifax Branch of the British Medical Association, vote from funds	2 0 0		
Dr. Lloyd G. Smith, hon. sec. North London Division of the London and Counties Medical Protection Society, collected as per list:—			
Mr. E. Hooper May, F.R.C.S., London	0 5 0		
Dr. Lloyd G. Smith, London	0 5 0		
Dr. A. O. Ward, London	0 5 0		
	0 15 0		

Surg. Capt. Spong, A.M.S., Egypt (two subscriptions)			
Mr. R. K. Whishaw, F.R.C.S., hon. sec. Croydon Division of the London and Counties Medical Protection Society:—			2 2 0
Dr. H. J. Cooper, Croydon	0 5 0		
Mr. H. W. Drew, Croydon	0 5 0		
Dr. P. T. Duncan, Croydon	0 5 0		
Dr. C. W. Philpot, Croydon	0 5 0		
Dr. W. Rosser, Croydon	0 5 0		
Dr. S. Parsons Smith, Croydon	0 5 0		
Dr. H. G. Thompson, Croydon	0 5 0		
Mr. R. R. Whishaw, Croydon	0 5 0		
	2 0 0		

*Dr. J. A. Wegg, Jamaica	1 1 0		
Mr. Wilkinson, Salop	1 1 0		
Yorkshire Branch of the B.M.A., vote from funds of Branch			
Victoria Branch of B.M.A., vote from funds of Branch	10 0 0		
	10 10 0		

*The Committee regrets that these were accidentally omitted in previous lists, having been received the day before the issue of the list of Aug. 24th. The Committee will be much obliged if subscribers will call attention to any such omissions.

Cheques and postal orders should be crossed and made payable to the Anderson Appeal Fund Account, and forwarded to the Manager of the Chancery-lane Branch of the Union Bank, Chancery-lane, London, W.C.

Public Health and Poor Law.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Stockport Urban Sanitary District.—Dr. Charles Porter, in dealing in his annual report for 1893 with the important question of infantile mortality—which, by the way, was in Stockport as high as 225 per 1000 births in 1893—makes a very interesting analysis of the returns of his district for the last five years. The main conclusions are these: the number of deaths on the first day of life is three times greater than in any succeeding day; the total number of deaths during the first week of life constitutes more than half the deaths in the first month; and the infantile mortality of the first month is nearly double that of any other month. The drift of the conclusions agrees with those given in the fifty-fourth annual report of the Registrar-General, where the distribution of mortality over the first year of life was very clearly set forth. We notice, too, in the Stockport figures that there was, as in the analysis of the Registrar-General, an arrest of diminishing mortality in the third week of life. In discussing the causes of infantile mortality Dr. Porter points out how important a factor the employment of women during the latter months of pregnancy is in producing mortality from prematurity and low vitality at birth; and he also refers to the manner in which the female workers' children are exposed in their travels to and from the caretakers' houses, thus increasing the mortality from respiratory diseases. Dr. Porter dilates upon the necessary remedial measures, and he

urges that it is more desirable to prevent female mill labour during the latter months of pregnancy than to extend the period of prohibition after confinement to three months. The existing law as regards female labour is, he considers, almost a dead letter, inasmuch as the employers are, as a general rule, ignorant of confinements amongst their employées. As a remedy he suggests the compulsory notification of birth to the employers, together with prompter registration, and the necessity for provision of properly regulated crèches. The death-rate from enteric fever in Stockport during 1893 was 0·67 per 1000, as compared with 0·24 for the thirty-three large towns; and from a study of statistics for past years Dr. Porter concludes that the disease is, to a large extent, endemic in Stockport. In reference to the prevalence of this disease in Stockport during 1893 he supplies a capital chart, which brings out well the apparent relationship of the disease to the temperature of the earth at a depth of four feet and to the diarrhoeal mortality. It seems, too, in regard to locality, that the distribution of typhoid fever and diarrhoea were in large part identical. There were 80 cases with 32 deaths from diphtheria in Stockport during 1893, numbers much in excess of previous years. Dr. Porter goes, too, very exhaustively into the distribution of the cases, and concludes, amongst other things, that the three parts of the town most affected were those built on basins of sand in which natural drainage was interfered with in 1893 owing to the configuration of the subjacent boulder clay and the unusual lowering of the ground water. In indicating the lines of future action in Stockport Dr. Porter insists upon the very great importance of converting the privy midden to the water carriage system; in fact, it would be almost impossible, he states, to over-estimate the danger to health resulting from the existing privies, which pollute the air and soil, and are beds for the development of disease germs.

St. George-the-Martyr, Southwark, Urban Sanitary District.—Dr. F. J. Waldo, in his annual report for 1893, again refers to the important part played by unregulated Salvation Army and other shelters in the dissemination of small-pox; and in illustration of this he supplies the following table, taken from Dr. Long's report to the Metropolitan Asylums Board, showing the number of patients admitted to the hospital ships who traced their infection to various shelters:—

	December, 1892.	January, 1893.	February.	March.	April.	May.	June.	July.	Totals.
Salvation Army shelters:—									
(a) Blackfriars—St. George's Southwark	—	—	3	3	6	16	3	—	31
(b) Lisson-grove, Edgware-rd., Marylebone	3	2	3	8	11	5	—	—	32
(c) Horseferry-rd., Westminster	—	—	1	7	5	1	—	—	14
(d) Others...	1	2	5	6	8	—	1	—	23
Free shelters generally	—	1	4	2	3	—	—	—	10
Totals	4	5	16	26	33	22	4	—	110

Dr. Waldo adds that in so far as the south of London is concerned he estimates that small-pox was spread in 1893 by the Blackfriars shelter to a much greater extent than the figures in Dr. Long's table appear to warrant; and he repeats his recommendation that Salvation Army and other shelters should be under the same restrictions as common lodging houses. The shelter with which Dr. Waldo is more particularly concerned has, he states, been recently enlarged so as to accommodate 500 persons in the 1d. division, 288 in the 2d. bunk dormitory, and 40 in the 3d. cubicle dormitory. The minimum cubic space allotted to each adult in the 1d. division is 90 cubic feet and 6 superficial feet, allowances which, as he points out, contrast most unfavourably with common lodging-houses, workhouses, and barracks. In referring to the carrying out of the Vaccination Acts in his district, Dr. Waldo, who was apparently unable to obtain any returns as regards vaccination from the guardians, states on information derived from other sources that in no single instance during 1892 and 1893 have the guardians in question instructed their vaccination officer to prosecute defaulters; and it appears from the returns of the vaccination officer that in the year referred to there were

13·3 and 15·3 per cent. of the births not finally accounted for in respect to vaccination. As Dr. Waldo aptly remarks, the interim recommendation of the Vaccination Commission in no way absolves boards of guardians from discharging their duties under the Vaccination Acts. During 1893 he examined the water cisterns of certain model dwellings in his district. He discovered them to be "for the most part on the roofs, often imperfectly covered in, and in most cases within a few feet of the opening of the soil-pipe ventilation." In the appendix to his report Dr. Waldo reproduces the paper which he read in February, 1894, before the Sanitary Institute on the retail bakehouses of his district, which, with the discussion on it, is well worth reading.

Stretford Urban Sanitary District.—Mr. W. John Heslop reports that the death-rate of his district for 1894 was the lowest yet recorded—i.e., 13 per 1000. Measles has been added to the list of diseases notifiable in Stretford, but Mr. Heslop is apparently reserving his judgment as to its utility. The Manchester Ship Canal is reported to have been very offensive during the summer months in so far as it affects Salford.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6625 births and 7117 deaths were registered during the week ending March 9th. The annual rate of mortality in these towns, which had increased in the six preceding weeks from 18·7 to 32·9 per 1000, further rose last week to 35·0. In London the rate was as high as 41·2 per 1000, while it averaged 30·7 in the thirty-two provincial towns. The lowest rates in these towns were 16·1 in Derby, 19·2 in Blackburn, 19·6 in Leicester, 21·0 in Swansea, and 21·5 in Birmingham; the highest rates were 40·1 in Brighton, 41·2 in London, 42·8 in Halifax, 45·2 in Leicester, and 48·0 in Plymouth. The 7117 deaths included 339 which were referred to the principal zymotic diseases, against 317 and 330 in the two preceding weeks; of these, 111 resulted from whooping-cough, 73 from measles, 62 from diphtheria, 39 from diarrhoea, 30 from "fever" (principally enteric), 23 from scarlet fever, and 1 from small-pox. No fatal case of any of these diseases was recorded last week in Blackburn; in the other towns they caused the lowest death-rates in West Ham, Croydon, Huddersfield, Gateshead, and Leicester; and the highest rates in Manchester, Salford, Bolton, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Plymouth, Bolton, Manchester, Sheffield, and Newcastle-upon-Tyne; and from whooping-cough in Norwich, Oldham, and Halifax. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 62 deaths from diphtheria included 34 in London, 6 in Liverpool, 4 in Birkenhead, 3 in Salford, and 3 in Birmingham. A fatal case of small-pox was registered in Derby, but not one in London or in any other of the thirty-three large towns. There were 54 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 9th inst., against 67, 75, and 68 at the end of the three preceding weeks; 8 new cases were admitted during the week, against 18, 19, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1619, against 1657, 1658, and 1621 on the three preceding Saturdays; 141 new cases were admitted during the week, against 159, 152, and 143 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 324 to 1448 in the six preceding weeks, were 1366 last week, and were as many as 842 above the corrected average. The causes of 126, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Oldham, Bradford, Leeds, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Brighton, Birmingham, Leicester, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 23·9 to 42·8 per 1000 in the five preceding weeks, declined to 40·9 last week, but was 5·9 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight

Scotch towns ranged from 28.5 in Greenock and 30.9 in Perth to 43.9 in Glasgow and 44.5 in Edinburgh. The 1180 deaths in these towns included 72 which were referred to measles, 39 to whooping-cough, 14 to diarrhoea, 8 to diphtheria, 6 to scarlet fever, 3 to small-pox, and 2 to "fever." In all, 144 deaths resulted from these principal zymotic diseases, against 118 and 115 in the two preceding weeks. These 144 deaths were equal to an annual rate of 5.0 per 1000, which was 3.3 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 54 and 51 in the two preceding weeks, rose again to 72 last week, of which 30 occurred in Edinburgh, 20 in Aberdeen, 11 in Glasgow, and 7 in Leith. The deaths referred to whooping-cough, which had been 36 and 30 in the preceding two weeks, increased to 39 last week, and included 31 in Glasgow. The 8 fatal cases of diphtheria exceeded the number recorded in any recent week, and included 3 in Edinburgh and 2 in Aberdeen. The deaths from scarlet fever, which had been 4 and 10 in the two preceding weeks, declined to 6 last week, of which 4 occurred in Glasgow. Of the 3 fatal cases of small-pox 2 were registered in Edinburgh and 1 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 345, 517, and 544 in the three preceding weeks, declined to 463 last week, but exceeded by as many as 350 the number in the corresponding week of last year. The causes of 82, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 35.1 and 32.7 per 1000 in the two preceding weeks, rose again to 48.8 during the week ending March 9th. During the past ten weeks of the current quarter the death-rate in the city has averaged 34.6 per 1000, against 25.7 in London and 28.6 in Edinburgh. The 327 deaths registered in Dublin during the week under notice showed an increase of 108 upon the number in the previous week, and included 14 which were referred to the principal zymotic diseases, against numbers declining from 19 to 6 in the four preceding weeks; of these, 5 resulted from small-pox, 5 from "fever," 3 from whooping-cough, 1 from diarrhoea, and not one either from measles, scarlet fever, or diphtheria. These 14 deaths were equal to an annual rate of 2.1 per 1000, the zymotic death-rate during the same period being 1.7 in London and 7.6 in Edinburgh. The fatal cases of small-pox, which had declined from 8 to 4 in the three preceding weeks, rose again to 5 last week. The 5 deaths referred to "fever" were all certified as enteric, and exceeded the number recorded in any recent week. The 3 fatal cases of whooping-cough also exceeded recent weekly numbers. The 327 deaths in Dublin last week included 64 of infants under one year of age, and 112 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in any recent week. Four inquest cases and 4 deaths from violence were registered; and 108, or nearly a third, of the deaths occurred in public institutions. The causes of 28, or more than 8 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING FEBRUARY, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during February in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 5.9 per 1000 of the population, estimated at 4,392,346 persons in the middle of this year. In the three preceding months the rates had been 9.5, 8.4, and 7.0 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, Westminster, St. Martin-in-the-Fields, Strand, City of London, and St. Saviour Southwark; while they showed the largest excess in Marylebone, Islington, St. Luke, Limehouse, Rotherhithe, and Greenwich. The prevalence of small-pox in London showed a slight increase during February, 48 cases being notified during the month, including 34 in Marylebone and 3 in Holborn sanitary areas. The Metropolitan Asylum Hospitals contained 66 small-pox patients at the end of February,

against 16 and 51 at the end of the two preceding months; the weekly admissions averaged 15, against 3 and 10 in the two preceding months. The prevalence of scarlet fever in London showed a slight increase upon that recorded in January; this disease was proportionally most prevalent in Hampstead, Islington, St. Luke, Limehouse, Mile End Old Town, Rotherhithe, Greenwich, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1569 scarlet fever patients at the end of February, against 2114, 1865, and 1633 at the end of the three preceding months; the weekly admissions averaged 141, against 208, 171, and 148 in the three preceding months. The prevalence of diphtheria in London showed a marked further decline during February; among the various sanitary areas this disease showed the highest proportional prevalence in Holborn, Bethnal-green, Limehouse, Poplar, Camberwell, Greenwich, and Plumstead. There were 461 cases of diphtheria under treatment in the Metropolitan Asylum hospitals at the end of February, against 517, 521, and 515 at the end of the three preceding months; the weekly admissions averaged 50, against 90, 93, and 71 in the three preceding months. The prevalence of enteric fever in London also showed a marked decline during the month under notice; among the various sanitary districts this disease showed the highest proportional prevalence in St. Luke, Bermondsey, and Battersea sanitary areas. Erysipelas was proportionally most prevalent in Hackney, Bethnal-green, Battersea, Wandsworth, and Plumstead sanitary areas. The 12 cases of puerperal fever notified during February included 3 in Camberwell and 2 in Poplar sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, March 2nd, the deaths of 10,205 persons belonging to London were registered, equal to an annual rate of 30.3 per 1000, against 15.2, 17.7, and 18.3 in the three preceding months. This exceptionally high rate was principally due to the epidemic prevalence of influenza. The lowest death-rates during February in the various sanitary areas were 16.6 in Hampstead, 19.3 in Plumstead, 19.5 in Lee, 21.9 in Woolwich, 22.0 in Lewisham (excluding Penge), 22.9 in Stoke Newington, and 23.6 in Hackney; the highest rates were 38.8 in St. Saviour Southwark and in Newington, 39.0 in Limehouse, 39.7 in Marylebone, 39.8 in Westminster and in St. George-in-the-East, 42.7 in Strand, 43.6 in St. Giles, and 49.3 in St. Luke. During the four weeks of February 514 deaths were referred to the principal zymotic diseases in London; of these, 172 resulted from whooping-cough, 119 from diphtheria, 90 from measles, 50 from scarlet fever, 44 from diarrhoea, 32 from enteric fever, 1 from an ill-defined form of "fever," and 6 from small-pox. These 514 deaths were equal to an annual rate of 1.5 per 1000, against 1.8 and 1.6 in the two preceding months. No fatal case of any of these diseases was recorded last month in St. Olave Southwark; in the other sanitary areas they caused the lowest death-rates in Kensington, Fulham, Westminster, St. James Westminster, Whitechapel, and Wandsworth; and the highest rates in St. Pancras, St. Giles, Clerkenwell, Limehouse, Poplar, and Battersea. Six fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 12; of these 6 deaths, 5 belonged to Marylebone and 1 to Newington sanitary areas. The 90 deaths referred to measles were 53 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Holborn, Shoreditch, Poplar, and Lee. The 50 fatal cases of scarlet fever were 19 below the corrected average number; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 19 deaths from diphtheria were slightly below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Limehouse, Poplar, Camberwell, and Greenwich. The 172 fatal cases of whooping-cough were as many as 128 below the corrected average number; this disease showed the highest proportional fatality in St. Pancras, St. Giles, Clerkenwell, and Limehouse sanitary areas. The 32 deaths referred to enteric fever were within 3 of the corrected average number; there was no marked excess of "fever" mortality last month in

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—FEBRUARY, 1895.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1886.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.														
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other con- tinued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria. [†]	Whooping- cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhoea.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON...	4,332,346	43	987	463	—	125	3	12	390	—	1988	5.9	6	90	80	119	172	—	32	1	44	514	1.5	10,205	30.3	169
West Districts.																										
Paddington...	122,756	1	24	9	—	2	—	—	—	—	38	4.0	—	—	—	—	1	—	—	—	—	—	—	1.1	28.4	162
Kennington...	167,671	—	24	15	—	4	—	—	12	—	58	4.5	—	—	—	—	—	—	—	—	—	—	0.8	28.3	173	
St. George Southwark...	108,429	—	12	6	—	—	—	—	3	—	22	2.6	—	—	—	—	—	—	—	—	—	—	1.3	25.5	202	
St. George Southwark...	117,745	—	18	14	—	4	—	—	6	—	43	4.8	—	—	—	—	—	—	—	—	—	—	0.8	28.8	205	
St. George Southwark...	99,930	—	16	12	—	—	—	—	4	—	37	4.8	—	—	—	—	—	—	—	—	—	—	0.7	29.7	171	
St. George Hanover-square...	74,037	—	9	6	—	—	—	—	—	—	21	3.7	—	—	—	—	—	—	—	—	—	—	1.2	30.6	195	
St. George Hanover-square...	64,003	—	8	1	—	—	—	—	—	—	11	3.7	—	—	—	—	—	—	—	—	—	—	0.2	30.6	193	
St. George Hanover-square...	23,149	—	4	2	—	—	—	—	—	—	6	3.4	—	—	—	—	—	—	—	—	—	—	0.6	61	34.4	125
North Districts.																										
Marylebone...	137,392	34	27	7	—	5	1	—	16	—	90	8.5	5	1	3	1	7	—	1	—	2	19	1.8	418	39.7	164
Hampstead...	77,592	—	35	3	—	3	—	—	5	—	46	7.7	—	—	—	—	—	—	—	—	—	—	1.2	99	166	172
St. Pancras...	233,543	1	56	27	—	6	—	—	29	—	119	6.6	—	—	—	—	—	—	—	—	—	—	1.4	574	32.0	182
St. Pancras...	335,929	—	183	25	—	6	—	—	23	—	237	9.2	—	—	—	—	—	—	—	—	—	—	1.5	738	28.6	132
St. Pancras...	35,214	—	10	1	—	2	—	—	30	—	16	5.9	—	—	—	—	—	—	—	—	—	—	1.5	62	22.9	75
Stoke Newington...	215,623	—	30	20	—	3	—	—	—	—	83	5.0	—	—	—	—	—	—	—	—	—	—	1.5	391	23.6	127
Central Districts.																										
St. Giles...	37,654	—	3	1	—	1	—	—	5	—	12	4.2	—	—	—	—	—	—	—	—	—	—	2.1	126	43.6	254
St. Martin-in-the-Fields...	13,576	—	1	2	—	—	—	—	1	—	3	2.3	—	—	—	—	—	—	—	—	—	—	1.0	27	74	182
St. Martin-in-the-Fields...	22,896	—	5	6	—	—	—	—	4	—	19	7.7	—	—	—	—	—	—	—	—	—	—	1.7	74	42.7	256
St. Martin-in-the-Fields...	32,188	—	13	8	—	—	—	—	6	—	30	6.0	—	—	—	—	—	—	—	—	—	—	2.0	93	37.7	262
Holborn...	65,036	—	13	8	—	—	—	—	5	—	26	8.3	—	—	—	—	—	—	—	—	—	—	2.2	154	49.3	223
Olerkenwell...	40,763	—	2	3	—	—	—	—	1	—	6	2.3	—	—	—	—	—	—	—	—	—	—	1.9	154	49.3	223
St. Luke...	33,824	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	91	35.1	200
City of London...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
East Districts.																										
Shoreditch...	122,932	—	19	5	—	3	—	—	13	—	40	4.2	—	—	—	—	—	—	—	—	—	—	2.0	329	34.9	196
Bethnal Green...	130,661	—	21	10	—	2	—	—	18	—	64	6.4	—	—	—	—	—	—	—	—	—	—	1.1	222	28.3	160
Whitechapel...	75,820	—	11	6	—	2	—	—	9	—	32	5.5	—	—	—	—	—	—	—	—	—	—	0.5	188	32.3	301
St. George-in-the-East...	45,227	—	5	6	—	—	—	—	3	—	17	4.9	—	—	—	—	—	—	—	—	—	—	2.0	138	39.8	207
Lincolns...	56,835	—	24	12	—	—	—	—	2	—	39	8.9	—	—	—	—	—	—	—	—	—	—	3.9	170	39.0	161
Mile End Old Town...	108,443	—	34	13	—	—	—	—	11	—	61	7.3	—	—	—	—	—	—	—	—	—	—	1.4	277	33.3	159
Poplar...	171,230	—	44	31	—	3	—	2	19	—	100	7.6	—	—	—	—	—	—	—	—	—	—	3.0	444	33.8	180
South Districts.																										
St. Saviour Southwark...	26,570	—	3	2	—	—	—	—	—	—	5	2.5	—	—	—	—	—	—	—	—	—	—	1.0	79	38.8	187
St. George Southwark...	60,168	—	12	9	—	—	—	—	1	—	23	5.0	—	—	—	—	—	—	—	—	—	—	0.9	173	37.5	221
Newington...	119,358	—	22	9	—	—	—	—	11	—	49	5.4	—	—	—	—	—	—	—	—	—	—	1.4	355	38.8	218
St. Olave Southwark...	13,665	—	3	—	—	—	—	—	—	—	27	3.0	—	—	—	—	—	—	—	—	—	—	3.7	37	36.9	314
Bermondsey...	40,713	—	15	3	—	—	—	—	4	—	35	4.2	—	—	—	—	—	—	—	—	—	—	1.4	200	31.1	183
Rotherhithe...	284,883	—	23	18	—	—	—	—	6	—	84	11.2	—	—	—	—	—	—	—	—	—	—	1.4	87	27.9	187
Lambeth...	165,130	—	44	15	—	—	—	—	15	—	84	6.6	—	—	—	—	—	—	—	—	—	—	1.4	171	32.8	187
Battersea...	185,586	—	29	22	—	—	—	—	22	—	84	6.6	—	—	—	—	—	—	—	—	—	—	2.6	363	30.2	230
Wandsworth...	252,737	—	23	21	—	—	—	—	25	—	72	5.0	—	—	—	—	—	—	—	—	—	—	0.8	364	25.5	140
Camden...	175,143	—	24	23	—	—	—	—	23	—	111	8.6	—	—	—	—	—	—	—	—	—	—	1.4	515	26.6	145
Greenwich...	42,768	—	52	39	—	—	—	—	17	—	115	8.6	—	—	—	—	—	—	—	—	—	—	2.0	338	25.2	115
Lewisham (excluding Penge)	82,411	—	8	4	—	—	—	—	8	—	21	3.3	—	—	—	—	—	—	—	—	—	—	1.3	139	22.0	115
Woolwich...	38,532	—	7	1	—	—	—	—	2	—	15	3.0	—	—	—	—	—	—	—	—	—	—	0.9	72	21.9	191
Plumstead...	61,494	—	9	3	—	—	—	—	2	—	15	5.0	—	—	—	—	—	—	—	—	—	—	1.0	58	19.5	146
Port of London...	—	—	27	15	—	—	—	—	8	—	51	10.8	—	—	—	—	—	—	—	—	—	—	1.5	91	—	—

† Including deaths from enteric group.

* Including 37 cases of membranous group.

any of the sanitary districts. The 44 deaths from diarrhoea were 14 below the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was nearly 30 per cent. below the average.

Infant mortality in London during February, measured by the proportion of deaths under one year of age to registered births, was equal to 169 per 1000, and was considerably above the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. James Westminster, Stoke Newington, Hackney, Greenwich, Lewisham, and Lee; and the highest rates in St. Giles, Strand, Holborn, Whitechapel, St. Olave Southwark, and Battersea.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

The following officers have arrived from India in the *Victoria*:—Surgeon-Lieutenant-Colonel Cleery Surgeon-Major Bourke and Surgeon-Captains Griffiths and Morris. Surgeon-Captain Hope has arrived from Malta and Surgeon-Major Sharpe from West Africa. The arrival of the following officers at the stations given against their names is reported:—Surgeon-Major Babbie and Surgeon-Captain Burnside, Malta; Surgeon-Major Clements, West Africa; Surgeon-Major Sloggett and Surgeon-Captain Mathias, Egypt. Surgeon-Major Webb has been posted to the Western district on return from foreign service; Surgeon-Major Ryan to Aldershot. Surgeon-Captain Moffatt has been transferred from Cyprus to Egypt, Surgeon-Lieutenant Collins from the Western district to Cork, and Surgeon-Major Pike has been posted to Ireland after a tour of service abroad.

ARMY MEDICAL STAFF.

Surgeon-Captain Alfred Wright is seconded for service with the Cape of Good Hope Colonial Medical Service.

INDIA AND THE INDIAN MEDICAL SERVICE.

The following appointments are announced:—Surgeon-Captain B. C. Oldham on being relieved of his appointment as Officiating Deputy Sanitary Commissioner, Metropolitan and Eastern Bengal Circle, is appointed to do general duty at the Presidency. Surgeon-Captain Narendra Prasanna Sinha, on being relieved of his appointment as Officiating Civil Surgeon of Jessore, is appointed to act as Deputy Sanitary Commissioner, Metropolitan and Eastern Bengal Circle, during the absence on deputation of Surgeon-Captain D. M. Moir, or until further orders. Brigade-Surgeon-Lieutenant-Colonel A. Cameron, Civil Surgeon, on return from leave, is posted to the Benares district. Surgeon-Major G. A. Emerson, Civil Surgeon, on return from leave, is posted to the Fatehpur district. Surgeon-Lieutenant-Colonel H. Allison, Professor of Anatomy, Medical College, Madras, is granted furlough out of India for one year. Brigade-Surgeon-Lieutenant-Colonel Moore, A.M.S., to remain in England till June 16th, on medical certificate, in extension. Surgeon-Lieutenant-Colonel Frederick Augustus Smyth to be Brigade-Surgeon-Lieutenant-Colonel, vice Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, retired.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon Charles Lyon Vasey has been placed on the Retired List of his rank.

The following appointments are notified:—Staff-Surgeons: T. J. Crowley to the *Barham*; J. O'B. Williams to the *Terror*; A. M. French to the *Tourmaline*; J. B. B. Triggs to the *Boscawen*; G. D. Twigg to the *Canada*; and G. F. Wales to the *Thunderer*. Surgeons: G. T. S. Sichel to Haslar Hospital; A. H. H. Vizard to the *Excellent*, additional; O. S. Fisher to Jamaica Hospital; C. L. W. Bunton to the *Humber*; H. B. Beatty to the *Impregnable*; E. T. P. Eames to the *Wildfire*; Bernard Ley to the *Victory*; T. T. Jeans to the *Raven*; J. A. L. Campbell to the *Vivid*; W. B. Macleod to the *Sealark*; W. G. Peck to the *Pilot*; H. Spicer to the *Martin*; H. P. Jones to the *Seafarer*; F. F. Mahon to the *Liberty*; R. H. Way to the *Nautilus*; W. H. S. Stalkart to the *Edinburgh*; and A. G. W. Bowen to the *Partridge*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Joseph Willoughby Hodgson, 1st Devonshire Volunteer Artillery (Western Division, Royal Artillery),

to be Surgeon-Captain. Surgeon-Lieutenant Percival Macleod Yearsley, 16th Middlesex Volunteer Rifle Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

The Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment): John Pirie, to be Surgeon-Lieutenant. 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Captain C. Templeman resigns his commission. 2nd Volunteer Battalion the Essex Regiment: Surgeon-Major C. E. Abbott resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement.

THE EPIDEMIC OF MEASLES ON BOARD THE "BRITANNIA."

The amount of sickness on board the training-ship *Britannia* has been made the subject of considerable correspondence in the press, but with the figures before us it seems that some of the reports have been unduly sensational, although there can be no doubt that the denizens of the training-ship have been passing through a severe epidemic. On Feb. 2nd the first case of measles occurred in the person of a cadet, who brought the infection back with him from his home. He was at once isolated in sick quarters, and the usual means were taken to prevent a spread of the disease. The mischief, however, was done, for the next cases appeared in the persons of the cadets whose quarters were on either side of the first case, and from this focus the fever spread until by Feb. 22nd 51 cases were under treatment. These 51 cases represent the extent of the epidemic, and no further case has occurred since that date. As an indication of the severity of the epidemic it should be remembered that the number of cadets is 269, the ship's company numbering 220 more, so that 20 per cent. of the lads have been attacked. From the beginning systematic inspection was in no way relaxed, but the epidemic was of a severe type, the later cases particularly manifesting a great tendency to pulmonary affection. When the severity of the February we have just gone through is remembered it is not surprising that pneumonia should have appeared, and in severe form, while in a large proportion of cases the patients were suffering from catarrh before receiving the poison of measles. Three deaths have occurred, and in two of these at least a predisposing tendency to the fatal issue was present. The first fatal case occurred in the person of an English native of Jamaica, who had recently joined the training-ship, and who might be supposed to be very susceptible to the severity of an English winter, and such a winter. This poor boy died of acute meningitis. The second death occurred in the person of a senior cadet who had suffered in the previous year from rheumatic fever which had left behind it cardiac mischief. The third fatal case succumbed to acute capillary bronchitis. The Medical Department of the Navy has shown throughout a laudable anxiety to discharge its duty towards its young charges, and neither pains nor expense have been spared to remedy and arrest the evil. In addition to the permanent sick quarters on shore temporary hospitals have been formed in the gymnasiums and other places, the medical staff of the *Britannia* has been increased, and nursing assistance obtained from the Plymouth Hospital. A convalescent home has also been obtained at Kingswear for the accommodation of the cadets, and elaborate precautions taken for complete disinfection. We note with particular approbation the provision of a convalescent home on shore; for, while a ship affords an appropriate place for the education of the future officers of the Navy, it must not be forgotten that ships are more likely to become unhygienic and unhealthy by long occupation than are buildings. But the Director-General, in his report on the epidemic to Lord Spencer—a report in which the First Lord and his colleagues concurred—uses the following words: "The sanitary condition of the *Britannia* is excellent, and the ventilation of the living and sleeping decks occupied by the cadets leaves nothing to be desired." This direct testimony to the hygienic condition of the *Britannia* is very reassuring.

ARMY RECRUITING IN 1894.

The Inspector-General for Recruiting, in his report for 1894, says: "The medical inspections have been generally very strictly carried out. The number of recruits who have been passed into the service with diseases or ailments that might have been detected at the medical examination is

exceedingly small when compared with the number examined, which shows that the medical officers have performed this important, and in some places where large numbers of recruits are examined arduous, duty with care and ability." In the course of the year 61 985 men offered themselves for medical examination, and of these 40·3 per cent. were rejected. In another part of the report it is stated that "the establishment of the Medical Staff Corps is 2478 non-commissioned officers and men. This is a popular corps and easily recruited. It is somewhat over establishment."

GAOL SANITATION.

The *Times of India*, referring to the recently issued report of the Sanitary Commissioner with the Government of India, says that there were less sickness and mortality in the Indian gaols in 1893 than at any time during the past twenty years. The year was distinguished by a large decrease in mortality generally and by a marked decline in that from cholera, fever, and small-pox. The ratio of admissions into hospital had also fallen greatly. The Sanitary Commissioner states that the death-rate of 25 per 1000 for the year is the lowest of which he can find record. The complete statistics for all the gaols have only been recorded since 1877, when the mortality was 62 per 1000, the deaths from dysentery and diarrhoea alone being 28 per 1000, whereas they are now less than 7 per 1000.

THE FEMALE HOSPITAL AT BENARES.

Some years ago a large and handsome hospital for females was built at Benares by public subscription, at a cost of 80,000 rupees, in memory of the late Maharaja of Benares. The expenditure on the maintenance of this institution has, however, usually exceeded its income. The present Maharaja, who largely subscribed to found the hospital, has now guaranteed a monthly subscription in its support equal to an endowment of a lakh of rupees, and the maintenance of an extremely useful and philanthropic institution will thus be secured to the population for a long time to come.

QUETTA DISTRICT.

The principal medical officer of the Quetta district has forwarded a report to the military authorities on the sanitary condition of the town of Quetta, in which he calls attention to the insanitary and dirty state of the narrow streets and yards, and to the overcrowding which exists—more especially in the Babu Mohalla quarter. The condition of the town and neglect of surface cleanliness are apparently such that, unless precautions be adopted, a probable outbreak of epidemic disease is anticipated.

NEW WATER SUPPLY AT MEERUT.

The scheme for a water-supply for Meerut, which has been long talked of and is much wanted, has now been completed, and it is expected that work will be begun at an early date. The proposal is to supply at first ten gallons a head, to be increased subsequently to fifteen gallons if necessary.

BACTERIOLOGY IN INDIA.

The Government of India have sanctioned a revised establishment for Professor Lingard, M.B., Imperial Bacteriologist, from April 1st, when his establishment will be moved from Poona to new premises in the hills.

His Excellency the Right Honourable the Governor of Bombay has nominated Surgeon-Major H. Martin, M.B., as medical officer on his personal staff.

The Earl of Rosebery will preside at a dinner to be held at the Whitehall Rooms, Hôtel Métropole, on Wednesday, March 20th, in connexion with the Evelina Hospital for Sick Children, Southwark.

EAST LONDON NURSING SOCIETY.—The annual meeting of the East London Nursing Society was held at the Mansion House on March 12th. Prebendary Harry Jones presided in the absence of the Lord Mayor, who was unfortunately through illness unable to be present. The principal object of the society is the nursing of the sick poor in their own homes. The visits of a trained nurse to these humble households have also the beneficial effect that her example is instructive for the family, the female members of which can thus gain some knowledge of what ought to be done in cases of illness. Canon Elwyn, Master of the Charterhouse, and the Rev. Marmaduke Hare, Rector of Bow, bore testimony to the value of the nurses' work. The accounts show a deficit of £180 and increased support is urgently needed.

Correspondence.

"Audi alteram partem."

"PARLIAMENT AND PRISON REFORM."

To the Editors of THE LANCET.

SIRS,—It must be admitted that the lengthy statement of your correspondent in THE LANCET of the 9th inst. on the maladministration of prisons and the evils of centralisation reflects somewhat seriously on the medical officers of prisons. If all these things be true, medical officers cannot divest themselves of responsibility for the existence of many grave abuses. They are armed, as you point out, with large discretionary powers, which I think they exercise to the best of their ability. The Commissioners give them a very free hand—so much so, indeed, in my own experience, that I have never known a medical recommendation for a prisoner's benefit either in respect to his diet or treatment to be ignored. But these charges are not new. They are substantially the same as those which appeared in the April number of the *Fortnightly Review* from the pen of the Rev. W. D. Morrison. Further, they are at present practically *sub judice*, as the committee appointed by the Secretary of State has not yet reported on them, so that the feverish impatience of your correspondent to pre-empt the case smacks somewhat of unfairness. Now, although I feel myself to be one of the incriminated, the tone of wholesome scepticism which marks your own leading article on the subject induces me to offer a few explanations by way of defending myself and my colleagues from this attack on us in a medical paper.

Let me premise that your correspondent's conclusions are totally at variance not only with official views, which I am prepared to hear are optimistic, but also with the facts and figures on which such views are based, and which are accessible to all in the reports of the Prison Commissioners. First, I would refer to the death-rate. Your correspondent says: "Centralisation has had disastrous results on the health of the inmates of local prisons." I need not comment on the inherent improbability of this statement, on which you imply some doubt yourself; but I would refer you to page 108 of the Report of the Prison Commissioners for the year ending March, 1894, which gives the death-rate for the past thirty-two years. Taking the average of ten years before the prisons were taken over by Government in 1878, and comparing it with the ten years after that event, I find this result: average annual death rate per 1000 of prison population, 1868-77, 11·2; average annual death-rate per 1000 of prison population, 1878-88, 8·1.

Further, for the six years since 1888 the average death-rate has fallen to 7·6. Your correspondent, however, while admitting this decrease, as shown by the figures, says that these are invalidated by two causes. First, he points to page 24 of the report, on which is found a circular sent by the Home Secretary to the magistrates, in which he calls attention to a number of cases in which persons have been committed to prison in a moribund state or suffering from serious disease, and requests more care to be taken in the way of medical examination. From this your correspondent infers that a "large number" of these cases of serious disease are not now sent to prison, or included in the death-returns. But this circular is dated March, 1885, and the mortality had declined considerably before its issue. The annual average death-rate for seven years before centralisation was 11 per 1000, while that for the seven years after centralisation, and up to the date of the circular, was only 8 per 1000. It is obvious, therefore, that the issuing of this circular has had no material effect on the figures. But your correspondent questions the accuracy of the returns for another reason. He says: "It is now more generally the practice to release prisoners who are in a dying condition before the expiration of their term." I am not prepared to deny that prisoners are more frequently released on medical grounds; but are we to look on this, too, as one of the evils of centralisation and a cruel system? The practice referred to was not in abeyance before 1878. It is no new invention. As to its effect on prison mortality statistics, I believe this to be much exaggerated; p. 92 of the last report gives the particulars of all prisoners so released during last year. Apart from pregnancy, 60 cases are shown for various causes. Out of these 60 cases 14 were removed to infectious hospitals for small-pox, 2 for typhoid fever, 1 for scarlet fever, and 1 for erysipelas; 19 were released

for tuberculosis, 5 for senile debility and chronic bronchitis, 1 for double cataract (to be operated on), 3 for Bright's disease, and 1 for stricture of urethra. Medical readers will readily understand that a large proportion of these are not likely to have died during the term of their original sentences. The total number of releases was equal to 4.1 per 1000 of the prison population. If we add half of these to the death-rate for the year under consideration, it will then amount only to 9.6, which contrasts favourably with the precentralisation death-rate of 11.2.

Your correspondent's observations on the dietary scale have a very unpractical ring about them to one who has had experience of the actual working of it since its introduction and been responsible at four different prisons in various parts of the country for supplementing it with extras to meet the special requirements of individual cases. He ignores the fact that the committee which passed the scale in 1878 were specially instructed to consider the various conditions as to climate, district, &c., to which he refers, and that it was based to a large extent on the scales in existence at the time in the local prisons then under local management. It is obvious that, for administrative purposes, some dietary scale must be in use. No scale that has ever been invented would exactly meet the physiological requirements of every individual in a large body of people. The task of framing such a scale for prisoners was one of special difficulty, and much trouble was expended over it. All this was recognised by the committee, and medical officers were consequently given full powers to deal with special cases and rectify inequalities in the working of the machinery. Without in any way claiming perfection for the scale in use, I would merely speak of it as I have found it in practice. During the past ten years my extra diet book shows on an average additions to the diet of one prisoner in every 180. This means, roughly, that the scale in existence has been sufficient, in my own experience, to meet the case of 99 in every 100 prisoners—a result which seems to me not unsatisfactory. That many prisoners should, after a course of it, leave prison weak and unfit for hard work would at first sight seem strong condemnation; but I can testify that many prisoners enter prison weak and unfit for hard work. A very large proportion are excused the tasks of hard labour which their sentences involve, many of the extra diets ordered are given to prisoners on reception, and not a few cases are admitted to the infirmary on or soon after reception. I yield to none in the desire to shield the prisoner from the consequences of his own misconduct or, it may be, misfortune; but, as the Home Secretary pointed out in the circular to which your correspondent alluded, "it must be remembered that prisons are places of penal discipline," not places where prisoners may retire to recruit their health with a view to fitting them for hard work on discharge. Your correspondent has fallen into a singular error in his figures about suicide. The facts are very simple. In the five years ending March, 1893, there were 43 cases of suicide in the prisons. Of these 2 only occurred after twelve months of imprisonment. Most people would say that 2 cases only amongst long-sentence prisoners in five years would not form a basis for any conclusions except such as to be favourable to prison treatment. The writer, however, sets to work to show the proportion between these 2 cases and the number of sentences exceeding twelve months, but in doing so he compares a five years' list of suicides with a single year's list of long sentences, and draws correspondingly startling results from the process. I must further demur entirely to the logic involved in his statement in connexion with the death-rate, that, because more than half of those who die in prison are old offenders, this indicates the fatal effects of imprisonment. Such a deduction is absurd.

For those of your readers who are disposed to accept his obviously improbable statement that the present system of administration has doubled the number of lunatics, I would venture to prescribe a grain or two of common salt. He evidently credits prisons with insane cases for which prisons are in no sense responsible. The total number of insane for the year 1893-94 was 354. They may be summarised thus: (1) found insane on reception, 282; (2) insane within one month, 17; (3) insane after one month, 55; total number received in year, 168,050. Of those under No. 3 many were reported as unstable, doubtful, or weak-minded on reception. Full particulars of each case appear on p. 110 of report. There is, indeed, no reason to believe that any increase has taken place in the

numbers which actually become insane in prison further than that which may be due to more careful diagnosis or to some general causes independent of prison treatment. It must be borne in mind that the criminal class is not of high mental standard, and it cannot fairly be compared with the general population in respect of mental stability. Large numbers of weak-minded and epileptic borderers on insanity are received every year, and special arrangements have long been in force for dealing with such cases in association wards and not in separate confinement. There are many other points I should like to have touched on, such as punishments, recidivism, &c., and in respect to which it could be easily shown that the picture is over-coloured, but I have already encroached too much on your space.

I am, Sirs, yours faithfully,

R. F. QUINTON.

March 10th, 1895.

Medical Officer, H.M. Prison, Wandsworth.

"FEVER AND SMALL-POX HOSPITALS."

To the Editors of THE LANCET.

SIRS,—I am sorry to learn in THE LANCET of March 2nd that among other things "incomplete data" furnish a reason for the writer of your annotation objecting to my evidence as to the limit of aerial diffusion of small-pox. My opinion was based upon personal observation of the facts of the case, and I did not deem it to be necessary to go into details in the report in question. The "incomplete data" to which the writer alludes are as follows. In the first place he says that I ignored the condition of the "school inmates" as to vaccination, and presumably the inmates of the adult asylum and the fever hospital as well. With regard to the fever patients the precaution to admit only those who had been vaccinated was adopted on my recommendation, but I did not on this account allow myself to suppose that patients who had not been vaccinated since infancy were proof against small-pox. On the contrary, seeing that the protective value of vaccination diminishes every year, I felt strongly that if these patients had been exposed to the infection of small-pox a large number of them would have contracted it. My object in taking this precaution was to ensure that if small-pox did break out amongst the patients they should at least have the benefits conferred by a primary vaccination. The writer makes a strong point of the "speciality of school inmates" as to vaccination, which does not appear to me to be applicable; but even if the school inmates (not to mention the inmates of the adult asylum) were as well protected from small-pox as the fever patients, it would not affect my view that if they had been exposed to the infection some of them would in all probability have caught it. The second point which the writer considers to have an "important bearing" on the case includes the stage of disease at which the patients arrived at the hospital and the proportion of convalescent to total small-pox patients. He characterises this omission as a flaw in my evidence, and gives as one of his reasons the existence of "a very general conviction that it is acute cases of small-pox, and not convalescents, that give rise to the diffusion of the infection from hospitals in which patients are aggregated." This opinion ought to receive careful attention before it is accepted, and I would suggest the following considerations, which, in my opinion, throw doubt upon its validity. In the first place, the stage of disease in which small-pox patients are most infectious has not been authoritatively determined, and considerable diversity of opinion prevails respecting the question. Secondly, the origin of outbreaks of small-pox generally proceeds from mild and unrecognised cases. And if the infection from cases so mild as to escape recognition is capable of spreading the disease, much more was the infection of patients in the stage in which they were admitted to the Gore Farm Hospital capable of disseminating the disease. I am not able to gather from the writer's remarks whether the infection of small-pox is diffusible through the air in one stage of the disease but not in another, nor could I follow him in such a view.

In conclusion, I should like to point out that the negative evidence afforded by the absence of a single case of small-pox amongst the inmates of the three institutions almost surrounding the small-pox hospital derives its value in my opinion from this very fact: positive evidence is discounted by the difficulty which attends the elimination of disturbing

causes, such as the transference of infection by personal agency.—I am, Sirs, your obedient servant,

C. E. MATTHEWS.

Fountain Hospital, Tooting, S.W., March 6th, 1895.

* * We can only assume that Dr. Matthews' letter is intended to endorse his previous one, in which he asked, "Why, then, should the question of vaccination and convalescence be used as arguments?" in a matter affecting the aerial communication of small-pox; and in which he regarded the question of convalescence as a mere "begging of the question." We must repeat that both questions are vital to the issue. We agree with Dr. Matthews that if the patients in the hospital had been really exposed to the infection of small-pox a number would have contracted it. But we doubt if it would have been a "large" number, since the patients were carefully selected, not one of them being unvaccinated. Our difficulty is in accepting the view that they were exposed to such infection as he would imply, since the generality, at least, of the small-pox patients were convalescents. And we must express our astonishment that Dr. Matthews has all along appeared to ignore the difference between the acute and the convalescent stage of small-pox in the matter of aerial conveyance. The Royal Commission appreciated the difference as far back as thirteen years ago, and on evidence that appeared to be overwhelming, and which has, so far as we are aware, never been in the slightest degree controverted. Again and again that Commission, in discussing the influence of small-pox hospitals, draw the distinction in question, and say, for example, that they are referring to "the admissions of *acute* cases," or to "cases presumably *acute*—that is, not yet *convalescent*." (The italics are ours.) We are content with the only evidence that is available on the subject, and we cannot admit that Dr. Matthews' conclusion to the effect that "the diffusion of small-pox through the air does not extend to a distance of 1000 ft." is based on data such as could alone justify it.—ED. L.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Feb. 2nd, under the heading "Fever and Small-pox Hospitals," the following remarks: "To quote Dr. Matthews' own words, he has laid it down that 'the extreme limit of diffusibility' of the small-pox infection is '1000 feet.' This is based on the negative evidence that, whilst 1563 small-pox patients passed through his hospital in certain months of 1893, the inmates of a fever hospital and of the Darenth Asylum and schools, situated about 1000 feet distant, did not contract small-pox. We indicated that two points at least having an important bearing on the question had been ignored. One was the condition of the school inmates as to vaccination." I am able to give you some evidence on this point. On former occasions when small-pox patients were in the camp, say 1000 feet from the schools, all the children were as soon as possible protected by revaccination with calf lymph. In addition, very strict precautions were laid down to prevent the mingling of the attendants and servants of the schools with those of the camp. I cannot tell you what was done in 1893, as I had then left the schools, but I have thought the evidence of the precautions taken in former epidemics might prove useful as bearing on the point in question.

I am, Sirs, yours faithfully,

FLETCHER BEACH.

Formerly Medical Superintendent of the Darenth Schools for Imbecile Children.

Kingston-hill, March 7th, 1895.

THE APPOINTMENT OF MEDICAL OFFICERS IN COUNTY HOSPITALS.

To the Editors of THE LANCET.

SIRS,—A short paragraph in the Times of Feb. 25th gave a report of the annual meeting of governors of the Surrey County Hospital at Guildford on the 23rd ult., when a statement was read of its financial position and of the good results of appeals made to the county for increased subscriptions and donations. It then mentioned that a resolution

was passed for adding two medical officers to the hospital staff from outside of the town of Guildford. As the reporter gave no hint of the peculiar line of argument taken by the mover and seconder in support of their proposition, with your leave I will now supply the omission, so as to give your readers an insight into the motives which sometimes actuate the governing bodies of these useful institutions. The mover, contended that the large contributions given to the hospital by the Godalming subscribers fairly entitled them to nominate two of their resident medical men to appointments on the hospital staff, which were now to be created for them. Lord Middleton seconded the motion, and assured his hearers that, if the governors of the hospital had at the outset accepted the medical candidate then put forward by Godalming, they would have received far more liberal support in the past from that quarter of the county. I know not how your readers may view the matter, but in my opinion an unprecedented and quite indefensible step has been taken by our hospital governors, by the one part in initiating it, and by the other in acquiescing in it. In the first place, I know of no county hospital that draws the members of its medical staff from any town but that in which it is situated; and there are obvious reasons for such a restriction. Then, what is to be said of the proposal to augment the staff when the existing number is already larger than is necessary? We have now six medical officers for less than ninety beds, and I can find no instance of a hospital with a larger proportion, and but few instances, if any, with so many. But what seem to me to call most for animadversion are the terms of this new arrangement, which virtually amount to a proposal for making subscription to the hospital fund conditional on the admission of two medical men to hospital appointments. And now that the Godalming subscribers have established their right to nominate medical officers on the strength of their contributions, by parity of reasoning the other neighbouring towns of Farnham and Woking may by doubling their subscriptions acquire similar rights to make additions to the hospital staff.—I am, Sirs, your obedient servant,

Guildford, March 4th, 1895.

HENRY TAYLOR.

THE TITLE OF "DOCTOR."

To the Editors of THE LANCET.

SIRS,—At the last monthly meeting of the Faculty of Physicians and Surgeons I submitted the following motions: First, "That the attention of the Faculty having been directed to the use of the title and style of 'Doctor' by gentlemen holding only the licence of the Faculty, the clerk be instructed to communicate with such Licentiates in the name and on behalf of the Faculty, pointing out that the licence of the Faculty is a purely surgical qualification and does not legally entitle its possessor to the title of 'Doctor,' and that in any case in which it is so assumed on the strength of this qualification alone it is recommended that the practice be discontinued." Secondly, "That the attention of the Faculty having been directed to the use of the title and style of 'Doctor' by gentlemen holding only the triple qualification of the Scottish Conjoint Board, the clerk of the Faculty be instructed to communicate with such Licentiates in the name of the Faculty, pointing out that this qualification is merely a licence to practise medicine and surgery, and does not legally entitle the possessor to the title of 'Doctor,' and that in any case in which it is so assumed on the strength of this qualification alone it is recommended that the practice be discontinued." These motions being somewhat embarrassing to the Faculty were manifestly rushed, and the "previous" question was carried by a majority. Now what is the significance of this vote? I take it to be that so far as the Faculty is concerned any one of its Fellows or Licentiates may assume what title he pleases, whether he possesses it or not. It is his academic distinction or other legal qualification that a member of the medical profession puts on his door-plate or visiting card and not a popular designation. Any medical practitioner prefixing the title "Doctor" to his name in this manner implies that he is in possession of the doctorate of an university—of a doctorate which is registerable; and when he does so on the strength of mere licence to practise surgery, in my opinion, he deceives the public, and between public deception and "infamous conduct in a professional respect" the partition is surely very thin. That in these days of hyper-sensitiveness

on the part of the Medical Council, difficult often to reconcile with reasonable freedom, the present unsatisfactory state of the question of medical titles should be permitted to continue is to me not a little surprising. Lord Justice Lopes defines "infamous conduct" in the medical sense as follows: "If a medical man in pursuit of his profession has done something in respect to it which would reasonably be regarded as infamous by his professional brethren of repute, that would be evidence of infamous conduct in a professional respect. The question was not whether that which the medical man had done would be infamous if done by someone outside the medical profession. The conduct must be infamous in a professional respect." Now I venture to express the belief that most men "of repute" in the medical profession would hold the assumption of a title to which a man has no legal claim "infamous" either in or out of the profession. If the mere Licentiate of the Faculty is to be permitted to assume the title of "Doctor" on the strength of a single surgical qualification, what is to prevent the L.R.C.S. Edin., the M.R.C.S. Eng., the L.S.A., and the L.A.H. Dub., from doing the same thing, and why should men take the trouble to qualify for University graduation if the title of "Doctor" is conferred legally by a minimum qualification in surgery? For some time past in Scotland, and, I presume, also in England, the holders of the Scottish triple qualification have boldly prefixed the title of "Doctor" to their names on visiting cards and brass plates, and with respect to this the College of Physicians of Edinburgh seems to have assumed a change of front. Not many years ago it was distinctly declared in one of the bylaws of this College that its licence in no wise conferred the right to this title. In order to make sure of its present attitude in regard to the question *a propos* of the foregoing motions, I wrote to the secretary of the College requesting information on the matter, and he replied, "The College has never sanctioned the adoption by its Licentiates of designations other than those legitimately implied in the licence which it grants"; and in further reply to my query whether the title of "Doctor" was considered by the College as "legitimately implied in the licence which it grants" he stated: "I regret that I cannot add more regarding the point that you raise. Beyond what I indicated in my previous letter the College has not to my knowledge expressed itself. I fear that an interpretation of law such as you invite might be regarded as outside the scope of the College's acting." Hence the Scotch College of Physicians, in common with the Faculty of Physicians, evidently permits its Licentiates to call themselves by any title which their indelicate sense of honour allows them to assume. The kernel of the question has been so well put recently by Dr. E. H. Cartwright that doubtless you will permit me to quote the following: "A man calling himself 'Doctor' implies that he possesses a doctor's degree in some Faculty or other, and hence one who has not acquired such a degree has no absolute right to use the style. Some people there are who, while admitting that a non-university man has no right to the title 'Doctor,' maintain that an M.B. is justifiable in assuming it. It is impossible to see any grounds for such an assertion. What, I wonder, would be thought of a 'B.D.' or a 'B.C.L.' who arrogated to himself the style of the superior degree? I am inclined to think that if such a thing were done that man's university would take active steps to stop it; and yet in the Medical Faculty it is allowed to be done on all sides with impunity." But not only do registered medical men, no matter what their qualification, assume the title of "Doctor," but the country is strewn with men in possession, doubtless, of some doctorate or another who have never been within the portals of an university. I refer principally to the great body of dentists, who assume this title on the strength of a fragment of parchment from some needy German university which they have never seen, or one or other of the mushroom shops of America, whose ephemeral existence depends on the sale of degrees. Not only are these men as ignorant of Greek (a knowledge of which is required for the M.D. of the Scotch universities) as they are of Coptic; but the great bulk of them are unable to write or to speak decent English. Now Clause 40 of the Medical Act provides that if any person assume a title implying registration under this Act when he is not so registered, he renders himself liable to criminal prosecution. The assumption of the title "Doctor" by anyone practising medicine or any branch of it implies registration as such under this Act, and yet this clause is violated throughout the length and breadth of the

land with impunity. If not the letter, it is, I hold, the spirit of the Act that no practitioner of medicine should assume a title under which he is not registered, and that a violation of this should be treated as penal. As matters are at present interpreted it appears that a man, no matter what his qualification may be, providing he is registered, can assume any title he pleases. Registration thus protects dishonesty. It surely cannot be held that this is a satisfactory state of matters or that under it the public are properly safeguarded. The solution of this question is clamant, and if the universities and the licensing bodies will not act, the Medical Council should be called upon to settle what is a burning question of long duration.

I am, Sirs, yours faithfully,

D. CAMPBELL BLACK, M.D.,

Professor of Physiology in Anderson's College Medical School.
Glasgow, Feb. 20th, 1895.

"CRANIECTOMY."

To the Editors of THE LANCET.

SIRS,—In your report of the discussion at the Medical Society of London of Dr. Wallis Ord's and Mr. Cotterell's case of Craniectomy¹ I observe that I am stated to have said that in microcephalus "union of the bones followed the arrest of cerebral growth." What I did say was that "the skull was consequently small," not intending to imply that premature synostosis usually occurred. The latter view, frequently attributed to Virchow, is, I believe, not now held by him, and, as Sir George Humphry has recently stated,² there was nothing found in the nineteen idiot skulls examined by him "to suggest that the smallness of the bony cerebral envelope exerted a compressing or dwarfing influence on the brain." Indeed, according to Professor Cunningham, the skull of a typical microcephalic idiot, for many years under my care at the Royal Albert Asylum, was at the age of twenty-nine years (when he died) not fully synostosed. In the case shown at the Medical Society there was evidence of premature closure of the fontanelles and pressure symptoms, which undoubtedly justified operative measures; but I venture to question the existence of congenital microcephalus in the ordinary acceptance of the term.

I am, Sirs, yours faithfully,

Richmond-hill, March 4th, 1895.

G. E. SHUTTLEWORTH.

"CYCLING AS A CAUSE OF HEART DISEASE."

To the Editors of THE LANCET.

SIRS,—I have read with much interest Dr. G. Herschell's paper on the above subject in THE LANCET of March 2nd. I cannot, however, entirely agree with the preventive measures with which he concludes his paper.

1. *The use of a gear.*—Dr. Herschell does not, it seems to me, sufficiently explain that the gear should depend upon the strength of the rider, the weight of the machine, the kind of tyres used, and the nature of the roads over which the machine is ridden.

2. *The upright position in riding.*—I do not think that the stooping posture either "contracts the chest" or "prevents the proper expansion of the lungs," or "so interferes with the aeration of the blood as to cause the condition of breathlessness to come on more quickly."

In the first place it is surely very improbable that racing cyclists should adopt a position which contracts the chest and brings on dyspnoea. I have myself never experienced any difficulty in expanding my chest when stooping forward over the handles, nor have I ever heard such a complaint from any other cyclist. About two years ago I made some simple experiments, which show that the chest or not contracted to any practical extent. Sitting on a bicycle first in the upright posture and then bending forward in the extreme racing posture, I measured by the aid of a spirometer the maximum amount of air which I could inspire and expire. The following are the mean results in litres of four such experiments:—Sitting upright: expiration, 3.7; inspiration, 3.2. Bending forward: expiration, 4.0; inspiration, 3.5. These experiments tend to show that the capacity of the chest is increased in the forward position; this increase is due, perhaps, to the shoulders being thrown back in

¹ THE LANCET, March 2nd, 1895.

² THE LANCET, Feb. 16th, 1895.

bending forward. In riding slowly I would advocate an upright position, but in riding fast or against a head wind a cyclist by bending forward to an extent proportionate to the pace or strength of the wind materially diminishes the wind resistance and rides with considerably less effort. Dr. Herschell's last precaution—"on no account should the cyclist continue riding after he has commenced to feel short of breath" &c.—seems to me to be far too strict to be observed in practice, for under such a condition no athletic exercise could be practised.—I am, Sirs, yours faithfully,

W. J. TURRELL, M.A., M.D. Oxon.

Ilffey-road, Oxford, March 5th, 1895.

"THE TREATMENT OF INFLUENZA."

To the Editors of THE LANCET.

SIRS,—I have read Dr. Burney Yeo's letter on this subject in THE LANCET of the 2nd inst., and I am glad to see that he gives the weight of his opinion against what may be called the "over-treatment of influenza." To overload with drugs a constitution already doing hard battle with the influenza poison, to deaden, benumb, or in any way decrease the nervous sensibility with a view to relieve mere symptoms may, indeed, please your patient, but I am persuaded that it also endangers his life. Indeed, I fear many fatal cases are due to this primary mistake of treating the symptoms instead of the patient. In influenza I recognise a disease which must run a certain course, and instead of trying to abort it I endeavour to secure to the patient such circumstances as may enable him the more safely to undergo the attack. The treatment I adopt is simple enough—perhaps too simple to recommend itself to many, nevertheless I have never met with any complications worth speaking about and never lost a patient. I put the patient to bed in a sufficiently warm and airy room, gave him plenty of good beef-tea, mutton-tea, or chicken-broth—preferably beef-tea—as much cold water as he cares to sip, and a sufficiency of the liquor ammoniac acetatis every three hours to keep the skin moist, eliminate the poison, and reduce the fever. I pay no attention to the cough, headache, or the usual bodily pains, consoling my patient with the information that such pains are necessary concomitants of the disease, and that they will disappear with the fever. This I find happens in from one to three days' time, when I immediately put the patient on quinine (and occasionally on arsenic also), alcohol in some form, and plenty of raw eggs, good soups, and nourishing diet, given in small and oft-repeated quantities. I have always found my patients progress, and the only real trouble I have had is in persuading them to remain sufficiently long indoors after they consider themselves well. Among other simple remedies one physician has successfully tried bicarbonate of potash in large and frequent doses. Here the drug appears to have eliminated the poison through the kidneys, and Dr. William Robertson of Newcastle-upon-Tyne appears to have been more rapidly successful through the use of benzol—an antiseptic and bacillicide. But whatever the drug may be it appears to me that the simplest is the best, and that the chief indications are to place your patient in the most advantageous hygienic circumstances and to nurse him scientifically.

I am, Sirs, yours faithfully,

R. MAXWELL MOFFAT, M.D. St. And.

St. Heliers, Jersey, March 6th, 1895.

"THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—I have always maintained that the onus is upon the shoulders of the proposed legislation to show the necessity for it and the reasonableness of it, so when Mr. Flemming gives up statistical evidence upon which it was admittedly based to a large extent, admits that it will not immediately or absolutely remove the unregistered practitioner, that it is doubtful whether a trained midwife in a country district would be able to earn a sufficient competence to make it worth her while to go through a comparatively expensive training, and admits that the present position of trained midwives practising chiefly amongst the poor as the employees of institutions or charities (which are usually, or I believe, always, assisted by medical men) is the best thing that could be wished for, he cannot be surprised when I say that the whole case for legislation has broken down. It appears to

me that Mr. Flemming has played the part of Balaam reversed, because his arguments cut away the ground from beneath the feet of nearly all those who supported registration before the House of Commons and of every one who has done the same in the medical and nursing papers. He came to bless the principle of registration, and he has cursed it.

I am, Sirs, your obedient servant,

[March 4th, 1895.]

LOVELL DRAGE.

"THE REMUNERATION OF THE RESIDENT OFFICERS IN ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS—In the letter published in your issue on March 2nd from "An Old House Surgeon of St. Bartholomew's" there are some points that require explanation. Your correspondent says that the "resident officer is in residence for six months—say, twenty-six weeks—and pays about £1 per week for his food. Therefore in twenty-six weeks he pays £26 for food." And again, "In those six months he pays £26 and for his year's work he receives £25." Now, Sirs, if this is the experience of your correspondent, he must either have left at the end of his term of office owing a sum of money to the caterer or else the cost of living must have changed very much of late years. It will serve no useful purpose to go into details, but in my experience the cost per week came to about 28s. to 33s. It is true that lunch and dinner only amounted to about £1, but one requires more than two meals per diem in St. Bartholomew's Hospital, and the extra one with washing brings the total cost up to at least £1 10s. per week. Further, the £25 paid to the residents are paid quarterly, so that, for instance, the intern midwifery assistant and the ophthalmic house surgeon, who are appointed for six months and not for a year, receive the handsome sum of £12 10s., on which they are supposed to board themselves during their term of office. Even were the house surgeons paid while in residence, as your correspondent assumes, there would then be the first six months during which period they as juniors would have absolutely no salary at all. I would suggest that the school authorities at St. Bartholomew's Hospital should carefully consider this matter—how much better the residents are treated so far as emolument goes in other hospitals, and I feel sure that the letters which have appeared will show them as well as the governing body how unfairly some men of small means are treated under the present system.

I am, Sirs, yours faithfully,

March 11th, 1895.

FAIR PAX.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Rev. John Watson.

THE author of the book so favourably alluded to in THE LANCET of March 2nd in the annotation entitled "Our 'Gideon Grays'" is a local clergyman of whom Liverpool may be justly proud. The Rev. John Watson is well and favourably known, not only as the minister of Sefton-park Presbyterian Church, but as one of the honorary secretaries of the Hospital Sunday and Saturday Funds Committee, and it is no disparagement to former secretaries to say that Mr. Watson has brought into his secretarial duties, especially the preparation of the reports, a thoroughness and originality all his own. His appreciation of the medical profession and of the self-denying labours of its members among the poor will be recognised by his numerous countrymen who have made Liverpool their place of abode. This city has always had a large number of Scotch residents, who set a good example in thrift and industry, many rising to very prominent positions. The medical profession is now, as it has always been, well represented among them and a long list might be given of Scotch names which have enjoyed a reputation far beyond the bounds of the city.

The Assizes.

Lord Chief Justice Russell presided to-day in the Crown Court and charged the grand jury. While congratulating them on the fact that the calendar disclosed a less serious amount of crime than formerly, he observed that it was quite serious enough, there being three charges of murder, two of attempted murder, five of manslaughter, nine of stabbing,

and eight of indecent assaults on female children. His lordship noticed with satisfaction the reduction in the figures for drunkenness in the head constable's report just published, which reduction he considered due to several causes—the better supervision of public-houses, the greater care shown by licensees in refusing to serve drunken persons, the reduction of the number of public-houses, and the improvement in the intelligence and moral tone of the masses of the people.

The Use of the Knife.

Later in the day, in trying a case of wounding with intent to do grievous bodily harm, Lord Russell told the jury that they ought not to hesitate to find a prisoner guilty on the grave charge in a case like this, when they were satisfied that a knife had been used. It was one of the disgraces of this city, and one of the most serious blots on the present calendar was the number of cases in which men were charged—on slight provocation, sometimes on no provocation at all—with taking out their knives—the husband against the wife, the neighbour against the neighbour, the workman against the fellow workman. That should be put a stop to. Juries were called upon determinedly to do their duty and the judges would do theirs. This kind of offence must not be treated lightly. The offence was a danger to the peace of society, far more dangerous than many offences regarded by the law as very serious offences against property.

A Year's Inquests.

The head constable's annual report gives the following statistics in the table of inquests. The inquests were for the year 1894 918, 570 being on males and 348 on females, the difference being clearly due to the greater exposure of men and boys to accident in such a city as this. In addition to these the coroner had 542 other cases referred to him by the police and others, making a total of 1460 cases of death investigated by him during the year. The number of informal inquiries is rather less. During the year 93 post-mortem examinations were ordered, but no details of these are furnished. Among the findings of the jury, that of "Suffocated whilst in bed with parents or others" occurred in no fewer than 163 cases. The deaths of 206 males and of 113 females were caused by accident; 45 males and 16 females committed suicide; 20 males and 1 female were found drowned. The shocking verdict, "Excessive drinking," was returned in the case of 104 males and 78 females. "Natural causes" was returned in 114 cases. Most, if not all, might have been medically certified if the coroner possessed the power to seek the aid of and remunerate medical practitioners in cases where he merely holds an informal inquiry.

An Abortive Inquiry.

At the inquest held in consequence of the unfortunate case of poisoning at Skelmersdale, near Ormskirk, already mentioned in our columns,¹ the jury failed to arrive at any conclusion, and the proceedings were accordingly adjourned from Feb. 27th to March 4th. The jury being still unable to agree, the Coroner directed them to attend at the assizes in order that they might be addressed by the judge. The Lord Chief Justice charged them that if in their opinion there had been gross and culpable negligence on the part of the chemist's assistant, he was liable to be tried for manslaughter, otherwise they ought to return a verdict of misadventure. After further deliberation the jury failed to agree, and were consequently discharged.

The Death-rate.

The recent severe weather has told heavily in Liverpool, where 510 deaths were registered during the week ending on March 2nd, the rate of mortality being 52.6 per 1000. This is probably the highest death-rate ever recorded in Liverpool, and compares with 25.5 per 1000 in the corresponding week last year.

March 12th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Fatal Football Accident.

On Thursday, the 7th, an inquest was held at Hexham on the body of Mr. J. Alexander Burn, aged twenty-three years, who came by his death under very sad circumstances on

the previous Saturday. While engaged in a football match he collided with a player on the opposite side, and sustained serious injury to his spine, the precise nature of which was never ascertained. However, on the Tuesday, the fourth day after the occurrence, he died. The gentleman with whom Mr. Burn collided is a medical student at the University of Durham College of Medicine. It should be added that the father stated that his son had told him that he absolved anyone from blame. The foreman told the coroner that the jury were unanimous in recommending, through the coroner, the Rugby Union to make a revision of its rules, so that the pastime might become less dangerous. Seeing how common these very sad so-called "football accidents" are it certainly seems necessary that some alteration in the mode of playing the game should be insisted upon. If after such alterations have been made the game is still played with such serious results as now only too often arise, there can be no doubt football—an excellent game when properly played—will at no distant date deservedly fall into disrepute.

Newcastle Dispensary.

The annual meeting of this very popular and useful charity has just been held. 9567 patients were admitted by letter last year and 17,904 were casual visitors, making a total of 27,471, the largest number perhaps treated in any one year by the medical officers. The dispensary is one of the oldest and best-managed medical institutions in the north of England. It does an immense amount of work and does it well; its finances, too, are in a sound condition.

Nurses' Home and Training School.

From very small beginnings this institution has become one of considerable importance. Commenced some twenty years ago with a staff of a matron and three trained nurses, with a capital of some £200 and a subscription list of about £100 a year, it has now a staff of seventy trained nurses, ten probationers training at its expense, a matron, and an assistant matron. It has become a self-supporting institution. Last year the nurses earned £3289 1s. 9d., and in addition to their salaries, uniforms, and residence in one of the most comfortable houses in the town a bonus of £280 was divided amongst them. Nothing can better indicate the change which has come over public opinion on the nursing question than the signal success which has attended the career of this home. The neighbourhood is deeply indebted to the ladies who, as a committee, have watched over and administered the Nurses' Home and Training School. They have been fortunate in securing the services of an able matron, and it is to a very considerable extent due to the kindness and administrative capacity of Miss Ennery that the present satisfactory condition of the home is due.

Suspected Cases of Rabies at Haltwhistle.

The justices of the Petty Sessional Division of Haltwhistle, Northumberland, have issued an order that dogs "not being under the control of any person within the division are to be muzzled, and kept muzzled" until April 6th, 1895. This action has been taken in consequence of a dog being suspected of rabies.

Tragedy at Newcastle Barracks.

Thomas Turnbull, a soldier aged eighteen years, was this morning (March 11th) at the police-court charged with causing the death of a comrade, Henry Young, aged nineteen, by stabbing him in the face with a pocket-knife. On Saturday, March 9th, a quarrel took place in the barrack-square, and during it Turnbull stabbed Young in the inner corner of his right eye. Young died at about one o'clock on Sunday, and on a post-mortem examination Surgeon-Lieutenant-Colonel Hoystead found that the knife had entered the base of the brain and divided a small artery, bleeding from which gave rise to a fatal compression. Turnbull was remanded till Saturday to await the finding of the coroner's jury.

North of England Surgical Aid Society.

The annual meeting of this society was held in the board-room of the guardians, Pilgrim-street, Newcastle, under the presidency of the Vicar of Newcastle. The report showed a considerable increase of work, and if there was a slight decline in subscriptions the workmen's contributions have been kept up.

Sir J. Lowthian Bell is seriously ill at his residence, Rounton Grange, Yorks, suffering from influenza

Newcastle-upon-Tyne, March 11th.

¹ THE LANCET, March 9th, 1895.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medico-Chirurgical Society.

THE ordinary meeting of this society, which was held last week, was very poorly attended, this being partly due to the prevalence of influenza keeping the profession very fully occupied with sick people, and partly, no doubt, to a reaction after the strain of three nights devoted to the discussion on Cardiac Therapeutics. Notwithstanding the smallness of the attendance a number of interesting patients and specimens were shown. Dr. McBride read a thoughtful paper on Suppuration in certain Osseous Cavities, in which he very calmly and judiciously reviewed current opinions in the light of his own long experience in the Ear and Throat Department of the Royal Infirmary, and as practising in that special department. Other communications on the billet were postponed until the society meets in May.

Health of Edinburgh.

The epidemic conditions in Edinburgh cannot be said to have abated much, if at all. Influenza is still rife, and the death-rate has during the past week gone up to 43 per 1000. Out of 225 deaths, 157 were due to diseases of the chest; and there were 2 deaths from small-pox. The intimations for the week include 8 fresh cases of small-pox, 38 of scarlet fever, and 528 of measles. Owing to the prevalence of measles amongst pupils and influenza amongst teachers, a good many schools have been shut for a short period.

Death of Dr. T. A. G. Balfour.

By the death of Dr. T. A. G. Balfour Edinburgh has lost a well-known figure. He was attending to his patients on Friday night, became ill on Saturday morning, and died on Sunday night. Dr. Balfour was seventy years of age, and had been in very active practice for forty years. He was a Fellow of, and Examiner to, the Royal College of Physicians of Edinburgh. In the College he also held the post of Curator of the Materia Medica Museum. He was a member of a medical family, one brother having been a practitioner in Portobello, and another occupied the chair of Botany in Edinburgh. Dr. Balfour took a very active interest in ecclesiastical matters. He was an elder in the Free Church of Scotland and ranged himself on the conservative and constitutional side in that denomination, and his voice was often heard in the church courts. His genial and friendly manner and kindly bearing were felt by all who came in contact with him outside the domain of ecclesiastical controversy, and many of his brethren will miss the kind and courteous greeting they always received from him.

Death of Dr. Shand.

Another figure which until recently was known to the members of the medical societies in town has gone from his place. Dr. Shand, who had formerly held a first place in Kirkcudbright as a practitioner of ability, died in Edinburgh this week at the age of seventy-two. He retired from active work years ago, after an attack which left him semi-paralysed on one side; but, a man of much determination and courage, he went about with great freedom in spite of his disabled condition.

Queen Margaret College, Glasgow.

Another set of medical wards (those of Professor John Dougall's) has been made accessible to women students in the Glasgow Royal Infirmary. The wards of two surgeons and of two physicians are thus now opened for clinical instruction to these students.

Public Health of Glasgow.

The city death-rate fell last week from 54 to 44 per 1000—an improvement due doubtless to the milder weather which now prevails.

Cremation in Glasgow.

A question having been raised as to whether the representative of a deceased person requires any legal sanction to have the remains cremated in the absence of special instructions of the deceased, the secretary of our local Cremation Society states that no such legal sanction is necessary. While in such circumstances the representative of a deceased person may dispose of the body by ordinary earth burial or cremation, with or without subsequent urn burial, no society will countenance the cremation of the remains of anyone who

was known to disapprove of cremation. In fact, one of the forms required to be filled up contains the phrase, "and I certify that the deceased expressed to me no objection (orally or in writing) to be cremated after death."

Consumption Hospitals for Scotland.

An account was given some time ago in this column of the scheme started, and now being carried out under the guidance and inspiration of one of our best-known local philanthropists, Mr. Wm. Quarrier, for the erection and maintenance of a series of hospitals for consumptives. In the course of "A Plea for Consumptive Hospitals for Scotland," a pamphlet just issued by Mr. Quarrier, the following sensible reasons are given for the building of these hospitals:—

1. Consumption is the most prevalent and most fatal disease in existence. So much is this the case that it is called the "plague of England," and I suppose it would not be unfair to say that it is equally destructive in Scotland.
 2. While the well-to-do or wealthy suffer from its ravages, consumption is essentially the poor man's disease, the outcome of poor food, poorly ventilated homes, and of overworked body and brain.
 3. Notwithstanding that the disease is so destructive, consumptive patients are often refused admittance into general hospitals on account of beds being occupied by more urgent cases, and because of the lingering nature of the disease and its almost certain fatality in its advanced stage. These very peculiarities of the disease should give the patient the strongest claim upon our sympathy.
 4. Even if the doors of the general hospitals were freely open to receive consumptive patients (and you know they are not), these institutions do not afford the necessary facilities for the proper treatment and care of such patients.
 5. While the aim is to furnish a home for consumptives and thus bring relief to the patients, undoubtedly a great benefit will be secured by affording an opportunity to physicians for the more careful study of this disease. This can be better done when a number of patients are brought together in the one building. The general public will be benefited through the education that will be given by patients who have been treated, and who have thus acquired a knowledge of how the disease may be prevented or cured.
 6. It is only by furnishing a building specially prepared for the treatment of patients afflicted with tuberculosis that satisfactory results will be obtained. In the first place, it is absolutely necessary to have a building so located that it will be free from smoke, dust, and other impurities of air incidental to city life. This is secured in the site amid the hills of Kenfrewshire.
- Mr. Quarrier contemplates having a series of six small buildings for twenty-five to thirty-five patients each, and estimates that £60,000 will be needed for completing the buildings; of this sum £12,000 have already been received. Mr. Quarrier has a board of advisers on the subject, consisting of Professor W. T. Gairdner, M.D., LL.D., F.R.S.; Professor J. G. M'Kendrick, M.D., F.R.S.; Professor Joseph Coats, M.D.; D. Yellowlees, M.D., LL.D.; James B. Russell, M.D., LL.D.; Ebenezer Duncan, M.D.; while the following medical men have also promised their practical help when required:—Professor Murdoch Cameron, M.D.; Professor D. N. Knox, M.A., M.B.; Professor John Barlow, M.D.; Professor W. L. Reid, M.D.; Dr. R. Cowan Lees, Dr. Walker Downie, Dr. Thomas Barr, Dr. T. S. Meighan, and Dr. T. Brown Henderson.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Public Health of Dublin.

At the general meeting of the Public Health Committee, which met on Tuesday, the 5th inst., Sir Charles Cameron reported that during the week ending Feb. 23rd the death-rate in the metropolitan registration district was 34.3 per 1000 persons living, the rate in the city being 39.4 per 1000. During the first eight weeks of the present year the death-rate was 0.3 per 1000 below the mean rate for the corresponding period in the previous ten years. The week ending March 2nd there were 3 deaths from influenza and 3 from small-pox. The number of cases of small-pox which occurred during the same week was 25—14 on the north side of the city and 11 on the south side. There were 61 cases of this disease under treatment in Cork-street Hospital, 34 in the Hardwicke, and 132 convalescing at Kilmaham. In the week ended Feb. 16th 56 cases of small-pox were notified, but in the following week the number fell to 27. The epidemic, which had shown great decline in the week ended Feb. 23rd, further but slightly declined last week. Up to twelve o'clock on Tuesday the cases notified for the current week numbered 5, which were all on the north side of the city.

Jervis street Hospital, Dublin.

The usual monthly meeting of the above institution was held in the board-room of the hospital on Thursday, the

7th inst. The minutes of the previous meeting were read and confirmed, and the accounts for supplies to the hospital during the past month were examined &c. The number of patients relieved during the past month amounted to 2002, of which 578 were cases from accidents. The managing committee acknowledged numerous subscriptions for the month ending February. The meeting then adjourned.

Richmond Lunatic Asylum.

An Order in Council has been issued by the Richmond Lunatic Asylum sanctioning the expenditure of £4000 to complete the erection and equipment of the new temporary buildings provided to meet the overcrowded condition of the lunatic asylum, and also the sum of £2000 for fitting up Portrane houses and offices for the accommodation of patients and to meet preliminary expenses in connexion with the erection of the new buildings.

Dublin University Calendar for 1895.

The Dublin University Calendar for 1895 has just been published by Messrs. Hodges, Figgis, and Co. I note that the number of electors on the roll of Trinity College is 4506, the returns having been brought down to the date of the last winter commencements. Efforts have been made to supervise the general information afforded in regard to the student societies &c. The subscribers to the Graduates' Tercenary Memorial have their names set forth with the amount of their benefactions. To this fund for the building of a Dublin University Union consisting of voluntary societies and organisations of the University a sum has been made available up to Dec. 31st last of £8900, and there can be no doubt that this will yet be considerably added to. In the meanwhile the board have granted as the site of the Union buildings that occupied by the present No. 29, in the Library square, and the plans for the structure are under consideration. A glance at the calendar shows that more than the usual care has been expended upon its revision.

Remarkable Case of Longevity.

A remarkable case of longevity has been brought under notice, that of a woman named Margaret McVey of Downpatrick, and on the coffin her age was stated to be 105. From other information since obtained it appears that the deceased was born at Ballykinlar in June, 1780, and was therefore 115 years old. She was married, had two children, and up to the time of her death was healthy, strong, and sensible. She remembered the battle of Ballynahinch well, and up to a short time before her death attended Ballykinlar Chapel.

The Battle of the Clubs at Cork.

We are promised a curious development in connexion with the recent prosecution of students for snow-balling. Soon after the proceedings in the police-court the *West Cork Eagle* made some comments which Mr. J. M. Lynch, one of the defendants, considers libellous, and he has accordingly caused a writ to be issued in his behalf by a solicitor.

Charge against a Poor-law Medical Officer.

The Killarney Dispensary Committee held an important investigation last week relative to a charge of neglect of duty against Mr. Paul R. Dillon. A Mrs. Sullivan, in a long letter originally addressed to the Local Government Board, stated that her son, a dispensary patient, received an injury to his head; that Mr. Dillon, on visiting him, "merely gave directions to give the patient a powder and apply mustard to his feet," but "did not examine the head of the patient, though being told that he had received a hurt on the poll"; that the following day Mr. Dillon was asked if he had brought his instruments, and "then only examined the patient's head"; that the patient died in about forty minutes after the medical man's departure; that at the inquest another medical practitioner stated he made a post-mortem examination and ascertained that "death resulted from blood being clotted on the brain, the result of a fall." Mr. Dillon's explanation to the committee gave a different aspect to the case. He stated that the messenger told him the patient had had a fit the previous night and was very bad. On arriving at the house he learned that the patient had been drinking, and at that time he heard nothing at all with regard to the patient having had a fall. As a matter of fact, the young man was actually dying from apoplexy, and treatment was ordered rather with a view to comforting the mother than in the hope that any good would result to the patient. The committee heard the evidence of several others, and

after an exhaustive investigation entirely exonerated Mr. Dillon from blame in connexion with all the charges.

Who Pays: the Guardians or the Poor-law Medical Officer?

As the remuneration of country dispensary medical officers is often so wretchedly inadequate, the result of the contest between the Midleton Poor-law guardians and Dr. Blanchard will be looked forward to with keen interest by many. Dr. O'Connell, dispensary medical officer, through ill-health was for some months incapacitated from discharging his duties, and Dr. Blanchard had been acting as his locum-tenent. The latter applied to the guardians for remuneration, but as he has not elicited a satisfactory reply he has put the matter in the hands of a solicitor, and the guardians have requested the Local Government Board to advise them as to what their legal obligations may be.

The National Calf Vaccine Institute, newly opened at Sandymount-green, near Dublin, is a welcome addition to our means of obtaining an adequate supply of unexceptionable lymph. The medical director is Mr. J. Knox Denham, and Professor McWeeney is the bacteriologist.

March 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Liabilities of a Traveller affected with an Infectious Disease.

EVERY perambulating Englishman is familiar with the *tracasseries* to which he may expose himself at the hands of foreign and mostly small hotel proprietors when either he himself or a member of his family has the misfortune to contract an infectious disease during his sojourn at the hostelry patronised by his party. The first thing the landlord generally does is to order the removal of the sufferer. In addition to this, damages are very commonly claimed to recoup the house for the real or imaginary prejudice caused by the presence of the patient. Now, it need hardly be said that compulsory removal may entail great danger, nor must it be forgotten that the presence of a case of scarlet fever has not unfrequently been successfully concealed from the other denizens of the establishment, in which case it is hard to appreciate the loss of credit or custom incurred by Boniface. The right of the landlord to enforce removal and the payment of damages is rarely contested by the victim who has then nothing to do but submit. Now the travelling public should know that by a judgment delivered by the Sixth Chamber of the Paris Cour d'Appel on Feb. 1st, 1895—a judgment confirmatory of the ruling of the Civil Tribunal of the Seine, dated June 30th, 1893—the position assumed by the landlord in such a contingency is untenable. In the judgment it is expressly stated that damages cannot be claimed from a visitor for the trouble and possible loss caused by the presence in the hotel of a member of that visitor's family affected with an infectious disease, provided that the medical attendant delivers a certificate to the effect that risk to life would attend removal to another house. The traveller can resist removal even if the landlord has served him with a formal notice to quit at the very onset of the illness. It is held that the illness is an accident beyond the sufferer's control, and that, further, such an unfortunate occurrence forms part and parcel of the obvious risks attending hotel-keeping. It is ruled, however, that the visitor is responsible for the expenses incurred for the cleansing and disinfection of the premises occupied by him. I have heard of extravagant charges being made at continental health-resorts after the death of a visitor whose disease was indubitably non-infectious. It is mostly at the smaller hotels that these annoying claims are made, and visitors cannot be blamed for showing fight. But when the disease is of an infectious nature it is better to come to some friendly understanding with the landlord, whose position is, after all, no enviable one under the circumstances. Should he prove recalcitrant, it is wiser to forego one's rights when possible and seek accommodation elsewhere, for an unwilling landlord and hotel staff are not exactly aids to the successful steering of a severe case of illness to recovery. It is only right that I should bear testimony to the good feeling almost invariably shown by the landlords of the best hotels here in Paris under such trying circumstances, and it is not unreasonable to expect visitors, even though they be

cognisant of the rights conferred by the above-mentioned ruling, to meet their Amphitryon half-way.

Cerebral Complications of Influenza.

Professor Cornil¹ has recently had under observation three women affected with encephalopathy of influenzal origin. In each instance recovery ensued. The first two cases were almost similar, the only difference being that in one instance the motor paralysis was on the right side and was accompanied with aphasia, whereas in the other the left side was affected and aphasia was absent. In both cases the early symptoms were identical: persistent and severe headache, followed by sudden loss of consciousness; partial coma with stertor, lasting in one case three weeks, in the other four days only; hemiparesis, retention of sensation, facial paralysis, visual troubles, inequality of the pupils, paralysis of the sphincters, and no loss of tendon reflexes. The condition might at first have been mistaken for that of acute meningitis, later for encephalitis or small hæmorrhages involving the motor centres. But recovery is against both hypotheses. The retention of sensibility, the facial paralysis and that of the sphincters, as also the ocular trouble, distinguish the condition from hysterical hemiplegia. The third case quoted was that of an hysterical woman, and the hemiplegia was accompanied with anæsthesia; but here also there were noted facial paralysis, inequality of the pupils, and aphasia, which was quite distinguishable from nervous matism, so that there could be no mistake about the diagnosis—hemiplegia complicating influenza.

Successful Laparotomy for Revolver Wound of the Abdomen in a Pregnant Woman.

M. Albarran presented to the Société de Chirurgie on the 27th ult. a young woman aged nineteen years who was admitted to the Hôpital Cochin for a bullet wound in the umbilical region at a spot four fingers' breadth from the median line. Five hours and a half after the receipt of the wound she had vomited only once—during her removal to hospital. The patient was collapsed, and there was ascertained to be some dulness at the lower part of the abdomen. A penetrating wound with internal hæmorrhage was diagnosed, and immediate laparotomy was had recourse to. During the preparations for the operation the state of the breasts led to a vaginal examination, and a pregnancy advanced to from the fourth to the fifth month was detected. Four wounds of the small intestine, necessitating the resection of twenty centimetres of the bowel, were seen directly the abdomen was opened; a fifth intestinal wound was sutured, and search for the source of hæmorrhage which continued revealed a perforation of the mesentery involving a branch of the superior mesenteric artery, which was tied. The fundus of the gravid uterus was the seat of a small wound through which protruded a loop of the umbilical cord. Wishing to terminate the operation promptly, M. Albarran resected the loop on a level with the uterine surface, the stump being returned into the uterine cavity. The abdominal incision was then quickly closed. The next day abortion took place, but nothing of interest occurred afterwards to retard complete recovery.

March 12th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Mayor of Berlin on Löffler's Bacillus.

IN America when diphtheria is prevalent the bacteriological examination of suspected cases is made in municipal laboratories free of charge. The medical club of the Luisenstadt quarter accordingly asked the municipality to follow the example of America and to make similar arrangements in Berlin. In the name of the town council the mayor answered that there was no need for this examination, as it was not yet proved that Löffler's bacillus is really the sole cause of diphtheria. In the *Medical Reform* a medical man asks ironically if the mayor would be acknowledged as an authority on bacteriological questions, and, if not, on whose advice it was that he formed his opinion on the etiology of diphtheria. The other medical journals join in blaming the mayor for his peremptory and not over-polite answer. The question will now be taken up by the "medical stores," an establishment similar to the Army and Navy Stores, where the members of the profession

can obtain medical articles at lower prices than in the ordinary shops. The directors of these stores now undertake general bacteriological examination. Practitioners who desire to have their cases investigated procure from the stores pieces of sterilised cotton-wool packed in small sterilised glasses. A bit of the cotton-wool is to be pressed on the suspected membranes, then put back into the glass, and sent in a small box to the laboratory of the stores, where the examination is performed by a specially appointed bacteriologist. The practitioner receives an answer on the following day. This system of providing for the profession an easy means of bacteriological examination in doubtful cases is very good, but as it is carried on by a private establishment the work, of course, cannot be done gratuitously. Although the charge of three marks is very moderate, it is still much too high for the poorer classes. It is, therefore, to be hoped that the mayor and town council may change their opinion as to Löffler's bacillus and provide for these investigations, a course which will be of the greatest advantage for the health of the population.

Improvements in Hospital Construction.

At the last meeting of the Berlin Hygienic Society (Gesellschaft für öffentliche Gesundheitspflege) Herr Schmieden, a leading hospital architect of Berlin, read a paper on Recent Progress made in Hospital Construction. He said that the pavilion system was now generally adopted throughout the world, even in countries like Russia, where the cold climate seemed to be an obstacle. Wood, which at first was often employed, is now completely abandoned, and only stone is used. Formerly the pavilions had but one floor, a system which requires much space; now they often consist of two, and in British hospitals even of three or four storeys, a design which not long ago would have been regarded as unhygienic. The usual ground plan is the rectangular one; there are a few exceptions where the want of space induced the architect to build circular pavilions. But this form, Herr Schmieden said, should not be generally accepted because it looks very ugly and makes a proper distribution of the buildings very difficult. Among recent buildings the new municipal hospital of Hamburg, one of the largest in the world, which contains 1500 beds and has no fewer than fifty-eight pavilions, is the most remarkable. Herr Schmieden especially mentioned the day rooms with their glass sides, which can be let down in warm weather, so that the room then forms an open balcony. All the arrangements for heating, ventilation, &c. are excellent. The operation rooms are models of their kind. They were built and furnished in accordance with the ideas of Dr. Schede, the chief surgeon, and consist only of iron, glass, and Dutch tiles, without any woodwork. Another new hospital which invites the attention both of medical men and architects is the Kaiser Friedrich Hospital for Children in Berlin. Special efforts have been made in the diphtheria pavilion to isolate the mild cases from the serious ones, and both of them from the convalescents. For this purpose the pavilion has been built in a novel way, which Herr Schmieden termed the "stage system." The building consists of three distinct parts, which are completely separated each from the other. The patients are received, according to the degree of the illness, in one of the first two wards. When the acute stage of the disease is over they come into the convalescent ward, from which they are discharged without entering any other portion of the edifice. The physician and nurses live in the diphtheria pavilion and never come to the other parts of the hospital. This is, Herr Schmieden said, of the utmost importance, as in other hospitals infection has often been conveyed by the nurses of the different wards living together. Herr Schmieden then drew the attention of the meeting to the great Policlinico Umberto in Rome, which all visitors to the last International Congress will remember. This hospital, designed for 900 patients, will cost 20,000,000 lire. The ground floor of the pavilion consists of open halls and not of sick wards, those being only on the first and second floors. This arrangement, Herr Schmieden said, is a very good one in hot climates, but it requires a great deal of space. A novel feature has been introduced in the operation room. To avoid infection the operations are performed in a sort of glass cage, so that the professor can be seen but not heard by the students who are in the room outside the cage. The architect then, speaking of England, said that the cost of hospital building was much higher there than on the Continent. In Germany a

¹ Académie de Médecine, March 5th.

sum of 4000 marks per bed is accepted as a rule, while in England 8000 marks are not thought too much. In England the rooms for the nurses, the bath-rooms, the day-rooms, &c. are furnished with a comfort nearly unknown in our general hospitals. Herr Schmieden finished his discourse with the remark that satisfactory results in hospital building can be obtained only by the collaboration of architects and physicians. The meeting was very well attended and the address greatly applauded.

March 11th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Vienna Medical Society.

At the last meeting of this society Professor Wagner spoke of the beneficial influence apparently exerted on mental alienation by an acute disease appearing in the course of it. Recovery has been observed after typhoid or intermittent fever and arthritis. The younger the patient and the shorter the period since the beginning of the mental symptoms the more advantageous is the effect of the febrile disease. Manthner has observed that atrophy of the optic nerve was cured by intercurrent small-pox. Leidesdorf experimented with transfusion of blood in cases of melancholia. In 1892 Professor Wagner saw a boy affected with muscular atrophy who contracted typhoid fever; some two months after this illness he recovered entirely from the muscular atrophy. The discovery of tuberculin provided Professor Wagner with a remedy capable of producing fever without the risk of an infectious disease. He proceeded by inducing a rise of temperature (not more than 3° F.) by means of injection, and obtained very gratifying results. The increase of body weight was a proof of the harmlessness of this remedy. The mental symptoms were never aggravated after the injections.

Death of Dr. Lorinser.

Dr. Lorinser, the late director of the Wieden Hospital, has died at the age of seventy-eight years. He was the first who proved the noxious effects of phosphorus on the maxillary bones of persons employed in match manufactories. His works, "Treatment and Care of Diseases of the Knee-joint" and "Diseases of the Vertebral Column," found universal acceptance. Dr. Lorinser, who was also an eminent botanist, held many obsolete and peculiar views; thus, he was a resolute opponent of vaccination and of mercurial therapeutics and did not believe either in hydrophobia or in the remedies used against it. In the deceased the poor lose a great benefactor, whose name is everywhere mentioned with gratitude and reverence.

The "Rettungsgesellschaft" (Humane Society).

Since Baron Mundy's death this society has been in permanent difficulties; apparently it will not long survive its promoter. Like Count Montecuculi, the present manager, Dr. Charas, exclaims: "We want money, money, and still more money." Dr. Charas is an able and very agreeable man, but the Humane Society has lost a great many friends in consequence of painful incidents which took place some ten months ago. In fact, the only hope for the society is that the municipality may assume the control of it.

March 11th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Entozoa of Finland and Russia.

DR. KLIMENKO publishes in the *Vratch* of last week a preliminary note upon the subject of the entozoa usually met with in Finland. His observations were made in the military lazaret in Helsingfors upon patients both of Finnish and Russian nationality, and both military and civil. As a result of these observations, which extended to 1427 persons, it was found that among the Finns the ova of various forms of entozoa could be demonstrated in the dejecta of as many as 29.29 per cent. of the total. Among the inhabitants of Helsingfors the percentage in whom ova could be found was as high as 29.43. This, however, is lower than what was found to be the case in St. Petersburg and Moscow, where Kessler has shown the percentages to be respectively 32.48 and 36. In

Helsingfors by far the commonest form of intestinal parasite is the tapeworm (25.2 per cent. of the total number of patients), while in St. Petersburg tapeworm ova were present in only 7.83 per cent., and in Moscow in 8.9 per cent. of the total numbers examined. The Finnish soldier is apparently more liable to worms than the Russian soldier, in the proportion of 30.71 per cent. to 27.5 per cent. In the case of the Finns, the ova met with are almost invariably those of tapeworms, round-worms being almost unknown; while among the Russian soldiery in more than half the cases the ova are those of the round-worm. Dr. Klimenko promises to publish full details of his observations later.

A New Method of spreading Syphilis.

The methods by which syphilis is spread among the peasantry in Russia are numerous, as the following incident shows. Within eighteen months Dr. Karakoz met, in one and the same village in the interior, with three cases of primary syphilitic sore upon the eyelids. This led to inquiry and it was found that there were certain old women in the village to whom anyone with a speck of dust or other foreign body in the eye was in the habit of going, and that their method of removing the foreign body was by licking it out of the eye with the tongue. Three such old women were found and examined at the dispensary; two of them were found to be healthy, but the third had syphilitic ulcers upon her tongue and elsewhere. She herself ascribed the disease in her own case to her having licked the eye of a girl, who, from the description given, was clearly syphilitic. Whether the occurrence of primary sores upon the eyelid in Russia is always, or even usually, to be ascribed to this objectionable practice it is impossible to say, but they are not uncommonly met with in that situation. Thus Dr. Poliakov, reporting a case in the *Journal of Ophthalmology* in 1893 (and his case was caused in a similar manner), stated that this was the thirty-fourth case recorded in Russian literature.

New Clinique in the University of Moscow.

A new clinique for skin diseases was opened in the Moscow Clinical Hospital on Feb. 19th (old style), a day of days in the Russian calendar, being the anniversary of the emancipation of the serfs, which took place in the year 1861. The clinique has been built with money left to the hospital by M. Solodovnikov. At the opening Professor Pospisilof, after whose plans the clinique is built, gave a brief history of the teaching of dermatology in Russia. So recently as twenty years ago there was but one clinique for skin diseases in the whole of Russia—namely, at the Army Medical Academy in St. Petersburg. In Moscow University there has for some time been a lectureship in dermatology, but for clinical purposes the university has had to use the wards of the Miasnitzkaia Hospital.

A New Russian Journal.

The new *Journal of the Society of Russian Practitioners in Memory of Pirogof* will shortly appear, as it is already announced in the *Government Gazette*. It will be edited by Professor Korsakof of Moscow, and will not have to be submitted to the censors before publication.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Drink Problem.

A COMMITTEE of fifty, of which the President of Columbia College is president and Dr. J. S. Billings of the United States Army is secretary, has been organised for the purpose of exhaustively studying the "drink problem." To determine its physiological and pathological aspects a circular has been issued containing the following inquiries. 1. Is the regular consumption of a moderate quantity of whisky, wine, or beer conducive to the maintenance of health and working power in any class of men? If so, in what class, and is the average quantity useful? 2. What is the quantity of whisky, wine, or beer which the average man in good health may consume daily without special risk of injuring his health? Does this vary in connexion with variations of age, of climate, or of occupation, and what are those variations? For the purpose of securing trustworthy evidence the committee are endeavouring to collect statistical information. With this object in view the following questions have been addressed to a large number of men in various

parts of the country who are above forty years of age and are engaged in mental work of a high class; the list includes the names of judges, lawyers, scientific and medical men, bankers, financiers, managers of corporations, &c.: Are you a total abstainer? Do you drink spirits, wine, or beer every day as a matter of habit? Are you aware of any chronic disturbance of your health?

Cornell Brain Association.

At a recent dinner of the alumni of Cornell University the following "form of bequest of brain" was presented from the professor of anatomy: "I now of student of Cornell University from 18 to 18 and graduated in 18 recognising the need of studying the brains of educated persons rather than those of the ignorant, criminal, or insane, in order to determine their weight, form, and fissural pattern, the correlations with bodily and mental powers of various kinds and degrees, and the influences of sex, age, and inheritance, hereby declare my wish that at my death my brain should be entrusted to the Cornell Brain Association (when that is organised) or (pending its organisation) to the curator of the collection of human brains in the museum of Cornell University, for scientific uses, and for preservation, as a whole or in part, as may be thought best. It is my hope that my family and friends may not oppose the fulfilment of this my earnest wish." The enthusiasm of the evening, however, was so great that very few of the circulars were examined by the New York alumni at their dinner, and probably not one of them was signed.

Traffic in Antitoxin.

The sale of antitoxin of a spurious quality is creating considerable discussion as well as alarm. As the United States has no central health authority, on the opinion or judgment of which the people can rely in determining the value of the remedy, deception is not difficult. In the emergency a morning paper is raising a fund for the purchase and importation of the remedy of pure quality. Antitoxin has not gained general favour, and its failures have been attributed to the lack of genuineness of the article employed.

Feb. 25th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Medical Society of Victoria

THE annual meeting of the Medical Society of Victoria was highly satisfactory. There was an exceptionally large attendance and the report of the committee stated that the attendance at all the meetings during the past year had been above the average. The treasurer's report showed a balance in favour of the society of £960. The election of office-bearers for 1895 resulted as follows:—President: Dr. Rothwell Adam. Vice-Presidents: Mr. F. D. Bird and Mr. J. T. Brett. Hon. treasurer: Dr. C. H. Mollison. Hon. librarian: Mr. J. H. Webb. Hon. secretary: Dr. A. J. Wood. Hon. auditors: Drs. Barker and G. Horne. Committee: Drs. Astles, Balls-Headley, Duncan, Grant, Gresswell, and Honman, and Messrs. Moore, J. P. Ryan, Stirling, and Syme.

Evolution and Medicine.

The retiring President, Dr. Gresswell, delivered a very long and thoughtful address on Evolution, deviating somewhat from the usual style of presidential addresses and selecting a theme which he thought required the assistance of those who deal with morbid structure operations for its complete demonstration, and which must needs react upon pathology and teach lessons to the profession. The biological arguments in favour of the doctrine of descent, as opposed to that of types, were then passed in review, with copious illustrations, which showed how intimate and profound was the speaker's knowledge of his subject. He then reminded us that comparative pathology is not necessarily evolutionary, and that care is required lest we class as instances of evolution in disease pathological phenomena presenting mere similarity among different groups of organisms. Cervical fistulae, cysts, and auricles, pinnae cysts and fistulae, harelips and cleft palates, whether in man or animals, receive, the anti-evolutionist might say, ample explanation in ontogeny without recourse to phylogeny. Similarly with retained pupillary membranes, bifid uteri in women, the development of hair on the conjunctiva or mucous membrane of the mouth of man, of talipes equino-varus, and so on.

Are there any abnormal conditions which do not receive satisfactory explanation by reference to ontogeny, but which do receive such explanation by reference to ancestral history? Dr. Gresswell suggested that the development of the anconeus quartus muscle, of the costo-coracoid fascia, and of an extra number of coccygeal vertebrae and muscles were really such conditions, but might not be universally admitted as such. He then described in detail a condition which he believed to be the only abnormality in man brought forward for explanation on phylogenetic grounds. The instance cited was that of the occurrence of an immense number of loose cartilages in the knee-joint, a reversion to what might be regarded as the primitive condition of the limb, homologous with the meta-ptyergium of the selachian, in which there is a very large number of cartilaginous elements. Again, although the cells of enchondroma myxomatodes have the characters of the cells of the notochord, and so receive explanation in ontogeny, the stellate cells of some enchondromata are not to be observed in normal structures unless we descend to selachian forms. Another fact which might be regarded as throwing light on the doctrine of descent is that in ill health there are in the main only the mechanisms of health to fall back upon. The Darwinist would say that no advantage would accrue from the perpetuation of organisms that have lost their healthy form and function, and only such mechanisms have been evolved as are sufficient to meet temporary conditions of ill health. In illustration, Dr. Gresswell took the case of pain. Those organisms would have the best chance of survival in which hurtful sensations were disagreeable, but when the mechanism beneficent in health is continued during ill health, it is detrimental to the individual. For instance, the irritation of indigestible food causes attempts at its ejection and it may be got rid of; but let inflammation be set up and the attempts at ejection continue, but aggravate the inflammation, and may even cause death. Such a result is intelligible only on the doctrine of descent. Other illustrations of the same thing were given showing that pain and the anticipation of it are sensations of generic value, consisting of many species and varieties, and that though of advantage in conditions of health, and possibly in certain diseased conditions, it becomes, when intensified, a source of danger and of death.

Small-pox at Melbourne.

The steamer *Cloncurry* arrived at Port Phillip on Jan. 28th with small-pox on board. She left Calcutta on Dec. 23rd. On Jan. 3rd one of the lascars crew sickened with small-pox, and subsequently two others. They were landed at Fremantle, West Australia, on Jan. 17th, and at that port everyone on board was vaccinated. On Jan. 19th a saloon passenger developed the disease, and becoming delirious jumped overboard. He was rescued and was none the worse for his immersion. Another case has developed since the steamer arrived, and was placed in quarantine. The passengers and crew have been revaccinated, and the ship and cargo thoroughly disinfected.

Typhoid Fever at Coolgardie.

Typhoid fever is alarmingly on the increase at the Coolgardie Goldfields, Western Australia. The Government and private hospitals are full, and steps are being taken to provide additional hospital accommodation. The sanitary arrangements are indescribable, so that with a deficient and very bad water-supply it is no wonder the disease is so rife.

Chloride of Lime in Snake-bite.

A child at Oakleigh, Victoria, was bitten by a snake, and died in spite of injections of chloride of lime and strychnine administered by Dr. Grant and Mr. Kenny.

Appointments.

The following have been appointed examiners to act with the professors and lecturers at the forthcoming medical examinations of the University of Sydney: anatomy, Dr. A. E. Mills; physiology, Professor Stirling; materia medica, Dr. A. Watson Munro; pathology, Dr. G. E. Rennie; surgery, Sir Alfred Roberts; medicine, Dr. Mackellar; medical jurisprudence, Dr. Ashburton Thompson; psychological medicine, Dr. F. Norton Manning; midwifery, Dr. James Graham; clinical medicine, Dr. Sydney Jones; clinical surgery, Dr. Fiaschi; ophthalmology, Dr. Murray Oram.—Mr. G. E. Miles, senior medical officer at Callan Park Hospital for the Insane, has been promoted to the post of medical superintendent of the Hospital for Insane at Newcastle; and Dr. R. S. Millard has been transferred to Callan Park.—Dr. G. H. Taylor has been appointed medical superintendent of the Coast Hospital at Little Bay, Sydney.

Obituary.

DANIEL HACK TUKE. M.D. HEIDELB., F.R.C.P. LOND.,
LL.D. GLASG.

IN our issue of last week we had the mournful duty of announcing the death of Dr. Hack Tuke. The following details of his life and estimate of his work will be of interest to his many friends and admirers. Daniel Hack Tuke was born at York on April 19th, 1827. He was the youngest son of Samuel Tuke and the great-grandson of William Tuke, the founder of the York Retreat, whose work in connexion with the humane treatment of the insane was on the same lines as that of Pinel in France, though the two laboured independently of each other. Dr. Tuke was delicate as a child, but he was remarkable, even in those early days, for his high spirit, which seemed to carry him through his troubles in an unexpected way. Although his schooling was often interrupted by illness he was always busy with learning of some sort or other or investigating on his own account. As an instance of this early scientific spirit may be mentioned a journey to the woods with the household cat, which he there deposited in the hope of some day re-finding it as a wild cat.

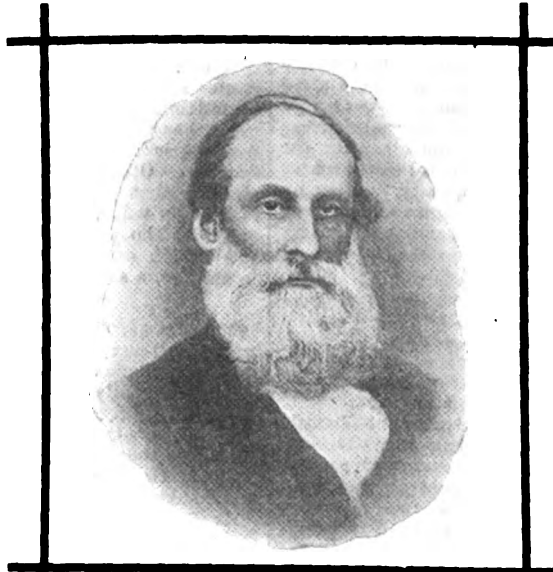
Samuel Tuke, his father, was a well-known Quaker, and his son was accordingly brought up in the family traditions, and in due time, when his health would allow, he attended as day scholar at a Friends' school. Later he went to another Friends' school at Tottenham, where he numbered among his schoolfellows some who have since become eminent. When his school education was finished he was thought to have such a legal mind that he was sent to Bradford to study law, but three months of this were quite enough for him, and he was at last allowed to begin the study of medicine, for which he longed. At about this time he seems to have held the post of steward at the York Retreat. He next came up to London, about the year 1849, entering at St. Bartholomew's Hospital. In 1852 he took the Membership of the Royal College of Surgeons of England, and in 1853 he graduated M.D. at Heidelberg. In this same year he married, and went abroad to visit the asylums of Holland, Germany, and France. In 1854 he published his first work, an account of these visits. He was now appointed visiting physician to the York Retreat and to the York Dispensary, and about this time he held the Lectureship of Psychology at the York School of Medicine. In 1857, on the death of his father, it was decided that the old family house in Lawrence-street, York, should be converted into a private asylum for ladies. This scheme, to which he looked forward with great eagerness, was frustrated by a serious attack of hæmorrhage from the lungs, which obliged him to give up practice entirely and to go south. After a year of wandering he settled in Falmouth, where he lived for fifteen years. Here, with improved health, he soon began to take active interest in town matters, such as the library, British schools, working men's club, &c., and at the same time he did much literary work, maintaining throughout the keenest interest in all things relating to psychology and the insane. In 1874 he came to London, where after a time he settled and gradually resumed practice, unable to resist the temptation so to do. Among his greatest pleasures at this time were his frequent visits to Bethlem Hospital, of which institution he subsequently became a governor; and when within the last year or two he was obliged on account of pressure of work to forego these visits

he felt it as a great trial. In 1882 his eldest son, William Samuel Tuke, died at Bournemouth. This was a terrible blow to Dr. Tuke, who had set high hopes on his medical career, which, as many of W. S. Tuke's fellow students will remember, had promised brilliantly. Dr. Tuke subsequently took up his residence at Hanwell, where the proximity of the asylum proved a great attraction to him. Here he continued to reside till the time of his death, coming up to London daily to his consulting-rooms in Welbeck-street. It was at the latter place, just after his arrival on the morning of March 2nd, that he was suddenly seized with left-sided hemiplegia. After a few hours of incomplete consciousness Dr. Tuke gradually lapsed into a coma, which lasted till his death at four o'clock of the morning of Tuesday, the 5th.

A prominent feature in Dr. Tuke's life was his indifference to the pleasures of the table; a meal would never stand between him and his work, and his family would alternately scold and smile at his ridiculous snatch luncheons of buns and glasses of ginger beer. Of Dr. Tuke's kindness of heart we think many must have a record. He was most genial and sociable by nature, and the meeting of his friends and colleagues was the chief attraction to him at social gatherings, which he invariably enjoyed. He liked to talk over matters of all kinds, but philosophical subjects and religious questions attracted him most outside the domain of medicine, and such readings and conversations were his relaxation. He was sometimes affectionately taxed by his home

circle with being sentimental; but whilst it was quite true that "sentiment" was ingrained in his fibre, as many little relics and hoardings would testify, his nature was far too simple and honest to allow of anything that savoured of the unreal. He was rather fond of poetry—Tennyson and Whittier being, perhaps, his favourite authors. He was certainly a hero-worshipper, and when engaged in this cult would take minute pains to learn all he could about the object of his affection. Hampden was thus much in his mind when he was at Oxford last year. Dr. Tuke had many devoted friends amongst young men—he was so exceedingly kind to them and would help whenever he could. A letter written by a medical friend whom he valued much described him as possessing "the gift of inspiring friendship"—it was quite true.

In endeavouring to form a true estimate of the value of the work of Dr. Hack Tuke we cannot but feel that it is difficult at present to appreciate its various parts at their just value, but yet we think it is a proper time to note the nature and quantity of what he has done, and its apparent influence on English psychiatry. Dr. Tuke had a power of continued intellectual work such as is given to very few, and which we are almost inclined to say is given most commonly to those who are not physically robust; he worked regularly till the early morning hours in his study and yet was regular in his London professional work. He always got a clear notion of the end he was aiming at, and never rested or turned till he had reached it. Steady, persistent observation with methodical recording and arranging of facts was his chief power, for, though not, as we have hinted above, without poetical feeling and sentiment, yet he was not imaginative, and he was rather a receiver and a recorder than an originator. He was the cool-eyed observer of nature, and not the far-seeing prophet. We have heard him described as a scientific sponge, taking up greedily whatever was presented to him and rendering it back uncoloured by any personal tint. His memory for facts and details was till the end extraordinary, and a case once registered in his mind was always fit to be brought out for use when the proper occasion came. We believe that he



DANIEL HACK TUKE, M.D., LL.D.

will live, if for no other work, as the historian of lunacy and its humane treatment in the nineteenth century. He knew the actors and their works personally, and in an absolutely truthful way gave the results. Dr. Tuke was not a clinical teacher, nor did he add much to the purely scientific medical knowledge of his specialty. He was a great reader of the works and observations of others and for years was a constant frequenter of the wards and the post-mortem room of Bethlem Hospital. We think that he expected to find more physical change than was generally visible to the naked eye and often left a necropsy with feelings of disappointment and yet with a hope that the time would come when the physical side of insanity would be more demonstrable. Kindly and considerate for all, his mind was a sort of balance for the weighing of scientific truth. No man and no man's work were better known all over the world, and he had visited most of the asylums in Europe and America, never losing a chance of picking up the threads which connected the present with the past. He knew the City of the Simple (Gheel) in Belgium and the secluded valley in Ireland where priest-healing had held sway. His holidays were combinations of the study of asylums with (insufficient) complete relaxation. As we have already said, he was judicial in the extreme, and though he might have strong personal feeling, by education or association, he was ever ready to hear the other side; thus, though a strong and persistent believer in non-restraint and in the humane treatment of the insane, he was quite able to see that cases might arise in which mechanical restraint might be the most humane treatment; and quite recently he expressed himself strongly that he hoped panic and sensational writing would not prevent the judicious use of baths and the pack. Dr. Tuke's earliest established work was in connexion with Sir (then Dr.) Charles Bucknill, and "Bucknill and Tuke" still holds its place as a monument of work. Later the "Influence of Mind on the Body" occupied him, and he always had a very strong personal affection for this book, which, though at its time of great value, has now been left behind. Yet it was an early record and comprised a collection of facts of great value. Though not imaginative, Dr. Tuke was a very thoughtful and careful student of hypnotism and lost no opportunity to see its legitimate development. Another special subject to which he devoted great thought and attention was moral insanity. He took a very definite position, in which he differed from some of his oldest friends, and to the end he believed in a form of insanity in which the social side was chiefly or altogether at fault, while the higher intellectual powers were intact or but slightly affected. He recently wrote a small book on the development of this idea by Prichard and Symonds.

For nearly eighteen years Dr. Hack Tuke bore the weight of editing the *Journal of Mental Science*, and no labour was too much for him to undertake and carry through for the perfect and exact editing of that journal. He not only carried out the ordinary work, but added an Index Medicus of great and lasting value. Friends believed that Dr. Tuke's hands were already full, but yet he undertook the "Dictionary of Psychological Medicine," and, knowing exactly whom to get as assistants, he produced this splendid book, which must long be the text-book for all medico-psychological subjects. Dr. Tuke's life was not devoted only to book work; he was not forgetful of the patients in and out of asylums, and was one of the originators of the "After-care" Association for patients who, having left asylums, were not fit for full work, and who needed a kind of convalescent home where they could give evidence of their real fitness to return to their ordinary work. Dr. Tuke was chairman of this association at the time of his death. For years he was a regular attendant, not only at the courts of governors of Bethlem and Bridewell Royal Hospitals, but he attended the weekly committees and knew every patient who was admitted, and thus his life was full of work and thought. Of late years with all this work he was a busy consultant whose opinion was regarded as of the first value. He did too much, but he would himself have chosen to die in harness. No one can tell the amount of good he did by that influence which is only recognised when it is lost, but the younger men in the special branch of medicine to which he was attached looked upon him as the "grand old man."

He was a representative man in the special sphere of work to which he had devoted, and even sacrificed, all his life and energies, and it is difficult to see who is to fill the gap which his death has caused amongst the practical workers in medical psychology. The simplicity of his funeral

was in keeping with that of his character, and it was felt by all his colleagues who attended on that occasion that the grave had closed over all that was mortal of a worthy, loved, and highly esteemed brother.

CHARLES H. ROBINSON, M.R.C.P., F.R.C.S. IREL.

It was with deep regret that the friends of Mr. Charles H. Robinson heard of his death, which took place at his residence, De Vesce-place, Kingstown, county Dublin, on the 1st inst., after only two days' illness. There were few men better known in Ireland in the profession, and his kindness of disposition and professional courtesy endeared him to all with whom he came in contact, whilst his practical ability was of an advanced order. Mr. Charles Robinson was born in Dublin on Jan. 19th, 1839, and was the second son of the late William T. Robinson, Comptroller of Her Majesty's Stationery Department, Ireland. He received his education chiefly at the Rev. Robert Boyle's school, Lower Leeson-street, Dublin, and his professional training in the College and Ledwich Schools, and the Adelaide and several special hospitals. He was qualified before he reached his twentieth year. He very soon afterwards went to Egypt, and on his return was appointed surgeon in the Peninsular and Oriental Steamship Company's service and on the Cape Mail steamers, where he was invariably held in the greatest esteem and respect by all on board. Returning to Ireland, he commenced practice as a physician in Dublin, where he obtained much eminence. In 1861 he became a Licentiate of the Royal College of Surgeons in Ireland, and a Fellow in 1873. In 1862 he obtained the licence of the Royal College of Physicians of Ireland, and the Membership shortly after that qualification was instituted. From 1872 to 1881 he lectured on Anatomy at the Ledwich School, in which he subsequently taught Botany and Zoology. He was for many years one of the proprietors of the Ledwich School of Medicine and Surgery and medical examiner to an insurance company. For a very long period he was one of the special correspondents in Ireland of THE LANCET. His name appears in Ziemssen's *Encyclopædia of Medicine* and his contributions to medical journals were numerous and of great merit. Among them may be mentioned: Asiatic Cholera treated by large doses of Calomel (*Dub. Med. Press*, 1866); Notes on a case of Traumatic Tetanus; Recovery (THE LANCET, Sept. 7th, 1867); Cases of Ague with Extensive Desquamation of the Cuticle (*Brit. Med. Jour.*, 1868); Remarks on Night-blindness, with notes of a case (THE LANCET, May 30th, 1868); Cases of Acute Rheumatism treated principally by the Alkaline Method (THE LANCET, June 12th, 1869); On Scarlatina sine Eruptione (THE LANCET, Feb. 12th, 1870); Herpes Circinatus treated by Local Astringents (*Practitioner*, 1870); Cases of Measles associated with Hemorrhagic Variola (*Dub. Jour. of Medical Sciences*, 1872); Rheumatic Pneumonia (*Brit. Med. Jour.*, 1876); Cirrhosis of the Liver: Alcoholic Paralysis (*Brit. Med. Jour.*, 1877); Bulbar Paralysis (THE LANCET, Oct. 19th, 1878); Hystero-Epilepsy (*Brit. Med. Jour.*, 1878).

In 1866 Mr. Robinson was appointed Examiner in Anatomy, Physiology, Materia Medica, &c., in the Royal College of Surgeons in Ireland. He was consulting surgeon to the Caragh Orphanage and a Fellow of the Royal Academy of Medicine in Ireland. He was much interested in the Masonic order. He was a member of the British Medical Association and had intended to go to the meeting in London this year. He was fifty-five years of age when he died, and, as already said, was most kind and painstaking both in his medical duties and in the ordinary affairs of life.

CHARLES EDWARD ARMAND SEMPLE, B.A., M.B. CANTAB., M.R.C.P. LOND., L.S.A.

DR. CHARLES E. ARMAND SEMPLE, whose death we briefly announced last week, took his B.A. and M.B. degrees at the University of Cambridge in 1872, and obtained the Membership of the Royal College of Physicians of London in 1894, having received his medical education at St. George's and the Middlesex Hospitals. Dr. Semple was well known as the author of numerous useful handbooks for students, and a few years back he brought out "Elements of Materia Medica and Therapeutics," a book well up to date and full of excellent illustrations. At the time of his death Dr. Semple

was secretary to the Court of Examiners at the Apothecaries' Hall, a post he had filled for several years and the responsible and multifarious duties of which he had discharged in a way that obtained much commendation. He was punctual and accurate in his work, and to his unvarying courtesy of manner all members of the examining board will readily bear witness. Dr. Semple held the post of physician to the Bloomsbury Dispensary and to the North-Eastern Hospital for Children. Originally a very strong man and active as an oarsman while at Cambridge, of late Dr. Semple had fallen much in health, and a troublesome affection of the throat and larynx that quite destroyed his splendid singing voice depressed him greatly. Though weak and ill he stuck to his work at the Apothecaries' Hall, greatly against the advice of his colleagues there, who urged upon him the necessity of rest from all labour. When last present with the Court of Examiners he expressed himself as feeling better in health, but a few days later a most severe form of influenza with alarming cardiac failure seized him, and despite all that could be done he died at his residence at Harrow on Tuesday, March 5th, leaving a widow and five young children. His numerous friends will sympathise with them in the sad loss which they have so prematurely sustained.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. W. Detmold, one of the oldest surgeons in the United States, he having been born in Hanover in 1808. He was the son of the King's body physician. In 1837 he went to New York, where he occupied himself mainly with orthopaedic surgery. During the civil war, however, he played an active part in the organisation of the medical department of the Northern army.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Gratz*: Dr. J. Loos has been recognised as *privat-docent* in Children's Diseases.—*Palermo*: Dr. Chiarleoni of Catania has been appointed Professor of Clinical Midwifery.—*Parma*: Dr. Corona of Sassari has been appointed Professor of Physiology.—*Prague (Bohemian University)*: Dr. Janovsky has been promoted to the Ordinary Professorship of Dermatology and Syphilography.—*Tomsk*: Dr. F. Krüger of Dorpat has been appointed Professor of Chemistry.

FOOTBALL CASUALTIES.—On Saturday last the following accidents occurred. During the progress of a match at Whalley Range, a youth, aged seventeen years, fractured his leg, and was admitted to the Manchester Royal Infirmary.—In the course of the Lancashire Championship match, at St. Helens, between the St. Helens and Oldham teams, the St. Helens full back sustained a fracture "of one of the bones in the back of the hand."

PRESENTATIONS.—Dr. Joseph Griffiths Swayne of Clifton, Bristol, on the occasion of a complimentary dinner given to him last month, was presented with a service of plate in appreciation of his fifty years' valuable work at the Bristol University College and as a medical teacher in that town. Engraved on one of the pieces of plate is the following inscription: "Presented with a service of plate to Joseph Griffiths Swayne, M.D., Emeritus Professor of Midwifery in University College, Bristol, by his colleagues, friends, and former pupils, as a mark of their personal esteem and in grateful recognition of his eminent services in the teaching of obstetric medicine and gynaecology in the Bristol Medical School and University College, Bristol, during the long period of fifty years." Dr. Swayne's work, "Obstetric Aphorisms," has been translated into eight languages.—Mr. A. Hope Walker, L.R.C.P. Lond., M.R.C.S., of Cranleigh, has been the recipient of a handsome silver-mounted gig whip from the Cranleigh ambulance classes as a small acknowledgment for his instruction on first aid.—Dr. John MacCombie, medical superintendent of the South-Eastern Hospital, New-cross-road, has been presented with his portrait by the principal officers and charge nurses in commemoration of the opening of the home for nurses, at the hospital, and as a token of their esteem.

THE DENTAL HOSPITAL OF LONDON.—The thirty-seventh annual meeting of this institution was held at the hospital on Wednesday, March 13th, Mr. Henry Harben, a vice-president, in the chair. The report, which was read, was unanimously adopted. The special appeal issued for the necessary funds to build a new hospital has realised £11,223 16s. 4d. The value of the present site is estimated at £15,000 to £20,000 (but this sum cannot be realised until the new building is erected), making together about £26,000, and as it has been estimated that the cost of the site and the new hospital will be about £40,000, there remains a balance of £14,000 to be collected, which sum the committee have no hesitation in asking the public to speedily contribute.

CHESTERFIELD HOSPITAL.—The Chesterfield and North Derbyshire Hospital appears to occupy an unusual position, inasmuch as it is, by the terms of its constitution, debarred from receiving patients in need of medical treatment, its benefits being reserved for surgical cases only. This anomaly, though upheld and defended by the governing body, has long been apparent to the townspeople, and various unsuccessful attempts have been made to remove it. In prospect of a renewal of these endeavours the governing body have published their views of the question, calling attention especially to Rule 2 of the hospital, which is as follows: "The hospital shall be open to receive only those persons who require surgical treatment; cases of disease or sickness in any form, and chronic cases, shall be excluded." They, moreover, point out that the creation of a medical department implies two additional wards, one for each sex, and further accommodation for the extra nurses and servants who would be employed. This extension is impossible from want of room on the present ground, and to raise the height of the existing buildings is inadvisable "having regard to the probability that the site has been undermined."

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on March 6th, the President, Mr. F. A. Southam, being in the chair.—Dr. Moritz showed a case of Agglutination of the Vocal Cords. There was complete adhesion of the vocal cords occurring in a woman aged twenty-four, who came under observation six months ago suffering from great dyspnoea and aphonia. The vocal cords were then found coherent in their anterior two-thirds, but there were no other cicatrices or ulcers visible in the larynx. Some white scars, however, on the palate, the consequence of an ulceration from which the patient had suffered three years ago, pointed to the syphilitic origin of the affection. On account of the urgent dyspnoea tracheotomy was performed, and when examined a week later the glottis was found entirely occluded by the complete agglutination of the vocal cords. Though this had been incised several times and dilated with Schröter's catheters the opening always closed up again in a few days. Dr. Moritz mentioned that he intended now, after making a fresh incision, to introduce a modified O'Dwyer's tube, and if the result should not be satisfactory thyrotomy and excision of the cicatricial tissue will be performed.—Dr. Ernest S. Reynolds showed a series of thirty-three lantern slides illustrating various cases of Nervous Disease.—Dr. Leech read a paper on the Causes of Death in Pneumonia.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 5th, Dr. Adolph Bronner, Vice-President, in the chair.—Mr. Horrocks showed a specimen of Sarcoma of the Femur taken from a woman aged sixty-one.—Dr. Major showed a Cerebellum containing a large Cyst, and read notes on the case. The patient, aged eleven years, came under Dr. Major's care in September, 1894, and died on Oct. 18th. The symptoms noted were headache, vomiting, interference with power of locomotion—going on to inability to walk,—failure of sight, and emaciation. On admission into the Infirmary there were double optic neuritis, passing on to atrophy, mental apathy, and a tendency to fall backwards on standing. The knee-jerks were diminished on both sides. There was no paralysis. On post-mortem examination a cyst containing two ounces of clear fluid was found in the left cerebellar hemisphere. There were no signs of hydatid disease. Dr. Major referred to the rarity of these cases and discussed the origin of the cysts.—Mr. Althorp read notes on some cases of Cerebellar Cysts.—Dr. A. Bronner read a paper on Some Reflexes of Nasal Origin.—Dr. S. A. Shlach read a paper on Microcephalic

Idiocy, with notes on two cases, and showed photographs of the two patients. The morbid anatomy of this condition was discussed, and the propriety (or otherwise) of craniotomy was gone into. The clinical history of the two cases was fully given.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Proposed Registration of Architects.

A BILL of forty-four clauses and four schedules has been introduced into the House of Commons for the purpose of setting up a system of registration for architects, and thus enabling persons requiring professional aid in architecture to distinguish qualified from unqualified practitioners. In the first place it proposes to establish, in a manner somewhat similar to that adopted in the case of the medical profession, a General Council of Architectural Education and Registration of the United Kingdom, with branch councils for England, Scotland, and Ireland. Like the General Medical Council, this new body will have the custody of the register and draw fees for registration, and it is empowered, if it has money to spare, to apply it to the support of museums, libraries, or lectureships, or for public purposes connected with the profession of architecture, or to the promotion of learning and education in connexion with architecture. In the clause dealing with removal from the register the framers of the Bill adopt from the Medical Act the phrase "conduct infamous in a professional respect." As to the qualifying examination, it is said: "The standard of proficiency required from candidates at the said qualifying examinations shall be such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of architecture, and it shall be the duty of the General Council to secure the maintenance of such standard of proficiency." Arrangements are made in the Bill for the registration of colonial and foreign practitioners.

The Select Committee on the Unemployed.

Following out the instructions given them at the time of their appointment, this committee have presented to the House of Commons an interim report. In this document an account is given of the steps already taken by the committee to procure evidence of the distress in the country arising from want of employment and of the measures adopted for its relief, and later it is said:—

"It is abundantly clear that, while over a great part of the country no lack of employment has prevailed beyond that which might be expected as a consequence of an unusually severe winter, there is and has been during the present severe weather much grave distress, affecting workmen ordinarily in regular work, as well as those whose employment is always liable to be intermittent, and that much suffering has been caused by this distress in many parts of the country; and there are, without doubt, many places where, underlying the distress due to weather, there exists a chronic want of employment of labour which will remain in force after milder weather has opened the out-door trades. Your committee, therefore, feel that it would have been most desirable had they been able, apart from the general inquiry which you entrusted to them, to make some recommendations applicable to the present juncture. But any such recommendation must satisfy two conditions: (a) it must be immediately applicable during the remaining weeks of the winter season; (b) it must be such that Parliament might be reasonably expected to accept it, or even take it into serious consideration, without further inquiry into the facts upon which it is founded or the principle it embodies. It is with full regret that your committee find that no plan has been suggested to them which fulfils these considerations."

In these circumstances the committee propose that they should proceed with their inquiry without making any recommendation at this time.

Food and Drugs Adulteration.

The committee on this subject, which began its inquiry last year, has been reappointed. It held its first meeting on Tuesday, March 12th, when it again elected Sir Walter Foster as its Chairman, and decided to resume the examination of witnesses on Tuesday, March 19th.

HOUSE OF COMMONS.

THURSDAY, MARCH 7TH.

Dangerous Trades under the Factories Act.

Mr. Knox addressed a question to the Home Secretary as to what trades or processes of trade have under Section 8 of the Factories Act, 1891, been certified by him as dangerous or injurious to health or dangerous to life and limb.—In his reply Mr. Asquith mentioned the following—viz., the manufacture of white, red, orange, and yellow lead, smelting and enamelling works, the manufacture of colours, lucifer matches, and earthenware, certain processes in the manufacture of explosives, chemical works, electric accumulator works, flax mills, linen factories, brass mixing and casting, and quarries. The clause in the new Bill empowering the Secretary of State to prohibit the employment of women or children or young persons is directed, said Mr. Asquith, to the case of trades where, from the nature of the industry itself, whatever precautions may be taken to ensure the safety of those concerned, particular processes cannot be carried on by particular classes of workers for reasons of age or sex without running exceptional risks to life or health.

FRIDAY, MARCH 8TH.

London University.

In Committee of Supply a small supplementary vote was asked for London University, and Sir Albert Rollit took advantage of the opportunity to press the Government for an increase in the annual grant to the University. The hon. member called special attention to the need for new laboratories.—The Chancellor of the Exchequer, while admitting the reasonableness of the demand, said that the state of the public funds did not enable him to meet it.—Sir Julian Goldsmid, who is a member of the Senate of the University, said that the fees for the students who were examined exceeded in amount the cost of the examinations, so the Treasury actually made profit out of the transaction and ought to be prepared to increase the grant. Other members having pressed the matter, the Chancellor of the Exchequer spoke again and promised to assist the University on the earliest opportunity.

MONDAY, MARCH 11TH.

Rabies in Dogs.

Mr. Herbert Gardner, answering a question put by Major Rasch, said that the number of cases of rabies in dogs during the six years 1889, 1890, 1891, 1892, 1893, and 1894 had been 312, 129, 79, 38, 93, and 248 respectively. Practically the whole increase in 1894 as compared with 1893 had been in the two counties of the West Riding of Yorkshire and Lancashire, and the Board of Agriculture had constantly been in communication with the local authorities in those counties as to the measures to be taken to bring about a more satisfactory position as regards this dangerous disease.

The Medical Division of the War Office.

Mr. Hanbury asked the Financial Secretary to the War Office whether he was now in a position to state the result of the inquiries promised during the debate on the medical vote last year into the distribution of the duties of the medical division of the War Office.—Mr. Woodall replied that the Secretary of State had made full inquiry into the distribution of the work in this division and satisfied himself that the professional officers and the civilians were appropriately employed on professional and clerical work respectively. Medical officers who were necessarily changed frequently could not properly discharge the duties which devolved upon the principal civilian clerk.

TUESDAY, MARCH 12TH.

Deaths from Starvation.

In reply to a question, Mr. Asquith said that the return of deaths from starvation was at present in the hands of the printers, and would be issued as soon as possible. A considerable correspondence between the Local Government Board and boards of guardians respecting certain cases in the return was necessary before the matter could be got ready for the printers.

The Tuberculosis Commission.

Sir John Hibbert, answering a question put by Mr. Hayden, said that the total cost of this Commission might be put approximately at £7500. This amount included £4672 for special scientific investigations and an estimated expenditure of £2828 on printing. He understood that the proceedings of the Commission would not extend beyond the present financial year.

Drainage of London Barracks.

Lord Stanley inquired of the representative of the War Office when the drains of Chelsea Barracks, Wellington Barracks, St. George's Barracks, and Kensington Palace Barracks were last inspected, and Mr. Woodall replied that apart from the ordinary quarterly barrack inspections, when defects are reported and remedied, no special report on the drains of these barracks had been necessary, as nothing had occurred to arouse suspicion as to their sanitary condition.

BOOKS ETC. RECEIVED.

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Aids to Surgical Anatomy. By E. S. Yonge, M.B. Edin. 1895. pp. 158. Price 2s. 6d.

Clinical Lectures on the Prevention of Consumption. By William Murrell, M.D., F.R.C.P. 1895. pp. 103. Price 3s. 6d.

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Abdominal Tumours and Abdominal Dropsy in Women. By James Oliver, M.D., F.R.S. Edin. 1895. pp. 289. Price 7s. 6d.

A Pharmacopœia, including the outlines of Materia Medica and Therapeutics, for the use of Practitioners and Students of Veterinary Medicine. By the late H. V. Tuson. Fifth Edition. By Jas. Bayne, F.R.S. 1895. pp. 370. Price 7s. 6d.

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A Study of Influenza, and the laws of England concerning Infectious Diseases. By R. Sisley, M.D. Lond., M.R.C.P. 1892. pp. 119. Price 3s. 6d.
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The Pathology of Mind: a Study of its Distempers, Deformities, and Disorders. By Henry Maudsley, M.D. 1895. pp. 571. Price 15s. net.
A Course of Elementary Practical Bacteriology, including Bacteriological Analysis and Chemistry. By A. A. Kanthack, M.D., M.R.C.P., and J. H. Drysdale, M.B., M.R.C.P. 1895. pp. 181. Price 4s. 6d.
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- WRIGHT, JOHN, & Co., Bristol.
The Medical Annual and Practitioner's Index. 1895. Thirteenth year. Price 7s. 6d.
- Suggestions as to the Methods of Determining the Influence of Springs on the Temperature of a River, as illustrated by the Thames and its Tributaries; by H. B. Guppy, M.B.; reprint from the Quarterly Journal of the Royal Meteorological Society; vol. xxi.; No. 93; January, 1895.—The Absence of Sugar from Normal Urine, proved by a New and Simple Method; by Sir George Johnson, M.D., F.R.S.; reprint from THE LANCET, Jan. 12th, 1895.—Handbuch der Physiologischen Optik; von H. von Helmholtz; neunte und zehnte Lieferungen; 1895 (Leopold Voss, Hamburg und Leipzig).—An Epidermis of Materia Medica, Pharmacy, Therapeutics, and Colateral Information; January, 1895; by E. R., E. H., and C. F. Squibb (Brooklyn, New York).—Brain: a Journal of Neurology; part 69; Spring, 1895 (Macmillan and Co., London); price 3s. 6d.—List of the Fellows, Members, Extra-licentiates, and Licentiates of the Royal College of Physicians of London and of Holders of the Diploma in Public Health; 1835.—La Tuberculose; périodico bimensile diretto dal Prof. E. Maragliano; anno iii. (F. Vallardi, Milano).—St. Mary's Hospital Gazette; February, 1895.—The Natural History of Plants; part ii. (Blackie and Son, London); price 2s. 6d. net.—Contributions to the Physiology and Pathology of the Nervous System; by Isaac Ott, M.D., Philadelphia; part xii.; reprint from the Journal of Nervous and Mental Diseases, Philadelphia, 1892-94.—Transactions of the American Dermatological Association, in connexion with the Congress of American Physicians and Surgeons; official report of the proceedings at the Eighteenth Annual Meeting held at Washington in May and June, 1894 (Geo. L. Goodman and Co., New

York).—A Little Chat about Wine (Hohoff and Co., St. Peter's House, Clerkenwell-road, London, E.C.); 1895.—The Physician's Vade Mecum; by S. J. Wimmer, M.A., M.D., and F. S. Parsons, M.D. (The Medical Publishing Company, Philadelphia); 1894.—The Psychological Review, March, 1895 (Macmillan and Co., London).—Therapie der Harnkrankheiten; zehn Vorlesungen für Aerzte und Studierende, von Prof. Dr. C. Posner, Berlin (August Hirschwald, Berlin); 1895.—The Preservation of Health in the Far East: Hints as to Clothing, Food, and Residence in China; by W. P. Meara, M.A., M.D. (Church Missionary Society, Salisbury-square, London, E.C.); 1895; price 2s. 6d.—Food for the Sick and Convalescent; by Miss Mary Feachem, Bristol (Rose and Harris, Broadmead, Bristol); 1895; price 1s.—Re Pigmentum Chlorialis Antisepticum; by Dr. John Brooin, M.D. Brux. (Clifton, Bristol); reprint.—Magazines for March: The English Illustrated, Pall Mall Magazine, London Home, New London: Her Parliament and its Work, Illustrated (Edward Lloyd, Fleet-street, London), price 1s., Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Knowledge, Leeds Hospital Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- AMBROSE, ALEX., M.D. Dubl., B. Ch., D.P.H. Camb., has been appointed Medical Officer of Health for the Urban Sanitary District of Buckhurst Hill.
- AULD, ARCHIBALD, M.B., C.M. Glasg., has been reappointed Medical Officer of Health for the No. 3 Sanitary District of the Pontefract Union.
- AWDRY, WALTER R., M.B. Durh., M.R.C.S., has been reappointed Honorary Medical Officer to the Berkeley Hospital.
- BATTEN, R. W., M.D. Lond., F.R.C.P., M., M.R.C.S., has been reappointed Honorary Consulting Physician to the Berkeley Hospital.
- BEAMAN, ERNEST H., L.R.C.P.I., L.R.C.S.I., has been appointed Medical Officer of Health for the Misterton Rural Sanitary District.
- BEVERIDGE, A. T. G., M.B., C.M. Aberd., has been reappointed Medical Officer to the Aberdeen Dispensary.
- BOUNTEAD, R. I., L.R.C.P., L.R.C.S., L.M. Edin., D.P.H., has been reappointed Medical Officer of Health to the Haltwhistle Rural District Council.
- BROWN, F. J., M.R.C.S., L.S.A., has been appointed Surgeon to the Police of Newark-on-Trent, vice T. G. O'Neill, resigned.
- CHILD, EDWIN, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health to the New Malden Urban District Council.
- COLLINGRIDGE, WM., M.D. Cantab., D.P.H., M.R.C.S., has been reappointed Medical Officer to the Port of London Sanitary Authority.
- CORTHORN, ALICE M., M.B. Lond., has been appointed Assistant Medical Officer at the North-Western Fever Hospital, Haverstock-hill, N.W.
- DENT, ERNEST A., M.B. and C.M. Edin., has been appointed House Surgeon to the Devonshire Hospital, Buxton.
- DEVANE, THOMAS F., L.R.C.P. and S. Edin., L.F.P. and S. Glasg., has been appointed Medical Officer to the Hearts of Oak Benefit Society, Penke and Anerley Branch.
- EDGAR, J. C., M.R.C.S., L.R.C.P., has been appointed Resident Clinical Assistant to the Barnes Convalescent Hospital, Chislehurst, near Manchester, for six months.
- ELIAS, JAMES, M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health to the Neath Town Council.
- ELLIS H. D'ARCY, L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer to the Brierley Hill Urban District Council.
- GLENNIE, J. A. R., M.B. Aberd., has been appointed Physician to the Aberdeen Dispensary, Vaccine and Lying-in Institution, vice R. G. McKerron, resigned.
- HILLIER, SYDNEY, M.D., C.M. Edin., has been appointed Medical Officer for the Stowmarket Sanitary District of the Stow Union.
- JONES, T. H., M.B., C.M. Edin., has been appointed Senior House Surgeon to the Infirmary for Children, Liverpool.
- LAWRENCE, A. E. A., M.D., C.M. Aberd., has been reappointed Physician Accoucheur to the Bristol General Hospital.
- MACLENNAN, D. U., M.D. C.M. Edin., has been appointed Medical Officer of Health for the Widnes Urban Sanitary District.
- MCKERRON, R. G., M.B., C.M., D.P.H. Aberd., has been appointed Obstetric Physician and Public Vaccinator, Aberdeen Dispensary.
- MURPHY, JAS. E., L.D.S.R.C.S., has been appointed Honorary Dental Surgeon to the Derbyshire Royal Infirmary.
- PARRHAM, WM., M.D., C.M. Edin., has been appointed Honorary Physician to the Brecon County and Borough Infirmary, vice Whyte, resigned.
- PRICHARD, ROBERT D., L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator for the Second Central District of Neath Union, vice Moses Morgan, M.D., deceased.
- ROBERTS, C. G., M.B., B.C. Camb., has been reappointed Medical Officer of Health to the Halstead Urban Sanitary District.
- ROBERTSHAW, W. M., M.B., C.M. Edin., has been reappointed Medical Officer of Health to the Stockbridge Urban District Council.
- ROBERTSON, W. F., has been reappointed Surgeon Dentist to the Aberdeen Dispensary.
- SEATON, DOUGLAS, M.B., Ch.B. Vict., has been appointed Resident Casualty Officer at the Leeds General Infirmary.
- SKEPPI, H. E. MARKHAM, M.D. Lond., B.S., F.R.C.P., M., M.R.C.S., has been reappointed Senior Physician to the Bristol General Hospital.

WESTMACOTT, FREDERIC H., F.R.C.S. Eng., has been reappointed Resident Medical Officer at the Barnes Convalescent Hospital, Cheshire, near Manchester.

WILLIAMS, H., M.D. Lond., L.R.C.P., M.R.C.S., D.P.H. Camb., has been reappointed Medical Officer to the Port Sanitary Hospital, Denton, Kent.

WRIGHT, JOHN L., L.R.C.P. Edin., M.R.C.S., has been appointed Honorary Surgeon to the Derbyshire Royal Infirmary.

WHYTT, ALEXANDER, M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Devonshire Hospital, Buxton.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASHTON UNION.—Resident Assistant Medical Officer at the Workhouse, Gravelly-hill, near Birmingham. Salary £100 per annum, with furnished apartments, rations, washing, &c. Applications to the Clerk to the Guardians, Union Offices, Vauxhall-road, Birmingham.

BELGRAVE HOSPITAL FOR CHILDREN.—House Surgeon. Board, lodging, fuel and light provided. Applications to honorary secretary at the hospital, 79, Gloucester-street, S.W.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Applications to the Clerk, Bridewell Hospital, New Bridge-street, E.C.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon for twelve months. Salary £20 per annum, with furnished apartments, board and attendance. Applications to the Hon. Secretary, 12, Acresfield, Bolton.

BRADFORD INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £110 per annum, with board and residence.

CHARING-CROSS HOSPITAL, London.—Assistant Physician.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer; single. Salary £100 a year, with board (no beer or wine), lodging, washing, and attendance.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, and Assistant House Surgeon. The appointments tenable for six months. Salary, House Physician and House Surgeon, each at the rate of £60 a year.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon, for six months. Salary £60 per annum, with board, lodging, and washing.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, S.E.—Demonstrator of Physics and Chemistry. Salary £100 per annum.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—House Surgeon for three years. Salary £100 per annum, with board, lodging, and washing in the hospital. Also Honorary Physician.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Medical Registrar and Pathologist, for one year. An honorarium of 50 guineas voted at the end of that term.

THE YORKSHIRE COLLEGE, Leeds.—Demonstrator of Anatomy. Applications to the Registrar.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Medical Registrar for twelve months. Salary £40 per annum.

Births, Marriages, and Deaths.

BIRTHS.

BOSWELL.—On March 11th, at Ashbourne, Derbyshire, the wife of Alexander Boswell, M.D., of a daughter.

MOSLEY.—On March 8th, at Montpellier-terrace, Swansea, the wife of Reginald L. Mosley, M.B., of a son (James Inglis).

PLANT.—On the 11th inst., at Earlsfield-road, Wandsworth-common, the wife of James R. Plant, M.R.C.S., L.R.C.P., of a son.

STEDMAN.—On Feb. 24th, at Towcester, Northamptonshire, the wife of Herman Stedman, M.D. Miami College, L.R.C.P. and S. Edin., L.F.P. and S. Glasg., of a daughter.

MARRIAGES.

PETERS—SERJEANT.—On March 7th, at Ramsay, Edwin Arthur, B.A., M.B. Cantab., younger son of Edwin Peters, of West Dene, St. Leonard's-on-Sea, to Alice Mary, eldest daughter of F. R. Serjeant, of Westward Ho! Ramsey.

DEATHS.

COGHAN.—On March 8th, William Boyle Coghlan, M.A., M.R.C.S., of Manchester, formerly Curate of the parish church, Chirbury, Shropshire, aged 66 years.

GROVE.—On March 5th, at Gloucester, John Grove, M.D., formerly of Wandsworth, Surrey, in his 79th year.

PHIPPS.—On Feb. 24th, at his residence, 246, Oxford Road, Manchester, George Constantine Phipps, M.D., F.R.C.S.E., in his 61st year.

TUTTITT.—On Feb. 28th at Cambridge Villa, Newport, Isle of Wight, Frank Sampfyde Tuttitt, M.R.C.S., aged 79.

N.B.—A fee of 6s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.). At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. W. Robertson: The Immunisation of Horses.—Drs. Wushbourn, Sims-Woodhead, and others will continue the Adjourned Debate upon the Pathology of Diphtheria.—Mr. Lennox Browne will show Specimens of the Pseudo-bacillus of Diphtheria.—Dr. Voelcker: Carcinoma of Ureter.—Mr. J. Jackson Clarke: Sarcoma Mammae.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Mr. W. N. Shaw: The Motion of Clouds considered with reference to their Mode of Formation (illustrated by Experiments).

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Mr. W. H. Brown: Patents connected with the Microscope from 1666 to 1800 A.D.

NORTH-WEST LONDON CLINICAL SOCIETY.—8.30 P.M. Clinical Meeting.

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Clinical Evening. Mr. Mayo Collier: Flatfoot; Hallux Rigidus.—Mr. Edmund Owen: A Boy convalescent from Pyæmia after Osteomyelitis.—Mr. Keetley: Exophthalmic Goitre after Ectoduction of Thyroid Tumours.—Dr. Sutherland: Pulmonary Fibrosis.—Dr. L. G. Guthrie: Two cases of Scaphocephalus.

SOCIETY OF ANÆSTHETISTS (20, Hanover-sq., W.).—8.30 P.M. Discussion on the Administration of Anæsthetics for Abdominal Operations.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Clinical cases will be shown. Every member will receive a card of agenda before the meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M. Mr. R. M. Gunn: Cataract.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Impaired Movements of the Vocal Cords.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. Charles Stewart: A Revision of the Endoskeleton in the Physiological Series in the Museum of the College.

SOCIETY OF ARTS.—8 P.M. Dr. D. Morris: Commercial Fibres.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: General Paralysis of the Insane.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (X).

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. H. D. Rolleston: Suprarenal Capsules. (First Goulstonian Lecture).

SOCIETY OF ARTS.—8 P.M. Mr. A. Millar: Practical Carpet Designing.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. Charles Stewart: A Revision of the Endoskeleton in the Physiological Series in the Museum of the College.

WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Dr. Hunter: Medical Cases. (Post-graduate Course.)

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Glaucoma.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Alopecia, its Varieties.

SOCIETY OF ARTS.—8 P.M. Mr. H. F. Lester: The Progress of the Abattoir System in England.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. S. R. Gardiner: Three Periods of Seventeenth Century History—III. The Restoration.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Penrose: Cases in the Wards.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Taylor: Infantile Paralysis.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Howship Dickinson: Cases in the Wards.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. H. D. Rolleston: Suprarenal Capsules. (Second Goulstonian Lecture).

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Erysipelas and Suppuration.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. W. H. Eiam: Cancer of the Stomach.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. Charles Stewart: A Revision of the Endoskeleton in the Physiological Series in the Museum of the College.

ROYAL INSTITUTION.—9 P.M. Sir Wemyss Reid: Emily Brontë.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: General Paralysis of the Insane.

ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Waves and Vibrations (IV.)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 14th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Maxi- mum Temp. Shade.	Min. Temp.	Rain- fall.	Remarks at 8.30 a.m.
Mar. 8	29.76	N.E.	36	35	75	48	35	...	Overcast
" 9	29.60	S.	41	40	74	47	36	0.06	Overcast
" 10	29.42	S.W.	47	44	85	51	41	0.09	Cloudy
" 11	29.57	S.W.	41	39	92	56	37	...	Cloudy
" 12	29.64	E.	40	38	79	53	36	...	Overcast
" 13	29.95	N.E.	39	38	84	48	38	...	Overcast
" 14	30.31	W.	36	35	79	61	43	...	Foggy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

TO ADVERTISERS.

THE pressure on our advertisement space this week has necessitated the omission of some few of our clients' announcements.

CLERGYMEN AND CURES FOR INFLUENZA.

WE should have thought that clergymen had their hands full at the present time with the cure of souls. But this does not seem to be true of the Rev. J. E. Woodrow, of the Vicarage, Ormskirk, who advertises "A Sure and Certain Cure for Influenza," consisting of a certain amount of pure phenol in a bottle of water; children to have half the dose. Mr. Woodrow would do well to consult his bishop as to this use of his spare time and knowledge. From the medical point of view we assure him that he incurs a considerable responsibility in advising such remedies or any other for a disease so serious in itself, and lowers his office and his influence by such interference with the functions of another profession.

An Engineer.—The temperatures used in the preparation of margarine are, we believe, at no stage sufficiently high to destroy germs.

"THE JOURNAL OF COMPARATIVE PATHOLOGY AND THERAPEUTICS."

To the Editors of THE LANCET.

SIRS,—Your correspondent, "F.R.S.," would probably be able to see this journal at the library of the Royal Veterinary College, Camden Town. It is a journal devoted to veterinary science, was first issued in 1888, and is edited by Professor McFadyean. The publishers are Messrs. W. and A. K. Johnston of Edinburgh.

I am, Sirs, yours faithfully,

March 9th, 1895.

J. W. C.

"* We have received numerous answers for "F.R.S.," and must apologise to the Editor of the *Journal of Comparative Pathology and Therapeutics* for not immediately recollecting the publishers of his valuable quarterly.—ED. L.

THE CASE OF MR. C. BRYAN TOWNSEND.

THE following additional subscriptions have been received or promised, and are hereby acknowledged with grateful thanks:—

Previously acknowledged £22 9 0	Mr. J. Terry (Bath) ...	25 0 0
Mr. H. S. Hughes (Lewes) 2 2 0	Dr. Joseph Kidd (Black- heath) ...	5 0 0
Mr. N. Davies-Colley ... 2 2 0	Dr. Wm. Vawdrey Lush (Weymouth) ...	2 2 0
Anonymous (Manchester) 0 10 0	Dr. Hugh Ealand (Puckeridge) ...	1 1 0
Mr. E. Walter Greene (Bury St. Edmunds) ... 2 2 0	Mr. Ed. B. Holwell (Leeds) ...	1 1 0
Dr. de Havilland Hall ... 0 10 0	Mr. J. T. Musgrave (London) ...	1 1 0
Dr. Hamilton (Burton-on- Trent) ... 1 1 0		
Mr. Chas. Terry (Bath) ... 5 0 0		

Further subscriptions are earnestly requested, and will be received and acknowledged by the Rev. H. Townsend, 41, King Henry's-road, London, N.W.

Mr. T. W. Morris.—The arrangement is not one that we can recommend or assist. If no actual covering is contemplated, our correspondent's scheme at any rate places the qualified assistant in an inferior place to the unqualified principal, and that in itself is wrong.

"A QUESTION OF DOOR-PLATES."

To the Editors of THE LANCET.

SIRS,—Your correspondent "H." seems very sensitive about reputable foreign degrees being registered; but he may be surprised to know that this has been the custom for some considerable time, and I think the General Medical Council may be left to see that the privilege is not abused. It is not necessary to cross the water to obtain a degree which is more precious from a monetary than any other point of view, so that it is as yet very unsafe ground to draw many comparisons. It is a strange weakness of our profession that the old subject of degrees and titles is ever to the front. I should think the Editors of THE LANCET are satiated of it. I can say that a large body of the readers are. Surely we are in an age when a man should be judged by what he can do rather than by what he is and for which he is generally credited? As to brass door-plates, I think usage is in the direction of their being smaller every year, judging by appearances, and a very good thing too. Why not let a man call himself anything he likes; it would not make him what he is not. Personally I would call all medical men "Doctors," letting those who select surgery as a speciality style themselves "Surgeons," and those who possess an M.D. use it, and no honourable man would be ashamed of the affix on suitable occasions, but we like a display of good taste as well as good tone.

I am, Sirs, yours truly,

March 2nd, 1895.

REGISTERED FOREIGN GRADUATE.

To the Editors of THE LANCET.

SIRS,—Will you permit me to reply to the letter of "H" in THE LANCET of March 2nd? Any man, medical or otherwise, is quite entitled to display the distinguishing initials of any degree or diploma he may possess, whether granted by a foreign or home corporation; when, however, it refers to medicine, and is not a registrable diploma, or only registrable as an "additional qualification," while it is neither illegal, dishonest, nor dishonourable to make what display he chooses of such diploma, it is at the same time somewhat despicable that a man should do so with the intention of obtaining undue honour or credit among his fellow men. I may point out that a man holding only an unregistrable degree may display what he likes upon his door if he does not practise. It is practising which herein constitutes the crime.

I am, Sirs, yours truly,

London, March 5th, 1895.

H. CRITCHLEY, M.A., M.D.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "H.," writing on this matter, is needlessly distressed. "Would it surprise him" to learn that in the official Medical Register there are the names of many honourable men of unquestionable standing and position who hold the M.D. degree of foreign universities duly and legally registered? Also, that these gentlemen are fully recognised and addressed as "Doctor" by the Registrar in all official communications from him, as well as by their fellow practitioners, who are probably as zealous for the honour of the profession as your correspondent, though perhaps less cautious and censorious.

I am, Sirs, yours faithfully,

March 12th, 1895.

M.R.C.P. & M.D. (DULY REGISTERED).

MEDICAL ADVERTISING IN WEST HAM.

THE following card is being distributed in West Ham:—

"S. L. Popham, M.D., Surgeon, 55, Fairland-road. At Home—10 to 12 A.M.; 6 to 7 P.M."

We need not say that this distribution is not in accordance with the traditions of the profession.

Mr. R. S. Trotter.—The idea of treating cases of Addison's disease by the administration of an extract of the suprarenal body has been suggested from more than one quarter since the successful employment of thyroid extract in myxœdema. We are not certain that any records of cases so treated have been published as yet; but we have reason to believe that particulars of researches in this direction will shortly be made known in this country.

PROFESSIONAL SANCTIONS OF QUACKERY.

THE advertising columns of the *Sun* (March 8th, 1895) contain laudatory notices of "Norton's Curanillo," purporting to be signed respectively by J. Alfred Wanklyn, M.R.C.S. Lond., Professor of Chemistry, &c.; Charles W. De Lacy Evans, M.R.C.S., Ph.D., Solly Medallist of St. Thomas's Hospital, &c.; J. Brodie, L.R.C.P., L.R.C.S., &c. It is not easy to understand how medical men justify themselves in giving such notices to quack medicines. The evil is a great one, and calls for some notice at the hands of the medical corporations.

"SULPHUR v. ANTITOXIN IN THE TREATMENT OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—Mr. Lennox Browne has certainly formed a very different impression from what I intended to convey in the sentence he quotes from my letter. If two or more remedies have been proved to be useful in a certain case there can, of course, be no objection to a combination. When, however, we have a deadly enemy to fight, and it is uncertain how to prevent the raids of that enemy, I am of opinion that we are justified in simply using one form of attack only until we discover which form or combination of forms will annihilate the foe, and it is only by this means that posterity will benefit by the researches of the present day. If two or more remedies are used and the observer gives all the credit to one of these without due trial exactly what Mr. Lennox Browne fears will happen. Many lives will be sacrificed and no advance will have been made. I did not cast any imputation on the efficacy of antitoxin because Dr. Hamilton used sulphur simultaneously with it; but I certainly took exception to him giving the whole credit to antitoxin, and came to the conclusion that if he published his successful cases in which he used antitoxin he would have headed his article as "So many Cases treated successfully by Antitoxin." Mr. Lennox Browne will probably say I am not justified in coming to this conclusion, because he says in his letter that antitoxin was used as an auxiliary only in the results published in THE LANCET of Feb. 2nd, p. 305. I have read through the accounts published in that number, and I can find no allusion to other remedies being used in combination. On the contrary, the only mention of other methods of treatment is made by Dr. Caiger of the South-Western Fever Hospital, who says: "Results which my experience justifies me in asserting could not have been expected with previous methods of treatment." I should be glad to hear if Dr. Caiger and the other gentlemen whose names are connected with the various accounts have given either sulphite of magnesium or sulphur a fair trial. The results published by those using these two remedies compare more than favourably with the results obtained so far with antitoxin. Medical and lay papers have filled their columns with accounts of the "new cure for diphtheria." Sulphur I claim to be a surer cure. If it is of only equal value it is a far better remedy to use, for it is always at hand and is free from many objections that may be raised against antitoxin. One shudders to think of the terrible havoc that would be wrought if the tube contained not antitoxin, but the inert rubbish—if nothing worse—often contained in tubes sent supposed to be filled with vaccine lymph. I should like to know how we are to contrast the usefulness of different remedies other than by mathematical calculations. If Mr. Lennox Browne does not believe in mathematical calculations, why does he tell us that a mortality of 5 per cent. is an object lesson? 0 per cent. is a more striking object lesson. This has been the success of sulphur in some hands since using it in the treatment of diphtheria. I know many will say the diagnosis has been wrong, but why should a man's power of diagnosis be faulty after using a certain drug when it was not questioned before using it? Then one cannot forget cases where the diagnosis had been made by another man, and the man called in confirmed the diagnosis and recommended sulphur, bringing about results highly satisfactory to all concerned. I should, indeed, be sorry to see any human being treated other than with a sense of grave responsibility. If, however, permanent benefit is to be the result of any treatment it must be as far as possible scientific and not empirical.

I am, Sirs, yours faithfully,

Aberdovey, March 4th, 1895.

W. HAWKINS CUTHBERT.

"BOOKS ABOUT MEDICINE."

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent "Enquirer," Dr. Doran appears to have gained his facts from B. F. Boerner's pamphlet "De Cosma and Damiana," published at Helmsstadt in 1751. It is a matter of common knowledge that the brethren preceded St. Luke in the estimation of our ancestors. They were the patrons of the barber-surgeons throughout Europe, as well as of the Medici family. In England they were made to act as supporters to the shield granted to the Fellowship of Surgeons in London in 1492, as may be seen in Mr. Sidney Young's valuable work on the Annals of the Barber-Surgeons. They are not present in the original grant of arms, but have been introduced at a later period without heraldic authority. A detailed account of the saints will be found in Mrs. Jameson's "Sacred and Legendary Art," vol. II., pp. 433-439, ed. 1890.

I am, Sirs, yours faithfully,

March 8th, 1895.

D'ARCY POWER.

* The worship of these saints was well established in Italy from a very early date, and the rites, prominently those of Phallicism, will not bear much detailed description.—ED. L.

"DR. GOFF, 179, WESTMINSTER BRIDGE-ROAD, LONDON, S.E."

SUCH is the address at the foot of one of the worst specimens of a medical handbill which we have seen. Its chief object is to laud the virtues of "Dr. Goff's reliable Female Pills for all ages," and "Reliable Female Mixture for obstinate cases of Irregularities." They are recommended for all females, married and unmarried, to be taken before menstruation. The handbill admits of very bad construction, and in any view is discreditable to a registered medical man. But is Mr. Goff such? In the Medical Register for 1892 we find that a Mr. George Romaine Goff, L.F.P.S. Glasg., L.S.A. Lond., resided at 179, Westminster Bridge-road, Lambeth; but we can find no mention of this gentleman again either in the official roll or in the Medical Directory. If this is the "Dr." Goff of the evil handbills the bodies from whom he has received his diplomas should proceed immediately to point out to him the reprehensibility of his methods. But if "Dr." Goff is not Mr. George Romaine Goff he would not appear to hold any medical degrees, or to be more amenable to the discipline of corporations and of the General Medical Council than other quacks.

W. G. G.—Income Tax Commissioners who are quite independent of the Revenue Department are appointed for the purpose of protecting the taxpayer, and our correspondent should, we think, apply to them. A brochure entitled "Income Tax and How to Get it Refunded" is published by Messrs. Effingham Wilson and Co. of the Royal Exchange and sold for a shilling, and a society which interests itself in these matters, named the Rate and Taxpayers' Assessment Protection Association, Ltd., has offices at 10, Serjeant's-inn, Fleet-street.

"THE INFLUENZA EPIDEMIC."

To the Editors of THE LANCET.

SIRS,—Mr. Terry asks if anyone has seen marked throat affection in cases of influenza. In every case I have seen there has been a decided sore-throat. The pharynx has assumed a strong redness, very similar to what is present in scarlet fever, but without any sign of ulceration. There is no pain in swallowing, but the patient complains of the throat being parched and hot. In one case there was acute eczema on one side, the corresponding tonsil being large, puffy, and encroaching on the isthmus. The thirst in every case has been most urgent and intense. Bronchitis of a more or less acute character has shown itself on the third or fourth day. The attack has been ushered in by distinct shivering, weariness, and severe headache, but no coryza. I have no doubt the essential infectiveness of this disease is mainly due to the condition of the peculiar local faucial lesion, which is unlike in appearance that of any other disease I know. I have found swabbing the inflamed area with borate of glycerine several times a day of great benefit. It cools and to some extent allays thirst and the dry and hot scalding sensation so much complained of. We hear a great deal of "chills being taken." This is an error in the majority of cases. The shivering is one of the first symptoms indicative of the assault or invasion of the disease, and has no connexion with a supposed "chill."

I am, Sirs, yours faithfully,

Southport, March 11th, 1895.

G. B. BARRON, M.D., &c.

THE AMENITIES OF THE PROFESSION.

T. R.—The rule still holds that the widow of a medical man is entitled to much consideration and, if need be, to gratuitous medical attendance from the profession. The rule is not an absolute one. It is subject to considerations of reason and circumstance, and should not be pressed too rigidly on either side; but, subject to these qualifications, it is one to be respected.

ERRATUM.—On p. 583 of our issue of March 2nd, under the heading "Royal College of Surgeons in Ireland," a comma should be inserted between the surname "Penrose" and the place-name "Burton."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Scotsman*, *Southport Guardian*, *Bridge of Allan Reporter*, *Dundee Advertiser*, *Horncastle News*, *Carlisle Express*, *Cincinnati Tribune*, *Flintshire Observer*, *North Star*, *Swansea Journal*, *Walsall Advertiser*, *Sussex Daily News*, *Spalding Free Press*, *Dover Telegraph*, *Leicester Post*, *Birmingham Gazette*, *Newcastle Leader*, *Warwick Times*, *Leek Times*, *New York Tribune*, *Stafford Advertiser*, *Manchester Courier*, *Sheffield Telegraph*, *Glasgow Evening News*, *Cornish Telegraph*, *Leeds Mercury*, *West Middlesex Standard*, *Hertfordshire Mercury*, *Public Health Local Government Chronicle*, *Mining Journal*, *City Press*, *Pioneer Mail*, *Bristol Mercury*, *Architect*, *Liverpool Daily Post*, *Vegetarian Builder*, *Times of India*, *Yorkshire Post*, *Weekly Free Press* and *Aberdeen Herald*, *Reading Mercury*, *Sanitary Record*, *Orkney Herald*, *Dumfries Standard*, *Surrey Advertiser*, *Guy's Hospital Gazette*, *East Grinstead Observer*, *West Middlesex Advertiser*, *Durham County Advertiser*, *Cheltenham Examiner*, *Oswestry Advertiser*, *Waterford Chronicle*, *Leighton Buzzard Observer*, *Durham County Advertiser*, *Umpire*, *Mayo Examiner*, *Army and Navy Gazette*, *Macclesfield Courier*, *Westmeath Examiner*, *Liverpool Express*, *East London Observer*, *Craven Herald*, *Roscommon Messenger*, *Hampshire Chronicle*, *Zoophilot*, *Indicator Cork Daily Herald*, *Wrexham Advertiser*, *Fulham News*, &c., &c.

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ABSTRACT OF
The Goulstonian Lectures
ON
THE SUPRA-RENAL BODIES.

*Delivered before the Royal College of Physicians of London
on March 19th, 21st, and 26th, 1895.*

By **H. D. ROLLESTON, M.A., M.D.CANTAB.,
F.R.C.P. LOND.,**

FELLOW OF ST. JOHN'S COLLEGE, CAMBRIDGE; ASSISTANT PHYSICIAN
AND LECTURER ON PATHOLOGY AT ST. GEORGE'S HOSPITAL.

LECTURE I.

Delivered on March 19th.

**ANATOMY, HISTOLOGY, AND MORBID ANATOMY OF
THE SUPRA-RENAL CAPSULES.**

AFTER thanking the College for the honour conferred upon him the lecturer described the most satisfactory method of exposing and removing the supra-renal capsules from the body after death, and laid stress on taking them out before, not with, the kidneys. The exact anatomical position and relations of the organs were then described. These organs lay not on the top of the kidneys, but at their upper and inner borders, reaching down to the hilum of the kidney. The right supra-renal body lay under the inferior vena cava along its inner border, and was for a varying extent in direct contact with the hepatic flexure of the duodenum. The oblique undulation in the right supra-renal body was described and compared with its vertical direction on the left side. The difference in the conformation of the two bodies was explained as being a result of the different pressures to which they respectively were exposed. The kidneys and supra-renal bodies were of the same size at the third month of intra-uterine life; at the sixth month the kidneys were twice and at birth three times the size of the adrenals. In adult life the relation was 44 to 1. There was no evidence to show that the supra-renal bodies in negroes were larger than in white men. Abnormal processes in connexion with the supra-renal body were mentioned. The absence or atrophy of these organs in hemicephaly and anencephaly was referred to. Accessory supra-renal bodies were commonly found, if looked for in the connective tissue around the main organ; they also occurred in the solar plexus, along the spermatic vessels, and in the broad ligament of the uterus. Structurally the smaller accessory supra-renal bodies were composed of the cortical substance, the larger of cortex and medulla. Accessory supra-renal bodies embedded in the kidney, and more rarely in the liver, were called "rests." In the kidney these "rests" appeared (1) as multiple round nodules which might be so fatty as to be called renal lipomata; (2) as single expanded plaques met with on the surface of the upper part of the kidney, where the pressure of the liver or spleen produced flattening.

HISTOLOGY OF THE SUPRA-RENAL BODIES.

A brief account of the three zones of the cortex was given. The zona reticularis of the cortex could not be sharply marked off from the medulla; its cells stained brown with chromic acid and contained a varying amount of pigment. Canalis had observed mitosis in the cortex, but never in the medulla. Dr. Hill of Cambridge had kindly informed the lecturer that from the active mitosis he had observed in the zona reticularis it was probable that cell multiplication occurred here in adult life. Fatty change in the cortex was normal in adult life and was always much more marked than in the medulla. The cells of the medulla stained brown with chromic salts, but this reaction gradually diminished, until twelve hours after death it had disappeared. Stilling had called these cells "chromophile," and had met with similar ones in the sympathetic and intercarotid gland of animals. Manasse had described a hyaline material in the veins of the medulla which was derived from the adjacent cells. Auld had described the medulla as a tubulo-alveolar gland with colloid material in its acini. The presence of ganglion cells in the medulla was discussed, and the conclusion was that there probably were some present. The relation of the cortex and medulla was next considered. The current view was that they were

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developmentally, structurally, and functionally distinct. The medulla embryologically was connected with the sympathetic and the cortex with the mesoblast or Wolffian body. Creighton's observations on the homologies of the supra-renal bodies, however, pointed to the cortex and medulla forming a functional whole, and this view the lecturer was inclined to adopt on histological grounds. Quite recently, however, Schäfer and Oliver¹ had shown that the medulla alone contained the active principle of supra-renal extract.

VARIOUS MORBID CONDITIONS OF THE SUPRA-RENAL BODIES.

The lecturer said that, though a sketch of the physiology would naturally come next, it was more convenient to refer to the chief lesions of morbid anatomy attacking them before considering the function of the supra-renal bodies, since that subject was so closely connected with the explanation of Addison's disease. Some degree of atrophy was normal in old age, but apart from this atrophy occurred occasionally earlier in life, and when extreme it was sometimes the cause of Addison's disease. The lecturer in an examination of 1050 bodies had noticed atrophy under the age of forty-five years on six occasions; in none of them was the atrophy so extreme—viz., to the size of peas—as had been described in some cases of Addison's disease; in none of these cases were the symptoms of Addison's disease present. Hæmorrhage into the supra-renal bodies was occasionally spontaneous, but was more frequently traumatic. Dr. Spenser had shown visceral hæmorrhages at birth to be far from uncommon. In 130 stillborn children he had found hæmorrhages into the medulla of the supra-renal in 24; half of them were bilateral. These hæmorrhages were more common in difficult labours. The after-result of such hæmorrhages might possibly lead to atrophy of the organ. After referring to cloudy swelling, the lecturer quoted Dr. Atlee's recent, as yet unpublished, work on Fatty Changes in the Supra-renal Bodies of Children. In wasting children the supra-renal bodies were extensively occupied by fat; they were more constantly affected than the liver. In stillborn children the amount of fat was very moderate; in infants dying from diseases other than marasmus the fatty change was never so marked as in marasmus. Experimentally Atlee found that starvation, suppuration, and poisoning led to marked steatosis. The question whether the change was of the nature of a degeneration or of an infiltration was discussed. The lardaceous change attacked the vessels on the cortex of the organ. The medulla might be affected to a lesser degree. In 15 cases of marked lardaceous disease the supra-renal bodies were affected eight times. Cysts might be due to hæmorrhages, to ecchinococci, or possibly to softening of adenomata, but were rare. Tubercle occurred comparatively often in the supra-renal bodies. In 1050 necropsies death was found to be due to tubercle in some form or other in 131 cases, and in 18 of these caseous material was found in the supra-renal bodies. There seemed to be an immunity on the part of the supra-renal bodies from tubercle during the first years of life.

	Years.								Total.
	1 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	
Cases of tubercle	23	17	29	29	17	10	5	1	131
Number of cases in which caseation or tubercle was present in the supra-renal	0	5	2	6	1	2	2	0	18

Chronic tuberculosis always began in the medulla.

SIMPLE TUMOURS.

Adenomata were of two kinds: (1) small multiple yellowish nodules on the cortex composed of the cells of that region, showing marked fatty change; (2) large single tumours arising from the cortex, magnified editions of the former. They had been called hyperplastic tumours, struma lipomatosa supra-renal, or supra-renal goitre. On the analogy of exophthalmic goitre symptoms might have been expected to be connected with these supra-renal adenomata. The extreme fatty change showed that they were probably inactive, and this, together with the apparent functional

¹ Proceedings of the Physiological Society, March 18th, 1895.

inactivity of the cortex from which they arose, accounted for the absence of any symptoms. Exceptional tumours, such as angioma and ganglionated neuroma, had been recorded as occurring in these organs.

MALIGNANT TUMOURS.

Both sarcomata and carcinomata occurred primarily; the former were the commoner, and showed a marked tendency to the formation of hæmorrhagic cysts and of necrosed areas. Supra-renal "rests" in the kidney might take on malignant growth, and thus give rise to a renal sarcoma. In the same way some primary sarcomata of the liver might be explained. Secondary carcinomata and sarcomata were occasionally found. Out of sixty-three cases of carcinoma of various parts of the body, the lecturer had found secondary growths in the supra-renal bodies in seven cases. Dr. Norman Moore had recorded three secondary growths in 102 cases of carcinoma. In twenty-four cases of sarcoma secondary growths were noted by the lecturer twice. Dr. N. Moore's figures were twenty-one cases of sarcoma with five secondary growths, of which two were described as endothelioma secondary to primary growths in the heart.

LECTURE II.

Delivered on March 21st.

PHYSIOLOGY OF THE SUPRA-RENAL BODIES.—MORBID ANATOMY OF ADDISON'S DISEASE.

The earliest researches were those of Brown-Séquard. By removing the adrenal bodies and observation of the results he came to the following conclusions: (1) that these organs are essential to life; (2) that they modified or destroyed a substance which otherwise transformed itself into pigment; (3) that when the organs were destroyed or removed this substance collected in the blood; (4) that removal was rapidly fatal, and that injection of the blood of an animal thus killed into a healthy animal led to symptoms like those of removal. Gratiolet, Phillippeaux, and G. Harley repeated these experiments and came to the conclusion that the supra-renal bodies had no special function, and that the fatal results were due to peritonitis, hepatitis, or damage to the sympathetic. Brown-Séquard in a further paper repeated his conclusions and denied that the results of removal were due to concomitant lesions. The negative results obtained by ablation might have been due to a compensatory activity of accessory supra-renal bodies, which Stilling had shown underwent hypertrophy after removal of the main glands. Tizzoni's observations were next described at length. Removal of one or of both supra-renal bodies gave rise to death with inflammatory changes in the central nervous system. Death might be postponed for years or might occur shortly after the operation. Since the same result followed the removal of one or of both organs, Tizzoni considered that the effects were not due to a toxin, but to disturbance of the circulation in the nervous system set up by irritation of the sympathetic connected with removal of the supra-renal body. These changes were not constant and so far had not been confirmed. Stilling thought the changes were set up by extension of inflammation from the wound. Tizzoni regarded the supra-renal bodies as only of importance from their close relation to the sympathetic. McMunn believed that the supra-renal bodies picked out effete blood pigment and its accompanying proteids from the blood, and that when these organs were destroyed or removed, pigment and poisonous bodies accumulated in the blood. Neurine had been thought to be the poisonous body which, when not removed, accumulated and gave rise to the symptoms of Addison's disease; this did not appear to be the case. There was no proof that leucin, leucithin, taurocholic acid, &c. were removed by the supra-renal bodies, or that accumulation of them gave rise to symptoms analogous to those of Addison's disease. Removal of the supra-renal bodies had been shown (Langlois and Abelous) to produce a fatal toxæmia, which could be prevented by the injection of supra-renal extract. Injection of the blood of acapsulated animals into healthy ones gave rise to symptoms like those following removal. The toxic body or bodies had an effect analogous to that of curare; they were probably due to muscular metabolism and had a resemblance to the poisonous bodies found in the blood of tetanised animals. Animals from whom the supra-renal bodies had been removed showed rapid and persistent fatigue which had been compared to the asthenia of Addison's disease. These writers regarded the supra-renal capsules as active glands, producing an internal secretion, which antagonised

toxic substances formed in the metabolism of the body. Ligature of the pedicle, including the vein, of the supra-renal bodies had been shown to be more fatal than ablation (Boinet). Ligature abolished the functional activity of the glands and gave rise to less damage to the adjacent sympathetic. If one supra-renal body was removed the other had been noticed to hypertrophy; if the remaining one was separated from its nervous connexions and left *in situ* no bad results followed; if, however, the hypertrophied organ was removed death resulted (Thirolloix). Therefore, removal gave rise to symptoms from interference with the functions of the glands, not from concomitant isolation of the sympathetic. Schäfer and G. Oliver¹ had injected supra-renal extract into animals. They had found: 1. A rise of blood pressure due to arterial constriction, best seen after section of the vagi, by which means the concomitant inhibitor of the heart was prevented. The constriction was due to peripheral action, since it persisted after section of the spinal cord and nerves. This high blood pressure was not affected by stimulation of the depressor. The rise in blood pressure was transient. 2. Cardiac inhibition due to vagus stimulation; stimulation of the cardiac muscle, leading after section of the vagi to acceleration and augmentation. 3. Paralysis of voluntary muscles due to modification of muscular contraction akin to that produced by veratria, but not in any way analogous to the action of curare. Since this effect lasted longer than the cardio-vascular phenomena, the extract probably became stored up for some time in the muscles. 4. That the active principle of the extract is only present in the medulla, and not at all in the cortex. B. Moore² had found that the active principle was not a proteid or a carbohydrate, that it was not affected by acids or by boiling for some minutes, but that it was destroyed by alkalies and by continued boiling. It dialysed and had a powerful reducing action. Its properties resembled those of a reducing agent described by Vulpian in 1856 as special to the medulla of the supra-renal bodies. The active principle had not been isolated.

Three deductions were possible from these researches: (1) that the supra-renal bodies had no proper function and were only important from their close relation to the sympathetic; (2) that these organs were *excretory* glands, removing pigment and toxins from the circulation; (3) that they were *secretory* glands, providing an internal secretion which was of use in the economy. The evidence was sufficiently strong to show that the supra-renal bodies had some definite function. The lecturer said it was more convenient to postpone the discussion whether the function was excretory or secretory until the explanation of Addison's disease was dealt with, since the physiology and pathology of these bodies were so inextricably blended.

MORBID ANATOMY OF ADDISON'S DISEASE.

Addison originally described eleven cases, of which six were tuberculous, one of cirrhotic atrophy, in three cases malignant growths occupied the supra-renal bodies, and in one a nodule of carcinoma blocked up the supra-renal vein. Addison's views were quoted. The view of the unity of Addison's disease (Wilke) was that all genuine cases of Addison's disease were due to one and the same lesion of the supra-renal bodies: a chronic inflammation comparable to hepatic cirrhosis. Though Addison's disease was most commonly due to tuberculous disease of the adrenal bodies, well-authenticated cases due to simple and cirrhotic atrophy had been recorded. The association of Addison's disease and malignant growths in the supra-renal capsules was then referred to. The sympathetic in the neighbourhood of the adrenals was sometimes sclerosed, sometimes normal. Von Kahlden had described certain changes in the semilunar ganglia as of great importance in the causation of Addison's disease; these, however, resembled those normally found in adults by Hale White. Cases had been recorded where the supra-renal bodies themselves were healthy, but where the sympathetic was involved in a mass of growth. The distribution of cutaneous pigment in Addison's disease was described as an exaggeration of that normally met with. The pigment melanin was present in the stratum Malpighii of the epidermis and in "carrier cells" in the dermis. The carrier cells probably conveyed pigment from the blood-vessels to the epidermis; in Addison's disease this transference was exaggerated owing to functional changes in the vessels. Professor Delépine had suggested that melanin was

¹ Proc. Phys. Soc., March, 1894-95.
² *Ibid.*

normally the antecedent, not the derivative, of hæmoglobin. Auerbeck and Burger's view that the pigmentation of Addison's disease was due to very active metabolism of the cells of the stratum mucosum was mentioned. Pigmentation of mucous membranes was rarer, and was usually regarded as a more reliable sign of Addison's disease than cutaneous bronzing. Dixon Mann described the pigment as situated in the keratin, and not in the epithelial cells of mucous membrane, and pointed out that its occurrence depended on irritation. Pigmentation of serous membranes was probably due to past inflammation; its presence had been recorded almost exclusively in the peritoneum.

OTHER ANATOMICAL LESIONS MET WITH IN ADDISON'S DISEASE.

The lymphoid follicles of the stomach and intestine were often enlarged; the spleen was not infrequently enlarged and softened, and the thymus gland had been found to be persistent. This evidence of activity in lymphoid tissue was compatible with the view that in Addison's disease toxic bodies were present in the blood, since in animals leucocytosis followed the injection of bacterial poisons, and leucocytosis presumably meant increased activity of the lymphoid tissue of the body. Tizzoni had quoted two cases of Addison's disease in which lesions of the central nervous system, somewhat like those which he had obtained experimentally, had been described.

Three Lectures

ON

TRAUMATIC INFECTION.

Delivered at the Royal College of Surgeons of England on Feb. 25th and 27th, and March 1st, 1895.

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LECTURE III.

Delivered March 1st.

VARIOUS INFECTIVE CONDITIONS.

Streptococcus Pyæmia: Bacterial Emboli in Organs apparently Normal.—Streptococæmia.—Urine in Streptococæmia.—Mixed Infections.—Angina Ludovici with Bacillary Septicæmia.—Conveyance of Infection by Contiguity; Septic Pneumonia.—The Local Infection in Angina Ludovici.—Consecutive Infection: The Pathology of Hæctic Fever.

GENTLEMEN,—In this third lecture I propose to describe cases of traumatic infection which do not clearly fall under the preceding headings. But first I will describe a case of pyæmia which presented some instructive features, especially that the naked-eye appearances of infected organs cannot in the least be trusted to indicate the absence of infection.

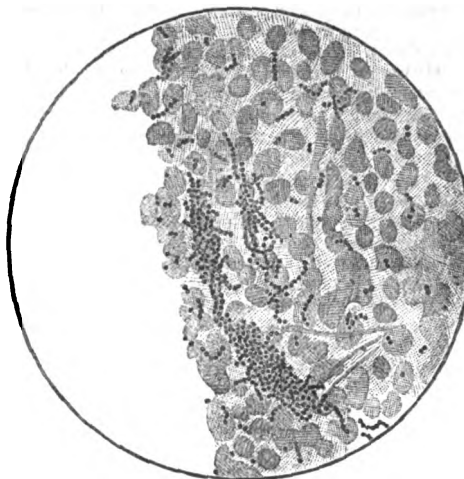
STREPTOCOCCUS PYÆMIA: BACTERIAL EMBOLI IN ORGANS APPARENTLY NORMAL.

Pyæmia is one of the best examples of septicæmia with subsequent sarcopæsis. I only propose to mention one example of pyæmia which was of the streptococcus variety, because it shows how easily the infective diseases may be overlooked if reliance be given to naked-eye evidence, and that bacterial emboli may be found in organs otherwise normal.

CASE 14 (Figs. 20 and 21).—An infant a year and ten months old was burned upon the arm. The burn was of the second and third degree, and not extensive. It suppurated, and the infant became ill, with a temperature of 102° F. An abscess formed in the subcutaneous tissue of the chest and a rash overspread the body. After the appearance of this rash the infant was isolated, scarlet fever being suspected. Death ensued without any complications such as nephritis, meningitis, or pneumonia. At the examination the burn, which involved about half the arm, looked quite healthy. The parotid region was swollen, but did not contain pus. The lymphatic glands beneath the angle of the jaw were filled with softening caseous material. There was a subcutaneous abscess as big as the palm of the hand

upon the side of the chest, and filled with thick pus. All the abdominal and thoracic viscera were individually examined and pronounced to be normal, as were also the serous and mucous coats of the intestines. The examination was made by my colleague, Mr. James Berry, whose name is a guarantee for the thoroughness and correctness of it. He concludes his report by saying that "the death was apparently due to the suppuration of the neck and

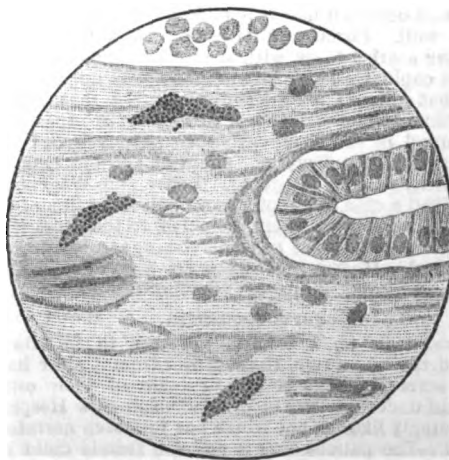
FIG. 20.



Streptococcus pyæmia. Streptococci in the walls of a subcutaneous abscess. (The lecturer is indebted to Messrs. Cassell and Co. for this figure, which is from his forthcoming article on Pyæmia in "A System of Surgery," edited by Mr. Treves, and now in the press.)

chest; perhaps to some meningeal trouble, as the head was not allowed to be examined." I cannot tell whether this surmise is correct, but the histological examination of some parts of the body gave the following results. The abscess wall was composed of fibrino-purulent material mixed with incredible quantities of streptococci in chains, both long and short, especially the last. (Fig. 20.) To the naked eye the kidneys and liver looked, as Mr. Berry said, quite normal,

FIG. 21.



Streptococcus pyæmia. Micrococci in the capillaries of a portal canal. In this case the liver and other organs were considered normal to the eye.

but the parenchyma of each was beginning to exhibit the early stages of cloudy swelling. Also in the liver a great many of the small vessels and capillaries of the portal canals, and also the vasa vasorum of the portal veins and of the bile-ducts, were plugged with micrococci. (Fig. 21.) These cocci were so crowded together that chains could not be recognised, but this is not

uncommon in streptococcus poisoning. Some blood which had remained in the hepatic veins contained occasional diplococci and short chains of cocci. In the cortex of the kidneys similar plugs of micrococci were found in the capillaries of the glomeruli and tubules, and especially in the vasa vasorum of the renal vessels; but these emboli were much harder to find in the kidneys than in the liver, being less numerous. As regards the cocci in the liver, it seems very evident that they had been carried there by the hepatic artery. It is probable that after a while they would have emigrated from the capillaries into the bile-ducts; indeed, the process seemed in places to have begun. Here we have an explanation of the presence of bacteria in bile without a macroscopic focus, such as an abscess, having been discovered. Hitherto bacteria found under such circumstances have been supposed to have been excreted with the bile. Had these plugs gone on to the formation of abscesses it is clear that the result would be very different from that produced by infection carried along the portal veins, but I am not aware that such differences have been described. It is interesting to note that although the kidneys contained capillaries plugged with micrococci yet albuminuria had not occurred, although it was frequently sought for. Lastly, the presence of the cocci in the vasa vasorum seems to me a fact of some moment. They had not begun to produce changes in the vessel walls, and it would be most interesting to speculate as to the ultimate result had the child survived. This case belongs to a class the seriousness of which is not always properly appreciated. Infants are most susceptible to both local and general infection, but the latter is often overlooked. I have no doubt whatever but that more searching and systematic examination of the tissues by more exact methods will vastly increase the rôle played by septicæmia in surgery.¹ The mortality after burns is a reproach to surgery. It could often be avoided by the skilful use of antiseptics.

CASE 15.—To control the investigation of this case of streptococcus pyæmia, that of a child who died with an extensive burn of the chest and abdomen may be mentioned. When the histological investigation of the lungs, liver, spleen, and kidneys was made by Dr. Blackwell and myself we were ignorant of the clinical details or of the result of the post-mortem examination, which was performed by Mr. Berry twenty-eight hours after death. We could find no bacteria in any of the tissues or organs, and came to the conclusion that death had been due to acute bronchitis. We afterwards learnt that this was correct, and that the burns were supposed to have been caused by the application of poultices intended for the relief of the bronchitis.

The foregoing case of streptococcus pyæmia might have been mistaken for one of scarlet fever in which streptococcus poisoning had occurred had it not been for the abscess upon the chest wall. Cornil and Babes² give a figure of the kidney after scarlet fever with a streptococcus embolus in one of the capillaries. Their specimen was apparently the same as that which I have described, except that there was also amyloid disease. The same authors give other figures of streptococci in the renal vessels in scarlet fever.³ They seem a common complication. Cultures showed that they were the streptococcus pyogenes. Leber and Wagenmann have described a case of streptococcus poisoning in an infant, but seem to have given their attention to the local lesions and not to have examined some of the organs because they looked normal. However, streptococci were found by them in the skin, eye, orbit, kidneys, and supra-renals.

STREPTOCOCCÆMIA.

Streptococciæmia is, I believe, not rare in infants and young children. As a rule, they recover from it after having sustained severe damage to one or other of their organs. Lately I had under my care in St. Bartholomew's Hospital a case exceedingly like the one which has just been narrated.

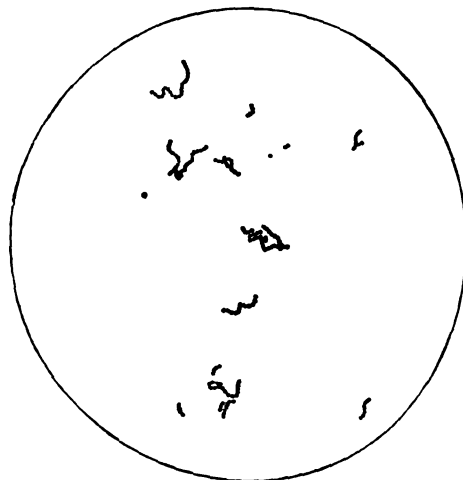
CASE 16.—The patient was a delicate female child aged two and a half years. She was admitted with an ulcer about an inch long and half an inch wide at the left margin of the anus. It involved the cutaneous and a little of the

mucous surface. At first it spread, but afterwards healed with simple local remedies. When admitted the child also had a loud systolic murmur, which still exists. Her liver, too, was enlarged almost to the umbilicus. Her legs were cedematous, with albumen in the urine. The temperature was usually subnormal, the thermometer as a rule registering 98° F. The coexistence of a point of inoculation, an endocardial bruit, acute nephritis, and swollen liver seemed to me to point so clearly to bacterial invasion that Mr. Farnivall, at my request, examined the blood and the urine. Nothing could be seen in the blood, nor could anything be grown from it upon the usual media. Fresh specimens of the urine collected with proper precautions contained cocci in short chains. I attached no importance to the absence of temperature in this case. As a sign of bacterial invasion the temperature is unreliable. It is quite usual to see no elevation of temperature even in such profound invasions as diffuse septic peritonitis. It is unreasonable to think that all bacterial poisons must be pyrogenous. The temperature, however, rose to 103° during the seventh week of her stay in hospital. A skin eruption, which was supposed to be measles, appeared at the same time. At this stage no streptococci could be found in the urine. The cause of the ulcer was never found out. Although a year has passed it has not been followed by any signs of syphilis. This is interesting because the mother had a syphilitic ulcer upon her face, but in the gummosis stage, and not, therefore, capable of infecting another with syphilis. That the ulcer of the mother was infected with other bacteria is certain. In a similar case I found staphylococci, streptococci, and bacilli.

Streptococci are easy to see in fluids, and appear in the urine soon after infection. The following is a common example of this.

CASE 17 (Fig. 22).—A healthy youth aged fifteen years crushed his hand and arm in a printing machine on Nov. 12th, 1892. Amputation was performed through the arm, and on the 13th his temperature was 101° F.; on the 14th it was 102°, and the urine contained a cloud of albumen. On the 24th he had pronounced pyæmia, with pus containing streptococci in the right hip, knee, and ankle. At the same time his urine contained numerous streptococci. (Fig. 22.) No examination

FIG. 22.



Streptococcus pyæmia. Streptococci in pyæmic urine. From a microphotograph by Mr. Cosens. (I am indebted to Messrs. Cassell and Co. for this figure. It is from a forthcoming article on Pyæmia by the lecturer in "A System of Surgery," edited by Mr. Treves, and now in the press.)

was permitted in this case, but in another of acute suppurative periostitis of the tibia following an injury the urine contained a similar cloud of albumen, and after death the kidneys were found acutely inflamed and studded with small abscesses and infarcts. The pus of the abscesses contained staphylococci similar to some found in the pus from the necrosed tibia.

I do not propose to discuss the conditions under which bacteria escape by the kidneys. This interesting question has been ably treated by Dr. Sherrington in his recent article and by others. Dr. Sherrington's work⁴ leads him to the conclusion

¹ Dr. A. S. Blackwell and myself were quite unable to demonstrate the conditions in the liver and kidneys by Gram's method. We succeeded by long immersion in the eosin and methyl blue solutions, from four to six days being requisite. I am much indebted to Dr. Blackwell for his trouble.

² Les Bactéries, vol. II., p. 260, Fig. 303.

³ Figs. 306 and 306.

⁴ Infantile Necrose der Bindehaut mit letalem Ausgang durch allgemeine multiple Streptokokken; Invasion des Gefässsystems. Archiv für Ophthalmologie, 1888, vol. xxxiv., p. 250.

⁵ The Escape of Bacteria with the Secretions. Journal of Pathology, vol. I., p. 276. This valuable paper gives a full bibliography.

that "the evidence is against believing that when this transit of bacteria across the secreting membrane occurs the membrane is still normal in condition, although at the same time it need not be ruptured or pervious to red corpuscles." In the main Dr. Sherrington's observations confirm those of Klebs, Ogston, Fodor, Wyssokowitch, and many others.

CASE 18.—I thought at one time that I had obtained clinical evidence that the healthy kidneys excrete bacteria. I performed laparotomy for a pistol-bullet wound of the stomach. The wound was inaccessible, and other injuries combined to cause a fatal ending. After the operation a drain was placed in the peritoneal sac. Some blood-stained fluid drawn from this tube ten hours after the operation and sixty-four hours after the injury was full of cocci, streptococci, and short bacilli. Urine collected at the same time contained similar morphological varieties. The kidneys were histologically normal, with the exception of a slight interstitial nephritis which, I afterwards learnt, was of old standing. This case illustrates the difficulty of obtaining clinical evidence of the elimination of bacteria by healthy kidneys. Also, assuming the correctness of my observations, it shows that it may be wrong to consider, as I have done, that diffuse septic peritonitis is a purely local infection.

MIXED INFECTIONS.

I propose now to proceed with some complicated conditions of infection. In some of these the local disease was associated with a variety of bacteria, of which it seems possible that at least two species had invaded the body. In others it is probable that the original local disease was a pure infection which was supplanted by another of a severer type capable too of invading the body.

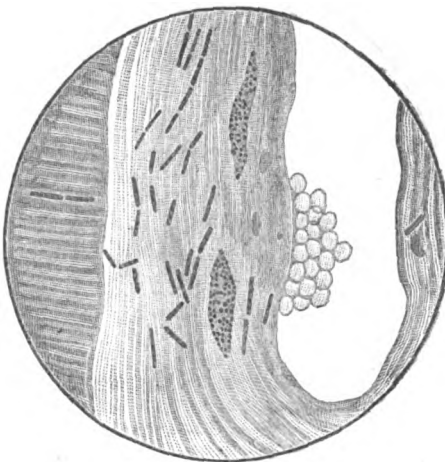
ANGINA LUDOVICI WITH BACILLARY SEPTICÆMIA.

CASE 19 (Figs. 23 and 24).⁹—In this case a bacillary septicæmia, closely resembling the cases I described in Lecture II. (Case 9),⁷ was unexpectedly met with in that grave disease described by Ludwig and called after him "cynanche or angina Ludovici." In narrating this case I propose, after giving the clinical history and morbid anatomy, to describe the septicæmia, and then discuss the cellulitis of the neck and its other complications. It will then be seen that the angina Ludovici is probably a mixed infection of the most complicated kind. Indeed, the examination of this and other cases leads me to think that several pathological conditions are included in the term "angina Ludovici." The case is also an example of the difficulty of the problems which confront inquirers into the infective processes of man. The patient was a man aged twenty-eight years. He was a heavy drinker. The cellulitis of the neck began without apparent cause and spread rapidly. On the fifth day the usual incisions were made and a little pus escaped. The patient became violent and was thought to be suffering from delirium tremens. On the sixth day oedema of the glottis caused so much dyspnoea that tracheotomy was performed. He became apathetic, drowsy, and unconscious, and died early on the eighth day. The actual cause of death was supposed to have been pneumonia. His highest temperature was 103° F., recorded on the seventh day. His urine contained a trace of albumen. Throughout his illness a purulent discharge ran from the floor of the mouth, and there was the usual horrible fetor. The drowsiness, apathy, and unconsciousness which supervened in this case remind me very strongly of the clinical condition of the woman who died from septicæmia after amputation of the breast for ulcerated scirrhus (*vide* Case 9, Fig. 10),⁸ and soon it will be shown that the same kind of bacillary infection existed in both cases. The delirium also may have been due to the septicæmia, and not, as was supposed, to alcohol. After death I found amongst the swollen and septic tissues of the neck engorged lymphatic glands and a clot in the left internal jugular vein. Both lungs were pneumonic and the kidneys swollen and engorged. The floor of the mouth was sloughing and ulcerated, and infiltrated with fetid pus. The heart and great vessels were normal, but gas escaped as I divided the pulmonary veins. The peritoneal cavity also contained some gas and blood-stained fluid. The spleen was enlarged and friable. The histological evidence of the septicæmia was in the kidneys. These organs were, as I have said, engorged with blood, some of which had remained in the veins and capillaries, forming a natural injection. Here and there this blood contained

a large bacillus which will be described presently. But in addition the vasa vasorum of some of the larger vessels of the medulla were packed with bacteria (*vide* Fig. 23), which I judged to be small, short bacilli. The appearances of these were the same as those of the cases of septicæmia which have been already described, and closely resembled the appearances seen in septicæmia artificially induced in animals. Similar bacterial emboli were not found in the capillaries of the lungs, liver, spleen, or neck. The heart and other organs were not examined.

I cannot ascertain that others have alluded to the presence of bacteria in the vasa vasorum. If a frequent occurrence, it would be of importance and may have a relation to ulcerative arteritis. What part the septicæmia played in causing the patient's death cannot be told, because the case was complicated by other bacteria, the presence of which cannot be ignored. In the walls of the renal vessels and in the intertubular tissues there were vast numbers of large bacilli, which in size, shape, and appearance exactly resembled Baumgarten's¹⁰ representation of the bacillus septicus, or Fraenkel and Pfeiffer's microphotographs.¹¹ They grew separately or in long strings (Fig. 23); their ends were slightly rounded, with a width of one millimetre and a variable length, but always

FIG. 23.



Angina Ludovici. Kidney with large bacilli in the walls of the vessels near the hilum; also with small bacteria in the capillaries.

many times the width; they contained no spores, but multiplied by fission; they evidently shunned the blood stream and grew in the interstices of the tissues running parallel to the muscle cells or connective tissue bundles. A similar absence of bacilli from the blood is observed when animals are killed with the bacillus septicus, and is accounted for by its strictly anaerobic properties. But as decomposition ensues they appear, as Flüge says, in the decomposing and oxygen-free blood.¹¹ In this way their occasional presence in the blood in this case would be explained. The secreting substance of the kidney had not suffered in any considerable degree, but the interlobular connective tissue was swollen, with here and there small inflammatory exudations, amidst the cells of which were occasional cocci, diplococci, and streptococci.

Before discussing the meaning of these large bacilli I propose to describe their presence in other organs. The lungs had the usual histological characters of acute septic broncho-pneumonia. (Fig. 24.) Their vessels were engorged with blood, forming a natural injection. This blood contained a few large bacilli, the same as those in the tissues of the kidneys. But the walls of the smaller pulmonary veins, like the renal veins, contained considerable numbers. The solidified pneumonic tissues were packed with vast numbers, and they were particularly abundant beneath the pleura and

⁹ Loc. cit., p. 469, Fig. 49.

¹⁰ Mikrophotographischer Atlas der Bakterienkunde, Pt. 5, Figs. 45 to 49.

¹¹ Flüge: Micro-organisms with Special Reference to the Etiology of the Infective Diseases, p. 246. Translated by W. Watson-Cheyne. New Sydenham Society, 1890.

⁸ I am indebted to Dr. C. Addison for much hard work at this case.

⁷ THE LANCET, March 9th, 1895.

⁹ Ibid.

in "non-vascular areas. They were clearly the predominant feature in the lung disease. In the lungs the bacilli grew in leptothrix less often than in the kidneys. The pneumonic tissues also contained occasional encapsuled diplococci the same as those described by Fraenkel and others.¹² Their presence was unexpected and gives rise to speculation as to their meaning in this and other cases. As Netter, Biondi, Vignal, Fraenkel, and others have shown, encapsuled cocci are found in saliva,¹³ and may thus, it may be supposed, pass into the air passages and lungs. The purulent tissues of the floor of the mouth were packed with cocci, diplococci, streptococci, and bacilli of various kinds. Amongst the cocci the presence of staphylococcus aureus and streptococcus pyogenes was proved by cultures. The bacilli included the ordinary ones of putrefaction, and in addition the sections of the deeper cedematous muscles and cellular tissues of the floor of the mouth and of the neck contained many large non-spore-bearing bacilli, the same as those in the kidneys and lungs. These bacilli were most difficult to demonstrate; but Dr. Addison and myself succeeded by soaking the sections for many days in Czenzynke's solution. Thus this case lends support to Baumgarten's¹⁴

FIG. 24.



Angina Ludovici. Septic pneumonia in angina Ludovici.

statement that acute phlegmon of the submaxillary cellular tissue was an invasion of streptococcus or of staphylococcus pyogenes, sometimes of both together, and to Eisenberg's observation that he found streptococci in the saliva in a case of phlegmonous angina. As Widal and Besançon have recently shown, streptococci are present in the mouth in both health and disease. I do not think, however, that the large bacilli in the floor of the mouth, neck, lungs, and kidneys can be ignored. I was prompted to look for bacilli because some kinds of angina Ludovici have such a close resemblance to acute spreading traumatic gangrene or malignant cedema, a disease which is acknowledged to be of bacillary origin, being caused by the bacillus septicus.

It may not be out of place for me to remark that the bacillus septicus is of the greatest interest to surgeons, and may, as I have already said, occur oftener than is thought. It was discovered by Pasteur and investigated by Koch, and is also called the "bacillus cedematis maligni." The disease which it causes is also called "gaseous or acute spreading traumatic gangrene." The bacillus septicus is an inhabitant of earth, mud, and decomposing substances of all kinds; hence it may be found in the human body without it having caused the fatal disease. In size and appearance the bacillus septicus closely resembles the bacillus of anthrax. Its ends, however, are slightly round, and its spores, which are not formed whilst the bacillus is in the tissues, are large enough to bulge the bacillus; it is also mobile and is a strict anaerobe; it usually produces a quantity of fetid gas. The clinical effects of the bacillus septicus might almost be inferred

from its behaviour in the laboratory. The rapidity of its growth and motion is exemplified by the swift spread of the disease, its abhorrence of oxygen by its passage along the lymph paths, its gas-producing powers by the emphysematous crackling, and, lastly, the noxiousness of its ptomaines by the poisoned condition of the patient. But although the production of a fetid gas is one of the properties of the bacillus septicus, yet Sternberg¹⁵ says that pure cultures often cause inflammatory cedema without emphysema. Very little seems to be known about the behaviour of the bacillus in the human organs. Obviously any gas which it produced in the lungs would escape and leave no trace, and probably the same applies to the kidneys. But in the case which I have just described the escape of gas from the pulmonary veins and its presence in the peritoneal sac are to be noted as evidence of the presence after death of a gas-producing bacillus. Presently I will describe another case of angina Ludovici in which the emphysematous crackling of the skin and subcutaneous tissues was observed during life, and in which there was also a bacillus in the lymph paths and in the inflammatory exudation. (Vide Fig. 26) It has lately been claimed that other bacteria besides the bacillus septicus cause acute inflammatory cedema and emphysema of the cellular tissues. Eugen Fraenkel¹⁶ has described such an one and called it "bacillus phlegmonis emphysematosi." It closely resembles the bacillus septicus in all its characters, but is motionless. It was found in four cases of "gas phlegmon." Bunge¹⁷ in a case of emphysematous cellulitis (gas phlegmon), found the bacillus coli communis and staphylococci, streptococci and proteus together. Rosenbach also observed the coincidence of pyogenic cocci and bacillus septicus.¹⁸ Gärtner¹⁹ has recently described a gas-producing bacillus, which Klein²⁰ considers identical with the bacillus coli communis. I shall soon describe a case of angina Ludovici in which there was emphysema, and in which a bacillus was seen in the skin and cellular tissues. This bacillus had not quite the morphological characters of the bacillus septicus. We must also take into consideration a bacillus which Dr. Klein²¹ met with in the tissues of guinea-pigs inoculated with garden earth. It grew in rods of different lengths and was mobile. Moreover, it was an aerobe and did not liquefy gelatine. In many points Dr. Klein's account of his bacillus reminds one of the colon bacillus, which is of course a common inhabitant of earth which has been manured. The possibility of there being cadaveric bacilli which had emigrated from the intestines has also to be considered. Although I have examined a great many diseases by the same methods similar bacilli have not been met with, except in the case of axillary wound with pleuritis (Fig. 7), and in a case to be described forthwith. Moreover, in the case of which I am speaking the bacilli were always most abundant where there was most disease. In a case of pneumonia due to the laceration of the lung by broken ribs the ordinary picture of a fibrinous pneumonia was unaccompanied with bacilli such as were found in angina of Ludwig and the case of fracture of the jaw which I am about to describe. Indeed, in the traumatic pleuro-pneumonia I could not with confidence assert the presence of any bacteria, although it is probable that a few scattered encapsuled cocci were present. All kinds of methods were used to stain the sections. Great labour was expended in examining the lungs of a patient who died from pneumonia after excision of the tongue. The pneumonic exudation was fibrinous and contained encapsuled bacteria, often in pairs, but no big bacilli. If these bacilli in the kidneys and lungs of this case of angina of Ludwig had been cadaveric it means, of course, that they had grown after death. Therefore I should have expected to have found them elsewhere than in the diseased tissues and organs. But none were found in the spleen or liver, although those are organs which are especially exposed to infection from the bowels. But throughout these investigations I have greatly felt the want of more definite knowledge of the cadaveric bacteria, especially their morphological

¹⁵ A Manual of Bacteriology, p. 491.

¹⁶ Centralblatt für Bakteriologie und Parasitenkunde, 1893, vol. xiv, p. 622. (Abstract.)

¹⁷ Zur Aetiologie der Gasphegmonen. Münchener Medizinische Wochenschrift, 1894, No. 46, p. 918. Also Centralblatt für Bakteriologie, 1894, vol. xvi, p. 831.

¹⁸ Micro-organisms in Human Traumatic Diseases. Translations of the New Sydenham Society, 1886, p. 430.

¹⁹ Centralblatt für Bakteriologie, vol. xv, 1894, p. 1.

²⁰ Loc. cit., p. 276.

²¹ Ein neuer Bacillus des malignen Oedems. Centralblatt für Bakteriologie und Parasitenkunde, vol. x, 1891, p. 186.

¹² With $\frac{1}{2}$ in. oil immersion (Zeiss) and No. 8 eye-piece these bacteria looked elongated and perhaps lancet-shaped.

¹³ H. Macé: Traité Pratique de Bactériologie, second edition, p. 280, et seq. Paris, 1891.

¹⁴ Lehrbuch der Pathologischen Mykologie, p. 883. Braunschweig, 1890.

varieties and staining properties. Sternberg²³ gives a brief reference to the subject and a photograph of cadaveric bacilli. No resemblance can be traced betwixt these and the bacilli found in the tissues of this case of angina. Jensen and Sand²⁴ also say that many large bacilli are found in animals which have died from asphyxia and lain for twelve or twenty-four hours. They differ from the bacillus septicus, however, in form, microchemical peculiarities, and inoculation effects. It would be no detracton from the importance of these bacilli to acknowledge that they were saprophytes causing putrid decomposition. That, most probably, is their function. But everyone knows that putrid decomposition of the tissues and fluids of the body occurs during life in angina Ludovici, and is part of the disease. Even if we assumed that these large bacilli were the chief cause of death, yet the bacteria which swarmed in the floor of the mouth may have played an important rôle. For the life of strict anaerobes like the bacillus septicus and its congeners oxygen must be either absent or abstracted. Now, many of the saprophytic and pyogenic bacteria, such as those in the foul tissues of the floor of the mouth, consume oxygen with avidity, and prepare and maintain an environment in which the anaerobes can live and flourish. Nothing was found at the necropsy or before to show whence these various bacteria came. It is to be doubted whether normal saliva could produce such effects, although it is well known that it often contains pathogenic bacteria. The important part which the saliva plays in rabies has led to many investigations of its properties by Pasteur and others. Injected into rabbits it causes a rapidly fatal septicæmia, with encapsuled cocci in the blood of various organs;²⁵ but I cannot ascertain that the bacillus septicus has ever been met with in sputum septicæmia. Biondi²⁶ injected the saliva of diseased and healthy individuals into the tissues of bloodvessels of rabbits, guinea-pigs, and dogs. From these were isolated bacillus salivarius septicus, coccus salivarius septicus, micrococcus tetragonus, streptococcus septopyæmious, and staphylococcus salivarius pyogenes, but nothing comparable to the bacillus which abounded in this case of angina Ludovici; but the bacillus septicus is so widespread that there is no difficulty in understanding that it might easily have been introduced with some article of diet.

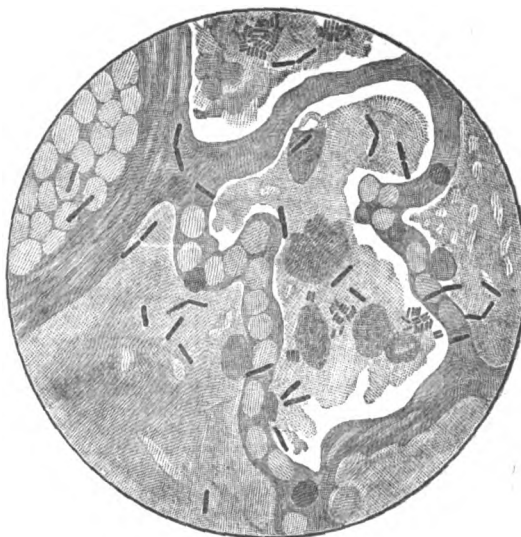
The foregoing suggests that in future cases of angina Ludovici a determined attempt should be made to disinfect the floor of the mouth and tissues of the neck before septicæmia or general tissue infection has supervened. Solutions of peroxide of hydrogen would probably be the safest disinfectant.

CONVEYANCE OF INFECTION BY CONTIGUITY; SEPTIC PNEUMONIA.

CASE 20 (Fig. 25).—A bacillus morphologically the same as that met with in the tissues of angina Ludovici was seen in the walls of a putrid abscess of the lung, which was found under the following circumstances. A young man who had been intemperate for two years was admitted into St. Bartholomew's Hospital after a brawl suffering from wounds about the head and face, a compound fracture of the lower jaw, and concussion of the brain. The day after admission his urine contained a cloud of albumen. He was very restless and had a temperature of 102° F. He was unconscious, but shouted at intervals. His right arm seemed rather weaker than the left, but this went away, and he became conscious and seemed to be progressing towards recovery. The eleventh day after the injury his temperature rose gradually to 101.8° F., and he again became unconscious with fresh symptoms of hemiplegia. During the ensuing week there was no abatement of these symptoms, and as his temperature still ranged between 100° and 102° he was supposed to have pyæmia, and a cerebral abscess was suspected. His brain was exposed after the skull had been trephined, but nothing was found. Death ensued the day after the operation, and twenty-four days after his injury. At the necropsy the brain was normal. There was suppuration around the fractured jaw with about two drachms of fetid pus. The internal organs were congested, but otherwise normal, except the right lung, which was pneumonic, with a putrid abscess in the upper lobe. It was surmised that this abscess was pyæmic. The

histological examination did not bear out the supposition that pyæmia had anything to do with his death. The liver and kidneys had suffered from his intemperance. In the liver there was an excess of fibrous tissue and in the kidneys commencing interstitial nephritis. The only change which might have indicated sepsis was slight cloudy swelling of the renal epithelium. No bacteria could be found in either the liver, kidneys, or spleen. The lungs, however, afforded abundant evidences of bacterial invasion. They were engorged with blood which had extravasated into some of the air cells, but the latter were mainly filled with pneumonic exudation. In some parts this exudation contained swarms of a small, short, round-ended bacilli (Fig. 25) similar to the

FIG. 25.



Septic pneumonia following a compound fracture of the lower jaw.

proteus vulgaris of Hauser; but the most striking objects were very large bacilli scattered in numbers both in the tissues of the lung and in the pneumonic exudations. These bacilli had slightly rounded ends and were 1 μ thick and from 3 to 6 μ long. They contained no spores and multiplied by fission, being often seen in twos or in short chains. The bacilli were abundant where there was most connective tissue, as, for instance, in the adventitia of the pulmonary vessels, thus suggesting that they were anaerobes. The walls of the obliterated air cells contained many of them, also the exudation; but the blood in the vessels contained none or occasional isolated examples. The lungs contained no bacterial emboli, nor could bacteria be seen in the clots in the vessels. By an unfortunate omission I obtained none of the brain for examination. It may be remembered that the clinical symptoms were like those of cerebral compression, although none existed. None of the bacteria in this lung possessed capsules, but the specimens had been hardened in alcohol. They bore no likeness to Friedländer's pneumo-bacillus, although in animals it seems as if that organism might grow to some size and length.²⁷

THE LOCAL INFECTION IN ANGINA LUDOVICI.

CASE 21 (Fig. 26).—The local tissue changes and some of the characters of the infective process in angina Ludovici were seen in a case which Dr. E. Valentine Gibson²⁷ described. I am indebted to him and Dr. Cameron for some of the inflamed cellular tissue of the neck. Unfortunately, specimens of the other organs could not be obtained. The case was that of a man aged forty-nine years, who had been a heavy drinker, was attacked with cellulitis of the neck, and died comatose in less than fifty-two hours. Twenty-four hours before he died a sudden dyspnoea nearly ended his life, but he was saved by tracheotomy and incisions, and afterwards there was no obstruction to the entrance of air. Nevertheless, his dyspnoea increased and he became

²³ Bacteriology, p. 583 et seq.; Fig. 197.

²⁴ Ueber malignes Oedem beim Pferde. Deutsche Zeitschrift für Thier-Medicin, Band xiii., 1887, Heft 1. Quoted in Centralblatt für Bakteriologie, vol. i., p. 265 et seq.

²⁵ Macé: Traité Pratique de Bactériologie, p. 280 et seq. Paris, 1891.

²⁶ Die pathogenen Microorganismen des Speichels. Zeitschrift für Hygiene, 1887, vol. ii., p. 194.

²⁷ See Günther's Bakteriologie, Plate xii., Fig. 67.

²⁸ A Rapidly Fatal Case of Angina Ludovici. THE LANCET, June 3rd, 1893.

cyanosed before he died. The cellulitis spread from the neck to the chest and, as it afterwards appeared, to the mediastinal cellular tissue. The swollen tissues were full of gas and began to crepitate. The temperature was in no way remarkable and was usually about 98° F., but rose to 101° the evening before he died. The urine contained no albumen. At the examination, which was made four hours after death, an ulcer was found upon the side of the neck, and it is probable that this is the point of inoculation. The inflamed cellular tissue was full of fluid, had a gelatinous appearance, and minute bubbles of gas made it glisten. The mediastinal cellular tissues were also inflamed, but the thoracic and abdominal viscera had nothing noteworthy the matter with them, nor was there any disease of the salivary glands. No bacteria were found in the fluids squeezed from the tissues, and Dr. Cameron reported that he could find "no specific pathogenic micro-organisms in the tissues." By using Czenzynke's method and by staining the sections for many days we found the cellular interspaces and lymph paths crammed with cocci, diplococci, and streptococci in long and short chains. (Fig. 26.) In some places the micro-

FIG. 26.



Angina Ludovici. Streptococci and bacilli in the cellular tissues.

cocci lay in dense masses. The tissues were cedematous and their connective tissue bundles swollen. In some places nests of pus cells had collected, and amongst them were numbers of bacilli. Some of these were about the size of the bacillus anthracis, but with rounded ends. They contained no spores, and were straight or slightly curved. Others were of the same thickness, but shorter. These probably belonged to the same species as the long ones. Finally, the pus had small bacteria in it, of which some were undoubtedly micrococci, but others looked like very small oval bacilli, such as were found in the capillaries of the last case of angina Ludovici.

The discovery of streptococci in this case is quite in accordance with that which others have observed. They probably belonged to one of the species of streptococcus pyogenes. The presence of the large, round-ended bacilli is of great interest when we recall the fact that during life and after death gas was found in the tissues. This might suggest that the bacillus septicus was present. This would not only explain the emphysema, but also the speed with which the patient died. The size and shape of the bacilli do not, however, agree with the assumption that they were the bacillus septicus. They were only half the usual size of that bacterium, their ends were more rounded, and they did not grow in strings. They were much more like some form of bacillus coli communis. As I have already said, both this and other bacilli can cause emphysema and inflammation of cellular tissues. The coexistence of the streptococcus pyogenes with the bacilli affords food for reflection. In cutaneous erysipelas and cellulocutaneous erysipelas streptococci growing by themselves do not often cause a fatal ending. Nevertheless,

the streptococci in this case may have played an important part by producing that absence of oxygen, and perhaps supply of toxins, which the bacillus septicus and the rest of its family require for their proper growth. It is obvious that the conditions would be much more favourable for the growth of the bacillus septicus or similar anaerobes if the tissues were packed with oxygen-loving bacteria, like the streptococcus pyogenes. Farther, we might speculate whether an excessive consumption of alcohol may not also help to produce similar favourable conditions. It is, I believe, supposed that alcohol uses up oxygen, which would otherwise go to the tissues.

CONSECUTIVE INFECTION: THE PATHOLOGY OF HECTIC FEVER.

When septic infection occurs during the course of other diseases, its effects, being confused with those of the original disease, are often overlooked or wrongly attributed to other causes. Thus in the course of tuberculous affections, such as chronic tuberculous arthritis or tuberculous caries, a newly-formed sinus or an ill-advised incision is often the starting-point of a new infective process, which is most destructive to the tissues previously deteriorated by the tuberculous inflammation. Locally, the effects of the new septic infection are often attributed to the original disease, and after it has become generalised the septicæmia is not usually, I believe, recognised as such. The symptoms which accompany it are designated "hectic fever," a phrase unrepresented by any definite morbid anatomy. When septic infection is implanted upon an already established morbid process I propose to call it "consecutive infection." The following is an instance of it both in its local and in its general manifestations.

CASE 22 (Fig. 27).—A young man had suffered for many months with tuberculous arthritis of the knee. A peri-articular abscess formed and was opened. It extended deeply towards the joint, but was not known to communicate with it. This opening ultimately healed, but the knee became stiff and bent. The joint was straightened without apparent ill-effects, but soon after the patient was readmitted, and it was clear that a septic arthritis had been engrafted upon the chronic tuberculous arthritis. The usual local and general symptoms existed together with others, which pointed to breaking-down tuberculous disease of the lungs. There was also an unusual feature in the case. His urine had hitherto been normal, but now a very large quantity, of low specific gravity and containing albumen, was passed. The patient died, it was supposed, of hectic fever and exhaustion, with amyloid disease. Afterwards I found an incision on the inner side of the knee, by which a finger could be passed into the joint. The synovial membrane was tuberculous and thickened, and there was complete erosion of the articular cartilages, with caries and necrosis of the tibia, especially near the outer condyle. The lungs were tuberculous and breaking down, with engorgement of the lower lobes. There was also tuberculous ulceration of the cæcum and right colon. The spleen, liver, and kidneys were enlarged and amyloid, and in addition the kidneys had the naked-eye appearances of parenchymatous nephritis; indeed, they were afterwards used at the morbid histology class to demonstrate that not infrequent combination of parenchymatous nephritis and amyloid infiltration.²³ But an investigation by Gram's method of staining threw fresh light upon the morbid condition; interspersed throughout the cortex of the kidney were numerous bacilli, singly and in chains, also cocci and diplococci, and capillaries blocked with micrococci. So far as the cocci are concerned these appearances were the same as those which are experimentally produced by the injection of cultures into the veins of rabbits. By the eosin and methyl-blue method of staining the capillaries blocked with micrococci were conspicuous objects, mainly situated beneath the capsule of the kidney (Fig 27). Although not quite sure, I thought the emboli were probably composed of streptococci. The bacilli were sparsely scattered and were apparently post-mortem in origin.

The foregoing was, as I have said, considered a typical instance of hectic fever, but whatever that may be there is no doubt but that the youth had septicæmia. Long before this, in 1889, I endeavoured to solve this question of hectic fever being in reality a symptom of septicæmia by inoculating gelatin, agar agar, and serum from the blood of patients with hectic fever. The blood was taken in the usual way from the finger and with the usual precautions. The result

²³ Ernst Ziegler: Text-book of Pathological Anatomy, Part 2, p. 58. Translated by D. Macalister. 1886.

was negative in the case of a man aged twenty-two years with tuberculous disease of the hip of four years' duration and with abscesses; also in that of a youth aged nineteen years, who had had morbus coxae since the age of six. In spite of this failure, I think that this line of investigation ought to be followed up and extended. Indeed this has recently been done, for the occurrence of a mixed infection in tubercle of the lungs has been signalled by Jakowski.²⁹ He investigated the blood during the hectic stage by cover-glass preparations and cultures. Two out of nine cases gave negative results. In two staphylococcus aureus was found, in two streptococcus pyogenes, in two staphylococcus aureus and albus together, and in one streptococcus pyogenes and staphylococcus aureus. The same point has been written upon by Petruschky,³⁰ who remarks upon the frequent coexistence of streptococci and tubercle bacilli in sputum and pulmonary tuberculous abscesses. He attributes secondary infection to these streptococci, and advocates early diagnosis and early treatment of the primary tuberculous disease. Although it is well known that tuberculous processes are often complicated by the presence of other kinds of bacteria hardly anything has been written

are in themselves able to cause marked rises of temperature, as was seen during the attempt to treat tuberculous diseases with Koch's tuberculin. Although the foregoing mainly refers to consecutive infection in tuberculous diseases, there is, I think, no doubt but that it may occur after any form of infective disease which produces the necessary conditions. Amongst these it is probable that typhoid fever ought to be included. That disease sometimes seems to terminate by the superaddition of a septicæmia, the blood becoming infected through the intestinal ulcers.

TEN FATAL CASES OF ACUTE IDIOPATHIC CEREBRO-SPINAL MENINGITIS.

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FIG. 27.



Hectic fever. Micrococcus emboli in the capillaries of the kidneys. The kidneys were also in a state of parenchymatous inflammation with amyloid disease.

about their presence in the circulation. Mr. Watson Cheyne³¹ has mentioned a case in which he found micrococci in the vessels of tuberculous patients. He did not at that time lay much stress upon them, but said, "though quite independent of the disease, [they] probably hastened the death of the patient, or they may have been present simply as the result of lowered vitality, though in that case I have never found them as plugs in the vessels." Cornil and Babes in a case of tuberculous caries of the spine found vessels filled with streptococci.³² The same microbe was also found by them in the pulmonary glands, peritoneum, and meninges of other cases of tuberculosis. Koch³³ has described a case of acute general tuberculosis in which many capillaries were blocked for a short distance by micrococci. He thought that a mixed infection of this kind would, if looked for, be found tolerably often. Much work remains to be done before we shall know whether the phenomena of hectic fever are always due to a consecutive infection. The ptomaines of tubercle bacilli

Acute cerebro-spinal meningitis, for which no obvious cause can be found, is not on the whole a common disease. Ten fatal instances of it occurred at St. Bartholomew's Hospital during the six years that I was medical registrar there (1887-1893), and the physicians kindly gave me leave to publish a short account of them. All cases are excluded wherein any recognised cause could be found, such as tubercle, injury, otitis, disease of the skull-bones, pyæmia, ulcerative endocarditis, pneumonia, erysipelas, &c., and also those in which only the cerebral membranes were affected (though doubtless some of these do not essentially differ from the cerebro-spinal cases) or in which post mortem the examination of the cord was omitted. In addition to the ten fatal cases there were three (or perhaps four) cases during the same period which recovered. Unfortunately, I can give no sufficient account of the bacteriology of these ten cases, which to many may seem their chief point of interest; but in a subsequent case occurring since my term of office Dr. Kanthack¹ demonstrated the presence of the pneumococcus; and our present registrar, Dr. Herringham,² notes that this organism has been found in two other recent cases. This, I believe, is in accordance with the majority of bacteriological observations on the subject. Nor have I anything to say as to their etiology generally, save that one case (No. 4) developed meningitis in the course of some acute throat affection, and four out of the ten (of which No. 4 was one) occurred between March and June, 1890. This is an unusual number for such a short time, and the fact suggests the possibility of some epidemic influence. As a matter of fact, an epidemic of meningitis did occur in the summer of that same year in the Eastern Counties.³ It is, indeed, possible that idiopathic meningitis does not differ essentially from the epidemic disease. The clinical resemblance may be illustrated by a case admitted under Dr. S. J. Gee in October, 1892. A child had been seized with vomiting, fever, and delirium; on admission she had retraction of the head, and a papular and petechial rash, with some larger purpuric spots. Later she developed a purulent infiltration of one eye, leading to its complete disorganisation, and arthritis in the knee; finally, she recovered, and was discharged after being four months in the hospital. This might serve as a picture of epidemic cerebro-spinal meningitis, but there was no epidemic.]

The cases that follow are given in chronological order. The clinical notes are taken from the records in the ward-books; the notes of post-mortem examinations, except where indicated, were my own work.

CASE 1.—(The onset took place with a fainting attack, then pains in the head, mental alteration, noisy state, and fever. Thereupon strabismus supervened, and finally coma, with Cheyne-Stokes breathing. Death took place in five days.) The patient was a boy aged six years, and was placed under the care of Dr. W. S. Church in the Matthew Ward in April, 1890. He was in his usual health till April 15th, when he was brought to the surgery for circumcision, but the operation was deferred because he fainted whilst walking across the hospital square. The next night he had pains in the head, strangeness

²⁹ Beitrag zur Frage über die sogenannten Mischinfectionen der Phthisiker. Untersuchungen des Blutes der Phthisiker in der hektischen Periode. Centralblatt für Bakteriologie, vol. xix., 1893, p. 762.

³⁰ Tuberculose und Septikämie. Deutsche Medicinische Wochenschrift, No. 14, 1893. Ref. Centralblatt für Bakteriologie und Parasitenkunde, Band xiv., 1893, p. 216.

³¹ Report on the Relations of Micro-organisms to Tuberculosis. The Practitioner, April, 1883, p. 302.

³² Les Bactéries, third edition, vol. II., p. 455.

³³ Etiology of Tuberculosis; translated by Stanley Boyd. New Sydenham Society, 1886, p. 106.

¹ Transactions of the Pathological Society, vol. xiv. (1894), p. 230.

² St. Bartholomew's Hospital Journal, December, 1894, p. 46.

³ Bruce Low: Twentieth Annual Report of the Local Government Board, 1890-91, p. 117.

of manner, drowsiness, and diarrhoea. He had measles two years before, with diarrhoea. On the 16th he lay on his back, putting his hand to his forehead as if in pain, the temperature being 103° F., with hot, dry skin; the pulse 144, regular and soft; and the respiration 36. On the 17th he was restless and noisy all night, screaming as if in pain, and putting his hands to his head. The temperature in the morning was 100°, and in the afternoon 103°. On the 18th he had a very bad night, shouting much, though conscious. There was internal strabismus of the right eye; the fundus of both eyes was normal. The temperature in the morning was 104°, and in the afternoon 103.8°. On the 19th he passed a very restless night. He had now double internal strabismus. The temperature was 102.8°. At 2.40 P.M. he was quite unconscious, with Cheyne-Stokes respiration; the pupils were contracted, and the strabismus had gone. The pulse was 135, but otherwise good. He died on the same day.

Necropsy.—There was sticky greenish-yellow lymph beneath the cerebral arachnoid, alike upon the convexity and the base (upon the former mainly in large patches and at the latter on the olfactory bulbs, optic commissure, and behind it); in the Sylvian fissures, where the membranes also looked thickened; and a small patch on the cerebellum. The convolutions of the brain were flattened, the surface was pale, and much turbid brownish fluid escaped during removal. Similar turbid fluid was present in the sac of the spinal dura mater, and in the spinal arachnoid there was thick yellow lymph, mainly upon the posterior surface of the cord. The cervical region was free, the deposit of lymph beginning in the upper dorsal region, and increasing in amount from thence downwards. There was some softening of the dorsal and lumbar cord. Except for a swollen gland at the left angle of the jaw (non-tuberculous and not caseating) and some œdema of the lungs, there was no other disease in the body.

CASE 2.—(The onset occurred with vomiting, petechial rash, headache, and screaming. There was herpes labialis on the third day, followed by strabismus and retraction of the head. Some improvement took place after a week's illness; but the patient became apathetic and wasted much. In the third week there was recurrence of the vomiting, the head was retracted, the knee-jerks were absent, and death took place about the twenty-fifth day. This case was complicated with whooping-cough. Post mortem there were found cerebral and spinal meningitis and much ventricular effusion.) The patient was a boy aged five and a half years who was under the care of Sir Dyce Duckworth in the Elizabeth Ward of St. Bartholomew's Hospital in March, 1890. The illness began on March 2nd with vomiting and fever. During the following night he woke up struggling and screaming. On the 3rd, at 10 A.M., the mother noticed a red rash on his hands, arms, and face, which in an hour's time had spread to the legs and had turned black. There had been measles in the street where he lived, but this complaint he was said to have had before on two occasions. A younger brother had whooping-cough. The patient had had a cough for a month, which had become worse since this illness. He now seemed to be ill and drowsy, the tongue being furred and the throat normal. There were minute purpuric spots on the face, trunk, and limbs; on the left thigh there were one or two papules; on the left buttock there was a small ulcer with purpuric areola. The temperature was 99° F. On the 4th vomiting occurred in the night and early morning. There was a purpuric spot on one conjunctiva. The pulse was small and very irregular. Some small glands could be felt under the left angle of the jaw. On the 5th vomiting occurred at night. The patient suffered from frontal headache. The purpuric spots had mostly faded. Herpes appeared on the upper lip. The temperature rose during the day to 102°. On the 6th he screamed violently during the night. He appeared to have abdominal pain as well as headache. The vomiting was less at midnight. Internal strabismus was noticed, as well as retraction of the head. The temperature varied from 100° to 101°. During the next few days there was some improvement, especially as regarded the vomiting; but whooping-cough developed. On the 12th the temperature rose to 102.4°, and on the 13th to nearly 103°. On the 13th he lay in an apathetic state, screaming on palpation of the abdomen; he screamed occasionally during the night from the headache. Knee-jerks were absent. On the 16th it was noted that he was becoming much emaciated. On the 24th vomiting recommenced. He lay on his back and side, with the head retracted and the legs drawn up, noticing nothing, but not unconscious. The temperature varied from 99° to 101°; the pulse was 135. He died on the 28th. The

eyes were examined, but nothing more was noted than a slight blurring of one disc, probably physiological.

Necropsy.—In the arachnoid, at the base of the brain, from the optic nerves to the crura cerebri, there was a layer of thick puriform stuff; the Sylvian fissures were gummed together, but no tubercles could be made out, and no tubercle bacilli could be found in the exudation. The convolutions were flattened, the corpus callosum was much thinned out and softened, and the ventricles were much distended with fluid. There was a patch of puriform stuff in one choroid plexus. As for the spinal cord, much fluid escaped on incising the dura mater, the arachnoid was rough, and in the lower dorsal region yellowish lymph was seen. There was much superficial softening of the cord. All the other organs of the body were healthy.

CASE 3.—(There was pain in the head, with hallucinations, vomiting, fever, and ptosis. Herpes of the lips and face supervened on the fourth day with albuminuria. Death took place at the end of four days.) The patient, a boy aged nine years, was admitted to the John Ward under the care of Sir Dyce Duckworth in April, 1890. He was quite well and at school on April 24th, and slept well that night; but on the morning of the 25th he woke up "silly" about 7 A.M., wandering, complaining of pain in the head, saying that "his sight was blighted," and apparently suffering from hallucinations of vision. Ever since he had been partially stupid, particularly during the night, had vomited what he took, and had had some ptosis of the right eyelid. Nevertheless, he was able to come alone to the surgery on the 26th; but as the stupor and headache increased he was brought again at midnight and admitted. The temperature then was 103.4° F. On the 27th he looked ill and flushed, and had an expression of pain. He objected to being examined. He tossed about restlessly, and complained, when asked, of pain in the head and in the back. He saw mousetraps, marbles, and his boy friends, and talked to them. He nevertheless answered easy questions and put out his tongue when asked. The tongue had a patchy fur upon it and was dry. The temperature was 101°, the pulse 140, and the respiration 35. There was partial ptosis of the right eyelid. In the afternoon there was well-marked double internal strabismus; the knee-jerks were natural. There had been some twitching of the right side of the face. The temperature was 104°. On the 28th it was noted that he had had no sleep since admission, being restless and noisy. There was much herpes on the lips and cheeks. The temperature was 100° (rising to 103° in the afternoon), the pulse 116, and the respiration 40. The urine was of sp. gr. 1026, and contained no sugar, but much albumen. During the next night the temperature fell to 98° and then rose again rapidly to 105°, after which he died.

Necropsy.—On the convexity of the brain, along the course of the veins, there was yellow, purulent lymph in the meshes of the pia-arachnoid. There was lymph at the base also, but less in quantity. The brain was reddened and softened on the surface. The cervical part of the spinal cord was superficially reddened, but there was no lymph. At the upper dorsal region a layer of lymph began and thence continued downwards, getting thicker near the lumbar region. It was limited to the posterior surface of the cord. In appearance the lymph was thick and purulent. There was some slight softening of the dorsal cord. The dural sac contained some dirty fluid. Except for some trivial swelling and reddening in the arytenoid region of the larynx and a slight enlargement of the mesenteric glands, all the other organs were normal. The appearance and distribution of the lymph in the cerebral membranes did not suggest tuberculous meningitis; no tubercle could be seen by the naked eye, and Mr. Edgar Willett, who kindly examined the spinal lymph microscopically, could find no bacilli in it.

CASE 4.—(On the fourth day of an acute inflammation of the fauces headache set in and albuminuria, with recurrence of fever. On the fifth day the headache was worse and consciousness was impaired; then there was a rigor, followed later by hallucinations of vision and a restless, tremulous state. On the sixth day there was laryngeal obstruction (œdema?), which was relieved by tracheotomy, after which occurred coma, conjugate deviation of the eyes, twitching of the arms, Cheyne-Stokes breathing, and hyperpyrexia. Death took place about forty-eight hours after declaration of the nervous symptoms.) The patient, a man aged thirty-eight years, was admitted under the care of Sir Dyce Duckworth into the Radcliffe Ward, St. Bartholomew's Hospital, in June, 1890. On the morning of June 19th he was taken ill

with vomiting, sore-throat, difficulty of breathing, and pain in swallowing, and a swelling developed in the right side of the neck. The same evening he came to the surgery looking very ill, the temperature being 103.5° F., the pulse 140 and feeble, and the respiration 36 and stridulous. The fauces, right tonsil, and the right side of the palate were cedematous, and no membrane was to be seen. Scarification was performed with some relief. He stated that his previous health had been good; he knew of no diphtheria in his neighbourhood, but the drains were said to be bad where he lived. On June 20th he was admitted to the Radcliffe Ward. His neck was swollen, especially on the right side; the fauces were also swollen, especially on the right side, and generally reddened, except the uvula, which was pale and thickened. There was a doubtful appearance of membrane on the right side of the fauces (which seems not to have been confirmed later). The temperature was 99.8°, the pulse 99 and of good volume and tension, and the respiration 16. The urine contained no albumen. Till the evening of the 22nd he progressed favourably, and the faucal inflammation went down considerably. The temperature was normal in the early morning, but in the course of the morning it rose to 102.8°, and at 7 P.M. to 104.8°. He had some headache all day, which became worse towards night. The tongue was much furred. The urine contained one-third albumen. On the 23rd, since 2.30 A.M., he was restless, with violent pain in the head, and only partly conscious. He had a rigor in the early afternoon, the temperature, which had been 102° in the morning, mounting to 104°, the heart's action being feeble and irregular. At 6.15 P.M. he had hallucinations of visions, trying to get out of bed, and picking at the bed-clothes; his hands were tremulous, and the tongue was dry, furred, and tremulous. On the 24th he had a sleepless night. There was twitching of the tongue and limbs, with some cedema of the fauces, and poor entry of air into the lungs. In the course of the day urgent laryngeal symptoms set in—stridor, recession, blueness, &c.—for which tracheotomy was performed about midday with considerable relief. At 2.30 P.M. he had been apparently sleeping since the operation; there was conjugate deviation of the eyes upwards and to the right; the breathing was of the Cheyne-Stokes type; the pulse was small and flickering, and the temperature 105.8°. He became worse during the afternoon, had twitching of both arms, and the temperature rose to 108°. He died at 5.50 P.M.

Necropsy by Dr. HAIG.—There was purulent meningitis, most marked on the convex surface of the brain and over the frontal lobes, extending also into the transverse fissure and to the velum interpositum. There were similar changes, but much less marked, at the base, round the medulla, and in the Sylvian fissures. The cerebral ventricles contained some slightly turbid, non-purulent fluid. There was some spinal meningitis, becoming evident at the lower part of the cervical enlargement and extending down to the cauda, being most marked on the posterior surface of the cord. In the larynx comparatively little was seen to account for the dyspnoea, but there was some cedema both of the false and true cords. There was no membrane. The heart weighed 15 oz.; the muscle substance was pale and showed fatty changes; the left ventricle was somewhat dilated. The spleen weighed 11 oz. and was soft and pulpy. The liver weighed 66 oz. and was normal in appearance. The kidneys weighed 18 oz. the pair; they were generally enlarged, the structure of their cortex being somewhat blurred; the capsule did not peel well—probably there was some increase of fibrous tissue. The other organs were natural.

CASE 5.—(Rigor followed by headache; in four days' time delirium, then coma, rotation of head and eyes to the left; albuminuria; death on the seventh day.) A man aged thirty-nine years was admitted into the Mark Ward of St. Bartholomew's Hospital under the care of Dr. Andrew in January, 1891. On Jan. 3rd, at noon, having been previously quite well, he shivered and could hardly get home. Since that time he had been in bed, complaining of his head, and had vomited once. On the 5th he shivered for hours, became hot afterwards, and sweated. On the 7th he was light-headed. On the 8th (after admission) he looked ill, with the face drawn and black sordes on the lips. He was delirious and restless; his breathing was noisy, 44; and the temperature was 102.5° F. The tongue was dry, with brown fur; the eyes deviated to the left. He lay with his head to the left, and seemed inclined to roll to that side. He did not understand or answer questions. On the 9th he was comatose and passed faeces in the bed; the urine (drawn by catheter)

contained albumen, but no sugar. His breathing was rapid, his colour more blue, the pulse 160 and very weak, and the temperature 101°. He died on the same day.

Necropsy.—In the subarachnoid space of the brain there was a thick layer of yellowish-green, purulent lymph covering the convexity of the brain on both sides. The same was observed in the interpeduncular space, over the surface of the cerebellum, and in the Sylvian fissures. The brain itself was normal. There was much lymph, like that on the brain, along the whole length of the spinal cord, except in the cervical region, where the membranes were only injected. The lymph was most abundant on the posterior aspect of the cord, though present on the anterior aspect also. The heart weighed 15½ oz., the left ventricle was thickened, but the valves were normal. The right suprarenal was cystic, consisting of a thickened, reddish wall, enclosing a cavity full of thick fluid. The left suprarenal could not be identified, and there was much hard, yellow fat in its place. The right kidney was rather small, pale, and soft; the left kidney was in its lower part like the right; in its upper part the renal substance was thinned and atrophic, and the capsule was very thick. The spleen was large, soft, and wrinkled.

CASE 6.—(There were vomiting and strabismus for about a fortnight before admission; after admission there were drowsiness, retraction of the head, and occasional strabismus, but no fever. The patient died about a month from the commencement of the symptoms. There was meningitis of the cord and the base of the brain and much hydrocephalus.) The patient, a female infant aged six months, was admitted into the Hope Ward of St. Bartholomew's Hospital under the care of Dr. Andrew in February, 1891. She was well till Jan. 1st, but had since then suffered from cough and loss of flesh. She had vomited during the last fourteen days, strabismus occurring about the same time. On Feb. 19th (when she was admitted) she looked very pale and the lips were rather blue. She was drowsy, the head being retracted and the eyes staring; there was slight internal strabismus at times. The temperature was subnormal and the pulse feeble and irregular. The optic discs were not quite clear, but there was no definite neuritis. The subsequent notes indicate very little change. The head was usually retracted; there was strabismus from time to time; the pulse was frequent, feeble, and irregular, and the temperature was normal or subnormal. On March 3rd the patient died.

Necropsy.—Beneath the cerebral arachnoid there was a very thick deposit of greenish lymph in the interpeduncular space; the Sylvian fissures were quite free. The cerebral ventricles were enormously distended with clear fluid. A thick deposit of lymph covered the spinal cord also, being most marked in the dorsal and lumbar regions, though visible in the cervical region also. There was no evidence of tubercle, and all the thoracic and abdominal viscera were normal.

CASE 7.—(There was a doubtful history of a blow on the head. The onset occurred with vomiting; there was nocturnal restlessness, and on the next day stupor with restlessness. On admission there was left-sided paralysis and the knee-jerks were absent; the coma was deepening, and death supervened with signs of pulmonary congestion and a tendency to Cheyne-Stokes breathing. There was moderate fever (99.5° to 102° F.). Death occurred on the fifth day.) The patient, a girl aged three years, was admitted into the Elizabeth Ward of St. Bartholomew's Hospital under the care of Sir Dyce Duckworth on Dec. 4th, 1891. On Dec. 2nd, on coming home from school, she said that a boy had hit her on the head. That day she vomited several times, and during the next night was restless, tearing her hair and throwing the bedclothes about. On the next day, Dec. 3rd, she again complained that a boy had hit her on the head. Since then she had not spoke rationally or recognised anyone, but had lain tossing about whining and muttering. On admission she was restless and tossing about. There was no rash and no evidence of injury to the head. She did not seem to notice a strong light. There was no strabismus, the pupils were normal, and there was no optic neuritis. She passed everything under her. There was weakness of the whole of the left side. Neither knee-jerk was obtainable. The plantar reflex was present on the right but absent on the left side. The temperature was 99.5°. On the 5th she was much worse. She lay quietly on her back. There was complete left-sided paralysis, including the upper face. There was conjugate deviation of the eyes to the right and scarcely any corneal reflex. The temperature in the morning was 102° and in the evening 100°. On the 6th, at 3.30 A.M., her complexion was dusky; there were tracheal râles; the respiration was 40,

with a tendency to Cheyne-Stokes rhythm; the pulse could not be felt at the wrist; the heart beats were 156; and the temperature was 102°. She died at 10 A.M.

Necropsy.—There was no sign of injury either to the skull or elsewhere. On either cerebral hemisphere, beneath the arachnoid, and principally on the lateral and upper surfaces, there were large tracts of thick, yellow, purulent lymph. At the base there was some lymph covering the infundibulum and optic commissure, and a little on the under surface. There was none in the Sylvian fissures (till the lateral aspect of the brain was reached), nor were the lips of the fissures adherent. No tubercles were seen, nor did the appearances suggest tuberculous disease. The convolutions were flattened, and the surface of the brain was pale and sticky and bulging through the incised dura mater; yet there was no excess of fluid in the ventricles or any inflammation of the choroid. The sections of the brain were pale and soft. As for the spinal cord, dirty fluid came from within the dural sheath. In the lumbar and lower half of the dorsal region, on the posterior aspect of the cord, there was purulent lymph in the arachnoid, like that on the brain. There was none on the anterior aspect of the cord or on either aspect of the cervical and upper dorsal cord. The nerve roots of the lumbar and lower dorsal regions were red and swollen. The cord itself was somewhat softened at the periphery, but otherwise normal. Coming to the chest, there were one or two oldish adhesions of either pleura. There was reddening and roughening of the left pleura. No pneumonia existed. One small caseous gland was observed at the root of the left lung. The abdominal organs were normal. Dr. F. Andrewes kindly examined the cord for micro-organisms and gave me the following (verbal) report: "No diplococci pneumoniæ. Numerous bacilli, which would not grow in cultures. The only organisms which could be got to grow resembled the streptococcus pyogenes aureus."

CASE 8.—(The patient had had a convulsive fit in the street and was brought in semi-comatose after this. A second fit followed, with persistent coma, deviation of the eyes to the left, and a rise of temperature. Death supervened in about thirty hours.) The patient, aged fifty-two years, was placed under the care of Dr. W. S. Church in February, 1892. On Feb. 17th, while walking in the street, he was noticed by a policeman to fall in a fit. According to the description given there were tonic and subsequently clonic convulsions, with frothing at the mouth. When brought to the hospital (5.30 P.M.) he was semi-comatose and unable to tell his name, or, indeed, to speak. The stomach was washed out; there was no alcohol in it, though it appeared from the statements of his friends that he was a heavy drinker. While being put to bed in the Surgery Ward he had another fit, with clonic contractions and afterwards rigidity. The temperature was then 103.2° F. He remained unconscious all night; there was conjugate deviation of the eyes to the left. The temperature next morning was 105.6°. He was moved to the John Ward. On the 18th he lay unconscious, with the limbs rather rigid; he moved the limbs when stimulated, but not in a purposive way; there were frequent slow movements of the fingers like those of athetosis. The temperature was 102.2°; the respiration was 48 and laboured; the pulse was rapid and of poor volume. The knee-jerks were normal; the plantar reflexes could not be obtained, and he did not swallow well. At 9.30 P.M. the temperature was 104.3°, the pulse was much weaker, and the respiration was more laboured. He died during the same night.

Necropsy.—There were the remains of an old ulcer on the left leg, but it was perfectly quiescent, and the bone beneath it was not diseased. There was a purulent effusion into the subarachnoid space, extending over the whole convexity of the brain; in the anterior half, for some two or three inches from the longitudinal fissure outwards, it formed quite a thick sheet, which could be peeled off. A similar, though less marked, effusion covered the interpeduncular space and the upper surface of the cerebellum. There was none to speak of in the Sylvian fissures. No tubercles were visible. In the choroid plexus of the ventricles there were several small cysts with soft yellowish contents. The brain itself was normal. There was no ventricular effusion. Coming to the spinal cord, there was turbid fluid within the dura mater. Beneath the arachnoid there was a purulent effusion like that on the brain, but more liquid. There was none on the anterior surface of the cord. Of the posterior surface, the cervical region was nearly free, but the whole dorsal region was covered with effusion; the surface of the lumbar enlargement was reddened, but showed no effusion.

The cord itself was natural on section. The apex of the right lung was puckered, containing some fibroid spots and a little grey translucent tubercle. The spleen was very soft and not notably enlarged. The liver was probably fatty. The left supra-renal contained a few small spots of quite doubtful nature. One kidney contained a curious cyst, in which was some slimy stuff having the colour of faeces.

CASE 9.—(The onset occurred with vomiting and headache; the latter was persistent and occipital, and there was pain in the neck, back, and limbs. The neck was stiff and tender. There were slight strabismus and nystagmus, and incipient optic neuritis (?). The patient suffered from wandering at night and tremors of the hands. Death occurred in about twelve days from the onset.) The patient, a young woman, was admitted into the Faith Ward of St. Bartholomew's Hospital under the care of Dr. W. S. Church in November, 1892. A week previously she had had a so-called "bilious attack"—viz., retching, vomiting, and headache—and since then constant occipital headache and gradual onset of pain in the neck, back, and arms. The neck was stiff for three or four days. The bowels had been confined for the last week. On Nov. 29th the temperature was 101.4° F., the pulse 76 and soft, and the respiration 30. The neck was stiff. There was tenderness over the third and fourth cervical vertebrae, and the hands were tremulous. There was slight internal strabismus. There were jerky lateral movements of the eyes on fixing any object. The urine showed a cloud of albumen (which cleared up, however, the next day). On the 30th she had a sleepless night, with much wandering, the temperature rising to 103.6°; in the morning it was 102.6° to 103.8°. The tongue was red and angry; there was a fleeting erythema about the chin and face; the hands were more tremulous, and the neck was still tender. During the next few days there was little change, save that the temperature fell somewhat (102°, 100°, 98°), while the pulse became more frequent on the whole. The abdomen became distended. The fundus of either side exhibited some old patches of choroiditis; the discs were ill-defined and woolly, but did not exhibit distinct optic neuritis. She died on the evening of Dec. 4th.

Necropsy.—There was found a large thrombus in each branch of the pulmonary artery; there was a little scanty lymph on the left pleura, with ecchymotic spots on the pleura, and there were two small infarcts in the left lower lobe. There was meningitis at the base of the brain—viz., a well-marked layer of thickish lymph covering the pons Varolii. Coming to the spinal cord, a well-marked layer of greenish-yellow lymph covered the posterior surface of the dorsal and lumbar regions. The arachnoid elsewhere—viz., in the cervical region and on the anterior aspect of the cord—was rather difficult to separate from the cord and perhaps a little thickened; but the meningitis as a whole was an acute process.

CASE 10.—(There was a history of headache and general pain, the patient a day later being found unconscious in the street. He made a very partial recovery, right hemianæsthesia ensuing. Later another fit occurred, followed by right facial palsy (!) and retraction of the head. Death supervened in about three days from the first symptoms.) The patient, a man aged fifty years, was admitted into the Mark Ward of St. Bartholomew's Hospital under the care of Dr. Andrew in February, 1893. It appeared that on the night of Thursday, Feb. 2nd, the patient had complained of headache and pains all over him. Nevertheless he took breakfast the next day and was supposed to have gone to work as usual. Nothing more could be found out about him till the evening, when he went into a coffee-house where the people thought him a little strange in manner. Next he was found in the road near the coffee-house, quite unconscious, some slight convulsive movement of the right hand being noticed. On being brought to the hospital (about 8 P.M.) he recovered consciousness to a limited extent and managed to raise himself and stand up, but did not answer when spoken to and only looked up with a dazed manner. He appeared to have less power in the right arm than in the left. His right conjunctiva was less sensitive than the left. He constantly put his left hand to his occiput. The temperature was 97° F. A pint of urine was drawn off, containing a considerable amount of albumen. He was put to bed in the Surgery Ward. His temperature rose to 101°; the pulse was regular and of moderate frequency; the respiration was unembarrassed, but irregular, being sometimes shallow, sometimes deep. He was found to have right hemianæsthesia. He passed his urine into the

bed. He was restless all night, but not violent, or quite unconscious of his surroundings. During the next day (Feb. 4th) he did not alter materially, except that he noticed a friend and seemed to recognise her. On the 5th, at 3 A.M., there was twitching of the left arm and face, with stertorous breathing. At 11 A.M. the face was drawn to the left. The right eye did not close (right facial paralysis). Retraction of the head set in, and the knee-jerks were found to be increased. The temperature rose from 100.2° in the morning to 104.4° at midnight, and he died early on the 6th.

Necropsy by Dr. H. M. BOWMAN.—Under the cerebral arachnoid, all over the convexity, there was a considerable amount of turbid fluid. The same was observed at the base, extending over the pons and lower surface of the medulla and about two inches up the right Sylvian fissure, which was rather glued up. As for the spinal cord, the dura mater was healthy, but on opening it there was found to be a considerable amount of pus beneath the arachnoid and an excess of turbid fluid; this condition extended down as far as the cauda equina. At both apices of the lungs there were dense fibrous adhesions, there being calcareous deposits in either apex, with fibroid thickening and puckering. The heart was large and flabby and weighed 14½ oz.; the right ventricle was much dilated. The spleen was small and healthy. The kidneys were large, weighing 8 oz. each; the capsule separated badly, tearing the cortex, but the section of the kidney looked healthy. No pus was found in any joint.

Remarks.—The symptoms in these ten cases may be summarised as follows. Pain in the head was complained of by all those patients who were not too ill or too young to complain; pain in the back twice, in the limbs once, and in the abdomen once. There was fever of variable degree in all cases save one (Case 6), which did not come under observation at the outset. There was no special type of fever. One case (Case 4) terminated with hyperpyrexia; a rigor is mentioned twice only. Vomiting occurred in five cases, and usually at the commencement of the illness. Retraction of the head developed, either a few days after the onset or at a later stage, in three instances, and a stiff neck (probably a minor degree of the same thing) once; rigidity of the limbs was observed only once or twice. Twitchings of the limbs, face, or tongue occurred about four times; actual convulsions only twice. The state of the knee-jerks, examined in five cases, was: absent twice, exaggerated once, and normal twice. Strabismus was frequent, occurring four times—sometimes early, sometimes late; ptosis occurred once, and doubtful nystagmus once. The fundus oculi was examined five times, and twice only was there a (doubtful) optic neuritis. There was no conjunctivitis, iritis, or panophthalmitis (as in Dr. Gee's case quoted above), and no otitis, deafness, or vertigo. As to paralyses, conjugate deviation of the head or eyes (whether this was paralytic or spasmodic) was observed four times, hemiplegia once, hemianæsthesia once, and doubtful facial paralysis once. Mental symptoms were frequent. There was restlessness or irritability in four cases, noisiness or delirium in three; there were hallucinations of vision in two cases, and drowsiness occurred sometimes. Early coma occurred twice. The pulse was usually frequent, being irregular in three instances. The respiration before death was apt to become irregular or to assume the Cheyne-Stokes type. Abnormal states of the tongue (red, dry, furred, &c.) are noted four times, diarrhoea is noted once, and constipation once. No mention is made of a *tache cérébrale*. In one prolonged case (Case 2) there was marked emaciation. Albuminuria occurred four (or, counting a transient appearance, five) times; but in three of these cases the state of the kidneys was questionable. Glycosuria did not occur; but that it may do so is shown by a case of (cerebral) meningitis admitted under the care of Sir Dyce Duckworth in 1891. A man was brought in comatose, his urine being loaded with sugar; diabetic coma was therefore suspected, but post mortem he was found to have purulent meningitis.⁴ As to eruptions, a petechial rash was seen once (Case 2), a "fleeting erythema" once, and herpes facialis twice. The ages of the patients varied from six months to fifty-two years. Thus the commonest features of the disease were: fever of sudden onset and without obvious cause, headache, vomiting, restlessness, and even delirium, and soon afterwards strabismus and retraction of the head, and, finally, death, which was often preceded by irregularity of respiration

or by coma, within a week. But some cases lasted longer—e.g., one for twelve days and two (Cases 2 and 6) between three and four weeks. In both of these latter hydrocephalus was found post mortem; possibly in Case 2 the recurrence of vomiting was the clinical indication of this. Further, as above mentioned, three, or perhaps four, cases (not included in these ten) recovered. In Case 8 the sudden onset, early coma, and rapidly fatal course (thirty hours), without the development of diagnostic symptoms, reminds one of the "type foudroyante," described by writers on epidemic meningitis. A clinical relation to other diseases only appears twice. In Case 2 the patient had whooping-cough, and had been exposed to measles; and in Case 4 the meningeal symptoms developed during an attack of acute faucial and laryngeal mischief, both diseases being possibly the result of some one unrecognised infection. Only one or two remarks need be made about the post-mortem examination results. Pneumonia was never found; pleurisy (in one case with pulmonary infarcts) twice only; the spleen was enlarged only in two instances, and in these the enlargement may have depended on other causes than the fever (Cases 4 and 5). As to the meningitis itself, the purulent character and the distribution of the cerebral exudation sufficed to distinguish it from tuberculous meningitis; the spinal exudation, though sometimes enveloping the whole cord, usually affected the posterior surface chiefly, and the dorsal and lumbar regions rather than the cervical.⁵ Hence, to exclude a spinal meningitis it is not enough to look around the foramen magnum, or even at the cervical region of the cord, but the whole length of it must be examined.

Upper Wimpole-street, W.

A STUDY ON THE TREATMENT OF NON-MALIGNANT STRICTURE OF THE PYLORUS.

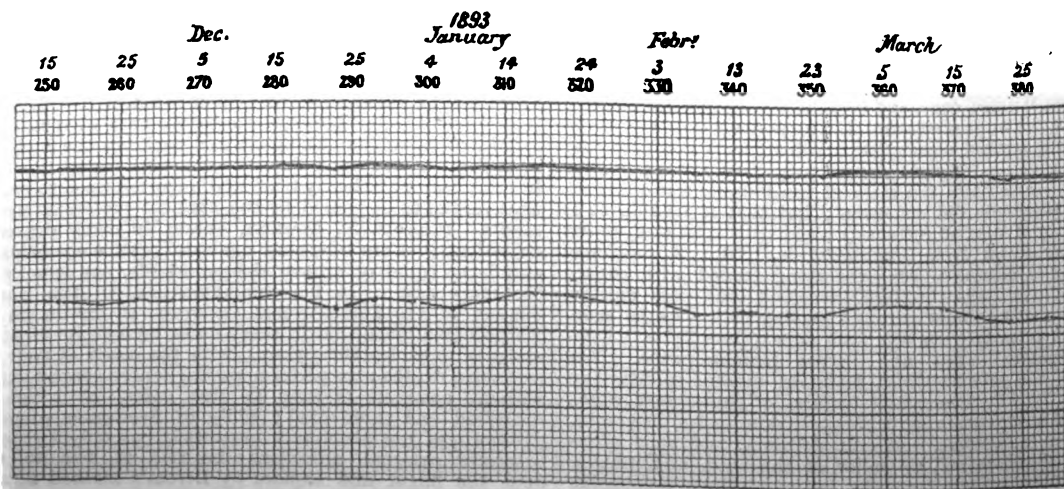
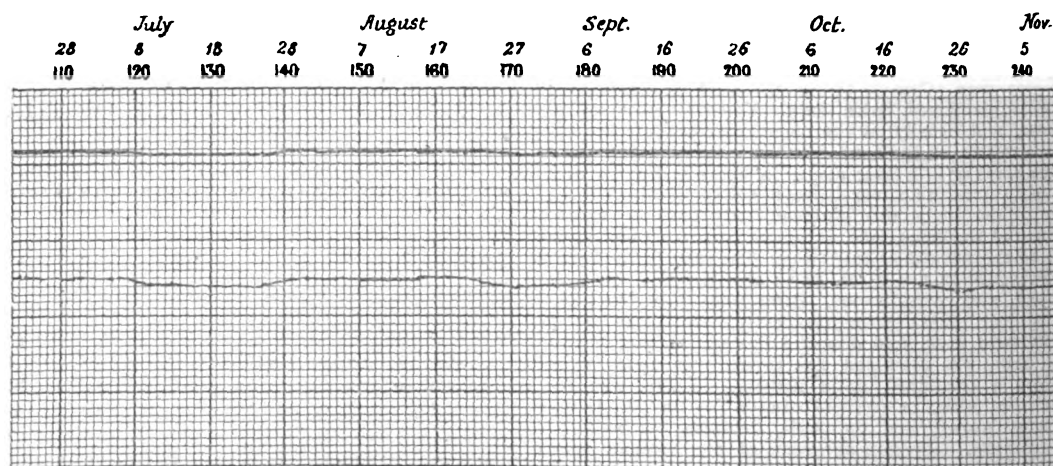
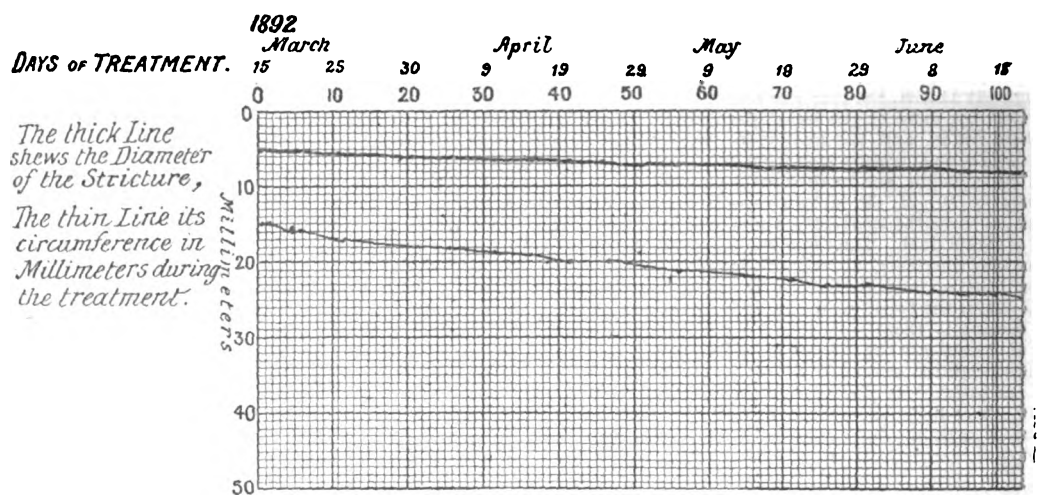
By PROFESSOR A. OGSTON, M.D. ABERD.,

SURGEON IN ORDINARY TO HER MAJESTY THE QUEEN IN SCOTLAND;
SURGEON TO THE ABERDEEN ROYAL INFIRMARY.

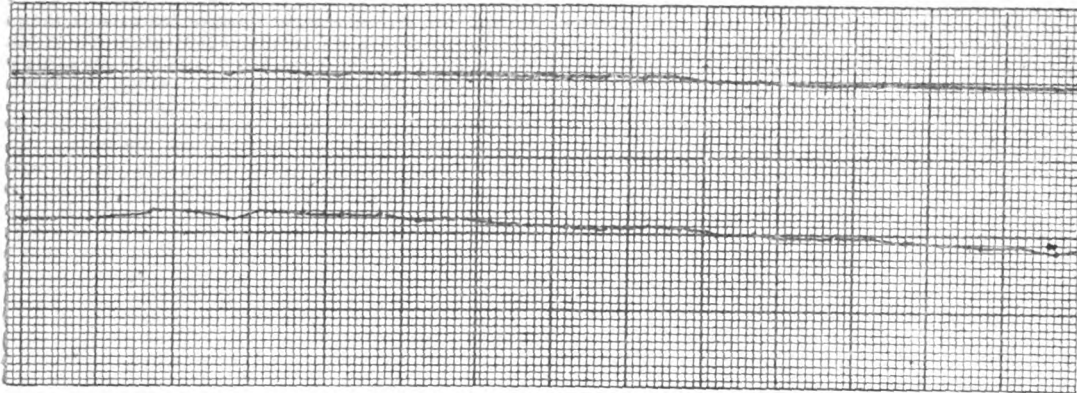
I COULD have wished before publishing the method of treating pyloric stricture without operation, with which this communication deals, that further experience of its efficacy had been obtained beyond that which it is in my power to offer. But in my experience non-malignant stricture is rare, and to wait for fresh cases on which to try it might entail almost indefinite delay. I have accordingly decided to make it known as it now stands, that it may, if they think well of it, be tested by others. It is now twelve years or thereby since Loreta drew attention to this stricture of the pylorus by his proposal to treat it by opening the stomach in front, introducing the forefinger into the wound and insinuating it into the stricture so as to expand it from within. The operation was a good deal practised, and with success. But most at least of the cases were only temporarily benefited, as recontraction slowly and surely occurred. And some of the cases were found to be due to the cicatricial contraction of former inflammations and adhesions around and external to the pylorus itself, and hence to be unsuitable for finger dilatation. Mikulicz's improvement upon Loreta's operation, that of incising the strictured bowel longitudinally and suturing the incision so as to form a transverse line of union and widen the bowel, has not been sufficiently tried and reported upon to enable a final verdict to be passed by the surgical profession upon its merits. It probably, however, shares to some degree the objections that are advanced against Loreta's operation. It entails an equal or greater danger to life, and is not suited for every case. In his communication to the Surgical Section of the International Congress at Berlin in 1890 Billroth mentioned that in seven cases he had, for cicatricial stenosis, to excise the pylorus, with the result of four cures and three deaths; to perform partial wedge-shaped excision without complete division in five cases, of which two recovered and three died; while of five cases where the pylorus was not absolutely narrowed, but only twisted by extensive external adhesions, he had in two to introduce the finger and explore by Loreta's method in three,

⁴ For two cases of glycosuria in meningeal hæmorrhage vide F. E. A. Colby, St. Bartholomew's Hospital Reports, xxviii. (1892), p. 153.

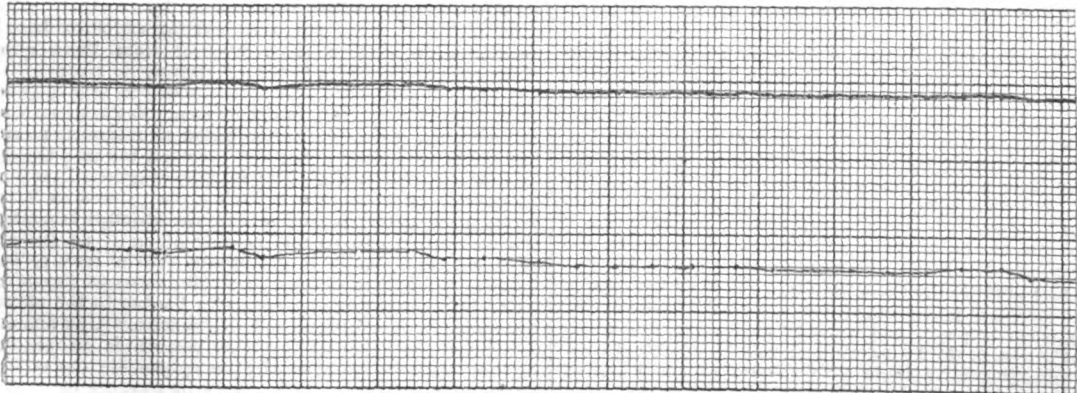
⁵ Klebs: Virchow's Archiv, vol. xxxix. Trevelyan: Brain, vol. xv., p. 104.



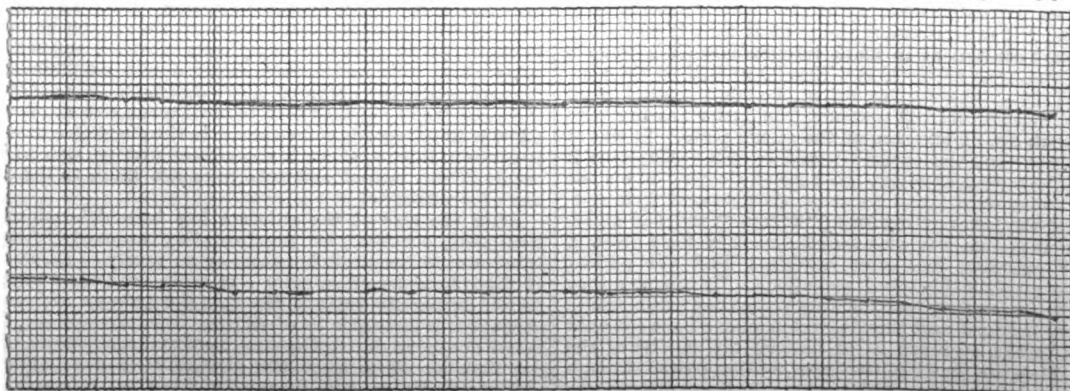
<i>April</i>			<i>May.</i>			<i>June</i>			<i>July</i>			<i>Aug.</i>	
<i>4</i>	<i>14</i>	<i>24</i>	<i>4</i>	<i>14</i>	<i>24</i>	<i>3</i>	<i>13</i>	<i>23</i>	<i>3</i>	<i>13</i>	<i>23</i>	<i>2</i>	<i>12</i>
390	400	410	420	430	440	450	460	470	480	490	500	510	520



Sept.				Oct.				Nov.			Dec.			1894 Jan.
22	1	11	21	1	11	21	31	10	20	30	10	20	30	0
530	540	550	560	570	580	590	600	610	620	630	640	650	660	670



			<i>Febr.</i>			<i>March</i>			<i>April.</i>			<i>May.</i>		
<i>10</i>	<i>20</i>	<i>30</i>	<i>8</i>	<i>18</i>	<i>28</i>	<i>10</i>	<i>20</i>	<i>30</i>	<i>9</i>	<i>19</i>	<i>29</i>	<i>9</i>	<i>19</i>	<i>29</i>
680	690	700	710	720	730	740	750	760	770	780	790	800	810	820



all dying, the other two recovering after the adhesions, which were less extensive, had been separated. These are rather discouraging results, and it has further to be remembered that many of those who suffer from this stricture are in debilitated and broken health, from the dilated and weakened state of the stomach, and from the attacks of hepatitis and peri-hepatitis that have accompanied or caused the disease. Any method, therefore, that offers a fair prospect of effecting a cure without the risks that an operation entails is worthy of consideration; and such a method, now to be described, I have carefully tried, and from my experience of it am inclined to recommend in suitable cases of the disease. The method suggested itself in the following way. Having had to deal with a few cases of pyloric stricture I was led by the considerations mentioned above to consider whether some safer plan than operation might be devised for overcoming the stricture. Why should a pyloric stricture, or for that matter any non-malignant and therefore cicatricial stricture, of the intestinal tract not be dilated and cured by similar methods to those by which we dilate and cure those of the urethra and rectum? Why not pass through them something that would act in the same fashion as a bougie? It is evident that the passage through the stricture of a hollow viscus in any part of the body of the liquid or pulpy matters it contains does not dilate the stricture from within like a bougie. We have daily evidence of this in the œsophagus, rectum, and urethra. It is probable indeed that, in some instances at least, the narrowing of the part is rendered less rapid by this agency, and that in the stationary urethral strictures sometimes met with in elderly men it may arrest the stricturing process and prevent its becoming absolute. But the influence of liquid and pulaceous matters must be limited in causing dilatation by the fact that their chief energy is exerted on the walls of the viscus above the narrowest part of the stricture, where we find the dilatation that exists above all such narrowings. The moment the mass is propelled into the jaws of the stricture it experiences a diminution of pressure, owing to there being none below, and it escapes through without exercising more than a feeble influence on the narrowest part of the stenosis. Thus it fails to exercise any such pressure there as causes the local irritation, followed by moderate inflammation, softening, and yielding, which we believe to be the mechanism by which a bougie dilates. But since bougies are out of the question in non-operative treatment of the pylorus, it seemed probable that if solid spheres of the diameter of bougies suspended in the food were passed through the stenosis they might act like bougies and produce the same results. Whether the natural forces operating in propelling onwards the food would suffice to carry them through, and whether unforeseen difficulties might not arise, could be ascertained only by an actual trial. The first attempts were made with spheres of sugar coated with various substances which it was supposed would resist the digestive process until they had passed the pylorus; and several materials were made use of to form the spheres. But nothing was found suitable save gutta-percha rolled in the hand into globules, and these arranged into sizes by passing them through a gauge for urethral or œsophageal bougies. Gutta-percha spheres are easily and simply made, and, being of almost the specific gravity of the stomach contents, have no tendency to settle in the lowest part of the stomach or to float in the uppermost strata of its contents. The gauges chosen were those on the French scale, which gives a greater selection of sizes and a more gradual dilatation; but so sensitive is the pylorus that it was afterwards found convenient to mark intermediate sizes between two numbers, thus between, say, Nos. 20 and 21 would come 20+ and 21-, the former being one that passed with difficulty through No. 20 aperture, the latter passing with ease through No. 21 aperture of the gauge plate. It was at first thought that the spheres would be most efficacious if given by the mouth at night, the patient sleeping on his left side; but they were found to cause sleeplessness from restlessness of the lower extremities ("fidgets") and bad nightmares, so that this was abandoned, and they were given in the early morning, just after breakfast, and the patient allowed to go about his usual avocations. By this plan they caused less discomfort, and the only precaution taken was to forbid very hot food and liquids, which might have softened the gutta-percha so much as to destroy the rigidity of the sphere. They are found in the fæces, having passed through the alimentary tract without alteration. It is not difficult, by observation of the patient's symptoms, to form an approximate

idea of the size of the pylorus in cases of stricture. If the pylorus be narrowed at all this is at once shown by the discomfort or suffering that follows the eating of large morsels of tough food, such as beef and mutton. Moderate mastication does not reduce such morsels full of tough fibrous structures to such a size as to permit of their passing through the orifice without inconvenience, and the patient experiences uneasiness or prolonged cramp-like pains, extending from the right epigastric region to the angle of the left scapula, an hour or two after eating, and continuing until they are relieved by a gurgle of flatus and food passing into the duodenum. Hence such patients avoid these articles of food instinctively, and select softer substances, like fish, or more finely divided foods, like minced meat, puddings, and pulpy articles of diet. If ordinary minced meat can be taken without discomfort, the stricture is certainly greater in size than a No. 10 or No. 20 urethral bougie of the French scale. If the orifice is less in size than this, only liquid and pulpy foods, containing no solid particles larger than boiled rice, can be taken without distress.

These data are of assistance in commencing the treatment as by regarding them the approximate size of sphere to use can be pretty well ascertained. The treatment is best commenced by administering immediately after breakfast a sphere which is considerably less in size than the estimated size of the stricture, the patient swallowing it like a pill in a mouthful of some cold liquid. If it causes no feeling of uneasiness in the pyloric region a larger size should be given next morning, and so on. When the effective size has been reached it will be known by its causing within twelve hours uneasiness or soreness in the pyloric region, and perhaps cramp-like pains in the stomach, until it has traversed the stenosed portion of the bowel. These pains are very characteristic, and as the treatment has to be guided by their appearance and nature a more minute description of them may be useful. After a sphere which just fits the pyloric stricture has been swallowed, a certain time, varying from three quarters of an hour to five or six hours, or even more, elapses without any unusual sensation, and then discomfort gradually comes on in the pyloric region, in nature something between a stitch and a cramp, and often accompanied by intermittent cramp-like pains extending along the stomach towards the spleen or left scapular angle. The former sensations I presume to be caused by the sphere irritating the pylorus as it passes through the stricture, and where the stricture is a long one the discomfort can be felt passing along it as the sphere advances, and finally it disappears with a rush or two of flatus as the sphere escapes into the duodenum beyond; the latter intermittent cramp seems to be due to the efforts of the stomach to overcome the obstruction. The amount of discomfort experienced by the patient is in proportion to the tightness with which the sphere fits the stricture; should this not be excessive, a slight soreness at most may be felt on the following day, or even for a day or two, when food is passing the narrow part; but if it be excessive the pain may be sharp, knife-like, or, like the pain of ulceration, may be accompanied by tenderness on pressure over the pylorus, and may continue for a day or two, or even a week or more. In this case it is generally associated with heartburn and acidity, and is significant, I incline to believe, of small fissures or abrasions of the stricture having been caused, for the employment of alkalies and bismuth, to keep the contents of the stomach alkaline, is very serviceable in overcoming it. Such attacks occurring during the dilatation treatment demand care lest the size of the spheres be unduly increased before they have completely subsided, and until this takes place it is well to rest satisfied with maintaining the dilatation already obtained, and administer only spheres of the same dimensions, or even to use them a size smaller and allow it to retrograde somewhat. In the chart of a case that is given in this paper such a condition may be seen to have occurred and proved obstinate from the 120th to the 280th day of treatment.

After the size of the stricture has been determined the treatment consists in administering successively larger spheres at intervals of five days, or as nearly so as possible. If the sphere be of suitable size some uneasiness ought to be felt during its passage through the pylorus, and on this account it is advisable to administer it in the morning, for it is less annoying during the movement and occupations of the day than at night, when the discomfort is more observed, and gives rise to bad dreams, nightmares, insomnia, and sometimes nerve pains, resembling the pricking of a needle,

in the right lower extremity, or it may be in both lower limbs. Next day slight pyloric discomfort is usual after food, but is unimportant unless it become severe or prolonged, in which case the next sphere should be used of the same or a less size. The spheres produce no uneasiness in their passage along the rest of the intestinal tract. The accompanying chart exhibits the progress of cure in a case where the stenosis was due to inflammation and perihepatitis. It will be seen that the progress is very slow. I incline to think that it never can be otherwise in these cases if safety is to be ensured; but my experience is confined to four cases, of which that charted here was the only one satisfactorily observed. In it 810 days were required to dilate the stricture from sixteen to forty millimetres of circumference, as shown by the thin tracing, or from five up to fourteen millimetres diameter, as shown by the thick tracing. Sometimes, it will be observed, the dilatation made no progress for considerable periods, perhaps because great caution was observed. But on the whole the dilatation made steady progress, and the patient's condition and symptoms improved along with it. The dilatation has not been pushed beyond 40. French bougie scale, as with care in diet this is sufficient for the wants of the patient, and he suffers only when he eats unminced flesh. One of the other cases proved to be cancerous, and the treatment was given up. In the third case I could not learn the result, as the patient passed out of my hands; and in the fourth case the stricture was so small that only water, milk, and beef-tee could be taken, the stomach was dilated, and the patient died before it could be ascertained if even the smallest sphere had passed through. Operative measures were steadily declined in this case by the patient. No post-mortem examination was permitted, but I imagine the stricture was barely large enough to admit an ordinary probe. This shows that only where the treatment is early begun is there a good prospect of its succeeding. But in such cases, where the patient has the necessary intelligence and perseverance and the medical attendant can watch over, encourage, and direct him, I am satisfied that the results can surely be counted upon, and a perilous and doubtful operative procedure avoided. The method may possibly be employed with advantage in other strictures of the intestinal tract, but I have had no opportunity of employing it in any such.

Aberdeen.

A CASE OF CHOLECYSTENTEROSTOMY WITH THE USE OF MURPHY'S BUTTON.

By WILLIAM PAUL SWAIN, F.R.C.S. ENG.,

SURGEON TO THE SOUTH DEVON AND EAST CORNWALL HOSPITAL.

A SHORT time ago the notes of a case of successful enterectomy with the use of Murphy's button were published in THE LANCET.¹ I now record the history of a still more interesting case which has since been under my care. For want of a better term I have called the operation which I am about to describe "cholecystenterostomy," a fearful name indeed, and one which, after all, may not be applicable to the case in point. On Oct. 12th, 1894, I was asked by Dr. Clay to see a girl aged seventeen years, who had been brought to him for the first time on the preceding day. She had been ailing more or less for two years. In January, 1894, she became jaundiced, and a swelling formed under the liver. She had been treated by two medical men with mercury and other drugs: but in spite of their treatment the jaundice deepened and the swelling under the liver increased in size. They appear then to have told the parents that nothing more could be done, whereupon Dr. Clay was consulted. The condition of the patient when I saw her was briefly as follows. She was very deeply jaundiced; the urine was the colour of porter. The stools were white. She suffered no particular pain, had not been sick, and throughout her illness neither of these symptoms had been present. She was much emaciated. There was a large abdominal tumour reaching from below the liver to the brim of the pelvis and across the abdomen obliquely about three inches to the left of the umbilicus. The whole swelling was absolutely dull on percussion,

and the merest tap on any part of it produced a thrill of fluctuation. Taking the sum of her symptoms we had little doubt that it was a distended gall-bladder, although the possibility of a hydatid cyst was suggested. I aspirated the tumour with a full-sized aspirating needle, and we immediately perceived the characteristic fluid of distended gall-bladder. As if to make assurance doubly sure, towards the latter end of the aspiration a gall-stone struck the cannula repeatedly, and the click of impact was heard by Dr. Clay, the father, and myself. The quantity of fluid withdrawn was six pints and one ounce. No evil results followed the aspiration, and I did not see the patient again until Oct. 17th, when I found that the swelling was as large as ever. We then advised that an operation should be performed, and for this purpose she was removed to the private home for patients, and on the following day I operated on her. An incision about four inches long was made a little to the outer side of the right linea semilunaris. The integuments were very thinly spread over the tumour and the peritoneum was rapidly reached and opened. The cyst, being exposed and packed well round with small sponges, was tapped with an aspirating needle. Fluid of the same character as before was withdrawn, but to the amount of seven pints and twelve ounces. On passing the hand into the abdominal cavity the cyst was found to be firmly adherent to the intestine in all directions, the transverse colon being spread out over it. A small opening was now made sufficiently large to admit the forefinger. The cyst wall was very thin, but tough. Externally it was of a dark chocolate colour; the cut edge was rather white, and the interior bile-stained. On introducing the forefinger, after a prolonged search no gall-stone could be found, although, as previously stated, the presence of one could not be doubted. The finger passed upwards and inwards towards the liver into a passage with a crescentic opening, which I believed to be the common bile-duct; but a probe passed down far beyond the finger impinged on no stone. Up to this time I had no doubt but that I was dealing with a huge dilated gall-bladder; but my astonishment may be appreciated when I found, in the course of further investigation as to the relation of the parts outside the cyst, the gall-bladder in its normal position, somewhat pale in colour, undistended by bile, and containing no gall-stones. The question now arose as to what course was the best to pursue. To remove the cyst was impossible. To stitch it to the parietes seemed to condemn the patient to a perpetual fistula, or, at any rate, to very prolonged drainage. I decided, therefore, to accept the other alternative and to attach the cyst to the intestine. Without much trouble I succeeded in drawing up a good coil of jejunum close to the duodenum. My great difficulty was to get a good surface on the cyst. In order to do this I had to tear through the two layers of the mesocolon, and even then the surface obtained was limited. The cyst was then rapidly attached to the bowel by Murphy's button in the manner described by him.² The small original opening made to explore the cyst was closed with Lembert's sutures. The peritoneal cavity, which had been thoroughly well packed with sponges, was now cleansed and the pouch to the outer side and beneath the liver drained with a Keith's tube. The wound was closed with silk-worm gut sutures. On Oct. 19th the patient had no sickness. She had passed a good night. The temperature was 99° 2' F. Flatus was passed by the rectum. About three drachms of bloody fluid were drawn off from the drainage-tube. She was fed per rectum with beef-tee and brandy enemata. On the 20th the temperature in the morning was 100° 8', in the evening 99° 8'. Only two drachms of bloody fluid were drawn off from the drainage-tube. Small quantities of peptonised milk were given by the mouth. On the 21st the bowels were freely opened at 8 A.M., the evacuation being stained with bile. The urine was much less highly coloured. On the 23rd the bowels were again opened freely, soft pulsatious evacuations quite natural in colour resulting. The urine was less highly coloured. The jaundiced appearance was much less pronounced. On the 25th the stitches and the drainage-tube were removed. The bowels were open. From this date the record is somewhat monotonous. She was sufficiently well to be removed to her home on Nov. 20th. The jaundice has disappeared, the urine and evacuations being normal. No return of the distension has taken place. She has but one unfavourable symptom, and that is an occasional rise of temperature at night to 101° or 102°. Up to this time (Dec. 10th) the button has not appeared.

¹ THE LANCET, Oct. 20th, 1894.

² THE LANCET, Sept. 15th, 1894.

Remarks.—The question that arises is, What was the nature of the case? Up to the time of the operation, and even after it had been commenced and the cyst was opened, there was every reason to believe that it was a gall-bladder enormously distended. But the discovery of the gall-bladder in its normal situation and, if anything, less than its normal size put this idea at once out of the question. That it was a hydatid cyst pressing on the duct could not be entertained, as the fluid drawn off at the first aspiration had been carefully examined and no indications of hydatids had been found. Neither could I find any cancerous tumour of the pancreas or elsewhere which by occlusion of the duct might have produced the symptoms. I believed at the time that I had to deal with a distended duct. I have in vain searched all the records at my command and have found nothing quite resembling this case. In THE LANCET³ there is the record of a case of distended and sacculated common duct. The duct had ruptured, and the slit was plugged by a movable gall-stone. In the Reports of the Bristol Medico-Chirurgical Society⁴ there is a case more resembling the present one. It was that of a child four years of age who had suffered from recurrent attacks of jaundice, and for a year before death with an abdominal tumour in the region of the gall-bladder. Cholecystotomy was performed, and twenty-nine ounces of greenish fluid were removed. The patient died a week after the operation, and at the post-mortem examination it was found that the sac of the tumour was a greatly distended common bile-duct. There is one other explanation. Was it a case of double gall-bladder? That such a condition may exist is demonstrated by the report of a post-mortem examination of a girl aged eleven years in whom a double gall-bladder was found to exist.⁵ The non-appearance of the button may be accounted for by its falling back into the large cyst instead of being carried into the intestine. One can hardly think that it can be a source of danger if so situated. It seems to have done its work effectually and established a permanent opening between the cyst and the intestine.

Plymouth.

Clinical Notes: MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AN EXTREME CASE OF ANGINA LUDOVICI ARISING FROM AN INFLAMED CARIOUS TOOTH; DEATH WHILE UNDER OPERATION.

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SHEFFIELD.

THE patient, aged thirty-one years, was brought to the Union Infirmary, Fir Vale, having for ten days previously complained of frequent attacks of pain due to a decayed tooth. Two days before admission a swelling under the jaw was noticed, which on the following day grew much larger and in the evening had extended to the front of the neck, and had forced his tongue up so much that he could hardly swallow or speak. When I saw him at the hospital lodge he was in a very distressed condition, only able to whisper and quite unable to swallow, the saliva dribbling from his mouth. The whole of the tissues on the front of the neck were immensely swollen, hard and brawny to the touch, and not pitting on pressure. There was no redness of the skin or signs of pus anywhere. The swelling extended from the angles of the jaw on each side forwards under the chin, and downwards over the front of the neck on to the thorax as far as the upper border of the third costal cartilages. The jaw was immovably fixed and the tongue forced up against the roof of his mouth. His respiration was greatly embarrassed, and the temperature was 103.5° F. He was at once put to bed, and I saw him half an hour later, when he appeared worse than on admission. He was sitting up in

bed breathing with much difficulty, and it was evident that he might be suffocated at any moment. Having explained matters to him and obtained his consent to an operation, chloroform was administered on a piece of flannel stretched over a metal frame. He passed under its influence without much struggling, only two drachms being required to render him unconscious. The inhaler was then removed, and I made an incision through the swollen tissues, commencing at the symphysis of the jaw, and carried it down the centre line of the neck as far as the lower border of the larynx. It was necessary to carry the incision to a depth of between an inch and a half and two inches to cut quite through the affected tissues. The parts were quite pale, very hard to cut, and no pus or discharge of any kind came from the wound. While making subsidiary incisions into the swelling on the wall of the thorax the patient's respiration became still more embarrassed, chest movements continuing, but no air entering the lungs, his face became cyanosed and the radial pulse became imperceptible. I at once opened the trachea, the operation being rendered difficult from the swollen state of the parts, and introduced a tube. Artificial respiration was begun, and all the ordinary methods of inducing respiration employed, including the passage of a catheter into the trachea through the wound and the inflation of the lungs through it, together with the injection of ether into the heart muscle, but the patient never made another attempt at breathing, although we persisted for nearly half an hour in our attempts to resuscitate him. Before commencing the operation we had discussed the advisability of performing a preliminary tracheotomy, but decided that incision of the swollen tissues would be sufficient to relieve him. At the inquest the jury returned a verdict of "Death from suffocation while undergoing an operation for cellulitis." No post-mortem examination was allowed.

Fir Vale, Sheffield.

TREATMENT OF BURNS.

BY S. GROSE, M.D. ST. AND., F.R.C.S. ENG.,
HON. MEDICAL OFFICER, MELKSHAM COTTAGE HOSPITAL.

LATELY it has fallen to my lot to treat certain severe burns, typical cases frequently met with when the clothes catch fire, in which extensive injuries to the third and fourth degrees are inflicted on the trunk and extremities. Lint soaked in warm carbolic carbolised oil with a thick envelope of cotton-wool is, perhaps, the best application for the first week; but the nauseous smell of the linseed oil, combined with the fetor of purulent discharge, is horribly offensive and helps to keep up the tendency to diarrhoea common at this period, which is frequently attributed to duodenal ulcer. Let me recommend the following alternative treatment. Dress the vast, beef-red, profusely suppurating wounds with gall ointment, thickly spread on strips of lint, or with ointment of galls and opium, or boric ointment having about a drachm of finely powdered galls to the ounce; wrap thickly in cotton-wool and bandage firmly, not loosely. Improvement is rapid, the smell diminishes, and the sufferer finds the treatment comforting. The admirable effect of gall ointment in coagulating albumen and restraining luxuriant granulations would seem to suggest it as a usual dressing in these cases; but none of our authorities mention it, nor have I seen it used excepting by myself. Indeed, the only mention of galls for treatment of burns that can be found in the "ever faithful, ever sure" Neale's Digest is an article written in 1852, claiming that ointment of galls prevents contraction of cicatrix. It is generally recommended that bandages in these cases should be lightly put on. But the fungous granulations are certainly more effectively restrained by firm pressure over elastic cotton-wool; and there can be no question that this treatment is more merciful than the application of nitrate of silver, whilst equally useful.

Melksham, Wilts.

A CASE OF SNAKE-BITE TREATED BY INJECTIONS OF STRYCHNINE; RECOVERY.

BY M. PERCEVAL, L.R.C.P. IREL.

AS the value of strychnine in cases of snake-bite is being much discussed at the present time, perhaps the following case may be of sufficient interest to publish in

³ THE LANCET, May 6th, 1882.

⁴ Bristol Medico-Chirurgical Journal, Jan. 10th, 1894.

⁵ THE LANCET, Dec. 4th, 1886.

THE LANCET. On Dec. 18th, 1894, a man was brought a distance of eighteen miles to my house at 4.30 A.M. suffering from snake-bite inflicted four hours previously. He was bitten when asleep, being aroused by the snake "chawing" at his lower lip, and on awakening he found a brown snake 2 ft. 6 in. long hanging from it, which he pulled off with his arm. On first being seen the patient was pale; the whole surface of the body was bathed in a cold perspiration, the pupils were widely dilated, the pulse was barely perceptible, rapid, irregular, and intermittent, and the breathing of a heavy sighing quality; characteristic marks of a bite were plainly seen on the lip. He was carried from the buggy, being unable to stand, was vomiting, and complained of extreme giddiness and as if about to die. I injected one-tenth of a grain of strychnine, repeating the injection twice at intervals of ten minutes. After the second injection marked improvement was evident in the pulse; after the third injection there was still further improvement of the pulse; the intermittency was gone, the rate was 96, and the breathing easier. He expressed himself as feeling better. Although the giddiness had improved he was not able to stand. I continued injections of one-fifteenth of a grain at intervals of twenty minutes with still greater improvement in the pulse and breathing; there was no further perspiration after the fourth injection. In an hour he was able to walk with support, but complained again of giddiness; the gait became staggering, and the pulse again almost imperceptible. These symptoms improved in a few minutes on his assuming the recumbent position. At the end of another half-hour I was able to admit him to hospital. During the day he only complained of drowsiness. At 6 P.M. he was attacked with vomiting and threw up a pint of fluid of a coffee-ground character. It has been pointed out that persons suffering from snake-bite are liable to hæmorrhage from mucous surfaces, but this is the first appearance of such in my experience, although I have now treated seven cases with strychnine, with recovery. On Dec. 19th and 20th he complained of stiffness of the jaws and nausea. He was discharged on the 24th well.

Isisford Hospital, Queensland, Australia.

PERFORATION OF APPENDIX CÆCI BY A PIN; GENERAL PERITONITIS, ENDING IN SUDDEN DEATH.

By PTOLEMY A. COLMER, M.R.C.S., L.R.C.P. LOND.,
MON. SURGEON, YEovil DISTRICT HOSPITAL AND DISPENSARY.

ON Oct. 3rd, 1894, about 7.45 A.M., I was called to see a boy seven and a half years of age. On my arrival at the house a few minutes after eight I was told the boy had died before the messenger could have reached my house. I examined the body, which was that of a well-nourished and apparently healthy lad, and nothing could be noted with the exception that the abdomen was a little distended. I obtained the following history from the mother. On Sept. 30th he appeared to be poorly, vomiting and complaining of pain in his abdomen, which she put down to be a bilious attack and administered a dose of castor-oil, which was repeated on the following day as the previous dose had taken no effect. On Oct. 2nd, the boy being no better, she went to a druggist, who prescribed a powder (one grain of calomel and six grains of sugar), which was immediately vomited, and in the evening, as this also took no effect, a second powder was given. On the following morning the boy appeared better, and took a cup of tea and milk about 7.30, immediately after which he wanted to have the use of his bowels. He was taken out of bed and placed on a chamber, when he passed a little fluid motion, after which, being replaced in bed (to use the woman's words), he seemed to alter and died in about four minutes. The following morning I made a necropsy on the coroner's order and found the following interesting condition. On opening the abdomen there were signs of recent general peritonitis, which were especially marked around the cæcum; the vermiform appendix was much thickened and enlarged, and presented a perforation through which was projecting a sharp point and within which could be felt a hard body. On opening the appendix after removal I found a body much resembling a date stone and apparently composed of hardened fecal matter, from one end of which was protruding a sharp point evidently that of a pin. The

other organs were natural with the exception of the bases of the lungs, which were congested. I may say there is no history to be got of the boy having swallowed a pin, although there is a history of his having swallowed a shot about last March.

Yeovil.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

VICTORIA HOSPITAL FOR CHILDREN.

ACUTE INTUSSUSCEPTION IN INFANTS.

(Under the care of Mr. T. P. PICK and Mr. H. F. WATERHOUSE.)

THESE cases form a contribution to the series of cases of intussusception to which we recently drew attention in the columns of THE LANCET. The first one is especially interesting, as it adds another to the small list of successes after operation for intussusception in children which Mr. Roughton has tabulated. We have before referred in THE LANCET to two other cases which were successfully subjected to operation and which are not included in the list named, cases under the care of Mr. Barrow and Mr. Berry respectively at the Royal Free Hospital. Mr. Pick in his remarks agrees with our expressions as to the treatment of intussusception, but emphasises the importance of disturbing the parts as little as possible. We fear that in a large number of the cases where patients are submitted to operation the consent of parents is obtained at such a late stage of the illness that adhesions are apt to prevent the surgeon reducing the condition by merely intra-abdominal manipulation, and in other cases the swelling of the intussusception acts as an insuperable obstacle to reduction unless the affected part is manipulated outside the abdomen. This swelling is sometimes present within a few hours after the onset of the intussusception. For the notes of these cases we are indebted to Mr. D. A. Chaning Pearce, house surgeon.

CASE 1.—A healthy, well-nourished infant, one year of age, was admitted into the Victoria Hospital for Children on the evening of Feb. 5th, 1895, under the care of Mr. T. Pickering Pick. The mother stated that for two days the infant had seemed poorly, had vomited three or four times, and had passed motions which were loose, but not frequent. About twenty hours before admission a little blood was noticed in the motion for the first time. Since then there had been no motion, and vomiting had only occurred once. An hour before admission a red mass was found protruding from the anus, but was easily pushed back by the mother. A good deal of blood was passed at the same time. On admission the child was found to be well nourished and not at all collapsed. The abdomen was not distended, and on palpation a distinct tumour could be felt without difficulty, extending along the whole course of the colon. Upon examination per rectum a mass could be felt in the rectum, extending down to the anus, which was quite unmovable. The child was at once placed under the influence of chloroform, and Mr. Pick proceeded to try reduction by manipulation through the abdominal wall, the pelvis being raised and the mass in the rectum pushed up as far as possible by the finger of an assistant. By this means the intussusception could be felt to be reduced as far as the splenic flexure of the colon, but beyond this reduction could not be accomplished. Inflation of air was next tried, but appeared to produce no result whatever and was therefore quickly abandoned. Warm water was now tried and the bowel filled under considerable pressure until the whole of the colon could be felt distended with the fluid. This was thought at first to have been successful as the mass disappeared from the rectum, but as soon as the water was

allowed to flow away the intussusception returned and could be felt per rectum and through the abdominal wall. It was believed now that nothing short of operative interference would be of any avail, and abdominal section was decided upon; and as the child seemed in spite of all these proceedings to be in a pretty fair state it was decided to proceed with the operation at once. A small incision was made in the middle line of the abdomen, below the umbilicus, of sufficient size to admit the finger and thumb. These digits were introduced into the peritoneal cavity, and the rectum was grasped at its upper part just below the intussusception; by a squeezing movement of the finger and thumb the mass was readily pushed back through the whole length of the colon and speedily reduced. The cæcum was now brought up to the external wound in order to make sure that the ileo-cæcal valve was quite clear; its coats were noticed to be thickened and infiltrated. At no period was any intestine allowed to escape from the abdominal cavity. The wound was sewn up and dressed and the infant sent back to its cot. The whole operation occupied from an hour to an hour and a half. The child was considerably collapsed for some hours, but took food (raw meat juice, with a few drops of brandy) readily and without any vomiting. It passed normal motions during the next twenty-four hours and its recovery was rapid and complete.

CASE 2.—A fat, rickety male infant aged nine months was admitted into the Victoria Hospital for Children on Feb. 11th, 1895, under the care of Mr. H. F. Waterhouse. The child had been given a "cooling powder" the night before and on the morning of admission much blood-stained mucus was found on the napkin. There had been no motion since and vomiting had occurred twice. Upon examination the rectum was found to be occupied by a large intussusception, which could also plainly be felt through the abdominal wall. An anæsthetic was at once given and the colon inflated with air. This was probably successful, as the intussusception disappeared from the rectum and could no longer be felt through the abdominal wall. In order, however, to make matters certain, Mr. Waterhouse filled the bowel with water at a moderate pressure, and as it was found to distend the colon readily as far as the ileo-cæcal valve it was concluded that the intussusception had been reduced. The child was therefore sent back to bed and made an uninterrupted recovery.

Remarks by Mr. PICK.—These two cases, which have occurred quite recently in the Victoria Hospital for Children, appear to me to be worthy of record in connexion with the very interesting case under the care of Mr. Roughton given in the Hospital Mirror of THE LANCET of Feb. 23rd. Mr. Roughton attributes the recovery after laparotomy in his case to the early performance of the operation without previous attempts at inflation or injection. These two cases seem to show—(1) that it is possible to cure some of these cases by simpler means than laparotomy, and (2) that in spite of prolonged attempts at reduction recovery may take place if abdominal section has eventually to be resorted to. With regard to the first point, it must be admitted by all surgeons who have much experience of these cases—and, indeed, Mr. Roughton admits it himself—that many cases of intussusception may be reduced by manipulation, by inflation, and by injection, especially when these remedies are applied early. I could from my own experience give records of several of these cases. Surely, then, it is better to try those measures which hold out a prospect of cure first before resorting to such a very formidable operation as abdominal section in an infant during the first twelve months of life. The amount of shock produced in these little infants is so considerable that the probabilities of a successful issue to a case of laparotomy are very slight, even if the operation is undertaken under the most favourable circumstances and at the earliest possible time, and when no previous attempts at reduction have been made. And even if these attempts have been made and have not been successful, the first case recorded seems to show that a successful result may be obtained. In my opinion a great point in connexion with the operation of abdominal section for intussusception in children is to take every care never to allow any of the intestine to escape from the abdominal wound. If it does there is always difficulty in getting it back, involving damage to the gut in the necessary manipulation. A small opening should be made in the abdominal wall, just sufficiently large to admit the finger and thumb. These should be immediately introduced and the intussusception sought for. When found the gut must be seized below the intussusception, and

by a gentle kneading and pushing movement the intussusception can generally readily be reduced without bringing it out of the abdominal cavity.

DERBYSHIRE ROYAL INFIRMARY.

A CASE OF ADVANCED MENINGITIS; CRANIOTOMY;
RECOVERY; REMARKS.

(Under the care of Dr. C. A. GREAVES.)

FOR the notes of this case we are indebted to Mr. C. H. Taylor, house surgeon, who remarks that the chief points of interest in the case are, firstly, that the symptoms were all those of tuberculous meningitis, and secondly, that the relief of intracranial pressure caused them all to subside. Whether this case was tuberculous or not, the suggestion naturally occurs, Should any cases of meningitis be allowed to die without the surgeon being called to give relief or to demonstrate that the cause is beyond his skill?

A girl aged thirteen years was admitted into the Derbyshire Royal Infirmary under the care of Dr. Greaves on Oct. 9th, 1894, with a medical man's certificate stating that she was suffering from enteric fever. The family history was doubtful as to tubercle. There had been no previous illnesses. The patient had always been a bright, intelligent girl, but during the previous few weeks had been quiet and subdued and difficult to rouse. She fell twice at school, but did not complain of any injury after the falls. Her parents attributed her "fainting attacks" to over-work. During the last week she had been ill in bed. On admission the patient was thin and emaciated, and her bones were very prominent. There was a hectic flush; the tongue was dry, and she lay with the head retracted, almost comatose. She could only swallow liquids with difficulty. The pupils were dilated, the right not reacting to light. There was double optic neuritis, most marked on the right side. Nothing was to be noted in the chest. The abdomen was retracted; *taches cérébrales* were present; there were no spots. The stools were natural in appearance. The temperature was 100° F.; the pulse 112, small and weak; and the respiration 32. During the next three weeks the notes show a persistently high temperature, 101° to 105° F., with occasional morning remissions, increasing emaciation and feebleness, increasing difficulty in taking nourishment, and a gradual lapsing into a condition of profound coma. After a consultation with Mr. Curgenvin it was decided, with the parents' consent, to open the cranial cavity on the right side to ascertain if the condition could be in any way relieved. On Oct. 30th, after the usual toilet preparations, a triangular flap of skin was dissected up behind the right ear. In doing this the mastoid vein communicating with the lateral sinus was cut across and required plugging, so dilated had it become from backward pressure. A small trephine was applied just above the level of the lateral sinus, exposing the dura mater, and on incising the latter a very large quantity of clear fluid escaped. A finger was then inserted, but beyond ascertaining that the brain had been pushed over towards the middle line nothing abnormal could be made out. The opening was then enlarged in the direction of the mastoid vein in order to better control the bleeding from it, but in doing so the lateral sinus was wounded and required plugging. As the hæmorrhage had been pretty considerable nothing further was done, and the patient was promptly put back to bed. For the next five days the oozing of cerebral fluid though the plugs was considerable, and the temperature still kept up slightly. The plugs were removed on the fifth day, and during the next few days the patient became slightly conscious and took nourishment better. During the next three weeks she gradually regained strength and consciousness, interrupted by three attacks of severe headache accompanied by fever, relieved by passing dressing forceps up through the wound into the cranial cavity, so as to allow some fluid to escape. The wound had healed completely by Dec. 27th. The patient has now (Jan. 1st) regained all her brightness and intelligence, and is physically a picture of health.

SUPERANNUATION ALLOWANCE.—Mr. William Hall, M.R.C.S., lately medical officer for the Tottenham district of the Edmonton Union, has been granted a superannuation allowance of £100 per annum.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Immunisation of Horses.—Adjourned Debate upon the Pathology of Diphtheria.

An ordinary meeting of this society was held on March 19th, the President, Dr. PAVY, being in the chair.

Mr. W. ROBERTSON read a paper on the Immunisation of Horses. He described the methods employed in the immunisation of horses for the preparation of diphtheria antitoxin, and the process of bleeding the animals when immune. He mentioned that suitable horses of the heavy draught class could be purchased for sums varying from £3 to £7. On purchase the horse is isolated and tested, generally twice, with mallein and then with tuberculin. If satisfactory, the animal is placed with the others. The injections are usually practised in front of the shoulder, due precautions being taken to ensure the sterilisation of the syringe &c. employed and of the skin over the site of puncture. It is seldom that the horse exhibits any uneasiness during the operation. Very small quantities of the toxine are used at first, usually not exceeding 1 c.c. The admixture of Gram's solution of iodine was soon discontinued as it was found to act as an irritant. The local lesion following the first inoculation is as a rule well marked. It presents itself as a diffuse soft swelling slightly painful on pressure, which reaches its greatest size in from six to seven hours, and persists for two or three days. The temperature follows the same course, falling to normal coincidentally with the disappearance of the local lesion. When this has taken place the inoculation is repeated, being raised by degrees, if the local and general effects are slight, until in seven weeks the dose has reached 50 c.c. This dose is given three times a week for a fortnight, and if no reaction is produced the dose is raised to 100 c.c. three times a week also for a fortnight, and then 200 c.c. for the same length of time at the same intervals. The period of time allowed to elapse varies in different animals, no inoculations being practised until the local swelling and the temperature have returned to normal. He observed that no two horses are alike in their power of resistance to the action of the toxine, and the disappearance of the local lesion and the fall of the temperature are also very variable. He has never known a horse to refuse its food after inoculation even when the temperature was very high and distinct rigors have occurred. Local necrosis of tissue was noted only four times out of many hundred inoculations. When thought to be sufficiently immune the horse is allowed a clear week's rest before being bled. The jugular vein is sought for, raised by pressure with the fingers, and an incision half an inch in length made through the skin and panniculus carnosus. The cannula is no longer inserted directly into the vein, but having been uncovered it is connected to Kitasato's flask by a piece of quarter-inch rubber tubing, and the cannula is then carefully inserted, avoiding introducing it into the sheath. When the flask is filled it can be replaced by merely pinching the rubber tube. The amount of blood that can be removed varies with the size of the animal, the average quantity being ten litres, though much more has been taken with impunity. The reason for not drawing off more is that if more than ten litres are withdrawn the last four or five litres do not clot properly, and the serum which separates is of a pink colour. The cannula is then withdrawn, pressing on the vein with the finger, and the wound is sponged with a 1 in 20 carbolic acid solution, the edges of the wound being fastened with two catgut sutures, dusted with iodoform and dressed with sterilised cotton-wool dipped in collodion. There has never been any difficulty in stopping the bleeding, and the vein has not once been obliterated. The flasks employed are conical in shape, being the ordinary two-litre and four-litre filtering flasks fitted with a rubber cork and two pieces of glass tubing, one of wide calibre to allow escape of air, the other of narrower dimensions, over the orifice of which is slipped the rubber tubing connected to the cannula. The tubes and flasks are duly sterilised in the steamer. After clotting of the blood the filled flasks are placed in a cool cellar, and in twenty-four hours a large amount of serum will have separated. The branch tube of the flask is then flamed in a spirit lamp, the wool plug removed, and the serum poured off into sterilised Winchester, the branch tube being replugged. The

amount of serum obtainable from the same quantity of blood varies greatly, the average yield being 50 per cent.

Dr. WASHBOURN, continuing the adjourned debate upon the Pathology of Diphtheria, said that Dr. Hunt's observations confirmed those of Roux with reference to the free access of oxygen favouring the production of serum. Dr. Hunt apparently considered the alkalinity of the cultivation to be the essential factor, the oxygen merely preventing the formation of acid; but additional facts were required before this view could be accepted. The rapid decline of toxicity in the cultivations after fourteen days was, he said, an important practical point, and he asked for further details in this respect. In reference to the dying out of the cultivations in nine days under free access of oxygen when methylene blue was used, he suggested that this substance acted deleteriously upon the cultivation in other ways than by simply carrying oxygen. He commented on the statement that a cultivation which yielded a powerful toxine did not necessarily contain bacilli of great virulence, and asked for further explanations. It must be clearly understood that the toxine is a specific proteid poison, but it was not necessarily the proteid which was the poison, but only its disposition and its active and specific quality. He thought that in discussing this matter Dr. Hunt had exceeded the boundaries of pathology. He discussed the alleged non-formation of tetanus antitoxin in fowls, and suggested that Dr. Hunt's failure to obtain a diphtheria antitoxin after injection of toxine was due to the period at which the blood was withdrawn not being suitable. He thought that the excretion of the toxine in the urine when given in large doses might account for the scanty production of antitoxin, and he pointed out that the antitoxic power of the blood was not sensibly diminished after removal of a quantity of blood equal to that contained in the whole body. He asked for further evidence of the view that this was due to a store of toxine present in the various organs. After stating his views in reference to the specific nature of antitoxin, he discussed the difference between infection with the living bacilli and with their toxines, adding that he considered the experiments in this respect somewhat unsatisfactory. He urged that an animal could not be said to be immune simply because it survived an inoculation, real immunity meaning that the animal suffered neither local nor constitutional effects after inoculation. He alluded to the presence of living bacilli in the throat of patients long after the symptoms had subsided, and raised the question whether the bacilli were still secreting toxines, and if so, whether their effects were being annulled *pari passu*. He mentioned in reference to bacterial associations that Dr. Goodall and he himself had failed to discover any relationship between such association and the severity of the case, though the presence of the streptococcus certainly appeared to explain certain complications. The majority of the so-called septic cases of diphtheria were, he thought, due to direct poisoning with diphtheria toxines, and he inclined to the view that the influence of associated streptococci had been much exaggerated. He concluded by stating in reference to the varieties of diphtheria bacilli that the short variety, which rarely produced a fatal effect in guinea-pigs, was the most usual form of the pseudo-diphtheria bacillus.—Dr. G. SIMS WOODHEAD said he had been struck by the differences in the quantity and activity of the poisons produced by the diphtheria bacillus in different broth cultures, even when the same culture was used. He had tried different methods of growing the bacillus to see the conditions in which the toxines were produced. He first used Roux's method, which yielded fairly virulent toxine directly from the membranes, the bacillus being of the long variety. When sown in flasks containing a much larger quantity of fluid kept constantly agitated they found that, although the virulence of the growth was not interfered with, the bacilli still living at the end of a month, the amount of toxine was small. When however, much thinner layers of fluid were used, as in Aronson's method, there was not only an increase in the growth of the organisms, but in the amount of toxine formed. It appeared therefore that there were two distinct sets of conditions: first, an increased supply of oxygen to the bacilli themselves, and, secondly, the action of a considerable quantity of oxygen on the production of the bacilli. If the action of the oxygen could be limited to the bacilli themselves without acting on the toxines they would have the best conditions possible. He pointed out that the poison formation of the bacilli might be quite distinct from their virulence, and it did not follow that if the bacillus did not live very well in the

tissues, that therefore it would not form large quantities of the poison. In regard to the alkalinity of the cultures he pointed out that it was not merely the alkalinity, as was proved by the fact that alkalinity obtained by the addition of soda solution did not give as good results as that resulting by oxygen. There was evidently something special in this alkaline quality. Moreover, keeping the solution alkaline did not increase the capacity of the organism for producing toxins, although they appeared very rapidly after the alkaline stage, or rather after the acid stage was past. He observed that it was the universal experience that great differences obtained in the resistance of different animals to toxins. He presumed that an animal which withstood the largest amount of toxin must take a longer time to give antitoxin, and that was his experience. He recalled the experiments with tetanus toxin, showing that if the relative immunity of a given animal were overcome by large doses of toxin a much better serum was obtained than was the case from a comparatively susceptible animal, a fact which held good in regard to the immunisation of the horse with diphtheria toxin. This was evidently a much more complicated matter than had at first been suspected. Roux and Viard, although maintaining that the action of the toxin was distinctly through the cells in the production of antitoxin serum, found that this action was very rapid, for by injecting toxin into a small animal, and then taking the blood from the ear, one could obtain a certain amount of antitoxin at once. Either the action must be spread out over a large number of cells or there must be some action directly on the serum. He agreed that it was better to give smaller quantities of toxin at shorter intervals after the first few inoculations, and he was making experiments in that direction. He mentioned that out of fifty post-mortem examinations of diphtheria patients in only five instances had he discovered the diphtheria bacillus in the lungs. In a large number of cases he had found micrococci in the pneumonic patches, and in only four had tracheotomy been performed. He admitted that it was almost impossible from the examination of a few tubes to say what organisms were present in a given case of diphtheria. In about 5 per cent. of the cases the bacillus was not found in the first cultures though present in abundance in the second, or it might be identified in the first culture, absent in the second, and present again in the third. The presumption was that with every care they must have been overlooked. He suggested that by-and-by, when physicians compared the clinical features of their cases with the bacteriological reports, given, for the most part, in ignorance of the nature of the case, much valuable information would be forthcoming. He believed mallein to be absolutely reliable, but he pointed out that it was the progressiveness of the swelling, along with a rise of temperature, that made the diagnosis reliable, not the mere swelling. Post-mortem examination had confirmed the mallein diagnosis in several cases in which glands were positively denied by the veterinary surgeon. Tuberculin was perhaps not quite so reliable, but if properly used it was also a valuable test. In conclusion he pointed out that the diphtheria bacillus was a far more protean organism than was thought. He had seen wedged shape, pointed, long, short, and divided club shape—in fact, a very large number of forms of this same bacillus. He said the short form was met with most commonly in convalescing patients.—Mr. LENNOX BROWNE showed two specimens of the so-called pseudo-bacillus of diphtheria: the first from a child who recovered under one dose of antitoxin serum; the second from a male patient aged twenty-five, whose symptoms recovered those of lacunar tonsillitis rather than diphtheria, though bacteriological examination revealed the presence of the Klebs-Löffler bacillus of the long variety in an almost pure culture. He made a good recovery without paralysis. Three months later this patient's tonsils were removed, and two days later the wound was seen to be partially covered with patches of pearly-grey exudate, which on removal exposed a freely bleeding surface. A culture from the exudate on blood serum showed sparse colonies of segmental bacilli of the short variety. A subculture showed colonies still more sparse, consisting mainly of cocci; and a further subculture failed to produce any bacilli, the whole growth consisting of cocci. Eleven days later, though the wound had healed, a culture from the surface yielded an almost pure growth of staphylococcus aureus. He remarked that the term "pseudo-bacillus" was a most unfortunate one, for these specimens being typical of what was usually found in similar circumstances proved

that they were true bacilli which were undergoing a process of attenuation in development and virulence. He also protested against any importance being attached to the presence of the "Brisou" coccus, this being an organism frequently found in the secretions of the oral and respiratory passages quite irrespectively of diphtheria and absolutely without either diagnostic or prognostic significance.—Mr. BOKENHAM said he had observed that the antitoxin prepared by Klein's method protected the animals inoculated with it against both the diphtheria bacilli and their toxins.—Dr. HUNT, in reply, said he had found that diphtheria cultures cultivated on thin layers of media which had air passed over them were living and well after the lapse of a month. Those bacilli which had been cultivated in a larger bulk of fluid through which air had been bubbled showed much less vitality at the end of a month. This seemed to show that if the bacilli were allowed to take their own air as they required it the products formed were more virulent. He thought there was a great future before the inquiry into the increased natural resistance of animals when they were treated with foreign proteids. He had examined fifty-eight specimens of diphtheric membrane, and in fifty-six of them the bacillus was virulent; he had never found a pseudo-bacillus. The action of associated streptococci was to increase the virulence of diphtheria bacilli, while when associated with staphylococci cases of diphtheria ran a milder course.—Mr. W. ROBERTSON, in reply, said that mallein was very reliable as a test for glands: if it gave a positive result it was certain that the animal had glands; if it gave a negative result it was not so certain that the animal had not glands. He had had no personal experience of the use of tuberculin in tuberculosis of horses, but in cattle, if tuberculin was properly used, the test was a reliable one.

OPHTHALMOLOGICAL SOCIETY.

Double Optic Atrophy with Peculiar Visual Fields.—Filaria Loa.—Traumatic Cataract with a Foreign Body embedded in the Lens.—A Form of Iritis not usually recognised.—Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held on March 14th, the President, Dr. ARGYLL ROBERTSON, F.R.S.E., being in the chair.

Dr. GEORGE OGILVIE read notes of a case of Double Optic Atrophy with Peculiar Visual Fields. The patient was a man aged fifty-seven, who was a sorter of cigars and a moderate smoker. His vision failed in December, 1893. He had formerly had epileptic fits and came of a family with a very neurotic history. The movements of the eyes were normal; the pupils acted sluggishly to light. In October, 1894, the vision of the right eye was $\frac{1}{2}$, and of the left fingers at ten feet, with eccentric fixation. Mixed astigmatism was present in both eyes. He had floating opacities in the vitreous. Both optic discs were pale, and the retinal veins were tortuous; there was a congenital crescent in both eyes. The right visual field was contracted for white and colours. There was contraction of the left visual field and complete inferior hemianopia. There was neither sugar nor albumen in the urine; and no history of syphilis or alcohol. His knee-jerks were exaggerated; some ankle clonus was present. The character of the visual fields pointed to change in the optic nerve itself; it was a question if it were a primary atrophy or the result of a neuritis. From an old Moorfields Hospital letter in his possession it was found that he had attended there for optic neuritis. In February, 1895, the upper and inner quadrant of his right visual field was missing, giving an appearance of right lateral hemianopia.—Dr. JAMES TAYLOR referred to the history of past optic neuritis as being a sufficient explanation of the changes observed in the fundus. He thought it was unnecessary to assume any lesion in the occipital lobes, but he asked whether the vitreous opacities present in this case were not pathognomonic of syphilis.—Dr. A. BROWNE asked if there were any possibility of the existence of lead poisoning.

The PRESIDENT communicated further notes of a case of Filaria Loa which he had brought before the society in October last. After removal of the parasite the patient was not troubled again for six weeks; on Feb. 6th the worm was felt and seen again, and was sought for in vain. Two days later a swelling appeared in the right temporal region. On Feb. 13th the worm was felt beneath the right upper eyelid;

it wriggled across and then remained coiled up there. An incision was made, and after some dissection a fine filamentous body, smaller than the ordinary filaria, was found; this was identified later as part of the expressed oviduct; a well-formed filaria was found deeper in the tissues, with its oviduct protruding. The blood had been examined many times in the last six months, but no traces of the filaria or its embryos could be found. The patient had occasional swellings of the skin of the arm, such as often occurred among residents in Old Calabar. As to the origin of the worms in this case, although the patient had been careful about her drinking water, for ten days before leaving Old Calabar she had been too ill to purify the water, and she might have become infected by impure water then.

Dr. W. SPENCER WATSON described a case of Traumatic Cataract with a Foreign Body embedded in the Lens. The patient, a man aged twenty-nine, had several injuries of the right eye, but only accidentally discovered that the sight was affected some time after the more serious injury. He was not aware that a foreign body had entered his eye. The foreign body was seen, however, in the cataract, which was dealt with first by dissection, and subsequently by linear extraction, the foreign body being removed at the second of these operations. Everything went smoothly, and when the patient was seen a year later there was a normal-looking pupil, and vision remained good. Mr. Watson pointed out that the time for extraction when a foreign body was present required very careful regulation, the gradual softening of the lens being watched until it became of a gruelly consistence, and the operation performed before it had become fluid.—Dr. DRAKE BROCKMAN referred to the case of a Hindoo target-keeper who received a splinter of lead from a bullet in the left eye. There was a wound of the cornea, the lens was opaque, and embedded in it was a small piece of lead, fixing down the iris and projecting into the anterior chamber. The portion of iris transfixed was removed with the lens, and the eye recovered good vision with the aid of a convex glass.—Mr. MARSHALL related a somewhat similar case.—In reply to Mr. JOHNSON TAYLOR, Mr. SPENCER WATSON said the exact nature of the foreign body was not ascertained.

Mr. W. A. BRAILEY described a peculiar Form of Iritis not usually recognised. After a summary of cases he arrived at the following conclusions:—That a late Iritis sometimes follows an acquired syphilis, and that the average time of its attack does not vary much from thirteen years from the primary sore. That such Iritis is generally double-sided and its usual form an Iritis serosa—that is to say, an Iritis, or rather an Irido-cyclitis, with comparatively little tendency to the formation of posterior synechia, and accompanied by dots on the posterior corneal surfaces and also by a tendency to secondary glaucoma. That the patient may show other late manifestations of syphilis, as in the cases shown, of which one has ozena and the other choroiditis disseminata. That a similar late Iritis may follow an inherited syphilis, and that the average age of the subject of it, though varying within wide limits, approximates to twenty-one. That in inherited, as in acquired, syphilis the usual form is a double serous Iritis. The Iritis may, however, be of a much severer type, with varying tension and with the occlusion of the pupillary area with a layer of lymph, such lymph being, however, comparatively free from the iris at the pupillary edge. That such an Iritis may also be accompanied by larger and more cloudy dots on the posterior surface of or perhaps deep in the cornea, such deposits with the others resulting in the formation of a dense non-vascularising triangular plaque deep in or behind the lower part of the cornea. That the Iritis may more rarely be of a different type, either the gummatous with occasionally peripheral anterior synechia, or the adhesive, leading even to occlusion of the pupil and consequent secondary glaucoma. That apart from the Iritis which simply attends and is quite secondary in degree to severe interstitial keratitis, the late serous Iritis of inherited syphilis may show a close relation to interstitial keratitis. Thus a slight interstitial keratitis may be followed after a distinct interval by a gummatous Iritis, while the Iritis with blocked pupil, deep triangular corneal plaque, and varying tension may be accompanied by fine filmy or denser and more widely spread opacities in other parts of the cornea. Notched teeth are rare, or perhaps even uniformly wanting, in the pure Iritis serosa of late inherited syphilis, while they are present in increasing frequency as the disease approximates in its associated characters to interstitial keratitis. It is very noticeable that the subjects of the late serous Iritis of inherited syphilis

are often of extremely good physical development.—Mr. HIGGINS was of opinion that one of Mr. Brailey's cases appeared very like an old case of interstitial keratitis, and inquired whether such an intercurrent attack could have occurred.—Mr. SPENCER WATSON wished Mr. Brailey to point out the novel features in these cases; they had been familiar to him, and he believed they were generally recognised.—Mr. JESSOP referred to the presence of punctate dots on the anterior surface of the iris in one of the patients, which resembled those present in a case he had recently brought before the society.—Mr. LANG said that in one case there existed a ring synechia between the periphery of the iris and the cornea, which must impede filtration; others presented isolated anterior synechia.—Dr. HERN inquired whether the Iritis was primary or an extension from keratitis.—Mr. BRAILEY said the Iritis was independent of keratitis. The boy to whom Mr. Higgins referred had been continuously under observation, and the white plaque present had been seen to develop from a keratitis punctata, and not from interstitial keratitis.

The following cases and card specimens were shown:—

Dr. SYDNEY STEPHENSON: An Improved Test Type.

Dr. A. BRONNER: Wire Eye Shields for use after Cataract Operations.

Messrs. HARTRIDGE and GRIFFITH: Cholesteroline in Sub-retinal Fluid of a Detached Retina in the Eye of a child removed for Buphthalmos.

Mr. HARTRIDGE: Cholesteroline in the Anterior Chamber.

Mr. C. DEVEREUX MARSHALL: Microscopical Sections of (1) an Unusual Syphilitic Growth, and (2) Tuberculous Growth.

Mr. JESSOP: Primary Sore on Upper and Lower Lid.

Mr. VERNON: Case of Pulsating Tumour of Orbit.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—The Dangers of Morphia in Gynecological Practice.—Leakage of an Ovarian Cyst in a girl aged thirteen.

A MEETING of this society was held on March 14th, Dr. CLEMENT GODSON, President, being in the chair.

Mr. F. BOWREMAN JESSETT showed a specimen representing a Cast of the Entire Uterus, which he had removed by packing the cavity of the uterus with chloride of zinc paste. The patient, aged forty-eight, had had an offensive discharge with pain and loss of flesh for seven months. The uterus was found fixed; the cervix was the seat of advanced ulcerated epithelioma. After scraping away as much of the growth as possible with the dredger, the paste was packed into the cavity of the uterus in the way previously described. Three weeks later the whole uterus came away as a slough. For a time there was a vesico-vaginal fistula. Four months after the operation there was no trace of malignant disease.—The PRESIDENT had seen many cases of this kind formerly at St. Bartholomew's Hospital, when they were regarded as hopeless and beyond relief.—Dr. PURCELL remarked that the surrounding structures in these cases escaped injury in a way one would not expect. He had not been able to tell in his own cases whether the peritoneal covering came away with the rest. The patients had, so far, done well.—Dr. ROUTH said he had used not only the chloride of zinc, but also strong nitric acid, the acid nitrate of mercury, and bromine. From the last, in a 20 per cent. solution, he had had very good results.—Mr. JESSETT replied. He said the pathologist had carefully examined the specimen to find the peritoneum, but thought it was not possible to state whether it was present or not. Twenty cases had been done at the hospital, happily without fatality, so no post-mortem examination had been made. He then gave some further details of the operation and promised to bring the later results before the society.

Dr. MACNAUGHTON JONES read the following paper upon the Dangers of Morphia in Gynecological Practice. He said: "I propose to consider the question of morphia administration in women from the following points of view: the influence of temperament on its action and effects; our knowledge of its physiological and psychological influences; and the precautions to be observed in its exhibition. With regard to temperament, I must ask your attention for a few minutes to that large class of sufferers from affections of the female generative organs commonly spoken of as 'nervous.'

The neurotic woman, I take it, is to be regarded in the light of a by-product of that unstable nervous organisation which we style the 'nervous temperament.' Such a temperament is frequently satisfied with little sleep. Under the influence of excitement fatigue is quickly recovered from, and a latent reserve force of energy appears ever ready on demand to carry its possessor over insurmountable obstacles. All this accumulated governmental control of will and nerve energy are missing in the neurotic, but none the less is that loss felt when the unequal struggle occurs between the sovereignty of an enfeebled, indeterminate will and the rebellious and more masterful emissaries—the woman's 'lower passions and lower pains.' While in health such individuals can pass through great physical and mental exertion without stimulants, but when the natural call on their reserve energy finds no response they apply the artificial spur of alcohol or some other excitant, such as morphia, to the flagging nerve cells. Such women are quite cognisant of the abeyance of the power to exercise free will. The desire to suppress the expression of pain is present, but the usual control is lost. Also, there is general hyperæsthesia of the peripheral nerves, which find in the frequently ill-nourished central cells a susceptibility to slight impulses and morbid sensitiveness with an exaggerated perception of any comparatively trifling stimulation. Here we are dealing with an *acquired* neurosis, for which possibly we may find no clue through atavistic transmission. On the other hand, we can frequently see in early childhood the traits of temperament which clearly foretell the future neurotic woman. Capriciousness, irritability, selfishness, restlessness, and excitability are the characteristics which stamp the moral prototype in the child of the adult neurasthenic and hysterical woman, though it is after puberty that we frequently find such distinctive features of character develop themselves. When a woman of this type marries, in the demands on her nervous system, if she be not sterile, which the claims of children and domestic duties involve her in, she generally escapes those neurotic and hysterical manifestations that are found in the unmarried and sterile. In the single woman of the 'neurotic' type we are more likely to meet with those erotic thoughts, desires, and practices that still further enervate her nervous system and enfeeble her central control. She is perhaps most of all the back drawing-room or boudoir woman who is apt to fall, to use Professor Clifford Allbutt's expression, 'into the net of the gynæcologist.' Turn we now for a moment to the *lymphatic* antithesis of this unfortunate victim to unbridled and morbid nervous and sexual impulses. There is a type of woman familiar to us all—indolent, lethargic, fanciful of ailments, with a superficiality bordering on childishness in conversation, dull of comprehension, readily open to flattery, even to her own self a bore, and often one to her husband and children if she be married. She is often found fringed with layers of pectoral and abdominal fat, the easy prey to quack systems of dieting and to the 'man of the world' physician. Her defective metabolism, added to a sexual voluptuousness, makes this proprietary article the registered dual property of the 'pure specialist' for gout, on the one hand, and the cotton-wool gynæcologist, on the other. She is one of the principal sources of revenue to the new *franc-tireurs* of the outposts of medicine—the ubiquitous masseurs or masseuses. With her every twinge is 'agonising,' to walk is impossible, and once let her evolve 'uterus and ovary' on the brain, and whether these organs be diseased or not they are made responsible for every ill her peccant flesh is heir to, not even excluding 'housemaid's knee.' She is not of the classical neurotic type previously described, though her visceral neuroses may in time come to be legion. She may suffer from congestive dysmenorrhœa and ovaralgia, her uterus may be as flabby as her brain, and her ovary be as fertile in aches as her imagination is in fanciful illusions. Her voluptuousness is not limited to her appetites of palate, and it is not infrequently manifested in various sexual abuses. She fancies she sleeps for many hours less than she actually does, and hence is often seeking for some new, when she has already exhausted every conceivable variety of reputed, hypnotic. While we find in the unmarried more frequently examples of the first type of temperament, married women furnish a larger proportion of the latter. Both, however, are to be found constantly as representatives of the habit of morphinism. Let us consider now the facts which are fully established regarding

the etiology and course of morphinism, leading up to the morphinomania. It is a curious fact that not until 1864, when Nusbaum¹ drew attention to the consequences following the abuse of injections of morphia, was there any serious notice taken of its ill-effects. The first English physician who seems to have written on the subject was Professor Clifford Allbutt, who drew attention in the *Practitioner* of 1870 to the dangers following incessant injections of morphia. [Dr. Macnaughton Jones here gave an exhaustive bibliography of morphinism.] It is important to note that so far as statistics appear to prove men are more subject than women to the morphia craving. Also the prevalence of morphinomania amongst medical men, nurses, and pharmacists has to be remembered, medical men representing by far the largest number of all classes in which the craving has been recorded. Out of 150 morphinomanacs noted by Lewinstein and Burkart 86 were either medical men or persons connected with the medical profession. Rochard considers that medical practitioners furnish more than half the number of male sufferers. Some of the most inveterate morphinists I have known have been medical men. One committed deliberate suicide by throwing himself from a window. This unfortunate prevalence of the propensity in the ranks of medicine may be accounted for, says Regnier, first, by the facility with which the drug is procured, and secondly by the arduous nature of a calling which oftentimes makes irresistible demands on a frame already over-fatigued and suffering. So far as the influence of age is concerned, it would appear that the majority of morphinomanacs will be found between the ages of twenty-one and fifty. [Dr. Macnaughton Jones then described graphically the downward course of the morphinomaniac.] What touches us here more especially is the influence exerted on the catamenial function through the morphia habit—namely, frequent arrest of the catamenia and constant irregularity or complete suppression. Sterility is at times the consequence of this arrest of uterine function. There is also to be remembered the undoubted effect of morphia on the embryo, and the fact that the infants of morphia-takers suffer immediately after birth from the consequences of the habit has to be recollected. But the fact before all others that I am anxious to emphasise, which has been clearly proved by a number of observers, is that what we understand by hysteria occupies the foremost place in the causation of morphinomania. Hysteria, neurasthenia, neuralgia, and cephalalgia are the correlated conditions often associated with sexual disturbances which stand in the forefront in the etiology of morphia abuse in women. And they are, unfortunately, the very conditions for which it is most frequently prescribed. Recall now the temperaments that I have endeavoured to depict as types of those most susceptible to the deleterious effects of morphia. They are distinctly those which all experience has proved are most likely to be conquered by the physiological action of the drug. Such persons are always importunate for its employment once they have experienced its effects, and the weak-kneed physician is compelled to yield to their importunity. A prescription is given, possibly a nurse is entrusted with the administration, and very frequently, when the nurse leaves, the patient retaining the prescription, not alone administers, but practically prescribes the medicament for herself. I have known a supply of a morphia solution of the British Pharmacopœia obtained daily at different druggists, and thus as much as eighteen or twenty grains of morphia have been taken subcutaneously within the twenty-four hours. The original prescription was copied at different establishments, and no demur was made to compounding it even after the lapse of two years from the date of the original prescription, nor was the physician who prescribed it made cognisant of the fact that it was so repeated. I cannot but look upon such a practice as a grave and dangerous abuse of that mutual trust which should exist between the physician and the pharmacist. When morphia can be readily obtained in large quantities the tendency often arises for one woman to recommend its use to another and even to go so far as to subcutaneously inject it into her friends. Thus the habit becomes contagious, and there is even a morbid delight felt in the act of puncturing, not alone herself, but others (Regnier). One other point I will only make a passing allusion to, and that is the double-edged nature of this weapon, when used

¹ Die Gefahren der subcutanen Injectionen. Bairisches Aerztisches Intelligenz Blatt.

by the surgeon after abdominal operations, in masking symptoms of peritonitis and possible interference with the natural process of cure through arrest of the secretions. As Greig Smith well says: 'The routine employment of morphia is to be condemned. Complications are better met with a system unimpregnated with morphia.' The moral of this paper is that there is a responsibility attached to the employment of morphia for the relief of pain in the affections of women not sufficiently recognised in practice. This responsibility imposes on the physician the duty of differentiating those cases in which morphia may almost be given with immunity from its toxic effects from those in which the risk of the intoxication by its repeated use is great. It is not too much to say that under no circumstances whatever should a patient be permitted to inject it herself, and it is questionable for many reasons whether relatives or friends, save under very exceptional circumstances, should accept the responsibility of doing so."—Dr. DUDLEY BUXTON thought Dr. Macnaughton Jones had done well to bring this subject before the society and thus emphasise the therapeutic as distinguished from the operative side of gynaecology. He had seen much of the bad effects of indiscriminate prescribing of morphia, and thought additional safeguards were required. He went further than the lecturer, and was of opinion that no druggist should dispense any poison a second time from one prescription unless initiated each time by the prescriber; nor should a medical man delegate to any other hands the hypodermic administration of such a potent drug as morphia.—Dr. CHAPMAN GRIGG said that in many cases large doses of morphia answered no better than small ones in relieving pain.—Mr. WALKER SMYTH, Dr. BENNETT, and Mr. JESSETT having spoken, the discussion was adjourned to the following meeting.

Dr. WALTER (Manchester) gave particulars of an abdominal enlargement in a girl aged thirteen which had been noticed for six months. The girl had rapidly lost flesh. The physical signs were those of ascites, and in the region of the umbilicus some hard nodular masses could be distinctly felt. There was no history of any sudden pain or change in the contour of the swelling. The diagnosis arrived at by all who had seen the patient was either tuberculous peritonitis or malignant disease of the abdomen with ascites. An exploratory incision proved that the fluid in the peritoneal cavity was entirely ovarian, and the masses referred to consisted of a multilocular cystoma of the left ovary. On its upper surface a round aperture a quarter of an inch in diameter was found, and through this opening fluid similar to that in the abdomen was seen to escape. The cystoma weighed 4 lb. 4 oz and the fluid weighed 9 lb. 6 oz. The girl made a rapid recovery.—The PRESIDENT thought Dr. Walter could not be said to have made any serious error in coming to the conclusion which he arrived at in view of the facts before him.—Dr. BANTOCK said it was not quite correct to speak of a case of this kind as "rupture," though this result might occur after a fall. Multilocular ovarian tumours were very prone to a colloid degeneration, owing to which a small hole gradually extending often occurred in the wall. By the formation of such a hole in a septum the loculi were thrown into one. He had pointed out some time ago that this was the mode of origin of unilocular ovarian tumours.—Dr. MACNAUGHTON JONES believed that a true rupture, apart from degeneration, could occur spontaneously; he had seen two cases.—Mr. JESSETT gave an account of an unusual case which he hoped to bring before the society in which a cyst ruptured, and the abdomen was found full of small free cysts. The case proved fatal.—Dr. WALTER briefly replied.

HARVEIAN SOCIETY OF LONDON.

The Dorsal Auscultation of Heart Sounds and Murmurs.

A MEETING of this society was held on March 7th, the Vice-President, Dr. J. E. SQUIRE, being in the chair.

Dr. WM. EWART read a paper on the Dorsal Auscultation of Heart Sounds and Murmurs. He dealt with the subject in great detail and corroborated the observations of Walshe. In particular he drew attention to the desirability of taking a fresh view of the subject of dorsal auscultation of the heart; for, though it probably had been studied by various observers, their results had not been published, and apparently no later account was available than that by Walshe. The statements of that great authority deserved to be tested

and confirmed by fresh observations; and although much immediate practical advantage could not be expected of the inquiry it would be satisfactory to feel sure that we possessed all the facts with which auscultation could provide us at the present time. A study of the conduction of the normal heart sounds must necessarily precede any study of the murmurs, but the method to be followed was the same in both cases, and implied a previous inquiry into the topography of the heart in connexion with the back, and into the intrathoracic anatomical relations which might favour or impede the conduction of sound vibration. An auricular and a left aortic auscultatory site suggested themselves in this way as it were, *a priori*, as anatomical sites; but other auscultatory sites were situated at a distance from the heart, and their recognition had been purely empirical. To these belongs the site at the lower angle of the left scapula, where auscultation was constantly being practised. For the auscultation both of heart sounds and of murmurs the rigid stethoscope was to be recommended. In the investigation valuable assistance had been received from Mr. Bertram Cooper, Mr. Scott Elliott, Dr. Sidney Ransome, and from Dr. Eric France, who, in a series of thirty children, had tabulated the results of his own auscultation of the heart sounds at the various sites. The paper dwelt in detail on the audibility of sounds and murmurs at the several auscultatory sites; the main results closely agreed with those which had been published by Walshe. Attention was drawn to the conduction of heart sounds and murmurs at the right base, apparently along the upper surface of the liver, a subject upon which further observations might probably throw interesting light. Meanwhile, the area at the left scapular angle still retained its prominent position among the dorsal auscultatory sites as supplying us with the most definite practical conclusions in connexion with the differential diagnosis of some of the cardiac murmurs.

Dr. SQUIRE thanked Dr. Ewart for bringing before the society a paper on so interesting a subject. He asked whether the patient in whom the cardiac impulse was observed in the back had a cavity in the lung. According to his (Dr. Squire's) observation an impulse synchronous with the heart's beat might be seen or felt in almost any part of the left chest—front or back—in cases of pulmonary cavities. The conduction of cardiac sounds to the back was often of more value in indicating the condition of the lung than in reference to the heart itself, though murmurs originating on the left side were most likely to be conducted backwards because of the position in which the heart lies. He had recently a case under his care in which a mitral presystolic murmur was plainly audible in the back. In connexion with murmurs heard in the back, he drew attention to the "whiffing" sound produced in the air tubes, which is systolic in point of time and might easily be mistaken for a true cardiac murmur. It is well heard just below the angle of the left scapula and is most distinct during inspiration. Though caused by the beating of the heart it is a pulmonary and not a cardiac sound.

HUNTERIAN SOCIETY.

Exhibition of Specimens.

AN ordinary (pathological) meeting of this society was held on March 13th at the London Institution, Mr. CHARTERS J. SYMONDS, President, being in the chair.

Messrs. William T. Partridge, Thos. Rushbrook, and E. B. Landon were unanimously elected Fellows of the society.

Mr. OPENSHAW showed a Congenital Sacral Tumour (and the child from whom it had been removed) presenting microscopically epithelial and striped muscle tissue. He also showed specimens of Sarcomatous and Cystic Tumours removed from the same region.—The President, Mr. Halliday, and Sir Hugh Beevor made remarks.

Dr. FRED. J. SMITH showed the Cranial Vault and Brain of a woman exhibiting the growth of a large Sarcomatous tumour which, starting from the brain, had perforated the dura mater and bone by several small processes and then formed a swelling as large as a foetal head beneath the scalp. The duration of the case had been less than a year from beginning to end, and yet the tumour showed considerable caseation (the microscope left no doubt as to its sarcomatous nature).—The case was discussed by the

President, Mr. Openshaw, Mr. Hallidie, Dr. Rutter, Dr. J. H. Sequeira, Dr. Turner, and Sir Hugh Beevor.

Specimens of Gall-stones causing obstruction which ultimately proved fatal were then shown by the President, Mr. OPENSHAW, and Dr. H. FOX.—The cases were discussed by Mr. Cotman, Sir Hugh Beevor, and Mr. Humphreys.

Mr. HOPE GRANT showed a specimen of Scirrhus Carcinoma, causing oesophageal stricture just above the stomach.

Mr. OPENSHAW showed a specimen of Cystic Sarcoma of the Kidney which had been hardened in formal. The specimen had been removed from a child aged three.—Sir Hugh Beevor and the President discussed the case.

The PRESIDENT showed specimens of Carcinoma of the Stomach and Liver taken from the body of a patient whom he had previously exhibited to the society as an illustration of the excellent result he had obtained by his method of performing gastro-jejunostomy; the patient lived in comparative comfort for over ten months after the operation had been performed.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Two Cases of Extradural Pressure on Spinal Cord.—Foreign Body in the Bronchus.

THE sixth meeting of the session was held on March 13th. The President in feeling terms spoke of the loss the society had sustained in the death of a past president, Dr. James G. Davey.

Dr. CHRISTIE showed a patient with Asymmetrical Development of the Cranium and Lower Jaw, with spinal symptoms; and another patient with Peripheral Neuritis, showing tropho-neurotic changes.—Drs. Firth and Clarke discussed the cases.

Mr. GREIG SMITH exhibited—(1) a large Sarcoma of the Breast; (2) Hydronephrotic Kidney, due, he considered, to pressure on the ureter, from a woman with extreme prolapse of the uterus; (3) Subphrenic Abscess Cavity, caused by a perforating ulcer in the stomach; (4) Malignant Stricture at the Ileo-caecal Valve; (5) Gall-stones from two recent operation cases; and (6) a small Calculus from the female bladder.

Dr. HARRISON exhibited a specimen of Necrosis of the Lower Jaw in a Polar Bear; and Fracture of the Base of the Skull in a Brahmin Bull.—Dr. J. G. Swayne and Mr. Ewens commented on the specimens.

Dr. MICHELL CLARKE read a paper, illustrated with numerous diagrams and specimens, on two cases of Extradural Pressure on the Spinal Cord (*a*) from inflammatory swelling in a case which presented symptoms of syringomyelia, and (*b*) from a localised tuberculous mass in caries.—Mr. BARCLAY described the operation he had performed in the former case, mentioning the great difficulty he experienced in stopping the excessive hæmorrhage.

Mr. PAUL BUSH read a paper on a case of Foreign Body in the Bronchus of a child aged eight years, and exhibited a steel hat-pin over three inches in length which had been expelled through the mouth three months after tracheotomy had been performed.—Dr. Fisher commented on the absence of lung symptoms, and Mr. Morton, Dr. Rogers, Dr. Newnham, Dr. Harrison, Mr. Barclay, Dr. Michell Clarke, Dr. Christie, and Dr. Firth considered various points in connexion with the paper.

LIVERPOOL MEDICAL INSTITUTION.

Cases of Laryngeal Paralysis.—Renal Calculus.—Supra-pubic Cystotomy for Vesical Hæmorrhage.—Death Certification and the Recommendations of the Select Committee of the House of Commons.

A MEETING of this society was held on March 14th, Mr. CHAUNCEY PUZEY, President, being in the chair.

Dr. PERMEWAN described two cases of Bilateral Laryngeal Paralysis. The first had a history of dysphagia combined with attacks of spasmodic dyspnoea. At first no oesophageal stricture could be detected, but even then there was complete bilateral abductor paralysis of the cords. Organic disease affecting both recurrent laryngeal nerves was diagnosed, and the patient eventually died from starvation. At the post-mortem examination a cancerous mass was found surrounding both recurrent laryngeal nerves. The second case was one

of bulbar paralysis, in which Dr. Permevan was able to watch the onset and progress of the laryngeal affection. The paralysis started with the abductors, and it was only after nine months that the adductors became affected. This, he observed, is only what might be expected from our general knowledge of laryngeal paralysis, but is in contradiction to the teaching of authorities on nervous diseases.

Mr. LARKIN read notes of a case of Renal Calculus in a woman where the symptoms closely resembled those of fissure of the anus. There were no symptoms referable to the kidney except a trace of pus in the urine, but, under chloroform, a slight enlargement of the right kidney was detected by palpation. The patient was relieved of all pain by removal of the calculi from the kidney.—The President, Dr. Carter, and Dr. Davies made remarks on this case.

Mr. GEORGE HAMILTON read a note on a case of Vesical Hæmorrhage for which supra-pubic cystotomy had been performed. He also showed a new apparatus for drainage.

Mr. F. W. LOWNDES read a paper on Death Certification and the Recommendations of the Select Committee of the House of Commons. After alluding to the heartburnings which this unremunerated duty had caused, both to the public and the profession, Mr. Lowndes quoted from a speech of Dr. Farquharson, M.P., and read a letter from Sir Walter Foster, M.P., in which both gentlemen expressed their sense of the importance of the subject, and of the value of any resolution which might be adopted by the members of representative and scientific bodies. Mr. Lowndes then went through the recommendations of the Select Committee *seriatim* and dwelt upon the importance of caution in giving death certificates, adducing instances which showed that carelessness in this respect facilitated wholesale poisoning; while, conversely, a little extra care might save life. He also urged that greater care should be shown by coroners in their informal inquiries, and that they should have power to remunerate medical practitioners in cases where they did not hold inquests.—Dr. HOPE drew attention to the importance of discriminating between mischief arising from defects in the law regulating registration and from evasion of the existing law. In Neal's case the medical man, registrar, and witness all seemed to have failed to comply with existing requirements. Dr. Hope considered that a fee should be payable by the governing body in respect to every death certified; this would conduce to greater accuracy, which was greatly needed. In the event of public medical certifiers being appointed, he did not think that the medical officer of health should be that officer, but an independent coroner's assessor might discharge such functions.—Mr. PUZEY, Dr. Carter, Dr. Whitford, Dr. Imlach, Dr. Permevan, and Dr. Davies also took part in the discussion which followed the reading of Mr. Lowndes' paper.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Traumatic Aneurysm of Aberrant Right Subclavian Artery.—A New Method of dividing Bone in Surgical Operations.—Exhibition of Specimens.

A MEETING of this society was held on Feb. 28th, Mr. SIMEON SNELL being in the chair.

Mr. PYE-SMITH showed a Breast removed that day from a woman aged ninety-one. It contained a growth which appeared to the naked eye to be a sarcoma. This had grown recently at the site of a small lump which had been present, it was believed, for sixty years, having followed an injury.

Dr. BLACK MILNE showed an almost perfect example of Congenital Asymmetry in a female child aged nineteen months. Full details and measurements were given. The patient was the first child of young parents who presented no anomalies in themselves, nor were any recorded in the case of their relatives. The right side was the larger, and the inequality was shown in the head, face, trunk, limbs, and in the following structures—viz., alæ nasi, palate, tongue, tonsil, and labium. On the right side the palpebral fissure was wider and the globe looked larger. There was cutaneous congestion on both sides, but more marked on the right. No varices or nævi were present. On the two sides the arteries appeared to be equal and there was no difference in the temperature. Six teeth were present on the right side and one on the left. Reasons were given for thinking that

there was deficiency of growth of the left half of the body as well as over-development of the right.

Mr. PYE-SMITH read notes of a fatal case of Traumatic Aneurysm of Aberrant Right Subclavian Artery. A man aged thirty years had fallen on his back from the top of a house. He had dyspnoea with signs of obstruction to the left bronchus, dysphagia, and absence of right radial pulse. After temporary improvement the dyspnoea and dysphagia increased, and the right carotid pulse disappeared. On the eighteenth day impending suffocation was relieved by tracheotomy and a long tracheal tube, but vomiting of blood occurred on the next day and he died the day following. At the necropsy a traumatic aneurysm was found in the posterior mediastinum on the aberrant right subclavian artery. This had caused pressure on the left bronchus, and later on the oesophagus, trachea, and right carotid artery. Finally, it had ulcerated into the oesophagus.

Dr. MORTON read a paper entitled "A New Method of Dividing Bone in Surgical Operations." The novelty he suggested was shown in an instrument with two opposing blades similar to bone pliers, but having a deeply indented cutting edge, the teeth being spear-pointed and sharp on either side. The lever handle, actuated by a strong closing screw, approximated the blades until the bone was divided. The dentated edge was applicable to chisels. Various sizes of them were exhibited. Sundry bones were experimented on with good results, the cut surfaces having a fairly even aspect throughout.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Frozen Sections and the Mechanism of Labour.—Some Measurements of the Uterus.—Walcher's Position.

A MEETING of this society was held on March 13th, Dr. A. H. FREELAND BARBOUR, President, being in the chair.

Dr. JAMES RITCHIE showed a Dimidiata Placenta; also an American Pessary for Prolapsus Uteri, a modification of the cup pessary, with telescopic stem attached to a pelvic band.

Dr. BALLANTYNE exhibited an Anencephalous Fœtus with Spina Bifida, to which amniotic bands were attached. The right thumb was poorly developed. This fœtus was female, and the fourth child of the mother. The previous child was also female, but was hydrocephalic and with absence of the right thumb. The first and second children were healthy males.

The PRESIDENT continued his paper on a Study of the More Recent Frozen Sections in their Bearing on the Mechanism of Labour and the Third Stage. As regards the engagement of the head, the received view is that the head is synclitic, the horizontal planes of the head coinciding with the horizontal planes of the pelvis, but in no frozen section is the head synclitic. In most there is more of the posterior half of the head below the plane of the brim as the head engages than of the anterior. (Saunders's and Barbour's sections show rather more of the anterior.) Pinard and Varnier advance the view that in normal labour the posterior part of the head is fixed and the anterior advances, as in the mechanism in the rachitic pelvis. The question is not settled; there is a fallacy, as the position varies according to the state of the cervix. Pinard and Varnier's frozen section was made in the horizontal posture, whereas the woman is usually in the erect position in this stage. As regards the third stage, Pestalozza gives two sections where the uterus had been emptied by artificial delivery, and thus it had shrunk after extraction of its contents, and had not been emptied by contraction of its walls. In the first section the uterus measures 8 in. by 4 in.; the anterior wall is 1 in. in thickness, and the posterior wall, to which the placenta is attached, only $\frac{1}{2}$ in. The posterior wall has not contracted or retracted. The second section was from a case of twins, where the mother died from sudden congestion of an enlarged thyroid; the first child was delivered by forceps, the second by turning. The uterus measures 8 in. by $4\frac{1}{2}$ in. by 5 in., and the fundus rises to 7 in. above the pubes. There is great diminution of the area of the uterus without separation of the placenta. The placenta are folded like a sponge, and yet with a diminished site there is no separation. Pinard and Varnier show a section of a uterus in the third stage. The case was one of triplets; the placenta of the twins is on the posterior wall, and that of the third child on the anterior wall. The section exhibits

the placental site shrunk, the placenta in folds or bulging at the borders, but not separated. The only place where there is a little separation is for one inch at the lower border. In a previous paper Dr. Barbour from his own work stated that the placenta did not separate till the beginning of the third stage and that there is no open space in the uterus at this time. In normal labour no separation takes place until retraction has occurred. During this retraction the uterine vessels are closed. In conclusion, Dr. Barbour discussed the general question of the knowledge gained from frozen sections in relation to labour in its clinical aspect—how these dealt with anatomy rather than with physiology, with position and not with movement, and with planes, not with a body in its general configuration.—Dr. HAULTAIN and Dr. BALLANTYNE spoke, and Dr. BARBOUR replied.

Dr. W. E. FOTHERGILL read a paper on the Height of the Fundus and the Shape of the Uterus when the Head is at the Brim and at the Vulva respectively. The results of measurements in thirty cases were that with the head on the vulva the fundus was one-third of an inch higher than in the former position, and that the uterus was narrower by one inch and had diminished by about one inch antero-posteriorly when the head was in the latter position.

Dr. W. E. FOTHERGILL also read a paper on Walcher's "Hanging Legs" Position, with special reference to its value where the perineum is in danger. Walcher's position is obtained by placing the patient across the bed with the hips at the edge, when the legs are allowed to hang down without touching the floor; a pillow can be placed below the buttocks if necessary. He had measurements of the diagonal conjugate in six cases, these were made under an anæsthetic, and comparison made between the results obtained in the lithotomy and in Walcher's positions. In the series there was an average increase of 0.93 cm. in the diagonal conjugate with the patient in Walcher's position.—Dr. BALLANTYNE alluded to a difficult high forceps case where he had endeavoured for about an hour to effect delivery in the lithotomy position; the assistants becoming tired he allowed the legs to hang down, and the head was then immediately and easily delivered.—Dr. BARBOUR had no doubt of the benefit of this position, but it was difficult to understand its rationale. An increased diagonal conjugate might not necessarily mean an increase of the true conjugate.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Symmetrical Gangrene of Ears.—Cirrhosis of Liver in a Child.—Spindle-cell Sarcoma of the Female Urethra.—Epithelioma of the Cervix Uteri.

A MEETING of this Section was held on March 8th, the President, Dr. J. A. SCOTT, being in the chair.

Dr. H. C. TWEEDY exhibited the Heart and Lungs of a male patient aged thirty-five, who had suffered from Symmetrical Gangrene of the Ears. In the heart the left ventricle was hypertrophied, and the mitral valve narrowed, thickened, and covered with vegetations. The aortic valves were healthy, but the aorta itself was atheromatous. The right ventricle was greatly dilated and the tricuspid valve was surrounded with hard atheromatous nodules. There was an infarct of large size in the upper lobe of the right lung and one of smaller size in the left lung. The left kidney was enlarged and contained numerous cysts. The gangrene of the ears had commenced nineteen months ago, in the autumn of 1893, and in opposition to the contention that the case was one of Raynaud's disease, Dr. Tweedy urged—(1) the absence of typical paroxysmal pains; (2) the absence of defective circulation in the hands or feet; (3) the absence of vesicles, bullæ, or ulceration in the parts affected; (4) the steady continuity of the morbid process, there having been apparently no successive attacks with intervals between; (5) the age and sex of the patient; and, lastly, that the general condition of the circulation, as the result of the disease in the mitral valve and the atheromatous condition of the vessels, supplied a possible explanation for the morbid change that had taken place in the ears. As there was no history of rheumatism, it was possible that the condition of the heart and bloodvessels might have been secondary to the morbid process, which was considerably

advanced in the kidney.—Dr. McWEENEY asked whether the patient had any pain. He thought it might possibly be a case of Morvan's disease, and would like to know if the brain or spinal cord had been examined.—Dr. DALY said that he had been the cause of bringing this case forward. The man was very much worse in cold weather. He had seen his hands wrinkled with cold. He had showed the case to many within the last eighteen months, all of whom had diagnosed Raynaud's disease. He was at the Richmond and Adelaide Hospitals, and had no heart murmur then. When the disease commenced it was symmetrical. He suffered intense pain. He never had syphilis. He was twelve years in the army, being four in Ceylon. He was a strong, healthy man.—Dr. BENNETT stated that the gangrene had commenced in the early autumn, when there was not much cold.—Dr. WOODS saw the case at the Richmond Hospital a year and a half ago. He had seen three other cases of Raynaud's disease, all of which were men, but this was the most pronounced. He had examined the man's heart and had found a mitral systolic murmur. He believed it was a case of Raynaud's disease the symptoms of which were aggravated by heart disease. He recommended him to wear ear-caps over his ears. As well as he remembered, the right ear was worse than the left.—Dr. PARSONS wished to know where the man was when it occurred. He thought the necropsy had not done much to clear up the case. He did not understand how the circulation in his ears was so bad as to cause gangrene in spring and summer, for there appeared not to be any dropsy of the extremities, which was one of the first signs of cardiac failure. He wished to know if the urine had been examined for methæmoglobin, which had been found present in cases of Raynaud's disease.—Dr. DALY said that the disease commenced one year and eight months ago. He was living in Dublin at the time. He never suffered from chilblains. When he examined the urine there was no albumen in it. The man worked inside a store and was not exposed to the cold.—Dr. TWEEDY, replying, said that the necropsy was made under great difficulties, and did not last more than ten minutes. He had been unable to get a portion of the ear. The brain and spinal cord had not been examined. There was no definite pain till the hard masses of slough formed, which then caused him pain to lie on the ear. He still thought the cardiac disease sufficient to cause the condition of his ears. It could not have been a frostbite, as the disease commenced in the early autumn. The heart trouble must have been pretty chronic from the post-mortem appearances. He had only seen one other case of Raynaud's disease. It was in a child, and the little toes were gangrenous, and in addition there were vesicles and bullæ present. The child had also paroxysmal pain. In this case the hands and feet were frequently very cold. He had not examined the urine for methæmoglobin as the man had only been a short time in hospital and died suddenly.

Dr. O'CARROLL showed a Cirrhotic Liver taken from a child aged eight years. The specimen was remarkable by reason of the fact that from the under surface protruded downwards a large mass consisting of nut-like islands of hepatic tissue surrounded by thick bands of glistening fibrous tissue, and which during life had given rise to the suspicion of a tumour of the liver or in its neighbourhood. No previous history of the patient could be obtained sufficient to settle the question of causation, but the large amount of peri-hepatitis seemed to hint at a syphilitic origin of the disease.—Dr. McWEENEY and Dr. PARSONS alluded to the difficulty of diagnosis in the case. Dr. McWeeney had only seen the naked-eye appearance.

Dr. McWEENEY showed an example of Spindle-cell Sarcoma of the female uterua and also a specimen of Epithelioma of the cervix uteri, with sections.

METROPOLITAN DISPENSARY.—The annual meeting of this institution was held in Fore-street, E.C., on March 15th, Mr. J. J. Baddeley, the treasurer, presiding. The committee's report showed that the visits paid by the medical staff to patients in their own homes were 500 fewer than in 1893, and explained the fact by the general improvement in the public health. During the year 13,182 patients came under treatment. The total expenditure was £883, and the balance in hand at the end of the year was £403. Grants of £100 were made to the dispensary by the City Parochial Foundation, and also by the Cripplegate Foundation; the Clothworkers' Company subscribed £20 and the Saddlers' Company £10. The usual votes of thanks were accorded to the treasurer and medical officers.

Reviews and Notices of Books.

Transactions of the Epidemiological Society of London. New Series. Vol. XIII. Session 1893-94.

THE Transactions of this Society always afford good reading, but the latest volume presents points of special interest. It contains nine papers and a supplement, and we must confess to having, like the novel reader who reads the last chapter of a new novel first, turned first to the supplement; or, rather, in strict accuracy, to having done so immediately after reading the President's inaugural address upon the History of Epidemiology in England. In that address Dr. Payne drew attention to an important, though little-known, contemporary account of the great Plague of London in 1665, and suggested that the Society would be doing excellent service to medical literature were it to print this treatise in full or in part. This suggestion the Society has carried out, and has printed the whole treatise, publishing it as a supplement to the present volume of Transactions. "Loimographia, or an Experimentall Relation of the Plague, of what happened Remarkable in the last Plague in the City of London....." by "William Boghurst, Apothecary in St. Giles'-in-the-Fields, London, 1666," has hitherto lain in obscurity as No. 349 of the Sloane MSS. in the British Museum, and now appears in print for the first time. Its existence, however, has been known, and it has been drawn upon by several writers. Defoe is thought to have made use of it for his great story of the Plague; Dr. Payne has himself quoted it in his article upon the Plague in the "Encyclopædia Britannica"; Dr. Creighton describes it in his "History of Epidemics"; and it has even been alluded to in Germany by Haeser in his "Geschichte der Medizin." But these facts in no way detract from the real service which the Epidemiological Society has rendered in now printing the treatise in full.

Of the author comparatively little is known, save that he was an apothecary at the sign of the White Hart in St. Giles'-in-the-Fields, and that when all who could were flying from the pestilence he remained and attended the sick without fear or faltering—a fact on which he insists with pardonable pride. His epitaph, we learn from Dr. Payne's introduction, declared that "he was an honest, just man, skillful in his profession and in the Greeke and Latine Tongues, delighting in the study of Antiquity." This is fully borne out by the present treatise, which contains much evidence of Boghurst's acquaintance with the classical medical writers, from Hippocrates downwards. But while accepting the medical traditions of his time, he was far from bowing down before them, and was clearly able to make original observations for himself. Clinically, he was evidently a close and acute observer. The work is divided into twenty-eight chapters: on the causation, prognosticks, diagnosticks, good and evil signs of the Plague, and so forth. Of these the first is the most interesting, in which the author discusses "the nature and causes of the Plague as a student in Physick." In this he goes curiously near what must now be accepted as the true explanation of the origin of the disease when he writes: "The essence of the Pestilence is lodged in some peculiar venome that is contrary and destructive to the vitale principles of man. That this venome is a body or concretion of many little bodies, though very subtle and invisible, can bee no doubt for those that have outgrown Aristotle and are acquainted with the Epicurean or corpuscular philosophy." Of the two so-called schools of contagionists and localists Boghurst must be counted a stout supporter of the second. He sums up his views as follows: "The Plague or Pestilence is a most subtle, peculiar, insinuating, venomous, deleterious exhalation arising from the maturation of the ferment of the faeces of

the earth extracted into the Aire by the heat of the sun, and diffused from place to place by the winds, and most times gradually, but some times immediately, aggraving apt bodies." This is not a happy example of the author's literary style; as a rule, when he escapes from the medical jargon of his age, he writes in all the simplicity of good Saxon English. He further displays a commendable mixture of common sense with his technical knowledge, and a deep conviction in the correctness of his own views and readiness to uphold them against all who may differ from him, while a leavening sense of humour makes his treatise far more readable than many old medical treatises. His account of the rise and early spread of the Plague in London differs in many important points from that given by Hodges, who has been the authority for most subsequent writers upon this epidemic, and, if for this fact alone, the Epidemiological Society was justified in its action, and is to be congratulated upon giving permanent form to a really valuable work.

Dr. McVail's paper upon the Aërial Convection of Small-pox from Hospitals deals with one of the most burning questions of recent years, and led, it may be remembered, to an adjourned discussion of considerable interest. Beginning with an account of the classical controversy in the last century between Haygarth and Waterhouse concerning an outbreak of small-pox in Charleston, this paper goes on to discuss some of the more important evidence published in recent times as to the part which the air plays in spreading the contagion of small-pox. Without adding anything new to our knowledge upon this subject, the paper is nevertheless a thoughtful essay upon a most important topic. The publication of Mr. W. H. Power's investigations at Fulham, now fourteen years ago, brought this question to the forefront of practical public health questions, and the additional evidence from at least half a dozen metropolitan hospitals and as many in the provinces has only tended to confirm the conclusions he then formed. With these Dr. McVail is in full accord, believing that aerial convection does occur from hospitals, though not denying to personal communication some share in the explanation of "special area" incidence of small-pox.

The paper entitled a Contribution to the Epidemiology of Cholera in Russia, by Dr. F. G. Clemow, is based on a careful study of the epidemics of 1892 and 1893, and although the maps and charts which were used to illustrate it have not been reproduced, it is written so lucidly that their absence is less to be regretted. The paper is one of no small interest and importance. In many respects the conclusions arrived at are in conformity with previous experience—e.g., the comparative immunity in the second year of an epidemic enjoyed by a district that has suffered severely in the first year; the brevity of the incubation period of cholera; and the greater fatality in children and elderly persons than in the middle-aged. Some interesting details are given as to the dissemination of the disease in a country where bazaars and fairs lead to large and shifting gatherings of people. That the disease is communicated from person to person Dr. Clemow is convinced, but he guards this view by admitting that the poison gains entrance by the alimentary canal. Instances of its conveyance by families and of contamination by water-supply are cited.

The paper upon the Distribution of Influenza Mortality in England and Wales in Recent Years is a careful statistical study by Dr. Franklin Parsons. It is illustrated by a number of useful diagrams and tables. Dr. E. D. Dickson of Constantinople writes an interesting account of the cholera in Mesopotamia and Syria, and communicates the report upon cholera in Persia, written by Dr. Camposampiero, Ottoman sanitary delegate at Teheran, to the Constantinople Board of Health.

Handbuch der Physiologischen Optik (Handbook of Physiological Optics). Von H. VON HELMHOLTZ. Zweite Auflage. 9te und 10te Lieferungen. (Second edition, 9th and 10th parts.) Hamburg und Leipzig: Leopold Voss. 1895.

WITH these two parts, embracing 160 pages, the late Professor Helmholtz's celebrated treatise is nearly brought to a close. In a short preface Dr. Arthur König of Berlin states that the author before his lamented decease believed that he had practically completed the editing of the second edition, the succeeding parts requiring little alteration or addition. The "Physiological Optics," it must be understood, was original in its conception, was founded largely on the experiments and reasonings of its author, and was not intended to be an encyclopædia of optical science. It has proved to be, from the precision of its statements and the novel manner in which the phenomena of vision were treated, a storehouse from which all subsequent writers on optical subjects have largely borrowed, and which constitutes the solid foundation on which the physiological side of optical science mainly rests. The two parts now before us contain the subjects of the rotation of the eyes mathematically treated; the sense of position in space as determined by the visual sense; the explanation of various illusions of the visual sense; the consideration of the blind spot, of unilateral vision, and of the stereoscope and stereoscopic vision. The work is worthy of its distinguished author.

The Uric Acid Diathesis: Gout, Sand, and Gravel. By DR. F. LEVISON (of Copenhagen). Translated by Dr. LINDLEY SCOTT. London: Cassell and Co. 1894.

THIS work has received such a favourable reception in other countries that Dr. Scott was encouraged to translate it into English, believing that it would receive a welcome in this country. As the translator observes in his preface: "It may be regarded as a logical summary of the more recent researches on the pathology of uric acid, and on the action of various remedies recommended in the treatment of this diathesis." After a full description of the most practical methods of estimating uric acid, the formation and physiological signification of this body is carefully considered. The conclusions at which Dr. Levison has arrived are interesting. He lays special stress on Horbaczewski's observation that there exists a constant proportion between the number of white corpuscles in the blood and the amount of uric acid secreted. He states that the amount of uric acid excreted in twenty-four hours is not influenced to a great extent by food, but adds that the easily digestible animal albumens set up digestive leucocytosis and formation of uric acid much more quickly than the vegetable albumens, which are difficult to digest. Other interesting sections are devoted to the consideration of the subject of uric acid in the blood and the chemical compounds of uric acid in the blood and urine.

Turning to the clinical side of the question, the etiology, pathogenesis, symptomatology, course, and pathological anatomy of gout are fully and admirably described. Prophylaxis and treatment occupy a full share of attention and many useful hints and valuable information are given. "Sand and gravel" are finally considered and the treatment fully discussed. The work is capitally translated, and to those who are especially interested in this branch of medicine will prove most acceptable and well repay perusal.

Degeneration. By MAX NORDAU. London: Heinemann. 1895.

Atas parentum, peior avis, tulit
Nos nequiores, mox daturos
Progeniem vitiosiore.

THIS is Dr. Nordau's despairing cry—and a very old one; but, in spite of the trouble he has been at to justify it, we venture to think he is mistaken. Dr. Nordau will probably

include us among the "grapho-maniacs who dominate the entire press" for venturing to disagree with him in his conclusions, even if to do so is to write ourselves down as degenerate. That there undoubtedly does exist at this time a school or sect—call it what you will—which delights in sex problems, strange idiosyncrasies of dress, eccentric drawings, and mystical writings, among other things, no one can help seeing; but the same state of things has always been present, more or less, in every age. Everyone knows the excesses that were fashionable in ancient Rome and Athens; strange Oriental religions, affording scope for every variety of "mania" (the reader will find a list on page 242), were imported, and everything that could in any way minister to the pleasures of either mind or body was systematically employed. Coming down to the Middle Ages we find the same thing. Flagellants and mystics of all kinds gave way to the wildest excesses; and so the story unfolds itself through the Puritan excesses, on the one hand, and the court dissoluteness, on the other, of the seventeenth century to the appalling outburst of the French Revolution and the Napoleonic idolatry of the eighteenth century. Later developments have certainly occurred with startling rapidity in the last forty years or so, but where we venture to join issue with Dr. Nordau is in his over anxiety to attribute the taking pleasure in almost any form of art or mental culture to degeneration. Take his account of the degenerate's house. Old china, silver ornaments, Oriental carpets—the possession of anything, in fact, that is prized for its colour or design is a sign of a weak mind. "All is one discrepant jumble; the unity of abiding by our historic style counts as old fashioned and Philistine." We cannot see why a person may not take pleasure in the different styles of art or what there is of degeneracy in a dislike to monotony. Let anyone compare the style of a modern room furnished and decorated by a person of taste with the drawing-room of "the fifties." Here was one definite historic style, and what a style—the white and gold paper, the elegant suite of rosewood and Berlin wool work furniture, the Brussels carpet, with the stone-coloured ground and sprawling pattern of virulent red and pink roses as big as cabbages all over it, and the round table with the drawing-room books on it, all these made up of a "composition"; but where was "the feeling of repose"?

Dr. Nordau sees degeneracy in everything except the music of "Cavalleria Rusticana." He falls foul of Rossetti's fondness for refrains. This was a characteristic of old poetry which was handed down by oral tradition, the refrain being like the large beads on a rosary—a sort of milestone to mark the point the reciter had arrived at, and though, through the invention of printing, it has lost its original point, its use is still a perfectly legitimate way of giving an old flavour to a poem, just as the use of a scale with a whole tone between the leading note and the tonic is a legitimate way of giving an old flavour to music. To call it "echolalia" is absurd. If we go on Dr. Nordau's principle we can find mysticism in the most unlikely quarters—e.g.:

"I see Jerusalem and Madagascar,
And North and South Amerikee,
And the British fleet a-riding at anchor,
And Admiral Napier, K.C.B."

Now here is megalomania and echolalia and all the other characteristics of literary mattoids. Observe the mysticism. The author could not have really imagined that little Billes was able to see all these countries, but with the weird transcendentalism that belongs to the degenerate he wished to include the whole world in the vision of his character. So he starts with Jerusalem, the mediæval centre of the earth, and then goes on to Madagascar, where flourish the Cryptoprocra and many another strange beast, which by their structure carry us back to prediluvian days; then Amerikee,

with its traditions of Atlantis and the isles of the blessed; and then, with the inconsequence which is so marked a feature of the mystic, he links with Amerikee the British fleet and Admiral Napier, K.C.B. As Dr. Nordau says: "There is no connexion between these phrases. They are strung together simply because they rhyme. It is a startling example of echolalia."

That the fever of degeneracy will wear itself out there can be no doubt; just as the activity of a bacillus is put an end to by excess of its own products, so the activity of the modern school will bring about its own death. We cordially recommend a perusal of Dr. Nordau's book both for its extreme interest and as an example of the pitfalls into which a really able man may fall by pushing a theory too far.

The translator's name is not given, but the work has been done exceedingly well.

LIBRARY TABLE.

The Aseptic Treatment of Wounds. By Dr. C. SCHIMMELBUSCH. Translated from the Second German Edition by ALFRED THEODORE RAKE, M.B., B.S., F.R.C.S. London: H. K. Lewis. 1894. Pp. 250.—Aseptic, as opposed to antiseptic, surgery is daily increasing the number of its adherents in this country; but the success of asepticism depends on the thoroughness of the purification of everything that may come into contact with the wound, and this is by no means easy. We therefore welcome the appearance of the English translation of this little book of Dr. Schimmelbusch, as in it are given clear and detailed directions for rendering aseptic the surface of the body to be operated on, the instruments to be used, and the dressings to be applied to the wound. It is copiously illustrated, and certainly it is a very good representation of the methods of aseptic treatment. A copious bibliography of the subject is appended. The style of Mr. Rake's translation is good and readable.

Urinary Surgery. By E. HURRY FENWICK, F.R.C.S. Bristol: John Wright and Co. 1894. Pp. 219.—This volume is a member of a series of "Epitomes of Modern Surgical Progress," and is intended to be a *résumé* of the recent literature of the surgery of the urinary organs. Within the last few years changes of great importance have been made in this department of surgery, and further progress, in details at least, is taking place almost daily. A work embodying these recent changes can hardly fail to be useful, and Mr. Fenwick's book certainly goes far in the direction of accomplishing what it claims. It gives summaries of more than 300 papers, and in each case gives the reference to the original article, so that if further information is needed it can be easily obtained. Mr. Fenwick also contributes "editorials" on special subjects, such as Tumours of the Bladder, where mere abstracts of published papers would fail to give an exact account of the present state of the subject.

Manual of Diseases and Deformities of the Spine. By K. L. SWAN, F.R.C.S. Irel. Dublin: Fannin and Co. 1894. Pp. 194.—The diseases and injuries of the vertebral column are of so much importance and are so frequently met with that it cannot be denied that they are deserving of a special treatise. The work before us deals with all the ordinary forms of disease of the spine, and includes chapters on the paralysis consequent upon spinal disease, railway spine, and torticollis. In the description of the treatment of spinal caries an account is given of the "hammock" method of applying a plaster jacket, which, for some cases at least, is certainly to be preferred to the more usual method of suspension. The work is illustrated by thirty-three lithographs, which have a pleasing but certainly somewhat novel effect.

MAGAZINES FOR MARCH.

Clinical Sketches.—The third number of this magazine is up to the level of its predecessors. An article which will be read with melancholy interest is by the late Mr. Hulke, and is an account of a case of Malignant Disease of the Colon in which the presence of a large concretion formed by charcoal and bismuth blocked for a time the sigmoid flexure, causing obstruction and masking the presence of the original disorder. An obituary notice of the late President of the Royal College of Surgeons of England is accompanied by an excellent portrait.

The *Strand Magazine* contains several articles of interest—for instance, one upon the Manufacture of Explosives and one upon Eccentric Ideation, and an exceedingly poor story, with medical details, entitled "The Silent Tongue." This story is one of a series of medical stories now appearing in Mr. Newnes's popular paper, and none of these have been particularly good. We are tempted to think that in the story with medical motif the attempt at accuracy of detail detracts from verisimilitude.

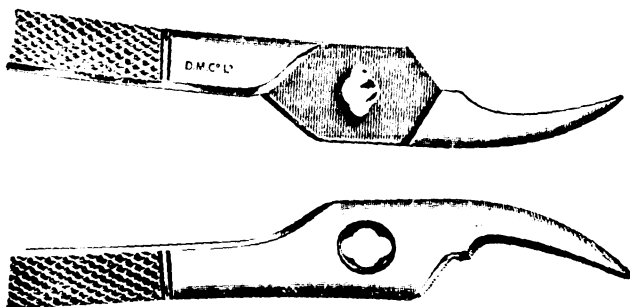
The Englishwoman.—Miss Ella Hepworth Dixon is responsible for the appearance of a new monthly magazine intended to meet mainly the taste of feminine readers. As is now becoming the fashion in our lighter periodicals, the serial is dispensed with, but there are several complete stories, the most noticeable of which is in dialogue form by Miss Violet Hunt. Mr. Hitchens deals in a healthy manner with the case of a decadent boy, and all medical men, recognising the extent to which this disagreeable class has multiplied, must welcome the signs of general repulsion which are now becoming manifest.

ERRATUM.—In the review of Baldy's "American Text-book of Gynecology," which appeared in our issue of March 2nd, we omitted to mention that Mr. F. J. Rebman, 11, Adam-street, Strand, is the London publisher.

New Inventions.

NEW DENTAL FORCEPS.

ANTISEPTIC precautions have been long recognised to be as necessary in dental as in surgical operations. Cases have been put upon record where specific diseases, and syphilis in particular, have been inoculated by the use of unclean instruments. When dental forceps are put in chemical solutions for the purpose of sterilisation—though it is not necessary to render the joint aseptic as in instruments used for an operation like laparotomy—experience shows that the



solution quickly finds its way into the joint, and mixing with blood and saliva, which trickle down the blades, collects there and causes rusting of the joint. The forceps thus becomes stiff and dirty, it being impossible, short of sending it to the makers, to take the blades apart. It is hoped that the instrument with a lock joint which the Dental Manufacturing

Company (Lexington-street, Golden-square, W.) have made at my suggestion will overcome this, and will ensure thorough and easy cleansing.

J. SEFTON SEWILL, M.R.C.S., L.R.C.P., L.D.S.
Cavendish-square, W.

THE VENTILATION OF PLACES OF ENTERTAINMENT.

THIS has been a very hard season for all places of entertainment; and the problem of warming and ventilating buildings where large numbers of persons congregate has rarely offered so many difficulties. There is one place, however, where special advantages are enjoyed. As a rule the crowding of spectators together in a limited space is the chief cause of trouble. At Olympia it may be said that the space is almost unlimited. The difficulty here is the other way round; there is no danger of the place becoming too hot through overcrowding. The great hall measures 650 ft. by 400 ft., and is 130 ft. high. Though it would be possible to accommodate 10,000 spectators such a number is not likely to attend; but when we consider that there are 2500 performers it may often happen that the hall would contain, including the performers, some 10,000 persons in all. Even then the difficulty would be that of warming rather than of ventilation, for 10,000 people would still enjoy about 3000 cubic feet of air each. It is, therefore, important to note how the warming is accomplished. For this purpose it has been necessary to lay pipes which have a total length of nearly ten miles. These pipes contain steam under pressure. They are in the flooring of the passages and in the walls, thus heating the body of the structure. Then, at various intervals, and especially in places where cold draughts are likely to occur, coils are placed which can be fed with steam from the pipes, and a sort of damper enables the attendants to regulate the amount of heat the coils are to give. There are in all about 250 such coils. But this is not all; the large sheet of water, which is so useful to cool the building in summer, adds to the heat in winter. This water is warmed by the Rosher system. This consists of a system of steam jets which draws the water from the canals. The water is heated by the condensation of the steam, and is then injected back into the lake or canals through the bottom of the tanks by "spreaders." Nine heaters are thus employed, and a systematic circulation of heated water established. The heaters have also each an air valve by which air is forced into the canals, and this helps to keep the water fresh. By these means the temperature of this vast volume of water can be raised at the rate of 2° F. per hour, and is generally maintained at a temperature of 60°. Once a fortnight, on a Saturday evening, the whole of the water is cleared out and the bottom of the tanks carefully swept. It then requires eighteen hours to fill them afresh with a constant flow through a nine-inch inlet pipe.

The great secret of the even and pleasant temperature that pervades this vast building is the fact that the system of warming is kept in full activity day and night during the whole of the season. It requires three days to warm the building, and then it is never allowed to become cool again. This is the secret of true comfort and the reason why houses in cold climates—Russia, Canada, &c.—are much warmer and more comfortable than in such moderate climates as that of England. At Olympia the heat is if anything higher in the passages than in the auditorium, and the heat is maintained day and night. Such is also the case in a Russian house; but in an English house the passages, hall, staircases &c. are rarely if ever heated, and in the rooms the fires go out at night. Thus there is no uniformity, but draughts and constant changes of temperature in different parts of the building. At Olympia, in the huge auditorium between the spectators and the stage, there is a vast surface of warmed water which constitutes an excellent medium for retaining and distributing heat in a slow and uniform manner. The dry and unwholesome air that is the consequence of over-heating and the foul air that results from overcrowding and inefficient ventilation, are dangers that too often prevail in places of amusement. The absence of any such inconvenience and danger has been not the least of the attractions which Olympia offers to the public.

THE LANCET.

LONDON: SATURDAY, MARCH 23, 1895.

A SPECIES of duel has lately been fought between the General Medical Council, on the one hand, and the Obstetrical Society, on the other, and has been rendered triangular by the interposition of the opponents of the registration of midwives. The feelings which have been excited on all sides over this subject have been, we think, unnecessarily heated and bitter. Certain distinguished leaders of the obstetric world—Sir JOHN WILLIAMS, Dr. PLAYFAIR, Dr. CHAMPNEYS, Dr. HERMAN, and not a few Irish and Scotch physicians,—who doubtless thought they were doing a kindly and useful action in giving their countenance to a certain amount of training in midwifery and providing for the certification of women who assume the title of midwife and practise among the poor,—have, it would seem in the opinion of some, been practically brought before the Council on a charge of infamous conduct in a professional respect. Dr. PLAYFAIR uses the strongest adjectives he can find—"outrageous," "insulting," &c.—to characterise the action of the Council. There is certainly some excess of imagination and of language on this side. The other is not much behind it. Dr. LOVELL DRAGE, for instance, does not see why the Council should mete out treatment to the Obstetrical Society different to that which it administers to gentlemen who employ unqualified assistants. There is in some of the correspondence which has been going on a want of acquaintance with the action and views of the General Medical Council which we should scarcely have expected in leaders of the profession with regard to such questions. Thus, Dr. PLAYFAIR says that, "so far as he knows, the Council has expressed no opinion on the examination and registration of midwives," the fact being that the Council has expressed many times, often in response to Government, its opinions on these subjects in the last twenty years.

Dr. PLAYFAIR does but scant justice to the General Medical Council when he proceeds to urge that it has heard only one side. To take only the last year as an example, the Council was approached by the advocates of both sides, as will be seen by referring to the published Minutes for 1894. Thus, at its May meeting the following rider to a verdict of a coroner's jury was received from the Home Office for the consideration of the Council: "The jury desire most strongly to censure JANE RUGG for not calling in medical assistance upon difficulties arising on the deceased giving birth to a child, and are of opinion that the Legislature should interfere to prevent women acting as midwives unless trained and certificated for such purpose." On the other side memorials reached the Council in numbers protesting against any regulation enabling persons to practise midwifery who were not fully qualified to practise medicine, surgery, and midwifery. It may be true that the Council at

its last few meetings has been mainly appealed to by the party opposed to legislation; but that is probably because the opposition is of recent origin. It is only within the last few years that any persons have been found to maintain that the midwifery of the very poor can all be done by medical men or fully qualified medical practitioners, and that there is no need of, or justification for, legislation to regulate the use of the term "midwife" by women who practise as such among the poor. Dr. WILKS has pointed out that there is some confusion between two distinct things which in England have always been well distinguished—the midwifery of an educated and fully qualified practitioner and the "midwifery" of a woman without special training, or with very little, who has made herself useful and acceptable to poorer neighbours who in their hour of need cannot afford for obstetric services the minimum fee required by medical men. The question whether the tragedies in the hands of ignorant midwives which so shock the public from time to time can be got rid of without legislation for the training or, at any rate, for the registration of midwives is one that cannot be settled offhand. In any case, however, it is a strange thing for the leaders of the Obstetrical Society to say that the Council hears one side only and has never expressed opinions on the fundamental question in dispute. We venture to recommend to Dr. PLAYFAIR a study of the minutes of the General Medical Council bearing on this subject, beginning, say, twenty or twenty-one years back. He will see many indications of respectful interchange of opinion between the scientific society of which he is an ex-President and the Council, which contrast favourably with the somewhat heated language which has lately obtained, and which seems to have raised fears of martyrdom in the President and members of the society.

In requiring that the language used in the certificates of the Obstetrical Society shall be such as not to imply licence to practise, the General Medical Council is only consistent with its own contention throughout, and with the obvious fact that the document given by the society has no legal value. Sir JOHN WILLIAMS says the word "diploma" is used in testimonials given to successful brewers. Even if this be true, it does not justify its use by the Obstetrical Society acting as an examining body. The Council cannot be said to have acted with undue haste. It has given repeated hints as to its objections to the document issued by the Obstetrical Society, which we publish on another page, and of which Dr. PLAYFAIR's version in a recent letter to us is a somewhat imperfect copy, though even in that form the owner of the diploma is styled "a skilled midwife," and it has not asked more than such a modification of language as shall make it clear that no legal licence to practise is conferred. Dr. LOVELL DRAGE himself will, we fancy, be satisfied if the document bears this on its face. We are glad to gather from Dr. PLAYFAIR's letter alluded to above that the society has resolved not to issue any more "diplomas" until a form is decided upon satisfactory to the General Medical Council. Under these circumstances we see reason to hope for a speedy disappearance of the somewhat strained relations at present existing between the General Medical Council and the Obstetrical Society. For our part we entirely acquit the

society of any purely selfish motives in this matter, and believe, as Dr. PLAYFAIR says, that they would gladly give up to others the work of examining midwives. In conclusion, let us add that THE LANCET always has been, and always will be, jealous of the rights of the general body of the profession and zealous in protecting their true and best interests. The question of the registration of midwives is undoubtedly a difficult one, but we do not yet despair of a solution of the difficulty which will be in accordance with the dictates of humanity and satisfactory to the whole body of our profession.

EGYPT and Algeria witness a large exodus of their winter visitants during the month of March, the melting of the snows in the Alps is the signal for the gradual dissolution of the winter colonies of Davos and St. Moritz, and during April the Riviera and southern French resorts become gradually deserted. This change from winter to spring quarters raises many difficult questions for the chronic invalid and his advisers, and at some of these difficulties we propose to glance, without attempting to lay down any hard-and-fast lines in a department of practice where individual idiosyncrasy counts for so much and where the special experience of the regular medical adviser is so important. The first question that naturally arises is why the invalid should leave his winter quarters at all. He has done well, let us assume, at Mentone, St. Moritz, Malaga, Luxor, Algiers, or Madeira. Why, then, leave a resort that has been proved favourable to his malady? The answer to this question is not quite so obvious as it may to some appear to be. It is true that a summer sojourn in Egypt or Algeria is practically impossible for the European invalid, but the same statement cannot be correctly made regarding the Alpine resorts or Madeira. There are some authorities with large special experience who hold that the summer climate of Davos or the Engadine is just as favourable for pulmonary complaints as the climate of winter. We believe this opinion to be to a considerable extent mistaken, but it is not manifestly absurd. Then, again, it is not very unusual for the winter visitant to Madeira or the Riviera to take to the hills at the approach of summer, and there encounter the hot season. Yet, we take it, the attempt to persuade the average invalid to make a permanent residence of his winter quarters is always predestined to failure. He longs for change, he yearns for ever so brief a sojourn in his own country, and he is deeply convinced that even the most favourable climate is not equally favourable at all seasons of the year. These feelings are not only perfectly natural, but may be defended on strong scientific grounds. Most sanatoria are—to put it plainly—dull to a degree, and the hackneyed round of medical treatment, regulated hygiene, and stereotyped amusements becomes to not a few individuals a hardly tolerable boredom. This boredom would be to many absolutely unendurable if there were no prospect of speedy release from it. Then, while there is much to be said for the principle of finding the climate that suits the invalid best and keeping him there, it is quite probable that there are cases with regard to which climates, like drugs, after a time lose their beneficial effects.

But the most solid ground for approving of a change of quarters at the end of winter is the incontestable fact that season may make all the difference between a good climate and a bad one, and that it is not as a broad principle true that because a climate is beneficial in winter it is likely to be equally beneficial at all seasons. Most of the southern sanatoria are beyond question much too hot in summer for British invalids. Then, to take the most disputable case, it is not a fact that the climate of the Alpine resorts is as favourable to pulmonary complaints in spring, summer, and autumn as it is in winter. The average of settled sunny weather is certainly higher in summer, there is less wind at this season, and the relative humidity of the air is less. These facts seem to us incontestable, and are quite consistent with the contention that the Alpine sanatoria are in certain cases good summer resorts. But the attempt which has often been made to prove that summer is as favourable a season as winter, and that invalids are extremely foolish to leave their winter quarters at the approach of spring, seems to us most injudicious.

Assuming, then, that invalids are, as a general rule, quite justified in their usual practice of seeking a change at the end of winter, various important questions arise. When should the change be made? Should it be made abruptly or gradually? What are the most convenient intermediate stations between winter quarters and the home country? The first question does not admit of any very precise answer, as so much depends upon the patient and so much upon the resort in which he has spent the winter. Few invalids remain south of the Mediterranean after the end of March; in the Alps the melting of the snows is generally taken to mark the transition between the seasons; while residence in the resorts of the Riviera or Southern France may be prolonged far into April or even later. As regards the second question, it is probable that abrupt transitions are more fraught with risk at the end of winter than at the beginning. An invalid may proceed with comparative impunity directly from England to the Alpine stations, but it will be well when possible to make the return journey in a more deliberate manner and to linger for a time at some intermediate station.

This leads us to the last point, What are the most convenient intermediate stations? To those who have wintered in Cairo or up the Nile, Corfu may be recommended, or Palermo, or Malaga. From Algeria recourse may conveniently be had to Ajaccio or Hyères. It must be remembered that none of the Italian resorts possess good spring climates, except the resorts of the Riviera—viz., San Remo, Bordighera, Allassio, Pegli, Nervi, and Rapallo. Those who have wintered in the Riviera have not, as a rule, much difficulty about an intermediate station, as they can stay in their winter quarters until the time has come when they can safely make the homeward journey by easy stages. The case of the Alpine sanatoria is more difficult, as a thoroughly satisfactory spring climate scarcely exists in Switzerland or Northern Italy. Among the places that may be recommended at this season, but with considerable reservations, may be mentioned Bex in the Rhone Valley, Montreux, and Gardone Riviera on Lake Garda. Spring is, indeed, a treacherous and most unsatisfactory season for the invalid over a large

part of Europe, and an ideal spring climate is still to seek. It will be well for the invalid to remember that as this is his most trying season at home, so is it in a large degree even in the most favoured of foreign resorts. He must relax none of his usual precautions, and must remember that the combination of bright sunshine with cold winds, which is so characteristic of the spring climate of most health resorts, is for him a peculiarly perilous one. Spring is the season *par excellence* for the ravages of pneumonia at home, and it is then also that the chronic pulmonary invalid abroad is most prone to those inflammatory complications which do so much either to imperil his life or to retard his recovery.

APPLIED science has its disadvantages as well as its advantages. The introduction of steam as a source of motive power brought with it a series of disasters caused by the sudden unloosing of the pent-up forces in the steam boiler through some defect in its construction; coal gas, since it was adopted as an illuminating agent, has introduced its share of dangers, though it must be admitted that accidents from this cause are rarer than they formerly were; while its competitor, electricity, since it has been laid down for lighting purposes, has actually been credited with manufacturing sodium beneath our pavements, which in contact with water has fired and ignited its rival, which, so it is asserted, has leaked from the mains. A happily less familiar source of public danger, but which may prove to become more frequent as the demands on applied science increase, is, as the experience of the past week would teach, the conveyance of certain chemical commodities along our highways both on land and sea. The bursting of a steel cylinder containing compressed oxygen gas at Fenchurch-street Station on Friday, March 15th, by which a man in charge of it lost his life, cannot be easily accounted for. Why the cylinder up to that moment had successfully resisted the enormous internal pressure of 1800 lb. per square inch, and nearly double that amount if in the ordinary course it had been properly tested before charging, is the mystery which surrounds that unfortunate occurrence. It can hardly be supposed that the cylinder contained an explosive mixture of hydrogen (or coal gas) and oxygen, for example, since the heat developed at the time of charging would probably have been sufficient to cause a powerful explosion. Again, there would appear to be no evidence that the cylinder was submitted to any shock; and, indeed, there is no reason to believe that even if that had been the case the cylinder would have sustained any injury. A properly constructed and tested cylinder is known by experiment to be free from the danger of bursting through being dropped, even from a height of thirty feet and upwards. The only explanation that remains is that an intra-molecular change had taken place in the steel of the cylinder, so that the metal had gradually returned to a brittle and crystalline condition, which careful re-annealing would have eliminated. We believe that it is the practice of the makers of oxygen gas to anneal the cylinders, not only in the first instance, but afterwards every few years, in order to correct any tendency in the metal to harden and become less ductile in the interval. This seems to us to be, therefore, in the present case the only plausible theory, and, that

being so, it is extremely desirable that some steps should be taken to compel gas-makers to make rigid examination of the cylinders at short intervals, so that, in addition to pressure tests, any physical change—from ductility to brittleness—may be counteracted by an annealing process.

It is remarkable, however, assuming that the disaster was due to bursting merely and not to violent combustion—and in that sense comparable to an ordinary boiler explosion—that the discharge was so far-reaching in its effects as to destroy gas lamps and to blow out the face of the clock at the extreme end of the platform. At the most the cylinder probably did not contain more than 20 cubic feet of gas, but the pressure, be it observed, is generally twenty times greater than in an ordinary steam boiler. Had the accident occurred in more confined limits, as, for example, in a railway carriage or in a lecture room, the loss of life might have been appalling. The disaster arising from the storage of chemicals which happened on March 14th on board a Mediterranean steamer belonging to a French company was of a different but equally serious nature. In this case two fluid chemicals mingled together with the production of a suffocating gas, which resulted in the loss of two lives and serious injuries to four other persons. It appears that the vessel, meeting with very heavy seas on rounding Cape Matapan, was at length struck by a huge wave, which shattered a great number of jars that were stored on the deck, some containing sulphuric and others hydrochloric acid. Apart from the intensely corrosive properties of the mixed acids, which found their way into the sleeping compartments of several of the passengers, the effect of the sulphuric acid mixing with hydrochloric acid would be of course to produce gaseous hydrochloric acid. The expedient of storing chemicals on board ship in close proximity to sleeping apartments cannot be too vigorously condemned, and we trust that a thorough and searching inquiry will be made, and that steps will be taken in future to protect the passengers from such dreadful and avoidable risks. We are apparently living in an age when chemicals have, more or less, become necessities and everyday commodities amongst us. Some time ago we recorded an accident arising from the simultaneous presence of chlorate of potash lozenges and match boxes in the same pocket, and other similar accidents due to chemical reactions on the comparatively small scale of domestic environment have been recorded. It is evident, however, that unless great care be exercised, both on the part of the manufacturers and the public, in dealing with these things they will surely have a forfeit to pay for availing themselves of the mysterious forces locked up in nature which man finds it profitable to release temporarily for his convenience and use. Finally, the increasing employment of chemicals such as compressed gases for public use should, it seems to us, shortly afford subject of special legislation and control.

ROYAL BRITISH NURSES' ASSOCIATION.—The fourth sessional lecture of the season was delivered at 17, Old Cavendish-street, on March 15th before an unusually large audience by Sir Dyce Duckworth, the subject being the Modern Trained Nurse. The chair was taken at 8 P.M. by Mr. Herbert Page. A discussion took place at the conclusion of the lecture on the various points raised of special interest to nurses.

Annotations.

"Ne quid nimis."

THE "SWEATING" SYSTEM APPLIED TO THE MEDICAL PROFESSION.

WE receive from all quarters evidence of a general revolt against modes of medical practice which practically amount to the degradation of the profession and the sweating of medical men. The general revolt of course implies a general evil. In one place the vortex into which all kinds of practice are to be sucked is a medical aid association; in another a club established by a commercial company worked by a layman, who gets so much—perhaps 20 per cent.—on the receipts; in another even the old-fashioned, and in its way honourable, "club" is degraded to wrong uses, and made the medium of meanness to a profession which deserves very different treatment from the working men of Great Britain. Against fair combinations of working men for attaining their own legitimate ends we have not a word to say. They have a right to take this course to procure reasonable wages and reasonable reductions in the price they pay for their prime necessities. Medical attendance is one of these necessities. They are as dependent on this as on food or education. And yet it has a delicacy of character about it which cannot be said to attach to any mere article of trade or to the person who supplies it. It cannot be supplied "in the lump." To be valuable it must be individual to a great extent. The individual patient must be considered, and his relation to the medical adviser should be continuous and individual. All attempts at procuring wholesale medical attendance on crowds are bad for the patient. They are also bad for the medical profession, and the profession has a right to object to them as inconsistent with its own proper conditions of work. It has a right to protest against all terms that would convert it into a mere traffic in drugs and take no cognisance of the fact that its members are not mere retailers of such drugs, but highly educated men, whose responsibility is great and whose judgment is, as a nearly invariable rule, equal to that responsibility. We learn that in Lincoln there is a determination on the part of the profession to resist the abuse of friendly societies, medical aid associations, and the like. We have only two words to say on this subject. The first is to express our hearty approval of the stand made in Lincoln and elsewhere. The second is to impress on medical practitioners there and in other places that victory over these evils depends entirely on themselves. The profession in each place must do its own duty. The General Medical Council has, perhaps unfortunately, resolved after full investigation that the evils are not such as it has power to deal with. After all, the profession must look to itself and to its own dignified and effective action in each particular locality for success. If the older and the younger members of the profession in friendly discussion arrive at clear views as to the real significance of these evils and loyally support each other in resisting them the result will soon be apparent. We cannot believe that either working men or the honorary members of friendly societies will, after due notice, allow these institutions to be used to the detriment of a profession to which they owe so much.

THE QUESTION OF THE COMMUNION CUP.

WHEN the story of the sanitary progress of the present century comes to be written it will be incomplete if it does not lay stress upon the fearlessness with which the reformer waged war against possible sources of infection in places where at a period not so very remote from his own mere

criticism would have been looked upon as little less than sacrilege. A controversy is now being raised in America as to the Communion cup as a source of infection to those sharing in the celebration of this solemn rite. This is not the first time by any means that the dangers which may attend the common use of the chalice in the administration of the Sacrament have been made the object of outspoken comment. With the historical aspects of the case we do not profess to concern ourselves, and with the religious aspects we also do not desire to deal. We shall not be suspected of neglecting the latter or of being callous to the great pain that even the idea that the Communion cup could be a source of danger will give to many if we speak only from a sanitary point of view. The administration of the wine to communicants in separate vessels for each would certainly remove a possible source of danger, and to advise this must seem to the ardent hygienist a counsel of perfection. There is, and it cannot be gainsaid, a possibility of infection in the use of the common chalice, and Moses, that prince of health officers, would probably not have sanctioned our present ritual; but, on the other hand, there seems to be no actually proven example of any serious amount of infection being traced to the use of the common chalice, and the precaution, which should give no offence to anyone, of wiping the rim of the chalice with a napkin after each communicant has placed it to his lips should go far to remove what danger there may be. It should surely be unnecessary for us to urge upon those who have only lately entered upon convalescence from some infectious disease the necessity of refraining from publicly taking the Sacrament until a reasonable period after recovery. Human nature, however, is not only weak, but, alas, thoughtless, and a word of warning is not, we think, likely either to do any harm or to give any offence.

THE INTERVIEWER AND THE MEDICAL MAN.

THE custom of interviewing is growing in this country, and there is no doubt a demand for this kind of information, albeit it must often be of the most meagre and occasionally, perhaps, of the least accurate kind. We are led to this consideration by the perusal, in the columns of a Sunday journal, of the report of an interview with a medical authority on the subject of vaccination. Assuming—as it appears to do—that the report gives an accurate statement of that gentleman's views, we may venture to doubt the advisability of these being promulgated in this form. In the main the opinions he is reported to hold are sensible, straightforward, and justifiable inferences from the facts of the case for vaccination; and it is eminently desirable that they should be brought into prominence. But the subject of the manner in which vaccination is performed, and that of its alleged injurious effects, is hardly one to be treated *ex cathedra*, and cannot but open the door to much unprofitable controversy when dealt with so summarily. Amongst the various aspects of the question submitted to the Royal Commission—which has at length resumed its sittings for the purpose of considering its report—there is none which has been more carefully inquired into than this; and we do not doubt that the consideration of the avoidance of all risks as well as the safeguarding of the efficient performance of vaccination will take a prominent place in the long anticipated recommendations that may be made by the Commission. The misfortune of this whole question of vaccination is that it has opened the door to the discussion of strictly technical topics in pathology and therapeutics by those who have had no scientific training and are unable to appreciate the value of scientific evidence. The art of the interviewer is to seize on questions of the day and to give the opinions of experts upon them in a form capable of being

understood by the people; and, seeing how common is the curiosity about medical matters, it is not surprising, although it is none the less regrettable, that the "medical interview" is growing in favour and extent. As medical questions are seldom simple—indeed, often most complex—there can be no two opinions upon the inutility and harmfulness of the practice.

AN ANATOMICAL CURIOSITY.

DR. J. W. OGLE has recorded in the twenty-ninth volume of the *Journal of Anatomy and Physiology* an interesting example in which one of the roots of the left hypoglossal nerve passed through the left vertebral artery within the skull. An excellent drawing is reproduced, but the specimen itself was not preserved. We had almost thought, with Dr. Ogle, that the observation might have been a unique one, for although nerves passing through bones in early development (as, for instance, one of the supra-clavicular nerves passing through the clavicle) are well recognised, nerves passing through bloodvessels, especially arteries, are very rare. Instances are known of the internal anterior thoracic nerve passing through the axillary vein and of the nerves at the bend of the elbow passing through one of the veins at that point; and the nerves passing into the thorax occasionally obtain a passage through the large venous trunks. It is therefore very remarkable that the only other instance of the passage of a nerve through an artery that we can find recorded is by Otto, who mentions a wax model in the anatomical museum of the Joseph-Academie in Vienna, where the hypoglossal nerve also ran through the vertebral artery. The same nerve and the same artery are involved, and it is very curious that such an anomalous development should apparently be thus limited.

METROPOLITAN DISTRICT RAILWAY FARES.

A DISCUSSION which has naturally awakened considerable interest among Londoners has recently arisen concerning some of the fares charged by the Metropolitan District Railway Company. It is alleged that the company has made a practice of charging rates in excess of the limits imposed by the statute under which it carries on its operations, and aggrieved passengers have very naturally made the charge the subject of complaint. We should have supposed that any such infraction of the law would easily be restrained by the Railway Commissioners if the point were proved, and in such a case it is very odd that any serious difficulty should exist about invoking their intervention or placing before them the necessary statement of the case. But however that may be, there are broader considerations to be taken into account in forming an opinion upon the merits of a controversy such as this than the mere letter of a statute thirty years old. The enormous growth of the traffic in the heart of London and of the residential districts on its borders which has taken place during the last quarter of a century may well be supposed to have revolutionised the conditions under which the transport services in all their various departments are carried on. It is difficult to imagine that the scale of charges fixed in the sixties would now need revision in such a sense as to augment the revenues of a railway company circumstanced as is the Metropolitan District; but on the other hand the change of fashions in the matter of class accommodation has been such that it may well have become desirable to readjust the various rates *inter se*. People who thirty years ago would have considered a first-class ticket indispensable to their self-respect may be found to-day very complacently sharing the improved third-class carriage with their less pretentious neighbours. Things like these have a money value when they are regarded from the point

of view of the railway manager, and it would be well both for the critics of the companies and their champions to bear in mind that the terms under which such a service as that which a great railway company supplies is to be undertaken and conducted must in the nature of things be subject to frequent revision, although invested for the moment with the sanctity of the law by Act of Parliament.

COUNTY HOSPITALS AND THEIR MEDICAL STAFFS.

THE question to which attention was directed in our columns last week by Mr. Henry Taylor is one of no small interest to the medical profession in county towns. We may say at once that we fully concur with Mr. Taylor in the views he expressed, although they are contrary to the action taken by the governors of the Surrey County Hospital. It is clearly absurd to contend that, as the hospital is a "county" one, therefore its medical staff should be drawn from other towns than that in which the institution is situated. That the staff appointments should be regulated by the subscription list of residents in various parts of the county is absurd, unless those thus appointed be merely consulting rather than acting medical officers. Apart from the practical inconvenience arising from medical officers living at a distance from the sphere of their hospital work, the general introduction of this principle of selection would, as Mr. Taylor shows, be quite impracticable. Guildford is the county town, not Godalming; and naturally, therefore, Guildford is the seat of the county hospital. It is not claimed that Godalming is ill-served by the hospital; and that its medical men feel a grievance at not having the hospital appointments, which form one of the compensations of a practice in a country town, is surely not the case. The idea probably arose in the minds of some of the influential and active governors dwelling in the charming neighbourhood of Godalming, who, perchance from their attachment to the place, have lost sight of the fact that, after all, Godalming is not Guildford.

INSTANTANEOUS SURGICAL ASSISTANCE.

UNDER this title Dr. Marcel Baudouin has published an interesting report of the plans which he has drawn up for providing the best possible aid at the shortest possible notice at the coming Exhibition of 1900 in France. The necessity of such organised assistance has been shown over and over again by the numbers of accidents which occur in all large exhibitions, both during the building of an exhibition and while it is open. At the Chicago Exhibition the daily number of cases requiring medical or surgical treatment was very great, and on two special days—viz., Oct. 21st and 22nd, 1893—no fewer than eighty-one cases required attendance in one form or another, and the experience gained at Chicago has helped Dr. Baudouin in the formation of his plans for future services. A hospital is to be built in the grounds, and from this as a centre outlying posts are to work. It is proposed to have ambulances stationed in different parts of the exhibition, which can at once be called to any locality by means of telephonic arrangements distributed over different parts, just as fire-engines in London are summoned to a fire. By this means any part of the exhibition can at once get an ambulance, and the injured be given "first aid" and then taken to the hospital. The hospital is to be built in as an advantageous position as possible for receiving patients from any part of the exhibition, and will thus form the centre of the whole system. It is to contain twenty beds, distributed over ten rooms, each room containing two. Four of these rooms are to be given up to surgical beds (two male and two female) and four to medical, while the two remaining ones are to be, if possible, rather larger than the others, and reserved for obstetric and gynaecological cases and for any young children whom it may be desirable not to put in the adult wards, and for this purpose each of these rooms is to

contain a cot in addition to the other beds. An operating room, with adjoining anæsthetic room, is to be built, and is to contain every modern surgical appliance, and there are also to be well-ordered rooms for receiving cases when they first come in. The medical and surgical staff is to consist of a resident surgeon, in command of the service, one non-resident assistant-surgeon, and one non-resident assistant-physician. In addition to these, there will reside in the hospital an assistant in medicine (also a bacteriologist), two surgical assistants, and a dispenser. There is also to be an efficient nursing and domestic staff in the building. It is proposed to raise the necessary funds by taxing the employers of labour according to the value of the constructions they erect in the exhibition, the necessary taxation being estimated at about 5 fr. per 1000 fr. Such a complete system for saving life and limbs will necessarily be an advantage to large employers who are responsible for the lives of the men they employ, as well as to the injured themselves, and it is to be hoped that the authorities will see their way to carry out Dr. Baudouin's carefully worked-out scheme.

SANITARY INSPECTORS AND TENURE OF OFFICE.

A DEPUTATION of the Sanitary Inspectors' Association was introduced on Friday last, by their President, to Sir Walter Foster, M.P., Parliamentary Secretary to the Local Government Board. A full report of the meeting will be found in another column, but we may here note that the deputation, which was very numerous, had for its object the task of bringing before the Secretary the question of the tenure of office held by the inspectors. Their President, Sir Benjamin Ward Richardson, urged that at present sanitary duties could not be properly performed by inspectors unless they were preserved from the danger of dismissal if they independently and faithfully fulfilled their duties in the removal of flagrant causes of disease. He gave an instance in which an able sanitary inspector, who had been for thirty years engaged in the work of inspection, had been peremptorily removed from his duties and left unprovided for, owing to the circumstance that the district in which he had laboured so long had been divided by the county council and that new inspectors were introduced, leaving him altogether unprovided for, without a pension or provision for the future; so it sometimes happens that the man who is most useful is in the most dangerous position of all. Several sanitary inspectors supported their President by details of facts which they themselves had directly observed, and Sir Walter Foster, in his very practical and excellent speech, spoke strongly in their favour and in the direction of their views. He did not admit that sanitation could not be carried on with considerable effect under existing conditions; and he pointed out a series of facts showing that an improved sanitation has led greatly of late years to the reduction of disease. This, he said, was specially marked in regard to the suppression of cholera in this kingdom. He referred to the epidemics of the disease between 1832 and the last epidemic which has appeared, showing that there had been a proportionate decrease of mortality and of cases affected according to the increase and spread of sanitary principles and practice. On the last occasion, in fact, cholera, after being introduced into this country, had been stamped out with a facility which could scarcely have been expected, and which could not have occurred in any other country where the sanitation was less perfect. At the same time sanitation still admitted of improvement, and the fixity of the tenure of office of sanitary inspectors, with an increase of salary for their services, would without any doubt tend largely to this end. Unfortunately there was at this time no Act of Parliament which permitted of such tenure, and he could hold out no hope

that this session there would be any legislation that would bring about what was asked for; but if at any time such legislation were attempted he would bear in mind the request in the most favourable manner he could. Meantime, he trusted that county councillors themselves, who had taken upon themselves the task of local self-government, would be wise enough to lead the way to the necessary reform by improving the salaries and making safer, and therefore more useful, the term of office amongst those who were so willing to serve them in the performance of what was often a delicate and hazardous duty.

APHTHOUS FEVER.

SOME alarm seems to have been caused in this country by a report from Berlin that "a new epidemic" has manifested itself in the south-western parts of that city, of which blisters in the mouth are the most characteristic feature. It is also stated that Professor Virchow regards the malady as the human form of bovine foot-and-mouth disease, induced by consuming the milk of affected cows. There is nothing at all surprising in this occurrence, as the aphthous or eczematous fever of animals known as foot-and-mouth disease is communicable to mankind, chiefly through the ingestion of uncooked milk from cows whose mammary glands are involved in the eruption. Innumerable instances of this transmission, experimental as well as accidental, are on record, and many have happened in this country when the disorder was prevalent, which it was for nearly half a century. Now, however, we are happily free from it, and it is not likely we shall ever see much of it again so long as we keep a sharp look with regard to the importation of cattle. On the Continent it is constantly present in some region or other, and at times is universally prevalent, so that it is not at all startling or wonderful to hear of people suffering from it when no precautions are adopted to render the milk innocuous.

DEATH UNDER CHLOROFORM.

WE are indebted to the house surgeon of the Royal Victoria Hospital, Bournemouth, for the substance of the following account of a death under chloroform. The patient, a man aged forty-three years, was admitted into hospital suffering from a transverse fracture of the patella during November of 1894. On admission his general health was fair, although there was unduly marked arcus senilis, and a history of intemperate habits. The patella was cut down upon and united by wiring. On this occasion chloroform was given from a Skinner's mask, upon which the anæsthetic was sprinkled from a graduated drop bottle. The stage of excitement was unusually pronounced. The inhalation took over ninety minutes, and twelve drachms were used. No unusual symptoms occurred. Recovery was not delayed, and only slight sickness followed. On Jan. 4th, 1895, a further procedure became necessary to remove the wires, and chloroform was again given, a Skinner's mask and drop bottle being employed. About a drachm was sprinkled upon the flannel, when violent struggling took place, the patient raising his head about two feet from the couch. Another drachm was sprinkled upon the flannel and the patient ceased to struggle. He appeared to go under in the ordinary way, his breathing being deep and regular. The corneal reflex was discovered to be absent, and the operation was about to be commenced when the respiration became altered in character, two or three deep, prolonged breaths being taken and then all breathing suddenly ceased. There was neither pallor nor cyanosis. No radial pulse could be felt after the failure of respiration. The usual restorative measures—artificial respiration, injection of ether beneath the skin, depression of the head, and extension of the tongue—were unsuccessfully employed. The necropsy revealed

fatty degeneration of the heart and kidneys. Those present expressed the opinion that death was occasioned by primary heart failure, predisposed to by the diseased condition of that viscus. It is pointed out that the violent struggling which took place during the anaesthetisation probably crippled a heart predisposed to syncopal attacks. There does not appear to be any reason why this patient, who was known to be an alcoholic subject and therefore prone to degenerative changes, should have been given chloroform. During the first operation he struggled, and presumably a like state of things would occur again; under these circumstances we doubt whether chloroform, which was likely to depress the vital processes and place the patient in grave danger, was the best anaesthetic. The preparation, the choice, and the management of the anaesthetic, however, often tax the resources of the most experienced chloroformist and confront the less expert practitioner with a problem the solution of which he may well fail to discover without any blame being incurred by him.

TWO SUPERNUMERARY TESTES.

SUPERNUMERARY testes are notoriously very rare. A case was recently reported to the Clinical Society of London. It is less remarkable than one reported in the *New York Medical Record* of Feb. 23rd. The case was noticed first by Lieutenant Alex. M. Davis, recruiting officer of the Eighth Cavalry, who took it to be a case of one superfluous testicle. On taking the recruit to a physician the latter found him to have four testes. Three were on the left side of the scrotum and one on the right. They were all apparently perfect testicles, and gave the peculiar pain incidental to pressure. Three were large and well developed, and one situated high up in the scrotum was small. There appeared to be but two spermatic cords, though the two large testicles on the left side seemed to be connected by a subsidiary spermatic cord.

BISKRA.

In the *Fortnightly Review* Major Arthur Griffiths gives some interesting information regarding a health resort to which we have more than once referred in our columns, but about which there is little accurate or precise knowledge. The place in question is Biskra, situated in an oasis beyond the Algerian mountains, and on the verge of the Sahara. Major Griffiths is disposed to think that the attractions and virtues of Biskra have been unduly magnified, but, in spite of some drawbacks, he gives a verdict of qualified approval. He writes from personal knowledge and from recent experience. The two special advantages of Biskra are "climate and comparative propinquity." As regards climate, Sir Lambert Playfair, a competent authority, says: "The climate of Biskra is delightful during six months of the year. Nowhere in Algeria can we find a more genial temperature, a clearer sky, or more beautiful vegetation. It is practically rainless; the only drawback is the prevalence of high winds." Other authorities speak in even stronger terms, and it is claimed for Biskra that it is comparatively free from that chill at sundown which is the bugbear of so many otherwise fine climates. The winds, however, would appear to be a serious drawback. They are often very tempestuous, blowing almost with the force of a tropical typhoon, and when they come from the north and pass over the snow-capped Atlas Mountains they are apt to be bitterly cold. The storms at Biskra differ in one important respect from those of Egypt—viz., they do not raise the vast quantities of dust familiar to the traveller on the Nile, the reason being that the desert surrounding the oasis is mainly hard and stony. The hotels and houses at Biskra, being built with a view to protection against heat, are not well adapted to withstand these storms and are very draughty during their continuance. Still, the

air is very fine; it is "dry, often warm, always invigorating, with a certain fine champagne-like quality of briskness, which, without being too stimulating or exciting, makes it delightful simply to breathe." As regards propinquity to England, Biskra has a considerable advantage over the resort most analogous to it in point of climate—viz., Upper Egypt. "The railway journey to Marseilles is the same in both cases; then four days remain for the sea voyage to Alexandria, against twenty-six to twenty-eight hours to Algiers, or thirty to Phillipville. Again, the desert of Sahara is certainly much nearer the Algerian seaboard than are Luxor and Assuan, with presumably parallel climates to Alexandria." The journey by rail from Algiers to Biskra is 400 miles, and a night must be spent *en route* at Setif, where the accommodation is described as inferior. From Phillipville the journey is only 200 miles, and can be made in one day, but against this great advantage must be set the serious drawbacks that the Compagnie Transatlantique do not run their best boats to Phillipville and that the hotel accommodation there is only third-rate. On the whole Major Griffiths is inclined to recommend the route *viâ* Algiers. The attractions of Biskra, beyond its admirable climate, do not seem to be numerous or great. The hotels are fairly good, but the *cuisine* suffers from inevitable monotony. There are gardens, a casino, a curious market, a negro village, the baths of Salahin, and neighbouring oases which may be visited. The sportsman, "if he is enterprising and fairly hardy, enough so at least to face the trials of tent-life, will be rewarded by good bags of gazelle, bustards, hares, snipe, and, in the proper season, quail." The supply of horses is not very good, and the prices demanded are often extortionate. In the matter of antiquarian remains, although Algeria is far behind Egypt, it is nevertheless very interesting. "At no great distance from Biskra are the famous Roman ruins of Thimegad, the ancient Thamgas, second only to those of Pompeii, and in excellent preservation. Near it is Lambessa, the city of the third Augustan legion, another Roman remain which would well repay the visitor, but neither Thimegad nor Lambessa can be approached without great pains and fatigue, with a night's lodging at the indifferent hotel of Batna thrown in."

THE CARDIAC PLEXUS IN DIPHTHERITIC PARALYSIS.

In the *Archives de Médecine Expérimentale et d'Anatomie Pathologique* Dr. A. Vincent has written a paper in which he strongly controverts the current view that in convalescence from diphtheria myocarditis is the only condition which leads to cardiac failure. Another view, that this condition is the result of an affection of the vagus or sympathetic, is not favoured by the exceedingly slight changes which are found in those nerves. The myocarditic theory, on the other hand, is contradicted by various observations in cases of patients dying in the course of convalescence from diphtheria in which no affection of the heart muscle was present. Dr. Vincent quotes such a case, which he had himself observed and examined, and he expresses the opinion that the reason why the cardiac failure has not been ascribed to its true cause is because only the nerve trunks have been examined, while the state of the cardiac plexus has been overlooked. In confirmation of the importance of carefully examining this he quotes the case of a man who died from cardiac failure after diphtheria, and in whom a careful examination of the medulla, spinal cord, and vagus and sympathetic revealed no abnormality. In the plexus cardiaco-aortic, however, there were widespread parenchymatous changes differing in degree in different parts, while in the muscle fibres of the heart the transverse striæ were well retained as a rule, and only in a few were they indistinct or absent. In the cardiac plexus also similar changes to those above described

were found—i.e., changes exactly analogous to those found in the peripheral nerves in post-diphtheritic paralysis. Dr. Vincent accounts for the fact that the trunk of the vagus was not affected by supposing that the course of the disease was so rapid that death ensued before the changes in the trunk of the vagus could manifest themselves. The changes in the plexus were severe and quite out of proportion to the affection of the myocardium, and there could be little doubt that the former were the cause of death. This observation of Dr. Vincent, together with one by Dr. P. Meyer, are said to be the only ones in which the cardiac plexuses have been examined; but the very definite changes described by both observers make it desirable that future observations should be directed to the elucidation of this point.

DEPRIVATION OF DEGREES.

THERE is good reason to hope that universities will soon acquire a similar power to that possessed by corporations of expunging the names of those of their members who have been guilty of conduct unworthy of their position. It will be remembered that at its last meeting the subject was brought to the notice of the General Medical Council in a motion by Dr. Glover. The motion was withdrawn after a satisfactory discussion, in which the representatives of universities showed every disposition to consider their duty in this respect. We now understand that the Council of the Senate of the University of Cambridge recommend that the following new statute for the University be made as to the deprivation of degrees—viz.: If the Chancellor of the Sex Viri, or four at least of their number, of whom the Chancellor shall be one, shall report to the Council of the Senate that it has been proved to their satisfaction that a graduate of the University has been convicted of a crime for which he has been sentenced to penal servitude or imprisonment, and that such crime is one which renders him unfit to be a member of the University, that the Council of the Senate may propose to the Senate a grace depriving him of his degree or degrees, and of all privileges enjoyed by him as a member of the University, and in case the grace be approved by the Senate he shall be deprived accordingly. The Convocation of the University of Durham has lately ordered the removal from the calendar of the University of the name of one of its medical graduates who had been found guilty of felony.

THE CORONER FOR CHESHIRE.

MR. HENRY CHURTON, the medical coroner for the division of Cheshire which includes Birkenhead, is the premier coroner for England and Wales, having celebrated his jubilee as coroner several years ago. He fought a most plucky fight against his legal opponent, and was successful. During his long career many changes have occurred, involving increased duties, and Mr. Churton accomplished all these with credit to himself and advantage to the community. Though past four score years, Mr. Churton possesses excellent health and has a commanding presence. It is all the more to be regretted, therefore, that he should bring a prejudice to his profession and office by an excessive irritability of temper. Not long ago he was taken to task by Mr. Justice Wills in the Crewe murder case, in which two youths were charged with the murder of their father. For very cogent reasons the police authorities declined to produce the prisoners at the inquest, which so ruffled the coroner, who evidently regarded it as a slight upon himself, that he sent no depositions to the trial, a proceeding which was condemned by Mr. Justice Wills and was noticed in THE LANCET at the time. More recently he acted with discourtesy at an inquest he held at the Clatterbridge workhouse. The jury had walked

a considerable distance, and, the weather being extremely inclement, naturally asked if they might be allowed the use of a conveyance or conveyances home. Without any expression of sympathy he sharply intimated that he could do nothing for them, and that they must find their way home as well as they could. In another case he was discourteous to a solicitor who represented the Society for the Prevention of Cruelty to Children at an inquest on the body of a child who had died presumably from neglect. In the third case he made such an attack on Dr. Monro, the house surgeon of the Wirral Hospital and Dispensary for Sick Children, that the chairman of the acting committee addressed a letter to the editor of the *Liverpool Daily Post*, in which he proceeded to show that the coroner was himself remiss in not communicating with Dr. Monro and summoning him to the inquest. There is another matter which ought to be noticed. Birkenhead is now a large incorporated town rapidly rising in population—already over 100,000—and in importance. It ought to have its own borough coroner and not remain any longer in the county coroner's district, such an arrangement being the cause of much delay in the holding of inquests and other inconveniences.

THE PSYCHOLOGY OF ANÆSTHESIA.

IN the course of an interesting letter, which we print elsewhere, Dr. Wyld calls attention to the phenomena of mind during partial anæsthesia. While we cannot quite accept as feasible his suggestion that experimental psychology should be studied from evidence derived *quâ* narcosis, we recognise a peculiar interest in the study of such dreams. Dr. Wyld's visions are not singular. He himself draws attention to the frequency with which persons experience such exiliatory phantasms under chloroform and other anæsthetics; and in the "Life of John Addington Symonds" we read: "On Tuesday I was put under the influence of chloroform and laughing gas together" (*sic*). He then details his vision. "I seemed at first in a state of utter blankness; then came flashes of intense light alternating with blackness, and with a keen vision of what was going on in the room round me, but no sensation of touch. I thought that I was near death, when suddenly my soul became aware of God, who was manifestly dealing with me, handling me, so to speak, in an intense personal present reality. I felt Him streaming in like light upon me and heard Him saying in no language, but as hands touch hands and communicate sensation, 'I led thee, I guided thee; you will never sin and weep and wail in madness any more; for now you have seen Me.' My whole consciousness seemed brought into one point of absolute conviction; the independence of my mind from my body was proved by the phenomena of this acute sensibility to spiritual facts, this utter deadness of the senses; Life and Death seemed mere names....." Symonds adds, "I cannot describe the ecstasy I felt," and referring to his experience and its psychological evidence, says, "If this had happened to a man in an uncritical age would it not have carried conviction, like that of Saul of Tarsus, to his soul?" There is no doubt, as has been pointed out, that these visions are the product of that kind of enhanced idea formation which occurs as the patient is "going over." At this time the senses are abnormally acute, but the impressions they convey are not true presentments of the physical stimulus received. They partake of the nature of hallucinations. Of course, the anæsthetics now in use are by no means the only drugs giving rise to dreams of elation. Hashish and the more familiar alcohol give psychological evidence of a like character. De Quincey, writing of opium in his "Confessions," sums up the action of alcohol as against his favourite nepenthe: "A man who is inebriated, or tending to inebriation, is, and feels that he is, in

a condition which calls up into supremacy the merely human, too often the brutal, part of his nature; but the opium eater feels that the diviner part of his nature is paramount—that is, the moral affections are in a state of cloudless serenity, and high over all the great light of the intellect." In a similar strain have the victims of cocaine told of its wonderful dreams and soul-stirring visions. The circulatory changes in the nervous system which bring about ordinary dreams in an undrugged person, and the morbid conditions of the nervous system which evolve vision seers and Lourdes miracles, are probably but variants from the states called into existence by the physiological effects of anæsthetics and narcotics—

"How sweet it were, hearing the downward stream,
With half-shut eyes ever to seem
Falling asleep in a half dream!"

ASEPSIS IN CATHETERISM.

A RECENT number of *Przegląd Chirurgiczny*, the Polish surgical review, is largely taken up by Dr. S. Groszlik's article upon Asepsis in Catheterism. Reviewing the methods usually employed for sterilising catheters and bougies, he finds most of them to be unsatisfactory. Bacteriological experiments made by himself showed that neither mechanical cleansing nor the use of liquid antiseptics, sulphurous acid gas or mercurial vapours thoroughly sterilised instruments which had been artificially infected with cultivations of staphylococci and streptococci. This end can only, he affirms, be gained by employing moist heat. Dr. Groszlik describes fully an apparatus, apparently simple and effective, which he has devised for this purpose. In this the instruments are sterilised in five minutes. Elastic instruments, it may be noted, are declared to be unaltered by the process. A useful bibliography is appended to this article.

COUNTRY HOLIDAYS FOR FACTORY GIRLS.

OUR readers will remember Captain Morris's cynical summary of the delights and wearisomeness of the country, but then he lived in Pall Mall, within easy reach of the green trees, ducks, and water of St. James's Park, and there are people in London, who do not live in Pall Mall, to whom the prospect of a visit to the country represents wonders unknown and pleasure untold. It is a physiological maxim that the constant use of one function, if performed voluntarily, will in time produce degeneration of the organs to which that function belongs, and the London factory girl in her daily work is much exposed to this danger. She stands or sits all day in her "shop," and in most cases feeds a machine—an insatiable monster like the daughter of the horse-leech, for ever crying "Give, give," which, whether it be fed with soap, envelopes, sweetmeats, or leather, is always ready for more. Conceive then the rest to the wearied brain and the tired muscles of a week in the country with nothing to do, away from the smoke and the noise of the crowded town, to lie on some warm hillside when the breeze blows off the Surrey heathlands, or, greatest treat of all, perhaps, to see the sea at some place other than Southend on a Bank Holiday. The factory girl is known to most of us only as a person who wears boots with brass eyelets and red laces, an enormous hat with three ostrich feathers dyed in aggressively brilliant secondary aniline colours, and a long black cotton velvet mantle. She is also a lady of unfettered speech and prone to acts which would horrify Mrs. Lynn Linton. But with all this "Lizerunt" and her companions have a great deal of sterling worth in them, and these good qualities are marvelously brought out by the assistance of the excellent society for whom we now plead. The Factory Girls' Country Holiday Fund was started by Miss Canney in 1888, and from its last report which we have just received, we find that by its agency 704 girls and women were sent into the country for

periods varying from a week to a fortnight. The average cost is 10s. a week and most girls pay a part at least of this. Subscriptions may be sent and will be most gratefully acknowledged by Miss Canney, St. Peter's Rectory, Saffron-hill, E.C., and we commend this work very warmly to our readers.

BLACKMAILING.

THE Wisbech borough magistrates have had before them a charge against Mr. George Bury of Wisbech, house surgeon of the cottage hospital, of assaulting one Fanny Maud Lillian Johnson. The examination was very damaging to the complainant, and the case was dismissed after a very brief consultation. Mr. Bury is to be congratulated, not on the dismissal of the case, which never assumed a serious aspect as far as he was concerned, but on the manly way in which he met the charge. A medical man deserves the thanks of the profession and of all respectable people for exposing such a case.

HEMIPLEGIA WITHOUT BRAIN CHANGE.

Dr. JACOBSON of Copenhagen has an interesting paper on this subject in the *Deutsche Zeitschrift für Nervenheilkunde*, of which an abstract appears in the last number of the *Neurologisches Centralblatt*. He has himself observed six patients in whom, clinically, the usual symptoms of a typical apoplectic attack were present, but careful examination of the brain failed to reveal any lesion except widespread arterial sclerosis. He also collected the records of thirty-two other cases described by various writers, and by a comparison of these with his own cases he finds that the hemiplegia in those patients manifests itself during an illness of some kind, most frequently during uræmia, but also during phthisis, or after pneumonia, lead-poisoning, or puerperal fever. The hemiplegia present is in all respects the same as that associated with a definite focal lesion and is usually fatal soon after its onset. Dr. Jacobson believes that in these cases the hemiplegia depends upon some circulatory disturbance, determined possibly by some inequality of pressure on the two sides of the brain, and that the cases usually end fatally because of the advanced age of the patients and the arterial sclerosis which is present, assisted perhaps by the toxic condition.

THE PRUDENTIAL ASSURANCE COMPANY.

THE magnitude of the operations conducted by the Prudential Assurance Company has long been matter of common remark, and, indeed, the figures annually reported are such as to strike even the most casual observer. With a revenue which aggregates upwards of six and a quarter millions sterling this great institution cannot but be conspicuous, and if conspicuous impressive. But the real significance of these astonishing figures can only be appreciated when it is borne in mind that the great total is produced by the collection of a vast number of contributions which are individually small. Upwards of two-thirds of the whole income is brought to account in the industrial branch—that is to say, represents the thrift of labourers and artisans and the "working classes" generally—and is contributed in weekly pence. Even the premiums which are paid in what is for distinction called the ordinary branch, and which amount in the whole to more than £2,000,000 per annum, even these are for the most part received in comparatively small sums. The Prudential is characteristically a poor man's life assurance company, and for this reason its prosperity is a matter of the very greatest public concern. The extent of its ramification through the humbler ranks of British society will be a matter of no surprise to the majority of our professional readers, being, indeed, pretty constantly brought to their notice in

the ordinary course of practice. But it is on that account the more interesting to us to be able to gather from the report and statement of accounts recently published and circulated that the society continues to enjoy marked prosperity. Nor is "prosperity" in this instance a mere synonym for "popularity." An annual valuation, made on the most approved principles by actuaries of the highest reputation, affords a guarantee for the continuance of this prosperity, with which not only may the members of the society be well content, but which is matter for satisfaction to the public at large, seeing that the scale and character of the task which the directors of this society have undertaken are such as to render its permanent success a matter of national importance.

VACCINATION AND SMALL-POX AT WILLENHALL.

A VERY interesting account of the outbreak of small-pox which occurred in this district during 1894 is given by Mr. John T. Hartill in his annual report. There were in all 842 cases of the disease, 588 being treated at home and 254 in the hospital. The history of 830 cases was traced, and their condition as regards vaccination and small-pox was as follows. Out of 89 which had never been vaccinated no less than 30 paid the full penalty of their own or their parents' neglect of the Vaccination Acts and died; while among 739 cases which at some time or another had undergone vaccination there were but 17 deaths. The remaining 2 cases had had a previous attack of small-pox, but had never been vaccinated. It is thus seen that the death-rate among the unvaccinated was 33·7 per cent. and among the vaccinated 2·3 per cent., or, put another way, the death-rate among the unvaccinated was fourteen times and a half greater than among the vaccinated. Furthermore, it was found that the death-rate among the vaccinated ranged from 4·1 per cent. in those with but one scar to 1·0 per cent. in those with four scars, whilst it was *nil* among the revaccinated. In regard to severity of attack it seems that amongst the unvaccinated the severe cases amounted to 95·5 per cent., as against 26·6 per cent. among the vaccinated. Mr. Hartill supplies other interesting information in regard to the preventive and modifying value of vaccination, and we commend his very lucid account to all those who are prepared to read it in an unbiased spirit.

THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED.

WE have been invited in two quarters to express an opinion upon the society and its working. To be thrifty at one's own expense is praiseworthy, to be so at the expense of another to some perhaps would seem to be still better. The London and Manchester Industrial Assurance Company, Limited, offer to their clients the following advantages: 1. A certain sum at death, varying according to the date of death and the amount of the weekly premium. This, it must be owned, is a very excellent arrangement. 2. Medical attendance and medicine in illness. The medical referee, we observe, signs a paper on appointment, wherein he agrees to examine candidates and sign a certificate, for which he will receive a certain fee—i.e., when the sum assured is under £25 he receives 1s.; between £25 and £50, 2s. 6d., and so on. In addition he agrees "for the under-mentioned consideration to give and supply at all times when required attendance, medicine, and advice to the best of my judgment to one and all of the said members residing in this district that become my patients the said members to pay for leeches when needed and find their own bottles or be charged extra for the same if found by me. The sum of 10d. per member per quarter to be paid by the company for all members whose names appear upon the list be they few or many." Thus for 3s. 6d. per annum every member gets

medical advice, presumably skilled, and medicine, but not leeches! Now, let us compare the internal economy of a house with that of the body. The house doctor is the plumber and gasfitter. Imagine an association formed whereby a plumber should be induced to sign an agreement that for the sum of 3s. 6d. per house per annum he would attend whenever he was required to see that there was nothing wrong with the pipes, he himself supplying piping, solder, pumps, gas burners, &c. The inevitable candle required would be supplied by the patient—we mean householder. This would be an exactly analogous condition of things, except that leeches are required less frequently than candles. Provident dispensaries are all very well, being in the nature of charity, but for a big commercial undertaking to make profits out of the sweating of medical men who voluntarily sell themselves into bondage is not consistent with either professional opinion or English ideas of fair play. It will be noticed that the estimate of one of our correspondents whose letter is published in another column—i.e., 2d. a week—is too high; 10d. for thirteen weeks is a fraction of a penny per week. The system of touting which he mentions is much to be deprecated, and we must say that, in our opinion, medical men would be wise to dissociate themselves from a society which pursues such methods.

THE BACTERIOLOGY OF GRAVEYARD SOIL.

DR. JAMES BUCHANAN YOUNG, in a paper read before the Royal Society of Edinburgh last year, and which he has now reprinted in pamphlet form, gives the results of some experiments undertaken by him on the chemical and bacteriological condition of soil, with special reference to the soil of graveyards. Samples of soil for bacteriological examination were taken with all due precautions from graves which were being opened for burial, and the examination was made with as little delay as possible. Without describing the methods adopted by Dr. Young or enumerating the organisms discovered, we may indicate here the general results which were arrived at. Dr. Young concludes that the soil of graveyards contains, as a rule, more bacteria than virgin soil; that the bacteria are not most numerous immediately surrounding the coffins, but at some distance above, and that at a short distance under the coffins there is a marked diminution in the number of bacteria present. In the immediate vicinity of the coffins the liquefying bacteria (*proteus vulgaris*) especially were very abundant. Finally Dr. Young points out that so far as his experiments have gone they tend to show that burial has little, if any, effect in increasing the organic matter in the upper layers of the soil, whereas it has a marked effect on the layers containing the coffins—i.e., at depths greater than four feet or thereabouts from the surface. The organic nitrogen and carbon in graveyard soil are, Dr. Young remarks, by no means so great in amount as is commonly supposed, and he considers that if burial is properly conducted in suitable soil there need be no risk to the health of communities.

COLOUR VISION AND ACCIDENTS.

IN our issue of March 2nd we published a letter from Dr. Gowers asking a most pertinent question—viz., "Has any accident been brought home to defect in colour vision?" To this question no answers have as yet been received, and this is all the more surprising as of late great attention has been paid to the subject. Mr. W. M. Beaumont in our issue of Feb. 9th, 1895, instanced the case of a railway guard who was incapable of distinguishing between red and green, and Dr. W. C. Rockliffe, in our issue of Feb. 23rd, gave a number of instances of colour blindness occurring in the mercantile marine. The deputation of ophthalmic surgeons which waited on Mr. Bryce upon Feb. 1st, and which was exhaustively commented upon

in our leading columns upon Feb. 9th, will be fresh in every one's mind. Thus the existence of colour blindness is an absolute fact, but does it necessarily follow that because a man picks out a grey wool when told to select a green, or an emerald green when told to select a rose, that he cannot tell that there is a difference between a red and a green light, or be conscious which light is shown. Dr. Gowers's desire for information derives additional pertinence from Dr. Rockliffe's paper. In this, it will be remembered, some cases were described of men who were rejected as captains on the score of defective colour-vision, having passed a presumably careful examination for colour-vision for the post of mate. It is important to know the details of the failure which entailed rejection, and also the power of adequate discrimination of red and green lights these men possessed. The point raised is urgent, and the question should be answered without delay. It is all for the benefit of railway and steamship companies that any element of doubt as to the capability of their servants to conduct traffic safely should be set aside, while common justice makes it necessary that rejections should not be capricious or unnecessary. Perhaps a Departmental Committee might be appointed to set this matter at rest.

THE HEALTH OF LORD ROSEBERY.

LORD ROSEBERY continues to suffer very much from sleeplessness, and this is aggravated by any attempt to attend to public business. While at the Durdans he has been out for drives on the Downs to Boxhill and other places in the neighbourhood daily, and has taken short walks in addition, but neither the air nor exercise has proved quite efficacious. Certainly some of the reports of the Premier's condition have been unduly gloomy. Except when wearied and discouraged by a particularly bad night he is cheerful, and has enjoyed the society of the friends who have in turn visited him at Epsom. His fortitude is really remarkable under one of the most trying and wearying conditions known to medicine. Throughout his illness he has never said an irritable word to anyone, and even when most sleepless he resolutely and quietly throws off any depression which he may feel in the early morning. Lord Dufferin has placed Walmer Castle at Lord Rosebery's disposal, who will probably go there shortly, but not until the insomnia has abated. For the present he is advised that he will be more comfortable in his own house.

THE INFLUENZA EPIDEMIC.

THE present outbreak of influenza seems to be rapidly extending, and to be resembling in its far-reaching spread the visitation of five years ago. Thus it has become extremely prevalent in St. Petersburg, in Christiania, Copenhagen, and Berlin, and on the whole its line of spread has been rather from west to east, than at the period referred to, when it may be remembered its rather uniform advance across Europe from the east, led it to be generally termed "Russian influenza." On this occasion England would almost claim the unenviable position of being the starting point for the pandemic. Especial mention has been made during the past week in local newspapers of its great prevalence in Rochdale, in Cheshire, and in North Wales, but in point of fact there is no doubt that it is widely prevalent in almost all parts of the kingdom. Its ravages in Dublin and Newry are referred to by our correspondents in Ireland. The Registrar-General's returns for the week ending March 16th show a diminution in the number of deaths directly attributed to influenza—349, as compared with 473 in the preceding week; whilst there has also been a decline in the deaths from respiratory diseases—viz., from 1366 to 1031, the latter being, however, in excess of the corrected average by 507. The general

mortality rates of the thirty-three great towns in England and Wales show mostly a diminution as compared with last week, there being only three towns in which the estimated annual death-rate for the week was 40 or more per 1000—viz., Preston, 40; London, 41·2; and Brighton, 48. The exceptionally high rate at the last-named town, exceptional both comparatively and actually, may perhaps be ascribed in part to the immigration of influenza sufferers to this famed resort for convalescents. In the February summary issued by Dr. Seaton, the medical officer to the Surrey County Council, reference is made to the rapid extension of the disease during that month; including an interesting statement by Mr. Child, M.R.C.S., of New Malden, to the effect that, whereas in January there were 89 cases of influenza in a population of 3437, in February there were 461 in the same population—i.e., nearly one-seventh.

THE DIFFERENTIATION OF OBSCURE THROAT DISEASES.

WE learn from some medical officers of health that considerable help has been afforded through them to medical practitioners having cases of doubtful sore-throats to deal with by reason of the system inaugurated by the Local Government Board of having scrapings or other material from such throats submitted to microscopical and cultural examination. The resulting information is at once telegraphed to the health officer concerned. The conditions under which the material must be sent to the medical officer of the Local Government Board are (1) that it should be transmitted by the local medical officer of health; (2) that it should be accompanied by a clinical history of the case; and (3) that when once the disease in question is ascertained to be diphtheria no more cases from the same locality and outbreak shall be submitted, it being then the duty of the local authorities to deal with subsequent cases as diphtheria.

THE Samaritan Fund of the Westminster Hospital is in urgent need of assistance, and an appeal is now being made for help to carry on the work. The almoner of the fund or the secretary of the hospital will be happy to supply information or receive contributions.

THE *Times* of March 21st states that a compulsory winding-up order has been made against the "Medical Electrical Institute (Limited)," which in October, 1894, was formed to take over the business of the Medical Battery Company (Limited).

MR. THOMAS SMITH, senior surgeon to St. Bartholomew's Hospital and a late Vice-President of the Royal College of Surgeons of England, has been appointed Surgeon Extraordinary to the Queen in the room of Sir William S. Savory, Bart., deceased.

MR. HERBERT W. ALLINGHAM, late demonstrator of anatomy at St. George's Hospital, was elected on Monday last to the vacancy on the staff of that institution as assistant surgeon.

HASTINGS AND EAST SUSSEX HOSPITAL.—The annual meeting of this institution was held in the hospital at Hastings on March 12th, the Rev. F. Young presiding. The fifty-fifth annual report was presented, and showed that during the past year there had been 638 in-patients and 3100 out-patients. The total income for the year was £3770 and the expenditure £4126. Under the head of legacies there was an increase of £904, and when these sums were carried to the capital account the result was that the expenditure exceeded the available income by £1355.

Pharmacology and Therapeutics.

PATENT MEDICINES IN AMERICA.

THE movement against the dissemination of nostrums is growing in America. In our issue of March 2nd we commented upon the introduction of a Bill in the Alabama Lower House with reference to their sale. We now learn from the *New York Medical Record* that a Bill has been introduced into the New York State Legislature with the same object; and the *Philadelphia Medical News* says that a Bill is pending before the Legislature of Tennessee to compel all patent medicine manufacturers to publish their formulas. Concerning this the *Chatauque News* protests as follows: "We desire to enter here our most emphatic protest against this measure. It means a loss of hundreds of thousands of dollars to the State. No reputable manufacturer would think of giving away his formulas in this manner so that anyone who chooses could take advantage of the legitimate secrets of his trade. Before they would divulge these secrets they would withdraw entirely from the State. The result would be that the druggists, a large part of whose trade lies in patent medicines, would be deprived of a principal source of their income, the railroads would lose immense amounts of freight, and the newspapers would be almost ruined. The advertisements of patent and proprietary medicines constitute a very large part of every newspaper's business, and many of the country weeklies would have to suspend publication if it were not for this patronage. The day has passed when the best physicians refuse entirely to prescribe these remedies. Most of them find occasion at times to use them in their practice. The really skilful doctor is not injured. The people are not imposed on to any large extent. They soon discover what is fraudulent and what is of genuine merit. The Bill can help no one but physicians who have not the ability to command practice on their own merits, but who hope by this means to compel patients to call on them." "The people are not imposed upon to any large extent." What refreshing candour. The *American Druggist* says that druggists are so no longer, nor are they apothecaries, but "prescription specialists."

FLUORIDE OF SODIUM IN INFANTILE TUBERCULOSIS.

The *Brussels Journal of Medicine, Surgery, and Pharmacology* reports some observations of Bourgois to the following effect. In the course of some experiments in the treatment of pulmonary phthisis by inhalations of hydrofluoric acid he was struck by the following facts. A woman whom he was treating by inhalations used frequently to bring her child with her. This child, who was afflicted with spinal caries, but without any chest lesion, used to sit with its mother in the inhalation chamber, and after some sittings its weight had increased from 14½ kilos to 19 kilos. Other children affected with non-pulmonary tuberculous lesions treated in the same way showed a similar improvement. Bourgois then took to administering fluoride of sodium by the mouth. The cases selected presented various tuberculous troubles—chronic bronchitis, otitis, and conjunctivitis—and all had a tuberculous family history. Under the fluoride treatment they all improved notably—an improvement which has persisted. Bourgois concludes: (1) purified fluoride of sodium has a marked action upon children, whether they only have a tuberculous diathesis or are already tuberculous, and the good results are enduring; (2) the dose is from ½ milligramme to 5 milligrammes a day; (3) when the specific effects of the remedy manifest themselves the dose is lowered; and (4) children take the drug very well and hardly ever show any intolerance.

SULPHATE OF COPPER AS A BLOOD-FORMER.

The *Répertoire de Pharmacie*, quoting from the *Rundschau für Pharmacie*, recommends the use of sulphate of copper as far preferable to iron in anæmia. Cervello, who reports the case, gave it twice a day immediately after food in doses of 2 to 6 centigrammes = ⅓ to 1 grain.

SUGAR AS A UTERINE STIMULANT.

Modern Medicine says that Professor Bossi of the Obstetrical and Gynecological Clinic of Genoa, Italy, has been experimenting with ordinary cane sugar as an oxytocic, and reports that "sugar in doses of one ounce dissolved in eight ounces of

water is an effective oxytocic, acting usually within a half hour after its administration. Usually a single dose is sufficient. In extreme cases a second dose, administered at the end of two hours, was found effective. The advantage claimed for sugar as a stimulant in labour is the fact that it does not produce tetanic contractions and does not cause retention of the placenta. These observations seem to agree with physiological experiments made within the last year or two, which indicate that the ingestion of sugar is followed by immediate and considerable increase in muscular energy.

THE PHYSICIAN'S VADE MECUM.¹

This is an attempt to compress the arts of medicine and therapeutics into an oblong duodecimo of 500 pages, but like all these kind of books it is either too big or too small. Hardly anything is said about spinal nervous disorders except that some half dozen prescriptions are given for paralysis, but in most of them we are not told under what circumstances they are to be used. Thus a prescription containing iodide of potassium is given for lead poisoning, and one so remarkable that we quote it in full. "Potassii iodidi, dr. ii.; ext. ergotæ fluidi, oz. i.; ext. nucl. vomicæ, dr. i.; tincturæ cardamomi co., oz. i.; syrupi, q.s. M.S. Dose, oz. ss., night and morning. (Due to lead poisoning)." If these directions were faithfully carried out the patient's illness would soon be due to other poisons than lead. Imagine starting with a dose of twenty or twenty-five grains of iodide and twelve or fifteen of the extract of nux vomica. "Syrupi, q.s." may mean anything. Some prescriptions are given for heart disease, but little is said about valvular lesions, or in what form some particular prescription is to be employed. The author notes that the composing was done by the Linotype process; this will perhaps account for "Pharangitis," p. 438. The book teems with inaccuracies—e.g., Hippocrates' facies—that of agony. From this, most people who read it would imagine that "Hippocrates' facies" meant that of acute pain, whereas it does nothing of the kind; and from the rest of the work we should be very disinclined to believe that the author used the word "agony" in its strictly theological sense. A little further on we find "Pott's fracture—fracture of the tibia," a most insufficient definition. The author tells us in the preface that "this little volume has been prepared for the busy physician, pharmacist, and medical student a brief examination of its contents will convey a clearer idea of its nature and scope than any statement could do." We cordially agree with him.

THE HYPODERMIC ADMINISTRATION OF ARSENIC IN LEUKÆMIA.

Dr. S. Rummo strongly recommends² arsenic in leukæmia and pseudo-leukæmia, administered hypodermically in the form of arsenite of soda. The ordinary Fowler's solution is painful, not only because of the lavender it contains, but because it is too concentrated. He uses a solution of arsenite of soda of the strength of two grains to the ounce and commences with a dose of one-twenty-seventh of a grain. This dose is gradually increased until, after some fifty injections, have been given, nearly half a grain—forty-five hundredths—is reached. Of course, the patient must be very carefully watched during the whole of the treatment, which must at once be stopped on the appearance of any signs of poisoning. According to Dr. Rummo it is necessary to push the drug until signs of intolerance begin to manifest themselves. He thinks that, given in the way above recommended, it is by far the most satisfactory of all the numerous remedies proposed for leukæmia.

¹ By Sebastian T. Wemmer, M.D., and F. T. Parsons, M.D., Philadelphia: The Medical Publishing Company.

² *Riforma Medica*, No. 98, 1894, quoted in *Nouveaux Remèdes*, Feb. 8th, 1895.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—

The eighty-first annual meeting of this charity was held at the hospital in the City-road on March 13th. Mr. Sheriff Hand presiding. During 1894 there were 477 patients admitted, and the attendances of out-patients numbered about 19,000. The drainage system has been entirely renewed and improved at a cost of £2900. The income for the year was £8700, and fell short of the expenditure by nearly £1500, so that a substantial loan had to be obtained from the bankers on account of the exceptional outlay on the drainage works.

THE LOCAL GOVERNMENT BOARD AND THE SANITARY INSPECTORS' ASSOCIATION.

ON Friday, March 15th, Sir Walter Foster, Parliamentary Secretary to the Local Government Board, received a deputation from the Sanitary Inspectors' Association, who represented to him the insecurity of the tenure of office by sanitary inspectors and the meagre rate of their remuneration, and suggested various measures by which their position might be improved.

The deputation was introduced by Sir Benjamin Ward Richardson, and amongst those present were Mr. Thomas, chairman of the council of the Sanitary Inspectors' Association and chief sanitary inspector for Bermondsey, Mr. Alexander, vice-chairman of the council, Mr. Wilkinson of Derby, Mr. Sumner of Wigan, Mr. Jacklin of Maidstone, and twenty metropolitan inspectors. Mr. Hayes Fisher, M.P. for Fulham, also accompanied the deputation.

Sir BENJAMIN RICHARDSON, in introducing the deputation, said:—"Sir, in addressing you to-day as President of the Association of Sanitary Inspectors, I desire to speak with you mainly on two points—firstly, the tenure of their office by sanitary inspectors, and secondly the amount of their remuneration. I should say that this matter has been brought to a crisis by the manner in which Mr. Watson, the sanitary inspector for the Burton-on-Trent district (who is here to-day), has been treated by his board. He was for thirty years inspector of the district, from which he has now been removed. He received in the first instance £215 a year, which was reduced to £175 upon the division of his district in 1888. Now there is another division in his district, with the result that new inspectors have been elected for each division and he is thrown out altogether. He has not been appointed to anything else, and although he knows the district so well, and has worked in it so long respected by everyone, he is, by this action of the county council, deprived altogether of his means of livelihood. This is not a solitary instance, although it is perhaps the most striking. All over the kingdom men are being thrown out in this way. We earnestly hope that some change will be made which will ensure to these gentlemen a respectable living and something in the way of a pension afterwards. I know that it may be said that at the present time the Local Government Board has no power whatever in these matters, and that you are obliged to do what has been done before; but we are somewhat doubtful whether this is the case. We of course accept at once that you have no direct power, but you have negatively and indirectly a great deal of power. But we want you to go further than that. We want you to bring about a change in the Act, so that security of tenure may be given to all sanitary inspectors. This is the only way in which injustice can be prevented. I also speak strongly on behalf of sanitation. Good sanitation cannot take place in England under the circumstances which now exist. These inspectors were originally appointed to assist the medical officer of health in his duties; but as time went on the work increased, and the sanitary inspector now has duties to perform which are not dependent on the medical officer at all. Therefore we think that the time has arrived when not only medical officers but also the sanitary inspectors everywhere should have a more secure tenure of office. We think also that in no case should the salary be less than £200 a year. An inspector who has gone through a proper education and passed an examination should receive a minimum of at least £200, rising to a maximum of £350. (I am surprised that inspectors should think that it ought to stop at £350.) They would then feel that they could perform their duties irrespectively of all personal interests and quite independently. We also think that there should be some retiring pension, which should be calculated on the same basis as other pensions are."

Mr. THOMAS pointed out the difficulties of the position of sanitary inspectors. "We need protection," he said, "in our work for various reasons. Local sanitary authorities are composed of interested persons—men who carry on offensive trades, lodging-house keepers, milkmen, butchers, grocers, &c. There is probably not one parish in England where an inspector does not have to interfere with the interests of some member of his authority in sanitary matters, nor one who can carry out his duties without fear or favour. It is

common for us to be threatened by tradesmen, against whom we are obliged to proceed in carrying out the Food and Drugs Act, that they will come on the board and see that we are disturbed from our office. We do not want to be protected when we are in the wrong, but we do want to be protected when we are in the right."

Mr. ALEXANDER, Mr. HAYES FISHER, M.P., and Mr. WILKINSON spoke to the same effect.

Sir WALTER FOSTER, in replying to the remarks that had been made, said:—"It gives me great pleasure to meet you here to-day as the representatives of so important a body of public officers as the sanitary inspectors of England and Wales. There are, I find, some 1600 of you in the country holding these offices at very varying salaries, under very varying conditions of tenure, and also under very varying conditions of efficiency—conditions of efficiency which are, however, I am glad to say, on the whole highly satisfactory and highly creditable to the gentlemen who do their work under so many difficulties and often with very little encouragement. I must say that one remark in the address of your President struck me very forcibly. He referred to the difficulty of carrying out efficiently sanitary work under present conditions—I think he said that it was almost impossible. I do not agree with him in that. I think that, looking at the existing conditions, one may well be surprised that these duties have been so ably carried out as they have been. You have certainly discharged your duties with a marvellous amount of efficiency as regards the saving of public life. This fact struck me particularly when some weeks ago I was looking over the result of this Board's work in reference to the Cholera survey which was undertaken by the Medical Department of this Board before and after the invasion of cholera in 1893. You will remember that in that year this country was placed in a situation of great peril. Although the ports of Western Europe were centres of infection there was during the whole time free intercourse between this country and those ports. Commerce went on as if there was no plague in the west of Europe. The danger was indeed very great, and the invasion threatened to be very fatal. To meet these difficulties we depended entirely on the sanitary service of the country. We had no quarantine and no interruption of traffic. You remember, most of you, that we have had invasions of cholera on two or three occasions previously and that it has been of a very fatal character. In 1849 we lost 53,293 lives, in 1854 20,097, and in 1864 14,378. When in the face of these figures one looks back upon the year 1893 one is struck by this fact—that although cholera did break through our outer line of defence, did get into our country and effect a lodgment in sixty-four places, yet in forty-two of those places the disease was stamped out with a single case and in only five instances did the disease extend beyond ten cases, our total loss being only 135 lives. When one considers that and compares it with previous results it seems to me one of the most marvellous triumphs of sanitation over the spread of cholera in the world's history; and after giving their full share of credit to the permanent officials of this Board, who, from Dr. Thorne downwards, worked most laboriously during the whole period, these results must to a very large extent be admitted to be due to efficient local sanitary work, inasmuch as on that depend the preservation of the purity of our water-supplies and the prevention of contamination air and soil. If this condition of things has so reduced cholera mortality you must have done your work throughout the various portions of the country with great efficiency, and I as a representative of this department would thank you for the efficient manner in which you have done your work during the last few years. The results to which I have alluded may be brought home to you by this fact: if we had had in England in the year 1893 a mortality from cholera in proportion to that of 1864—the least fatal of previous invasions—instead of 135 deaths we should have had 19,965, and thus 20,000 lives were practically saved in that single year by the efficiency of the sanitary service. It is impossible to estimate how much sorrow and want and pauperism were thus averted, and I hope every local authority will learn from this that the truest economy they can practise is the enlightened administration of the Public Health Acts and the placing of their sanitary officials in such a position that they can do their duties fearlessly. You will see that personally I am in sympathy with you and that I appreciate the great results which follow from the efficient discharge of your laborious and dangerous duties. I agree with Sir Benjamin Richardson that the life of a sanitary inspector is undoubtedly as perilous as that of the

soldier. While, however, from these remarks you may recognise that I have the strongest sympathy with you, I want you to bear in mind that we, the Local Government Board, can only go so far as the law will allow us. Your first demand is in the direction of having security of tenure. The law does not at present give you that position, and it would require the passing of an Act of Parliament to give you the security of tenure you desire. I do not see any prospect of time being at the disposal of the House of Commons for the passing of such an Act during the present session. If, however, an amendment of the Public Health Acts is brought forward at any time I shall do my best to support it and shall remember the arguments which have been so ably placed before me to-day. I have no doubt that in so doing I could count on the support of Mr. Hayes Fisher and other members on that side of the House. I wish also to say that, although up to the present time the Local Government Board have been in the habit of recognising appointments for one year only, we have done this on account of the hitherto uncertain areas of local government in this country; but now that the form of government has become settled and the country has been mapped out into more suitable governing districts we shall be in a position to take a different attitude towards this question. The Board are prepared to use their influence (within all proper limits) with the various local authorities to do away with these short-period appointments and to encourage local authorities everywhere to make these appointments for a term of years or, if possible, permanently, believing that, under such circumstances, the duties of sanitary inspectors would be discharged more fearlessly and with much more benefit to the public. The Board are prepared to go thus far without an Act of Parliament, but in course of time I hope an Act will be passed to bring about the changes desired. With reference to the salaries, I find that you are not as a body properly paid. I find that in many cases the salaries are exceedingly small, and I must say that when you suggested £200 as a minimum I could not help contrasting it with the actual state of affairs. I find there are some sanitary inspectors receiving only £5 a year, and some others, even where there is part repayment by the county council, receiving salaries of £10 a year. I fear that in many cases these salaries are not paid with a view to the discharge of onerous duties, but are given for services which are supposed by the local authorities to be nominal, but which you very well know are not nominal and ought not to be. You may be sure that we shall endeavour as far as possible to secure more adequate remuneration for these posts. We have discouraged and raised objections in many instances to these inadequate salaries. But you must remember that the Local Government Board cannot govern and control local matters to the extent which many of you seem to desire; we can never become a strong central authority such as you would like. In the evolution of government in the country more and more power must go to the local authorities; the whole bent and bias of modern development is in that direction, and it is to local bodies, therefore, that you must primarily look for redress. This Board will be a guiding and sanctioning body; it cannot be a constantly interfering one; but I can assure you that you will always have from the Local Government Board such sympathy and help as they can give. The salaries must, of course, to a large extent depend upon the local authorities, though in all cases the tendency of the Board will be to encourage proper and liberal, rather than inadequate, payments for such valuable services as you render to the community. As regards pensions, you must work that question out for yourselves on the same basis as the Poor-law officers throughout the country are now doing. There are Bills now before the House brought in by private members dealing with the question. I direct your attention to them with a view to your getting yourselves included in the scheme. There is a strong feeling against pensions, public opinion being more in favour of salaries being paid at such a rate as would lead to the abolition of pensions; but if the system is to be continued I see no reason why it should not be extended to sanitary officers as well as to other officials. Lastly, with reference to the very hard case of Mr. Watson (for it must be admitted that it is a very hard case), you must, I think, recognise that it is one of those cases in which the Board has no real authority. The statute of 1894 enables local authorities to make these changes in the areas under their control, and gentlemen who are unfortunately in the position of having their appointments renewed from year to year may be dismissed by these authorities. But I should hope that

local authorities will not forget the faithful services rendered by these gentlemen, and that they will feel that such officers have a moral claim upon them, and that they will not on the sole ground of economy put these claims on one side and use their powers harshly."

Sir BENJAMIN RICHARDSON then thanked Sir W. Foster, and the deputation withdrew.

ALDERSHOT: THE SANITARY AND SOCIAL CONDITIONS.

THERE have been so many rumours and reports concerning the sanitary condition of Aldershot that it will tend to relieve unnecessary anxiety to show what is the actual state of affairs. Briefly, it must be explained that there are two systems of drainage—that of the town and that of the camp. Of course, it would be much better to amalgamate the two; that is a point beyond dispute. The difficulty has been to effect an arrangement between the civil and military authorities and to settle how the expenses should be shared between these two independent and widely different bodies. Aldershot as a town has very rapidly developed of late years. From a hamlet with a few hundred inhabitants it has become a little town with a population of about 14,000. The town, under these circumstances, has the advantage of being built on virgin soil, a soil which has never been contaminated by old cesspools and where sewers were laid down as fast as houses were built. But difficulties have arisen with regard to the disposal of the sewage thus collected. Some twenty years ago the town of Aldershot contracted with a firm for the treatment and clarification of this sewage before its discharge into the river Blackwater; but the method of treatment was not satisfactory. Complaints were made that the river was befouled, and a neighbouring authority lower down the stream entered an action against the Aldershot authorities. They gained their point. Judgment against Aldershot was obtained, and injunctions to restrain from polluting were given. Under these distressful circumstances, the town took the sewage works out of the hands of the contractor, who fortunately made no resistance, but seemed, on the contrary, glad to escape from all the difficulties that had arisen. The town authorities now tried various processes of purification, and discovered that, probably in consequence of the large number of horses at Aldershot, their sewage was stronger than that of most towns, and methods of purification which gave satisfaction elsewhere did not act with sufficient energy at Aldershot. Also there was the fact that not only was the sewage stronger, but that the river is small. Thus an affluent was produced by a lime process which if thrown into a large river would cause no trouble. It was clear, free from colour, and looked pure, but still contained organic elements in solution. A large volume of water and a rapid current would have oxidised this small quantity of remaining impurity, but in the comparatively stagnant waters of the Blackwater a secondary decomposition set in. Lower down, in bends of the river, black deposits were formed which, under the heat of the summer sun, soon became obnoxious. The local authorities, after taking advice, abandoned lime as a precipitant, and have since utilised Gibb's alumina. Cakes of this precipitant are placed at the bottom of a trough and the sewage is pumped up through them. After the precipitation is over the water is thrown on to land. So that the filtration may be more perfect some thirty more acres of land have been purchased. The land slopes; the clarified sewage is discharged on the soil at the highest point, and is collected again at the lowest point in a trench dug some 5 ft. deep near the river bank. On the grounds some root crops and rye grass are grown. In rainy weather as many as a million gallons of sewage have been treated and pumped upon this ground in the twenty-four hours. The average outfall of sewage is from 600,000 to 650,000 gallons per day, and this for a civil population of some 15,000 persons. In spite of these improvements in the treatment of their sewage, some twelve months ago the Aldershot authorities were again convicted by the County Court for polluting the river. Feeling that, under the altered circumstances, this was not a fair judgment, the Aldershot authorities carried the case before the Court of Appeal in London and here they were successful. The Court of Appeal decided that the Aldershot authorities were using the best available means and gave

judgment in their favour with costs. Indeed, according to analyses, the result seems very good. For instance, the analysis made by Professor John Attfield on Jan. 25th last shows that per gallon there were 41.0 grains total solids, 1.68 grains of free ammonia, 0.09 grain albuminoid ammonia, and 5.7 grains of chlorine in chlorides. Professor Attfield adds the following comment: "This sample is in a most excellent condition. Such an affluent may safely be admitted into any stream."

Such, briefly, is the history of the town drainage, so far, at least, as the treatment of the sewage is concerned. When, in the time of the Crimean War, the camp was first built there was no town of Aldershot, no sewage, and no sewage treatment. The military authorities, therefore, had to take this matter in their own hands, and they selected a spot which was to be made into a sewage farm. But the knowledge of such questions in those days was not very great; in any case a most unsuitable site was selected. Instead of a sandy, porous soil, which can act as a natural filter, it is a low peaty deposit, which cannot absorb the large volume of camp sewage it receives. As a consequence a good deal of the sewage is not treated at all, but allowed to escape in any condition. This camp sewage farm has been the great cause of complaint for many years, and it certainly ought to be abolished. For this purpose, and at the instigation of the camp medical officer, the town approached the War Department and suggested that experts appointed by the War Office should meet experts appointed by the town and see if some means could not be devised for united action between the civil and military authorities to drain both camp and town together. This meeting was ultimately held, but the course of action then recommended was not adopted. Nevertheless, the need of some agreement was very pressing and became particularly acute when the old wooden huts were pulled down and replaced by handsome red brick barracks. Negotiations were resumed, but the great difficulty rested in the fact that the military authorities were not ratepayers. They certainly subscribed of their own free will a certain small annual sum towards the town expenses, but the camp is not rated, and if the town authorities undertook to drain the camp they would have to deal with double the amount of sewage. The town authorities stood fast to the principle that they were quite willing to drain the camp if the camp would pay rates; otherwise they must leave the camp to its own devices. This led to interminable negotiations with the Treasury, particularly as it is absolutely impossible to estimate the rateable value of a camp. Rateable value is generally estimated at what rent would be paid to occupy the property in question if it was vacant. But if the 14,000 or more soldiers who live in the camp buildings were all taken away not only would it be impossible to find tenants for their barracks, but the town of Aldershot itself would very soon dwindle and lose the greater part of its inhabitants. However, in spite of all these obstacles a sum has at last been fixed acceptable to both parties, and this annual sum or rate being paid by the War Department to the Aldershot Local Board, the latter authority will take over the drainage of the camp. We may hope, therefore, that the abominations of the camp sewage farm will soon disappear, and there will be no further cause for anxiety on this head. The sewage of the camp will be as carefully clarified as is that of the town. We propose to deal with the subject of Venereal Disease at Aldershot in a future number.

(To be continued.)

PROVISION FOR YOUNG IMBECILES.

At the quarterly meeting of the Lancashire Asylums Board, held in the county hall at Preston on Feb. 28th, it was announced that the Local Government Board had sanctioned the borrowing of £26,582 for additions and completions at Lancaster, Prestwich, and Whittingham Asylums. It is agreeable to note that a vote of congratulation was passed to Dr. Wiglesworth of Rainhill Asylum upon his restoration to health after a serious attack by a lunatic named Horan, who was afterwards removed to Broadmoor as a criminal lunatic. The chairman, the Rev. T. C. Royds, stated that the West Derby board of guardians had passed a resolution in favour of special provision at the new asylum at Winwick or elsewhere for young persons and children of

weak intellect. Mr. H. P. Cleaver, on behalf of a combined deputation of guardians, explained that they had come on behalf of an unfortunate class of the population unable to plead their own cause, and for whom no adequate provision was made in the north of England. The Royal Albert Asylum at Lancaster was practically useless so far as the pauper class was concerned. Neglect of these cases was costly and it was a disgrace to the community that no provision had been made for epileptics. Mr. Cleaver further stated that there were 214 cases in the workhouses of young people requiring special treatment, and it would be impossible to say how many more were kept at their own homes—at least treble the 214, he should estimate. Mr. A. Grey of Lancaster said his recollection was that the seven northern counties contained about 7000 cases, of which over 2000 were in Lancashire. The Royal Albert Asylum provided for about 600 out of the whole seven counties. There were 136 cases in the Lancashire workhouses, and nearly 200 in county lunatic asylums. The chairman said the deputation had made out a very good case for the careful consideration of the Board. Experience showed that only a small percentage of imbeciles and idiots were curable, and he did not think the ratepayers were prepared to spend as a start at least £250,000 for an institution for weak-minded children, besides the cost of maintenance of such an institution. His suggestion as a temporary measure, to supplement the private benevolence, would be that the juvenile idiots in workhouses should be medically examined, and where there was thought to be a prospect of improvement that they should be sent for a probationary period, at the cost of the ratepayers, to the Royal Albert Asylum. Children not favourably reported upon, or returned unimproved, should be kept in isolated wards of the workhouses, with separate airing grounds, so that the other inmates might not be afflicted by their presence and the imbeciles might not learn rough habits. Dr. J. M. Rhodes (Chorlton) said census returns were of no value on this subject, as by personal inquiry in pronounced cases known to himself he had found that not 20 per cent. were returned as weak-minded. The Royal Albert Asylum rightly refused cases of epilepsy, because non-epileptics deteriorated in the presence of epileptics. He would remind the Board that many of these children for whom the deputation had pleaded were girls unfit to resist the temptation of any scoundrel, with results costly to the ratepayers and sadly deteriorating the population.

THE OBSTETRICAL SOCIETY OF LONDON AND ITS "DIPLOMA."

THE following is a specimen of the document in full as given by the Obstetrical Society to midwives who pass their examination.

[COPY.]

OBSTETRICAL SOCIETY OF LONDON.

We hereby certify that has passed to our satisfaction the examination instituted by the Obstetrical Society of London, and that she is in our opinion a skilled midwife competent to attend natural labour.

G. ERNEST HERMAN, M.B., President.	
F. H. CHAMPNEYS, M.D., Chairman.	
JOHN PHILIPS, M.D.,	} Examiners.
AMAND ROUTH, M.D.,	
M. HANDFIELD-JONES, M.D.,	} Honorary Secretaries.
WILLIAM DUNCAN, M.D.,	
WM. DAKIN, M.D.,	

I undertake to abide by all the rules and regulations of the Obstetrical Society with regard to all the duties and conduct of midwives, and to submit to the jurisdiction of its council in the decision of all matters relating to my conduct as a midwife. I further agree that in case I shall be hereafter convicted of any criminal offence or be guilty of any act or conduct which in the opinion of the council renders me unfit or unworthy to hold its diploma, the same may be forfeited by a resolution of the council, in which case I will, on receiving notice in writing of such resolution, to be served either personally or by having the same at my then present or last-named place of abode in the United Kingdom, forthwith give up such diploma to the President or to one of the secretaries for the time being of the society, and I agree that my name may be removed from the Register of Midwives kept by the society, and I promise henceforth to desist from the use of any designation or title implying possession of such diploma. (Seal)

At its recent meeting the Executive Committee of the General Medical Council, replying to a letter from the hon. secretary of the Obstetrical Society asking the General Medical Council to point out in what respect the certificate

of the society of examination in midwifery is a colourable imitation of a legal diploma, resolved: "That the Executive Committee are of opinion that the words in the diploma, 'a skilled midwife competent to attend natural labour,' are open to legal objection, seeing that under the Medical Act midwifery is one of the three branches in which a regular practitioner must pass an examination in order to obtain a registrable qualification. The above-cited words suggest that the holder has a registrable qualification. This both contravenes the spirit of the Medical Act of 1886 and is calculated to deceive the public. Again, the formal character of the document, which is described on its face as a diploma, is fitted to deceive the more ignorant part of the public, that part which most needs protection."

THE HALF-YEARLY REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON.

BLUE-BOOKS as a rule are not particularly interesting specimens of literature, but the one now under notice is an exception to the rule, especially when we read it in the light of the recent debate on the Navy, during which an honourable member mentioned that the British mercantile marine formed one half of that of the whole world. In this report we find that in the latter half of 1894 13,471 vessels were inspected within the Port of London, of which 81.9 per cent. were British, Scandinavian coming next with 8 per cent. In 266 ships 343 structural alterations were ordered and carried out; 114 were for increased ventilation of crews' quarters and 47 were alterations with regard to water-supply, mainly the substitution of galvanised iron tanks for rotten casks. Of the total number of vessels, 6880 were foreign traders and 6591 coasters. The report recalls the recommendations of the Royal Commission on Labour, whereby the proper amount of cubic space allotted per man was laid down as 120 feet, and compares it with the Merchant Shipping Act of 1894, which re-enacted the old amount of space—viz., 72 cubic feet. This Dr. Collingridge considers quite inadequate. On the arrival of a vessel she is inspected medically in conjunction with Her Majesty's Customs. The total number of vessels medically inspected for 1894 was 1868, and the number of individuals averaged about 100 per day, while as a result of this inspection twenty-seven cases of infectious disease were discovered. All masters are bound to report any case of illness which has occurred either during the voyage or during the stay in a foreign port. During the year 3425 Jewish alien emigrants were inspected at Gravesend, and it is satisfactory to note that they arrive "in a much cleaner condition than formerly," owing to the knowledge that they will be inspected at Gravesend. Another satisfactory result of medical inspection is that owing to the issuing of orders at Gravesend for water-tanks to be emptied if the ship has come from an infected port the practice has been adopted of filling up tanks on this side for the outward and homeward voyage. Since September, 1894, all vessels entering the Medway have been inspected by a medical officer stationed at Garrison Point.

Some few cases of cholera and choleraic diarrhoea were dealt with at Gravesend, and diarrhoea has been made a compulsorily notifiable disease. The other infectious diseases dealt with were chiefly enteric fever and diphtheria. A serious nuisance has been caused by barges carrying dung from cattle ships. It is the habit of these barges to load partly in one dock and then to proceed to another to complete their freight instead of going away at once. Steps have been taken to prevent this.

The Kensington vestry have again commenced to deposit refuse dust at Purfleet, causing a nuisance, but it is expected that an amicable arrangement between the various authorities concerned will soon be arrived at.

The Port hospital is working well, and has been extremely useful. The seizures of unsound food have been about the average. During the year 909 canal boats were inspected, but only three prosecutions were found necessary, and "as a general rule the cabins are cleanly and wholesome."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

*Diphtheria at Broadstairs, by Dr. BRUCE LOW.*¹—The outbreak in question had its principal interest during the visiting season of 1894, but the report on it was only made at the close of the year. Including each of the three subdivisions of the urban district, 31 attacks of diphtheria occurred in Broadstairs between Jan. 1st and Aug. 8th of last year, and in 11 instances the attacks terminated fatally. There were two localised outbreaks—one in the suburban portions of the district and one in the Broadstairs division, but this latter was confined to one establishment. The first outbreak was probably traced to imported infection, for it occurred in the house of a woman who acted as laundress for a convalescent home receiving London children. Eighteen attacks occurred as the result, and 15 of the patients were removed to the isolation hospital, a step which, in Dr. Low's opinion, largely contributed to stay the further spread of the infection. In the case of the second outbreak diphtheria was twice imported into a children's home. Once it was detected, precautions were taken and it was stopped. On the next occasion there was some diffusion of the infection in the dormitory where the patient originating the mischief had slept. But, on the whole, the interest in this inquiry, so far as the general public are concerned, lies in the fact that Dr. Low is able to assert with confidence that the disease was in no way due to local insanitary conditions. He also speaks highly of the sewerage of the place and of the prompt manner in which the existing means of isolation were utilised. The truth is that Broadstairs has a large colony of convalescent children and of poor children who are sent there for their health, and, as a consequence, it runs some unusual risk of imported infection; but the risk is practically limited to the institutions in question, it hardly applies at all to the town generally, and even in the "homes" prompt medical supervision may be trusted to identify any infectious disease that appears and to secure the immediate removal of the sick to the hospital which the town has been wise enough to provide for itself.

*On the General Sanitary Condition of Festiniog, by Mr. EVAN EVANS.*²—This report, by one of the temporary medical inspectors of the Local Government Board, gives a very complete account of the general sanitary condition of this Welsh urban district, which has suffered a good deal by the depression in the slate trade, although at the time of the inspection work seemed plentiful and wages good. The Blaenau villages, comprised within its district, are perhaps those which most call for remedial sanitary measures, these measures being very largely wanted by reason of the evils resulting from the non-completion of a system of sewerage and drainage. The general water-supply is from the Morwyion Lake, but other sources are resorted to because the water supplied by them appears to be clearer to the eye. In this way springs, spouts, and mountain rills afford a supply; but since these sources are often near to privies and privy pits the risks of their contamination is by no means inconsiderable. Streams, too, are seriously affected in several ways. Thus the want of sewerage leads, during periods of drought, to extensive and offensive fouling of small watercourses by liquid refuse; and the form of privy known as a "water privy," so styled because it is built over a stream, constitutes another obvious and grave nuisance; indeed, such a system ought to be regarded as a thing to be prohibited by any sanitary authority. In this district excreta accumulate on the banks of the stream, and when rain falls the decomposing material is swept into the immediate vicinity of dwellings. Many of the principal defects of the populous areas in this district would be remedied if the authority would complete their sewerage scheme, and this has more than once been pressed upon them by their medical officer of health. The bringing in of good water as a public supply has already caused a distinct lowering in the typhoid fever death-rate,

¹ Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Grafton-street, Dublin. Price 3d.

² Ibid., price 9d.

and has thus shown the value to health and life of proper sanitary expenditure; but the lesson has as yet been lost as regards other diseases, such as scarlet fever &c., which need to be coped with by means of isolation. No isolation hospital has been provided, and partly by reason of the absence of any such provision diphtheria was recently very prevalent in a part of the district. Mr. Evans's report is an excellent example of a very complete examination into the sanitary conditions and administration of a district such as the one here involved.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6914 births and 6534 deaths were registered during the week ending March 16th. The annual rate of mortality in these towns, which had increased in the seven preceding weeks from 18.7 to 35.0 per 1000, declined again last week to 32.2. In London the rate was equal to 33.4 per 1000, while it averaged 31.3 in the thirty-two provincial towns. The lowest rates in these towns were 15.6 in Norwich, 20.7 in Leicester, 21.3 in Derby, 22.1 in Blackburn, and 22.9 in Hull; the highest rates were 36.4 in Bradford, 37.1 in Liverpool, 40.3 in Preston, 44.0 in Oldham, and 48.0 in Brighton. The 6534 deaths included 302 which were referred to the principal zymotic diseases, against 330 and 339 in the two preceding weeks; of these, 113 resulted from whooping-cough, 52 from diphtheria, 51 from measles, 31 from diarrhoea, 27 from "fever" (principally enteric), 22 from scarlet fever, and 1 from small-pox. No death from any of these diseases was recorded last week in Leicester, Huddersfield, or Halifax; in the other towns they caused the lowest death-rates in Cardiff and Blackburn; and the highest rates in Manchester, Bolton, Croydon, Newcastle-upon-Tyne, and Burnley. The greatest mortality from measles occurred in Plymouth, Bolton, Manchester, and Sheffield; and from whooping-cough in Croydon, Swansea, Liverpool, Gateshead, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the thirty-three large towns. The 52 deaths from diphtheria included 27 in London, 4 in West Ham, 4 in Birmingham, and 3 in Sheffield. One fatal case of small-pox was registered in London, but not one in any of the thirty-two provincial towns. There were 57 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, March 16th, against 75, 68, and 56 at the end of the three preceding weeks; 12 new cases were admitted during the week, against 19, 8, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1615, against 1658, 1621, and 1619 on the three preceding Saturdays; 133 new cases were admitted during the week, against 152, 143, and 141 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the seven preceding weeks from 324 to 1366, declined to 1031 last week, but were as many as 507 above the corrected average. The causes of 98, or 1.5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Bradford, Sunderland, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Blackburn, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 42.8 and 40.9 per 1000 in the two preceding weeks, further declined to 35.1 during the week ending March 16th, but exceeded by 2.9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18.7 in Aberdeen and 23.2 in Dundee, to 41.4 in Paisley and 45.8 in Edinburgh. The 1014 deaths in these towns included 48 which were referred to measles, 22 to whooping-cough, 22 to diarrhoea, 10 to scarlet fever, 4 to diphtheria, 3 to "fever," and 1 to small-pox. In all, 110 deaths resulted from these principal zymotic diseases, against 115 and 144 in the two preceding weeks. These 110 deaths were equal to an annual rate of 3.8 per 1000, which was 2.3 above the mean rate during the

same week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 51 and 72 in the two preceding weeks, declined to 48 last week, of which 19 occurred in Edinburgh, 15 in Glasgow, 5 in Leith, and 4 each in Aberdeen and Paisley. The deaths referred to whooping-cough, which had been 30 and 39 in the two preceding weeks, declined to 22 last week, and included 14 in Glasgow and 4 in Dundee. The 10 fatal cases of scarlet fever exceeded by 4 the number in the preceding week, and included 7 in Glasgow and 2 in Edinburgh. The deaths from diphtheria, which had been 7, 5, and 8 in the three preceding weeks, declined again to 4 last week, of which 2 occurred in Glasgow and 2 in Leith. The 3 deaths referred to different forms of "fever" included 2 in Glasgow, where the fatal case of small-pox was also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 544 and 463 in the two preceding weeks, further declined to 385 last week, but exceeded by as many as 279 the number in the corresponding week of last year. The causes of 67, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 32.7 and 48.6 per 1000 in the two preceding weeks, declined again to 42.4 during the week ending March 16th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 35.3 per 1000, against 26.4 in London and 30.2 in Edinburgh. The 284 deaths registered in Dublin during the week under notice showed a decline of 43, from the number in the previous week, and included 9 which were referred to the principal zymotic diseases, against 6 and 14 in the two preceding weeks; of these, 4 resulted from small-pox, 3 from whooping-cough, 1 from diphtheria, 1 from diarrhoea, and not one either from measles, scarlet fever, or "fever." These 9 deaths were equal to an annual rate of 1.3 per 1000, the zymotic death-rate during the same period being 1.4 in London and 5.5 in Edinburgh. The fatal cases of small-pox, which had been 6, 4, and 5 in the three preceding weeks, declined again to 4 last week. The 3 deaths referred to whooping-cough corresponded with the number recorded in the preceding week. The 284 deaths registered in Dublin last week included 36 of infants under one year of age, and 82 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the very high numbers recorded in the preceding week. Two deaths from violence, but no inquest cases, were registered during the week; and 83, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR RECKITT has embarked for Jamaica on exchange. Surgeon-Major Le Motté and Surgeon-Captain Hassam have been posted to Aldershot. Surgeon-Captain Duncan has arrived in Malta. Brigade-Surgeon-Lieutenant-Colonels Price and Riordan have arrived home after a tour of service in India and Cyprus respectively. Surgeon-Colonel Maunsell has embarked for Bombay. The following officers have arrived from India in the *Dilwara*:—Surgeon-Majors Bartlett and Semple; Surgeon-Captains Pocock and Reilly. Surgeon-Captain Thacker has been transferred from Aldershot to Dublin.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel William Sparks Martin Price to be Surgeon-Colonel, vice W. C. Robison, retired. Surgeon-Lieutenant-Colonel James Maybury Beamish, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice W. S. M. Price.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the retirement of the under-mentioned officers: *Bengal Medical Establishment*: Brigade-Surgeon-Lieutenant-Colonel William Roe Hooper, Surgeon-Lieutenant-Colonel Alexander Bannerman Strahan. *Bombay Medical Establishment*: Surgeon-Lieutenant-Colonel John Alexander Howell. Surgeon-Lieutenant-Colonel M. M. Galloway temporarily assumes Medical Charge of the Mhow district, vice Surgeon-Colonel Gore. Surgeon-Captain A.

Street, having taken over the medical charge of the 1st Bombay Grenadiers from Surgeon-Lieutenant H. M. Moore, the latter is transferred to the Quetta district on general duty. Surgeon-Lieutenants J. G. McNaught and H. A. Bray, A.M.S., shortly expected to arrive in India, are posted to the Bombay Command. Surgeon-Major E. F. H. Dobson, M.B., Civil Surgeon, is posted to the Gwalpara district. Surgeon C. O'Connor Hodgkins, A.M.S., is, on arrival in India, posted to general duty, Nagpore district. The following postings are made in the Madras Command: Surgeon-Captain B. F. Zimmermann and Surgeon-Captain M. Kelly, A.M.S., to the Southern district for duty; Surgeon-Captain W. Gibbard, A.M.S., to do duty in the Chin Hills Command; and Surgeon-Captain R. L. R. McLeod, A.M.S., to do duty in the Secunderabad district. Surgeon-Major J. C. H. Peacocke is to be Civil Surgeon, Karwar, but to continue to act as Civil Surgeon, Belgaum; and Surgeon-Captain H. C. L. Arnim to be Deputy Sanitary Commissioner, Sind Registration district. Brigade-Surgeon-Lieutenant-Colonel S. M. Salaman, Superintendent of the Yeroda Central Prison, in the district of Poona, is appointed to be a Magistrate of the Third Class in that district. Surgeon-Lieutenant A. E. Berry, I.M.S., is appointed to be, in addition to his medical duties, the Civil Medical Officer, Falam Chin Hills.

NAVAL MEDICAL SERVICES.

Staff-Surgeon Archibald McKinlay has been promoted to the rank of Fleet-Surgeon.

The following appointments are notified:—Staff-Surgeon R. E. Biddulph to the *Dreadnought*. Surgeons: R. S. Bernard to the *Bonaventure*; J. C. Wood to the *Minotaur*; S. H. Birt to the *Lion*; J. Grant, M.B., to the *Mosquito*; W. Bett to the *Inferrible* (lent); J. Down to the *Duke of Wellington*; G. R. McMahon to the *Dreadnought*. Surgeons and Agents: E. B. Cutting at Maudesley, C. F. Rudd at Palling, Bacton, &c.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain James William Thornton Gilbert, 1st London Volunteer Artillery, to be Surgeon-Captain. Surgeon-Captain Robert Launcelot Sparrow, 6th Volunteer Battalion the Manchester Regiment, to be Surgeon-Major.

VOLUNTEER CORPS.

Rifle: 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders): James Samuel Yeaman Rogers, M.B., to be Surgeon-Lieutenant.

THE LATE OUTBREAK OF CHOLERA IN THE JAMSETJEE JEJEEBHAY HOSPITAL, BOMBAY.

It will be remembered that the Government of Bombay instituted an inquiry into the cause of the late outbreak of cholera in this institution, and that the Surgeon-General sent in a very exhaustive report on the subject, in which, however, one point was raised as to its possible cause, which was not thoroughly threshed out at that time. The "Medical Union" of Bombay had, in the meantime, asked the Government for an independent inquiry, and the Government had also requested to be supplied with a further report as to the provision, preparation, distribution, and cooking of the food supplied to the patients in the hospital—the point which the Surgeon-General had raised as affording a possible clue to the cause of the outbreak in question. Our readers will probably be interested in learning the results. The Government of Bombay have replied to the "Medical Union" that they consider further inquiry unnecessary, and, as regards the results of the further investigation into the food supply, we understand that the evidence fails to furnish any conclusive evidence that it was connected with the cause of the outbreak.

PARKES MEMORIAL PRIZE.

This triennial prize of seventy-five guineas and a gold medal for the best essay on "Malarial Fevers: their Causation and Prevention," illustrated as far as practicable by facts personally observed by the writer, has been awarded to Surgeon-Major R. Ross, of the Indian Medical Service. The assessors by whom the prize was adjudged were: Dr. Veale, Dr. Patrick Manson, and Professor A. E. Wright. The essays were eleven in number, and the assessors were unanimous in allotting the first place to that bearing the motto, "Da nobis lucem, Domine," which, on opening the sealed envelope, was found to be the work of Surgeon-Major Ross. The other essays will be returned on application to the Secretary, Parkes Memorial Fund, Netley.

Correspondence.

"Audi alteram partem."

THE MECHANISM OF ACCOMMODATION.

To the Editors of THE LANCET.

SIRS,—Some years ago, by the kindness of my friend, the late Dr. Garrod, while he was prosecutor to the Zoological Society, I was enabled to compare a great variety of eyes in birds and mammalia. The chief objects of inquiry were the structure of the ciliary muscle, and of the iris, and the shape and size of the lens. I must say that there seemed to be strong evidence in favour of the view that the lens is not altered in shape but in position, and looking back to the idea put forward originally by the great Dr. Young (that the lens alters its shape), it seems that this view was wisely abandoned by him after later consideration. When we recognise the visual powers of the birds and fish, and see how inferior our powers are in comparison with them, I think it well to look into the theory of alteration of shape with greater care than it has yet received.

I am, Sirs, yours faithfully,

ROBERT LEE.

March 20th, 1895.

* * We have no doubt the conclusions drawn by our correspondent from his observations will be of value. That there is some uncertainty upon the points to which he refers is clear from the fact that a paper was read by Dr. Tscherning before the Ophthalmological Congress which met at Edinburgh last year on the mechanism of accommodation, in which a new and ingenious view of the nature of that process was advanced and supported by good reasoning; but Dr. Robert Lee should read through the chapter on this subject in the second part of the *Physiologischen Optik*, of Professor H. V. Helmholtz, and that by Professor Landolt in his *Treatise on the Refraction and Accommodation of the Eye*.—ED. L.

"THE TREATMENT OF INFLUENZA."

To the Editors of THE LANCET.

SIRS,—Most practitioners will, I imagine, concur with the warning issued by Dr. Burney Yeo and Dr. Moffat against over-treatment in influenza. I have no difficulty in believing that adherence to the principles upon which Dr. Moffat bases his treatment will lead, in the majority of cases, to most satisfactory results; but when he enjoins on his patient the necessity of bearing philosophically the pains characteristic of the initiatory stage of the disease, and offers him only the poor consolation of an assurance that "they will disappear with the fever—i.e., in from one to three days"—I ask permission to join issue. In the numerous cases I have had to treat here in Paris since the first epidemic I have almost invariably been enabled to bring down the temperature and rid the sufferer of his pains in a few hours by the exhibition of four six-grain hourly doses (in cachets) of phenacetin. Should, as is rarely the case, pain and fever continue I prescribe two more cachets at intervals of four hours. At the same time I give every three hours an effervescent draught containing ten grains of potassium nitrate. Complications such as bronchitis must, of course, be treated on general principles, but I should certainly not feel justified in allowing my patient to pass the night coughing when an expectorant mixture with a small proportion of morphia would procure him relief. I have never noticed any ill-effects from this plan of administering phenacetin. Thanks to it, I almost invariably see my patient at my second visit smiling and absolved from the necessity of philosophically bearing what I consider is superfluous suffering.

I am, Sirs, yours faithfully,

Paris, March 19th, 1895.

J. H. BARNARD, M.D.

* * We print Dr. Barnard's letter with pleasure. We have received many others recommending highly the use of certain special drugs, old and new. Their publication can hardly be profitable, for it is clear that the limits of a letter are too restricted to allow of the exposition of evidence in favour of any one remedy for any

disease which shall suffice to carry conviction. Moreover, our space is limited.—ED. L.

"THE EAST-END MOTHERS' HOME."

To the Editors of THE LANCET.

SIRS,—You ask questions as to the East-end Mothers' Home which I ask leave to answer: 1. "At what period are patients discharged after confinement?" Fourteen days.—2. "Were any patients discharged who could not be fairly classed as quite well?" No.—3. "Were any patients who were seriously ill sent to their homes?" None.—4. "Or to some general hospital?" One suffering from erysipelas was removed to the London Hospital.—5. "Did any such cases die or only recover after a longer or shorter illness of more or less gravity?" In case above-mentioned, recovered.

I am, Sirs, yours faithfully,

London, E., March 18th, 1895.

M. C. CORNER.

ON CERTAIN PSYCHOLOGICAL PHENOMENA ACCOMPANYING THE ADMINISTRATION OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—In the year 1800 Humphry Davy, then twenty years of age, experimented with nitrous oxide and suggested its use in surgical operations as a means of preventing pain, and in his biography we read that the impressions he received while under the influence of the gas induced him to exclaim to Dr. Kinglake, "Nothing exists but thought. The universe is composed of impressions, ideas, pleasures and pains." In the year 1874, while inhaling chloroform as a relief to the agony of passing a small renal calculus, I suddenly experienced the extraordinary impression that my spiritual being stood visibly outside my body, regarding that deserted body lying on the bed. Shortly afterwards I called on three different professional chloroformists and asked them if any of their subjects had ever experienced sensations like my own? In reply one gentleman said, "I have often heard patients express similar ideas." Another said, "I myself have experienced on three occasions, when under chloroform, exactly similar sensations." And the third gentleman said, "My patients have often said that they experienced no pain, but felt as if they saw with their inner eye all I was doing during the operations." I was told of a patient who said after anaesthesia, "I thought I was got at the bottom of the secrets of nature." And a dentist told me that many of his patients had experienced similar sensations to those I described.

Now, it is well known that those who have been rescued from drowning have often described their sensations while drowning as being pleasurable and their visions as transcendental. Similarly in the case of anaesthetics. The startling and significant fact is this: that while the body is as if dead under anaesthetics the imagination becomes active and at times exalted. Or, as another friend said to me, "When under chloroform the Platonic ideas came to me that Matter was only phenomenal, while the only reality was that which underlay Matter—viz., its spiritual substance." The object of this letter is to bring before the medical profession these psychological experiences when under anaesthetics; and as in Great Britain there are probably not fewer than 1000 individuals, including midwifery cases, daily placed under anaesthetics there should be an almost unlimited store of evidence to draw from, and thus most important facts may be arrived at as to the construction of an experimental psychology.

I am, Sirs, your obedient servant,

Wimbledon, Feb. 28th, 1895.

GEORGE WYLD, M.D. Edin.

"PLEURITIC EFFUSION WITH NEGATIVE PRESSURE IN THE PLEURA."

To the Editors of THE LANCET.

SIRS,—In the case under the care of Dr. Samuel West, published in THE LANCET of March 16th, there are several points of interest, but I wish to refer only to the one described under the above heading. Fluid was undoubtedly present in the chest, and paracentesis was performed twice with an ordinary trocar and long tube. On the first occasion no fluid

passed out, the "manometer pressure indicated four inches negative pressure of water with half an inch respiratory oscillation," and air passed into the pleural cavity from the outside. On the second occasion, three days later, "the manometer registered a positive pressure of four inches and a half of water, with a respiratory oscillation of an inch and a half," and ninety-seven ounces of fluid along with much air were removed. Dr. West regards the existence of a negative pressure of four inches of water with an increasing effusion as "almost inexplicable"; and according to the teaching of most of the text-books I think it may be regarded as not almost but altogether inexplicable. That teaching is to the effect that when any fluid is effused into the pleural cavity it at once exerts pressure on the lung, the heart, and other surrounding tissues, and consequently one is led to expect that when an opening is made into the chest the fluid will rush out. That this teaching is not in accordance with clinical facts has been known since the time of Trouseau, but, so far as I am aware, the problems remained unsolved until Dr. Douglas Powell¹ ascertained and explained the effects of lung elasticity. In health there is a (potential) negative pressure in the pleural cavity, and on the occurrence of effusion this is maintained until the elasticity of the lung is exhausted by its gradual retraction, when the pressure of the fluid becomes positive. Two distinct stages are associated with pleural effusion, the first when the pressure of the fluid is negative and it is held in suspense by the elasticity of the lungs, and the second when the pressure of the fluid is positive, the lung elasticity having been exhausted. In the first stage the introduction of a trocar will not lead to the evacuation of the fluid, but to the entrance of air from the outside, if an opportunity is presented; while in the second stage fluid will flow freely as long as a positive pressure exists. These facts I have frequently verified at the bedside, and Dr. West's case supplies confirmatory evidence. In testing them one further point must be noted—namely, that the patient must be breathing quietly and regularly, for if he cough or hold his breath fluid will be driven through the trocar, whatever the intra-pleural pressure may be, owing to the forcible elevation of the diaphragm and the passage of air from the sound into the retracted lung. As the respiratory oscillation in Dr. West's case was only half an inch during the first paracentesis this disturbing factor evidently did not come into play.—I am, Sirs, yours faithfully,

G. A. SUTHERLAND.

Old Cavendish-street, W., March 18th, 1895.

"THE RAM, THE BULL, AND THE HEAVENLY TWINS."

To the Editors of THE LANCET.

SIRS,—Referring to your Annotation with the above title, which appeared last week, I think the old theory as regards twin calves has been fairly established by modern experience—viz., that if the twins are of different sex the female is sterile though the oestrus and sexual instinct are generally present. Bewick, in his "History of Quadrupeds," 1800, mentions this as a well-authenticated fact and calls the female twin a "freemartin"—a term still used in many parts of the country. Stockbreeders who accept the theory are often unwilling to bring a sterile animal to maturity, whilst many to whom it is unknown overlook the matter altogether, so that extensive evidence is difficult to obtain. Two cases only have come under my own observation, and in each case the female twin proved sterile; but I have repeatedly seen twin calves of the same sex which have eventually both proved fertile. That no such law holds good as regards sheep or mankind is a matter of common knowledge.

I am, Sirs, yours faithfully,

Ballachulish, N.B., March 18th, 1895.

W. D. ANDERSON.

"THE REMUNERATION OF THE RESIDENT OFFICERS IN ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—I do not quite understand the point at issue under this head, but as one who enjoyed the rare experience of a two years' service as house surgeon at this hospital (my

¹ Lung Elasticity in Health and Disease. Transactions of the Royal Medical and Chirurgical Society, vol. lix., 1876, p. 165.

colleague and friend, the late G. W. Callender, being the only other known to me) I feel it right to assert that 50 guineas were paid in each year to the surgeon under whom we served, and we received from the hospital 20 or 25 guineas per annum, with suitable rooms free. The three or four house surgeons had a housekeeper, and we each lived as we could afford. No doubt the hospital authorities made gain out of us, in addition to our services, by avoiding the payment of inquest fees, they themselves being the parish authorities. The information I derived during my house surgery under the late Mr. E. Stanley and Mr. E. A. Lloyd will ever be remembered with infinite pleasure, and the comparatively small honorarium paid to them will ever be considered a most trivial recognition of friendship.

I am, Sirs, your obedient servant,
North Cliff, Kidderminster, March 18th, 1895. S. STRETTON.

To the Editors of THE LANCET.

SIRS,—I still maintain that a man on the junior staff at St. Bartholomew's Hospital is not much, if at all, more out of pocket than a man on the junior staff of any other hospital with a school. Personally, I think that any resident officer ought to have rooms, commons, light, fire, and beer free during his term, and also a small salary to keep him in clothes and tobacco; but this does not alter my opinion as concerning the parallel between St. Bartholomew's and other hospitals with a school. Personally, too, I should say that the collegiate system ought to be much further carried out. At St. Bartholomew's certain idiotic restrictions that existed in my time at any rate ought to be done away with—perhaps they have been, and the "College" rebuilt. Perhaps when the long-pending removal of Christ's Hospital takes place we may see a collegiate establishment attached to the hospital on the model of one of the Oxford or Cambridge Colleges; but, with all its faults, St. Bartholomew's is a fine old place, and it is not seemly for a former resident to draw depreciatory comparisons between it and other hospitals after he has left.

I am, Sirs, yours faithfully,
AN OLD HOUSE SURGEON OF ST. BARTHOLOMEW'S.
March 19th, 1895.

* * This correspondence is now closed.—ED. L.

THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY.

To the Editors of THE LANCET.

SIRS,—I think there must be many of your readers who will agree with me that something should be done to check the baneful influences that the London and Manchester Assurance Company is exercising towards the degradation of the profession amongst general practitioners. I suppose there is no legal reason why a medical man should not attend patients for the sum of twopence weekly, including medicine, if that is the amount of the remuneration at which he values his services, although such can hardly be said to raise the profession in the estimation of the public. But when it comes to touts annoying the patients of other practitioners by pestering them to join the society, I say that surely it is time that the bulk of the profession should by some means be able to stop such practices. The General Medical Council would hardly take action, I am afraid, were facts brought before them. The Medical Defence Union has, alas, its hands full with more legitimate work. I, therefore, appeal to the medical press to use its influence to restrain medical men from association with a society of this class. The South-West London Medical Society—to which I have the privilege to belong—lately passed a resolution condemning the practice of charging fees as low as one shilling or eightpence. Its members also passed, amongst others, the following by-law: "That no member of the society should solicit private practice either by public advertisement in the newspapers, by placards, by the public distribution of circulars, cards, or handbills, or by soliciting by agents." Other societies have formed similar by-laws.

I am, Sirs, your obedient servant,
Fulham, S.W., Feb. 25th, 1895. A GENERAL PRACTITIONER.

To the Editors of THE LANCET.

SIRS,—Will you kindly give expression of your opinion in your next issue of the above, in accordance with the orthodox views being presently held by leading members of the profession? Should it be supported by medical men upon the

principle of a company or aid association running medical business? Is it a burial club with medical aid thrown in at the expense of the profession? What are the abuses to which it is subject? Perhaps some members of the profession would give their experience upon the latter.

I am, Sirs, yours faithfully,

March 18th, 1895.

INQUIRER.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Health of Manchester during the last Quarter of 1894: the Medical Officer's Report.

THE births of 4000 children were registered within the city, and equalled an annual rate of 30·7 per 1000, against 32·4 the corrected average of the December quarters of the previous three years.

Of general sickness treated at the public hospitals and dispensaries there were 10,137 cases, or 780 per week, being an increase of 238 as compared with the last quarter of 1893; 1243 were treated as in-patients, 6718 as out-patients, and 2176 were visited at their own homes. Of infectious sickness 1025 cases were reported to the medical officer of health, against 852 in the preceding quarter, and 960 the average number for the fourth quarters of the previous three years. Severe cases of small-pox were reported during the quarter. In the last quarter of 1893 4 cases were reported, in the March quarter of 1894 there were 16, in the June quarter 195, in the September quarter 64, and, as has been seen, there were 7 only in the last quarter of 1894. In his report for the week ending March 9th Dr. Niven says that no fresh cases of small-pox have occurred here for the last nineteen weeks. Scarlet fever was notified in 725 cases last quarter, equal to an annual rate of 5·57 per 1000 persons living, against 4·25 in the immediately preceding quarter and 3·98 the average rate for the fourth quarters of the years 1891–93. In London the rate was 3·81 last quarter, and in the twelve selected notification towns in this part of England 4·42. In Halifax it was only 0·39, while in Warrington it was 9·50. Liverpool and Salford showed rates of 8·25 and 6·03 respectively. Diphtheria was slightly less prevalent than usual, 114 cases being reported, the average for the quarter being 130. In North Manchester the attacks corresponded to an annual rate of 1·50, in South Manchester of 1·03, and in the old unhealthy "township" it only equalled a rate of 0·71. There was less enteric fever than usual, 147 cases being reported, against 240 the average for the quarter. They were most numerous in the Manchester township, where the attack-rate equalled 1·34 per 1000, and fewest in North Manchester, which had a rate of 0·82, thus reversing their positions as to diphtheria. Whooping-cough and measles do not seem to have been excessively prevalent. In the course of the quarter the deaths of 2631 persons were reported, but after making allowance for the deaths of 70 non-residents this number is reduced to 2561. This equals a corrected annual rate of 19·7 per 1000. The average rate for the fourth quarter for the previous three years has been 23·6 per 1000, so that last quarter the rate was below the mean for the quarter by nearly 17 per cent. Here, again, the old township maintained its reputation, for the death-rate was equal to 24·7 per 1000, while in North Manchester it did not exceed 16·8. Last quarter was marked generally by a low death-rate—e.g., in the thirty-three great towns of the Registrar-General the rate was 17·7; in London 16·6; and in sixty-seven other large English towns with a population of about 3,500,000 the death-rate was 16·7, or 3·0 below Manchester. In Edinburgh it was 19·6, in Glasgow 21·6, and in Dublin 23·5. In rural England and Wales the rate was only 15·5.

Infantile mortality was lower than usual in Manchester. Measured by the proportion of deaths under one year to births registered, the rate last quarter was 162 per 1000, against 172 in the previous quarter, and 180 in the fourth quarter of 1893. North Manchester had the lowest rate, 140, while in the Manchester township it was 182. But according to Dr. Ashby of the Children's Hospital this high rate is much exceeded in certain areas.

In the decline of life, amongst those above the age of sixty-five the death-rate was high. 109·4 per 1000 living at that age, being equal to 98·4 per 1000 in North Manchester, while in the unhealthy district of the Manchester township it rose to 134·8.

Small-pox was the cause of death in one case last quarter, but no fresh cases have occurred for the last nineteen weeks. To the "seven principal zymotic diseases" 251 deaths were referred, equalling an annual rate of 1.93 per 1000 persons living, somewhat lower than the average for the fourth quarter. In the Manchester township it was 2.43 and in South Manchester 1.68 per 1000. The mortality from phthisis in the city generally was equal to 1.74 per 1000, ranging from 1.05 in North Manchester to 2.78 in the township. The deaths from diseases of the respiratory organs, exclusive of phthisis, corresponded to an annual rate of 4.79 per 1000, lower than the average for the quarter by 1.56. In North and South Manchester respectively the rates were 3.58 and 4.38; but in the Manchester township the rate was 6.55 per 1000.

Dr. Niven again regrets that in a population of upwards of half a million of people, "many of them living under notoriously unhealthy conditions, only 73 direct complaints should have been made to him during the last three months on matters concerning the public health." On the other hand, 1912 separate informations have been received from the chief constable, Mr. Malcolm Wood, showing what valuable services the police render, not only as regards the property, but the health of the community. With regard to the suppression of infection, 663 patients suffering from infectious diseases and badly isolated at home were removed to our local fever hospitals, 7790 infected articles of clothing were disinfected or burnt, 1552 rooms were fumigated, and the walls and ceilings of 1969 rooms were washed with a solution of chloride of lime and afterwards fumigated. By female district visitation 9934 "house-to-house" visits to poor people were paid during the last quarter; 540 special inquiries were made on behalf of the medical officer of health into cases of death; and 382 special reports were made to him on sanitary defects discovered in the course of daily visitation. Three districts, those of Deansgate, Chorlton South, and East Hulme, are at present unfortunately without female health visitors. The points specially noted are dilapidation, condition as to dirt or cleanliness, overcrowding, and the presence of sickness. As would be anticipated, two districts of the old township, Ancoats and the Central, are the worst in the city. Great disparity exists apparently in regard to the "incidence of sickness"; in the district of Angel Meadow only 4 per cent. of the houses contained sick inmates last quarter, while in West Hulme 59 per cent. were so circumstanced. Was it that in Angel Meadow the sick were generally taken to the hospitals, while in West Hulme they were treated at home? The average death-rate in the fifteen districts visited is much higher than that of the city generally, ranging from 25.1 in St. George's East to 50.9 in Angel Meadow. In West Hulme it is 34.7, showing that the low incidence of sickness in the former does not give an accurate notion of its salubrity.

The average weekly number of paupers relieved last quarter by the guardians of the Manchester township, which has an estimated population of 147,138, was 3872, of whom 3453 received in-door and 419 out-door relief, the numbers in the last quarter of 1893 being 3560 and 492 respectively. It must be remembered that the long and severe frost we have just passed through did not begin till quite the close of the year, and did not influence the amount of distress in the last quarter of 1894.

Influenza.

Manchester has not escaped the visitation in an epidemic form of this tantalising and too often fatal disease. So far, however, it has been of a milder type than in previous invasions. During the week ending March 2nd there were 5 deaths due to influenza complicated with some form of lung disease, and of these 3 occurred in the Manchester Workhouse. In the course of the next week, ending March 9th, the deaths assigned to it were 20, all the cases being of a complicated nature, and 9 of these occurred in the workhouse. In 2 other cases influenza was put down as a secondary cause of death. The medical officer of health has issued a placard containing "Precautions against Influenza," which has been extensively posted throughout the city.

Dr. Tatham's Report on the Health of Greater Manchester for the years 1891-92-93.

This report has been waited for with much interest and will repay not reading merely, but careful study. It is an example of statistical information only to be fully appreciated perhaps by experts; but even those of us who are not senior wranglers may gradually acquire confidence, for

the checks and counterpoises—the qualifying circumstances—are so carefully examined and allowed for that one feels safe in the guidance of a master who will keep clear of the pitfalls and fallacies that have led to the saying "figures will prove anything." Most interesting and ingenious are the applications of the Manchester life tables (which will long remain witnesses to Dr. Tatham's unwearied energy) to the various problems of vital statistics. Their practical value as supplying accurate tests of sanitary progress or regress is abundantly shown.

The Sanitary Inspectors' Association.

Mr. Francis Vacher, medical officer of health for Cheshire, read a paper on the Inspection of Food before the Sanitary Inspectors' Association at Manchester on March 16th. He said that horseflesh was sold as beef, but that no other deception of that nature appeared to be prevalent. The difference between the bones and fat of the ox and horse made it easy to distinguish the meat, and consequently it was usual to remove both the bones and the fat from horseflesh which was to be sold as beef. Various symptoms of disease and decomposition in the flesh of several animals were then described with a view to the recognition of unsoundness. Fashion had placed game in an exceptional position, and it was possible that an officer might not be supported by the magistrates in seizing it even when greatly decomposed. There appeared to be hardly any doubt that serious illness had been caused by eating oysters which had lain in water contaminated with sewage.

March 18th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Season's Epidemic.

AMONG various branches of the public service, the Postal employees appear to suffer much from illness. Of 1500, which comprises the whole of the Postal staff in this town, there are 115 on the sick list; these comprise 72 from the postal division and 43 from the telegraphic department. The majority of cases are ascribed to influenza; it is remarkable that the advent of any kind of ailment at the present time is readily classed under this cause.

Death under an Anæsthetic.

A man aged twenty-eight succumbed whilst under the influence of a mixture of chloroform and ether at the General Hospital on the 14th inst. He was the subject of empyema, and was about to be operated on when he suddenly stopped breathing. A necropsy revealed a dilated and feeble heart, and the verdict was given in accordance with the medical testimony, the coroner, Mr. Oliver Pemberton, remarking that the risk of anæsthetics was small, only 2 persons out of every 7000 anæsthetised meeting with death.

Suicides of Octogenarians.

An old man, aged eighty-one, was charged with attempting to commit suicide recently. The example of previous cases appears to have exercised some influence in this direction, since there have been in a short time four cases of men about the same age resorting to this method of terminating their days.

March 19th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Drunkenness in Newcastle-upon-Tyne.

THE Right Worshipful the Mayor, Alderman W. H. Stephenson, recently publicly stated that Newcastle was the most drunken town of its size in England, and he quoted official statistics in proof of his statement. The chief constable has just issued his report on the state of crime during the year 1894, in which the amount of drunkenness coming before the magistrates is dealt with. It appears that 6042 cases were investigated by the bench, being an increase of 703 cases over those of 1893; 1347 of these cases referred to non-residents of the city. The mayor has been roundly taken to task for his observations, but he maintains that his conclusions are correct, and certainly so far he seems to have the best of the argument. Why Newcastle should be more drunken than other similar towns it is

difficult to understand. The amount of serious crime in Newcastle is small. The chief constable says in his report "three-fourths of the crime of this country is occasioned by drunkenness." How does it happen that in the most drunken town in England the amount of serious crime is not larger than it is—is not in proportion to the amount of drunkenness? It is true nearly half the indictable offences in Newcastle are due to drink, and the proportion of indictable offences is high in Newcastle. It would seem to be a fair inference that while drink leads to the minor forms of crime, it is not the cause of serious crime—such, for instance, as that which came before the Lord Chief Justice at the late Liverpool Assize. From such serious crime Newcastle is, and always has been, remarkably free.

A Sidelight on Pauper Immigration.

For the sum of £37 10s. the master of the steamer *Palatine* contracted to bring from Alexandria to Boston thirty-eight Jews exiled from Russia. The contract was that the exiles should supply their own food on the voyage. After the vessel had been cleared the Jews came on board, and the vessel at once put to sea, on Jan. 31st, 1895. There was no accommodation of any kind for the Jewish party, which consisted of men, women, and children. They were to sleep on deck. The vessel was delayed on its passage by cold, wet weather, and the Jews were allowed to crawl into the coal bunkers, where they huddled together. The herrings and bread brought on board for the voyage by the miserable exiles were consumed, and only by purchase could food be obtained by the Jews, most of whom were destitute. Finally the party was landed at Boston, where no provision had been made for their arrival. It was stated during the investigation of this scandalous case before the magistrates at Newcastle-upon-Tyne, on March 19th, by the solicitor defending the master, "that there was a good deal of the same sort of thing carried on." The master was fined the full penalty, which, including costs, amounted to £81 8s. 9d., and an order against the ship was granted. This case throws a lurid light on pauper immigration and suggests many questions of national importance.

A Health Exhibition will be held in Newcastle from May 13th to June 11th next. The general object of the exhibition will be, as set forth in the promoters' prospectus, to make obvious the enormous strides made by sanitary science during the past twenty years.

Newcastle-upon-Tyne, March 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Edinburgh.

THE influenza epidemic is waning, at least it is not so widespread. The death-rate, however, still keeps inordinately high, having reached 44 per 1000 last week. The intimations for the week included 5 fresh cases of small-pox, 52 of scarlet fever, and 435 of measles.

Close of the Winter Session in Edinburgh.

The medical classes in the University, the extra-mural school, and the women's colleges all close on Friday of this week. The session has probably been the longest on record, and it has on the whole been an uneventful one. The professional examinations in the University will begin next week.

The Aberdeen City Fever Hospital: Action against the Town Council.

A case was tried in the Court of Session, Edinburgh, before the Lord President and a jury, on the 26th and 27th ult., in which the pursuer, George Sutherland, claimed £500 damages in connexion with the death of his child in the Aberdeen City Hospital. The defenders were Mr. Gorman, one of the Aberdeen sanitary officers, and the Aberdeen town council. The jury gave a unanimous verdict for the defenders. As the case involves some important considerations relating to the laws of public health the charge by the Lord President to the jury has been printed in full by the Aberdeen town council as an appendix to the printed minutes and reports of their committees for the council meeting of March 18th. Considering the pursuer's position in life, the defenders did not ask for expenses, and besides defraying their own will have to pay the pursuer's taxed expenses.

March 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Outbreak of Influenza in Newry.

THERE has been quite an outbreak of influenza in epidemic form in Newry and district. The disease has broken out in the military barracks. Forty men have fallen victims to it. The hospital accommodation having been found inadequate several of the men are being treated in rooms allocated for the purpose. Fortunately, up to the present it is of a very mild type.

Professor Mahaffy.

It has been announced that the Senate of the University of Dublin will meet to-day, March 20th, at two o'clock, to elect a representative of Classis Secunda on the council in place of the Rev. Dr. Mahaffy, resigned.

The late Mr. C. H. Robinson.

At a recent meeting held by the proprietors of the late Ledwich School the following resolution was passed: "The proprietors of the late Ledwich School desire to offer to Mrs. Robinson and her family the expression of their sincere sympathy with them in their recent bereavement, and at the same time to place on record the sense of the great loss the proprietors have sustained by the recent death of their lamented and much-respected colleague."

Death of Mr. William Dyas.

It is with regret I have to announce the death of Mr. W. Dyas of Chicago, who met with a fatal accident by an incoming train on the Nickel-Plate-road, Chicago. William Dyas was born in Dublin on Nov. 4th, 1807. In his sixteenth year he entered Trinity College, Dublin. He graduated in 1830 at the Royal College of Surgeons in Ireland. In 1832 he received an appointment to the Cholera Hospital, county Kildare. Subsequently he was appointed Assistant Demonstrator of Anatomy at Trinity College, acting under Professor Harrison, of the University. In July, 1839, Mr. Dyas went to America and settled in Chicago, where for a time he acted as editor of the *Chicago Medical Journal*. He was eighty-seven years of age.

Simultaneous Ligation of the Subclavian and Carotid Arteries for Innominate Aneurysm.

An operation was performed by Mr. Coppinger at the Mater Misericordiae Hospital on Saturday which caused much interest and was witnessed by a large audience of surgeons as well as of students. The patient, a man aged thirty-five, suffered from a rapidly growing aneurysm of the innominate, projecting upwards above his sternum and clavicle, and causing severe pain and other pressure symptoms. The third stage of the right subclavian was encircled by a ligature, and the carotid at the seat of election similarly dealt with. The vessels were now tied, one immediately after the other, the ligatures being of silk. Aseptic precautions were rigidly carried out, all the dressings, iodoform, &c. having been previously sterilised by prolonged exposure to dry steam, after the von Bergmann method. The patient was not apparently a satisfactory subject for the operation, being short-necked and full-blooded. He, moreover, had suffered for some weeks from severe laryngeal symptoms, as well as from the so-called "vagus pneumonia" due to pressure on the recurrent laryngeal and trunk of pneumo-gastric nerves. I learn, however, that his temperature to-day (Wednesday) is normal, and that his progress is otherwise favourable.

The Protection of Infant Life.

The Dublin *Evening Echo* on Monday last contained an outspoken appeal for the alteration and amendment of the Burial Laws in Ireland. Under the various Acts for the registration of births and deaths in Ireland it is possible for interments to be made without a medical certificate as to the cause of death and even without registration. There are penalties, but they can be avoided; and it is the belief of our contemporary, and apparently a well-grounded belief, that this laxity has become a serious source of danger to child-life.

The Cork Ophthalmic Hospital.

The annual meeting of the subscribers to the Ophthalmic Hospital was held last week, and the report stated that in addition to the £4000 obtained by the late bazaar a further sum of £4000 was received in donations towards the building

fund. It was further stated that a site for the new hospital had been selected. Unfortunately, the proposed site met with anything but the unanimous approval of the subscribers present at the meeting. Lady Arnott led off the attack in a very vigorous speech. She pointed out that no exercise grounds would be available for the patients, and that tolerably close to the hospital would flow a stream from which at times are emitted certain malodorous fumes. Dr. Hobart, consulting surgeon, agreed with her ladyship as to the unsuitability of the site. On the other hand, Dr. Sandford, surgeon to the hospital, did not consider the position an insanitary one, and did not think they were likely to get a more suitable one. Many of the committee protested that the opposition to the site took them completely by surprise. Eventually the most sensible thing was done; the whole question was referred back to the committee, and as all concerned are actuated by a desire to do what will be best for the patients, I have no doubt a satisfactory solution will be soon arrived at.

Influenza at Cork.

Influenza has paid us an unwelcome visit, but so far it has not assumed a virulent type, though many of the cases are complicated by broncho-pneumonia. The city has been in a singularly healthy condition during the past two months, due, no doubt, to improved sanitation. In that connexion I may mention a fact of which our City Fathers are very proud. Domestic scavenging in Cork costs less than 1d. in the £, though Dublin citizens cannot have this done for less than 6½d. in the £.

Cork Lunatic Asylum.

A meeting of the board of governors of the Cork District Lunatic Asylum was held last week. The asylum contains at present 382 patients, while the estimated accommodation is 434. The hospital block, providing as it does most excellent accommodation for the treatment of the sick and infirm, has its utility greatly impaired by the want of a kitchen and by the loss of the infectious wing. Dr. Woods also brought under the consideration of the governors the advisability of increasing the medical staff as all authorities on asylum management now consider that there should be one medical officer for every 300 patients. The governors having gone very carefully and at great length into the subject, decided, on the motion of Alderman Dale, to approve of the addition being made to the medical staff, but that the extent of the increase should be left to a meeting of the full board to determine. The meeting then adjourned.

A woman named Stapleton has died at Carey's Road, Limerick, at the age of 102. Within a brief time before her death she enjoyed excellent health and was in full possession of her faculties.

March 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Uterine Tubal Pregnancy: Retention of Fœtus for Fifteen Years.

M. FOLET of Lille communicated to the Academy of Medicine on the 12th inst. details of the above extraordinary case. His patient is a woman now aged forty-nine years, who, having previously given birth to four children at full term, became, sixteen years ago, again pregnant. When the pregnancy had reached the ninth or the tenth month symptoms simulating labour occurred, blood and membranes being expelled, and the hæmorrhage persisting for six weeks. This strange occurrence led to the belief that no pregnancy had really existed. The abdomen remained, however, voluminous, but for fifteen years nothing further happened to disturb her until a year ago, when repeated attacks of peritonitis determined her admission into the Saint-Sauveur Hospital, Lille, where laparotomy was decided upon. The operation was laborious on account of the presence of numerous adhesions of the foetal sac to the intestines. The sac was, nevertheless, excised almost entire, the too adherent fundus only being left *in situ* and stitched *en colerette* to the lower part of the abdominal incision. Recovery was complete in six weeks, no accident having occurred to retard it. The sac contained two fœtuses—one which had at its death attained the age of two or three months, and the other which had reached the full term of nine months—a phenomenon which is so extremely rare in tubal gestation that only six or seven examples are recorded. The fœtus exhibited at the Academy

by M. Folet was not a lithopædion. Its tissues were supple, non-calcified, but were, nevertheless, as dense as cooked bacon. With the exception of certain alterations undergone, the tissues had retained their structure recognisable by the naked eye and under the microscope. The peculiar lardaceous degeneration above mentioned will be further investigated by Dr. Curtis, *professeur-agrégé* of Pathological Anatomy at the Lille Faculty.

The War against Alcoholism in France.

The Conseil Supérieur de l'Assistance Publique, having at the request of the Government deliberated over the advisability of establishing special retreats for the treatment of lunacy caused by alcoholic abuse, has sent in the following report, which I transcribe textually: "1. Que le gouvernement encourage la création d'établissements spéciaux pour les aliénés alcooliques et l'organisation de quartiers spéciaux dans les asiles. 2. Qu'une application plus rigoureuse soit faite des lois contre l'ivresse publique. Le Conseil Supérieur signale, en outre, aux pouvoirs publics l'utilité plus grande et plus pressante encore de rechercher et d'appliquer les moyens de prévenir l'alcoolisme."

March 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Meeting of the German Balneologists.

THE German Balneological Society held its annual meeting in Berlin from March 7th to 12th, Professor Liebreich presiding. In his inaugural address the president said that many valuable improvements in therapeutics had originated from this society. He mentioned especially the fresh-air treatment of tuberculosis introduced by the late Dr. Brehmer at Görbersdorf, which had up to now given the best results in this dreadful disease. In that society it would be unnecessary to state that pulmonary tuberculosis is not merely an infectious disease, but depends also upon the social condition of the population. Fresh air and good food have contributed more to the cure of sufferers than tuberculin and the other antitoxins invented by bacteriologists. Professor Litten then read a paper upon the Diaphragm Phenomenon. He has found that the movements of the diaphragm during respiration can be seen through the walls of the thorax and abdomen if the patient lies on his back near a window so that his body has full light on it. Under these circumstances one sees through the skin a kind of undulation descending with the inspiration from the sixth intercostal space down to the ninth rib, and sometimes to the costal arch, and ascending again with the expiration. Professor Litten pointed out the great importance of this phenomenon in cases of emphysema, pleurisy, &c., where the respiratory power of the lungs can be estimated from the extent of the above-mentioned undulation. Dr. Grödel of Naheim then spoke on the Hydropathic Treatment of Arterio-sclerosis. He said that it is an error to say that hot baths would be harmful to such patients, although as a rule they are more than fifty years old. Although he had often ordered baths of 35° C. he had never seen apoplectic attacks during or after the bath. He advises his patients to stay only for five minutes in the bath and to put a cold compress on the head in order to remove the blood from the brain. Diseases of the heart took a considerable place in this year's proceeding. Professor Kisch (Marienbad) read a paper on Cardiac Irregularity caused by General Obesity, and Dr. Pospischill on the Hydrotherapy of Organic Heart Diseases. The latter mentioned the efficacy of this method, even in an advanced stage of the illness. The hydrotherapeutic treatment, he said, regulates the cardiac action, repairs the elasticity of the bloodvessels, and strengthens the heart muscle. Every form of heart disease is fit for this treatment, which can be performed not only in hospitals but also in the homes of the poor. A very interesting paper was that of Dr. Fürst (Berlin) on Inhalations at the Seaside. The good results obtained in cases of scrofulosis by inhalations of salt air in the salt-pits have induced him to try the same method at the seaside. For this purpose he proposes to build open halls to which the sea-water will be conducted in pipes and dispersed by an engine. In this way the air becomes mixed with the sea water, and the children who have to stay in the hall for several hours inhale an air

which contains a great percentage of salt. Dr. Lindemann of Hallgoland approved Dr. Fürst's proposition, and remarked that his method would be useful also for patients suffering from chronic laryngitis. The meeting finally discussed the hygienic condition of the health resorts. A committee was elected, which made the following propositions. The municipal authorities of the health resorts should be asked to provide—(1) an efficient supply of good drinking water by aid of water-works; (2) arrangements for artificial ice; (3) hospitals for infectious diseases; (4) establishments for the disinfection of goods &c.; and (5) public mortuaries. Dr. Ibell (Ems) proposed that every health resort should appoint a hygienic council of which at least one resident medical man should be a member. The propositions were unanimously adopted and the meeting then closed.

Curious Evidence of a Medical Officer.

A man who was brought before a jury of Berlin had promised a woman in the latest stage of tuberculosis to cure her within three months. He had ordered her a medicine for which he charged twelve marks, the real worth being only twenty pfennigs. A fortnight afterwards the patient died, and her family indicted the quack for fraud. At the trial Dr. Long, medical officer at the Berlin law courts, was asked by the defendant's counsel if it was not possible to cure "consumption." Dr. Long answered that it would be as easy to fetch a star from the sky as to find a universal remedy for this illness. The defendant's counsel asserted that his client was as persuaded of the curative effect of his remedy as Professor Koch was of tuberculin, and could, therefore, not be made responsible because it was a failure. Dr. Long answered that in his opinion they were, both Dr. Koch and the defendant, guilty of the same crime, and he did not understand the public attorney only prosecuting the little and not also the great thieves. This allusion caused the utmost sensation in the court. The judge said he was sorry he must blame Dr. Long for comparing a scientific authority like Professor Koch with a quack. The defendant was condemned to three months' imprisonment.

March 18th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Cases of Homicidal Mania.

HOMICIDAL mania has been assuming epidemic proportions in our hospitals, particularly in our lunatic asylums. In the Santo Spirito a nun of exemplary character and high professional worth was assassinated by a patient who owed her a quite imaginary grudge, and just the other day one of the most prominent of our citizens—a man respected and beloved throughout Italy, the Marchese Berardi—was brutally murdered in open day in the villa annexed to the Manicomio. As one of those officially interested in the asylum the Marchese was on duty, superintending a group of labourers employed in removing earth from the airing grounds, and he was just in the act of suggesting to a subordinate the propriety of laying a small *binario* (pair of rails) to facilitate the carting away of rubbish when he was suddenly assailed from behind by one of the labourers aforesaid. This man, who as a non-violent patient had been allowed to work in the open, dealt him with uplifted spade a murderous blow on the occiput, felling him to the ground. Bleeding profusely and absolutely unconscious, the Marchese, after the first hasty attentions of the resident physicians, was taken to one of the houses of which the villa is composed and was soon afterwards examined by Professor Paolo Postemski, who holds one of the chairs of Surgery in the Roman school. Trephining was at once performed, and in half an hour, during which he was assisted by Professors Bertini and Scalzi, Professor Postemski was able to give the following account of the injury: "Depression of the right parieto-occipital region, with fracture external to the depression. Fracture of the internal surface and disintegration of the cerebral substance. Subdural hæmorrhage. Probable fracture of the base of the skull. Prognosis very grave." His Excellency Dr. Baccelli arrived just as Professor Postemski was penning the last words of the bulletin, and, having heard the particulars, approved of the operation and also confirmed the very unhopeful prognosis. The Marchese never recovered con-

sciousness, but lingered on till a little past midnight, when he expired. Meanwhile his assassin, who had been put under arrest, was examined and the following instructive history was elicited. He is a young man, Bruni by name, some twenty-seven years of age, and a Sabine by birth. He is of middle height, blonde of complexion, and with a prepossessing type of countenance. Of unknown parentage, he was brought up to an uncertain mode of life, working at odd jobs, till the age of nineteen, when he was sentenced to seven months' imprisonment for cutting and wounding, after which he underwent another term of incarceration for theft. In August of 1888 he entered as a conscript the 15th Regiment of Infantry, and about the close of his period of service he insulted and attacked his superior officer. Put on his trial he was found to be insane and shut up in the lunatic asylum. From this he was unaccountably set at liberty—unaccountably, I say, for the report of the resident physicians, dated 1892, was to this effect: "Alienazione cessata; persistente semi-imbecillità" (alienation ceased; persistent semi-imbecility). The latter condition ought certainly to have caused some kind of surveillance to be kept over him; but no. Set at liberty, as I have said, he soon gave symptoms of a recrudescence of his malady, so that for violent conduct in the Piazza del Popolo he was taken into custody by the Carabinieri, and his mental alienation having been once more duly certified he was again shut up in the lunatic asylum. Here he developed the so-called "persecution mania," and at first had to be safeguarded among those classed as "agitati" (violent). But in October last, having till then maintained a persistent calm, he was relegated to the class of "paranoici tranquilli" (peaceable lunatics) and employed, as we have seen, in rural labour. Interrogated by the director of the asylum, Professor Bonfigli, and the Questor, Signor Sironi, as to what induced him to attack the Marchese Berardi, he replied: "I had condemned the Marchese to death because once he had complained of my work." Successive interrogations elicited little more than this, that he was constantly being persecuted by "pezzi grossi"—personages in authority—among whom he classed "Cabinet Ministers, colonels, majors, and presidents," and added that he struck down the Marchese Berardi as one of those persecutors. And so he stuck to his text, till Professor Bonfigli and Signor Sironi made up their minds as to his case and relegated him to the class of the "agitati," taking the precaution (his menacing looks and language considered) to put him in a "camicia di forza" (strait-waistcoat). I need pursue the matter no further, except to add that about the same time another deed of violence was committed in the same asylum by one of the patients (an epileptic) dealing another of the same class a murderous kick on the abdomen, the result of which was death some hours afterwards.

The Management of the Manicomio.

A few comments will be in place as to the circumstances under which the Roman Manicomio has had to register such tragedies and the system under which these become possible. In some respects it has a record as honourable as any in Europe. It was one of the first on the Continent to adopt the non-restraint system inaugurated by Tuke. Thanks to its enlightened patron, the late Pope Pio Nono, the "bath of surprise," the shackles, the strait-waistcoat, and such like were either wholly done away with or had recourse to only under rare and special circumstances. The "out-door employment" system was freely introduced, and under such excellent superintendents as Dr. Viale Prelli and, more recently, Dr. Fioridispini the beautiful villas on the Janiculum were laid out for the reception of non-violent cases whose time (if paying patients) could be occupied in such intellectual or artistic pursuits as were congenial to them, or (if of the poorer or pauper class) by labour, agricultural or other. Repeated visits to this really delightful retreat convinced me of the thoroughness with which the non-restraint system had been carried out, and, on the whole, the success which had crowned it. But one defect always struck me, and not me only, but others who were admitted on the visiting list. That was, according to our British ideas, the insufficiency of attendants. Those who were on duty seemed in the highest degree capable; but they were inadequately supported. Now, if there is a *conditio sine qua non* which, more than another, must be enforced in the treatment of lunatics it is this, that "the sense of being controlled" should never be absent from them. An over-awing

demonstration of surveillance is not absolutely necessary. It will be enough if the patient feels that, even in non-official garb, there are attendants who have their eye on him, and who are ready (reinforced at once, if need be, by others) to check any outbreak on his part. Just as on the high seas the man-of-war least often suffers shipwreck from its greater supply of hands, so in the lunatic asylum casualties are fewest where attendants, *en évidence* or in the background, are most in readiness. Now in the Roman Manicomio this chronic defect had been aggravated by recent administration. According to its most able and efficient superintendent, Professor Bonfigli, it is a fact that no fewer than thirty among the "sorveglianti" and "infermieri" (keepers and male attendants) had, for a temporary cause, been dismissed—some of them had been on the staff of the Manicomio for over twenty years—and that, at the time of the recent murderous outbreaks among the patients, the *personnel* was dangerously undermanned. It is said that the author of this proceeding was no other than the Marchese Berardi himself. If so, that estimable man has expiated by nothing less than his life an error in administration which, in hot-blooded populations generally, and particularly in their lunatic asylums, can never be committed with impunity.

March 16th.

Obituary.

LOUIS FLORENTIN CALMEIL, M.D.

OUR Paris correspondent writes:—"The survival up to the 11th inst. of the famous alienist will come as a surprise to the majority of those of your readers who are interested in mental medicine. This surprise will be fully justified when on turning to the chapter on general paralysis of the insane in physiological works we read such sentences as the following:—'This interesting but hopeless form of disease may be said to have been unknown until it was fully described in the admirable *mémoire* published by Calmeil in 1826. In his later work, "*Traité des Maladies Inflammatoires du Cerveau*," 1859, he designates the disease "*Periencephalitis chronica diffusa*.'" Again, 'In 1826 M. Calmeil gave a most complete account of it, and to him frequently is ascribed the merit of having been the discoverer.' Louis Florentin Calmeil, the *doyen* of French alienists, was born on Aug. 9th, 1798; he was, consequently, at his death in his ninety-seventh year. His father, a retired barrister, renounced practice early in his career and took up his residence at his country house at d'Yversay in Poitou. Here was born his third son, who was destined to become so famous as a 'mad doctor.' At the age of nine years he and an elder brother were placed in a house at Poitiers under the care of a trusted servant in order to pursue their classical education. He soon evinced a passionate liking for natural science. One day he informed his professor that he intended being a botanist, which infantile resolution did not prevent his being entered later as a student in the *École Préparatoire de Médecine de Poitiers*. While there he daily repaired to the hospital, where he soon became an assiduous attendant in the post-mortem room. Every spare moment he devoted to the study of plants and insects. The inevitable removal to Paris came in due time. In this new sphere his untiring industry quickly procured him the place of *externe des hôpitaux*. In this quality he was a frequenter of Dupuytren's wards. One day, carried away by a too close attention to the illustrious surgeon's utterances, he accidentally touched the bed of a patient who had just been operated on. Dupuytren thereupon seized him by the arm and shook him so violently that, terrified at such treatment, he procured his mutation to the Salpêtrière, where he worked under Rostan. This good-natured physician took a great fancy to young Calmeil and engaged him to take numerous notes of cases of partial softening of the brain. Appointed *interne*, he was sent to Charenton under Royer-Collard. He was then twenty-four years old, and he never left that hospital until fifty more years had elapsed. There he passed all his life—a life of devotion to his poor patients and to his researches into the nature of their diseases. The death of his loved master, Royer-Collard, deprived him of an influential friend; but he found in his successor, Esquirol, an equally ardent supporter. Calmeil became his right-hand man. Knowing that his *protégé* had during his sojourn at the

Salpêtrière made a special study of hysteria and epilepsy, Esquirol requested him to write a *mémoire* embodying his observations. The task accomplished, Esquirol entered the *mémoire* for a prize he himself had founded. Félix Voisin and Calmeil were bracketed equal and shared the prize. Esquirol had frequently urged his master Pinel to found a private paying asylum, but the latter, pleading the infirmities of old age, persuaded his pupil to put the idea into practice. Calmeil entered with enthusiasm into the organisation of this new scheme; but when, later, Esquirol wished him to become his partner in the venture, he firmly declined in these words: 'Non, je n'accepte pas, car non-seulement je m'y ruinerais, mais, ce qui est pire, j'aurais ruiné mes co-associés. J'ai mon plan tout tracé et bien arrêté; je ne veux que le travail avec l'indépendance.' This disinterested programme he followed to the letter. His duties over, he would retire to a modest pavilion he called his hut, when after a few hours' sleep he would, winter and summer, wake before sunrise to write the works which have placed his name on the roll of honour as a psychologist. Appointed Inspector of Charenton, then Assistant Physician, he obtained the unsolicited distinction of the Cross of the Legion of Honour. At the death of Esquirol he was deemed by his *confrères* the best fitted to succeed him as *Médecin-en-chef*. But royal favour procured the post for another, and Calmeil continued his studies until 1848, when, terrified by the Revolution, his chief fled, and a vacancy was once more declared. This time Calmeil was more fortunate, being appointed to the female wards, while the men were placed under the care of Archambault. Soon after, his coadjutor having to retire, he was appointed *Médecin-en-chef*, a post he held for twenty-two years. In the accomplishment of his responsible duties he was ever gentle and dignified towards his pupils and subordinates, and most patient with his poor charges. It was during his tenure of the Physicianship-in-chief that he crowned his work by the publication of his treatise '*Maladies Inflammatoires du Cerveau*.' This procured him promotion (to office) in the Legion of Honour. In 1872 Calmeil asked to be allowed to retire. He chose Fontenay-sous-Bois, in the Charenton district, as the place wherein to pass the evening of his life. Here in a pretty villa built specially for him, and which his friends and admirers christened 'La Maison du Sage,' he gave himself up to his favourite botanical studies and to his book and the notes he had accumulated during his sojourn at Charenton. Nothing delighted him more than a visit from some old pupil, become since famous perhaps. For some years past, senile weakness, while sparing his intellect, had deprived him of the strength necessary to enable him to take his favourite walks in the Vincennes woods, or in his garden. I append a list of his principal works, some of which are undoubtedly standard productions:—'*De l'Épilepsie étudiée sous le rapport de son Siège et de son Influence sur la Production d'Aliénation Mentale*' (Thèse, 17 juin, 1824); '*De la Paralyse considérée chez les Aliénés*' (Paris, 1826, 8vo); '*Des Maladies de la Moelle Epinière*' (Paris, 1839, 8vo); '*De la Folie considérée sous le point de vue pathologique, philosophique, historique, et judiciaire, depuis la Renaissance des Sciences en Europe jusqu'au XIX^e Siècle, (descriptions des grandes épidémies de délire simple ou compliqué qui ont atteint la population d'autrefois et régné dans les monastères; exposé des condamnations auxquelles la folie méconnue a souvent donné lieu; Paris, 1845, 2 vols. 8vo); 'Traité des Maladies inflammatoires du Cerveau' (ou histoire anatomopathologique des congestions encéphaliques, du délire aigu, de la paralysie générale ou péri-encéphalite diffuse, à l'état simple ou compliqué, du ramollissement cérébral local aigu et chronique, de l'hémorragie cérébrale localisée récente ou non récente; Paris, 1859, 2 vols. 8vo); 'Du Ramollissement partiel du Cerveau (par Rostan; Obs. par Calmeil). One of the first to utilise the microscope in the study of mental derangements, he always betrayed satisfaction at the improvement effected in an instrument which he prophesied 'would render great service in this particular branch of medicine. Ever a most conscientious student, he would often allow years to elapse before he would publish communications of the correctness of which he was not absolutely sure. He thoroughly believed that every neurosis or form of lunacy corresponded to a definite lesion which it behoved the student to discover. His name will for ever remain associated with the disease, general paralysis of the insane, which he succeeded in establishing as a clinical and pathological entity. Although a member of the Société Médico-Psychologique, he rarely*

attended the meetings, preferring to remain at Charenton amongst his books and patients. In Calmeil we may salute a man who lived all his days a true student—disinterested, modest, and consequently great. I feel that these few commemorative words give but a dim picture of such a personality, but I venture to hope that their perusal will not be found uninteresting."

WILLIAM BOYLE COGHLAN, M.A., M.D. Q.U.I.,
M.R.C.S. ENG.

GENERAL regret has been occasioned among a wide circle of friends by the death of this popular and highly respected gentleman, who passed away on March 8th at his residence in York-place, Oxford-street, Manchester. He was born in county Cork about sixty-six years ago, and was the first scholar in Queen's College, Cork. He subsequently studied divinity, and having graduated in 1853 as M.A. at Trinity College, Dublin, he became curate of Chirbury Parish Church, in Shropshire, as mentioned in our columns last week. Having unhappily lost his voice, he obtained permission from his ecclesiastical superiors to enter the medical profession, and qualified himself for this new career by studying at his old university and at St. Thomas's Hospital. In 1864 he became a Member of the Royal College of Surgeons of England, and in 1868 he graduated as M.D., eventually settling in practice in Manchester. He nevertheless was able to continue his pulpit ministrations, and was well known and highly esteemed as a preacher in many churches of the city and suburbs.

EVAN PIERCE, M.D. ST. AND., F.R.C.S. EDIN.,
L.F.P.S. GLASG., L.S.A., J.P.

By the death of Dr. Evan Pierce, who passed away at his residence in Denbigh on March 15th, the profession of medicine in North Wales loses one of its best-known exponents. Dr. Pierce was born in 1808 in a farmhouse a few miles from Denbigh, and on leaving school commenced his medical education by apprenticeship to Drs. Yorke-Jones and Lodge of Denbigh. He subsequently studied in the medical schools of London, Edinburgh, and Paris, and in 1836 gained the diploma at the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Apothecaries' Society of London. In 1832, while a student at Edinburgh University, the young Welshman distinguished himself by his active participation in the work of the cholera hospitals in Edinburgh and Musselburgh. Returning to his home in Denbigh he found that the same epidemic was prevailing there, and that the mortality was very heavy. His services to his native place on this occasion were remarkable, and were publicly acknowledged by his being presented with an oil painting of himself. Having subsequently settled in practice in Denbigh, he speedily attained success, and in 1844 graduated as M.D. at the University of St. Andrews. About the same time he became a member of the Denbigh town council and in 1866 was elected mayor, an office which he held for five years in succession. In 1848 he became coroner for Denbighshire, and retained the appointment up to the time of his death. In this capacity he had to hold the inquest on the victims of the Abergele accident on the London and North-Western Railway in 1868, when more than thirty lives were lost, partly through the collision and partly through the ignition of mineral oil with which a truck was loaded. He was a public benefactor to his town, for he supported a hospital of fifteen beds, and presented to the borough a public pleasure ground and a public hall, acts of munificence which involved an outlay of several thousand pounds. In commemoration of his mayoralty the townspeople in 1875 erected in the pleasure ground a limestone column seventy-three feet in height, surmounted by a statue of him in white marble. He was remarkably devoted to field sports as long as his bodily energy permitted, and was in every respect a staunch Welshman.

JOHN BALBIRNIE, M.A., M.D. GLASG.

WE regret to announce the death of Dr. Balbirnie, which took place on March 11th at Keyworth, near Plumtree, Nottinghamshire, as the result of an attack of influenza. He was a man of much culture and literary ability, and some

forty years ago gained a considerable reputation as a writer on medical subjects, principally in connexion with hydro-pathy. Born in Glasgow in 1810, he in due course entered the arts classes of the University there, graduating as M.A. in 1830. His tendency being towards the medical profession, he continued his studies in this direction at the same school, eventually taking the M.D. degree in 1836. Previously to graduation he spent some time in improving himself by observing the practice at the great medical schools in Paris, and this, no doubt, partly accounted for the fact that at Glasgow University he gained the Brisbane Bursary of £200 awarded to the most meritorious of the theses presented by the medical graduates of the year. Balbirnie on this occasion took as his subject "The Speculum applied to Organic Diseases of the Uterus and its Appendages." His best-known work was probably "The Water Cure in Consumption and Scrofula," published in 1854. He had, however, previously brought out "The Philosophy of the Water Cure" in 1845, and in 1863 he wrote "The Physiological Basis and Curative Effects of the Turkish Bath." His last work appeared in 1870 on "Inhalation as a Branch of Scientific Therapeutics and a new Apparatus for giving it Effect." Dr. Balbirnie practised in various towns in England and Scotland; a great part, however, of his long life was spent in Sheffield. Keyworth, where he died, had been his residence for the last seven years. He has left two sons, both of whom are in the medical profession.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Waldau of Berlin, one of A. von Graefe's earliest assistants.—Dr. Marjolin, honorary surgeon to the Paris hospitals.—Dr. Larabrie, Professor of Clinical Surgery in Nantes.—Dr. F. R. Müller, formerly President of the Swiss Federal Medical Examination Commission.—Dr. A. Beketoff, formerly Professor of Surgery in the University of Kazan.—Dr. Bruno Mester, first assistant in the Breslau Medical Clinic, at the age of thirty-one.—Dr. F. W. Lorinser, formerly President of the Council of Hygiene of Lower Austria.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Florence*: Dr. Tamburini of Modena has been appointed Professor of Clinical Psychiatics. Dr. Roster has been promoted to the Ordinary Professorship of Hygiene.—*Jena*: Dr. H. Haeckel, *privat-docent* in Surgery, has been appointed Professor.—*Lyons*: Dr. Augagneur has been appointed Professor of External Pathology.—*Pavia*: Dr. Mangiagalli of Catania has been appointed Professor of Midwifery and Gynecology.—*Naples*: Dr. Pedicini has been recognised as *privat-docent* in Medical Pathology, and Dr. Farena as *privat-docent* in Medical Chemistry.—*Prague (German University)*: Dr. Wölfler of Gratz has been appointed to the chair of Clinical Surgery in succession to Dr. Gussenbauer. *Bohemian University*: Dr. Pesina has been recognised as *privat-docent* in Pathology and Therapeutics.—*Vienna*: Dr. Julius Schnitzler has been recognised as *privat-docent* in Surgery.

THE St. Patrick's Festival Dinner of the Irish Medical Schools' and Graduates' Association was held on St. Patrick's Eve, March 16th, at the Café Monaco, Dr. H. Phillips-Conn, President of the Association, being in the chair. Among those present were Sir William MacCormac, Sir B. W. Richardson, Dr. Clement Godson, Dr. Gilbert Smith, Mr. Keetley, and Mr. Edmund Owen. There were also a number of ladies present. Songs were sung and national airs played on the Irish pipes.

ROYAL INSTITUTION.—Among the Lecture Arrangements after Easter we notice the following:—Professor George Forbes, three lectures on Alternating and Interrupted Electric Currents; Professor E. Ray Lankester, F.R.S., four lectures on Thirty Years' Progress in Biological Science; Professor Dewar, F.R.S., four lectures on the Liquefaction of Gases; and Dr. William Huggins, F.R.S., three lectures on the Instruments and Methods of Spectroscopic Astronomy (the Tyndall Lectures). The Friday evening meetings will be resumed on April 26th, when a discourse will be given by Dr. John Hopkinson, on the Effects of Electric Currents in Iron on its Magnetisation.

DENTAL HOSPITAL OF LONDON.—Mr. Henry Harben, J.P., has, in addition to £500 already contributed by him, promised a further munificent donation of £1000 towards the amount required for building the new Dental Hospital in Leicester-square, conditionally upon a sum of £13,000 being contributed by the public within reasonable time so as to enable the committee to commence the building.

BEQUESTS AND DONATIONS TO HOSPITALS.—The governors and directors of the Bank of England and Mr. Richard Benyon have respectively sent a donation of £100 to the Metropolitan Hospital, Kingsland-road.—A Retford lady has anonymously given £100 to the Retford Cottage Hospital for surgical purposes.—The collections for the local medical charities for the year 1894 of the workpeople of Messrs. J. S. Fry and Sons, Bristol, amounted to £502 6s. Of this sum £115 each were apportioned to the Bristol Royal Infirmary and General Hospitals and £189 10s. to the Bristol Dispensary.—The late Mr. Robert Smith, of the firm of Smith, Payne, and Smith, bankers, London, has bequeathed £500 to the Hertford Infirmary.—The late Mrs. Church Dixon has bequeathed £500 (free of legacy duty) to the general funds of the Belgrave Hospital for Children, Gloucester-street, London.—The board of management of the British Home for Incurables has received a contribution of £300 in memory of the Rev. W. Heygate Benn; and Mr. H. C. Hartley has also sent to the Home a donation of £150.—The late Mr. C. W. Savage of Westbury-upon-Trym has bequeathed £200 each to the Bristol General Hospital and the Bristol Royal Infirmary, and £100 each to the Children's Hospital and British Eye Hospital.—The late Mr. W. F. Rawdon, of Clifton, York, has bequeathed £1000 each to the Middlesex Hospital (Female Cancer Ward) and the York Hospital, and £2000 to the York Dispensary.—Mrs. James Packe has sent a donation of £500 to the funds of Queen Charlotte's Lying-in Hospital, Marylebone road, London.—An anonymous donor has sent a donation of 300 guineas to the Royal Hospital for Diseases of the Chest, City-road, London.—The late Mr. J. H. Worth of Retford has bequeathed £100 (free of legacy duty) to the Retford Dispensary and Cottage Hospital.—Lady Kortright of Roden House, Brentwood, has sent a donation of £7000 to the Grosvenor Hospital for Women and Children, Vincent-square, Westminster, in aid of the building fund.—Mr. Herbert H. Sharland, late of Thavies-inn, Holborn, London, has bequeathed £1000 each to the North Devon Infirmary (Barnstaple), St. Luke's Hospital, Old-street, London, Guy's Hospital, St. Thomas's Hospital, the Royal Free Hospital (Gray's-inn-road), the Hospital for Sick Children (Great Ormond-street, Bloomsbury), and the Royal Albert Orphan Asylum, and £200 to the Barnstaple Dispensary.—The late Mr. John H. Brain Kenridge of Chew Magna, Somersetshire, has bequeathed £200 to the Bristol Royal Infirmary and £100 to the Bristol General Hospital.—The late Mr. James Price, of Barcombe, Paignton, Devon, has bequeathed £1000 each to Guy's Hospital, St. Thomas's Hospital, St. George's Hospital, Charing-cross Hospital, the London Hospital, the Westminster, King's College, Middlesex, and the Royal Free Hospitals, the North London or University College Hospital, and the Royal Hospital for Incurables, West Putney, and £500 each to the Brompton Cancer Hospital and the Torbay Infirmary at Torquay. The testator also bequeaths £1000 each to the Liverpool Infirmary, the Liverpool Northern Hospital, the Liverpool Southern Hospital, and the Dispensaries at Liverpool.—The following donations have been made to the special fund now being raised for St. Thomas's Hospital, London:—The Directors of the Bank of England, 500 guineas; Messrs. Barclay and Perkins, £1000; the Cannon Brewery Company, London, 100 guineas. The London City Companies have contributed to the same fund as follows: the Mercers' Company, 500 guineas; the Clothworkers' Company, £500; the Grocers' Company, £250; the Leather-sellers' Company, 200 guineas; the Drapers' Company, 100 guineas; the Carpenters' Company, 100 guineas; and the Salters' Company, 100 guineas.—The Mercers' Company has voted a grant of 50 guineas to the Surgical Aid Society (offices, Salisbury-square, London).—The Fishmongers' Company has granted £50 guineas to the East London Hospital for Children, Shadwell, E.—The Leather-sellers' Company has sent a donation of 50 guineas to Guy's Hospital.—The Goldsmiths' Company has voted £200 to Guy's Hospital and £100 to the North-Eastern Hospital for Children, Shoreditch.

At the meeting of the Royal Society on Thursday, March 14th, Professor Engelmann of Utrecht delivered the Croonian Lecture on the Nature of Muscular Contraction.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 6th, Dr. J. S. Tew, President, being in the chair.—Mr. Anderson read a paper on Some Cases of Renal Surgery, and detailed six cases in which nephro-lithotomy had been performed, and six of nephrorrhaphy. In one of the former a large branched stone was removed from the right kidney, and a small one from the left ureter by extra-peritoneal ureterotomy. All the cases recovered. Of the nephrorrhaphies two were of recent date and the ultimate result could not be recorded, but the remaining four had been entirely relieved of their symptoms, the kidneys remaining fixed.—The President and Dr. Cattle, Mr. Tompsett, Dr. Watson, and Dr. Tresidder took part in the discussion of the subject, and Mr. Anderson replied.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—The annual meeting of this hospital was held at the Mansion House on March 15th, the Rev. Arthur Powell (chaplain) presiding, in the absence of the Lord Mayor, who was unfortunately prevented by illness from being present. The Lady Mayoress, however, was among the company. The in-patients treated during the year were 591, and the attendances of out-patients exceeded 32,000. The financial position of the hospital was far from satisfactory. Invested capital to the amount of £750 had to be realised in order to meet current expenses, and there nevertheless remained liabilities of about £260. An earnest appeal for aid was made to the public, especially to the merchants and bankers of the City, the hospital having been originally established in the City and removed to its present position in Waterloo-road only in 1825.

PRESENTATION.—Mrs. Agnes N. Hicks of Tad-dington, Dunstable, Bedfordshire, has been presented, as a memorial of her late husband, Dr. Charles C. Hicks, of Wokingham, with a beautiful carriage clock, bearing this inscription: "To the memory of the late Dr. Hicks, from the poor of Finchampstead." An illuminated framed address was at the same time presented, of which the following is a copy: "Presented to the widow and son of the late Charles Cyril Hicks, M.D., with timepiece. 'We, the undersigned, representing the poorer inhabitants of Finchampstead, request your acceptance of the accompanying testimonial to the memory of the late Dr. C. C. Hicks, as a slight token and acknowledgment of his unwearied and self-denying labours amongst us during his fourteen years of devoted service as a medical officer, February, 1895.'"

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—The annual meeting of this institution was held on March 16th at the hospital buildings, St. Michael's-hill, Bristol, the High Sheriff presiding. The report showed that 918 children and 40 women had been admitted as in-patients during 1894, while the attendances of out-patient children amounted to 23,000, and of women to 14,000. The hospital has a measles ward, to which 62 children were admitted; among these there were 8 fatal cases, of whom 7 were aged two years and under. The finances of the institution are fairly satisfactory, the receipts for the past year having slightly exceeded the ordinary expenditure. Six legacies were received, amounting to a total sum of £1069. At Weston-super-Mare there is a convalescent home in connexion with the hospital, and on it there is still a heavy liability.

FOOTBALL CASUALTIES.—On the 14th inst. a member of the Swansea team succumbed to injuries sustained to the spine during a match between the Swansea and Newport teams on the 23rd ult.—The following accidents occurred on Saturday last. While playing a match between the Leeds and Altofts Clubs at Altofts a member of the Leeds team fractured one of his legs and was removed to the infirmary.—At Sandhurst a half-back who was playing for the Lennor team against the Royal Military College fractured his clavicle.—A youth, aged eighteen years, while playing for the Craigpark Club, at Kenny Hill, Glasgow, "became ill," and was carried to a surgeon's, "but was found to be dead from over-exertion."—A young man, aged twenty-one years, of the Leith Athletic Club, fractured his left leg during a League match in Glasgow, and a player in a match, also in Glasgow, fractured his leg.

MR. PETER SWALES, Public Vaccinator, Sheerness, has been awarded the gratuity for successful vaccination for the eleventh time.

THE annual dinner of the Medical Society of London was held in the Whitehall Rooms of the Hôtel Métropole on March 8th, the President, Sir William Dalby, being in the chair. The evening passed most pleasantly, and some excellent singing by Dr. Frederick Roberts, Dr. Samuel West, and others enlivened the proceedings.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The annual meeting of governors and subscribers was held at the hospital on March 12th, Lieutenant-Colonel Thorneycroft presiding. The state of the finances caused some anxiety, as there was an indebtedness amounting to £2694. The chairman expressed his satisfaction at the providing of wards for the treatment of diseases peculiar to women; a mortuary has also been constructed, the necessity for it having long been felt.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held on March 14th, 1895, Dr. Pye-Smith, F.R.S., President, being in the chair. Mr. George Pernet read the notes of a case of Acute Fatal Pemphigus. Dr. Stowers read for Dr. Waldo of Clifton notes of a case of Acute Nephritis with Uræmia, attended by an Erythematous Rash and Extensive Desquamation. The following cases were exhibited by Mr. Shield: a Female Patient with Chancre on Right Cheek; Dr. Payne, Erythema Induratum Scrofulosorum (or Bazin's Disease); Dr. Abraham, Bazin's Disease, Adenoma of Alæ Nasi, Pustular Prurigo, Lupus Erythematosus; Dr. Eddowes, Folliculitis Decalvans, Alopecia of Scalp, Lichen Ruber Planus; Dr. Stowers, Lupus Vulgaris, on buttock, Lupus Erythematosus with result of treatment. The President, Mr. Buxton Shillitoe, Mr. Hutchinson, and Dr. Radcliffe Crocker took part in the discussions which followed.

LONDON AND DISTRICT POOR-LAW OFFICERS' ASSOCIATION.—The third annual dinner of this association will be held at the Holborn Restaurant (King's Hall) on Friday, April 5th, 1895, at 6.30 P.M. Mr. Walter H. Long, M.P., late Parliamentary Secretary to the Local Government Board, has kindly agreed to take the chair, and he will be supported by Members of both Houses of Parliament and several distinguished visitors. Mr. Long having brought in the Superannuation Bill and obtained an early date for the second reading, it is hoped that a large number of officers and friends will attend on this occasion, so as to make the dinner a record one, and the committee, relying on such support, have taken the newly opened King's Hall for the occasion. The hon. secs. to the dinner committee, to whom all communications should be made, are Mr. Francis H. Birch (Holborn Union, E.C.) and Mr. Morton F. Cadman. We are requested to state that evening dress will be optional.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The alleged Increase of Insanity.

MR. KENNY has given notice that on an early day he will call attention to the progressive increase in the numbers of the registered insane in all countries, and move "That steps be taken towards the appointment of an International Commission to inquire into the subject from an etiological standpoint, and to consider if any and what measures can be taken to arrest the spread of the disease, especially through hereditary transmission and intemperance, admittedly the two principal factors in the causation of insanity."

Habitual Drunkards.

The Manchester and Salford Social Questions Union has presented to Parliament a petition "for legislation for registration of convicted habitual drunkards, and for restraining owners of licensed premises from harbouring or serving such habitual drunkards."

Baths and Washhouses for the City of London.

MR. A. C. MORTON has had the good fortune to get through all its stages in the House of Commons the Bill to enable the Commissioners of Sewers of the City of London to provide baths and washhouses within the City boundaries. The Bill empowers the Commissioners by a resolution passed at a special meeting to apply the Baths and Washhouses Acts, 1846 to 1882, and to do so without the sanction or approval of

any vestry or other body whose sanction or approval is made necessary by these Acts. It is, however, provided that no bylaw made by the Commissioners in this connexion shall have legal force until approved by the Local Government Board, and, further, an appeal to the sessions is given to any person aggrieved by any bylaw, or order, or direction, or appointment of the Commissioners.

Proposed Amendment of the Public Health Acts.

A Bill, introduced into the House of Commons by Sir Albert Rollit, seeks to amend the Public Health Acts with respect to sewers. It gives local authorities power to recover any expenses incurred by them in cleansing, maintaining, repairing, or replacing private sewers from the owner of the premises for the drainage of which the sewers are used. If there is more than one owner involved, then the apportionment of the expenses is to be made by the surveyor of the local authority or, in case of dispute, by a court of summary jurisdiction. An important clause in the Bill gives the local authority power to enter premises without notice in case of emergency, and do what is necessary in the interests of public health.

The Relief of Distress in Ireland.

The Bill of the Government to make temporary provision for the relief of distress in Ireland provides that at any time before Sept. 1st next the Local Government Board for Ireland may, if they think fit, authorise the board of guardians of any Poor-law union to administer relief in food or fuel, out of the workhouse, for any time not exceeding two months to any poor persons resident in the union. It also indemnifies any boards of guardians who may have done this already with the sanction of the Local Government Board, and declares that no electoral disability shall be incurred by any person receiving this special out-door relief.

HOUSE OF COMMONS.

THURSDAY, MARCH 14TH.

The Employment of Children.

MR. SHAW-LEFEVRE, replying to a question put by Sir John Gorst, said that his attention had not been called to the fact that any children in the Poor-law schools had been put to labour before the age of eleven years. There was, he believed, some evidence to that effect before the committee on these schools, but it appeared that in such cases the industrial work to which the children were put was of a domestic character and very different from work in factories. He proposed, however, to issue an order prohibiting the employment of children below the age of eleven as half-timers.

The Sanitation of Windsor Barracks.

MR. CAMPBELL-BANNERMAN, in answer to Mr. Hanbury, said that a full report was made half yearly with regard to the condition of the cavalry barracks at Windsor. The last report was dated Nov. 12th, but reports upon particular items of sanitation were constantly being made. The drainage of the barracks was not satisfactory, but a complete new system was in hand. Such of the work as could be done while the troops were in occupation was being pushed forward, and the remainder would be executed later in the season, when the barracks would be vacated for the purpose.

Pleuro-pneumonia in London.

MR. HERBERT GARDNER, President of the Board of Agriculture, in reply to Sir Albert Rollit, said he was sorry to have to admit that pleuro-pneumonia was discovered a few days ago in the carcase of a cow brought from a cowshed in Spitalfields. The usual inquiries had been made, and the contact animals slaughtered, but no further cases of disease had been found.

The Indian Cantonments Question.

In the course of a debate on the Army, Sir Richard Temple, who has held high office in India, made a strong speech on this subject. He condemned the new cantonment regulations, saying that they had resulted in an enormous increase in disease. The return of Sir George White, he said, mentioned one-third, but he was afraid that one-half of the men were suffering from disease, which might easily have been made preventable, and which was effectually prevented until the House interfered from a false sense of morality. If war broke out in India it might be necessary to send out a whole fresh army corps to repair the ravages caused by the disease. Morality had benefited not at all. India was placed under heavy additional charges in deference to Lord Roberts and other authorities, and yet all that was entirely nullified by having 30,000 or 40,000 men diseased, owing to the new regulations. Every military officer in India was dead against these regulations, which had also received the protests of the Council and others. They should not be doing their duty to their fellow-subjects in India if they hesitated to speak out. Their speaking out might possibly give offence to some, but they acted under a grievous misapprehension. They had been the means of inflicting great evils on their fellow-countrymen—evils which would last not for a year or two, but probably for a lifetime.

FRIDAY, MARCH 15TH.

The State of the Army.

MR. CAMPBELL-BANNERMAN, Secretary of State for War, speaking on the first of the Army Estimates, gave the House an account of the work of his department during the past year and the state of the army. He reported most satisfactory progress in the vital matter of recruiting. They still, he said, filled up their numbers with growing lads below the standard, but they found that a large proportion of these—about two-thirds—had in a few months of steady life, drill, and good feeding reached the standard. The record of the army in 1894 in the matter of health was good. The admissions to hospital among the home troops were considerably below those of the previous year, and the

death-rate was only 359 per 1000. In connexion with the mobilisation work Mr. Campbell-Bannerman said that five bearer companies and five field hospitals were mobilised at Aldershot and the Curragh, associated with the other arms of the service in the important duties which would devolve upon them in war. These manoeuvres were most instructive to the staff and the other officers, as well as to the department from which they were primarily undertaken. They hoped to repeat these exercises, perhaps on a smaller scale, yearly, in order that the bulk of the Medical Staff Corps now serving might be trained in the work.

MONDAY, MARCH 18TH.

The Reformatory Ship "Clarence."

Mr. Asquith, in reply to Sir George Baden-Powell, said that the conclusions come to after the inquiry into the condition of the reformatory ship *Clarence* were substantially that there was a failure on the part of the committee to visit the ship with sufficient frequency and regularity; and that with regard to the outbreak of small-pox which occurred in November last the Secretary of State was of opinion that no blame was attached to the captain for insufficient precautions having been taken, but after carefully considering the report and the evidence he thought the responsibility must rest with the medical officer, and he had expressed to the committee his opinion that they should reinstate the captain in command of the *Clarence*, and he trusted that steps would be taken by the committee in future to prevent the recurrence of the condition of things which had necessitated the recent inquiry.

Colour-blindness among Railway Servants.

Mr. Bryce informed Sir John Leng that railway companies were not legally compellable to subject their servants to eyesight tests for colour-blindness. The subject, however, was of great interest and importance to the companies and the travelling public, whose interests obviously required that adequate tests for colour-vision should be applied.

The Epidemic on board the "Britannia."

On this subject Mr. E. Robertson, answering a question put by Sir Henry Howorth, said that the sanitary condition of the *Britannia* was at present considered excellent. Frequent inspections of the ship and cadets had been made and every precaution taken to ensure as perfect a hygienic condition as possible. The origin of the late epidemic was distinctly traceable to a cadet who had been exposed to infection previously to joining the ship. Three deaths occurred, one in the person of a colonial cadet from Jamaica, who was undoubtedly affected by the late severe weather; another had been the subject of heart disease, and the third succumbed to severe acute bronchitis. The epidemic might now be regarded as practically at an end.

TUESDAY, MARCH 19TH.

Kitchen Boiler Explosions.

Mr. Bryce, replying to Mr. Weir, said that the principal causes of these accidents were well known, and he was at present considering whether some means might not be adopted of warning householders as winter approached of the measures to be adopted to prevent explosions.

The Opium Commission.

When the House was in Committee of Supply discussing a vote for the expenses of temporary Commissions, Sir E. Ashmead-Bartlett raised the question of the Opium Commission. He was glad, he said, that the expenses of the Commission would be borne by this country, because the people of India did not want the inquiry, which was not in their interest. The result, he believed, would show the absurdity of the anti-opium agitation, and would prove that the use of opium in India, far from being injurious, was in the great majority of cases beneficial to the people who used it. Mr. Cohen said the Commission would be useful if it dispelled the ideas entertained on this subject by many sincere but misinformed and deluded persons.—Mr. Cairne said he did not object to those with whom he was associated being called nababists, but as a matter of fact they did not want the Commission, and voted against the Government on the subject.—Sir John Lubbock explained that the report of the Commission had been sent to India for the signature of some of the members, and would be presented to Parliament as soon as it was returned.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on this subject resumed their inquiry on Tuesday, March 19th, under the presidency of Sir Walter Foster.

The only witness they examined at this sitting was Mr. J. C. Lovell, member of a firm of butter importers in London and Manchester, who came forward in his individual capacity and as representing the Provision Trade Section of the London Chamber of Commerce and the London Butter Association. Speaking with wide and long experience he said that a great amount of butter adulteration prevailed. In the case of his own firm they had found it necessary to take steps to protect themselves from large quantities of adulterated butter coming from France. They succeeded in getting numerous prosecutions in that country, and in this way put down the adulteration to a very large extent. Lately there had been an association of the London butter merchants formed for the purpose of taking up this question. He did not in the least object to margarine. On the contrary, he regarded it as a most necessary and good article of food, and he would not interfere in any way whatever with its honest sale; but he did object to butter mixtures, of which enormous quantities were made and sold. He was of opinion that it should be an offence against the law to ally butter and margarine in a mixture. It was this mixing of butter and margarine that opened the door to fraud and injured the butter trade. He was aware that under the Margarine Act any mixture that contained margarine must be described as margarine, but the law was not respected. Many men who sold margarine cared nothing for the penalties under the Act, and when they were imposed upon them did

not alter the course of their trade in any way. He suggested that the fines should be much heavier, and that for the third offence imprisonment should be inflicted. He also suggested that the manufacturer of margarine and margarine mixtures and the wholesale merchant and retailer should be licensed, his licence to be exhibited on his premises. In London there were many persons who were known to buy margarine, and who did not sell it—that was to say, did not sell anything by the name of margarine. He considered it would be unjust and unreasonable to impose any restriction upon the colouring of butter, because in certain districts and at certain seasons it was absolutely necessary to colour it. Most of the evils he complained of would long ago have disappeared had the existing law been vigorously carried out. For example, the Margarine Act gave the Customs authorities power to take samples of goods in transit, and they had never done so except upon information given them by persons in the trade. Now, in his opinion there should be systematic examination at the port of entry. Then there was the neglect and carelessness of the local authorities and their inspectors. In some places one was inclined to say that the inspector winked at offences, and in others it was no doubt true that the inspector worked under great difficulties. For instance, the people knew him at once by his uniform, and when he went into a shop and asked for butter he must certainly get it, although ordinary customers might not find themselves so fortunate. His suggestion was to have travelling inspectors who were not known in the districts. He strongly objected to margarine or mixtures being packed as they were now, in known butter packages. The manifest object of the present system was to assist the retailer in selling the margarine or mixture as pure butter. He found that every known package for the carriage of butter had been imitated by people dealing in margarine or mixtures. In this connexion he suggested that these articles could very well be confined, as was the case in Denmark, to one package. The London Butter Association had only been at work for a month, but the mere fact of its establishment had done good. The association employed inspectors who were told to go anywhere they liked to detect fraud, and already there had been a number of convictions. Within the last two years a system had sprung up of retailers mixing butter and margarine on their own premises by the use of machines specially made for the purpose. It was difficult to detect fraud here, because the quantities made were very small. As to the water to be allowed by law in butter, he thought 17 per cent. would be a perfectly safe maximum.

The Committee then adjourned.

The Committee met again on Wednesday, March 20th, with Sir Walter Foster in the chair.

Mr. R. H. Slater, shipper of butter from Rennes in Brittany, said he had come to the conclusion that the facility with which the adulteration of butter in France was carried on arose from the admitted incompetence of French analysts to detect a percentage of margarine of less than 10 per cent. French shippers, taking advantage of this, were careful to put in at least 10 per cent. of margarine, secure, as they were, against detection. There was a law in France to prevent the mixing of butter and margarine, but it was of no practical advantage. They had also a law prohibiting the sale of margarine as butter, and requiring the exhibition of the words "margarine," "oleomargarine," or "grease" where these substances were used, but this law could be evaded in a number of ways. He himself, in his own business, had been invited to buy margarine which the sellers assured him could not be detected in Brittany butter in a less proportion than 15 per cent., and he knew very well that large quantities of margarine were received in France by shippers of butter. There was so strong a feeling about the injuriousness of this competition among honest butter shippers in France that they had declared to the Government that unless it was prepared to help them with efficacious legislation, they would be obliged to imitate their less scrupulous competitors, or see themselves ruined. "The French Government," he might say, "had taken steps to prevent the use of margarine in hospitals and public institutions, on the ground that it was injurious to health." What he recommended was that the English Government should approach the French Government, and bring such pressure to bear as would make it decide to pass stringent laws against the margainers, and see that they were applied all round. He thought there should be a regular system of analysis at the ports of entry for butter, or reputed butter, coming from such countries as Holland and Belgium, and the heavier fines should be inflicted upon offenders.

Cross examined by Mr. Whiteley, witness expressed the individual opinion that margarine was injurious to health.

By the Chairman.—In his view the reason why the French Government did not interfere was that the houses who dealt in margarine were very powerful, and not that their interference would involve dearer butter and butter substitutes for the people of France. At the present moment in the towns of France the people paid very much more for French butter than did the people of England for the same butter.

Mr. J. T. Horner, who represented the Dairy Trade and Can Protection Society, gave evidence as to the analysis of milk. He told how out of 2229 samples, no fewer than 724 were found to fall short of a standard of 12 per cent. total solids, and he strongly advocated the adoption of a low standard to meet the varying condition and quality of cows. If the constituent parts were fixed they should not be more than 8.50 per cent. and 2.50 per cent. At present there was no legal standard, and in prosecutions they had to depend largely upon the particular idiosyncrasy of the analyst.

The Chairman read to the Committee a memorial which had been received from the London Butter Association, presenting the views of that body. The substance of the memorial will be found in the report of the evidence given by Mr. Lovell.

Mr. Kilbride, one of the members of the Committee, made complaint that in certain prosecutions in England for watering butter use was being made of inaccurate statements of evidence given before this Committee.

The Chairman said that the Committee could do nothing to prevent this, but reminded the hon. member that it was open to any one to procure the Blue-book containing the true record of the evidence taken.

The Committee then adjourned until Tuesday, March 26th.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ALLEN, JOSHUA, M.R.C.S., has been reappointed Medical Officer of Health for the Belper No. 1 Sanitary District.

BEATTIE, R., M.D., M.Ch. Irel., M.R.C.S., has been appointed Honorary Medical Officer to the Dewsbury and District General Infirmary.

BREW, R. W., M.B., B.Ch., B.A.C. Dubl., has been appointed Medical Officer for the Bunickerry Dispensary District.

CALVERLEY, J. E. G., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to the Metropolitan Hospital.

COOMES, GEO. NOBLE, L.R.C.P. and S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Government of His Highness the Maharajah of Cochin, South India.

COSLYFFE, T. V., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Manchester Royal Infirmary.

DOCKRAY, H. S., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Manchester Royal Infirmary.

DUN, H. W., M.B., M.S. Edin., has been appointed Resident Assistant Medical Officer and Dispenser at the Workhouse, Sheffield Union.

FLEGG, F. A. MARTIN, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., has been appointed House Surgeon to the Seamen's Infirmary and General Hospital, Rangoon, and Visiting Surgeon to the Hantsgate and St. Lawrence Royal Dispensary.

FLEET, T. B., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Manchester Royal Infirmary.

GAYLOR, EDWARD, L.R.C.P. Edin., L.F.P.S. Glasg., L.M., has been reappointed Medical Officer of Health for the Belper Rural Sanitary District.

HAMILTON, J. C., M.B. Dubl., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Rathdown Union Workhouse.

BOARE, WILLIAM WALLIS, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Chief Medical Officer to the Hospitals and Estates of the New London Borneo Tobacco Company, Limited, British North Borneo.

ROBERTS, R. T., M.R.C.S. Eng., L.R.C.P., has been appointed House Surgeon to the Mauchette Royal Infirmary.

HUGH, J. H., L.R.C.P., M.R.C.S., has been appointed Assistant Medical Officer to the East Dulwich Infirmary.

JON, H. PERCY, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Newark Town and District Hospital, vice Matterson.

LAWRENCE, A. E. ARST., M.D., has been reappointed Physician Accoucheur to the Bristol General Hospital for a third period of ten years.

LOVE, F. J., F.C.S., F.I.C., has been reappointed a District Agricultural Analyst for the County of Wiltshire, under the Fertilisers and Feeding Stuffs Act, 1893.

MACINTOSH, ANGUS, M.D., L.F.P.S. Glasg., &c., has been reappointed Medical Officer of Health to the Chesterfield Rural District Council, and also to the Urban District Councils of Clay Cross and Dronfield.

MELLAND, C. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Manchester Royal Infirmary.

MCDUGALL, P., B.Sc. Lond., M.B., Ch.B. Vict., has been appointed House Surgeon to the Manchester Royal Infirmary.

KEV, THOMAS WM., F.R.C.S. Eng., Consulting Surgeon to the Middlesex Hospital, has been appointed Consulting Surgeon to the London Skin Hospital, 40, Fitzroy-square, W.

PITFORD, HERBERT, M.A., M.B., C.M. Cantab., has been appointed Third Assistant Medical Officer at the Worcester County and City Lunatic Asylum.

RICHARDSON, W. J., M.D., M.Ch. Irel., B.A.C., has been appointed Honorary Medical Officer to the Dewsbury and District General Infirmary.

SHARPE, W. C., M.B. Edin., has been appointed Senior Physician to Smedley's Hydropathic Institution, Matlock.

SEBRITT, E. MARKHAM, M.D. Lond., F.R.C.P., has been reappointed Physician to the Bristol General Hospital for a third period of ten years.

STEWART, BOTHAM C., M.R.C.S., L.S.A., has been appointed Medical Superintendent to the Leicestershire and Rutland Asylum, vice W. H. Higgins, M.B., resigned.

THOMPSON, ROBERT, M.D., B.S., has been appointed Honorary Ophthalmic Surgeon to the Ipswich Hospital, Queensland, and also Visiting Ophthalmic Surgeon to the Blind Institution, Brisbane, Queensland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARSTAPLE UNION.—Medical Officer to the Sick Poor within the parishes of Ilfracombe, Morchoe, Bittadon, and West Down. Salary £70 a year, upon certain conditions, but midwifery fees allowed. Applications to the Clerk, Barnstaple.

BETHLEHEM HOSPITAL.—Two Resident Clinical Assistants. Applications to the Clerk, Brideswell Hospital, New Bridge-street, E.C.

BLOOMSBURY DISPENSARY.—Physician. An honorarium of £105 is annually voted to the physician. Applications to Mr. C. E. Baker, 12, Bloomsbury-street, W.C.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon for twelve months. Salary £80 per annum, with furnished apartments, board and attendance.

BRADFORD INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £110 per annum, with board and residence.

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's-road, Brighton.—Non-Resident House Surgeon. Salary at the rate of £52 per annum.

CAMBERWELL HOUSE, 33, Peckham-road, Camberwell.—Assistant Medical Officer, unmarried. Salary to begin at £100 a year, with board, lodging, and washing.

CHARING-CROSS HOSPITAL, London.—Assistant Physician.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—Junior House Surgeon, unmarried. Honorarium £40 per annum, with board, lodging, and washing.

CITY ORTHOPAEDIC HOSPITAL, Hatton-garden, E.C.—Honorary Assistant Surgeon.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary to commence at £100 a year, with prospect of an annual rise of £25 up to £200, and further increase according to promotion, together with furnished apartments, board, attendance, and washing.

EAST LONDON HOSPITAL FOR CHILDREN, Glamies-road, Shadwell, E.—House Physician. Board, lodging, &c. provided.

GLANMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer; single. Salary £100 a year, with board (no beer or wine), lodging, washing, and attendance.

HOLBORN UNION.—Medical Officer of the Union Schools at Mitcham, Surrey. Salary £100 per annum, non-resident. Applications to the Clerk to the Guardians, Holborn Guardians' Office, Clerkenwell-road, E.C.

HOSPITAL FOR WOMEN, THE (THE LONDON SCHOOL OF GYNECOLOGY), Soho-square, W.—Clinical Assistants.

LEEDS UNION.—Assistant Medical Officer for the Workhouse, Schools, and Infirmary, situated in Beckett-street, Leeds. Salary £100 per annum, with board, washing, apartments, and attendance. Applications to the Clerk, Union Offices, East-parade, Leeds.

LEICESTERSHIRE AND RUTLAND ASYLUM.—Assistant Medical Officer, unmarried. Salary £150, increasing £10 yearly to £200, with board, lodging, and washing. Applications to the Clerk to the Visitors, 10, New-street, Leicester.

LINCOLN COUNTY HOSPITAL, Lincoln.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrarship. Salary £100 per annum.

LONDON HOSPITAL MEDICAL COLLEGE, THE, Mile End, E.—Assistant Demonstrator of Anatomy. Salary £30 per annum.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer, for six months. Salary at the rate of £50 per annum, with board, attendance, and washing.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer. Salary £110 per annum, increasing £10 annually to £150, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician. Applications to the Secretary, Office, 27, Clement's-lane, E.C.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer.

SURREY COUNTY LUNATIC ASYLUM, Brookwood, near Woking.—Second Assistant Medical Officer. Salary £120, with board, lodging, attendance, and laundry, but not beer. Applications to the Medical Superintendent.

TAMTON AND SOMERSET HOSPITAL, Tamton.—House Surgeon for three years. Salary £100 per annum, with board, lodging, and washing in the Hospital. Also Honorary Physician.

WEST RIDING ASYLUM, Menston, near Leeds.—Third Assistant Medical Officer. Salary to commence at £130 a year, rising £10 annually to £160, with board and apartments.

YORKSHIRE COLLEGE, Leeds.—Demonstrator of Anatomy. Applications to the Registrar.

Births, Marriages, and Deaths.

BIRTHS.

CANE.—On March 13th, at Peterborough, the wife of Dr. Leonard Cane, of a daughter.

DAVIES.—On March 17th, at Oakland-terrace, Cricklewood, N.W., the wife of Dr. H. O. Davies, of a son.

EDGE.—On March 15th, at Maidenhead, the wife of A. J. Edge, M.B. Lond., of a son.

STOCKER.—On March 12th, at Weedon, Northamptonshire, the wife of E. Gaved Stocker, M.R.C.S., of a son.

MARRIAGES.

DENT—PARK.—On March 14th, at St. Barnabas', Kensington, Herbert Crowley Dent, of Cromer, Surgeon-Captain A.M.S. (retired), to May Burton, youngest daughter of the late Rev. John Park, formerly Vicar of Ramsgate, Lancashire.

SETON—ARMSTRONG.—On March 16th, at St. Simon's, Southsea, Surgeon-Captain Bruce Gordon Seton, I.M.S., eldest son of the late Lieutenant-Colonel A. R. Seton, R.E., to Elma, daughter of Lieutenant-Colonel F. H. Armstrong, Southsea.

DEATHS.

BALL.—On March 17th, at Cliff House, Stoke-upon-Trent, Daniel Ball, F.R.C.S., in his 96th year.

BANKS.—On March 11th, at Brooke House, Riseley, Bedford, Philip Humbley Banks, M.R.C.S., L.A.C., aged 62.

CHILD.—On March 15th, at Silverhowe, College-park, Willesden, Warwick Long Child, M.D., M.R.C.S., in his 39th year.

COATES.—On March 15th, at Summer Villa, Hythe, Kent, Surgeon-Major John Coates, M.D., late 24th Regiment, in his 69th year.

CUNLIFFE.—On March 12th, at St. Heliers, Jersey, William Shirabole Cunliffe, M.R.C.S., in his 53rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Bland Sutton: On a case of Tubal Pregnancy and one simulating Tubal Pregnancy.—Mr. L. A. Bidwell: An Operation for Extra-uterine Gestation involving Resection of Intestine.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. James Taylor: On Nervous Symptoms and Morbid Changes in the Spinal Cord in certain cases of Profound Anemia (with lantern illustration).

WEDNESDAY.—HENTERTIAN SOCIETY (London Institution).—8.30 P.M. Dr. Fortescue Fox: The Varieties of Rheumatoid Arthritis.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. A. S. Morton: Ocular Injuries.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Law: Demonstration of Cases.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Joseph Griffiths: Observations on the Testis.

SOCIETY OF ARTS.—8 P.M. Dr. D. Morris: Commercial Fibres.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Impulsive, Homicidal, and Moral Insanity.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (XI.).

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Subject of Lecture: Fire.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4.30 P.M. Dr. Dundas Grant: Diagnosis and Treatment of Diseases characterised by Visible Changes in the Organs of Hearing.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. H. D. Rolleston: Suprarenal Capsules. (Third Goulstonian Lecture.)

WEDNESDAY.—WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Dr. Ball: Throat Cases. (Post-graduate Course.)

ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Joseph Griffiths: Observations on the Testis.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. W. Lang: Squint.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Ringworm and Vegetable Parasitic Diseases.

SOCIETY OF ARTS.—8 P.M. Mr. Horace Wilmer: Modern Photogravure Methods.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. E. B. Taylor: Animism, as shown in the Religions of the Lower Races (I.).

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Penrose: Cases in the Wards.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Mr. Victor Horsley: Surgery of the Nervous System.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.

SOCIETY OF ARTS.—4.30 P.M. Capt. F. E. Younghusband: Chitral and the States of the Hindu Kush.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. G. Fielding Blandford: The Diagnosis, Prognosis, and Prophylaxis of Insanity. (First Lumleian Lecture.)

LONDON SKIN HOSPITAL.—8 P.M. Mr. Augustus Harbord: Syphilis, Acquired and Congenital.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Subject of Lecture: Air.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. E. Cotterell: Cancer of the Oesophagus.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Joseph Griffiths: Observations on the Testis.

ROYAL INSTITUTION.—9 P.M. Prof. H. E. Armstrong: The Structure of the Sugars and their Artificial Production.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Lunacy Law.

ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Waves and Vibrations (V.).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 21st, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Mar. 15	30.33	W.	46	44	71	54	36	...	Cloudy
" 16	31.45	S.W.	46	44	73	55	43	...	Hazy
" 17	30.35	W.	51	47	61	54	45	...	Overcast
" 18	30.21	S.W.	43	41	74	59	40	...	Foggy
" 19	30.03	W.	44	42	71	56	41	...	Overcast
" 20	29.81	S.W.	51	49	67	57	44	0.06	Cloudy
" 21	29.95	S.W.	48	47	60	54	45	0.10	Raining

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

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UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

NEWSPAPER THERAPEUTICS AND THE INFLUENZA EPIDEMIC.

JUMPING into a medical practitioner's carriage and eliciting his views with regard to influenza between one patient's house and another is the last device of that modern representative of the Inquisition, the newspaper interviewer. The victim in this instance was a practitioner who, in spite of his strong anti-alcoholic views, is a man with the quality of sweet reasonableness. But it is to be regretted that he should give material for such scrappy writing on a serious medical subject, especially to a contemporary which is one of the chief mediums of all the facts that harass and hinder scientific medicine in its attempts to get at the roots of disease. Medical men best consult the dignity of their profession and the interest of the public by doing their best in the sick-room and in the study, and leaving to others the interviewer.

Medicus is thanked for his communication.

THE EXAMINATION FOR THE NAVAL MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—Can any reader of THE LANCET inform me as to the best books to read for the Naval Medical Service examination in biology, physical geography, and physics? I shall be much obliged for the information.

March 18th, 1895.

I am, Sirs, yours faithfully,

T. D. L.

BONESSETTING IN THE NORTH OF ENGLAND.

Whether the difference be in the bones or the brains of the people of the north of England, they seem to have a great love for bonesetters. The *Carlisle Journal* in a recent number publishes the full names and addresses of twelve persons alleged during the preceding week to have sustained various specified fractures, dislocations, and bruises, and all of whom were attended by one bonesetter in a small Cumberland town called Aspatria. There seems to be a perfect epidemic—plentiful as influenza cases—of fractured collar-bones, dislocated knees, wrists, ankles, and shoulders. We must, however, perhaps, not take these diagnoses quite so seriously as our lay contemporary.

First Swiss Alpine Milk Exporting Co., Ltd.—It is obviously not correct to say generally that cane sugar &c. are very harmful to the body. We quite agree, however, with the remark in the succeeding paragraph relative to the "special objection" to cane sugar in infant feeding.

Mr. H. Percival Gaston.—Such quackery is not to be reached under the Medical Acts. It should be dealt with by the police authorities as contrary to public morals.

A MIDWIFE CENSURED.

At the Chelsea town hall an inquiry was lately held into the death of an infant one week old, the illegitimate child of Thomas Rowles and Florence Jones of Chelsea. A midwife, Mrs. Harwood, attended, and said the child was feeble and not at full time. The coroner thought the evidence very unsatisfactory, and showed neglect on the midwife's part in not calling the attention of the medical practitioner to the child's condition. Dr. Campbell had visited the house, but was not informed of the weakly state of the child. The jury added to their verdict of "Death from syncope following premature birth" that the nurse acted without due care in failing to call the attention of the medical practitioner to the condition of the child.

Mr. D. H. Willey.—We never recommend individual practitioners. The regular medical attendant can advise upon the necessity of a consultation and upon the proper person to be consulted.

IS PARALYSIS AFTER A SORE-THROAT A PROOF THAT THE DISEASE WAS DIPHTHERIA?

To the Editors of THE LANCET.

Sirs,—It is asserted that if any doubt exists about the nature of a sore-throat the subsequent development of paralysis is proof that the disease the patient suffered from was diphtheria. I must traverse this statement, for I lately attended a case in an adult, and I diagnosed pseudo-diphtheria (unilateral septic follicular tonsillitis), and soon after recovery the patient developed paralysis of the soft palate, which lasted for about a week. There were three young children in the house at the time, and they were simply excluded from the sick room of their mother, who was the patient, but no other precautions were taken. No one in the house and no visitor took the disease. There was no marked depression of the system and no albuminuria. It is interesting to remember that women after childbirth suffer sometimes from polyneuritis, and that this form of paralysis has a septic origin.

I am, Sirs, yours faithfully,

HENRY ALSTON,

Trinidad Government Service.

Trinidad, Feb. 21st, 1895.

THE CASE OF MR. C. B. TOWNSEND.

PREVIOUSLY ACKNOWLEDGED.									
Previously acknowledged	£51	1	0	Fr. (London)	...	...	£0	5	0
M.B., B.Ch.	...	0	10	0	Dr. A. W. Orwin (London)	...	2	2	0
Mr. Chas. J. Woodd	...	...	...	...	Dr. J. J. Sundell (Finch-	...	1	1	0
(Penge)	...	1	1	0	ley)	...	...	...	...
Dr. Dickinson (Bourne-	...	...	...	...	Dr. K. H. P. Williams	...	0	10	0
mouth)	...	1	0	0	(Llandudno)	...	...	2	2
Mr. J. S. Curgiven	...	...	...	...	A. B.	...	...	1	1
(London)	...	1	1	0	Sympathiser	...	...	...	...
Fr. (Ratford)	...	0	5	0					

Further subscriptions are earnestly desired to put the family in the way of self-support, which will require about £200. The Rev. H. Townsend, 41, King Henry's-road, N.W., will receive subscriptions.

A BISHOP AND QUACK TESTIMONIALS.

We lately commented on the unseemliness of a clergyman, who has in the cure of souls a sufficient care, undertaking the heavy responsibility of recommending cures for the body. We have to-day to complain of something still more unseemly—viz., of a bishop (the Right Reverend the Bishop of Swansea) recommending a quack medicine—Mortimer's Croup-cough and Whooping-cough Mixture. Surely, the Bishop has not considered the matter and the risks of such diseases. We are unwilling to criticise so great an ecclesiastical authority; but we beg him to remember that his authority does not extend to medicine, and that by writing as if it did he damages the respect of reasonable men for the use of his authority even in his own sphere.

DEGRADATION OF MEDICAL SERVICE AT IPSWICH.

We refer in another column to the wide tendency to degrade medical service by abuses of the club system. The following handbill is an illustration of our meaning:—

"THE PEOPLE'S MEDICAL AID SOCIETY, IPSWICH.

"The above Society is now being formed for the purpose of securing for its members sound medical advice, attendance, and a supply of medicine whenever they are in need of same. A weekly subscription of one penny for adults, and one half-penny for children will be charged. No entrance fees. Members will be entitled to immediate benefit providing they are in a good state of health at the time of entry.

"It is hoped that sufficient members will be enrolled so as to enable the Society to have the exclusive services of its Medical Officer. All persons interested in the Society are kindly requested to make it known amongst their friends. Further particulars may be obtained from the Secretary, W. H. Baldwin, 25, St. Peter's Street, Ipswich."

We do not see the name of Mr. W. H. Baldwin in the Medical Register. We must content ourselves now with directing the attention of the profession in Ipswich to this wretched bill, and asking them fully to investigate its nature. Any medical man who lends himself to coöperation with Mr. Baldwin would do much to forfeit the respect of his professional brethren.

Miss Emma H. Fredriewsk.—We do not feel at liberty to give our correspondent the addresses in question without knowing more fully the nature of the responsibility she desires to share with the leaders of the profession.

"SULPHUR v. ANTITOXIN IN THE TREATMENT OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—I have no desire to enter into controversy regarding a remedy such as sulphur and the sulphites, of which I have a high opinion in the treatment of diphtheria; but I desire to acknowledge that Mr. Hawkins Cutlibert is quite correct in saying that there is no allusion to antitoxin having been used as an auxiliary and in combination with other remedies at the North-Western Fever Hospital in the report published in THE LANCET of Feb. 2nd. I was, indeed, surprised to notice this omission, since I was well informed that the original return contained a distinct statement to that effect, and I mentioned the circumstance, with an expression of regret at its suppression, in my last lecture on diphtheria, as recorded in the *Medical Press and Circular*, Feb. 13th, p. 160.

I am, Sirs, yours faithfully,

Mansfield-street, W., March 18th, 1895.

LENNOX BROWN.

A REGISTERED MEDICAL PRACTITIONER AND DENTAL ADVERTISING.

The laudation of a dentist by a registered medical practitioner in the way of a testimonial printed in the form of a handbill, based on his observation of cases in which he acted as chloroformist, is a form of double advertisement which may be original, but is certainly entitled to no other praise. The author, Mr. George Gresswell, M.A. Oxford and Cape, possesses the combined qualifications of the Edinburgh Colleges and the Faculty of Glasgow. If he will consult these bodies on the taste of the handbill he will be enlightened.

ERRATUM.—At the end of the third line of Dr. Barron's letter on "The Influenza Epidemic" in our last issue, page 725, the words "in area" should be added after "very similar."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers

have been received:—*Weekly Budget, Medical Record, Echo, Eastern Morning News, Bury Guardian, Cork Weekly Examiner, Cheltenham Free Press, Birmingham Gazette, Sheffield Telegraph, Sussex Daily News, Newcastle Daily Chronicle, Irish Times, Ashton-under-Lyne Reporter, Norfolk Chronicle, Carlisle Express, Civil Service Gazette, Dunelm Weekly News, Leicester Post, Chorley Guardian, Liverpool Mercury, Manchester Guardian, Derbyshire Times, Wolverhampton Chronicle, Western Morning News, Justice, Electrical Review (New York), City Press, Grimsby News, Western Gazette, Northern Whip, Horncastle News, Stockton Herald, Craven Herald, Leeds Mercury, Sanitary Record, Architect, Bristol Mercury, Morning, Mining Journal, Liverpool Daily Post, Reading Mercury, Yorkshire Post, Builder, Times of India, West Middlesex Standard, Pioneer Mail, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Local Government Chronicle, The Welshman, Surrey Advertiser, St. Bartholomew's Hospital Journal, West Middlesex Advertiser, Local Government Journal, Invergordon Times, Health, Cycle, Southampton Echo, Ilfracombe Chronicle, Evening Echo, Dublin, Long Eaton Pioneer, Kettering Guardian, &c., &c.*

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T.—Mr. J. Thin, Edinburgh; Mr.

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Three Lectures

UPON THE TESTES.

Delivered before the Royal College of Surgeons of England on
March 25th, 27th, and 29th, 1895,

By JOSEPH GRIFFITHS, M.A. CANTAB.,
M.D. EDIN., F.R.C.S. ENG.,

ASSISTANT TO THE PROFESSOR OF SURGERY IN THE UNIVERSITY OF
CAMBRIDGE; HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY
AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; ASSISTANT
SURGEON TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

LECTURE I.

Delivered on March 25th.

MR. VICE-PRESIDENT AND GENTLEMEN,—Before commencing these lectures allow me to offer my sincere thanks to the President and Council of the College for electing me to the honourable position of Hunterian Professor of Surgery and Pathology, and to express the hope that I shall be able to justify the confidence they have thus placed in me and to do credit to the office I have the honour to hold. I propose to embody in these lectures the results of my own observations and experiments upon the testis and to give a general review of them rather than to recount all the details which have taken me some years to gather and to put together. By means of such a general review I hope to convey a concise summary of the views I have put forth to some extent in a series of papers already published in the *Journal of Anatomy and Physiology*. For a discussion upon the views of other writers and for a fuller and more detailed account of my own observations I shall often have to refer to one or other of these papers. I shall endeavour to make the subject as interesting as I possibly can, and I hope you will listen to me with indulgence and overlook any shortcomings on my part.

I will, in the first place, give an account of the structure of the testis in early life, in adult life, and in old age, and then proceed to consider the influences this organ exercises upon the growth and development of the sexual glands that are accessory to it, as well as the influence it exerts upon the character of the body and the mind. Secondly, I propose to give an account of the state of the testis, and of the function exercised by it when it is retained at some point in the course of its descent, or transition, from the abdominal cavity to the scrotum. Lastly, I will state the effects upon the testis of obliteration of the vas deferens, whether that be induced by disease or by experiment.

STRUCTURE OF THE TESTIS.

The testis, as is well known, is an organ which attains neither its full size nor its full function until the onset of puberty—a time that varies in different persons and in different climes. With the attainment of the full size and the full function of the testis the features which we regard as characteristic of the male sex are developed.

1. *In the boy.*—The body of the testis of a boy, say at ten years of age, measures about 15 mm. in length by 10 mm. in breadth, and also 10 mm. from before backwards; a transverse section, therefore, is nearly circular. It is firm and of compact structure. The seminal tubules are almost indistinguishable from one another and from the somewhat dense intervening connective tissue. In minute structure the body of the testis consists of numerous tubules closely packed and firmly bound together. These tubules are but little convoluted, and each of them is surrounded by a well-marked tunica propria composed of two or three layers of flattened connective-tissue cells with flattened and elongated nuclei. The intertubular connective tissue, which is of a fibro-cellular nature, is relatively large in amount, and in this the bloodvessels, lymphatics, and nerves run. Each tubule is composed of a solid column or rod of cells, the cells at the periphery of the tubule being of a cubical shape, and those filling the centre polygonal or irregular in outline. There is at this stage in the development of the seminal tubules no lumen, and all the cells seem to be in a quiescent state. In the corpus Highmori, which is small, the rete testis is simple, and the few channels seen in it are lined by a single layer of low cubical cells resting

No. 3735.

directly upon dense fibrous tissue. The epididymis is relatively large to the body of the testis, this being always so in early life, and it is also large in cases of atrophy or want of development of the organ. (See Fig. 1.) In its upper end the tubules

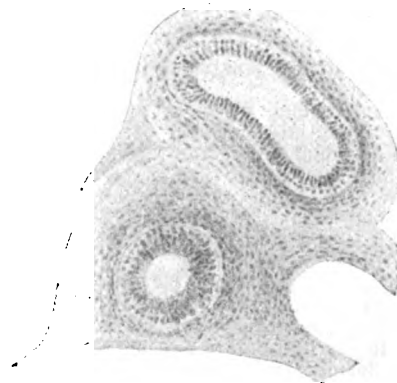
FIG. 1.



Right testis of a boy aged five years. Natural size.

are small and empty, and are lined by a single layer of sub-columnar, non-ciliated cells having between their narrow and attached ends other small, irregular, or pear-shaped cells. The walls of these tubules are chiefly composed of several layers of those flattened or spindle-shaped cells which we are in the habit of recognising as incompletely developed unstriated muscular fibres. The tubules are bound together by cellular connective tissues. (See Fig. 2.) Thus in the child the

FIG. 2.



Section of epididymis of a boy aged ten years. $\times 50$.

globus major of the epididymis differs from the testis in that the lumen of its tubules is not occupied by cells, and that the cells lining them are of the subcolumnar, non-ciliated variety. They differ from those of the adult, as will be seen further on, by the smallness of the cells and the absence of cilia upon them. The lower part of the epididymis is composed of the coiled commencement of the vas deferens, connected together by loose areolar tissue.

2. *In the adult.*—In the adult the body of the testis is large, soft, and plump, measuring on an average $1\frac{1}{2}$ in. in length, $1\frac{1}{4}$ in. in breadth from before backwards, and 1 in. from side to side. It weighs between six and eight drachms. On section through the tunica albuginea the tubules, resembling twisted threads, immediately bulge outwards under pressure of the investing tunica. They are easily separated from one another owing to the intervening intertubular connective tissue being small in amount and very delicate in its structure. There is usually a certain degree of asymmetry between the two organs—the left and right—as, indeed, is the case in other bilateral organs of the body. This asymmetry between the two testicles, though usually very slight—the left being often the larger and more dependent—may be seen in a striking degree in a specimen in the Cambridge Pathological Museum, which shows the testes taken post mortem from a man aged forty-four years. The left, which was the smaller, measured only 30 mm. in length by 20 mm. in breadth; whereas the right measured 50 mm. in length by 35 mm. in breadth. (Fig. 3.) The epididymis was relatively larger to the body of the testis in the left or smaller than in the right. Each organ was

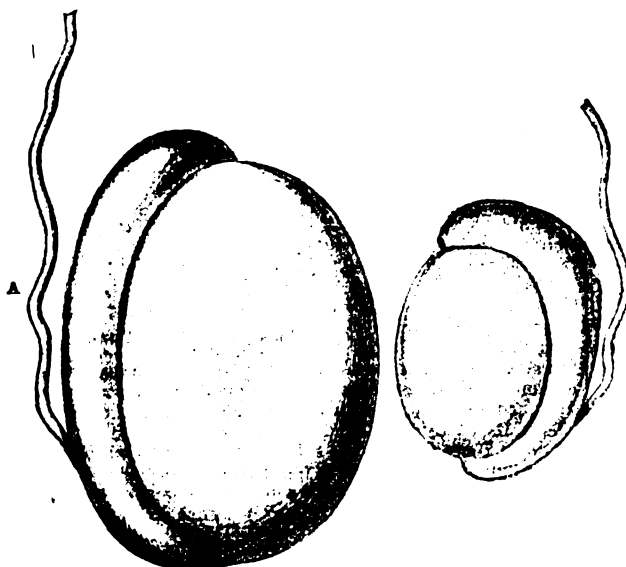
natural in form and in structure, and in each the formation of the spermatozoa was going on at the time of death, as shown by the presence of special sperm cells in the interior of the seminal tubules. [Thus, though both were natural in

with some debris of cells. Thus, at the periphery of each seminal tubule there are, as it were, parent cells; within these there are daughter cells, some of the innermost of which give rise to spermatozoa-forming cells, and others, perhaps all the remainder, break up to form the fluid portion of the secretion.¹ In the epididymis (Fig. 4), which is relatively smaller than in the boy, the tubules of the globus major are fully developed, and have a large lumen filled with the seminal secretion, which contains, during life, active spermatozoa. Each tubule consists of a thick wall of unstriated muscular fibres and is lined by a single layer of tall columnar cells with fine long cilia at their free margins. In the adult, so far as can be judged from their structure, the seminal tubules are more or less constantly producing the seminal secretion, which is made up of spermatozoa derived from some of the daughter cells already mentioned, and of a special secretion formed in all probability from the dissolution of those daughter cells that do not give rise to the formation of the special and most power-giving cells in the animal kingdom—the spermatozoa. Thus, in the testes of the adult the seminal tubules differ from those in the child in the presence of these sperm and secretion producing cells, as well as in the presence of a central lumen; and the tubules of the epididymis (upper end) differ in being lined by tall columnar cells bearing long cilia and in each enclosing a lumen of considerable size filled with seminal secretion.

An interesting subject—namely, the mechanism by means of which the seminal secretion is conveyed from the seminal tubules to the epididymis—may well be referred to here. The seminal tubules have, as is well known, no sheaths of muscular tissue to exercise a compressing influence upon them and so expel their contents, as is the case with the tubules of most other glands—those of the prostate, for example. Moreover, the testicle itself has only a very imperfect covering of striped muscle in the form of the cremaster, which is a suspender rather than a compressor of the body of the testis. Accordingly, in the absence of any such muscular mechanism, either around the individual seminal tubules or around the whole gland, we are left to assume that the secretion is forced out of the seminal tubules by the *vis a tergo* pressure under which it is produced, and that as new secretion is formed the older material is forced along the tubules into the channels of the rete, thence into the vasa efferentia, and ultimately into the tubules of the upper end of the epididymis. These last have muscular walls which by their contraction must drive the seminal secretion onwards; and, besides, these tubules are lined by ciliated cells which are presumably for the purpose of driving the secretion onwards.

3. *In the aged.*—The time at which the testes cease to produce their special secretion—the spermatozoa—and the person loses his reproductive powers varies within a wide range. In some men between the ages of seventy and eighty years the seminal tubules may be found active—that is, showing spermatozoa and the different stages requisite for their production; and it is known that men about or over eighty years of age may beget children. Some men suffer from spermatoceles at an advanced age, in whom the production of spermatozoa must be still going on, for in the fluid removed from such spermatoceles during life there are usually numerous active and vigorous sperm cells lashing their tails and moving swiftly from place to place. On the other hand, the testes may, independently of disease, cease to produce spermatozoa at as early an age as fifty, and may undergo at that time the structural changes which I have elsewhere more fully described as characteristic of the natural involution of this organ.² I may here simply state that in the testicles of the aged two distinct stages may be recognised in the process of involution or decay to which they are liable. In the *first* the epithelium of the seminal tubules, and also that of the tubules of the globus major of the epididymis, undergo more or less complete fatty degeneration and partly disappear, and the tunica propria of the tubules of the testicle

FIG. 3.



Asymmetrical testes in a man aged forty-four years.
A, Right. B, Left.

structure, the left was stunted in its growth and the right overgrown.

The seminal tubules, which in the adult are large and much convoluted, are composed of a thin tunica propria lined by the seminal cells. The tunica propria usually consists of a single layer of flattened connective-tissue cells, and is, therefore, less obvious than the corresponding structure in the seminal tubules of the boy's testis. Immediately within this is a continuous layer of small cubical cells, which are the parents of all the others. The next layer consists of two or three strata of large polygonal-shaped cells with large nuclei, which are usually found in one or other of the stages in the process of division. More centrally still—that is, nearest to the lumen—are two kinds of cells not usually arranged in definite strata: the one in which young spermatozoa radially disposed are found, and the other in which the nuclei are broken up into fragments, probably preliminary to their escape into the lumen after the dissolution of the protoplasm of their containing cells. These nuclear subdivisions do not, so far as I have observed, undergo any further change so as to develop into spermatozoa. Thus, the central cells in an adult active

FIG. 4.



Section of the tubules of the epididymis of an adult. $\times 350$.

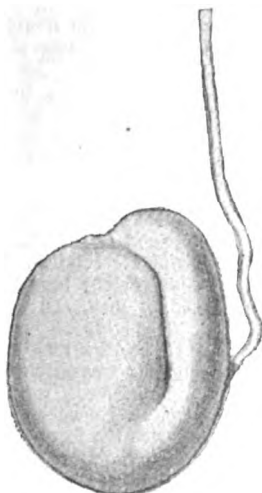
seminal tubule are of two kinds—viz. the one which gives rise to the young spermatozoa, and the other which after subdivision of its nucleus undergoes dissolution and probably contributes the greater part of the fluid portion of the seminal secretion before the latter leaves the seminal tubules. The central lumen of the tubule is occupied by fully formed spermatozoa, some fluid secretion, and some degenerated cells

¹ This has been to some extent worked out by Frazer. See Quain's Anatomy, vol. II., ninth edition, p. 689.

² Journal of Anatomy and Physiology, vol. xxvii., p. 474.

becomes somewhat thickened, but the intervening intertubular connective tissue remains practically unaltered. In the epididymis the muscular wall of the tubule is replaced by fibrous connective tissue, and the intertubular connective tissue is increased, dense and fibrous. In the other, or second, stage the seminal tubules are much reduced in size, the epithelium having in great part disappeared, leaving only in many instances a single layer of long, tapering, columnar cells, lining and filling the tubule, the central spermatozoa-producing cells having completely disappeared, while the tunica propria is greatly thickened from proliferation of its own connective-tissue cells and the formation of a fibrous matrix. The intertubular connective tissue is in this second stage relatively increased owing perhaps to the diminution in the size of the seminal tubules; but it still remains of loose texture, and contains, as in the normal state, many connective-tissue cells. The epididymis shows no other changes than those incidental to the first stage. Besides the above there is a third change, which is more

FIG. 5.



Left testis of a man aged seventy-six years. Natural size.

partial, and much resembles the result of the inflammatory process. It is usually observed in the small or shrunken testicles of old men and affects both organs. In the altered patches the seminal tubules, in the majority of instances, are completely transformed into fibrous rods or cords; but in some there still remain in the central fissure that represents the original lumen traces of epithelial cells derived from the degenerated cells of the tubes. The intertubular connective tissue is increased in amount and converted into a dense fibrous variety. It will be observed that in the senile testicle the tubules do not seem to become dilated or to form cysts, as is commonly the case in the prostate and some other glands. Thus the testicle passes through certain phases in its life-history. It acquires its full size and full function at the time of puberty, maintains this for a long period of years—it may be up to from seventy to eighty years of age,—and then declines or undergoes natural involution or decay, the period at which decay sets in varying in different persons.

Briefly, we may summarise the different phases in the life-history of the testis thus. 1. In the boy the seminal tubules are composed of solid rods of epithelial cells, supported by a relatively large amount of cellular connective tissue sufficient to give firmness to the structure of the gland. 2. In the adult the seminal tubules are much larger, are actively producing spermatozoa, and have relatively very little loose areolar tissue supporting them, the tubules being in consequence easily disentangled from one another. 3. In the aged, when involution has taken place, the seminal tubules are much reduced in size, the inner epithelial cells having, from fatty degeneration and subsequent disintegration, entirely disappeared, leaving only the peripheral layer of cells, which are often liable to elongate and to become fibrillated in their long axis. The intertubular connective tissue is relatively increased, and the tunica propria of the tubules is usually thickened. Similar changes take place in the tubules of the upper end, globus major, of the epididymis.

These changes agree, in so far as the thickening of the walls of the tubules and of the intertubular connective tissue is concerned, with the changes which the mammary and other glands pass through when their function ceases, but, as I have just stated, the tubules do not become dilated or cystic.

THE EFFECT OF CELIBACY UPON THE TESTIS.

The effect of long celibacy upon the spermatozoa-producing power of the testis is one of considerable interest, and one upon which the medical man is not infrequently consulted. Under these circumstances the organs are usually smaller and softer than they are in a married man of the same age; and it would appear that the sexual desire is under such circumstances commonly in abeyance. So far as I am aware, it has never been determined microscopically to what extent, if any, the structure of the seminal tubules suffers from long celibacy. The bodies of the testes commonly become reduced in size, soft, and flabby, yet we know that under the natural stimulus they in a comparatively short period of time regain their full size and full function, with the production of spermatozoa. It may, therefore, be assumed that atrophy does not occur, but merely that the organ becomes slightly reduced in size, the capability of the seminal cells of the tubules of the testis to multiply and to produce spermatozoa merely remaining in abeyance until the sexual feelings are aroused and the sexual glands thereby stimulated.

THE INFLUENCE THE TESTICLES EXERT UPON THE GROWTH AND DEVELOPMENT OF THE ACCESSORY SEXUAL GLANDS.

The influence the testes exercise upon the accessory sexual glands (the prostate, vesiculæ seminales, and Cowper's glands) may be inferred from those cases in which the testes (both) were removed in early life. There are many of the domesticated animals in which this operation is performed with commercial advantage, and in some countries the same is done in man in order to produce the eunuch; indeed, among a certain sect of people in South-east Russia removal of the testes late or early in life is a practice religiously observed and enforced. The prostate gland is essentially glandular in structure, and the muscular tissue which is abundant in it is apparently for the purpose of expelling the secretion from the tubules into the ducts and so into the prostatic dilatation of the urethra. In the full-grown eunuch the prostate gland is small, atrophied, and fibrous. The glandular tubules, having never fully developed, are represented only by branching fissures, which are obviously the representatives of the ducts, and are lined by a single layer of flattened cells. The intervening or intertubular connective tissue is relatively increased in amount, and consists almost entirely of fibrous connective tissue, with hardly any of those unstriped muscular fibres which are so abundant and form so large a proportion of the intertubular connective tissue in the normal, fully developed gland.³ The vesiculæ seminales are small and their sacculi are devoid of secretion. Cowper's glands are small, fibrous, and in much the same state as the prostate gland. The penis is small, and the sheet of striped muscle around the intrapelvic part of the genital portion⁴ of the urethra (including the external sphincter of Henle and the constrictor urethræ) is small, pale, and fibrous, instead of being thick, well-formed, reddish-striped muscle. The special muscles of the penis, and with them the accelerator urinae, are also small and ill developed. The same influence is exerted by the absence of testes in other animals—e.g., in the dog, in the cat, in the horse, in the bullock, and in the boar. In the last animal the prostatic and Cowperian glands, together with the striped muscle of the urethra, are so pronounced in the entire male and so diminutive in the castrated pig that the contrast between them is very striking. In the entire animal, indeed, these glands are so prominent, and in the natural state so enormously developed, that they deserve special notice. The prostate is bilobed and lies on the sides and behind the urethra. Each lobe is composed of numerous

³ With regard to the enlarged prostate in old men, removal of the testes, whether they be at the time of their removal actively engaged in the production of spermatozoa or in one of the stages of involution already referred to, produces a similar effect—namely, atrophic changes in the gland tubules and in the intertubular connective tissue, which soon take place. The gland steadily diminishes until it becomes reduced to a small size. For the early changes in the enlarged prostate after castration see a case reported by me in the *British Medical Journal*, March 9th, 1895.

⁴ By the genital portion of the urethra I mean that portion which extends from the opening of the vasa deferentia forwards to the end of the penis. The reasons for this nomenclature are given in a paper entitled "Observations on the Urinary Bladder and Urethra" (*Journal of Anatomy and Physiology*, vol. xxv., p. 535, 1891).

small glandular lobules held together by loose areolar connective tissue, which in the form of a thin sheet surrounds and thus binds together the different lobules making up each lobe, and the gland is soft and granular. Its ducts pass into the hinder, or dorsal, wall of the urethra. It is composed mainly of vesicles, some of which are quite small and hardly visible to the naked eye, others being large and one-sixth of an inch in diameter; and they are filled with a thin, slightly turbid mucous secretion. Each vesicle is lined by a single layer of cubical or subcolumnar epithelial cells. The vesicles are embedded in a thin layer of tissue, mainly composed of unstripped muscular fibres, and traversed by blood-vessels, lymphatics, and nerves. Cowper's glands also are very large, each measuring four and a half inches in length, and at the lower and larger end one and a quarter inches in thickness. They are firm, elongated, three-sided pyramids, lying one on either side of the urethra, and having over the hinder part of their outer surface, and all over the dorsal, or posterior, surface, a sheet of reddish-striped muscle with the fibres running from behind outwards and forwards on to the dorsum. In the middle of each is a large dilated branching duct into which smaller ones open. The smaller ducts commence in the glandular substance proper, which is subdivided by thin fibrous partitions into small compartments. The main duct narrows as it passes out at the posterior extremity of the gland, rendering it probable that the main duct, and also the smaller ducts, act as reservoirs for collecting and retaining the secretion of the gland, which is thick and viscid. The ultimate gland lobules are composed of numerous small vesicles lined by a single layer of columnar cells lying on a basement membrane which consists of a single layer of flattened connective-tissue cells. The columnar cells have small nuclei near their attached ends, and their protoplasm is clear and almost transparent. The vesicles are separated from one another by the minimum amount of connective tissue without unstripped muscle fibres in it. Cowper's gland thus differs from the prostate in having no unstripped muscle in its substance and in having a thick sheet of striped muscle partially covering the gland on its outer surface, which serves the purpose of expressing its secretion. The sheet of striped muscle around the intrapelvic part of the genital portion of the urethra is thick, of red colour, and well formed. The muscular fibres are of full size, and they present the usual structure of normal striped muscular fibres.

In a full-grown pig, which when a few days old was deprived of the testes, the condition of the parts presents a striking contrast. The prostate is represented by two small, flat, bean-like masses, which are firm and composed of small compact lobules held together by means of loose areolar tissue. Each lobe is one inch long, and one-third to one-fourth of an inch broad. Each lobe is composed of a number of tubules with thick walls, consisting in the main of fibrous connective tissue with a few unstripped muscular fibres, and lined by a single layer of subcolumnar cells. In many of the tubules there is a small lumen, but in others the interior is filled with cells. The tubules in a lobe are connected together by somewhat dense fibrous connective tissue, though the lobules themselves are connected only by a small amount of loose areolar connective tissue. Cowper's glands are small elongated pyramids. They measure two inches in length and one-fourth of an inch in thickness at the lower and larger end. The striped muscle on their outer surface is correspondingly small. They are mainly composed of ducts which are filled with a mucous secretion. The peripheral part of the gland is composed of numerous closely packed vesicles which have hardly any lumen and are lined by a single layer of subcolumnar cells with clear protoplasm. The sheath of striped muscle around the intrapelvic portion of the urethra is thin and fibrous, and the muscular substance is pale. The individual muscular fibres are of small size and about half the size of those in the same muscle in the boar. The contrast between the accessory sexual glands in the boar and the same glands in a pig castrated when young clearly shows that the testes exert an all-important influence upon the growth and development of the accessory sexual glands, and that the full development of the striped muscle around the urethra is dependent upon the existence and full development of the testes.

THE INFLUENCE THE TESTES EXERT UPON THE GROWTH AND DEVELOPMENT OF THE BODY AND THE MIND.

Not only do the testes—the dominating sexual glands—exert a marked influence, as has been shown above, upon the

growth and development of the accessory sexual glands, and upon the growth of the penis and the striped muscle around the urethra, but they also exert an important influence, as is well known, upon the growth and development of the body, and doubtless upon the mind. If a boy when young be deprived of his testes—castrated—the developmental changes that go on to form the characteristic features of man do not take place, and, as he is sexless, characters that are more or less intermediate between those of man and those of woman develop; indeed, such a person, commonly known as a eunuch, acquires characters that are more akin to those of the female than those of the male. The female likewise, we know, when deprived of ovaries acquires some of the characteristics of the male. John Hunter noticed the development in the hen pheasant of fine and brilliant plumes after disease involving and destroying both ovaries. The eunuch is usually large, fat, and flabby, with scanty hair on the face. His pelvis is broader and his shoulders are narrower than those of the entire man; his features simulate those of the female, but are not so well cut or so delicately shaped, being, like the rest of the frame, coarser. His voice remains like that of a boy—that is, in the high register—though the larynx enlarges somewhat, and the vocal cords increase in length. Eunuchs are in great requisition in the choirs of some churches for their voices, which combine the sweetness of the soprano and the richness of the tenor notes. Precisely the same changes take place during puberty in persons in whom the testes are diminutive and their special structure is wanting. Such persons I have termed "eunuchoid," because they resemble eunuchs in all particulars save and except that the testes have not been removed, but remain in a diminutive or abortive condition. The effect of the removal of the testes in early life upon the development of the mind at puberty is a subject which is scarcely ripe for solution. What is written about eunuchs is unreliable, chiefly because they as a class have always been despised by men, and whatever has been said of them has been too highly coloured by prejudice. Many of them have attained to high rank and position and have shown great capacity for transacting business of all kinds. One of their number, Narses, was among the first generals of the Roman Empire. He not only possessed great power over his soldiers and was the foremost in the practice of war tactics, but was also highly esteemed and respectfully feared by them. Another celebrated eunuch was Eusebius, who possessed, in addition to other powers, that mental quality which eunuchs have always been noted as developing and exercising in the courts of eastern countries—namely, that necessary for the purposes of intrigue. Other eunuchs who have taken a prominent position in the world's affairs might be mentioned. Further information upon this subject is still wanting, for though we know in what respects a eunuch resembles the woman and differs from the man physically, yet we do not know to what extent the mental characters correspond and resemble those of women and differ from those of man. Additional and critical observations, indeed, are still needed for the elucidation of this not uninteresting problem. I need scarcely allude to the difference between the gelding and the entire horse, and between the bullock and the bull, to indicate the effect of removal of the testes upon the body. In some animals, as the cat, these differences are not so marked.

THE EFFECT OF REMOVAL OF THE TESTES IN MEN AND IN FULLY GROWN ANIMALS.

Removal of the testes in an adult and in fully grown animals produces in a comparatively short time (within three months) atrophic changes in the accessory sexual glands—the prostate, vesiculæ seminales, and Cowper's glands. These parts after a time acquire a structure that is similar in all respects to the structure of the same parts in a eunuch or in a eunuchoid person. In the latter the condition arises from arrested growth and development, whereas in the adult deprived of the testes it arises from atrophy and disappearance of existing structures. The result is the same in each, but the process differs. In adults deprived of their testes the body will have acquired the male characteristics, and in consequence the permanent skeletal parts will be but slightly, if at all, modified. Such persons, however, usually put on fat and get, in fact, into better condition. They often, also, become placid and content, though in some cases, as in the young man whose testes were removed by Sir Astley Cooper, extreme misery may ensue.

LECTURE II.

Delivered on March 27th.

RETAINED TESTES.

MR. VICE-PRESIDENT AND GENTLEMEN,—In the first lecture an account was given of the changes that the structure of the testis undergoes from early life to old age, and of the influence, in addition to producing spermatozoa, that this organ exercises upon the development and growth of the accessory sexual glands, and also upon the formation of the male sexual characteristics. To-day, after reviewing the position the testes occupy in different animals and in man, I propose to give an account of the structure of the testes when they fail to reach the end of their destined course, and to point out the function, if any, which the testes under such circumstances are capable of performing.

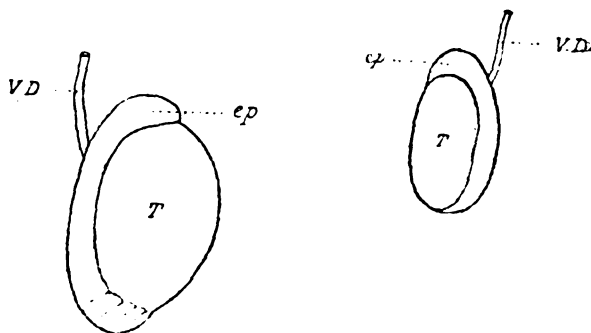
In the study of the comparative anatomy of the male generative organs in the mammalian group of vertebrates there is nothing, perhaps, more striking than the varied permanent positions that the testes occupy in the several classes or groups of animals. In the Monotremes, in the Elephant, and in the Cetacea the testes remain in the abdominal cavity just below the kidneys; in a few artiodactyls they are found in the groin; and in the remainder, which comprises the majority, they occupy the dependent scrotum, be it inguinal or perineal.⁶ Further, in the rutting animals, such as the hedgehog, the testes are found in the groin during the rutting season and are withdrawn into the abdominal cavity at the end of that period, where they remain until the return of the next period of rut. Thus, in these rutting animals the testes pass outwards into a sac of peritoneum—the tunica vaginalis—in the groin at the onset of the rutting season, and backwards into the abdominal cavity at its termination; and, as will be pointed out later, these organs only attain their full size and full function when they reach the furthest point in the course of their descent, dwindling and losing their spermatozoa-producing powers when withdrawn into the abdominal cavity. The testes, then, occupy—(1) in some animals a permanent position in the abdominal cavity below the kidneys; (2) in others they occupy at all times the scrotum, be it inguinal or perineal—the serous cavity may or may not then be shut off from the general peritoneal cavity; and (3) in others (rutting animals) they are in the scrotum during the period of sexual activity (rut) and in the abdomen during the period of sexual inactivity (non-rutting period). John Hunter, in his well-known monograph on the Position of the Testes in the Fetus, gives an account of the place of origin of the testis and describes the mechanism by which, in part at any rate, it is made to travel from its protected and concealed to a more unprotected and exposed position. He notes that the mechanism not infrequently fails, both in man and in the domesticated animals, to convey the organ to the termination of its destined course—the scrotum. The testes on one or both sides may fail to pass out of the abdominal cavity or to go beyond the external abdominal ring. The commonest situation in which an undescended testis is found is the external abdominal ring; it may pass into the perineum, thus missing the scrotum. More rarely it finds its way into the upper and front part of the thigh.⁷ It may also be found in the cavity of the pelvis. Failure in descent of the testis is more common on the right side than on the left, as was shown by Braman. When one testis only remains undescended—whether the organ be in the abdominal cavity, at the internal abdominal ring, or in the groin, the other being in its natural position and well developed—the case is of interest chiefly owing to the concurrence of congenital hernia in connexion with the undescended testis and the difficulty of successfully applying an apparatus for the proper closure of the canal and the prevention of the escape of intestine. If, however, the surgeon finds it impossible to adapt a well-fitting and comfortable truss,

then the question of operative measures may arise, and naturally the exact structure of the testis, its capabilities of producing spermatozoa, and the influence it may exercise upon the man become of importance. Especially is this the case in those instances, which are not very rare, of incomplete descent of the testes on both sides. When the testes are duly transmitted they acquire, as is well known, their full size and full function; but when they fail to reach their destination they do not attain either their full size or their full function—the production of spermatozoa. This may appear strange, seeing that the testes do in some animals attain their full size and full function when retained in the abdomen or in the groin. It is, however, the fact that, in any given animal in which complete “descent” of the testis normally takes place, the testis, in order to attain its full size and full function, must reach and occupy the terminal part of that destined course. In man, for example, unless the process of descent be fully accomplished the testes attain neither their full size nor their full functional powers. I am aware that this has been doubted, but my own observations quite confirm the view. Further, I have shown in a paper entitled “The Structural Changes in the Testicle of the Dog when it is Replaced within the Abdominal Cavity”⁸ that when the testis in the dog is by experiment replaced within the abdominal cavity it soon dwindles and loses its spermatozoa-producing powers, undergoing at the same time certain definite retrogressive changes in the structure of its seminal tubules.

The following is the only example of a retained testis in a boy that I have had the opportunity of examining. He was aged twelve years, and the right testis was just outside the external abdominal ring. There was apparently no gubernaculum extending to the scrotum, which was on that side small. The body of this, the right testis, measures 14 mm. in length by 8 mm. in breadth, whereas that of the left testis, which was in the scrotum, measures 15 mm. in length by 10 mm. in breadth. The right epididymis is small and apparently deficient in its lower part. The right vas deferens is short and slender, but otherwise natural. In this, as in similar cases, the tunica vaginalis is large, and the processus vaginalis is patent, opening freely above into the peritoneal cavity and below into the capacious tunica vaginalis. The seminal tubules are small and filled with small epithelial cells, as they are before puberty.

When the testicle of a puppy is replaced in the abdominal cavity it undergoes but little change, becoming only slightly less plump than its fellow. It continues to grow with the body until the onset of puberty, but its growth is not so great as that of the undisturbed organ in the scrotum. (See Fig. 6.) At puberty it does not pass through the

FIG. 6.



Testicles of a small fox-terrier. The right is of natural size and descended, the left of small size and undescended (in groin).

structural changes preliminary to the formation of the mature spermatozoa-producing tubules, as does its fellow, the descended organ; nor does it remain stationary, retaining its pre-puberty structure, but it undergoes a change that is peculiar to a retained or replaced testis, the seminal tubules becoming altered. They are of small size and have only a small central lumen, and are lined by a single layer of delicate columnar cells, which are derived from a modification of the single layer of the peripheral cubical cells

⁶ In all the animals, with the exception of man, and, I believe, the chimpanzee, the connexion between the peritoneum and the tunica vaginalis remains as a patent canal into which the vas deferens and the spermatic vessels and nerves more or less project, carrying the peritoneum before them. In man and in the chimpanzee—the only two vertebrates which assume the erect posture—this connexion is obliterated at or soon after birth.

⁷ In fox-terriers, which are now so highly bred in this country, failure in descent of the testis on one side is not at all uncommon, and it is well known that this condition not infrequently happens in horses. The entire horse with one testicle descended and the other retained within the abdominal cavity is so common as to be known as a “rigg.”

seen in the normal state before and after puberty, the central cells having disappeared. (See Fig. 7.)

Thus the seminal tubules in the testis replaced in the abdominal cavity, are incapable of producing spermatozoa. They undergo, indeed, a degenerative change, being no longer like the tubules which characterise the pre-puberty state of the testicle, inasmuch as they no longer

FIG. 7.



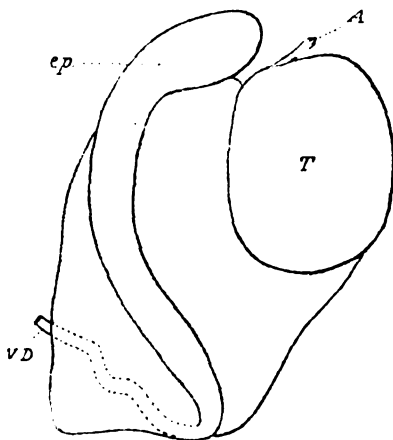
Section of seminal tubules from left undescended testis of dog.

remain solid, but the central cells disappear, while the peripheral ones are converted into a layer of columnar cells which taper, towards the lumen of the tubule.

UNDESCENDED TESTIS IN THE ADULT.

I come now to the account of the undescended testis in the adult man and in the full-grown dog. There is a specimen (1065) in the Pathological Museum of the University of Cambridge, the description of which in the catalogue is as follows: "Right testicle situated at the external ring. It [testis] is small, though plump, and the epididymis is disproportionately large. There is a sac of a congenital hernia,

FIG. 8.

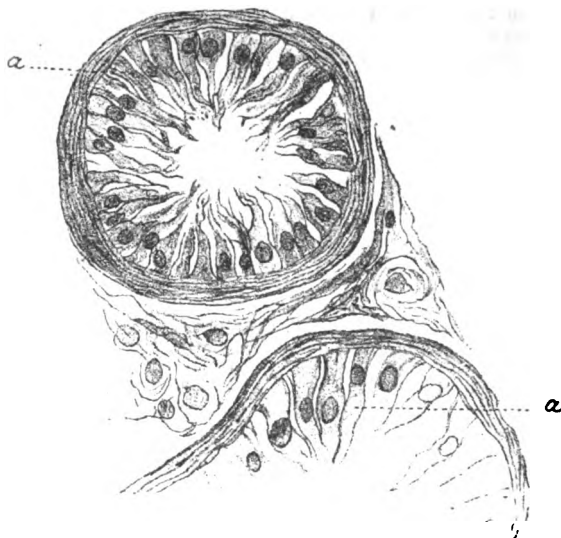


Right undescended (in groin) testis of a man, natural size. T, Body of testis. A, Appendix. ep, Epididymis. V.D., Vas deferens.

from which a blue glass rod has been passed into the tunica vaginalis. The left testicle is of natural size and occupied the natural position in the scrotum. On microscopical examination, after the specimen has been some months in spirit, large cells, like sperm cells, are found in the epididymis on both sides, but spermatozoa in the left only." The body of the right testis measures 3 cm. in length by 1.8 cm. in breadth, whereas that of the left measures 4.5 cm. in length by 3 cm. in breadth. A section of the right testis shows the seminal tubules to the eye, as in a normal organ, but they are more distinct, and, therefore, more easily seen, the intertubular connective tissue being relatively increased. Under the microscope the seminal tubules in this right testis are found to be reduced to at least one-half their natural size, and the intertubular connective tissue is relatively increased. This intertubular tissue is composed in the main of spindle-shaped connective tissue cells, with but little intervening fibrous matrix, and in it there are hardly any traces of the peculiar interstitial cells frequently found in the normal and full-grown organ. The seminal tubules are, in addition to being reduced in size,

altered in their structure. The tunica propria is much thickened and as seen in transverse section forms a sort of collar round the tubule. This tunic is composed, as in the natural condition, of two or more layers of flattened connective-tissue cells, with but little intervening fibrous matrix, the thickening seen in the specimen being mainly due to the formation, on the side next the lumen, of a layer of newly formed, almost transparent, fibrous tissue, with only one

FIG. 9.



Section of seminal tubules of an undescended testis in an adult man. x 350.

or two flattened cells embedded in the matrix. This layer of tissue I have often found, and always in the same position in other cases of atrophy. The epithelial cells in the seminal tubules are greatly reduced in number, and in the majority of instances the cells form only a single layer, which lines the thickened and altered tunic and which

FIG. 10.



Section of seminal tubules of an undescended testis in an adult man. Tunica propria much thickened and epithelium atrophied. x 350.

encloses a small central lumen. The cells differ from the normal, inasmuch as they are of columnar shape, with broad bases and narrow free extremities which project into the interior of the tubule and bound the central lumen when present. In each of these cells a round or ovoid nucleus may be seen occupying a position near the basal or attached

end of the cell, and in each the protoplasm is finely granular, with a tendency to fibrillation in the long axis of the cell. Here and there among these cells smaller cells, with irregular outlines and indistinct nuclei, may be seen. In a few of the tubules the epithelial cells are not so regularly arranged, but they are of irregular outline and are massed together, as it were, there being no central lumen. In none of these tubules is there any evidence of spermatogenesis in the epithelial cells, and there is no evidence of spermatozoa in the interior of the tubules. In short, the seminal tubules are small, their tunica propria is thickened, and the epithelium is reduced to a single layer of columnar-shaped cells. I have examined several others in which the structural condition of the tubules was similar to the above.

THE RETAINED TESTES IN THE DOG.

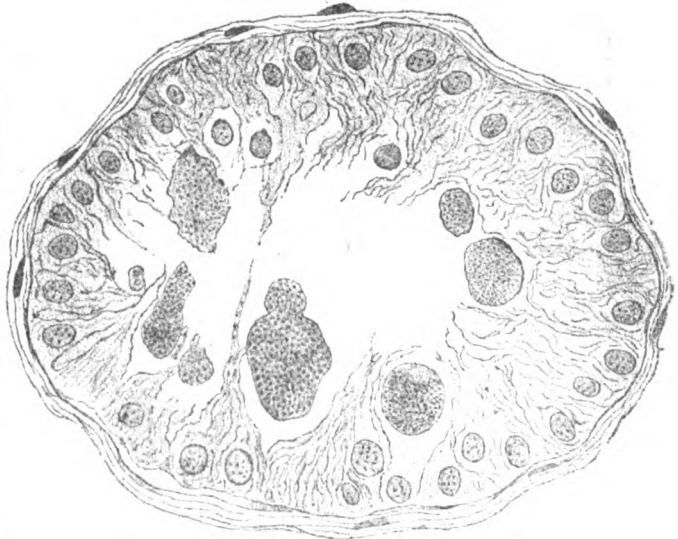
In a dog three to four years old the right testis was found in the groin just beyond the external abdominal ring. It was small and measured 15 mm. in length by 12 mm. in breadth. The left testis, which was in the scrotum, was of full size, and its body measured 20 mm. in length by 15 mm. in breadth. With the naked eye the only difference observable was that the tubules were more apart, and therefore more distinct in the retained organ. The seminal tubules are not more than one-half the size of those in the left or descended organ. In each tubule the tunica propria is somewhat thickened, the cells being columnar and tapering and completely filling the tubule. This difference from the normal is very marked.⁹ There is no evidence of spermatozoa or spermatogenesis.

Thus, both in man and in the dog the retained testes are of small size; they alike present a definite structure that is almost, though not quite, peculiar to them; and they are not in that state which is fitted for the production of spermatozoa. Hunter expressed the view that the retained testes were, *ab initio*, imperfect in their structure, and that it was owing to this imperfection that they failed to stimulate into activity the mechanism of descent, and thus they remained undescended. Curling stated that this was not the case in the majority of instances, and he considered that the testes when retained are in structure like the testes before the onset of puberty. That this view, however, is not correct is shown by a comparison between the structures of the retained and of the undeveloped organ. In the former, as we have seen, the tunic of the tubules is thick, and the epithelial consists, as a rule, of a single layer of columnar cells; whereas in the normal condition of the child the tubules consist of solid rods of small polygonal cells, and each is surrounded by a thin tunica propria. Godard, who is followed by Monod and Arthaud, maintains that the retained testes acquire their natural structure, but he specified that their secretion does not contain spermatozoa. A careful microscopical observation would, however, have shown him that, although to outward appearance the testes in the two cases (descended and retained) are similar, the intimate structure is very different. Follin and Goubaux, with whom I concur, found that both in man and the domesticated animals, not only were the undescended testes of small size, but the seminal tubules were atrophied and incapable of producing spermatozoa.

Further, if a properly descended testis of a dog be replaced in the abdominal cavity without injury to the structures of the cord it undergoes similar changes, as may be gathered from the result of the following experiment in a fox-terrier three months old. On May 22nd, 1891, the left testicle, which measured 15 mm. in length by 12 mm. in breadth, was replaced in the abdominal cavity. At the beginning of October in the same year the right testicle, which had not been interfered with, began to show signs of growth, and by the beginning of March it had reached its full size. The dog was killed on March 9th, 1892 when the right testicle measured 30 mm. in length by 20 mm. in breadth, this being the usual size for a grown-up dog of this breed. The left testicle was found attached to the peritoneum at the brim of the pelvis, and hanging down into that cavity; the vas deferens was coiled, but the spermatic vessels, though somewhat smaller than those of the opposite side, were normal and not in any way interfered with in their course. The body of the testicle measured 17 mm. in length and 13 mm. in breadth, and was small and roundish, but of natural appearance, though softer than its fellow. The epididymis was small though relatively larger

than the testis, as is usually the case in young animals. The tubules in the left testicle were only about one-half of the size natural in a full-grown organ. The tunica propria of each tubule was somewhat thickened, and the tubules were widely separated from one another. The epithelial lining of these tubules was composed of a single layer of columnar cells resting upon the inner surface of the tunica propria. These cells contained large, round, clear nuclei, which were found near the basal or attached ends of the cells; their protoplasm was delicately fibrillated in the long axis of the cells and was

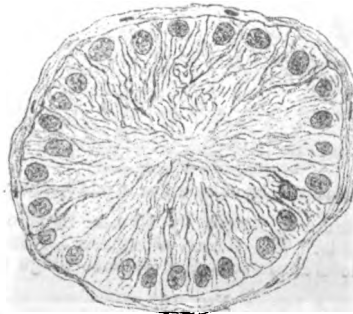
FIG. 11.



Section of seminal tubules of a testis of a full-grown dog replaced in the abdominal cavity thirty days before death. $\times 450$.

comparatively free from granules, as in Fig. 12. The cells themselves were prolonged to the centre of the tubule in fine converging processes composed of the delicately fibrillated protoplasm of the cells. There were no spermatozoa, or any trace of their formation, in any of the tubules. The tunica albuginea of the testicle, together with the septa and the intertubular connective tissue, were not changed beyond a relative increase due to a diminution in the size of the seminal tubules. In the epididymis the tubules were small and contracted, but they were all lined by the usual single layer of columnar epithelial cells bearing fine long cilia. In

FIG. 12.



Section of seminal tubules of a testis of a full-grown dog which was replaced in the abdominal cavity three months before death. $\times 350$.

the central lumen, which was correspondingly small, there were no spermatozoa, but in their place a few coarse, clear granules. The right testicle and epididymis were normal. In the seminal tubules there was abundant evidence of the formation of spermatozoa, the tunica propria being lined by cubical cells; the cells nearer the lumen, which were altogether absent in the left testicle, showed the division of their nuclei preparatory to the formation.

N 2

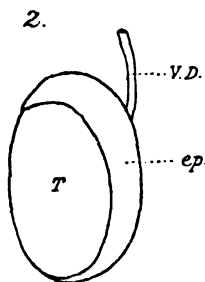
⁹ See, further, a paper by me in the Journal of Anatomy and Physiology, vol. xxvii., p. 483.

of spermatozoa; and in the tubules of the globus major of the epididymis there were numerous spermatozoa.

It appears, therefore, that:—1. The retained testis in a man and in the domesticated animals is of small size, and the seminal tubules, though smaller, are more distinct, owing to the disproportionate amount of intertubular connective tissue. 2. The retained testis in a boy is of smaller size and is softer than its fellow which is in the scrotum. When the normal testis of a puppy is replaced in the abdominal cavity it dwindles a little and becomes softer than natural, and fails to grow as its fellow left undisturbed in the scrotum. The walls of the tubules in the retained testes of a man are often thick from the formation of fibrous tissue on the inner surface of the tunica propria, and there are no traces of spermatogenesis. 3. The testes do not acquire their full (spermatozoa-producing) function unless they reach and remain at the point of descent furthest from their primary position. 4. The testicle of a full-grown animal, when replaced in the abdominal cavity soon dwindles to two-thirds or one-half its natural size and presents precisely the same structure as does the replaced testicle of a young animal.

It may be well to give briefly an account of the testicle during the non-rutting period in a rutting animal, and to compare with it the undescended testis of man. For this the

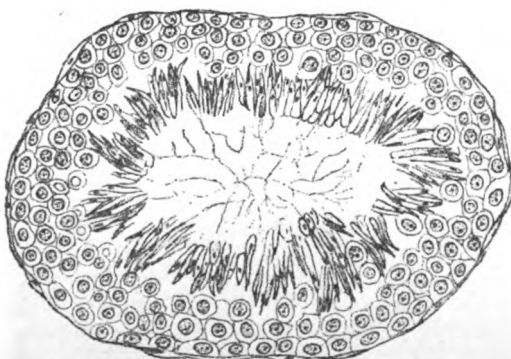
FIG. 13.



Testis of full-grown hedgehog in mid-summer. Natural size.

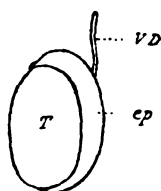
hedgehog, an animal that is procurable at any time, will serve our purpose. In *mid-summer*, when the rutting season is at its height, the testis of the hedgehog is of full size,

FIG. 14.

Section of seminal tubules of hedgehog in mid-summer. $\times 300$.

measuring 25 mm. in length by 15 mm. in thickness from before backwards. The tunica albuginea is tense, and the contained structures are soft and at once bulge through an

FIG. 15.

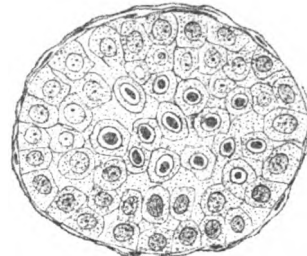


Testis of full-grown hedgehog in mid-winter. Natural size.

incision in it. The seminal tubules are large and the epithelial cells are actively engaged in the production of spermatozoa

and seminal secretion, which fill and occupy the somewhat large central lumen. In *mid-winter* the testes are in the abdomen and of hardly half the size they attain in summer, measuring 15 mm. in length by 10 mm. in thickness from behind forwards. Their structure is firmer and does not bulge on section of the tunica albuginea. The seminal tubules are much reduced in size and are composed of solid rods of epithelial cells arranged as follows. At the periphery there is a single and continuous layer of small cubical cells with

FIG. 16.

Section of seminal tubules of testis of hedgehog in mid-winter. $\times 300$

round nuclei and granular protoplasm. Within these are numerous irregular-shaped cells with round nuclei and a large amount of granular protoplasm. Many of these cells are vacuolated. In a few of the tubules there still remains a central lumen, but in none of them is there any trace of the formation of spermatozoa. Thus, the seminal tubules of the testes in *mid-winter* correspond on the whole with those of the undeveloped testes in man and in the dog. The seminal cells are quiescent and show no signs of the formation of spermatozoa.

THE EFFECT OF THE UNDESCENDED TESTES UPON THE GROWTH AND DEVELOPMENT OF THE BODY.

It is of much interest to find that the undescended testes, though incapable of producing their special secretion of spermatozoa, yet are capable of exerting their peculiar and important influence upon the growth and development of the body. When only one testis fails to "descend" to the termination of its destined course, the opposite organ having duly reached the scrotum, the person grows, as we often have the opportunity of observing, just as if both organs were in their natural position. The fully descended testicle produces spermatozoa in abundance and usually acquires a larger size than natural, due to what is called "compensatory hypertrophy." Thus, a person who has one testis natural and in the scrotum, whether the opposite be undescended or absent, is in possession of full virility. But when both testes fail in their descent they, as we have just seen, are incapable of producing spermatozoa, and in consequence the person is sterile. In spite, however, of the imperfection of the organs, such a person acquires all the external bodily characteristics of the male and is in all respects, except in the power of procreating, like an ordinary man. His shoulders are broad, his pelvis is narrow, his beard and moustache and hair on the pubes are well grown, his voice is deep and manly, and his penis is large and well developed, though the scrotum is small and empty; so that the external appearance, except that of the scrotum, would give no clue to the condition. I know of one such person who is well formed and who is capable of erection and emission, but without issue. It is evident, therefore, that the influence of the testis upon the growth and maintenance of the characteristics of the male is a property independent of their power of producing spermatozoa; and the remarkable fact is established that the spermatozoa-producing work of the testes, possibly even their potentiality for that purpose, is not necessary for the establishment of the influence which those organs exert upon the rest of the body. It is further of interest that, although the natural involution of the testis in the aged is unaccompanied by any corresponding change in the system, yet if the testes in an elderly person are removed the accessory sexual glands, at any rate, are found to undergo changes somewhat similar to those which are observed in eunuchs and in eunuchoid persons.

The function of the testes is, therefore, clearly twofold—viz. (1) to control and determine the development of the characteristics of the male sex, and (2) to produce spermatozoa for the reproduction of the species. These two functions are usually exercised together, but that the former may

be exercised when the latter fails seems to indicate that the production of spermatozoa is the more specialised property and attained with more difficulty. In what manner is this sexual effect of the testes upon the body produced? Is it through the medium of the nervous system as an ordinary reflex, or is it through the medium of some substance produced by the seminal cells (whether they form spermatozoa or not) and absorbed into the system, which by influencing the nerve centres or in some other way controls growth and nutrition? Brown-Séquard tried upon himself, when he was seventy-two years of age, the effect of the subcutaneous injection of a watery extract of the testes of a vigorous dog two or three years of age, and relates that after five daily injections he lost his feebleness, felt many years younger, and was capable of doing more work. The testicle extract has since been used in various diseased conditions, chiefly those associated with nervous debility, but with only temporary results. During the last few years a watery extract of the thyroid gland has been administered with signal success in myxœdema, in which disease the thyroid gland atrophies and ultimately disappears. The disease myxœdema arises from the want of the influence of some unknown substance, which the thyroid gland, as is supposed, elaborates, upon the nutrition centres of the central nervous system. It may be that the testis in like manner elaborates, irrespectively of its spermatic secretion, some chemical substance which by a similar influence not only controls the growth and development of the body at puberty but maintains the manly characters then acquired throughout life.

ABSTRACT OF

The Goulstonian Lectures

ON

THE SUPRA-RENAL BODIES.

Delivered before the Royal College of Physicians of London on March 19th, 21st, and 23rd, 1895.

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LECTURE III.¹

Delivered on March 23rd.

EXPLANATION OF ADDISON'S DISEASE: (1) NERVOUS THEORY; (2) THEORY OF SUPRA-RENAL INADEQUACY (a) AS EXCRETORY GLANDS, (b) AS SECRETORY GLANDS.—TREATMENT OF ADDISON'S DISEASE BY SUPRA-RENAL EXTRACT.

The lecturer recalled the early view as to the absence or unimportance of any function of the supra-renal bodies. This negative view was the physiological basis for the *nervous* theory, which explained the connexion between disease of the supra-renal bodies and the symptoms of Addison's disease by the secondary morbid lesions induced in the neighbouring semilunar ganglia and sympathetic. Thus the languor and collapse were due to the altered condition of the abdominal sympathetic, and the vomiting and pigmentation to the irritation of the sympathetic nerve trunks by the caseous supra-renal bodies. Arnaud and Alexais had accepted this idea, but had limited the nervous changes to the ganglia in the capsules of the adrenal bodies, and had thus been able to explain the fact that in cases of Addison's disease the solar plexus &c. were sometimes quite normal. A modification of the earlier nervous theory was that there need not be any change in the adrenal bodies as long as there was some lesion of the sympathetic. Changes in the supra-renal bodies had even been thought to be trophic in nature and due to injury of the sympathetic. The lecturer said the nervous theory was untenable, since (1) in some cases of Addison's disease the abdominal sympathetic was normal, and (2) Addison's disease was occasionally due to simple atrophy of the supra-renal bodies without any inflammatory change around them. Moreover, chronic irritation of the abdominal sympathetic due to other causes, though it might be associated with pigmentation, did not give rise to Addison's disease.

The theory of supra-renal inadequacy assumed functional activity on the part of these glands. Interference with this function led to an altered condition of the body fluids, in-

cluding the blood; hence this theory might be called the *chemical* theory in contradistinction to the *nervous* one.

BEARINGS OF MORBID ANATOMY ON THE THEORY OF SUPRA-RENAL INADEQUACY.

Destructive tuberculous lesions and atrophy of the supra-renal bodies were known to give rise to Addison's disease. But it might be objected: 1. That these bodies were sometimes extensively destroyed by tubercle or new growth without any symptoms of Addison's disease. In answer to this the lecturer said that in such cases the adrenal affection was usually part of advanced disease elsewhere which had killed the patient before the symptoms of Addison's disease had had time to develop. In addition it was possible that compensatory hypertrophy of accessory supra-renal bodies might occur, and that thus supra-renal inadequacy was obviated. 2. That in cases of Addison's disease the supra-renal bodies were found to contain a comparatively small amount of caseous tubercle, perhaps less than in other cases where no symptoms had been present. In reply to this it might be urged that this failure in compensation might be due to inherent want of vitality, concomitant atrophy, or to pressure exerted by the tuberculous material on the efferent vessels of the organ, thus rendering the organ functionless. 3. That in some cases of Addison's disease the adrenal bodies were healthy, but that the sympathetic was involved in adhesions or growths, such as lymphadenoma. It was possible that here again the vessels of the supra-renal bodies were so interfered with that the organs were practically placed outside the circulation. The facts of morbid anatomy were compatible with the theory of supra-renal inadequacy. The question whether Addison's disease was a toxic condition could not be definitely answered in the affirmative, but from a comparison with other chronic auto-intoxications, such as uræmia, pernicious anæmia, and perhaps myxœdema, it appeared probable that it was so. Extended research into the properties of the urine was urgently needed to determine whether the urine in Addison's disease was more toxic than in health. Oliver and Schäfer had found that the urine of Addison's disease was not more toxic than ordinary urine. This observation militated against the view that Addison's disease was a toxæmia. The toxic condition of the blood in animals after removal of the supra-renal bodies, and the analogy with other diseases, suggested a toxic origin. For the present the question should remain open. The symptoms of Addison's disease could be explained as due to toxic influences. The extreme debility might be due to a poison like curare, the gastro-intestinal phenomena to an irritant poison, and the pigmentation to the constant influence of a toxic body on the sympathetic, leading to an altered condition of the walls of the vessels of the dermis, and thus to increased transference of pigment to the epidermis.

FUNCTION OF THE SUPRA-RENAL BODIES.

The lecturer then discussed the nature of the function of the supra-renal bodies. Were they excretory or secretory organs? McMunn's theory that they picked up effete blood pigment and removed it with its accompanying proteids from the blood was criticised. No accumulation of pigment had been found in the blood in Addison's disease, and as the result of experimental removal no such increase had been proved. There was no increase in the urinary pigments in Addison's disease. McMunn had laid stress on the presence of a pigment—urohæmatoporphyrin—in the urine of Addison's disease, which he regarded as evidence that the supra-renal bodies were not discharging their pigment-metabolising function. This observer had, however, found urohæmatoporphyrin in the urine of enteric fever, measles, cirrhosis, &c., where the supra-renal bodies were not specially affected. This detracted considerably from the force of his argument. As a chemical body urohæmatoporphyrin did not exist; it had been shown to be a mixture of a larger quantity of hæmatoporphyrin and a smaller quantity of urobilin. Garrod had shown hæmatoporphyrin to be increased in tuberculous diseases; since Addison's disease was generally tuberculous, any increase of hæmatoporphyrin, if this did occur, would thus be accounted for. Moreover, hæmatoporphyrin was increased in amount in such various conditions as sulphonal poisoning, gout, phthisis, and pneumonia, and its presence had, therefore, no special significance. From these considerations it was highly improbable that the supra-renal bodies had any special action on effete blood pigment. The question whether toxic bodies were normally removed from the blood by the supra-renal bodies and rendered innocuous was then considered. If the

¹ Lectures I. and II. appeared in THE LANCET of March 23rd, 1895.

supra-renal bodies were crushed and left to be absorbed *in situ* no toxic symptoms resulted; therefore they did not contain the poison they might be supposed to excrete. The toxæmia produced by experimental removal of the supra-renal bodies had been shown to be counteracted by the injection of supra-renal extract. If these organs excreted poisons of the same nature as those accumulating on their removal and thus producing toxic symptoms, injection of the extract would only intensify the existing toxæmia. Again, Abelous and Langlois found that experimental removal of the organs gave rise to a toxic effect analogous to that of curare, while Schäfer and Oliver had shown that the physiological effect of the extract was not at all comparable to that of curare. Therefore the body or bodies giving rise to a toxic condition of the blood in "acapsulated" animals were not the same as the active principles of supra-renal extract. There was, therefore, strong evidence that the supra-renal bodies did not remove effete blood pigment or excrete and metabolise toxins, and that their function was not excretory.

THEORY THAT ADDISON'S DISEASE WAS DUE TO INADEQUATE SECRETION BY THE SUPRA-RENAL BODIES.

This alternative view was strongly supported by the observations of Abelous and Langlois and Schäfer and Oliver. The latter observers had found that, while the healthy supra-renal bodies of man yielded an active extract, these organs in Addison's disease provided an extract which was absolutely inert. What was the method of action of this internal secretion? 1. It might possibly antagonise poisons resulting from the general metabolism of the body in two ways: (a) By exerting a ferment-like action on and thus destroying it. If its active principle was a ferment, the activity of the extract would be destroyed by boiling. Moore had shown that, although long-continued boiling abolished the activity of the extract, boiling for some minutes did not have this effect. This view, therefore, was improbable. (b) By directly neutralising the toxic bodies in a manner analogous to the action of an alkali on an acid. Schäfer and Oliver's experiments showed that the extract had a definite physiological effect on healthy animals; hence the secretion did not act merely as a chemical antidote. To prove whether the extract had any action at all analogous to that of a chemical antidote experiments like that of Buchner with tetanus toxin and antitoxin should be made. 2. The secretion might act as a stimulus to the various tissues of the body. The researches of Schäfer and Oliver were in favour of this view. This tonic influence might act—(a) by regulating their nutrition and activity and preventing the formation of any toxic bodies; or (b) by increasing the resistance and defensive powers of the tissues, including the white blood-corpuscles, so that they were thus enabled to resist and to destroy the toxic bodies produced by the metabolism of the body. The latter hypothesis was attractive, but as yet there was not sufficient evidence to warrant any definite opinion.

In conclusion, Addison's disease was due to inadequate supra-renal secretion, but whether the deficiency in this internal secretion allowed a toxic condition of the blood to develop, or whether it led to a general atony and apathy, could not be settled at the present stage of our knowledge.

TREATMENT.

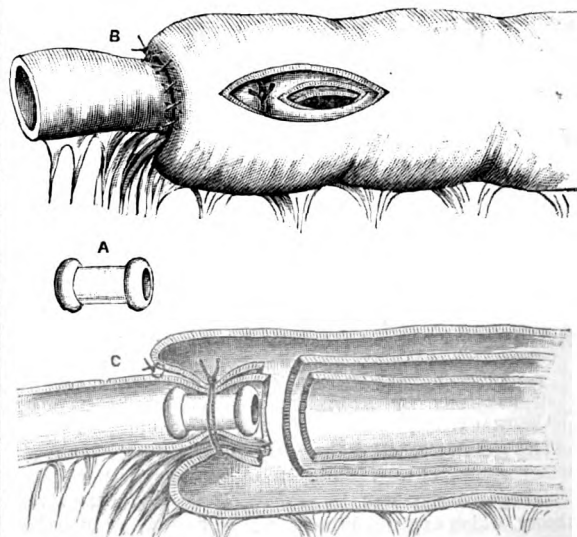
The treatment of Addison's disease by supra-renal extract was yet in its infancy. Dr. G. Oliver had recorded two cases which had reacted in a satisfactory way, in that the pigmentation diminished, nausea disappeared, and weight was gained. The lecturer had had a case of Addison's disease under treatment since June, 1894; pigmentation remained, but nausea and languor had been relieved. It was important to ascertain the appropriate dose of the extract, otherwise its therapeutic value might be discredited from the employment of inadequate quantities. Forty-four grains of the gland in the day were not an excessive dose, though this was about the weight of the medullary parts (the active portions) of both human supra-renals. Artificial gastric digestion did not impair the activity of the extract, so the administration by the mouth was physiologically correct.² Dr. G. Oliver had suggested the therapeutic use of supra-renal extract as a hæmoestatic in purpura, hæmophilia, &c., and in exophthalmic goitre, cyclic albuminuria, diabetes, and in the conditions of vaso-motorial paresis associated with the menopause.

² Schäfer and Oliver: Proceedings of the Physiological Society, March 16th, 1895.

AN OPERATION SUGGESTED FOR SOME CASES OF INTUSSUSCEPTION.

By F. T. PAUL, F.R.C.S. ENG.,
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WHEN the abdomen is opened for intestinal obstruction and an irreducible intussusception is discovered to be the source of the mischief some form of enterotomy or enterectomy is absolutely necessary. It is too often urged that some specific operation is the only right and proper means to adopt under the circumstances; but experience very soon teaches that there is no kind of intestinal obstruction for the relief of which there is only one best method. The varying circumstances of each case should be met by various procedures, and the surgeon should be prepared to meet the many unlooked-for difficulties which appear in almost every laparotomy undertaken for this condition. Cases of acute intussusception in children are a little less fatal under medical treatment than those in which the obstruction is due to other causes. For this reason the majority of them come under the surgeon's hands at a very late stage of the case, and it is unfortunately the rule rather than the exception to find them in a state of collapse and totally unfit for an extensive resection of bowel. In such cases it is simply throwing away the last chance of life to attempt anything more than the establishment of an artificial anus or a faecal fistula. Again, there are other patients in whom the constitutional condition



A, Light metal tube with expanded, rounded ends. B, Incisions in the bowel, and ligature *in situ*. C, Diagrammatic section of invaginated bowel, showing position of tube.

may be better whilst the intussusception itself is hopelessly irremediable from gangrene or some other cause. In such enterectomy is imperative, and one has to decide after removing the damaged bowel whether the patient will have the better chance by immediately approximating the ends or by bringing them out of the abdomen and approximating later. When collapse and gangrene are both present—and they are generally associated—few, I think, would hesitate in deciding upon the latter course; but when the patient is in fair condition these are suitable cases for immediate approximation, and it only remains to determine which method best fits the circumstances present. Fortunately, in many patients the condition is less grave, and in these an operation on the lines first suggested by Mr. A. E. Barker¹ seems to be the best. The object of this short communication is to propose a modification of his method which may possibly prove serviceable in some cases. When the invagination is short and easily brought out through the incision in the outermost or receiving layer of the intussusception Mr. Barker's operation perhaps leaves nothing to be desired; but when the invagination is too extensive for

¹ THE LANCET, Jan. 9th, 1892.

this, and has to be divided *in situ*, the operation certainly has dangers. There are many large vessels in the invaginated mesentery which, being at the bottom of the wound, are difficult to get at, and cannot be readily controlled by sutures as in the slighter cases; also the tendency which the large stump of mesentery has to retract when the weight is removed is so great that the preliminary sutures are liable to tear out, thus releasing the invagination and rendering it necessary to approximate the ends by another method or bring them out of the abdomen. I therefore propose that the surgeon should be armed with a short metal tube made of aluminium and shaped somewhat as in the engraving (Fig. A). The preliminary sutures—very few of which are required—connecting the intussusceptum with the intussusciens and the first incisions are made as recommended by Mr. Barker; then the returning and entering layers are also respectively incised (see Fig. B), and the tube grasped with forceps is pushed into the position shown in Fig. C. A stout silk ligature is now made to surround the intussusceptum just above the incisions in it, and is tightly tied. Finally, the intussusceptum is cut off below the ligature and withdrawn, and the wound in the outer layer is closed in the usual way.

I have not yet had the opportunity of trying this plan, and as one may have to wait indefinitely for a suitable case I make the suggestion public, in order that if any other surgeon is so disposed he may give it a trial. The end aimed at is exactly the same as that attained by other methods; but it seems to me that there are certain advantages, of which the following, if real, are important: (1) a saving of time, as the ligature replaces many sutures and also closes the bloodvessels before they are divided; (2) the operation is practically bloodless; and (3) disengagement of the invaginated stump is impossible, as it is firmly held by the ligature for at least three days.

Rodney-street, Liverpool.

A CASE OF RABIES.

By B. KEMP, M.R.C.S. ENG., &C.,

MEDICAL OFFICER OF HEALTH, HORBURY.

A BOY ten years of age was bitten in the lower lip by a strange dog on Saturday, Nov. 17th, 1894. He at once told his father. The latter and some other men gave chase to the animal, but it got away, and has not been seen or heard of since. The father said it was a black-and-tan sheep dog. He thought it was rather lame and ran in a staggering manner, like a person half drunk. The boy was brought to my surgery about an hour after being bitten. The lower lip was torn quite through, leaving a small gaping wound. I washed and dressed it with boracic acid and inserted one suture, and ordered the wound to be dusted occasionally with boracic acid powder. I saw the patient again on the Monday and Thursday following the day of the accident; the wound was quite healed, and the boy appeared well. I may say that it was not known that the dog was rabid. The patient's mother told me that he went to school after staying at home for a week, and did so until Dec. 8th. During this time he had not eaten so well as usual, and had become thinner, otherwise he appeared to be well. On Dec. 9th he first complained of not being able to swallow food or liquids so well as usual, and of thirst. On Dec. 10th he could not swallow anything, the thirst was worse, and he was now thought to be suffering from cold. He was ordered to have warm applications applied to the throat and to be kept warm in the house. He said his throat was not sore, but felt as if there was something lower down which prevented him from swallowing anything. He slept fairly well in the night. On Dec. 11th the symptoms were the same; a dose of castor-oil was given him by his mother; he swallowed a portion of it with great difficulty and was put to bed at 7 P.M. The boy did not sleep and awakened his mother about 3 A.M. on Dec. 12th by calling out. He was now very restless, looked wild, said he was going to die, and was unable to swallow anything. Soon after 6 A.M. he had the first real spasm, which alarmed his parents; he tried to jump out of bed whilst in it. His father came for me, and on hearing his account I suspected the nature of the illness and went at once. On arriving about 7 A.M. I found the boy in great distress, with wild staring eyes, foaming at the mouth, constantly spitting, and the muscles of the neck rigid. I gave him a teaspoonful of a strong

solution of chloral hydrate, most of which he got down, and it at once brought on spasm of the muscle of the pharynx and larynx, also of the thoracic muscles; the eyes were almost protruding; there were lividity of the face and difficulty of breathing. Two men had the greatest difficulty to prevent him from springing out of bed. He complained of a strange sensation in the right arm; the fingers of the right hand were rigid, and he wanted some one to hold the hand. He was quite sensible and talkative, said he was going to die, and soon afterwards expressed a wish to see his clergyman, who came. On seeing the serious nature of the case I recommended the patient's immediate removal to the hospital at Wakefield, sent for a cab, and along with his father took him there. Soon after my arrival, and before removing him, he became much calmer and had no more convulsions until after his arrival at the hospital. On the way to the hospital the muscles of the neck were rigid and viscid, and frothy mucus was constantly working out of the mouth. He talked all the way sensibly, but seemed now afraid of our doing anything for him, such as covering him up in the blankets, and would do it for himself. He continued in this state until after arriving at the hospital, a journey of three miles, when he was at once put to bed. The convulsions now came on rapidly. The surgeon (Mr. Walker) and the house surgeons quite agreed with me as to the nature of the case. A strong hypodermic injection of morphia and strychnia was given, also chloral by the rectum. This kept him quiet for about an hour, and he slept. This I was told by the house surgeon. After an hour the spasms came on more frequently, and he died in one about 4 P.M. the same day, nothing appearing to have any effect upon them. He was conscious to the last.

Horbury, Wakefield.

DEGREES OF KNEE-JERK.

By LEONARD J. KIDD, M.D. BRUX.

FOR the last two years or more I have been in the habit of recording the degrees of the knee-jerks by means of a scheme which was suggested to me in the following way:—I had often seen physicians mark a particular jerk as + or ++ with the purpose of conveying the meaning of exaggerated and greatly exaggerated respectively. These signs brought to my remembrance the well-known "Degrees of Intra-ocular Tension" of the late Sir W. Bowman. I thought one might frame a scheme of various degrees of knee-jerk by means of *plus* and *minus* symbols. It was clear to me that to be of any value, apart from that of saving time in clinical work, these signs must convey a definite meaning, so that any particular *plus* or *minus* jerk could be at once put into a certain category. I found that there were three distinct groups of excess of jerks and three of diminution, the last being the absent jerk if I may speak of a diminished jerk as being an absent jerk. These, together with the normal degree, make up seven degrees; for those who wish to follow literally the analogy of Bowman's notation an additional *plus* query and *minus* query can be added, but I think these are not needed.

After very many attempts the best classification I can suggest is as follows:—

K.J.n. = normal jerk—i.e., of normal quickness and of normal excursion of the leg and foot. Right jerk written as R.K.J.n.; left jerk as L.K.J.n.

K.J. + 1 = distinctly increased quickness and excursion, but not obtained by a blow above the patella. K.J. + 2 = still more lively and extensive, and obtained by supra-patellar blow. K.J. + 3 = as in K.J. + 2, but with addition of clonus of anterior thigh muscles; this is usually found, I think, only in cases where foot-clonus is also obtained.

K.J. - 1 = distinctly diminished quickness and excursion, but obtained without reinforcement—e.g., by Jendrassik's method. K.J. - 2 = still more sluggish, and obtained only with reinforcement. K.J. - 3 or 0 = absent, even on reinforcement and after many careful trials by all known methods.

I occasionally find that both jerks come within the same category, but one is more marked than in the other. This I have seen mostly in that very common class styled K.J. + 2. In such cases, if one jerk is about half way, as to quickness and excursion, between + 2 and + 3, but the other very nearly as quick as + 3 usually is, I call one + 2½ and the other + 2½. By this means a still more accurate result is obtained than by simply calling both + 2. The same can be

done, if necessary, with the *minus* degrees. I have recently seen a case of great obscurity (to me and to three other medical men who previously saw the patient) where I have marked: L.K.J. + 2½; R.K.J. + 2½. In this case there is in the left foot only a condition of spurious ankle-clonus. Even with the patient's boots off I have been unable to obtain true and decided clonus in the left foot. Now, the point of paramount importance in this case is to know whether this is one of organic disease. Should the L.K.J. advance to + 3 I shall consider it is almost certainly so. It is, I believe, generally considered by the best authorities that K.J. + 3 means organic disease in ordinary clinical work. Possibly it would be found in many cases of very marked supervenosity of the blood. It was obtained in Dr. Risien Russell's experiments on rabbits artificially asphyxiated¹ about two and a half minutes after the trachea was clamped. I think that K.J. - 2, and possibly K.J. - 1, may sometimes point to the approach of tabes or other diseases characterised by absent jerks in their fully developed stages. But in these two *minus* degrees we have to bear in mind the element of muscular rigidity on the part of the patient; stoutly built people frequently, and children sometimes, present jerks of sluggish response and difficult to obtain at the first stroke. Personally, I attach no diagnostic importance to the not uncommon flinching on the part of patients (these are generally, according to my experience, in that common class K.J. + 2), or to the patient's sensation of the jerk up the thighs and back. Some physicians, however, hold that these features point to "functional" disease as against organic; but I have seen them in cases of undoubted organic disease, and they are, of course, often absent in the functional cases. A jerk which comes into the class K.J. + 2, but which is obtained by a mere flick of the finger-nail, we should usually call + 2½. I think, as it shows very great myotatic irritability. I have used the above scheme myself for quite two years with considerable saving of time; anyone will see, I think, that any jerk can be easily, quickly, and without hesitation placed in one of these seven degrees. In testing the jerk I always now, after finding it present, strike the quadriceps just above the upper border of the patella. In this way I at once discover whether the case is one of great irritability of jerk; this applies especially to cases presenting merely an increased jerk. I use the ulnar border of the hand first, then a weighted stethoscope, then a tap with the two fingers as in percussion of the chest, and lastly a flick with the finger-nail. By these means I think we best estimate how far the jerk approximates in quickness and excursion to K.J. + 3. Doubtless some, and perhaps many, cases of K.J. + 1, + 2, - 1, and - 2 are cases of organic disease in either early or later stages, but about + 3 and 0 there will, I fancy, be little doubt. I believe that those who give this scheme a trial will soon find it a help, and the initial difficulty of acquiring any new formula is soon overcome by an accurate observer endowed with the invaluable faculty of attention. Should it be widely adopted, the poor over-burdened medical student may find comfort in the thought that we acquire knowledge more readily in the golden time of youth than in the "years that bring the philosophic mind." The ideal method of measuring the knee-jerks appears to me to consist in the use of an instrument, yet to be invented, somewhat on the lines of Mr. Priestley Smith's tonometer, that shall record: (1) the force of the blow which elicits the jerk, (2) the quickness of motor response, and (3) the extent of the excursion of the leg and foot. I have hitherto failed to devise a scheme for recording varying degrees of the other jerks, such as the wrist, triceps, and the jaw-jerk.

George-street, Hanover-square, W.

¹ Quoted by Dr. Hughlings Jackson in his *Neurological Fragments*, No. 5, in *THE LANCET* of Jan. 20th, 1894.

THE SUPPLY OF ANTITOXIN IN ORMSKIRK.

The Ormskirk Rural District Council at its last meeting resolved to supply diphtheria antitoxin serum and sterilised apparatus to all registered medical practitioners for use within the district free of charge. Arrangements have also been made for the bacteriological examination of samples of doubtful throat exudation, and Mr. Herbert Peck, the medical officer of health, has caused these unwonted facilities to be notified to the members of the profession in his district. It is gratifying to find a public administrative body so promptly taking such liberal and enlightened views of its functions.

THE MECHANICO-GYMNASTIC AND BALNEO-THERAPEUTIC TREATMENT OF CHRONIC CARDIAC DISORDERS.

By DR. GROEDEL.

THE physical treatment of chronic diseases of the heart has only recently assumed an important place in therapeutics. I therefore wish briefly to state my views of the general treatment of these diseases, based upon an unusually extensive practice of twenty years in Nauehm, and I shall describe what may be called the speciality of Nauehm—i.e., the balneo-therapeutic treatment, adding a few words about the gymnastic treatment and the so-called "Terrainkur" (walking uphill, &c.).

Although formerly treatment by baths was considered as essentially contraindicated for patients suffering from heart disease, a contrary opinion has been expressed by Professor Beneke¹ as early as the year 1859 in his first work on Nauehm, and still more forcibly in his second work, which appeared in 1861. Among those patients suffering from rheumatism who came under his treatment in Nauehm there were eight cases of organic heart disease, and he found that taking the warm brine baths was not only beneficial to their rheumatism, but to a certain degree also to the cardiac trouble. In 1870 Beneke wrote a larger work,² in which he explained his views more fully, and it was only after this that patients with heart disease, more especially in conjunction with rheumatism, came to Nauehm in great numbers. In a monograph³ which appeared in 1872 he recorded 101 cases, and he gave a detailed account of 55 of them. In 1875 he published another paper on the same subject in the *Berliner Klinische Wochenschrift*. In these works Beneke draws attention to four main points in the treatment of heart disease at Nauehm—viz., firstly, the removal of rheumatic tendencies whereby relapses of acute rheumatism, which would increase an existing cardiac lesion, are prevented; secondly, the effect of these baths being to promote absorption, he believes that, as they cure other effects of rheumatic inflammation, so they will also be beneficial to the cardiac valvular apparatus; thirdly, he found that the baths always had a soothing effect upon the heart's action even where there was no rheumatism; and consequently, fourthly, he very often found in old valvular disease a striking improvement in compensation, as well as in the general state of health, in cases where no other treatment had been of any service. He has thus the indisputable merit of having introduced a new kind of treatment into the therapeutics of chronic heart disease. A paper written by me⁴ described a very marked case and showed how, under certain circumstances, the thermal brine baths containing carbonic acid had the same effect as digitalis on heart diseases. This was the first announcement that the baths "increase the energy of the heart's action." It was followed by other papers⁵ which partly brought to light new facts concerning the effect of the baths of Nauehm upon the circulation of the blood, and partly confirmed by many observations what was already known. Thus the assertions made by Beneke that the baths always lessened the frequency of the pulse, and that the decrease lasted for some time after the baths had been taken, were proved to be correct. It was further observed that the blood pressure was increased as well as the power of respiration. From the beginning it was evident that to exclude any form of cardiac disease entirely was impossible, and although Beneke, as well as myself, formerly believed that arterio-sclerosis must be excluded from the treatment for theoretical reasons (increase of blood pressure), yet I can now state that the baths are beneficial in these cases also, for in the course of years I have treated in this

¹ From 1852 to his death in 1883 he was physician at Nauehm, and since 1856 he at the same time occupied the chair of Professor of General Pathology and Pathological Anatomy at the neighbouring University of Marburg.

² Zur Therapie des Gelenkrheumatismus und der ihm verbundenen Herzkrankheiten. Hirschwald, Berlin, 1872.

³ Berliner Klinische Wochenschrift, 1870, No. 22.
⁴ Berliner Klinische Wochenschrift, 1878, No. 10.
⁵ Groedel: Pneumatometrische Beobachtungen über den Einfluss verschiedener Bäder auf's Herz; Berliner Klinische Wochenschrift, 1880, No. 22. Aug. Schott: Die Wirkung der Bäder auf's Herz; Berliner Klinische Wochenschrift, 1880, No. 25. Groedel: Zur Behandlung Herzkranker; Berliner Klinische Wochenschrift, 1883, No. 25, &c.

way many patients suffering from advanced arterio-sclerosis without in one single instance having found any unpleasant result; on the contrary, the usual effect was a considerable improvement of the circulation and general state of health. Even for aortic aneurysm I can say the same thing, and in a lecture delivered at the Balneologists' Congress in Berlin¹ I described such a case combined with tachycardia paroxysmalis which was greatly benefited after several courses of the baths. Of course such patients are treated differently to those affected only with a nervous cardiac malady, or with a simple disorder of the cardiac valves.

The carbonic acid thermal brine baths tend to soothe and regulate the heart's action and to strengthen the cardiac muscle. A strictly physiological explanation of this effect is not possible, as it is, indeed, difficult to give a perfectly non-hypothetical explanation of the effect of any other bath treatment. It is supposed that, by stimulating the peripheral circulation, a certain influence on the cardiac action is obtained, and that at the beginning of the bath and as long as the impulse of the cold lasts an increase of the intra-cardiac pressure is procured by the contraction of the cutaneous vessels, with an incentive to increased activity of the cardiac muscle. This is soon followed by relief of the internal organs, especially the heart, owing to the dilatation of the cutaneous vessels caused by the carbonic acid, in spite of the cool temperature of the bath. If the contraction of the cutaneous vessels lasts too long, as is the case with the ordinary cold baths, an over-exertion of the heart would take place. The baths are at first prescribed with a temperature little lower than the normal heat of the body, and with such a small quantity of carbonic acid that it can only have a very slight effect on the heart and vessels. If the irritation of the cold has too great an effect, lasts too long, or is not counter-balanced by the carbonic acid (as shown by cyanosis, shortness of breath, or continued shivering), then the temperature of the bath must be raised and the amount of carbonic acid increased afterwards. When the patient can bear the carbonic acid well the temperature is again cautiously lowered. To obtain better nutrition and action of the cardiac muscle it is necessary to stimulate the heart to more powerful action, not continuously, but so as to alternate rest with exercise in a manner suitable to each individual case. As has been seen from the above explanations, the baths answer this purpose perfectly, and therefore it is not necessary to give fuller particulars as to how the cardiac muscle is at length revived and invigorated by the effects of a continued course of them. These different factors combine to produce the favourable result which is so often to be seen in the Nauheim treatment, and therefore the baths are adapted to all kinds of cardiac mischief that require an increase of the cardiac action; it is quite immaterial whether the illness arises from valvular defects or is the result of a diseased cardiac muscle or of atheromatous degeneration of the vessels, or even of generally abnormal nourishment, such as obesity. Great success has also been obtained in conditions which result from irregular innervation of the heart, especially in neurasthenia cordis.

I will now give a short description of the method of treatment. I begin with baths containing only a slight quantity of carbonic acid and salt, having a temperature of from 90° to 92° F., and lasting from five to ten minutes, according to the reaction produced; as time goes on the carbonic acid and salt are increased and the temperature is reduced (sometimes as low as 83° and even lower), the time being increased to fifteen or twenty minutes. At the beginning there is a pause every third or fourth day, but later at longer intervals. I often make the patients begin with weak baths, especially in cases of angina pectoris and aortic aneurysm. They must be warned against taking chill after the bath, as that would produce a contraction of the cutaneous vessels with shivering and oppression of the heart. Most of the patients are ordered from one to two hours' repose in bed after the bath, and it is only in some exceptional cases that I make them take a walk for from a quarter of an hour to half an hour before resting. In prescribing the bath treatment it must always be kept well in mind that a proper proportion of rest and exercise must be given to the heart, and, although at the beginning the former predominates, yet later the latter plays the chief part in the treatment.

Artificial thermal brine baths containing carbonic acid can be prepared in several ways. The proportion of salts contained in the Nauheim springs, which varies in

amount from 1 to 4 per cent., often being made still stronger with mother-lye, can be replaced by a corresponding quantity of kitchen salt and Nauheim spring salt or mother-lye. Carbonic acid can be produced in several ways, as with bicarbonate of sodium and muriatic acid, or with bicarbonate of sodium and bisulphate of sodium, &c. The carbonic acid in these baths escapes very quickly; those artificial baths made on the Lippert system are preferable, because in them the carbonic acid is better absorbed; yet even they are far from being so effective as the natural Nauheim bath, from which they differ considerably in many respects. The effervescent flowing baths, "Sprudelstrombäder," a peculiarity of Nauheim, in which the brine, unusually rich in carbonic acid, flows continually through the bath, have a powerfully stimulating effect on the general nervous system, which must operate as a tonic on all the nervous organs, including the innervation of the heart, in a much milder manner, though certainly not less powerfully than the cold water baths. Artificial carbonic acid baths, which were first recommended by Nauheim physicians, have yielded good results, but at Nauheim the natural baths can be graduated most exactly, and the bathing treatment—which was formerly limited to weak carbonic acid baths, and then only applied to a certain number of those patients suffering from heart diseases—has now been brought to such a state of perfection and exactness as is to be found in no other place. Besides those illnesses which are amenable to simple brine baths (scrofula, diseases of women, &c.), the carbonic acid thermal brine baths are especially indicated for affections of the peripheral and central nervous system, gout, and the different forms of rheumatism.

I now come to the other modes of treatment generally in use for disordered circulation in addition to the bath treatment. There can be no doubt that the effect of the baths in a watering place is in a great measure influenced by the continued stay in pure strengthening air and the avoidance of all excitement; it is also quite certain that in such places the patients are a great deal readier to follow the injunctions of the physician as to their whole manner of living, and more especially his directions for their diet, than they are at their homes. Particular attention is paid to dietetics in Nauheim. I am always when prescribing diet led by the special circumstances of each individual case, both as regards the choice of food and the use of alcoholic stimulants &c. It is well known that Oertel recommended a restricted use of fluids in cases of disordered circulation, whether due to obesity or any other cause; but shortly after the publication of Oertel's book I gave it as my opinion in a lecture² that this principle should not be carried too far.

It will not be out of place to give here a short account of the so-called "Terrainkur" (walking uphill &c.), which is recommended in the above-mentioned book of Oertel. But I must first refer to the use of gymnastics as an auxiliary means in the bath treatment at Nauheim. For many years gymnastics have been employed by physicians in Sweden for all circulatory disorders, and were eventually introduced into Nauheim. Gymnastics are divided, as is well known, into "active," "passive," and "resisting" gymnastics. It is the last of these that plays the principal part in the treatment of heart diseases. The gymnastic exercise is performed either by means of machines, or manually by persons especially trained for this purpose. The principle and aim of exercises are to stimulate the circulation in the muscles brought into action, whereby the cardiac muscle is reflexly induced to stronger and more abundant contractions, with a simultaneous relieving of the venous, and acceleration of the arterial, portion of the circulation. At first I only allow patients to exercise the upper extremities, and then proceed to some movements of the lower extremities and trunk, where all such movements are to be avoided as prevent free motion of the diaphragm or the wall of the thorax. Especial care should be taken that the patient does not make jerky movements, but slow and continuous ones, at the same time neither holding nor increasing the breathing. The exercise should not be made on a full stomach, and there should be frequent pauses to let the heart, which becomes somewhat agitated, calm down again. Whereas formerly manual gymnastics only were in use in Nauheim, we are now able to employ mechanical exercise, and from the experience that I have had I decidedly prefer

¹ Ueber nervöse Herzklopfen und sonstige auf Innervationsstörungen beruhende Herzaffecten; Berliner Klinische Wochenschrift and Deutsche Medicinalzeitung, 1890.

² Erfahrungen bei der Behandlung von Circulationsstörungen nach Oertel'scher Methode. Congress of Balneologists at Berlin, 1888.

the mechanical gymnastics to the manual. Still, there are some cases for which manual gymnastics are to be preferred, especially for persons who may only do little exercise at a time, several times daily, and with a limited amount of movements. That both kinds of gymnastics should be performed under careful medical superintendence is a matter of course.

The success of the "Terrainkur" is based mainly on the same principles as that of the gymnastics; yet there are also other factors that go to explain the beneficial effect, among which I attribute the greatest importance to its influence on respiration, and so I frequently prescribe pulmonary gymnastics alone as having a very advantageous effect on heart disease. Hill climbing, which was made known to us as a remedy by Stokes, and which under certain circumstances may strengthen a weak heart, was frequently prescribed by me before the publication of Oertel's work, though certainly more often after Oertel had explained the matter more methodically. I have, however, pointed out in the above-mentioned lecture the danger of generalising this method, and what I said at that time (1886) is now universally acknowledged—namely, that Oertel's "out-door exercise" or climbing treatment could only be recommended in cases of diminished cardiac power resulting from general obesity, of insufficiency of the cardiac muscle in patients with anæmia and a general flaccidity of the muscle, or of kyphosis and kyphoscoliosis, causing disordered pulmonary circulation; but it can only be used in few cases of cardiac valve lesion, more especially if it be mitral insufficiency, when the disordered compensation is still in its first stages or when, by previous courses of bathing, an almost sufficient compensation has been attained. Therefore hill climbing is suited to only a small portion of those patients with disordered circulation who come to Nauheim for treatment. Gymnastics are generally to be preferred to Oertel's "Terrainkur" because they do not exert the heart so much, can be regulated better, and are often admissible in cases in which the "Terrainkur" would be absolutely impossible. I have here referred more particularly to walking uphill, for walking on level roads can be borne by every patient with heart disease if it is done at a slow pace, with frequent rests and regular breathing, with the avoidance of all talking during the walk, and if every now and then a deep breath be taken. Of course, the length of the walk must be regulated by the patient's power of endurance. Yet there are always among the patients sent to Nauheim a number for whom the only treatment at the beginning that can eventually lead to a good result consists in absolute rest and repose, avoidance of every kind of bodily exertion, and the use of the bath-chair.

I have still to mention massage, which—usually applied in the form of a general massage—has likewise the effect of removing venous stagnation and stimulating the action of the heart by increasing the circulation in the skin and peripheral muscles. It is often used as an aid to the bath treatment in conjunction with gymnastics, and often also as a substitute for the latter in those not too rare cases in which gymnastics cannot be borne, such as arterio-sclerosis, most cases of aortic insufficiency, or advanced fatty degeneration of the cardiac muscle, &c.

I should not omit to state that in many cases medicinal treatment is not quite inadvisable, but I must also add that I could quote many instances in which all the drugs tried at home had produced no result, whereas the same remedies in connexion with a course of baths had acted in a most striking manner. Yet this does not affect what I have said elsewhere about the contraindications for Nauheim—namely, that it is not advisable to send patients here for a course of the baths on whom medicaments, and especially digitalis, produce no reaction whatever. As regards the success which one may hope to obtain from the treatment we are in some cases very glad to have obtained a temporary improvement, even if it only lasts for a few months; yet by far the greater number of our patients, and especially those who repeat the course of baths regularly, succeed in establishing a relatively good state of health lasting over a number of years.

Nauheim, Germany.

A CASE OF ACUTE PERIOSTITIS FOLLOWED BY RAPID PYÆMIA AND DEATH.

By ERNEST W. G. MASTERMAN, F.R.C.S. ENG.,
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On Feb. 13th, 1895, I was called to see a little Jewess, aged eleven years, who had just had a rigor accompanied by high fever, headache, and nausea. There was no history of any fall or any complaint of pain in any of the limbs. It seemed like an ordinary case of ague—which is the commonest fever here—and was so treated. On Feb. 14th I saw the child again. She still had fever with frequent vomiting, and all along the front of the right leg there was a patch of diffuse redness. There was no fluctuation. Unfortunately, I thought it was a case of commencing erysipelas, which is very common here, while acute periostitis is exceedingly rare. This was the more regrettable inasmuch as I was not called to the case again for a week. On Feb. 22nd the patient was admitted to the English Hospital, Jerusalem, and again came under my care. The history during the interval was that on the 15th the patient had been attacked with pain in all her joints. The pain was so severe that the right leg was thought by the mother to be "all right," and the disease to be rheumatism. The child at this time looked very ill and was very anæmic, the lips looking quite white. The temperature was over 103° F., and there was no shivering and no sweating. All the joints were very tender and were held constantly still; the wrists and elbows were especially painful. The right leg was swollen, but all the redness had disappeared. There was distinct fluctuation over the inner surface of the tibia from the internal malleolus for about four inches up the leg. The skin over this area was white and not tense. The patient being put under chloroform, an incision was made and three or four drachms of thick blood-stained pus were evacuated. On introducing the finger about two inches of the shaft of the tibia—on its inner and posterior part—were felt to be bare. Two additional incisions were made for more complete drainage and tubes were inserted. The temperature that evening rose to 104·6°. The bowels were open four times with liquid, but not markedly fetid, stools. She scarcely slept at all that night, was very restless, and in much pain both in the leg and in her joints. From the 23rd to the 26th she continued to have a high temperature, the evening temperature being always two or three degrees above that of the morning. The leg discharged freely. All the joints continued tender, but especially the right wrist and left elbow. These joints were swollen slightly, but not reddened. The child cried out with pain constantly and slept badly. She was made to take a good deal of nourishment in the form of milk and eggs, and stimulant in the form of an ounce and a half of brandy and half an ounce of meat essence daily. She was given quinine and opium and at night sulphonal. On the 26th the two most painful joints were put on splints. She took food better. The tongue became more moist and her general condition seemed to be improved. At 5 P.M., however, she had a rigor lasting five minutes and the temperature rose to 104·8°. She sweated all night after and complained of great pain, especially in the head. The motions were very light in colour, thick, and very foul. There was no vomiting. During the 27th and 28th there were no more rigors. She constantly perspired and was very restless. The bowels were open frequently. On the night of the 27th the breath was noticed to be very foul. A small abscess formed just below the angle of the right scapula and was opened on the 28th, about one drachm of thick white pus being evacuated. She continued to take food fairly well. Her evening temperature was always above 104°. On March 1st the morning temperature was 103°. She had no more rigors, but the profuse perspiration continued. She could not lift her arms at all, but her joints were not externally worse. She was semi-conscious all the latter part of the day. The temperature at 6 P.M. was 104°, and at 10 P.M. 105·4°. She continued semi-conscious and died at 7 A.M. on March 2nd. No post-mortem was allowed. I have thought this case worth recording in spite of its most unsuccessful issue. Firstly, because it exhibits in a marked degree the difficulties attending the diagnosis of cases of acute periostitis; and, secondly, because of the exceedingly rapid onset of the symptoms of

FOOTBALL CASUALTIES. — On the 13th inst., during a match at Flint, a member of the Flint team fractured his femur, and a player in the Holywell team "dislocated his knee-joint."—On Saturday last, in the course of a match between the Bradford and Bowling Old Lane teams, a player "displaced one of his ribs."

general pyæmia. On the third day after the initial rigor there were symptoms of pyæmia in the form of pain in all the joints, which pain became so severe as for a time to cause the condition of the leg to be almost forgotten. Then, thirdly, it is interesting to notice that though the blood-poisoning was severe enough to cause death on the seventeenth day from the initial rigor, yet the amount of bone affected was quite small. Probably, had the patient lived, the sequestrum, which would subsequently have had to be removed, would have been only about a couple of inches long and one inch broad, and possibly less. It would seem that the poison was in a sufficiently large dose to kill before it could do much damage locally. In notes of a good many cases which I took at St. Bartholomew's Hospital I find that on an average the patients whom I saw there were admitted between two or three weeks after the onset of the disease, many being previously treated for other diseases outside. In these cases, too, there is frequently a large abscess and great destruction of bone. Pyæmia frequently, too, sets in during prolonged suppuration after the original abscess has been opened; but that form of pyæmia is more chronic, and, as far as I can judge, less fatal, especially if amputation is resorted to early enough. In my case I do not believe amputation would have been any good when the child came under my care in the hospital, as the whole system was already so greatly affected.

Jerusalem.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ACUTE DELIRIOUS MANIA FOLLOWING ACUTE DRY PLEURISY IN A GIRL TWELVE YEARS OF AGE.

By W. R. BATES, L.R.C.P., L.R.C.S. IREL.

IN the course of nearly twenty years' experience I have never met with a case similar to this, which emboldens me to bring it before the readers of THE LANCET. An intelligent and well-nourished girl twelve years of age, gasser in a silk spinning mill, first seen on Sunday, Oct. 28th, 1894, had not been well from the previous Thursday, complaining of headache, pains in the limbs, and general lassitude, but had worked up to the previous morning, when she had to come out of the mill. She was suffering from pain in the right side of the chest, which increased on inspiration and by pressure over the lower ribs. The respirations were hurried and shallow, with slight cough, but no expectoration. The tongue was furred and moist; the bowels acted regularly. There was no vomiting. The patient said also that her head ached very badly. The temperature in the axilla was 103.4° F., and the pulse 112. There was no dulness on percussing the chest, but on auscultation there was a friction sound heard over the right base anteriorly; the heart sounds were normal. A diaphoretic mixture of acetate of ammonia with potassium bicarbonate was ordered, with hot linseed-meal poultices, mixed with one-twelfth part of mustard, applied to the right side; the diet was to consist of milk with a little soup. Next morning the temperature had fallen to 100°, the respirations were less hurried, but there was still the quick pulse and there had been very little sleep. On the 30th the temperature was normal. The respiration was regular, but the pulse-rate still kept high (120), and she had had another sleepless night. She was taking food well and seemed to be convalescing rapidly. On the 31st her sister came for me before breakfast, asking me to see my patient at once, as she had not slept and was very excitable, saying there was a woman behind the door with something over her face continually looking at her, and that cats, dogs, and other animals were running all over the bed and biting her legs and toes. When seen she was not at all violent, but it was with difficulty she could be persuaded to lie down. She talked quite rationally, however, until questioned about the woman, when she became very excited, reiterating the statements already made to me. Her temperature was normal, but the pulse-rate was quick. A mixture of potassium bromide with vinum antimoniale was given every three hours. The room was ordered to be darkened and the child kept perfectly quiet. I was away all day, and on arriving home at night

found I had been sent for several times. On entering the room I found it required the united efforts of several women to keep the girl in bed. She was violently delirious, but her chief delusion was that she was floating down the river in a tent with the water gradually filling it, and that we should all be drowned. She recognised me, however, and asked me to take her away to a safe place. With a little coaxing I persuaded her to lie down, and took her temperature in the axilla; it was still normal. A draught containing two scruples each of bromide of potassium and chloral hydrate was ordered, half to be given immediately and the other half in two hours if required. She fell asleep for a little while after the first half, and then had the second portion administered, when she slept for about eight hours. Waking up quiet and free from delirium, but still full of delusions, she slept well the following night without a sedative, and gradually regained her usual health, but it was rather more than a week before the delusions entirely disappeared. I think, on looking at her and the family history, we have a clue to the cause of the mental disturbance, following what was only a mild attack of pleurisy. In infancy and childhood I attended her, when she had several convulsive attacks during the period of dentition and from gastric disturbance, showing that she has a tendency to have her nervous system easily thrown off its balance; I also attended two of her sisters, who died from tuberculous meningitis. Her mother died from lardaceous disease following spinal caries. The girl is now in good health, mentally and bodily, has got stout, and is following her usual employment.

Addingham, Yorks.

A MODIFICATION OF PHELPS'S OPERATION FOR THE RELIEF OF TALIPES EQUINO-VARUS.

By T. H. KELLOCK, F.R.C.S. ENG.,

MEDICAL SUPERINTENDENT, THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THIS operation having now been performed for some years, we are able, to a very fair extent, to form an opinion as to the ultimate benefit derived from it, and many surgeons must have been somewhat disappointed at the tendency to relapse which takes place some time after the abandonment of the splints or other supports which have been used to keep the foot in the corrected position, the part of the foot in front of the wound becoming slightly adducted and the sole inverted. This appears to be particularly the case in those instances where the large open wound resulting from the operation has been allowed to granulate and close by itself; it is obviated, to a certain extent, by planting epithelial grafts taken from some other part of the body on to the raw surface at the time of, or soon after, the operation; but in cases treated in this way the resulting scar is unsightly, and there remains a deep sulcus formed by the drawing together of the sides of the wound thus covered by epithelium. It occurred to me that this might be further remedied by making use of some of the redundant skin which is always present on the outer side of the foot when this has been brought into the straight position, and by the kindness of Mr. J. H. Morgan I was able to perform the following operation on a case under his care. The patient was a healthy-looking girl six years of age, the subject of bad congenital talipes equino-varus—an essentially favourable case for the performance of this operation. Continual walking on the outer side of the foot had caused the usual thickening of the skin in that position, which had to be softened by being treated with a wet dressing a day or two before the operation, which was performed in April last. After dividing the tendo Achillis subcutaneously and completing the operation as described by Phelps, with division of the tendons of the tibialis anticus, tibialis posticus, and flexor longus digitorum muscles, the foot could be brought into a very good position; a flap of the whole thickness of the skin, about an inch wide, was then cut on the outer side of the foot by two parallel incisions reaching from the upper end of the operation wound to the sole, and dissected off the underlying structures, the skin being brought together underneath it by sutures. Five or six days later, the flap appearing to be thoroughly well nourished, the lower end was divided and, leaving the upper end still attached, was turned across and secured by one or two horsehair stitches into the deep wound on the inner side of the foot, which was by this time mostly

covered with granulation tissue, and the foot and leg fixed in plaster of Paris. The healing of both wounds was quickly accomplished and the plaster-of-Paris splint dispensed with about three months after the operation. Some time afterwards, as there was still a tendency to equinus, the tendo Achillis was again divided and the foot put into plaster-of-Paris for a fortnight. The result now—ten months after the operation—is very satisfactory, the foot being in good position, with more strength in it than one dared hope for after the division of the tendons of so many important muscles.

Great Ormond-street, W.C.

CASE OF FRACTURE OF THE BASE OF THE SKULL, WITH OUTWARD DISPLACEMENT OF BONE.

By C. B. DALE, M.R.C.S. ENG., L.R.C.P. LOND.,

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ELEVATED fractures of the vertex of the skull are described as the result of oblique cuts. In the following case a similar condition affected the base. On Sept. 26th, 1894, a man aged fifty-one years was working on the Great Northern Railway line when an iron plate measuring 13 in. \times 7½ in. \times ½ in. flew off the engine of a passing express and struck him behind the left ear. When seen a few minutes afterwards he was in a semiconscious condition, but rapidly became comatose. There was an irregular, lacerated wound about 5 in. in length, extending downwards and forwards behind the left ear as far as the angle of the jaw. The skull was perforated just behind the mastoid process, and a circular piece of bone about 2 in. in diameter was cut out and turned back in the posterior flap. There were some loose splinters of bone lying in the wound, but the edges of the opening in the skull were not depressed, and no fissures could be detected extending from it. The surface of the brain was lacerated. The wound was washed out with carbolic acid lotion and brought together with carbolised silk sutures, the piece of bone being replaced and kept in position by the flap to which it was attached. The patient made a good recovery. The wound healed by first intention, with the exception of the lower angle, from which a small quantity of cerebro-spinal fluid continued to escape for some days. Four days after the accident he developed left-sided facial paralysis, but this has since almost completely disappeared. He is now back at work and complains only of slight weakness of the right leg.

Hatfield.

A Mirror OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

A CASE OF FLOATING KIDNEY WITH INTERMITTENT HYDRO- NEPHROSIS CURED BY FIXING THE KIDNEY IN THE LOIN.

(Under the care of Mr. WATSON CHEYNE.)

THIS case illustrates a condition of the kidney which is much more common than was supposed a few years ago; in fact, the relationship between movable kidney and hydro-nephrosis was not mentioned in our text-books and was perhaps not recognised. Probably the most interesting and important contribution to this subject (intermittent hydro-nephrosis) is that by Terrier and Baudouin,¹ who collected a series of eighty-three cases. They found that the most

common cause of this condition is a movable kidney, which when displaced causes a kink in the ureter, the escape of urine being thus prevented until the kidney has returned to its normal position. They state that such a condition usually becomes a permanent one, because in consequence of inflammatory changes about the kidney adhesions form which hold it in its displaced position. The symptoms produced by intermittent hydro-nephrosis were well shown in the case which follows, whilst the treatment carried out has proved very successful. It is, of course, advisable that the operation should be performed as early as possible, so that the inflammatory changes which are only too apt to ensue and produce destruction of kidney substance, and may possibly necessitate the operation of nephrectomy, may be prevented.

A widow aged thirty-five years was admitted to King's College Hospital on Nov. 16th, 1893. Four years before admission she first began to suffer from attacks of pain in the left side. These attacks lasted from two or three days to a fortnight, and from that time she had had attacks of this kind every week or ten days. At first she noticed that the attacks occurred especially after exertion, such as lifting heavy weights, and relief was sometimes speedily obtained if she lay down on her side. Latterly, however, the attacks had occurred without exertion, and even on turning in bed. The pain was of an aching character, beginning mildly at first, gradually increasing in severity, and subsiding either gradually or sometimes pretty quickly. For the last year, coincidently with each attack of pain she had noticed the appearance of a lump in front and above the left anterior iliac spine, which was very tender and was the seat of the pain. It appeared and disappeared coincidently with the pain. Tenderness remained for some days after the attack. During these attacks she did not notice any frequency of micturition or alteration in the quantity of urine passed, nor had she noticed any increase in the quantity of urine when the tumour disappeared. She had, however, frequently noticed blood in her urine, both during and in the intervals between the attacks. She was admitted to hospital during an attack, but on her being examined two days later the pain and tumour were found to have completely disappeared. An elongated mass which seemed to be the remains of the kidney was, however, felt and was freely movable. The patient's general health was good. The urine was acid, of sp. gr. 1030, and with a considerable deposit of urates, but no albumen, sugar, or blood. As no lump was present she went to the ophthalmic wards on account of a keratitis from which she had suffered for some months. She afterwards went out for a few days and returned on Dec. 20th with a fresh attack of pain in the lumbar region. On examination a large, soft, rounded swelling about the size of two fists was felt in the left lumbar region, extending as low as the anterior iliac spine and passing up under the ribs. There was also bulging in the left lumbar region behind. There was dulness over this area, and the swelling was very tender to the touch. On considering the history and symptoms Mr. Watson Cheyne came to the conclusion that this was one of the cases which have been recently described by Mr. Clement Lucas, where hydro-nephrosis had followed on a movable kidney, and that the attacks of pain &c. coincided with a kinking of the ureter from an alteration in the position of the kidney. As it was evident that considerable kidney substance still remained, Mr. Watson Cheyne decided to wait till the attack passed off—that is to say, till the position of the kidney which led to kinking of the ureter had given place to a position in which the ureter was free—and then to try to fix the kidney in that position. The swelling and other symptoms had completely disappeared by Jan. 12th, 1894, and accordingly on Jan. 17th the usual oblique posterior incision was made and the kidney exposed. Considerable remains of kidney substance were found, of a horse-shoe shape, and in front and below a large empty sac, the dilated pelvis. The kidney having been placed as nearly as possible in its normal position, a portion of the capsule was stripped off and stitched in with stitches which united the divided layers of muscles somewhat after the manner described by Mr. Arbuthnot Lane. There is nothing special to note about the after-progress of the case except that two of the superficial stitches found their way out through an angle of the wound left open for drainage. The patient left the hospital on Feb. 24th, not having had any further accumulation or attack of pain. She was seen quite lately, when she stated that she had remained perfectly well and free

¹ *Revue de Chirurgie*, Paris, 1891, vol. ii. *Sajous' Annual of the Universal Medical Sciences*, vol. iii., B. 23.

from attacks for months; indeed, she had only had one very slight attack a few days after leaving the hospital, which, however, subsided in a few hours and was not accompanied by any appearance of tumour. As more than a year has now elapsed since the operation she may be regarded as well.

HOSPITAL FOR WOMEN AND CHILDREN, LEEDS.

A CASE OF OSTEOMALACIA; REMARKS.¹

(Under the care of Dr. J. B. HELLIER.)

THE disease of which the following is a good example is fortunately rare in England, and the remarks which are appended to the case by Dr. Hellier give a good summary of most of our present knowledge on the subject. Winogradsky² described a micro-organism which he had found in the blood of a patient suffering from osteomalacia and which he considered might be the cause of the disease; others have failed to confirm his observations, and the cause remains unproved. Petrone, who also considers that the cause may be a micro-organism, states that it may be destroyed by the use of chloroform, and Latsko succeeded in curing a patient by chloroform narcosis. Phosphorus has been used with considerable success by Steinberg, Weissmayer, Schlesinger, and others. Castration has not always proved successful. Much improvement is stated to have followed the application of weight extension to the limbs of a patient during convalescence from this disease. We are indebted to Mr. F. Horsman for the notes of this case.

The patient, a married woman thirty years of age, was admitted to the Hospital for Women and Children, Leeds, in May, 1894. She had never been very strong, but had not had any previous illness except measles. In 1883 she bore a living male child by natural labour, after which she began to complain of pain in the back, passing down into the thighs. Her second child (female) was born in 1886 by natural labour, and was suckled fifteen months. During lactation she felt much pain in the lower part of the back, which was increased by locomotion. After weaning she felt still weaker, and though she could walk two miles she began to oscillate in her gait. Her third and last confinement took place in July, 1888, when a healthy male child was born at full term by a short, easy, natural labour, so that it may be taken as certain that up to this time there was no appreciable amount of pelvic contraction. She remained in bed one month, and felt very weak and ill on getting up. She suckled ten months, but pain and difficulty in walking were now very considerable. During the last six years she gradually reached the condition which she presented on admission to hospital. During this period she had been treated for rheumatism, and had been supposed to have some disease of the cord on account of the altered gait, but the true nature of the illness did not seem to have been recognised. The patient had not known poverty or destitution, but had always been able to procure good food. The house in which the last two confinements took place may possibly have been unhealthy, for it was a farmhouse, and the cowshed was under the same roof. Her condition on admission may be summed up under three heads: (1) signs of softening and giving way of the skeleton, especially of the spine and pelvic bones; (2) pain and tenderness in connexion with the bony parts most affected; and (3) symptoms of constitutional debility and dyscrasia. 1. The patient on admission was thin, and markedly sallow and anæmic. She was weak and ill, and distressed by pain, and her muscles were somewhat wasted. 2. Her gait was peculiar. As she walked her arms, hanging vertically, fell behind the central line of the body, the shoulders being thrown back and the abdomen prominent. She moved along in a waddling-fashion, like an exaggeration of the gait of a very stout woman far advanced in pregnancy. In going up and down stairs she took one step at a time. The knee-jerk and abdominal reflexes were increased. 3. She had shortened stature; her actual height was 59½ in. She said that she and her sister used to be of equal height; her sister measured 62½ in.; hence the patient had lost about 3 in. 4. The spine

was deformed; there was very marked lordosis; the last lumbar vertebra and the upper part of the sacrum were sunken, whilst the lower end of the sacrum was unduly prominent. 5. The thorax was deformed; the upper intercostal spaces were widened, the lower being very much narrowed. The chest was sunken towards the pelvis, so that there was no space between the ribs and the iliac crest, but, on the contrary, the lowest ribs came below that level. 6. There were external signs of contracted pelvis. The symphysis pubis was distinctly rostrated, presenting a very characteristic beak, which could be grasped between the finger and the thumb. The external measurements were as follows: the distance between the iliac crests was 10½ in.; the distance between the two anterior superior spines was 8 in. (this measurement is usually only ½ in. less than that between the iliac crests, so that in this case the iliac spines were rotated inwards and approximated); the external conjugate was 6½ in. In osteomalacia beaking of the pelvis may, as here, prevent any great shortening of the external conjugate. In addition to this, there was sinking in of the great trochanters. In the normal pelvis the intertrochanteric measurement is greater than the intercrystal, and this helps to produce the well-known curve from the waist to the thigh in the female figure. In the present case the body tapered off from the hips downwards and caused a singular and characteristic appearance. The following table gives these two measurements in the patient and in eight other women who happened to be in the same ward at the time. It will be seen that the average intertrochanteric distance in the eight cases is one inch more than the intercrystal, and that in the osteomalacia case it is half an inch less:—

Table of Measurements of Osteomalacia Patient and Eight other Women.

Case.	Intercrystal distance.	Intertrochanteric distance.
1.	11 inches.	12 inches.
2.	10½ "	12 "
3.	11 "	11½ "
4.	10½ "	11½ "
5.	11½ "	12½ "
6.	11 "	12½ "
7.	12½ "	12½ "
8.	10½ "	11½ "
Average ...	11 inches.	12 inches.
Osteomalacia patient ...	10½ inches.	9½ inches.

7. The vaginal examination was as follows. The pubic arch was greatly contracted. The tuberosities of the ischium were nearly together. The tip of the index finger could be just passed under the pubic arch, but not the first joint. When the finger was passed into the vagina it impinged on a round hard swelling which nearly filled the pelvis. This was the sacral promontory and the lowest lumbar vertebra. The first finger could be passed between the sacral promontory and the pubes, but the second finger could not be passed by its side. The available conjugate may be said to be not more than an inch and a quarter. The os uteri was felt below the promontory, and the fundus lay obliquely to the left. 8. There was tenderness of the pelvic bones, vaginal examination gave great pain, especially when the finger was passed between the pubic rami or when the promontory was pressed upon. Walking was painful, so was any jerk of the body, and she said that when she sneezed it hurt her all over. 9. The teeth were so carious that there was not a sound tooth left in the jaws. Menstruation was regular and there was no dysmenorrhœa. The temperature was normal. From these data a diagnosis of osteomalacia was made, and removal of the ovaries was entertained in order to prevent further conception and to give the patient the benefit of a procedure which has recently been followed by such remarkable results. However, the first indication seemed to be to give a trial to simpler measures and to watch the case for awhile. The patient was put upon Parrish's syrup and cod-liver oil. Her weight was now a little under 6st. From this time a steady improvement began. By June 26th she had gained about five pounds, and could sit and walk better. On July 6th she was sent into the country, her weight being 6st. 4½ lb. On Sept. 4th she attended at the hospital. She

¹ This case formed the subject of a paper read before the Leeds and West Riding Medico-Chirurgical Society, Oct. 2nd, 1894.

² *Sajous' Annual of the Universal Medical Sciences*, vol. iii., I., 17, 1894.

had lost almost all her pain, she looked better in all respects, there was a marked improvement in her walking power, and her weight was 6 st. 12 lb. On Dec. 4th the weight was 7 st. 4 lb. and she declared herself to be quite well. The pelvic condition was the same except that there was a great diminution in tenderness. Her present condition (March, 1895) is excellent.

Remarks by Dr. HELLIER.—Osteomalacia is so rarely seen in Leeds that I have ventured to put this case on record, although it is not an example of the most severe type of the affection; and as this disease, especially in its more pronounced stages, is seldom seen by English practitioners, and as the accounts given in English text-books of obstetrics are rather meagre, the following clinical sketch of the disease as seen on the Continent, abstracted from a monograph by Baumann,³ may be of interest. The earliest symptom is pain, which begins in the ischial tuberosities and spreads to the pelvic bones and to the lumbar vertebrae; very soon the hip-joint becomes painful, the movements of the thigh difficult, and the gait slow and shuffling. In the further progress of the disease not only locomotion but also sitting become impossible. The patient is bedridden and can usually lie on the side only, not on the back, because the spine is so tender. Characteristic deformities arise according to the particular bones affected. The promontory of the sacrum sinks into the pelvis and the acetabula also sink inwards. The pubes project like a beak, and the pelvic cavity takes the shape of a heart on a playing-card. There is no one characteristic deformity in this disease, for if the patient can sit and stand the pelvis tends to become flat and the vertebral column to sink downwards and forwards. The normal curves of the spine become exaggerated. The cervical spine may be so much shortened that the chin rests on the sternum. In extreme cases the stature has become a foot less in a few weeks and the sternum has bent to nearly a right angle with apex forwards. Finally, the bones of the extremities bend or break. In consequence of these deformities the internal organs become compressed and displaced, and their functions are interfered with. Hence there may result circulatory disturbances, cardiac obstruction, bronchitis, asthmatic symptoms, digestive disturbances, diarrhoea, &c. Phthisis may come on, or general marasmus may terminate life. If pregnancy occur the pelvic deformity may prevent normal birth, may necessitate Caesarean section, or may cause rupture of the uterus. [Sometimes the contracted pelvis is more or less dilatable in labour.] The bones become bent or partly or completely broken. In the worst cases fractures and curvatures are both found. The bones which go first are the ribs and the bones of the extremities. Callus may fail, or may be so reabsorbed that imperfect union is the result. The mortality of the puerperal form is estimated at 70 per cent. (Litzman). In the non-puerperal variety of osteomalacia the mortality is 84·7 per cent. It occurs in both sexes and in rare cases in young people. Its course is severe. The starting point is almost always the vertebral column or the thorax. The pelvis may escape, but this form is specially apt to extend all over the skeleton, even in rare instances to the bones of the head. The effect of castration upon the course of this disease is one of the most interesting discoveries in obstetrics made in recent years. In 1878 Porro published his improved method of Caesarean section, which, as is well known, involves the removal of the appendages with the amputated fundus uteri, and hence an artificial induction of the menopause. Of 44 cases of Porro's operation published up to 1889, 13 died at the time and 26 recovered from the operation; 5 of these died not long after from various causes (phthisis, Bright's disease, heart disease, &c.). In the remaining 21 a very marked improvement followed in almost every case, and the osteomalacia was practically cured. This does not mean that the deformities disappeared, but that the patients lost their pains and became able to walk and work, that there was no increase in the deformities, but, on the other hand, an improvement in general condition. Naturally the question arises whether simple castration would have the same effect. Fehling and others have tried this in 20 cases, with, it is said, much success.⁵ Dr. Everke of Bochum, in Westphalia,⁶ and Dr. Rasch of London⁷ have also published

successful cases. The old-fashioned Caesarean section, which leaves the ovaries, does not tend to cause improvement in the disease.⁸ Making every allowance for the deductions which experience may demand to be made from the success claimed at first for any new treatment, I think that anyone who reads the details of the cases published will see that while the influence which most tends to make osteomalacia worse is repeated childbirth, that which has most effect in arrest and cure is removal of the ovaries. The good results seem to follow very quickly after the operation, marked relief to the pain often beginning in a week or two, and patients who were entirely bedridden have been able in a few months to walk, to work, and even in one recorded case to dance (Baumann). The causation of this disease is not yet explained; when we consider the list of causes given in text-books our puzzle is increased. If damp, cold, draughty dwellings, hard manual labour, anxiety and worry, bad clothing, poor food, repeated childbirth and hyperlactation will cause it, why do we not find the disease in every large city, where women bear children in rapid succession amidst damp, cold, chill, draughts, rags, and starvation? Surely all the facts of the case, together with the consideration that the disease is notoriously endemic in certain districts and that its sporadic occurrence is very exceptional, point to the probable existence of a micro-organism as the essential factor. It may be urged that this supposition would not harmonise with the effects just described as produced by castration. But a simple explanation of these might be that the condition of the blood in pregnancy and the puerperal state favour the presence and activity of such organisms, and that after the menopause the blood has the opposite tendency. There is nothing extravagant in such a theory. The possibility of spontaneous cure must always be borne in mind, especially in the milder cases. Recoveries from osteomalacia are reported from time to time apart from surgical interference. They may be attributed to various modes of treatment, as, for instance, to phosphorus,⁹ to sea baths,¹⁰ to change of air, iron, cod-liver oil, lime salts, &c., or to the vis medicatrix nature; but it is plain that medical treatment should be tried before surgical. I am especially glad that this was done in the present instance. Had oophorectomy been performed the temptation to cite the case as a convincing proof of the efficacy of the new treatment would have been irresistible, and the patient would have been exhibited cured but without her ovaries, unless, indeed, I had been unfortunate enough to have had to exhibit the ovaries without the patient. Nevertheless, if she should have a relapse and medicinal and hygienic treatment should fail, castration would then, in my opinion, be the proper course to pursue.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Nervous Symptoms and Morbid Changes in the Spinal Cord in Certain Cases of Profound Anæmia.

An ordinary meeting of this society was held on March 26th, the President, Mr. HUTCHINSON, being in the chair.

Dr. JAMES TAYLOR read a paper on Nervous Symptoms and Morbid Changes in the Spinal Cord in Certain Cases of Profound Anæmia. At the commencement of the paper Lichtheim's observations in 1887 were referred to as the earliest recognition of the association of nervous symptoms and spinal cord changes with pernicious anæmia. The subsequent very exhaustive examination of that observer's cases, and of others by his pupil Minnich, was next mentioned. These observations showed that in certain cases of pernicious anæmia symptoms of sclerosis in different areas of the cord were present. The actual degeneration found in the cords, chiefly marked in the posterior columns, was described, and also the conditions found in cords of patients the subjects of pernicious anæmia, but in whom during life no symptoms of cord disease were present. The subsequent confirmatory observations of van Noorden, Eisenlohr, Nonne, and Bowman were briefly

³ Ueber den Einfluss der Porro-operation und Castration auf das Wesen der Osteomalacie &c. Johannes Baumann, Basel.

⁴ See Barnes' *Obstetric Medicine and Surgery*, vol. ii., p. 570, for cases in point.

⁵ *Deutsche Medicinische Wochenschrift*, Jan. 28th, 1892.

⁶ *Ibid.*

⁷ *Zeitschrift für Geburtshilfe und Gynäkologie*, Band xsv., Heft 2.

⁸ Baumann, *op. cit.*

⁹ See Latzko: *Allgemeine Wiener Medicinische Zeitung*, January, 1894.

¹⁰ Pelezar: *Brit. Med. Jour.*, Epitome, Dec. 15th, 1894.

noticed. Allusion was next made to a series of cases published by Dr. Putnam of Boston of diffuse degeneration in the spinal cord in enfeebled persons past middle life, to a case observed by Sir T. Grainger Stewart, ascribed by him to the same class as Dr. Putnam's, and to a case of hyaline degeneration of the cord published by Dr. Bullock. All these cases Dr. Taylor, from a study of the clinical symptoms and of the distribution of degeneration in the cord, believed to belong to the same class as Lichtheim's cases. He next described two cases observed by himself. The first was that of a woman aged fifty admitted to hospital with symptoms of ataxy and in a condition of considerable anæmia. She gradually became weaker, developed excessive spasticity of the limbs, lost control of the sphincters, and died from exhaustion. The cord showed marked degeneration in all areas of the white matter and little or no change in the grey. The second case was that of a man aged forty-three admitted with symptoms closely simulating those of locomotor ataxy. He became gradually weaker, retinal and subcutaneous hæmorrhages were present, and he died from exhaustion. Similar extensive degeneration was found in the white matter of the cord, the cells in the grey matter being unaltered. Dr. Taylor regarded the association of extreme anæmia and spinal cord changes as no mere accidental one. The cord changes he regarded as of double origin: (1) sclerosis resulting from small hæmorrhages similar to those occurring in the retina in the same disease, and (2) sclerosis is the result of a blood state and he instanced as analogous the posterior sclerosis found by Williamson in cases of diabetes and the sclerosis present in the cord in cases of pellagra.

Dr. JOHN HARLEY desired to contribute to the discussion of the general question. Had fatal anæmia any direct connexion with spinal cord changes? In both Dr. Taylor's cases the nerve lesions preceded the anæmia, and in the second case it was only a month before death that anæmia in a marked degree showed itself; so with other recorded cases. From this it appeared that the anæmia was merely the sequel. Did pernicious anæmia induce evidence of spinal cord disease? In six cases of fatal anæmia which he had himself observed there was no symptom of spinal disorder, though sprinkled hæmorrhages were present in the retina and the serous membranes in all the cases. He therefore concluded that the association was merely accidental and not interdependent.

Dr. GOWERS thought that the society was to be congratulated on having brought prominently before the profession facts which raised questions of extreme importance. The problem underlying the questions raised in the paper was similar to that underlying the debate recently held at the society. There was to some extent a similarity of lesions in the two conditions, and also a difference which could not be less significant than the similarity. He desired to point out the salient questions underlying the facts which had been put before them by Dr. Taylor with perfect lucidity and comprehensive grasp. There was, as he had said, a resemblance to the lesions seen in cases with post-syphilitic taint, but this was not always a close resemblance, and there were associated with it changes more or less random in character—changes due to hæmorrhages and the consequences of them. The lines of degeneration found in these cases in the posterior column, or postero-median column, or in the lateral or anterior pyramidal tract resembled in strict localisation the lines of degeneration seen in tabes. In tabes there was a loss of the nutritional influence of the nerve cells of the posterior ganglion, and so also in the case of action of all poisons like syphilis, alcohol, arsenic, lead, and possibly post-diphtheritic poison, and the posterior root fibres going from the skin and muscles to the posterior ganglia would also be affected. Those fibres, he repeated, which were under the nutritional influence of the cells of the posterior ganglion were especially susceptible to most poisons, but the fibres of the pyramidal tract were susceptible to only some of these poisons. In all these instances the sclerosis was a secondary overgrowth of tissue revealed by negative staining in the specimens which had been exhibited, or they could be revealed by positive staining with carmalum. That there must be a toxic agent at work must be admitted, but whether the same toxic agent was the cause of the pernicious anæmia it was not possible to say. In pernicious anæmia there was found structural change in the blood-forming organs, such as the marrow and the spleen. Could such changes occur

without causing also a profound change in the chemical processes of such blood-making organs? It should be remembered in this connexion that the ferment from the diphtheria organisms had been shown to transform the proteid material of the spleen into a poison which acted upon nervous tissues, and among other effects produced symptoms much like those of pernicious anæmia, only more acute. With such a perversion of the process of formation of the blood corpuscles he maintained there would be perversion of the chemical constitution of the albuminous substances of the blood, with the result that a toxic agent would be produced capable of acting on the nervous system in the special way characteristic of such toxic agents. In this way a sidelight was thrown on these affections—on the way in which the sufferer rose only to fall again. Whenever the toxic agent accumulated vomiting and diarrhoea occurred and with it the prostration which ultimately proved fatal.

Dr. W. HUNTER said that the facts adduced were of interest both to the neurologist and to those engaged in the study of the blood. He agreed with what had been said by Dr. Gowers that a toxic agent played a considerable part in the production of pernicious anæmia, and that the toxic agent was due to the absorption of poison of a specific nature from the intestinal tract. From the cases related it was not clear that the relation between the anæmia and the cord changes was a close one, for the cord changes appeared to be antecedent to the anæmia, and in one of the cases related the evidence that the case was really one of pernicious anæmia was not conclusive. He referred to a case of pernicious anæmia which was peculiar in two respects—its association with certain nerve changes and the occurrence of extensive and deep pigmentation of the skin. There was absence of knee-jerk with numbness and tingling of the limbs, and after a first exacerbation there occurred atrophy of the deltoids and of the extensor muscles of the thighs. The degenerative changes in the nervous system might either be due to some toxic change in the blood or to hæmorrhages occurring in the course of the disease. He favoured the view of the lesions being hæmorrhagic in origin, because in cases of pernicious anæmia these changes were few and far between, and recovery from the lesions was good.

Dr. BUZZARD wished to discuss the point whether the anæmia could be a cause of cord changes. In cases of ordinary chloro-anæmia functional troubles referable to the spinal cord were not uncommon, and disappeared when the anæmia passed away; in other words, they were temporary and functional. This bore on the point as to the possibility of cord troubles such as those Dr. Taylor had described being produced by a blood condition. He first referred to the case of a young woman who had all the symptoms of an organic paraplegia. She was suffering from pronounced chloro-anæmia, and she recovered perfectly when the anæmic symptoms were relieved by treatment. In another case a young woman had diminished knee-jerks, and was the subject of chloro-anæmia. Under Weir-Mitchell treatment the knee-jerks returned in full force. A third case occurred in a woman aged twenty-three years. She was admitted to hospital with symptoms which induced them to consider the advisability of an operation for intracranial tumour. There were intense headache, vomiting, double papillitis, and absent knee-jerk. Iodide of potassium being tried without result iron was substituted for it, and there was a very rapid improvement; the papillitis disappeared, the knee-jerks returned, and the blood corpuscles and hæmoglobin rose to their normal ratio.

Dr. MOTT mentioned a case of pernicious anæmia in which the blood corpuscles were reduced to 400,000 per cubic millimetre; the knee-jerks were increased, but there were no signs of spinal cord degeneration. At the necropsy there was found fatty degeneration of the pyramidal cells of the cerebral cortex; possibly later there would have been changes in the crossed pyramidal tracts. He asked if Dr. Taylor had examined these tracts and the ganglion cells of the posterior root. The fibres of Goll's column were the longest fibres going up the spinal cord, and therefore were the most likely to suffer if the centres of nutrition were affected; degeneration could be evident in the peripheral nerves as well.

Dr. BOWMAN said he had examined five cases of pernicious anæmia, and in none of them was affection of the nervous system noted as being present during life. He examined the spinal cords of three of these cases, but no degeneration was found to be present either in the cord itself or in the posterior nerve roots, though Minnich found changes

in the cord in five cases out of twelve in which there had been no nerve symptoms.

Dr. ORMEROD said that the paper constituted an important addition to the etiology of spinal cord diseases. Neither pernicious anæmia nor the form of spinal cord disease described was so common as to warrant the belief that the association between them was a mere chance one. The symmetry of the specimens was against the idea of their being due to hæmorrhage. He examined a case under the care of Dr. Church in which there was a lesion like that shown, but in that case no anæmia was present. A point to be remembered with regard to these cases was that there were very few cases of pernicious anæmia which were not treated with arsenic, and it had been shown that arsenic itself might produce similar lesions.

Dr. TAYLOR, in reply, said that in one recorded case the knee-jerk was at first exaggerated, then it disappeared, and then came back again. The cases were too numerous to be explained by mere coincidence. He had carefully guarded himself in his title from branding his cases as pernicious anæmia, which he thought was at present an indistinct entity. He described his cases as profound anæmia, and one at least of Dr. Putnam's cases was so called. So far the cases were an unexplained series: he had merely drawn the parallel between them, but he did not force it, though he tried to bring his cases into line with those described by Lichtheim and Minnich. The changes were much too symmetrical to be explained by the theory of hæmorrhage. He had not examined the cerebral cortex.

MEDICAL SOCIETY OF LONDON.

Tubal Pregnancy and Case simulating Tubal Pregnancy.—Extra-uterine Gestation operated on in the Tenth Month of Pregnancy.

AN ordinary meeting of this society was held on March 25th, the President, Sir WILLIAM DALBY, being in the chair.

Mr. BLAND SUTTON read a paper on a case of Tubal Pregnancy and one simulating Tubal Pregnancy. A woman thirty-five years of age, mother of two children, the youngest five years old, was suddenly seized whilst "trying on a dress" with sudden severe pain in the abdomen. Mr. Hazel was summoned and found the patient collapsed. At the end of five hours she was blanched, the voice reduced to a whisper, the pulse scarcely perceptible at the wrist, and she complained of great abdominal pain. Since the birth of her last child she had menstruated regularly till January, when her period, which was due on New Year's Eve, failed to appear. Nine days later she was seized with the severe pain which preceded the collapse. On physical examination the abdomen was slightly distended and some dulness could be made out in the left iliac fossa. The uterus was somewhat enlarged, the cervix soft, and the os patulous. As it was clear that the patient was suffering from intra-peritoneal bleeding, probably due to rupture of a gravid tube, abdominal section was performed by Mr. Sutton. On incising the peritoneum a broad stream of arterial blood leaped through the wound and a ruptured gestation sac was detected in the left Fallopian tube. The tube and ovary were removed in the usual way and the blood and clot carefully sponged from the abdomen. The patient rapidly convalesced and discharged the decidua on the fourth day. Sections were cut from the gestation sac and tube and examined microscopically; the sac contained a tubal mole 8 mm. in diameter furnished with chorionic villi. Mr. Sutton stated that this was the smallest tubal mole he had examined. The second case occurred in a patient thirty-five years of age who had been married seven months and believed herself to be three months advanced in pregnancy. She was suddenly seized with severe pain in the left side of the abdomen and metrorrhagia. On examination Dr. Marsden Low made out a swelling in the left iliac fossa, dull to percussion, and smooth and rounded in outline. The uterine fundus could not be distinguished above the pubes. The cervix was so depressed that it could be felt just within the vulva; it was soft and the os patulous; there was also an escape of offensive blood. On examining the patient it was clear that she was pregnant, but whether the fetus occupied the uterus or the broad ligament was by no means certain; further, it seemed that the pregnancy was complicated by a tumour, either a myoma of the uterus or an ovarian tumour. It was decided to examine the case under chloroform next morning and Dr. Champneys was asked to see the patient. During the night she miscarried of a three months fetus

and it was then clear that in addition to the pregnancy there was a large solid tumour in the abdomen. Three days later the abdomen became tender, the temperature fell to 96° F., then rose to 103°, and the patient became extremely ill. Nine days later abdominal section was performed, and Mr. Sutton removed a large pedunculated myoma growing from the fundus of the uterus. The tumour was inflamed and glued to the omentum and intestines by soft, recent adhesions. Recovery was uninterrupted. It was pointed out that the two cases were contrasted because one illustrated the certainty with which rupture of a gravid tube might sometimes be diagnosed, and the other showed how closely such an accident might be simulated by uterine pregnancy complicated by a tumour. The first case demanded decision, the second needed deliberation. The second case was also interesting as an example of the successful removal of a uterine myoma during the puerperium.

Mr. BIDWELL read a paper on a case of Extra-uterine Gestation in which he had operated at the tenth month of pregnancy. The fetus had been dead for some time, and was probably about seven and a half months old. The transverse colon and part of the ileum were adherent to the sac; the former was easily separated, but on attempting to free the ileum the muscular coat peeled off and a rent occurred in the mucous membrane. All the part which had been adherent to the sac, about five inches in length, was therefore resected and the ends united by Mause's method. The patient made an excellent recovery, although a slight fecal fistula appeared on the tenth day and continued to discharge for five days; it was now soundly healed. Mr. Bidwell attributed the success of the anastomosis to the fact that he had excised all the damaged gut and had inserted his sutures into healthy tissues. He did not think that abdominal cases required isolation or special nurses, and if there was no vomiting he treated them as regarded diet in the same way as any other serious surgical case.—Mr. ALBAN DORAN asked why there was so much bleeding from a small ruptured tubal sac. Two days ago while he was operating on such a case the blood spouted out furiously, but in that instance a band passed from the vermiform appendix to the sac. The band was found in reality to spring not from the appendix itself but from its mesentery, and the bleeding came from an artery in this. He thought that tubal pregnancy was much more common now than formerly. Mr. Sutton had done much in clearing up the diagnosis of this subject by showing that the presence of the chorionic villi was an essential diagnostic point. Till recently it was taught that inflammation of the Fallopian tube led to desquamation of the epithelium and then the impregnated ovum coming down the tube would stick at that point; in this way the inflammation of the tube was made to be the primary causative factor. Dr. Webster of Edinburgh had recently adopted a different view. He held that decidual tissue occasionally developed in the tubal parenchyma, and that this might occur all along the tube. In the normal condition of things, when the ovum coming down into the uterus touched the decidual tissue it became adherent there because for some reason the uterine epithelium became lost at that point. According to Dr. Webster this abnormal decidual change in the tube led in a similar manner to the implantation within it of the arrested ovum, and thus a tubal pregnancy was brought about. By this theory, therefore, it was plain that inflammatory disease of the tube or ovum was not necessary to account for the tubal pregnancy, and the inflammation was regarded as a secondary result of the pregnancy. Observations on the condition of the abdominal ostium bore out this theory, for it was usually found that in cases of inflammation of the tubes of the ordinary kind independent of pregnancy the fimbriae were closed, while in cases of tubal pregnancy the fimbriae were usually patulous and the ovum might be extruded through the abdominal ostium into the peritoneal cavity, a condition which had been called tubal abortion.—Mr. HARRISON CRIPPS said that there were two common forms of rupture of the tube—(1) when the rupture occurred on the free or upper border of the tube, and the blood was extravasated into the peritoneum; and (2) when the rupture occurred on the lower border of the tube and the blood passed into the tissues of the broad ligament. In the first variety there was nothing to restrain the hæmorrhage, and the patient was liable to bleed to death; in the second variety, as the broad ligament became distended with blood the pressure arrested the further flow. The symptoms of the first variety were sudden pain and collapse; no tumour could be felt, but there was a general puffiness felt per vaginam and dulness in the flanks.

In the second variety the pain was more acute and of a bearing-down character, but the general symptoms were not so severe. A large firm tumour like a fibroid was felt per vaginam and a tumour could be felt in the iliac fossa on deep palpation. In the first variety it was necessary to operate at once; cases of the second class were best left to nature. There was yet a third variety, where on vaginal examination a tumour could be felt in Douglas's pouch, but no tumour could be discovered in either iliac fossa. In this variety the blood was effused into Douglas's pouch and shut off by adhesions from the general peritoneal cavity. He thought Mr. Bidwell made a mistake to dissect off the intestine; it would have been better to have left a portion of the sac adherent to the gut.—Dr. HERMAN thought that cases of the first variety rarely or ever occurred; it was commoner to get a series of slight hæmorrhages. This was borne out by the observation that the abdomen contained clot of different dates. Cases of this kind had been described by Mr. Taylor of Birmingham. A valuable sign of hæmorrhage into the broad ligament had been described by Mr. Tait; processes of cellular tissue went back to the sacrum on each side of the rectum, and in hæmatoma and cellulitis a ring was formed round the rectum in this tissue which could be plainly felt from the rectum.—Mr. CLUTTON maintained that a considerable number of cases of the first variety occurred, but they came under the care of the surgeon rather than of the obstetric physician. In the autumn of 1894 he saw a case which resembled one of acute strangulation of the small intestine or perforation. The patient was a woman aged forty who had had no children for ten years, but was still menstruating regularly; she had a firm uterine fibroid. The symptoms were vomiting, faintness, and prostration, with acute obstruction of gut, neither feces nor flatus being passed. On opening the abdomen there was a rush of blood and a ruptured tubal gestation was found and removed; the patient recovered. He agreed that it was better to leave a portion of adherent sac attached to the intestine rather than to attempt to separate a firmly adherent gut.—Dr. LEWERS said that two years ago he operated for a right ruptured gestation of three months. He removed the fetus and tube in the usual way, and the patient made a good recovery. A year later she came back with similar symptoms. There was a swelling in the left side of the pelvis, and another in the mid-line. Changes in the breast indicated pregnancy. The day before operation she passed a blighted ovum of the size of a hen's egg. This made no difference to the size of the tumour on the left side of the pelvis, which was found to be a small ovarian tumour, and was successfully removed.—Mr. SUTTON, in reply, said that he was glad to find that surgeons were beginning to take an interest in these cases. He did not think that tubal pregnancy was relatively more common than formerly, but it was certainly more frequently recognised. He referred to two cases in illustration of this. In one case a woman ate a hearty meal of mussels; she was afterwards taken suddenly ill, and was thought to be suffering from poisoning. She died and a necropsy being made on a coroner's order a ruptured tubal pregnancy was found. In another case a woman in Paris was eating an ice at a restaurant when she was suddenly taken ill and died. At the necropsy it was found that she had a ruptured tubal gestation. Cases of the first group usually died unrelieved, while those of the second group went to hospitals and were diagnosed as instances of pelvic hæmatocoele. Cases of the third group had been known for a long time; there first occurred a moderate hæmorrhage from a tubal abortion, then inflammation followed by successive hæmorrhages; these were the intra-peritoneal hæmatocoeles of the obstetric physicians.—Mr. BIDWELL, in reply, said he only attempted the separation of the gut with his finger, but found it to be more fragile than he thought.

CLINICAL SOCIETY OF LONDON.

Nephrectomy for Renal Adenoma.—Cases illustrating Local Treatment by Oxygen.—Syringomyelia with Perforating Ulcer.—Pseudo bulbar Paralysis.—Facio-humeral Type of Myopathy.—Fracture Dislocation of the Spine.—New Form of Aspirating Instrument.—Successful Trephining for Syphilitic Cranial Necrosis.—Meningococle.—A Case of Myosis Fungoides.

A MEETING for the exhibition of clinical cases was held on March 22nd, Mr. LANGTON, Acting President, being in the chair.

Mr. MALCOLM showed a child aged four and a quarter years on whom Nephrectomy was performed for Adenoma two years and four months ago. The interest of the case lay in the long survival of the child after operation. He had removed the right kidney and a tumour which had been regarded as a malignant adenoma, the mass being of oval shape and measuring six inches by four inches. This was done on Nov. 15th, 1892, the child being then under two years of age. When he recorded the case in January, 1894,¹ he thought that only one other child had survived nephrectomy for neoplasm more than a year, in which case death from recurrence had taken place after eighteen months. But, in debate, Mr. Sutton had directed attention to two cases operated on by Dr. Abbe of New York,² in which the children, aged respectively two years and fourteen months at the dates of the operations, had survived. Mr. Malcolm was able, from a private communication, to say that both Dr. Abbe's patients were recently alive and well. One of them would have lived after operation three years on April 12th, 1895, and one was operated on five days after the case he now showed. The patient exhibited was quite well and freely secreted urine of good specific gravity and free from albumen. In answer to Mr. Howard Marsh, Mr. Malcolm said that the tumour in his case had consisted almost entirely of tubules lined by columnar epithelium and elongated processes of epithelial cells which did not show any lumen. As such tumours usually contained also cells resembling striped muscle cells, and as these were absent in this case, he had thought that the peculiar structure of the tumour might account for the good result. This view was negatived by the fact that in one of Dr. Abbe's cases similar tubules were associated with sarcomatous tissue, while the others consisted of striped muscle cells, round and spindle-shaped cells. If the result was not due to some peculiarity in the nature of the tumour the only other suggestion he could make as to the cause of the prolonged immunity was that he had removed the growth very freely, including the capsule and a mass of enlarged glands.

Mr. G. STOKER showed three cases to illustrate Local Treatment by Oxygen Gas. The first case was that of a woman aged fifty-six years, who had for several years been suffering from an intractable ulcer of the leg involving almost its entire circumference. She had been under treatment as an in- and an out-patient for years without any benefit. The limb was immersed in an atmosphere consisting of equal parts of air and oxygen gas. The treatment at once entirely relieved the pain from which she had been suffering; the gas caused a pricking sensation when first turned on, but this disappeared in the course of half an hour. The pus was found to be speedily freed from organisms and the new skin formed was not cicatricial. The second case was that of a man who suffered from extensive and intractable ulceration of the hand, following a poisoned wound of the finger. The rapidity of the healing under a similar atmosphere was remarkable; the nails grew so quickly that they had to be cut every day, and there was an exuberant growth of hair on the back of the hand. By the seventh day the wound was completely aseptic. The third case was that of a girl who had lost nearly all her hair from alopecia areata. The head had been shaved previously, and no hair grew after that till the treatment was commenced. He fitted her with a rubber cap, and into this pure oxygen was pumped. At the end of six weeks she was getting quite a good head of hair.

Mr. MORGAN and Dr. MOTT showed a case of Syringomyelia with Perforating Ulcer. The patient was a man aged twenty-four years who was well until sixteen years of age. Then after a chill he developed perforating ulcer of the left foot, for which the leg was subsequently amputated. Eighteen months ago another ulcer formed on the right foot. The foot was in the position of talipes equino-varus, with pes cavus. There had been no crises.—Dr. MOTT added that there was wasting of muscles of the hand and arms, and the muscles did not react to even the strongest faradaic current, although they did to galvanism. Below the knee there was no sensation of any kind, but in other parts of the body there was dissociation of sensation which was characteristic of syringomyelia. The disturbance of sensation along with the wasting of muscles and the existence of perforating ulcers established the diagnosis.

Dr. MOTT showed a case of Pseudo-bulbar Paralysis in a man aged fifty-three years. Twenty years ago he had suffered from fits accompanied by left hemiplegia and some

¹ Clinical Society Transactions, vol. xxvii.

² Annals of Surgery, Philadelphia, January, 1894.

right paresis. Four years ago it was noticed that the arms and legs were still weak. The knee-jerks were increased, and wrist contraction was marked. There was much difficulty in swallowing, and saliva ran out at the angles of the mouth. On examining the larynx it was noticed that the two sides of the epiglottis fell together. Articulation was very imperfect, and on one occasion he had been fined in mistake for being drunk. The symptoms were possibly due to sclerosis of the pyramidal tracts, which at their decussation might interfere with the glosso-labio-laryngeal nucleus.—Dr. JAMES TAYLOR said that some time since he had seen a somewhat similar case, which Dr. Hughlings Jackson, from the history and clinical appearances, thought was one of pseudo-glosso-labio-laryngeal paralysis—that is to say, a case of double cerebral lesions simulating disease of the bulb, although other physicians who saw it took it to be an ordinary case of glosso-labio-laryngeal paralysis. The cerebral hæmorrhage which ultimately determined the death of the patient rendered it impossible to ascertain what the condition was in the brain, but there was descending degeneration of equal extent on both sides, and the cells of the hypoglossal nucleus were normal. The case shown was similar and the history pointed in the same direction. This patient's voice was very peculiar. He only remembered to have heard that intonation in one other case exhibited by Dr. Ormerod.

Dr. BEEVOR showed a case of the Facio-humeral Type of Myopathy. The patient was a man aged twenty-seven years, who began to feel weak in his legs when fifteen. At twenty he waddled when walking, and at twenty-two he could not walk without help. There was considerable wasting of the muscles of the face, arms, and trunk, and some lateral curvature of the spine with pronounced lordosis. The extreme lordosis was due to weakness of the glutei and rectus abdominis muscles.

Mr. BALLANCE next brought forward a case of Fracture Dislocation of the Spine which had been operated on. The patient was a man aged forty-eight years who fell from a train in rapid motion in November, 1893. He was unable to get up after the accident and he developed cystitis with incontinence of urine and feces. When admitted to hospital he was quite unable to stand or sit owing to loss of power in the lower limbs. Below the knees the muscles were quite paralysed and wasted, and the gluteal muscles were also wasted. Tactile anaesthesia was nowhere absolute, but there were well-defined areas of dissociation of sensation to heat, pain, and cold. The knee-jerks were diminished. The twelfth dorsal vertebra projected very markedly. On Jan. 12th, 1894, seven weeks after the injury, Mr. Ballance made a seven-inch incision with its centre immediately over the projecting vertebra, and removed the laminae and spinous processes of the tenth, eleventh, and twelfth dorsal and the first two lumbar vertebrae. He did not open the theca, but that sheath was adherent to the lamina of the first lumbar vertebra. Two months later the patient had regained perfect movement of the hips and knees, sensation was much improved, and the sphincters were under control. The patient was actually in the condition of a man who had undergone double amputation of the legs below the knees, and he observed that it was quite open to question whether or not he would be better off without the two wasted pegs which were all that remained of the limbs below that level. He could only walk with crutches. He recalled a case in which a patient, who was a footman, had both his feet removed under similar circumstances.

Dr. GARRETT, introduced by Sir Dyce Duckworth, showed an ingenious piece of apparatus by which drainage, aspiration, and exploration could be performed with the same instrument.

Dr. J. B. PARKINSON showed a case of Local Anaesthesia in one Hand. The patient was a young woman aged nineteen years, who suffered from occasional attacks of enlargement and discolouration of one hand, lasting from some hours to several days, specially provoked by cold. The hand became cold and lost sensation. The nerves on the ulnar side appeared to be less sensitive, and pressure on that ulnar nerve did not give rise to any sensation in the hand, as on the other side. She had suffered from amenorrhoea of five months' duration.

Mr. H. W. PAGE exhibited a case of Syphilitic Cranial Necrosis in which there were frequent fits and trephining was followed by recovery. The patient was a man aged forty-one years, who was admitted into his wards suffering from fits which had gradually become more and more frequent; indeed,

he was almost unconscious, being roused only with difficulty. He seemed to be gradually losing ground. There was a history of syphilis and long continued pain in the head. No optic neuritis was present. The symptoms appeared to point to widespread pressure on the brain rather than any definite cerebral tumour. He trephined over the Rolandic area and at once came across some inflammatory material between the scalp and the bone. Having removed the piece of bone he found much broken-down gummatous matter between the bone and the dura mater, of which he removed as much as he could. As the dura mater itself appeared healthy he did not open it. Since then the patient had been free from fits and had had no return of the pain. In 1890 he had a very similar case, in which spontaneous relief was afforded to the pressure by erosion of the bone, but the patient died after a time from pyæmia.

Mr. H. B. ROBINSON exhibited a case of Meningocele. The patient was a child aged seven months, who had first come under his care in December last with a swelling on the right side of the head over the posterior part of the parietal bone. The child was the first-born of a healthy looking mother, and was born after some difficulty. The presentation was cranial and instruments were used. The head appeared to be bruised all over, but most of this swelling soon went away, within the month, leaving the tumour now presented. The mother said that the swelling seemed then about the same size as it was on the first visit to the hospital, about four and a quarter inches by four and a quarter inches (Dec. 4th), and from the time she first noticed it she thought that it "throbbled." On examination the swelling was round and soft with the skin quite free over it. It was placed over or a little anteriorly to the right lateral fontanelle. On deep pressure there could be made out some deficiency in the skull, the edge being very irregular and everted, especially anteriorly; the deficiency seemed to be chiefly in the posterior part of the parietal bone. The skull as a whole was asymmetrical. There were very marked impulse and increased tension on coughing or straining. On pressure when the swelling was lax no definite external pulsation could be made out. Pressure on the swelling did not affect the child at all. There was no history of fits. The tumour had not been tapped. The diagnosis of traumatic meningocele was entertained because of its situation, which was a very rare position for the congenital forms, and from the history of the difficult labour and use of forceps. Such a cause for the traumatic form seemed not previously to have been described.—Mr. MORGAN thought that there was absence of the lateral half of the occipital bone; but whether this was due to the instrumental labour or to want of development he could not say. If it had been an encephalocele it would have increased in size more markedly.—Mr. A. PEARCE GOULD regarded the case as traumatic in origin; he thought he felt a raised rim of bone round the edge and depressed bone within this.—Mr. MARSH suggested that it might possibly be a hæmatocele.—Mr. ROBINSON said that he proposed to tap it shortly with a view to clear up the diagnosis. The extreme tension on coughing and straining was against hæmatocele.

Dr. DE HAVILLAND HALL showed a case of Mycosis Fungoides. The patient was a man aged fifty-two years, who first complained of pains in the arms and legs, to relieve which he rubbed in acetic acid. Between two and three years ago the skin where he had applied the acid began to be affected, especially on the outer side of each arm. The rash spread to the thighs, and in September, 1893, a big swelling the size of a goose's egg appeared on the right hip, and next one on the right elbow. The tumours lasted from six to nine months, some of them breaking down and discharging, others disappearing without going on to that stage. In June, 1894, tumours made their appearance on the feet, head, and face. Since October he had complained of sore-throat, and tumours of the same nature could be seen in the pharynx and on the arytaenoid cartilages.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

Selection of Cardiac Tonics.—Treatment of Psoriasis by Thyroid Extract.—Aneurysm of the Descending Thoracic Aorta in a Female.

A MEETING of this society was held on March 14th, the President, Dr. J. G. GLOVER, being in the chair.

Dr. ARCHIBALD CHRISTIE read a paper on the Selection

of Cardiac Tonics. He first criticised the methods of employment of this class of drugs. Usually the practitioner prescribed one favourite member of the group, generally digitalis, to the exclusion of the others. In this way the peculiar properties of the drugs were not considered, and it could not be expected that their full benefit would be obtained. The importance of bearing in mind the different factors occurring in any individual case of heart disease—viz., the weakening of the myocardium, the disorder of the cardiac innervation, the condition of the arteries—was strongly emphasised as being essential in choosing the tonic best adapted to the case. The action of digitalis was then illustrated by means of numerous sphygmographic tracings taken during the course of treatment. The disadvantages of digitalis were much insisted on, and especially in cases when for various reasons it was inadvisable to cause a rise of blood pressure, digitalis was the worse cardiac tonic to employ. Strophanthus was the most useful cardiac tonic for general use. Illustrations were given of its use, and the rapidity of its action was brought prominently into notice. Twenty minims of the tincture of strophanthus by mouth produced a distinct effect on the pulse tracing of healthy individuals in fifteen minutes. The actions of convallaria, caffeine, and strychnine were also described and compared. This paper was illustrated throughout by lantern slides of sphygmograms obtained from patients during the course of treatment.

Mr. CHARLES KING described the case of a woman aged fifty years who had for twenty years or more suffered from general Psoriasis in a most aggravated form. There had been practically little relief to symptoms during these years, on many occasions the skin becoming dry, hot, and inflamed, impeding voluntary movements almost completely. After the use of all the usual remedies, in November last she was treated with thyroid extract. At first there was considerable constitutional reaction, but in a short time the psoriasis disappeared, and now the patient is practically well. Mr. King remarked on the value of the use of thyroid extract in chronic scaly skin diseases.

Dr. BURNET and Mr. MACREADY showed the specimen and drawings and gave an account of a case of Aneurysm of the Thoracic Aorta. The patient was a woman thirty-one years of age, who had given evidence of symptoms of serious disease of the thoracic viscera, but none sufficiently definite to allow of accurate diagnosis. She came under observation on account of difficulty in swallowing food and consequent emaciation and weakness. Occasionally this difficulty disappeared, but only to recur. Gastrostomy had to be performed on account of the increasing dysphagia, but the operation came too late, and she died exhausted two days later. After death an aneurysm of the aorta was found in the posterior mediastinum. The oesophagus was compressed between the heart and the aneurysm, and a narrow vertical opening communicated between the heart and the aneurysm, which was blocked by firm coagula in the recent state. The oesophagus at the point of greatest pressure was in a sloughing condition, and was in communication also with an abscess cavity. They remarked on the comparative rarity of aneurysm of the thoracic aorta below the arch, and especially in females. In 167 cases of aneurysm of the thoracic aorta collected by Crisp this combination did not occur once, in 24 cases of aneurysm of the descending portion collected by Dr. Burnet and Mr. Macready it occurred only twice in females.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Epithelioma of the Oesophagus with Perforation into the Trachea.—Exhibition of Specimens.

A MEETING of this society was held on March 13th, Professor SHERIDAN DELEPINE being in the chair.

Dr. LEECH and Dr. GROSVENOR mentioned a case of Epithelioma of the Oesophagus with Perforation into the Trachea. The patient was fifty-five years of age. Three years ago there commenced symptoms of discomfort in the throat and an alteration of the voice. Two years ago he had occasional attacks of choking and difficulty of swallowing, which increased for six months, when it was suddenly relieved. A month afterwards the patient was seized with violent paroxysms of coughing, and he could not swallow even a drop of water, death occurring in six days. Post mortem an epithelioma was found which was situated in the middle of the oesophagus, encircling the tube, and two inches

in length; there was a large perforation into the trachea.—Dr. LEECH and Dr. WILD mentioned a case of ulceration of the oesophagus perforating the aorta and right lung during the course of typhoid fever.

Dr. PERCY ASHWORTH showed specimens of Tuberculous Salpingitis and Peritonitis from a woman aged fifty-seven whose family history was good, but who had married a tuberculous husband, by whom she had five children—the first two healthy and the others tuberculous. When seen seven months before death the patient was greatly emaciated, and the abdomen was filled with fluid. After tapping, a hard mass was found in the pelvis. She was tapped twenty-one times in all; at the thirteenth tapping a hard nodule was discovered in the abdominal wall at the seat of puncture. Post mortem this nodule was found to be a piece of tuberculous omentum adherent to the abdominal wall; the intestines were studded with tubercle, and the pelvis contained a large mass, from the midst of which the two thickened Fallopian tubes, filled with thin pus, could be isolated. There was no doubt that in this case the tuberculous mischief commenced in the Fallopian tubes, and the interesting point was whether the infection had thus been communicated by the tuberculous husband.

Dr. WILLIAMSON showed a Microscopical Specimen of the Phrenic Nerve which presented well-marked parenchymatous neuritis. The specimen was taken from a case of alcoholic paralysis which was under the care of Dr. Steell. During life there had been the usual signs of alcoholic neuritis and finally paralysis of the diaphragm. The anterior tibial nerves also showed marked parenchymatous neuritis. The spinal cord, macroscopically and microscopically, was normal in the cervical, dorsal, and lumbar regions.

Dr. ROBINSON showed a Congenital Malformation in the Heart of a Sheep, and card specimens were shown by Dr. KELYNACK, Dr. MILLIGAN, and Mr. WOLSTENHOLME.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Some Points in Invalid Dietetics.

THE eighth ordinary meeting of this society was held on March 20th, the President, Mr. J. F. CHAVASSE, being in the chair.

Dr. LESLIE PHILLIPS presented a man aged thirty. Four years ago a squarish bald patch came on the occipital scalp, upon which hair has never since grown and which is now hidebound. Two years later a round patch appeared at the vertex, apparently of alopecia areata. The hair has grown here, but a curious ring of baldness exists around it on which pale-coloured hair is now growing. A similar horse-shoe-shaped patch exists at the occiput, and a band over the right ear. This latter gives the impression of partial adhesion to sublying tissue, and pressure here caused pain at the nape. In the right cheek is a vertical band of apparent sclerodermic infiltration. The disease was apparently circumscribed scleroderma simulating alopecia areata, and if this view of the case was correct the regrowth of hair on one patch was notable. The alternative, but less probable, diagnosis given was that morphea and alopecia areata coexisted.

Dr. SHORT showed a man with Violinist's Palsy. The patient, aged twenty-six years, was a jeweller by trade, using his hands for fine work during the day, and for several years he had practised the violin in the evening. He first noticed a sense of numbness between the ring and little fingers of the left hand, followed by weakness of the arm and hand, so that he had to rest his elbow on his knee when playing. The marked features of the case were the absence of spasm or cramps, and the rapid wasting of the thenar, interosseous, and lumbrical muscles. He had been under treatment by massage and electricity for about two months, with marked improvement in the muscular power of the hand.

Mr. JOHN W. TAYLOR showed a Uterus, the seat of Malignant Disease, which he had recently removed by Doyer's operation of vaginal hysterectomy. In this operation the broad ligament is secured by two pressure forceps with elastic blades, and a considerable portion of the ligament may be removed on each side of the uterus without danger of injury to the ureters.

Mr. WOOD WHITE showed a middle-aged woman with a large fungating Epithelioma of the Left Eyelid. The growth had invaded the outer half of both upper and lower eyelids and extended on to the cheek and temporal region.

There were no enlarged glands to be felt. It had been growing for six years.

Dr. DOUGLAS STANLEY showed Cultures in various stages of the Löffler Diphtheria Bacillus.

Mr. HENRY showed a number of specimens illustrative of Injuries and Diseases of the Eye.

Dr. T. NELSON read a paper on Some Points in Invalid Dietetics, in which he reviewed the possibilities of the kitchen in providing a more varied diet for those suffering from fevers, gastric and liver disorders, and other affections. He gave examples of dietaries with methods of preparation of various food stuffs, and concluded by urging some form of instruction in the principles of cookery for medical students as a necessary accompaniment of success in practice.—The President, Drs. Short, Stanley, Puralow, Johnstone, Kirby, and others took part in the discussion.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL MEETING of this society was held on March 19th, Dr. S. JOHNSTON, President, being in the chair.

Mr. HORROCKS showed: 1. A case of Lupus of the Tongue. 2. An Epithelioma of the Temple where, after freely excising the growth, skin grafting by Thiersch's method was successfully employed. 3. A case in which the Astragalus was excised for Tuberculous Disease. A transverse incision was made and gauze packing employed for two days, the stitches then being tightened. A good result followed. 4. A case of Epithelioma of the Penis in which Thiersch's amputation was performed.

Mr. CHAPMAN showed (for Dr. MAJOR): 1. A case of Functional Paralysis simulating Sclerosis. 2. A boy aged twelve years with symptoms of Cerebellar Tumour. Twelve months ago there were headache, vomiting, and double optic neuritis; afterwards the sight failed, and now the patient is blind (optic atrophy). 3. A case of Aortic Aneurysm.

Dr. KERR showed: A man with "Habit Spasm" of sixteen years' duration. 2. A girl who had Tetany following a fall on the ice, with injury to forearm.

Dr. A. BRONNER showed cases of—(1) Retinitis pigmentosa, illustrating the early and late stages of the disease; (2) a patient on whom he had performed Stacker's Operation for Disease of the Attic.

Dr. H. BRONNER showed a patient with an obscure Brain Lesion, the symptoms being indistinctness of speech, general mental failure, and implication of the third, fifth, and twelfth cranial nerves on the left side. The probable seat of the lesion was discussed.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Varicocele, Nævus, and Varicose Veins of the Leg.—New Operation for the Cure of Rotation Inwards of the Entire Limb.

A MEETING of this Section was held on March 15th, Mr. W. THORNLEY STOKER, President, being in the chair.

Mr. CHARLES BALL read a paper on the Arrest of Bleeding by Sutures, with special reference to the operations for Varicocele, Nævus, and Varicose Veins of the Leg. In varicocele the mass of spermatic veins is separated from the vas deferens. Clamp forceps are applied above and below, and the entire mass excised *en bloc*; the cut surfaces are now brought together by a very fine continuous suture passed all round the cut extremities and the ends firmly knitted together, the forceps are removed, and if any bleeding takes place additional sutures are put in. No ligatures whatever are used; reliance must be placed altogether on the sutures to stop bleeding, as in the operation for harelip. By this method the spermatic circulation is occluded altogether, the vitality of the testes being provided for by the deferential arteries and veins. Union between cut extremities of the veins effectually braces up the testicle. In a period of five years this operation had been performed nine times with complete cure by primary union, no case of recurrence being met with. In nævus a number of needles are passed under the growth, each of which is threaded with boiled silk. An elastic ligature passed round under the needles temporarily arrests bleeding.

The nævus is excised down to the needles; the elastic ligature is now removed, the needles pulled through, and the silk sutures firmly knotted; in this case also bleeding is controlled by the sutures, if sufficient are put in, and union takes place rapidly. In varicose veins of the leg an incision is made over the portion to be removed, two pairs of catch forceps are applied to the vein, which is divided between them and dissected up to each angle of the incision. Boiled silk sutures are now passed under the entire length of the wound, and the one at each angle is closed, completely controlling the vein, which is cut away close to the sutures; a fine continuous suture is applied to the margin of the wound and the remaining deep sutures closed; here again no ligatures of any kind are applied to the veins.—The PRESIDENT thought that papers dealing with practical matters of detail of this sort were of more interest than the capital subjects of surgery. With regard to the question of the avoidance of ligatures he agreed with Mr. Ball. Quite recently he had written a paper, published in the *Dublin Journal of Medical Science*, on operations on veins. He thought that sutures were better avoided in superficial operations which have to do with veins. Mr. Ball's passage of a ligature under the varicose vein is practically a soft ligature by acupressure. He agreed with nearly all Mr. Ball said on operations for varicocele. In that case pressure applied by a pad low down over the loose scrotum is not suitable. His own practice is to excise from half to one inch of the pampiniform plexus, pass a sterilised catgut ligature round the stump, and ligature the cut ends. He only tied the ligature round the stump tight enough to stop hæmorrhage. The part did not then necrose, and no slough was left.—Mr. BENNETT bore testimony to the success of the cases mentioned by Mr. Ball. What he thought of most importance was his method of dealing with nævi.—Mr. S. M. THOMPSON highly approved of deep sutures.—Mr. KENDAL FRANKS had never tried Mr. Ball's method, but hoped he would have an opportunity of trying it shortly. It was a new method. He did not think there was so much novelty in other matters mentioned in his paper.—Mr. W. THOMPSON thought Mr. Ball's treatment of nævus was the most important practical suggestion. It seemed to him that the ligature had been put upon its trial. Mr. Ball had abandoned the term "ligature" for suture, but he maintained that Mr. Ball was only ligaturing the veins in another way.—Mr. TAYLOR had seen a good many of the cases operated on by Mr. Ball. In the operation for varicocele the catching of the veins by the forceps flattened them out, and so there was a good broad line of union on suturing. The shortening of the cord was important.—Mr. BALL, replying, said that the President had used the terms "necrosis" and "slough" as being practically synonymous terms. He did not agree with this. A necrotic part becomes a slough when it becomes septic.

Mr. SWAN read a paper on a New Operation for the Cure of Rotation Inwards of the Entire Limb after aggravated Equino-varus, with an attempt to explain the anatomy and etiology of the distortion. Mr. Swan showed that the factors of foot inversion commence below the knee. The tibia is in its normal position, but the lower extremity of the fibula is deflected forwards, and is considerably in front of the position which it should normally occupy. This anterior position of the fibula is normally found in the quadrumana, where the foot is used for grasping and is ill suited for walking. Mr. Swan proposes to remedy this condition in man by a careful transverse division of the tibia alone at the junction of its middle and lower thirds. The fibula must be left intact. The lower fragment is rotated outwards and the foot thus brought into a straight position. Mr. Swan has adopted this method in many cases with perfect satisfaction.—The PRESIDENT, commenting on Mr. Swan's paper, thought that his theory of a descent back into lower forms of animal life was very interesting and quite in conformity with the explanation of many deformities.

CITY OF LONDON AND EAST LONDON DISPENSARY.—The annual meeting of this charity was held at the offices, Wilson-street, Finsbury, E.C., on March 22nd, Mr. F. Sharrett presiding. The report showed that the patients' attendance during last year exceeded 42,000. The contributions of subscribing members were £1007, and the awards of the Hospital Sunday and Saturday Funds were respectively £19 and £21. The institution is in a satisfactory financial position, being free from debt and having £1400 invested in Consols. The approaching retirement of Mr. Blunt, the secretary, was regretfully announced, his popularity and ability being heartily acknowledged.

Reviews and Notices of Books.

On the Geographical Distribution of Tropical Diseases in Africa. By R. W. FELKIN, M.D. Marburg, F.R.S.E. Edinburgh: William F. Clay. 1895.

THIS work was originally contributed by the author to the African Ethnological Congress which assembled at Chicago in 1893, while the Appendix, treating of a new method of illustrating graphically the distribution of disease in any area, is the reprint of a paper read before the Congress of Hygiene and Demography at Budapest last autumn. The author, who has a large personal knowledge of Africa, believes in the possibility of its colonisation by Europeans. Thus he says: "Can Europeans become acclimatised in Tropical Africa? My strong opinion is that it can only be possible if migration occurs step by step; and in estimating the possibilities of acclimatisation we must count by generations rather than by years. I believe, however, that our increased knowledge of climatology and hygiene renders the problem of acclimatisation more easy of solution than it was, and, given picked individuals and the careful selection of tropical areas in which to colonise, I see no reason why, with precautions, inhabitants of the temperate zone should not colonise even Central Africa. In the selection of emigrants great care should undoubtedly be taken, and all persons with a tendency to gout or rheumatism, diabetes or albuminuria, those of a nervous or alcoholic family history, or those suffering from either acquired or hereditary syphilis, should certainly be restrained from emigrating to tropical Africa." With regard to the unhealthiness of West Africa the author writes: "Although the West African Coast is called 'the white man's grave,' yet it is undoubtedly true that to a certain extent it is not malaria which causes—or perhaps one should say has caused—the very high death-rate of even 50 per cent. amongst the whites on the coast. In the past, at any rate, this death-rate has been due to the fact of diseased individuals proceeding to Africa, to want of knowledge of the precautions necessary for a residence there, and, unfortunately, in many cases to the wilful ignoring of prophylactic measures and of a well-ordered life." The author speaks very highly of the climate of the Orange Free State, and regards it as an excellent sanatorium for sufferers from pulmonary tuberculosis. Dr. Felkin's map of the distribution of disease is likely to be very useful. The number of different symbols is great, and it requires very close scrutiny to distinguish among them (thus the symbols for scarlet fever and rheumatism, and for syphilis and ophthalmia, seem almost identical), but the information afforded is most valuable.

St. Thomas's Hospital Reports. New Series. 1892-93. Edited by T. D. ACLAND, M.D., and BERNARD PITTS, F.R.C.S. Vol. XXII. London: J. & A. Churchill.

WE learn from the editors' preface that the publication of the present volume has been delayed in order that the statistical reports for 1892 and 1893 and the Calendar for 1894 and 1895 might be included in it. Attention is directed by the editors to the new arrangement of the names of those who have held appointments or who have gained prizes or distinctions in the hospital, and to the local and alphabetical lists of students of the hospital which appear at the end of the volume. About 150 pages at the end are taken up with the Hospital Calendars and purely school matters, of little interest to members of the profession not connected with the hospital. The contents are divided into two parts as usual: contributions from members of the staff and others and statistical reports. In the former are included two papers in Memoriam—W. B. Hadden, M.D. Lond., F.R.C.P., and George Rainey, his Life,

Work, and Character, by Mr. W. W. Wagstaffe (this has been recently specially noted in the columns of THE LANCET). Mr. H. H. Clutton contributes a paper on the Treatment of Hallux Valgus, also a case of Separation of the Lower Epiphysis of the Femur, Amputation, Pyæmia, Gangrene, Death. Mr. W. H. Battle records cases of Traumatic Separation of the Upper Epiphysis of the Femur in Early Life and a case of Acute Bone Inflammation in which a large quantity of Medullary Oil was found in the resulting Subperiosteal Abscesses. Dr. Sharkey writes on Acute Bronchiectasis; Dr. W. H. Tate on Pregnancy in a Unicornuate Bicornuate Uterus; Mr. Edmund White, pharmacist to the hospital, on Sterilised Dressings and Sterilised Water; Mr. C. S. Wallace on a case of Gangrene of the Foot, with Sugar in the Urine, successfully treated by Amputation; and Dr. Cullingworth on the Removal of the Uterine Appendages for Uterine Myoma, with an account of Twenty Cases. In the second part are the statistical reports—Medical, for 1892, by Dr. Hector Mackenzie; for 1893, by Dr. Charles R. Box; Surgical, for 1892 and 1893, by Mr. F. C. Abbott. Midwifery Department: Dr. R. Cory. In-patient Department for Diseases of Women: Dr. Tate. The Ophthalmic Department: 1892, Mr. J. Fisher and Mr. E. P. Isaacs; 1893, Mr. J. F. Rudall. Out-patient Department for Diseases of the Skin: 1892, Mr. W. B. Winston; 1893, Mr. J. W. Hewitt. Department for Diseases of the Throat: 1892-93, Mr. W. P. Purvis. Aural Department: 1891-92, Mr. R. Lake. We are much pleased with the arrangement of these statistical reports, and know of none which are calculated to give greater satisfaction to those members of the medical profession who are anxious to obtain information of value. They are evidently compiled with great care, and must have involved much labour. The result is highly creditable, more especially to those responsible for the reports of the medical and surgical departments. The reports of future years would, perhaps, be improved if, instead of printing long abstracts of cases which have been brought before the societies or published in the medical journals, reference were made to the places where they have already appeared; such reports are read not only by the men of the hospital to which the profession is indebted for them, but by many of those who are in earnest pursuit of professional knowledge. They are also most useful for reference.

On the Natural Immunity against Cholera and the Prevention of this and other Allied Diseases by Simple Physiological Means. By C. GODFREY GUMPEL. London: Williams and Norgate. 1894.

THIS is a learned and at the same time curious pamphlet. It is learned in that its author shows that he is well acquainted with the literature of the subject and with all the latest researches that have been made in regard to it, and curious in that it sets forth an extremely simple view and remedy. Briefly stated, the author's view amounts to this. The rôle of the disease is in the blood, the real cause of death is attributable to the destruction of the blood corpuscles, which swell by the absorption of water, assume a globular form, and burst, allowing the hæmoglobin and potash salts to diffuse in the blood serum; whilst in the globular form the corpuscles have lost their capability of absorbing oxygen and their power of resisting the cholera poison. The presence of sodium chloride in the blood serum tends to counteract this endosmotic property of the corpuscles to absorb water. Ninety per cent. of a population in times of cholera epidemics escape the disease—in other words, are immune to it—and the author concentrates his attention on this and seeks to explain it. Susceptibility to cholera, he argues, indicative of a deficiency of sodium chloride in the system, and conversely the presence of the amount of common salt in the blood that the

system needs the probable cause of immunity from cholera. It follows, if this hypothesis be correct, that the best way of conferring such immunity from cholera, the best prophylactic, is to supply the system with the required amount—a few grains dissolved in cold water and taken every morning before food. We do not at all desire to prejudice the reader by thus curtly expressing the aim and object of this pamphlet. We are persuaded that the author has convinced himself of the truth of the view he advocates, and about which he has written this little treatise, which, apart altogether from the practical point he seeks to prove, is worth reading on account of the nature and variety of the information which it contains. The German edition of this little treatise, its author tells us, was originally written in 1893, and was published in Munich last autumn on the recommendation of Professor Max von Pettenkofer. The literary part of the pamphlet and that which deals with destructive criticism are interesting; it is the constructive part that seems to us weak. To examine and criticise it would take up more space than we can give. Those who care to do so can read it through in a couple of hours, and if they ever have the opportunity and desire to try the prophylactic virtues of the small dose of sodium-chloride recommended they can, at any rate, easily do so without any injury to themselves or anybody else.

Transactions of the Eighth International Ophthalmological Congress held in Edinburgh, August, 1894. Edited by GEORGE A. BERRY, F.R.C.S. Edin., with the assistance of H. PARENT, M.D., of Paris, C. HESS, M.D., of Leipzig, and A. F. FERGUS, M.D., of Glasgow. Edinburgh: Messrs. T. and A. Constable. 1894.

THIS goodly volume, which has been published with commendable speed and accuracy by the editors, contains the papers read before the Congress that met in Edinburgh last year under the genial presidency of Dr. Argyll Robertson, by whom the numerous visitors were warmly welcomed. It contains several interesting papers. Dr. Little of Manchester gives, for example, the results he has obtained from his operations for Cataract for the last five years, during which period he has extracted 428 senile cataracts; 322 of them were performed with and 106 without iridectomy, and it is interesting to find that in the hands of a master the difference in the degree of success is comparatively trifling. In the discussion which followed, Dr. Swanzy and Mr. Critchett expressed themselves in favour of the combined operation, whilst Dr. Noyes, Dr. Knapp, and Mr. Fridgin Teale preferred the simple operation. Professor Leber discussed the proper treatment to be adopted in cases of Perforating Injuries of the Eye by Morsels of Copper, and advocated their early removal by operation. Professor Panas considered the Oculo-motor Paralysis caused by lateral pressure of the cranium, and showed that the greater number of such paralyses were due to fracture of the base of the skull. Dr. Mules describes a new operation for Ptosis, and in a second paper his method of dealing with Ulcers of the Cornea by means of a specially prepared gelatine wafer. Mr. Marcus Gunn contributes an article on the Changes in the Macula associated with Retinal Inflammation and Oedema. A paper that led to some interesting discussion was by Dr. Benson of Dublin on Recurrent Temporary Visual Obscurements, with the ophthalmoscopic appearances observed during the obscurations, which are probably of vaso-motor origin. Mr. Juler supplies a contribution to the Anatomy and Physiology of the Iris, in which he describes a dilator muscle of the iris. The Mechanism of Accommodation is the subject of a paper by M. Tscherning. Dr. Bull draws attention to the effects of Lid Pressure on the Cornea. Histological papers on the Structure of the Ganglion Cells of the Retina and the disposition of Schlemm's

Canal are given by Dr. Bach and Dr. Gutman. The treatment of strabismus by advancement instead of tenotomy is ably advocated by Dr. Landolt in a paper on Strabotomy. Dr. Darier of Paris contributes a paper on the Best Methods of applying Mercury in Ocular Therapeutics and discusses the relative value of innunction, hypodermic injection, intra-ocular injection, and subconjunctival injection. It would appear that, whilst in many cases these methods of treatment are very efficacious, in others severe irritant symptoms are apt to be set up which may prove troublesome, and rather larger experience than we at present possess is required before they can be recommended with confidence.

We cannot pretend to give a full list of the sixty or more papers that are contained in this volume, but many of the articles deserve careful study by every ophthalmic surgeon. The Congress appears to have been a highly successful one, and it was agreed that the next Congress should be held at Utrecht, the date being at present not definitely settled.

Essays on Rural Hygiene. By GEORGE VIVIAN POORE, M.D., F.R.C.P. Lond. Second Edition, with Thirteen Illustrations. London: Longmans, Green and Co. 1894.

WE are not at all surprised at the appearance within eighteen months of a second edition of this work, for it contains a large amount of interesting and instructive matter based upon the results of reflection and experience on the part of a bold and original thinker. The author has added a large amount of new material to the present edition of his "Essays on Rural Hygiene," and omitted some which had previously appeared. What he has to say is well worth reading, and as the book has the merit of being vigorously and pleasantly written the reader's interest is stimulated and sustained. Sanitary defects, difficulties, and shortcomings are tersely described, and the way in which the author would have them dealt with is set forth in a clear and practical manner. The chapters on concentration of population in cities, "the living earth," practical details, and personal experiences are written in a fresh and excellent way. But our readers should peruse the volume and judge of its merits for themselves.

Analytical Records FROM THE LANCET LABORATORY.

(1) LIQUOR CINCHONÆ HYDROBROM (FLETCHER).

(2) CINCHONA WINE (FLETCHER).

(FLETCHER, FLETCHER, & CO., HOLLOWAY, N.)

MESSRS. FLETCHER have recently added an important new member to their well-known list of syrups of the hydrobromates, of the value of which we have before expressed a favourable opinion. In the new preparation (liquor cinchonæ hydrobrom.) hydrobromic acid is employed as the solvent of the active principles of cinchona bark, so that it contains amongst other less well-defined constituents the whole of the alkaloids of cinchona, together with the kinic, kinovic, and cincho-tannic acids, which contribute important aromatic and tonic properties not possessed by the chemically separated alkaloids themselves. The hydrobromic extract is a dark reddish-brown, syrupy liquid, acid in reaction, and turning nearly solid on the addition of alkalis, the mass yielding an abundance of alkaloid when the proper solvents are used. Bromine was recognised, but with some difficulty, owing doubtless to the complexity of the preparation. The extract remains perfectly clear, even when largely diluted with water, and is not unpleasant to the taste. It is sufficiently stable to allow of combination with a well-chosen wine, samples of which we have also

examined. On analysis the Cinchona Wine gave the following results: alcohol, by weight 13.38 per cent., by volume 16.52 per cent., equal to proof spirit 28.95 per cent.; extractives, 17.80 per cent.; mineral matter, 2.45 per cent., consisting largely of the potash salts of the bark. Its composition indicates the employment of a good class of port wine for this purpose, each wineglassful being equal to ten minims of the hydrobromic extract, or the equivalent of ten grains of selected cinchona bark. It is an agreeable tonic and invigorant. Not the least interesting and important feature of the extract is that it is perfectly compatible with iron compounds, more particularly with the bromide, no precipitate or even a blackening in colour being produced, as in the case of ordinary alcoholic extracts. This combination of cinchona with hydrobromic acid is designed to obviate the distressing symptoms which, as is well known, frequently follow the exhibition of quinine or its allies—an advantage which, we learn clinical experience has proved it to possess. Liquor cinchonæ hydrobrom. (Fletcher) is calculated to remove a drawback, therefore, which has debarred many from deriving the antiperiodic, antipyretic, and tonic properties for which cinchona bark is chiefly valued.

ALPHA GUAIACOL (SYNTHETIC CRYSTALLISED).

(A. CRAMPIGNY & Co., PARIS. LONDON: WILCOX AND Co., 239, OXFORD-STREET, W.)

Most chemical works of reference describe guaiacol—the methyl derivative belonging to the group of diatomic phenols, of which catechol and resorcinol are members—as a strongly refractive liquid. It is prepared synthetically in the form of well-defined crystals, which melt at the temperature of the hand, the liquid boiling a few degrees above 200° C. It crystallises at 28° C., although a lower temperature is necessary for recrystallisation. On dropping, however, a crystal into the liquid at 15.0° C. the entire mass soon solidifies, the temperature rising to nearly 30° C. An aqueous solution of these crystals, we find, gives a mahogany colour with iron perchloride, and an emerald green changing to olive with concentrated sulphuric acid. Guaiacol is a powerful antiseptic and disinfectant, and has been used as an inhalation in phthisis. On applying it to the skin it is said to exert powerful antipyretic effects in febrile disorders, more especially in tuberculous. Its use in dental treatment is also well known. Since, however, it has been obtained in a pure crystalline form guaiacol, or alpha guaiacol, as the above makers prefer to distinguish it, will probably find a wider field of usefulness in the treatment of disease, especially as hitherto its uncertainty of composition, as represented in creasote, afforded no guarantee of uniform and constant results. For internal administration it is used in capsules.

LIQUORICE EXTRACT (SOLAZZI).

(STREET BROTHERS, 5, SKELLS-STREET, LINCOLN'S-INN, W.C.)

The dried extract of liquorice root, generally sold in sticks, has frequently been the subject of very considerable adulteration, the adulterant commonly found being entirely inert medicinally, and being in most cases some form of starch. The above brand has long been known to be of standard purity. We found the specimen to be completely soluble in water and entirely free from impurities of any kind. It is, therefore, well adapted for the pharmaceutical purpose for which it is so useful, while as a popular demulcent it is both safe and reliable.

HUMANISED MILK.

(THE ATLESBURY DAIRY COMPANY, LIMITED, 31, ST. PETERSBURGH-PLACE, BAYSWATER.)

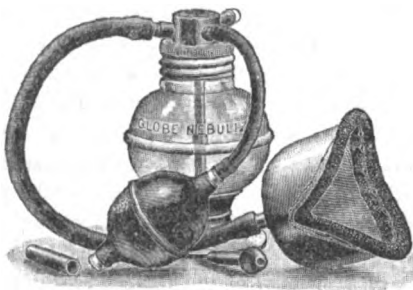
Samples of this milk were kept in the Laboratory for several weeks before being opened, at the expiration of which time the contents were found to be perfectly sweet and in good condition. The bottles are closed by a metal cover fixed upon a rubber band by atmospheric pressure, the space within being exhausted of air. On piercing the lid with a sharp-

pointed instrument air rushes in, and the cover may then be easily removed. The following analysis shows how well adapted this preparation is for infant feeding: total solids, 11.42 per cent.; fat, 3.70 per cent.; mineral matter, 0.47 per cent. Its composition is evidently based upon well-ascertained physiological requirements. The milk is sterilised and we could trace no preservatives, two points which accentuate its value and excellence as an infant food.

New Inventions.

THE GLOBE NEBULIZER.

MANY of the various forms of spray-producing or "atomising" apparatus resemble each other in projecting a more or less forcible stream of medicated spray carried by a current of air or steam. The instrument under notice acts on a somewhat different principle, the forcible jet of spray being produced within a globular vessel furnished with a caoutchouc tube through which the patient breathes quietly, inhaling an atmosphere charged with a vaporous cloud or mist derived from the solution employed. Only a small quantity (less than half an ounce) of the medicated solution is put into the bottle and is sprayed by a current of air supplied by an ordinary valved caoutchouc ball worked by hand. The spray being driven against the inside of the bottle is further com-



minuted and is quickly felt in the naso-pharynx of a person breathing through the tube. Alcoholic solutions of oleo-resins are, from their physical properties, well adapted for use in this apparatus. One of the formulæ recommended for cases of bronchial and catarrhal affections consists of menthol crystals, oil of "Scotch pine," of eucalyptus, and of cassia, dissolved in tincture of benzoin. Other formulæ have "fluid petrolatum" as the solvent, and to others glycerine is added. Several of the stock solutions contain iodine, carbolic acid, cocaine, quinine, antipyrin, &c. A nickel-plated inhaling mask is supplied for ordinary use, as well as vulcanite tubes applicable to the nostrils and the ear. When the breathing-tube is detached and the hand-ball vigorously worked, the "nebulized" vapour issues from the short outlet tubes like a faint cloud of pale smoke. The designer is Dr. H. M. Dunlap, an American physician, and the London agents are Messrs. Oppenheimer, Son, and Co., Limited, 14, Worship-street, E.C.

NEW SAFETY BOTTLE.

MR. PADMORE, 84, Regent-street, Leicester, has brought out a novel and very simple contrivance for guarding against mistakes in the handling of bottles which contain poisons. The neck of the bottle below the lip is cylindrical for a length of about an inch, as is the case with very many ordinary bottles, and this part is encircled by a loose collar of tinplate, to which a swinging cap covering the cork is attached by means of a wire. Previously to removing the cork this cap must be turned aside out of the way, and a further means of attracting the attention of the careless is provided by the fact that the tilting of the bottle in pouring out the contents causes the cap and loose collar to fall in the way of the issuing fluid, so that they have to be turned round and held up between the finger and thumb before a glass or cup can be filled. The attachment does not in any way interfere with the replenishing of the bottle, and by its use it would seem that the most inattentive, even in semi-darkness, could hardly confuse ordinary draughts or mixtures with liniments or medicines of exceptional strength.

THE LANCET.

LONDON: SATURDAY, MARCH 30, 1895.

ON Thursday next, April 4th, the Council of the Royal College of Surgeons of England will proceed to the election of a President in the place of the late Mr. JOHN WHITAKER HULKE, whose death while worthily holding the reins of office was a subject of recent regret to the profession which he dignified with his character and ornamented with his learning. For what qualifications should we look in Mr. HULKE'S successor? He should have been a member of the Council for some years, so that he may have become fully acquainted with the working of the body over the deliberations of which he will have to preside. He should, if possible, still be engaged in active hospital work, so that as an administrator, a teacher, and a practical surgeon alike he may remain in touch with the hospital of the day, the student of the day, and the surgery of the hour. He should have also been a member of the Court of Examiners for a reasonable time so that the work which is, at any rate at a superficial glance, the most essential work of the College—the examination of candidates—may be familiar to him; and it is well that he should be a ready and eloquent speaker. It is also desirable that he should reside in London, for the almost daily attendance at the Royal College of Surgeons, which is needed for numerous small but important matters, would be a very arduous task to a member of the Council continuing to live in the provinces. There are four members of the Council who suggest themselves to us as proper candidates for the office of President, inasmuch as each fulfils most of the conditions we have indicated above. These gentlemen are, taking them in the order of seniority of election to the Council, Mr. THOMAS SMITH, Mr. CHRISTOPHER HEATH, Sir WILLIAM MACCORMAC, and Mr. REGINALD HARRISON.

Mr. THOMAS SMITH, the senior surgeon to St. Bartholomew's Hospital, was first elected a member of the Council of the College in 1880, and was re-elected in 1892; and in 1887 was Vice-President. Mr. CHRISTOPHER HEATH, the senior surgeon to University College Hospital, joined the Council in the year 1881, was elected a member of the Court of Examiners in 1883, and was Vice-President both in 1888 and in 1892. Sir WILLIAM MACCORMAC was elected to the Council in 1883, and re-elected in 1891. He has twice held the office of Vice-President—in 1890 and 1893. He became a member of the Court of Examiners in 1887, and, being re-elected in 1891, still continues a member of the Board. Though no longer on the active surgical staff of St. Thomas's Hospital, the interval is so short since he resigned his post that the resignation cannot be considered any serious objection to his claims. Mr. REGINALD HARRISON became a member of the Council in 1886, and was re-elected last year; for the present year he is one of the Vice-Presidents. Mr. HARRISON holds no appointment at a general hospital in London, but he has made an excellent reputation as surgeon and examiner in

the provinces. Any of these members of the Council would fill the post satisfactorily, but Mr. THOMAS SMITH has, it is said, no intention of becoming a candidate for the position, and if this be so it seems to us that the choice of the Council will probably fall either on Mr. HEATH or Sir WILLIAM MACCORMAC. Both have been members of the Council many years, both have acted as examiners and have held the office of Vice-President, and both occupy prominent places in the estimate of their profession as scientific surgeons.

The position of President of the Royal College of Surgeons of England is one of great and growing importance, for the President is not merely the titular head of a Royal College, but the official representative of surgery in England. There was a time, as is known to all our readers, when it was customary for the Council of the College to elect to the Presidency, as a matter of course, the senior member of their body who had not already held the office. This custom was broken through a few years ago, and the old method has happily never been reverted to, for it could not but detract from the honour and credit of the office for its possessor to hold it merely through a routine method of election; but the election still rests with the Council, and, unlike the sister college, the Fellows have no direct voice in the choice of their own President. Our views on this and cognate points in the administration of the College have been and are constantly before our readers, and this does not seem to us a particularly apt time for their recapitulation. We have also purposely refrained from dilating on the views held by the gentlemen whose names we have mentioned on college politics, because we feel certain from indications whose significance can have escaped but few that there will no longer be any bigoted resistance on the part of those in power to the just reforms which have so long been demanded and must eventually be conceded both to the Fellows and to the Members.

THAT the nosological position of so common and familiar a disease as acute rheumatism should even now be undetermined may seem strange, but is not inexplicable. For in the case of rheumatism there has been no such clinching demonstration of primary blood change made as in the memorable discovery in gout of uric acid in the blood, and its deposit in articular and fibrous tissues by Sir A. GARROD—a discovery which once and for all determined the nature of that malady. The fact that in rheumatism, as in gout, the most obvious changes are arthritic has long tended to a confusion based upon theories on diathesis which we are fast leaving behind. Rheumatic fever must be regarded as a disease *sui generis*, and the sooner it is detached from other joint diseases that go under the "rheumatic" name the clearer will be our conceptions of its nature. The imperfections of a nomenclature which is based on partial knowledge not only tend to perpetuate erroneous ideas of morbid affinities, but must be taken into account as knowledge widens. The old terms—sanctioned by long usage—cannot be dissociated from the conditions they connote, but they must be given new meanings, even if this involve an entire severance from their old-established relationships. This appears to be eminently the case with the term "rheumatism," that embraces

many conditions now known to be of widely differing pathogeny. Regarding solely the leading instance of the group of so-called rheumatic affections—namely, acute rheumatism—it is instructive to observe how many and varied have been the views advanced to explain its origin. The name implies an affinity to catarrhal states, of which the existing cause is held to be a “chill”; the *modus operandi* of this chill being explained in various ways—e.g., a suppression of cutaneous functions, a disturbance of nervous mechanism, or a perversion of muscular metabolism. That the stress of the resulting inflammatory reaction falls upon articular structures is accounted by some as evidence of an underlying arthritic diathesis, by others as proof of disturbance in the central nervous apparatus controlling the nutrition of joints, and by others to the special predilection of excess of lactic acid in the blood to excite arthritis. There is no gainsaying the fact that theories such as these have each more or less plausible support in what is known of the etiology and intimate pathology of the disease, and some—e.g., the lactic acid theory—have been put to the test of experiment. Yet when a broader view of the subject is taken, and an attempt is made to harmonise these explanations with all the known facts concerning rheumatic fever, it is seen how one or other hypothesis fails to account for all its phenomena. Even the common exciting cause of chill is sometimes lacking; whilst, as is well known, arthritis in some cases, especially in the young, may form but a fleeting part of the disorder or be practically absent. Hence the endeavour to ally acute rheumatism more with the great group of zymotic or infective diseases, which implies that whatever may be the internal changes that characterise it these alone do not form its whole pathology, but that the initial factor is the introduction from without of a specific agent. It was to the exposition of this view of the nature of acute rheumatism that the Milroy Lectures, lately delivered by Dr. NEWSHOLME before the Royal College of Physicians of London were devoted; and, although the doctrine itself is not original (it was held formerly by Dr. FARR, as the lecturer stated, and has been advanced by many recent writers), it has not hitherto been supported in so exhaustive and complete a manner, for Dr. NEWSHOLME recognised clearly that in order if possible to justify the claim to range rheumatic fever among zymotics it must be proved to have affinities with the commonly accepted attributes of the whole class, and be not simply characterised by certain isolated features, either etiological or clinical, which may point to the probability of this alliance. The thesis which he ably sustained was to the effect that “rheumatic fever is a specific febrile disease caused by introduction from without and multiplication in the system of a pathogenic microbe, endemic in Europe and America and other parts of the world, but at varying intervals excessively prevalent, epidemic, or even pandemic.” It would be impossible to pursue the whole of his instructive and weighty demonstration of the truth of this proposition, but we must be content to treat of what seem to be the three main lines of argument which he advanced—viz., those based (1) on epidemiology; (2) on environment; and (3) on clinical and pathological observation.

The argument from epidemiology which Dr. NEWSHOLME placed in the forefront, and to which he devoted

much consideration, opened up practically new ground. He had collated statistics upon the prevalence of the disease from all sources, and marshalled them in a manner which few could emulate. The diagrams which he constructed from these statistical facts were most telling in their uniformity. For whether—as he was perforce compelled to do—he utilised only the death returns in various countries, or dealt with hospital statistics of the cases of rheumatic fever admitted, or with the notification returns of Scandinavia, the main result was to show that, in certain years there was very marked rise in prevalence as compared with other years—so marked, indeed, as to justify the application of the term epidemic to them, on the same ground as it is applied to the years of excessive prevalence of zymotic diseases in general. Due allowance was made for obvious sources of fallacy, such, for example, as the varying fatality of the disease, where death returns only were available, and the assumption that cases treated in hospital are at all proportionate to the prevalence of the disease in the places concerned; and it is quite likely, as Dr. NEWSHOLME suggests, that a smaller proportion of such cases now find their way into hospital wards than formerly. The concordance in the results of such an inquiry is all the more striking in face of these and other difficulties; and we are glad that the annual reports issued from our hospitals should have been utilised in this manner. There are many moot points in the statistics of disease which could be determined by a similar analysis of hospital reports; and if it were possible to have greater uniformity in the plan of compilation of the returns of various hospitals their value for this purpose would be enhanced. As regards the question before us, it may be urged that the excessive prevalence of a disease does not prove that it occurs in epidemic form, but that it may depend on variations in seasonal or other conditions. To this it would be equally right to assert, as we take it Dr. NEWSHOLME practically does, that marked excess in prevalence is what is meant by “epidemic,” which may or may not have such determining conditions behind it.

To pass to the argument from environment it would be absurd to maintain that a disease can have no specific character because of its prevalence being apparently related to conditions of soil, climate, or weather, although the independence of a disease of of such conditions may go far towards suggesting its specific or zymotic character. Thus, no one doubts the specificity of tuberculosis, but the prevalence of phthisis has been clearly shown to be influenced by soil conditions; malarial diseases are bound up with the states of air and soil of infected districts, and no one doubts their specific nature; it has been proved that the weather conditions favouring bronchitis are not precisely those which are associated with the prevalence of pneumonia, and yet the evidence in favour of the specificity of the latter is on other grounds practically convincing. The seasonal prevalence of rheumatism may not then be taken as proof of its non-zymotic character, provided other and stronger evidence in favour of the alteration be forthcoming. Dr. NEWSHOLME'S researches have shown that there is a very definite relationship between deficient rainfall, low ground water, and high soil temperature on the one hand and the prevalence of rheumatic fever on the other. This result is unexpected, but it is supported

by facts which cannot be gainsaid, and he has applied it to the explanation of the nature of the disease that he adopts.

In considering the argument from pathology and therapeutics, it must be admitted that no theory of rheumatism is so well able to account for its clinical phenomena as the one which refers it to an infective agency. Considerations based upon changes in blood or nervous system fail to embrace its multifarious manifestations. The type of the pyrexia—the articular and, above all, the cardiac inflammation—are best explained on the microbic doctrine. Indeed, so far as bacteriological investigations go—and their results are by no means so uniform or conclusive as to set the whole matter at rest—the occurrence of endocarditis would seem almost to necessitate some such agency. But Dr. NEWSHOLME takes us further. He dwells on the fact of the relationship between tonsillitis and acute rheumatism, as suggesting that it is through the tonsil that the rheumatic microbe enters the system; but we confess that here he has probably exceeded his warrant. For, frequent as tonsillitis or mild sore-throat may be in conjunction with the onset of an attack, it is not so pronounced a feature as to be deemed a necessary and essential part of it. Nevertheless, we may admit that the liability to relapse, as well as to second and later attacks, although not concordant with many proved infective disorders, does not suffice to remove acute rheumatism from this category; whilst the factor of heredity can, we do not doubt, be found—to a much more limited extent, it is true—in many other diseases of admittedly specific origin. The marked anti-rheumatic action of the salicylates has been explained on chemical grounds by Dr. LATHAM, but was claimed long since by Dr. MACLAGAN, as it is now by Dr. NEWSHOLME, in proof of the microbic view.

On the whole, it is impossible to peruse these admirable lectures without being largely impressed with the force of the arguments and evidence which they contain, and whatever the precise position of the disease may be amongst the zymotics—whether it is more allied to the miasmatic than to the contagious class, or whether its microbe is bacterial or protozoal—that it is more reasonably placed here than elsewhere in the nosological list seems to be well-nigh proved. When this is quite assured it will be time to reconsider the position of the other forms of disease known as “rheumatic,” but which have no real relationship to the malady hitherto taken as their prototype.

SLEEP is a greater mystery than insomnia. We hear much of the latter state in these days. But it is more wonderful that we sleep so well than that we are occasionally wakeful. We hear more of sleeplessness than our forefathers did. It is a remarkable fact that in scarcely any of the older recognised text-books of Practice of Physic is there any formal notice of insomnia *per se*. In later works, and especially in those devoted to treatment, the subject of insomnia does receive considerable attention. And every now and again the sleeplessness of a great man in the world of science or in that of politics reminds us that eminence has its troubles, and of a sort which seldom affect the poor man. It is probable that this evil of wakefulness is more common than

it used to be. The excitements, and especially the worries, of life multiply. Many of the arrangements of society are of a nature to drive away sleep. Even the very pleasures of life are so taken by many as to rob them of one of the greatest pleasures of all—an eight hours' sound sleep; for we maintain that this is what everybody should aim at. It may seem a long time to spend a third of one's life in sleep. But if the other two-thirds are used well there is little cause for blame. No rule for all can be laid down; but it would be well for most people in the intensive days in which we live to devote eight hours to the cultivation of the mood and act of sleep, and to resist the domination of all habits and fashions that are inconsistent with this purpose.

Insomnia is not necessarily to be treated as a disease by itself. It may sometimes even be corrected without the aid of the medical man, by a little common sense and prudence on the part of the patient. The great danger of acting without medical advice is that mere drugs are apt to be regarded as the remedy, and the most obvious causes are apt to be overlooked. There cannot be a greater mistake than for a sleepless person ignorant of medicine and more ignorant of disease to take one after another the advertised and vaunted medicines which are supposed to procure sleep. The last state of that man is likely to be worse than the first. If there is one thing on which therapeutists are agreed it is that such medicines constitute but a small part of the treatment of insomnia, and require extreme care in selection and in use. Some eminent men in our profession have carried this objection to great lengths. They were satisfied that the cure of sleeplessness lay in other directions and that a little sleep procured without such means was better than twice the amount produced chemically. Some of these medicines are practically useless; others are actually dangerous in themselves and in their immediate effects. All of them are liable to the objection that their action is attended with a certain fascination which is apt to engender a liking for frequent repetition of the dose. Clearly the use of such agents should be controlled severely by medical prescription. If the abuse of them goes on as it is going at present the Poisons Act should be extended so as to include this whole class of drugs.

Insomnia is really a mere symptom and will no more be treated *per se* by the intelligent practitioner than the eruption of an infectious fever or the diarrhoea of typhoid fever. The great duty of the medical man is to trace it to its causes and its associations, and to deal with these. If it follows influenza it must be regarded like all the other *sequela* of that protean disease with some patience, but with much conviction that it will yield, sooner or later, to sound treatment. A very important point is to ascertain whether the insomnia is attended with pyrexia or otherwise, for of all means for producing restlessness and marrying the night's repose an increase of two or three degrees in the temperature is among the most effective. Apart from general pyrexia, it is well to note all local peculiarities of heat, whether in the direction of excess or defect—cold feet, a hot head, &c.—and to deal with them accordingly. It is, of course, equally important to ascertain any error of function that can reasonably be associated

with such a symptom. Such errors may frequently be found in the gastric or renal or hepatic functions, and their removal will quickly alter the whole complexion of the patient's life by night and day.

No treatment of a sleepless patient can be satisfactory which has not strict reference to the particular patient, to his constitution, his habits, his idiosyncrasies, and his pursuits. No details bearing on diet or surroundings must be overlooked. The physician will not needlessly interfere with any legitimate pursuits or even habits; but, on the other hand, he will be firm in suggesting reasonable changes dictated by a medical survey of the patient's condition. While interference with a patient's necessary business or pursuits is objectionable as tending to aggravate his complaint there should be no hesitation in laying down rules with regard to diet, stimulants and general environment. We may be asked, Is there to be no place for hypnotics and narcotics in such cases? Our answer is simple. They are not excluded; but they should be used only as a secondary and subordinate means after the failure of other means, and they should be used only under medical sanction. We will not attempt to dictate to the profession which drug is most safe or least objectionable. That is a part of the daily study of every medical man. But we are persuaded that the use of "sleeping draughts" will be reduced to a minimum by those practitioners who best realise the normal conditions of healthy sleep and the advantage of so using their influence over their patients as to bring them well within reach of the attainment of those conditions.

Annotations.

"Ne quid nimirum."

THE NATION'S CONSUMPTION OF ALCOHOL, TEA, AND TOBACCO FOR THIRTY-TWO YEARS.

A RECORD of the consumption from 1861 up to the present time of tea, coffee, cocoa, and chicory, of alcoholic beverages, and of tobacco, compared with the increase of population, should be of interest to all classes: to the social reformer, because he may be able to form some estimate of the moral progress of the community based on the figures dealing with the consumption of intoxicating drinks; to the economist, because he may find interesting information on the revenue accruing from duties; to the hygienist, because he may make some valuable deductions bearing upon the relation to health of the increased or decreased consumption of alcoholic and non-alcoholic drinks and of tobacco; and lastly to the intelligent public, because, to some extent, the return is a gauge, so to speak, of the moral, social, and financial condition of the people as a nation, as well as of its prosperity. The most striking feature in the purely diagrammatical return, which has been recently issued and which has been ordered by the House of Commons to be printed, is that while an enormous increase in the consumption of tea, coffee, &c. has taken place—the line illustrating this extending as a diagonal across the diagram till it reaches the top right-hand corner (1893)—there has been a steady diminution in the consumption of both beer and spirits, the lines indicating the last two being practically parallels not only with one another, but approximately with the base of the diagram also. Between 1861 and 1862 the total consumption

of tea &c. was 120,000,000 lb.; it then steadily rose until in 1893 it stood at 265,000,000 lb. In the same period the population increased from 28,500,000 to 38,500,000, so that while in 1861 the consumption of tea &c. per head was 4.33 lb., in 1893 it was 6.90 lb. In regard to wines and spirits, the consumption in 1861 was equal to 35,000,000 gallons, with the population at 28,500,000, and in 1893, with the population at 38,500,000, the consumption was 52,000,000 gallons, so that per head it was equal to 1.22 gallons in 1861 and in 1893 to 1.35 gallons, the highest record being 1.80 gallons in 1876, since which the consumption has steadily diminished. The consumption of beer exhibits a similar rise and fall. Thus in 1861 the amount consumed per head was 24.3 gallons, in 1874 34 gallons, and in 1893 29.6 gallons, the total consumption varying from 20,000,000 gallons in 1861 to 31,000,000 gallons in 1876 and 32,000,000 gallons in 1893, the population having increased by 10,000,000. Coming to tobacco, in 1861, when the duty was 3s. 1½d. lb., the total consumption was 34,000,000 lb., being equal to the use per head of 19½ oz.; in 1863 the duty on cigars was reduced from 9s. 5½d. to 5s. per lb., and the consumption then rose to 21½ oz. in 1865 to 23½ oz. in 1877. In the following year (1878) an increase of 4d. per lb. on all tobacco was made, and an extra 2d. per lb. on cigars in 1879, with the result that after that date the consumption fell to 22½ oz. From this time it gradually recovered till in 1887, when, the duty on tobacco being reduced 4d. per lb. and on cigars 6d. per lb., the consumption quickly rose till it attained to 26 oz. per head of population in 1893. The total consumption in 1893 was 62,000,000 lb., while in 1861 it was 34,000,000 lb.—i.e., an increase of 28,000,000 lb. for an increase in the population of 10,000,000. To sum up, this interesting return shows that there is a decided diminution in the demand for intoxicating stimulants, whilst there is a very considerable increase in the demand for non-intoxicating stimulants, principally tea and coffee. There would appear therefore to be a distinct and steady reaction setting in against general alcoholic imbibition—a fact which lends support to the view that the evil of intemperate drinking, as its wretched consequences become more and more painfully manifest, will finally work out its own remedy. It is beginning to be recognised—if we interpret the return correctly—that the effect of alcohol is comparable to the flick of the whip, which for a brief period urges on the horse, while the rational use of tea and the allied beverages, of which theine is the base, is more like the corn out of which a more real and lasting energy is derived. It is idle to argue, however, that both sources of energy and stimulation have not their use as well as their abuse. Finally, the enormous increase in the amount of tobacco consumed is noteworthy, and would seem to indicate a growing demand for a substance which, when temperately indulged in, doubtless affords a source of comfort and relief to many in the increasing struggles and worries of modern existence.

CHITRAL.

CHITRAL is now in everybody's mouth, so that Captain Younghusband's paper, read on Monday last before the Royal Geographical Society, on that province, Hunza, and the Hindu Kush was a remarkably apposite contribution and was listened to with the deepest attention by a large audience. Captain Younghusband has only recently returned from official residence of more than two years in the primitive little States where the empires of India, Russia, and China touch, and he spoke of the country and its physical resources, and of the people, with their curious, savage, childish, pleasant temperaments, with the picturesque clearness that is born of intimate knowledge. To us as medical men no less than as subjects of the Empress of India the recent *émoué* at Chitral has a particular interest, for the British Agent, now immersed in the

Chitral fort, is Surgeon-Major Robertson, a member of our profession, and it is with a view of rescuing him from the attack of a usurping border chief that an expedition is to be sent up. No one who heard Captain Younghusband's address can fail to see that an expedition into such a country must be attended with the greatest risk to life. The roads are only tracks at the bottom of frightful mountain gorges or indications of a path—for no real paths exist—running sheer up the sides of pure rock. The mountains stand up twenty-five thousand feet into the air, and so abruptly that it is possible to see at a glance two-thirds of their enormous altitude. It follows from this geographical formation that any expedition sent through these passes must be easily susceptible of attack, as throughout their route their position would be always commanded by an enemy placed on higher ground. The military tactics of the mountains is to get and keep the higher ground, and the marching force would necessarily be almost always on the lower. Lord Roberts, in his excellent speech upon Captain Younghusband's paper, laid stress upon the strategical importance of Chitral and of a direct road from Peshawar to Chitral in the scheme of frontier defence, and expressed confidence that the well-organised and well-equipped force which Sir Robert Low will have under his command should reach its destination in safety. No one in the world is more qualified to express an opinion on such a subject than Lord Roberts, and his outspoken remarks are very reassuring. Let us hope also that the expedition will reach Chitral in time.

THE HIPPOCRATIC REVIVAL.

MEDICAL scholarship has been busy of late in clearing up the early progress of the healing art. Not only have we had such interesting monographs as those of Dr. Constantin Tsintsiropoulos on "La Médecine Grecque depuis Asclépiade jusqu'à Galen," and of M. Maurice Albert on "Les Médecins Grecs à Rome," but we have had critical recensions of such authors as Aëtius, whose twelfth book has been for the first time given to the world (*πρώτον νῦν ἐκδοθεῖς*) by that admirable Hellenist Dr. George A. Kostomoiros, Professor of Ophthalmic and Aural Medicine in the University of Athens. It is the Father of Medicine himself, however, that has received the largest share of attention; and, whether we take the admirable biography of him contributed by the late August Hirsch to the "Biographisches Lexikon der hervorragenden Aerzte aller Zeiten und Völker," or the masterly edition by Dr. Theodor Gomperz of the *Ἱερί Τεχνῆς* (or apology for the healing art) which is generally included in the Hippocratic collection, we have ground for congratulation on the fresh light thrown on the most commanding figure in medical history. Within the last few weeks we have had further evidence of the enthusiasm with which ancient medicine, and particularly its Hippocratic period, is being cultivated. Dr. Michel Sourlangas has recently presented us with an "Étude sur Hippocrate: son Œuvre, ses Idées sur l'Infection, et ses Moyens Antiseptiques," in which he puts in evidence the fact that "the great and glorious conquest of modern surgery, antisepsy, was not unknown to Hippocrates," who indeed "recommends it several times in his works and often in a way so precise 'que l'on se croirait en présence d'insinuations modernes.'" Prefixed to a useful appendix of Hippocratic maxims, in which the carefully revised Greek text is accompanied with a literal, yet flowing, translation into French, Dr. Sourlangas gives a summary of the conclusions reached in his monograph: first, that Hippocrates made medicine a science, and that on this ground he merits the title rather of Legislator than of Father of the Healing Art; secondly, that most of the infectious diseases were known to him—the rôle he attributes in their production to the air and the

water constituting in fact a scientific study in etiology; and thirdly, that he availed himself in treatment of substances whose virtues as microbicides are undeniable. But more important than these incidental excursions into the fascinating field of ancient medicine is the new German translation of the entire Hippocratic collection by Dr. Robert Fuchs, of which the first volume is now before us. In this the reader will readily discern that Dr. Fuchs is a more learned scholar than his predecessors, and that he has also the advantage of belonging to a sounder, more scientific medical school. The language in which he reclothes the Greek author is that of modern medicine, and the interpretation he gives is such as was possible only to one who has profited by the vast accessions to our knowledge of antiquity made by the archaeologist, the epigraphist, and the special investigator of antique life and culture. His familiarity with such monographs as the well-known "Die Botanik Homers" and such monumental treatises as that of Berendes on the "History of Pharmacy" (commented on in THE LANCET of April 2nd, 1892) will illustrate our meaning. The undoubted advantage he possesses over Littré, Adams, and Ermerins is also manifest in the notes, which from their richness in expository matter contribute to make this book an encyclopædia of Greek medicine. The first volume comprises the introductory writings of Hippocrates, then the general treatises, then that on Dietetics, and, finally, the general pathology and the prognostics. The second volume will include the special pathology and therapeutics, and will be ready next summer. The third, completing the work, will appear in September or October, and will deal with therapeutics (second part), surgery, ophthalmic medicine, gynaecology, treatment of infancy, and the Hippocratic correspondence. The entire publication will indicate the high-water mark attained by European research and scholarship in the "mare magnum" of Greek medicine, and our only regret in calling attention to it is that, since Francis Adams published his translation some fifty years ago for the Sydenham Society, British learning has done so little for a subject in which it has in past centuries shown its ability to excel.

THE DISCOVERY OF HELIUM.

THE earth spirit allows us to see more and more of the fabric that falls from his whirling loom, and we may, perhaps, soon be able to gather the scattered threads together and behold the full beauty of the great design. After the Faraday Medal had been presented to Lord Rayleigh at the annual meeting of the Chemical Society on Wednesday, the 27th inst., his co-worker in the discovery of argon, Professor Ramsay, was called upon to speak. He announced that in his endeavours to discover a compound of argon he had experimented with a rare earth—cleveite, we believe—which was said to yield nitrogen when acted upon by sulphuric acid. Instead of nitrogen, argon was evolved, but associated with it was some strange gas. On examination this turns out to be helium, the lightest of all the possible elements, whose existence, apart from the demands of chemical theory, had only been inferred from the line D₃ in the solar spectrum. It is the first of all the elements, for below this comes the hypothetical "protyle"—that pre-elementary cosmic stuff from which all the elements are supposed to have condensed. Although this small quantity of helium was only found a few days ago its existence has been confirmed by Professor Crookes, who has identified its spectrum, of which the most powerful line is that at a wave-length of 587.47 micro-millimetres. This line is almost identical with the well-known yellow Sodium lines, and at first Professor Crookes thought that he had to deal with these, but all the magnifying power at his disposal was incapable of separating the lines into two, and

careful measurement confirmed the suggestion that the line was no other than the D_3 line in the solar spectrum, attributed to an unknown element, provisionally termed helium. A more remarkable vindication of our chemical theories than this it would be difficult to find, and Dr. Ramsay is to be congratulated deeply on this fresh addition to our knowledge and to his own laurels.

THE HEALTH OF H.R.H. THE DUKE OF YORK.

THE Duke of York has been suffering during the past week or ten days from a mild attack of influenza, from which we are glad to be in a position to report authoritatively he is now rapidly convalescing.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.

MR. T. HOLMES, Hunterian Lecturer in Surgery, will deliver three lectures in the school in the month of June on the Experience of the Hospital in Abdominal Surgery (excluding gynaecological operations) from 1888 to 1894 inclusive. Dr. W. H. Dickinson, Baillie Lecturer in Physic, will deliver three lectures in the school in the same month: (1) on Some Points touching Valvular Disease; (2) on Some Recent Observations relating to the Cardio-Vascular Change of Renal Disease; and (3) on Dropsy. These lectures will all be public and members of the profession will be admitted on presenting their cards. The dates and hours will be announced later.

A DEGENERATE EXHIBITION.

IN a recent issue we drew attention to the folly, if not worse, of exhibiting patients in an hypnotic trance for the purpose of making money. Those experiments were bad enough, but we now hear of an intention to take a victim through England whilst in a trance. The first stay was to be at Cardiff (we quote from the *Evening Standard*), and doubtless crowds will flock to see the absorbing spectacle of a "slender, little, pale, nervous sort of man," apparently asleep. At Cardiff he is to stay six days, be awakened, re-hypnotised, and start for another town. Such pandering to a morbid taste is scandalous. The only possible attraction in such a show must be the idea or chance of something untoward happening; for it has not the excuse, like acrobatic performances, of being an exhibition of highly trained physical powers. In the event of a fatality occurring we hope that not only the showman but the gaping idiots who go to see the "man in a trance" will be compelled to pay a heavy penalty.

A SIX-DAY RECORD OF OPHTHALMIC SURGERY.

AS an evidence of the very large amount of ophthalmic work occasionally done in a village district of India we may place the following on record. A few weeks ago Surgeon-Lieutenant-Colonel G. C. Hall, F.R.C.S. Eng., surgeon to the Allahabad Eye Hospital, was called upon to operate on a patient in a village in the province of Oudh. The village was some twelve miles from the railway and twenty-six miles from any English station. No means were taken to let the people in the surrounding villages know of the intended visit of an ophthalmic surgeon to their neighbourhood, but the news nevertheless spread. Surgeon-Lieutenant-Colonel Hall lived in camp. The natives arrived in various ways—some in bullock carts, having been four or five days on the road, from distant villages; some came on foot, led by others not quite so blind as themselves; others were carried on the backs of their relatives. A large number had no eye left to be dealt with, but all had a large amount of faith. It was altogether an extraordinary and weird spectacle to see these poor, helpless people coming into camp in the early morning and quietly sitting down in groups patiently waiting until their turn came. During six days the total number of patients seen

was 394, the total number of cataracts extracted 69, and the total number of operations performed was 147. The operations were all done in the open air under the shade of a large mango tree, the patient lying on a native bed, the operator sitting at the head of it. As far as possible all the cases were treated antiseptically, and notes were taken of them with the prognosis formed at the time of operation. When Surgeon-Lieutenant-Colonel Hall left, which he did on the sixth day, a native assistant remained to look after the patients, to whom sixty-five pairs of spectacles have already been forwarded for the successful cases. We think our readers will concur with us in considering that the foregoing account records an enormous amount of hard and successful work of a most humane and philanthropic kind, of the accomplishment of which anyone may well feel proud.

THE PRESERVATION OF HEALTH IN THE FAR EAST.

OUR attention has been called to a useful pamphlet issued under the direction of the Medical Mission Committee of the Church Missionary Society for the guidance of its missionaries in China and published by the Church Missionary Society. This little guide to health has been compiled by W. P. Mears, M.A., M.D., late of the Fuh-Kien Mission, and it gives some excellent hints as to clothing, food, and residence in China. The members of the Church Missionary Society are necessarily scattered about abroad, many of them must live in isolated stations among semi-civilised people and remote from medical aid, and something in the way of a guide of this kind therefore seems to be very necessary, if not essential. The pamphlet is chiefly concerned with matters connected with travel and residence in Mid- and South-China, but it affords many very practical and useful observations for those proceeding to Eastern climates. The hints as to the personal, travelling, and general outfits required, and the remarks about the site and construction of a house, with its lighting, ventilation, drainage, and water-supply, strike us as very good on the whole. The work, it should be added, is illustrated with several excellent plans and diagrams.

ASEPSIS AND ANTISEPSIS IN OBSTETRIC PRACTICE.

THE January number of the *Annales de Gynécologie et d'Obstétrique* contains an interesting article on Professor Tarnier's work entitled "De l'Asepsie et de l'Antiseptie en Obstétrique." The earliest contribution to a determination of the nature of puerperal fever is credited to an English medical man, White, who towards the middle of the last century formulated the opinion that puerperal fever could be contagious. His views, however, seem to have met with no support. In 1846 Kneeland published a summary of the opinion of certain English and American physicians, which seems to have been very near the truth, since he insisted not only that puerperal fever was contagious, but that it might be conveyed by infected bedding &c. and by medical men, and especially if they had recently made necropsies on those who had died from puerperal fever. Still, it was not till Semmelweis, in 1847, was struck by the difference in the mortality among those who were attended by students who were working at the same time in the dissecting-room and in the class of operative surgery, and the mortality among the lying-in patients attended by midwives, that the true causation of puerperal fever was in a fair way to be ascertained. The antiseptic era as regards midwifery undoubtedly dates from 1847. Professor Tarnier recalls how when he was an in-door pupil at the lying-in hospital between May 1st and 10th thirty-two women were delivered, and that thirty-one died. He questioned his

teachers on the subject, and they told him that the epidemic was equally prevalent among lying-in women in the town, and that such a state of things "always had been so, and always would be so." Not content with this answer, and unaware of the work of Kneeland and Semmelweis, he investigated the point for himself, with the result that he found the mortality among lying-in women in the hospital was seventeen times greater than among those in private practice. This convinced him that puerperal fever was contagious. The researches of Coze and Feltz, of Pasteur, of Doléris, of Chauveau, and of Vidal, by which the part played by micro-organisms was investigated, are referred to; and those that accoucheurs should more especially fear are stated to be the streptococcus pyogenes, the staphylococcus aureus, and the septic vibrio. The most interesting question from the practical point of view is as to the course of procedure needed to apply the antiseptic principle in attending lying-in women. Much valuable information is given by Professor Tarnier on this point. A list is given of the principal antiseptics in the order of their activity. Among those in common use here we find that the perchloride of mercury, free iodine, carbolic acid, and permanganate of potassium are respectively first, third, fifth, and seventh on the list. The measures needed to render the hands aseptic are given in much detail. The importance of keeping the nails short is insisted on. We see, however, that in the preliminary washing of the hands with soap and water and a nail brush it is recommended to have sublimate in the water, although it will be to a greater or less extent decomposed when so used. It is true that a final washing of the hands in sublimate solution, without soap, is also advised. We think that it is a good rule, after thoroughly washing in soap and water with a nail brush and getting rid of the soap, not only to soak the hands in the sublimate solution, but to thoroughly brush both the hands and nails with the same solution. We see that Professor Tarnier thinks that iodine water is the best antiseptic to choose for intra-uterine injections, and he considers that it has a special property of penetrating some distance into the thickness of the tissues. He considers sublimate lotion too dangerous for use within the uterus, unless followed by an intra-uterine injection of some inert fluid, which, of course, weakens its antiseptic action. Sublimate lotion for the hands, carbolic lotion for the instruments, and iodine water for the uterus appears to be a good arrangement for actual practice.

THE SUPERVISION OF PULMONARY TUBERCULOSIS IN NEW YORK CITY.

A RECENT number of the *American Journal of the Medical Sciences* contains an interesting account by Drs. Herman Biggs and J. J. Huddleston of the sanitary supervision of tuberculosis as practised by the New York City Board of Health. The account is one which medical officers of health interested in the control of tuberculosis will do well to read, if only to bring home to them the difficulties which beset all attempts to do this work with the thoroughness demanded by those who maintain that this disease is largely propagated by contagion. As early as 1889 steps seem to have been taken by the New York City Board of Health towards educating the public as to the nature of tubercle by means of the distribution of leaflets &c.; and in the beginning of 1894 it was resolved to take action with a view of preventing the spread of the disease. Briefly put, the steps taken resolve themselves into the registration of every person suffering from tuberculosis, in so far at least as information can be obtained by compulsory notification from public institutions and voluntary notification from private practitioners; the control by specially appointed medical inspectors of cases residing in tenement houses,

boarding-houses, or hotels where such cases are not already under the care of private practitioners who have notified their willingness to give all the necessary instructions; the renovation of premises and the removal of carpets &c. in cases where it is considered desirable by the inspectors, and in affixing to an apartment previously occupied by a tuberculous patient a placard setting forth the fact that no further occupation is to take place until the premises have been renovated and cleaned to the satisfaction of the Board. Furthermore, the bacteriological examination of suspicious tuberculous sputum is undertaken by the Board of Health. As may be imagined, regulations such as those indicated above are not carried into effect without some difficulty, and we are not surprised to hear that "as yet private practitioners do not generally report their cases of tuberculosis." False addresses are, we are told, frequently given, and occasionally wrong diagnoses are made. In the death certificates, too, pneumonia and chronic bronchitis are recorded as the cause of death when it is considered expedient to avoid the word tuberculosis. These false certificates are given, it appears, in some cases owing to the fact that by the regulations of many industrial insurance companies death from tuberculosis renders the life policy wholly or partially void. Drs. Herman Biggs and Huddleston state that, although the number of apparent deaths from tuberculosis has been falling for some years, in 1894 a much greater diminution took place than was ever the case before. When, however, we have regard to the uncertain period of incubation of tuberculosis and to the duration of the disease, we are tempted to wonder whether this marked diminution in so short a period is due to the dislike on the part of the public to "renovations" and restrictions imposed or to the good effects of the measures taken. Obviously, however, it is too early to judge what may be the result of the energetic action taken by the New York City Board of Health, and we shall look forward with very considerable interest to subsequent reports on what may be regarded as a bold experiment in sanitary regulation.

THE DIFFUSION OF SMALL-POX.

THE news coming to hand from the several places wherein small-pox still finds record is of a generally very reassuring character. The data for London, it is true, show a rise in each of the past two weeks as compared with a like earlier period, the numbers for the two weeks ended the 23rd inst. having been respectively 12 and 15, as compared with 8 and 8. In the week still earlier there were 19 cases, mainly owing to recrudescence in Marylebone Parish, in which parish Mr. Wynter Blyth states, in a report just issued, that in February 39 attacks were notified and removed to hospital, the 5 fatal attacks being all in young unvaccinated children. Of the 15 cases arising in London last week 14 were removed to hospital, the institutions of the Metropolitan Asylums Board and Highgate Small-pox Hospital containing at the close of last week 58 patients, against 68, 56, and 57 on the three Saturdays preceding. One death of an unvaccinated child occurred in the week before last, the deceased belonging to St. Marylebone Parish. Thus, it is seen that small-pox still clings to the metropolis, although it seems unable to fasten on the sanitary areas in an epidemic form. The suburban districts have been fairly free from the disease during the fortnight in question; but we learn that the town of Bedford has been freshly invaded, though the number of attacks has been small, amounting to some half-dozen in all. Derby appears to have got its outbreak in hand, and to be in a fair way to exterminate the disease, though 1 death was registered last week. Liverpool and the neighbourhood have had only an odd case or two to record, 1 death being registered in the city last week. Neither Edinburgh nor Glasgow has been free from fatal small-pox in the present month. Over the Channel matters

seem to be on the mend somewhat in Dublin, though still far from satisfactory. The admissions to hospital have during the several weeks of the present year shown an almost continuous disposition to decline in number, those for the seven weeks ended March 16th having been respectively 69, 60, 56, 37, 31, 34, and 30. In the week last named there were 4 deaths registered, all in unvaccinated individuals, aged two months, one, seven, and forty-seven years. In the preceding week there were 5 deaths, 2 of vaccinated adults, aged twenty and thirty-eight years, and 3 of unvaccinated persons, aged twenty-two days, thirty-six and eighty-three years. The numbers of patients remaining in hospital in the four weeks ended March 16th fell week by week from 135 to 110, thence to 93, and finally to 72; there are, however, 118 convalescent patients at Kilmainham.

THE CRAIG COLONY FOR EPILEPTICS, NEW YORK.

THE colonisation of epileptics, which has been commenced on a small scale in this country at Chalfont and Godalming under the management of two charitable societies, is about to be carried out on a much larger scale in New York and administered by the State. An estate of 1850 acres—formerly a colony of the Shaker community—on which there are already sufficient buildings to accommodate a number of colonists, has been purchased for £23 000. The salaries of officers of the colony are to amount to £2000; 100 of the inmates are to be “indigent persons” supported by the State, just as at our own colonies a certain number of the inmates are boarded out by the boards of guardians. The system of colonisation is to be that introduced at the famous colony at Bielefeld, in Germany, and adopted at the Chalfont colony, of lodging the colonists in small numbers in pleasant cottages with cheerful surroundings. The superintendent of the colony is to be a medical man, and he will be the supreme authority on matters of discipline and conduct as well as medical adviser to the colonists.

THE PREVALENCE OF DENTAL CARIES.

THE great prevalence of caries of the teeth nowadays, as compared with the past, is a subject worthy of much consideration, for sound teeth are an important factor in the maintenance of health. To what is this alarming increase of dental caries due? A degeneration in structure no doubt plays a prominent part, and this imperfection is to be found not only in the hard tissues of the tooth, but also in the alveolo-dental membrane, as evidenced by the frequent occurrence of premature loss of the teeth, a condition insufficiently recognised and one quite as important as the prevalence of decay. From time to time various theories more or less plausible have been brought forward to account for this degeneration in structure, but the only one which seems to explain the condition in a rational way is that advanced by Mr. Smith Turner in his presidential address to the British Dental Association in 1891, in which he considers that the various changed conditions of childhood—such as diet, education, amusements—operating together rob the body as a whole, and the teeth especially, of the earthy salts which are so necessary during the period of development. Fortunately the public is awakening to the fact that careful periodic attention to the teeth is essential, but not infrequently the visit to the dental surgeon is delayed until too late. A fallacious idea is prevalent among many parents that the temporary teeth do not require attention and the child is probably not seen by a dentist until perhaps ten or twelve years of age. By this time the most important teeth in the head—namely, the first permanent molars—have been erupted over four years and are quite possibly in a hopeless condition. If the great amount of caries of the present day is to be combated at all successfully the periodic visits to the

dental surgeon should start immediately after the completion of the temporary dentition. Too much stress cannot be laid on this point, and it is here that the medical practitioner can do so much by directing the parents' attention to the fact.

BATHS IN THE TREATMENT OF DISEASES OF THE CIRCULATORY SYSTEM.

IN our issue of last week we printed a necessarily condensed report of the meeting at Berlin of German balneologists. This week we publish a paper by Dr. Groedel of Nauheim upon the bath treatment in use at that watering place for diseases of the circulatory system. It will be remembered that Dr. Bezly Thorne contributed an article on the method of Schott with a number of cases to our columns.¹ The present paper gives an account of the technique of the baths, which may be useful to our readers.

LOCUSTS IN CYPRUS.

A RECENTLY issued Parliamentary paper gives some interesting particulars on the subject of the repression of locusts in this island. It has come to be considered that the trapping and burning of the insects practised for some years past are unsatisfactory, and reliance is now placed on the collection of eggs during the summer and winter, and of living locusts in the springtime. Labourers were not hired for the work, but the eggs and the living locusts were purchased from the villagers by weight. For egg-cases the price was sixteen piastres the oke, representing about 2600 egg-cases, and as each case contains thirty-two eggs, assuming that only one-half of these hatch out, 2600 locusts are secured for one piastre, equal to about twopence. The living locusts were caught either by driving them on to sheets laid on the ground or by scooping them up in muslin bags. Chickens could not be induced to eat the young insects. During 1894 the sum of £4302 was expended in combating these pests. The Jewish colonists whom, according to the *Gaulois*, Baron Hirsch would like to establish in Cyprus will obviously not find it to be a land flowing with milk and honey; but, as the Chancellor of the Exchequer has recently said, it is a pity that only half of the income of the island has been available for purposes of development. It would seem under these circumstances not quite fair to condemn it as *damnosa hereditas*.

THE BUCKS COUNTY COUNCIL.

WE referred in THE LANCET of March 16th to the fact that one of the results of the last Bucks Sanitary Conference had been to prolong the life of the county council sanitary committee, which at the time of the conference was in a somewhat precarious condition. Unfortunately the respite has been but a brief one, and we understand that at a meeting of the council, held on March 18th, it was decided by 23 votes against 19 to dispense for the future with the services of a sanitary committee. It is difficult to understand the exact meaning of this step on the part of the county council, as we can hardly believe that they propose to disregard their now by no means nominal duties in respect to the public health of their district. At the same time we fail to see how the powers of the council under the Local Government Acts, 1883 and 1894, the Rivers' Pollution, the Housing of the Working Classes, and the Isolation Hospital Acts can be properly exercised, if indeed they can be exercised at all, without the assistance of a sanitary committee. Indeed, we fear that any attempts on the part of the whole council to deal with the preliminary investigations and details in reference to complaints from parish councils &c. must, by virtue of the undue publicity which such a course necessitates, lead to a great resentment

¹ THE LANCET, May 5th, 1894.

on the part of the local sanitary authorities. Schemes and complaints brought before the council should surely be presented in a well-digested and easily assimilable form, and not in such condition as to require detailed discussion. That the Bucks County Council should have considered a sanitary committee necessary before the passing of the Local Government Bill, 1894, but not afterwards, appears to us to be a somewhat strange recognition and appreciation of their increased responsibilities. We should have imagined that increased duties required a more complex machinery.

THE HEALTH OF LORD ROSEBERY.

WE are very glad to be in a position to announce that Lord Rosebery has made decided progress during the week. His sleep has been of better quality, and he has as a consequence gained strength. He has remained at Epsom, his detention there having been partly determined by the exigencies of public business and partly by his own private preference. He has felt the improvement that has taken place in his health during his sojourn there, and has not been eager to go away for a change. Nor did his physicians wish him to do so until the severity of his insomnia had abated.

THE MIDWIVES BILL.

A DRAFT form of a Bill for the Registration of Midwives has been forwarded to us on the lines indicated in previous Bills of the sort. Those in *bonâ-fide* practice or who have obtained a certificate in some hospital or workhouse infirmary and who claim to be registered within one year from the passing of the Act will be entitled to be registered. Thereafter admission to the register will be the privilege of those who pass the examination of examiners nominated by the Midwives Board but appointed by the General Medical Council. The Council is expected also to frame rules regulating the conditions of admission to the examination and the practice of midwives. The Bill will require much criticism, for which in the present state of Imperial and medical politics there seems to be likely to be ample time.

MATTHEW HOPKINS REDIVIVUS.

It is curious to notice how, after twenty years of School Boards and a great many other means of spreading education, superstition and savagery still linger in various places. Only the other day a farmer near Ilfracombe, whose cattle were attacked with anthrax, went to consult a "white witch" at Exeter, who informed him that the cattle had been "overlooked." He took no measures to prevent the spread of infection and is reported to be ruined. This instance, though bad enough, is as nothing to the appalling tale reported from Ireland. An unfortunate woman named Cleary was suffering from bronchitis, and some of her "friends" conceived the idea that she had been spirited away and a witch substituted. They accordingly called in a "herb doctor," who administered some potion, while the husband adjured her in the name of God to say that she was not his wife. As a means of accelerating her comprehension she was held over the fire. The next night the proceedings were repeated, and in addition she was drenched with paraffin oil and placed on a fire. As she burned more oil was thrown over her. The charred body was then hidden in a ditch. While she was burning the relatives and the "herb doctor" stood round expecting to see her fly up the chimney. As the case is now *sub judice* we cannot comment further on what will be the result; but it may well give us cause for reflection that such crass ignorance is still possible. The witch mania was perhaps the most terrible form of insanity, for it was an insanity, that ever afflicted the human race. As far as we know, neither Buddhists nor Mohammedans have

been attacked by it, but the records of the Roman and Anglican Churches are full of burnings and torturings, while among Protestant bodies Cotton Mather in America and many an official in Germany made "perambulations" for the discovery of witchcraft. The curious in such matters will find an interesting account thereof in Meinhold's "Amber Witch."

"DEPRIVATION OF DEGREES."

A PAMPHLET sent to us, entitled "The Private Medical Adviser, by Dr. Fraser, M.B., C.M., on Nervous Debility, its Causes, Consequences, and Private Treatment," would appear to be a flagrant illustration of the absurd inability of the universities to deal with medical graduates who abuse their position by publishing pamphlets on private and delicate subjects, conceived in the worst style of the quack who lives on the most pitiable weaknesses of his fellow creatures. The person in question is, it is admitted, a graduate of the University of Aberdeen. The University will be quickened in its efforts to acquire powers for dealing with such graduates by the creditable action of other universities—notably, Cambridge, Durham, and Wales. In the drafting of the charter of the new University of Wales, as Dr. Isambard Owen informs us in another column, the point is to some extent provided for, and power is given to the University to revoke its degrees for sufficient cause. The section in the charter of the University of Wales does not, however, go far enough. There are many offences for which a university might desire to punish its graduates by depriving them of their degree which are not felonies or indictable misdemeanours.

DIPHTHERIA IN LONDON.

DIPHTHERIA in London has in the past two weeks shown sensible decline in its fatal form. Having fallen from successive weekly numbers of registered deaths of 31 and 34 to 27 in the week ended March 16th it showed further decline last week to 24; and whilst in the preceding week the deaths were 5 below the corrected average, they were last week also below the average—namely, by 4. All in the first week of the fortnight, and 23 in the second week, were in persons aged under twenty years. Of the total 51 deaths, the Registrar-General credits Camberwell and Greenwich each with 6, Lambeth and Mile End Old Town each with 3, and 2 each occurred in Fulham, Kensington, St. Martin-in-the-Fields, and Battersea sanitary areas. During the four weeks including the fortnight with which we are dealing the admissions have been constantly growing in regard of hospital treated cases, the number having been respectively 43, 55, 61, and 64; and last Saturday found 455 patients still under treatment, as compared with preceding week-end totals of 463, 455, and 456. In this way it is seen that the disease is for the time maintaining itself in London, but shows no disposition to increase. In its fatal form especially the evidence is rather in the contrary direction. In Greater London there were in the two weeks 15 deaths registered from diphtheria, of which 9 were in West Ham, 2 in Croydon, and 2 in Romford districts.

THE DENTISTS' REGISTER FOR 1895.

PREVIOUSLY to the passing of the Dentists Act in 1878 anyone arming himself with an instrument serving as dental forceps, and presuming on the lethargy of the public, could set up as a dentist; but after the passing of this Act anyone who took the title of "dentist" or any title implying registration unless registered under the Act was liable to a penalty not exceeding £20. Despite, too, the fact that a false declaration rendered the maker thereof liable to one year's imprisonment, the publication of the first Register showed that 4806 persons embracing various

trades, not excluding the gentle craft of the blacksmith, had claimed the right to be on the Register. Many of these, of course, possessed no qualification whatever, but time must necessarily erase their names from the roll. At the present time the total number on the Register is 4901, including 27 gentlemen who possess the dental qualifications of Harvard or Michigan Universities, U.S.A. These qualifications are not yet recognised by the General Medical Council, and these gentlemen are designated in the Register "Foreign Dentists." Slowly, yet surely, the number of Licentiates in Dental Surgery of the various Royal Colleges of the United Kingdom is increasing, while the number of those whose names are upon the Register by virtue of their being in practice before the passing of the Act is decreasing. The proportion of the former to the total number on the Register is 27·82 as compared with a percentage of 26·48 in 1894. Of the latter class who do not possess qualifications the proportion is 70·98 as compared with 72·35 last year. On deducting the 27 foreign dentists from the total number on the Register and comparing the remainder with last year's figures it will be seen that there is an addition of 79 names.

PUERPERAL POLYNEURITIS.

DR. LUNZ of Warsaw has recorded in a recent number of the *Deutsche Medicinische Wochenschrift* an interesting case of this rare and peculiar condition, in which the symptoms differed considerably from those usually recognised. In the usual form there is an isolated neuritis of the upper or lower extremities, while the case here mentioned resembles more closely post-diphtheritic paralysis, inasmuch as difficulty in swallowing and diplopia were present, and also what is rare in diphtheritic paralysis, an affection of the face. With regard to the etiology of the condition it does not seem to follow only a pathological puerperium. Dr. Lunz believes that cases can be divided into three groups: a pyæmic or septic group, in which the neuritis follows some local infection; a cachectic form, which succeeds grave disturbance of nutrition, such as may be produced by loss of blood, persistent vomiting, &c.; and a third group, in which neither infection nor cachexia can be regarded as the cause, but in which the psychical disturbance which the confinement produces is to be regarded as determining the onset, just as it probably does of the puerperal psychoses which occur without puerperal infection. He urges, in conclusion, that obstetricians and psychologists should coöperate to elucidate the obscurities of these important and little understood conditions.

THE RECENT GALE.

THE gale of Sunday, March 24th, was remarkable in many ways. It was extremely destructive within the district where it was felt, but that district was remarkably circumscribed. According to the *Times*, if we take a triangle formed by joining the points of Valentia, the mouth of the Thames, and Scarborough we shall pretty accurately map out the affected region. Within this area the wind worked terrible destruction, and the accounts of the damage done to buildings and trees recall those of the great storm of 1703, when Winstanley, over-confident in the stability of his newly built Eddystone Lighthouse, hoped "that God would send the greatest storm that ever blew out of Heaven," and, as a contemporary writer remarked, "God took him at his word." Perhaps the most distressing feature of the recent storm was the number of hospitals that were demolished. At Walsall two wards in the district hospital were completely wrecked, in one of which the floor, a nurse, and eight female patients collapsed into the board-room below, but all were apparently unhurt. More disastrous were the results in the other ward, where the roof fell in and buried the patients. One man had both legs fractured and otherwise

badly cut. At Grimsby a chimney crashed through the roof of the children's ward in the hospital, burying a child aged six years, who died an hour afterwards. At Hinckley, in Leicestershire, the isolation hospital, in which were nineteen patients suffering from diphtheria, was completely destroyed. Fortunately, warning was given by the wrecking of the out-buildings, and the patients were carried out wrapped in blankets and laid under a hedge. A word of praise is due to Mr. Goode, who offered his house as a temporary shelter. Compared with tropical hurricanes, our record of disaster is perhaps light, but for all that we fear that widespread distress has been caused.

MENTAL DISTURBANCE FROM IODOFORM.

IN the *Neurologisches Centralblatt* there is the abstract of a curious case recorded by Dr. Oldenburg. A female patient aged fifty-one, who had suffered from epileptic attacks from the age of twenty, but in the intervals between the attacks had been quite healthy and not psychically peculiar, injured her hand in a fit and was treated with a 10 per cent. iodoform ointment. Twelve days later she became excitable, restless, and confused, and by-and-by had hallucinations. The urine gave a distinct iodine reaction. When admitted to hospital she talked incessantly, would not answer questions, could scarcely be kept in bed, and complained of plots and persecution. The restlessness increased, and the patient became cyanotic; the urine contained albumen, but gave a very slight iodine reaction. She then remained quiet for a few days, but became again demented, after which she had another period of quietude followed by another outbreak, which, however, subsided, so that she was then able to be discharged. Dr. Oldenburg thinks the condition cannot be regarded as a post-epileptic mental disturbance, because of the interval that elapsed between the last attack and the onset of mental symptoms. He thinks it was determined by the iodoform poisoning acting upon a nervous system predisposed by epilepsy to grave disturbance.

THE LIQUEFACTION OF HYDROGEN ACCOMPLISHED.

UNDER the combined influences of great pressure and intense cold, hydrogen has at last surrendered and been liquefied. The means by which this has been effected have, of course, been at the disposal of the physicist and chemist for many years, but Professor Olszewski of Cracow, who, it may be remembered, also liquefied argon and examined its properties, has been the first to succeed in obtaining liquid hydrogen in tolerable quantity, since he has been able, we learn, to give two constants in regard to it. Thus it is announced that its critical point—the temperature at which it passes from a liquid to the condition of vapour—is -233°C ., and its boiling point at normal pressure is -243°C . It is well known that hydrogen has hitherto most strenuously resisted all attempts at liquefaction, and the fact of its obduracy in this respect, though in other respects it is most tractable, having now been overcome, removes the only gaseous element known to us which has not been liquefied. Until, therefore, more attenuated gases even than hydrogen are added to the list of chemical simplicities no further discoveries on this particular line of research can be hoped for. Meanwhile a detailed communication from Professor Olszewski on his very important discovery, which has just been announced, will be awaited with keen interest.

It has been decided by the Abernethian Society of St. Bartholomew's Hospital to hold a *conversazione* in the Great Hall of the Hospital and in the Medical School buildings to celebrate the centenary of the Abernethian Society on May 1st, 1895. Any past members of the society who desire

to be present on the occasion should communicate with the secretaries of the Abernethian Society before April 15th. A card of admission will be sent to those who apply, together with a ticket for one friend if desired. The number of tickets issued will be limited.

THE Erasmus Wilson Lectures on Pathology at the Royal College of Surgeons of England will be delivered by Mr. J. H. Targett, as already announced, on Monday, Wednesday, and Friday next, at the College, at 5 p.m. Mr. Targett has selected for his subject "Certain Forms of Neuropathic Joint Disease."

THE publication of the report of the Royal Commission on Opium is now imminent. The only dissentient to the opinion that both the cultivation of opium and the tax upon it should be maintained is understood to be Mr. Wilson.

THE REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1893.

THE appearance of this bulky volume is looked for with interest in India and by all those who are concerned with the public health and vital statistics of that country. It is a sort of official health handbook of India of a big and ambitious kind. It deals with the diseases of the European and native armies, the gaoles and civil populations of India, with the epidemics that have prevailed during the year, and in addition to affording a vast amount of information embodied in a number of voluminous tables of all kinds has an appendix in which health problems and questions of a special and scientific kind are discussed. It cannot be denied that these reports are very laborious and valuable productions, of interest alike to the politician, the statesman and military department of India, and the medical statistic; but able as they are do they not attempt too much? It is impossible, as it appears to us, to deal adequately with such colossal materials and figures as the civil and military populations of such a vast country as India and its disease-causes in any one volume. To begin with the European army. The strength of that force serving in India in 1893 was over 70,000; the ratios per 1000 respectively were as follows: admissions into hospital, 1415; constantly sick, 87; deaths, 12.61; invaliding, 25; total loss, 38. The death-rate (12.61) seems to have been the lowest recorded for a number of years and was much under that for 1892, when it stood at 17.07 per 1000; the admissions were also less; and the health of the British army in India may therefore be said to have been better in those respects in 1893 than in 1892. Among the chief causes of admission were venereal diseases and ague. The increase in the former was very considerable; there were no less than 32,663 admissions for venereal disease, or 466 per 1000, against 410 in 1892. The admission-rate for cholera fell from 2.5 to 0.2 per 1000, and that for influenza from 12.7 to 0.3. Venereal diseases caused 33 per cent. of the total sickness, and ague 26 per cent.

The chief causes of mortality were enteric fever, pneumonia and pulmonary tubercle, dysentery, and injuries. Enteric fever caused 42 per cent. of the total deaths, and injuries 8 per cent. There was a marked increase of sickness amongst the European troops stationed at Quetta. The admissions for ague at that station were more than doubled. The health of the troops in Burmah has improved steadily since 1889, but the improvement in respect of sickness from malarial fever is almost counterbalanced, we are told, by increased prevalence of venereal disease. The admissions from this cause in 1893 amounted to 503.1 per mille. Enteric fever is much more prevalent in Bengal than in either Madras or Bombay; so also is remittent fever. On the other hand, simple continued fever appears to be more prevalent in Madras than in Bombay and Bengal, and the same remark applies to dysentery. In all three Presidencies enteric fever causes the largest number of deaths; next to it, and in all the Presidencies, comes hepatic abscess. The percentage respectively

of enteric fever, hepatitis, dysentery, and pneumonia in the total deaths of each Presidency in 1893 was:—

	Bengal.	Madras.	Bombay.
Enteric fever	44.6	35.2	36.5
Hepatitis and hepatic abscess	7.0	11.7	5.1
Dysentery	3.4	6.2	5.1
Pneumonia	6.5	2.3	4.4

It may be remarked here that the prevalence and mortality from pneumonia are much greater amongst the native army than amongst the European troops: about 4 deaths among the former to 1 of the latter. Moreover, although dysentery affects European and native troops almost equally there is a marked difference in their liability to abscess of the liver; the admissions from this cause amongst the former were thirteen times more numerous, for equal strengths, than among the latter, and the mortality was twelve times greater. As regards enteric fever, we know that the liability of the European soldier to that fever, as compared with the native, is enormously greater, but we shall revert to this point later on. The foregoing facts are noteworthy, however, and open up, as it seems to us, a field for useful investigation.

As regards cholera there were only 16 cases throughout the European army in India in 1893 with 10 deaths; 9 of the cases occurred in Bengal, 6 in Bombay, and 1 in Madras. Of the Bengal cases 4 occurred at Umballa, and were, in the opinion of the medical officer, due to importation from a gang of infected coolies working on the Simla road in April; but as it was not known that the coolies ever entered Umballa, and no sort of communication, direct or indirect, was traced, this hypothesis is deemed untenable, especially as it is a fact that in years of epidemic cholera April and May are precisely the months for the disease to make its appearance in Umballa. There were also 3 fatal cases at Meeran Meer. They all occurred within thirty-six hours, on May 3rd and 4th. Two of them belonged to one regiment, but to different companies, while the third occurred at a distance of two miles from the others. The hypothesis that the disease was conveyed in this instance by either soda water or drinking water, which was urged, seems to be contradicted by the fact that the disease only lasted two days and affected only three men, one of whom lived at a distance of two miles from the others. Whilst on this subject we may repeat what we have said long ago, that we have no confidence in barrack filters. They are, under the circumstances and conditions of military life in cantonments, probably rather a source of risk and danger than a protection to health against pathogenetic micro-organisms. The reliable and proper plan is to provide a perfectly pure and good water-supply at its source, and to see that it is kept so and protected from all contamination until it reaches the individuals drinking it.

(To be concluded.)

ALDRESHOT: THE SANITARY AND SOCIAL CONDITIONS.

(Concluded from p. 772.)

WE dealt last week with the question of the drainage of Aldershot; the disposal of sewage is, however, not the only difficulty to be surmounted there. The presence of the camp has brought about social conditions that are the cause of much embarrassment to the civil authorities. The camp indirectly causes a considerable increase of pauperism, with which the civil authorities have to deal. For instance, a large number of military pensioners have elected to live at Aldershot. These pensioners are paid every three months. This mode of payment is a very serious mistake. A great good would be effected if the military authorities could arrange to pay the pensions in weekly instalments—through, for instance, the agency of the post office. The necessity of a reform in this direction has made itself heavily felt at Aldershot. The old soldiers, having received their quarterly allowance, to use their own expression, "lived like lords" for a week or two; then, when all their resources were exhausted, came upon the union and lived at the ratepayers'

expense for the rest of the quarter. This was so crying a grievance that special regulations had to be made by which the workhouse authorities got a charge on the pensions of those pensioners whom they had relieved.

Though the difficulty caused by the pensioners has thus been settled, nothing as yet has been done with regard to the grave problem involved by the presence of a large number of women whom soldiers have married without obtaining leave. These women usually follow their husbands about from garrison to garrison; but at Aldershot the soldiers are prepared for foreign service, and it is impossible for these women to follow their husbands to Gibraltar, Malta, India, &c. Thus it is at Aldershot that the separation between man and wife very generally takes place. What becomes of these unfortunate women when their husbands have gone? It is not in a small town of only 14 000 inhabitants that they can readily find employment. Some may obtain a little washing to do either for the women in the married quarters or for the officers' families; probably the greater number are driven to prostitution. Some of them become so extremely poor that they reach the very lowest strata of fallen women. Their poverty is such that they have been known to sleep in the open air, and offences against decency are often committed under the shelter of trees, embankments, furze, and other covering. As there is no law whatsoever to regulate the conduct of these women, to bring them under treatment when ill, to teach them cleanliness, and to put them in connexion with those institutions that would help them to a better mode of life, syphilis and other contagious diseases are of course very prevalent at Aldershot. This is a vexed question, and there has been much juggling with figures; but in any case, so far as Aldershot is concerned, the last Army Medical Department Report for the year 1893 confirms the opinion just expressed that the grievance is especially acute at Aldershot. Taking all forms of venereal disease together for the United Kingdom, the total admission ratio per 1000 was 194.6, and the constantly-sick rate 16.68, and these compared with the average of the last seven years show a decrease in the former of 29.0 and in the latter of 0.79. As compared with the previous year, the decrease in admissions is 6.6 per 1000, whereas at Aldershot, instead of a decrease there is an increase of admissions equal to 36.9 per 1000.

If we take the figures during the last few years the Contagious Diseases Act was in force we find that the ratio of admissions for venereal diseases at Aldershot was in 1878 138.36; in 1879, 163.35; in 1880, 197.78; in 1881, 211.58; and in 1882, 261.13 per 1000. How far this notable increase of figures is due to the less strict application of the Act at a time when it was about to be abolished or to the arrival of a specially large number of recruits it was difficult to ascertain. With regard to the recent figures, these were not altogether easy to obtain and seemed rather low. Under the heading "venereal diseases" the ratio for the last three years was 252.3, 210.3, and 156.6 per 1000; but this did not include ulcers of the penis and balanitis. Adding these complaints, the figures were apparently 260.03, 221.3, and 189.8 for the years 1890-91, 1891-92 and 1892-93. As there has been an increase of 30.9 for 1893 the figure for that year would show that 226.7 soldiers out of every 1000 soldiers quartered at Aldershot were admitted during the course of the year for all forms of venereal disease.

Considering the great fluctuation that must ever take place in such diseases it will be seen that there is no very marked difference in the prevalence of venereal disease before and after the Contagious Diseases Act was abolished. But then it must be borne in mind that these figures include gonorrhoea, which the Act does not help to check. The utility of such legislation is best set forth when the prevalence of secondary syphilis, about which there can be no mistake, is studied. Thus, in 1893 the rate of admission into hospital for secondary syphilis was in the United Kingdom equal to 31.8 per 1000, and the constantly-sick rate 3.31. The figures for England and Wales stood higher—namely, 37.4 and 3.74; and the average for the last seven years in England and Wales was 39.5, and 3.66 constantly sick. If, on the other hand, we take the island of Malta, where a Contagious Diseases Act is in force, the ratio per 1000 of admissions for secondary syphilis in 1893 was only 13.3, and the constantly-sick rate only 1.69. The average at Malta from 1886 to 1892 of cases of secondary syphilis is 14.6 per 1000 per annum, and the constantly sick 1.42. Thus, roughly and to put the case in round figures, we may say that for three soldiers who suffer from secondary syphilis in the United Kingdom, where there is no Contagious

Diseases Act in force, only one soldier suffers from secondary syphilis in the island of Malta, where a Contagious Diseases Act is in force. With regard to all classes of venereal diseases the statistics for Malta do not present the same startling difference, but they are more favourable than the home returns. For 1893, instead of 194 admissions to hospital and 16.68 constantly sick, the figures for the United Kingdom, there were at Malta 122.3 admissions and 10.56 constantly sick; and these latter figures are above the average. From 1886 to 1892 the average at Malta was 91.6 admissions to hospital and 7.39 constantly sick for all venereal diseases per 1000 men per annum.

In dealing with this question we must not only look at figures. Above all, we must consider social conditions. These, fortunately, have greatly improved. First and foremost, the army is composed of a much higher class of men than was the case some twelve and more years ago when the Contagious Diseases Act was in full force. The School Board has had time to produce a change for the better, and there is now a fair sprinkling of gentlemen serving in the ranks. There are also more mechanics, tradesmen, shopmen, &c., who now drift into the army. The husbandman and common labourer, from which class the majority of recruits were formerly drawn, no longer constitute the preponderating element. Then the labourer of to-day is better educated than his predecessors, and when in the ranks finds himself surrounded by a much superior set of companions than was the case a decade or two ago. In a word, the whole tone of the rank and file of the British army has improved. As a result the soldiers are more careful and better behaved; they are more sober and more clean. In building the new barracks at Aldershot especial care was taken to provide the soldiers with improved facilities for personal cleanliness. The men, being better educated and more intelligent, are also more careful. Many complex influences have been at work, more especially of late years, otherwise the evil effects of abolishing the Contagious Diseases Acts would have been even more marked than is actually the case. These evils still, however, constitute the gravest difficulty. What is to become of the abandoned wives of the soldiers who have gone abroad? How can women known to be diseased be prevented from frequenting the streets? In round numbers we may say that almost one out of every four soldiers quartered at Aldershot contracts venereal disease in the course of the year. Apart from the reduction in the efficacy of the army this implies, it also means that there is a great prevalence of venereal disease among the civil population, and this must in many instances culminate in abject pauperism. Thus the ratepayers are made to suffer. There are more paupers in Aldershot than anywhere in the neighbourhood. The number of in-door paupers in the Farnham Union in 1893 was equal to 17 per 1000 of the population; but in the Aldershot district it was equal to 22 per 1000. The widespread prevalence of immorality that must result from the gathering together of a large number of young unmarried men is always a grave matter. At Aldershot the difficulties are greater than usual, because the town is very small, has very few resources of its own, and it is burdened by the presence of a number of the abandoned wives of soldiers married without leave.

TUBERCULIN AND BOVINE TUBERCULOSIS IN THE STATE OF NEW YORK.

THE knowledge which has been acquired within recent years of the prevalence of bovine tuberculosis, more particularly in adult cattle and dairy stock, has excited considerable attention among public authorities in many countries. In Denmark and in Prussia, for example, the matter has been extensively taken up by the sanitary authorities of the State, and in our own country by the present Royal Commission on Tuberculosis; and, seeing the energy which the Health Departments of some of the States of the Union have thrown into all questions relating to the contagiousness of tubercle, it is no matter of surprise that the question of bovine tuberculosis has been widely attacked in America.

In an article in THE LANCET of Feb. 3rd, 1894, it was pointed out that a valuable method of diagnosing tuberculosis in cattle had arisen in Koch's tuberculin, and that with its aid efforts were being made in many directions to recognise tuberculosis

and to endeavour to exterminate it from herds such as pleuropneumonia can be exterminated. Such an effort has been made by the State Board of Health of New York, and the story of its action is to be found in vol. ii. of its annual report for 1894.

So early as 1892 a statute of the State of New York called upon its Board of Health—(1) to ascertain whether or not there exists in milch cows or other cattle in the State a cause of disease or danger to life, and (2) to devise means for averting the same and for preventing all injury from tuberculosis in milch cows. To this end ample powers were given to the Board to employ and fix compensation to medical and veterinary practitioners, to prescribe rules, to make and secure the enforcement of orders, and, finally, to destroy all cattle affected with tuberculosis, laying it down as the Board's duty, whenever tuberculosis is found to exist among milch cows or other animals, to suppress it promptly and to prevent its spread.

The Board proceeded with great promptitude to act upon this mandate. A staff of veterinary tuberculosis inspectors was appointed and rules drawn up for their guidance. These rules at the outset had relation to diagnosis chiefly on the strength of physical examination; but as the futility of this method soon became manifest the rules were modified so as to make tuberculin the cardinal test. Thenceforward, in the main, animals inspected were passed or slaughtered according to the results of tuberculin injections.

From the end of 1892 to the early months of 1894 the staff of inspectors appears to have caused the slaughter of over 1000 cattle, principally cows, on the ground of demonstrable or of suspected tuberculosis. What number were actually inspected and in what precise proportion tuberculin was used it is unfortunately impossible to gather from the report. If we add up the numbers given for different herds in the several counties we reach a total of over 20,000 inspected; but we find in the introduction to the report the reservation that "in many cases the same herd, or part of the same herd, is noted two or three times," and no data are given by which we can correct this error. It is apparent, however, that whether the 1000 slaughtered were among 20,000, or whether (as the introduction suggests) among a considerably smaller number, they indicate a very extensive and serious prevalence of the disease; for there can be little doubt, after reading the accounts of post-mortem examinations of the cattle condemned, that in a very considerable majority tuberculosis was present in one or another form. In some instances the reports of these examinations call for comment, and it is not always easy to agree with the diagnosis as given. Thus, on p. 247 the whole account of the post-mortem examination of Cow 5 (tabulated elsewhere as tuberculous) is an example of several equally dubious:—

"Lymphatics: Retro-pharyngeal enlarged; serous membranes, no calcareous deposits found; uterus, with foetus, full, six months. Diagnosis: tuberculosis."

We find, too, a number of cases in which confirmation of the inspector's diagnosis by a skilled pathologist would appear to be very desirable. Little if any examination for tubercle bacilli seems to have been made, and the special pathological reports that are given are somewhat meagre and inconclusive.

Among the undoubtedly tuberculous a point of considerable interest is the limited extent to which tuberculous lesions were frequently found. Taking at random the record of the slaughter of twenty-five animals in one herd (at pp. 233-245), we find that in twelve the tubercle was confined to calcareous glands (in one case only a few "pin-head deposits") in the thoracic cavity, without any affection of the lungs or organs elsewhere; while only in four or five of the remainder is any evidence given that the tubercle was becoming general or at all extensive.

The fact remains, however, that tuberculosis, whether slight or severe, was found in a very large number of the animals condemned, and we cannot but admire the energy with which the Board of Health has set itself to work to detect and destroy the disease. And in this connexion its methods of diagnosis, particularly the result of tuberculin injections, are worthy of careful study. Have the indications of tuberculin been sufficiently constant to give reasonable grounds for its administrative action? It is disappointing not to find an answer to this question in the report. Only casually, in the reports of a few inspectors, is any reference made to the source of the material (though it appears there are both a "U.S." and a "K" tuberculin), nor are we told whether

any method has been adopted to secure its uniformity, or, in the case of a number of the injections, what dose has been given. Again, while the Board, defining the normal temperature of cattle to be from 99° to 102° F., lays down that a "reaction" is a rise of 2° or more above the mean of two temperatures taken before injection, it has also directed its inspectors to use discretionary power in cases of doubt. The latter appear to have interpreted this permission in a liberal spirit, and to have condemned a number of animals which did not react according to the definition. But unfortunately they do not supply us with details in many of these cases, and in others the reason of slaughter is extremely difficult to understand. Perhaps the greatest difficulty of all is the absence of any system of control experiments. From the first the certainty of tuberculin seems to have been taken for granted. We may instance (from p. 114) the remark of an inspector, apparently perplexed at having slaughtered two cows innocent of tubercle post mortem, that in their case "the reaction was so positive that it seems scarcely probable that these animals were not tuberculous."

Some indications, however, may be obtained from those cases in which post-mortem examinations have been made upon animals whose temperatures before and after the injection have been fully recorded, and it is worth while to go through them and apply to each the definition of reaction given by the Board of Health. An analysis of 682 cases collected from the several counties may be put into the following table:—

	Number slaughtered.	Tuberculous.		Doubtful if tuberculous.		Not tuberculous.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.
A. Undoubted reaction	569	534	94.0	16	2.7	19	3.3
B. Reaction doubtful, owing to temperature above 103° before injection ...	30	20	—	2	—	8	—
C. Reaction doubtful from other causes ...	28	18	—	1	—	9	—
Total of A, B, and C.	627	572	91.2	19	3.0	36	6.8
D. No reaction ...	55	16	29.0	12	22.0	27	49.0

* Including 25 cases where the post-mortem evidence of tuberculosis is extremely slight.

It will be seen at once in what a large proportion the indication of tuberculin has been found correct, but it will also be seen that it is by no means free from error. If we exclude the animals in B and C, whose reaction was doubtful, the error is only 3.3 or at most 6 per cent.; but to omit to recognise these doubtful reactions would be to pass 38 tuberculous animals out of 58. Adding them, therefore, we find the mistaken cases range between 6.8 and 9.8 per cent. On the other hand, tuberculous lesions were found in as many as 16 out of 55 animals that did not react, but were slaughtered notwithstanding by the inspectors for various reasons.

The existence of these errors appears to be a matter of considerable moment. If among the animals passed because they did not react there exists anything like the proportion of tuberculosis found post mortem in the non-reacting animals slaughtered, then the administrative action taken will have been of little use in the interests of the cattle. For them the theory acted upon is that tuberculosis in whatever form is infective, and if, therefore, in any herd a number of tuberculous animals escape detection so many centres of infection for the rest remain. And until we know more certainly what particular conditions of bovine tuberculosis are dangerous to man, we can hardly affirm that an incomplete destruction of tuberculous cattle, however extensive, is the simplest or most efficacious method for the protection of human health.

The reader of this report cannot but reflect that if, in spite of the want of exactness and uniformity of method that has been indicated, tuberculin has nevertheless been successful in diagnosing tubercle in so large a proportion of animals, what might not be expected of it if the conditions of its action were thoroughly investigated and properly defined? The New York Board of Health had a great opportunity; the country was alive to the danger, the Legislature gave the

Board a free hand in dealing with the question, and, judging merely from the report, it would seem that no condition was wanting to enable an accurate determination to be made of the conditions under which tuberculin is a trustworthy test. As it is, the Board has done much commendable work on a large scale, but appears to have made little endeavour to formulate at the outset any scientific basis for its action. After reading the report it is hardly surprising to discover that considerable dissatisfaction has arisen, and that the Legislature has been compelled to suspend the powers of the Board and appoint a commission to consider the question afresh.

UNQUALIFIED MEDICAL PRACTICE AND DEATH CERTIFICATES.

AN inquest was held at Coventry on March 15th before Mr. Charles Webb Iliffe, coroner for North Warwickshire, on the body of William Alfred Gumbley, the sixteen months old child of a bicycle polisher living at 4 court, 5 house, Leicester-street, Coventry. The case excited much interest in the city owing to the discussion which took place at the inquest as to the issue of the death certificate.

The mother of the child deposed that he had been healthy from birth, but on the previous Monday she noticed that he was very poorly. When her husband came home at dinner time she told him of the child's illness, and the father said to her, "Have you got a shilling?" and she replied "Yes." He then said, "You go and take the boy to Millerchip," and she took him to 4, Swanswell-place and saw "Dr." Millerchip.—The Coroner: Why did you call him "Dr. Millerchip"? Witness: That is what I have heard the Coventry people call him.—You did not know he was not a medical practitioner? If I had I should not have taken the child to him.—You only had a shilling? No, sir. I went to Millerchip's and when the door was opened I saw an assistant who took me into a room and "Dr." Millerchip came in with him.—Were there any other people there? No one else; only the "doctor" and his assistant. The latter looked at the child, said it was a very bad case, gave me a powder, and told me to take the child home and give him a warm bath.—Is it a fact or not a fact that you did not see the assistant at all? Both were there when I went the first time, but the assistant gave me the powder and "Dr." Millerchip went out. The assistant said the child was as bad as ever he could be.—What did "Dr." Millerchip say? He did not say anything whatever.—You were really consulting the other person, the assistant? Yes.—You paid a shilling to the assistant or to Millerchip? To Millerchip.—When you started from home whom did you think you were going to see, Mr. Millerchip or the assistant? I did not know whom I should see; I wanted to see anybody who could save my child. I went with the intention of seeing Mr. Millerchip.—Had you seen the assistant before? Yes. The witness went on to say that a few weeks before the child was taken to the Coventry and Warwickshire Hospital, but she was told that whooping-cough (from which he was suffering) was not treated there.—Whom did you go to with this child? "Dr." Millerchip.—You thought Mr. Millerchip was a doctor? Yes, I did.—Have you since learnt differently? Yes, or I should have my baby now.—Did you know that if your child died Mr. Millerchip had no power to give a certificate for burial? I did not know. I thought he was a doctor. On leaving Millerchip's house she took the child home and bathed him, but he got worse. She went to Millerchip again in the evening, and he then said to her, "I have done all that I can for the child." Her husband then said, "I will call in another doctor," and he went for Mr. Overton, surgeon, who came at 10.30 p.m.—Did Mr. Millerchip's assistant make any visit? No; I could not get "them" to come. The child died while her husband had gone to Mr. Overton's for medicine. She (the mother) went to Mr. Millerchip for a certificate, and he said he could not give one.—For what reason? Because we had called another doctor in.—Had you seen this assistant at Mr. Millerchip's before? No.—Did you only a little time ago see another assistant? Yes.—Mr. Overton declined to give a certificate. She and her husband went to Millerchip again the next morning, and he then gave a certificate, the cause of death being put as convulsions, secondly as exhaustion, and the paper was signed "Samuel Murphy, L.R.C.S.I."

Mr. Millerchip said, "We will give a certificate rather than have any bother about it."

The coroner, in reply to the foreman of the jury, stated that Mr. Millerchip was not entitled to give a certificate, he not being a qualified practitioner. Mr. Murphy was registered in Ireland. There had been (added the coroner) a number of cases that had been attended by Mr. Millerchip in people's own homes, and then an assistant had been called in at the last moment for the purpose of giving a certificate of death. The registrars had sometimes objected to accept these certificates without reference to the coroner. These assistants were, as it were, "covering" Mr. Millerchip and saving him from responsibility.

John Gumbley, the child's father, was next called, and he corroborated the wife as to the child being taken to Mr. Millerchip, whom he had heard spoken of as "a clever man."—The Coroner: Do you think he was clever as a doctor? Yes.—Did you know he was not legally qualified as a doctor at all? No. He knew a lot of people went to him, but had not heard of Mr. Millerchip visiting patients. The father went on to say that Mr. Overton, when he saw the child alive, thought that poison must have been taken. On his going to Swanswell-place for a certificate he told Mr. Millerchip he had called in another doctor, and Millerchip then said, "If you have called in another doctor it is nothing to do with me. I can give no certificate." He went a second time, and then Millerchip said to him, in the presence of the assistant, "You don't want your child to be cut open and hacked?" and he replied "No." Then Millerchip turned to the assistant and said, "You had better give him a certificate," and the assistant wrote one.

Thomas Golby, coroner's officer, deposed that the registrars of deaths in the city had called his attention to certificates of deaths of persons treated at 4, Swanswell-place. This was the fifth case since Jan. 1st where it was alleged that certificates were signed by assistants who had seen the patients only a short time before death. His investigations led him to believe that Mr. Millerchip had attended people not only at his surgery, but in their own homes.—The Coroner: As a professional man? Yes. Someone else has gone to the patient just before death, and then signed the certificate at death. He remembered a case of the sort that came before the coroner eighteen months ago. The assistant then was an old man, who admitted that he was called in for one visit before death.

Mr. Percy Edgar Overton proved that he and Mr. Edward Phillips made a post-mortem examination of the body of the child Gumbley, and that they were unable to say what was the cause of death. The child's organs were healthy. Mr. Phillips added that he was not in a position to say whether the secondary cause was exhaustion. All depended on what exhaustion meant.

The Coroner summed up the case for the jury, and commented on the impropriety of a medical man giving a certificate of death without full acquaintance with the case, and of a system of "cover" to an unqualified person.

The jury returned a verdict of "Death from natural causes."

ANÆSTHESIA IN THE LOWER ANIMALS.

NOT very long after the introduction of chloroform as an anæsthetic into medical practice, and when its beneficent and pain-suppressing powers had been fully demonstrated on mankind, inquiry began to be made as to why its merciful influence should not be extended to the domestic animals when they had to undergo painful operations, especially those of a protracted kind; and we remember reading a most eloquent appeal for its employment in the case of the horse in a clever little book, published nearly forty years ago, by Sir Francis B. Head, entitled "The Horse and his Rider." This appeal is perhaps as necessary now as it was when first made, and certainly it should be brought again to the notice of those who, for some reason or other, do not resort to anæsthesia, general or local, when plying the cutting instrument, the burning iron, or other pain-producing agent on animals. In the section of his book on chloroforming horses, after dwelling on the unspeakable boon that had been conferred on man by the application of anæsthetics in the abolition of suffering and agony, he says: "Now, if in

return for this extraordinary alleviation, or rather annihilation, of all sufferings under surgical treatment, man should deem it his duty to render thanks to that Omnipotent Power from which it has proceeded, is it possible for him practically to perform any more acceptable act of acknowledgment than to allow the dumb creatures in his service to participate in a blessing which, by Divine authority, has been imparted to the possessors, not exclusively of human reason, but without favour or exception of animal life? As regards his horses, the performance of this duty is especially incumbent; for not only, like all other animals, are they liable to the accidents and ills that flesh is heir to, but some of the cruellest operations to which they are subjected—such, for instance, as cutting off and cauterising their tails, burning their sinews with red-hot irons, dividing and cutting out a portion of a nerve (sensory), with other excruciating operations on young horses, under which they are often heard to squeal from pain—are inflicted on them to comply with either a useless as well as a barbarous fashion; or to enable them 'to go for another season's hunting'; or for the attainment of conveniences of which the horse derives not the smallest share; or to make them 'sound enough to sell'; and as the high-bred, broken-down hunter has no voice to ask for mercy, as he cannot boast of possessing reason, or as he has inherited no knowledge, as he has no power to bequeath any, as his whole energies have been devoted to the service and enjoyments of man, by whose mechanical contrivances he is now 'cast' with his four feet shackled together, lying prostrate on a heap of straw, just before the red-hot iron sears his overstrained sinews or the sharp knife is inserted into his living flesh—surely in a civilised country like England some high power should be authorised to exclaim, not 'Woodman, spare that tree!' but '*Sportsman, save that horse!*' by chloroform from the agonising torture to which you have sentenced him. You are a man of *pleasure*—save him from unnecessary *pain*. You are a man of *business*—inscribe in that ledger in which every one of the acts of your life is recorded, on one side how much *he* will gain, and on the other, *per contra*, how very little you will lose, by the evaporation of a fluid that will not cost you the price of the shoes of the poor animal whose marketable value you have determined, by excruciating agony to him, to increase."

This urgent appeal concludes with another allusion to the benefits chloroform has conferred on the human species, and adds: "If, therefore, man to this enormous extent is benefited by chloroform, what right has he to withhold it from his own animals, to whom, not only in equity, but by the laws of God it belongs as much as it belongs to him? Their claims are so affecting and so obvious, the remedy that would save them from all pain is so cheap and simple, that we feel it is only necessary to appeal to the public to obtain by acclamation a verdict in their favour."

Notwithstanding this and similar appeals and remonstrances, the employment of anæsthetics has made slow progress in veterinary practice, expense, trouble, and time being usually the pleas offered for their non-adoption. A number of veterinary surgeons, however, resort to them on every possible occasion, and, putting the avoidance of pain on one side, testify to the advantages they derive from them; indeed, there are some operations which could not be attempted with any hope of a successful result unless the animal is under the influence of an anæsthetic. Even in cases of difficult parturition, partial anæsthesia, especially in the mare, is found to be most advantageous in effecting delivery. Of all animals the horse is the one to which chloroform can be most safely administered; in fact, it is sometimes an arduous task to destroy this creature by inhalation of the drug. It has been given to hundreds—it might be said thousands—of horses, almost undiluted with air, and with absolute impunity. But some veterinary surgeons imagine that there may be danger in this rapid anæsthesia, and advise the mixture of chloroform and air, which, if it requires a longer time to produce the necessary degree of narcosis, is safer. However this may be, it is gratifying to find that attention is being increasingly directed to this matter; and among those who have distinguished themselves in this direction, and have laboured to dispel the prejudice which still opposes the use of chloroform, must be named Mr. Wallis Hoare, F.R.C.V.S., Cork, who, in advising the dilution of chloroform vapour with air during inhalation, has improved on the ordinary apparatus by a modified bag and foot bellows, which appears to be easily worked and effective. For adult

horses the quantity of chloroform required in this apparatus is from one and a half to two ounces, the time occupied in producing complete anæsthesia varying from ten to fifteen minutes, and Mr. Hoare regards loss of muscular power in the limbs and loss of sensation on striking the animal firmly on the quarter as the best indications of the proper stage at which operations may be commenced. Mr. Hoare is evidently an enthusiast in this humane practice of veterinary surgery, and it is earnestly to be hoped that his example may be largely followed; for though all animals should receive merciful consideration when they have to undergo operations, surely none of them is more entitled to this than the horse, whose muteness under the infliction of pain seems to lead people to think that he suffers but little—a grave error, but one which has caused him to be more abused and tortured than all the others put together.

THE

COMPLIMENTARY DINNER TO SIR JOHN E. ERICHSEN, SIR J. RUSSELL REYNOLDS, AND SIR JOHN WILLIAMS.

SIR JOHN E. ERICHSEN, Sir J. Russell Reynolds, and Sir John Williams were entertained at dinner on Wednesday evening by their colleagues, friends, and pupils at the Criterion Restaurant. The Vice-President of University College, Lord Reay, presided.

Lord REAY, in rising to propose the health of the three distinguished guests, said it was impossible to leave out of sight the extraordinary revolution which the science of which they were the illustrious representatives had undergone. After briefly tracing the development of their professional knowledge and touching upon the recent discoveries of Roux with reference to diphtheria; of Lord Rayleigh and Professor Ramsay with regard to argon and helium; of Kitasato with regard to the microbe of the plague; of Sir Joseph Lister, Pasteur, and others, he said the conquests which had been achieved were tangible ones, tending to make life more worth living. Referring to the efforts which had been made to rid the profession of quackery, he would like to see other professions adopt something similar to the Medical Register. He saw little signs, however, of getting rid of quacks in other professions, and in this respect the medical profession in England had been singularly fortunate. To belong to such a profession was in itself a great honour. To rise to a leading position in the profession such as that which their three guests held made it superfluous to enter into biographical details. Of Sir John Erichsen it was sufficient to mention that he was the author of a standard work on the Science and Art of Surgery; and those who had worked with him, for him, and under him, in University College knew the stimulating power of his work. His example had left an indelible mark. Sir Russell Reynolds' "System of Medicine" alone entitled him to the position he held, and Sir John Williams had mastered in all their medical and surgical ramifications the science and art of gynaecology. In offering congratulations to these gentlemen it could not be forgotten that this official recognition of their talents followed the natural selection of the fittest by those best able to judge. It was a noteworthy fact that in the medical profession the State was conspicuous by its absence, except when it created baronets. The medical schools were self-governing institutions, the hospitals were not aided or controlled by County Councils, and the Royal Colleges of Physicians and Surgeons were corporations which were absolutely their own masters. It was a situation which was absolutely unique in the world, and if it could be followed by other professions would be to their advantage. It was a great honour to University College that its medical school claimed all three of their guests, and that in Sir John Erichsen they had a past President of the Royal College of Surgeons, and in Sir Russell Reynolds the actual President of the Royal College of Physicians. Their position had been attained not only by the splendour of their intellect, but by the self-sacrifice of which throughout their careers they had given such abundant proof. Lord Reay then paid a tribute to the memory of the late Sir William Savory, testifying to the good work he had done on the Royal Commission on the University of London.

The toast of the evening was spoken to by Sir Henry

Thompson, who gave some interesting reminiscences, and by Dr. Champneys, who spoke of his associations with Sir John Williams.

Sir JOHN E. ERICHSEN, in responding, expressed the gratification he felt for the reception which had been accorded to him that evening. The distinction which had been conferred upon him by Her Majesty was most gratifying, but there was the proverbial drop of bitter in the cup. "It comes too late." In looking down that long vista of his life which extended from the commencement of his work to the present day, he could truly say that he had ever tried to so shape his work that it might conduce to maintain the honour and dignity of the profession to which he belonged, both in public and in private. If there was one matter more gratifying to him than another it was that the distinction conferred upon him was not a personal one but was conferred through an individual upon the profession. The public at large knew little of the inner life of the profession, of the great intellectual activity of its members, of its splendid achievements in scientific work, of its devotion to duty, and of its self-sacrifice in the cause of charity. These characteristics were common to the humblest as well as the most exalted members of the profession, from the dresser who imperils his life in attending to a patient to the work of Presidents of the Royal Colleges. The debt of gratitude which he owed to University College he could never repay, the opportunities in early life for achieving whatever success he had attained and the formation of many friendships. To be president of University College was one of the highest honours which could befall a professional man, especially when he was the successor of such men as Lord Brougham, Mr. Grote, Lord Belper, and Lord Kimberley.

Sir J. RUSSELL REYNOLDS said that nothing could be more gratifying to any member of the medical profession than that evening had proved to him. He stood between his old master, Sir John Erichsen, who was subsequently his colleague and always his friend, and Sir John Williams, an old pupil, then his colleague and afterwards his friend. Something had lately been said about University College being a favoured one, but it had always enjoyed a large share of University honours, and had been productive of men of distinction not only in the medical but also in the legal professions. In the former he mentioned Sir Joseph Lister and Sir Richard Quain, and in the latter Sir G. Jessel and the present Lord Chancellor. Sir Russell Reynolds then concluded a brilliant little speech by relating a personal anecdote. He was called to see a gentleman, and the next day a friend of his called upon the patient. On the friend inquiring of the butler how the gentleman was, he replied, "Oh, he is much better and quite happy now. He has just seen Sir Joshua Reynolds, the president of the Royal Academy."

Sir JOHN WILLIAMS also responded.

Sir WILLIAM BROADBENT proposed the health of the Chairman, remarking that he did not think any honours bestowed within his recollection had been received with such unanimous goodwill and support on behalf of the profession as those which had been conferred upon their guests.

During the evening Dr. F. Roberts admirably rendered the charming ballad "The Anchor's Weighed."

THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON.

We have received the following statement from the Hon. Secretaries of the Southampton Medical Society with a request, as will be seen, for its publication:—

"Certain facts relating to the constitution, management, and work of the above hospital having come to the knowledge of several members of the Southampton Medical Society in the course of their individual practices, and also to the members generally in the ordinary course of the work of the society, which are deemed by them to be of serious public importance, we are instructed by the society to request the Editors of THE LANCET, in the public interest, to publish the following statement of facts:—

"In November, 1889, a few persons met and discussed the subject of starting in Southampton a free hospital for the treatment of the special diseases of women, and a committee of five was appointed and the hospital started at 1, Bellevue-

terrace. In June, 1890, it was removed to 17, Ordnance-road, and in June, 1891, to 2, Middle Portland-terrace, and since then the out-patients' department has been removed to a new building in Portland-terrace, where it is now carried on. Professor Lawson Tait was stated to be the consulting surgeon and Mr. Eliot the medical officer. Subsequently the committee announced that Dr. Playfair had consented to act as consulting physician, and had promised his support. The committee, with the hospital thus formed and staffed, in about December, 1891, issued an urgent appeal to the public for support, and in each of the three reports subsequently issued by them a similar appeal is made. This appeal has in some small degree been responded to by public subscriptions and donations.

"Notwithstanding that the hospital is called 'free,' it appears from the reports issued by the committee that patients require letters of recommendation, to be renewed every two months, subscribers of one guinea annually receiving seven letters, those subscribing 10s. 6d. three letters, and those subscribing 5s. one letter. In-patients have to pay the medical officer a sum of two guineas a week and are treated at his private surgical home, which in an extract from a newspaper notice incorporated in an advertisement of the home contained in a local directory is described as a place where 'patience and kindness combined with vast experience and skill can hardly fail to bring about a speedy recovery.' That the committee are responsible for the in-patients as well as the out-patients is shown by the fact that in their published statement of the patients treated they include in-patients. In their first report they state that 'a ward has been efficiently fitted up with all modern appliances for the reception of in-patients'; and they add, 'As soon as funds will permit all such cases will be offered the boon of being admitted for treatment as in-patients at the hospital.' In their second report they state that an arrangement had been made with their medical officer to receive hospital patients at a charge of two guineas a week, payable by the patient, at a house he had taken for his private patients; and the medical officer, in his report to the committee—which was adopted by them and published with their report—stated, 'I am glad to state we can now treat in-patients and out-patients under a different roof.' In his report the medical officer thought right to inform the committee that he had a good staff of nurses thoroughly trained in the special branch of work they were engaged in. This seems to imply a most incredible ignorance on the part of the committee as to matters they should have under their control. In their third report the committee state that 'patients requiring operations have been admitted into beds set apart for hospital patients at 8, Carlton-crescent, according to the arrangement that the committee made with their medical officer last year.' The medical officer, in his report, adopted and published by the committee, states, 'I have admitted cases for operations into 8, Carlton-crescent,' and adds that 'twenty-four abdominal sections have been performed, in addition to other operations.' In a letter from the hon. secretary to the hospital in answer to an inquiry for information, under date July 16th, 1894, he states: 'The in-patients have been treated at Rockstone House' (or 8, Carlton-crescent) 'in the free ward,' and adds the somewhat extraordinary statement, 'I am not in a position to answer your question, not having access to the books.'

"The reports of the committee contain no statement of the number of patients treated, distinguishing in-patients from out-patients, or any detailed particulars of the operations performed, or the deaths after operation, as is usually given in reports of a like kind. The published accounts are also very meagre, giving no particulars of the sums paid by patients or the cost of in-patients. In their second report the committee state that their medical officer asked for permission to furnish rooms at 2, Middle Portland-terrace (the house used as the hospital) for his private patients, and such permission was given; but although the charity bore the rent and other expenses of the house, no reference is made in the accounts of any sum received from the medical officer for the accommodation thus afforded him.

"Seeing that (1) the committee were taking on themselves the responsibility of very serious operations involving risk of life, and which, if not absolutely necessary, were merely useless mutilations; (2) there was only one medical officer residing in Southampton, the consulting surgeon residing in Birmingham and the consulting physician in London; (3) the hospital is styled 'free,' while letters of recommendation are required and in-patients are expected to pay two guineas

a week; (4) the committee seem not to have any proper control over the in-patients' department; and (5) the absence of rules to govern the hospital, the Medical Society, as representing the profession, felt that a grave responsibility rested on them, and the matter having been formally brought to their notice on Nov. 6th, 1894, in a paper on the subject read before them by Mr. Bullar, it was resolved 'that a copy of Mr. Bullar's paper be sent to each member of the committee of the Women's Free Hospital, and also that information be asked for on the following points: (a) the number of in-patients that have been treated, (b) the diseases from which they suffered, (c) the number and nature of the operations performed, (d) the result of the operations, and (e) the mortality after operations and general mortality.'

"To this communication the committee of the Women's Free Hospital replied in a letter from their hon. secretary under date of Dec. 5th, 1894, who, while repudiating any obligation to give the Medical Society any information whatever, regretted the insufficiency of their reports in past years, and the committee stated that 24 abdominal sections had been performed in the year 1893, involving 4 deaths, and of these Mr. Tait saw 19 and assisted at 12 of them; but nowhere is there any statement showing that the universal rule in the profession, in hospital practice, not to perform a serious operation involving risk to life, except under urgent necessity, without previous consultation, was followed. Appended to the reply is a statement from the case and operation books of the hospital, giving particulars of the operations performed. From this statement and the reports it appears that in the year 1893, of 215 patients treated at the hospital, 24, or 1 in every 9, were submitted to abdominal section, whereas from the published reports of other similar special hospitals the ratio appears to be about 1 in 40.

"The reply of the committee was considered by the society at a meeting on Dec. 20th last, at which twenty-eight members were present, and with one dissentient the following resolutions were passed:—(1) 'That in view of the frequency with which abdominal sections have been performed and advised at the Women's Free Hospital, and of the fact that operations have been performed without previous consultation of a satisfactory kind, the Medical Society feels that it is a matter of grave doubt how far the operations have been justified. The society is also of opinion that the management of the hospital is lax, and that the financial arrangements are most peculiar in a hospital called "Free." The Medical Society therefore feels bound in the public interest to demand that an inquiry into the whole work and management of the hospital be held by an independent and competent committee, as has recently been done in the case of the Chelsea Hospital for Women. The society suggests this as a means whereby further publicity may be avoided. The Medical Society is of opinion that if the work of the hospital has been good an inquiry cannot fail to benefit it, and that if it has been bad the committee of the hospital cannot wish that it should continue. The Medical Society suggests that a committee of three be appointed to hold the inquiry, and that one member be nominated by the Women's Free Hospital and one by the Medical Society, the third being nominated by the other two.' These resolutions were sent to each member of the committee and medical staff of the hospital, together with a letter, on Jan. 7th last.

"Dr. Playfair, in a letter addressed to the committee of the hospital, has stated in reference to the inquiry asked for, 'In my opinion it is one which should be at once carried out. When the work and management of a charitable institution such as yours has been publicly impugned full inquiry should be courted. Nothing could be better for such an institution than a favourable report from a qualified and unbiased committee of investigation. If this proposal is declined, the public will naturally come to the conclusion that there is something it is wished to conceal.' To these resolutions the hon. secretary of the Women's Free Hospital replied on Feb. 2nd last, stating that the committee 'declined to admit the right of the society to interfere in matters relating to the constitution and government of the hospital,' and that 'the Medical Society have no right whatever to demand an investigation of the affairs of the hospital.' He further added that 'the issues involved are far too serious to warrant my committee in agreeing to such a proposal as your society has made, it would not afford them that complete satisfaction which they are anxious to obtain,' and proceeded to state that it was the duty of the society to acquaint the committee with the particulars of the evidence in their possession in support of the charges, and that upon this

being done the committee would have a full, impartial, and thorough investigation. He also stated that the committee wished to receive full particulars of the charges, so that they, as the responsible governing body of the hospital, might have an opportunity of investigating them. In the same communication the committee, speaking of their medical officer, state, 'it is perfectly well known that Mr. Eliot is specially skilled in cases of this kind' (i.e., diseases peculiar to women) 'and that his skill as a surgeon is too well known to need any confirmation at their hands.' The society have, however, been unable to ascertain that he has ever made any exceptional study of the subjects of which his committee thus attribute to him a special knowledge, or that he has done anything to differentiate himself from the rank and file of general practitioners in this particular matter.

"The society, feeling that the committee, being the persons responsible for the mismanagement of the hospital (if any), could not bring unbiased and impartial minds to bear on the subject of the charges, instructed us to write on Feb. 7th last declining to furnish the committee with the evidence in the possession of the society, more especially as the committee had already declared that they were 'loth to believe without absolute proof that women could have operations performed on them unnecessarily.' However, in deference to the wishes of the committee, we again repeated the charges in these words: '1. That, having regard to the appalling frequency with which abdominal sections have been performed in the Women's Free Hospital (one in every nine of all patients treated), in some instances without previous consultations of a satisfactory kind, and to the many instances known to our committee in which similar operations were advised, though not performed, and now demonstrated to be unnecessary—which if included would seriously increase the ratio—a grave suspicion arises that some at least of the operations performed cannot be justified. 2. That the management of the hospital is lax. 3. That the financial arrangements are most peculiar in a hospital called "free."

"We again asked if the demand of the society for an inquiry would be complied with, and promised that the society would lay the evidence in their possession before any unbiased tribunal and give every assistance in their power to arrive at the truth. On Feb. 13th last the hon. secretary of the hospital wrote to the society, stating that 'the society having failed to bring any specific charge against the hospital or its medical officers, as requested in the letter referred to' (namely, his letter of Feb. 2nd), 'my committee decline to continue the correspondence until this is done.' In consequence of the committee declining the inquiry proposed, Dr. Playfair has resigned his position as consulting physician to the hospital.

"The inquiry asked for having been refused, the Medical Society feel it their duty, in the public interest, to ask the Editors of THE LANCET to publish this statement of what has occurred, in order to relieve themselves of the responsibility in which silence on a matter of which they have peculiar opportunities of being better informed than the general public would involve them.

"R. D. H. GWILLIM,

"NORMAN ALDRIDGE,

"March 9th, 1895. Hon. Secs., Southampton Medical Society."

We publish the statement of the hon. secretaries of the Southampton Medical Society, agreeing with them that *prima facie* the matter is one that demands publicity. We have before us a copy of the annual report of the Women's Free Hospital for Treatment of Special Diseases for 1894. This document, it appears to us, contains certain of the particulars whose absence the secretaries of the Southampton Medical Society reprobate. On the other hand, it does not constitute in itself an answer to charges of mismanagement, and that is what the communication from the secretaries of the Southampton Medical Society amounts to.

WORCESTER DISPENSARY PROVIDENT MEDICAL INSTITUTION.—The annual meeting of the supporters of the Worcester Provident Dispensary was held on March 26th, the Rev. W. R. Longhurst being in the chair. The report showed that the total number of names on the books was 9053, being an increase of 100 upon last year's figures. The financial state of the institution was shown in the report to be satisfactory.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On certain localised Outbreaks of Diphtheria at Crofton and Orpington by Dr. S. Monckton Copeman.—The report in question discusses a number of comparatively small and yet very fatal occurrences of diphtheria in the Bromley rural sanitary district, and much of their interest lies in the obscurity attaching to the causation of the disease, and this although all the circumstances of the majority of the cases seemed more than usually accessible. Typical amongst the attacks was one at an old mansion known as Crofton Court, where between February and May five cases occurred with three deaths. There were certain chances of the importation of a definite infection, although none could be absolutely proved. But, admitting such importation, the infection seems to have clung with tenacity to the premises, notwithstanding the adoption of measures of prevention. From this point of view Crofton Court is a place of interest, and it exhibited conditions which can hardly be said to be rare in old country houses to which diphtheria has clung in somewhat the same fashion. The house itself had certain definite sanitary defects, but many of these were remedied on the occurrence of the first case. The site was, however, very damp, water was near the surface, and a cellar exhibited conditions showing that damp air had constant access to the interior of the house. Dampness was also favoured by thick trees, which overshadowed some of the windows and thus excluded sunlight. Then, again, there had prevailed in connexion with these defects a predisposition to sore-throat of an undefined sort amongst the members of the household. And, lastly, there was the difficult question of the possible influence of the offensive carting about of "London manure" in close proximity to the house. Some will find in one or more of these conditions ample to explain the cause itself of diphtheria; others will regard them mainly as favouring the reception of an external infection due to importation and the retention of that infection when once introduced. The various points are discussed at some length by Dr. Copeman, and we could have wished that this report had found a place amongst those which are placed on sale. Incidentally Dr. Copeman found it necessary to deal with the so-called "Bexley system," which has been devised with a view of getting rid of, or at least postponing, the question of drainage and sewerage. He distinctly condemns it. Any system under which cesspools are to be emptied by pumping machinery and tank carts can only be regarded as possessing the elements of efficiency provided the cesspools are really watertight. In the case under discussion they are leaky cesspools, and in a waterlogged soil; they fail to secure the proper disposal of all the liquid refuse, and they perpetuate the waterlogged state of the soil instead of aiming at lowering the high level of subsoil water, which is a distinct drawback to the healthiness of the area here under consideration. Under these circumstances Dr. Copeman advised the Bromley rural authority no longer to delay the construction, in connexion with the Orpington sewer, of a sewerage system to serve the Crofton district.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Pudsey Urban Sanitary District.—Dr. W. Lovell Hunter, in the introduction to his annual report for 1894, gives some excellent advice to the new district council as to their duties and responsibilities under the Public Health Acts, and we trust that this year's report will show that the advice has not been thrown away. The new council have been given a good start, inasmuch as the general death-rate for 1894, which was 14.6 per 1000, was the lowest yet recorded. Dr. Hunter reminds the council that the low death-rate cannot be entirely attributed to local causes, but he considers that there are three sanitary measures which have in particular had their effect—i.e., improved scavenging, prevention of lead poisoning, and a better provision for checking the spread of infectious disease. In the matter of compulsory notification Dr. Hunter, in urging his sanitary authority to adopt the Act, points out that Leeds, the only large town in the West Riding of Yorkshire not previously under the Act, embraced its provisions last year, and that 83 per cent. of the total

West Riding population are now under notification. Perhaps the new Pudsey council will see their way shortly to adding their population of 13,900 to the total. Dr. Hunter did not hear of a single case of lead poisoning during 1894, although it appears that the water supplied to the district still retains the power of acting upon lead, as evidenced by analyses of samples drawn in the early morning from a lead pipe 185 feet long. The monthly averages of lead ranged from 0.06 to 0.19 gr. per gallon, the lowest average being in August and the highest in April. The analyses show a very decided improvement on those for 1892, though not in all cases as compared with those for 1893; indeed, in some months the analyses for 1894 show an increase on those for the preceding year. There are in Pudsey few mill chimneys in proportion to its area, but Dr. Hunter reports that frequent complaints as to the smoke nuisance reach him; he points out that a reasonable smoke limit adopted by the council and enforced would soon improve the condition of the town.

West Hartlepool Urban Sanitary District.—Dr. Samuel Gourley reports that during 1894 the general death-rate of his district was 14.6 per 1000 of the population, and the infantile mortality 125 per 1000 registered births. There were in the period under review eleven cases with five deaths from small-pox; not one of the fatal cases showed signs of being vaccinated. Dr. Gourley condemned during the year seventeen carcasses on account of extensive tuberculosis, and he considers that in cases such as these, where the butcher has bought the beast in open market, compensation should be allowed. The smoke nuisance could, Dr. Gourley reports, be much reduced by careful stoking, and he thinks that unless proceedings are taken in some of the worst cases there is but little chance of improvement taking place. It is not clear why the sanitary authority are averse to relieving the population of West Hartlepool from this excess of smoke.

Short Heath Urban Sanitary District.—In this district, which contains a population of but 2667, there seems to be considerable difficulty in the matter of isolation accommodation, and Mr. John Hartill, the medical officer of health, proposes that the district shall for the purpose of small-pox hospital accommodation be grouped with others under the Isolation Hospital Act, 1893, while for other infectious disease he advises that six beds be provided in Short Heath. There were 90 cases of small-pox in Short Heath during 1894, the death-rate among the unvaccinated being more than four times greater than among the vaccinated.

Poole Urban and Port Sanitary Districts.—Dr. Herbert Lawton, through his annual report for 1894, impresses upon the inhabitants of his district the fact that it is incumbent upon the householder or nearest relative to notify cases of infectious disease to him, and that their responsibilities in that direction are in no way relieved by the medical certificate. During 1894 it appears that 36 out of 105 cases were not notified by the householder. We are glad to see that Dr. Lawton draws attention to this point. The methods of excrement disposal in Poole proper were, to judge by a report from one of the medical inspectors of the Local Government Board, anything but satisfactory; indeed, the accounts given of the proximity of privy cesspits to dwellings and the soaking of liquid filth up the walls were such as to render changes imperative. We are glad, therefore, to be able to record that the sewage disposal scheme has been begun, and also that during 1894 twenty old privy vaults were filled in. The sanitary condition of the bakehouses and slaughterhouses in Poole is apparently not as it should be, but there is no reference in Dr. Lawton's report as to dairies, cowsheds, and milkshops; no doubt, however, having regard to the importance of this matter both to Bournemouth and Poole, they are well looked after. No case of infectious disease has, Dr. Lawton reports, been notified from any of the vessels frequenting the port, and the health of the seamen has, he states, been satisfactory. In referring to the machinery for cholera prevention, we note that Dr. Lawton speaks of a "quarantine" station. It would, perhaps, be as well in speaking of cholera to avoid this word and to use the terms of the Cholera Order.

Chelmsford Rural Sanitary District.—The defunct Chelmsford rural sanitary authority now replaced by the rural district council may, as Dr. Thresh observes, look back upon their work with satisfaction; and we will add that if the new council carry on the work of progress initiated by their predecessors their district will soon be one of the best-equipped rural areas in the county. Dr. Thresh's reports are always cheerful reading because those portions

of them having reference to sanitary improvements bear signs of steady progress. For instance, in the report now before us, that for 1894, we read under the head of improvements effected during the year of a new water-supply for Woodham Ferris, Retterdon, East Hanningford, and Ranwell; of the provision of an isolation hospital after the plans of the Local Government Board, in which, by the way, the families of labourers will be admitted free of charge; and of the adoption of new and important by-laws. Under the head of improvements contemplated we read of schemes already far advanced for fresh water-supplies and the provision of a disinfecting apparatus. It seems, too, that the sanitary authority has recently obtained by-laws applicable to all the more populous parishes with respect to the offensive trades enumerated in the Public Health Act. We notice with regret that the Essex County Council is not very energetic in public health matters. For instance, in referring to some houses which are a danger to the public in consequence of their dilapidated condition, Dr. Thresh observes: "Our clerk having ruled that it is the duty of the county council to deal with such dangerous structures, nothing will probably be done until someone is injured"; and, again, in discussing the effluent of sewage farms: "If the county council paid any attention to the condition of our rivers, doubtless they would insist upon a higher standard being reached." In dealing with the prevalence of infectious disease Dr. Thresh refers to the manner in which the practice of medical men differs in regard to cases of an infectious character; in some cases he (Dr. Thresh) finds every precaution taken, in others but few. More especially is the absence of precautions discoverable in slight cases of diphtheria. Dr. Thresh observes as to this that if a case is sufficiently suspicious to warrant notification it is sufficiently serious to necessitate the most complete isolation possible under the circumstances.

Wimbledon Urban Sanitary District.—The general death-rate for this district for 1894 was, Mr. Evelyn Pocklington tells us, the lowest during the last eighteen years—i.e., 10.3 per 1000. In a case where the mother of two children suffering from scarlet fever neglected to duly notify the medical officer of health the bench inflicted a fine of 10s. for each case. Mr. Pocklington reports that considerable discontent has been evinced during the year owing to the unsatisfactory state of the fever hospital, and he insists upon the importance of erecting a more suitable building. New by-laws in regard to pig-sticking have recently been adopted, and their enforcement has resulted in considerable benefit. Mr. Pocklington thinks, however, that in certain parts of his district the prohibitive distance of pigsties from dwellings should be 150 ft. instead of, as at present, 100 ft.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6693 births and 5635 deaths were registered during the week ending March 23rd. The annual rate of mortality in these towns, which had been 35.0 and 32.2 per 1000 in the two preceding weeks, further declined last week to 27.7. In London the rate was equal to 26.0 per 1000, while it averaged 29.0 in the thirty-two provincial towns. The lowest rates in these towns were 18.9 in Birkenhead, 19.9 in Swansea, 20.6 in Halifax, and 20.7 in West Ham and in Nottingham; the highest rates were 36.4 in Blackburn, 36.5 in Manchester, 37.1 in Wolverhampton, 38.1 in Oldham, and 47.5 in Brighton. The 5635 deaths included 314 which were referred to the principal zymotic diseases, against 338 and 302 in the two preceding weeks; of these, 100 resulted from whooping-cough, 72 from measles, 50 from diphtheria, 39 from diarrhoea, 29 from scarlet fever, 22 from "fever" (principally enteric), and 2 from small-pox. No death from any of these diseases was recorded last week in Huddersfield or in Halifax; in the other towns they caused the lowest death-rates in Bristol and Portsmouth; and the highest rates in Wolverhampton, Bolton, Manchester, Blackburn, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Brighton, Plymouth, Bolton, Manchester, and Sheffield; from scarlet fever in Wolverhampton; and from whooping-cough in Norwich, Leicester, Blackburn, and Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria included 24 in London, 5 in Leeds, 4 in Birmingham, 3 in Manchester, and 3 in West Ham. One fatal

case of small-pox was registered in Derby and one in Liverpool, but not one in London or in any other of the thirty-three large towns. There were 58 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, March 23rd, against 68, 56, and 57 at the end of the three preceding weeks; 14 new cases were admitted during the week, against 8 and 12 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1587, against 1621, 1619, and 1615 on the three preceding Saturdays; 184 new cases were admitted during the week, against 143, 141, and 133 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 1448, 1366, and 1031 in the three preceding weeks, further declined to 740 last week, but were 254 above the corrected average. The causes of 74, or 1.3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Bradford, Leeds, Sanderland, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Hull, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 42.8 to 35.1 per 1000, further fell to 31.2 during the week ending March 23rd, but exceeded by 3.5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 25.1 in Greenock and 27.2 in Aberdeen, to 40.9 in Edinburgh and 42.0 in Leith. The 900 deaths in these towns included 56 which were referred to measles, 27 to whooping-cough, 17 to diarrhoea, 9 to diphtheria, 5 to scarlet fever, 1 to "fever," and not one to small-pox. In all, 115 deaths resulted from these principal zymotic diseases, against 144 and 110 in the two preceding weeks. These 115 deaths were equal to an annual rate of 4.0 per 1000, which was 2.5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 72 and 48 in the two preceding weeks, rose again to 56 last week, of which 19 occurred in Edinburgh, 17 in Leith, 9 in Glasgow, and 9 in Aberdeen. The deaths referred to whooping-cough, which had been 39 and 22 in the two preceding weeks, increased to 27 last week, and included 17 in Glasgow, 3 in Aberdeen, and 3 in Leith. The 9 fatal cases of diphtheria exceeded those recorded in any recent week, and included 6 in Glasgow. The deaths from scarlet fever, which had been 6 and 10 in the two preceding weeks, declined again to 5 last week, of which 3 occurred in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 544 to 385 in the three preceding weeks, further fell to 313 last week, but were nearly three times the number recorded in the corresponding week of last year. The causes of 48, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 48.8 and 42.4 per 1000 in the two preceding weeks, rose again to 45.0 during the week ending March 23rd. During the past twelve weeks of the current quarter the death-rate in the city has averaged 36.1 per 1000, against 26.4 in London and 31.1 in Edinburgh. The 302 deaths registered in Dublin during the week under notice showed an increase of 18 upon the number in the previous week, and included 7 which were referred to the principal zymotic diseases, against 14 and 9 in the two preceding weeks; of these, 5 resulted from small-pox and 2 from "fever," but not one either from measles, scarlet fever, diphtheria, whooping-cough, or diarrhoea. These 7 deaths were equal to an annual rate of 1.0 per 1000, the zymotic death-rate during the same period being 1.4 in London and 5.3 in Edinburgh. The fatal cases of small-pox, which had been 4, 5, and 4 in the three preceding weeks, were 5 last week. Since the commencement of the current year no fewer than 77 deaths from small-pox have been recorded in Dublin. The 302 deaths registered in Dublin last week included 39 of infants under one year of age and 102 of persons aged upwards of sixty years; the deaths both of infants and of elderly

persons exceeded those recorded in the preceding week. Four inquest cases and 4 deaths from violence were registered; and 74, or nearly a fourth, of the deaths occurred in public institutions. The causes of 20, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-COLONEL W. S. M. PRICE, A.M.S., will succeed Surgeon-Colonel A. F. Churchill, M.D., as Principal Medical Officer at Woolwich next month.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are notified:—Surgeon-Lieutenant-Colonel A. Scott Reid (Bengal), Medical Officer, 2nd Battalion, 4th Gurkha (Rifle) Regiment, to officiate as Civil Surgeon at Quetta until further orders; Surgeon-Lieutenant-Colonel J. Duke (Bengal), Medical Officer, Malwa Bhil Corps and of the Bhopawar Political Agency, to officiate as Residency Surgeon in Kashmir until further orders; Surgeon-Major R. J. Baker (Bombay), Residency Surgeon and *ex-officio* Assistant to the Political Resident in Turkish Arabia on return from leave to officiate as Medical Officer of the Malwa Bhil Corps and of the Bhopawar Political Agency until further orders; Surgeon-Captain R. H. Castor to be Civil Surgeon, Akyab, vice Surgeon-Captain Evans, transferred; Surgeon-Lieutenant Burnett to officiate in Medical Charge of the 26th Bombay Infantry until further orders; Surgeon-Lieutenant-Colonel Quill to the Medical Charge of the Station Hospital, Mhow, vice Brigade-Surgeon-Lieutenant-Colonel Moore, on leave on medical certificate; Surgeon-Major Hill to the Medical charge of the Station Hospital, Kirkee, vice Quill; Surgeon-Major Croly to the Medical Charge of the Station Hospital, Satara, vice Surgeon-Major Hill; Surgeon-Major Drury to the Medical Charge of the Station Hospital, Kamptee, vice Croly. Surgeon-Major-General William Roche Rice, C.S.I., Surgeon-General and Sanitary Commissioner with the Government of India, retires from the service.

NAVAL MEDICAL SERVICE.

Staff-Surgeon William Edwards Breton, M.D., has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet.

The following appointments are notified:—Fleet-Surgeons: W. H. Stewart to Portsmouth Dockyard; George B. Murray to the Plymouth Division, Royal Marines; John Tyndall to the Haslar Hospital; Anthony Gorham to the *Royal Sovereign*; Thomas C. Hickey to the *Empress of India*; Alfred T. Corrie to the *Resolution*; E. R. H. Pollard to the *Excellent*; James L. Sweetnam to Sheerness Yard; and H. A. W. Richardson to the *Repulse*.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant A. R. Chater resigns his commission.

VOLUNTEER CORPS.

Artillery: 2nd Devonshire (Western Division, Royal Artillery): William Phayre Ryall, formerly Surgeon-Lieutenant, Army Medical Staff, to be Captain. *Rifle*: 2nd Volunteer Battalion, the Durham Light Infantry: Joseph Atkinson, Gent., to be Surgeon-Lieutenant.

THE SANITARY STATE OF BARRACKS.

We hear from time to time reports about the insanitary condition of our barracks and of the occasional outbreak of disease attributable to leaky drains. There is no doubt that many of our barrack buildings, especially in Ireland, are old, badly constructed, and badly drained. Quite recently Lord Stanley complained of the state of some of the London barracks, and notably of the Tower and Wellington Barracks. Mr. Campbell-Bannerman, who has of late assumed a humorous and even jocular tone in discussing Army matters, when recently discussing the Army Estimates said that if there was anything which he had served an apprenticeship to it was drains! The state of the drains in London barracks was a trifle, he declared, compared with that of his rooms at the Chief Secretary's Lodge, when he had the honour of being

chief secretary to the Lord-Lieutenant of Ireland. He did not deny, however, that the drains at the Tower were imperfect. The reconstructions which had taken place, although excellent in plan and design, had not been so perfectly carried out as they might have been. The main drains had been well laid, but the connexions were very defective and the defects would have to be remedied, and he gave an assurance to the House that the work would not be passed until it was approved by a competent sanitary engineer. As regards the Wellington Barracks, the War Minister stated that they were old barracks, and one could never be sure about the drainage of old barracks or old mansions; but he did not admit that the state of those barracks in this respect was bad; the health of the officers and men occupying them had been excellent. Apart from the skill and knowledge of the Royal Engineers the War Office had the services of an excellent and highly trained civilian sanitary expert. The subject of drainage is one about which most of us in civil life also have had some experience, and not always a happy experience. In the majority of instances defects and failure are not usually attributable to faulty plan and design, but to sins and defects of execution, in construction, work, and detail.

ARMY RECRUITING.

The Vicar of Old Ford in the east end of London has addressed a communication to the Chief Recruiting Staff Officer, St. George's Barracks, in reply to that officer's circular letter about obtaining good recruits for the army. The Vicar advocates a method which, in his opinion, would tend to remedy the deficiency of recruits and diminish the ranks of the unemployed, and lessen juvenile crime at the same time. Speaking from long experience he says that thousands of Board School children can obtain no employment when they leave their schools, and as the State and philanthropy have already to pay for their education and largely for their food and raiment, he would have the State adopt all unemployed boys of fourteen years of age and send them to large rural military camps or training ships, with the view of bringing them up to become our future soldiers and sailors. We have previously adverted to this proposal. There is no doubt that an enormous amount of good might be done in this direction among the ill-clad, ill-fed boys at present idling about our streets in want of employment, and the suggestion of turning this material to account for the benefit of the nation and of the boys themselves seems to us well worthy of consideration.

Whilst on the subject of recruiting we may here regretfully allude to the intelligence received of the death from cholera at Bangkok, Siam, of General the Hon. W. H. Fielding, who lately filled the post of Inspector-General of Recruiting at the Horse Guards.

REFRIGERATED BEEF.

Lieutenant-Colonel W. H. Allsopp, writing to the *United Service Gazette* referring to the 1895 edition of the "Manual of Military Cooking," expresses his surprise that refrigerated beef is now accepted for army service during ten months of the year, including June and July. He has been taught to believe, he says, that though this meat is mostly of excellent quality, yet through the action of the atmosphere in the summer months it is frequently bad on the surface, and is not suitable for the troops during the hot weather.

DEATHS IN THE SERVICES.

Surgeon Edward Alan Rogers, R.N., M.R.C.S., L.R.C.P. Lond., on the 4th inst., at the Royal Naval Hospital, Stonehouse. The deceased officer had been suffering from influenza.

Surgeon-Major Coates, M.D., late of the 26th Regiment, died on the 15th inst. at Summer Villa, Hythe, Kent, in his 69th year. The late officer entered the service in 1850, became Surgeon in 1856, Surgeon-Major in 1869, and after serving at Gibraltar retired on half-pay in October, 1881. He was also for some time medical officer to the School of Musketry at Hythe.

Surgeon-Lieutenant-Colonel W. L. Gubbins, acting for Brigade-Surgeon-Lieutenant-Colonel W. Taylor—on special employment in China—is confirmed in the appointment at the Headquarters of the Medical Department. Brigade-Surgeon-Lieutenant-Colonel Taylor will shortly be gazetted to the vacancy created by Surgeon-Colonel Gore's advancement.

Correspondence.

"Audi alteram partem."

"PLEURITIC EFFUSION WITH NEGATIVE PRESSURE IN THE PLEURA."

To the Editors of THE LANCET.

SIRS,—A considerable pleuritic effusion with a negative pressure in the pleura of four and a half inches of water which I described as "almost inexplicable" Dr. G. A. Sutherland apparently regards as nothing remarkable, and, indeed, easily explained. For the explanation he refers to the well-known fact that the pressure in a healthy pleural cavity is negative, and that the cause of the negative pressure is the elastic tension of the lung. He is very unfair to the teaching of the present day, and indeed to that of many years past, when he asserts that these elementary facts are not taught, or, as he seems to imply, are not even known to most of those who teach. He himself, however, fails to realise that the conditions in a pleura containing fluid are very different from those of health: that as the fluid increases in amount the negative pressure does not remain constant, but rapidly diminishes, until when the fluid has reached a certain size the pressure ceases to be negative and becomes *nil*, afterwards to become positive if the effusion still further increases; so that his explanation as applied to the case under consideration is not only no explanation, but is actually erroneous. The subject of pleural pressure has for some years been a favourite study of mine, and the more I see of it the more I find it full of difficulties. A few of these difficulties, with suggested explanations of some of them, he will find referred to in my Bradshawe Lecture on Pneumothorax for the year 1887. This, of course, he has not read, or he would not have suggested that I at any rate was ignorant of the elementary facts he speaks of. What we require is not a theory into which all facts must fit, whether they will or not, but clinical observations such as that I have recorded, by which any current theory may be tested, and upon which, if one theory be discredited, another may be built. Having a large number of such clinical facts at my command, and speaking from the experience of some years, I can only say that such a condition of things as a negative pressure of four and a half inches of water with a considerable and increasing effusion is of the greatest possible rarity. Whether the fact deserves to be on that account described as "almost inexplicable" is a matter of opinion. If Dr. Sutherland has other facts of a similar kind he would be doing science a service in bringing them forward, especially if he would, at the same time, provide a really satisfactory explanation of them.

I am, Sirs, yours faithfully,

Wimpole-street, W. March 25th, 1895.

SAMUEL WEST.

"PROVISION FOR YOUNG IMBECILES."

To the Editors of THE LANCET.

SIRS,—Your report in THE LANCET of March 23rd of what recently passed at the meeting of the Lancashire Asylums Board with regard to Poor-law provision for young imbeciles gives rise to the hope that something will at length be done in that populous county for this class in addition to the limited and fundamentally eleemosynary provision at the Royal Albert Asylum. But the question is one of considerable urgency in other counties than Lancashire—perhaps of greater urgency where there is not at hand an institution such as that just named. With the exception of that in the metropolitan district and the county of Northampton there is at present no specific provision in this country for the training of young pauper imbeciles at the cost of the rates. The counties of Middlesex, and I believe also Essex and Hants, are moving in the matter; but what is there to prevent the other counties of England and Wales from setting up, either separately or in combination, training institutions for improvable imbeciles? The Lunacy Act of 1890 gives power to any local authority, either alone or in combination with any similar authority, to provide separate asylums "for idiots, or patients suffering from any particular class of mental disorders"; and under this section (which it is to be regretted is optional and not compulsory) there need be no difficulty in doing throughout the kingdom all that is necessary for imbeciles, and even for epileptics whose mental

condition requires care. The further question of custodial provision for adult imbeciles, apart from lunatics, such as has been organised in the metropolitan district, is an after consideration; but the proper training of juvenile imbeciles would lessen the necessity for this provision, while its neglect is detrimental not only to the imbeciles themselves but to society at large. There is no doubt that the defective child if left to its own devices in too many cases becomes the delinquent man, and from the economical point of view judicious outlay for training would save expense in the end. The experience of the voluntary institutions is quite encouraging enough to justify this view, apart from the benevolent aspirations of Christian charity. If we measure ourselves by the standard of our Transatlantic cousins we shall find that we are considerably behind them in this matter. In America no less than seventeen States have established institutions for the "feeble-minded," their legislatures having voted "appropriations" for the purpose, in addition to several charitable foundations; and in these, and a few private schools no less than 6315 pupils are under training. If it be objected that America is a rich country we may turn to a comparatively poor one like Norway, where we shall find that three considerable institutions are maintained mainly by national funds. Is it too much to expect that England should also do her duty to her imbecile children?

I am, Sirs, yours faithfully,

G. E. SHUTTLEWORTH,

late Medical Superintendent, Royal Albert Asylum.
Richmond Hill, March 25th, 1895.

ROYAL MEDICAL BENEVOLENT COLLEGE.

To the Editors of THE LANCET.

SIRS,—You have taken such a warm and generous interest in the scheme for augmenting the annuities of the pensioners of Epsom College that I hasten to inform you that, in consequence of most generous assistance received under the will of the late Dr. Bowen of Melbourne, the council hope to be able to arrange that on and after July 1st the annuities of all non-resident pensioners will be raised to £30 per annum. To make this step actually secure in the future the council must impress upon the governors the necessity for continued and generous support. I may mention that the dividends accruing from your gift of £1000 have been continuously used to augment the annuities of existing pensioners.

The dinner this year will be held at the Queen's Hall, Langham-place, on Wednesday, May 15th, the Right Honourable A. J. Balfour, M.P., in the chair. I trust we may have the pleasure of including your names amongst the list of stewards, and we shall be glad to receive the names of any supporters of the College who will aid us at this festival.

I am, Sirs, yours faithfully,

C. HOLMAN, M.D., Treasurer.

37, Soho-square, W., March 25th, 1895.

"DEPRIVATION OF DEGREES."

To the Editors of THE LANCET.

SIRS,—In reference to the annotation in THE LANCET of March 23rd on "Deprivation of Degrees" by universities it may be of interest to state that the power referred to was not overlooked in the Charter of the University of Wales, issued in 1893. The 13th section of Article 14 provides that: "The [university] court may revoke the degree or degrees of any graduate of the university who shall be convicted within our United Kingdom or its dependencies of felony or of any indictable misdemeanour, and may restore on cause being shown any person whose degree has been revoked to the degree he previously enjoyed or to any lower degree in the same faculty without further examination."

I am, Sirs, yours faithfully,

March 23rd, 1895.

ISAMBARD OWEN.

"PARLIAMENT AND PRISON REFORM."

To the Editors of THE LANCET.

SIRS,—I think most of us who are interested in prison management are agreed that it is the aim of county councils to secure the government of prisons, as the magistrates had of yore; and, further, that the articles which appeared a short time back in a daily newspaper were written to attain this end. For my own part I suspect that the lengthy statement of your correspondent in THE LANCET of March 9th is

written for the same purpose. If this is so, his three columns of attack on the present administration of our prisons should be of no value; at any rate, your correspondent should be satisfied with the reply he has obtained from Dr. Quinton, of Wandsworth Prison. Dr. Quinton's very able letter points out the objections to your correspondent's charges of mal-administration, and it does so in a temperate manner, although it is evident that Dr. Quinton places little value on the credibility of this would-be prison reformer. It is so easy to raise an unwarranted scare on the question of treatment of our prisoners. Perhaps this is natural, they being shut out from the gaze of the public by high walls. But it does not seem right that public feeling should be so constantly harrowed by the public press as it has been of late. Any amount of what should be done for the reformation, &c., of prisoners can be said or written, but I believe, and I have had ten years of acquaintance with the criminal, that more is to be done towards lessening year by year the criminal population by outside work. Children born of criminal parents, and living in a thieves' locality, must almost of necessity become criminals, and it would seem that good, steady outside influences are at work if we portion out the late years' decrease in the prison population. Only a few points in your correspondent's statements, of which Dr. Quinton does not treat, I would touch upon—one, that if the dietary of prisoners is much improved the shorter sentences for local prisons will have to be increased in order to make prison life at all deterrent. As it is many men prefer to be in a prison than in a workhouse. That for a serious offence a flogging is by far a better punishment than a dietary one. It does not reduce the strength of the prisoner, and besides—a very important fact—it very greatly tends, at any rate for some months, to keep order in the prison.

It is not always remembered by writers that the inmates of a prison are largely made up of the scum of our population, ready for any disturbance if the government is lax, and lax prison management is not a kindness nor is it safe. Some years ago in my gaol in a fortnight four prisoners pretended to hang themselves in order to escape work. In each case as medical officer I informed the governor (now dead) that I believed that the prisoner was humbugging. Now, if he had sharply punished the first, at any rate the second, prisoner, the other cases would not have occurred, and a pretence at hanging may easily become a reality, therefore the practice is more serious than one of simply trying to get off work. When the fourth case occurred my medical treatment at resuscitation (the prisoner had nearly hanged himself beyond all earthly help) was such that there were no further pretences at hanging. But it was not my business to carry medical treatment to such an extent that it became a punishment, but it seemed a necessity, and I have always felt that the result justified me. Doubtless there would be great reason to feel that local prison life led to insanity if the whole two years of cellular imprisonment was the strict rule. But in no prisons do I expect is the strict letter of the law carried out. Hardly a prisoner is daily kept to his cell after the first year of a two years' sentence, although it is difficult in local prisons to find them work outside. The present Prison Commission, it may be hoped, will recommend a change of the law on this point. Your correspondent says "Punishment means solitary confinement in dark cells." He does not know that dark cells have been given up for many years. I remember taking a prison surgeon's work for some weeks at the time when country magistrates managed our prisons. Then three days in a dark cell was not an uncommon punishment. Your correspondent's "bureaucratic" Prison Commissioners have done away with the dark cell. He may be glad to know this.

I am, Sirs, yours faithfully,

PUGIN THORNTON.

Canterbury, March 23rd, 1895.

THE LATE LOUIS FLORENTIN CALMEIL.

To the Editors of THE LANCET.

SIRS.—In the admirably full and appreciative obituary notice of the famous alienist Calmeil, written by your Paris correspondent and published in THE LANCET of March 23rd, there is one point as to which it may not be out of place to say a word. Whilst vying with others to do honour to the memory of this great observer and worker we may rightly be careful lest, by inadvertence, we do injustice to another equally distinguished savant. In the latter

part of the notice it is said—and all will agree—that Calmeil's "name will for ever remain associated with the disease, 'general paralysis of the insane.'" But it is added that this disease "he succeeded in establishing as a clinical and pathological entity." He, indeed, gave to the motor aspect precisely the name which, transferred to the disease in its entirety, has perhaps survived more than has any other of the numerous names which have been applied to the disease. And on the basis of the quotations made at the beginning of the notice (if we accepted them) the latter part of the above statement would hold good. Nevertheless, it is the fact that the work of establishing that which was subsequently known as "general paralysis" as a clinical and pathological entity (as so many have held it to be) was first accomplished by Bayle. In my work on the subject, after mentioning the partial clinical descriptions of some previous observers, I briefly referred to the relative position of Bayle and Calmeil in the discovery of "general paralysis," and in the following words: "The discovery was completed by Bayle (1822, 1825, 1826), who gave the first full account of the affection, and who was closely followed by Calmeil (1826) in this investigation." Here Bayle's three contributions are taken as a connected series, constituting the first full account. It would trench far too much on your space and my time to add here proofs for the words just cited. Looking at the state of medical knowledge in general and of that of mental disease in particular at the time, and the early age (twenty-eight) at which he published the book, one must deeply feel very great admiration for the clinical acumen and pathological knowledge shown by Calmeil in his early work on this subject.—I am, Sirs, yours faithfully,

W. JULIUS MICKLE.

Grove Hall Asylum, London, March 25th, 1895.

"COLOUR VISION AND ACCIDENTS."

To the Editors of THE LANCET.

SIRS.—In reply to Dr. Gowers' question in your issue of March 2nd, "Has any accident been brought home to defect in colour vision?" will you allow me to call attention to several instances showing positive evidence on this point quoted by Dr. Edridge Green in his book on "Colour Blindness" (p. 224 *et seq.*)? He states that "there are many accidents in which the cause has been definitely proved to be colour blindness," and refers to the following cases in point.

1. A colour-blind man, who stated that his steamboat had collided with and sunk a steamboat on account of his inability to distinguish the signal lights.¹
2. The case of the pilot of the steamer *City of Austria*, which was lost in the harbour of Fernandina, Florida, in April, 1881. He was proved to be colour-blind, "and it would appear that he mistook the buoys, and his mistake cost the owners \$200,000."²
3. Related by Dr. Joy Jeffries. An accident between Helsingfors and Tavasthus, July, 1876. "It was caused by a colour-blind switch-tender showing a green instead of a red light to the approaching train."³
4. A railway collision due, according to his mate, to the colour blindness of an engine driver.⁴
5. A railway collision in consequence of a train over-running a signal. The driver was colour-blind and "believed that his sight was the cause of the accident."⁴
6. A railway accident due to the engine driver's inability to distinguish the red light.⁵ The last case was one of acquired colour defect, and Case 2 was diagnosed as one of tobacco amblyopia.

Captain Abney, in his recently published Tyndall Lectures on Colour Vision, says (p. 167), with regard to the loss of life owing to colour blindness: "The evidence is, as a rule, merely negative, though there are cases extant where great losses which have occurred can be traced to a deficiency in colour perception." The cases quoted prove, I think, that there is positive evidence of the disastrous results which may arise from defects for colours. Possibly there are degrees of deficient colour perception quite compatible with safety in those whose duty requires them to recognise coloured signals, but where the boundary between "safe" and "dangerous" lies must be a most difficult problem to solve.

I am, Sirs, yours faithfully,

WALTER W. SINCLAIR, M.B.

Ipswich, March 26th, 1895.

¹ Brit. Med. Jour., Jan. 28th, 1883.

² Quoted by Mr. Bickerton: Shipping and Mercantile Gazette and Lloyd's List, June 29th, 1881.

³ Invention, Dec. 28th, 1889.

⁴ Engineer, Dec. 6th, 1889.

⁵ Mr. Haynes Walton, in the Times, Jan. 3rd, 1877.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED"

To the Editors of THE LANCET.

SIRS,—Our attention having been called to an article in your issue of the 23rd inst. concerning this company, we beg that you will be good enough to insert this response in your next issue. We emphatically deny your allegation that we "make profits out of the sweating of medical men who voluntarily sell themselves into bondage," for we sweat no one, and there are no professional men less fettered than those who attend our policy-holders in time of sickness. "Provident dispensaries," you say, "are all very well, being in the nature of charity," but we are endeavouring, and for no unworthy or sordid motives, for our shareholders derive no pecuniary benefit from our medical aid branch, to do something for those in whose ears the word "charity" in such a matter is synonymous with degradation and reproach, and to inculcate self-help, self-respect, and thrift in others. This scarcely deserves the appellation of "touting," as some understand the meaning of the word. Our members are, in fact, very largely composed of those who would have, did not the company collect their contributions in a small weekly sum, to seek hospital or dispensary advice, or failing that run up doctors' bills which their meagre incomes would never, unfortunately, permit them to pay. How often one hears it said that medical men are the first that people think of calling in, and the last they think of paying! The fact is, however, that in nearly every instance it is inability and not indisposition to pay. Such persons and the medical profession at the same time are assisted by this company's system. On the question of payment to our medical officers we have no hesitation in saying that they are as well remunerated by us as by their private practice amongst the same class of people. Our payments to them are higher than they appear on the surface, because we pay for all members on the quarterly lists supplied (in advance) by us, whether the members continue paying or lapse out during the quarter, as many do from one cause and another, and in which latter event they cannot apply for medical attendance. We claim, and most justly, that this company, far from doing a pecuniary injury to the medical profession, assists it very much indeed.

I am, Sirs, yours faithfully,
W. WOODWARD.

Managing Director, London and Manchester Industrial Assurance Company, Limited.
Southwark Exchange, London, S.E., March 27th, 1895.

To the Editors of THE LANCET.

SIRS,—Your annotation on the above in your last issue points out most clearly the nature of this commercial undertaking and medical sweating, and it ought to be the means of dispersing the array of medical men's names from the list which the touters for this company pride themselves upon when pestering the patients of other medical men when already in attendance. Let insurance companies canvass for their own legitimate business, but not for medical attendance and medicine. It may be all very well for young practitioners to work for literally nothing in order to get patients; but their association with this company does incalculable injury to their fellow-practitioners and spoils the public. I know of a case of a man in receipt of at least £3 per week owing his medical attendant a small bill for fees proportionate to his earnings, and when payment was sought was informed that he had joined the above company. This is simply disgraceful. In your annotation you say, "Provident dispensaries are all very well, being in the nature of charity." All are agreed upon that, but let them be properly organised and fairly conducted. Should charitable dispensaries conduct provident work (semi-charity) with a restricted medical staff? Ought not a provident dispensary be a self-supporting institution, open to all medical men residing in the neighbourhood to take a part? Abuses such as these require the remedy—viz., the staunch and deliberate action of individual members of the profession to safeguard their interests which are at stake and disassociate themselves from that which is an evil in our midst.

I am, Sirs, yours faithfully,

March 27th, 1895.

INQUIREE.

To the Editors of THE LANCET.

SIRS,—I fear that "A General Practitioner" is not fully aware of the power of the so-called medical aid societies or

of the way the medical profession is getting entangled in the meshes of their ever-spreading net. The lower middle and working class practices in most towns, it seems to me, are gradually being absorbed by those societies. In this town almost every man, woman, and child belongs to one or another of them. The fees collected are 1d. per week under twelve years of age and 1d. over that age, of which 25 per cent. is retained by the society. One or two points must be considered. The societies have obtained so much influence that it is a necessity to allow one's name to be on the list of medical officers or lose the publicity which others enjoy. Again, it is absolutely necessary under existing conditions for some men in the place to undertake the work, or the experiences of the Cork practitioners would be repeated. Could these societies be stopped the congested state of the profession would be much relieved, as so many more men could get a comfortable living among the same number of inhabitants were the fees reasonable. A less drastic method would be to insist on the clubs revising their fees, and charging at least 3d. a week per member. Compared with the present remuneration offered by these clubs, the fees of 1s. and 1s. 6d. condemned by the South-West London Medical Society would be generous, for twenty consultations a day at 1s 6d. would exceed £545 a year, even admitting that none of the patients could afford more. At the present rates, to get the same income (allowing two children to one adult) it would require over 5000 members, and I leave it to those who have experience in this class of work to decide which sort of practice would be the more lucrative. It is difficult to suggest a remedy, but I believe that if men who unwillingly hold these cheap clubs would keep a strict account of one year's work and publish it, with the remuneration received, and point out to the public the absurdity of expecting conscientious treatment and necessary drugs for the price, the evil would remedy itself.

I am, Sirs, yours faithfully,

March 27th, 1895.

AN UNWILLING CLUB DOCTOR.

To the Editors of THE LANCET.

SIRS,—As one of the medical men attached to the London and Manchester Industrial Assurance Company I was shocked to read the letters in THE LANCET of March 23rd, along with your annotation commenting on the subject. Some months ago I was approached by representatives of this company with a request that I should become one of their medical referees. This I lightly undertook, the more so on seeing well-known names with high medical qualifications on the list they supplied. Some of those had for twenty years done the work, so it was reasonable to presume that the company's methods were beyond reproach. Their agents assured me that there was no desire to push the medical side of the business, but on the contrary, they would rather be without it, and that no touting of the patients of other medical men took place; in fact, that assurance work was what was desired, and the persons assured were themselves the applicants for entrance into the medical department. Of late I have not been satisfied that such is the case. Patients have come for advice &c. who were quite able to pay a reasonable fee, and such I have refused to treat as members. I have now sent in my resignation as one of the so-called medical referees, and I am sure that such will be the course adopted by many who like myself now find that touting has been carried on without their sanction.

March 23rd, 1895.

I am, Sirs, yours faithfully,

NEMO.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—I see that you have once more opened your columns to this chronic discussion, and have allowed Dr. Black to write fully from his point of view. Therefore I presume you do not bar the other side of the question. I have repeatedly applied to the Royal College of Physicians of Edinburgh on this matter, and have always received the reply that my legal title as Licentiate was that of "Physician," and that, while disapproving, the College could not disallow the Members and Licentiates using the title "Doctor" if they chose to do so. In effect, the title of "Doctor" as applied to medical men is a courtesy title, given by custom, and adopted in consequence of custom. If it be true that it is a courtesy title then those who withhold it on technical grounds are not courteous. I believe that legally a Licentiate of a medical

college has quite as much right to use the title "Doctor" as a layman has to use that of "Mr.," and much more than that of "Esquire," which, strictly speaking, should be reserved to a distinct class. The matter, then, is practically one of "taste," not of "law," and "de gustibus non est disputandum." Underlying this petty and trivial squabble as to little dignities of title is, however, a matter of more importance; in fact, the only important thing to my mind in the question at all. It is an index of the miserable jealousy and throat-cutting spirit which permeates the profession. Twenty qualifying bodies carry on a "battle of the shops," some of them actually pulling their degrees as superior articles to diplomas. Who can wonder that with so arrogant an *alma mater* the often half-educated graduate starts in life with an exaggerated idea of his own importance as a "university man" and complains bitterly of any practitioner who styles himself "Dr.," in fear that his brand-new "brass" M.D. should not look large enough by comparison?

If all M.D.'s were university men in the true sense, if they had graduated in arts instead of passing a very ordinary preliminary, if their science training had been very much wider and deeper than ours, we might allow them some distinction besides that of putting their university degrees after their names, and where they came from. But, Sirs, we know very well it is not so; we know that the medical section of a university is often merely a medical school, with which our great teaching hospital schools of London would in many respects compare favourably. The difference is this, that by schools being affiliated to a university degrees can be obtained after an ordinary curriculum and ordinary examinations in some cities, while in London this is not the case. The true remedy for this anomalous state of things appears to be that all medical titles should be assimilated in form, the only distinction being the status of the school from which they are obtained, or that the one portal system for each division of the country should be adopted. In the meantime I usually find the most eminent and best-qualified men of my acquaintance invariably giving the courtesy title, and except as a matter of abstract justice feel perfectly indifferent on the vexed question of "Dr. versus Mr." If Dr. Black is willing to pay the costs he will find scores of instances in which the title of "Doctor" is assumed by M.B.'s and College of Physicians diplomates against whom legal proceedings might be taken with a view to restrain their infringement of the supposed right of that varying quantity, a real "M.D.," or possibly satisfaction might be obtained by obtaining the opinion of counsel. I fear Dr. Black would find that—as in the title of "Reverend"—in matters of taste, courtesy, and custom, these, and not law, will rule.

I am, Sirs, yours obediently,

Loughborough, March 16th, 1895.

J. B. PIKE.

To the Editors of THE LANCET.

SIRS.—I have read with interest the letter in THE LANCET of March 16th from Dr. Campbell Black, and, whilst entirely agreeing with him that assuming the title of "Doctor" without a degree entitling one to it should be considered "infamous conduct in a professional respect," I cannot agree with him as to the deception practised on the public. Does he mean to imply that unless one is an M.D. he is not a doctor? Does he mean to imply that M.D.'s are the only people capable of "doctoring"? If so he errs greatly. Are M.D.'s so skilful, so learned, so very much superior that they should receive a title, whilst men with only from one to six diplomas, who have spent exactly the same time in the study of medicine as themselves, who have seen the same operations, the same patients, and attended the same lectures, are to have no distinction of this sort? What is an M.D. but a diploma a very little better than other diplomas? Why are there not more M.D.'s? Is it because men are not able to pass the examinations? No, certainly not; often it is because they cannot afford to attend a university, often simply because they make a false start, and, as it were, get off the "main line" and have to travel along a track which does not lead to an M.D. I would suggest a remedy. Let all M.D.'s be called physicians and ordinary diplomates doctors; for, whatever our qualifications, we are doctors—why should we not be allowed to say so? I think the deception on the public, if any, is on the part of the M.D. who tells them that he alone is a "proper doctor," and gives the public to understand that this is not the case with

his neighbour who only happens to be, say, F.R.C.S. Eng., L.R.C.P. Lond., D.P.H. In conclusion, I would point out to Dr. Black what he appears to have rather overlooked—viz., the most eminent men in our profession are not all M.D.'s. Are our great surgeons to have no title, whilst some clumsy bookworm who has managed to scrape through the M.D. poses before the public as a greater man? I do not myself want to be called "Doctor" except to prevent people saying I am not one. I should prefer to see the title done away with entirely.—I am, Sirs, yours faithfully,

March 22nd, 1895.

M.R.C.S. &c.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Assizes.

LORD CHIEF JUSTICE RUSSELL concluded the criminal business of the Assizes on the 25th inst. No conviction for murder has occurred, but in one case in which a man was charged with the murder of his wife the judge told him that he had had a very narrow escape. The medical witness found thirteen of the woman's ribs broken, some of the fragments having penetrated the lungs. It was a sad story of intemperance on the wife's part, followed by brutality on the part of the husband, ending fatally. A woman, who had been convicted of causing grievous bodily harm to a girl entrusted to her care, was sentenced to five years' penal servitude. The evidence disclosed acts of fiendish cruelty, the prisoner having on several occasions burnt and beaten the child, who, unable to bear it any longer, escaped to a neighbour's house. Severe punishments were also awarded to those who had been convicted of wounding with knives and to those who had been found guilty of criminal assaults upon children.

The Head Constable's Annual Report: Decrease in Drunkenness.

Captain Nott-Bower's annual report shows a most gratifying diminution in the number of cases of drunkenness. Making every allowance for the old objection to statistics that they may be made to prove anything, there is one circumstance which goes far to prove the truthfulness of these. Up till 1893 the statistics had to be made up to the end of September in each year; those of 1893 and 1894 relate to the whole of each respective year only. Again, the statistics of each year have always been (with the exception mentioned) on the same plan. Up till 1889 the yearly number of cases had been as high as 21,694 and never lower than 12,568. The following are the numbers for six years: 1889, 16,042; 1890, 14,680; 1891, 11,343; 1892, 9005; 1893, 7936; 1894, 5657. There is nothing after all that is inexplicable in such a reduction. For years past Liverpool has been reviled as "the black spot on the Mersey"; while judges, magistrates, clergy, and philanthropists have all raised their voices in the cause of temperance and in denunciation of drunkenness. It would, indeed, be disastrous if all these efforts had been in vain. But two more circumstances must be taken into account. One is that a large number of persons are yearly being absorbed into the ranks of adult citizens who have been brought up to be total abstainers from childhood, a number which is yearly increasing. Another is that the times have been very depressed for some years past, and if prosperity shows itself in an increased revenue from the sale of intoxicants it is, too, probable that reduced wages and loss of work mean less drink and less drunkenness.

The Effects of Punishment on Drunkards.

In connexion with this subject it must be borne in mind that the penalty of spending a night—possibly two nights—in the case of those arrested on Saturday in Bridewell is calculated to act as a deterrent against the repetition of the offence. While a total of 3800 persons were apprehended for the first time, those who had made one previous appearance only numbered 644, the hardened offenders decreasing gradually down to the twelfth time, when they showed a tendency to rise again. This accords with the views of experienced magistrates, who have expressed the opinion that a large number of persons charged with drunkenness come before the bench once, and once only.

The Report on Immorality.

With regard to the second great sin of great cities the head constable's report is less satisfactory. During the

year 1894 proceedings were taken in 792 cases against persons for keeping brothels; in 677 a conviction followed, 32 were discharged, and in 83 the persons charged absconded. But in 13 cases only did there appear to be even *prima-facie* evidence against the owners or agents of these brothels of an offence against the letter of the present law. The 13 cases when tried resulted in only 2 convictions, both these convictions being against the same woman, who was convicted mainly on evidence that she was the habitual frequenter of the brothels of which she was owner. It is incredible that there can be such ignorance on the part of owners and agents as to the uses to which their houses are put.

The late Distress during the Severe Weather.

The employment of the police, both city and county, as almoners during the severe frost and the distress which prevailed through so many men being thrown out of work was attended with the happiest results. As a local paper observes, it presents the police in a new and honourable phase. In times past they were regarded almost as the natural enemies of the lower classes; they are now recognised as their best friends. House-to-house visits were made, and by this means, combined with kindly tact, many deserving poor, who would rather have starved than have asked for help, were relieved from hunger, being provided with food and fuel. This was in addition to the more clamorous being also relieved. In a suburb largely inhabited by the working classes 23,016 meals and 46 tons of coal were distributed; the donations in money amounted to £282, but the contributions of food, coal, and clothing were also so liberal that there remains a substantial balance for any future emergency.

March 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Aberdeen University.

DR. MACGREGOR has handed over to the University Court the sum of £300 subscribed towards the "Dr. James Anderson Memorial Fund." It is to be devoted to instituting a gold medal and, if possible, a prize for clinical medicine, to be awarded annually. It has been competed for this year for the first time, and has been won by Mr. Robb. The extension scheme of the University buildings has assumed a new phase within the last few weeks. The side wings of the quadrangle at Marischal College are to be completed, but the front block, which was to be largely the administrative block, is to be for the present abandoned. Towards this new plan Dr. Mitchell of Newcastle has offered another £4000 on certain conditions.

The Scientific Study of the Mental and Physical Conditions of Children.

On March 25th a large audience assembled in the Natural History class-room in Marischal College to hear Dr. Francis Warner lecture on this subject. Principal Sir William Geddes occupied the chair, and, besides a number of the professors, the audience included the chairman and several members of the Aberdeen School Board, the Rector of the Grammar School, and many teachers.

Death of Miss C. S. A. Peddie.

Miss C. S. A. Peddie (Sister Sibbald) died suddenly on Wednesday, the 20th inst., at King's College Hospital, from pulmonary embolism ten days after an operation. She was a daughter of Dr. Alexander Peddie of Edinburgh, and had been eleven years at King's College Hospital, four as ward sister and seven as home sister. After a service in the chapel at King's College Hospital on Monday last, the remains were removed to Edinburgh and interred on Tuesday morning. Miss Peddie was beloved by a large number of friends in London and Edinburgh, and much sympathy is felt for the family in their sad affliction.

At the February meeting of the Aberdeen Branch of the British Medical Association a motion by Professor Ogston to contribute 20 guineas towards the Aberdeen University Extension Scheme was unanimously adopted. At the March meeting a similar motion by Dr. Garden to give another 20 guineas to the Aberdeen Royal Infirmary was negatived.

March 27th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Richmond Lunatic Asylum.

IN THE LANCET of the 16th inst. notice is taken of the grant by order of council of £6000 to complete the erection of temporary buildings provided to meet the overcrowded condition of the asylum, and to provide additional accommodation at Portrane pending the erection of a special lunatic asylum there. The latter will cost between £200,000 and £300,000, and much excitement has been caused by articles and correspondence in some of the daily journals in favour of the acceptance of the lowest of three estimates tendered by three architects whose designs were approved of by the inspection committee and classed together as of equal merit. The question has now been settled, for the board of control of the Irish lunatic asylums has selected the design of the eminent architect, Mr. George Ashlin.

Poor-law Medical Officers.

The *Irish Times*, in an excellent leading article on the subject of the election of Poor-law medical officers by boards of guardians in Ireland, complains of the absence of that "proper chance of promotion" which would secure for the most populous and important districts those who possess the largest knowledge and the best repute. The editorial remarks seem to be worthy of reproduction, as they advocate to a certain extent that fixity of tenure in these posts upon the want of which THE LANCET has frequently commented. Nothing, it is stated, is more inimical to the public interest than the fixing for the greater part of his useful life of a man of acknowledged mark and eminence in his profession in a place where there is no demand for his powers, while at the same time in other quarters men of shorter standing, who have yet their fame to make, may be put in charge of districts where the severity of the duties and its higher responsibilities are manifest.

Influenza in Dublin.

Owing to the prevalence of this disease the number of deaths in Dublin has recently far exceeded the average of this somewhat unhealthy town. Teaching at some of the medical schools here was almost brought to a standstill on account of the illness of professors and lecturers. The disease proved indirectly fatal to a member of the family of one of our best-known and most popular surgeons, Mr. Meldon, Ex-President of the Royal College of Surgeons in Ireland, and much sympathy is felt for him in his bereavement.

Health of Dublin.

Sir Charles Cameron reported that during the week ending March 16th the death-rate in the whole area was 41.9 per 1000, the rate in the city being 47.4. During the last three weeks the death-rate, which was previously below the mean, rose to figures considerably above the average for the corresponding period in the previous ten years. In the English and Scotch towns very high death-rates prevailed, and from an earlier period in the year influenza was more or less responsible for the increase. As that disease has only appeared in Dublin when it was beginning to decline in England, and when the weather everywhere had become mild, it may be hoped that it has reached its maximum here, and that its fatality will henceforth decline.

The Influenza Epidemic in Belfast.

During the past three weeks there has been a very widespread epidemic of influenza in Belfast and throughout the north of Ireland. Though a large number have been attacked the disease on the whole has not been so severe as in the previous visitations. Infants and children have suffered in larger numbers than formerly, and a red rash has been frequently an accompaniment of the disease. In certain cases the rash has been attended with itching like urticaria, while in others it has been scarlatiniform. It is not followed by desquamation, and in the early stages the diagnosis from true scarlet fever has sometimes been difficult.

The Winter Session, Belfast.

The winter session will terminate on April 11th. Among many of the teachers the feeling is growing that it would be better to begin earlier, say in the middle of October, and to end at the termination of March. It is also hoped that the examinations of the Royal University of Ireland (to which the Belfast school sends over 50 per cent. of the candidates) will

also be held at an earlier date. At present the M.B. examinations take place in May, and as the summer session in the schools begins on May 1st these arrangements of the Royal University interfere with teaching in the case of those who are examiners. There is no reason at all why the examinations should not, as in some other universities, be in April.

Belfast Ophthalmic Hospital.

Dr. Walton Browne, in presenting the surgical report at the annual meeting of this hospital on March 25th, said that during the past year 1212 eye cases, 220 ear, and 230 throat cases were treated at the extern department, and 109 cases were admitted into hospital. During the year the assistant surgeon, Dr. Calwell, resigned, and Dr. Cecil Shaw was appointed in his place. A large number of students attended the clinique. Financially there was a balance in favour of the institution.

Witchcraft in Clonmel.

A most extraordinary case is reported from the neighbourhood of Clonmel, and it has caused a most painful shock to the whole community, especially as it indicates that there are some few people who believe in the powers of witchcraft. It appears a poor woman named Cleary was visited by the dispensary medical man, who found her suffering from nervous excitement and a slight attack of bronchitis, but there was nothing to cause anxiety. Later on some of her friends apparently conceived the idea that the real Mrs. Cleary had been spirited away and a witch substituted in her place. A "herb doctor" was called in, but the poor woman strenuously objected to swallow his potions, and her obstinacy was regarded as a further indication that the real Mrs. Cleary was not being dealt with, and with the view of ascertaining the truth the poor creature was actually placed across the fire. It was stated that soon afterwards she left the house, and for a time no tidings of her could be found. Eventually, however, the police, after careful searching, discovered her body buried in a field. An inquest was held, and the evidence of the medical men who made the post-mortem examination is most gruesome reading. The right hip and thigh and a portion of the abdomen were charred and burned, with the internal organs protruding through the burned apertures. The jury brought in a verdict that death resulted from burns, and a magisterial investigation into all the circumstances is being held. The inspector of police states in an information that he has reason to believe that it was by the instructions of the "herb doctor" the horrible injuries were inflicted.

The President of Queen's College, Galway.

The Queen has been pleased, on the advice of the Government, to withdraw the warrant that terminated Dr. Moffett's appointments in Galway on the 25th inst. Dr. Moffett will continue to hold his office as before.

The Battle of the Clubs at Cork.

The following subscriptions are announced by Mr. D. D. Donovan, the hon. treasurer of the Cork Societies Medical Officers' Indemnity Fund:—Mr. Henry Stear (Saffron Walden, Essex). £1 1s.; Mr. T. Jenner Verrall (Brighton), £1 1s.; Surgeon-Major R. T. Beamish (The Citadel, Portland), £2 2s.; Lincolnshire Division, Midland Branch, British Medical Association, £4 5s.

The Condition of the Bishop of Cork.

I regret to say that I have learned through a most reliable source that the Right Reverend Bishop Meade has been bitten by a dog which at the time exhibited symptoms which would indicate that it was possibly suffering from rabies. The Bishop, noticing that the dog was ill, stooped down to fondle it and was bitten slightly on the hand. The coachman then endeavoured to remove the animal, and in the attempt had his hand very severely lacerated. Further investigation showed that the dog was suffering from paralysis, and as he was not running about in the usual frantic fashion peculiar to rabid animals it does not appear to have occurred to his lordship that there might be any special danger attending the bite, and he allowed five days to elapse before he consulted a surgeon. The dog, which was of the terrier breed, was afterwards sent to a veterinary surgeon, and he, fearing it was suffering from the paralytic variety of rabies, recommended its destruction, and the spinal cord has been submitted to a pathologist for examination. It is stated that his lordship and the coachman have proceeded to Paris to put themselves under the Pasteur treatment. General sympathy is felt throughout the city for the Bishop, as he has become very popular since his arrival in Cork

owing to the active interest he has taken in many works of public utility. He has been a prominent figure, too, at the board meetings of some of our more important medical charities.

The Death-rate in Cork.

The medical superintendent officer of health reports that for the four weeks ending March 9th the mortality was 36.75 per thousand and he attributes the high rate to "the depressing influence exercised by the recent cold weather and to the long-continued prevalence of easterly winds." It seems strange that though the general mortality was so high the number of infectious cases showed a very considerable decrease as compared with the number in the corresponding period of last year, and, as I mentioned in my last letter, the amount of sickness of any kind has been very small.

Mr. Richard Murphy, the medical officer, Newbridge Dispensary, county Kildare, died on the 24th inst.

March 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Reorganisation of the Paris Maternity Hospital.

Up to Jan. 1st, 1895, the Maternité or Maison École d'Accouchement, situated in the Boulevard de Port Royal and containing 322 beds, occupied an exceptional position amongst the hospitals of Paris. Instead of being superintended by an accoucheur it was directed by a surgeon (Dr. Guéniot), although the practical working of the establishment was in the hands of Madame Henry, the *sage-femme en chef*. Taking advantage of the retirement through age of Dr. Guéniot, a change was made in the organisation, Dr. Budin, the well-known physician-accoucheur of the Charité, being appointed accoucheur, with Dr. Auvard as assistant accoucheur, Dr. Charrin being appointed in charge of the patients needing ordinary medical care. The accoucheur has to deliver eighty lectures per annum, the physician twenty, and the assistant accoucheur forty. The *sage-femme en chef* will take part in the teaching of the female students (*élèves sages femmes*). We thus see a decided anomaly removed, and a lying-in establishment provided for the instruction of female midwives placed, as it should be, under obstetric physicians.

Sanitaria for Phthisical Patients.

It has long been a matter of surprise to Englishmen that there should exist in such an enlightened city as Paris no hospital devoted to the treatment of phthisical patients. As a matter of fact, the medical wards of the general hospitals are filled with these poor sufferers, who, being in a great majority (an average of about 200 of them die weekly in Paris), monopolise room sadly wanted for men and women affected with other diseases. The danger of infection incurred by the neighbours of the *poitrinaires* is too obvious to be mentioned. There has recently been formed the Société des Sanatoria Français with the object of establishing in different parts of the country retreats for cases of phthisis. The society is already at work, for land has been bought in the neighbourhood of Ajaccio, the capital of Corsica. Here three sanatoria—one maritime, one at an elevation of 1000 metres, and one situated still higher (1600 metres)—will soon be built. The mayor of the town, fearing that the presence of these establishments would constitute a standing danger to the population of Ajaccio, consulted Professor Verneuil, President of the Œuvre de la Tuberculose, and Professor Brouardel, President of the Comité d'Hygiène of France. Dr. Petit, secretary of the Œuvre, was despatched to Ajaccio to inspect the *locus*, and he has reported in favour of the innocuity of the proposed sanatoria. The Société des Sanatoria Français intends to construct pavilions in different towns for the reception of phthisical patients, whose keep and treatment will be paid for by the local Assistance Publique. Dr. Netter has also investigated the question of the danger attending the hospitalisation of this class of patients, and he reports to the Comité Consultatif d'Hygiène that the observance of ordinary sanitary rules will largely suffice to obviate any risk incurred by the inhabitants of towns in the neighbourhood of such establishments.

A Health Exhibition.

Paris is to have its "Healtheries," the scene to be the Champ de Mars, and it will be held from May 15th to Sept. 15th. The exhibits will be divided into ten classes—

viz., Hygiène de l'Habitation Privée et Collective, Hygiène Urbaine, Prophylaxie des Maladies Transmissibles, Démographie et Statistiques Sanitaires, Science Sanitaire, Hygiène de l'Enfance, Hygiène Industrielle et Professionnelle, Hygiène Alimentaire, Hygiène du Vêtement, and Exercices Physiques.

The Transmissibility of Tuberculosis.

Dr. Rémy¹ relates a case of tuberculous inoculation, the victim being a healthy child aged three years. The child had a wound of the chin occasioned by a fall. This wound became the seat of a warty cutaneous tuberculous growth, whose presence caused the development of tuberculous lymphangitis of the neck, resulting in the formation of an abscess. The origin of the infection may have been due to kisses of a tuberculous person.

March 26th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Vienna Medical Society: Syphilis; a Case of Raynaud's Disease.

PROFESSOR NEUMANN, at a recent meeting of the Vienna Medical Society, spoke on syphilis of the internal female genitals. Concerning recent exanthemata on the vaginal mucous membrane, he said venereal eruptions have not been satisfactorily ascertained to occur there or on the cervix uteri, with the exception of moistening papule. In 100 cases of syphilitic primary diseases fifty-one have appeared on the vaginal portion of the cervix and only four on the vagina; they caused cicatrised strictures and menstrual interruptions. Gummatous nodes and formation of ulcers on the internal female sexual organs have been proved by numerous observations without doubt. The syphiloma of the vagina occur at the orifice and the anterior, rarely in the middle third. He had observed a diffusive gummatous affection of the vagina resulting in recto-vaginal fistula. Syphilis of the corpus uteri is extremely rare, but metritis and endometritis frequently cause abortion or premature birth. By means of statistical returns Professor Neumann showed the pernicious influence of syphilis on posterity. Concerning the death of the foetus from syphilis, infection of the ovum or the semen has been suggested; but syphilitic disease of the endometrium and placenta sufficiently explains a great many cases of habitual abortion. By the blood exchange taking place between the foetus (affected with syphilis from the father) and the mother the uterus must be attacked. It is furthermore known that syphilis localises itself on parts which are often irritated. This is the case with the uterus. Cases not uncommonly occur in which the mature foetus is stillborn or dies soon after birth without any syphilitic symptoms descending from sound parents, whereas parents affected with tertiary syphilis procreate sound children. Without doubt anæmia and the decrease of the red blood-corpuscles and the hæmoglobin resulting from it perniciously influence the life of the foetus. Dr. Narath, assistant of Professor Gussenbauer, exhibited a patient aged forty-four years who shows the typical symptoms of Raynaud's disease. Both hands and feet were cyanotic, the skin arid and exfoliating, and the fingers cylindrical and symmetrically shortened by gangrenous processes. Dr. Narath supposes it to be an idiopathic disease in consequence of functional or anatomical lesions of the bloodvessels. The idiopathic form is characterised by the appearance of paronychia, and the symptomatic by gangrene in little patches. Professor Drasche has observed a similar case in consequence of influenza, therefore he supposes an infectious origin of many cases.

Anthropological Society.

At the last meeting of this society Professor Benedikt spoke of the cranium and brain of the murderer Schneider, whose name still frightens the housemaids of Vienna. The cranium is extremely asymmetrical and the sutures are grown together. On the brain Professor Benedikt clearly saw the middle furrow of Larrey, which characterises the brain of the beasts of prey. Schneider was not diseased in mind; he had a congenital and developed criminal nature, and the treatment of such a perversion is the task of justice. The removal of creatures who injure society by their qualities is the right of the law. Professor Neumann publishes a peculiar case of parasitic disease of the skin. The

parasite produced burrows in the skin, and when these are in process of formation the patient passes sleepless nights in consequence of terrible pains. In the present case the burrows are on the nates and the leg. Professor Neumann observed the course of development of a burrow. First arises a reddish place of the extent of a thaler; then in the middle of it a white spot appears, which grows red in half an hour or so. The animal lays eggs under the skin; from these grubs originate, which produce the burrows.

March 24th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Whipping-post.

THE subject of instituting the whipping-post as a method of punishment of those who inflict injuries upon their victims was discussed in the Section on Public Health of the Academy of Medicine. It was brought forward by the President of the Society for the Prevention of Cruelty to Children, who had prepared the form of a law to be introduced into the Legislature. The argument for the measure was that the only punishment which criminals guilty of felonies against the person fear is pain, and hence flogging will accomplish far more in deterring this class than imprisonment. It was contended that the corporal punishment should not take the place of imprisonment, but should be additional to that at the discretion of the court. The proposition was favourably received by some of the medical members present, but it has not been approved by the profession at large. Nevertheless, the measure has been introduced into the Legislature, and has been commented upon more or less unfavourably by the public generally. There is little doubt that it will be rejected.

Large Endowment of a Medical School.

The oldest medical college in New York, and the second oldest in the United States, the College of Physicians and Surgeons, has been the recipient of large endowment funds from the Vanderbilt estates. The Senior Vanderbilt gave \$500,000 towards the purchase of a new site and the erection of buildings several years since. This was followed by several smaller gifts from different members of the family. With these means at its command the trustees greatly enlarged and improved their facilities for teaching. Large and well-equipped laboratories were established, clinical instruction was perfected, and as a consequence the classes rapidly increased until it became impossible adequately to provide for them. And now the Vanderbilts have duplicated their endowment, and the College will at once extend all its departments of teaching. When the institution has completed all its projected improvements, the "Old School," as it is familiarly known in the profession, will be the foremost centre of sound medical learning in the United States.

Tenement House Reform.

The Governor of the State of New York appointed a commission last year to study the whole subject of the domiciles of the poor of New York City. The commission was composed of prominent citizens of different professions, the chairman being the editor of the famous *Century Magazine*. The commission took a large amount of evidence, which showed (as was to be expected) that the housing of the poor of this city is most discreditable. One startling discovery was made which excited unusual public interest. It was found that the large blocks of tenements which the Trinity Church Corporation owned were not supplied with water, and in other respects were deficient in ordinary sanitary appliances. A suit was brought against the corporation to compel it to correct these deficiencies. The trustees contested the suit and were defeated in the lower courts. They appealed, and within a few days the higher court has decided against them. The result has been received with great favour by the public. The commission has now reported the results of its work to the Legislature, with a Bill making sweeping changes in the building laws. The Bill is encountering much opposition from the landlords, and it is very doubtful if the really good features of the measure—such as making all tenements fireproof and supplying them with abundance of water, air, and light—will be successful.

Keely Cure enforced by Legislation.

One of the latest freaks of legislation is an effort to enforce the Keely Cure remedy in the treatment of the

¹ Journal de Clinique et Thérapeutique Infantiles, March 14th.

alcohol habit by law. The State of Massachusetts is distinguished for its conservatism in legislation, and yet its Legislature is gravely considering a Bill to compel the employment of the Keely Cure in the treatment of patients in the Massachusetts Hospital for Dipomaniacs. This ridiculous attempt to govern the methods of treatment of a disease by statutory laws in one of the oldest States of the Union creates much comment, and will probably end in total discomfiture of the advocates of this scheme for popularising an alleged "remedy" for inebriety not recognised by the medical profession.

A Statue of Dr. Gross.

Congress has passed the Bill granting permission to the American Surgical Association and the Alumni Association of the Jefferson Medical College to erect a statue to the memory of Samuel D. Gross in this city. The Bill appropriates \$1500 for a pedestal.

March 13th.

Obituary.

HAROLD J. MOLYNEUX, L.R.C.P. EDIN., M.R.C.S. ENG.

It is with sincere regret that we have to chronicle the death of Mr. H. J. Molyneux of Upholland, Lancashire, at the early age of forty-three years. He was the son of a surgeon, and studied at the Liverpool School of Medicine. Immediately on obtaining his diplomas, although only in his twenty-first year, he attended patients in his native village, and subsequently on his brother's death succeeded to the practice established by his father, which ultimately in his hands became one of the most extensive in this part of the country. About fourteen months ago he had a severe attack of hæmatemesis, from which he recovered sufficiently to resume his professional duties, but on the 2nd inst. he had a recurrence of gastric symptoms, to which he succumbed on March 9th. He was a man of great personal influence in the district, and a sound and safe practitioner; he held numerous Poor-law appointments, and was also medical officer of health to the Billinge Local Board. Of a most generous and kind disposition, he is mourned by all who knew him. The funeral took place at St. James', Orrell, on March 13th, and was attended, not only by many of his brother practitioners, but by a large gathering of the general public—a testimony of the affection and esteem in which he was held by all.

BASIL DE BEAUVOIR CAREY, M.A., M.B. CANTAB.,
M.R.C.S. ENG., L.S.A.

THE death of Dr. B. de B. Carey has brought deep sorrow on his numerous friends in Guernsey, where his promising career came to a premature close on March 17th. His health had been failing for some time, and his relatives were not unprepared for their bereavement. He was the second son of Dr. Francis Carey, who has for many years held a leading position among the medical men of the island, and, having determined to follow his father's profession, he studied at Cambridge University and St. Thomas's Hospital. He obtained the diploma of the Society of Apothecaries in 1886 and that of the Royal College of Surgeons of England in 1887. He did not, however, definitely commence practice until he had graduated as M.B. at Cambridge University in 1889, when he settled down among his friends in Guernsey, and held the appointment of surgeon to the St. Peter Port Hospital for about two years. At the time of his death he was surgeon-captain in the Guernsey Militia. Dr. Carey was a man of most amiable character and very popular among his patients, as he had been among his fellow students at both his hospital and his university. He was in his Cambridge days a very proficient and enthusiastic cricketer. He leaves a widow and one daughter.

GEORGE THOMAS LEE, M.R.C.S. ENG., L.R.C.P.

WE regret to announce the premature death of a highly promising young practitioner, who had devoted his attention to lunacy, and for whom a bright and useful future was anticipated. Mr. Lee obtained his professional education at University College Hospital, London, and later held one of the junior posts at the Leicester Infirmary. He obtained his diplomas in 1883, and at once determined to adopt lunacy as his department of practice. He soon obtained the post of assistant medical officer to Fisherton House

Asylum, Salisbury. Having held this appointment for rather more than a year, he took the similar post at the Institute for the Insane, Colon Hill, Stafford. After working here for two years it was suggested that general practice might suit him better, as—never a strong man—he was somewhat run down. However, after a very short interval, in which, upon trial, he found general practice uncongenial, he returned to his old work at Cotton-hill. In 1887, Dr. Pater of the Stafford County Asylum having died, the junior appointment was offered to Mr. Lee and accepted by him. He remained at this asylum until within a few days of his death, serving first as junior and later as senior assistant medical officer. It was during his work here that he gained the character of a conscientious and careful physician. He has left behind him many friends and many mourners.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent medical men are announced:—Dr. Victor Parisot, formerly Professor of Clinical Medicine at the Nancy Medical School.—Dr. Ljambł, formerly Professor of Clinical Therapeutics in the University of Warsaw.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects:—

Surgery.—T. B. Abbott, Leeds; R. N. de Beauvais, Aberdeen; A. Harding, Royal Free Hospital; F. E. H. Keogh, St. Mary's Hospital; W. E. Kirby, University College; P. Kitchen, Leeds and St. Mary's Hospital; A. E. Philipps, Guy's Hospital; J. A. K. Renshaw, Cambridge University and Manchester; J. Spears, London Hospital; G. E. Williams, London Hospital.
Medicine, Forensic Medicine, and Midwifery.—G. W. Brown, St. Thomas's Hospital; W. J. Gillespie, St. Bartholomew's Hospital; A. Harding, Royal Free Hospital; P. Kitchen, Leeds and St. Mary's Hospital; R. W. Middleton, Leeds; H. S. Oliver, Charing-cross Hospital; A. E. Philipps, Guy's Hospital; E. P. Staples, St. Mary's Hospital.
Medicine and Forensic Medicine.—T. H. Wilkins, Charing-cross Hospital.
Medicine.—S. H. L. Archer, London Hospital; R. G. Jones, London Hospital.
Forensic Medicine and Midwifery.—J. S. A. Murphy, Leeds; G. A. Skinner, Guy's Hospital.
Forensic Medicine.—G. C. Jackson, Cambridge University and St. Mary's Hospital; A. L. M. Churchill, Westminster Hospital.
Midwifery.—G. Downes, Dublin; T. B. Abbott, Leeds.
To Messrs. Archer, Churchill, Gillespie, Harding, Kitchen, Middleton, Philipps, Skinner, Spears, Staples, and Williams was granted the diploma of the Society.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 14th, the President, Mr. Makeig Jones, being in the chair. Dr. Ernest Knight related a fatal case of jaundice in a boy six years of age. The first attack of jaundice was slight and transient. A month later he came under observation again with very deep jaundice and a much engorged liver. In a fortnight toxic symptoms set in, and two or three days after this the liver began to diminish in size. The patient died four weeks from the second onset of jaundice. At the post-mortem examination, which was limited to the abdomen, a mass of tuberculous glands was found in the portal fissure, compressing the hepatic duct. There was no sign of tuberculosis elsewhere in the abdomen. Mr. Makeig Jones showed a man forty-seven years of age the subject of mixed melanoderma and leucoderma. Except for the colouration the skin appeared perfectly normal. The hairs on the white patches in the axilla were also white. After an obscure illness three years ago he noticed that his face, trunk, and arms became bronzed, and then white spots appeared which gradually enlarged into big patches. Dr. Alfred Robinson showed a man with progressive muscular atrophy. Dr. Burges showed a specimen of malignant stricture of the cardiac end of the œsophagus. Vomiting sometimes as long as an hour after taking food was complained of, but throughout the illness the patient was never aware of any difficulty of swallowing. Dr. Hunt related a case of Exophthalmic Goitre with marked brownings of the skin. Reference was made to a similar case recorded by Carrington in the Transactions of the Ophthalmic Society for 1886.—Mr. Richard Favell reported a case of puerperal eclampsia, and made remarks on the treatment of this affection.—The President, Dr. Keeling, Dr. Martin, Mr. Dale James, Dr. Arthur Hall, and Dr. Burges took part in the discussions.

THE ROYAL COMMISSION ON TUBERCULOSIS.—Mr. Shaw-Lefevre had a private interview at the House of Commons with the National Federation of Butchers and others on Tuesday night last with reference to the report of the Commission. Mr. Field, M.P., introduced the deputation, and urged the importance of having the report of the Commission issued at once. Mr. Shaw-Lefevre said that he was anxious to have the report published, but the delay had arisen from the death of Lord Basing. The secretary of the Commission reported that the greater portion was in type.

BIRMINGHAM GENERAL HOSPITAL.—The annual meeting of the governors of this hospital was held on March 20th. Mr. William Kenrick, M.P., who presided, said that it was the 115th annual report which was before the meeting, and that the progress made during a century would appear from the fact that the building was at the time of its erection "outside the village of Birmingham, being generally described as near Sutton Coldfield." The original number of beds was only 37; at present there are 270, and the premises now in course of construction will accommodate 340 patients. During 1894 there were 4336 in-patients and 49,835 out-patients, the average length of residence of the in-patients being twenty-four days; at the Jaffray Branch Hospital 237 patients were admitted.

THE CHEMICAL SOCIETY.—The annual meeting of this society was held in Burlington House on Wednesday afternoon last, Professor Armstrong presiding. The Faraday Medal was bestowed by the council upon Lord Rayleigh in recognition of his services to physics generally and of the discovery of argon. Lord Rayleigh, in returning thanks for the honour that had been done him, made a graceful allusion to the prominent share in the discovery enjoyed by Professor Ramsay. Professor Ramsay contributed the sensation of the meeting by announcing the discovery of helium, a discovery upon which we comment in another column. The annual dinner of the society was held on the same evening in the Whitehall Rooms of the Hotel Métropole, when the company had the pleasure of listening to a brilliant speech from Mr. A. J. Balfour.

UNIVERSITY COLLEGE HOSPITAL.—The annual meeting of the governors of this hospital was held in the board-room on March 22nd, Mr. Henry Lucas presiding. During 1894 there were 3035 in-patients, the average daily number resident being 181, and the average duration of stay being 21½ days. The expenditure had exceeded the income by about £1000, and funds are urgently needed. Last year's festival dinner resulted in contributions amounting to about £4850, and the award of the Hospital Sunday Fund was £1288. Mrs. Nathaniel Montefiore had endowed a bed by a donation of £2000, and friends of the late Professor Marcus Beck, surgeon to the hospital, had partially endowed another. The arrangements for the rebuilding of the hospital were progressing satisfactorily, and the efforts of the medical and surgical staff had been successful in raising about £3000 for the building fund.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—A meeting of the Scottish Division of this association was held in the Hall of the Faculty of Physicians and Surgeons, Glasgow, on March 14th. After the preliminary business had been transacted a resolution expressing the sense of the great loss which the association has sustained in the death of Dr. Hack Tuke was submitted by Dr. Ireland and unanimously adopted. Dr. G. M. Robertson read a paper, "Sane or Insane?", which was followed by considerable discussion; and Dr. Turnbull showed the plans of an addition, in the shape of a "hospital block," which has recently been made to the Fife and Kinross District Asylum. A meeting of the South-Western Division of the association will be held at the City Asylum, Fishponds, Bristol, on Thursday next, April 4th, at 2.30 P.M. The City Asylum is half-an-hour's drive from Bristol and one mile from Fishponds Station. Dr. H. Bristowe will contribute a further note on the Relationship between General Paralysis and Chronic Renal Disease. Dr. J. V. Blackford will read notes on a case of Ataxic Insanity. Dr. Law Wade will move the following resolution and initiate a discussion thereon: "That it is desirable that power be given to the visiting committees of asylums and hospitals for the insane to grant gratuities to the widows or orphans of officials who may die after long service or be fatally injured in the discharge of their duties."

THE HOSPITALS FOOTBALL CHALLENGE CUPS.—On Monday last the final ties were played in these challenge competitions under both rules. St. Bartholomew's competed with Guy's under the Association code, and came off victorious by one goal to nothing. St. Thomas's met St. George's in the final tie under Rugby Union rules and secured a substantial victory by three goals and three tries to nothing.

The one hundred and fifty-ninth annual meeting of the governors of the Bristol Royal Infirmary was held on Tuesday last. The report showed that 1000 more patients had been treated in 1894 than in 1893, whilst the cost per bed had sensibly decreased. The resignation of Dr. Shekleton of the secretaryship to the institution, on the ground of failing health, was accepted with the greatest regret by the meeting, the words of commendation which Mr. C. D. Cave, the president of the hospital, bestowed upon Dr. Shekleton's work being received with general applause.

HOSPITAL SATURDAY FUND.—The annual meeting of this fund was held at the Mansion House on the 23rd inst. Mr. Reginald B. D. Acland, who, in the absence of the Lord Mayor, presided, stated that £17,609 had been distributed among London medical charities during the past year. The street collection had again fallen off, but the workshop collection showed an increase, the former amounting to only £4820, while the latter had reached the sum of £14,514, nearly the whole of which was contributed in pennies. On the motion of Canon Scott Holland a resolution approving of the principle of soliciting weekly subscriptions from working men was agreed to. The street collection for 1895 was fixed for July 13th. For our part we should be glad to know that the street collection was to be abandoned. It is not pleasant to see ladies touting for money in the streets, even in the divine cause of charity, and it affords an example of which other less worthy institutions are too apt to take advantage. The "man in the street" is notoriously wanting in discrimination in such matters.

BRITISH ORTHOPÆDIC SOCIETY.—A meeting of this society was held on Jan. 31st. There were about twenty members present. Mr. Ewens of Bristol was voted into the chair and made a few introductory remarks. Mr. Muirhead Little then showed a case of inveterate Talipes Equino-varus in both feet successfully treated by removal of wedges of bone from the astragalus and os calcis. Messrs. Keetley, Reeves, Noble Smith, Brodhurst, Walsham, Freer, and Ewens discussed the case and Mr. Little replied. Mr. Tabby presented a case of Contracted Elbow, Wrist, and Fingers due to pressure on the median nerve by scar tissue. The nerve was freed by operation and the flexor tendons of the wrist were subsequently divided, with complete restoration of the functions of the hand. Messrs. Keetley, D'Arcy Power, Reeves, and Walsham discussed the case and Mr. Tabby replied. Mr. Luke Freer brought forward a specimen, the amputated left leg of a case of congenital Talipes Varus due to deficiency of the left tibia. A paper was read by Mr. Keetley on the Causes of Rotation in Scoliosis. An animated discussion followed. The society adjourned after arranging for the next meeting at Liverpool in May.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Shops' Early Closing Bill.

THE Select Committee appointed by the House of Commons to inquire into the subject of this Bill is now engaged examining witnesses. Apart from the adjustment of details the only point at issue seems to be whether further trial should be given to voluntary effort in the matter of early closing, or whether the time has now arrived for the interference of the Legislature. So far the evidence taken tends to the latter conclusion and is consequently in favour of the Bill.

Accommodation for the Insane in Dublin.

In the House of Lords on Monday, March 25th, a question was put to the Government with reference to the Richmond Asylum in Dublin, and Lord Ribblesdale, in the course of his reply, said that the Chief Public Health Officer of Dublin recently reported favourably on the healthiness of the site of the Asylum. He found that some limited portions of the soil had been contaminated by sewage in the vicinity of old drains, but that he considered could be remedied. The inspectors of lunatics had advised that, with certain alterations which were about

to be made, the Richmond Asylum could be continued with advantage as an institution for the care and treatment of the insane poor of the City of Dublin. The Resident Medical Superintendent had stated that in his opinion the site was not a suitable one for an asylum. Much had, however, been done to improve it by the execution of a complete system of drainage and the purchase of some additional land and alterations, and additions were now in contemplation for the improvement of the buildings.

Reformatory and Industrial Schools.

The Government have introduced into the House of Commons a Bill for enabling children to be sent from the Channel Islands to reformatory or industrial schools in Great Britain. In this connexion it may be added that the Government intend to appoint a committee to inquire into the whole question of the management of reformatory and industrial schools.

Imbecile and Epileptic Children in Workhouses.

Early in February a motion was made by Sir Walter Foster for a return showing the number on Sept. 1st, 1894, of imbecile and epileptic children under sixteen years of age in each workhouse, separate infirmary, school, or other similar establishment belonging to the guardians of unions in England and Wales (excluding the metropolis), distinguishing the number of such children who were of dirty habits and the number who would, in the opinion of the medical officer, be likely to be improved by special training. This return has been prepared and is now before Parliament. It is prefaced with a summary note which explains that there are 618 extra-metropolitan unions in England and Wales, that the particulars in the return are drawn from 175 unions, and that the remainder of the unions have no such children in their workhouses. The number of children who were imbecile only was 294 (male 174, female 120), the number epileptic only was 93 (male 55, female 38), and the number both imbecile and epileptic was 98 (male 52, female 46): total, 485 (male 281, female 204). The number of these children of dirty habits was 223 (male 142, female 81), and the number who, in the opinion of the medical officer, would be likely to be improved by special training was 178 (male 95, female 83).

HOUSE OF COMMONS.

THURSDAY, MARCH 21st.

Potato Disease.

Mr. John Morley, answering a question put by Mr. W. Johnston, said that field experiments for testing the value of applications of copper sulphate and lime to the potato plant as a preventive of potato disease were carried out by the Agricultural Department of the Irish Land Commission in 1891, 1892, and 1893. The results obtained from the experiments conducted in 1892 and 1893 proved conclusively that a proper application of the mixture used was of great value as a preventive. It was not therefore considered necessary to continue the field experiments in 1894, but field demonstrations were given in a small district of the counties of Derry and Antrim, the same mixture being used.

The Accommodation for Members.

Mr. Cremer asked the First Commissioner of Works whether, in view of the evidence laid before the Committee on the Accommodation of the House of Commons during last session, he would endeavour to make arrangements for increasing the accommodation for members.—Mr. Herbert Gladstone replied that he was afraid he could not give this undertaking.—Mr. Cremer then asked whether he would consider a proposal to reappoint the Committee, and to this Mr. Gladstone replied that no practical advantage would come from the reappointment of the Committee.

FRIDAY, MARCH 22nd.

The Vaccination Commission.

Mr. Hopwood asked the Parliamentary Secretary to the Local Government Board why neither Sir George Buchanan nor Dr. Ballard, formerly chief medical officer and medical inspector of the Local Government Board, offered themselves for examination in defence of vaccination before the Royal Commission, whether both suffered from indisposition when their attendance was required, and whether, seeing that Sir George Buchanan had since recovered sufficiently to undertake the chairmanship of the Royal Commission on Tuberculosis, there was any obstacle present to prevent either of those gentlemen from being examined if the Royal Commission on Vaccination desired it.—Sir Walter Foster replied that it was not the practice of officers of the Local Government Board to offer themselves for examination before a Royal Commission. Some inquiry was made as to the attendance of Sir George Buchanan and Dr. Ballard before the Royal Commission on Vaccination, and it was the fact that both these gentlemen were then prevented by indisposition from attending. He regretted to state that Sir George Buchanan was still out of health, and on this account he undertook the chairmanship of the Royal Commission on Tuberculosis with great reluctance.

MONDAY, MARCH 25th.

Pleuro-Pneumonia.

In answer to a question Mr. Herbert Gardner, President of the Board of Agriculture, said that a veterinary inspector had no power to order slaughter either in pleuro-pneumonia or glanders. In pleuro-pneumonia the power to slaughter rested absolutely with the Board of Agriculture, the compensation paid where the animal was not diseased being its value immediately before it was slaughtered. In glanders the power to slaughter rested with the local authority.

Substitutes for Butter.

Mr. W. C'Brien asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he had yet come to any conclusion as to the introduction of a Bill this session for remedying the defects of the existing law in respect of fraudulent substitutes for butter. Mr. John Morley in reply said he was well aware of the importance of this matter, but,

at the present moment there was a committee at work with regard to it, and immediately upon the receipt of the committee's report the question of amending legislation would be carefully considered.

Female Factory Inspectors.

Mr. Asquith, replying to a question on this subject by Mr. Sexton, said there were now four female inspectors of factories. They were not assigned to any particular locality, but travelled to every part of the United Kingdom where their services were required. Notices were exhibited in all factories and workshops in Ireland where women were employed stating that complaints might be sent to the female inspectors, and all such complaints were promptly inquired into by one of the female inspectors. With the staff and resources which were at present at his disposal he thought that the female inspectors were more usefully employed in peripatetic visits than if they were stationed in particular districts.

TUESDAY, MARCH 26th.

The New Factory Legislation.

Mr. Asquith answered a question put by Mr. Woods with reference to woolsorters and the Bill of the Government amending and extending the Factory and Workshops Act. He said that an amendment would be proposed by the Government when the Bill was in committee to extend to their workshops the power given to the Secretary of State by Section 8 of the Act of 1891 to make special rules for industries certified to be dangerous or injurious. An inquiry, he added, had for some time been in process by the Factory Department into certain industries which involve the risk of injury to the persons employed, among them being wool-sorting, where there was a possibility that anthrax might be contracted, and this inquiry was nearly completed. On its completion the question where special rules were desirable for the occupation of wool-sorting would be considered.

WEDNESDAY, MARCH 27th.

Better Houses for Farm Servants in Scotland.

The House engaged in a debate of some length on the motion made by Mr. Seymour Keay for the second reading of a Bill to provide for the better housing of farm servants in Scotland. The special object of the Bill, as Mr. Seymour Keay explained, is to strike at abuses in connexion with what is known in Scotland as the "bothy system." It provides that every building on a farm used as a dwelling or sleeping place for farm servants shall be provided with sufficient and suitable accommodation in the way of cubic contents, fireplaces, sanitary arrangements, and fixtures, having regard to the number of inmates. It also provides that when persons of both sexes inhabit the same "bothy" there shall be proper separate accommodation for each sex. Power is given to the local authority to make and enforce by-laws and, when its medical officer of health reports that the provisions of the Act are not complied with, to order the landlord of the premises to make such alterations and additions as may be required to give sufficient suitable and proper accommodation. Objection was taken to the Bill on the ground of its limited application, one member describing it as "a scrap of piecemeal legislation." Dr. Farquharson strongly supported the Bill and predicted that the local authorities in Scotland would carry out its provisions with prudence and discretion. In the end the Bill was read a second time.

IN COMMITTEE.

Food Products Adulteration.

A Defence of Margarine.

The Select Committee of the House of Commons on this subject resumed its inquiry on Tuesday, March 26th, Sir Walter Foster presiding.

Mr. Hickey, a wholesale butter merchant in Manchester and a representative of the Chamber of Commerce of that city, gave evidence in great detail as to the presence of water in butter. The trade in Manchester, he said, had given this matter the most careful attention and taken great pains to acquire information with regard to it, and had come to the conclusion that any standard under 20 per cent. would be unfair to the producer of Irish salt butter. The result of overworking butter in order to get the water out of it was to make it altogether unsalable. An analysis of 350 samples of Irish salt butter taken in 1893 showed that 80 per cent. of them contained above 15 per cent. of moisture. If they established a 15 per cent. standard they would shut out 35 per cent. of Danish butter, 22 per cent. of English butter, and 50 or 60 per cent. of Irish salt butter. This Irish salt butter was scarcely sold in London, the great markets for it being Lancashire, Yorkshire, and Wales. As to margarine, the witness said he would prohibit colouring, because the object of colouring was to facilitate fraud. He admitted that according to the present law a man mixing 50 per cent. of butter with margarine must call it margarine, which it was not. It was only because mixtures conduced to fraud that he would prohibit them. He did not think that any method of labeling would be a sufficient protection against fraud. The great grievance the trade had was that the present law was not stringently administered—that, in fact, it had hopelessly broken down.

Mr. J. J. Thompson, another Manchester butter merchant, examined by the Chairman, said he imported margarine, most of it coming from Holland, and all of it being marked "margarine." He considered margarine and mixtures of margarine and butter most useful as articles of food. They were quite wholesome, and there was little difference between them and butter in the matter of nutrition. He could quote no scientific authority in support of this—it was merely his own opinion. He regarded margarine as quite as legitimate an article of commerce as butter, and to interfere with its sale would be wrong and very injurious. He did not think the working classes were defrauded, because they bought margarine for its value, which was lower than the price of butter. It was true that margarine came into competition with the cheap butters now sent from the colonies; that might be injurious to the butter makers, but not to the public. Whether he preferred a pound of New Zealand butter to a pound of margarine mixture would depend on the quality of the former, because it often went stale and was very inferior to the latter. In Lancashire margarine would sell in preference to all except the very finest quality of Australian butter. Q. Margarine is largely sold, is it not, to public institutions?—A. Yes; but always under the name of margarine. Q. And supplied to the inmates as butter?—A. Yes, that is so. Margarine was packed in shapes and sizes in accordance with the desire of the

customer and to suit the requirements of the district. He did not think that any interference with the shapes or makes of margarine mixtures would tend to diminish fraud upon the public, but he was sure that if the present law were properly enforced it would prevent fraud. He would not object to travelling inspectors going about to see that the Act was carried out and that local authorities did their duty. He did not know of any adulterated butter coming into the country now. People were afraid now because of the action taken here and in foreign countries. In his opinion all the butter now received in this country was pure butter and contained no percentage whatsoever of margarine. He made this statement in spite of the assertion that Brittany butter was sold cheaper here than in the country where it was made. Prosecutions, in his opinion, should be taken under the Margarine Act and not under the Sale of Food and Drugs Act. To license dealers in margarine would do no good because almost every retailer sold margarine nowadays. The public knew this, and a licence would tell them no more. There could not be a doubt that the introduction of these cheap Colonial butters had reduced the price of margarine very much.

By Sir Charles Cameron: One advantage possessed by margarine was that it contained much less water than butter. For instance, he had never heard of margarine that contained 15 per cent. of water, although this seemed to be common in the case of butter. He would not interfere with the colouring of margarine any more than of butter, and he thought that it would be an injustice to the working classes to say that they must take their margarine white. Another thing he wished was that butter mixtures should be permitted to be sold as such, and not branded "margarine."

By Mr. Whiteley: The people of Lancashire were very shrewd, and knew perfectly well that if they went into a shop and asked for butter at 6d. or 8d. per pound, they could not get genuine English fresh butter, no matter how the retailer might describe the article he offered. Some New Zealand butter could be sold at 6d. per pound, and he had no hesitation in saying that margarine at the same price would be found infinitely superior to it.

The Committee then adjourned.

The Committee met again on Wednesday, March 27th, with Sir Walter Foster in the chair.

Mr. James Hudson, engaged in the butter and provision trade in London, and a member of the London Chamber of Commerce, said he was not opposed to the sale of margarine as such, but he objected to the mixing of margarine and butter, because it was the cause of all the fraud and did a great deal of injury to butter makers in this country. Very large quantities of butter were coming here from our colonies at a very small price, and he believed that this new trade would interfere for a time at least with the sale of margarine. The colonial butter did not contain so much water as Irish butter and up to the present had proved good and sound and free from any trace of margarine. The large profits made by makers and retailers of spurious butter rendered them indifferent to the fines imposed on conviction. He would therefore increase the fines and send offenders to gaol on the third and subsequent convictions. Great quantities of margarine were sold in all the towns of Scotland, but especially in Edinburgh and Glasgow. He could only account for this by the Scotch people not caring to pay 1s. per lb. for butter when they could get margarine at half that price, which satisfied them. He should say that the margarine sold in Scotland contained no more butter than what came from the milk used in the process of manufacture. He recommended that butter and margarine should not be sold in the same shop, that all dealers in the latter should be licensed, and that they should be compelled to sell it in a particular shape and with a particular package. He was in favour of having margarine coloured, because in its natural colour it would look nasty and would be unsaleable. He also recommended the appointment of travelling inspectors. He had no hesitation in saying that many of the inspectors under the present Act were "squared." Cases were known where inspectors went into a shop and, on asking for a pound of margarine, were either supplied with fresh butter, which had cost, perhaps, 1s. 4d., or had found half a sovereign in the scales. He favoured the prohibition of mixtures, thinking that margarine was quite good enough to be sold upon its merits.

Mr. Harold Faber, Commissioner for the Agricultural Department of the Danish Government, said his duties in this country were to look after the interests of the agricultural products of Denmark. From time to time he received information from different parts of the country as to the sale of other butter and butter substitutes under the name of Danish butter, and he made inquiry into the circumstances of each case. He also kept under his observation improvements effected in this country and elsewhere in the making of butter and other farm products. The law of Denmark required that margarine should always be kept in certain shaped packages marked in a certain way. This provision was found most effective for its purpose of preventing imposition. They had inspectors appointed with no other duty than to look after the administration of the Margarine Acts, who inspected butter and margarine where they were manufactured, or kept for sale, or stored. All the expense was borne by the Central Government, not by the local authorities. They put a limit upon mixtures. By Act it was prohibited to add more than 50 per cent. of butter fat, but on account of the colour section of the Act it was impossible to have as much butter as 50 per cent. in the mixture. This section provided that the colour of margarine must not exceed a certain yellow tint, and if more than 20 per cent., or even 20 per cent., of butter was added the mixture would exceed in colour that pale tint. Therefore, as matter of practice, they never had more than say 25 per cent. of butter in the mixtures. It might be that certain conditions of weather baffled the colour test, but there were other tests that could be applied. The witness showed to the Committee a number of colour-plates used for this test. He admitted that it was a delicate and difficult test, but in Denmark, he said, the margarine inspectors performed it so well that they were agreed among themselves and produced excellent results with it. The penalties in Denmark for the minor offences ranged from £2 10s. to £10, while for the more serious offences imprisonment was awarded. From the experience of Denmark and what he had seen in this country he had no hesitation in saying that even high fines were not sufficient to put down fraud altogether. His view with regard to mixtures was that they should be prohibited by law, because they gave rise to unfair competition and swindling. He also thought that in this country, as in Denmark, margarine should be sold in a particular shape and with a particular mark upon it.

The Committee then adjourned for a week.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ALEXANDER, S. R., M.D. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Faversham Union.
BROOKS, CHAS., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gerrard's Cross Sanitary District of the Eton Union.
BROWNE, EDWARD, M.A., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the West London Hospital, Hammersmith, W.
COLWELL, J. K., has been appointed Public Analyst by the Clerkenwell Vestry.
CUTFIELD, A. B.Sc. Lond., M.R.C.S., has been appointed Medical Officer for the Man of Ross Lodge of Oddfellows, Manchester Unity, vice Knapp, resigned.
DRAGE, LOVELL, M.D. Oxon., B.Ch., M.R.C.S., has been reappointed Medical Officer of Health for the Hatfield Rural Sanitary District.
FLAVIN, F. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Seventh Sanitary District of the Ashton-under-Lyne Union, vice Kishys.
GAULT, EDWARD LESLIE, M.A., M.B., B.S. Melb., has been appointed Ophthalmic Surgeon to the Alfred Hospital, Melbourne.
HARSTON, L. DE C. B., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer for the Pirbright Sanitary District of the Guildford Union, vice Brown, resigned.
INGLIS, A. M., M.D. Edin., L.R.C.S. Edin., M.R.C.S., has been appointed Consulting Physician to the Cheltenham General Hospital.
LORIMER, J. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Farnham Rural Sanitary District.
MITCHELL, R., M.D., M.Ch. Irel., has been appointed Medical Officer for the Hooton Pagnell Sanitary District of the Doncaster Union.
MURDOCH, MARY C., L.R.C.P., L.R.C.S. Ed., L.F.P.S. G., has been appointed Assistant Medical Officer to the North-Eastern Fever Hospital, Tottenham.
PAGET, OWEN T., M.B., B.C. Cantab., has been appointed Resident Medical Officer to the St. George's and St. James's Dispensary, W.
PALMER, EDWIN C., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Lincoln General Dispensary, vice Dalton, resigned.
RUSSELL, W. A. G., M.B., C.M. Aberd., has been appointed Medical Officer for the Wingage Sanitary District of the Kington Union.
SHAW, CECIL EDWARD, M.A., M.D., M.Ch. R.U.I., has been appointed Assistant Surgeon to the Belfast Ophthalmic Hospital.
STILL, GEO. F., M.A., M.B. Cantab., has been appointed Medical Registrar and Pathologist to the Hospital for Sick Children, Great Ormond-street, Bloomsbury, London.
STUCKLING, C. W., M.D. Lond., M.R.C.P., M.R.C.S., has been reappointed Consulting Physician to the Hockley Provident Dispensary.
TAIT, LAWSON, M.D. N.Y., F.R.C.S. Edin., F.R.C.S. Eng., has been appointed Consulting Surgeon to the Hockley Provident Dispensary.
TAYNTON, W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Linton Sanitary District and the Workhouse of the Linton Union.
WEISER, W. W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Crewkerne Urban Sanitary District.

Vacancies.

For further information regarding each vacancy references should be made to the advertisement (see Index).

BLOOMSBURY DISPENSARY.—Physician. An honorarium of £105 is annually voted to the physician. Applications to Mr. C. E. Baker, 12, Bloomsbury-street, W.C.
COUNTY ASYLUM, Dorchester.—Second Assistant Medical Officer, unmarried. Salary to commence at £130, rising £10 annually to £160.
COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary to commence at £100 a year, with prospect of an annual rise of £25 up to £200, and further increase according to promotion, together with furnished apartments, board, attendance, and washing.
EAST LONDON HOSPITAL FOR CHILDREN, Glamis-road, Shadwell, E.—House Physician. Board, lodging, &c. provided.

HOLBORN UNION.—Medical Officer for the Union Schools at Mitcham, Surrey. Salary £100 per annum, non-resident. Applications to the Clerk to the Guardians, Holborn Guardians' Office, Clerkenwell-road, E.C.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY.—Two Honorary Medical Officers for the Rupert-road Branch of the Institution. Applications to the Hon. Secretary, 68, Aldermanbury, E.C.

LEICESTERSHIRE AND RUTLAND ASYLUM.—Assistant Medical Officer, unmarried. Salary £150, increasing £10 yearly to £200, with board, lodging, and washing. Applications to the Clerk to the Visitors, 10, New-street, Leicester.

LINCOLN COUNTY HOSPITAL, Lincoln.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

LONDON COUNTY ASYLUM, Hanwell, W.—Fifth Assistant Medical Officer. Salary £120 per annum, rising by £5 a year to £150, with board, furnished apartments, and washing. Applications to Clerk of the Asylums Committee Office, 21, Whitehall-place, S.W.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer, for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Solihol-square, London. Clinical Assistants for the Electrical Department.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician. Applications to the Secretary, Office, 27, Clement's-lane, E.C.

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Clinical Assistant. Board and residence provided.

NOTTINGHAM GENERAL DISPENSARY.—Junior Assistant Resident Surgeon, for six months. Salary at the rate of £120 per annum, with rooms, fire, and light.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—House Surgeon. Salary £60, with board and washing. Also Assistant House Surgeon. Salary £30, with board and washing.

WEST RIDING ASYLUM, Menston, near Leeds.—Third Assistant Medical Officer. Salary to commence at £130 a year, rising £10 annually to £160, with board and apartments.

Births, Marriages, and Deaths.

BIRTHS.

ADAMI.—On March 24th, at Durocher-street, Montreal, Canada, the wife of J. George Adami, M.A., M.D. Cantab., of a daughter.
BALL.—On March 26th, at Upper Winpole-street, the wife of Dr. J. B. Ball, of a daughter.
COLLINS.—On March 23rd, at Waveney-mansions, Fairhazel-gardens, South Hampstead, the wife of E. Treacher Collins, F.R.C.S., of a daughter.
COWEN.—On March 23rd, at Walpole Lodge, New Malden, Surrey, the wife of George Cowen, M.D., of a daughter.
CUTCLIFFE.—On March 20th, at North Tawton, North Devon, the wife of Montagu Cutcliffe, L.R.C.P. Lond., M.R.C.S., of a daughter.
DIXEY.—On March 18th, at Oxford, the wife of Frederick A. Dixey, M.D., Fellow of Wadham College, of a son.
LANCASTER.—On March 8th, at Rockdale, Clitheroe, the wife of Lewis T. Lancaster, M.B. Edin., of a daughter.
MACKAY.—On March 16th, at The Cloisters, Knaresboro', the wife of Ian D. Mackay, B.A., M.B., of a daughter.
MORTON.—On March 21st, at Church-green-east, Redditch, the wife of Edwin Morton, M.D., of a son.
RAMSAY.—On March 24th, at Jesmond Dene, Bournemouth, the wife of F. Winsome Ramsay, M.S., F.R.C.S. E., of a son.

MARRIAGES.

CARTER—JUST.—On March 26th, at Westbury-on-Trym, by the Rev. S. Baker-Penoyre, Thomas Moravian Carter, M.R.C.S., L.R.C.P., to Adelheid Clara, youngest daughter of H. W. Just, Esq., Bristol.
SANDIFER—LEE.—On March 20th, at St. Augustine's Church, Highbury, Henry Stephen Sandifer, M.D., F.R.C.S., son of the late Jabez Sandifer, Esq., of Highbury-hill, to Evelyn, youngest daughter of Henry Lee, Esq., J.P., of Earlham, Highbury-quadrant.

DEATHS.

CAREY.—On March 17th, at Hirzel House, Guernsey, Basil de Beauvois Carey, M.A., M.B. Camb., aged 32.
CHATER.—On Feb. 14th, at Hannans, Western Australia, Arthur Reginald Chater, M.R.C.S., aged 28.
HILLIER.—On March 22nd, at Beccles, Susan Hillier, widow of the late Thomas Hillier, M.D. Lond., F.R.C.P., Physician to the Hospital for Sick Children and to University College Hospital, London, of cardiac syncope in her sleep, aged 66.
JESSETT.—On March 23rd, at Clenthorpe, The Avenue, Surbiton, the residence of his sister, George Thomas Lee, M.R.C.S., L.S.A., son of Fred. Bowreman Jessett, F.R.C.S., aged 34. For eight years senior assistant medical officer of the Stafford County Lunatic Asylum.
LEIDS.—On March 9th, suddenly, at the Europa Hotel, Gibraltar, Thomas Leeds, M.R.C.S. Eng., aged 55.
SMITH.—On March 20th, at 111, Blackfriars-road, S.E., Walter Stephen Smith, L.S.A., aged 67 years, late of Sheffield.
STRUTHERS.—At Hill End, New South Wales, on Feb. 17th, James Struthers, M.D., aged 35 years, second son of Emeritus-Professor Struthers, M.D., 24, Buckingham-terrace, Edinburgh.
TOWERS-SMITH.—On March 16th, at Harley-street, Cavendish-square, W., Towers-Smith, M.R.C.S., aged 59.
WICKHAM.—On March 13th, at Polmont, N.B., Walter Wickham, M.R.C.S., Barrister-at-law, aged 38.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians. 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. G. G. Campion: Studies in Superior Protrusion (illustrated with lantern slides). Mr. G. Brunton: (1) A Hodge Right-angle Handpiece altered to adapt it for use in Close Bites and Difficult Positions; (2) A new Amalgam Balance made in one piece.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Voelcker: Carcinoma of Ureter.—Dr. F. Hawkins: Congenital Obliteration of Bile-duct.—Mr. Jackson Clarke: Sarcoma Mammary.—Mr. E. Willett: Carcinoma of Bed of Thumb-nail.—Mr. L. A. Bidwell: Carcinoma of Stomach treated by Gastro-duodenostomy.—Dr. Lee Dickinson: Duodenal Ulcers in Women.—Dr. P. Weber: Cirrhosis of Liver in Child. Card Specimens.—Dr. A. A. Kanthack: (1) (with Mr. C. B. Lockwood) Psammoma of Tunica Vaginalis; (2) Psammoma (?) of Mesentery; (3) Psammoma of Vermiform Appendix and Ovary; (4) (with Mr. E. L. Lloyd) Metaplasia of Omental Epithelium into Squamous Epithelium; (5) (with Dr. C. P. White) Giant Cells in Innocent and Malignant Tumours of Epithelial Origin.—Dr. Voelcker: Ulceration of Gall-bladder in Typhoid Fever.—Mr. H. Snow: Malignant Reversion of Mammary Cystic Fibromata.—Dr. Lee Dickinson: Solitary Kidney with Two Ureters.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Cullingworth and Dr. Duncan. Adjourned Discussion on Dr. Probyn-Williams and Mr. Lennard Cutler's paper on "Some Observations on the Temperature Pulse, and Respiration during Labour and the Lying-in." Dr. Remfrey: List of Ovariectomies in Women over Eighty; A case aged Eighty-three complicated by Epithelioma of the Vulva.

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Mr. Howard Marsh: A Clinical Study of the more important forms of Abscess.

FRIDAY.—WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M., Special General Meeting. 8.30 P.M., Ordinary Meeting. Papers:—Dr. Coutts: Treatment of Empyema in Children.—Mr. S. Paget: Three cases of Secondary Malignant Disease of Pleura. Card Specimens.—Dr. Parkes Weber: Ruptured Heart.—Mr. Lake: Nasopharyngeal Polypus and Large Nasal Spur.—Mr. S. Paget: Ruptured Spleen.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Miller Hospital, Greenwich).—8.15 P.M. Discussion on Antiseptics. The Discussion will be opened as follows:—Antiseptics in General Surgery by Mr. John Poland; in Midwifery and Gynaecology by Dr. Horrocks; in Medicine by Dr. Newton Pitt; in Ear and Throat Surgery by Dr. Bzard; in Eye Surgery by Dr. Ernest Clarke.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—ROYAL COLLEGE OF SURGEONS.—5 P.M. Mr. J. H. Targett: Recent Additions to the Museum of the College.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

SOCIETY OF ARTS.—8 P.M. Dr. D. Morris: Commercial Fibres.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (XII).

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Subject of Lecture: Earth.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. G. Fielding Blandford: The Diagnosis, Prognosis, and Prophylaxis of Insanity. (Second Lumen Lecture.)

SOCIETY OF ARTS.—8 P.M. Captain Wiggins: My Recent Voyage in Siberia.

WEDNESDAY.—ROYAL COLLEGE OF SURGEONS.—5 P.M. Mr. J. H. Targett: Recent Additions to the Museum of the College.

WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Dr. Abraham: Parasitic Skin Affections. (Post-graduate Course.)

SOCIETY OF ARTS.—8 P.M. Mr. John J. Holtzapffel: Sand Blast Processes.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Discussion on "Combined Drainage from the point of view of Health, Construction, Administration, and Law," to be opened by Dr. John F. J. Sykes and Mr. Wm. Nisbet Blair.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. E. B. Tylor: Animism, as shown in the Religions of the Lower Races (II.).

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. G. Fielding Blandford: The Diagnosis, Prognosis, and Prophylaxis of Insanity. (Third Lumen Lecture.)

FRIDAY.—THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.). 3 P.M. Subject of Lecture: Water.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. E. Cotterell: Excision of the Rectum.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Mr. J. H. Targett: Recent Additions to the Museum of the College.

ROYAL INSTITUTION.—9 P.M. Lord Rayleigh: Argon.

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Waves and Vibrations (VI.).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 28th, 1895.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Mar. 22	29.94	N.W.	49	47	97	64	44	...	Bright
" 23	29.96	S.W.	48	46	96	59	46	...	Cloudy
" 24	29.45	W.	52	50	83	58	47	0.06	Cloudy
" 25	29.35	S.W.	45	43	98	56	41	...	Cloudy
" 26	29.11	W.	45	44	78	54	41	...	Cloudy
" 27	29.19	S.	40	40	65	54	40	0.34	Raining
" 28	28.91	S.W.	47	44	81	49	40	0.19	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

INFANTS' MIXTURES.

An inquest was held recently at Sheffield upon the body of an infant whose mother, it came out in evidence, was in the habit of giving her children "infant's mixture" at night, whether or no, apparently, there was anything the matter with them. The coroner, according to the *Leicester Post*, made some very strong remarks, with which we quite agree, and the verdict was "Death from natural causes, probably convulsions," a ridiculous and inconsequential verdict which suggests that no medical witness was called.

Matter of Principle.—From the facts supplied by our correspondent we have no hesitation in saying that: (1) he should have been asked by the other practitioner to see the patient; and (2) he did right in refusing to attend the case further.

ROWLANDSON AND HIS WORKS.

It is not very long since (Feb. 16th) we commented on the curious manner in which Rowlandson, in attempting to portray a particularly hideous man or woman, frequently foreshadowed the faces of acromegaly—a disease in his day entirely unknown to medicine. Messrs. Pears and Co. have chosen as the subject of their pictorial quarterly "Rowlandson and his Works," and the accuracy of our remark will be seen by all medical eyes. The figure in the plate representing *Avarice*, the male spectator in the picture entitled *A Six-in-hand Team*, both combatants in the picture entitled *A Fencing Match*, and the candidate in the picture entitled *A Theatrical Candidate*, all present to a remarkable degree the characteristically distorted features of the disease. The reproductions of Rowlandson's works are very well executed in this interesting publication.

W. J. H.—It cannot be wrong to visit a friend as a friend, though our correspondent is no longer the medical adviser. If the possible difficulties about such a visit are made quite clear to the patient, it seems to us that conversation concerning the medical aspects of the case and their present treatment could easily be avoided.

Dr. Robertson.—The Pasteur-Chamberland filter was described on page 259 of THE LANCET of Jan. 26th, 1895.

"A QUESTION OF DOOR-PLATES."

To the Editors of THE LANCET.

Sirs,—With some interest tempered with amusement have I read two letters in your last issue purporting to be replies to the question I asked you as to "the legality of the use of foreign unregistrable M.D. degrees alone on door-plates without other affix." The first, from a "Registered Foreign Graduate," occupies nineteen lines of your space in discussing points nowise germane to the matter under discussion. It is true he considers the editors "satiated of it"—and no wonder, if "Registered Foreign Graduate" represents the full strength of the foreign graduate element. To "M.R.C.P. & M.D. duly registered" somewhat similar remarks may fairly apply, as he also has missed the point of the original communication as to the continued presence on a door-plate of an unregistrable M.D. alone without distinguishing affix—the right being challenged. Dr. Critchley's letter is of a very different type, although he will, I hope, forgive my pointing out that it hardly replies to the question and is rather involved. The *crux* of the matter is: Is a medical man—A. B. by name—holding a registrable licence to practise, but not a registrable degree, entitled to place on his door, sign himself, and allow himself to be addressed "A. B., M.D." on the strength of having taken or purchased a foreign M.D. degree, which is not registrable? The reply can be given by you, Sirs, in few words.

I am, Sirs, yours faithfully, H.

March 25th, 1895.

*. The foreign source of the degree ought to appear on the card or plate, as a matter of candour. But we are not quite so clear as our correspondent seems to be as to the illegality of not stating it. The legal offence under the 40th section of the Medical Act is that of using titles which falsely imply registration. But in the case supposed the person is registered in virtue of other qualifications than his degree, which are just as good for registration purposes as a British degree.—ED. L.

THE CASE OF MR. C. BRYAN TOWNSHEND.

The following additional subscriptions are hereby thankfully acknowledged:—

Surgeon-Maj. De Tatham (London)...	£1 1 0	Mr. J. Cuthbertson Walker (St. Austell) ...	£0 10 6
Mr. Thomas Smith (London)...	10 10 0	Dr. and Mrs. Mutch (London)...	0 10 0
Dr. W. M. Kelly (Taunton)...	1 1 0	G. V. S. ...	1 1 0
Dr. Henry T. Sylvester (London)...	5 5 0	Mr. E. G. Cuthbert F. Atchley (Bristol) ...	1 1 0
Sympathiser ...	0 10 6	Mr. Alfred Emsom (Dorchester) ...	1 1 0

Further donations are earnestly requested, and will be acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

STRUCK OFF THE REGISTER.

The following small circular is being circulated among shops and public and private houses. On the door, we are informed, is a wooden board with "Dr. Costelloe" painted on it. We do not see any one answering to this address in the Medical Register. The General Medical Council at its last meeting ordered the removal of the name of Daniel Costelloe for covering an unqualified practitioner at Croydon and Belhurst (Minutes, 1894, Dec. 5th).

"Dispensary and Consulting Rooms, 23, London-street, Greenwich. Surgery hours: morning, 9 to 12 o'clock; evening, 6 to 10; Sunday evening, 8 to 9.30. Messages may be left at any hour, but patients are requested whenever possible to send before 12 A.M. Dispensary fees. Midwifery cases are attended at a reduced fee. Vaccination with calf lymph only. Teeth extracted."

Prochiral.—We think the appointment should be held in the name of an individual member of the firm.

MEDICAL ADVERTISING IN MANCHESTER.

THE following card is a study in the degenerated methods of practice which have multiplied of late. The absence of a name does not much excuse or extenuate the author of the card, whose personality is said to be well known. Similar documents are said to be common in Manchester. The card should be forwarded by the gentleman's neighbours to the bodies who are responsible for his diplomas. Does the author mean the public to infer by the words "a physician or a surgeon" that there are two persons responsible for this dispensary?

"The General Dispensary, 109, Upper Moss-lane, Manchester (established for the benefit of the middle and working classes during illness). A physician or surgeon attends daily—morning, 10 to 12; afternoon, 3 to 4; evening, 6.30 to 9; Sunday morning, 10.30. Terms: Advice and medicine, 1s., or 2s. per week; visits to patient's home, 1s. 6d., or from 3s. 6d. per week, payable in advance. Vaccination from calf lymph every Tuesday. Patients requiring to be visited are requested to give notice before 12 o'clock."

T. W.—We do not give medical advice and we never recommend individual practitioners. Our correspondent's condition is one that is very familiar to medical men; and it is in all probability the fact that on account of his avocation he cannot obtain rest and a definite or prolonged course of treatment that is answerable for the obstinacy of his case.

Mr. J. C. Bhattacharji should write to the Military Secretary, India Office, Westminster. The rules and conditions under which admission into the Indian Medical Service is gained will be found in the Students' Number of THE LANCET, published each year in September.

CLUB CHARGES.

To the Editors of THE LANCET.

Sirs,—(1) A large fishermen's protective society wishes to draw up a fixed rate of charges for medical attendance. What would you consider fair for visit and medicine, for visit only, and for medicine only? (2) A girl of twenty-two years has been suffering for the last seven years from oedema of the lower extremities, with occasional attacks of phlebitis. Everything imaginable has been tried. May I ask the advice of your readers, some of whom may have seen a similar case?

I am, Sirs, yours faithfully,

March 25th, 1895.

R. I. T. A.

*. We regret to be unable to advise our correspondent, but the information given us is too scanty. The tariff should obviously bear due relation to the wages of the fishermen, to the numbers who would belong to the proposed society, and to the strictness of the regulations against the admission of comparatively well-to-do persons as fishermen. If our correspondent can give us further particulars on these points we will attempt to assist him from our knowledge of the fees paid by members of similar clubs. We leave the second question to our readers.—ED. L.

THE STUDY OF EVOLUTION IN WHITECHAPEL.

ONE English lady has evidently profited by the writings of Haeckel. She did not want to be evicted, and so she produced a fetal kitten, saying she had had a miscarriage. Early embryos are very much alike, and the medical man accordingly gave her a certificate to that effect; but another discovered the fraud, and so the lady had to go. She may console herself by posing as a nineteenth century Mrs. Tofts, who made her name by producing a brood of rabbits. Students of Hogarth will remember his picture, "Superstition, Credulity, and Fanaticism," where the incident is represented in a vivid manner.

Colonist is advised to write to Dr. Chas. Gage Brown, C.M.G., Medical Officer to the Colonial Office, Downing-street, S.W. He will also find some information in the Students' Number of THE LANCET, published every September.

ERRATUM.—In the report of the deputation from the Sanitary Inspectors' Association to the Local Government Board, which we printed last week, Sir Walter Foster was made to refer to the year "1864" as the date of "the least fatal of previous [cholera] invasions." The date mentioned by Sir Walter Foster was, of course, 1866.

During the week marked copies of the following newspapers have been received:—Irish Field, Bolton Chronicle, Medical Record, Hampshire Telegraph, Man of Ross, Cork Daily Herald, Glasgow Herald, Derbyshire Courier, Wallasey Chronicle, Denbigh Free Press, Sussex Daily News, Huddersfield Examiner, Scotsman, Sheffield Independent, Birmingham Mail, Carlisle Journal, Cumberland Packet, Stirling Journal, Macclesfield Courier, Citizen, Builder, Pioneer Mail, Leeds Mercury, Sun, Times of India, Architect, Yorkshire Post, Lincolnshire Chronicle, City Press, Bristol Mercury, Mining Journal, West Middlesex Standard, Hertfordshire Mercury, Courrier de la Presse, Local Government Journal, West Middlesex Advertiser, Surrey Advertiser, Guy's Hospital Gazette, Nottingham Daily Guardian, Ormskirk Advertiser, Burton Chronicle, Bath Herald, Evening Citizen (Glasgow), Guernsey Advertiser, Edinburgh Evening Dispatch, Craven Herald, Littlehampton News, North Wales Guardian, Grimsby News, Sevenoaks Chronicle, Dundee Advertiser, St. Mary's Hospital Gazette, &c., &c.

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The Krumlein Lectures

ON

THE DIAGNOSIS, PROGNOSIS, AND PRO-PHYLAXIS OF INSANITY.

*Delivered before the Royal College of Physicians of London
on March 28th and April 2nd and 4th, 1895,*

By G. FIELDING BLANDFORD, M.D. OXON.,
F.R.C.P. LOND.,

LECTURER ON PSYCHOLOGICAL MEDICINE, ST. GEORGE'S HOSPITAL.

LECTURE I.

Delivered on March 28th.

THE DIAGNOSIS OF INSANITY.

GENTLEMEN,—The diagnosis of most diseases is easy when we are face to face with a well marked and typical example, but in almost all there is from time to time a case which is not well marked and about which there is great doubt. It may be that time will solve the difficulty, and meanwhile we watch the patient and stand prepared for whatever result we may find, and our uncertainty may possibly be unattended by any evil consequence either to the sick man or to ourselves. In insanity also the diagnosis is easy in the majority of cases. We are not in doubt when we see the noisy raving or hilarious chattering of acute mania, the gloom of melancholia, or the fatuous silence of dementia. But there are others about whom we shall be consulted where the diagnosis will not be easy. It may be necessary to consider whether a man shall be placed under restraint "for his own or for the public safety," or to prevent him squandering his fortune and impoverishing his family. He may have committed an offence, and we have to say whether he is responsible to the law; or he may be dead and we are no longer able to examine him, yet we are called upon for an opinion as to his capacity to make a will. In a great number of cases we cannot wait and let time come to aid us in our decision. We have to decide then and there, and if it is a question of placing the individual under restraint, it is one of the greatest importance both to him and to us. If we shirk the responsibility and leave him at large, homicide or suicide may follow, or he may be reduced to absolute beggary. If we sign a certificate without sufficient ground we may be assailed by an action at law. Many at the present time will not sign certificates; but in one way or other most men in practice are brought into contact with insanity, and cannot avoid giving an opinion upon some patient whom perhaps they are attending for another ailment, or who has done something which raises the vexed question of criminal responsibility, or has made a will which is disputed. It is of no avail to decline to give an opinion on such a matter. A *subpoena* will bring us into court, and cross-examination will elicit in perhaps an unpleasant way what we know or do not know about the subject. There are two processes or steps in arriving at the diagnosis of a case of insanity. First of all, there must be an examination of the alleged lunatic. To gain access to a patient is sometimes a very difficult matter, and may tax all our resources. I do not, however, propose to consider that now. Having interviewed the individual we have to come to a conclusion as to whether he is or is not insane. In very many cases there is no doubt about it. The symptoms are well marked and the need of restraint urgent, and without further delay a certificate of insanity is signed. In others we can decide with equal confidence that a certificate cannot be signed. But here and there we meet with a case which admits of doubt and is not urgent. We can go home and think it over and consider whether it falls under one or other of the varieties of insanity which are described in books, or of which we have had previous experience. I purpose to bring some of these before you, but prior to so doing I would say a few words as to the origin and conditions of mind disorder which may throw some light on the diagnosis to be made.

In the sane and healthy mind the highest brain centres, the seat of the highest feelings, reason, volition, and memory, work harmoniously in ordered action and reaction in a sane and healthy body. But if anything interferes

with the healthy working, the highest brain-centres, those which are the latest evolved and the least organised, will be the first to show symptoms of strain or fatigue, and will be, to use a modern but well recognised phrase, "reduced." Then the lower impulses are not controlled as they should be by the higher. The higher, which by some are called the "altruistic sentiments,"¹ by others the "relational feelings" or "object-consciousness," are weakened by the diminished functional activity in the realms of the cerebrum correlated thereto.² The egoistic feelings, or subject-consciousness, rise in proportion, the patient becomes more and more selfish, indifferent to the wishes and wants of others, takes no pleasure in the society or pursuits of others, even those of his own family, neglects his business, and in all outward relations is an altered man, while at the same time he displays an equal alteration in himself, in his egoism, his indecision and general failure of mental power. The decline of the highest mental attributes, and the rise of the lower egoistic, the self or subject-consciousness, are noticeable throughout all the stages and varieties of insanity. It is hailed as a good sign if a melancholic patient will so far forget himself as to ask after his family or children. The general paralytic at the opposite end of the scale boasts of the asylum being his palace, and proclaims his personal strength when he cannot stand without assistance. The self-feeling has no check and no control from the higher centres, which become more and more enfeebled from the progress of the disease.

When we turn to the origin and causation of mental disorder we see at once how much more prone are some to such rise of subject-consciousness. There are many who by reason of a faulty inheritance are egoistic throughout life. Selfish at school, they are selfish when adolescent. They are selfish in their love-making, and if in consequence they are unsuccessful, their pride is mortified and perchance their head loses its balance. Their religion is all self. Either it proceeds from self esteem, and a pharisaical wish to pose as better than others, or from fear of what will happen to them hereafter. Then, again, how many do we see whose whole life is devoted to the gaining of wealth? Some strive to attain this object by increasing attention to business. Their whole day is given up to making money, and if anything goes amiss and they make a small loss instead of a profit, it affects them in an extraordinary manner. Others are excessively penurious and try to amass a fortune by stinting themselves and those about them in every conceivable way. One gentleman, a patient of mine, used to invest every penny that he could to add to his income, and when he had reduced his balance at his banker's to such a point that it was inconvenient, he tore his hair, became melancholic, declaring that he was ruined and could not pay his debts. His income was about £3000 a year. How often do we see in those who inherit the insane diathesis the constant presence of suspicion. This often makes its appearance in the relatives of patients. They go from medical man to medical man trying to test the opinion of one by that of another. They place their relative under our care, and if he does not get well in a week or two they forthwith suspect that we are not trying to cure him, that we are trying to keep him for profit, and so on. These people suspect not only the medical man, but everybody. Everyone has an object in what they do or say. They suspect their clergyman, their lawyer, their friends. They listen to every tale of their servants or the gossip of a village, and embitter their lives by their suspicious fancies. Another form which is not uncommon is jealousy. This may range from the jealousy of boys and girls, manifested at a very early age, to that which makes wretched the life of married people and often approaches very near to insanity. Amongst the young it is one of the manifestations of intense egoism. Their friends must have no other friends. The boy or girl is jealous if anyone comes between him or her and his or her especial comrade. It is the same in later life, though more frequently seen in women than in men. In large families great jealousies often exist amongst the members; and in married life incredible jealousy is to be found without any other sign of insanity. Men and women think their wives or husbands are running after others or looking at others without the faintest ground for such suspicion; many a home is thus rendered miserable, and the step towards insanity is not a long one, though such insanity is often difficult to certify. Another variety of the insane temperament is excessive nervousness or fear. I do not mean that every lady who is

¹ H. Spencer.

² Bevan Lewis.

afraid of a cow, or shrieks at the sight of a mouse or a black-beetle, a toad or a rat, is likely to become insane. It is a kind of hereditary privilege of the sex to have a horror of such objects, but we see women—aye, and men, too—who are fearful of things quite as ridiculous, afraid to go in a train, afraid to drive, afraid of this, and afraid of that; let one of these get out of sorts, depressed by influenza or the like, and he straightway imagines that everyone is plotting against him and conspiring to kill or ruin him. If reassured by change of scene and people he may rapidly recover and return to his normal condition, which we may call "pantophobia"—fear of everything. Then there is hypochondria, which often merges into insanity. This is another form of fear. Patients are so afraid for their health, and so wrapped up in the task of taking care of it, that they can do nothing else, and neglect their business and family in the vain search for remedies for imaginary ailments. All these egoistic people are prone to insanity, but the diagnosis is difficult, for the insanity grows out of the inherited temperament, and it is not easy to say where the one ends and the other begins, or to fix the point where the normal must be considered to have passed into the abnormal.

Far easier is the diagnosis when we find that instead of an exaggeration of the natural character of the man a total change has come over him and he is altered in every way—in habits, disposition, and feelings. In many a certificate we read that the patient is "totally changed," and no better symptom of insanity can be adduced than such a change if we are so circumstanced that we can mention it as a fact. Now it is clear that patients whose whole condition is altered by mental disorder must have their nervous system far more "reduced" than those whose insanity is only an exaggeration of their previous state and whose "reduction" is comparatively slight. The latter being persons with an insane diathesis, a very small matter suffices to throw them off their normal balance. They are the cases where the friends tell us that they can in no way account for the attack. Such people for the most part have a history of heredity. They break down, perhaps without any apparent reason, recover, and break down again, and pass often into a state of recurrent insanity which may last through a long life. In the patients whose character is totally changed we more often find an adequate cause. Long-continued overwork or worry has reduced the health of the brain cells, or bodily illness, such as influenza, has undermined the nervous force of the individual, and insanity, chiefly of the depressed kind is the result. This does not pass away speedily, but is often very tedious, a long uphill process of repair being required to bring the nerve power to its normal level.

Whether the reduction be an exaggeration of the individual's peculiarities, or a total change of habits and character, if it only goes deep enough we find sooner or later delusions. Delusions aid us much in the diagnosis of insanity, especially for the reason that they do not appear at the commencement of the disorder, but indicate that it has existed for a certain time and proceeded to a considerable depth. Many patients suffer from simple melancholia without definite delusion. They are depressed, out of spirits—they cannot tell why. Their business, or even their amusements, are a nuisance to them. They dislike seeing their friends, and even writing a letter a bore, and are often irritable to those about them in a way they never were before. But as yet there are no distinct delusions. Conversely, patients will display a state of exaltation and of change in this direction without delusion. They talk in an excited and rapid way, much more so than is their wont. They are inclined to speculations, they build new houses or buy things they do not want, are inclined to quarrel, and by no means willing to take advice. They sleep but a short time, rising very early and expecting others to do the same, and their whole conduct is foolish, often causing in their friends a fear that they have been giving way to drink. But all the time there may be no delusions. In the latter class of cases insane conduct generally precedes delusions because the patient is active, restless, and eager to be doing something. In the former delusions generally come earlier, and we have less difficulty in diagnosing insanity and taking the necessary steps for protection, the depressed person being for the most part more docile and more easy to deal with. That the delusions of the depressed grow out of their condition of nerve prostration is recognised by many observers, and according to the idiosyncrasy of the individual they will arise early or late.

In many the self-consciousness which I have already mentioned is a prominent feature and comes readily to the surface. Such people are timid, fearful of criticism, and distrustful of others. They feel great depression of spirits, for which they cannot account. They may at the same time feel bodily discomfort, with pain in the head, indigestion, and constipated bowels. Notwithstanding they imagine that their food is poisoned; at first, perhaps, they think only that it has been tampered with, or that unwholesome provisions have been supplied; then that poison has been put in it by some person or persons known or unknown. Feeling themselves peculiar and changed, they think that the people in the streets look at them, then that they point at and deride them. Next they fancy that the newspapers write about them, and that all the mysterious advertisements refer to them. There is a plot and a conspiracy to rob, ruin, and destroy them, and they try to run away from it and hide themselves from their enemies. Here it is evident that there is a complete loss of adjustment between the environment and the patient. Instead of living in harmony with his surroundings he dreads them and would flee from them. How does all this affect our diagnosis of the case? Our diagnosis is for the purpose of treatment, for legal restraint, or legal interference with a man's property and business. The depression I have spoken of demands in the first place treatment, and this is often efficacious. Mere removal, with change of scene and surroundings, I have known to be sufficient to allay the fear with which the sufferer is overwhelmed. Having conceived the idea that those about him wish to poison him, to mock or ruin him, he feels the utmost relief when removed from their reach and finds himself surrounded by others in whom he has every confidence. More than once I have known patients escape from those placed to guard them, escape to friends or acquaintances, and then recover by the feeling engendered through the new set of surroundings. This is the reason why in almost every case change of scene does good, though possibly only for a time. It is the reason why almost every patient is better when first admitted into an asylum, though the improvement may not last long. The reduction of the brain centres may become deeper and the delusions increase. The patient will be afraid of his new-found friends after a few days, or will think that his former enemies can reach him in his new abode. Then, as his subject-consciousness becomes more and more developed, and his self-feeling intensified, being always pervaded by the nerve depression, he thinks not only that all his environment is conspiring against him, but that all is wrong with himself. He has done wrong, has neglected his business and ruined his family, or has robbed his partner or employer; he has committed the unpardonable sin, the sin against the Holy Ghost, and is eternally lost and about to suffer torments in this world or the next; or he has some loathsome disease, as syphilis or leprosy, or is about to have hydrophobia because perhaps a dog licked his hand some years ago. All such patients come before us for treatment, and our diagnosis will be largely influenced by this—that all such people are to be looked upon as suicidal. It is difficult to say when a patient may begin to be suicidal. Some will commit the act, or attempt it, when only a very moderate degree of depression has been noticed, and their friends will express the greatest surprise at their so doing. The diagnosis is difficult, but we may render it easy if we choose to treat all melancholia, however slight, as suicidal, and insist on a patient not being left alone. When such advice is given we meet with the greatest opposition from the friends. Not long ago I told a lady of high rank that her daughter was suicidal and required attendants. She said she was not going to have such people in her house for her servants to see and know. In a week or so her daughter threw herself out of a top window into a flagged yard and was killed on the spot, and instead of attendants the mother had an inquest to face. People shrink from watching a man in his own house and say he will not like it; and, in spite of advice, he is allowed to go out alone to buy revolvers or throw himself into the river or under a train. Suicide is very hereditary, and our diagnosis may be assisted by the knowledge that the ancestors or other members of the family have shown the same tendency. Many patients will openly threaten it, and it is a popular belief that those who talk about it will not carry it out. Unquestionably many who talk about and threaten it have not the slightest intention of committing suicide. They do this to frighten or worry their friends, or they make feeble attempts, such as scratching their throats or making small cuts on their wrist; but many who talk

about it have done it at last. They may for a time have sufficient self-control or fear of death, but as the malady advances this is overcome. One week a patient may say he would not do such a thing, or is afraid lest he should do it, and the next he commits the act. Men commit suicide in far larger numbers than women, but I am inclined to think that women make attempts or pretences of suicide in greater numbers than men, but have not the courage to effectually accomplish it. Depressed patients require care and treatment for this reason, and another is that all except those in a state of extreme delirious melancholia are exceedingly amenable to treatment and recover in larger proportion than any other class of the insane. Recoveries are on record where the patients have been melancholic for years. I myself have seen two who recovered, one after thirteen and the other after fifteen years, and several I have known were in a state of extreme depression for five, six, or seven years. I do not think that any suffering from chronic mania with delusions or hallucinations ever recover after so long a time. In the case of the latter the reduction, I imagine, is greater, and an organic change takes place which does not occur in the melancholic. In the latter it appears as though there was a defect of nerve force which causes the feeling of intense depression, and out of this feeling the delusions spring; but the cells of the brain and their connexions, though they suffer from want of power, are not thereby damaged, and are ready to resume their healthy working when the needful force is supplied. And this is borne out by what we notice in so many of the depressed. Apart from the melancholy and the delusions engendered by it, they can converse rationally on any subject. There is no loss of memory, of attention, or of judgment in matters not pertaining to themselves. One gentleman whom I saw daily for five years had various delusions, but he was thoroughly up in all that was recorded in the newspapers and would discuss it with excellent sense and judgment. A pleasanter companion I could not wish for. He recovered after being for seven years in an asylum. It is this mental power which so often deceives the friends and even the medical attendant. They shrink from placing such a man in an asylum; but a man who is tolerably composed and will talk excellent good sense in the evening will very likely wake the next morning in the blackest despair, and that is the time he is most likely to commit suicide. There is one golden rule: that such persons shall never be left alone. Whether in or out of an asylum, this should be enforced, whether they like it or whether they do not.

Far different is the state of those who suffer from mental exaltation. This will vary much—from excitement of a kind which can hardly be considered insanity to the hilarious delirium of acute mania. I am not here to discuss the pathology of mania or melancholia, but I cannot help thinking that in the former we have an opposite state of things—that there is an over-action of the brain circulation due to the failure of the centres which control it. This over-action is shown in the flushed face, the quickened pulse, the general "explosiveness" of the maniac. Here, more perhaps than in melancholia, we remark the "alteration" of the patient. His highest centres are "reduced," and very much "reduced." Judgment, reasoning, and attention are all in defect. If we engage such a man in conversation he cannot keep to the point; he will commence the answer to our question, but soon wanders off; his ideas have no coherence, and we write him down as incoherent. There may as yet be no delusion, but it is impossible to say that there is no defect of intellect. His every act betokens that his highest cerebral centres have lost control, and the lower and egoistic self-feelings are carrying him along in an uncontrollable flood. The most typical cases of mental exaltation are the general paralytics. Their hilarity and self-satisfaction, the grandeur of their ideas, their extravagance of expenditure and delusions of wealth and magnificence are known to all. Yet these delusions point to a condition of brain for which there is no cure. Instead of the slow and defective action of the melancholic who recovers after years of insanity, we find a coarse brain disease which terminates life after a short time. It is evident that the pathological condition of the exalted maniac who is not a paralytic must be closely allied to that of the maniac who is; for the mental symptoms may be so much alike that the most experienced may be left in doubt if physical symptoms are wanting. There is at first the same alteration, the same moral perversion, the same loss of attention. They even begin in the same way by a stage of melancholic depression. This is very common in ordinary mania, but not so common

in general paralysis; yet I have known a case of the latter where melancholia lasted for a considerable time, necessitating care in an asylum. The patient recovered from this in the usual way and returned to his home and work and no one had a suspicion that the attack had been anything but ordinary melancholia till the symptoms of exalted general paralysis suddenly made their appearance. In another there was a long period of depression, from which recovery did not take place, but a gradual change whereby the patient passed from the depressed to the exalted, but demented, state of general paralysis.

In the case of a patient suffering from mental exaltation a diagnosis is necessary to determine, first, whether he is or is not insane—so insane as to justify interference with his liberty of conduct; and, secondly, whether the insanity is ordinary mania and probably curable, or that which is known as general paralysis and incurable. As I am speaking now more especially about insanity with delusions I will take the latter question first. There are many maniacs with exaltation and corresponding delusions who are not general paralytics. Some are under the delusion that they are descendants of some noble family and the rightful heirs of this or that noble house, and they lay claim to a title in accordance with the idea. They may have cards engraved with the title and coronets placed on their notepaper; others will imagine that they have discovered some wonderful invention which is to make their fortune, and on the strength of the riches which are to come they squander what they have in the most reckless way. I once was occupied for half a day in going round the town and countermanding the carriages and horses that one of my patients had ordered. Many tell us they are going into Parliament. If in the army they are to be made generals, if in the law they will be judges or Lord Chancellors. Exaltation of any kind will make us suspect that the patient is suffering from incipient general paralysis. I know nothing more difficult than the diagnosis here if physical signs are wanting—nothing more easy if they are present. By the time that exaltation has reached the stage of delusions the physical signs of general paralysis will be noticeable in the majority of cases if the disease is present. The expression of the face is often peculiar. The patient looks dull and demented when at rest, and abnormally excited when speaking, with twitchings of the facial muscles and general tremor. When asked to show the tongue he jerks it out and in with a kind of convulsion, and if we ask him to keep it out we notice a fibrillar tremor of the muscles of it. And besides the facial and tongue muscles, those of the lips will show signs of the disorder. There is a tremulous condition of the latter, said by Sir John Bucknill to be like that seen in persons about to burst into passionate weeping. In some this tremor will be noticeable, while in others we see a stiffness and unnatural immobility of the lips, especially the upper. And these affections of the lips and of the tongue bring about another symptom which is very characteristic of general paralysis—viz., defect in the articulation. This is a stopping or stutter in the enunciation of a word or the various syllables of a word, especially a long one. It is somewhat like the thickness of speech of a man who has had a little too much liquor, and many are thought to be in this condition if they are disorderly in public places. It may vary on different days; if a patient is speaking with an effort and loudly, he may get his words out clearly enough, but if he is excited and talking quickly and hurriedly, the defect will be conspicuous. Then there is another physical symptom very frequently present in this stage, which we call the second, or that of delusion; this is inequality of the pupils of the eyes. This, taken in conjunction with exalted delusions, is perhaps the most pathognomonic sign of general paralysis that we can find. There can be no question as to this. About the stammer observers may disagree, but if one pupil is larger than the other and is fixed to light, or contracts but little, it is almost conclusive. Sometimes both pupils are extremely small and contracted, do not alter under light, and may remain constantly in this state during the patient's life. The knee-jerk in the early stages of the disorder is generally exaggerated; later on it is altogether abolished in the majority of cases. There are often epileptiform attacks even in the early stage which may materially aid us in our diagnosis. And it sometimes happens that the physical symptoms may be more marked than the mental, and that we may be able to note inequality of pupils or want of reaction, difficulty in gait, or slowness of speech at a time when there is only an alteration in mind, when we are not

able to sign a certificate of insanity. I have seen two such cases within a short period. From time to time we see a case of acute alcoholism where there are such symptoms of dementia with perhaps some amount of paralysis, that we pronounce it to be one of general paralysis. We are greatly astonished to find improvement take place under proper treatment, and ultimately recovery. Did time permit I could give the particulars of an interesting example of this disorder.

In the insane we meet not only with delusions, but also with hallucinations—sometimes both coexist in the same individual. Hallucinations are extremely common in acute insanity, especially those of sight and hearing. In chronic insanity they are frequent, especially those of hearing; they characterise an important class of patients, and are symptoms difficult to remove and very prone to recur. They depend upon disturbance of the centres of the special senses, of those of general sensation, and visceral and sexual feeling. I am not concerned with the pathology or origin of hallucinations. For the diagnosis of insanity they are important, especially in the chronic forms, but they occur not only in the insane but also in the sane. Sometimes they are found in those suffering from acute febrile disorders, when they take the sound of church bells, or appear as rats or snakes around the patient in delirium tremens. People not in acute illness, but in feeble health, may see visions of cats or the like. And such visions may serve as a gauge, so to speak, of the individual's state of health. I have said that in acute insanity, especially acute mania, they are common. And those most frequently met with are hallucinations of sight. Patients see visions or faces or animals about them, angels or devils, or mere flashes of light or fire. The diagnosis in such cases admits, of course, of no doubt. The patient is in a state of acute insanity, and delusions and hallucinations abound, frequently changing, and being generally more marked by night than by day. It often happens that a patient waking from sleep is terrified by something he fancies he sees or hears, and he may attack the person or persons watching him with this idea. But as the acute attack passes away, the hallucinations, like the delusions, vanish, and recovery takes place. There is no difficulty in detecting such hallucinations or in recognising the symptoms of insanity. Neither will it be difficult to recognise the hallucinations which we may call visceral, or those where the disturbance is of cutaneous sensibility. Such troubles of sensation are loudly complained of, and the sufferer will seek relief in various ways and appeal to medical men or lawyers or the police in the belief that a conspiracy is set on foot to torture him by electric shocks or such like methods. When such hallucinations exist in a chronic state, we are not likely to mistake them or under-estimate their significance. Far more frequent amongst the chronic insane are hallucinations of hearing—hearing "voices," as they are often termed. These are very common and very formidable, often incurable and hard to detect. But for these "voices" such people may be in all respects sane, and conduct themselves as ordinary members of society, yet are they always to be looked upon with suspicion. One day they may be able to control themselves and to disregard the "voices," the next they may feel bound to obey the voice and do what it commands them, whether it be homicide or suicide. It often happens that a patient will not reveal what the "voices" say, or confess that he hears them at all, and our ignorance of the hallucination may make it very difficult for us to arrive at a diagnosis or account for the patient's peculiar conduct. I once saw a lady whose conduct was manifestly insane, and who, when alone, was excessively noisy, but no one could detect any delusions. Her noise ceased when anyone entered the room and she would give no explanation thereof. By watching her without her knowledge through the crack of the door I saw that she was talking to imaginary people up the chimney, and was evidently greatly enraged at what she was hearing from them. She ceased when I entered the room, but admitted the hallucination, and I was able to sign a certificate. Such patients are dangerous for two reasons. They may think themselves bound to obey the voice, whatever it may direct. They will hold it responsible and themselves irresponsible, and they will feel themselves equally bound to conceal what passes, and will deny that they hear any voice at all. We may sometimes detect them by noticing that the patient, while we are talking to him, is inattentive to us, and evidently listening and trying to catch something which he hears going on. This he may or may not communicate to us. But there are other patients who hear voices and are dangerous for another reason. The voices often torment them and make

their lives intolerable by the accusations they bring and the crimes they allege. All the delusions which we find in a melancholic patient are in the hallucinated converted into "voices." From the next house, through the walls, the floors, or the ceiling, these voices perpetually resound, calling the sufferer the foulest names, accusing him of unnatural offences and everything that is vile. The patient does all he can to avoid the persecution. He flies from house to house, from country to country. One lady I knew bough: the next house to her own whence the voices proceeded and turned everyone out of it. Needless to say, the sounds went on as before. She made it a solitude, but she did not procure peace. And not only in the house does this persecution go on. In the streets and public places the passers-by launch obnoxious epithets at the individual, and when we hear of a person being shot or attacked by one wholly unknown to him, we may have a reasonable suspicion that "voices" are the explanation of the assault. If there is a forensic contest and hallucinations are adduced as evidence of insanity, we shall be told that sane people have hallucinations. It is quite true that persons who are not insane in the ordinary sense have hallucinations both of sight or hearing if they are out of health or are suffering from an acute attack, whether it be delirium tremens or some febrile disorder. But nobody can pretend that there is nothing wrong with the brain of such patients. For the time, at any rate, their brain and mind are disordered as much as is that of the insane person. Then we shall be told that various well-known people had hallucinations. Dr. Johnson heard his mother's voice calling "Sam" when she was far away; Lord Byron saw a spectre, Napoleon saw a star, and Cromwell a vision. We have nothing to do with these stories, which are very doubtful; the authority for them we cannot cross-examine. It is when hallucinations affect conduct that we are concerned with them, or when they are likely to affect it, for we cannot wait till a man assaults or murders another under the idea that he is insulted. Similarly with regard to delusions. Erroneous opinions are not insane delusions. There are people who believe in spiritualism and mesmerism, in homeopathy, and the like. There were many who believed that the "Claimant" was the real Tichborne. But these are not the delusions of the insane man, who believes in some fact which personally concerns himself and on which he is prepared to act in spite of all the reasoning and demonstration which is brought and put before him by others, friends or advisers, whose opinion he would undoubtedly accept were he in his right mind.

Hitherto I have considered those forms of insanity which are characterised by delusions and hallucinations, and the large majority of insane patients have delusions or hallucinations or both as the prominent symptoms of the mental disorder. There are some, however, whose unsoundness of mind, to use a comprehensive term, is shown by insane conduct rather than insane ideas, or who, by congenital or other defect, are unable to take care of themselves or manage their property or business. The first class, those whose insanity is characterised by insane conduct rather than ideas, are those to whose disorder has been applied the term of "moral," or "emotional," or "affective" insanity. The patients, it is said, are insane, but with an apparently unimpaired state of the intellectual faculties. Here, as in so many cases, there is beyond all question a very great dispute about words. One writer uses a word to mean a great deal which another does not, or the latter may use the same word in a totally different sense. Physicians are quite agreed that there are patients whose acts are insane, yet who have no delusions in the ordinary sense of the word. Every one can from his experience call to mind such cases, but controversy exists with respect to the name by which we are to designate them. If we lay aside for the moment the divisions of the mind such as intellect, emotion, volition and the like, and look upon it as the working of the highest cerebral centres which have been gradually evolved in ever-increasing complexity from savage to civilised races, and from the child to adult man, we see that according to the degree of evolution will be the complexity of feelings and the relations of feelings, and the composition and ideas of relations of which mind consists. There cannot be highly complex ideal feeling without equally complex intelligence. The highest mental attainment which civilised man can reach is a right rule of conduct regulating the affairs of life with judgment, prudence, and restraint. But if this standard is never reached owing to congenital defect or imperfect development or training, or if the highest centres are reduced by insanity,

or epilepsy, or alcohol, the mind is likewise reduced from a higher to a more automatic condition. There is over-action of the lower centres from the removal of the controlling influence of the higher. Applying this to conduct, we find that the reduced brain gives way to the gratification of the senses, regardless of consequences, permits indulgence in pleasure to the detriment of self or family, may set at defiance the conventional laws of society, or possibly the law of the land. The patient is reduced to the level of a child or an uneducated and untrained person, and the reduction may go on till it brings him to a level lower than that of a savage. This is no special variety. Any cause which operates injuriously upon the brain function may reduce the individual in this way. He is an altered man. He may possess a perfect memory, may be able to converse brilliantly, and argue keenly. He presents no delusion or hallucination, and yet his conduct is different from what it was before. He may not be immoral; immorality is only one form of this so-called moral insanity, but he is altered—and altered for the worse. He is wrapped up in self. The egoistic part of his mental constitution comes prominently forward, owing to the loss of the higher controlling centres. His affection and feeling for his wife, family, and friends are estranged; he is extravagant or penurious; he devotes his time and money to objects he would formerly have despised, or associates with people beneath him. This will go on for a time, and then he will get worse and descend to a lower level of delusion and more marked insanity. From this he may recover, to reach again the level of alteration, but he will never regain perfect sanity. He remains an altered man, altered in feelings to those he loved best, altered in habits, character, and conduct. He presents the spectacle of a half-cured patient. Nowadays, as soon as a patient is somewhat better, the friends clamour for his release from the asylum or restraint in which he has been placed, and those who have the care of the insane, whether officials or others, are prone to release patients, owing to such popular clamour, as soon as improvement reaches a certain point. Consequently, many who might have been cured by longer care and treatment are turned out to take care of themselves in the world at large and to remain half cured for the rest of their days. I have come across various patients in my own experience who were well-marked examples of this insanity without delusions. Two were men who had given way to drink and were in fact cases of chronic alcoholic insanity. They were both men of some amount of brain power, and a casual observer might say after an hour's pleasant conversation that he could detect no intellectual defect in either. Both had recovered from a lower level of insanity, from melancholia with delusions. One had a constant desire to return to drink, was dirty in dress, a collector of stones and rubbish with which he decorated his rooms, furiously passionate if thwarted, and quite without self-control. The other, under the garb of religion, was a liar of the most ingenious kind. His delight was to breed quarrels in the asylum, and to concoct letters of complaint to the Commissioners out of the quarrels and lies which he had concocted. No jury would have pronounced him insane, and only those who lived with the man could recognise how mad he was. Now if we are familiar with patients of this sort we recognise without difficulty or doubt that they are insane. But if we do not look at the patients in the concrete, but consider in the abstract moral insanity and such questions as what is morality or what is intellect, what is intellectual soundness or unsoundness, or whether a person can be intellectually sound and morally or emotionally unsound, we lose ourselves in a sea of verbiage and can satisfy neither ourselves nor anyone else. Just the same difficulties have arisen in applying the well-known legal test of the responsibility of the insane. We have heard and read a good deal about this lately; that to be irresponsible an insane person must be incapable of knowing right from wrong, or knowing the nature and quality of his act. Here everything turns on the meaning of the word *know* and its applicability to the accused person. To hear a judge solemnly charging twelve British common jurymen that they must decide whether an alleged lunatic knew right from wrong, and the nature and quality of his act, on a day perhaps three months previous—he being a man whom they have never seen before in their lives and never heard speak three words—would be grotesque were it not so serious. There is scarcely a dement in any asylum who does not know when he is doing wrong. He is deterred from doing it by the fear of consequences, knowing that his tobacco or his pudding will be stopped, or that something he dislikes will happen to him. He is an insane man, nevertheless,

and the system of rewards and punishments by means of which every asylum must of necessity be governed is one proportionate to the minds with which we have to deal, they being all alike in one respect—viz., that they are unsound, though in degrees they may vary much. The insanity of a man or woman in whom we can find no delusions must be shown by his or her conduct, and in forming an opinion we must examine the case as we would any other in other branches of practice. What is the history of the individual and his relatives? Does insanity exist in his forefathers or in any other members of his family? What has been his manner of life? Has he been intemperate, has he had epileptic attacks or apoplectic seizures? Is he altered, and, if so, how long has he shown signs of alteration, and have these increased lately? Close examination of one of these altered men may reveal to us the physical signs of general paralysis. Unequal pupils, the fibrillar trembling of the tongue, or the peculiar dull look of the face, will explain beyond doubt the nature of the change, and make a diagnosis easy which otherwise might be difficult. For the early stage of general paralysis is one which in many cases presents a typical moral insanity. The patient makes silly purchases, boasts in a silly way, is forgetful of times and appointments, drinks more than usual, possibly indulges in immorality or theft, yet no one act is unquestionably that of an insane man and no one idea is palpably a delusion.

I now pass to the consideration of another variety of insanity about which there has been much controversy. I refer to the so-called impulsive insanity which comes before us chiefly in cases of insane homicidal impulse. In our ordinary state of health an impulse to do something sudden or violent occurs to many. Some feel an impulse to throw themselves down from a height, or over the side of a vessel into the water. One person has a desire to scream out in a crowded church or theatre, another to smash something valuable on the table. All these impulses are by the healthy mind resisted and controlled; but when the mind is not healthy, when by disease the controlling power of the higher centres is inhibited, then insane impulse may be let loose in any direction—homicide, suicide, mere wanton smashing, or causeless violence. It is often urged that this impulsive insanity is something invented by medical men to excuse crime, but examination of patients and of recorded cases will reveal disorder of a very serious extent. There is a close connexion between these sudden impulses and epilepsy, and in more than one recorded case a well-marked *aura* has been known to precede the homicidal impulse. In others the latter appears to take the place of an epileptic convulsion, constituting what has been termed *épilepsie larvée*. And not unfrequently it follows, and is the result of, an epileptic attack, and of this both the patient and his friends may be ignorant, if it has occurred in the night when he has been sleeping alone. It also much resembles epilepsy in this, that it is not always present in the patient's mind, but is periodical, recurring like epilepsy without any special cause. Many are quite conscious of the feeling, and of their inability to resist it, and many have sought the assistance and restraint of an asylum, being unable to control themselves. In examining such a person we shall have first to consider the character of the deed, the mode of committal, and the absence or presence of motive. The act may be so motiveless, so contrary to the previous nature and feelings of the perpetrator, that no one can doubt it must have been that of a madman. It is not the amount of wickedness displayed in the act, but the senselessness of it that we are to regard. And even when the nature of the deed sufficiently stamps it as insane, we shall, if we seek diligently, generally discover other symptoms of insanity. The individual's history must be carefully examined, and the occurrence of epilepsy or insanity in the family noted. The time of life and condition must be taken into account, for instability of the nervous centres is specially liable to be exhibited at the periods of puberty or the climacteric, or those of pregnancy, parturition and lactation. Nor must it be forgotten that homicidal impulsive attacks may occur in other forms of insanity.

That caution must be observed in signing certificates of lunacy I need hardly insist on here, but in no class of cases ought greater caution to be used than in those where the insanity, or alleged insanity, is complicated by alcoholism. We have at present in this country no means of restraining inebriates but by confining them as lunatics under the statutory order, petition and certificates. As they are a terrible torment to their friends, and ruin their health and the property of themselves and families, as they are frequently violent to those about them both in language and in

act, and are often found wandering, lying in the gutter, and absent from home all night, the relatives seek our assistance and entreat us to sign certificates that they require care and treatment; but if we examine one of these individuals, what do we find? He may be drunk; but drunkenness is not insanity, and we must wait till he is sober; and then we may be able to detect no delusion or hallucination. He may deny most of what is alleged of him, and may be incensed with his relatives for calling us in. If we find enough in his history and in himself to warrant our signing a certificate, and he is sent to an asylum, this usually happens: drink is cut off, the man sleeps, his appetite returns, and in a very short time the asylum authorities are obliged to release him, and often the relatives are worse off than they were before. That there is an insanity from alcohol we know, but the insane symptoms of this are strongly marked and persist even when drink is stopped. If possible, I require that a patient shall be kept without drink for twenty-four or forty-eight hours before I examine him. It is of no use to examine a man in the middle of his potations.

I now proceed to the consideration of patients whose mental symptoms are not those of exaltation or depression, are not marked by hallucinations or delusions, but are characterised rather by enfeeblement and deficiency. These are of two kinds: those whose mental defect is congenital or the result of an arrest of development at an early age, and those who from former attacks, from coarse disease of brain or old age, have come to the condition which is commonly called "dementia." And first, of those who, through congenital defect or as the result of disease in early life, are mentally deficient—not idiots, but weak-minded imbeciles—children in mind throughout life. They come before us in various ways. Though children in mind, they are very often men and women in wickedness and vice; and it may be necessary to place them under restraint, or to protect their property from being squandered and themselves from being robbed. I know no class over whom controversy is so likely to arise, or where we may have greater difficulty in forming a diagnosis. They are not idiots; many of them have acquired a fair amount of education, can construe a Greek play, or master a proposition of Euclid. Their memory is excellent, and we cannot compare their condition with a former one; for they have never been any better, so that this test fails us. They have no delusions or hallucinations, and are not insane in the ordinary sense of the word. With regard to many there is no difficulty. When a man or woman of forty submits to be treated like a child of ten—to be taken out and amused, and to have sixpence a week pocket-money, we have not much difficulty in forming an opinion. But the development of others is not so low; yet they are deficient in reason and judgment, and often in conduct. There is a tendency to low and depraved habits, to brutish and sensual enjoyment, to low company amongst whom they are of more importance, and if remonstrated with they show an absolute disregard for truth or for right behaviour. Lawyers will defend these patients and say that they are not insane, and the celebrated Windham case shows what can be done by their aid. In examining any such individual we must consider his conduct in regard to his environment and bringing up. What might be passed over in the lower walks of life is in the higher evidence of a degraded mental state. Every case must be judged by itself, and the question must be asked, Is this person able to take care of himself and his affairs? But to sign a certificate is often very difficult, as we may not ourselves witness the insane conduct, all of which we arrive at only by hearsay. It is not to be forgotten, however, that imbeciles are very prone to display violent explosiveness of their nerve centres, and this is specially likely to happen as they advance from the period of puberty to adolescent life. "Last stage of all," there is the dementia of old age, of chronic insanity, or brain disease. In the vast majority of such cases the diagnosis presents no difficulties. Loss of memory, loss of attention, the mere oblivion and childishness, enable us to say that such a person is unable to take care of himself or his affairs, and never will be able. The prognosis is attended with as little doubt as the diagnosis. Here and there we see a patient whose dementia has not advanced very far, who varies a good deal, having good days and bad days, and is capable of being "coached" into giving tolerably rational answers to our questions. About such a one legal questions may arise and a forensic contest. If there is no urgent necessity it is better to wait. The dementia is sure to increase as time goes on, and a case which is difficult now may be easy enough to diagnose in six months' time.

TWO CASES OF ABDOMINAL SECTION ILLUSTRATING THE DIAGNOSIS OF TUBAL PREGNANCY PRIOR TO RUPTURE OF THE SAC.

By ARTHUR H. N. LEWERS, M.D. LOND.,
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CASE 1. *Diagnosis made of extra-uterine pregnancy prior to rupture of the sac; abdominal section; unruptured tubal gestation sac found and removed; recovery.*—A married woman aged thirty-five years was admitted into the Davis Ward of the London Hospital under my care on Feb. 24th, 1894, complaining of severe pain in the back and left iliac region. She had been married sixteen years and had had two children; the last was born fourteen years ago and is still living; the first, which was born ten months after marriage, only lived eight days. Both confinements were easy. She had one abortion when two months pregnant seven years ago. The catamenia appeared when she was thirteen years old. She menstruated regularly while suckling. She was quite well till about the end of 1893. At the beginning of 1894 she felt very sick and retched frequently, but there was no actual vomiting. About the same time she had severe pain, starting in the left iliac region, and extending round to the back and also across the lower abdomen on the right side. She was admitted into the Bromley Sick Asylum for three weeks from Jan. 19th, but was not relieved, and shortly afterwards was admitted into the London Hospital. The pain in the lower abdomen had been more or less constant both night and day; it did not shoot down the thighs, but was aggravated when the bowels acted. Besides the constant pain there had been occasionally since Christmas, 1893, severe pain in the left iliac region resembling labour pains and lasting two hours. She had had two intervals of a week since the beginning of the illness without pain. She had menstruated regularly up to Christmas, 1893, when the last period occurred. It lasted only three days, but the ordinary duration of the periods had been seven days. Since this period there had been no red discharge from the vagina till Feb. 12th, 1894, when she noticed a slight reddish-brown discharge, not offensive. This had continued up to the time of admission. She then continued to feel sick at times; this occurred in the night as well as in the day, and had no relation to meals. She was quite sure the breasts had been getting larger lately. She had at times recently experienced a sense of fullness in the left iliac region, but had not noticed any actual swelling there. On admission the patient was rather pale, but there was no marked anaemia. The pulse and temperature were normal, and the tongue was clean and moist. The urine was normal. On abdominal examination nothing abnormal could be felt. On vaginal examination the uterus was found to be uniformly enlarged, freely movable, and in the normal position. The cervix was soft and blue. A soft swelling about the size of an orange, but less definite in outline, was felt occupying the left side of the pelvis; it had a fair range of mobility. The sound was passed, and entered a distance of 3½ in. with the curve forwards. The breasts were firm and looked active, and fluid was easily expressed from both, that on the left side being distinctly milky. On March 3rd I examined the patient under the influence of an anæsthetic and dilated the cervix with Hegar's dilators up to No. 12. The uterus appeared, however, to be empty, and there was no history of anything solid having been passed before admission, nor was anything of the kind passed while she was in the hospital. Taking all the points of the case into consideration, it seemed to me to be a case of extra-uterine pregnancy in the left Fallopian tube, and I advised the patient to have an operation at once performed in order to remove the gestation sac before it should rupture. On March 8th, 1894, the abdomen was opened in the usual way. There was no blood in the peritoneal cavity. The uterus at an early stage came into view; it was of a purplish-red colour, very soft, and enlarged uniformly; in fact, its appearance and feeling were very similar to those of a pregnant uterus at about three months. On passing the hand down to the left of the uterus a soft swelling was felt about the size of an orange. It evidently contained fluid and was very thin-walled, for the manipulation needed to bring it up to the abdominal wound burst it and shot a foetus of about

three months' development out of the wound on to one of the mackintoshes covering the patient. The ruptured tube was held up, the broad ligament transfixed and tied with the Staffordshire knot, and a second ligature tied round the whole pedicle. The tube was then cut away. One or two separate pieces of placenta about the size of a penny came up on the sponges when the pelvis was being sponged out. The abdominal wound was completely closed with silk sutures. The subsequent progress of the case was uneventful and the patient made an uninterrupted recovery. The temperature never rose above 99.5° F., or the pulse above 94. The wound healed by first intention. The red vaginal discharge continued after the operation up to March 15th and then ceased. On April 2nd I examined the patient and made the following note: "Bimanually the uterus can be felt in a position of slight anteversion; it is little if at all enlarged, but a little less movable than normal." The patient was discharged on April 6th wearing an abdominal belt, and feeling quite well.

Remarks.—A certain number of cases have been published in which a tubal gestation, of the degree of development here mentioned, has been removed prior to rupture of the sac; but they are not very numerous, and any cases of the kind seem worth recording. The operation prior to rupture of the sac is a much simpler matter than when rupture has occurred, and the prognosis is that of a simple ovariectomy. It is far otherwise when an operation is undertaken after rupture of the sac. The patient may then be in a very feeble condition from the extravasation of blood into the peritoneal cavity, and on that account alone the risk of an abdominal section is considerably increased. There is also in some such cases great difficulty in thoroughly removing all the clot from among the intestines and the various recesses of the peritoneum; and if any portions are left there is a considerable risk after the operation that they may become septic, and so militate against the patient's recovery. In Case 2 recorded in this paper the first operation was undertaken under these unfavourable conditions, and her recovery from it was therefore tedious, forming a striking contrast to the uneventful recovery of Case 1. It is of the utmost importance, therefore, in the patient's interest, when the opportunity occurs, to make the diagnosis of extra-uterine pregnancy before rupture of the sac. The risk of operative treatment is then very small, while after rupture it is often considerable. A careful consideration of the history and of the physical signs will lead to a correct conclusion in a considerable proportion of cases. As regards history, the patient will generally be not younger than about twenty-eight or thirty, and will either have had no children or, at least, there will generally have been an interval of some years since any former pregnancy. She may miss a period, going some six or seven weeks without "seeing anything," and then some red vaginal discharge may occur and may be more or less persistent. Pain in one or other iliac region is also an important symptom. There may also be a history of gastric disturbance. Such a group of symptoms is extremely suggestive of extra-uterine pregnancy. The physical examination, especially under anaesthesia, if it shows that the uterus is uniformly enlarged and soft, the cervix blue, soft, and enlarged, and the presence of an elastic swelling in one or other side of the pelvis, is sufficient, combined with the history mentioned, to justify a diagnosis of extra-uterine gestation. Signs of activity in the breasts are also of considerable value. It is well to bear in mind, as has been well said by Mr. Lawson Tait, that absolute diagnosis within the abdomen is often not possible. Practical men will be content with such a strong balance of probability as is afforded by the history and physical signs given above. To refuse to act on that evidence is simply to wait in a considerable percentage of cases for rupture of the sac, and all its attendant dangers. There is an interesting point as regards the specimen removed in this case. There is, of course, at the outer end the largely dilated Fallopian tube that contained the foetus, then about an inch nearer the uterus there is a second dilatation of the tube forming a spherical swelling of the diameter of a half-penny; on section this, in the recent state, contained firm, dark-red blood-clot. It may possibly be a tubal mole, two ova having become impregnated in the same tube, the one forming the ovum that contained the three months' foetus and the other having become blighted and degenerating into a mole.

CASE 2. *Diagnosis made of extra-uterine pregnancy prior to rupture of the sac in a patient on whom I had operated for ruptured tubal pregnancy at the third month eleven months*

previously; abdominal section; actual condition, molar uterine pregnancy with ovarian tumour the size of a small cocoanut; recovery.—The case of this patient was especially interesting in that I had operated on her for ruptured tubal gestation in the spring of 1893. The case, so far as that part of it is concerned, is fully recorded in THE LANCET,¹ and I will only say that at that operation I found the peritoneal cavity full of blood and a foetus of about three months' development lying among the intestines. She made a tedious recovery after that operation, which I ascribed partly to the condition of extreme anaemia to which she had been reduced prior to it, and partly to my not having used a drainage-tube after it. She came to see me in October and November, 1893, and I examined her. There was nothing abnormal to be felt on examining the abdomen, and bimanually the uterus was found to be of normal size and in the normal position, but slightly less movable than normal. She menstruated regularly in October, November, and December, 1893. She also menstruated in January, 1894, from the 13th to the 17th, losing on that occasion a great deal more than at the periods in November and December. She consulted me again on Feb. 16th, 1894, on account of great pain in the left iliac region, of two days' duration. On simple palpation of the lower abdomen a swelling could be felt in the hypogastric region and also in the left iliac region, rising from the pelvis, and just about level with the pelvic brim. No such swellings existed when she was last examined in November. Bimanually the uterus was enlarged, less movable than normal, and an elastic swelling continuous with that felt in the left iliac region was felt in the left side of the pelvis. This could not be distinctly separated from the uterus. On March 4th I was sent for to see her and found that since Feb. 8th she had been losing blood in small quantities up to March 3rd; the loss then was considerable, and she passed two "lumps," one small and one large; these were kept for me to see, and were only blood clots. The pain in the left side had continued from Feb. 16th to the 27th, and then ceased. Since then to March 7th the patient had remained in bed. The reddish-brown discharge had persisted. Examination of the lower abdomen detected two swellings reaching to a level of four fingers' breadth below the umbilicus. The swellings were separated by a distinct interval in the neighbourhood of the scar left from the previous operation. On March 12th the patient was examined very carefully under an anaesthetic: the uterus was moderately but uniformly enlarged, the cervix being blue and soft; the swelling of the left side seemed to be fairly separable from the uterus. It appeared to me that the case was one of extra-uterine pregnancy, though the possibility of uterine pregnancy with a small ovarian tumour was thought of. Whichever it might be made no difference in the treatment, and I advised abdominal section. The patient was accordingly removed to Fitzroy House on March 13th. On the afternoon of that day an oval mass the size of a small egg was passed from the vagina; its outer surface was shaggy, and on section it had a central cavity lined by a smooth membrane, but there was no foetus. On examining the patient the swelling of the left side was felt as before, but the uterus was somewhat smaller and contracted. On opening the abdomen on March 14th the swelling of the left side was found to be an ovarian tumour the size of a small cocoanut; it had no pedicle and had to be enucleated from the broad ligament. Two pairs of Wells's forceps were left on bleeding points too deep in the pelvis for ligation, and a Keith's tube was inserted at the lower angle of the wound. The forceps were taken off in two days' time, and the patient made an uninterrupted recovery. A small sinus persisted for a considerable time till two silk ligatures came away; it then healed rapidly. I last saw the patient on Feb. 15th, 1895. She had not menstruated since the operation, and was getting much stouter. The uterus was in the normal position and of the normal size, and was freely movable.

Remarks.—There are some interesting points in this case in addition to the fact of the patient having been operated on for ruptured extra-uterine pregnancy eleven months before the operation here recorded. The oval mass passed from the uterus was undoubtedly a true mole—i.e., a blighted ovum; therefore, as the right ovary and tube had been removed at the first operation the ovum which degenerated into a mole must have been produced from the left ovary, which nevertheless had degenerated into an ovarian cyst the size of a cocoanut. On examining the specimen the left tube, a part

¹ THE LANCET, March 10th, 1894.

of which was removed with the ovarian tumour, can be seen to be open. Another point of interest is the time occupied by the degeneration of an apparently healthy ovary into an ovarian cyst of the size described. At the first operation, on April 22nd, 1893, there was nothing obviously wrong with the left ovary, yet by March 14th, 1894, it had become cystic, forming a tumour of the size mentioned. Whether its rapid formation was hastened by the occurrence of the molar pregnancy or not it is of course impossible to say, but on examining the abdomen in November, 1893, no swelling in the lower part of it could be detected; yet on March 7th, 1894 two swellings, rising from the pelvis and separated by a slight depression, were very easily felt there, the central one being of course the pregnant uterus and the lateral one the ovarian tumour.

Wimpole-street, W.

INTERSTITIAL KERATITIS AND SYNOVITIS, WITH REPORT OF A CASE IN WHICH BOTH WERE UNILATERAL.¹

By G. CRAWFORD THOMSON, M.D. DURH.

Literature on the subject.—It is only lately that a connexion between interstitial keratitis and synovitis has been recognised in England, although occasional remarks on the casual coexistence of both diseases may be found as far back as in W. Mackenzie's treatise and Hutchinson's earlier writings. W. Mackenzie,² in his classical description of what he called "scrofulous corneitis," mentions that sometimes with it "effusion into the bursa under the tendon of the extensor cruris" occurs. I have little hesitation in considering that the words quoted are meant to refer to the condition in question. Amongst fifty-three cases of interstitial keratitis published by Hutchinson in the first two volumes of the Ophthalmic Hospital Reports, 1860, swelling of the knee-joint is only once mentioned—viz., in Case 7, vol. i, p. 239. The patient is described as "a poor miserable looking child of bad, pale complexion." In his clinical memoir on Certain Diseases of the Eye and Ear consequent on hereditary syphilis in 1863 the former fifty-three cases are reproduced, and with them the case above referred to. On page 118 Hutchinson says that affection of the knee-joint was observed in three instances; but, as is clearly shown from the table of his cases, two of these instances refer to one patient (case 7), with double synovitis, while the third instance (ankylosis of the knee-joint, case 73) refers to a different condition altogether. Amongst the forty-nine additional cases (the memoir being based on 102) no further reference is made to the condition in question. I have not been able to find any other communication by Mr. Hutchinson on this subject between 1863-1886, the time of the publication of Heath's Surgical Dictionary. In his article on Hereditary Syphilis in "Reynolds's System of Medicine," 1866 the subject is not mentioned. In his two papers published in 1860-63 the connexion between interstitial keratitis and hereditary syphilis, as is universally acknowledged, has been first pointed out. A paper by Spencer Watson on four cases of parenchymatous keratitis associated with acute rheumatism,³ published in 1870, will be discussed later. The syphilitic synovitis due to the tertiary stage of the acquired and to the inherited form has been first fully described by A. E. Barker in his article on joint diseases,⁴ and the occasional occurrence of interstitial keratitis with it is here already mentioned. The first to draw attention to the close affinity of the two affections was Mr. Clutton in 1886.⁵ In his eleven cases both affections were bilateral, the joint affected being invariably the knee, there being only one case with previous swelling of ankles as well. As far as the etiology of the disease is concerned, the information is scanty, the history of specific disease being found only in four cases, no history in four, a doubtful history in one, and in two cases no notes were obtainable. In the same year as Mr. Clutton's paper appeared the connexion

between the two affections appears as a well-established fact, characteristic of hereditary syphilis, in Hutchinson's article on Hereditary Syphilis in "Heath's Dictionary of Surgery," and in 1887 in the same writer's manual on Syphilis. Nearly ten years before the appearance of Mr. Clutton's paper the fact was recognised and its pathological bearing fully discussed by Foerster.⁶ To him credit is due for having first observed the close clinical connexion between the two diseases, and for having first pointed out the non-rheumatic character of the joint disease.

Description of case.—Amongst all the literature which I have consulted (both English and foreign) I have not been able to find a case in which both affections have been and undoubtedly remained unilateral, therefore the presentation of the following case does not require further justification. In June, 1885, I commenced attendance on a girl fifteen years of age suffering from amenorrhoea and anæmia. She first menstruated at the age of thirteen, and her periods were regular until a year before, when she went to school. It was then that the menses became affected. Under treatment (iron and arsenic) she became much better in about six weeks. I did not see her again until the end of December, 1885, when I found she had relapsed into her former condition and was also suffering from inflammation of her right eye. In the beginning of January, 1886, she was seen by Dr. Julius Jacobson, who confirmed the diagnosis of interstitial keratitis made by me. The appearance of the cornea, which showed a diffuse greyish infiltration, containing some more saturated spots under a perfectly normal epithelium, advancing slowly from the margin to the central parts and surrounded by a dense ciliary congestion, was absolutely typical of interstitial keratitis. There was no deposit in the anterior chamber; the pupil was dilated perfectly by atropine. An ophthalmoscopic examination was not possible at this time. Warm fomentations and the continued use of atropine were ordered. Within a week afterwards effusion into the knee-joint, also on the right side, developed. The swelling was evenly distributed over the joint; the skin was of normal colour, not tense; painless, passive movement was not impeded; no nodes of tibia or enlargement of bones in the neighbourhood were to be detected; no loose bodies were to be felt in the joint; and there was no feverishness. I wrote to Dr. Julius Jacobson mentioning this, when he answered that the appearance of painless synovitis before, after, or with interstitial keratitis was by no means uncommon, and rather tended to endorse the previous diagnosis, at the same time adding that, both affections being nearly always symmetrical, we had to be prepared to see the other eye and joint affected in the same way. I may remark that his letter was written before the appearance of Mr. Clutton's paper, and that the connexion between the two affections pointed out by him to me was at the time completely unknown to me. It is needless to say that the suspicion of the case being one of hereditary syphilis presented itself at once, but a most careful examination did not elicit a single other symptom pointing to this disease. The teeth in particular were uncommonly well shaped, without any irregularity at all; the hearing was in no way impaired; there were no scars at the angles of the mouth or on the palate or mucous membrane of the mouth, no glandular tumours, no osseous swellings, no trace of any present or previous skin affection; the patient's regular and fine features showed nothing of the characteristic appearance of the skull; her nose was perfectly formed, and there was no flattening of the bridge. The examination of the body revealed nothing abnormal except a soft systolic murmur at the apex of the heart. Taking into consideration the extreme pallor of the face and mucous membranes, the general treatment resorted to was of a merely tonic character, including iron, arsenic, with plenty of milk, fresh vegetables, &c. At no time was either mercury or iodine given. Several attempts were made to reduce the swelling of the knee by strapping with Scott's dressing, iodine, and complete rest in splints, but without effect. It lasted about six months and then disappeared of itself, while the disease of the cornea ran its usual course, leading to complete infiltration of the corneal tissue and gradually clearing up from the margin after the onset of vascularisation. The eye had not regained its normal appearance until the beginning of 1887. During the whole time the general treatment was continued. At this date not only had the local symptoms disappeared, but a striking improvement had taken place in her general

¹ Thesis for the M.D. degree: Gold Medal, Durham, 1894.

² W. Mackenzie: Practical Treatise on the Diseases of the Eye. 4th edition, 1845, p. 527.

³ Transactions of the Clinical Society, vol. iv., pp. 1-7.

⁴ A System of Surgery, by Holmes and Hulke. London, 1883, vol. ii., p. 341.

⁵ Symmetrical Synovitis of the Knee in Hereditary Syphilis: by H. H. Clutton, THE LANCET, Feb. 27th, 1886.

⁶ Graefe und Saemisch, Band vii., p. 158, 1877.

health and appearance. Between then and now she has had occasional relapses into an anæmic condition, of which I have only seen one personally, as she took arsenic again on her own account whenever she began to feel unwell. She has been under my observation up to the present date and has developed into a strong, active woman, showing absolutely no trace of her former ailment, her complexion particularly being clear and healthy and her menstrual periods perfectly normal. She has never shown any disease in the other eye or knee or any other local mischief, so that the prognosis given at the time of the first examination has not been fulfilled. Dr. Jacobsen saw the patient again about four years ago. From the report then given to me by him I may mention here that there was slight hyperopic astigmatism in both eyes, after correction of which vision in the left eye was full $\frac{1}{2}$, while it was $\frac{1}{4}$ in the right; this slight diminution in sight was accounted for by an exceedingly thin central opacity of the cornea, only noticeable by focal illumination, in which examination with a strong magnifying convex lens still showed traces of bloodvessels so characteristic of the remains of interstitial keratitis. There were no opacities of the vitreous, no peripheral choroiditis, the pupil acted promptly to light and accommodation, and tension was normal. The previous history of the patient does not reveal anything pointing to hereditary syphilis. She had measles and whooping-cough when a child, but she was born perfectly healthy, and during infancy and early childhood had no snuffles, no skin eruption, and no throat affection; no bone lesions were noticed; in fact, up to 1835 she had been in the enjoyment of perfect health. I may add that I have had at different times the opportunity of questioning the mother as to the above-mentioned point, and that she is perfectly positive about the absence of any similar symptoms. The father of the girl died within the last year; he had been confined in a lunatic asylum for the last ten years of his life. From the medical officer I learned that the disease was diagnosed by Drs. Wilks and Savage as general paralysis, and that he had no direct evidence of syphilis. The mother is a strong and energetic woman, who has always been in perfect health, and has been confined fifteen times with the following results: (1) miscarriage at six months; (2) full time, crossbirth, died shortly after (unskilled attendance); (3) son, living; (4) daughter, living; (5) miscarriage at two months; (6) daughter, living (the patient); (7) miscarriage at two months; (8) son, living; (9) daughter, living, twin died at birth; (10) miscarriage; (11) daughter, living; (12) daughter, living; (13) son born healthy, died two months after birth from inflammation of lungs; (14) twins at seven months, died at birth; (15) daughter, living. An analysis of the above shows there were four miscarriages: Nos. 1, 5, 7, 10; one premature birth, No. 14 (twins); three children born at full time, but dying shortly after birth, Nos. 2 (unskilled attendance at birth) and 9 (one of twins dying and the other surviving); No. 13 (died two months after birth from inflammation of lungs); eight living children, Nos. 3, 4, 6 (patient), 8, 9, 11, 12, 15. With the sole exception of the eldest son, I have not only examined all the living children, but I have had them under observation during the last nine years, and am positive that not one of them has shown any trace of specific disease. In none of them the peculiar formation of head the broadening and flattening of the nose, the notched teeth, or any other symptoms of the kind are to be found.

Remarks on case.—Most cases described as one-sided interstitial keratitis are of little value, the time during which they are under observation being too short, as not rarely several years elapse before the onset of the disease in the other eye, but I am not aware that the interval has ever been as long as nine years. As my patient has developed from a delicate, anæmic girl into a perfectly healthy woman without any trace of former disease, I have no hesitation in regarding the case as being at an end, and, therefore, as one of undoubtedly unilateral disease and as one of the rare exceptions to the law formulated by Hutchinson⁹ that "interstitial keratitis in its typical form is always in the end symmetrical."¹⁰ In the best observed cases the effusion into the knee-joint has also been symmetrical, and probably the percentage of double-sided affection is still higher than

one would gather from reported cases, the absence of pain in mild cases blinding the patient to its existence. As said before, a case where both affections have been limited to one and the same side of the body is according to my knowledge unique." Certainly no explanation can be given why one side should be attacked in preference to the other, as otherwise no difference between the two halves of the body could be found. As to the causation of both affections I do not feel justified in attributing them to hereditary syphilis simply for the one fact that interstitial keratitis existed together with knee-joint affection. The history of my case, complete as it is, contains scarcely anything to suggest syphilis; only one point might be interpreted in this way—viz., the miscarriages of the mother. As regards this, the number and the time of occurrence are such as might be met in any woman free from specific disease, and it ought to be borne in mind that abortions are very common quite independently of syphilis, that there is every day proof that women may bear large families of tainted children and never show any tendency to abort—that, in fact, the part which syphilis plays in the causation of abortion is commonly exaggerated.¹⁰ This, taken together with the entire absence of any other sign of syphilitic taint in the patient, or of any sign in her mother, her sisters and brother,¹¹ all seen by me and under observation to the present day, leaves practically nothing which could be adduced as an argument in favour of specific disease. On the other hand, the girl at the time of her illness presented the usual symptoms of pronounced anæmia with amenorrhœa, appearing at the time of puberty and probably due to change of climate. It is in this lowered state of nutrition that, in my case, the cause of the affection of the cornea as well as of the knee-joint must be sought. Complete recovery took place under a simple tonic treatment, neither mercury nor iodide being given. In a disease with a decided tendency to recovery this latter fact is not of much value; still, it in some respects corroborates the view taken here.

(To be continued.)

ON THE VALUE OF EUCALYPTUS OIL AS A DISINFECTANT IN SCARLET FEVER.¹

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SINCE I have been connected with the public health service I have always felt that there was room for improvement in the treatment of scarlet fever patients. It seemed to me that the long stage of desquamation, during the greater part of which the hospital patients are to all intents and purposes convalescent, was, to say the least, hard lines upon the general body of ratepayers, and that, therefore, all scientific endeavours should be directed towards the shortening of this desquamation period or towards the rendering of the desquamation itself in some way or other non-infectious. The average length of stay in hospital for scarlet fever cases varies in different institutions—e.g., in Leicester Borough Hospital it is about six weeks, as compared with seven to eight weeks or longer in the hospitals of the Asylums Board. Then, again, despite such a lengthened stay in hospital, patients when sent home appear (in a proportion of cases at least) to give rise to the disease in others. These are the so-called "return" cases—i.e., cases that are apparently, in some way or other, connected with the return of convalescents from infectious diseases hospitals to their homes; and their occurrence is disheartening when all possible precautions are taken in the way of keeping the patients isolated in hospital until every visible trace of peeling is gone and in the way of scientifically disinfecting clothes &c. As the result of my own investigations into "return" cases of scarlet fever, I have long felt that perhaps the desquamating stage is not their *vera causa*, the peeling skin not being so infectious as is generally supposed. It is true that

⁹ In fifteen cases of joint disease in inherited syphilis collected by Mr. J. Hutchinson, jun., one-sided knee affection is mentioned five times, but the time of observation is too short; and the clinical notes, especially in Virchow's cases, are too incomplete to allow these cases to be regarded as unilateral.

¹⁰ Hutchinson: *Syphilis*, p. 415.

¹¹ In this respect my case is in striking contrast to one published by G. Ogilvie (*THE LANCET*, June 10th, 1893), where syphilis could be traced from the "father" to all of the offspring. Out of nineteen confinements eight children survived, all showing to a greater or less extent the hereditary taint.

¹ A paper read before the Epidemiological Society, March 15th, 1895.

⁷ Syphilis, p. 76.

⁸ Mansell Moullin also in his *Surgery*, London, 1891, p. 97, says: "Interstitial keratitis always attacks both eyes." This is only approximately correct for the cases due to congenital syphilis; it does not hold good for interstitial keratitis in acquired syphilis, which is as a rule unilateral.

we as health officers are satisfied if we discover an antecedent case of peeling in the neighbourhood of a localised outbreak of scarlet fever, but it is equally true that in Leicester, when at the time of the outbreak of small-pox not less than 120 children in various stages of desquamation after scarlet fever were sent to their homes, no single second case occurred at any of these houses, although I carefully watched them for three months. Surely this was not a pure coincidence? My own line of reasoning is as follows. Scarlet fever is an infectious disease due to the entrance into the system of a micro-organism—the micrococcus scarlatinae of Klein, the bacillus scarlatinae of Edington, or other germ—the point of attack being in all probability the throat. On entering the body at this point, and incubating there for a certain length of time, the poison (be it the germ or its products) gives rise to certain changes in the blood, with a resultant train of symptoms—e.g., temperature and rash, followed by peeling of the epidermis. The simplest explanation is that the rash—i.e., hyperæmia or congestion of the skin—causes its outermost layers to die, to be thereafter cast off as waste products. No definite, generally accepted specific germs have as yet been found in this shed skin, nor have any cultivations been made therefrom, as far as I know; indeed, such skin is dead, and it has therefore seemed to me a little difficult to understand how such dead skin could so readily give (as it is generally stated) rise to the disease in others. I do not, of course, definitely state that it does not, but it has not yet been satisfactorily proved that it does; whereas experience, I think, is tending to prove that scarlet fever is extremely infectious in its early stages—i.e., from the moment that sore-throat and vomiting appear. Small-pox is undoubtedly infectious in its very early stages, as are also measles, diphtheria, influenza, whooping-cough, and typhoid fever. The fever stage in scarlet fever lasts from a week to two weeks, and the stage of desquamation from six to seven weeks. Presumably, when the fever stage ends the germs and their products have ceased to act deleteriously, and theoretically, therefore, all that is required is to render aseptic during the fever stage the blood, secretions, mucous membranes and skin, breath, &c. This Mr. Curgenvin claims practically to have done—a claim not yet seriously contested; and when my attention was first called to his eucalyptus treatment I may, perhaps, be described as being almost prejudiced in favour of such a line of treatment or disinfection. I read all Mr. Curgenvin's papers, and even after allowing a deduction for the praises naturally lavishly bestowed by a father upon his own offspring I felt that I had at last found my long-looked-for and long-wished-for remedy, by means of which I should be able to save my authority a considerable sum of money, whilst at the same time a much larger number of patients suffering from scarlet fever could be treated in my present hospital accommodation per year. Considering that Mr. Curgenvin unfortunately had to base his conclusions in regard to scarlet fever upon twenty-six cases, I anxiously waited for further statistics from other medical men, but none came. I decided, therefore, and through the courtesy of my committee was enabled, to try the treatment at the Leicester Borough Hospital, seeing and treating all the cases myself. In fact, I was able as medical superintendent to treat the cases, and then as medical officer of health to watch that no evil results arose therefrom in regard to the spread of the disease in the town. I propose now to bring forward all my facts, so that each one may draw his own deductions therefrom, contenting myself with stating that the comparatively few cases (120) that have been treated with eucalyptus by me do not warrant any very definite conclusions being drawn, but may perhaps tone down somewhat the exaggerated statements of others (on both sides) and be an incentive to those who have opportunities to do so to officially give this treatment a trial and to publish careful notes. I personally feel, as no doubt others do, that the subject is one that ought to be stringently and scientifically criticised and a definite opinion "for" or "against" come to. Mr. Curgenvin's paper, having the honour of being printed in the Transactions of the Epidemiological Society, and therefore practically "passed" by the society, holds the field, and his conclusions, until rebutted, must be accepted.

I have carefully followed out the treatment as suggested, personally supervising it, and have only included amongst my cases those patients who showed the rash well developed, so that not only was the diagnosis certain, but the disease had not advanced beyond its early stages—i.e., first or second day. It would be manifestly unfair to include cases with only initial symptoms—e.g., sickness, headache, and

sore-throat,—as whatever the result of the treatment might be in such patients it could never be definitely stated that they were genuine cases of scarlet fever, for I confess that I am one of those who deny the existence of scarlet fever without rash and subsequent peeling (branny or otherwise), though I recognise the so-called pseudo-scarlatinal cases, which are sometimes met with in scarlet fever infected houses or in times of epidemics, but which are not, in my opinion, genuine cases of scarlet fever. My mode of treatment has been as follows:—Careful rubbings with the oil over the whole body three times a day for three days, followed by one rubbing (after a warm bath) daily for seven days. The disinfectant is sprayed also into the patient's throat, mouth, and nose, and diffused into the air of the room. No eucalyptus has been administered internally beyond what passed down into the stomach during the spraying process. Further, sequelæ and complications as they arose were treated with the usual remedies—in addition, of course, to the eucalyptus oil. The oil that I use is Tucker's oleusaban "A" disinfectant, which is stated to be the essential oil of eucalyptus globulus with thymol and other camphors and aromatic antiseptics in solution in definite proportions, freed from most, if not all, resins and aldehydes by distillation and redistillation. There is stated to be a fluid hydrocarbon (eucalyptene) holding in solution an oxidised hydrocarbon isomeric with camphor—viz., eucalyptol. The eucalyptus oil is volatile and diffusible, evaporating readily, and so offers little or no obstruction to the pores of the skin, and it does not turn rancid. It is stated further to contain no fixed oil, no water, and no alcohol, and to be a non-poisonous, non-staining, and non-irritating germicide, antiseptic, and antiferment, according to the researches of Omelchenko, Bucholtz, Siegen, Mayo Robson, Lister, Schultz, Klein, Pitzer, Hirst, and others. I have compared the 120 patients treated with eucalyptus with 161 treated in the usual orthodox way, and at the same time, in the same hospital, and under precisely the same conditions—i.e., I have only included cases that showed the rash well out and were in the early stages of the disease. Further, all my patients were taken from the same epidemic (a declining one) and in rotation as they were notified, so that no selection of cases took place. In short, as far as possible, I chose my two sets of cases so that they practically agreed as to age, constitution, conditions of life, stage of disease, and severity of attack, the only difference, therefore, being one of treatment—i.e., eucalyptus v. orthodox or ordinary. The total 281 cases were the only suitable ones admitted to hospital during 1894. The majority of the cases were of a mild type. My results may be tabulated as follows:—

Details of cases.	Eucalyptus.	Ordinary.
Number of cases of scarlet fever treated and number of deaths ...	120 cases and 2 deaths. Per cent. 1·6	161 cases and 7 deaths. Per cent. 4·3
Length of stay (in days) in hospital—		
Non-fatal cases... ..	34·4	42·7
Fatal cases... ..	8·5	13·4
Length of interval (in days) between admission—i.e., commencement of the treatment—and normal temperature—i.e., the cessation of all fever... ..	11·4	10·3
Percentage of complications and sequelæ	20·0	27·3
Serious	79·3	83
Trivial	20·7	17
Percentage of "return" cases—i.e., of all those treated with eucalyptus and discharged from hospital during 1894	3·9	5·0
Calculated on special cases treated ...	4·2	6·4
Particulars as to Complications and Sequelæ.		
1. Serious—	Cases.	Cases.
Rhino-rhœa	2	7
Otitis	9	4
Phagedæna pharyngis	2	4
Acute rheumatism	2	1
Abscesses	12	14
Albuminuria	10	3
Uremic convulsions	1	4
Pneumonia	1	2
Acute tuberculosis	1	1
Hæmaturia	0	1
Meningitis	0	2
Anasarca	0	
2. Trivial—		
Tonsillitis	2	2
Pityriasis	1	0
Urticaria	1	3
Epistaxis	0	1
Erysipelas	0	1
Reinfection—i.e., secondary rash	2	3

It must be stated that with twenty-three exceptions the eucalyptus cases were kept in hospital until their skins were quite smooth—i.e., until all visible peeling was gone. If we take the 97 cases that were thus kept in hospital until all peeling was finished, we find the average stay in hospital of each patient was 35.6 days, whilst the average stay for the 23 patients who were sent out still peeling on the feet was 32.4. It makes, therefore, little difference, so that we may treat of all the eucalyptus cases together, with the understanding that practically each case was detained in hospital until the skin was smooth. I do not feel justified in sending the patients out into the town at the end of ten days as suggested by Mr. Curgenven. As medical officer of health I feel chary of doing so, of being a party to such an arrangement; though as medical superintendent I sent 23 patients out with peeling feet (the rest of the body being smooth) without any bad results accruing—without, in short, coming into collision with my other self, the medical officer of health! The 5 "return" cases in connexion with eucalyptus patients have reference to those who were perfectly smooth, all peeling having ceased, though I may mention that 2 were connected with patients who were discharged (at the request of the parents) with running ears; and we must all admit that a suppurating middle ear is theoretically an ideal cultivation medium for germs, and practically has been shown to be so by the interesting bacteriological investigations of Dr. F. Blaxall, who shows that the streptococcus pyogenes, and the staphylococcus albus and aureus are constantly found there, whilst Frankel's diplococcus pneumoniae and Friedländer's bacillus pneumoniae have also been found by other observers. Of the 5 "return" cases, the patients in connexion with whom they had apparently arisen had been 35, 23, 25, 44, and 34 days respectively in hospital, whilst the intervals elapsing between the dates on which they returned home and the "return" cases sickened were 5, 15, 6, 8, and 12 days respectively. Taking my own eucalyptus statistics, then, it would appear that there were in those particular cases in favour of the eucalyptus: (1) a lower death-rate; (2) a shorter stay in hospital; (3) slightly fewer complications of a serious nature; and (4) fewer "return" cases; whilst the process of desquamation was certainly hastened with, I may add, a slightly increased epithelial loss. The stage of fever was practically the same in both sets of cases—if anything, slightly increased in the eucalyptus ones; and I would mention here that the fever was not supposed to be gone until normal temperature had been not only attained, but also maintained. Two doubtful cases of scarlet fever out of 5 that were put into the eucalyptus ward and treated developed a rash, sore-throat, and temperature in 4 and 9 days respectively. Other results noticed were stimulation of the skin with feeling of warmth to patient, brightening of the colour of the rash, slight cough, slight suffusion of conjunctivæ, and tendency to sleep after the application, pulse softer and less rapid, whilst the smell of the oil was but slightly objected to. As to the cost of the treatment, my figures work out to about 2s. per patient, and taking the average number of rubbings as sixteen it is equal to 1½d. to 2d. per application (about an ounce being used each time). The stay in hospital, however, is shorter, and so the hospital maintenance expenses per patient are less. In Leicester during the last nine years the average weekly cost per patient is 16s. 2½d., and this I take in connexion with an average stay in hospital of 42.7 days for orthodox, as against 34.4 for eucalyptus, treated cases. There is thus a saving of a week's expenses—i.e., 16s. 2½d., whilst the oil costs 2s., leaving a balance of 14s. 2½d. in favour of each patient treated with eucalyptus, even when such patient is kept in hospital until smooth.

[Dr. Priestley then quoted from the reports of others. Thus Mr. C. Knox Bond, resident superintendent at the Liverpool City Fever Hospital, published in THE LANCET of June 6th, 1891, that during 1890, 305 cases were admitted, and 47 (44 consecutive cases) were treated with eucalyptus, but not by inunction. The oil was administered internally and the throat sprayed. The mortality was 8.5 and the complications 42.5 per cent. Mr. H. G. Armstrong, medical officer to Wellington College, read a paper on June 27th, 1894, before the Medical Officers of Schools Association. He had not tried the treatment himself, but had asked other medical officers of schools and superintendents of metropolitan fever hospitals. Of twenty-three medical men who were asked—Does antiseptic inunction prevent infection?—nine said "yes" or

"probably," three said "no," two were doubtful, and nine had no experience. In answer to the question—Does the inunction shorten the disease or prevent complications?—seventeen said "no," four said "yes," and two expressed no opinion. The conclusions drawn by Mr. Armstrong, who somewhat ridiculed the treatment by calling it the "bacon fat method," comparing it with a method adopted at Hanover, were—(1) antiseptic inunction does not exert any specific power over infectious diseases; and (2) it has but little if any power in preventing the spread of infection. Mr. R. M. Bruce of the Western Fever Hospital treated 16 cases by antiseptic inunction; 5 cases were uncomplicated (equal to 31.2 per cent.), 11 cases showed complications (68.8 per cent.), and 1 case died (6.25 per cent.). Mr. Curgenven quoted statistics of a fever hospital of 16 cases in which 30 per cent. had suppurative complications and 1 case died from "lung disease." Dr. Sweeting, late of the Western Hospital, says "the advocacy of the eucalyptus treatment rests on a crude generalisation." Dr. Edward Little of Wimbledon reported favourably on the treatment. Dr. Thresh of Chelmsford reported (from his own experience and that of others) unfavourably. Mr. Peake of Shepherd's-bush and others supported Mr. Curgenven. Drawing a comparison between hospital and home nursing Dr. Priestley said that in Leicester during the ten years 1883-92 7612 cases of scarlet fever were notified: 4488 were treated in hospital, where the death-rate was 3.6 per cent.; 3124 were treated at home, where the death-rate was 8.2 per cent.]

In conclusion it will be understood that my only desire is to get at the truth of this eucalyptus treatment and to inspire my colleagues to scientifically investigate it, at least in regard to scarlet fever. There is, I think, more in it than the "bacon fat" of Mr. Armstrong, though less than the "hospitals disestablishment" of Mr. Curgenven. *In medio tutissimus ibis.*

Leicester.

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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(Continued from p. 698.)

JUST after correcting the proof of my last paper I was asked to see the patient described under Case 39 in consultation, and found that she had in some respects relapsed into the condition before the removal of the kidney. The urine is quite as bad as it has ever been—viz., bloody, pyoid, and extremely offensive—and the warty condition of the vagina has returned, though it is not as bad as before. There is no sign of inflammation or suppuration in the tissues of the loin above and around the ureteral stump, and the latter is to be felt quite distinctly as a small and very tender swelling about the size and shape of a large almond. There is no fever and the pulse is quiet and of good character. The patient takes her food fairly well, being not nearly so emaciated as she has been, and can get out and about when allowed to do so. It is, however, the getting up and getting about that reproduces all the mischief. When she is kept at perfect rest in bed, and has the bladder carefully washed out frequently with antiseptics, the urine gradually clears and becomes in time bright, acid, and normal, and the vaginal trouble also subsides. Then if she is allowed to get up almost immediately slight bleeding occurs at the end of micturition, and in a few days the urine is again in its old foul condition. Evidently the least movement sets up hæmorrhage, and then putrid suppuration in the little sac in which the stones lie. It seems clear that another operation will be necessary to remove the stump of the ureter and the calculi, and I believe the best way of reaching them will be by turning aside the peritoneum and its contents, a modification of Abernethy's operation for ligaturing the iliac artery. The chief risk of the operation lies in the probable adhesion of the parts to the peritoneum and the possible adhesion to the iliac vessels, as they are lying very near the point at which the ureter crosses them. The only alternative is a very prolonged rest in bed, but I do not feel at all confident, or even hopeful, that there

would not be a relapse when she got up again. Case 19 seemed to demonstrate that it was a safe practice to remove a damaged kidney above an impacted stone, and leave the latter alone when its situation rendered its removal specially dangerous; but Case 39 shows that one cannot depend upon such a satisfactory result, at any rate when more than one calculus lies in the ureter with a space between them. I shall still hope at some future time to record a successful ending as regards that case.

CASE 40.—A man aged forty-eight consulted me in the summer of 1892 about a large tumour in his loin, which had been slowly growing for some time without causing him much trouble, but latterly had begun to be a source of discomfort when jolting about on an Irish car, his duties giving him a great deal of such travelling. I diagnosed renal sarcoma and advised its removal, and the operation was performed on Oct. 11th, 1892. There was nothing calling for special comment in the operation; it was a large tumour, and a good deal of care was required in its enucleation in order to avoid serious loss of blood. I fastened the ureter into the lower angle of the abdominal incision and drained the sac with a glass tube. For twenty-four hours the patient was very well; then he began to hiccup, and this gradually increased in violence till I could hear him when I entered the hall of the house, though he was in a top back room up three flights of stairs. Nothing in the way of drugs had the smallest effect upon it, and I was seriously afraid that it would kill him, for it was incessant, shaking the bed and, indeed, the room; and though he was naturally a very strong man I felt that he could not stand it much longer, when, at the end of forty-eight hours, it ceased as suddenly as it began and he made a speedy recovery. The urine before the operation contained about a third of albumen and was of rather low specific gravity, and the sediment was full of blood corpuscles, renal cells, and much granular debris. It became quite normal soon after the operation. The tumour had evidently started in the capsule, gradually invading the substance of the kidney, and at the date of operation was invading the pelvis. The specimen was unfortunately destroyed without microscopic examination. The patient was very soon able to resume his work and when I last heard from him was in excellent health and spirits, finding no inconvenience from jolting about the country.

CASE 41.—This was also that of a male patient, aged twenty-nine, who was seen in consultation with Dr. Anderson in November, 1892. He had long been aware of the presence of a large tumour in his left side, and had at times suffered attacks of pain, which were so severe as to cause him to roll on the floor in agony. He had consulted many of the leading physicians in London and on the Continent, and all had told him that he was suffering from tumour of the spleen and that operation was out of the question. Knowing Dr. Anderson's special experience in such cases he sought his advice and was at once told that it was not an enlarged spleen at all, but an enlarged kidney—probably a case of hydronephrosis—and in this view Sir William Broadbent and I concurred, and it was decided that I should remove it. The operation was performed on Nov. 19th, 1892, and was without any special complication, and he made a perfectly smooth recovery, except that after I ceased to attend him he had a very alarming attack of severe internal pain and collapse, the exact nature of which was not very clear, and it was quickly recovered from. He was travelling and shooting in Egypt within six months, and has since been able thoroughly to enjoy life, playing cricket, shooting, and, in fact, doing everything that any other healthy young man of his age can do. The exact pathology of the case was somewhat obscure, but the ureter was practically obliterated, and I am much inclined to think from his history that it may have been a congenital one.

CASE 42.—The patient, a woman aged thirty-two, was sent to me by Mr. Tivy of Clifton in January, 1893, with a large abdominal tumour, evidently cystic, and I added to my notes "probably hydronephrosis." I advised operation and removed it on Jan. 14th, 1893, ligaturing and dropping the cut end of the ureter, which was like a very minute cord, but evidently pervious. This again was a case of inadequate ureter. The convalescence was rapid, and she is now in excellent health. A carefully kept record of the amount of urine passed showed a distinct drop in quantity on the third, fourth, fifth, and sixth days, then a return to the normal quantity for a few days, and then a very decided polyuria lasting for five days. This seems to be the natural course in a well-doing case.

CASE 43.—A man aged thirty-four was sent to me by Dr. Seton, who had diagnosed suppurating hydronephrosis. When a lad aged seventeen the patient had received a kick in the abdomen at football, passing blood in his urine for fully two years, and some swelling was observed at the time in the left side of the abdomen. On two subsequent occasions, after severe exercise, he suffered from attacks of pain with sensation of swelling in the left side, both attacks slowly passing off in three or four weeks. In 1879 he got a chill during a night march in Afghanistan and was said to have cystitis; the urine became cloudy and had remained so ever since. On his return home in 1880 Sir Henry Thompson examined him and said there was nothing wrong with his bladder. In the following year he consulted a distinguished physician, who said that there was nothing wrong with his kidneys and from his prescriptions evidently considered it to be a case of chronic cystitis. The ache and swelling in the left side of the abdomen had returned about a dozen times since the first attack, and on each occasion he had lost colour and flesh. In 1891 he began to suffer from general malaise and could not bear exertion; lifting a can of water or climbing over a gate would upset him entirely. I found a large, hard, fixed swelling in the left side of the abdomen, which I had no doubt was a suppurating kidney and I advised its removal. I operated on March 23rd, 1893. The ureter was found to be exceedingly small and entered the kidney at some considerable distance from the vessels; it was tied and sutured into the lower angle of the abdominal incision. I placed a rubber drainage-tube in the sac, and there was a very considerable discharge of bloody serum through it for some days after the operation. The kidney contained a pint and a half of offensive pyoid urine and weighed, after removal of this fluid, 1 lb. 9½ oz. He was very much troubled during convalescence with a bad cough, this leading to a good deal of irritation about the drainage-tube, and there was some brawny swelling in the loin for some time after he had begun to go about, but it gradually cleared up, and when I last heard of him he was in excellent health. The prolonged passage of blood in the urine after the kick is a curious feature in this case. The attacks of pain were probably at first due to distension of the pelvis with urine, and this caused hydronephrosis, which became pyonephrosis after the chill in Afghanistan. The peculiar attachment of the ureter to the kidney and its small size would greatly facilitate the various pathological changes following the kick. The quantity of urine passed from the bladder did not become normal in this case till nearly two months after the operation; the polyuria commenced on the seventh day and reached its height on the twelfth day.

CASE 44.—The patient was a single woman aged forty-four, who was in the habit of travelling a great deal and had very shortly before she saw me been travelling in little frequented regions, where she was much on horseback and driving in rough conveyances over rough roads; she was happily unconscious that she had any serious illness, though she had a very large suppurating kidney. She was so unconscious of its doing her any harm that I had considerable difficulty in persuading her that an operation was necessary. Some pain along the edge of the ribs in the left side and a catch in her side on stepping out of a railway carriage had led her to seek the advice of Dr. Knowling, who sent her to me. She had a tuberculous history on the mother's side and had had a sharp attack of right pleurisy a few years before the present illness. In February, 1893, she suffered from influenza and during its course was seized with shivering sickness and pain in the left side and had a tender swelling in the left side of the abdomen and pus in the urine, but she got better and thought no more about it till the occurrence of the symptoms named above. I operated on June 1st, 1893, and removed a large tuberculous kidney with a much thickened ureter, the stump of which I fastened out in the lower angle of the abdominal incision. She made a very quick recovery, with the exception of some little irritation about the end of the ureter. I had noticed this in other tuberculous cases, in one of which there was some ulceration, and I feared that there was going to be some serious breaking down of the wound, but a free application of tincture of iodine stopped it. Whenever I think that the ureter is sufficiently patent I am in the habit of letting a little tincture of iodine run down it into the bladder each time I dress the wound; it hastens the drying up of the ureter and keeps the urine sweet just at the time when it is liable to become contaminated by pus flowing into it from the ureteral stump. The patient remains well.

CASE 45.—This was that of a young woman sent to me by Dr. E. R. Butler. It was a left hydronephrosis containing five pints of urinous fluid. There was nothing of special interest in the operation or recovery, hence a description of them is unnecessary. The patient is now in very good health.

CASE 46.—This was a very interesting one. The patient, a young woman aged thirty-four, had always been strong and healthy till 1891, when she suffered much from constipation and from frequent calls to micturition, which always left her with a feeling that she had not emptied the bladder. She consulted Dr. Little of Dublin, and under his care improved, and he did not hear of her again till he was asked to see her in consultation and found that she had been under the care of Dr. Macan, who after the failure of a course of vesical injections had opened and drained the right kidney through the loin. Before this operation she had rigors, high fever, and much pus in the urine; the latter was seen by the endoscope to be flowing from the right ureter. In December, 1893, she called on Dr. Little on account of a discharging sinus in her side, complaining of pain in the rectum and in the meatus, which always came on about 11 A.M. Action of the bowels and passing urine would sometimes relieve her, but not always. After being in bed some hours at night she would have a free flow of urine, and then was better till the next day. Mr. Ball removed a mass of hæmorrhoidal tissue from the rectum, which gave relief while she remained in bed, but as soon as she was up again all her troubles returned, and Dr. Little sent her to me. I found a sinus over the right kidney from which offensive pus was oozing, and she said that a little urine sometimes escaped also, but that there had been very little pus in the bladder urine since the operation. The evidence as to the presence of tubercle was conflicting. One expert said he had found the tubercle bacilli, another could find none. The kidney was very fixed, and I explained to the patient that the operation of removal of the kidney would be a specially difficult and dangerous one in preference of this fetid sinus, but she said her life was so miserable that she would face anything to get better. I operated on March 29th, 1894, and with much difficulty encircled the kidney, the adhesions being very dense and running along the spine and great vessels. I began by carefully cleaning out the sinus and washing out the kidney with strong iodine solution, and during the operation I was very careful to avoid fouling the sac; immediately the kidney was out I flushed the sac well out through the sinus with a 1 in 1000 corrosive sublimate lotion. My precautions were successful, for she had no fever after the operation, and practically no discharge from the sac, which I drained with a glass tube in front and a rubber one through the loin sinus. The ureter was not thickened and enlarged, as is usual with tubercle. I pinned it into the lower angle of the wound, and had no further trouble with it. Convalescence was very satisfactory and rapid until she was up and about, when there was some return of bladder discomfort; but this soon passed off, and when I last heard from her she was in excellent health.

Remarks.—It is curious how constantly renal cases are subjected to bladder treatment, and yet it is not difficult in most of them to elicit facts from the patient which should, at any rate, make one suspect a renal origin, whereupon a careful examination will reveal some renal abnormality, and the more severely the bladder is left alone the better for the patient. Tinkering the bladder is a very dangerous business in face of a ureter discharging pus. Many a patient has told me that all the symptoms became serious after the simple passage of a sound into the bladder, and how much greater the risk must be when washings out and dilatations and digital explorations are practiced may be imagined. Mischief spreads up the ureter with great difficulty when there is a constant flow of healthy acid urine down it, but when this urine is mixed with pus or blood, or both, it is a very different matter.

(To be continued.)

FOOTBALL CASUALTIES.—On Saturday last, during a match between the Derby County Reserve and Stoke Swifts teams, a player received a kick in the abdomen and was carried off the field to the pavilion, but the extent of his injuries was not fully ascertained.—On the same day, in a match between the Royal Military College and United Services teams at Sandhurst, one of the home three-quarters was "kicked on the head in stopping a rush." He was seen by two medical men who were present and was then taken to the College Hospital.

ON THE ASSURANCE OF IMPAIRED LIVES, CHIEFLY WITH REFERENCE TO SPECIAL FORMS OF ASSURANCE.¹

By R. HINGSTON FOX, M.D. BRUX.,

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AN impaired life is a life of which we have evidence showing that the risk exceeds that of average lives, yet not so much as to render it uninsurable. The evidence is derived from: 1. Family history: this may show chiefly two things—(a) prevalence of some disease, especially tuberculosis or gout—inherited taint; and (b) a tendency to die early—a "breaking-down age." 2. Personal history: facts indicating (a) attacks of disease, especially lung disease, rheumatism, gout, heart disease, or epilepsy; and (b) showing general weak health. 3. The present condition is much the most important factor: (a) habits and occupation; evidence of intemperance of any kind, insufficient fresh air and exercise, exposure to chill, malaria, &c.; also various unhealthy occupations; (b) development and nutrition, including defect or excess of weight, ill-developed lungs, and premature age; (c) damage to organs and tissues, including the blood, lungs, &c.; and (d) disordered functions, circulatory, urinary, nervous, &c. In most cases evidence from several of these classes will be combined.

How far is it possible to classify impaired lives? Three categories are suggested:—1. Lives in which increased risk is attached to the early part of the expectation period, with a probability that if that be surmounted the expectation will be lived out or exceeded. The typical example of this is the young life in good personal condition, but with a tuberculous family history. It is matter of common clinical observation that the liability to phthisis falls especially on the early years of adult life. The Registrar-General's returns are sometimes quoted to show that such mortality is nearly as great in later life. This is true in the strict sense—i.e., taking the ratio of deaths to persons living at those ages; but if for insurance purposes we take 1000 persons living at the age of twenty-one we find of course that the number surviving to subsequent ages is constantly diminishing. The mortality calculated on these diminishing numbers will show a more marked decrease in later years:—

Age.	Registrar-General. Deaths from phthisis per mille per annum— males.	Healthy males. 1000 entering at age 21; numbers surviving (approximate).	Estimated deaths from phthisis per mille per annum of males entering at age 21.
20-24 yrs.	3.09	1000	3.09
25-34 "	3.70	937	3.46
35-44 "	4.12	855	3.52
45-54 "	3.86	752	2.90
55-64 "	3.19	600	1.91

These figures refer of course to all forms of phthisis. But Dr. Reginald Thompson has shown² that the mortality from inherited phthisis falls more markedly on early life than that from acquired phthisis, which is distributed throughout life. Hence the death-rate given above would show a greater decrease in the latter decades if deaths with a tuberculous family history were alone included. Further, the mortality from all causes greatly increases in later life, so that the proportion of phthisical deaths to total deaths will become less and less, ranging from 42 per cent. of all deaths at the ages 20-24, down to only 5.5 per cent. at the ages 55-64. That the risk in many cases of tuberculous inheritance attaches only to the earlier years of life may be illustrated by the history of two families: (a) consisting of seventeen children, of whom ten died, nearly all from phthisis, at ages 1, 16, 16, 20, 20, near 30, 32, about 36, 38, and 43 years, one from cancer at 57 (a daughter), and the remaining six lived on

¹ Introduction to a discussion by the Life Assurance Medical Officers Association, March 27th, 1895.

² Family Phthisis.

to 68, 69, 70, 79, 83, and 91 years, of generally delicate health, but long-lived; (b) the daughter just mentioned as dying at 57 years married her cousin, who himself died at 69 from chronic lung trouble. They had thirteen children: three died under 1 year; five died, mostly from phthisis, at 6, 17, 26, 30, and 30 years; one from pneumonia at 39; and four are still living at ages 60 to 73 years. There are a few other conditions besides liability to phthisis which produce a similar increased risk. Diabetes has been known to attack several members of a family in young adult life. A more common liability is that to acute rheumatism, which is often associated with the susceptibility to the group of specific fevers—scarlet fever, diphtheria, and enteric fever. Certain families are especially liable to this entire group of diseases,³ and the increased risk of death therefrom falls chiefly on the earlier and middle decades of life. A family history showing an early "breaking-down age," irrespective of special disease, will also place a life in this category. To meet this kind of increased risk we need a form of policy which will especially guard the earlier part of the period of expectation of life. The risk is a diminishing one. 2. A second category contains lives showing special risk at the other end of the expectation period. The typical instance of this kind of risk is found in a life entering young with an inherited taint of gout. When gouty disorders have already shown themselves in a life entering in or after middle age the life belongs rather to the first category, the liability to death within a short course of years being, as Dr. Symes Thompson has recently shown,⁴ greater than is generally supposed. A family history showing some prevailing cause of death in old age—such as cancer—or a personal history of slight asthma or dyspepsia indicates increased risk near the end of the expectation period without material addition to the risk at earlier ages. I am inclined to place here also cases of slight albuminuria with low arterial tension. The characteristic of this category is an increasing risk. It will be noted that it is mainly the evidence of family history which places a life in the two categories first described. In some cases this evidence is of great and obvious importance, but the experience of the Scottish Under-Average Association of Insurance Companies has shown that lives rated up on account of family history have had a much less mortality than those rated up for defective personal health. In most cases there is, however, besides the bad family record, some element of personal weakness, and where, on the other hand, a proposer has every sign of robust health and good development, family history has small weight. 3. The third and largest category includes lives with some general impairment of vitality. This will increase the risk, no doubt, chiefly in the latter part of the expectation period, but also more or less during the whole of that period. The evidence of this impairment may be illustrated by the following: a generally unsatisfactory family history, showing various deaths in middle life; a personal history of weak health without special illness; a personal condition of poor nutrition, anemia, premature age, damage to organs, especially the heart; any cause that diminishes the resisting power of the body to disease influences; hence unhealthy habits and occupations. Taking these lives as a group, the increased risk is represented by a shortened expectation period, and the form of assurance must provide for this general increase of risk. Mr. Chisholm has devised a diagram to show graphically the risk of death at various periods for a life entering at twenty years: a curved line represents the normal death-rate for each year of life, and this can be varied to represent the increase of risk at any particular epoch.⁵ With regard to the special forms of assurance best adapted to meet these various risks, it may be objected that this is a question for the actuaries alone. Yet surely the medical officers of companies are constantly advising recourse to this or that form of policy. And whilst it is for the actuaries to devise forms of insurance to meet the special risks which we can define, and to work them out in detail on a sound financial basis, it is surely our part to understand that which they have devised, and to examine its applicability to the various risks with which we meet, so that our advice to the companies may be founded upon a full knowledge of the methods in use. Before going further allusion may be made to one guiding principle in the provision made for these risks—viz., that as a rule all weak lives should be subjected to some

kind of extra rate, whether in the event they prove to be under or over the average length. It is surely no injustice that an impaired life should be thus charged, even if that particular life reaches or exceeds its expectation. I mention this because the contrary has been maintained. An American actuary (Mr. Fouse) writes that the correct principle is only to treat "those lives as under average which prove themselves to be so."⁶ It is obvious that a very much heavier extra rate must be put upon impaired lives if it is only to come into force in the event of their falling in early.

I propose now to pass briefly in review the chief forms of assurance in use in this country, with special reference to their applicability to the risks of impaired lives: 1. The ordinary whole-life policy, with annual premium, about which it need only be said that it may fairly cover a considerable margin of risk. 2. The ordinary whole-life policy rated up in the manner usual in this country—i.e., by taking the life at an assumed age, say five, seven, or ten years in advance of the real. (The practice of making small advances of one, two, perhaps even three years, to meet slight extra risks is, I imagine, generally felt to be inexpedient.) This is a very convenient and straightforward method of dealing with increased risks, and no doubt in the main works very well. Investigations which have been made by various companies, such as the Eagle and the Equity and Law Companies, have, I believe, generally shown that the advances imposed have about or nearly met the extra mortality of impaired lives. This may not be true of certain classes of risks, particularly of gout, as shown by Dr. Symes Thompson and others, but it appears to be true of all the risks taken in the aggregate. This method of meeting increased risks has a somewhat unequal application to the different ages of life. Thus, in early adult life, when the premium rates are low and increase very slowly, an advance of seven or ten years results in a comparatively small addition, and the loss to the office if death occurs early in the expectation period is scarcely lessened. On the other hand, at or after middle age an advance of seven or ten years becomes almost prohibitive. It is important not to fix these advances by any mere "rule of thumb"; the use of the table of expectation of life affords a more scientific method, as one can form some idea of the shortening of the expectation period appropriate to the case, and then see to what advance in years this may correspond. A simple advance, then, treating the life as a little older than the real age, seems fairly to meet the third category of impaired lives, where there is a generally increased risk attaching to no special period. A typical condition is that of premature ageing. When the risk attaches to the earlier years, I submit that a form of advance which better protects the company against the risk should be adopted. And when the extra risk belongs to the latter part of the expectation, a form of advance more acceptable to the proposer can be found. The mortality experience collected by the Institute of Actuaries in 1869 showed clearly that after the first five years from entry the mortality of impaired lives accepted for insurance was but little greater than that of healthy lives. Thus, during the first five years the mortality of diseased lives at ages twenty-five to thirty-four was 62 per cent. higher than that of healthy lives, and at sixty-five to seventy-four 25 per cent. higher; but after the five years had expired the percentage of increase ranged from but 29 to 16 per cent. This suggests that the risk of lives accepted at advanced rates really falls, in no inconsiderable proportion of instances, upon the early years after assurance. 3. A policy subject to temporary deduction from the sum assured; otherwise, charging the policy with a diminishing lien or contingent debt. By this method, originally proposed by the late Mr. M. A. Black in 1861,⁷ and improved by Mr. W. M. Makeham in 1872,⁸ a deduction is made from the full value of the policy in the event of death occurring within a definite period, usually the expectation of life; a large deduction if the death occurs early, but gradually diminishing until the end of the period, when it vanishes, and the policy is paid in full. The amount is calculated to be equivalent in value to an advance of a given number of years. This method, which is explained and commended in Dr. Pollock's and Mr. Chisholm's handbook,⁹ is referred to by Dr. Reginald Thompson as peculiarly applicable to cases in which a phthisical family history is present, and it certainly seems to provide against a risk attached to the early years of adult

³ Brit. Med. Jour., 1889, vol. ii., p. 586.

⁴ Gout and Life Risks: THE LANCET, Dec. 8th, 1894.

⁵ Journal of the Institute of Actuaries, vol. xxv., p. 408.

⁶ On Insuring Under-Average Lives, by L. G. Fouse. 1892.

⁷ The Insurance Record, Aug. 12th, 1891, p. 400.

⁸ Journal of Institute of Actuaries, vol. xvii., p. 153.

⁹ Medical Handbook of Life Assurance, p. 157.

life in a more satisfactory manner than any other in use. Take the case of a man entering at twenty-one years, of good personal condition, but with a family history of phthisis fatal at early ages. It is but little protection to the company to advance his premium rate a few years. In the aggregate of impaired lives the company may not lose, but is not the balance maintained by making the lives of other and less urgent risk pay for his special risk? On the other hand, such a proposer may fairly be expected to submit to a deduction of this kind as the penalty of his particular risk.

[To illustrate this matter Dr. Fox showed a table and chart exhibiting the loss to the company attaching to death at various ages under several different forms of policy, from which it appeared that the only method which met the risk of the early years after assurance was the deduction policy. He continued:]

This is no doubt largely an actuarial question, yet it seems to me that as medical officers we might do well to represent to our actuarial colleagues that there is a special class of risk which needs such a method as this to meet it adequately. The method is in use by several companies, but does not seem to be as well known as it deserves. It will be observed that this method of dealing with impaired lives is not in accordance with the rule submitted just now, that the extra rate should be of a nature to apply to all such lives whether they die early or later. The plea, however, is that to meet a special limited risk the rate should fairly be applied in the manner shown, and that it would not be just to burden all who survive this special risk in early life and live, perhaps, to old age, as in the instances given, with a heavy charge. In advocating the use of this form of policy it is not suggested that lives with a phthisical taint should be accepted more freely than is at present the practice, but only that they should be subjected to the conditions described. 4. The limited payments policy, under which the entire premiums are paid up in a fixed term of years—say, ten or twenty. A large sum is accordingly received in the early part of the expectation period, and, if death occur prematurely, the loss is less than under the usual plan of spreading the premiums over the whole of life. This lessens the risk in the case of impaired lives, but it does not fully meet it, since the rates are calculated upon the experience of healthy—that is, average—lives. It is not, therefore, proper to use this form of assurance for lives of increased risk without making an addition, excepting in cases of a slight character, in which the lessening of the risk may be considered to bring it within the margin of average risks. It is in cases with increased risk of death in the middle part of the expectation period that the limited payment policy is most useful, but a small extra rate should be added. 5. The endowment policy. This is a very interesting form of policy, and one which enjoys a just and increasing popularity in this country. It is of importance in the present connexion since Dr. Glover Lyon has told us that it is largely used in the United States, as I understand, without extra rating, for the assurance of under-average lives; but, as with the limited payment policy, so here the rates are calculated on average lives, and it cannot, therefore, be right to use the endowment policy without extra rating for impaired lives taken as a class. The large premiums reduce, of course, as in the former case, the loss to the office in the event of early death, and an actually smaller advance is needed than with whole life policies; this should be given in the form of a percentage addition. The special feature of an endowment policy, the term of which is almost always well within the expectation period, is that it cuts off the end of that period. Hence, as Dr. Pollock has told us, it may be of the greatest use for lives without sufficient stamina to carry them into old age, and it may be so applied as to cut the insurance short at the breaking-down age. It is, in fact, especially useful for the case of an increasing extra risk herein contrasting with the deduction policy, which is strictly applicable to a decreasing risk (Makeham). For lives with a phthisical family history this method has, therefore, a very limited use, since it leaves the early years unprotected. A tendency to gout, on the other hand, is especially well met by an endowment policy, provided the proposer comes before us pretty early in life, and the term of the endowment is fixed so far within the expectation period as the probable shortening of the life may require. And I would suggest that slight degrees of albuminuria, with low blood tension, may be appropriately dealt with in this way. In such cases, if the personal condition is otherwise good, an extra rating does not seem needful. It is understood that the mortality experience of

endowment policies is very favourable, no doubt in part owing to an unconscious selection amongst proposers. The endowment policy is, then, especially applicable to impaired lives of the second category, and with an extra rating to those in the third category.

Finsbury-square, E.C.

IMPACTION OF ENORMOUS GALL-STONE IN THE LOWER PORTION OF THE ILEUM; INTESTINAL OBSTRUCTION; LAPAROTOMY; ENTEROTOMY; RECOVERY.

By W. C. EVERLEY TAYLOR, F.R.C.P. EDIN.,
SURGEON TO THE SCARBOROUGH HOSPITAL.

THIS case is of interest on account of the comparative rarity of intestinal obstruction being caused by gall-stone, the enormous size of the concretion, the prolonged period the patient was on the verge of complete obstruction, and the remarkable recovery after so severe an illness.

On April 3rd, 1894, a woman aged fifty-six years, residing about two miles from Scarborough, sent for Dr. Rust and myself. She gave my colleague a history of continuous vomiting for a period of thirty-six hours. She seemed very exhausted. There was no evidence of organic disease or error of diet to account for it. She stated that she had been in perfect health for thirteen years, never having needed medical attendance since 1880, when Dr. Taylor opened a very large abscess in the thigh. Predigested food was ordered and a hypodermic injection of a quarter of a grain of morphia, $\frac{1}{4}$ gr. For the next forty-eight hours the vomiting was nearly continuous and nourishment of any kind was only retained for a few minutes. On the 5th at 8 p.m. I saw her. She was not so collapsed as the continuous vomiting, now lasting two days, would have led one to expect. On making a careful examination of the abdomen a little below the apex of the ninth rib a rounded swelling, slightly movable and dull on percussion, was discovered. There was no evidence of hernia at any of the hernial openings. There was no evidence of disease in any organ, nor did the examination of the rectum reveal anything; flatus had been passed and a small motion. The next day the condition of vomiting remained; feeding by the mouth was stopped, and nutrient suppositories were ordered every four hours. A careful examination by Dr. Godfrey and myself failed to discover the rounded swelling detected on the previous day. For the next five days all food by the mouth was prohibited, and peptonised enemata and nutrient suppositories were administered. Only a little water was allowed by the mouth. While this line of treatment was pursued there was no retching or nausea, and flatus was passed every day. On April 14th deep palpation in the left iliac region gave a sensation of localised hardness and resistance over a limited area. Every day the patient said she felt flatus passing through the intestines, which was expelled, and at no time was the vomiting of a stercoraceous character. Water when given by the mouth was retained, but any other kind of fluid nourishment returned unchanged. The patient volunteered a statement that one night in December, 1893, she had great pain over the site of the gall-bladder, which had kept her awake, that Dr. Scarth had seen her, and had said she had gall-stone. She had forgotten all about this until now, although previously questioned on this matter. On April 17th Dr. Cuff saw her in consultation, and the question of the escape of a large gall-stone by ulceration from the gall-bladder into the intestine was suggested as an explanation of the symptoms. It was decided to wait and not operate until the symptoms of obstruction became more acute. During the next few days the pulse and the temperature were normal and a little peptonised milk was given by the mouth which was immediately vomited. On April 24th it was decided to remove the patient into Scarborough, as it was felt that the necessity for an abdominal section might arise at any time. She bore the journey well. On April 27th the vomiting became stercoraceous, the temperature rose to 100° F. and the pulse to 120, the abdomen became distended, and no flatus had been passed for thirty-six hours, so abdominal section was decided upon. A median incision was made. It was decided to

explore the small intestines from the cæcum upwards if nothing was found in the left iliac region, where the hardness had been felt on one occasion. The intestines were much distended and bulged into the wound; the hand passed to the left iliac region came upon a flaccid coil of intestine, and tracking this upwards a hard mass was felt in the gut. This was gently brought to the surface. The bowel was clamped above and below the mass, and sponges were packed around it. An incision was made in the long axis of the gut one inch in length, and the gall-stone extracted. The wound in the intestine was closed with silk Lembert sutures. The peritoneum was sutured with sterilised silk, and the abdominal wound with silkworm gut. The patient bore the operation well. The temperature rose at 10 P.M. to 100.4°, which was the highest recorded during the convalescence. Nothing whatever was given by the mouth for the first twenty-four hours, but a small quantity of peptonised milk was given per rectum. After this small quantities of peptonised milk and beef-jelly were allowed. An enema was given on May 2nd, and was followed by a copious loose motion, flatus having been passed naturally on April 30th. No pain at any time was complained of either in the intestines or in the wound. The progress of the case was uneventful. Fish was allowed on May 3rd, meat on the 12th, the bowels acting every other day with enemata. The patient was kept in bed for three weeks, by which time the wound was soundly healed. The stone weighed 1½ oz. It was 4½ in. in circumference and 2 in. in length, of ovoid shape, with smooth, rounded ends. The illustrations give a good idea of its size.

FIG 1.

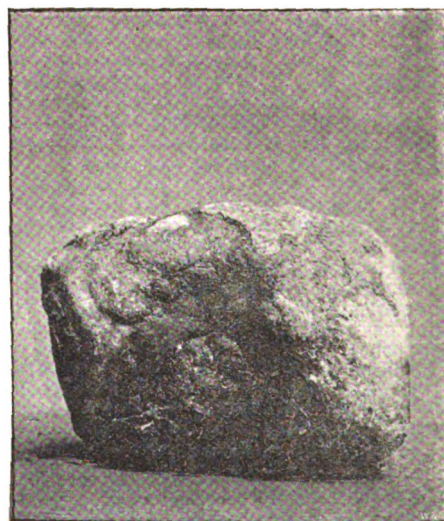


Showing greatest length.

The remarkable features of the case are as follows: the absence of any pain approaching to gall-stone colic, save in the previous December, which was not severe enough to have left any marked impression on the patient's mind; the sudden onset of the severe vomiting; the rapid disappearance of the mass from the region of the gall-bladder; the fact that at no time till April 26th was the evidence of intestinal obstruction complete; that with so large a mass impacted so low down in the small intestine the patient was certain that flatus passed completely through the whole length of the bowels; and that, considering the fact that the patient was entirely dependent upon rectal feeding for twenty-four days and quite realised the gravity of her position, her strength was so well maintained. Mr. Lane¹ has published a case on similar lines with a successful result, and Mr. Bryant² a case where the stone had a diameter of 3½ in., the patient dying. Calculi impacted in the bowels have

attained considerable dimensions. Mr. E. Pye-Smith³ records a stone measuring 4½ in. by 2½ in. lodged in the upper part of the jejunum. A stone 2 in. in length with a circumference 4 in. also in the jejunum has been noted.⁴ Of thirty-two cases collected by Leichtenstern in seventeen the stone was impacted in the lower ileum. Dr. Sands⁵ records a case where a stone with a diameter of 3 in. was passed at the end of five weeks, the stercoraceous vomiting lasting three weeks. The largest stone I can find any record of is Richter's case mentioned in Mr. Hutchinson's *Archives of Surgery* for July, 1891, where a stone weighing 3 oz. and 50 drachms was found post mortem. I cannot find any record of any gall-stone so large as in the case I am reporting having been removed during life. There can be no question that this calculus entered the duodenum by ulceration direct from the gall-bladder, and Mr. Treves says: "It will be evident that there need be no evidence of hepatic colic in a given instance if it be true that the stone usually reaches the duodenum by ulceration from the gall-bladder." Mr. Hutchinson says: "To turn to the class of cases in which real obstruction is present we may ask the question, Is it possible to make the diagnosis of a case where the small intestine is plugged by a gall-stone? I maintain it is not practicable to get further than a mere conjecture. If the case is recent it will count as one of acute intestinal obstruction, and a band or a twist or some other form of internal strangulation will be suspected. A differential diagnosis is simply impossible, for the symptoms are the same. There is little to help us excepting the history of an

FIG. 2.



Showing greatest depth.

early stage of symptoms referable to the region of the gall-bladder, and this is in many instances—I think in the majority—wholly wanting; cases of block by hardened faeces and by a malignant stricture may each in turn resemble it." It is, as a rule, impossible to diagnose obstruction from gall-stones from other conditions causing acute intestinal obstruction; therefore the surgeon should always bear gall-stones in mind when called upon to treat acute obstruction. I have sent the gall-stone to the Museum of the Royal College of Surgeons of England.

Scarborough.

¹ Transactions of the Pathological Society, vol. v., p. 163.

⁴ Revue Médicale de la Suisse Romande, No. 2, 1882, p. 820.

⁵ New York Medical Record, vol. xxxi., 1882, p. 487.

THE fourth annual smoking concert of the Life-Saving Society was held at St James's Hall, Regent-street, on Thursday evening, March 28th, when an excellent entertainment was provided.

¹ THE LANCET, Aug. 18th, 1894.

² Transactions of the Clinical Society, vol. xii., p. 106.

CASE OF RESECTION OF INTESTINE, WITH APPROXIMATION OF THE DIVIDED ENDS BY MEANS OF MURPHY'S BUTTON.

By J. PAUL BUSH, M.R.C.S. ENG., L.S.A.,
SURGEON TO THE BRISTOL ROYAL INFIRMARY.

I THINK this case may be of interest, as I believe it was the first occasion on which the Murphy button was used successfully in this district.

The patient, aged fifty-five, though a much older man for his age, and who had suffered all his life from a marked angular curvature of the spine and chronic bronchitis, came under my care for a strangulated inguinal hernia on Nov. 27th, 1894. He had had a reducible hernia for twenty years and had always worn a truss. Three days before his admission the hernia came down, and all the symptoms of an acutely strangulated hernia followed; he was treated, before seeing me, with an ice-bag and a turpentine enema, and taxis was tried, but without any reduction of the strangulated intestine. On his admission the patient was collapsed, there was stercoraceous vomiting, and all the physical signs and symptoms of a strangulated hernia were present; there was some fullness in the right iliac fossa with pain on pressure. Herniotomy was at once performed. On laying open the sac the smallest possible quantity of fluid was let out, and about four inches of small intestine were found to be so tightly strangulated that the hernia director could not be inserted until the constriction had been partly divided. The ring was then very freely divided and a small portion of the gut both above and below the constricted area was brought down for inspection. The strangulated portion was quite black, the surface glistening only in places; the upper end of the gangrenous portion appeared to be united to the non-strangulated portion of intestine by only the serous coat. A fresh incision about three inches long was made in the middle line of the abdomen midway between the umbilicus and pubes, and the strangulated portion of the gut was brought from the scrotal incision to the opening in the middle line. Swain's intestinal clamps were placed on the healthy intestine about ten inches apart, with the portion to be resected lying between; the gangrenous intestine was then resected with the scissors, about half an inch of non-strangulated gut on either side being removed with it. Some vessels in the mesentery were ligatured; no wedge-shaped portion of the mesentery was removed. The male and female portions of the button were fixed in the cut ends of the intestine by means of a purse-string of silk and the two parts of the button were fitted together; the largest size button that is made for the small intestine was used. No sutures were used to unite the divided intestine or mesentery. On removing the clamps the upper and distended intestine was observed to be emptying its contents through the button into the lower portion without a sign of any leakage; the gut was then dropped into the peritoneal cavity and the wound closed. As the patient was considerably collapsed before the operation commenced it was deemed advisable not to prolong the administration of the chloroform by performing an operation for the radical cure, so the scrotal sac was drained only, and the wound sutured. A little weak milk-and-brandy was given by the mouth during the night. On Nov. 28th the vomiting had ceased and the abdomen was somewhat distended. On the 29th the patient passed flatus frequently. On Dec. 1st there was considerable pain in the right iliac region and some distension. On the 2nd there was a slight action of the bowels. There was nothing special to record till the 4th, when there was a rigor, distension, and severe pain in the abdomen. The passage of flatus had almost ceased. There were dyspnoea and cough. The pulse was very weak and intermittent. Dr. Shaw kindly saw the man with me in the evening, and we decided that the grave condition of the patient was due to double pneumonia, and not to any complication of the intestinal lesion. Stimulants were freely given by the mouth, and a turpentine exema greatly relieved the distended abdomen. The patient from this time gradually improved. The bowels were opened twice on the 8th and 9th, and between the 10th and the 16th there was some diarrhoea. On the 14th a small quantity of blood was passed; no button could be felt in the rectum. On the 26th the patient was sitting up, and no button could be felt. On Jan. 4th, 1895,

Murphy's button was passed without pain. On April 2nd it was over four months since the operation; the man had been under close observation throughout, and there were no signs of any obstruction.

Remarks.—There are one or two special points I should like to notice. The advantages of the button are undoubted to my mind, as it certainly takes a very much shorter time to perform resection with the button than any suturing operation I know of, and this question of time is a most important one in intestinal surgery. It may be said that in dealing with small intestine cases, as the button must be small enough to pass through the ileo-caecal valve, the opening in the united ends of the intestine must be small also, and that the size of the ring tends to diminish. All I can say is that so far this case shows nothing of the kind. I have wondered whether a button could not be made with the expanded portions consisting of some such substance as decalcified bone, but retaining the ingenious ideas of Dr. Murphy in the spring screw arrangement of the male and female portions. If this could be done we should then be able to increase the size of the opening in the intestine very considerably for the small intestine cases. I think the making of a second incision in the middle line useful, as it is a much more convenient place to carry out the operation on the intestine, and it is a much less serious incision than that of opening up the inguinal canal for, say, three or four inches. Five weeks is a long time for the button to be retained, but then it must be remembered that its expulsion was not hastened in any way by aperients, as none were ordered till the morning of Jan. 4th. The patient, hearing the order given for a good dose of "house medicine," promptly got rid of the button before the dose could be administered.

Clifton, Bristol.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE RADICAL TREATMENT OF LUPUS.

By RICHARD T. CESAR, M.R.C.S. ENG.

IN THE LANCET of July 21st, 1894, Mr. Bidwell published particulars of six cases of lupus treated by free excision and skin grafting, and in his paper he stated that he believed Mr. Watson Cheyne was the first to perform such an operation in this country, his cases being exhibited at the Medical Society of London in March, 1893. When Mr. Watson Cheyne performed his operations I do not know, but I should like to mention two cases in which I performed the very same operation, with the exception that I did not do the skin grafting. The first I performed nearly twenty years ago and the second about ten; in both cases I simply made a free deep incision all round the edges of the ulcer and raised the floor entire. I used no sutures nor in any way attempted to bring the edges of the wound together; I simply dressed it as an ordinary granulating surface, and both cases turned out all that could be desired without any return in either, and the resulting scar was trifling.

CASE 1.—A man aged sixty-two years consulted me in March, 1876, for an ulcer on the left side of his face, which he said had existed for some years, but of late was spreading very fast. He stated he had been under various treatment by different medical men, and had, as usual in such cases, tried all sorts of "certain cures" and quack remedies without the slightest good resulting. It was then so large and unsightly that he was compelled to give up his situation as coachman. On removing the dressing I found a patch of lupus much larger than a half-crown piece, situate on the left cheek and spreading towards the outer angle of the eye. I first tried the application of the usual remedies, but without benefit, and the man becoming impatient for some more active treatment, I suggested the complete removal of the diseased structure, hoping thus to make a permanent cure, and to this proposal he readily consented. With the kind assistance of my friend and former pupil, Dr. H. Payne, I made a deep incision all round the edges,

keeping well away from the diseased structures; I then dissected off the entire floor of the ulcer, keeping my knife well under the disease, so as to make sure of removing all the diseased tissues. Having applied pressure forceps to a few bleeding points, I dressed the wound with dry antiseptic dressing without strapping or sutures, allowing it to granulate; this it did most satisfactorily, and in a little time was well and the scar not particularly noticeable, so that he was able to resume his occupation. I had the advantage of constantly seeing this man for some years after, and there was no sign of the disease returning.

CASE 2.—A boy aged eight years was admitted into the Shirley Children's Hospital in December, 1884, with a large patch of lupus on the left cheek $2\frac{1}{2}$ in. by $1\frac{1}{2}$ in. He had been under treatment for some time, both private and hospital, before applying to me. I first tried local and general treatment, but as this failed to afford any prospect of cure, and the disease continued to spread, I decided to treat it after the same manner as the first case, and with the kind assistance of my colleagues, Dr. C. G. Beaumont and Mr. Chamberlain, I made a deep incision round the ulcer, keeping well away from all traces of the disease. This done, I dissected off the floor, as in the previous case, and treated it in every way the same, and the result was entirely satisfactory; the wound healed, and the resulting scar was not very perceptible. So far as I could afterwards learn, there was no return of the disease.

I do not publish these cases with any wish or intention of claiming priority for the operation, but to confirm Mr. Bidwell in the good results which he claims for the proceeding. No doubt the skin grafting may be of some advantage; but I do not think it is essential to the success of the operation, which I consider far preferable to the old plan of scraping, as there is more control over the diseased structures and a better chance of thoroughly removing them. Of course, the great point is to get well beyond the disease and not be afraid of removing too much; and, like all operations of the kind, the sooner it is done the better for the patient. Had I noticed the papers to which Mr. Bidwell refers I should have mentioned these cases before; but they must have escaped my attention, as I have no recollection of having seen them.

Wellington, Salop.

EPITHELIOMA OF THE TONGUE IN WOMEN.

By CHAUNCEY PUZEY, F.R.C.S. ENG.,
SURGEON, NORTHERN HOSPITAL, LIVERPOOL.

As a contribution to the statistics of epithelioma of the tongue attacking women¹ I send a short note of two cases upon which I operated in the summer of 1892. Curiously, both patients were admitted within a few weeks of each other, and they are the only cases occurring in women which have come under my care during twenty years of hospital work.

CASE 1.—The patient, a woman aged fifty-three years, had the left side of the tongue (posterior position) extensively affected with epithelioma, and several of the submaxillary glands of the same side were enlarged. She was in a very feeble condition from pain and starvation, but urgent in requesting operation. On June 20th, 1892, I removed the left lateral half of the tongue close to the hyoid bone. Very little blood was lost, but the patient was so weak that removal of the glands was deferred. For some hours after operation it seemed doubtful if she would rally; but after that she made a rapid recovery. A few weeks later the submaxillary region was thoroughly cleared out. For two or three months she improved remarkably, but then disease recurred in the glands at the back of the neck and the case soon ended fatally.

CASE 2.—The patient, a stout, ruddy, healthy-looking woman aged fifty-nine years, was admitted a few weeks later. She had a large epithelioma involving the middle portion of the right lateral half of the tongue and slightly invading the floor of the mouth, but without glandular enlargement. On July 29th, 1892, I removed the right lateral half of the tongue, close to the hyoid bone. She made a rapid recovery. Twelve months later I heard that everything was perfectly satisfactory, and so it continued until the end of last autumn, when disease recurred somewhere in the submaxillary region (I did not see her) and she died last Christmas. The operation had given her two years of comfort.

¹ Vide THE LANCET, March 2nd, 1895.

The operation in both cases was that generally known as Morrant Baker's, and the only other point to which I wish to refer is that there was throughout the whole period of the healing of the wound in both cases complete absence of fetor, which I attribute to the hourly painting of the whole wound with glycerine of borax.

Liverpool.

FAT EMBOLISM FOLLOWING FREE INCISION OF THE FEMALE BREAST FOR DIFFUSE SUPPURATION.

By SURGEON-MAJOR A. F. FERGUSON,
BOMBAY MEDICAL SERVICE.

THE patient, a healthy female twenty-two years of age, came to the Civil Hospital, Shikarpur, on April 7th, 1894, in great pain and looking very much worn out by intense suffering. The left breast was enormously swollen, red, and exquisitely tender, with a doughy elastic semi-fluctuant feeling uniformly throughout. The tenderness was so great that chloroform was necessary for examination. A free incision was made in what appeared to be the most likely situation. There was great hæmorrhage, but only a small quantity of pus. The excision was extended, but still no collection of pus was reached; the finger was introduced and passed through the gland, which was spleen-like in consistence, and the fingers could easily be pushed through it; but still only a small quantity of pus escaped, and it seemed to be equally distributed throughout the gland. A drainage-tube was inserted and a suitable dressing applied. The pain continued and the suffering seemed great. Morphine was given pretty freely, but she was very restless nevertheless. On the next day she looked extremely anxious and worn out, and the breathing was oppressed. The drainage-tube was removed, and some milky, oily-looking fluid escaped with it. There had been a good deal of bleeding, but only slight purulent discharge. The dyspnoea rapidly increased, and at 5 p.m. the following note was made: "The breathing is very much oppressed and 30 per minute, the face cyanosed, the pulse running, and patient unconscious." She died at 11 p.m. A post-mortem examination was obtained with great difficulty, and during its performance the relatives were outside clamouring for the body, so it was necessarily very superficial. The lungs were much congested, a great portion of the left approaching red hepatization. Portions were kept and hardened. The kidneys could not be obtained, nor could the other organs be carefully examined under the circumstances. Sections of the lungs, stained with perosmic acid and mounted in Farrant's solution, were shown at the Indian Medical Congress at Calcutta. They show the capillaries and smaller vessels blocked with fat, and globules of fat in the blood in the larger vessels.

Mhow, Central India.

A Mirror OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF TUMOUR OF THE LUNG; REMARKS.

(Under the care of Dr. G. V. POORE.)

PULMONARY growths of a malignant character are usually secondary to disease in other parts. Probably in the large hospitals sarcoma of the lung secondary to bone disease of similar nature is most frequent, whilst in the infirmaries the disease is usually secondary to a scirrhous growth which first showed itself in the breast. This case is a most instructive one of primary sarcoma of the lung—a condition which, as this case demonstrates, is extremely difficult of diagnosis until evidence of compression of intra-thoracic veins or the appearance of tumours elsewhere affords additional aid.

Many cases which are recorded of primary growths of the lung are doubtful, for careful search does not appear to have been always made for a possible primary growth in other parts; here the examination was complete and conclusive. For the notes of this case we are indebted to Mr. A. M. Watta, house physician.

A man aged twenty was admitted to University College Hospital on Dec. 12th, 1894. He stated that on Oct. 8th of the same year he noticed, on getting up to go to his work in the morning, that he was very short of breath and felt cold all over. He had been quite well previously, but the symptoms were so severe that he took to his bed at once and sent for medical advice. He remained in bed till the end of the month, when, feeling better, he got up and went about for a fortnight, but did not resume his occupation. One morning about the middle of November, while out walking, he was suddenly seized with a severe aching pain in the middle of his back, which caused him to double up. He immediately returned home and took to his bed, stopping there till he entered the hospital. Since the middle of October he had suffered from pain in the left side, which was worse on coughing. For a week—a month before the date of his admission—he expectorated sputum stained with blood. He had been treated during his illness with poultices, blisters, &c. He had had influenza three years before, but no other illnesses. He said that he had always been delicate. There was nothing noteworthy in the family history. On his admission it was found that he had a slight cough, but no expectoration; he had some dyspnoea on exertion; there was no cyanosis; the respiration was 40 per minute. On examining the chest it was noticed to be poorly covered, long, and narrow, and that the intercostal spaces were better marked on the right side than on the left, which side hardly moved at all on respiration. Below the third rib on the left side there were absolute dullness on percussion and loss of vocal fremitus of breath sounds and of voice sounds. In the second left intercostal space there was distant bronchial breathing with egophony, the percussion note being impaired very much. In the first left intercostal space the percussion note and breath sounds were normal. Behind there were on the left side, below the spine of the scapula, very diminished vocal fremitus and dullness on percussion, with faint bronchial breathing and very weak voice sounds. In the left supra-spinal fossa the percussion note was impaired and the breath sounds were weak, but bronchial in character. The physical signs over the right side of the chest were normal, except that the heart could be seen beating over the second, third, and fourth spaces on the right side internally to the right nipple line, with the heart's apex beat in the fourth space midway between the right nipple line and the right border of the sternum. The impulse was somewhat heaving in character. On listening at the apex a well-marked systolic murmur was heard, which was only conducted inwards as far as the middle of the sternum. There was nothing abnormal in the urine, he had a fairly good appetite, and his bowels were regular. There was no oedema anywhere, and there were no dilated veins and no enlarged glands. As the patient had all the signs of an extensive effusion into the left pleural cavity, an attempt was made on the day after his admission to aspirate the chest in the sixth space in the mid-axillary line. An ordinary bottle aspirator was used with a moderate-sized needle; but as nothing but a little blood was drawn off the needle was again inserted on the same day, this time just internally to the angle of the left scapula, with the same result. The blood drawn off contained nothing but corpuscles. The temperature was 100.2° F. on his admission, and varied between that point and 98° for the next few days, and after that kept below 100° for some days. Soon after admission he was noticed to have a slight prominence of the chest wall in the left mammary region, which gradually became more marked, and on comparing a tracing of the chest wall taken on Jan. 12th, 1895, with one taken a month previously a considerable difference could be noticed in the size of the left side of the chest, especially in the anterior part. His general condition altered very little during this time; the temperature chart from Dec. 23rd to 30th showed an evening rise of nearly 101°, with a morning fall to normal, but from the latter date till his death his temperature did not rise above 100°, and after Jan. 1st or 2nd it never rose above normal. His pulse during the whole time he was in the hospital was rapid, on an average 120 to the minute, with the respiration 30 per minute. On Jan. 3d

an exploring needle was again introduced (this time into the left side of the chest in front), but with a regressive result. On the 15th some oedema of the chest wall in the left mammary region was noticed, which gradually increased. About this time, also, some dilated veins were noticed in the left axilla, and both external jugular veins were found to be distended; there was also some distension of the veins of the forehead at this time. From the 15th till the time of his death the patient passed very small quantities of urine, which was of high specific gravity and contained a trace of albumen on two occasions, but at other times was normal. On the 29th some oedema of the lower part of the back on the left side was noticed, that on the front of the chest being more marked; there was also some on the left side of the face. He now could only lie on the left side, being unable to breathe in any other position. On Feb. 2nd a small, rounded, almost fluctuating swelling was found just over the anterior surface of the head of the right humerus; it was painless, and the skin over it showed no signs of inflammation. On puncturing the tumour a little blood escaped, which on microscopical examination was found to contain cells of a sarcomatous nature. The dullness on percussion, loss of vocal fremitus, &c. now extended over to the right as far as a line drawn downwards from the middle of the right clavicle to the right nipple, and then to the costal margin, the heart's apex beat being just to the left of the right nipple in the fourth space. The signs were limited to the left side behind. From this time the patient became rather rapidly worse, the oedema increasing and the dyspnoea being more marked; he, however, apparently did not suffer any pain and slept well. The growth at the head of the humerus increased slowly in size, and another small tumour was found on Feb. 10th just below the left scapula, attached to a rib. He became delirious on the evening of the 18th, and died the next morning.

At the post-mortem examination the diaphragm on the left side was found to be very much depressed by, and the whole of the left side of the thoracic cavity filled with, an extremely soft growth; it was dark-brown in colour and enclosed in a capsule formed apparently of thickened pleura, which was firmly attached to the chest wall everywhere. At the upper and anterior part of the tumour, and continuous with it, was found a layer of collapsed lung about half an inch thick, seven inches long, and four inches wide at its upper part and narrower below. The heart and pericardium were displaced to the right, as was also the right lung. The two former were healthy, but the right lung contained a small growth about the size of a marble on its posterior surface. The liver contained a few small growths about the size of peas scattered through its substance. All the other organs were healthy. There were no enlarged glands, except one in the anterior mediastinum. Microscopic examination of the tumour showed it to be a round-celled sarcoma, which was rapidly degenerating.

Remarks by Dr. POORE.—The great interest of this case consists in the impossibility of diagnosis in the early stages. The history was that of an acute onset, and the physical signs on admission were those of effusion into the left pleura. Even after the failure of aspiration, which necessarily aroused one's suspicion as to the true cause of the trouble, it was hard to believe that such failure was not due to some mechanical condition—such as profuse and oedematous adhesions—which prevented the flow of the fluid from the pleura. The physical signs were uniform in character, and there were no patches of dullness and resonance or of diminished and increased vocal fremitus, such as are common in growths in the lung. The necropsy, which revealed a soft pultaceous tumour uniformly distending the visceral pleura, fully accounted for the physical signs during life. There was a history of very slight hæmoptysis, but this was never repeated and merely gave rise to the suspicion that there was tubercle as well as fluid. When, towards the end, there appeared marked oedema of the chest and marked distension of the veins on the left side of the face and chest, and this without any rise of temperature, the diagnosis became almost certain, and with the appearance of the soft tumours on the neck of the humerus and one of the ribs one felt quite sure as to what would be found post mortem. It is interesting to note that the weight of the patient, which was 6 st. 11 lb. on admission, fell to 6 st. 7½ lb. on Dec. 22nd, 1894, and rose to 7 st. 2½ lb. on Jan. 14th, 1895. The last weight recorded (on Jan. 22nd) was 7 st.

NORTH DEVON INFIRMARY.

A CASE OF INJURY TO THE ABDOMEN AND LEFT LUNG;
FREQUENT ASPIRATIONS, WITH SUBSEQUENT
RECOVERY; REMARKS.

(Under the care of Mr. JOHN R. HARPER.)

WE are pleased to place on record the account of the following case of severe abdominal injury. The patient was closely and skilfully watched and judiciously treated, and the description forms a useful addition to the few cases of the kind satisfactorily described in our literature. With regard to the diagnosis Mr. Harper was of opinion that the spleen was ruptured by the blow; the injury was directly over that organ, and, in addition, the amount of shock appears to have been considerable and the pain great. It is possible that there was a small rupture of the spleen, but it is more probable, we think, that the large collection which required to be tapped only twelve days after admission was retro-peritoneal and due to a rupture of the kidney. The blood which escapes in consequence of a rupture of the normal spleen passes through the thin capsule into the peritoneal cavity, where it may occasionally be limited by adhesions, and thus produce a swelling similar to that described. A case was under the care of Mr. Morgan¹ for rupture of the spleen and the patient died twelve days after the injury; the blood around the spleen had undergone but slight change, although it was localised by adhesions. The presence of urea in the fluid removed is of importance as confirmatory of this view. The absence of hæmaturia is at first sight against it, but this is not always present under such circumstances, for the laceration may be deep enough to cause considerable extravasation of blood, but as it has not extended into the pelvis of the kidney no blood escapes in the urine. The complication of effusion into the pleura is not uncommon after severe injuries to the upper part of the abdomen.

On Oct. 6th, 1894, when playing football, a man aged twenty-four whilst running was struck with great force in the upper and left side of his abdomen by an opponent's head. He was knocked down by the force of the blow and had to be carried off the ground to the pavilion, where he was examined by a medical man, but beyond marked tenderness in the left hypochondrium nothing abnormal could be detected. He had no fractured rib as far as could be made out; his pulse was good, but he complained of feeling a little faint; his pain soon passed off. He was advised to desist from playing, though, contrary to advice, he joined in the start of the second half, but soon had to retire. He afterwards drove back with the rest of the team to the hotel, and had partly dressed himself when he was taken suddenly with very acute pain in the abdomen; he fainted and was laid upon a bed, and medical assistance was sent for. He was found lying on the bed in great pain, his face pallid and covered with a cold sweat. His pulse was feeble and easily compressed. He localised all his pain below the ribs on the left side, where the full force of the blow had been spent; it was paroxysmal in character, the relief between the attacks being slight. He was very restless, yawning and throwing his arms about. He retched continually and once spat up a little frothy mucus tinged with blood. The abdomen was kept very tense, and pressure caused great pain. The pain was to some extent relieved by hot fomentations and turpentine. An opium pill (1 gr.) was given him. After an hour he rallied sufficiently to be moved carefully in a cab to the North Devon Infirmary. On admission he was at once put to bed, hot-water bottles were applied to his feet, and an injection of morphia was given. Laudanum applied on hot flannels was also ordered. The urine was drawn off by catheter; it contained no blood and was normal. His pulse had much improved and was now about 90. He himself felt better and almost free from pain. His abdomen could now be examined more carefully. There was an ill-defined fulness seen in the left side below the costal margins; some slight evidence of bruising was evident. The breathing was mainly thoracic. Palpation was rendered difficult owing to the rigidity of the abdominal muscles. There was very marked tenderness below the rib margins on the left side; percussion in this situation gave a dull note over an area about two inches wide and about three in depth. It appeared to be due to an increase downwards

in the area of splenic dulness. No fractured rib could be made out. He was given ice to suck and was kept under the influence of morphia. On one occasion after swallowing a teaspoonful of ice-cold water an intense pain was produced in his left side; it lasted a few minutes. On the following morning he appeared to be much the same, had had a fairly good night, and had been sick once, the vomited matter simply being bilious in character and containing no blood. He said he felt much better. The temperature was 100° F. and the pulse 96. The local condition was much the same—viz., extreme tenderness on pressure over the dull area, rigidity of the muscles was still marked, and there was some tympanites, with diminution of liver dulness. He was kept on a milk diet. For the next few days there was not much alteration in him. Locally there were all the signs of localised peritonitis; the dulness in the left side was increasing downwards and forwards, and no fluctuation could be made out. His general condition was better, but the tympanites caused him some discomfort, which was not relieved by enemata. The temperature varied from 100° to 101.5°. On Oct. 12th fluid was detected in the left pleura, reaching in front to the lower border of the third rib and behind to the spine of the scapula. The cardiac impulse was displaced slightly inwards. His breathing was a little quickened, and he complained of being "tight on his chest." The temperature was 102.5°. The pleural cavity was aspirated at the angle of the scapula, and about sixteen ounces of very deeply blood-stained fluid were withdrawn. The abdominal swelling had been gradually increasing in size, but it was not till Oct. 16th that well defined fluctuation could be made out. He still had considerable pain on pressure over the swelling. His pleura had filled to the level of the fourth rib. His general condition began to get worse; his tongue was coated, the breathing embarrassed—about 36 to the minute—and the temperature 102°. On Oct. 18th he was put under chloroform and examined. There was a distinct fluid swelling in the left hypochondrium, reaching from directly below the rib margin forward to the right of the median line, and extending down on a level with the umbilicus and across the left side of the abdomen. The whole area was uniformly dull, the dulness merging into that of the pleura, so that there was a dull area reaching from the fourth rib to the level of the umbilicus. His discomfort was so great that it was thought wise to aspirate the abdominal swelling, and the site chosen was two inches below the ribs and one inch behind the nipple line. About seventy-seven ounces of fluid were removed; the sac was not emptied, and a bandage was applied round his waist. The fluid was dark-green in colour and of a fairly thick consistence, with an alkaline reaction, sp. gr. 1011, and contained albumen in considerable quantities; there was a small quantity of urea (1 per cent.). The colour was due to altered blood pigment, chiefly methæmoglobin. Bile pigment and salts were tested for, with a negative result. Microscopically, masses of blood pigment could be seen; there were no definite crystals of hæmatoidin, but a few well-defined tyrosin crystals. On examination the following day the swelling was found to be nearly as large as previously to the tapping, but as yet there was no distension, which had made him so uncomfortable. He was in no pain. On Oct. 20th the pleura was aspirated, and forty-six ounces were removed, only slightly stained with blood. On the 23rd the fluid swelling was increasing, and abdominal distension very marked; he was in pain and very uncomfortable. The temperature was 102.5° and the pulse 110. The face was pale and haggard. The cavity was aspirated close to the former site, and sixty ounces of fluid of a specific gravity of 1010 and of a similar colour to the former were withdrawn. On Nov. 1st the fluid in the pleura, not having diminished, was aspirated; this time twenty-four ounces of clear serum were obtained. On the following day the abdominal cavity, which had again refilled, was aspirated, the quantity this time being 100 oz., of sp. gr. 1007 and not quite so dark a green colour. A good stout binder was applied. The swelling gradually increased till on Nov. 11th it had to be again relieved. Sixty-four ounces of a similar character were removed. After this date he required no further operative interference. He was put upon ten grains of diuretin every four hours for a few days, at first with apparent benefit, as in the first twenty-four hours he passed 115 oz. of urine. The fluid left in the pleura began to be slowly absorbed, and the abdominal cyst did not refill. His general health rapidly improved, so that by the end of the first week in December he was allowed to get up. On Dec. 21st he went home. His general

¹ Guy's Hospital Reports, 1844, p. 487.

health was excellent. There was a little thickening of the pleura at the left base and some slight displacement of the cardiac impulse inwards was evident; otherwise the chest was normal. A well-defined swelling could be felt below the rib margin for about two inches, which was dull on percussion, but no fluctuation could be obtained. On Jan. 22nd, 1895, he reported himself by letter as being in excellent health and stated that he had no trouble or inconvenience whatever from his side. On March 23rd he was seen by Mr. Penny, house surgeon. He was then at work and in good health, but had "a lump in his side."

Remarks by Mr. HARPER.—I have thought it best to report this case rather fully, as I have been unable to discover any case resembling it. Rupture of the spleen is in so many instances followed by rapid death that it seems to be advisable to put on record any in which recovery has taken place. In this case, fortunately, the associated lesions were not very grave; the one complication—probably a slight rupture on the surface of the lung into the pleura, which set up a certain irritation and was followed by effusion of serous fluid—was the only one to contend with. The injury to the spleen could not have been very extensive and could not have extended beyond the capsule of the organ. The hemorrhage appears to have been confined to within the capsule, which must have been gradually distended. The character of the fluid removed from the abdominal swelling is interesting from the fact of its containing tyrosin crystals. Quain, in his recent edition of the "Dictionary of Medicine," says: "Tyrosin is present in small amount normally in the spleen." The resulting lesions seem to have been due to the effect of contusion rather than fracture of the rib, as no evidence of the latter could be made out. From the abdomen 302 oz. of fluid were removed, and from the pleura eighty-nine ounces.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Carcinoma of Ureter.—Congenital Obliteration of Bile duct.—Sarcoma of Breast.—Carcinoma of Bed of Thumb-nail.—Carcinoma of Stomach.—Duodenal Ulcers in Women.—Cirrhosis of Liver in Child.—Secondary Intra-thoracic Sarcoma.—Exhibition of Specimens.

An ordinary meeting of this society was held on April 2nd, Dr. FAY, President, being in the chair.

Dr. VOELCKER related a case of Primary Carcinoma of the Ureter. The specimen was obtained from a man aged sixty-eight who was admitted into the Middlesex Hospital under the care of Dr. Cayley on Dec. 7th, 1894. He had never been laid up except in 1892, when he had influenza. Four months before admission he noticed a discolouration of his urine. On admission he was a well-built man with cedema of the left ankle. He complained of pain across the loins and of nausea, and was unable to take solid food. The liver was enlarged, nodular, and tender, and there was a resistance to be felt in the left iliac fossa. The urine was acid and contained a blood-clot. A fortnight after admission there was considerable hæmaturia and the patient had lost 18 lb. in weight in the last three months. The prominent symptom was pain over the liver; the liver was enlarged considerably, but the blood disappeared from the urine. Towards the end there was rapid loss of weight, 14 lb. being lost in as many days. The patient died on Jan. 20th, 1895. At the necropsy the body was fairly nourished; there was marked cedema of the left leg, and to a less degree of the right leg also. There was slight jaundice. The pericardium was adherent. Hypertrophy of the left ventricle was noticed and atheroma of the aorta was also present. The liver weighed 8 lb. 14 oz. and was much enlarged. The left lobe was almost replaced by soft pale new growth, and numerous nodules of similar growth were present in the right lobe. The nodules were not umbilicated. The gall-bladder was natural. The right kidney was natural; the left was only about one-third the size of the right and showed hydronephrosis. The left ureter was dilated. The lower two inches of the ureter were the seat of a new growth which formed delicate villous processes projecting into the ureter, and were blood-stained. The bladder was quite free from

growth, but a small blood-clot projected into it from the left ureter. The lumbar glands on the left side were infiltrated with growth and also the pelvic glands near the lower end of the ureter. There was a small nodule of growth in the upper lobe of the right lung. Microscopical examination of the growth in the ureter showed a typical papillo-carcinoma (villous cancer) of the ureter. The growths in the liver showed a similar structure. The epithelial cells were strikingly pyriform. No similar specimen had been recorded in the Transactions of the Pathological Society, and he had been unable to find any reference to a similar case either at home or abroad. Dr. Murchison¹ recorded a case of villous tumours in the pelves of each kidney associated with similar growths in the bladder around the orifices of each ureter. The structure of the growth was similar to that presented by a villous carcinoma of the bladder. The reasons for regarding the growth in the ureter as primary were the structure of the growth and of the deposits in the liver, the infiltration of the lymphatic glands on the left side of the aorta, the absence of any infiltration of the ureter from outside, the history of hæmaturia, and the presence of cedema in the left foot. The infiltration of the liver was unusual, for malignant disease of the bladder was rarely followed by secondary deposits in the liver. The small size of the left kidney might possibly be due to long-standing hydronephrosis induced by some injury to the lower end of the left ureter, possibly by a calculus lodging there, and at that situation a new growth developed later.—Mr. TARGETT regarded the specimen as a rare and interesting one. Villous growths in the bladder were not common, but were very malignant, and the secondary deposits strikingly resembled the primary growth. In one case of secondary growths in the lung, the villous processes were infolded and covered with epithelium precisely like that of the bladder. Secondary growths in the ureter were not uncommon; they might penetrate the tube from outside and either ascend or descend along it.—Mr. BOWLEY said that the bladder near the lower end of the ureter was a usual site for these tumours, the epithelium at the lowermost end of the ureter being of the vesical type.—Dr. VOELCKER, in reply, said that the growth did not commence at the lip of the ureter, for nothing could be seen of the growth from the interior of the bladder. The secondary growths were like those described by Mr. Targett.

Dr. FRANCIS HAWKINS (Reading) exhibited a specimen showing Congenital Obliteration of the Ductus Communis Choledochus. This duct was obliterated and appeared as a mere thread about one inch before joining the duodenum. The hepatic and cystic ducts were pervious, as was also the ductus communis choledochus for nearly an inch before becoming obliterated. The gall-bladder was not enlarged and was empty. The liver was enlarged, very firm, and of a dark olive-green colour, with fibrous bands running over the surface, which was slightly irregular. The blood-vessels were normal. The pancreatic duct was pervious and the opening into the duodenum was seen. Microscopical examination on section of the liver showed it to be cirrhotic. There was a right inguinal hernia containing the cæcum and appendix. There was also a small localised empyema at the left pulmonary base. The specimen was removed from a male child aged at death four months and two weeks, who was admitted into the Royal Berkshire Hospital suffering from jaundice, which had first been noticed eight days after birth. The jaundice was of a deep olive colour and the stools were white. Hæmorrhage from the mouth occurred on two occasions and epistaxis once. The family history was not important. Only two similar cases had been shown before the society, and from a diagrammatic representation of the local condition of obliteration of the bile-ducts made by Dr. John Thomson of Edinburgh it would appear that, including the two cases above mentioned, only six were recorded in medical literature where the ductus communis choledochus was alone obstructed. The cause of the jaundice was thought to be due to the change in the liver itself owing to the bile-ducts becoming constricted and obliterated. The cystic and hepatic ducts were pervious, and yet contained no bile.

Mr. J. JACKSON CLARKE described the histology of a Lobulated Growth of the Breast removed by Mr. Edmund Owen from a middle-aged woman. It was a typical alveolar sarcoma free from ulceration. Most of the cells of the tumour contained intranuclear bodies which were not found

¹ Transactions of the Pathological Society, vol. xxi.

in normal nuclei. These bodies were stained reddish-yellow by the hæmatoxylin-eosin method, and a brownish-red by Biondi's method. They appeared to contain one or more vacuoles, and most of them were provided with stiff peripheral processes which in many cases terminated in a round knob. Some of the intranuclear bodies were attached by a pedicle to the nuclear membrane. They attained a size averaging ten micro-millimetres, and the larger the intranuclear body the smaller was the amount of chromatin in the nucleus. Some of the larger bodies could be traced in the act of escaping from the nucleus into the cytoplasm of the cell or into intercellular spaces. Having escaped, they became enlarged and usually chromatin appeared within them, and so was constituted a series of forms leading up to the cells with giant mitoses. The latter entirely corresponded with bodies he had described in squamous epithelioma² and in sarcomata as free and sporing parasites, but they presented two important additional features—that is, besides the forms of sporing previously described by Mr. Clarke, ciliated zoospores and acinetæ embryos could be detected. The latter were identical in appearance with the smallest of the intranuclear bodies, and the former closely resembled some of the bodies described by Mr. Clarke in vaccinia.³ He had observed in all the cancers and sarcomas he had recently described intranuclear bodies similar to but less distinct than those in this sarcoma. He concluded that they represented an early phase of the parasites he had previously described. Up to the present time the only logical course had been to refer the parasites to the sporozoa. As he had stated elsewhere, and as had recently been demonstrated by Sanfelice,⁴ those who recognised only a few of the forms of the parasites of cancer could not logically refer them to the protozoa at all. They might just as well belong to the protophyta. In investigating the so-called psorosperms of the ureter he had been able to refer them to the protozoa by the character of their ectosarc, their nuclear forms, and mode of sporing. And in the absence of the special characters of the suctoria (ciliated swarm spores and acinetæ forms) the only logical position was to refer them to the sporozoa; in this he had recently been confirmed by von Kahliden.⁵ In cancer and sarcoma many of the parasites were identical in form with the psorosperms of the ureter, and, in spite of careful search, until now he had been unable to find ciliated spores and acinetæ embryos, so that the logical conclusion was that they were to be counted as sporozoa. Now, however, in the presence of the ciliated and tentaculiferous forms a modification of the position was necessary, and the parasites could only be referred to the suctoria. The change might prove to be no great one. It was quite possible that the suctoria formed a link between the sporozoa and the ciliata. This was for biologists to determine. The result of the examination of this sarcoma was quite in harmony with what Mr. Clarke had already advanced with regard to cancer and sarcoma. It was noteworthy that the parasites of variola and vaccinia were identical in form with many of the phases of the parasites in this sarcoma. Syphilis, again, constituted another link between infective processes and malignant neoplasms. Doehle⁶ had observed flagellates in the blood in primary syphilis, and Mr. Clarke had found bodies similar to the parasites of variola, cancer, and sarcoma in the primary, secondary, and tertiary lesions of syphilis. A few words were to be added with regard to molluscum contagiosum. Mr. Hutchinson⁷ had brought forward an observation made by Mr. Hitchens, by which it appeared that this disease had been communicated by a dog to a human being. This evidence was confirmatory of the careful work of Neisser and L. Pfeiffer. A still further observation tending to show the parasitic nature of this disease had been made by Mr. Clarke.⁸ Some material obtained from molluscum lesions was given to him by Mr. Malcolm Morris (a firm believer in the parasitic nature of this disease), and was placed in a moist chamber. After five days numerous actively moving flagellates were present, and there was good evidence that the latter were produced from the molluscum corpuscles.—Mr. SHATTUCK said that before the society could criticise the opinions put forward by Mr. Clarke it was necessary that the facts should be corroborated. The specimens should be

submitted to the Morbid Growths Committee in order that others should be convinced of the accuracy of the facts and observations recorded in the paper. Mr. Ballance and he had been cultivating molluscum contagiosum on wet sand under sterile conditions without obtaining any growth of protozoa.—Dr. KANTHACK said that Drs. Klein and Copeman had failed to find protozoa in the rabbit's cornea after vaccination. He himself and two others had produced blisters on themselves in the ordinary way with cantharides, and in the blisters were found a large number of bodies identical with these so-called protozoa. The majority of those who were constantly finding protozoa appeared to work without any control observations whatsoever. In a case of sero-cystic disease of the breast he found in some large cells leucocytes in all stages of degeneration, which stained readily with acid fuchsin and eosin, and other dyes. A catalogue of diseases had been enumerated in which protozoa had been found, but he asked where the specificity of these diseases came in if all were caused by the same organism.—Mr. CLARKE, in reply, consented to permit his specimens to be examined and reported on by the Morbid Growths' Committee provided that the photographs of the specimens which he supplied were published along with that committee's report. He lodged a complaint against the manner in which he had been treated on previous occasions by the Morbid Growths Committee. He claimed that for some years he had studied this subject, and had compared his results with control examinations of normal tissues.

Mr. EDGAR WILLETT showed a Tumour growing from the Ungual Phalanx of the Thumb which had been removed by operation from an old woman aged eighty. From the structure he considered it to be carcinomatous. It had grown slowly for seven years. There was no glandular enlargement at the time of operation, nor within one year afterwards. Three years later secondary deposits had formed in the axilla.—Mr. TARGETT said the specimen was one of squamous-celled carcinoma with extensive processes the central parts of which were breaking down.

Mr. BIDWELL showed a specimen of Gastro-enterostomy for Pyloric Cancer. The jejunum was firmly united to the stomach, but the patient had died ten days after the operation from broncho-pneumonia. There was a huge mass of cancer involving the pyloric end of the stomach, and the jejunum, at a point two inches from the duodenum, had been united to the middle of the posterior surface of the stomach by Halsted's method for lateral intestinal anastomosis. Food had been taken in good quantity immediately after the operation, and there was no sign of any peritoneal irritation around the anastomosis. The opening, though small, had not contracted during life.

Dr. LEE DICKINSON showed a specimen of Acute Perforating Duodenal Ulcer in a woman, and three other similar cases in women were described. These ulcers were known to be much commoner in men, in whom no particular diathesis had been recognised; and the few women whom they affected were generally neither young nor anæmic, markedly differing from the chlorotic females who were the usual subjects of perforating gastric ulcer. Not one of the four women whose cases were described was anæmic. It was suggested that, though perforating ulcers of the stomach and first part of the duodenum appeared so similar in their morbid anatomy, they depended for their initiation upon a different diathesis, and anæmia had no share in the causation of the duodenal ulcer. Some remarks were subjoined upon subphrenic abscess, which was a comparatively frequent result of gastric perforation. Duodenal perforation, on the contrary, almost always caused diffuse peritonitis; but a case was quoted, however, in which a subphrenic abscess was due to this cause. One was specially remarkable because the abscess was to the left of the falciform ligament.

Dr. F. PARKES WEBER showed a specimen of Cirrhosis of the Liver in a Child. The liver and spleen were those of a girl aged fourteen, who had been more or less jaundiced all her life. For her age she was very ill-developed, appearing much younger. The skin was considerably pigmented (probably a result of the chronic jaundice). The liver could be felt below the costal margin and the spleen reached to below the anterior superior iliac spine. For about ten weeks before death there was considerable fever of an irregular type, commencing a few days before ascites was first detected. The superficial abdominal veins were distended. At the necropsy the fluid in the peritoneum was clear. The liver was green, hard, hob-nailed, and weighed 26½ oz. Microscopic examination showed a large amount of fibrous tissue

² Morbid growths—sporozoa.

³ THE LANCET, Jan. 19th, 1895.

⁴ Centralblatt für Bakteriologie, Jan. 31st, 1895.

⁵ Ziegler's Beiträge, 1894.

⁶ Centralblatt für Bakteriologie, 1892, p. 906.

⁷ Clinical Journal, March 13th, 1895.

⁸ Centralblatt für Bakteriologie, Feb. 23th, 1895.

situated much as in ordinary cirrhosis, dividing the gland substance into unequal compartments and sometimes invading the lobules, entering between the individual hepatic cells. In the orange-rubin specimens green inspissated bile could be seen situated between or in the hepatic cells. The gall-bladder contained some clear, almost colourless fluid. There was no perihepatitis. The spleen, uniformly enlarged, weighed 20½ ounces; on section its substance appeared too firm, but otherwise natural; the microscope showed considerable increase in fibrous tissue and considerable deposit of pigment in some of the trabeculae. The lymph glands, especially those of the hilum of the liver, were somewhat enlarged and much pigmented. The common bile-duct was, unfortunately, not examined. The mother of the child died from phthisis and at the period of her life when the child was born was a great drunkard. The late development of the ascites was noteworthy, and the great size of the spleen was interesting from both a pathological and a clinical point of view. Perhaps ordinary hepatic cirrhosis affecting the growing tissues of a child might cause a much greater relative enlargement of the spleen than in an adult.

Mr. H. B. MEAKIN showed a large Sarcoma filling the left pleura; there was also another mass infiltrating the spine. It was obtained from a girl aged fifteen, who one year previously underwent amputation of the right thigh for a subperiosteal sarcoma of the lower end of the femur. Notwithstanding the enormous size of the growth there had been very little pain and discomfort, and it was noted that the inhalation of oxygen relieved in a marked degree the attacks of dyspnoea to which she had been liable.

The following card specimens were shown:—

Dr. A. A. KANTHACK: (1) (with Mr. C. B. LOCKWOOD) Psammoma of Tunica Vaginalis; (2) Psammoma (?) of Mesentery; (3) Psammoma of Vermiform Appendix and Ovary; (4) (with Mr. E. L. LLOYD) Metaplasia of Omental Epithelium into Squamous Epithelium; (5) (with Dr. C. P. WHITE) Giant Cells in Innocent and Malignant Tumours of Epithelial Origin.

Dr. VOELCKER: Ulceration of Gall-bladder in Typhoid Fever.

Mr. H. SNOW: Malignant Reversion of Mammary Cystic Fibromata.

Dr. LEE DICKINSON: Solitary Kidney with Two Ureters.

Dr. F. HAWKINS: Adhesion of the Vocal Cords and Laryngeal Stenosis in a case of Leprosy.

HUNTERIAN SOCIETY.

Rheumatoid Arthritis.

An ordinary meeting of this society was held on March 27th at the London Institution, Mr. CHARTERS J. SYMONDS, President, being in the chair.

Dr. FORTESCUE FOX read a paper on the varieties of Rheumatoid Arthritis. He said that the cases naturally divided themselves into three groups: (1) those occurring during childhood and young life; (2) those at or about the climacteric in women; and (3) those occurring in elderly people—say, over sixty. He narrated the particulars of one or two typical cases in each class. He considered briefly the pathology of the disease, noting especially its constitutional and nervous origin, while considering the relation which anaemia, tubercle, shock, &c., bore to it. Prognosis, Dr. Fox considered, was better in the cases advanced in life than in those occurring in youth. Treatment was largely concerned with warm baths and massage, while arsenic and iron were the most reliable drugs.

Dr. FRED. J. SMITH thought that Dr. Fox's paper threw much light on the numerous arthritic cases occurring amongst hospital out-patients which would not range themselves under the heading of gout or rheumatism as type cases; he thought that treatment from an out-patient view was very disappointing.

Sir HUGH BEEVOR agreed with Dr. Smith's views and asked for further information on the morbid anatomy, hinting at the possibility of changes being found in the spinal cord as marked as those found in other acknowledged cord diseases.

Dr. LOUIS BLANC (Aix-les-Bains) remarked on the relative frequency of the disease in England compared with France, and thought that one factor might be the imperfect drying and exercise after the morning tub.

Dr. A. GARROD regretted the absence of knowledge of the

anatomical condition of the affected joints in young people, he did not agree that the prognosis was worse in youth. To the syrup of the iodide of iron he was inclined to give the first place among drugs, arsenic being the next most useful; but he agreed with Dr. Smith that treatment in out-patients was disappointing because many months rather than a few weeks were required.

Dr. GLOVER drew special attention to anaemia as a contributory factor, and thought that measures conducive to the improvement of the blood were the best to be employed; he agreed with Dr. Garrod and others that a full diet, stimulating in character, was an essential feature.

Dr. Fox replied, and the meeting adjourned.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on March 21st, the President, Sir JOHN WILLIAMS, Bart., being in the chair.

Dr. LEONARD GUTHRIE showed two cases of Scaphocephalus in children, one of whom was the subject of rickets. The fontanelles were said to have been closed at birth. He thought the cause was synostosis of the sagittal suture.—Dr. SHUTTLEWORTH related similar instances and showed drawings.—Mr. GORDON BRODIE referred to a case under his care in which there was also exophthalmic goitre.

Mr. EDMUND OWEN showed a boy convalescent from Pyæmia after Osteomyelitis. He commented on the frequency with which this event occurred in children and the readiness with which they recovered.

Dr. WILLIAM HILL showed a case of Disease of the Accessory Sinuses of the Nose, caused, as he thought, by dental irritation.—Dr. C. W. CHAPMAN thought rather that the inflammation had extended from the nose.—Dr. PEGLER believed that the mischief was active in the posterior ethmoidal cells and advised exploration of the maxillary antrum by way of the inferior meatus.—Mr. MAYO COLLIER also commented on the case.

Dr. G. A. SUTHERLAND showed a case of Pulmonary Fibrosis in a youth with Phthisis.—Dr. C. W. CHAPMAN remarked upon the chronic nature of this condition and related a case of extreme displacement of the heart without serious impairment of health.

Mr. MAYO COLLIER showed two cases of Hallux Rigidus. He described the origin of flatfoot in this condition and the changes in the articular surfaces.—Dr. GUTHRIE inquired as to the cause of spasm of the short flexors in ballux rigidus and suggested that the partial subluxation of the joint was the first step in the deformity. Such subluxations of the toe joints were known to be the cause of severe pain.

LIVERPOOL MEDICAL INSTITUTION.

Perforating Ulcer of the Stomach; Gastrostomy; Recovery.—Complete Removal of the Internal Semilunar Cartilage.—Removal of Loose Cartilage from the Intercondyloid Notch.—Neuritis from Poisoning by Carbon Monoxide.—On the Mental Aspect of some Traumatic Neuroses.

A MEETING of this society was held on March 28th, the President, Mr. CHAUNCEY PUZEY, F.R.C.S., being in the chair.

Mr. PAUL related a case where he had successfully operated for a Perforating Gastric Ulcer.

Mr. BANKS showed a patient from whom he had removed the Internal Semilunar Cartilage. An incision was made along the inner side of the knee-joint, and after the strong internal lateral ligament had been divided the joint was easily opened up and the cartilage removed. The patient was now on a Thomas's splint and was gradually recovering the use of the leg.—Mr. BANKS also read notes of a case where he had removed a Loose Cartilage from the Knee-joint. He made an incision along the inner side of the joint, and without dividing the internal lateral ligament he was able to feel the loose body in the intercondyloid notch and to remove it.

Dr. GLYNN gave particulars of a case of Chronic Neuritis produced by the Inhalation of Carbon Monoxide. The patient, a boy aged sixteen years, was admitted into the Royal Infirmary on March 6th. He was quite unable to walk and had been confined to bed for five months. There was weakness of the muscles of the legs, especially the extensors of the feet;

there was tenderness of the muscles and loss of irritability to the faradaic current; and there was some loss of sensation and paræsthesia. The knee-jerks and plantar reflexes were absent; there was marked spasm of the gastrocnemii. The more ordinary causes of neuritis—lead, alcohol, diphtheria, and rheumatism—could be excluded, and the history of his illness pointed to the probability of carbon monoxide poisoning. The boy was an engine cleaner and worked in a shed where about twelve engines were cleaned every night. In this shed there was a furnace, and he had to carry red-hot coals from this furnace to start the engine fires; the engines took four hours to get up steam, and during that time he often found the fumes of the fires very irritating. Five months ago he began to have pains in the calves; a month later he had dyspnoea on exertion and swelling of the legs, his urine became albuminous, and he lost all power in his lower extremities. In the hospital he rapidly improved under iodide of potassium and hot fomentations to the legs. He regained the power of walking, though the extensors remained weak; the knee-jerks were still absent and he was unable to stand with his eyes closed. When first seen his blood was examined and the amount of hæmoglobin found to be normal, and the number of red cells was not diminished, so that the more direct effects of carbon monoxide poisoning were absent. The boy presented many of the marks of degeneration—smallness of stature, ill-developed ears, &c.—and hence was probably predisposed to disorders of the nervous system.

The paper of the evening was read by Mr. HERBERT PAGE (London) on the Mental Aspect of some Traumatic Neuroses. Having defined a traumatic neurosis as a disorder of the nervous system following injury, functional or dynamic in character, and independent of gross structural or as yet known lesion in the nervous centres, he pointed out that the evolution and elaborated structure of the nervous system as seen in man seemed to predispose it to instability of equilibrium. The close relationship of distant parts of the body through the agency of the nervous system made it unavoidable that prolonged physical pain should cause mental anxiety and derangement of the general health. Speaking of the periphery of the nerves and the nervous centres as respectively the two ends of the nervous system, Mr. Page showed how trifling physical injury at the periphery might lead in time to considerable mental disturbance and to the evil consequences thereof, while psychical shock acting on the cerebral cortex might bring about serious impairment of health by causing functional derangement of the organic processes of life. As instances of the former effects he cited cases of injury to extra-spinal structures. Railway collisions and kindred accidents associated with much terror provided examples of the neuroses beginning in central disturbance. It was a mistake to look on the symptoms of these cases as either imaginary or feigned, nor could treatment be successful if this were the view entertained of them. The close relationship of mind and body must not be forgotten, and due regard to the psychical element in all these nervous disturbances was essential for success in treatment. It was all-important, moreover, that diagnosis should be prompt, so that the patient might be saved from lines of treatment likely to perpetuate his ailments by reason of continued apprehension and introspection. The various determining factors in the traumatic neuroses were specially alluded to, and it was shown how suggestion might play a part in originating new phenomena and prolonging those which had arisen directly from the accident.—A most interesting discussion followed the paper, in which Mr. Puzey, Mr. Banks, Mr. A. Wiglesworth, Dr. Barr, Dr. Carter, Mr. Sheldon, Mr. Paul, and Dr. Davidson took part.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Hydroa Gestationis.—*Friedreich's Disease.*—*Protracted Typhoid Fever.*

A MEETING of this Section was held on March 22nd, Dr. W. G. SMITH, the President, being in the chair.

Dr. NINIAN FALKNER showed a case of *Hydroa Gestationis*. The patient, aged thirty-eight years, had been married twice, has had six children, and is now in the third month of her seventh pregnancy and the third attack of the

disease. The eruption commences at the end of the third month on the back of the wrists, and continues to advance until it covers all parts of the body; after delivery it disappears in about six weeks. This is the third time that Dr. Falkner has attended her. She states that it comes on only when she is carrying a male child.—The PRESIDENT said that he had seen this patient a year ago. She was pregnant at the time, and he had no doubt that it was a case of *hydroa gestationis*. He was not aware of any other cases of the same kind seen in Dublin except one by himself at the Adelaide Hospital dispensary.

Mr. M. J. NOLAN read a paper on Three Cases of *Friedreich's Disease* (*Hereditary Ataxy*) associated with *Genetous Idiocy*. The communication was illustrated by photographs. The ataxic subjects are aged respectively ten, fifteen, and twenty-two years, and are members of a family of eight, the remaining five being healthy and intelligent. There is a family history of tubercle, brain disease (*cerebellar*? maternal grandmother ataxic), and alcoholism. The father is a chronic drunkard. There is no syphilitic taint. The symptoms became evident in earliest infancy, and progressively developed from the lower to the upper limbs. They consist in jerky movements of the head, feet, and hands, "static ataxy" (*Friedreich*), and "ataxy of quiet action" (*Friedreich*), scanned speech, tremor and paresis of muscles, and "static" and "ataxic" nystagmus (*Friedreich*). In one case knee-jerk is retained; in one it is retained and exaggerated, and accompanied by ankle clonus; and in one it is lost. The girl has lateral curvature of the spine and arrest of sexual development. All are psychically asexual. The two oldest cases have large goitres. There is no clubfoot deformity (a non-essential symptom) or ocular disease; the integrity of the sphincters is preserved; there is no marked disorder of sensation (apart from varying degrees of analgesia irregularly distributed in two of the patients); the electrical reaction of the muscles is normal. The patients possess a very low degree of intelligence, but a marked tractability and good humour of an expansive type, without irritability or tendency to unprovoked mirth. All the symptoms, physical and psychical, are in inverse ratio to age—i.e., the youngest are the most affected. No previous cases have been recorded showing an association of *Friedreich's disease* with *genetous idiocy*. The mental condition is devoid of the waywardness, sexual depravity, and violent outbursts so common to idiots. The possibility of an extension of gliomatosis to the cerebral hemispheres (*idiotcy* so often arising from neuroglial sclerosis) is suggested as the explanation of this twin condition of *genetous ataxy* and *genetous idiocy*.

Dr. A. R. PARSONS read the notes of a case of *Typhoid Fever* in which *Pyrexia* was Prolonged for a lengthened period. He exhibited a temperature chart which extended over 290 days. The patient recovered.

Dr. NINIAN FALKNER read a note on a case of Prolonged *Typhoid Fever*, and exhibited a temperature chart for 119 days.—Dr. PURSER thought that Dr. Parsons' case differed materially from that of Dr. Falkner. In the latter there were several complications, and the case was that of a young child, in which the temperature increased much more easily. Dr. Parsons' case seemed to have been uncomplicated except for a short attack of pneumonia at the beginning.—The PRESIDENT thought that Dr. Parsons' chart was the longest on record, and that there was no doubt about the diagnosis from the full account given.—Dr. PARSONS, replying, said that Murchison gave 160 days as the longest chart of typhoid fever. He did not think the cause of the temperature was a suppurating mesenteric gland, as it probably would have burst into the peritoneal cavity and produced peritonitis, which the patient never had.—Dr. FALKNER, in reply, thought the complications in his case would have some effect on the temperature, but the patient had hæmorrhage on the seventy-second day, and diarrhoea with jelly-like motions till the ninetieth day, and also typhoid spots with pain, so that he was still of opinion that the typhoid fever lasted at least till the 120th day.

THE monthly meetings of the Royal Statistical Society during the remainder of the session 1894-95 (April 23rd, May 21st, and June 18th) will, by kind permission of the council of the institution, be held in the lecture theatres of the Royal United Service Institution, Whitehall, S.W., at 5 P.M. precisely.

Reviews and Notices of Books.

On Diseases of the Vermiform Appendix, with a Consideration of the Symptoms and Treatment of the Resulting Forms of Peritonitis. By HERBERT P. HAWKINS, M.A., M.D. Oxon., F.R.C.P., Assistant Physician to and Lecturer on Pathology at St. Thomas's Hospital, Assistant Physician to the London Fever Hospital, and late Radcliffe Travelling Fellow of the University of Oxford. London: Macmillan and Co. 1895.

We learn from the title-page that this was a dissertation presented to the University of Oxford for the degree of Doctor of Medicine in April, 1894, and in this respect it resembles Dr. Kelyack's *brochure*, which was a graduation thesis at the Victoria University. Dr. Hawkins has done a really valuable piece of work, and no one can read this essay without obtaining a clear idea of our present knowledge of this important subject. It is not that we are presented with original work or new views of the pathology or treatment of "appendicular peritonitis," but the great merit of the thesis lies in the really admirable manner in which the facts are presented. In many contributions on this subject much error has been mixed up with fact, and in some the influence of the writers' personal bias has largely affected their statements and arguments. And so this unprejudiced, precise, and critical survey of the actual facts is particularly valuable. The main points which Dr. Hawkins insists upon are that the appendix is the true source of all those cases which were formerly called iliac phlegmon and typhlitis; that in all cases the acute disease is a peritonitis which may be localised and plastic in character, ending in resolution, or localised and suppurative, ending in abscess, or from the first a generalised peritonitis. In all these forms alike the actual *causa causans* is the invasion of the peritoneum through the walls of the appendix by pathogenic organisms, of which the bacillus coli communis is by far the most important. This invasion of the appendix by micro-organisms may be the result of chronic catarrh of its mucous lining, or of the pressure of a concretion or of fluid in a cystic dilatation beyond a stricture, and it is largely aided by the functionless rudimentary state of the organ. Great stress is laid upon the fact that it is impossible with our present means to decide during the first two days of the disease what course the appendicular peritonitis will run. This is shown to have a great bearing on the question of treatment, for, while the commonest form of the disease—limited adhesive peritonitis—is practically free from all mortality when treated by medical measures only, the diffuse general peritonitis has a very heavy death-rate. The question of treatment is most judiciously dealt with, and without dogmatic assertion the author has given a most fair statement of the position of the question and of the points at issue between American and British surgeons. We have read this *brochure* with great pleasure, and we commend it to our readers as the most reliable statement of our present knowledge of this disease that has yet appeared.

On Some Symptoms which Simulate Disease of the Pelvic Organs in Women, and their Treatment by Allo-Piosto-Myo-Kinetics (Massage) and by Auto-Piosto-Myo-Kinetics (Self-Movements of Muscles under Pressure). By A. RABAGLIATI, M.A., M.D., F.R.C.S. Edin., Honorary Gynaecologist, and late Senior Honorary Surgeon, Bradford Infirmary. London: Baillière, Tindall, and Cox. 1895.

This little work aims at assigning a definite pathology to some of the symptoms met with in certain neurotic or hysterical women. The author endeavours to show that many of the pains and discomforts, of which these patients complain, are not really referable to the nervous system, as such a term as neurasthenia or neuralgia might seem to imply, but

that the affection is really one of the muscular system, and that it might, therefore, be more properly called a myalgia or myosis. He believes it to be of rheumatic origin, and suggests the name perimyositis rheumatica. An essential feature of the condition is a passive congestion of the muscles, or, rather, of the muscle-sheaths, brought about by a rheumatic state of the blood. One reason given in support of the view that rheumatism is the primary cause, is, that in rheumatism the synovial membranes are affected, and that in the cases under consideration he always finds tenderness of the synovial membrane of the articulation of the lower jaw. Similarly, he finds the sacro-iliac synchondroses affected, and believes that tenderness really due to the state of these joints is not unfrequently wrongly assigned to the corresponding ovary. Perverted nutrition is given as playing an important part in the causation of the disease, and consequently the author lays stress on careful attention to the diet in treating it. The special feature of his treatment, however, is the movements of various muscles by the patient herself, combined with pressure on them while they are made to contract. A series of photographs is given at the end of the book illustrating some of the principal movements that the patient is advised to make.

We are naturally inclined to be a little cautious in accepting any treatment as likely to prove a specific in some of these cases, which are generally recognised as being among the most obstinate and disheartening that the practitioner has to deal with. Still, there can be no reason why Dr. Rabagliati's method should not be tried. It can, we should think, do no harm, even if it fails, and in that respect contrasts favourably with surgical procedures of a mutilating nature, which have no doubt been too often employed, and employed not rarely unsuccessfully in the past.

The Treatment of Wounds, Ulcers, and Abscesses. By W. WATSON CHEYNE, M.B. Edin., F.R.S., F.R.C.S. Eng., Professor of Surgery in King's College, Surgeon to King's College Hospital. Edinburgh and London: Young J. Pentland. 1894.

SURGICAL students and those practitioners who have not yet familiarised themselves with the modern improvements in surgery will find in this volume an admirable guide to the practical application of antiseptic methods. Mr. Watson Cheyne entirely approves of the general doctrines of Sir Joseph Lister, his eminent predecessor at King's College, frequently quoting him and warmly advocating his employment of bactericides in preference to the intricate aseptic procedures adopted mainly by some Continental surgeons. The reader is continually reminded that careful attention to many details is absolutely essential to success, and these injunctions are emphasised by the assurance that unfavourable results must be attributed not to any inherent defect in the antiseptic system, or to any exceptional idiosyncrasy in the patient, but solely to some accidental oversight or neglect on the part of the operator himself. An acquaintance with at least the elements of practical bacteriology is, in fact, indispensable for a surgeon in order that he may be sufficiently convinced of the necessity of a conscientious and intelligent observance of the precautions required in antiseptic practice. About a hundred pages are devoted to the antiseptic management of wounds, including under that heading both incisions made by the surgeon and injuries inflicted in various ways and under diversified conditions. In cases of surgical incisions the preliminary stage is disinfection of the skin by washing, firstly, with soap and a 5 per cent. carbolic acid lotion containing also a 500th part of corrosive sublimate; and, secondly, with turpentine. The surgeon's hands are carefully treated in the same way, and all instruments are sterilised by two or three hours' immersion in a 5 per cent. carbolic acid lotion. During the progress of the operation

the wound is from time to time filled with a 1 in 2000 corrosive sublimate solution, bleeding from small vessels is checked by pressure or torsion, large veins and arteries are ligatured with catgut prepared by sulphurous acid and chromic acid, the skin is brought together with silk stitches or silver wire, and the junction is covered with a liberal supply of gauze impregnated with double cyanide of mercury and zinc and wetted with a 1 in 4000 corrosive sublimate or a 1 in 40 carbolic acid solution. In the majority of cases this dressing is left undisturbed for about ten days, by which time primary union is generally established.

As a clearly written, reliable, and handy exposition of the characteristic feature of modern surgery Mr. Watson Cheyne's work merits the highest commendation.

LIBRARY TABLE.

On Preservation of Health in India. By Sir J. FAYRER, K.C.S.I. London: Macmillan and Co.—This little book is a reprint of the substance of a lecture delivered to the students of the Engineering College at Cooper's Hill. The author begins by drawing attention to the size and extent of British India, a very necessary reminder, for there are still many people who think that if you live in Bombay you can pay morning calls in Madras. A short description of the various climates of India is then given and rules laid down for clothing, diet, the use of alcohol and tobacco, and the choice of the site for a dwelling-house. Sir Joseph Fayrer very properly lays stress upon the danger of being over anxious in regard to health and of undue physicking. Malaria is discussed, and rules given for avoiding, as far as may be, that scourge of India. Dysentery, cholera, and snake-bite are treated of, and directions given which a layman may carry out until the arrival of a medical man.

Brewery Companies. By H. S. Reprinted from the *Statist* for August-December, 1894. London: the *Statist* Office. 1895.—Many readers will learn with some surprise that there exist in the United Kingdom no fewer than 404 registered brewery companies, possessing a total authorised capital of upwards of £106,000,000. The three largest businesses are those of Arthur Guinness, Son, and Co., Limited (capital £6,000,000), Bass, Ratcliff, and Gretton, Limited (capital £4,030,000), and Samuel Allsopp and Sons, Limited (capital £3,700,000). The public interests involved in such undertakings are, of course, very great, whether from the point of view of the investor or the social reformer. The volume under consideration deals with the question mainly as affecting the investor, who will find in it copious details on the subject of the various companies' finance, production, and prospects. The work is well worthy of perusal by brewery shareholders.

MAGAZINES AND REVIEWS FOR APRIL.

The Practitioner.—This journal offers its usual amount of interesting and well-written matter. In the department of surgery Mr. Pearce Gould writes on Some Unusual Cases in the Surgery of the Breast, where, as he says, "the rules usually formulated to guide the surgeon in his treatment" were not adhered to, but with good results. Dr. Sansom writes an eminently practical paper on the Treatment of Nervous Disturbances of the Heart resulting from Influenza. Such are cardiac pain, irregular action, rapidity of heart beat, and slowness of the same. Dr. Cullingworth writes on the Local Treatment of Puerperal Fever; Dr. Skeritt on Caffeine as an Anti-spasmodic in Respiratory Affections; and Dr. Hewlett sends an interesting article on the Antitoxin Treatment of Tetanus. A retrospect of the past month, some reviews, an abstract of foreign journals, and practical

notes on medicine, therapeutics, and surgery make up a number well worth reading.

The Asclepiad.—Sir Benjamin Ward Richardson's quarterly is as usual marked by the author's well-known learning and lucidity of expression. The first paper deals with the Treatment of Uræmic and Dropsical Coma, the indications being to remove pressure (a) by bleeding and (b) by aspiration. The causes of coma in uræmia and dropsical conditions are discussed, and the circumstances in which bleeding is to be preferred to aspiration, and *vice versa*, are ably set forth. A Lecture on Health and Athletics follows, and in the *Opuscula Practica* some good sound rules are laid down for the Prevention of Consumptive Disease. Other points of interest are the notes on the Iodine Disinfecting Box and Tracheotomy in Diphtheria, suggesting that not only is tracheotomy curative by admitting air into the lungs, but by the fact that the air admitted no longer passes over a decomposing surface. The biographical notice is a careful and sympathetic review of the life of William Alexander Greenhill of Hastings, a true type of the literary and scholarlike medical man. Sir Benjamin Richardson is always happy in his articles on the medical and surgical art of the past, and in his quotations from the work of M. Bellotti, "The Hospital Surgeon," treating of the dressing of wounds speedily to prevent the access of air, he shows how in 1713 the embryo of antiseptic surgery was already conceived.

The Contemporary Review has several articles of interest, notably a review of Mr. Balfour's "Foundation of Belief" by Dr. Fairbairn, and a paper on "Canadian Copyright" by Mr. Hall Caine. The article which, however, concerns us most nearly from a medical point of view is "The Fiction of Sexuality," wherein Mr. James Ashcroft Noble says that the cry for more freedom in literature is really a cry for the removal of a certain healthy phase of public opinion. From our point of view the modern "sex novel" is as rightly condemned by this opinion as a detailed account of a post-mortem examination or a labour would be if published in a book intended primarily for lay readers.

The Humanitarian treats of various medical subjects in its usual outspoken way. Mr. F. St. John Ballen writes on the Prevention of Insanity, and, after passing in review the various methods which have been proposed to check the disease, comes to the conclusion that little can be done except to educate people more widely in the laws of hygiene as affecting insanity and its causes. Mr. G. T. Leicester has an earnest plea for the re-enactment of the Contagious Diseases Act, and the Rev. J. R. Byrns writes on Corporal Punishment in Schools. He calls it degrading, and talks about the "odious Eton swishing." From a personal knowledge of Eton boys we doubt whether any boy ever felt degraded by hearing that he was to "stay," or was hardened by being "swished."

The Westminster Magazine.—In the ever-present sex article, this time by Mr. G. P. Sykes, we find the following notable sentence (the italics are our own):—"The judicious author frequently accomplishes more than a dozen sermons; but when fools rush in to stop a gap the inevitable consequences are that the gap is widened and made worse than before." The future scholiast will doubtless quote this as a gloss upon "Yellow books" and the like. Mr. Sykes is a hard hitter. "Woman at the present epoch has persuaded herself that she is the salt of the earth as well as the sweet, that her intelligence, her faculties, and fads and crazes are greater than anything else in the evolutions of the *fin de siècle*." Miss Alice Law writes very charmingly about the late Christina Rossetti, and there are many reviews and an article on Schopenhauer.

THE LANCET.

LONDON: SATURDAY, APRIL 6, 1895.

THAT the problem of the poor is still with us is sufficiently proved by the Report of the Royal Commission on the Aged Poor. It is not that there are more poor, or that the poor are poorer than they were, but that society is more sensitive—more healthily and morally sensitive—on the subject. Some say that we are following the evil luxurious fashions of old Greece and Rome. Certainly there is far more luxury among us than is good for us. But, nevertheless, society is pervaded more and more with a sense of the miseries of poverty, such as probably has never before been felt by well-to-do people. They feel that they have a responsibility, not alone for themselves, but for others. To make "provision for one's own, and especially for one's own household," is a primary duty of humanity, enforced by Scripture in striking terms; but we have come to see that our duty does not stop there, but extends to unfortunate people—and even faulty people—and includes an obligation to do what in us lies to extricate them from the plight into which they have fallen by their very vices. This view is laid down very strongly in the separate report to the Commission by Mr. BROADHURST, who quotes with concurrence the following striking language of Professor ALFRED MARSHALL:

"While the problem of 1834 was the problem of pauperism, the problem of 1893 is the problem of poverty—that a man ought not to be allowed to live in a bad home, that extreme poverty should be regarded, not indeed as a crime, but as a thing so detrimental to the State that it should not be endured, and that everybody who, whether through his own fault or not, was incapable of keeping together a home that contributed to the well-being of the State, that person should, under the authority of the State, pass into a new form of life."

All will agree that society has great responsibilities for the existence of insanitary houses and even for those who live in them. But is there not in such language as the above an excessive estimate of what the State can do? Is it really possible for the State to take hold of a man and his wife who have proved themselves incapable of creating a healthy and happy home and to place them *volentes volentes* in a condition to make them "pass," to use Professor MARSHALL's remarkable language, by waving its wand, as it were, into "a new form of life"? This seems to us to be a sort of delusion of the State—an attribution to it of powers which it has not got of treating men as if they were not men, but pawns or machines. It seems to ignore the personal element altogether, forgetful that the man makes the home rather than the home the man—that "the mind is its own place."

The fact is, this Royal Commission has done no more than to bring into very vivid light the different views of poverty and its remedies which undoubtedly exist among people equally anxious to do all that is possible for the amelioration of the lot of the poor. In this investigation all sorts of experience and evidence have been brought together except

perhaps medical evidence, which is very scanty and which in some respects is the most important of all. We would venture to say that a few experienced and thoughtful medical officers of parishes in town and country could throw more light on the deep causes of poverty than either relieving officers or guardians, since they are brought into much closer contact with the poor and their homes in all the deep plights of life than any other persons whatever. The predominant note of the Report—that of the majority—is that the pauperism of the aged is not increasing, but rather decreasing, and that those who are in regular employment are able to make direct or indirect provision for old age as well as for sickness and other contingencies beyond the everyday needs of life. This is undoubtedly true. But it does not alter the fact that from some cause or other a large proportion of those above sixty-five have to apply for parish relief in one form or another; that, in round figures, three in ten of the population above this age are compelled to apply for such relief during the twelve months; and that there is a large number just removed from pauperism who deserve as much sympathy, if not more, than those who actually apply. The great point on which all the Commissioners are agreed is that the State should carefully ascertain its own responsibility in this matter and, where it can, interfere beneficially without damage to the personal respect of those whom it designs to help, and that in future there should be more discrimination in the granting of relief as to the merits of individual cases. This is, no doubt, a duty of great delicacy. It would be very difficult in a work-house, or even in regard to out-door relief, to classify those who are relieved—to give some better quarters and better conditions than others. The great end of all good legislation must be to help men and women to make their own living and work out their own independence. Still, there is room for far more benevolent action on the part of the State towards the poor than has yet been taken, and this investigation, though very imperfect, will help. We have only, in conclusion, to say that one immense factor in the production of pauperism is the element of disease in families, and that in any sound schemes for elevating the social conditions of life provision must be made for more perfectly meeting the medical and nursing wants of the people as well as for improving and purifying their homes.

THE returns from the medical schools in different parts of the country for the present year encourage the hope that the "rush to medicine" is to some extent slackening. It is not well to be too sanguine on this subject, as some of the causes of this slackening—e.g., the circumstances attending the change from a four years' to a five years' curriculum—are to some extent temporary in character, and a few years must elapse before we can feel quite sure that the number of those seeking admission to the medical profession, which all must admit to have been excessive during the last two decades, has undergone any permanent diminution. But some causes of the temporary slackening—e.g., the increasing stringency of the examining boards—are likely to be permanent factors, and we may fairly hope that we

have seen the worst of the overmanning and consequent underpaying of our profession. It is a disagreeable reflection, but a necessary and salutary one, that the honour, dignity, and general well-being of medical men depend upon the numbers of medical practitioners being kept within reasonable limits. If these limits be exceeded—and we take it that in this country and in America they have already been largely exceeded—the inevitable law of supply and demand comes into force, the temptation to undersell their brethren becomes to many irresistible, and the whole profession suffers in dignity. We see what is at present taking place in the city of Cork, where several medical men from a distance have been found willing to accept club practice on terms that the general body of the profession in Cork regard as insufficient. If the professional ranks were not overfull such a thing would have been impossible. It is very important that the public should realise that our protest against the overcrowding of the medical profession is not wholly, or even mainly, a selfish protest. Its main strength is founded on the unquestionable fact that overcrowding is incompatible with high efficiency. If medical men could not look forward to higher rewards than those of a superior clerk or a first-class mechanic it would be obviously absurd to expect them to go through a prolonged and expensive course of preliminary study. Again, if our profession had not substantial rewards to offer men of superior energy and ability it is absolutely certain that such men would carry their powers into more promising fields of human endeavour, and that medical life and the public advantage would proportionately suffer. It is indispensable that there should remain sufficient attractions to youths of superior endowments to induce them to go through a long and most laborious course of study in the hope of some day finding adequate rewards in the medical profession, and those attractions are in the present day in danger of growing steadily less and less, owing to the fact that the young practitioner so constantly finds all fields overstocked and all avenues closed against him.

But the "bitter cry" of the medical world finds only too responsive a wall from the other professions. The overstocked condition of the Bar has been so long notorious that young men without private means hesitate to embrace it as a profession unless conscious of superior powers and special aptitude for forensic work. In recent years the "poverty of the clergy" has become a familiar expression, and we have no doubt that much real distress exists in the clerical ranks. There is, we fear, a real danger of the efficiency and social status of all the professions suffering from the diminution of income consequent upon overcrowding. Our cautious contemporary, the *Spectator*, some time ago published an article of which the burden was that we were within measurable distance of the time when professional incomes would range from £150 to £200 *per annum*. If such a time should ever come it would mean many radical changes in existing things. It would mean that professional training would have to be shortened and cheapened, that the professions would be manned by men of an inferior social grade, and that the general weight and influence of the professions would be to a notable degree less than at present. We cannot think

that such a change would be anything short of a national disaster. If the Church, the Bar, and Medicine be impoverished and degraded, how long will commercial life or the general *morale* of the nation remain at a high level? Not long, we submit, and it is well to recognise that these very material, and even apparently mercenary, considerations have very far-reaching effects.

The remedy, if remedy there is to be, must come in the shape of measures calculated to prevent overcrowding. It is impossible to limit the numbers of those entering the medical profession by any arbitrary rule, but it should not be impossible so to adjust the time and money necessarily spent upon a medical education to the probable rewards to be reaped hereafter, that the number of candidates would not exceed the number of those who might fairly expect to earn a tolerable maintenance. The standard of medical education, both as regards duration, variety of subjects, and stringency of tests, has of late been steadily rising, but we cannot think that it is even now at all too high. The outcry sometimes raised over the poor over-taxed medical student might be not inappropriately answered in some cases by the suggestion that he should transfer his powers to some easier field of labour. Medical life wants more than average men. It wants men of good physique, good *morale*, and at least good intelligence. Such a combination is none too common, and we think the day is past when any youth can be considered good enough to become a medical practitioner. Competition is regulating this, but it is on every ground preferable that the necessary testing should be applied before entrance upon medical life rather than afterwards, when a change can only be effected at the cost of much suffering and loss.

While making the above reflections we are far from thinking that the medical profession presents anything less than the highest attractions even now to a youth of character, energy, and brains. Probably in no profession is a reward proportionate to worth and labour more sure, and if the great prizes are few the blanks, compared with the Bar or the Church, are also few. The aspirant to medicine must look forward to a life of incessant activity and unremitting labour, to heavy responsibility and scanty and uncertain leisure, and to little of the *otium cum dignitate* with advancing years of which the other professions enjoy a large share. But there are great compensations—work that appeals to the sympathetic side of human nature and brings the practitioner into the most intimate relations with his fellows, the gratitude and confidence of patients, a prospect of fair if not large material rewards, and the consciousness of an active, beneficent, and well-spent life. These are great matters, and in our natural and justifiable regrets at the overcrowding and diminished dignity of the medical profession we must not over-colour the picture or forget the many compensations of the lot of a fairly successful practitioner of medicine.

ON a previous occasion¹ we published the recommendations of the London County Council relative to the proposed alteration of the law regulating coroners' inquests. Recently a deputation of the Council appeared before the LORD

CHANCELLOR with a view of urging the pressing necessity for reform both as regards death certification and official investigations into the cause of death. Lord HERSCHELL has taken special interest in the question, as shown by the fact that nineteen years ago he recommended changes which practically form the basis of what the London County Council consider to be not only expedient but necessary reforms. As regards death certification we have on several occasions pointed out the methods by which improvement of the present system could be effected, and these being practically the same as advised by the Council need no further comment from us now. As regards the proposed changes in the law regulating the appointment and duties of coroners, in order to deal with the matter in a short but comprehensive way it may be premised that the main departures from the present system recommended are:—(1) that medical investigators should be appointed who should be attached as officials to the coroners' courts; (2) that London should be divided into districts so as to give approximately an equal amount of work to coroners, and that coroners should be paid by salaries not dependent on the number of inquests held; (3) that coroners' courts should be provided for each district, with a coroner, clerk, inquiry officer, and other necessary officials, as in police courts; and (4) that coroners should have full power to commit on criminal charges and to bind over all witnesses.

Long ago we urged the desirability of appointing official medical investigators and of attaching them to coroners' courts, and it is with satisfaction that we find that our views have been adopted by the Council. With liberal salaries it would be possible to secure the services of thoroughly capable medical men whose functions would be fourfold—viz., (a) to inquire into the causes of all uncertified deaths; (b) to examine the body in all such cases and to make post-mortem examinations where necessary; (c) to report the results to coroners sitting in court; and (d) to give evidence at inquests and act as medical advisers to coroners. If this system were adopted, the obvious results would be to prevent uncertified deaths being registered and to ensure a more efficient method of recognising the causes of death, and thus to remove what may be termed a passive incentive to crime, which the existing statutes are to a great extent powerless to effect. Without detracting from the merits of the profession generally, it may safely be conceded that it is not every medical man who is in a position to investigate the circumstances surrounding many cases of obscure cause of death. The records of inquests where a second post-mortem examination has been found desirable are evidence in complete support of the above contention. But these remarks apply to the employment of specially skilled observers in cases of particular difficulty, and not to the general run of post-mortem examinations, which can be conducted with skill and trustworthiness by the general practitioner. Should the presentments of the County Council receive the sanction of the Legislature it is obvious that the interests of the general body of medical men would be seriously assailed. In the first place, fewer inquests would be held, and thus many fees be lost which now fall to the share of medical men whose services are requisitioned by coroners. The County Council is silent on the matter as to how far the proposed medical investigators would interfere with or supplant

medical men who have attended deceased persons during their fatal illness, or who have been called in subsequently to unexpected deaths. The natural consequences of putting the suggested proposals in force would, in our opinion, deprive the general practitioner of a source of income to which he has looked forward with faith and with a sense of rightful claim. We do not feel called upon at the present juncture to express our opinions upon the equity of the matter, but as a duty to the profession we are compelled to point out the nature and probable extent of the results likely to follow the acceptance by Parliament of the County Council's recommendations. It must also be remembered that the establishment of coroners' courts analagous in area and executive power to police-courts, including the conferring of higher magisterial functions on coroners, and the appointment of medical investigators, part of whose duties would be to sit as medical assessors to coroners, would largely discount the chances of medical men not possessed of a legal qualification attaining coronerships, and the paucity of appointments to such offices would bar many from risking their chances of professional success in other spheres in order to acquire both a medical and legal diploma.

Doubtless, if the proposed amendments and alterations of the law as regards the appointment, jurisdiction, and duties of coroners and the institution of official medical investigators were adopted, the number of inquests would be materially less than at present, and the expense correspondingly diminished. The saving thus effected would go to disburse the charges necessitated by the new regulations. For the rest we most cordially approve of the abolition of franchise coroners and of the present plan of providing deputies for coroners who through illness or other pressing reason are temporarily unable to personally discharge their duties. Deputy coroners are now nominated by the coroners and appointed by them at their expense, subject to the sanction of the Council. The law makes no provision for coroners' deputies, nor does it prescribe the extent to which their services shall be called upon by their superior officers; consequently the deputy may be required to conduct a large share of a coroner's duties without commensurate remuneration.

The important bearing which the scheme of the London County Council has upon the interests of medical men as a body seems curiously enough to have been so far entirely overlooked by the profession. There can be little doubt that if this scheme becomes law it will be made to affect, not only London, but the whole of England.

ROYAL INSTITUTION OF GREAT BRITAIN.—The lectures announced to be delivered at the Royal Institution after Easter should be of considerable interest. On April 23rd, 30th, and May 7th Professor G. Forbes, F.R.S., M.Inst.C.E., will deliver three lectures on Alternating and Interrupted Electric Currents. Four lectures on Thirty Years' Progress in Biological Science will be given by Professor E. Ray Lankester, M.A., LL.D., F.R.S., on May 14th, 21st, 28th, and June 4th Professor Dewar, M.A., LL.D., F.R.S., will deliver four lectures on the Liquefaction of Gases on April 25th, May 2nd, 9th, and 16th; and on May 23rd, 30th, and June 6th Mr. W. Huggins, LL.D., F.R.S., D.C.L., will deliver the Tyndall Lectures on the Instruments and Methods of Spectroscopic Astronomy.

Annotations.

"Ne quid nīmls."

THE DANGERS OF ELECTRIC MAINS.

WE have received a copy of the return made to an order of the House of Commons containing the report of inquiries, held by Major Cardew by direction of the Board of Trade, into the circumstances attending certain accidents in connexion with the electric light mains in the City and the Euston-road. In regard to the explosion in Budge-row, Cannon-street, Major Cardew considers that the Electric Light Company and their officers and employes were to blame for want of judgment, carelessness, and inattention to the regulations imposed by the Board of Trade. To begin with, the inexcusable blunder was committed of charging one main under the impression that it was another, the consequences of which (the pressure being enormous) might easily have proved fatal. Then it appears that there was no provision made by which mains when subjected to an excessive current could be cut out of the circuit automatically. Again, the use of indicators to show the disturbance of potentials with regard to the earth and the rush of current through the mains affected might have prevented a breakdown, or at least shortened the duration of such dangerous conditions. Then come the important questions as to why it was that the street surface could become so dangerously charged in consequence of any defect in the mains—as in the case of Budge-row—to kill a horse; as to why the high-pressure main in the street box was not enclosed in strong metal casing efficiently connected to the earth in accordance with the regulations of the Board of Trade under the Electric Lighting Acts, 1882 and 1883; and, lastly, as to why the accumulation of gas to which the company attributes the explosion was allowed to take place, when they themselves proved gas to exist in a neighbouring street box. These points are dealt with at some length in the report, and the proper preventive lines are suggested, which, if thoroughly carried out, should remove any farther cause of anxiety as regards the public safety. Referring to the St. Pancras explosion, Major Cardew, in view of the evidence placed before him and of his own investigations, is of the opinion that the explosions were caused by the firing of a mixture of coal gas and air by an electric spark. It appears that some days after the explosion a four-inch gas main was found to be leaking in a position about eighty yards from the electric light conduit. There is reason to believe that this gas, assisted by the small amount of heat produced by the current in the electric mains, would percolate along the channels of both mains, which are contiguous, into the boxes. The occurrence of an electric spark was probably, Major Cardew thinks, a result of the formation of a salt incrustation on the insulators. This incrustation probably acts to some extent, it is pointed out, as a conductor, and if a piece breaks away a small spark would very likely be caused. The vestry of St. Pancras are enjoined to lose no time in removing the two existing causes of danger just indicated, and steps should immediately be taken, as was pointed out in THE LANCET of March 9th, to provide a thorough system of ventilation or means for the immediate escape of gas from their conduits and street boxes, and they should reduce the empty space available for accumulation of gas in their street boxes as far as possible, and should carefully guard against the dangerous formation of an incrustation of salts on the insulators of the negative main by frequent inspection and by protecting the insulators against drip from the condensation of moisture on the iron lids of the street boxes. What has become of the sodium theory said to have

been put forward by Major Cardew, to which we alluded in the article just referred to? In the present report we find no mention of it.

"A CURE FOR CANCER."

CERTAIN details published respecting the discovery by a Bernardine monk in Leicestershire of a reported "cancer cure" recall the gropings of medical intelligence in the Dark Ages. It is not a little interesting to see this kind-hearted man with no prospect of personal gain, but, alas, with as little knowledge of the character of cancer, using his herbal decoctions with honest zeal in efforts to soothe his suffering neighbours. The evident intention is wholly commendable. Would that we could say as much for its effects. Brother Philip on one occasion last June bruised his hand. A wound which followed the accident healed slowly, but it did heal at last under the application of certain herbs which he considered "would together heal any wound." He believed that his wound was a cancer, and the thought struck him that perhaps he had found a cure for this disease. *O sanota simplicitas!* Could anything be more mystic or more misty than the relation here suggested between premisses unexplained and a conclusion all assumed? Brother Philip had occasion soon after this to treat a woman aged eighty-three years for what was described by her medical attendant as "cancer." In four months' time this had nearly healed. The question of diagnosis in this case remains an open one. It is probable that fuller details would expose its fallacy, but whether this be the case or not, the result claimed for the new empirical method is in the circumstances not impossible. Unfortunately by this assertion we destroy the reputed efficacy of the new remedy. Cancers in the aged, as is well known, sometimes progress but slowly, and even at times appear to undergo spontaneous absorption, and this quite independently of any local applications. No credence, therefore, can be accorded to the professed virtues of Brother Philip's decoctions. His medicaments are commendable only in their intention, the friendly motive of their introducer. They are open to the very serious objection that they profess far more than can be believed of them by any properly instructed person. As "cancer cures" they may safely be dismissed to the limbo of all such unfounded inventions, and those who may be tempted to employ them should remember that by so doing they lose time which, if not early used for other and more effective surgical treatment, will cost them their sole chance of recovery.

PULEX IRRITANS.

A CORRESPONDENT, writing on behalf of the staff and habitants of the institution to which he belongs, begs us to state some means whereby a plague of fleas from which they are suffering may be put an end to. Such a request is not an unusual one, and on several occasions correspondents have suggested remedies. As far as we know, the best and indeed only effectual means of getting rid of these pests is by thorough and systematic cleaning. *Pulex irritans* goes through its various stages from the egg to the perfect insect in a period of about a month, and the first thing to do, therefore, is to thoroughly cleanse all articles likely to form a nidus for the eggs at periods within a month or before the eggs burst. Furs, woollen garments, mattresses, pillows, and all such things, and the various folds and pleats in our clothes, are frequently chosen as suitable places for the deposit of eggs. While linen materials generally receive frequent and thorough cleansing, the articles we have just mentioned are often but imperfectly cleansed, and herein, in many cases, lies the unsuspected cause of the plague. As long as the plague lasts blankets should be washed at least once a fortnight and subjected to

a temperature—either by steam or by some other means—sufficiently high to kill the ova. Old pillows should be destroyed or subjected to heat in the same way, and carpets, rugs, curtains, and clothes—in fact, anything likely to form a harbour for the pest—should receive similar attention. Floors should be washed at least once a fortnight with salt and water (about a handful to a pint),—a strong decoction of laurel leaves, it is said, will answer the same purpose. Several plants, from their power of destroying or driving away the pest, have received the name of “*flæbane*,” but their efficacy is perhaps more supposed than real. Some years ago a correspondent who had travelled a great deal in England and on the Continent, whose experience of hotels and inns included those of Austria and Italy, advocated in our columns the use of the common English lavender kept with clothes or in beds. Good lavender water or a solution of the oil of lavender in spirit frequently sprinkled on beds and clothing should have the same effect. Paraffin oil is said to drive away these insects if sprinkled freely, but the great objection to this is of course the smell. If before retiring for the night the body be sponged with weak vinegar and water pulex irritans will often cease from troubling. To allay the irritation caused by the bite sal volatile or salt and water is generally efficacious.

MISTAKEN LIBERALITY.

It is not often that a purchaser has to complain that the material supplied is “too strong.” Licensed victuallers and refreshment contractors might be tempted to greet such complaint as sarcastic chaff, though purveyors of certain kinds of cheese might not be surprised. Cheese, however, is not yet included in the Pharmacopœia, but diluted acetic acid finds a place therein, and an unlucky druggist who sold a specimen of more than twice the pharmacopœial strength has been called to account. The case is still *sub judice*, but in the course of argument the intention of the Food and Drugs Act was called into question. It was suggested that the intention was to prevent fraud by dilution of such substances as milk and beer. Whatever the Act may mean there is no doubt that one of the primary ideas of the Pharmacopœia is to ensure uniformity, and this sword cuts both ways. It is unlikely that preparations of opium should be made containing more than the prescribed alkaloidal strength, but the danger of a benevolent desire to give more than is expected is sufficiently obvious in such a case. With diluted acetic acid the probability of danger depends upon the mode of employment, and with this the Pharmacopœia is not concerned. The judgment will be awaited with interest, since it is surely important to medical men to obtain drugs of constant strength, otherwise unexpected therapeutic, or rather toxic, results may be anticipated.

THE NORMAL PRÆCORDIA IN CHILDHOOD.

Dr. WHITNEY¹ publishes observations which he has made on the normal præcordia of childhood. An accurate diagnosis of heart disease naturally depends considerably on the accurate mapping out of the limits of the cardiac dulness. Dr. Whitney, from the study of a large number of cases, has arrived at the following conclusions: 1. In children, until the beginning of the sixth year, the outline of dulness of the heart in its normal condition has practically the same limits as in the adult—namely, above and to the left, a curved line extending from the junction of the third rib and the sternum outward and downward to the apex of the heart in the fourth interspace, a little internal to the mammary line; the right border, a perpendicular line corresponding very nearly with the left border of the sternum. The lower half of the sternum is therefore of the same resonance as is obtained over the upper half in children under six years of

age. 2. From the fifth to the ninth year the præcordial dulness varies in different cases. A considerable majority of children whose ages vary between these years have an area of cardiac dulness which does not differ from that found in infancy and in adult life. At five years, in all the cases which Dr. Whitney examined, the præcordial dulness was the same as that found in younger children. But at six years there were two cases of the area found in infants to one in which the area was enlarged, and at seven years of age there was about an equal number of each. At eight the proportions had changed, and there were three which were enlarged to two which preserved the usual area. At the age of nine the infantile condition had completely disappeared. The conclusion to be drawn from these statements is that not much importance can be attached to variations of the cardiac dulness in children between the ages of five and nine. 3. In children over eight and under the usual age of puberty the normal limits of the præcordia are always found to differ considerably from those of infants and of adult life. The upper border is generally higher. It is often as high as the second interspace, and occasionally as high as the second rib. The apex is usually a quarter to half an inch outside the mammary line. The right border, instead of being a perpendicular line along the left edge of the sternum, is a curved one which meets the line of liver dulness at a point outside of the right sternal edge one and a quarter to one and a half inches to the right of the median line. The outline is somewhat similar to that of a pericardial effusion.

NEITHER FOOD NOR DRUG.

THERE are certain articles of general consumption which, strictly speaking, are neither food nor drugs, the quality and character of which, nevertheless, it is desirable should be just as much beyond reproach as the indispensable members of our common dietary. Again and again the question arises in legal proceedings instituted under the Food and Drugs Act as to whether the article called into question is a drug or food, and frequently the prosecution fails because the article cannot be regarded as serving the purpose of either. A notorious example of this sort is the case of alum in baking-powder, which has been ruled in the High Courts as not a food within the meaning of the Act. On the same line of reasoning we might also exclude such things as condiments from its operations, and many other commodities about the purity of which, though neither strictly food nor drugs, it is equally desirable there should be no question. The time has come when many substances now outside the meaning of the Act, not being food or drugs in the common acceptance of the words, but which are consumed partially or totally in some way or another, should be made to conform to the Act's requirements of standard and purity. Putting aside the temptation to practise fraud in regard to these articles, the public have no security, it seems to us, against the use in them of possibly injurious substances. Last week an appeal was made in the Queen's Bench Division on a decision of certain justices at Chesterfield who had refused to convict the respondent of an offence under the Food and Drugs Act. It appears that the appellant purchased of the defendant three sticks of chewing gum, and each was labeled “Cloves, for chewing only, and not to be eaten.” A stick was submitted to the county analyst, who reported that it contained 35 per cent. of paraffin wax, that the wax was insoluble, and that if a portion of it was swallowed it would be injurious to health. In the end Mr. Justice Cave said he was of opinion that the appeal should be dismissed. The magistrates had found that the article in question was not an article of food, and he could not say they were wrong. Mr. Justice Wright concurred. The article in question, it is true, was only intended for chewing,

¹ Archives of Pediatrics, November, 1894.

and not swallowing, and it is interesting to opine what the decision would have been if the foreign substance found had proved to be even more injurious than paraffin wax. The probability, however, of swallowing this hybrid jujube is extreme, and the risk involved by children, for instance, who appear to be the biggest consumers, is serious. Paraffin wax is a refractory, inert substance, which probably passes through the system for the most part unchanged, while it doubtless hinders the digestive functions and would tend to obstruct freedom of passage. The public have a right, we contend, to demand an article of purity and free from objection, be it food, drug, or other thing destined for consumption in one way or another. The practice of chewing tobacco is detestable and objectionable enough, but even for this purpose tobacco and nothing but tobacco should be supplied. These are subjects which are engaging the attention of the Food Products Adulteration Committee now sitting, and we trust they will see their way to recommend an extension of the scope of the Acts so as to include many articles of consumption which are not necessarily food or drugs, the sale of which should all the same be under some control.

PARISH HOSPITALITY.

It is not to be expected that the demands of a luxurious taste should be considered in making arrangements for the management of parish hospitals and asylums. If the claims of humanity be met the ratepayer may feel that he has done his duty. These claims, however, constitute the irreducible minimum immediately below which is the freezing-point of charity. In some institutions it would appear as if the temperature of social usage never rises above, if, indeed, it reaches, this level. Trained nurses are needed, but their place is filled by ignorant and superannuated paupers; stimulants are called for, and, as constantly happens, they are dispensed by the thimbleful. Visiting friends are treated with scant courtesy. The case of these latter has lately been taken up by the Mile End board of guardians, who have very properly condemned an absurd custom still practised at Claybury Asylum. At 5.30 A.M. the inmates of this establishment must get up for the day. Visitors who may have passed the night with dying relatives are at the same hour dismissed from the building to return, if they choose, after the breakfast hour. Anyone can appreciate the discomfort implied in this arrangement, carried out as it is under under all conditions of weather and season. A waiting-room could no doubt be very easily provided and warmed with a stove or fire at no great cost. Nor should there be any difficulty in providing at the breakfast hour some simple refreshment for any visitors willing to pay a trifle for it. We are pleased to note that the Mile End guardians are disposed to institute a reform in the present inhospitable system, and we would commend their action to the notice of the parochial authorities elsewhere, who may be conversant with customs of an equally rigorous character.

OPTIC NEURITIS FOLLOWING OZÆNA.

In a recent number of the *Annales d'Oculistique* Dr. D. E. Sulzer has an article on this curious and interesting condition. He says that he has not been able to recognise any symptom of abscess of a sinus in the two cases complicated with optic neuritis which he himself has observed. These cases are noteworthy on account of the long duration of the symptoms. The first patient, thirty-four years of age, had been subject to ozæna from early youth; seventeen years before he came under Dr. Sulzer's observation he had had an operation performed on the nose, and had ever since freely irrigated it with boracic acid in order to mitigate the fetid odour. Lately, however, these precautions had been neglected. The turbinated bones on the left side were small; those on the right, as well as the posterior art of the septum, were

absent, having been removed at the operation referred to. For ten or fifteen days before he had consulted Dr. Sulzer he had observed an obscurely veiled portion situated at the lower and inner side of the left visual field. In this portion objects were seen indistinctly and with fringed borders. Examination with the perimeter revealed a large irregular scotoma in the left visual field. With the ophthalmoscope the papilla of the right optic nerve was found red and swollen, the redness and swelling being almost confined to the superior part of the papilla. At the nasal side a small hæmorrhage was visible. No affection of the sinuses was found, and no abundant discharge from the nose had at any time been observed. During the next two years no further symptoms developed, but amelioration of the ocular condition proceeded *pari passu* with the improved condition of the nose. The lacuna in the visual field disappeared entirely after three months' treatment, but the ophthalmoscopic changes have never entirely ceased to be visible. The second case was that of a woman aged twenty-seven whose vision had failed for several years. Central vision was found to be considerably reduced and the lower halves of the visual fields were almost completely absent; ophthalmoscopic examination revealed redness and swelling with obscuration of the margin of the disc in the upper halves. The changes were more marked in the left than in the right disc. Ozæna had existed since early youth, and the left nasal fossa, especially the middle turbinated bone, was covered with yellow crusts emitting an intensely offensive odour. Treatment of the nose with warm boracic acid irrigations soon led to great amelioration not only of the nasal trouble but also of the ocular. The vision improved, the swelling of the discs subsided, and within a very short time the ophthalmoscopic changes had almost disappeared. Dr. Sulzer in conclusion briefly discusses the etiology of the neuritis in these cases, but, as he remarks, the facts observed do not yet justify him in formulating any definite theory.

PRELIMINARY EDUCATION FOR MEDICAL STUDENTS.

A CIRCULAR letter, signed by the Deans of most of the London medical schools, has been sent to the headmasters of the public, grammar, and intermediate schools in England and Wales, calling their attention to the advantages of matriculating at the University of London in the case of any pupil who intends to study medicine at a London medical school. This is the outcome of the new regulations by which a five years course is now as necessary for a diploma as for a medical degree, and consequently the latter will be more frequently taken than under the old regulations. The advice to a pupil to pass his preliminary examination at the University of London is admirable, but it must be remembered that many who will become medical students cannot attain to this standard while many headmasters, for obvious and valid reasons, object to instruct their pupils with a view to the examination. Either a boy must have special tuition, or a matriculation class must be in regular work in his school, and this is not likely to be the case in the principal public schools of England. The range of subjects is so large that no boy can master them in the ordinary routine of school life, and in few schools can a proper training in mechanics, chemistry, physics, or botany be obtained. In 1886 a subcommittee of Convocation recommended considerable alterations in the syllabus for this examination, but practically the Senate has left the examination as it then stood. In the report of that subcommittee will be found expressions of great dissatisfaction from many of our most eminent school authorities, and it is but little likely that they will change their present systems of teaching with a view to meeting the tests whose desirability they have denounced. The fact

is that the matriculation examination aims at two objects, which are incompatible. It is looked on by many as a certificate of proficiency for boys leaving school, whilst it is also the entrance examination for the University degrees. So far as it fulfils the former purpose, it must fail as a proper commencement to the latter. It would be one of the first duties of a teaching university to arrange a proper examination to serve as the portal to its degrees.

ST. GEORGE'S HOSPITAL.

DR. PATRICK MANSON has been appointed Lecturer on Tropical Diseases in the St. George's Hospital Medical School. Dr. Minson will give a course of some twenty lectures on the principal diseases peculiar to the tropics and Eastern Asia during the summer session of each year, commencing this year early in June. They will be illustrated by demonstrations of living patients and of microscopic objects shown by means of the electric lantern, with which the St. George's lecture rooms have lately been fitted. The lectures will be especially adapted to the needs of medical men preparing for service in the tropics or the East, and admission to them will not be limited to students of the St. George's School. This is, we believe, the first provision made by any English school for special instruction in this important subject.

THE HEALTH OF LORD ROSEBERRY.

WE are happy to announce that Lord Rosebery's health continues to improve, though the duration of his period of convalescence speaks to the severity of his attack and the wearing nature of the chief symptom—insomnia. He has gained in strength during the week, and in general tone, and has enjoyed better nights; but, as can be readily believed by those who have watched the politics of the last few days and have noted the acrimonious spirit that has crept into them, public affairs have made great demands upon him and have undoubtedly retarded him in his progress to health. The Cabinet Council held on Saturday last at Downing-street was unusually protracted, and as a result of the anxiety and fatigue the Premier passed a bad night. He has not yet left The Dardans, partly because the unsettled state of the weather did not promise him a pleasanter sojourn at Walmer, but chiefly because the proximity of his Epsom house to London renders it easy for him to see his colleagues and personally assist in their deliberations.

THE PREVENTION OF WINDOW-CLEANING ACCIDENTS.

ACCORDING to the report of the Registrar-General the number of fatal falls from the window in England alone is eighty per annum, but notwithstanding this fact little has been done either on the part of the Government or on the part of house-owners to take means to lessen this unnecessary mortality. In 1892 the corporation of Glasgow passed a by-law enacting that in dwelling-houses all window-sashes above the ground floor should be hinged or constructed so as to admit of the outside of the windows being cleaned from the inside of the apartment; and we believe that an old Act, passed in 1847 and applying to English boroughs, made it an indictable offence to allow anyone to stand outside a window, with a fine of 40s. payable by the occupier. But this Act is undoubtedly a dead letter in the country, and would anyhow be impracticable in a large city like London. The proper remedy obviously lies in the fitting of the window itself. If this can be so constructed that the operation of cleaning can be performed from the inside, whilst the framework is both air- and water-tight, the safety of the cleaner is assured, but before any such innovation can become popular among those who have grown up among sashes, and

are returning to casements, it must be made clear that the new invention does not lose in comfort for its user what it may gain in safety for his servants. The framework must be air-tight and water-tight, and the general effect must be good to look at and obtained at a reasonable cost. These and many other advantages are possessed by the National Accident Prevention Window, which we have had an opportunity of examining at the Builders' Exhibition held this week at the Agricultural Hall, London. The window, which has the appearance of an ordinary window, consists of top and bottom sashes, each of which can be drawn inwards and attached to a stay bar while being cleaned, the top sash drawing down so as to render it unnecessary for the cleaner to use steps or to raise himself above the level of the floor. Cleaning is thus rendered perfectly easy and the risk of loss of life is obviated. At the same time the peculiar construction of the sash and frame entirely prevents draughts. When necessary for the admission of a large body of air or for the entrance of cumbersome articles of furniture, the window can be lifted out; and reglazing can be done inside the room with perfect safety. The cost of fitting this window to existing frames varies from 17s. 6d. to £1, and a new window and frame in this style costs but 17s. 6d. more than the fitting of an old-fashioned window. The same firm exhibit a window adapted to hospitals, which, while possessing the same advantages as those we have just alluded to, has in addition a hopper transom light, with glazed wooden cheeks and a ready means of drawing the fanlight inwards for cleaning. A casement window is also shown which opens inwards and outwards, and is perfectly watertight. We are glad to note that these windows are now the accepted model in building new Board schools in London.

THE BACTERIOLOGICAL TEST OF THE PURITY OF WATER.

WE desire to call attention to the excellent scientific work of a practical and useful character that is at present being carried on in India, thanks to the labours of Professor Hankin, the chemical examiner and bacteriologist to the Government of the North-West Provinces and Oudh. Professor Hankin, who is a Fellow of St. John's College, Cambridge, is by his training eminently qualified for the work he has undertaken and is prosecuting in India. He has just written and published a short pamphlet for the use of municipal engineers and others interested in providing water for drinking purposes, in which his aim has been to explain the process of testing for microbes present in water to those who wish to carry out this process for themselves. He states his conviction that the time has come for substituting the simpler, cheaper, and more reliable method of "microbe counting" for the cumbersome and expensive one of testing municipal water chemically, and he considers that the former method should be relied on to learn whether municipal filter beds are performing their functions properly. This opinion is mainly based on the observations and evidence of Prof. Koch in his paper "Wasserfiltration und Cholera," which was translated and published as an appendix to the report of the medical officer to the Local Government Board for 1893. Of course, the great value of the chemical test for other purposes is not questioned; but cases have been known, says Professor Hankin, in which a breakdown of filter beds that caused an epidemic was detected by means of the bacteriological test when the chemical test failed to afford any indication that anything was wrong with the water. The little pamphlet under notice contains much interesting information regarding the bacteriology of the waters of Indian rivers as compared with those of Europe; the process of filtration and the *modus operandi* of sand filtration; the municipal filter beds, filter-tank wells, and water-supplies of India, and the accidents to

which they are exposed; together with a description of the method and apparatus necessary to carry out the bacteriological examination of water.

THE MALE NURSES' (TEMPERANCE) COÖPERATION.

WE have received a report of the first year's working of this association, from which we learn that the average earnings of each man have been at the rate of £97 2s. 5d. per annum after paying all expenses. This is certainly a gratifying result, and we congratulate the association upon it. The old-fashioned drinking female nurse is quite extinct, but, as the report says, a prejudice has hitherto existed against male nurses owing to the number of drunken and doubtful characters calling themselves by that name. This prejudice the association in question has set itself to overcome, and we trust their efforts will meet with success. The offices of the association are at 8, Great Marylebone-street, Portland-place, W., and all information will be supplied by the secretary, Mr. F. Rouse.

THE LIFE-SAVING SOCIETY.

It is only within recent years that swimming—most ancient of exercises—has received the attention which it deserves and that much encouragement has been given to the art, from the life-saving point of view as well as from the athletic. With this idea before it the Life-Saving Society was formed, and its beneficial objects, which are now known almost throughout the world, have met with much encouragement. The annual report of the society, which has just been issued, is a most satisfactory record of progress. It gives us great pleasure to note the number of medical men throughout the kingdom who have taken an active interest in the society, and to whom the executive tender their hearty thanks. The public lectures and demonstrations of rescue, resuscitation, and release from the clutch of a drowning person have been well attended, and the number of clubs that have been induced to start life-saving classes shows a marked increase. It is needless to say that such work cannot be carried on efficiently without substantial pecuniary aid, and such a society should not ask in vain for public support. On the necessity and importance of the art of swimming being taught as part of the ordinary school education we have insisted in these columns more than once, and all efforts to establish new swimming baths have always met with our warmest support. In this connexion we are pleased to note that at last there is some prospect of a swimming bath being built for the City of London. The City of London Swimming Association, which with its affiliated clubs boasts a membership of over 3000, has long agitated for a home, and it is now stated that the Commissioners of Sewers are considering sites and plans for this purpose.

A MATTER OF ETIQUETTE.

A QUESTION has recently come before the vestry of St. George's, Southwark, which shows how difficult it may be for laymen to understand the ordinary rules of courtesy and ethics which govern members of the medical profession. It appears that Dr. Waldo, the medical officer of health, agreed, under the terms of his appointment, "to attend, if required, the employes of the vestry during illness." We presume that this meant if the employes wanted him instead of their usual medical attendant. At a meeting of the vestry, held on the 12th ult., Dr. Waldo was instructed to attend the sick employes and report upon their condition, and at the vestry meeting held on the 26th ult. he reported that he had done so, and that he had explained to the clerk that the usual custom was for the medical man in charge of the case to be consulted before another medical man came upon

the scene, and to get a double fee; he had also asked the clerk if he could guarantee this fee to the medical men on behalf of the vestry. The chairman said the object of the resolution of the 12th was to prevent malingering, and another vestryman said he thought Dr. Waldo could pay an occasional visit without a consultation. Dr. Waldo thereupon explained the etiquette of the matter, saying he could not say whether a man was malingering or not without making an examination. To this a Mr. Bray remarked that it was never intended that the medical man should diagnose the case, for he thought that the practitioner could tell by the colour of a man's face whether he were ill or not! Eventually the matter was referred to the Works Committee after Mr. Barr had said that the proposal of the vestry placed their medical officer in the position of passing a vote of censure on other medical men. Mr. Barr's remark seems to us to comprise the whole gist of the matter, and we are glad to see that at least one member of the vestry was able to view things in this light. We shall be curious to learn the result of the Works Committee's deliberations, and can only hope that they will stand by Dr. Waldo in the honourable position he has taken.

THE LONDON HOSPITAL MEDICAL COLLEGE.

A STAINED-GLASS window containing the coats of arms or crests of past or consulting members of the staff of the London Hospital has just been erected in the Library of the London Hospital Medical College. It has long been desired to perpetuate in some manner the names of those who worked and taught for so many years both in the Hospital and College, and it was recently decided to adopt this form of memorial. The window just erected contains thirty-two shields on which are displayed the armorial bearings of past or consulting members of the staff, including those of Dr. John Andree, first physician, and Mr. John Harrison, the first surgeon, appointed in 1740. There are also the coats of arms of Sir William Blizard, Sir Andrew Clark, and Messrs. Richard Clement Headington, John Goldyer Andrews, James Luke, Thomas Blizard Curling, and Jonathan Hutchinson, all at one time or another Presidents of the Royal Colleges of Physicians or Surgeons, as well as other distinguished members of the medical profession who were on the staff of the London Hospital. It is hoped in time to add the armorial bearings of many others whose descendants at the moment have not been traced, and any information with reference to former members of the staff whose names do not appear in the present window will be gladly received by the Warden of the College, who will be pleased to show the window to all who may be interested.

FROUD v. SNELL.

WE recently commented upon a proposition made by a correspondent with regard to limiting the opportunities afforded to phthisical subjects for marriage, and now the question has appeared in the unromantic atmosphere of the Law Courts. Dr. S. H. Snell, a medical practitioner, had promised to marry a Miss Froud, but a month or so before the intended date of the marriage the defendant discovered that Miss Froud's mother had died from "phthisis meningitis," and thereupon broke off the engagement. The result of this was that on April 2nd, in the Queen's Bench Division, a jury found a verdict for Miss Froud for breach of promise and awarded her £1000. Mr. Justice Hawkins refusing to stay execution. The plaintiff's counsel tried to bring out the point that the defendant was influenced in his actions by the fact that Miss Froud was the daughter of a butcher, while he was the son of a costumer, and therefore higher in the social scale; but this allegation was not supported by any convincing evidence. Dr. Snell's point was that he did not care to

have the responsibility of being the means of possibly bringing children into the world who would suffer from the hereditary taint of phthisis. Undoubtedly a man who marries when he has either a phthisical history himself or selects as his wife one labouring under the same disability does take upon himself a heavy responsibility, and Dr. Snell's views on that question cannot be too highly commended. Our sympathy with him would, however, have been greater (indeed, would probably not have been needed) had he taken the trouble to ascertain particulars of the lady's family history before "proposing" to her and had he refrained from imputing fraud to the plaintiff with respect to the cause of her mother's death. She was only eleven years old when her mother died and so probably would know nothing of the matter.

NOTIFICATION OF TYPHOID FEVER.

AN important case in regard to notification is reported in the *Yorkshire Evening Post* affecting the question whether it is the duty of more than one medical man to notify. A case of typhoid fever was attended at Cullingworth by Mr. Jackson of Denholme, who notified. Later Mr. Beckett was called in, and apparently without inquiring whether the case had been already notified, also notified. For this second notification the District Council refused to pay, on the ground that the case had been already notified. The magistrate took the view that Mr. Beckett should have inquired, and on ascertaining that his predecessor in attendance had notified should have desisted from further notification; but he deferred judgment. We are clear that it was Mr. Beckett's duty to notify in accordance with the words of the Act: "Every medical practitioner must notify forthwith." This point we have already dealt with in a recent series of articles entitled "Difficulties under the Infectious Disease (Notification) Act," which has been reprinted in pamphlet form.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria has again risen, the figures for last week being 6 above the corrected average, and in all 31, as compared with 34, 27, and 24 in the three preceding weeks. All the 31 were persons under twenty years of age; 6 of these belonged to Greenwich, 3 each to Camberwell and Poplar, and 2 each to Battersea, St. Pancras, and Westminster sanitary areas. The admissions to hospital last week were 67 in number, and compare with 55, 61, and 64 in the preceding three weeks; the number of patients remaining in hospital, which had varied but very slightly for three weeks, fell 20. The number of admissions, however, gives but very little idea of how the disease really stands, as the admissions, last week for example, were only some 60 per cent. of the cases heard of in London. It is true that the cases of March show a large drop compared with those of January of this year, but they also show a heavy rise on the total for February. Roughly, we have for the three months of the past quarter 800, 425, and 500 cases to consider. In the same months of last year the respective figures were 1050, 800, and 750, and the quarterly total for last year works out at some 2600, against 1740 for the current year. Judged by case mortality the comparison for the two quarters is as follows, 1894 being in each instance first named:—January, 28.0 and 23.0; February, 27.0 and 23.4; March, 29.2 and 23.0; and for the three months, 28.0 and 24.5 per cent. So, speaking generally, the present is a milder epidemic, and also a more limited one in point of numbers, although it appears of late to be recrudescing to some extent.

DR. ARTHUR GAMGEE, F.R.S., of Lausanne, is, we are glad to say, recovering from the serious attack of double pneumonia consecutive to influenza from which he has lately suffered.

ON April 1st there started for Massowah *en route* to the Colonia Eritrea (Red Sea Colony) a first relay of the staff and *matériel* of the Italian Red Cross Society destined for active duty in the frontier warfare in which the army of occupation, native and European, has been engaged for ten years. It consists of a hospital fitted up with fifty beds, with a transport service of mules and a carefully selected body of physicians, surgeons, nurses, and attendants. A full account of the initiative thus taken by the Società della Croce Rossa Italiana and of its probable scene of operations was given in THE LANCET of Feb. 23rd, 1895.

THE University of Aberdeen has bestowed the degree of LL.D. *honoris causa* upon three distinguished members of the profession:—Sir J. Russell Reynolds, Bart., F.R.S., President of the Royal College of Physicians, London; Surgeon-Colonel Robert Harvey, D.S.O., Honorary Surgeon to the Viceroy of India and the President of the recent Congress of Medicine in India; and Sir William McGregor, M.D., K.C.M.G., the newly appointed Lieutenant-Governor of British New Guinea. Sir William McGregor's appointment was gazetted last week; he has been for seven years Administrator of British New Guinea.

OUR Durham correspondent calls the attention of the medical graduates of the University of Durham to the fact that the biennial prize in surgery, due to the beneficence of the late Professor Heath, will be awarded next year. The Heath Scholarship, being the interest of £4000 accumulating for two years, is one of the most valuable surgical prizes in the kingdom, and we feel confident that the trustees will have before them by next March an assortment of careful contributions to surgical science between which to discriminate.

MR. CHARLES SCOTT SHERRINGTON, M.A., M.D. Cantab., F.R.S., Professor-Superintendent of the Brown Institution and Lecturer on Physiology at St. Thomas's Hospital Medical School, has been appointed Holt Professor of Physiology in University College, Liverpool, in the place of Professor Francis Gotch, F.R.S., the new Waynflete Professor of Physiology in the University of Oxford.

THE annual meeting of the North London Medical and Chirurgical Society will be held on Thursday, the 11th inst., at the Great Northern Central Hospital, Holloway-road, at 9 P.M. The President, Dr. Glover, will deliver an address on the Profession—its Place and Progress.

THE President of the Local Government Board has appointed Major-General A. de Courcy Scott to inquire into the complaints that are being generally made against the working of certain of the metropolitan water companies.

DR. WILLIAM MARCET, F.R.S., will deliver the Croonian Lectures at the Royal College of Physicians of London on June 18th, 20th, 25th, and 27th. The subject of the four lectures is the Respiration of Man.

MR. ANDREW CLARK, F.R.C.S., Assistant Surgeon to the Middlesex Hospital, has been elected a full surgeon to the hospital, filling the vacancy caused by the death of Mr. J. W. Hulke.

MEDICAL MAGISTRATES.—Mr. W. C. Faulkner, M.B. Edin., of Rockhampton; Mr. M. W. C. Perceval, L.K.Q.C.P. Irek., of Isistord; Mr. W. E. Roth, L.R.C.P. Lond., M.R.C.S., of Boulia; and Mr. D. W. B. Wilkie, M.B. Melb., M.R.C.S. Eng., of Gayndah, have been appointed Justices of the Peace in Queensland.

PROFESSOR KOCH ON WATER-SUPPLY AND CHOLERA.

PROFESSOR KOCH's recent work on this subject has been translated into English by Mr. George Duncan, M.A., and is entitled: "Professor Koch on the Bacteriological Diagnosis of Cholera, Water Filtration and Cholera, and the Cholera in Germany during the Winter of 1892-93." It is published in Edinburgh by David Douglas and has a few words of preface by Professor W. T. Gairdner, M.D., LL.D., F.R.S. So far as it deals with bacteriology, every line will be read with the interest and respect due to certainly one of the greatest among the bacteriologists of all nations; but when Professor Koch deals with cholera in relation to the water theory he opens out controversial ground. No one can accuse *THE LANCET* of not having repeatedly and forcibly dwelt upon the important connexion which exists between outbreaks of cholera and contaminated or impure sources of water-supply, and this at a time, too, when the subject had not attracted anything like the attention that it has at present. But there is, nevertheless, a danger of people forgetting that contaminated water has not yet been demonstrated to be the sole and exclusive cause of cholera. It is, no doubt, a most important—probably the most important—point on which to focus attention in times of cholera prevalence, but it is not everything, and to direct and limit our efforts in public sanitation in this direction only is to curtail our powers, and to court may be disappointment and failure in the future. Speaking of the influence of water in the spread of cholera, it is right, however, to point out that Professor Koch says: "Some, misled by isolated observations of a specially surprising nature, have gone decidedly too far in this direction, and declared water to be the exclusive bearer of the germ of cholera. To these the designation of 'water fanatics' or 'water theorists,' which has been much used of late, may not quite unjustly be applied. That I do not belong to this class of cholera investigators will be admitted at once by everyone who knows what I have said and written about cholera. I have always said that, according to experience hitherto gained, direct transmission from person to person is possible, but to all appearance not very frequent; that, on the other hand, indirect transmissions by many bearers of the germ of cholera play the principal part in the real epidemics and mass outbreaks of that disease, and that among these bearers water is one of the most important. I have further endeavoured to show by examples that, under certain conditions, water has really played the part ascribed to it. Beyond that, however, I have never, as far as I know, expressed an opinion as to the extent to which this factor is to be regarded as effective. Nor has it been possible hitherto to arrive at a definite judgment on this subject, because investigations of the relations of cholera to water have almost always been undertaken from a one-sided point of view and are therefore generally open to objection. Why, under such circumstances, attempts have been made to stamp me, of all people, as a 'drinking-water fanatic,' I do not clearly understand. It seems almost as if the purpose were to attribute to me by hook or by crook opinions which it is easy to refute."

These are words which we gladly reproduce, though unfortunately they are not quite borne out by the context of the book. On the very same page, speaking of Hamburg, Altona, and Wandsbeck, Professor Koch says: "These three places, which immediately border on one another, and, strictly speaking, form one single city, do not essentially differ from one another except in the one respect that they are differently supplied with water." It would surely be difficult to find a more "one-sided point of view" than is implied by this assertion. Whatever may be the point of view of a bacteriologist, to the sanitarian great and fundamental differences exist between the places mentioned. A great portion of Altona stands high on a dry rock and is easily drained; the part of Hamburg which was most severely affected by the cholera epidemic is on low-lying marshy soil. Indeed, so unmindful is Professor Koch of sanitary conditions that he even caps the above sentence by saying, a few pages further on, that "Hamburg is one of the best drained cities of the world." Considering that a part of the houses in Hamburg are built on piles, and that the

soil is in many places below the level of the water of the river, it would be very marvellous if a town thus disadvantageously situated were so admirably drained. In any case, the engineers in charge of the Hamburg sewage works make no such pretensions. On the contrary, they informed one of our representatives that the main sewers were originally intended to drain the ground and therefore were not impervious, but had purposely been made to leak; that the sewers were built of bricks; that there was no natural fall; that the sewage had to be raised artificially by pumping; and that, to drain satisfactorily, there were many districts where the ground on which houses are built should be raised artificially. Worse than all this, there is no system of inspection to ensure that all drains and waste-water pipes are properly trapped and disconnected from the sewers. Great as is the undoubted importance of the question of water-supply, a treatise on cholera at Hamburg which does not deal with these and other grave sanitary defects is certainly open to the charge of being somewhat one-sided.

If Professor Koch ignores the sanitary defects of Hamburg he does not fail to point out the sanitary defects of the Nietleben Asylum. This is perhaps even more surprising, for, though evidently conscious of these potent causes of disease, he lays no stress upon them and would appear to regard them as of but little importance. Thus we are told that the asylum was built in 1840. What knowledge existed of sanitation in Germany, or, for the matter of that, in any other country, in 1840? Then we are told that the asylum has a sewage farm intended to treat the sewage of 600 persons, but that the asylum had 991 inhabitants. Among this population there were 122 cases of cholera, resulting in 52 deaths. This occurred during the winter, and there was no reservoir at the sewage farm to retain the sewage during frosty weather. The sewage water, which was found to contain from 350,000 to 470,000 germs per cubic centimetre, was allowed to flow over the frozen ground without being properly filtered or purified. Attendants coming from Hamburg infected the sewage, the sewage infected the water-supply, the water-supply was not properly filtered, and therefore cholera broke out in the asylum, and this in a simultaneous manner all over the building, instead of creeping from ward to ward, as it had done in the 1850 and 1866 epidemics. Professor Koch further remarks, but again fails to lay stress on the fact, that the ward which suffered the most was that of the incurables, who were exceptionally dirty in their habits; while in Pavilion P—, which was only half full of inmates, no case occurred. All this would seem to show that the Nietleben Asylum is in an insanitary condition, which renders it especially susceptible to cholera influences, and that the worst parts of the asylum suffered most and the better parts least. Instead, however, of insisting on the necessity of better sanitation, Professor Koch suggests that the attendant at Pavilion P— was more careful in boiling the water given to the inmates. That some carelessness may have existed in some of the other pavilions is probable, but it is not probable that it prevailed in all these pavilions. Surely the water was carefully boiled in some of the pavilions where cholera prevailed. It would be a very peculiar coincidence if proper precautions were taken only in the pavilion where there was no overcrowding and which was only half occupied. Might it not have been the plentiful supply of space and air rather than the boiled water that saved the inmates in Pavilion P—, and might not Professor Koch be teaching a more useful lesson if he insisted on the necessity of plenty of room and of efficient ventilation? Again, in the neighbourhood of the asylum the cholera outbreaks seem to be associated with the drinking of the polluted water of the Saale river. We are told that at Trotha the disease was entirely restricted to one exceptionally insanitary house. This house was inhabited by 14 families, consisting of 62 persons, and some workmen who had drunk Saale water had cholera; but there was no cholera anywhere else at Trotha, and 16 or 18 persons died from the disease in this self-same unwholesome house during the 1866 epidemic. What, then, was the principal cause of cholera—the drinking of the Saale water or the living in this especially unhealthy and overcrowded house? Many persons drank Saale water and did not have cholera, but they did not live in such insanitary, overcrowded houses.

The same arguments apply to Hamburg and Altona. The facts are capable of being read differently and of receiving another interpretation than that which has been given to them. The prevalence of cholera varied, not according to the

water-supply, as Professor Koch would have us believe, but according to the density of the population, the foulness of the subsoil, and the poverty of the inhabitants. We are referred to the cholera maps, but we have seen and have published such maps and do not find that they coincide with the water-supply.¹ The spots marking places where deaths from cholera occurred become thinner and more scattered as we look on the Altona side of Hamburg; but this reduction of cholera cases commences within the boundaries of Hamburg, and before the frontier line of Altona is reached. Then, as we have pointed out several times before, there were far greater differences between the various districts of Hamburg itself, where the same water is drunk, than there is between Altona and Hamburg. It seems very conclusive to state that at Altona the Elbe water was filtered and the death-rate from cholera was only equal to 2·13 per 1000, whilst at Hamburg the Elbe water was not filtered and the death-rate from cholera was equal to 14·2; but these are mere generalisations, and sanitation has to deal essentially with details. We should like to know—unfortunately we do not know—what was the death-rate in those few portions of Altona which can be compared with Hamburg. They would probably be found to correspond much more closely with the experience acquired at Hamburg; for it was precisely in the low-lying and worst-drained districts of Altona that most of the Altona cases of cholera occurred. It is preposterous to compare the part of Altona built on a dry hill with Hamburg, built on marshy soil. But even taking the figures of Altona as a whole, which is a manifestly unfair thing to do, we find that in Hamburg itself, in districts that almost touch Altona, the Rotherbaum and Harvestehude districts, the mortality from cholera was 5·91 and 4·43 per 1000 inhabitants. But in these districts the average income is 2310 marks and 3155 marks; they are the wealthiest districts of Hamburg. The income of the two districts actually touching Altona is very low—563 marks for Eimsbüttel and 421 marks for St. Pauli, yet their death-rates from cholera were 10·76 and 12·56. Perhaps these death-rates are below the Hamburg average because these districts, being the nearest to Altona, possess something of the sanitary advantages enjoyed at Altona. As we get further away from these a reference to the map we published will show there is a higher death-rate even where there is a higher income—for instance, in one such district, 17·52 per 1000 deaths from cholera, though the average income is 668 marks per inhabitant. In fact, poverty alone does not produce a high death-rate; it must be in combination with bad sanitary conditions. All this, however, Professor Koch passes over; in his mind Altona and Hamburg only differ inasmuch as they have different water supplies. He forgets also that this difference, even in respect to the water-supply, did not always exist. In 1831 the water was probably just as bad at Altona as at Hamburg, yet the death-rate from cholera at Altona was only 0·5 per 1000, while it was equal to 3·4 at Hamburg. Altona enjoyed the same immunity in the 1866 epidemic, the figures being 5·4 for Hamburg and 1·4 for Altona. There is nothing new in the fact that in serious epidemics Altona is comparatively free from cholera, and that this immunity is due to other causes than water-supply is unconsciously hinted by Professor Koch. Not a word is mentioned as to the presence of the comma bacillus in the Hamburg water-supply during the great epidemic of 1892, yet the terrible fatality of this epidemic is attributed to this water-supply. On the other hand, speaking of the few cases of cholera that occurred at Altona during the following winter, Professor Koch says that "cholera germs—that is, cholera bacilli—were found in the water of the Elbe just below Hamburg and in the water of the Altona waterworks before filtration"; and as at that time two of the filter beds were out of order he thinks the germs got through these beds. Nevertheless, only a very few cases of cholera occurred. Nor is this the only instance of the bad water drunk at Altona. We are told that at Altona 366 wells were examined in May, 1892, and 92 were found to be polluted. One of the wells which was then considered good afterwards became polluted, and is supposed to have caused a small epidemic in the "Lange Jämmer" court. Thus the water drunk at Altona is not always filtered water free from cholera germs, and yet Altona enjoys a much greater immunity from cholera than Hamburg. Doubtless a polluted water-supply will cause an epidemic to spread with greater rapidity, and no one denies the extreme

importance of securing a pure water-supply; but there is a danger that a work such as that written by Professor Koch may tempt many local authorities to neglect other matters that are also of very great importance. For instance, at Hamburg great energy has been displayed since the epidemic in establishing filtering beds and waterworks, so that now the water at Hamburg is as good as at Altona; but the narrow, dark, unventilated courts and slums remain untouched. The leaky defective drainage is not remedied, the trapping of the soil pipes is not enforced, and the overcrowding of unhealthy dwellings continues as before. Complete protective measures against cholera have not yet been enforced. There might have been better results from the terrible lesson of 1892 if Professor Koch had not contented himself with a dissertation on the effects of water in cholera epidemics, but had dealt with equal fulness with the other causes which are quite as evident and which urgently need to be removed.

A PARISIAN EXHIBITION OF HYGIENE.

THE law of July 10th, 1894, compels all householders in Paris to connect their drains with the public sewers; but as all the sewers are not yet in a sufficiently perfect condition to receive the drainage of houses the connexion has only to be effected after notice has been served on the householders and within three years of the serving of such notice. According to the progress made in the building or repairing of sewers a fresh list of streets where such notices are to be served will be drawn up every year. The list for this year is of formidable length, and if within three years all the houses in these streets are properly drained Paris will be a much healthier town. There are actually in Paris 5447 blocks of buildings out of about 80,000 that are properly drained. These figures suffice to show how much work remains to be done. It is calculated that it will require ten years before all the cesspools and the portable pails &c. in Paris are replaced by properly flushed and trapped drains communicating directly with the sewers. The householders will have to pay a drainage tax instead of having, as at present, to pay a contractor to come and remove their pails or empty their sewers. In many cases the tax will be so much less than what is actually paid to the contractor that the economy realised will represent the interest and amortisation of the cost the householders will incur in building closets and drains suitable to the new system of drainage. Thus this great reform will have been brought about without imposing extra burdens on the already highly taxed population of Paris.

But the great majority of Parisian householders have no knowledge whatsoever of the proper methods of draining a house into a sewer. Till quite recently it has always been illegal to drain into sewers. For this reason the various syndical chambers representing the trades interested—plumbers, hardware manufacturers, paviors, &c.—have met together and obtained the sanction of the Government to hold an Exhibition of Hygiene at the Palace of the Liberal Arts, one of the wings of the great exhibition building of 1889. The leading sanitary reformers in France have been invited to help, and have consented on the condition that they should have the right to decide as to who should be admitted to exhibit and the right to exclude all bazaar elements and exhibits that are devoid of merit. Under these conditions a scientific committee of control and management has been formed, consisting, among others, of Dr. Brouardel, Dean of the Paris Faculty of Medicine; Dr. A. J. Martin, Director of the Sanitary Services of Paris; M. Bechmann, chief engineer of the town of Paris; and M. Louis Masson, chief sanitary inspector of Paris; and Messieurs Napias, Cornil, Proust, Bertillon, Gariel, Philbert, and others are also members of the committee, and their well-known names are a guarantee that every effort will be made to render the Exhibition in every sense worthy of its purpose. That purpose, as already explained, is to show the Parisian householder how he is to trap, flush, and ventilate. In this it was thought that English manufacturers, sanitary engineers, and plumbers might, advantageously to themselves, constitute an important British section. But the Exhibition is to open on May 15th or June 1st, and the time is wanting to bring exhibitors from abroad, though the exhibition professes to be international. However this may be, all measures that are

¹ THE LANCET, Aug. 25th, 1894.

likely to extend the knowledge of the practical application of the laws of health in their relation to domestic hygiene cannot but prove a benefit to the populations concerned. We therefore wish the Parisian Exhibition of Hygiene every success.

THE HIGH WYCOMBE CASE OF SCARLET FEVER.

A CASE of great interest, not only to the medical profession but to the public at large, has recently been decided at the Guildford County Court. The facts which came out in court are briefly these. Mr. Bird of High Wycombe was charged with exposing Sara Williams, a nurse suffering from a dangerous infectious disorder. Dr. Browne was also charged with the same offence, and the nurse was charged with having exposed herself while suffering from an infectious disease. Miss Williams was sent by the Hanover Institute for Nurses to attend upon the children of Mr. Bird, who were suffering from scarlet fever. A few days after her arrival she complained of not feeling well, and Dr. Browne saw her on Jan. 18th and expressed the opinion that she was developing scarlet fever. Thereupon it was decided that she should go to Woking, where the institute to which she belonged had a cottage used as a "quarantine" station. She accordingly travelled by train to Paddington, crossed London in a cab to Waterloo, where she sat some time in the waiting room, and then proceeded by train to Woking, there being other passengers in the compartment. On arrival at Woking the rash was well out. It was mentioned in court that it had been alleged that Mr. Bird had literally turned the nurse out when she was very ill; but we are glad to say that no evidence to support this was forthcoming, and the contradiction which he was of course unable, being a defendant, to give to the report from the witness box Mr. Bird has since made in the local papers. We learn that he has paid his fine and refused to carry the matter to a higher court. The cases against Dr. Browne and the nurse were dismissed. Another point to which we wish to draw attention is that, according to Mr. Wellington Lake's evidence, the Notification Act is not in force at High Wycombe, nor is there an isolation hospital there. On Jan. 18th a meeting of the Wycombe town council was held, when Mr. Wood moved that the Notification Act should be adopted. To this very sensible proposal one councillor remarked that the medical officer was paid to do the work, and yet he wanted some one else to tell him and "collar the half-crown." After sundry other remarks the resolution was put and lost by 12 votes to 7. We are sorry for this exhibition of ineptitude, for it is just conduct of this sort that helps to keep alive the old and, in most cases we fancy, now quite unjust allegation that vestries and town councils are incapable of doing any useful work or of treating any serious matter in the way it deserves. The Local Government Board will, we hope, impress upon the council the need of taking some definite steps to prevent the spread of infectious disease, and point out that a remedy lies ready to their hand if only they will use it.

This prevalence of diphtheria, which in its earlier days went by other names, is discussed at great length from the etiological point of view. Dr. Low came to the conclusion from a detailed investigation as to the general sanitary circumstances of houses and surroundings that faulty arrangements had not been commonly associated with occurrences of diphtheria, whilst the disease invaded dwellings where no fault could be found with the sanitary arrangements. As to emanations from sewers and drains which were locally credited with the disease, no evidence was forthcoming to show that this was the case. Water, as such, and defective flushing of hand-flushed and hence dirty closets, had also been credited with causing the disease, but Dr. Low is obliged to dismiss them after examination of all the circumstances. There seemed to be some concurrence between scarlet fever and diphtheria, but it was of limited extent; diphtheria, indeed, attained its greatest maximum in 1892, whereas scarlet fever prevailed most in 1893. But as has so often happened, a number of persons who were sent to the borough sanatorium with scarlet fever were attacked by well-marked diphtheria during their convalescence; and it is quite evident from the statistics of the hospital that there must have been a considerable amount of overcrowding there whilst the two diseases were simultaneously under treatment. In July, 1893, this was especially so, and "bad throats," some in a "sloughy" and "phagedenic" condition, were the result. This cannot be claimed as "isolation" work, which is the primary duty of a sanitary authority as regards hospital provision. Many other conditions influencing diphtheria are discussed in the report, but since 1890, at least, the disease had been so far prevalent that its cause could hardly be looked for beyond the limits of the borough where sources existed sufficient to explain the operation of personal infection. A seaside resort runs special risks as to importation, but Hastings seems to have retained its infection with some tenacity, and this partly owing to the inadequate and very imperfect means of isolation which the town possesses. The outbreak of small-pox in Hastings in 1894 is dealt with at length, but we pass rapidly over the clearly written statement as to this and limit ourselves to a few statistical considerations only. From January to June, 1894, there were 86 cases of small-pox in the registration district—namely, 37 in the urban and 49 in the rural district. Definite information was obtained as to the vaccination of 79 out of the 86 cases, the remaining 7 being doubtful. Two amongst the latter had died, and others had been so covered by confluent disease that nothing could be made out as to vaccination. The deaths at all ages amongst the 67 vaccinated was at the rate of 4.4 per cent.; it was 33 per cent. amongst the 12 unvaccinated. Under ten years of age there was no death amongst the vaccinated, whereas 4 out of 10 children under ten who were unvaccinated died. Out of the 67 vaccinated cases 35 were mild, 8 severe, and 3 very severe. Out of the 12 unvaccinated 1 was mild, 5 severe, and 4 very severe. Around the small-pox hospital 7.1 per cent. of 70 persons living within a hundred yards circle were attacked; whereas on infinitely larger populations the incidence dwindled gradually down to 0.2 per cent. when a zone of from 400 to 500 yards' distance from the hospital was reached.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6317 births and 4751 deaths were registered during the week ending March 30th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 35.0 to 27.7 per 1000, further fell last week to 23.4. In London the rate was equal to 21.1 per 1000, while it averaged 25.0 in the thirty-two provincial towns. The lowest rates in these towns were 14.5 in Swansea, 15.1 in Cardiff, 16.5 in Birkenhead, 16.8 in Croydon, and 17.8 in Halifax; the highest rates were 30.8 in Manchester, 36.6 in Brighton, 37.1 in Bolton, 38.3 in Wolverhampton, and 42.4 in Burnley. The 4751 deaths included 311 which were referred to the principal zymotic diseases, against 302 and 315 in the two preceding weeks; of these, 101 resulted from whooping-cough, 63 from measles, 53 from diphtheria, 45 from diarrhoea, 26 from scarlet fever, 23 from "fever," and not one from small-pox. No fatal case of any of these diseases occurred last week in Portsmouth; in the other towns they caused the lowest death-rates in Cardiff, Leicester, Leeds, and

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria and Small pox at Hastings. by Dr. BRUCE LOW.¹—This report deals separately with a prevalence of diphtheria and an outbreak of small-pox in Hastings, the former relating mainly to 1893 and 1894, and the latter to the early part of 1894. In the Hastings registration district there were 40 deaths from diphtheria in 1892, and 41 in 1893; and including deaths from other allied throat diseases there were during the three years 1891-93 no less than 177 such fatalities.

¹ Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Grafton-street, Dublin. Price 1s.

Bristol; and the highest rates in Sheffield, Manchester, Gateshead, and Bolton. The greatest mortality from measles occurred in Bolton and Sheffield; from scarlet fever in Wolverhampton; whooping-cough in Plymouth, Salford, Blackburn, and Gateshead; and "fever" in Halifax and Sunderland. The 53 deaths from diphtheria included 31 in London, 3 in West Ham, 3 in Manchester, 2 in Liverpool, and 2 in Birmingham. No fatal case of small-pox was registered in London or in any of the thirty-two large provincial towns. There were 58 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, March 30th, against 56, 57, and 58 at the end of the three preceding weeks; 11 new cases were admitted during the week, against 8, 12, and 11 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1555 against 1619, 1615, and 1587 on the three preceding Saturdays; 161 new cases were admitted during the week, against 141, 133, and 184 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 1336 to 740 in the three preceding weeks, further fell to 497 last week, but were 48 above the corrected average. The causes of 74, or 1.6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Nottingham, Oldham, Sunderland, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 42.8 to 31.3 per 1000, further fell to 25.4 during the week ending March 30th, but exceeded by 2.0 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18.4 in Greenock and 22.3 in Perth, to 32.0 in Paisley and 34.2 in Leith. The 732 deaths in these towns included 35 which were referred to measles, 26 to whooping-cough, 14 to diarrhoea, 5 to scarlet fever, 5 to diphtheria, 3 to "fever," and 2 to small-pox. In all, 90 deaths resulted from these principal zymotic diseases, against 110 and 115 in the two preceding weeks. These 732 deaths were equal to an annual rate of 3.2 per 1000, which was 1.7 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 48 and 56 in the two preceding weeks, declined again to 35 last week, of which 15 occurred in Glasgow, 9 in Leith, and 6 in Aberdeen. The 26 deaths referred to whooping-cough were within one of the number recorded in the preceding week, and included 12 in Glasgow, 6 in Leith, and 4 in Dundee. The fatal cases of diphtheria, which had been 6, 4, and 9 in the three preceding weeks, declined to 5 last week, of which 2 occurred in Glasgow. The deaths from scarlet fever, which had been 10 and 5 in the two preceding weeks, were again 5 last week, of which 3 occurred in Glasgow and 2 in Aberdeen. The 2 fatal cases of small-pox were registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 385 and 313 in the two preceding weeks, further declined to 189 last week, but were 83 above the number in the corresponding week of last year. The causes of 38, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 42.5 and 45.0 per 1000 in the two preceding weeks, further rose to 48.6 during the week ending March 30th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 37.1 per 1000, the rate during the same period being 26.0 in London and 30.5 in Edinburgh. The 326 deaths registered in Dublin during the week under notice showed an increase of 24 upon the number in the previous week, and included 12 which were referred to the principal zymotic diseases, against numbers declining from 14 to 7 in the three preceding weeks; of these, 4 resulted from "fever," 3 from whooping-cough, 3 from diarrhoea, 1 from small-pox, 1 from diphtheria, and not one

either from measles or scarlet fever. These 12 deaths were equal to an annual rate of 1.8 per 1000, the zymotic death-rate during the same period being 1.6 in London and 4.0 in Edinburgh. The 4 deaths referred to different forms of "fever" exceeded by 2 the number in the preceding week. The fatal cases of small-pox, which had been 5, 4, and 5 in the three preceding weeks, declined to 1 last week, a lower number than in any week since November last. During the first three months of the current year no fewer than 78 deaths from small-pox have been registered in Dublin. The 326 deaths in the city last week included 46 of infants under one year of age and 112 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further increase upon those recorded in recent weeks. Two inquest cases and 3 deaths from violence were registered; and 103, or nearly a third, of the deaths occurred in public institutions. The causes of 25 or nearly 8 per cent., of the deaths in the city last week were not certified.

THE HEALTH OF GREATER MANCHESTER.

THE corporation of Manchester have just issued a report on the health of Greater Manchester during the period 1891-3—that is, for the first three years that have elapsed since the recent extension of the city. The report, which is from the pen of Dr. Tatham of the General Register Office and previously for several years medical officer of health of Manchester, is in more than one respect a remarkable one. Whether regarded from the point of view of the statistician or from that of the practical sanitarian, we think that both its subject matter and the manner in which it is arranged are excellent, and quite typical of what such a work should be. We therefore propose to notice somewhat in detail those special features of the report which distinguish it from other productions of a similar character. It will be remembered that soon after the publication of the 1891 Census Reports Dr. Tatham compiled an elaborate series of Life Tables for Manchester, with the object of ascertaining by reliable methods, and of demonstrating the actual extent of the waste of human life which is occasioned by the notoriously unhealthy conditions prevailing in the older parts of the city. As these life tables were reviewed in our columns at the time of their publication we need refer to them here only so far as is necessary to explain the object we have now before us—namely, that of giving publicity to Dr. Tatham's plan of applying life-table methods to the estimation of the efficacy of preventive operations, or, in the words of the report, his mode of using "the life table as a test of sanitary progress or regress."

Omitting the first eight pages of the report as chiefly of local concern, and coming to Part II., we find that this section has been written as practically a continuation of the remarks which accompanied the life tables of 1892 and 1893, which must therefore be considered as part of the present report. This section alone is so rich in matter of prime sanitary importance that to do it justice would occupy more space than is at our present disposal. We can only, therefore, touch upon a few leading points in the report and express the hope that as the work itself has been published by the corporation it will be carefully studied by those of our readers who are more especially interested in questions of sanitary reform. There is no need that we should reiterate our oft-repeated warning against the acceptance of crude death-rates alone as a sufficient test of the relative healthiness of populations variously constituted in regard to age and sex. The life table method, which eliminates errors dependent upon varied age constitution of populations, is obviously the only satisfactory basis of comparison between communities differently circumstanced, not only in this respect, but perhaps in regard to sanitary conditions also. The life table is the instrument by which alone the true significance of mortality can be gauged year by year, and thus the direction shown of changes taking place in the mortality at various ages. It is true that such comparison may be made, after a fashion, without the aid of a life table by simply comparing the death-rates at successive ages in one year with those in other years, and in the same way the death-rates in a given town in any year may be compared with those of England and Wales in the same year; but only a life table can show the combined effect of a higher rate at one age period and a lower rate at another, or can express the result thus produced on the duration of life at all ages and on the comparative duration of life in childhood, maturity, and old age.

Dr. Tatham has made it abundantly clear that the vitality of the population of Manchester, taken as a whole, compares very unfavourably with that of the population of England and Wales in the aggregate. It was, therefore, natural that in his recent endeavour to fully investigate the question he should inquire whether the whole of the city population is subject to similar adverse conditions or whether, as is more likely, the town is composed of sections differing widely in regard to the average lifetime of their inhabitants. For the purpose of testing this point two supplementary life tables were constructed in the year 1893, one for the old township of Manchester and the other for the outlying townships—i.e., the newer part of the city. In order that these two life tables might fairly represent the populations of the areas chosen it was found to be essential that the populations and the deaths of inmates in Manchester public institutions should be distributed to the townships to which they properly belonged. This was accordingly done. The results are sufficiently startling. We cannot give them here in full; but, as a rough measure of the loss of working power that is implied in the heavy mortality which is known to have occurred in the old township of Manchester, it may be mentioned that the survivors of each sex at the age of twenty-five years scarcely exceeded the numbers that should have reached forty-five years of age. In other words, the numbers who reached the threshold of this the most active and in many respects the most important vicennium of lifetime were equal only to the numbers that should survive to the end of that period. There can be no reasonable doubt that this heavy mortality in the earlier periods, the springtime of life, implies enfeebled vitality in the survivors, and that this is actually the case there is abundant evidence in the report before us.

We now have to consider Dr. Tatham's mode of applying the Manchester Life Table, to the calculation of what he has termed the life capital of the population. For the sake of convenience the whole term of life is divided into three stages, named respectively childhood, working period, and decline; and by the help of a formula given in the report the mean future life term of persons at each of these age groups is ascertained. This future lifetime is termed by Dr. Tatham the average working life capital of the population. A table is given which shows the application of the life tables to the existing population of Manchester. It proves that so long as the age constitution remains as it was at the last census enumeration, and the death-rates at the various ages remain as in the decennium 1881-90, the average life capital of the population of the old township of Manchester, taking young and old together, is only twenty-eight years, the ordinary annual expenditure of this capital being equal to $3\frac{1}{2}$ per cent. If, now, we calculate for any period the number of deaths that should have occurred in each age group at the rates of 1881-90 and compare them with the deaths which actually occurred during this period, the difference between the two sets of figures will be the number of lives saved or lost by the fluctuations of mortality in the given period, and by means of readily constructed tables we can ascertain the gain or loss of life capital due to these fluctuations of mortality. This has been done in the report, and the balance of loss and gain is shown for the three years 1891-93. It will be readily understood that the gain or loss of life capital depends not simply on the number of lives saved or wasted, but even more on the value of those lives to the community. For example, 100 lives of young adults who have, say, twenty-five years each of potential working life before them, are economically better worth preserving than would be the same number of persons in the decline of life who can never again hope to add to the sum of the common wealth. It is familiar knowledge to those who have studied the vital statistics of Manchester that a terrible waste of human life is constantly going on there, especially in the older parts of the city. The amount of this waste and its incidence at the various stages of life have been accurately measured and set before the constituted authority in the recent reports of Dr. Tatham. In the old township of Manchester there lives a population of more than 100,000 persons, who pay a tax which must be reckoned not in pounds, shillings, and pence, but in years, months, and days—a tax amounting, on the average, to fully 30 per cent. of the lifetime of every member of the community, and which presses so heavily upon their vitality that the men and women are known to enter the period of decline at an age when they ought scarcely to have passed the prime of life. It is pos-

sible, and indeed probable, that a part, and perhaps a considerable part, of the excessive mortality which afflicts these unfortunate people is inseparable from life and work in a great manufacturing city; but surely much remains to be done before Manchester can claim to have attained to the irreducible minimum. The task which lies before the authorities is that of restoring to every infant in Central Manchester the twelve years of life expectation of which it has been defrauded by the evil surroundings of its birth; and we cannot believe that the governing body of that great and opulent city will rest content until something considerable has been accomplished in the direction here indicated.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

THE following officers have arrived from India in the *Britannia*:—Surgeon-Colonel Markey, Surgeon-Majors McGill, Dodd, and Hughes, and Surgeon-Captain Young. Surgeon-Lieutenant-Colonel Harvie Scott will proceed from Aldershot to Dublin, and Surgeon-Major O'Sullivan from Dublin to Aldershot. Surgeon-Captain Skerrett has been posted to the North-West district, and Surgeon-Lieutenant-Colonel Robinson to Dublin. Surgeon-Major Bourke has been posted to Woolwich, and Surgeon-Major Pike to Belfast. Surgeon-Major-General Davis, who is about to retire, will be succeeded at Portsmouth by Surgeon-Colonel Markey on promotion.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Captain F. W. Gee (Bengal), Medical Officer of the 5th Bengal Cavalry, to the Medical Charge of the Bundelkhand Political Agency; Surgeon-Captain F. P. Maynard to act as Resident Physician, Medical College Hospital, and Professor of Pathology, Medical College, Calcutta until further orders; Surgeon-Captain J. Chaytor-White, Officiating Civil Surgeon, at present attached to Allahabad, to the Civil Medical Charge of the Unao district; Surgeon-Captain J. M. Crawford, Officiating Civil Surgeon, to officiate as Superintendent, Central Prison, Benares; Surgeon-Captain H. C. Thurston, A.M.S., doing duty at the Station Hospital, Bangalore, to the Medical Charge of the Cantonment Hospital, Bangalore; Surgeon-Lieutenant H. A. Hinge, A.M.S., to do duty in the Belgaum and Bangalore districts, and Surgeon-Lieutenant W. D. Erskine, A.M.S., to do duty in the Madras district. Surgeon-Captain W. R. Edwards (Bengal), Civil Surgeon at Quetta, is granted furlough for one year and fourteen days. Surgeon-Lieutenant-Colonel W. E. Griffiths, 20th (the Duke of Cambridge's Own) Punjab Regiment, is granted leave for one year; Surgeon-Lieutenant-Colonel B. Evers, Civil Surgeon, Raipore, is also granted leave for one year. Surgeon-Captain F. J. Drury, Resident Physician, Medical College Hospital, and Professor of Pathology, Medical College, Calcutta, is allowed furlough for fifteen months.

ARMY MEDICAL STAFF.

Surgeon-Major-General Alexander F. Bradshaw, C.B., is placed on retired pay. The following appointments are notified:—Surgeon-Colonel Albert Augustus Gore, M.D., F.R.C.S. Irel., to be Surgeon-Major-General, vice A. F. Bradshaw. Brigade-Surgeon-Lieutenant-Colonel William Taylor, M.D., to be Surgeon-Colonel, vice A. A. Gore. Surgeon-Lieutenant-Colonel James Albert Clery, M.B., to be Brigade-Surgeon-Lieutenant-Colonel, vice W. Taylor.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeon Christopher Pearson and Surgeon Arthur Gaskell to the *Retribution*.

ARMY MEDICAL RESERVE OF OFFICERS.

The undermentioned Surgeon-Captains have been appointed Surgeon-Majors:—Edward Williams and Francis J. Walker. Surgeon-Major Charles E. Abbott having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Surgeon-Lieutenant A. H. Jackson resigns his commission.

Note: 1st Nottinghamshire (Robin Hood): Surgeon-Lieutenant H. G. Ashwell has been appointed Surgeon-Captain.

THE LATE LOSSES IN THE SERVICES.

Death has been very busy of late with notabilities in the services. The navy has lost Lord Alcester, so long known as Sir Beauchamp Seymour, upon whom, when of the rank of Admiral, the duty fell to carry out the bombardment of Alexandria and the operations in Egypt with which his name is associated. A veteran soldier of long and distinguished service—in India especially—full of years and honours, Field-Marshal Sir Patrick Grant has just been interred with a great military gathering of Field-Marsals and others at his funeral. Sir George Chesney, who saw active service during the Indian Mutiny and was wounded at the siege of Delhi, but who was better known to the public as the author of "The Battle of Dorking," "Indian Policy," and several other works, has died quite suddenly from angina pectoris. The deceased general, who was a man of undoubted ability and an admirable writer, held numerous important appointments in this country and in India, and was an M.P. for Oxford. He was not altogether free, perhaps, from some prejudices about medical officers, but he was, as we happen to know, nevertheless very friendly and kind to some of them. Lastly, in these days, when success does not by any means invariably attend ability, merit and integrity, we have to record the death of Sir Charles Mills, a really able and deserving man, whose early career was a military one, and who by his talent and energy rose to the high and important colonial appointment which he occupied at the Cape, and subsequently in this country.

ARMY MEDICAL SCHOOL, NETLEY.

The seventieth or summer session of the Army Medical School commenced on Wednesday, April 3rd. The session is attended by thirty surgeons on probation, twelve for the Army Medical Staff, and eighteen for the Indian Medical Service. The following are lists of the surgeons on probation:—

ARMY MEDICAL STAFF.

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|--------------------|-----------------------|
| 1. L. F. Smith. | 7. G. T. K. Maurice. |
| 2. S. H. Fairrie. | 8. F. E. Gunter. |
| 3. R. J. Blackham. | 9. J. H. Campbell. |
| 4. J. V. Forrest. | 10. J. Grech. |
| 5. H. W. Grattan. | 11. P. Dee. |
| 6. E. Fawcett. | 12. E. G. E. O'Leary. |

INDIAN MEDICAL SERVICE.

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|----------------------|-----------------------|
| 1. J. Stephenson. | 10. R. F. Standage. |
| 2. F. N. Windsor. | 11. F. L. Blenkinsop. |
| 3. P. F. Chapman. | 12. J. E. Watson. |
| 4. W. B. Turnbull. | 13. H. A. F. Knapton. |
| 5. A. Hooton. | 14. C. G. Webster. |
| 6. J. M. H. MacLeod. | 15. A. A. Gibbs. |
| 7. E. E. Waters. | 16. A. Moore. |
| 8. A. Leventon. | 17. G. E. Bensley. |
| 9. A. F. W. King. | 18. E. M. Hiewicz. |

SURGEON-MAJOR G. S. ROBERTSON, C.S.I.

Surgeon-Major George Scott Robertson, C.S.I., the British Resident at Chitral, belongs to the Bengal Medical Department, which he joined in 1878. As a young officer he took part in the Afghan War, and the operations around Kabul. He has since been employed in the Foreign Department, and was mentioned in despatches for his services as Chief Political Officer with the Hanza-Nagar Expedition of 1891-92.

THE GREENWICH HOSPITAL PENSION.

The Greenwich Hospital Pension of £50 a year for Fleet and Staff Surgeons of the Royal Navy, rendered vacant by the death of Deputy Inspector-General David Lyall, M.D., has been awarded to Deputy Inspector-General William Ross, M.A., M.D.

The s.s. *Britannia* brought 278 patients to Netley from India on the 27th ult.

POPULAR HOSPITAL FOR ACCIDENTS—The annual meeting of this charity was held in the institution at Blackwall on March 26th, Mr. John Coles presiding. The report stated that an entirely new hospital, containing sixty-four beds, was now completed, and that the old building had been converted into a residence for the medical and nursing staff. The cost of the new structure had been £30,900, and something still remained to be done, as a new operating theatre, mortuary, and post-mortem room were urgently required. The total number of accidents treated during the past year was 8276, of which 3166 occurred in the patients' homes, 2415 at work, and 1720 in the streets. The working men of the district had contributed £650 during the year, and Sir Donald Smith had given £1500.

Correspondence.

"Audi alteram partem."

"THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON."

To the Editors of THE LANCET.

SIRS.—Dr. Elliot and I offered months ago, when the affairs of this young institution first attracted the invidious notice of Mr. Frederick John Palfar, to read a paper to the society on the complete work of the hospital, but the offer was not accepted. Surely if their desire had been one for real inquiry and for instruction in righteousness, no committee could have been more after their own heart or more after the customs of our profession. After the refusal of such an offer, I regarded their commotion as merely a personal attack on Dr. Elliot on account of his professional success—"because he drives a pair," as one of them frankly confessed, as the chief cause of it—and I did not trouble any more about it. Dr. Playfair's action has been hasty and unfair.

I am, Sirs, yours faithfully,

Birmingham, April 3rd, 1895.

LAWSON TAIT.

* * Mr. Lawson Tait has hardly realised the importance of the statement made by the secretaries of the Southampton Medical Society. Mr. Elliot has sent us copies of all the correspondence that has passed between the Free Hospital for Women and the Southampton Medical Society, and it is his intention, or that of the hospital, we understand, to reply in detail.—ED. L.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS.—Now that you have again opened your columns to the discussion of the question of fees in the letters concerning the London and Manchester Industrial Society there seems to be a chance that we may arrive at the actual facts of the matter and be able to deduce from them what is a right and fair price at which a medical man may undertake to treat his poorer neighbours. If this right standard of remuneration is once established we could by a united effort put an end to the system of sweating under which many of us now work. I think I am right in saying that 1s. a quarter for each adult is the usual fee that obtains in nearly all the better-class clubs. Although this may seem very little it still may be a fair contract fee; we none of us feel we are sweating a fire insurance company by paying the small sum of 3s. a year to insure us against loss by fire to the extent of £100. However, I think I shall be able to show that in the case of sick insurance 1s. a quarter is not a fair premium to pay. In the report of the Hearts of Oak Benefit Society for the year 1892 I find the amount of sickness amongst its members for that year works out to one member out of every thirty-seven being permanently on the funds of the society. This does not give us an exact account of the number of members applying for medical treatment, as some would keep at work although under the care of the medical officer; so that we may take it that about one member out of every thirty is constantly in receipt of medical treatment. This would give us a payment at the rate of about 2s. 4d. a week for each member who is constantly sick. Can we call this a fair rate of payment? I think, Sirs, you will agree with me that it is not. I would suggest that, taking an average between the slight cases of sickness requiring little or no attendance and the severe cases requiring constant care, 5s. a week would not be too much to ask, which would be covered by a payment of 2½d. per member per week. It was very noble of the South-West London Medical Society to pass a resolution condemning 1s. and 1s. 6d. fees, but if the members of this society are practising in poor neighbourhoods and have never soiled their hands with shillings they have not only been foolish but cruel, driving poor and honest patients into the hands of the dispensing druggist and the cheap and inefficient dispensary. We must always recognise the fact that a shilling means a great deal to a man with a wife and family when he is only earning £1 a week, and what we want is not a fixed fee, but as much as the patient can honestly afford to pay us.

The 1s. fee can never be abolished until what is already indicated by the great elasticity of our fees is officially recognised and the rich are made to pay for the medical attendance on the poor, or, in other words, we are supported out of the rates.—I am, Sirs, your obedient servant,

WILLIAM F. CLARKE, M.B., B.S. LOND.

Fulham, S.W., April 1st, 1895.

To the Editors of THE LANCET.

SIRS,—The statement which Mr. Woodward, managing director of the above company, makes without "hesitation" is, no doubt, a *bona fide* one; and his error is pardonable, seeing that he is not in a position to express an opinion on the somewhat complex question of the remuneration of medical men. It is certain, however, that what he ventures to state—viz., "On the question of payment to our medical officers we have no hesitation in saying that they are as well remunerated by us as by their private practice amongst the same class of people"—is disproved both theoretically and practically as a matter of common notoriety amongst medical men. In the first place, it is disproved theoretically because it is perfectly obvious that the system of canvassing patients and offering them medical attendance without medical examination for a sum which does not exceed 4s. per annum must necessarily act as a strong incentive to induce many patients to join who have at least remunerated medical men with a few pounds annually, and who could certainly pay more in private practice than they do under the company. It may be asked how it is that innumerable old-established practitioners can persuade themselves that it is to their private interest to accept this work, seeing that the system of touting from house to house is, to say the least, calculated to educate the public to the too-prevalent idea that a professional man is in a pecuniary sense on a par with an ordinary mechanic.

I am, Sirs, yours truly,

Queen's-road, April 2nd, 1895.

CLEMENT H. SEERS.

To the Editors of THE LANCET.

SIRS,—As a discussion is now going on in your columns concerning the London and Manchester Assurance Company I beg to enclose you a list of the medical referees (over one hundred in number) for South London. Many of these gentlemen have good-class practices and would look down upon those of their brethren who charge low fees. But surely it is more honourable to charge sixpence or a shilling for advice and medicine than to be a medical officer of the above company. I am certain that much harm, in a monetary sense, is done to the profession by this society, as most of those who belong to it could well afford to pay a medical man.

I am, Sirs, yours truly,

H. DE BURGH DWYER.

Blackfriars-road, S.E., March 30th, 1895.

To the Editors of THE LANCET.

SIRS,—I shall be glad to hear how Mr. W. Woodward, managing director of the above-named company, explains the following advertisement, which appeared in the *Derbyshire Courier* of March 30th, 1895: "Medical aid in all districts within ten miles of Chesterfield. For terms apply to Mr. Woodger, 9, Marsden-street, Chesterfield." Now, Sirs, the name and address given in this advertisement are those of the local agent of the London and Manchester Assurance Company. I can hardly think the company would be so anxious to further the Medical Aid Branch if there were no profits to be made out of the working of it.

I am, Sirs, yours faithfully,

April 2nd, 1895.

ONLOOKER.

To the Editors of THE LANCET.

SIRS,—The managing director of the London and Manchester Industrial Assurance Company has carefully avoided referring to the most objectionable feature in the working of his company—viz., that of "touting" for clients. I speak from personal experience and not from hearsay evidence, and I assert that the agents of the company make a house-to-house canvass and admit anyone who is willing to pay the necessary fees. Some time since I had reason to regret the loss of two patients—for a short time, fortunately—who had been inveigled into joining this company. So strong is the feeling in this town against the company's

mode of proceeding that the Cardiff Medical Society determined some time since not to admit any gentleman as a member of it who held an appointment under this or any similarly conducted company. It is to be hoped that the *modus operandi* of this company and of all such-like companies will be brought under the notice of the General Medical Council at their next meeting.

I am, Sirs, yours truly,

MEDICUS.

Cardiff, April 2nd, 1895.

To the Editors of THE LANCET.

SIRS,—Mr. Woodward, the managing director of the London and Manchester Industrial Assurance Company, ignores the gravest of the charges brought against his society. As I stated in my former letter, if medical men estimate their capabilities at 2d. or (as you corrected me) 1½d. per week, there is nothing to prevent their contracting to give their valuable aid at that remuneration and at the same time lowering their profession by so doing. What I strongly objected to was that the members of an honourable profession should tacitly sanction the touts of the society annoying the patients of other practitioners (who value their skill at higher remuneration) by pestering their patients to join the society and place themselves in the hands of the medical men sweated by this society. Will Mr. Woodward deny such procedure or will he plead ignorance of the action of his touts? In the former case I am prepared to bring proofs of my statement, and beg to inform him that these agents do not confine their attentions to persons of "meagre incomes" or to those who are unable to pay properly for skilled advice.—I am, Sirs, yours obediently,

April 1st, 1895.

A GENERAL PRACTITIONER.

THE SAC IN EXTRA-UTERINE PREGNANCY.

To the Editors of THE LANCET.

SIRS,—In the report of my remarks on Mr. Sutton's paper, read at the Medical Society of London, it is stated that I "asked why there was so much bleeding from a small ruptured tubal sac," and that recently when I was "operating on such a case the blood spouted out furiously, but in that instance a band passed from the vermiform appendix to the sac. The band was found in reality to spring not from the appendix itself, but from its mesentery, and the bleeding came from an artery in this." I fear that I failed to make myself perfectly clear. What I intended to say was that the arteries in a tubal sac bleed very freely and the hæmorrhage does not tend to stop spontaneously. The vessels in adherent structures outside the sac, on the other hand, do not seem to share in this undesirable peculiarity; indeed, they do not bleed more than in adhesions to malignant pelvic tumours. In my case the blood spouted freely from a slight tear which I made on the surface of the tubal cyst, but there was no difficulty in securing the vessels of the pedicle. The only trouble arose from the artery of the appendix, which happened to adhere, with its mesentery, to the sac, as is often the case in pelvic tumours. This artery and also the vessels in the pedicle were in no sense diseased through communication with the vessels in the sac.

I am, Sirs, yours faithfully,

ALBAN DORAN.

Granville-place, Portman-square, March 29th, 1895.

THE SPREAD OF TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—Some four years ago, and on more than one occasion since, I drew attention to the probable diffusion of typhoid fever into the houses along the route of the sewers leading from large hospitals and similar institutions, where numbers of cases of this disease were treated, and where, as too frequently is the case, no attempt, or at least an inefficient one, was made to disinfect the dejecta. I proposed at that time that the dejecta should be destroyed by fire, and not permitted to specifically infect the sewage. That suggestion has already been carried out in more than one institution. That typhoid dejecta is frequently not disinfected thoroughly I have found to be the case in many hospitals; that these dejecta are the main source of infection, and that the bacillus,

¹ THE LANCET, March 30th, 1895.

though difficult to isolate in sewage, will live at least some days in such surroundings, has been abundantly shown. These questions have all been frequently and so recently discussed that I need not enter into them at the present time; but I have been for years anxious to know whether the incidence of the disease shows any increase in the houses along the route of the infected sewage coming from such institutions compared with the rest of a town or city. This could easily be mapped out where notification of typhoid fever was in force, and where a map of the town sewers showing the direction of the currents was obtainable. Both these conditions are generally available. I have myself tried and am at present engaged in dotting such a map of the sewers coming from the Dublin hospitals that receive typhoid fever cases. The chief object of this communication is to ask fellow workers to do the same where available elsewhere. The value of such map demonstrations, were a number to agree, showing the increase in such houses or otherwise, is self evident. Even supposing no such increase was shown, still it would be necessary to destroy the typhoid dejecta to prevent the possible and common spread of the disease by the dejecta finding its way into the water for domestic use. I should be glad to hear if any investigations on the lines I have proposed have been carried out by medical officers of health. The question whether other diseases spread in a similar direction might be a subject of future investigation.

I am, Sirs, yours faithfully,

ANTONY ROCHE, M.R.C.P. (Irel.).

Professor of Hygiene, Catholic University
Medical School of Dublin.

Stephen's-green, South Dublin, March 27th, 1895.

TUMOURS OF THE SUPRA-RENAL BODIES.

To the Editors of THE LANCET.

SIRS,—In treating of the liability of any part of the body to originate neoplasms, it is of primary importance not to neglect perspective. I am induced to make this remark because on reading your report of Dr. Rolleston's lecture on the Supra-renal Bodies, it seems to imply that neoplasms of these structures are fairly common. This of course may merely be an instance of the many erroneous impressions that necessarily ensue from the modern mania for abbreviation. However, on looking over the chief monographs on the supra-renals I have found that they convey a similar implication. Hence it seems to me important to call attention to the fact that it is an occurrence of the greatest rarity for any kind of neoplasm to arise from the supra-renal bodies. Of 13 824 primary neoplasms consecutively under treatment at four large London hospitals, I found only one instance of the kind recorded—an adeno-sarcoma. Similarly, Gurli's analysis of the localisations of 13 971 primary neoplasms—under treatment at the three chief Vienna hospitals—does not contain a single instance of supra-renal neoplasms. The truth is that obsolete structures like the supra-renals, vermiform appendix, male mammae, os centrale, sesamoid bones, clitoris, uterus masculinus, thymus, inter-vertebral discs, membrana nictitans, coccyx, &c., have but an exceeding small tendency to take on the neoplastic process.—I am, Sirs, yours truly,

Preston, March 28th, 1895.

W. ROGER WILLIAMS.

"PLEURITIC EFFUSION WITH NEGATIVE PRESSURE IN THE PLEURA."

To the Editors of THE LANCET.

SIRS,—The problem presented by Dr. West under the above heading, of which I ventured to attempt an explanation, has now been declared by him to be of the nature of an elementary fact, and we therefore agree in regarding the existence of a negative pressure as the normal condition in the first stage of effusion. He still considers, however, that this negative pressure rapidly diminishes as the fluid increases in amount, and that, therefore, the explanation I gave will not apply to the case he reported, and is in fact "actually erroneous." On the other hand, I hold that the negative pressure diminishes slowly or rapidly according to the rate at which the fluid is effused, and its degree depends upon the amount present, and it disappears only when the quantity exuded is very large. This stage of the disappearance of negative pressure in fluid effusion is marked clinically, according to Dr. Douglas Powell,¹ by the dulness mounting up above the third cartilage

and by the loss of Skodaic resonance. There were no signs in Dr. West's case that this stage was reached, but on the contrary there was distinct evidence that the effusion was moderate in amount, as shown by the absence of dyspnoea ("respiratory oscillation half an inch"), the entrance of air from the outside, and the failure to obtain fluid from the chest even when the syphonage action of a long tube was employed. Under these circumstances I still think that the amount of the negative pressure, although undoubtedly "considerable," was by no means such as to be incapable of explanation. I am afraid, however, that it is impossible to satisfy Dr. West. When he has propounded an "almost inexplicable" problem, and I have added that according to the teaching of most of the text-books it is altogether inexplicable, he asserts that I am very unfair to the teaching of the present day. Some years ago, while investigating the subject of pleural effusion, I formed the opinion that the importance of the elasticity of the lungs in connexion with the diagnosis and treatment of pleurisy was not fully appreciated by most of the leading teachers—e.g., Wilson Fox, Fagge, and Clifford Allbutt. That, of course, was merely an opinion, which I have supported in several papers published in THE LANCET,² and in stating these views I have always acknowledged my indebtedness to what I consider the sound teaching of Dr. Douglas Powell. But in adopting, and I hope supporting, Dr. Powell's teaching I have made no imputation against those who interpret the facts differently.

I am, Sirs, yours faithfully,

Carlton-hill, N.W.

G. A. SUTHERLAND.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—Re the title of "Doctor," it is interesting to note that in "Tristram Shandy" Slop the apothecary is entitled "Doctor," also that "Peter Pindar," himself an M.D., in one of his poems makes a servant girl speak of the family practitioner as "old Doctor Slop." It is thus evident that a hundred years ago and more the title of "Doctor" was, rightly or wrongly, popularly accorded to the general practitioners of the day, a class of men far inferior in education and social position to those of our day. Customs of such antiquity die hard, and, whatever we may call ourselves, we shall for a very long time be "Doctor" with the public. This custom must necessarily involve a certain amount of injustice on all sides; but perhaps the most glaring injustice is that a man can obtain a degree from a university entitling him to call himself "Doctor" after passing examinations not one bit better than, if as good as, those necessary to obtain the London double qualification which gives no legal right to the title. Unless some reform is shortly introduced this must surely tell seriously against the London corporations and schools, as I imagine that, like myself, most people, in the event of their sons going in for the profession, would send them to a university where they can obtain all the necessary qualifications to practise, and at the same time acquire a legal right to the title of "Doctor," in preference to sending them to study in London, where they cannot obtain that privilege.

I am, Sirs, yours faithfully,

Dawlish, March 31st, 1895.

A. DE W. BAKER.

"PROVISION FOR YOUNG IMBECILES."

To the Editors of THE LANCET.

SIRS,—I am unwilling again to obtrude myself upon your readers, but the publication since I wrote to you last week of a Parliamentary return as to the number of imbecile and epileptic children in workhouses (briefly referred to on page 847 of your last issue) seems to call for some additional remark. I have no fault to find with the form of the return, which is satisfactory, inasmuch as it shows that the Local Government Board is paying attention to the necessities of the case; but I venture to suggest that the numbers given in the summary by no means adequately represent the extent of special provision which it is desirable to make for pauper imbecile children. It is not only the children of this class now actually in workhouses that must be taken into account—there are many others residing with relatives who receive out-door relief for their maintenance. There are, moreover, a considerable contingent of imbecile children in the various county lunatic asylums, mixed up (for the most

¹ Diseases of the Lungs and Pleura, fourth edition. 1893, p. 107.

² The Physics and Diagnosis of Pleural Effusion, July 22nd, 1893, and the Treatment of Empyema, Jan. 27th, 1894.

part) with the insane adult inmates, to the disadvantage of both. In addition, there may be found in every county in the dwellings of the poor children of this class in no way officially registered, even if known to the school attendance officers. Their parents would be glad to avail themselves of a rate-aided institution competent to give suitable training to these exceptional children, whose education ought to be a matter of concern to the State quite as much as that of ordinary children or of those who are blind or deaf. The experience of the managers of the Metropolitan Asylums District Board in the matter of providing for imbecile children may be usefully considered in this connexion. Starting originally (in 1874) with 100 children, they soon found it necessary to provide for 250 undergoing training and education, and when plans were made for a permanent institution it was thought that accommodation for 500 would be ample for the needs of London; but when the benefits of the special training given at the Darenth schools became known amongst the poorer classes the demand for accommodation steadily increased, and the provision of 1000 beds at the present time is scarcely adequate. Taking the pauper population of England and Wales at about seven times that of the London district—a ratio also subsisting between the respective gross populations—we find that if accommodation were provided throughout the country in the same proportion as at Darenth an aggregate of 6000 beds would be required independently of the metropolis. In conclusion I am tempted to say, with sincere respect for the many excellent qualifications of workhouse medical officers, that my experience leads me to think that their opinion as to whether or not an imbecile inmate "would be likely to be improved by special training" is not always to be relied on, the question being one for an expert acquainted with the peculiarities of the imbecile class and the results achieved by appropriate modes of education.

I am, Sirs, yours faithfully,

G. E. SHUTTLEWORTH,

Late Medical Superintendent, Royal Albert Asylum,
Lancaster.

Richmond Hill, April 1st, 1895.

"A CASE OF ENCYSTED EMPYEMA."

To the Editors of THE LANCET.

SIRS.—Will you permit me, though late, to correct an error in the report of my case of encysted empyema upon the internal surface of the right lung in THE LANCET of March 9th? On p. 620, fourth line from bottom of first column, "there were signs of *pericarditis*" should read "*peritonitis*, with effusion." So many of the deaths after operation for empyema are caused by suppurative pericarditis that it was carefully sought for during life in the case described, but the heart was normal in site and sounds. The peritoneal effusion was obvious.

I am, Sirs, yours faithfully,

T. CHURTON, M.D.

Leeds, April 2nd, 1895.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary Question.

THE progress made towards the definite step deciding the future of the infirmary is slow; but there may be some advantage in this. Two schemes have been voted on by the trustees—that of the board of management, which was to throw out wings on each side of the present building; the other, moved by Dr. Brockbank, advocated the gradual rebuilding of the infirmary on the present site. Out of the 1300 trustees about 600 recorded their votes—three to one being in favour of rebuilding. An adjourned meeting was held on the 26th ult. to further consider the various proposals for extending the building. Alderman King proposed an amendment to Dr. Brockbank's scheme, which had become the substantive resolution, to obtain the accommodation required by raising the roof and putting an additional story on the present building. This was defeated by a large majority. Sir John Harwood gave notice of another amendment, which was, however, withdrawn in favour of one moved by Dr. Leech. It is, however, worth placing on record: "That the infirmary building remain as it is at present, with such improvements and sanitary alterations as may be found

necessary and desirable. That the stone-work outside the building be cleaned and put into thorough repair, and that only such additions be made to the building as the board may consider necessary in order to bring the whole structure into harmony with modern sanitary requirements, and the providing of such other conveniences as have been adopted in recent institutions of this character." This was withdrawn, however, and Dr. Leech's amendment, "That before proceeding further, a committee, consisting of the members of the infirmary board and an equal number of trustees who are not members of the board be appointed to report on the best means to be adopted for increasing the accommodation afforded by the institution." It was further resolved that the members of the committee outside the board of management should be nominated by the chairman of the board, the Lord Mayor, and the President of the Chamber of Commerce. So the matter stands for the present. The great majority of the infirmary staff favour the complete, but if necessary gradual, rebuilding on the present site. One or two wish for a supplementary hospital as near as may be to Owens College, and confessedly in its interests. No arguments, however, can do away with the fact that the present infirmary, in a central and hence most convenient position, is salubrious, and that there is a prestige connected with it which would be lacking in a suburban annexe. It is to be hoped that the ultimate decision will be to rebuild on the present site. As time goes on, Owens College may be in a position to provide a hospital with its own funds.

Popular Views on Medical Education.

The controversy on infirmary matters has brought to light views as to medical education, that most of us fondly supposed were out of date and exploded. The *City News*, however, which is usually considered an intelligent paper, at once disabuses our minds. It says: "Whilst there are only between two hundred and three hundred in-patients of the infirmary, it appears that no fewer than four hundred medical students are in attendance"; and then goes on to ask, "For whom is the infirmary maintained, for the patients or to give eleemosynary medical instruction to young fellows qualifying for the profession?" It considers, also, that Dr. Renaud ruined his case by telling the meeting that the extensions were required "more for the accommodation of the increasing number of medical students from Owens College than for any other reason," and it quotes, evidently with approval, a dictum Sir John Harwood uttered in 1892: "If ever it got abroad that the infirmary was a school for young students and not an infirmary, it would decline. People would not go to get their maladies healed and their bones set by learners." Such observations as these make one wonder at the tenacity with which ignorance maintains its ground even in the mind of an able man. With the true facts before him no one would see more clearly than Sir John Harwood the great advantage of a teaching hospital to the patients themselves.

Chief Constable's Report.

We are so apt to hug ourselves complacently on the gradual diminution of crime and improvement of morals, in consequence of the spread of Board schools and other elevating agencies, that the recently issued report of the Chief Constable is not pleasant reading. During the past year there has been an increase of 356 in the number of indictable offences reported to the police, the total being 3279, as against 2923 last year. This increase is spread over all classes of crime, but is more particularly marked in housebreaking, breaking into shops, and in cases of larceny. There has also been an increase in the number proceeded against for non-indictable offences of 1412, chiefly for "drunkenness" and "offences under the Vagrancy Act." The total number of persons arrested for all offences was 17,250—11,344 males and 5906 females—and of this number 5260 males (or 46.3 per cent.) and 2973 females (or 50.3 per cent.) were drunk when taken into custody. Many of those arrested for drunkenness had frequently been in custody for the same offence; 62 persons had been arrested more than 20 times, 19 more than 50 times, and one confirmed inebriate has been before the magistrates 193 times. It is quite clear that the present mode of dealing with drunkenness is a failure. The increase is not due to greater facilities for obtaining drink, as there has been a net decrease of 20 licences, the number of public-houses now being 519, and of beer and wine houses 2506. During the year 851 violent deaths occurred in the city, 98 of them being those of babies. This shows that there is much waste of child-life here, as

does also the fact that inquests were held on 318 children under the age of ten. It is noticeable that of these 175 were insured. It is a regrettable fact that 758 juvenile offenders were arrested during the year, 655 male and 103 female. Of these, 57 boys and 24 girls were under ten years of age, while 598 boys and 79 girls were from ten to sixteen years old. It is to be presumed that they either escaped from any education or that the lessons of conduct no doubt given along with the three R's were obliterated by home influences or their social surroundings. It is sufficiently evident that there is still room for improvement in our morals and manners.

A Jurymen on the Drink Question.

At the coroner's court the other day a verdict of accidental death whilst under the influence of drink was returned in the case of a man who fell backwards down some steps and was killed. He had had four pints of beer and an unknown share in a quart of hot whisky which was handed round the beerhouse. Mr. Smelt said "he was sorry there was no power to punish licence-holders for making people drunk and thereby probably causing their death. In such cases persons who supplied the drink were morally guilty of manslaughter." One of the jury said that hundreds of men could "sup" eight or nine pints and "you could not tell." He stated, too, what may have a germ of truth in it, that half the men take beer to make them sleep. This man's example will not, it is to be feared, do much good, for he said, "I was thirty years drinking and do not think I was two years sober. I am living now, and am turned sixty." The love of drinking for its own sake is still prevalent enough among British workmen. The poor wretch who was killed left a wife and eight children—as Mr. Smelt said—to starve.

Ladies and the Children's Hospital.

At the annual meeting of the subscribers to the Ladies' Fund connected with the Children's Hospital at Pendlebury, an interesting account was given of its origin. A public meeting was held in April, 1893, to consider the financial condition of the hospital, for it was causing much anxiety. A ladies' council was formed as the outcome of this meeting, and immediate steps were taken to organise a systematic canvass of the suburbs of the city. At the first meeting of this council, a year ago, it was reported that £1400 had been collected, and, after deducting expenses, £1375 was handed over to the treasurer. It was felt that it would be a cause for deep regret if the interest caused by these special efforts were not sustained, and it was determined to carry on the work. At the meeting the other day it was announced that £1271 had been received, of which £1257 had been paid to the hospital. A network of branches has been permanently established, and twelve of the districts have subscribed the necessary £50 to obtain cots bearing their respective names. Some of the other charities in Manchester might follow this example with advantage.

April 3rd.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

At the annual meeting of this institution, of which a notice appeared in THE LANCET of March 30th, the President, Mr. Wm. Kendrick, M.P., alluded to the difficulty in keeping up the necessary subscriptions to maintain so large a building. He suggested that the burden might be relieved if people would endow memorial beds therein to the memory of their deceased friends. Such a memorial would certainly be as appropriate as the placing of a window in a church, and would be of great value to the institution. This is a very practical way of looking at the subject, but it seems that the illustration is hardly to be viewed under the same conditions. It was noted in the report of the Jaffray suburban branch attached to the General Hospital that Miss Elizabeth Reay, of Handsworth, had bequeathed the sum of £2500, free of legacy duty, for the endowment of two beds; it was stated that already there were seven endowed beds in the hospital.

The Medical Institute.

The annual meeting was held on March 28th, under the presidency of Dr. W. E. Parkes. The report, in mentioning the fact that it was now twenty years since the institute was founded, congratulated the members that after

many difficulties, financial and otherwise, there was now no debt. An excellent library of 11,000 odd volumes, an income considerably more than half of the annual expenditure derived from investment, and a roll of 175 members, gave ground for confidence and trust in the future. Still, it was a matter for regret that with so large a medical population in the district only a comparatively small proportion were members of this valuable institute. Now that the position is assured and the advantages of membership so obvious, it is to be hoped that a larger number will recognise their duty as well as their privilege in joining it.

The Skin and Lock Hospital.

The fourteenth annual meeting of this charity was held on the 26th ult. The Rev. W. H. Poulton presided. The committee invited attention to the extraordinary development of the institution: 167 in-patients were admitted during the year, and 5421 out-patients, being an increase of 577. The financial condition was not so satisfactory, there being a decrease of £57 in the income, while the expenditure increased £61. Additional accommodation was urgently needed, but in the face of diminished income it was thought unwise to recommend it for the present. Various votes of thanks were passed.

Window-cleaning Accidents.

An inquest was held on March 26th on the body of a man aged fifty-six years, who fell from a window at the Queen's Hospital. In standing on the outside sill the deceased fell into the street and sustained fatal injuries. The coroner, Mr. Oliver Pemberton, called attention to the provisions of the Consolidation Act against standing upon the outside sill to clean windows. A verdict of "Accidental death" was returned. In former years there was need of some law upon this subject, but it is pointed out by a correspondent in the local press that a simple and inexpensive method can be provided whereby both sides of the window can be cleaned from inside the room. By means of this the risk and danger may be avoided.

Workhouse Diet.

It appears from the report that the diet of the inmates of the workhouse has been revised and made more liberal. In future instead of 1½ oz. of tea to a gallon of water 1½ oz. will be allowed, and the 4 oz. of sugar increased to 5 oz. Various other additions were made, but the *crux* of the discussion arose upon the amount of suet necessary to make a pudding; formerly 1 oz. was used to 15 oz. of flour, in future 2 oz. is to be allowed, though sundry members of the board thought this insufficient. Bread and cheese were mentioned as alternatives, and some time was spent in talking of the advantages of a fish diet. On the whole the paupers have occasion to be satisfied with the attention and care given to their condition and comforts.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Tuberculosis in Cattle.

ON Saturday last an interesting and instructive lecture was given by the Heath Professor of Comparative Pathology at a meeting of the Farmers' Club, Newcastle-upon-Tyne. Mr. W. A. Watson Armstrong presided. During the lecture Professor Murray said that when an animal was found to be suffering from tuberculosis it should be fattened for the butcher and the meat sold. He should like it to be sold, however, with a special mark upon it so that those who bought it should know it was from a tuberculous animal. This plan was in vogue in Germany. Danger only arose if the meat was eaten without being thoroughly cooked. These observations are of considerable importance. At present in this country it is a serious offence against the law to offer for sale the flesh of a tuberculous animal, and there are constant convictions in the police-courts and heavy fines imposed by the magistrates upon those who infringe the law by offering for sale tuberculous carcasses. In these hard times it seems wrong that food fit for human consumption under certain precautions in cooking should be destroyed. If Professor Murray's contention be correct, it would seem that some alteration in the law is desirable, so that tuberculous meat may in this country be utilised as it is elsewhere. At any rate, the matter is

worthy of careful consideration by those who are responsible for the making of our laws.

Death of Mr. J. Sang.

On Friday last this well-known and universally respected member of the medical profession died at his residence, Newcastle-upon-Tyne. Mr. Sang qualified in the year 1827, and during his long career in Newcastle was connected with many benevolent institutions. To within a very short time previous to his death, though blind, he was able to get about a little accompanied by his daughter, who devoted her life to taking care of her father.

The Heath and Stephen Scott Scholarships at the University of Durham College of Medicine.

In accordance with the will of the late Dr. G. Y. Heath, Professor of Surgery in the University of Durham, and President of the University of Durham College of Medicine, the trustees of the Heath Scholarship, Professor W. C. Arnison and Mr. Frederick Page, will award and pay to the writer of the best essay on Surgical Diseases of the Jaws the sum of £200. All graduates in medicine or in surgery of the University of Durham are eligible to compete for this prize. The essay must be type-written or printed, and delivered to the trustees not later than March 31st, 1896. The essay, together with any specimens, drawings, casts, microscopical preparations, or other means of illustration accompanying it, will become the property of the College of Medicine, Newcastle-upon-Tyne, but by permission the essay may be printed for general circulation by the Heath Scholar. Mr. Stephen Scott of Harrogate has generously presented to the College of Medicine the sum of £1000, which has been devoted, in accordance with Mr. Scott's wish, to founding a scholarship to promote the study of hernia and allied subjects. Any graduate in medicine or surgery of the University of Durham, or any student of the University of Durham College of Medicine, is eligible to compete for the scholarship, provided that such student shall have had at least one academical year in attendance at the College, and that in any case his age does not exceed thirty years at the time when the essay is sent in. The competition takes place every year. Essays for this year's competition must be sent not later than July 31st, 1895, to Professor Arnison, University of Durham College of Medicine, Newcastle-upon-Tyne.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Judicial Decision under the Edinburgh Dairy Regulations.

AN important case, arising out of the Edinburgh new regulations for dairies, was tried in the Sheriff Court this week. The Lord Provost, magistrates, and town council of Edinburgh, as local authority under the Public Health (Scotland) Act, were the complainers, and the action was against a Mrs. Thomson, a general provision dealer and dairywoman. She was charged with having contravened one of the regulations made by them by selling ham, cheese, groceries, firewood, and other articles in her dairy premises, and of having continued to do so notwithstanding that she had received notice that she was acting in contravention of the regulations. The main objection to this charge was that the regulation relied upon was *ultra vires* of the local authority. The sheriff pointed out, in giving his judgment, that the regulations referred to had been framed by the local authority in 1893, "under and by virtue of the powers vested in them by the Order of Privy Council of 1885 and the Amending Order by the Local Government Board of 1887." Among the regulations is the following: "No purveyor of milk, or person selling by retail, shall carry on within his registered premises any business which, in the opinion of the local authority, is of such a nature that its continuance shall tend to contaminate the milk." The sheriff considered he could not pronounce a judgment against the defender unless it was perfectly clear that the prosecutor had a lawful warrant for asking him to do so. He held that the regulation, for the breaking of which the action was raised, was *ultra vires* of the local authority. The power given by the Privy Council Order was, *inter alia*, "for prescribing precautions to be taken by purveyors of milk by retail against infection or contamination," but the regulation

in question went far beyond this. It was not properly a regulation prescribing any precaution to be adopted by persons selling milk by retail, but it was an absolute prohibition against such persons carrying on any trade or business which in the opinion of the local authority was of such a nature that its continuance would tend to contaminate the milk. If the words "in the opinion of the local authority" had not been inserted, there might have been something to say for it; but then the complaint would have had to be framed differently, and the complainers would have been obliged to set forth not only the nature of the business carried on by the respondent, but also that it was one conducive to the contamination of milk with whatever precautions it might be conducted, and they would have had to prove that, had it been disputed. It seemed to the sheriff that a conviction could not competently follow upon the complaint, and he did not find any sanction for the penalty attached by the complainers. The respondent was allowed five guineas of modified expenses.

Female Medical Students at the University Examinations in Edinburgh.

For the first time in the history of the Edinburgh University a number of female students have appeared for the first professional examination in medicine, which is at present being held. Nearly all the candidates are from the College for Women in Chambers-street, which is under the wing of the Scottish Association for the Medical Education of Women, and most of them have been successful in passing.

The Edinburgh Royal Infirmary.

The friends of the Royal Infirmary are rejoicing over the legacy of £50,000 left to it by the Earl of Moray, and those interested are speculating as to the effect it may have in determining the managers to proceed with the proposed extensions. At the meeting of managers on Monday the new presidents who were appointed were given copies of fresh regulations bearing upon their conduct in the residency. This has unfortunately been brought about from the somewhat boisterous nature of some of the entertainments during the winter.

Edinburgh Royal Maternity Hospital.

At the annual meeting in connexion with this hospital it was intimated that there was a credit balance on the year of £327. The number of inside patients had been 310 and outside patients 610, making 80 more than during the previous year.

The University of St. Andrews.

At a largely attended meeting of the general council of St. Andrews University, held last week under the presidency of the Marquis of Bute, a motion was adopted by 74 votes to 38 approving of the action of the University Court in deciding to found from the Berry Bequest two additional medical chairs at St. Andrews.

The Glasgow Eastern Medical Society.

The committee on organisation of this society having published certain recommendations to the members to guide them in their dealings with public bodies, I give them without comment, as, firstly, their tenour is very clear, and, secondly, they are only recommendations, not having yet been adopted by the society. (1) If the Procurator-Fiscal asks any member for information none should be given unless requested in writing, fee for which to be one guinea; (2) the doctor who first saw deceased ought to be joined with the official post-mortem examiner at the post mortem, fee for which to be one guinea; (3) all service at street accidents, whether the member is called in by citizen or policeman, ought to be paid for by the Commissioners; (4) the English and Irish parochial surgeons are dismissable by the Local Government Board only—it is desirable that the Scottish surgeons be put upon the same footing; (5) it is desirable, in cases of lunacy, that the patient's medical adviser sign one of the certificates, and be paid for it by the parochial board; (6) all certificates of death being public documents should be paid for by the Registrar-General—the certificate should be sent direct by the practitioner, and secrecy be maintained in regard to it by the Registrar; (7) certificates asked for by the School Board should be paid for by that Board; (8) an official should be appointed to investigate the condition of all applying for dispensary treatment, and no free medicine be given; (9) our society should fix the minimum fee per member per annum at five shillings, and juvenile societies should be at the same rate or higher; and (10) the society should use all its influence in

endeavouring to throw open the election of all the members of the General Medical Council to all registered practitioners.

A Complimentary Dinner to Dr. J. F. Sutherland.

On Tuesday, March 26th, the Glasgow Caithness Benevolent Association entertained Dr. J. Francis Sutherland at a complimentary dinner on the occasion of his having been appointed Visiting Commissioner in Lunacy for Scotland. In the course of his reply to the toast of "The Guest of the Evening," which was proposed by Baillie W. Primrose, Dr. Sutherland spoke of the certainty that the country was on the eve of legislation in regard to the habitual drunkard, and compared, in apparent unconsciousness of the double *entente* of his words, the labours of the Scottish Committee, who had examined one hundred and fifty witnesses for a population of four millions, with those of the English Committee on the same subject, who examined but twenty-two witnesses for a population of thirty millions.

Measles Epidemic in Aberdeen: Zymotic Diseases.

Measles began to assume an epidemic form in October last, when there were 73 cases of sickness and 1 death. In November there were 251 new cases and 5 deaths. In December the fresh cases numbered 1102, and there were 39 deaths; in January 1008 additional cases were reported and 47 deaths; in February there were 720 new patients and 43 deaths. The epidemic is now on the decline, the number of cases for the week ended March 9th being 153, in the next week 135, in the week ended March 23rd 112. The following is the return of the cases notified to the medical officer of health for the week ending Saturday, March 30th: Measles, 87; scarlet fever, 6; diphtheria, 1; whooping-cough, 8; erysipelas, 2: total cases 105, being 32 fewer than in the preceding week.

Aberdeen University: Honorary Degrees.

The Senatus has conferred the degree of LL.D. on Sir John Russell Reynolds, Bart., M.D., F.R.S., President of the Royal College of Physicians of London; Surgeon-Colonel Robert Harvey, M.D., F.R.C.P., D.S.O., who presided over the recent Indian Medical Congress; and Sir William McGregor, M.D., K.C.M.G., Administrator of British New Guinea. Of these the last two are distinguished alumni of Aberdeen University. The list of honorary degrees this year is also remarkable from the fact that for the first time in the history of Scottish universities a lady is among the recipients. The lady is Miss Jane E. Harrison, the well-known writer on Greek art and mythology.

New Convalescent Hospital for Aberdeen.

The directors of the Royal Infirmary have been inquiring as to the site for a new convalescent hospital to take the place of the one at Loch-head, which is situated in the city itself and has been sold to the directors of the Royal Lunatic Asylum. It is proposed to build the new hospital in the country. The committee found it impracticable to get a supply of water for one location looked at and have been necessitated to advertise for a building site at some little distance from the city and near to a railway station—"a good supply of water, with ample sewage outlet, essential." Such a site for such a purpose will not easily be got.

Public Nursing Classes in Aberdeen.

Over 200 ladies have attended the public nursing classes in Aberdeen conducted by Dr. J. Scott Riddell. After defraying all expenses the class has been able to hand over to the Ambulance Association about £7. Mrs. Ogston presented the medals and certificates in the large hall of the Young Men's Christian Association to the successful candidates and was accorded a vote of thanks. Professor Alexander Ogston acknowledged the compliment paid to his wife in suitable and humorous terms.

April 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

THE regulations for the Fellowship examination in this College have recently been revised, improved, and altered in many particulars. A resolution has also been passed by the Council by which the Court of Examiners will for the future be consolidated. The two examiners in each subject will thus examine candidates for the Fellowship, Dental, and other diplomas as well as for the Licence of the College.

No less than eighty candidates presented themselves for the preliminary examination last week.

A Groundless Charge against a Poor-law Medical Officer.

A special meeting of the Cashel Dispensary committee was held at John-street, Cashel, on Thursday, the 28th ult., for the purpose of taking into consideration a communication from the Local Government Board in reference to the discharge of the duties of the medical officer of the district. During the investigation it transpired that the action of the Board was caused by a letter addressed to it by a man named Timothy Ryan, in which Mr. Cusacks was accused of neglect of duty. This man subsequently wrote to the dispensary committee (a communication which was read) stating that he had never perused the letter to the Local Government Board. Mr. Cusack, in reply to the communication from the Local Government Board, denied the allegation and invited the fullest inquiry into his action as medical officer. Many members of the committee expressed their full confidence in Mr. Cusack, while a strong letter to the same effect was read from the Very Rev. the Dean of Cashel, who was unavoidably absent. Ultimately the following resolution was passed unanimously.

"The committee of management have had before them Dr. Cusack's letter with enclosures, and while they do not object to any such inquiry as he desires, they feel he would be justified in treating the communication sent to the Local Government Board under the circumstances stated in Timothy Ryan's letter to the committee to-day with contempt. The committee, as well as the poor of the district, know too well how satisfactorily and courteously Dr. Cusack has always discharged his duties. The committee most willingly bear testimony to the great care he has always bestowed on the sick poor, and for this very reason they deeply regret he should be subject to any annoyance in the discharge of his duties, and if this annoyance emanates from another union official, as is suggested, the Local Government Board should put a stop to it without delay."

It is satisfactory to note the unanimity and effectiveness of the action taken by this dispensary committee in loyally supporting their medical officer in repelling a false and groundless accusation.

Private Hospitals in Dublin.

The case known in the daily journals as "The Hospital Injunction Case" has not yet been decided. The delay is unfortunate, but from the recent observation of the Vice-Chancellor it seems to be unavoidable. The case stands briefly thus: A house has been taken in Fitzwilliam-square by a lady who wishes to use it as a private or "home" hospital. Many of the residents in the locality, which includes some of the best private houses in the city, object on the plea that the grounds of the square, which is a small one, may be used by convalescent patients, and that the quiet of that somewhat aristocratic quarter may be disturbed by, for instance, the nocturnal screams of patients. A determined effort is now being made to restrain the proprietor of the house by injunction from utilising it for the above-mentioned purpose, and the leaders of the Irish Bar have had their say on both sides of the question. The judgment of the Vice-Chancellor is now awaited with interest, for his decision will probably affect the position of many other private hospitals and "homes," the multiplication of which in Dublin has been one of the most striking of the local medical developments of the last few years.

Mater Misericordiae Hospital.

Mr. Coppinger's case of innominate aneurysm, of which a brief notice was published on the 23rd ult., continues to do well, both wounds having healed "per primam."

New Medical Magistrates.

Mr. McNulty, L.R.C.P. and S. Edin., Skreen, has been appointed to the Commission of the Peace for the county of Sligo; Mr. Shanahan, L.R.C.S. Irel., Kilmacthomas, to the Commission of the Peace for the county of Waterford; and Mr. J. F. Roden, L.R.C.P. and S. Edin., Headen, to the Commission of the Peace for the county of Limerick.

Sir David Barbour at Queen's College, Belfast.

On Monday, April 1st, at a meeting of the Queen's College Literary and Scientific Society, Sir David Barbour, K.C.S.I., an old *alumnus* of Queen's College, Belfast, who has recently returned from India after having attained the high position of Finance Minister, delivered an address on Bimetallism. Sir David Barbour thinks that the experience of the last twenty-two years appears to afford an irresistible argument in favour of using both gold and silver as the future standard of value. The question to be considered was not whether we shall use gold alone as the world's standard of value, but what is the best method by which gold and silver can both be maintained

as standard money. Sir David Barbour, who was a guest of the President of Queen's College during his stay in Belfast, has left to lecture in Dublin.

The New Asylum at Purdysburn.

A meeting of the farmers and residents in the neighbourhood of Purdysburn was held on April 1st to protest against the proposal of the Belfast Asylum authorities to run the sewage of the new asylum at Purdysburn into the Purdysburn river. It seems that, owing to the peculiar nature of the soil of the district and the almost total absence of springs, the people have depended on the river for their supply of water at all seasons of the year. It was stated that more than 500 families use the river. A deputation was appointed to lay the views of those present at the meeting before the asylum authorities.

Death of Dr. Daniel Jamison.

The very greatest regret was felt in medical and other circles on March 31st when it was announced that one of the younger members of the profession, Dr. Daniel Jamison, had succumbed to an attack of typhus fever. There has been an outbreak of the disease in the Falls district of Belfast, said to have been introduced into the city by a girl from Lisburn. Dr. Jamison, in the course of his duty as dispensary officer, was called to attend several of the patients, and in this way he contracted the disease which has been so fatal to medical men in all parts of Ireland. Dr. Jamison graduated in 1890, and a few years ago was appointed a dispensary officer. He was greatly respected for his many good qualities and his death is deeply deplored.

The Witchcraft Case at Clonmel.

The witchcraft horror still absorbs a considerable amount of public attention, and the ghastly details brought out in evidence clearly indicate that the unfortunate husband had lived on terms of affection with his wife. He firmly believed she had been spirited away and a supernatural being substituted in her place. Fully impressed with the idea that the only way in which he could recover his wife was by ejecting the supposed witch, he acquiesced in the ordeal by fire, and with the assistance of the unfortunate woman's father and other near relatives, inflicted the terrible injuries already detailed. Public indignation runs so high in the neighbourhood that the authorities find it prudent to surround the prisoners by a very strong guard of constabulary as they are marched from the Bidawell to the court, and the groaning of the crowd is principally directed against the "herb doctor." The latter moves in a very humble sphere of life, and his healing powers have been "inherited" from his father and grandfather!

The Bishop of Cork.

I have definitely learned that the Right Reverend Dr. Meade and his coachman have arrived in Paris, and so far are progressing very well under the care of Professor Pasteur. The spinal cord of the dog has been submitted to Professor Pasteur with a view to a positive diagnosis being made as to whether the animal suffered from rabies. Doubt has been expressed upon this point, but several cases of that disease have recently occurred in this district, and only a few weeks ago a child was bitten by a rabid dog at Douglas, a village two miles from Cork. The Poor-law guardians, with commendable promptness, proposed to send the little sufferer in charge of the relieving officer to Paris, but the parents refused to allow the child to go unless they could accompany it, and the guardians could not see their way to incurring the additional expenditure.

Cork Lunatic Asylum.

At the last meeting of the board of governors of this institution the medical superintendent reported that recently a patient had a struggle with some of the attendants and on examination afterwards it was found that three of his ribs were broken. The board decided that a searching investigation should be held for the purpose of ascertaining whether any unnecessary violence had been used.

Died at the Post of Duty.

Sister Evelyn (Miss Adams), Cork, who recently completed her period of probation at the South Infirmary and afterwards joined the staff of the North Fever Hospital to acquire a knowledge of fever nursing, contracted typhus fever whilst in the latter institution. The medical and nursing staffs were unremitting in their care of her, but her health had been previously somewhat run down, and the disease assumed a virulent type which medical skill and kindly nursing failed to combat.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Astigmatism or Astigmia?

In the current number of the *Annales d'Oculistique* Dr. Georges Martin of Bordeaux publishes a suggestive article on the correct nomenclature of the above condition. He reminds us that Dr. Whewell, when he invented the word astigmatism, meant to describe a condition in which rays emitted by a luminous point and traversing an eye of which the cornea or the lens are refracted less in the vertical axis than in the other axis, and could not consequently be brought to a focus or point on the retina. But Dr. Martin contends that Whewell should have chosen for his purpose, not *στιγμα*, *στιγματος* (which really means *puncture*), but *στιγμή*, *στιγμής* which signifies a mathematical point. He points out that the word *stigmata* is commonly employed to describe the wounds made in Our Saviour's feet and hands by the nails of the Cross. Before, however, bringing the new word *astigmie* to the notice of the profession, Dr. Martin consulted two competent Hellenists—M. Oavré, Professor of the Faculty of Letters of Bordeaux, and M. Monnier, Law Professor at the same Faculty and a well-known Greek scholar. Dr. Martin adduces, as a further reason for the adoption of the new term *astigmie* (*astigmia*), the fact that the innovation would justify the use of the current word *astigmatometer*, which should logically be written *astigmatometer* under the old nomenclature. My friend Dr. Bull of Paris, to whom I am indebted for this information, tells me that Dr. Martin's view has met with such acceptance that he himself (Dr. Bull) and Dr. Javal and Dr. Parent intend to employ the word *astigmia* to the exclusion of Whewell's term *astigmatism*, and that the official sanction of the next Ophthalmological Congress will be sought for the innovation.

The Medical and Cognate Professions in Alsace-Lorraine.

All information relating to the former French provinces, Alsace-Lorraine, is naturally eagerly welcomed by our Gallic neighbours, and my *confrères* in England will perhaps be interested in the census of the medical, pharmaceutical, and dental population of the latest recruit (excepting Heligoland) to the German Empire. The number of medical practitioners in Alsace-Lorraine is 653, 149 of these being army medical men. Of the pharmacists, whose number is strictly limited by law, there exist 333. The dental profession will grieve when they hear that their comrades in the whole of Alsace-Lorraine only number 12. Of the 504 civil medical men, 83 possess French diplomas (Alsace 60 and Lorraine 23), being a diminution of 7 on the figures of last year. There still survive in the two provinces 3 *officiers de santé*. Of 333 pharmacists, 16 only hold French diplomas, whereas 21 out of 67 veterinary surgeons were educated at French schools. The fathers of the medical profession in Alsace-Lorraine are Dr. Berdotz, sen., of Colmar and Dr. Scheidecker of Rothau, who qualified in 1829 and 1831 respectively.

Ocular Chancre.

A lecture on the above-mentioned rare affection was recently delivered at St. Louis by Professor Fournier. In 1850 Ricord gave a complete description of this phenomenon, and Zeiss later counted one ocular chancre in 20,000. If we may rely on recent statistics furnished by Fortinades, the proportion has increased forty times (1 in 500). The lesion may occupy one of three situations—whole palpebral (rare), ciliary and invading also either the cutaneous or the mucous aspects of the lid (the most common), or exclusively conjunctival (the rarest). Chancres involving the internal angle are at least twice as common as those situated at the external canthus. The lesion is almost invariably single and generally no other chancre exists on the body. Nevertheless, such coincidences do occasionally occur, and a patient now in Professor Fournier's wards has two chancres—one at the external angle of the eye and another on the chin. More commonly met with in the man than in the woman, it is seen at all ages, which circumstance is in favour of its accidental, non-venereal origin in a good many instances. In a large proportion of cases the etiology is problematical; in other words, the cause is an accidental one. The cause will, however, come under one of the three following heads: (1) direct contagion, (2) contamination through the fingers, and (3) mediate contagion. In direct contagion kissing occupies the chief place. Then, again, infected saliva may accidentally be projected on to the eyelid, as in the inspection of the fauces of a syphilitic

subject by a medical man. Professor Fournier has come across five fellow-practitioners who became syphilitic in this way. Three of them assured him that they had immediately washed their faces thoroughly. In such a predicament the prompt application of an antiseptic such as corrosive sublimate solution is necessary. Again, a bite or suction has sufficed for infection. One example given is that of a boxer who went home with an extensive ecchymosis of the lower lid. A woman who had buccal mucous patches pricked the swollen lid and sucked the wound in order to evacuate the effused blood. A chancre was the result. The tongue may convey the virus, as in the practice followed in certain countries for the extraction of foreign bodies of the eyelid. A Russian confrère, Dr. Teplyaschin, relates how an epidemic of syphilis reigned in a small village, the source of the mischief being a "wise woman" renowned for this kind of practice. Infants have been infected through the saliva of a syphilitic nurse or mother, it being the custom in some countries to wash the child's eyes with the spittle. The chancre of the palpebral border presents itself under the aspect of a tumour of the eyelid as large as a haricot bean or the half of an olive. It is a hard erosive neoplasm. The surface is generally smooth and red; sometimes it is, however, covered with a brown or yellowish crust. The only part of the chancre that is eroded is the conjunctival surface. The chancre of the external angle is fissured, being composed of two portions separated by a rhagade. The glands affected in chancres of the inner angle are submaxillary, in those of the outer angle preauricular and parotidian, although a chain extending from the preauricular gland to the clavicle may be noticed in certain cases.

A New Obstetrical Department.

The new Maternity forming part of the Beaujon Hospital is at last completed. It contains fifty-eight beds, forty being reserved for women actually in labour, twelve for pregnant women, and six for purposes of isolation. The sum of 75,161 francs has just been voted by the municipal council for the furnishing of these wards. The accoucheur of the Beaujon Maternity is Dr. Ribemont-Dessaignes, to whom is due the credit of having done away with the old microbe-laden obstetrical wards in favour of the modern premises.

The Congress at Bordeaux.

The Secretary-General of the Congress to be held under the auspices of the Société de Gynécologie, d'Obstétrique, et de Pédiatrie de Bordeaux in that city in August communicates the three subjects to which special attention will be directed: (1) Gynecology—Uterine Displacements; (2) Obstetrics—Treatment of Puerperal Septicæmia; (3) Pediatrics—Malformation of Lower Limb, Subluxation of Hip, and Clubfoot.

April 2nd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A New Epidemic in Berlin.

APHTHOUS fever, an affection identical with bovine foot-and-mouth disease, has been for some years constantly present in several places in the neighbourhood of Berlin. This year it has invaded the city, and, although for the present only a part of Berlin is infected, the epidemic will undoubtedly spread over the whole town if no preventive measures are taken. An excellent description of its pathology has been given by Dr. Siegel in the *Deutsche Medicinische Wochenschrift* of 1891, the year in which the disease first appeared. Dr. Siegel is a practitioner in Britz, a village near Berlin, where many cattle are kept by the inhabitants. He is of opinion that in the human subject incubation lasts eight or ten days; the patients are then seized with shivering, giddiness, and an inclination to vomit. Most of them become hoarse; the skin assumes a yellowish-grey colour, and, as a rule, there is obstinate constipation. The temperature is usually not very high; in Dr. Siegel's cases it never rose above 39.5° C. This stage of the illness lasts from three to eight days; then swelling of the tongue and gums, loosening of the teeth, and intense fœtor of the breath ensue; at the same time little blisters appear on the tongue, the lips, and the skin of the legs. The blisters in the mouth very soon break and form small ulcers, those on the legs are often so close-set that they resemble the eruption of measles. All these symptoms disappear after a

few days, and the patients enter on the convalescent stage. The disease, however, is not always of so mild a character, and in some cases there have been very alarming complications. In one case shown to the Surgical Association the swelling of the tongue was so intense that it was tightly compressed by the teeth and became partly gangrenous. Another very grave symptom was bleeding from the gums, the tongue, and the stomach. Sometimes the eruption on the legs resembled pemphigus and formed large ulcers which were somewhat slow of healing. Orchitis was found in some cases, whilst albuminuria was very uncommon. Notwithstanding these grave complications, the death-rate of the disease was low; Dr. Siegel had only six deaths in 400 cases. In a second communication to the *Deutsche Medicinische Wochenschrift* of 1894 Dr. Siegel completed his description. In addition to the regions already mentioned, he has observed the blisters on the mammae of nursing women, the prepuce, and the conjunctiva. He distinguishes three forms of the disease—viz., intestinal, pectoral, and cutaneous, according to the predominance of the symptoms in the respective organs. He has had good therapeutic results with salicylate of potassium. The cause of the disease is, in his opinion, a bacillus which he has found post mortem in the liver and kidneys. This bacillus is somewhat short, being only 0.5-0.7 μ in length; its ends are rounded and are more intensely dyed by aniline colours than the middle portion; it has no mobility and can be cultivated on gelatine without liquefying it; it also thrives on agar, blood-serum, and potatoes; it cannot be stained by Gram's method. At a recent meeting of the Medical Society Dr. Siegel, who has made apthous fever his speciality, stated that in some cases this year there were no blisters at all during the course of the illness, the principal symptoms being only obstinate constipation and general malaise. The bacillus which he had formerly found only in the organs post mortem has now been seen by him also in the excreta. He has succeeded in producing typical foot-and-mouth disease in cattle by inoculating cultures of the bacillus. Although there is no doubt that the disease is transmitted by milk he had never found these bacilli in it, and it would seem that they are destroyed by the numerous other bacteria which the milk contains. He says that the only way to prevent the propagation of the disease is to kill all the cattle affected with foot-and-mouth disease; for this purpose a very strict control would have to be exercised over all the cowhouses of the infected places. As the disease is of very great interest the Medical Society will soon discuss the matter, and if the number of patients increases perhaps a collective investigation will be undertaken. The members have already been asked to send notes of their cases to the secretary of the society.

The Helmholtz Monument.

A monument will be erected in Berlin in honour of the late Professor Helmholtz. For this purpose a committee has been formed under the presidency of Dr. Delbrück, former Secretary of State, and a friend of the deceased *savant*. The medical members of the committee are Professor Dubois-Reymond, the celebrated physiologist, Professor Fränkel, Professor Liebreich, and Professor Virchow. Professor König, the successor of Helmholtz in his chair at the University of Berlin, will act as honorary secretary. The Emperor has contributed £500, and other subscriptions to a considerable amount have been received.

Influenza in Berlin.

Influenza, which has been endemic here for the last five years and became prevalent nearly every winter, has this year attacked an uncommonly large number of people. Persons whose business keeps them a great deal of the day at home or in offices seem to be more liable to it than those who work out of doors. Many serious inconveniences have been caused by the epidemic; in the law courts, the Government offices, and other establishments business was often stopped because the officials and employés were for the most part ill. The exact number of the sick cannot be given as the official health statistics only report the number of deaths. In the week from Feb. 12th to 18th influenza caused only 5 deaths; Feb. 19th to 25th, 21 deaths; Feb. 26th to March 2nd, 67 deaths; and March 3rd to 9th, 95 deaths. There were also a great many fatal cases of pneumonia associated with influenza. In the last-mentioned week the epidemic seemed to have reached its acme and has since declined. The complications were both numerous and grave. In addition to affections of the

respiratory organs suppurations have been observed in the bones, joints, ears, and other parts of the body. There has been no discussion as yet in the medical societies, and it is therefore impossible to give further particulars at present.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Death of Professor Rinaldo Roseo.

WE have just lost our very able and popular Professor of Medical Jurisprudence. Professor Rinaldo Roseo had been for some time labouring under a vesical affection which ultimately required an operation. He repaired for that purpose to the Clinica Chirurgica directed by his friend and colleague, Professor Durante, in whose skilful hands all went well for some days, till suddenly and unexpectedly a rigor declared itself as the prelude to severe convulsive attacks, which carried him off on the 25th inst. Professor Roseo was not more than forty-eight years of age, but he had early in life established a solid reputation for acquisitive and original power. Legal medicine in all its ramifications was his special department, and on the chair reserved for it in the Sapienza becoming vacant he offered himself as a candidate. The election was by comparative trial, and a number of formidable competitors presented themselves. He distanced them all, however, and the examiners gave public expression to their gratification at having secured for the University so able and accomplished a teacher in a subject so important. Indefatigable in the laboratory and most painstaking in his prælections, he was one of the most attractive occupants of a university chair in Italy. In the law courts he commanded respect and even deference by his tact and conciliatory power in making scientific evidence prevail over legal technicality and routine precedent. He even mingled, on occasions of political crisis, in the public questions of the day, and contested, happily without success, the first and then the fourth electoral division of Rome. I say happily, for, as all his friends perceived, his devotion to duty was such that, had he been returned to Parliament, he would have given his constituents an amount of his time and thought that he could not, compatibly with health, have spared from his academic and forensic avocations. He did good service as Assessore dell'Igiene—a post for which his great knowledge of State medicine and his interest in the sanitary welfare of the community eminently fitted him. His funeral was attended by all the Senatus Academicus and students of the University, by the Grand Orient of Freemasons, in which he held high office, by the chief representatives of the great public bodies, communal and municipal, and by the delegates of the leading literary and scientific societies.

Enrico Canori.

Another academic loss is that of Enrico Canori, one of the most brilliant students of medicine in the Roman school. He was just on the eve of graduation, and would have more than justified the expectations of his teachers and class fellows when he succumbed to pyæmia. It will be long before the Sapienza boasts of another prosector and assistant teacher of equal promise.

March 31st.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The Club Question.

I HAVE received the following circular, which speaks for itself:—

"The present very inadequate scale of remuneration made by the majority of sick clubs to their doctor was originally accepted by the latter in consequence of such societies having been regarded as charitable institutions (especially established for unskilled working men and their families), the members of which appealed to the philanthropy of the profession for services to which the pay bore no relation to the value of their skill, time, and labour. The present enlarged means of the members of sick clubs generally (among whom are not only skilled artisans, whose earnings are now greater than in former years, but tradesmen and others whose position in life renders them able to pay the customary medical fees, and whose self-respect should induce them to bear in mind the rule of 'live and let live') should, therefore, not merely as a matter of justice, but of policy, incite them to remunerate their medical officers on a scale more proportional to the value of their services than the existing one, and one better calculated to promote the mutual confidence and respect which should

subsist between members and their doctors; for although inadequate payment affords no justification for the omission of duty on the part of the latter, still the probability, nay, the moral certainty, cannot be ignored that a fair and liberal remuneration would, by insuring increased medical attention, tend (humanly speaking) to shorten the duration of disease, and thus, to no inconsiderable extent, lessen the demand upon the several club funds for 'sick pay.' Moreover, it is of importance, as affecting the financial position of clubs, that every member should on admission be in sound health and free from any hereditary or marked tendency to disease. This can only be ascertained by a careful medical examination—a work of time and skill; and it is but reasonable that a moderate fee should be paid for the trouble and responsibility incurred."

The very hard work which the club medical officer has to undertake, especially during epidemics and in scattered localities, is indeed not adequately met by this existing scale of remuneration. The wages of workmen in this colony are on a high scale, and skilled labour is handsomely rewarded. When it is taken into consideration, on the one hand, that to obtain a satisfactory medical qualification nowadays real hard work is absolutely essential, and that it entails the expenditure of extended time and much money, and, on the other, that the wage of workmen is so high, surely members of clubs and friendly societies ought to be able to recompense professional attention in a more satisfactory manner as far as their medical officer is concerned. Personally I have no interest in clubs or friendly societies, but I see quite enough in my own district to be entirely convinced that persons with thousands of pounds at their command are mean enough to secure medical attention at an absurd rate under cover of being members of this or that club or friendly society. Why should a man with, say, a thousand a year, meeting with an accident, such as a fractured thigh, or being the victim of typhoid fever, receive all the skilled attention necessary to meet his case for the paltry pittance which the friendly societies offer? The whole matter rests with the members of the profession themselves, and I hope that the time is shortly coming when the subject of clubs &c. will be placed on a more satisfactory basis so far as the hardworking medical man is concerned.

The Wright Fund.

This fund, raised by subscription among the members of the medical profession in New Zealand, amounts as the mail leaves to £184 odd. The almost unanimous response which was made to the suggestion that aid should be given to Dr. Wright as a small token of sympathy is very satisfactory to the chief promoters of the scheme, and especially so to the recipient, who in the latest issue of the *New Zealand Medical Journal* cordially thanks the members of his profession for their sympathy, which has been exhibited in such a practical manner.

Wanganui, Feb. 23th.

Obituary.

JAMES HENRY COVENEY, M.R.C.S. ENG., L.S.A.

WE regret to announce the death, on the 26th ult., of Mr. James H. Coveney, who for many years was engaged in private practice at Prestwich, near Manchester. Mr. Coveney was the son of the late Captain James Coveney of the 60th Rifles, and was born at Stilton, Hunts. He was educated at the Huntingdon Grammar School and St. Bartholomew's Hospital, and subsequently, after obtaining the diplomas of the Royal College of Surgeons of England and the Society of Apothecaries, he held the office of Physician's Assistant at the Royal Infirmary, Manchester, later becoming attached to the Royal School of Medicine at Manchester as Lecturer on Surgery. While engaged in practice in Prestwich Mr. Coveney held the appointments of district medical officer and of medical officer of health. He retired in 1886, to the great regret of his patients, who had been accustomed to rely on his skill and kindness during the many years he had lived among them. On his retirement he was presented by those who had learnt to value his services and his friendship with a handsome token of their esteem. His remaining years he passed at Hawkhurst, in Kent.

EDMUND GRUNDY, M.R.C.S. ENG., L.S.A.

MANY old friends and patients will feel more than a passing regret at the announcement of the death of Mr. Grundy of Bury, Lancashire, who succumbed to an attack of bronchitis

on March 20th, at the great age of eighty-seven years. He was the son of Mr. Edmund Grundy, the first Parliamentary representative of Bury after it became a borough. Having obtained his medical education in Dublin, he passed the examination of the Society of Apothecaries in 1829, and became a member of the Royal College of Surgeons of England in the following year. He then commenced practice in Bury, and from that time onward, as long as health and strength permitted, he continued in the active exercise of his profession in Bury or the vicinity. Mr. Grundy was a widower, and leaves one son.

JOHN GROVE, M.D. ST. AND., M.R.C.S. ENG., L.S.A.

DR. GROVE, whose death has been already announced in our columns, was within a month of attaining his eightieth year when he passed away on March 6th at his residence in Gloucester, where he had for some years made his home. He was born in Bethnal-green and was of French extraction, a circumstance to which he probably owed in some degree the enthusiasm of his character. He commenced medical practice in Wandsworth in 1840, having in that year qualified as M.R.C.S. and L.S.A., and from that time till 1860 led the busy life of an active general practitioner and medical officer to the board of guardians. He was a zealous investigator of clinical problems, and indefatigable in searching for the remote causes which underlie and lead up to the phenomena of disease. During the cholera epidemic of 1848-49 he placed great reliance on the use of sulphur both internally and externally, and published his views in a pamphlet which was reviewed in our columns on Oct. 20th, 1849. In the same number of THE LANCET appeared the first of three articles by him entitled "The Vitality of the Choleraic Fungi Demonstrated," in which he argued on behalf of the specific character of mycelium growths observed in the urine of cholera patients. Although subsequent investigations have not supported his conclusions as to the particular organism the general idea was sound, and the view that disease might originate in a living growth was then comparatively new. Dr. Richardson in 1877 and Mr. Dolan in 1881 bore witness to the originality of his work, the latter speaking of him as "the first in modern times to advocate the hypothesis that living germs are the exciting agents of epidemic and infectious disease." Dr. Grove also wrote on the microscopical character of lymph and the method and results of inoculation. Other works of his were "Epidemics examined and explained, or Living Germs proved by Analogy to be a Source of Disease," "Aphtha, and its Important Relations as an Epidemic Disease," and "Contagion and Infection in relation to Epidemic Diseases," this last being a reprint from the *Journal of Medical Science* for November, 1853. Dr. Grove's last contribution to the literature of his special subject was "The Unity of the Laws which govern the Exciting Agents of Epidemic, Endemic, and Infectious Diseases," on which he wrote in the *Transactions of the Epidemiological Society* for 1851 and the *Medical Press* of January, 1852. About 1852 Dr. Grove became a Fellow of the Royal Medical and Chirurgical Society, and in 1852 he graduated as M.D. at the University of St. Andrews.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF PRESIDENT.

At a special meeting of the Council of the College held at the College on Thursday, April 4th, Mr. Reginald Harrison, the Senior Vice-President, in the chair, Mr. Christopher Heath was elected President of the College in the room of Mr. John Whitaker Hulke, F.R.S., deceased, for the remainder of the collegiate year. Mr. Heath's election will therefore run until Thursday, July 11th, 1895, the second Thursday in the month.

The choice of the Council had been very generally anticipated.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the Second Examination of the Board in the subjects indicated:—

Monday, April 1st:—

Anatomy and Physiology.—Isaac Taylor, student of Yorkshire College, Leeds; Roland Wilfred Pearson, Henry Harold Robinson, James Bennett, and James Wood, Owens College, Manchester; Joseph Black, Owens College, Manchester, and Firth College, Sheffield; John Gardner and Norton Milner, Firth College, Sheffield; Frank Barnes, Frank Newstead Deakin, Wilfred Henry Coltart, John Godfrey Crosswell Taunton, John Bradley, Francis Pope, and John Augustus Noel Longley, Mason College, Birmingham; Arthur Wren Tuxford, St. Mary's Hospital; Walter Rodney Battye, University Colleges, Bristol and London; and John Worthington Hughes, Cambridge University.

Anatomy only.—Messrs. Henry Spinks, James Wallwork, and Herbert Blakemore, Owens College, Manchester; Frederick Charles Morgan and Charles Martin Mitchell, University College, Bristol.

Physiology only.—Messrs. Graham Renshaw and Herbert Lancaster Lordman, Owens College, Manchester; and Owen Treadwell Athley Phillips, University College, Cardiff.

Twelve gentlemen were referred in both subjects, four in anatomy only, and five in physiology only.

Tuesday, April 2nd:—

Anatomy and Physiology.—William Edmund Jones, student of Owens College, Manchester; William Edward Bee Roberts, Mason College, Birmingham; Edward Charles Sawley and Edward Septimus Graham, St. Mary's Hospital; Edwin Vincent Foss and Robert Fletcher Moorshead, University College, Bristol; George Llewellyn Bates and Walter John May, Charing-cross Hospital; Robert Wynne Charles Pierce, William Hancock Tucker, and Harry Edward Hewitt, St. Thomas's Hospital; George Conyns Marrack, St. Bartholomew's Hospital; Harold John Ercart, Westminster Hospital; Lionel Edwin Charles Handson, Guy's Hospital; Thomas Jones, London Hospital; Alphonse Roman, Tubingen, Strassburg, and Kiel Universities; Herbert Alexander Bruce, Toronto University and University College, London.

Anatomy only.—Edward Smyth Crispin, King's College, London; Joseph Lewin Payne, Guy's Hospital; Alfred John Andrew, St. Bartholomew's Hospital; Polham Christopher Maitland, Middlesex Hospital; and John Edward Hocking Parsons, Cambridge University and Guy's Hospital.

Physiology only.—James Michael Aloysius Manning, St. George's Hospital; Donald Ackland, Charing-cross Hospital; and Austin Ronald O'Flahertie, London Hospital and Mr. Cooke's School of Anatomy and Physiology.

Ten gentlemen were referred in both subjects, five in anatomy only, and six in physiology only.

THE VICTORIA UNIVERSITY.—The following candidates passed in March, 1895, in the subjects indicated:—

Final M.B. Examination: Part I.—G. F. Bowman, Owens College; Archibald Brushfield, Owens College; H. S. H. Callum, Yorkshire College; C. E. Ligertwood, Yorkshire College; F. C. Moore, Owens College; J. V. Shaw, Yorkshire College; Spencer Thorp, Owens College; R. H. Trotter, Yorkshire College.

Part II.—Hugh Ainsworth, Owens College; C. S. Ashe, Owens College; R. E. Bickerton, University College; D. E. Darbyshire, University College; F. W. Fish, Owens College; J. P. Hall, Owens College; J. J. H. Holt, Owens College; W. A. Newall, Owens College; H. A. Scott, Owens College; W. L. Spink, Yorkshire College; J. S. Taggart, Owens College.

The following have been awarded Honours:—*First Class.*—Hugh Ainsworth, Owens College; J. S. Taggart, Owens College. *Second Class.*—J. P. Hall, Owens College.

Second M.B. Examination: (a) Anatomy and Physiology.—J. T. Auld, Owens College; Mark Augier, University College; T. F. Bamford, Owens College; W. H. Bateman, Owens College; William Bradley, Owens College; J. J. Butterworth, Owens College; H. J. Crompton, Owens College; L. O. Delecourt, Owens College; J. E. Dutton, University College; Walter Graham, University College; A. S. Griffith, University College; Harold Hartley, Owens College; J. F. Hodgson, Owens College; D. G. Hurter, University College; Robert Kelsall, Owens College; James Kemp, Owens College; G. G. L. Lawson, University College; F. T. A. Lovegrove, University College; J. H. Mason, Yorkshire College; H. A. Mawdsley, University College; W. T. Mellington, Owens College; John Milne, Owens College; H. G. H. Monk, Yorkshire College; John Mooney, Owens College; C. H. Moorhouse, Yorkshire College; John Prestwich, Owens College; A. H. Priestley, Owens College; Graham Renshaw, Owens College; J. H. Sheldon, Owens College; Robert Sutherland, University College; Harold Thorp, Owens College; L. S. Whitman, University College; J. H. Willett, University College; Joshua Williamson, Yorkshire College; D. S. Wylie, Owens College.

(b) Materia Medica and Pharmacy.—D. A. Ashton, Owens College; J. T. Auld, Owens College; T. F. Bamford, Owens College; R. W. Bollans, Yorkshire College; H. N. Bridge, Owens College; Lucy Buckley, University College; W. J. S. Bythell, Owens College; H. R. Clarke, Owens College; Francis Darlow, Yorkshire College; J. W. Dearden, Yorkshire College; Walter Graham, University College; Roland Hamer, Owens College; T. W. Hart, Owens College; Harold Hartley, Owens College; Walter Hickey, Owens College; D. G. Hurter, University College; Robert Kelsall, Owens College; G. G. L. Lawson, University College; E. J. Martin, Owens College; Thomas O'Neill, Owens College; A. H. Priestley, Owens College; C. R. Schofield, Owens College; J. H. Sheldon, Owens

College: Harry Slater, Owens College; Robert Sutherland, University College; H. de P. B. Veale, Yorkshire College; J. V. Watson, Owens College; William Wright, Owens College.
The Scholarship in Medicine is awarded to Robert Kelsall, Owens College.

UNIVERSITY OF ST. ANDREWS.—The following registered medical practitioners, having passed the required examinations, received the degree of Doctor of Medicine on March 29th, 1895:—

George Henry Darwin, F.R.C.P. Edin., L.F.P.S. Glasg., Didsbury.
Samuel Barjona Fairley, L.S.A. Lond., L.F.P.S. Glasg., Aston.
John Joyner Fraser, L.R.C.P. Edin., F.R.C.S. Edin., Hesse.
James Robert Haynes, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A. Lond., London.
Lewis Leon James, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glasg., Edinburgh.
John Dysart McCaw, F.R.C.S. Edin., L.R.C.P. Edin., L.S.A. Lond., London.
James Bruce Ronaldson, L.R.C.P. Edin., F.R.C.S. Edin., L.A.H. Dublin, D.P.H., Haddington.
St. Clair Brokway Shadwell, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H., Walthamstow.
Thomas Willey, M.R.C.S. Eng., L.R.C.P. Lond., Tunbridge Wells.
Isaac Williams, L.R.C.S. Edin., L.M. Edin., London.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—A festival dinner in aid of the funds of this hospital was held on April 2nd in the Whitehall Rooms, Hôtel Métropole. H.R.H. the Duke of Cambridge presided, and among the company were Lord Halsbury, Field-Marshal Sir Donald Stewart, General Sir Redvers Buller, the President of the Royal College of Physicians of London (Sir J. Russell Reynolds), Sir J. Crichton Browne, and Dr. Gowers. The chairman stated that the Queen had contributed £50 to the funds of the charity, and he expressed a confident hope that its finances would be maintained in a satisfactory position by the generosity of the public. In response to the toast of his own health the Duke expressed his deep interest in all the charitable institutions of this country, and strongly deprecated any innovation which was likely to change their character of voluntarily supported charities. The toast of "The Medical and Surgical Staff of the Hospital" was proposed by the President of the Royal College of Physicians of London, and Dr. Gowers, in his reply, emphasised the importance of the position which the hospital was assuming, as the centre of neurological teaching in this country. Subscriptions to the amount of £4440 were announced by the secretary.

THE LEEDS GENERAL INFIRMARY.—We have received the annual report of the Leeds General Infirmary for the year 1894, which appeared last month, being its 127th yearly issue. The total number of beds in constant use was 394, of which 90 per cent. were continuously in occupation. The number of in-patients admitted was 5714, which with 295 remaining at the end of 1893 makes a total of 6009 treated during the year. The average daily number of beds occupied was 353, and the average length of residence of each patient was twenty-two days. The rate of mortality was 6.14 per cent., but, deducting the large number of patients (107) who died within forty-eight hours after admission, the percentage is reduced to 4.44. Of the deaths, 31 were due to burns and scalds, chiefly in young children; 91 were the result of accidents; and 116 inquests were held. The total number of out-patients treated, including 192 in the electrical department, was 40,827. Of those who applied as out-patients about 150 were rejected as being in a position to pay for treatment. In the maternity department there were 706 confinements. The Ida Hospital of forty-two beds serves to relieve the pressure on the wards of the infirmary; there were 696 patients transferred to it, and of them 2 died. During the year the horse ambulance has been used 518 times. On many occasions it was sent for persons who were found to be quite able to walk, and in 44 instances when it reached the place to which it was summoned there was no patient to be brought. The average cost of each in-patient for treatment, nursing, and maintenance was at the rate of 17s. 11½d. per week; or, inclusive of outlay on fittings, furniture, and repairs to buildings, 21s. 3½d. per week. The total income was £22,070, and the total expenditure on the infirmary and the Ida Hospital was £24,202. At the end of the year the serious debt of £6021 remained. In conclusion, the weekly board express their profound regret at the death of Dr. E. H. Jacob, who had for many years been connected with the infirmary, first as resident medical officer, then as assistant physician, and for the past three years as physician.

THE usual quarterly meeting of the General Council of the Royal British Nurses' Association will be held at 17, Old Cavendish-street, on Friday, April 19th, 1895, at 5 P.M.

THE CHARGE AGAINST A MIDWIFE.—Mildred Mary Rake, the certified midwife who has been standing her trial for manslaughter, the charge being that she had caused the death of one of her patients by communicating to her puerperal fever, was released on Tuesday on bail, the jury having been unable to agree on a verdict.

NOTTINGHAM SAMARITAN HOSPITAL.—The annual meeting of this hospital was held on March 27th at the Exchange Hall, Nottingham, the Mayor presiding. Dr. Elder presented the medical report, which showed that during 1894 there were 171 in-patients admitted, and that 148 operations were performed, including 18 cases of ovariectomy, all of which were successful, 35 abdominal sections for diseases of the uterine appendages, in 2 cases ending fatally, and 5 abdominal sections for the treatment of uterine myomata. During the year there were 4 deaths, one of the cases being a patient who was not operated on, and died from heart disease. The total income amounted to £704, and the expenditure to £884; a sum of £946 is owing to the bankers, and strenuous efforts are being made to obtain increased subscriptions.

PLYMOUTH MEDICAL SOCIETY.—A clinical evening was held on Wednesday, March 27th, Dr. Lawrence Fox in the chair.—Mr. Whiteford related the case of a man aged fifty who fourteen years ago fell and injured the left shoulder; seven years later an abscess pointed and was opened just below the clavicle. Six years ago a sinus formed on the anterior axillary fold and at intervals has discharged synovia. About 15° of movement are now possible, and members were asked as to their views of treatment of the case. Mr. Woolcombe exhibited for Mr. Swain a mass of black human hair weighing 5lb. 3oz. removed by the latter on March 20th from the stomach of an unmarried girl aged twenty by median abdominal section and gastrotomy. The patient is doing well, the sutures having been removed eight days after operation. A full account of this case will be published later by Mr. Swain.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The forty-sixth annual meeting of the governors of the Wolverhampton and Staffordshire General Hospital was held at the Bell Medical Library on March 12th. The report for the year 1894 stated that the number of in-patients treated during the past year has been 2100; of these 873 were medical and 1227 were surgical cases; 1357 as accidents, or urgent cases, were admitted without tickets. The number of attendances of out-patients during the year has been 47,695, showing an average of 917 per week. The number of in-patients in the preceding year was 14,918. The ordinary income for the past year has amounted to £7375 0s. 9d., being a decrease of £171 17s. 2d. as compared with the previous year. A new mortuary with rooms attached, for pathological and microscopic work, was commenced and finished at a cost of £800.

THE ROYAL EYE HOSPITAL, SOUTHWARK.—On March 27th the annual general meeting of the governors of this institution was held at the hospital in a ward which is unfortunately closed for want of funds. Professor McHardy, one of the surgeons, occupied the chair. The report for 1894 showed that during the year there were 13,337 new cases, of which 490 were in-patients, and that £2488 in Consols had been sold to supplement the still inadequate annual income of the charity. Mr. Henry Irving was unanimously elected a vice-president, and it was announced that Mr. R. K. Causton, M.P., would preside at the festival banquet on June 18th next. It is confidently hoped that as the public become acquainted with the work of this ophthalmic hospital they will assist it with such supplementary income as may be needful to fully utilise its advantages in the service of the sight-endangered poor of South London. The chairman mentioned that the Royal Ophthalmic Hospital at Moorfields, following the example of this hospital, is abandoning its present obsolete premises and erecting new buildings upon a more economical and suitable site. Various eminent architects and ophthalmic surgeons who have visited the hospital at Southwark had, he stated, greatly admired its general design and its adaptation to the purposes which it is intended to serve.

THE ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS, E.C.—The annual meeting of this charity was held at the hospital on March 28th, Mr. C. Gordon presiding. The report showed that 1881 in-patients were treated during the past year, and that there were 24,500 out-patients, who made 113,000 attendances. In 1863 cases spectacles were either provided gratuitously or assistance was given towards the purchase of them. The total income for the year was £7620, and the ordinary expenditure was £6883. There was, however, an extraordinary expenditure of £4080, made up of a sum of £2850, the cost of a site for a new hospital, together with a large outlay in connexion with an abortive scheme for enlarging the existing hospital. The site of the present building would be sold, a plot of land having been acquired on a 999 years' lease in the City-road for the erection of new premises, which were expected to be ready in about two years.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Shop Hours Question.

SIR JOHN LUBBOCK'S Committee on the Shops' Early Closing Bill have now before them a considerable body of opinion against the fixing of a legal limit. Representatives of the Voluntary Early Closing Association were examined this week, who claimed that there is still a large field for successful voluntary effort. One of these representatives, Mr. Bryce Grant, explained that he had written to the medical men connected with the association on the subject of the hours worked in shops in London, and had got from seven of them replies to the effect that they could not attribute suffering and illness to these hours.

Habitual Offenders and Inebriates.

The Committee, of which Sir Charles Cameron is chairman, appointed to inquire into the treatment of habitual offenders and inebriates, has completed its inquiry so far as the taking of evidence is concerned, and is now busy with the preparation of its report.

HOUSE OF COMMONS.

THURSDAY, MARCH 28TH.

The Government Veterinary Department.

Mr. Herbert Gardner, replying to a question on this subject, said that on the retirement of the late director of the Veterinary Department in December, 1893, he found it necessary to redistribute the business performed by the principal officers so as to enable the scientific officers to devote themselves exclusively to work for which the possession of veterinary knowledge was requisite, and to place the business of an executive and non-professional character in the hands of the officers best qualified to perform it. The new organisation had been in full operation for the past fifteen months, and there was no vacant post to be filled, nor was it necessary to make any new professional appointment now that the scientific officers were in a position to devote themselves to professional work.

The Meat-supply for the Army.

Mr. W. Field questioned the Secretary of State for War with reference to the proposed tenders for meat-supplies to the troops stationed at Dublin for the six months commencing June 1st next.—Mr. Campbell-Bannerman, in his reply, said that the tenders for meat for the Dublin garrison, like those for other stations, would be for both fresh and refrigerated meat. The conditions prescribed did not amount to a preference for foreign meat, but they admitted it into restricted competition with home supplies. This was not a departure from the general system, but an application of the general system to the Dublin garrison. Several military abattoirs were established many years ago, chiefly to secure the efficiency of butchers for field service and for the instruction of officers in connexion with meat-supplies. These purposes had been attained, and a sufficient supply of military butchers could be kept efficient with a smaller number of abattoirs, while the instruction of officers in judging meat is specially provided for. Abattoirs were expensive, and the contract system had recently been reverted to at Portsmouth with satisfactory results. The same course was proposed for Dublin, where the decision had been hastened by the fact that if the abattoir had been retained a large expenditure would have been necessary for its reconstruction. In reply to further questions on this subject, Mr. Campbell-Bannerman said that the question of the allowance of meat was very elaborately inquired into three or four years ago, and he thought they had better leave it where it stood.

FRIDAY, MARCH 29TH.

The Indian Civil Service.

Mr. Herbert Gladstone, replying on behalf of Mr. Henry Fowler to a question on this subject, said that the Government of India had submitted proposals respecting the leave rules of the various civil departments in India. These were now under the consideration of the Secretary of State, but before a final decision could be passed on all points a further reference to the Government of India would probably be necessary.

Flogging in the Indian Army.

On the motion for the third reading of the Army (Annual) Bill, Mr. Hanbury made reference to the continuance of the provision for flogging natives in the Indian army. This form of punishment, he

pointed out, had been abolished in the case of white men, and he thought it a most invidious thing to have the two classes of men working together as they did in India and elsewhere, with one liable to flogging and the other free from it. He thought the distinction should be at once abolished.

MONDAY, APRIL 1ST.

The North-Eastern Fever Hospital.

Mr. Bartley asked the President of the Local Government Board whether his attention had been called to the alleged cases of the consequences of the too early discharge of patients from the North-Eastern Fever Hospital; whether he had seen the letter of Feb. 11th from the Islington medical officer of health on the subject, addressed to the Local Government Board, but not yet replied to; whether he was aware that, in the case of Mr. Holland's children, two died and the father was attacked with scarlet fever, having caught the fever, it was alleged, from the third child, who was sent home while still desquamating; and whether he would order an inquiry into the whole matter?—Mr. Shaw-Lefevre replied that he had communicated with the manager of the Metropolitan Asylums District, who had caused full inquiry to be made into the case of Mr. Holland and the children. There appeared to be no justification for attributing the disease of the father and children to any infection arising from the premature discharge of the child from the hospital. The clerk stated that in the case of the two children there was strict evidence that the disease was diphtheria and not scarlet fever.

The Explosion at Fenchurch-street Station.

In reply to a question on this subject, Mr. Asquith said he was advised that scientific opinion differed as to whether the bursting of the cylinder was due to the pressure of oxygen upon an imperfectly-welded steel tube or to traces of impure substances present in the oxygen. He proposed to refer the question for the opinion of two or three distinguished experts.

The Importation of Margarine.

The Chancellor of the Exchequer, replying to a question by Mr. Lambert, said the Board of Customs were advised that the Margarine Act of 1897 imposed no duty on their officers with regard to importations of margarine marked with a detachable tin or parchment label to designate the contents. Their powers were limited to the taking of samples under Section 8 of the Act.

The Government and Irish Lunatic Asylums.

Mr. John Morley stated, in answer to a question, that a suggestion had been made to him with respect to an increase of the Government capitation grant for lunatic asylum boards in Ireland. The Government grant was first made in 1874 and was fixed at 4s. per week in respect of each patient. The average cost of maintenance was £24 1s. 2d. in the year 1875, as against £21 14s. in 1893 (the last year for which this information was available), so that no increase had taken place in those years in the cost of maintenance. The capitation grant was made with a view to the improved maintenance and treatment of the insane poor, and was not applicable to meet the cost of structural alterations of asylums, for which separate loans were granted under an Act of 1893.

In-door Paupers in London.

In reply to a series of questions by London members, Mr. Shaw Lefevre, President of the Local Government Board, said that under Section 43 of the Local Government Act of 1883 the amount of the grant of 4d. per day for each in-door pauper paid to each metropolitan union by the London County Council was determined by the average number of in-door paupers maintained in the union during the five financial years ended on March 25th, 1888, and the section expressly declared that it should continue to be reckoned in accordance with the same average number unless Parliament otherwise determined. If, therefore, the basis of the apportionment of this grant was to be altered, legislation would be necessary, and he should not be justified in submitting any proposals to Parliament on the matter until he had had full opportunity of ascertaining the views held with respect to it by the London County Council, who had to pay the grant, and the various boards of guardians who received it.

WEDNESDAY, APRIL 3RD.

The Care of Steam Engines.

A long discussion took place on the motion for the second reading of a Bill which provides for the examination and certification of persons in charge of steam engines. In order to increase its prospect of being carried, the promoters agreed to withdraw from the scope of the Bill persons in charge of steam engines engaged in agriculture, railways, and shipping. Some members objected to the usefulness of the Bill being thus curtailed, and Mr. John Burns pleaded that at least steam tugs, river boats, and small steam fishing vessels should be included, on the ground that in these craft accidents were frequent. The Bill in its limited form was, however, read a second time, and it was decided to refer it to the consideration of a select committee. Several of the speakers in the course of the debate cited cases where serious accidents had occurred through engines being left in the care of incompetent workmen.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on this subject resumed its inquiry on Tuesday, April 2nd, with Sir Walter Foster in the chair.

Mr. W. L. Stokes of Limerick, who represented the South of Ireland Butter Merchants' Association, said in the course of examination by the chairman that the attention of the butter trade in Ireland had been very specially directed to the question of water in butter by certain prosecutions instituted in England for supposed excessive moisture in Irish butter. These prosecutions were a revelation to the people engaged in the Irish butter trade, who in consequence took steps to have the butter examined in order that it might not lose in reputation. The opinion they came to was that the butter could be brought down to the standard set up by the analysts, and the view of his association was that by going round to the different bodies and getting inspectors appointed they would be able to get the butter down to that

standard. In the course of 1893 and 1894 they took 350 samples indiscriminately in all the markets and sent them for analysis, and they found that the moisture in them varied from 8 to 30 per cent. He attributed excess of moisture in Irish butter partly to temperature and partly to defective appliances. They had also carried on experiments with regard to the preserving of butter, and had obtained better results from using warm brine and salt than from using a preservative like boracic acid. For Irish salt butter there was a great demand in England because of its quality and its keeping capacity. He had known it keep for five or six months. He strongly objected to any legal standard of moisture. If an analyst knew his business he should be able to distinguish between honestly made butter and butter with water added for the purpose of fraud. In his opinion there had been great and general improvement in Irish butter during the last ten years, owing, he believed, to better education among farmers and to the stimulus of competition in the butter trade.

By Mr. Kilbride. While he was opposed to a legal standard of moisture being fixed, he thought 18 or 20 per cent. might prove a reasonable standard for normal seasons. During such a season as 1893, with its high temperature, it would have been utterly impossible to insist upon a standard. He was opposed to butter mixtures and the colouring of margarine, because in his view they conduced to fraud.

Mr. Robert Gibson, another representative of the South of Ireland Butter Merchants' Association, expressed the opinion that it was impossible to fix a standard for moisture which would not interfere with an honest man honestly doing his best in certain circumstances. He cited to the Committee a number of cases where high percentages of water were found in butter made with the most modern machinery by acknowledged experts. Asked how he would protect the public from excess of moisture, witness said he did not believe the public were prejudiced, because they were very good judges of butter and were quick to detect the presence of water.

Mr. Robert Hickey, secretary of the association, gave the results of analyses of butter churned and made in various conditions. These went to show that butter made in the same dairy and during the same week might vary with regard to the moisture it contained to the extent of 8 and 9 per cent. His fear was that the fixing of a standard of moisture would lead not to levelling up, but to levelling down, and that water would be introduced into butter which now contained only a very slight percentage of it. In the case of Irish salt butter it would be most injuriously affected by a standard, because it was absolutely necessary for keeping purposes to use a considerable amount of brine. A standard of 16 per cent. of moisture would affect injuriously five-sixths of the butter made in the province of Munster. The association had passed a number of resolutions, in which they disclaimed any desire to interfere with the legitimate sale of margarine, but said that the colouring of margarine to imitate butter should be prohibited; that all margarine should be sold in specially shaped packages so that the purchaser might know what he was getting; and that the mixing of margarine and butter should be prohibited. It was a matter of common knowledge that a large trade was done between Limerick and Rotterdam and some Austrian ports in empty Irish firkins, and the only conclusion they could come to, although they had no positive proof, was that these empty firkins were imported for the purpose of being filled with margarine.

The Committee then adjourned.

The Committee met again on Wednesday, April 3rd, Sir Walter Foster presiding.

Mr. C. J. Dunne, chairman of the Cork Butter Market Trustees, said that, in his opinion, the present law with regard to the adulteration of butter did not afford sufficient protection either to the public or to the honest manufacturer. Fraud was so profitable that fines of £2, £5, or £10 had no effect, and his view was that the maximum fine should be as high as £500. He favoured a high fine rather than imprisonment, because the men who adulterated butter did so for the sake of the profit they made. They were told, though he could not produce direct evidence on the point, that people who sold margarine mixtures promised the retailers that if they were convicted the fines would be paid for them. If fines of £500 were imposed these promises would not be made. The Market Trustees had passed a resolution condemning the practice of colouring margarine so as to simulate butter. In his opinion the Local Government Board in Ireland, and in England also, should have power to compel local authorities to put the law as to adulteration into operation, just as they compelled boards of guardians to carry out the Poor-law. He suggested further, that all dealers in margarine should be licensed, and should be compelled to let their customers know that they were licensed. The question of water in butter was a most difficult one, and the conclusion he had come to was that at the present moment there had not been sufficient investigation with regard to it to justify the fixing of a legal standard. If, as had been suggested, a standard of 16 per cent. of moisture were adopted, it might in certain circumstances cause quite innocent persons to be punished. In the Cork market they had a simple apparatus for testing the moisture, and whenever their inspectors had any suspicion of an undue amount of moisture they sent up the butter to the room where this apparatus was kept, and the test did not occupy more than ten minutes. The results of this test corresponded to within one-half per cent. with the results obtained from chemical analysis. If less than 18 per cent. of moisture were found in butter, it was passed. If there were between 18 and 21 per cent. they did not consider it a case for prosecution, but at the same time they did not consider the butter good enough to get any of the brands of the market. The committee might take it that when they found more than 21 per cent. of moisture, there was a prosecution. He had with him a series of figures showing that in forty-one cases where there had been convictions the percentage of water had varied from 21.26 to 27.24. A sub-committee of the Munster Dairy and Agricultural School were at present engaged upon a most careful inquiry into this and cognate matters. They had got about 200 samples of butter, mostly made by small farmers in the county of Cork, twenty samples from Sweden, and six from Australia. Among other points being considered by them was the comparative keeping properties of butter mixed with dry salt and with warm brine. He could not agree with Mr. Gibson that the public were quick to detect the presence of an excessive amount of moisture in butter. On the contrary he thought they were easily deceived and that deception and fraud were common.

Alderman Henry Dale, representing the Cork Butter Exporters' Association, stated that he preserved his butter with dry salt and used no brine whatever. He considered salt to be as good a preservative as brine, and it had the advantage that it had not the tendency to add water to the butter that brine had. He put in several reports of analysis of samples of butter in county Cork with the view of showing the great range of variation which the samples exhibited in the percentage of water. In the case of one maker the lowest percentage of water found in his butter was 13.4 and the highest 17.65; while in the case of another maker the results came out 12.67 and 20.30 respectively. The result of the tests and analysis was to establish the fact that more water was found in the butter in the month of October than at any other period of the year. He believed that experienced inspectors could tell pretty accurately whether the water in butter was there naturally or added to it with fraudulent intent. He had no objection to margarine as an article of food, but thought it should be sold in special packages and cases. Increased and more effective inspection would favour the large producer so far as high-class butter was concerned, as the competition with margarine would be diminished. He suggested the putting of starch in margarine as a means for its easier identification and preventing its being fraudulently substituted for butter.

Mr. William O'Sullivan, another trader from Cork, gave evidence of a corroborative character.

Mr. Thomas Clement, of the firm of Andrew Clement and Son, provision merchants and colonial produce importers, Glasgow, Manchester, and London, stated that, while, owing to the increased importation of cheap butter, margarine mixtures were much less sold, the trade in margarine itself was a rapidly increasing one. It was greatly used by people who could not afford to pay for butter, and for cooking purposes and for baking and confectionery. There was much less inducement now than formerly to sell margarine as butter, because the retailer could make almost as much profit upon the one commodity as the other, and in the case of margarine there was the risk of prosecution and exposure. He regarded margarine as a necessary article of food, and beyond requiring that it should be made in a certain shape and bear a special mark he would put no restriction upon its honest sale. He would make the invoice a legal guarantee and prosecute the wholesale merchant who sold the adulterated butter, instead of being content with the retailer. In his experience he found that an enormous quantity of what was called pure butter was imported into this country which contained 15 and 20 per cent. of margarine and 20 to 25 per cent. of water, and to prevent fraud in this connexion he would have strict inspection at the port of entry and call upon the local authorities to do their duty. There was also a great quantity of adulterated cheese imported. In regard to cream and milk witness said that large quantities were imported from abroad without any guarantee whatsoever that they were free from the germs of disease. He was aware that in forty-eight towns in England, with an aggregate population of one and a half millions, not one sample of butter was taken by the local authorities during the year 1893, and he thought it most desirable to stir the local authorities in some way to a proper sense of duty.

The Committee then adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- ANHWORTH, J. HENRY, M.D. St. And., F.F.P.S. Glasg., M.R.C.P. Edin., has been appointed Medical Officer to the Post Office, Halesd, Essex.
- ASTIN, WILSON, M.B., C.M. Aberd., has been appointed Assistant Medical Officer to "Oriolet" Cottage Hospital for Cancer, Loughton, Essex.
- BARNETT, H. C., L.R.C.P., C.M. Edin., L.R.C.S. Eng., has been re-appointed Medical Superintendent to the Fremantle Lunatic Asylum, Western Australia.
- BARNITT, L. E., M.B., Ch.M. Edin., L.R.C.P. Lond., F.R.C.S., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.
- BELSON, GEO. DE V., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Dulverton Union.
- BIRD, RICH'D. K., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for Arapiles Shire, N.R., Victoria, Australia.
- BOWSER, H. C., M.R.C.S. Eng., L.M. Edin., has been appointed Resident Surgeon to the Gladstone Hospital, Queensland.
- BROOKS, CHAS., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Chalfont Sanitary District of the Amersham Union.
- BURGHARD, FRÉDÉRIC F., M.S. Lond., F.R.C.S., has been appointed Surgeon to Out-patients at the Paddington-green Children's Hospital.
- CLARK, ANDREW, F.R.C.S., L.M., has been appointed Surgeon to the Middlesex Hospital, vice J. W. Hulke deceased.
- CLOSS, J. O., M.B., Ch.M. Edin., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.
- COLQUHOUN, D., M.D. Lond., M.R.C.P., M.R.C.S., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.
- CROSSLEY, A. W., Ph.D. Würzburg, M.Sc. Victoria, Berkeley Fellow and Demonstrator of Organic Chemistry in the Owens College, Manchester, has been appointed Demonstrator of Chemistry in the Medical School of St. Thomas's Hospital, vice W. H. Ince.
- CURRY, E. F. N., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Physician to the West London Hospital.
- DAVIES, J. M. L., L.R.C.P., L.M. Edin., M.R.C.S. Eng., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.
- DERMER, WM. T., M.B. Univ. N. Z., has been appointed a Public Vaccinator for the district of Wairoa, New Zealand.
- DICKSON, J. D., M.D., M.Ch., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Wycombe Sanitary District.

DOBBS, JAMES, L.R.C.P., L.R.C.S., has been appointed Medical Officer of Health for the Urban District of Golborne.

ELLIS, J. C., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator for the Fifth District of the Lincoln Union.

FERGUSON, H. L., L.K.Q.C.P., F.R.C.S. Irel., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.

GIBBES, JOHN M., M.D., Ch.M. Aberd., M.R.C.S. Eng., has been appointed a Public Vaccinator for Borderton, South Australia.

GILL, J. M., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Honorary Assistant Physician to the Sydney Hospital, New South Wales.

GILLET, GEO. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Loddon and Clavering Union.

HALAHAN, SAM H., M.B., Ch.B., Dubl., has been appointed Health Officer for Kowree Shire, N.R., Victoria, Australia.

HEARD, CHARLES DE W., M.B. Melb., L.R.C.P., L.R.C.S. Edin., has been appointed Health Officer for Wyndham shire, Victoria, Australia.

HOPKINS, J. W., F.R.C.P. Edin., L.M., L.S.A. Lond., has been appointed Resident Government Medical Officer and Public Vaccinator for the Fremantle district, Western Australia.

HORNE, GEO., M.B., Ch.B. Melb., has been appointed Honorary Medical Officer to the Melbourne Women's Hospital, Victoria, Australia, vice Prendergast, resigned.

HOUGHTON, GEORGE S., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Resident Medical Officer to Montistown Hospital, vice Brew.

JEFFCOAT, F. H., M.B., Ch.M. Edin., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.

LANG, MATTHEW, M.B. Ch.B. Melb., has been appointed a Public Vaccinator at Clunes, Victoria, Australia.

LIMBICK, W. S., L.R.C.P., L.R.C.S. Edin., L.M., has been appointed Medical Officer to the Waterloo Urban District Council.

LINDEN, H. C., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Harptree Sanitary District of the Clutton Union.

LOCK, G. H., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Paddington-green Children's Hospital.

MACALAN, THOMAS, M.B., C.M. Aberd., has been appointed a Public Vaccinator for the Districts of Norsewood and Armondville, New Zealand.

MACDONALD, J., L.R.C.P., L.R.C.S., L.M. Edin., M.R.C.S. Eng., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.

MACKENZIE, MURDOCH, L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for Poowong and Jeetho Shires, Victoria, Australia.

MACKINNON, JAS., M.B., Ch.M. Edin., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.

MEAKIN, HAROLD B., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Senior House Physician to the Metropolitan Hospital, Kingsland-road.

RICHARDS, W. H., L.S.A., has been appointed Medical Officer for the St. Mellons Sanitary District of the Newport Union, Mon.

ROBERTS, E. J., M.B., Ch.B. Univ. N.Z., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.

ROPER, ARTHUR C., F.R.C.S., L.R.C.P. Edin., M.R.C.S., has been appointed Surgeon to the Devon and Exeter Hospital, vice J. Baukard, resigned.

ROSEHURST, A. B., M.A., M.B., F.R.C.S., has been appointed Surgical Registrar to the London Hospital, Whitechapel-road.

STENHOUSE, W. MCS., M.D., Ch.M. Glasg., has been appointed Honorary Medical Officer to the Dunedin Hospital, New Zealand.

STRECHES, E. W. LOCKHART, M.R.C.S., has been appointed Medical Officer of Health to the Warlington Urban District.

STEWART, A., M.B., C.M. Glasg., has been appointed surgeon to the Welsh District Hospital, Queensland.

STRUTHERS, JAMES, M.D., Ch.M. Aberd., has been appointed a Medical Officer of the Hospital at Hill End, New South Wales, vice Baker.

TISWELL, FRANK, M.B. Syd., has been appointed Government Bacteriologist, New South Wales.

WALL, M. E., M.D. Munich., has been appointed a Public Vaccinator at Cammockburn, Victoria, Australia.

WALTON, A. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for Chiddingfold Sanitary District of Hambledon Union.

WEST, WALDEMAN S., M.A., M.B., B.C. Cantab., has been appointed Obstetric House Physician to the Middlesex Hospital.

WILKINSON, E. W. C., L.F.P.S. Glasg., has been appointed a Public Vaccinator for the District of Foston, New Zealand.

WILSON, GEORGE JOHN, M.A. Oxon, M.D. Dubl., M.R.C.S. Eng., has been appointed Honorary Physician to the Radcliffe Infirmary, Oxford.

WILSON, T. A. M., M.B., M.S. Edin., has been appointed Medical Officer for the Morland Sanitary District of the West Ward Union.

ZICHY-WOJNARSKI, V. J. E., M.B. Melb., has been appointed a Public Vaccinator at West Melbourne, Victoria, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM CITY ASYLUM.—Resident qualified Clinical Assistant. Board and apartments are provided.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BRITISH LYING-IN HOSPITAL, Endell-street, Longacre, W.C.—Physician to the Out-patient Department.

COUNTY ASYLUM, Dorchester.—Second Assistant Medical Officer, unmarried. Salary to commence at £130, rising £10 annually to £160.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR SICK CHILDREN, THE, Great Ormond-street, W.C.—Anaesthetist, for one year. Honorarium of £15 15s. will be voted at the expiration of that term.

HOSPITAL FOR SICK CHILDREN, THE, Great Ormond-street, W.C.—Surgical Registrar, for one year. Honorarium of £40 at the expiration of that term.

HOSPITAL FOR WOMEN, THE (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

KENT COUNTY LUNATIC ASYLUM, Barning Heath, near Maidstone.—Fourth Assistant Medical Officer and Pathologist, for two years (unmarried). Salary £175 per annum (rising £5 a year), with furnished quarters, attendance, coal, gas, garden produce, and washing. Applications to Mr. F. R. Howlett, 9, King-street, Maidstone.

LONDON HOSPITAL MEDICAL COLLEGE, THE, Mile End, E.—Assistant Demonstrator of Anatomy. Salary £90 per annum.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician. Applications to the Secretary, Office, 27, Clement's-lane, E.C.

NORTHERMBERLAND COUNTY ASYLUM, Morpeth.—Clinical Assistant. Board and residence provided.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer, for six months. Salary at the rate of £50 per annum attaches to the senior post.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon for the Throat and Ear Department.

POPULAR HOSPITAL FOR ACCIDENTS, Blackwall, E.—Honorary Surgeon.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon, for six months. Rooms, commons, and washing provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, THE, City-road, E.C.—Resident Medical Officer, for six months. Salary at the rate of £100 per annum, with furnished apartments and board.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. £10 will be given at the end of that period if found satisfactory. Board and lodging provided.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners.

UNIVERSITY OF GLASGOW.—Two Examiners. The appointment will in each case last till Dec. 31st, 1896, at the rate of £50 annually.

Births, Marriages, and Deaths.

BIRTHS.

GRINDON.—On March 26th, at Olney, Bucks, the wife of F. J. Grindon, M.R.C.S., of a daughter.

HEELIS.—On March 31st, at Church-street, Lenton, Nottingham, the wife of Robert Heelis, M.D., of a daughter.

OPPE.—On March 31st, at Winchester House, Worthing, the wife of Edward A. Oppe, M.B., of a son.

ROUSE.—On March 31st, at Belgrave-road, S.W., the wife of Deputy-Surgeon-General R. Rouse, of a daughter.

WHISHAW.—On March 29th, at Larkstone, Birdhurst-road, Croydon, the wife of Reginald R. Whishaw, M.B., F.R.C.S., of a son.

WIGLESWORTH.—On March 28th, at Hainhill, Lancashire, the wife of Joseph Wiglesworth, M.D., of a son.

MARRIAGES.

BERKELEY—FORDHAM.—On April 3rd, at St. George's, Hanover-square, George Harold Arthur Comyns Berkeley, B.A., M.B., and B.C. Cantab., elder son of George Augustus Berkeley, Esq., of Belgrave-road, S.W., to Ethel Rose, younger daughter of the late Edward King Fordham, Esq., J.P., D.L., of The Bury, Ashwell, Herts.

BROWN—JOHNSTONE.—At the Presbyterian Church, Brompton, on April 1st, by the Rev. Robert Brown, father of the bridegroom, Robert Cunningham Brown, M.B., B.S., to Ella Halliburton, youngest daughter of the late Dr. J. J. Johnstone, of Brampton, Cumberland.

STATION—JENNINGS.—On March 28th, at St. Mark's, Surliton, Henry Foster Staunton, M.B., C.M., M.R.C.S., Green Hammerton, York, to Minnie Isabel, eldest daughter of William Jennings, late of the Mairis Commission, India.

THOMSON—MACKINTOSH.—At St. Giles's Cathedral, Edinburgh, on April 3rd, by the Very Rev. Cameron Lees, D.D., LL.D., Dean of the Chapel Royal and Order of the Thistle, and the Rev. Andrew Gray, D.D., Minister of the Parish of Dalkeith, James Stitt Thomson, F.R.C.P.E., &c., of Belmont, Dalkeith, and The Mount, Lincoln, to Louisa Ella Mary (Edgie), eldest daughter of the late Henry Florence Mackintosh, of Totteridge, Herts, and Rylstone, Yorks.

DEATHS.

ACKLAND.—On March 30th, at St. Luke's-road, Clapham, William Ackland, L.S.A., of the Strand, W.C., aged 74 years.

CLEAVER.—On March 31st, at his residence, Broomhill, Sheffield, William Jackson Cleaver, M.B., aged 47.

CLIPPINGDALE.—On March 29th, at 50, Northfield-road, Stamford Hill, Samuel Dodd Clippingdale, M.R.C.S., in his 85th year.

COVENY.—On March 24th, at The Roost, Hawkhurst, James Henry Coveny, M.R.C.S. Eng.

DUKES.—On April 1st, at South Hackney, William Proft Dukes, L.R.C.P. Edin., M.R.C.S., aged 57 years.

HARVEY.—On March 29th, at Streatham, J. H. Harvey, L.R.C.P. Edin., M.B.C.S., of Prince's-square, Bayswater.

LEPPS.—On March 9th (suddenly), at the Europa Hotel, Gibraltar, Thomas Leeds, M.R.C.S. Eng., M.S.A. Lond., aged 55 years.

THORNTON.—On March 27th, at Marlborough-hill, St. John's-wood, Philip Thornton, M.R.C.S., aged 90.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 9.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 4th, 1895.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb	Wet Bulb	Solar Radiation in Vacuum	Maximum Temp. in Shade	Min Temp.	Rain-fall	Remarks at 8.30 a.m.
Mar. 29	29.03	S.W.	42	41	69	48	41	0.08	Raining
" 30	29.33	W.	41	39	77	49	37	0.09	Cloudy
" 31	29.44	W.	44	41	91	52	41	0.16	Cloudy
April 1	29.64	S.W.	41	39	91	53	37	...	Cloudy
" 2	29.86	N.E.	43	42	56	48	41	0.02	Raining
" 3	29.94	N.E.	40	39	57	47	39	...	Overcast
" 4	30.09	N.E.	39	38	64	44	38	0.02	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians. 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Cases:—Dr. G. Johnston: Congenital Chorea.—Dr. Brevor: Facial Hemiatrophy.—Dr. L. Guthrie: (1) Friedreich's Disease; (2) Cerebral Disease.—Mr. S. Edwards: Case after Removal of a Papilloma of the Bladder by Suprapubic Cystotomy.—Mr. Waring: Charcot's Disease.—Mr. Astley Blexam: (1) Restoration of Nose by means of Transplanting portion of the First and the whole of the Second Phalanx of Middle Finger of Left Hand; (2) Macrocheilia.—Mr. Openshaw: Multiple Osteitis.—Mr. Allingham: Large Renal Sarcoma removed from a Child aged three.—Dr. Abraham: (1) Subcutaneous Nodules in an Infant; (2) Devergie's Lichen Pilaris with Psoriasis.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (197, High Holborn).—7.30 P.M. Ordinary Meeting. Election of President. Adjourned Discussion on Mr. Jones's paper on "Drains or Sewers."

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—A case of Large Pelvic Hydatid successfully treated by Perineal Incision and Drainage, with Observations by Mr. Reginald Harrison.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Mr. E. H. Crisp: Syphilitic Perforation of Septum Nasi.—Mr. A. Knyvett Gordon: Microscopic Sections of (1) Middle Turbinate Body with Polypus Formation and (2) Cured Masses from case of Antral Empyema.—Dr. Dundas Grant: (1) A case of Empyema of the Antrum successfully treated by means of Krause's Trocar; (2) A case of Empyema of the Antrum secondary to Suppuration of the Frontal Sinus successfully treated by means of Krause's Trocar; (3) A case of Empyema of the Antrum under treatment by the same means; (4) A case of Empyema of the Antrum apparently cured by the same means and Closure of the Alveolar Perforation; (5) A case of Empyema of the Antrum complicated with Suppuration of (probably) the Frontal Sinus.—Dr. de Havilland Hall: A case of Mycosis Fungoides involving the Larynx.—Dr. William Hill: A case of Disease of the Left Frontal, Ethmoidal, and Maxillary Sinuses in association with Nasal Polyp. —Dr. J. Middlemass Hunt: A case of Multiple Papillomatosis of Larynx occurring after Removal of Sarcoma by Thyrotomy.—Dr. Percy Kidd: The case of Laryngeal Stenosis with Polypoid Growth of Vocal Cord shown at January meeting, 1895.—Dr. Scanes Spicer: A case of Bilateral Empyema and Polyp of Frontal Sinuses for which Trephining and Curettement have been recently performed, and in which Right Antral Empyema and Polyp have been treated by large Canine Fossa Opening. Inferior Meatus Counter-opening, and Curettement. Ethmoidal Cells partly affected and under treatment.—Mr. Charles J. Symonds: A case of Frontal Sinus Disease under treatment.—Dr. E. B. Waggett: Subglottic Tumour for Diagnosis. Also cases by Mr. A. A. Bowly.

HUNTERIAN SOCIETY.—8 P.M. Dr. Arnold Chaplin: Case for Diagnosis.—Transposition of Viscera.—Dr. Galloway: Cases of Lichen Planus.—Mr. Openshaw: Cases of Cerebral Abscess.

THURSDAY.—BRITISH GYNECOLOGICAL SOCIETY.—Specimens. Adjourned Discussion on Dr. Macnaughton Jones's paper on "The Abuse of Morphia in Gynecology."
DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—5 P.M. Ordinary Meeting. Exhibition of Cases at 4.30 P.M.
NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Great Northern Central Hospital).—9 P.M. Closing Meeting of the Session 1894-95. Address by Dr. J. G. Glover (the President) on "The Profession, its Place and Progress."

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

"THE CARTOGRAPHY OF MALARIA."

SUPPLEMENTARY to our article on this subject (*vide THE LANCET*, Jan. 5th, 1895) may be read the more extended paper contributed to the March number of the *Scottish Geographical Magazine* by Signor Luigi Bodio, head of the Statistical Department of the Italian Government, under whose superintendence the "Carta della Malaria" was issued. Very interesting are Signor Bodio's remarks on the genesis of malaria in regions where under the Roman Empire it was quite unknown. In those days the Imperial Government maintained a high standard of cultivation throughout the peninsula, drainage being especially well regulated and the rivers canalised and kept navigable. With the irruption of the barbarians, followed by the anarchy, violence, and confusion of the Middle Ages, these works were discontinued; rivers and torrents inundated the fields, obstructing by their own alluvium their discharge into the sea, and thus multiplying the sources of malaria. On this part of the subject Signor Bodio refers the reader to the "Carta della Malaria dell'Italia Illustrata da Luigi Torelli," published in Florence by G. Pellini in 1882—a volume in quarto which should be in the library of every epidemiological society.

Mr F. R. L. Edwards.—Laura Bridgman is the only instance other than in an idiot of loss of sight, hearing, and speech occurring in the same person that has come to our notice. She lost her special senses at the age of two years. Under the treatment of Dr. Howe of Boston she was taught to read, write, and perform most of the ordinary duties of life. She was born in 1829, and we have an idea that she has not long been dead.

Middlesex.—The dose depends upon the preparation. The British Institute of Preventive Medicine (101, Great Russell-street, W.C.) will be able to give all information.

J. R.—A masseur has no special professional status; but we imagine he could claim payment for any services contracted for.

Eucalyptus.—No.

THE CASE OF MR. C. BRYAN TOWNSEND.

THE following donations have been received in addition to those already announced and are hereby thankfully acknowledged:—

Dr. Wm. Henry White ...	£1 1 0	Dr. J. J. Lacey (Fitzington) ...	£3 3 0
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Mr. David Ferrier ...	1 1 0	Dr. Wm. Carter (Liver-	
Mr. A. A. Phillips ...	10 0 0	pool) ...	3 0 0
Dr. Wyld (London) ...	0 10 0	Mr. Bernard Roth ...	1 1 0
Dr. Wells (London) ...	1 0 0	Mr. Thomas Bond ...	1 1 0
Dr. T. Barlow (London) ...	2 2 0	(London) ...	1 1 0
Dr. Cheeseman (Bucks) ...	1 1 0	P. T. ...	1 1 0
Sir James Paget ...	2 2 0	Non Nobis Solum ...	1 0 0
Dr. Champneys (London) ...	2 2 0	Mr. A. Lansom (London) ...	1 1 0
Dr. R. Marcus Gunn ...	2 2 0	Mr. Woodhouse Braine ...	2 2 0

Further donations are earnestly invited by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W. [In the list of subscriptions in our issue of March 23rd, the name "Dr. J. J. Sundell" should have been given as Dr. J. J. Swindell.]

Tate.—An M.B., C.M. who desires to be guide 11 y good taste in regard to his brass plate should put "X. Y. Z., M.B., C.M." The addition of "Physician and Surgeon" is a little more questionable, as being rather redundant. We are not prepared to say that it is wrong. It is a matter of taste. In a poor neighbourhood it may be necessary for the practitioner to make his calling clear.

"MENTAL DISTURBANCE FROM IODOFORM."

To the Editors of THE LANCET.

SIRS,—With reference to the case cited under the above heading in the last issue of THE LANCET (p. 827), I think Dr. Oldenburg is wrong in ascribing any predisposing influence to the previous epileptic attacks; for the symptoms are characteristic of acute iodoform poisoning, as has formerly been observed in a long series of cases in strong and healthy persons as well as in the weakened, at a time when iodoform was applied to wounds in enormous doses and without any discretion. It is true the acute form of iodoform poisoning is rarer than the chronic one, iodoform dissolving slowly and thus being absorbed in small quantities only at a time. But where there is much secretion or the adipose tissue abundant iodoform is readily dissolved, and acute poisoning, with psychoses of a malignant character, sometimes feigning every symptom of acute meningitis and almost always proving fatal, is very apt to set in. In these cases special care should be taken not to apply more than one drachm at a time, to discontinue its use, and to remove the remainder by syringing the wound with sterilised water as soon as the first premonitory symptoms make their appearance and the urine exhibits the iodine test.—I am, Sirs, yours faithfully,

H. OPPENHEIMER, M.D. Held., L.S.A.

Crossfield-road, N.W., April 1st, 1895.

A SIMPLE AIR-TIGHT COVER.

We have received from Messrs. Day and Co. of Weston-super-Mare specimens of their patent air-tight cover. The specimens sent consist of a piece of fine indiarubber stretched upon a circular metal frame—but any other shape can be obtained—and depends for its action on the pressure of the atmosphere. These covers form a simple and effective means of instantly making an air-tight cover on glasses, jars, cups, basins, and the like, and will preserve their contents as long as may be desired from the action of the air and from dust. In fixing the cover the centre is slightly depressed by the fingers, and thus a portion of the air in the vessel is expelled. On the pressure of the fingers being released a partial vacuum is established, and the vessel is hermetically sealed. The joint formed is so secure that a tumblers of water may be turned upside down or held up by the cover alone. For the efficient working of the cover the rim of the vessel should be perfectly smooth, and should be moistened before applying the indiarubber. Any size or shape can be obtained on application to the manufacturers.

Mr. John Boden.—The treatise on "Hyperamnia," about which our correspondent asks, is probably Dr. Wilson Fox's work on Dyspepsia. There is no special book on Raynaud's Disease besides Raynaud's own work, but the subject has been fully treated in various back numbers of THE LANCET and other medical journals. Neale's Medical Digest, gives all the references.

Mr. J. Westmorland.—It would seem that the only requirement is a fee of five dollars to be paid to one of the Boards of Medical Examiners.

CERTIFICATES OF LUNACY.

To the Editors of THE LANCET.

SIRS,—Can you or any of your readers inform me, with regard to granting a certificate of lunacy, if it is necessary to examine the patient and fill in the certificate on the same day on which the magistrate and relieving officer fill in theirs, or may the medical practitioner choose his own time for doing so?

I am, Sirs, yours truly,

INQUIRER.

* Section 29 of the Lunacy Act of 1890 requires the medical examinations to have been made within seven days of the making of the reception order; but there is apparently no other restriction as to the time at which the examination must take place.—ED. L.

AN UNDIGNIFIED PROXIMITY.

AN evening paper published in Manchester contains the following advertisements in a row:—

Manchester Eye and Ear Hospital, 25, St. John-street.—Committee: Mr. Ald. Bowes, Messrs. Chas. J. Hurst, J. T. Lingard, Jno. Lomas, J. D. Sutcliffe, and G. H. Winterbottom. Hon. Surgeon, David McKeown, M.A., M.D., M.Ch. Patients admitted on Monday, Wednesday, and Friday mornings from 9 to 11 o'clock, and on Tuesday and Thursday evenings from 6 to 7.30. No recommend is needed. J. G. Skemp, M.A., Hon. Sec.

Sufferers from Nervousness, Rheumatism, &c., should try Herr Cohen's Electrotonic Treatment, free of charge at St. James's Hall, from 10 to 5.

Ulcerated Sore Legs quickly and permanently cured by New Discovery, by Mr. Marsland, Specialist, 7, Chester-st., Oxford-rd., Manchester. Hours 2.30 to 5.30, & 7.30 to 10 p.m.

Triumphs of a Specialist.—A splendid tribute to a non-operating system. Forty-sixth testimonial published in this column. Cure of Cancer.

8, Back Moss-street, Rochdale, July 8th, 1892.

Dear Sir,—It is two years since you cured me of a cancer in the cheek. It had been growing steadily two years, and was getting very painful, and spreading rapidly. I had my attention first drawn to it by a medical man, who, perceiving the growth, asked the privilege of examining it. He pronounced it at once to be a "naughty irritating cancer." He examined it again in six months, and seemed very much concerned about it, but did not advise anything. I thought it was now time to take action, and hearing so much of you, I thought I would give you a trial. I am pleased to say that you removed it beautifully, and from that day of being discharged as cured by you it has not troubled me the least, and now you cannot see the spot where the cancer was. I consider that you made a splendid cure, for I am positive that if I had had a cut it would have reappeared and eaten my face away.—Believe me to be, yours,

Mrs. Nicol.

Mr. Whitehead, Cancer, Tumour, and Lupus Specialist. Residence: 230, Brunswick-street, near Owens College. Attendance every day 10 to 1. Branch Consulting Rooms: 21, Mawdsley-street, Bolton, attendance Tuesday and Friday, 4 to 6 p.m.; Oldham: 5, Queen-street, Monday and Thursday, 4 to 8; Rochdale: 11, Acker-street, Wednesday, 4 to 8, Saturday, 2 to 6 p.m.

We have before had occasion to point out that Dr. McKeown's private address as given in the Medical Register is that of the special hospital of which he is honorary surgeon. It is not permissible for a practitioner to advertise himself; and the advertisement of the Manchester Eye and Ear Hospital that we print above, whilst presumably advocating a charity ("no recommend is needed" must have that meaning, if it have any), in reality advances the claims of the honorary surgeon whose professional address is the same as that charity. Unintentionally no doubt on the part of Dr. McKeown, the advertisement appears at the head of a row of others of the most objectionable character.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Would you mind telling me, in your "Answers to Correspondents" next week, whether there is more than one society for insuring against accident and sickness for medical men? If more than one, which do you recommend?—I am, Sirs, yours faithfully,

SUBSCRIBER.

* The Sickness and Accident Assurance Association, Limited, of 64, Moorgate-street, E.C., offers insurance of the kind indicated by its title to professional men, and the Medical Sickness Annuity and Life Assurance Society of 33, Chancery-lane, E.C., covers the sickness risk. But we are not able to decide upon the comparative merits or competing claims of these two societies.—ED. L.

LOW FEES FOR EXAMINATION FOR INSURANCE.

THE Royal London Friendly Society intimates its intention to revise fees for medical examinations for insurances of small amount—viz., 2s. 6d. for sums not exceeding £25; 5s. for sums over £25 and under £100; and 10s. for sums of £100 and upwards. The fees, we think, are insufficient, and we advise medical practitioners to decline them.

During the week marked copies of the following newspapers have been received:—*Stratford Gazette, Derbyshire Times, Ashton-under-Lyne Reporter, Leicester Chronicle, Lancaster Standard, Essex County Chronicle, Kendal News, Birmingham Gazette, Cork Constitution, Sheffield Telegraph, Elgin Courier, Huddersfield Chronicle, Sussex Daily News, Liverpool Mercury, Midland Evening News, Liverpool Courier, Nottingham Daily Express, Stirling Sentinel Light, City Press, Bristol Mercury, Reading Mercury, Sanitary Record, West Middlesex Standard, Hertfordshire Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, Builder, Lynn News, Londonderry Sentinel, Architect, Bradford Mercury, London, Times of India, Pioneer Mail, Pall Mall Gazette, Christian Leader, Walsall Free Press, Christian World, Madagascar News, Catholic Times, Surrey Advertiser, Essex Telegraph, Blackpool Times, Orchestry Advertisement, Cumberland Pacquet, Chichester Observer, Berwick Journal, Australasian Medical Gazette, Lincoln Gazette, Islington Gazette, Australian Medical Journal, Derbyshire Courier, Norwich Mercury, Scarborough Post, Dover Standard, Western Mail, Carlisle Journal, Alnwick Gazette, Somerset City News, Macclesfield Courier, Ayrshire Post, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. G. A. Abrath, Sunderland; Dr. L. L. Ames, Richland, Kansas, U.S.A.; Mr. A. H. Allen, Sheffield; Mr. E. G. E. Arnold, Lond.; Mr. J. Allen, Lond.; Messrs. Armour and Co., Lond.; A. B. Z.
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Y.—Dr. R. G. Younger, Lond.; Yorkshire Coll., Leeds, Sec. of.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. R. E. Archer, Cardiff; Mr. S. Aldred, Great Yarmouth; Apollinaris Co., Lond.; A. Z., Lond.; Assistant, Lond.; A. B. C., Lond.
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Agent for the Advertisement Department in France J. ASTIER, 8, Rue Traversière, Amières, Paris.

The Lumleian Lectures

ON

THE DIAGNOSIS, PROGNOSIS, AND PROPHYLAXIS OF INSANITY.

*Delivered before the Royal College of Physicians of London on March 28th and April 2nd and 4th, 1895.*By G. FIELDING BLANDFORD, M.D. OXON.,
F.R.C.P. LOND.,

LECTURER ON PSYCHOLOGICAL MEDICINE, ST. GEORGE'S HOSPITAL.

LECTURE II.

Delivered on April 2nd.

THE PROGNOSIS OF INSANITY.

MR. PRESIDENT AND GENTLEMEN,—I have said that in many cases of insanity the diagnosis is doubtful and hazardous. When we proceed to consider the prognosis we find that our difficulties are not diminished, but if anything are increased. For the purposes of diagnosis we have to examine the state of mind of the individual at the time we see him; but to form a prognosis we have to look into the future, and to say what will happen to a patient under all circumstances—circumstances over which we may have no control, and treatment or want of treatment with which we have nothing to do. The physician called to a case of ordinary illness receives a coherent and true account of the symptoms, past and present, from the sick man and his friends or nurses. He is generally enabled by what he hears and sees to form an accurate diagnosis of the malady, and his knowledge and experience enable him to give a confident prognosis of the result, knowing well that all will be done for the sufferer that can be done, that his directions will be strictly adhered to, and that the patient himself will second his efforts and try to get well. Contrast this with a case of insanity. The patient is excited and exalted. He denies that there is anything the matter with him, scoffs at physicians and at the notion that he requires one, says he was never better in his life, and will have none of medical treatment unless it is compulsory. Or he is not exalted, but depressed; then he thinks that a physician can do him no good, that he is very wicked—too wicked to live—that his immortal soul is for ever lost, and if anyone is to do him good it is the parson and not the medical man. Another is suspicious and thinks there is a conspiracy to poison or ruin him; he is very shy of a strange medical man or of his own if he includes him in the plot, and completely refuses to take his advice. When we ask for information from the friends, what do we get? They will minimise the symptoms as far as they can; will say they have lasted a week when they have lasted for months; and all that we hear we have to look upon as doubtful and untrustworthy. When we tell them that the patient is insane we are immediately asked, How long will the insanity last, and will he recover? If told that the disorder is curable, but to effect a cure it is absolutely necessary to place the patient at once under proper restraint or in an asylum, they straightway vow that they will not hear of such a thing, that restraint means application to a magistrate and certificates and consequent publicity, and an asylum will stamp him as a lunatic, will interfere with his subsequent career, and prevent his daughters from getting married. In the face of all this we have to pronounce a prognosis upon the case, and this can only be done with a considerable reservation. In many cases, however, it is easy enough, and in these our prognosis will be unfavourable. If our diagnosis leaves no doubt about the nature of the disease, if we are sure that the patient is the victim of general paralysis, we may affirm without hesitation that he will not recover, but will die at no distant date; this verdict will often be received with incredulity by those who see a fine and apparently healthy man before them. The question of time is of great assistance to us, but is one whereon we are dependent on others for information. If we hear that a patient has been insane, and has manifested delusions or hallucinations for upwards of a twelvemonth, our prognosis will be unfavourable, and if they have existed, not for a twelvemonth, but for

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two, three, or four years, it will be very unfavourable except in certain cases which I shall mention later. We may consider insane patients according to the various methods of classification which writers have put forward. As simple as any will be that according to the various periods of life from childhood to old age. According to this we shall pass in review patients who have inherited the malady, these being chiefly the young, others older persons who have acquired it through the dangers and ills of life. Some owe it to that change we call the climacteric, others to old age.

If we examine the insanity of children below the age of puberty, what do we find? Such insanity is rare. I put aside idiocy and the various phases of the weak-minded or imbecile children, also epilepsy or degenerative cerebral disease, the result of syphilis or injury. Children of unstable nerve-centres occasionally show symptoms of insanity at an early age, and I believe it is always inherited. It may be transient, occurring in the night, taking the form of delirium or night horrors. I have known it to be genuine melancholia, the child being much depressed, sitting alone in the dark, avoiding the society of her brothers and sisters. Yet it all passed away in a short time by removal from home and the companionship of other lively children. The prognosis here is good, but it indicates a neurotic condition which should not be overlooked. Then we come to the period of puberty, a time of profound physiological change, of great importance, not only to the female, but also to the male. There is now not only a development of the body and its functions, the procreative system, the osseous and muscular, but also of the brain-centres and mind. It might be supposed that at this time of change insanity would be frequent. It is not, however. As years advance the number of cases increases. In the Commissioners' Report for 1894 we read that during the five years, 1888 to 1892 inclusive, the yearly average of patients admitted under the age of fifteen was 323. Those between the ages of fifteen and nineteen averaged 835, while those between twenty and twenty-four were 1520. These latter are the adolescents, suffering from what has been termed the insanity of adolescence, and the prognosis in this and the insanity of puberty is equally favourable—at any rate in the females. Its character is almost always mania with excitement, exaltation, hilarious and noisy chattering and restless movement. Mr. Bevan Lewis says that, "of all the types of insanity, that occurring at the puerperal period is one of the most recoverable, yet the recovery rate is nearly as high for the insanity incidental to adolescence." And he gives the recovery rate in puerperal cases at 80 per cent., while that of adolescent females is 73·3 per cent. But, he says, "it is far otherwise with the same affection amongst men; in them, where depression is often largely present, the prognosis is far less favourable, and a wide margin must be allowed for partial recoveries, chronic incurables, and fatal cases." And he gives the recovery rate of adolescent males as 58·4 per cent. My own experience agrees with this. I have found a much larger proportion of young men remaining as a chronic residuum in asylums than of young women, and the majority of the former were patients whose insanity was melancholia, and not the noisy mania which is the characteristic form amongst the young. It would seem that the prognosis is unfavourable where the insanity does not present the characteristics which should belong to the time of life. The young when melancholic do not recover rapidly, while of acute mania at the climacteric the prognosis is bad. There is one form, however, which occurs in the young which is one of apparent depression. This has been called "acute dementia," or "acute primary dementia," or "stupor with dementia," and has been confounded with the stupor of melancholia—*melancholia cum stupore*. It is not the same; it occurs in the young, its onset is rapid, the reduction is great. We never find so rapid a reduction in melancholia. The patient appears to be in a state of fatuous imbecility, lost, dribbling, and dirty, grinning idiotically or sunk in vacuous stupor. Yet the history may enable us to give a favourable prognosis. If we find that this all came on rapidly after some shock or fright, and we can ascertain beyond a doubt that it is not secondary dementia following an attack of acute insanity, and is not a state into which the patient has gradually drifted through hereditary weakness combined with masturbation, we may pronounce hopefully as to the result even in the face of the unfavourable symptoms. The physical condition of these young people is so low that they require special treatment, warmth, food, and nursing; but with this improvement

takes place slowly but surely, and in my experience the improvement has almost always terminated in recovery.

Passing from the insanity of the young, the adolescents below the age of twenty-five, I may fitly consider that of the women, mostly young, who show symptoms of mental disorder before or after childbirth, or during the period of lactation, this being termed the insanity of pregnancy, puerperal insanity, and the insanity of lactation. All writers are agreed that the first is rare. Such cases as occur are seen by the family rather than the asylum physician, and but few are admitted into asylums. Mr. Bevan Lewis says that among 1814 females admitted only eleven cases of insanity during gestation occurred. Of these, nine had previously borne children, and no one had suffered from a previous attack of insanity. Two left the asylum recovered before their confinement, and the recoveries were in the ratio of 54.5 per cent.; two left relieved and two died, one of puerperal fever and the other of chronic phthisis. Dr. Clouston admitted fifteen in nine years to the Royal Edinburgh Asylum, and of these nine recovered, or 60 per cent. of the whole. Nine were of an acute type, seven being suicidal—a large proportion. Seven of the fifteen cases were first pregnancies and five had illegitimate children. Besides the nine who recovered, two were removed and probably got well, and two died—one from uræmic poisoning, the other from general tuberculosis. Dr. Clouston says that this form of disease in its worse forms is more incurable than the insanities of childhood and nursing. In my own experience the cases have not been severe, and, so far as I know, all have recovered. The form has always been melancholia, but not of an acute type. In mild cases the prognosis is good; but of such as are severe enough to require asylum treatment the outlook is not so favourable, and almost all are desperately suicidal. This brings me to the insanity which, albeit acute, is the most curable of all—the insanity of the puerperal period. In the majority of cases the form that this assumes is that of mania, which may rise from quiet and simple mania, with delusions, to very acute delirium. It is readily to be understood that at such a time as parturition the nerve-centres are in a very unstable condition and are ready to explode in extreme excitability. A woman, nervous by constitution and heredity, has been for nine months looking forward to and, perhaps, dreading the event. After labour, which may or may not have been easy, she is subject to the dangers of hæmorrhage, of septic contamination, and all that is attendant on uterine involution. The first thing to be noticed is loss of sleep. This is so important that I mention it here, though it belongs to the treatment rather than the prognosis. I constantly find on inquiring that the patient has slept badly ever since delivery took place. Nurses are frequently less careful than they should be as to this. They may even disturb the patient on behalf of the child, or to give food, make up the fire, or the like. They do not report to the medical attendant the little sleep the patient is having, and in a week, perhaps, mental symptoms appear, sleep is less and less or is altogether lost, and in a few days the patient is in a state of acute or subacute mania. Now if we are called to a case in this state and asked what our prognosis is, the first point to be considered is. Where is this maniacal woman going to be treated? Many such are treated at home, and it is a great thing to be able to save a young mother with, perhaps, her first child from going to an asylum. But if her friends are not able to provide the necessary nurses and medical treatment, if the sufferer is to be kept in a little stuffy room with the sun blazing into it in the dog-days, and perhaps the roar of street traffic outside, to an asylum she ought to go, and if the friends will not consent our prognosis should be a very guarded one. If everything is favourable and the patient is well cared for and has plenty of nourishment—given, if necessary, by forcible feeding—our prognosis will be good. But there are certain points to be considered. First, the age: young women recover better than those more advanced in life—e.g., those who are past the age of thirty; child-bearing in women past the age of thirty with strong hereditary tendency is certainly attended with much risk. Then will come the question of temperature. A high temperature in all acute insanity is very unfavourable, and here is especially so; for it may depend either on mere maniacal excitement or on some febrile condition of blood-poisoning, and we may have to treat not only puerperal mania, but also puerperal fever. Dr. Clouston gives us the particulars of 60 cases admitted in the Royal Edinburgh Asylum, and of these 5 died all within two

months, 4 within one month, and in all that died the temperature was over 100° F. Yet of 5 cases in which it was over 103° 3 made excellent recoveries. Mr. Bevan Lewis gives us the particulars of 68 cases, and here the mortality was 6. The mortality of Dr. Clouston's cases was 8.3 per cent., that of Mr. Lewis's 8.5 per cent. These two ratios are nearly identical, and are probably the correct proportion of deaths from the disorder. The recoveries also as reported by these two gentlemen are nearly the same. Of Dr. Clouston's the ratio was 75 per cent., of Mr. Bevan Lewis's 80 per cent. This, I need not say, is a high rate of recovery, the highest of all forms of insanity, and the reason for its being so high is not hard to discover. Such cases are all acute, most of them commencing in the first fortnight after delivery. This being the case, the patients are under medical observation and nursing, and if they are mild cases they are treated promptly and efficiently at home, or, if they are too severe for home treatment, they are at once removed to an asylum, where, with suitable care and constant feeding, they recover rapidly and surely. They do not drift on without treatment, as so many ordinary maniacal and melancholic patients do. The value of early treatment is well illustrated by these puerperal cases, even in the patients sent to asylums. These are Mr. Bevan Lewis's words: "The incalculable advantage of early treatment is very obvious in the recovery list, since of four-and-twenty who were placed in the asylum within one week of the onset of their insanity as many as thirteen were recovered within three months and the remaining eleven left recovered within five months, and this despite the fact that several of these patients had inherited strong neurotic tendencies." He tells us also that those who remained as chronic insane or who succumbed to a fatal malady were either late admissions or women over thirty years of age.

From the insanity following parturition we pass to that which occurs during the period of lactation. This may arise in two ways. It may come on at an early date after childbirth, in the fifth or sixth month, and may be due to defective uterine involution, to reflex irritation and excitement arising from suckling, or to disturbed sleep or lactation undertaken in the face of bodily illness, or it may appear later as the result of exhausting and long-continued suckling. It is not uncommon to find women nursing for months, even after cerebral disturbance has developed. Such cases occur most frequently amongst the poor and are admitted to public asylums. Yet of these the prognosis is favourable, especially of those whose insanity appears at an early date after delivery. Of Dr. Clouston's cases the recovery rate was higher than that of the puerperal, and Mr. Bevan Lewis gives one of 65.6 per cent. I myself have seen but little of the insanity of lactation in private practice, and Dr. Clouston says that of 166 ladies admitted only two were lactational cases, though there were among them the usual proportion of puerperal.

We have now arrived at the period of adult life, the period of from twenty-five years to forty-five, a period which will include many of the puerperal cases I have just been speaking of, and the largest number of patients of all kinds, for in the Commissioners' last report the average number of admissions of persons between these ages was 7,310 out of a total of all ages of 16,045. A large number of them will be found to be cases of mania, the majority of those suffering from general paralysis will also be included, and a certain proportion will be melancholic. I shall proceed to consider the cases of mania first. Under this term are comprised all the various states of exaltation, which range from a slight reduction of control to one of delusion or hallucination, and thence to a condition of maniacal delirium of the gravest nature. Now, although the last is a condition of most profound reduction, and clinically becomes a malady of the most formidable character, yet there is no absolute line of demarcation between acute mania and acute delirious mania, the latter differing from the former in intensity. The prognosis, however, will differ widely. In delirious mania the first question is, Will the patient live out the storm or die? We may prophesy that if he or she lives recovery will take place unless certain circumstances are unfavourable. In answer to the question, it may be said that young persons, and especially women, almost always recover, at any rate in the first attack. Women seem to withstand the strain of excitement and want of sleep much better than men. This will account for the large number of recoveries from puerperal mania, and the proportion of recoveries from delirious mania is, in my experience, quite as large. In thirty-six years I have lost only one young female patient from

acute delirium under asylum treatment. This one died, in my opinion, from opium poisoning, the result of hypodermic injections of morphia given, but not by my advice, at the time when these injections were first practised and were greatly in vogue. Our prognosis, then, will be favourable if the patient is properly placed for suitable treatment, if rooms and attendants are adequate, and if the latter know their business. Much depends on the patient being properly nourished, and the feeding is a matter for skilled attendants, and for them only. We do not find food obstinately resisted as in melancholia, but amateurs are not likely to succeed in giving it or in giving a sufficient quantity. There are various things to be observed before we pronounce our prognosis. The first is the pulse. If this is very quick, even when the patient is comparatively quiet, it is a bad omen. If between the paroxysms of excitement—and this is paroxysmal and periodical in almost every case—the pulse falls to a frequency not much beyond the normal we may be reassured. The tongue, too, tells its tale. Incessant shouting and talking, and the nervous excitement of the disorder, will cover the tongue with a thick, sticky coat of dead epithelium. If it increases and proceeds from yellow to brown, and brown to black, and the lips and teeth are covered with sordes, I need not say that the prognosis is bad; but nowadays, when we do not give opium and sleep is produced by drugs like chloral, chloralamide, and the bromides, this typhoid-like tongue is less often seen. Women, too, will go through a period of the most acute delirium and keep a clean tongue throughout. Then there is the temperature. It is wonderful how in many of the most delirious cases, with never-ceasing muscular movement and violence, the temperature will remain only a very little raised above the normal at 99° or 99.5°. We may find it rise to 100°, and yet not be alarmed, but if it goes beyond 100° and rises to 102° or 103° the prognosis is bad, and the patient's life is in danger. There is an acute mania where there is no delirium. Acute delirious mania runs a rapid course of a few weeks, terminating in death or, in the majority of cases, in recovery, while the noisy, garrulous, exalted state of acute mania may last for six months, a year, or even longer, and then pass away and sanity return. The prognosis points to a different issue. It is not a question of life or death; we are not anxious about the lives of these patients. The important point is, Will they recover their reason or not? Sometimes we see noisy mania varying from silly and frivolous hilarity to anger and abuse, yet without delusion, an absolute want of self-control constituting that moral insanity I have already spoken of. We inquire the duration of the attack, the history of previous attacks, if any, the condition of the patient during the interval between the attacks, the health and bodily strength, the probable cause, and the family history. The more recent the attack and the more rapid the onset the better the prognosis. If it is one of a long series of attacks and has lasted for months, we may have doubts, though sometimes patients have such attacks recurring at intervals through a long life.

The cases of simple mania with excitement are not nearly so numerous as those with delusions and hallucinations. How will our prognosis be affected by these? Delusions are no doubt evidence of a considerable reduction in the healthy action of the brain-centres. They are generally the outcome of a somewhat acute attack of insanity. If the symptoms of the latter are present, the attack having begun recently, the fact of there being delusions need not make us give an unfavourable prognosis. The attack subsides, the delusions vanish, and the patient recovers. It is wonderful how delusions vanish which have been persistently adhered to for some time. In some cases the delusions are perpetually changing. To-day there is one fancy, to-morrow another. This is a good sign. It sometimes happens, however, that all the acute symptoms subside, the patient recovers his sleep, and is able to occupy and amuse himself, but some one delusion remains obstinately fixed and becomes organised in the brain. If this goes on for any length of time, for a year or more, the individual not being melancholic, the prognosis is bad. The nature of chronic delusions varies considerably, and I am not aware that one class is more persistent than another. I have found hypochondriacal fancies very difficult to eradicate, but these are the outcome of melancholia rather than mania, and some will retain delusions of grandeur. There are in most asylums chronic patients who think themselves kings or queens, or dukes or duchesses, and will sign themselves by imaginary titles in their letters. Of course, I am not now speaking of

the exalted delusions of the general paralytic. Whenever we find these ideas of grandeur we suspect general paralysis, and then arises the question of diagnosis. If we can establish the fact that the patient is suffering from this fatal disorder beyond any doubt the prognosis follows. But occasionally the diagnosis is extremely difficult, and sometimes the most unlikely cases recover and *vice versa*.

How do hallucinations affect our prognosis? We find hallucinations of all the senses, but chiefly of sight and hearing. In an acute state of insanity hallucinations of sight are very common. Patients see visions, faces of angels, faces of devils, animals, birds, snakes, and the like, as do those who are suffering from the acute alcoholic insanity which we call delirium tremens. In the acute state other hallucinations occur also, as those of hearing, taste, and smell, or the muscular sense. But none of these need render our prognosis unfavourable. They come and they go; when the acute stage has passed away they vanish, very frequently before the delusions which accompany them. It is quite otherwise, however, with hallucinations found in non-acute or chronic cases. They are almost always those of hearing, and generally take the form of voices speaking from the next room or the next house by means of wires or telephones or some supernatural agency. If a patient who has apparently recovered from the acute state and is in all other respects restored to mental health still hears voices—not mere sounds, but words and sentences—plain and distinct, the prognosis is decidedly bad. Some lose them even after a considerable period, but these are the exceptions; and in some they vanish for a time, and then upon any failure of health return, to vanish again when the health is improved. Such patients are prone to relapses, and the prognosis is bad, for they are unstable, and there seems to be a weakness of the supreme centres which are constantly losing control.

We come now to another of the epochs of life, that known as the climacteric, an epoch of transformation when various important functions of the body with their corresponding nerve organisations come to an end, sometimes quite suddenly. When we consider what all this involves, it is not surprising that we find it to be eminently a period of nerve instability, when the various chances and accidents of life may exercise an undue influence over the nervous system, and bring about an overthrow of the mental balance. The climacteric and the cessation of the menstrual function are put down as causes of insanity. It would be more correct to say that the whole climacteric period is one of instability in which other causes, moral or physical, exercise a power which would have been resisted at another time and would have passed by without serious harm. In some cases the change of life will by itself produce mental disorder in persons prone by inheritance, or in those who have no object or aim in life, no occupation, duties, or work. What is the prognosis in these cases? The form of insanity incidental to this period of life is melancholia, more or less acute. It is an opinion common to many that the religious melancholia of this time is peculiarly hopeless and that few recover; but this is not so. The melancholia of women is almost always religious, but many recover. Comparing the statistics of various writers, we may reckon upon 50 per cent. of recoveries. In forming our prognosis we take into consideration the duration of the illness, the question of early treatment, the number of previous attacks, the health of the patient, and the cause, such as alcoholic indulgence. Many recover, but such disorder is far slower in its progress to recovery than the maniacal seizures of earlier life. There is a popular notion that the climacteric change of life will bring relief or even cure to those who are already disordered in mind, or have suffered from periodic attacks, which, it is hoped, will disappear after the new lease of life is taken up. I fear such hopes are doomed to disappointment. In my experience all such patients are not better, but worse, at the time of the cessation of menstruation, and I cannot see how such an important change and the disturbance of such functions can have a beneficial effect on an unstable nervous system. Do we find this insanity in men, and can they be said to undergo a climacteric? Assuredly there is no such functional revolution in them as in women, but they exhibit the same symptoms of mental disorder, though at a later period of life. We should fix the age at sixty-five, which corresponds to the woman's change at fifty. The mental disorder is for the most part melancholia, acute maniacal symptoms being the exception. This brings me to the consideration of melancholia in its varied aspects,

ranging from what is called *simple melancholia* characterised by depressed feeling, inability to apply to work or business or to concentrate thought, but without delusion or hallucination of any kind. The prognosis with regard to this simple melancholia is good. It may last a considerable time and pass away, leaving the patient perfectly sane and sound. There is, no doubt, at the first onset a certain risk of suicide. This is more likely to occur early than late, and should not be lost sight of. Many have these slight attacks periodically, and pass through them even without leaving home and with little medical treatment. I have often tried to cut them short by attacking that much abused organ, the liver, by giving sedatives to improve the sleep, or tonics, but seldom with much success. The disorder appears to run a certain course and to vanish in about the same time, whatever treatment is tried, or if no treatment is tried. A more advanced stage is melancholia with delusions, a more formidable but not an incurable disorder, and one which demands more active treatment—treatment which for many reasons cannot be carried out in a patient's own house amidst a number of terrified or sympathising relatives. Almost all these melancholics are suicidal; all are to be treated as such, and must be carefully guarded and kept from everything with which they can do harm to themselves. Many of them have to go to an asylum, their means not allowing the expense of taking care of them in a private house with proper attendants and the medical supervision which is requisite. A large number refuse their food and have to be fed by force, and this necessitates removal to an asylum, as such feeding cannot be carried on in a private house without a large staff. If all the proper care and treatment be arranged to our satisfaction, the patient sedulously guarded, well fed and housed, with opportunities for air and exercise, the prognosis will be decidedly favourable. Unless very old or completely broken in health, we may hold out a strong hope of a favourable termination, though the cure may take a long time. These are the cases which are cured after years of depression. In a case of mania after a year or eighteen months, the prognosis is very bad and few recover; but in melancholia so slow is the process of building up and repairing the waste of nerve-force that a year does not oblige us to give up hope. For a long time we may see no improvement at all, except perhaps in physical health; then there may be a trifling brightening which the patient will altogether deny or try to conceal, but it will go on, it may be very slowly, with perhaps occasional pauses, or even relapses, so that we must estimate it by months rather than weeks. And at last we are rewarded by recovery, and after perhaps years of gloom the sufferer returns to the full possession of every faculty, of reason, memory, and feeling, for the brain appears to have undergone no organic change. It is sad to read in the paper that this person and that have committed suicide because they were depressed when we know that all, or nearly all, might have been cured were they properly treated and guarded. The patients who suffer from simple melancholia, or from melancholia with delusions and suicidal tendency, rising even to what we may call a subacute stage, recover in large numbers and the prognosis is decidedly favourable. Not so is it in the case of those whose reduction is more severe and in whom the disorder assumes the form of acute delirious melancholia. Such persons are usually very debilitated in the beginning, and the violence of the disorder soon exhausts them. Instead of the quiet state or stupor of ordinary melancholia characterised by passive resistance and inertia we see panic-stricken frenzy and incessant motion. The patient paces the room, jumps up and down from his seat, will not lie in bed, thinks the room is on fire or he himself is going to be burned with the fires of hell. He is constantly trying to put an end to himself, will keep no clothes on, will take no food or medicine, and resists to the uttermost everything that has to be done to and for him. The strength of these people is for the most part failing at the onset and does not hold out long against the tremendous strain of this condition, complicated with want of sleep and the struggle over every dose of medicine and food that has to be given. The prognosis in these extreme cases is as bad as it can be. It sometimes happens that a patient has apparently recovered from an attack of melancholia. He seems quite well, and has returned, or is about to return, to his family and friends. All his gloom has passed away, and we are told that he has not been so well for years. He is in such good spirits, so busy and active, so full of energy and enthusiasm. This sounds very satisfactory, but as time goes on the good spirits become abnormal excitement and the energy drifts into

active mania, and we have instead of melancholia the alternate state of mania set up, and the patient has to be led through an illness of this kind. The converse also may take place, and an attack of melancholic depression may succeed one of mania. This alternation of mania and melancholia constitutes what I have already spoken of as "alternating insanity." After any attack of mania there may be a stage of depression, just as the majority of such attacks commence with depression; but this is not what I mean. In alternating insanity the patient has a well-defined period of the one form followed by a well-defined period of the other; and when he has recovered from the one, after a shorter or longer interval of convalescence, the other follows and runs its course, the two recurring with the utmost regularity, and alternating each time with almost identical symptoms through the rest of life. The prognosis of a case of this kind is extremely unfavourable. Do what we wish in the way of change, treatment, or removal of every supposed cause, the malady returns with fatal regularity. All periodicity in insanity is unfavourable. I have known patients who had alternate days of depression and excitement. This alternation went on for years with the utmost regularity, so that I could always tell the condition in which I should find the individual by referring to that which existed a week or a month ago. I have known the regularity diminish, the patient passing perhaps two or three days in the same state, but I have never known one recover. This alternating insanity is not quite the same as, though closely allied to, recurring insanity. In the latter the same kind of attack recurs after a varying interval. All insanity is liable to recur. A person who has had one attack may have another, but if the latter takes place after perhaps thirty years of health we do not call it recurring insanity. In the latter the attacks recur in rapid succession, coming on without apparent cause and running a similar course. The prognosis is unfavourable. The patients are for the most part the victims of hereditary transmission and are of middle or advanced age. It may, however, commence early, and be continued through a long life.

I have, so far, considered the various kinds of insanity, mania in different degrees, and likewise melancholia, in the different periods of life from youth to age; but besides the age of the individual and the form of the insanity, there are often other points to be taken into account, and these may have much influence on our prognosis. We may derive information and guidance from a knowledge of the cause of the disorder. For this there may be an assignable reason, a moral cause, as it is called—such as grief, worry, or overwork; or a physical, as influenza, a blow on the head, or alcohol. It may be that no cause can be assigned. In the column of the statutory statement sent with a patient we find the cause returned as "unknown" in a very large number of instances. Such insanity has been termed "Idiopathic," and if we translate this into other words it means heredity—hereditary instability—and a proneness to rapid reduction of the supreme centres through some slight cause which escapes notice or would produce no effect on a healthy brain. How is the prognosis affected by our knowledge that the disorder is hereditary? The popular idea is that such insanity is very incurable, but this is not borne out by experience. A vast majority of the cases of insanity occurring in young persons is of this kind—cases of the mania of adolescence and of puerperal mania. Parturition is not a frequent cause of insanity when we consider the number of births that take place every year. Women have children, many have large families, with no signs of insanity, therefore those who break down must have inherited an unstable organisation. Yet I have said that puerperal mania is a curable disorder, and according to the statistics a larger number recover from this than from any other form. I have found that those who are affected by inherited insanity recover, at any rate from the first attack, quite as often as others. Being unstable by nature and constitution, they are thrown off their balance by something which in others we should consider trifling, but which is sufficient to cause a reduction of their nerve centres. The reduction, however, is not deep, and recovery takes place. It is clear that such persons are liable to a return of the disorder, which any cause, slight or severe, may bring about; but in the first and possibly subsequent attacks the prognosis is good.

Passing from the hereditary or idiopathic insanity to that which is acquired by the individual himself, we have to consider, first, the "moral causes," so called. These are given in the Commissioners' Report as six varieties: (1) domestic trouble,

including loss of relatives and friends; (2) adverse circumstances, including business anxieties and pecuniary difficulties; (3) mental anxiety and "worry" (not included under the above), and overwork; (4) religious excitement; (5) love affairs, including seduction; and (6) fright and nervous shock. Now these are all called "moral causes," but some of them deserve the name of physical as much as any. The long-continued strain of the first three, which may be comprised in two words—worry or overwork,—must produce a physical effect on the brain cells and brain circulation. You will remember the experiments of Dr. Hodge and his observations on the effect of normal fatigue on the sparrow, the pigeon, the swallow, and the honey-bee. He found that the normal fatigue of the day's exercise caused a marked decrease of the nucleus of the nerve cell, and a jagged and irregular instead of a smooth and rounded outline. This was restored by the night's rest. In man excessive stimulation in the shape of overwork or worry causes a want of control of the vaso-motor system, hyperæmia, over-action of the lower centres owing to obstruction of the higher, deposits of waste, and so on. These are physical effects, though they proceed from moral causes.¹ How does all this affect our prognosis? In proportion to the time that the excessive stimulation has lasted, so will our prognosis be unfavourable or the reverse. Long protracted overwork or worry may produce the same injurious effects on the brain cells and centres as a blow or alcohol. Therefore the duration must affect our verdict. Such acquired insanity must be looked upon very unfavourably. Causes such as the sudden loss of a friend, or a fright or shock, are likely to upset an unstable mind, and to produce a rapid reduction of the mental balance; but this will not be spread over a long time, and will come nearer to that which we call hereditary insanity, and of this the prognosis is good in a first attack if it occurs in one not broken in health.

Passing to the physical causes given in the Commissioners' Report, we find some which have been already considered—as puberty, pregnancy, parturition, and the change of life. Another group is that of uterine and ovarian disorders. How far do these affect our prognosis? Under the head of uterine disorders we have to consider all the derangements of menstruation which are so commonly met with amongst the insane and are so often assigned as the cause of the mental disturbance. Of these amenorrhœa is the most common. It may occur in the course of an acute attack or have been noticed before any mental symptoms. The patient has declined in health and strength, and as concomitant symptoms the amenorrhœa and mental disorder have appeared. When by dint of rest, feeding, and sleep the bodily condition is brought again to its normal level, the catamenia reappear and the patient becomes sane—but not as cause and effect. The amenorrhœa has not caused the insanity, the restoration has not cured it, both having a more remote origin. So, too, menorrhagia may have reduced the strength and insanity has followed. If the menorrhagia is stopped the patient may recover. Neither of these conditions need make us give an unfavourable prognosis. That affections of the uterus, such as displacements, prolapse, and the like, may by a reflex irritation upset an unstable brain is evidenced by many recorded cases, and cures have followed when the uterine disorder has been remedied. The prognosis here will depend on the duration of the mental symptoms and the extent to which they have become organised. I have had a patient recover who had a severe prolapsus uteri which could not be dealt with, while another did not recover from whom an irritating pessary was removed, which was supposed to have given rise to the insanity. Though there may be amenorrhœal and dysmenorrhœal trouble in many cases, I do not think the prognosis depends on this, and examination in the case of young unmarried women is likely to do more harm than good. There is a variety of insanity which has received the name of traumatic. By this is meant insanity which is the result of an accident causing a direct blow or injury to the head, or a shock or shake to the body generally without definite harm to the head. In either case we may find insanity rapidly supervening in an acute form as the result of shock, even when the damage done to the head has been slight, and then our prognosis will be favourable if there are no other conditions to prevent recovery. I have known mental symptoms follow falls and blows and patients recover at all ages. In the young it has taken the form of acute primary dementia, and the issue

has been recovery. In elderly persons acute mania or acute melancholia has supervened, and recovery here also has followed. Far other, however, is the prognosis in those cases where the advent of the mental malady is slow and insidious, and we find at first a moral insanity, a gradual perversion and alteration of the whole man, the reduction leading to quiet and concealed delusions, or to loss of memory and incipient dementia, or to the boastfulness and other symptoms of general paralysis. All these point to a chronic organic change which the brain is undergoing and we are powerless to arrest. With traumatic insanity is often, but erroneously, coupled that which is said to proceed from "sunstroke." Sunstroke, in the strict sense of the word, rarely, in my experience, produces insanity; but heat, the continual heat of the tropics, especially in unhealthy places, produces a considerable amount. I have seen many from India, Burmah, the Straits Settlements and such climates, both men and women. I have found such patients when removed to a cold climate recover in the large majority of cases; therefore the prognosis is good. But I have come to the conclusion that those who have once broken down and become insane in the tropics ought not to be allowed to return to those climates. If they do they undergo a great risk even under the favourable conditions of hill stations in the hot weather and such-like precautions. It is not the hot days but the hot nights that try the nervous system and cause sleep to be broken and unrefreshing. More like traumatic insanity is that to which we give the name of alcoholic. Very various are the symptoms and phases of this, and the prognosis will vary equally. This is an acquired insanity, the direct result of alcoholic poisoning; but those who have an hereditary predisposition more readily fall victims, and it is not unfrequently hereditary, the same propensity showing itself in successive generations. All the varieties of insanity may be produced by alcohol. We see acute delirium and acute mania exemplified by the symptoms we call delirium tremens. Less acute than this is the insanity with delusions, either maniacal or melancholic, which is due to long-continued drinking. Now, with regard to the acute symptoms you are all familiar with them, and will agree with me that patients as a rule recover, at any rate from the first attack. Many recover again and again, and have such illnesses periodically for many years. From the less acute insanity the majority recover at first if no unfavourable conditions arise. The stoppage of the drinking allows the poison to be eliminated and the mind is restored. If the drinking is more protracted we may find evidence of organic brain change, paralytic symptoms will be noticed and signs of approaching dementia, as loss of memory and childish conversation. This is frequently the way in which the drinking of women terminates. In them delirium tremens rarely occurs, and after years of alcoholisation paralytic symptoms are often the first to be noticed. Here the prognosis is very unfavourable, yet I have known them recover in a most unexpected manner after being admitted in a helpless condition with complete loss of power in the lower extremities; but recovery of all such means a return to their evil habits, and from a second attack they are not likely to emerge. Insanity from other poisons, such as opium, chloral, or bang, is rarely met with here. Here and there we find mental symptoms, chiefly depression, coming on in persons who are addicted to opium eating, or that which is now the prevalent fashion, hypodermic injection. The prognosis is not favourable. The patient improves when the morphia is withheld or lessened, for it is not always possible to stop it altogether; but I know no habit so difficult to break through, and though many times interrupted the victim goes back to his syringe unless he is in actual confinement. Of insanity from chloral I have had little experience. If it is stopped I should expect recovery, as the habit is not likely to have continued a long time. Insanity from bang is common enough in the East, but here we do not see it. The patients recover—at any rate in the earlier attacks.

There is an insanity which occurs in epileptic patients which is of a very serious nature and is by no means uncommon. Epilepsy means a discharge of unstable grey matter, which causes mental symptoms ranging from a loss of consciousness of a very brief duration to most acute mania, or, if of long duration and much severity, to complete dementia. There are many epileptics who have fits, not very numerous or frequent, which do not produce insanity, though a certain cloud may remain for a time after an attack. But if the fits are frequent, or occur a number at a time, they

¹ Cf. Dr. Betty Tuke, Morisonian Lecture, Edinburgh Medical Journal, March, 1894.

may be followed by very acute symptoms. These may pass away, and the patient recover; yet the prognosis is unfavourable. Epilepsy in the adult is a very grave disease, of which cures are the exception rather than the rule, and the occurrence of the disease and the resulting insanity tends to that state of hopeless dementia which characterises the chronic epileptics of our asylums. If the prognosis of insanity following epilepsy is unfavourable, the outlook of that which follows apoplexy is still more gloomy. After an apoplectic seizure well-marked symptoms of insanity, mania or melancholia, may appear either at once or after an interval. They may pass away or alternate, mania and melancholia succeeding one another. But if the more prominent features disappear, there will be a weakness of mind and memory tending to the dementia so constantly found; as in all cases of organic mischief in the brain or its vessels the prognosis is unfavourable, especially in the cases of hæmorrhage, where consciousness is more interrupted than where the damage is due to thrombosis. There are many important questions, such as the degree of mind, the capacity and responsibility of the apoplectic, but I am not concerned with such at present. More favourable is the prognosis in that insanity which has been termed post-febrile, and arises in the course or towards the decline of acute disorders such as the eruptive fevers, pneumonia or typhoid fever. This is not to be confounded with the ordinary delirium so often seen, and seen when the temperature is at its highest. The insanity I am speaking of has been well described by Dr. Hermann Weber.² It does not come on at the height of the fever, but during its decline, when the temperature has fallen, and he says that the commencement in almost every case occurred immediately after waking from sleep. No doubt the brain in these cases becomes deprived of blood to a considerable extent, and on waking delirium takes place in a patient whose centres are unstable. Of this sudden insanity the prognosis is good, and the attack is usually transitory. Where insanity follows a long-continued illness, whether fever or any other exhausting malady, such as influenza, the prognosis is decidedly unfavourable, and will depend on the general health and recuperative power of the individual. I have seen several patients who had had influenza, and who never recovered. There is much difference of opinion as to the relations of syphilis and insanity. Can we speak of a syphilitic insanity? I do not myself think that insanity in the ordinary sense of the word is due to syphilis except when the latter acts as a moral cause. Syphilophobia is not uncommon. Patients who have or have had specific disease become melancholic and are possessed by the one idea that they shall die of it in its most loathsome form. Even those who have had the disease may conceive a delusion that they have it, and point to every little spot and pimple in proof thereof. Syphilis does produce mental defects, but it does so, as Dr. Hughlings Jackson has shown, "by attacking the neuroglia, the fibrous tissue, bloodvessels, lymphatics, membranes, or bony coverings, involving the nerve tissue and its functions secondarily by pressure, so causing irritation, inflammation and ramollissement, or by starvation³ from deficient blood-supply, causing degeneration and atrophy." The prognosis is most unfavourable in all cases where the brain is so damaged by syphilis, and I have rarely found that antisyphilitic treatment, which nowadays is so largely used, has produced any beneficial result. There is a form of insanity which has received the name of the insanity of masturbation on which a word or two may be said. Masturbation is very common amongst the insane, common amongst males, and also among females, though perhaps in a less degree. Amongst the latter it is constantly found in an acute attack of mania, but it disappears when the acute symptoms are over. It is not to be supposed, however, that this evil habit is the cause of the insanity in every case where it exists. In many, I may say the majority, it is a symptom. In some neurotic persons with an inherited unstable organisation it may be a cause. Loss of control allows the habit to be indulged in to excess, and the irritation and exhaustion of this perpetual indulgence upsets the weak brain and produces the mental phenomena which have been described as characteristic of this variety. These are morbid and exaggerated ideas of self, sometimes self-importance and conceit, sometimes hypochondriacal fancies about health or delusions that the patient is not sufficiently valued by his relatives and friends. At some time or other there will be an

acute or subacute attack of mania or melancholia, and when this passes away there may be a period of remission and an apparent recovery, but the patient soon drifts into hopeless dementia. The prognosis in all such cases is extremely unfavourable.

As I began with the insanity of puberty and adolescence, so will I end with that of old age. And by this I do not mean the dementia which is the last scene in the history of many a once great mind. There may be difficulty in determining the extent of this at the commencement; questions of diagnosis and of mental responsibility may arise, but of the prognosis there can be no doubt. But one meets with a certain number of cases of mania and more frequently of melancholia in old people, many of whom recover in a surprising way. The year before last I was asked to see an old lady of seventy-five years whose mental and bodily strength had been failing, as her medical man told me, for six months. She did not know where she was, though she was in her own house where she had lived for many years, and she had all kinds of delusions. Being unmanageable there she was removed to an asylum, and everyone supposed it to be the beginning of the end. She was in a somewhat acute state for some weeks, had hallucinations of sight and many delusions, and then gradually improved, became perfectly clear in her mind and memory, and went home to the old house in less than three months recovered. Dr. Clouston gives the particulars of 203 cases of senile insanity, excluding 101 others which were cases of epilepsy, mania, or dementia of long-standing or climacteric insanity. He says that heredity as a cause was uncommon. The age was from sixty to ninety years, and of these 203 persons 72 were discharged "recovered"—"that is, in all of them their worst mental symptoms disappeared, they passing into normal senility. In many cases they became quite well in an absolute sense." This is in the proportion of 30 per cent., a large number when the time of life is considered. So that our prognosis is not utterly without hope, though it may be doubtful or even unfavourable. It is to be remembered that all Dr. Clouston's patients and my own whom I have mentioned recovered in asylums. I do not think the same results would be attained by any home treatment.

Three Lectures

UPON THE

TESTES.

Delivered before the Royal College of Surgeons of England on March 25th, 27th, and 29th, 1895,

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LECTURE III.¹

Delivered on March 29th.

THE RESULTS UPON THE TESTICLE OF LIGATURE OR DIVISION OF THE VAS DEFERENS.

MR. VICE-PRESIDENT AND GENTLEMEN,—Having given in Lectures I. and II. an account of the structure of the testes at different periods of life and the influence they exercise upon the growth and development of the body, and also of the structure of the undescended testis and the function it is capable of performing, it remains for me to relate the results I have obtained from a series of experiments in which the vas deferens was ligated or divided so as to effectually and permanently obliterate its canal. I propose to give, in the first place, a short résumé of the work of previous writers upon this subject, then to show the effect of obliteration of the vas deferens upon the testicle of the puppy and upon that of the full-grown dog, and, lastly, to briefly describe a testis from a young man in whom the vas deferens had been in part accidentally removed during an operation on the spermatic cord.

² Transactions of the Medical and Chirurgical Society, vol. xlviii.

³ Dr. Clouston, Clinical Lectures, p. 420.

¹ Lectures I. and II. appeared in THE LANCET of March 30th, 1895.

Hunter² gives a full description of a case of obliteration of the vas deferens which he met with in his dissections during the year 1775. In this case, the first of its kind ever described, the vas deferens was, in the greater part of its length, converted into an impervious cord of fibrous connective tissue; but the corresponding testicle, though its duct was thus occluded and in great part obliterated, was of natural size and of normal appearance, as may be seen from the drawing which accompanies the description; and from the context there was nothing observable in the internal structure of the testicle to give rise even to a suspicion of there being any morbid changes. This observation and subsequent ones of a like nature induced Sir Astley Cooper, in the year 1823, to perform the following experiment. He said: "I divided the vas deferens [in the dog] upon the one side and the spermatic artery and vein on the other. The testis upon that side on which the artery and vein were divided gangrened and sloughed away. The testis on that side upon which the duct was divided became somewhat larger than natural. I kept the dog for six years; during that time he was twice seen in coitus, but the female did not produce. This was in 1827. In 1829 I killed him and found the vas deferens below the division excessively enlarged, full of semen, and its extremity closed; the upper portion, however, remained pervious from its point of division to its termination in the urethra. A small space was found to exist between the two divided portions."³ He made the following remark: "The testis does not in general become absorbed when partially diseased, although its functions may be interrupted, even to the complete obstruction of the passage of semen." Even after this confirmation by experiment of an anatomical observation by Hunter doubt still existed as to the accuracy of the statement. Curling in this country, and Gosselin and afterwards Godard in France, conducted a series of experiments on animals and made a post-mortem dissection in man of several instances in which the vas deferens was in part of its length obliterated. In the main their results confirmed those obtained by Cooper, as may be gathered from the following short extracts from their works. Curling concludes thus: "The foregoing cases and experiments show, then, that the testicles may be properly developed though a physical obstacle to the elimination of their secretion is present from birth; and that so long as the testicles exist entire, though to no purpose, the individual acquires and preserves all the marks of the male sex."⁴ Gosselin found the same results after excision of a portion of the vas deferens.⁵ Godard⁶ makes the following remarks: "Ainsi, l'absence congénitale du canal excréteur du sperme chez l'homme, et l'excision du même conduit pratiquée sur les animaux, donnent un résultat identique; dans les deux cas, la glande privée de son conduit se développe et fonctionne comme si elle pouvait éliminer le produit de sa sécrétion, et il est vrai que le testicule privé de communication avec les conduits éminifères ne s'atrophie pas et continue à sécréter le sperme." Thus far all the writers upon this subject seem to agree; and the results of their experimental inquiries simply confirm the inferences drawn from dissections in man. More recently, however, Brissaud examined this subject further and performed similar experiments in rabbits (not in dogs and cats, the animals previously used), and subjected each specimen that he obtained to a minute microscopical examination. Having ligatured their vasa deferentia, he divided the rabbits into two sets; the one he kept alone, and the other he placed among a lot of does, in order that the latter set might be subjected to the full influence of sexual excitement which the presence of the does was supposed to bring about. The following is a *résumé* of the results of his experiments.⁷ "En résumé, la ligature du canal déferent ne produit de phénomènes analogues à ceux des cirrhoses par l'obliteration que dans l'épididyme. Le corps d'Highmore semble opposer une barrière infranchissable à la propagation du processus inflammatoire vers le testicule. Enfin, dans le testicule lui-même tout se borne à une exagération transitoire du travail spermatogénique, à la suite de laquelle l'organe, sans retourner à l'état embryonnaire, revient à une constitution plus simple, celle de la neutralité fonctionnelle, c'est-à-dire celle qui précède son développement complet ou qui correspond aux intervalles des époques du rut."

While residing in Paris in the summer of 1890 I began, through the kindness of Professor Dastre, of the Experimental Physiological Laboratory of the Sorbonne, to whom I am much indebted, a series of experiments on the testicle in dogs, and have since conducted some at Cambridge. I made use of puppies and of full-grown dogs. In most instances, after exposing the spermatic cord in the groin I opened the processus vaginalis and seized the vas deferens and ligatured it with a piece of strong sterilised silk; in others I made use of two catgut ligatures and divided the cord between them. The wounds as a rule healed by first intention, and when they did not there was only a superficial wound left to granulate, which did not interfere with the dog running about and appearing as lively as ever. I will give an account of only a few of my experiments and will group them for convenience under the following headings: (1) ligation of the vas deferens in puppies; and (2) ligation of the vas deferens in full-grown dogs.

1. Ligation of the Vas Deferens in Puppies.

CASE 1.—A fox-terrier puppy about two months old. On June 28th, 1890, the right vas deferens was tied in the inguinal region with sterilised catgut. On the following day no change was observed in the corresponding testicle. On July 1st, three days later, the dog was killed. The right vas deferens was completely occluded, but there was no difference between the two testicles. After hardening in spirit no change whatever between the two testicles could be detected by the microscope.

CASE 2.—A puppy sheep-dog about four months old, whose testicles were as yet small and undeveloped. On Dec. 29th, 1890, the left testicle was removed, and the right vas deferens was ligatured just outside the inguinal ring with sterilised silk thread. There was no change in the testicle after the operation, and both wounds healed rapidly, the animal soon getting well. In the beginning of April, 1891, the testicle (right) began to show signs of growth, and it grew rapidly until at the end of the month it was of nearly natural size. The animal was killed. This right testicle is illustrated in Fig. 17, because it shows in a remarkably clear manner the

FIG. 17.



Right testis of dog. (Experiment 1.) Body of testis somewhat globular in shape, epididymis much enlarged from distension of its tubules, and vas deferens distended up to seat of ligature.

changes that arise after a certain period in the epididymis, and also those in the testicle, the latter being much less marked. The epididymis is greatly swollen, the lobules of the upper part being especially prominent, as are also the convolutions of the duct below, though these are not so well represented in the drawing. This enlargement of the epididymis, and indeed of the vas deferens, up to the seat of ligature is dependent upon over-distension due to the accumulation of the seminal fluid secreted by the testicle. The body of the testicle had assumed a globular shape, thicker and somewhat more tense than a testicle the secretion of which is allowed to pass away freely. Under the microscope this testicle presents the appearance of a perfectly healthy active gland; and in the epididymis the only changes are those of dilatation of all the tubules, their cavities being filled with seminal secretion abounding in well-formed spermatozoa.

² Observations on Certain Parts of the Animal Economy, p. 31.

³ On the Anatomy of the Testis, p. 52.

⁴ Ibid., p. 52.

⁵ Diseases of the Testis, fourth edition, p. 13.

⁶ Annales Générales de Médecine, 1863, tome II., p. 257.

⁷ Recherches sur l'Appareil Séminal de l'Homme, p. 103.

Archives de Physiologie Normale et Pathologique, 1880, p. 769.

2. Ligation of the Vas Deferens in full-grown Dogs.

CASE 3.—A large sheep-dog from three to four years old. On June 24th, 1890, the left vas deferens was tied in two places and divided between them. On the following day (25th) the left testicle and epididymis were slightly swollen and tender. No unusual sexual excitement was noticed in this case, and no further changes were observed. The animal was killed on July 1st, seven days after the operation, and the organs were placed in strong spirit. Under the microscope the seminal tubules appeared normal, showing the natural formation of spermatozoa. In some tubules there were many small, round homogeneous bodies of about the size of red blood-corpuscles; these stained of a delicate pink colour with carmine and are probably of the nature of mucin bodies. The tubules of the epididymis contained spermatozoa, and showed no signs of a structural change in the epithelium or in the intervening connective tissue.

CASE 4.—A fox-terrier eighteen months old. On Oct. 30th, 1890, the left vas deferens was ligatured with sterilised silk thread in the groin. The wound healed quickly, and the animal was soon well and running about. On the following day, Nov. 1st, the testicle as well as the epididymis was enlarged and tender; this passed away, but reappeared on Nov. 10th; and on Dec. 20th the testicle was apparently smaller, firmer, and more tender than natural. No further change took place until Jan. 22nd, 1891, eighty-three days after the operation, when the animal was killed. The epididymis, as also the vas deferens up to the seat of ligature, was found distended, though not to any great extent, but the body of the testicle presented nothing abnormal in shape or size. Microscopically the testicle is quite normal, the seminal tubules being well formed, showing abundance of spermatozoa in their interior, and the process of spermatogenesis could be traced in most of them. In the epididymis the epithelial cells lining the over-dilated tubules have lost their tall columnar character, and are reduced to low cubical cells which do not bear cilia as do the natural columnar cells. Further, the cells thus flattened are found in several layers; the walls of the tubules are unaltered, and the intervening connective tissue remains unchanged and free from any signs of inflammation. (Fig. 18.)

FIG. 18.



Section of epididymis of a dog after ligation of vas deferens. $\times 35$.

Accordingly, when the vas deferens is ligatured in puppies there is no immediate result either upon the epididymis or testicle; nor is the growth of the latter in any way interfered with—that is to say, the ligation of the duct does neither hasten nor retard the growth of the gland, and the testicle acquires its maturity both of structure and function just as if the duct had been left alone in its natural and previous state. Again, when the vas deferens is ligatured in full-grown dogs there occurs enlargement of the epididymis, with tenderness. This enlargement in part subsides, leaving it, together with the portion of the duct up to the seat of ligature, permanently enlarged from the accumulation of semen. The structure of the seminal tubules remains unaltered, and they are after a few days or a few months just the same, showing the active formation of spermatozoa, as those of the normal testis, the duct of which is left natural and undisturbed; therefore ligation of the vas deferens induces a slight enlargement of the epididymis and of the vas deferens up to the seat of ligature,

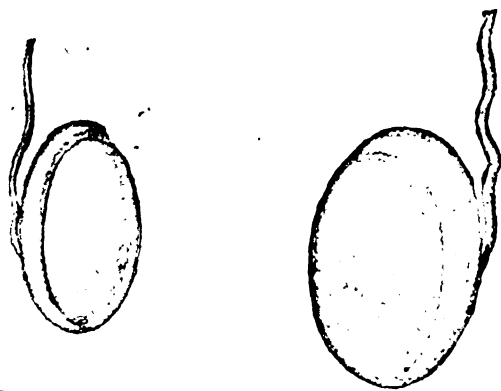
but it does not interfere in any way with the structure of the seminal tubules or the production of spermatozoa. This is in accordance with the views of Hunter, Cooper, Curling, Gosselin, and Godard, and in part with those of Brissaud. Curling and others, who were aware, both from experiment and observation, of the independence that exists between the growth of the testicle and that of its duct, considered that this independence was due to the manner in which the testicle and vas deferens took separate origin in the embryo. It is now generally well known that the testicle arises from a modification of the germinal cells of the body cavity, while the vas deferens (Wolfian duct) is either a segmentation from the epiblast near the dorsal groove or takes origin in the intermediate cell mass as a solid rod which soon becomes hollowed into a tube or duct, and subsequently these two become united by the development of intermediate tubules which form the vasa efferentia, and which effect a communication between the numerous seminal tubules on the one side and the canal of the epididymis on the other. Accordingly, the testicle and its vas deferens have each of them, like the kidney and its ureter, a separate origin in early embryonic life, and in this respect they differ from other glands. It may be questioned, however, whether this is really an explanation of the fact that when the vas deferens is ligatured or in great part destroyed by disease the testicle grows to its full size and acquires its function as if there had been no interference. Such an explanation as that adopted by Curling, attractive as it may seem, is not only unnecessary but probably erroneous, and some other reason than independence of origin in development must be sought for. Up to the time of adolescence the testicle and the vas deferens constitute together an unused apparatus which simply grows gradually in each of its parts preparatory to the greater development at puberty; and the whole genital system is an apparatus the potentiality of which mainly depends upon the integrity of the testicles, one or both, and that they control the extent to which the remainder of the sexual apparatus grows, the growth of the vas deferens no less than that of the prostate and other accessory sexual glands. I make this statement because in observations upon castrated animals I have found that the testicle exerts (see Lecture I.) such an influence upon the growth of the other parts of the sexual apparatus, while I have found nothing to indicate that any other part of this apparatus exerts even the slightest control over the growth of its neighbour or over that of a distant part. When, for example, the vas deferens is, either in part or in the entirety of its length, destroyed the testicle and the remainder of the apparatus on that side of the body, including the vesiculae seminales and prostate, continue to grow without any observable modification until they reach their full size. Further, it is not until that full size is attained and the functional powers of the gland as a secreting organ are well established that any imperfection resulting from the obliteration of the vas deferens becomes manifest except such as I have mentioned. Therefore any injurious influence which that obliteration may give rise to may reasonably be inferred to be the result of interference with the due expulsion of the semen from the gland and of its accumulation in the part of the duct still unobliterated.

It may be observed that in other organs, where the duct is occluded by disease or otherwise, the secretion as it is formed is prevented from making its proper escape, accumulates, and in time, if not small in amount and absorbed, tells injuriously upon the secreting tubules. For example, ligation of the biliary duct induces a variety of cirrhosis of the liver if the obstruction be permanent and complete, as shown by the researches of Wickham Lezg and afterwards by Charcot and others; and this change follows in virtue of the damming up of the bile, first in the biliary ducts and ultimately in the bile capillaries, the secretion of bile going on more or less continuously until the liver cells become destroyed by the pressure of their own secretion. In the testicle, however, the same result does not usually follow except to some extent in the epididymis. May not this result either from the great length of its tubules and the slow secretion of spermatozoa or from the absorption of the seminal fluid taking place in proportion to its rate of secretion? This view seems to be on the whole confirmed by the observations of Brissaud in the rabbit and of myself in the dog and in man. Brissaud, it may be remembered, obtained, after ligation of the vas deferens, different results according to the conditions under which the animals were placed after the operation. For example, if, on the one hand, the rabbits operated upon were placed by themselves, nothing more than a passing enlargement of the epididymis and

testicles occurred, similar to that which has been shown above to occur in full-grown dogs; but if, on the other hand, they were placed with does different results occurred—results in which the structure of the testicle becomes like that of a testicle before its full development at puberty or during the non-rutting period of rutting animals. In the latter series the testicle passed through a period of super-activity that was followed by certain atrophic changes in the structure of the seminal tubules, and by means of these changes the testicle becomes transformed into the state above referred to. It seems clear, therefore, that Brissaud found some atrophic changes in the testicle consequent on his experiments. I can, however, scarcely agree with his statement that these changes correspond with the condition before puberty or with that in the non-rutting period of rutting animals. But I would note that the structure of the testicle under these conditions, as gathered both from the description and drawing given by Brissaud, does not quite bear minute comparison with that either of the undeveloped organ or of one of a rutting animal during the non-rutting season. In the rabbits that were subjected to the sexual influence of the does the testicle represented by him shows that the seminal tubules were much reduced in size, and the epithelial lining of the interior was in many places represented by a single layer of small cubical cells surrounding a rather large central lumen; the intertubular connective tissue was increased, and in some places it was denser and more fibrous than natural, whereas in the undeveloped organ—twenty or more of which I examined—the seminal tubules were in all instances solid rods of epithelial cells, and I also found this to be the case in the testicles of rutting animals during the non-rutting period, as has already been pointed out in Lecture II. Further, the amount of intertubular connective tissue or stroma is not in increased quantity. The essential histological features, therefore, of the two conditions differ, and the two states are distinct from one another.

CASE 5.—A hound from eight to nine years old. On June 11th, 1890, the right vas deferens was ligatured with sterilised catgut and the left testicle removed. The wounds healed quickly, and but little change occurred in the right testicle for three or four days except for some tenderness, especially of the epididymis. On June 16th there was great sexual excitement, erection of the penis being more or less constant during the day, and the parts were tender. On June 18th swelling of the lower end of the epididymis became distinct, and sexual excitement, though somewhat less than on the previous days, was yet strongly marked. On June 25th the testicle itself was found to be appreciably reduced in size and softer than natural, but not nearly so tender as it was a week previously; the epididymis still remained of large size.

FIG. 19.



Testes of dog (Experiment 5) twenty-one days after ligature of right vas deferens. Left testis of full size. Right testis considerably reduced in size.

The testicle became gradually less in size, and it acquired a more globular shape than natural. On July 2nd the dog was killed, and the organ was placed in strong spirit. The body of the left testicle, which was removed when in a healthy state, is ovoid in shape, measuring 30 mm. in length and 17 mm. in breadth; while that of the right, the duct of which was ligatured, is less and of a more globular shape, measuring 25 mm. in length and 14 mm. in breadth, a difference which indicates a considerable diminution in entire

bulk (Fig. 19). The epididymis, however, is enlarged, especially at its lower end, the upper part, or head, and the body having during the last week or so become considerably diminished, owing probably to the disappearance of the secretion that had overfilled its tubules. In this (the right) testicle the seminal tubules are much reduced in size and in number, but the intervening connective tissue is not much, if at all, changed. The tubules, of which none are normal, show different degrees of wasting; those tubules that are least changed have a thickened tunica propria lined by a single layer of small cubical cells, the middle of the tubules being occupied by larger and irregularly shaped cells which do not show any traces of the formation of spermatozoa, whereas those that exhibit the most advanced changes have a much thicker tunica propria, and the epithelium in their interior is reduced in most instances to a single layer, which is of the columnar variety. These columnar cells rest with their bases or outer ends upon the altered and thickened tunica propria, and their inner ends taper towards the centre and occupy the middle of the tubule, as seen in Fig. 20. The tunica propria is divisible, when much thickened,

FIG. 20.



Section of right testis of dog. (Experiment 5.) Seminal tubules with thickened tissue lined by a single layer of tapering fibrillated columnar cells.

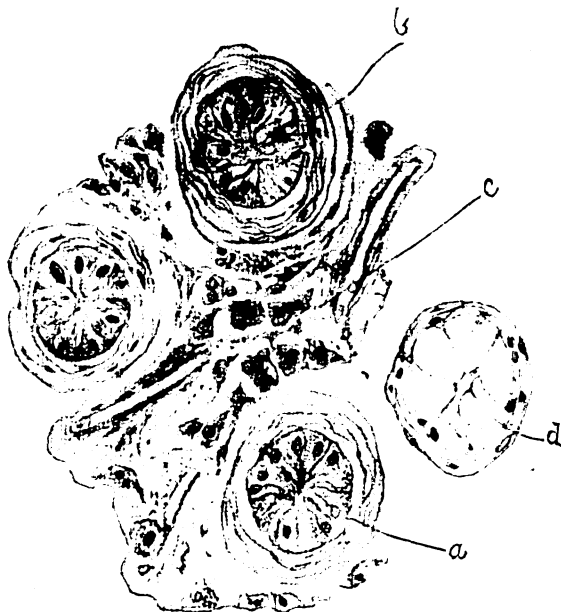
into two layers—an outer thin layer of connective tissue, resembling the original tunic, and an inner, more transparent one, with wavy fibrils traversing it. This inner layer seems as if it had been formed from the connective tissue of cells of the normal tunic which had remained more or less unaltered. In the epididymis the muscular coat of the tubules is infiltrated with connective-tissue cells, and the intertubular stroma is increased and denser than natural, but the epithelium of the tubules is hardly altered.

Similar results occur in man, as shown by the following specimen, the only one that I have obtained in which the vas deferens was occluded. The testis was excised from a young man, managed twenty-one years, six weeks after the removal of an encysted hydrocele of the cord with which had been taken away a portion, about three-quarters of an inch in length, of the vas deferens. After the hydrocele had been removed the testis, which was previously normal, swelled and became tender, and owing to the continuance of the pain and tenderness the organ was excised at the man's request. The body of the testis was of about the natural size, but firmer; the epididymis was somewhat enlarged, the tubules being distended, and the tunica vaginalis showed signs of previous inflammation. The seminal tubules were reduced in size and in number, and the intertubular tissue was relatively increased. In none of the tubules could the natural arrangement of the seminal cells be seen; and in none of them were there any evidences of spermatozoa or of spermatogenesis. In the tubules that were the least changed the seminal cells were represented by a single layer of small cubical cells at the periphery of the tubules, and a number of irregularly shaped cells occupying the lumina (Fig. 21). In the tubules that were much reduced the seminal cells were represented by a single layer of columnar cells enclosing a small central lumen. In these tubules the tunica propria was not much altered, but between it and the epithelial cells there was a thick layer of almost transparent fibrillated connective tissue which arose from the inner cells of the tunica and took the place of the receding and dwindling epithelial cells. In a few tubules the epithelial cells had completely disappeared, leaving a narrow fissure-like lumen, the two parts of the tunica propria only representing the tubule. The stroma

consisted largely of cellular connective tissue, with here and there a considerable formation of a fibrous matrix. The tubules in the epididymis were not much altered, and the intertubular connective tissue was natural. Thus the changes that occurred in this specimen were practically identical with those in the preceding one from a dog.

Are these changes dependent upon simple ligation or severance, or are they the result of some damage to and subsequent interference with the blood flow through the spermatic vessels? Seeing that ligation of the vas deferens may be practised on full-grown dogs over and over again without producing any destructive changes in or atrophy of the seminal tubules, and seeing that the testis is usually natural in cases where there is a congenital deficiency of the duct in man, it is but reasonable to suppose that there exists some

FIG. 21.



Section of right testicle of a man, aged twenty-one years, six weeks after removal of a portion of the vas deferens with an encysted hydrocele of the cord. $\times 450$. *a*, Tubules lined by a single layer of columnar tapering cells. *b*, Thickened tunica propria.

additional cause when progressive atrophy of the seminal tubules occurs. It is, I believe, true that in the human subject atrophy of the seminal tubules not infrequently follows the removal of cysts or growths of the spermatic cord in which the vas deferens is accidentally ligatured or a part of it excised; but in these cases the tumours or cysts arise from the middle of the cord, and as they grow they spread out the structures (the vessels and nerves) of the cord upon them; accordingly, when such tumours or cysts are removed the spermatic vessels and nerves have to be carefully dissected off, and during this process I apprehend that damage is done to them. When, therefore, a portion of the vas deferens is accidentally removed under the above circumstances the testicle is influenced, not only by the results of the damming up of its secretion, but also by the damage done to its bloodvessels in the spermatic cord. It would hence seem that mere division, ligation, or occlusion of the vas deferens does not lead to atrophy of the seminal tubules; but if in case of division there is, in addition, some damage to the other structures of the cord destructive changes, followed by atrophy and ultimate disappearance of the seminal cells, are liable to occur.

With regard to the suggestion made by Mr. Reginald Harrison of division of the vas deferens in cases of enlarged prostate I have not sufficient experience to arrive at a conclusion; but, seeing that obliteration of the vas deferens has so little effect upon the structure and secretion of the testis, it must be doubtful whether the operation will suffice to influence the enlargement of the prostate.

INTERSTITIAL KERATITIS AND SYNOVITIS, WITH REPORT OF A CASE IN WHICH BOTH WERE UNILATERAL.

By G. CRAWFORD THOMSON, M.D. DURH.

(Continued from p. 861.)

Interstitial keratitis and inherited syphilis.—I am aware that to some authorities the coexistence of interstitial keratitis and synovitis, to others even the existence of interstitial keratitis alone, will be sufficient for the diagnosis of syphilis, even if there is no other evidence in the condition of the patient, in his previous history or that of his relatives; but, as far as I have been able to ascertain, the present position of the question, judged from the results of the most reliable observers, does not justify these rigorous conclusions. This statement is in antagonism to another rule laid down by Hutchinson¹: "Interstitial keratitis in its typical form is always a consequence of syphilis and in itself sufficient for the diagnosis." But, as shown by a table of statistics recently published by Dr. G. Ogilvie,² the results of most other ophthalmic surgeons do not bear out the above rule. The highest percentage was found by Parinaud (96.7 per cent. in the comparatively small number of thirty-two cases), but he also admits that the corneal lesion has nothing specific and is observed outside syphilis.³ Nettleship, amongst 240 cases, found evidence of hereditary syphilis other than corneal disease in 68 per cent., and in the remaining 32 per cent., almost without exception, strong suspicion.⁴ The 68 per cent. of cases with other syphilitic symptoms are in accord with other observers, while the 32 per cent. of suspicious cases are considerably in excess of the results of others. But here much scope is left to the individual interpretation of facts. The polymorphous character of inherited syphilitic lesions is well known, so is the fact that not one of them is really pathognomonic; therefore, two, or even more, symptoms met with in syphilis might coexist without being produced in a particular case by that disease. Snuffles and a rash on the buttocks exactly imitating the specific form, appearing about six weeks after birth, are not sufficient for the diagnosis.⁵ In the same way any other symptom met with outside inherited syphilis, even if complicated by interstitial keratitis, will also not be sufficient proof, and it is here where the individual judgment of the observer plays a rather arbitrary part. Therefore, statistics drawn up by different observers cannot safely be compared unless the principles on which they are based are practically the same. This condition is fulfilled in the statistics I am now going to quote. The percentage generally found, if drawn from a sufficient number of cases, is between 60 and 70: Ancker, 61 per cent.; Horner, 70.5 per cent.; Fournier, between 70 and 75 per cent.; Jakowlena, 57.1 per cent.; Saemisch, 63 per cent.; Wecker, 66 per cent.; and Pfister, 64 per cent. Panas,⁶ combining the numerous statistics on the subject, finds the average to be from 40 to 41 per cent., but this is decidedly too low and probably due to non-comparable statistics being compared. Fournier,⁷ also granting the part which hereditary syphilis plays in the production of interstitial keratitis (in 212 cases of hereditary syphilis he saw 88 of interstitial keratitis), says: "It is incontestable that interstitial keratitis is met apart from any specific influence" (p. 218); and: "Interstitial keratitis is neither cachectic, nor scrofulous, nor a syphilitic lesion, but 'une lésion vulgaire banale,' a simple lesion of nutrition which can be produced by different morbid influences" (p. 218).

Another argument against the exclusively specific nature of interstitial keratitis, given by Ogilvie, is that it has been observed in dogs, and experimentally produced in rabbits. Since the publication of his paper several cases of interstitial keratitis have been observed in bears by Hennicke,⁸ and the diagnosis has been confirmed by microscopical examination,

¹ Syphilis, p. 75.

² A Rare Case of Hereditary Syphilis, with Remarks on Interstitial Keratitis; THE LANCET, June 10th, 1893.

³ Archives Générales de Médecine, November, 1883.

⁴ Berkeley Hill: Syphilis, p. 263. London, 1881.

⁵ Hutchinson: Syphilis, pp. 81, 411.

⁶ Traité des Maladies des Yeux, 1894, vol. i., p. 245.

⁷ La Syphilis Héritaire Tardive. Paris, 1886.

⁸ Klinische Monatsblätter für Augenheilkunde, 1894, pp. 133-136.

which, besides diffused interstitial inflammation of the cornea, revealed inflammatory changes in the ciliary body and in the equatorial regions of the choroid. Oglvie's argument is exactly the same as the one adduced by Hutchinson⁹ for the non-syphilitic character of rickets and scrofula: "That rickets and scrofula are both of them frequently met with in the lower animals, and that they may, indeed, be produced artificially under conditions which make the influence of syphilis an impossible hypothesis." Again we find Mr. Hutchinson referring to the fact that miscarriages are abundantly frequent in our domestic animals in order to prove that the influence of syphilis in the production of abortion is probably overrated;¹⁰ and protesting against the condition known as the macerated foetus being accepted as an indication of syphilis, he also takes his argument from the fact that nothing is commoner than the macerated lamb, calf, or foal (p. 416). If this argument holds good for rickets, it holds good as well for interstitial keratitis, and then the experiments of Wagenmann, to be referred to later, and the observations of Haltenhoff, Randolph, and Hennicke disprove the exclusively specific character of interstitial keratitis.

According to Fournier¹¹ four theories exist concerning the causation of interstitial keratitis: (1) that it is a cachectic malady—"une manifestation de la misère organique" (Panas); (2) that it is produced by scrofulous or strumous disease (W. Mackenzie); (3) that it is exclusively, or nearly exclusively, due to syphilis (Hutchinson); and (4) that it is a lesion of general nutrition (Fournier). He dismisses (2) with little comment, as no connexion with strumous disease could ever be proved; he considers (3) to be contrary to the clinical facts, as interstitial keratitis is met with apart from any specific influence; and refutes (1) because interstitial keratitis is met with in subjects otherwise apparently healthy, and in private as well as in hospital practice. I fail to see that Fournier's explanation differs materially from that of Panas. "A lesion of general nutrition," "cachexia," and "organic misery" are only different expressions for the same condition or for different degrees of the same condition. Therefore, the fact that interstitial keratitis is met with in apparently healthy subjects is explicable by either theory only in one and the same way—viz., that the defective general condition in these cases is apparent as localised or limited to one special organ. This same view has been quite recently taken by Panas,¹² who admits that between Fournier's dyscrasia and his cachexia practically no difference exists, and that he therefore willingly accepts Fournier's denomination instead of his. From the above the conclusion has to be drawn that in the production of interstitial keratitis hereditary syphilis is probably operative in between 60 and 70 per cent.

With regard to the affection of the joint we have no similar statistics to be guided by, but that the appearance of interstitial keratitis, with or after effusion into the knee-joint, need not be in itself conclusive proof of hereditary syphilis has already been suggested by Foerster. Arlt¹³ has seen this painless and benign knee affliction in ten cases of interstitial keratitis, all of them non-syphilitic. Laverne¹⁴ has put together fifty cases of interstitial keratitis. Syphilis was absolutely certain in nineteen cases, very probable in thirteen, probable or doubtful in twelve, and could be excluded in six. He mentions only one case of effusion into the knee-joint, and this case is to be found amongst the six in which he excludes syphilis. I, therefore, from my own case as well as from the experience of Arlt and Laverne, draw the following conclusions. Neither interstitial keratitis nor the synovitis, nor their coexistence, is in itself absolute proof of hereditary syphilis; that the joint disease also is due to a general defect in nutrition, in the production of which inherited syphilis plays a prominent part, the extent of which we are not able to give in figures. In what this disturbance of general nutrition consists, what general condition constitutes the connecting link between interstitial keratitis and synovitis, is merely a matter of conjecture. But some light will perhaps be thrown on this point afterwards by reference to the pathology of interstitial keratitis.

Interstitial Keratitis and Rheumatism.—Obscure as is the connexion between the two affections, interstitial keratitis and synovitis, it is certainly not produced

by rheumatism, although this interpretation has been given to their combined appearance by writers here and abroad. Undoubtedly the existence of swollen joints was regarded as evidence of rheumatic disease without taking the other possible causes into due consideration. If in the causation of interstitial keratitis acute rheumatism played any part this fact would be referred to in the text-books on this disease of everyday occurrence; but in not one of the leading English, German, or French works on rheumatism can we find mention of it. Mitchell, Bruce, and Senator do not refer to eye complications at all; according to Homolle the visual organ is not affected in acute rheumatism; Charcot says that affections of the eyes in acute rheumatism are exceedingly rare; Besnier that the eye enjoys a nearly complete immunity from disease; and Archibald Garrod that the eye is little liable to be attacked in the course of rheumatic fever. All give as the only ophthalmic complication a troublesome conjunctivitis in no way characteristic, and probably identical with what is met with in other fevers. The eye itself is not attacked, with the only exception of the superficial vesicular form of keratitis consisting in the elevation of the epithelium in small blisters and superficial ulceration after their bursting (Terrier).¹⁵ This keratitis is met with occasionally in any febrile disease with predilection to affections of the respiratory tract, from a simple cold to a pneumonia, and, being frequently accompanied by herpes of the lips, with which it is pathologically identical, has been properly called "herpes of the cornea" (Horner). In subacute and chronic rheumatism, however, eye affections are by no means rare (Bennett, Watson, Garrod, Fuller, Cornil, Charcot, Besnier, Hutchinson, Homolle, and others). The lesions observed are iritis, cyclitis, scleritis, and episcleritis; but nowhere is interstitial keratitis given as a rheumatic complication. From this fact alone the cases of interstitial keratitis published as of rheumatic origin have to be received with considerable suspicion. By some Foerster has been represented as having first demonstrated the rheumatic origin of interstitial keratitis, although he wishes the difference between the joint affection described by him and the rheumatic to be clearly understood. Spencer Watson, in a paper already referred to, gives four cases of interstitial keratitis associated with synovitis of the larger joints (knee three times, elbow once), which he ascribes to acute rheumatism. Apart from there being strong evidence of hereditary syphilis in at least three of them, the acute rheumatic nature of the synovitis is not proved in one, there being, for instance, no notes as to temperature. Instead of questioning, as Mr. Watson does, "whether the keratitis of inherited syphilis is not a form of rheumatic ophthalmia," it would have been more to the point to inquire whether the form of synovitis met with, the keratitis of inherited syphilis, was not of other than rheumatic origin. A remarkable and perhaps unique case under the care of Dr. Armstrong of Newcastle-on-Tyne has been reported by Maynard.¹⁶ The patient was suffering from severe interstitial keratitis, and had a clear history of congenital syphilis and effusion into both knee-joints, ankles, wrists, and finally elbows. Although the sweating and rise of temperature were in favour of rheumatic joint disease, Dr. Armstrong is inclined to attribute the joint affection to syphilis, on the ground of the rapidity and long duration of the effusion, the absence of redness of the skin, the relaxation of the ligaments with increase of mobility, and the previous history. But whatever view may be taken of the nature of the joint affection, the interstitial keratitis is sufficiently explained by the evidence of hereditary disease, and cannot be put down to rheumatism. Couzon¹⁷ mentions that he has seen two or three cases of interstitial keratitis without any trace of syphilis, but with rheumatic articular manifestations which disappeared with the keratitis. Of these cases he reports only one. This case, also referred to by Perinaud,¹⁸ is the only one I could find in which the connexion between rheumatism and interstitial keratitis has been established with some probability. But as nothing else is known about the connexion between rheumatism and interstitial keratitis, the case has to be regarded as an exceptional coincidence rather than as one proving a pathological connexion otherwise not borne out by clinical experience.

Syphilis, p. 408. ¹⁰ Ibid., pp. 78, 79, and 415.

¹¹ Loc. cit., p. 218.

¹² *Traité des Maladies des Yeux*, vol. 1., p. 245. Paris, 1894.

¹³ *Krankheiten des Auges*, p. 113. Vienna, 1881.

¹⁴ *De la Keratite Interstitielle*, p. 57. Thèse, Paris, 1887.

¹⁵ *Archives d'Ophthalmologie*, vol. iv., p. 65. Paris, 1884.

¹⁶ *Brit. Med. Jour.*, vol. i, 1887, p. 569.

¹⁷ *De la Kératite Interstitielle dans la Syphilis Héritaire et dans la Syphilis acquise*. Thèse, 1883, pp. 43-45.

¹⁸ *Archives Générales de Médecine*, 1883, p. 533.

The coexistence of interstitial keratitis with synovitis has led to the erroneous diagnosis of rheumatism, a mistake which might be avoided by a more careful investigation of the nature of the joint affection and by a less vague use of the word "rheumatic." The connexion between rheumatism and interstitial keratitis as cause and effect has neither been established by the experience of general medicine nor by that of ophthalmology in special.

Pathological anatomy and pathology of interstitial keratitis.—It is self-evident that a disease with a decided or almost invariable tendency to recovery only rarely presents itself for anatomical examination. No example of a typical uncomplicated case of interstitial keratitis has yet come into the hands of the pathologist. The cases which have been examined were the rare exceptions of malignant destructive character, and were seen at a stage when the actual inflammatory process had led to considerable consecutive changes such as cicatrization, perforation, glaucoma, &c. Besides, amongst the cases which, from a pathologico-anatomical point of view, have been described as interstitial or parenchymatous keratitis, some have absolutely nothing to do with the disease in question, being instances of diffused corneal affection brought on through general disease of either the whole globe or the anterior part of it, sometimes of tuberculous, sometimes probably of embolic, origin. This remark applies first of all to Virchow's¹⁹ case, which is constantly quoted as the first case of interstitial keratitis examined microscopically. After an intense diffused phlegmonous inflammation of the extremities, which ended fatally, the cornea became affected (the patient was under the care of von Graefe). It is more than likely that the purulent inflammation of the eye, of which the corneal affection was probably only part, was caused by some embolism from the destructive changes going on in the lower extremities, and that the case ranks with those of metastatic or embolic choroiditis, subsequent to puerperal or other septic processes. The second case usually referred to is that of Kruckow.²⁰ Both eyes were removed a few hours post mortem from the body of a woman aged forty-eight years, the subject of old acquired syphilis, who died from large gummatous tumours in the brain and petrous portion of the temporal bone. The information given on the localisation of the disease and the microscopical changes of the corneal tissue is very scanty; anyhow, double keratitis in acquired syphilis at the age of forty-eight years, if interstitial at all, must be considered a most exceptional case, and not one from which conclusions can be drawn on the ordinary form. A much fuller description of the anatomical changes is given by Baumgarten.²¹ But here, too, the clinical history has nothing in common with what is properly called interstitial keratitis, and the case is therefore rightly described by him as one of "sclerosierende keratitis," meaning an inflammation of the cornea in which it assumes a sclera-like appearance. The patient was sixty-three years of age, a time of life at which interstitial keratitis is practically unknown. O. Meyer²² quotes the last two cases mentioned as the only two examined histologically which with full certainty can be considered as typical specimens of interstitial keratitis (p. 5). As said above, the last case can under no circumstances be so classified, presenting a rare affection clinically absolutely different to interstitial keratitis; while Kruckow's case is at least doubtful. His own case, regarded by him as the third of undoubted interstitial keratitis examined anatomically, is subject to doubts as grave as in the other cases. The patient, who was under the care of Dr. Swanzy in Dublin, had phlyctenular ophthalmia when twenty years of age, circumscribed scleritis a year later, and five months after that on the inner surface of the cornea a yellowish white deposit began to form without any inflammatory redness of the globe. It spread from its original seat gradually over the whole posterior surface of the cornea, and while the process was going on, absorption of the exudation began at the starting point, so that it had disappeared there when it had reached the opposite side, leaving a diffused opacity behind. In my opinion, taking the clinical and anatomical observations together, it is most probable that some tuberculous process involving the anterior part of the globe had led to secondary infiltration of the cornea. Von Hippel, jun.,²³ has described the case of a boy, probably subject to

hereditary syphilis, who had been under treatment for parenchymatous keratitis with iritis for several weeks. He died from laryngeal croup. The changes found in the cornea were vascularisation and a rather typical cellular infiltration, as well as inflammatory changes in all parts of the eye, presenting themselves partly under the form of typical giant cell tubercles without caseation. To this case exactly the same remarks are applicable as to the former. A case of undoubted interstitial keratitis under the care of Hirschberg, and described by him as malignant diffuse keratitis, had led to glaucoma, enlargement of the globe, cornea globosa, complete cicatrization of the latter, in fact, to total disorganization of the eye, when it was examined by Birnbacher.²⁴ Another case, undoubtedly due to hereditary syphilis, and microscopically examined by Mr. Nettleship,²⁵ although interesting enough in itself, especially as far as the fundus of the eye is concerned, is not conclusive with regard to the anatomical condition of the cornea in interstitial keratitis, because it was complicated with trauma of the cornea. The patient was under the care of Mr. Brudenell Carter, suffering from interstitial keratitis with iritis, when the left eye was ruptured by a poke from an umbrella stick.

Up to the present date pathological anatomy supplies us with scarcely any information as to the histological process underlying the clinical aspect of interstitial keratitis. Out of seven cases quoted above, which, according to my knowledge, constitute the complete list of cases diagnosed as interstitial keratitis, and examined microscopically, four—those recorded by Virchow, Baumgarten, Meyer, von Hippel—cannot clinically be considered as specimens. Kruckow's case is, at least, doubtful and rather incomplete. The two undoubted cases are not conclusive for the reasons given above; one (Birnbacher) because it was examined at too late a stage, the second (Nettleship) because it was complicated by injury; therefore the greater value seems to me to be attached to the researches of Wagenmann,²⁶ who succeeded in producing interstitial keratitis experimentally by section of the ciliary arteries, thereby affording an opportunity of examining anatomically all stages of its course, and particularly the non-malignant form, ending in recovery and mostly met with in clinical experience. As both affections, the one produced experimentally and the one known clinically as interstitial keratitis, are perfectly analogous in appearance as well as in the course they run, it is probable that the interstitial keratitis of man also is only a secondary consequence of the disease of the choroid.

Conclusions.—Here the results of experimental research are in accordance with the observations of clinical experience. The so-called interstitial keratitis is not a primary inflammation of the cornea, but one probably originating in the anterior part of the uvea, which provides the nutritive supply for the corneal tissue. It is not a characteristic symptom of hereditary syphilis, but is due to an insufficient supply of nutritive matter to the cornea, whether this is produced by cutting off the blood-supply experimentally or by diminution of the lumen of the bloodvessels through the thickening of their walls. That this latter condition (Heubner's endarteritis) is to be found in syphilitic disease of the retina and choroid, as well as in brain syphilis, has been shown by many observers. Compare, for instance, the interesting case of Dr. Barlow and Mr. Nettleship in vol. xi. of the Ophthalmic Hospital Reports. Clinically it is known that syphilis plays an important part in the production of anaemia, and perhaps in this way the surprising fact might be interpreted that boys are much less frequently the subjects of interstitial keratitis than girls (Hutchinson, amongst 102 cases, 64 females and 38 males), the great proneness of the female sex to an anæmic condition being undoubted. An interesting observation of Klebs might be mentioned in connexion with the foregoing consideration. In animals which, after inoculation with the syphilitic virus, do not develop any symptoms that could be clinically considered as parallel to the characteristic symptoms in man, frequently a state of profound anaemia is produced with a tendency to hydropic effusion.²⁷ It is most probable that the affection of the knee-joint is to be explained

¹⁹ Cellular-Pathologie, fourth edition, pp. 376-82. Berlin, 1871.

²⁰ Monatsblätter für Augenheilkunde, vol. xiii., pp. 494-497, 1875.

²¹ Graefe's Archiv, vol. xxii., Part 2, pp. 185-203, 1876.

²² Ein Fall von Keratitis Parenchymatosa mit Sectionsbefund. Thesis. Göttingen, 1887.

²³ Report on the Twenty-third Meeting of the Ophthalmological Society, Heidelberg, 1893, p. 221.

²⁴ Centralblatt für Augenheilkunde, vol. x., 1886, p. 101.

²⁵ The Royal London Ophthalmic Hospital Reports, vol. xi., pp. 9-12, 1887.

²⁶ Experimental Researches on the Influence of the Circulation in the Retinal and Choroidal Vessels on the Nutrition of the Eye, particularly of the Retina, and on the consequences of Section of the Optic Nerve: Graefe's Archiv, vol. xxxvi., Part 4, pp. 1-220.

²⁷ Archiv für Experimentelle Pathologie und Pharmakologie, p. 180. Leipzig, 1878.

in a similar way. The fact that it is the knee-joint which is most frequently affected, although not exclusively so, might be explained by its synovial membrane being the largest and by the exposed condition of the joint. I am not aware of any clinical facts which would show a similar synovitis following the arrest of blood-supply to joints by obliteration or compression of bloodvessels. To attack this question experimentally on the same lines as Wagenmann has done with regard to the ciliary vessels would be a matter of no common interest, and one which I hope to be able to approach at no distant period.

Sinclair-road, W.

RESULTS OF

MAJOR AMPUTATIONS TREATED ANTISEPTICALLY IN THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE, DURING THE YEAR 1894, AND FOR A PERIOD OF SIXTEEN YEARS AND NINE MONTHS.

By FREDERICK PAGE, M.D. EDIN., M.R.C.S. ENG.,
SURGEON TO THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE, ETC.

DURING the year 1894 69 major amputations were performed in the Royal Infirmary upon 68 patients. In 1 case a patient lost two limbs. Sixty patients recovered and 8 died—a mortality of 11·7 per cent. Twenty-seven of the amputations were for injury, and 6 patients died—a mortality of 22·2 per cent. For disease 41 amputations were performed and 2 patients died—4·8 per cent. The following table gives the results in a tabular form:—

TABLE I.—Major Amputations treated antiseptically in the Royal Infirmary, Newcastle-upon-Tyne, during the year 1894.

	Injury.			Disease.			Total.
	No.	Recovered.	Deaths.	No.	Recovered.	Deaths.	
Double amputations ...	1	—	1	—	—	—	1
Hip-joint	—	—	—	2	1	1	2
Thigh... ..	11	6	5	18	18	—	29
Knee-joint	—	—	—	—	—	—	—
Leg	9	9	—	8	7	1	17
Ankle-joint	3	3	—	9	9	—	12
Shoulder-joint	1	1	—	2	2	—	3
Arm	1	1	—	2	2	—	3
Forearm	1	1	—	—	—	—	1
Wrist	—	—	—	—	—	—	—
Totals... ..	27	21	6	41	39	2	68

Precise Explanation of Deaths.

INJURY.

1. Man, aged forty-two years, died one hour after amputation of both thighs for crushed legs—shock.
2. Man, aged thirty-seven years, died two days after amputation of thigh for contused and lacerated leg and thigh, with wound into knee-joint—shock.
3. Man, aged twenty-four years, died a few hours after amputation of thigh for compound fracture of leg &c.—shock.
4. Man, aged thirty-seven years, died one hour after amputation of thigh for railway smash—shock.
5. Boy, aged nine years, died a few hours after amputation of thigh for compound fracture of leg—shock.
6. Man, aged fifty-six years, died seven days after amputation of thigh for compound fracture of leg of two weeks' duration—septicæmia. This patient was admitted and operated upon in a septic condition.

DISEASE.

1. Man, aged twenty-two years, died a few hours after amputation at hip-joint for advanced hip-joint disease—shock.
2. Man, aged thirty-seven years, died a few hours after amputation of the leg for ulcers, from shock.

TABLE II.—Major Amputations treated antiseptically in the Royal Infirmary, Newcastle-upon-Tyne, from Jan. 1st, 1883, to Dec. 31st, 1894, a period of twelve years.

	Injury.			Disease.			Total.
	No.	Recovered.	Deaths.	No.	Recovered.	Deaths.	
Double amputations ...	13	7	6	—	—	—	13
Hip-joint	6	3	3	23	14	9	29
Thigh... ..	52	39	13	154	144	10	206
Knee-joint	7	7	—	2	2	—	9
Leg	76	69	7	70	67	3	146
Ankle... ..	26	25	1	122	120	2	148
Shoulder-joint	17	16	1	15	14	1	32
Arm	37	34	3	18	17	1	55
Forearm	36	35	1	31	31	—	67
Wrist	7	7	—	—	—	—	7
Totals... ..	277	242	35	435	409	26	712

As will be seen from the above tables, during the twelve years from 1883 to 1894 712 major amputations were performed in the Royal Infirmary, and 61 patients died. This is a mortality of 8·5. The period is a long one, and every amputation performed in the infirmary during it is included. To arrive at a correct estimation of these results the nature of the amputations and the actual cause of death must be taken into account. Six patients died after double amputations and 7 recovered. Twelve patients died after amputation at the hip-joint and 17 recovered. Six of the hip amputations were primary and 3 of them proved fatal. Twenty-three were for disease and 9 ended fatally. Twenty-three patients died after amputation of the thigh and 183 recovered. Ten patients died after amputation of the leg and 136 recovered. Two patients died after amputation at the shoulder-joint and 30 recovered. Four patients died after amputation of the upper arm and 51 recovered. One patient died after amputation of the forearm and 66 recovered. Three patients died after Syme's amputation and 145 recovered.

Now I will examine the cause of death in these 61 cases, for, after all, that is the most important consideration. The causes of death were as follows:—

1. Pyæmia	9	7. Phthisis	3
2. Exhaustion	4	8. Syncope	2
3. Tetanus	4	9. Tuberculous meningitis	1
4. Recurrent gangrene ...	6	10. Delirium tremens ...	1
5. Shock and loss of blood	30		
6. Head injury	1	Total	61

It will be seen that 9 of the deaths are returned as due to pyæmia. This is 15 per cent. of the deaths, but deaths occurring some weeks after amputation, and returned as due to exhaustion, must be looked upon with considerable suspicion, and, therefore, I propose to include the 4 deaths from exhaustion amongst the deaths from septic disease. This gives 13 deaths from sepsis—21·3 per cent. of all the deaths. But there were 712 cases operated upon, 13 of which terminated fatally from some form or other of septicæmia, giving only 1·8 per cent. Tetanus, no doubt, is a form of blood poisoning, and the patients who died from recurrent gangrene would probably be septic, but I do not think I am called upon to include these. If they are to be included, then the mortality will be raised to 23, making 3·7 per cent. of all the deaths due to some form or other of blood poisoning, the mortality of the 712 amputations being, even then, only 3·2 per cent. from blood poisoning of any kind. That only 3 per cent. of the amputations in a large hospital should end fatally through any form of blood-poisoning during a period of twelve years shows a marked improvement; and, while this is so, it is significant to find how high the relative

proportion of deaths from blood poisoning remains, more than a third of the deaths being still due to some form or degree of blood poisoning.

The next important factor is shock and loss of blood, and from this cause 30 patients died—all within a few hours of operation—i.e., 49.1 per cent. of the whole number of deaths, and 4.2 per cent. of the 712 amputations. If these 30 unavoidable deaths be eliminated from the statistics, as I think they should be, then we have 682 amputations with 31 deaths, a mortality of 4.5 per cent. for the twelve years.

It is remarkable that no death is returned as having been due to secondary hæmorrhage; that formerly by no means uncommon occurrence seems to have been entirely eliminated by the antiseptic system.

With regard to the deaths from pyæmia and tetanus I am entitled to point out that 3 at least of the 9 cases of septicæmia were admitted in a septic condition, and 3 of the 4 cases of tetanus were also admitted suffering from lockjaw. No case of pyæmia after amputation has arisen since 1891 in the hospital. In that year a man, a confirmed drunkard, died seven days after amputation of his leg from pyæmia. There were no deaths from pyæmia in 1890 or in 1889. The patients who died from recurrent gangrene were all very unfavourable cases for operation. They suffered from spontaneous moist gangrene and died from that cause after amputation. That 3 out of the 9 cases of pyæmia and 3 out of the 4 cases of tetanus treated in the infirmary should have originated in private practice tends strongly to confirm the growing public opinion that patients recover much more satisfactorily after surgical operations performed in properly equipped and managed hospitals than in private houses. This conviction induces the public to prefer surgical treatment in either a public or in a private hospital, when they can get it, to treatment in their own homes, and, I am sure, the preference is a wise one. However true the conclusion Sir Jas. Y. Simpson arrived at may have been when he wrote his paper on the relative mortality after amputation in hospitals and in private practice, the position is certainly very different now. It is reversed, for there are, I am satisfied, more deaths in proportion to the number of operations from what is called "hospitalism" now in private practice than in hospitals—certainly, than in the larger public hospitals.

TABLE III.—The Number of Amputations performed from 1883 to 1894, with the Mortality of each Year.

Year.	Injury.			Disease.			Totals.	
	No.	Recoveries.	Deaths.	No.	Recoveries.	Deaths.	No.	Deaths.
1883	23	23	—	25	22	3	48	3
1884	21	19	2	36	35	1	57	3
1885	14	14	—	37	35	2	51	2
1886	25	25	—	41	37	4	66	4
1887	17	15	2	43	43	—	60	2
1888	13	7	6	29	29	—	42	6
1889	23	20	3	29	27	2	52	5
1890	35	32	3	35	33	2	70	5
1891	35	28	7	46	45	1	81	8
1892	16	13	3	30	28	2	46	5
1893	28	25	3	43	36	7	71	10
1894	27	21	6	41	39	2	68	8
Totals	277	242	35	435	409	26	712	61

The age of the oldest patient who died after amputation was seventy-seven, and of the youngest four years.

3 died aged 70 or upwards.	5 died aged 30 or upwards.
7 " 60 " "	8 " 20 " "
11 " 50 " "	14 " 10 " "
6 " 40 " "	6 died under 10 years.

I regret very much that I am not in a position to give the ages of all the patients operated upon, without which the value of the above table is much diminished.

The following table gives the results of all the major amputations performed in the Royal Infirmary, Newcastle-upon-Tyne, from April 1st, 1878, to Dec. 31st, 1894, a period of sixteen years and nine months:—

TABLE IV.—Major Amputations treated antiseptically in the Royal Infirmary, Newcastle-upon-Tyne, from April 1st, 1878, to Dec. 31st, 1894, a period of sixteen years and nine months.

	Injury.			Disease.			Total.
	No.	Recoveries.	Deaths.	No.	Recoveries.	Deaths.	
Double amputations ...	13	7	6	—	—	—	13
Hip-joint	6	3	3	25	14	11	31
Thigh	68	50	18	191	178	13	259
Knee-joint	10	9	1	6	6	—	16
Leg	96	85	11	94	91	3	190
Ankle-joint	30	29	1	138	136	2	168
Shoulder-joint	20	19	1	17	16	1	37
Arm	48	43	5	24	23	1	72
Forearm	44	43	1	35	35	—	79
Wrist	7	7	—	—	—	—	7
Totals	342	295	47	530	499	31	872

Thus there were 872 amputations, with 78 deaths—a mortality of 8.9 per cent.; 342 of the amputations were for injury, and 47 patients died—13.7 per cent.; 530 of the amputations were for disease, and 31 patients died—5.8 per cent.

From a paper published by Dr. Sam. Fenwick in the year 1848 on the surgical operations performed in the Newcastle-upon-Tyne Infirmary during a period of seventeen years and six months I have taken the following table showing the results of major amputations:—

TABLE V.—Major Amputations treated in the Infirmary, Newcastle-upon-Tyne, during a period of seventeen years and six months.

	Injury.			Disease.			Total.
	No.	Recoveries.	Deaths.	No.	Recoveries.	Deaths.	
Thigh and knee	8	3	5	50	41	9	58
Leg and ankle	38	24	14	74	59	15	112
Shoulder-joint	5	3	2	—	—	—	5
Arm and elbow	24	20	4	11	10	1	35
Forearm and wrist	6	5	1	9	6	3	15
Totals	81	55	26	144	116	28	225

Two hundred and twenty-five patients were operated upon during that period, and 54 died—just 24 per cent. Eighty-one of the amputations were for injury, 3 being double amputations, and 26 patients died—32 per cent. One hundred and forty-four were for disease, and 28 patients died—12.5 per cent. It is interesting to compare these results with those extending over a very similar period some forty years later. The tables indicate to what an extent the work of the institution has increased and how strikingly the mortality has decreased. The precise causes of death are not given by Dr. Fenwick, but there is evidence that a large proportion of the deaths, as would be expected, arose from pyæmia.

Newcastle-upon-Tyne.

GALASHIELS COTTAGE HOSPITAL.—The first annual meeting of the managers of this hospital was held on March 29th in the Burgh Buildings, Galashiels, Mr. Brown (ex-provost) presiding. The report stated that from the opening of the hospital in November, 1893, to the end of December, 1894, there had been fifty-one patients admitted, of whom two died. The income during the same period was £654 and fell short of the expenditure by about £20. The cost of building and furnishing the hospital was £4482. The grounds extend to an acre and a half, picturesquely situated by the river Tweed.

CASE OF ADDISON'S DISEASE; NECROPSY.

By C. CRAWFORD AITKEN, M.B. EDIN.

ON Nov. 23th, 1894, I was called to see a farm labourer aged fifty-nine years. He complained of weakness, nausea and vomiting, and had been ill for about nine months. His previous health had been very good, and with the exception of a dislocation of the shoulder-joint, sustained through a severe fall five years before, he had never had any serious accident. He gave a satisfactory family history, but two brothers appear to have died from phthisis. His habits as to food and drink were good; his home was comfortable; and his work, though exposing him occasionally to the inclemencies of the weather, was light and wholesome. His original occupation was that of a butcher, but in 1889 he had been obliged to resign it and turn for a livelihood to farm labour. The illness of which he complained commenced insidiously. The initial symptoms were languor, depression of spirits, and fatigue after exertion, and were first noticed in the previous February. They became gradually more pronounced, and were supplemented in April by attacks of headache, giddiness, palpitation, and shortness of breath. His appetite, moreover, became exceedingly poor, and he began to experience vague pains, shooting and burning in character, in the region of the stomach. He consulted a medical man and was told that he suffered from indigestion. He accordingly had a course of medicinal treatment; but his condition, instead of improving, grew daily worse, and the weakness became at length most distressing. He continued, however, his employment, and throughout July worked hard at the hay harvest. But the severe manual labour and the heat of summer told so disastrously upon his already enfeebled frame that eventually, in the second week of August, he was obliged to give up work and take to bed. His friends noticed that he was looking worn and ill, and that his face and hands had a peculiar yellowish discolouration. He placed himself a second time under treatment, but his condition showed not the least amelioration. He began in September to suffer frequently from nausea and vomiting. The nausea, though usually worst in the morning, persisted often for an entire day, and prevented him taking a due amount of nourishment; while the vomiting attacks, accompanied as they were by intense retching, left him on each occasion sensibly weaker, and reduced him at last to a condition of extreme prostration. His throat was very sore after the vomiting, and occasionally his sputum would be blood-streaked. He had, moreover, developed latterly a slight cough and become emaciated; but had no diarrhoea, night-sweating, or hæmoptysis. When I saw him on Nov. 23th he was utterly exhausted with the recent and severe vomiting. Although of powerful build and muscular development, he was markedly emaciated, and one could not fail to be struck with the peculiar cachectic appearance he presented. The cheeks were hollow, the eyes sunken, the lips somewhat cyanosed; the ocular conjunctivæ were yellowish and slightly injected, while the skin had a distinctly sallow tinge, which on exposed parts, in the flexures of joints, and in the region of the genitals deepened gradually, though decidedly, into shades of walnut-brown, the hands, axillæ, genitals, and back of the neck being the regions most pigmented, while the scalp, front of the chest, abdomen, legs feet, and mucous membrane of the mouth were apparently unaffected. The discolouration varied much in its intensity in different parts, but was of uniform type and uninterrupted by spots or mottling of any kind. The skin was free from eruption, excess of moisture, and itching; and there was, with the exception of blueness of the lips and faint duskeness and clubbing at the finger-tips, no cyanosis and no oedema. There were no evidences of acute suffering, but the whole attitude and expression of the patient betokened great mental depression and physical exhaustion. He lay in a listless, semi-comatose state, sighing and yawning frequently. He had no appetite, and complained much of thirst, heartburn, flatulence, and pyrosis, with dull aching pain in the epigastrium and feelings of distension and weight about the stomach. He had, moreover, been very sick all the morning, and had vomited all his food a few minutes after taking it, each ejection being accompanied and preceded by intense stomacheic pain and retching. Examination of the abdomen threw no light upon the causation of such symptoms. There was, indeed, some tenderness on pressure in the epigastric

and hypochondric regions; but no tumour was anywhere discoverable, and the liver and stomach were not enlarged. The bowels were sluggish and the faecal matter small in amount and pale almost to chalkiness; but neither that nor the vomited matter contained any blood, and the patient did not suffer from hæmorrhoids. There was, however, considerable anaemia. It was unaccompanied by any enlargement of blood glands and was evidently not due to hæmorrhage. The symptoms were headache, giddiness, buzzing in the ears, palpitation, and shortness of breath on exertion. There was a loud hum in the external jugular vein and a systolic murmur in the cardiac pulmonary area. The heart was apparently free from valvular lesion; but the heart sounds, especially the first, were extremely faint. The pulse was regular, moderate in frequency, small in volume, and of low tension. The temperature was subnormal. The urine was clear and straw-coloured, and showed no traces of sugar, albumen, bile, or blood pigments. The patient had a slight cough, with expectoration of scanty, frothy, blood-streaked mucus. The breathing was shallow and the breath sounds almost inaudible. Crepitations, non-consonating, were audible at the base of each lung, and all over the chest were faint rhonchi, while at the right apex there were a few fine crepitations and a slight prolongation of expiration. There was, however, no dulness or other sign of consolidation. After a careful consideration of the symptoms of the case as a whole, and of the possibility respectively of malignant disease, gastric ulcer, biliary obstruction, chronic phthisis, Bright's disease, and pernicious anaemia, the provisional diagnosis of Addison's disease was made. The prognosis was hopeless, and the treatment, which consisted of milk diet, stimulants, and arsenic, was useless. The patient lingered on for three days, semi-comatose and almost pulseless, and died on the evening of Dec. 1st.

Necropsy on Dec. 4th, 1894.—Putrefaction was just beginning to show itself in green discolouration of the abdomen. Rigidity was present in all the muscles and hypostasis was well marked. The pigmentary changes in the skin of various regions were distinct, more so perhaps than in life. The muscles were much wasted, but there was a fair amount of subcutaneous fat. The heart, which was the first organ examined, was small, pale, and uncontracted, rough and lymph-coated on its epicardiac surface, but inside quite free from endocardiac or valvular disease. The lungs were crepitant throughout and had no morbid excavation or consolidation; but the lower lobes of each lung and the apex of the right were profoundly congested. The stomach was of normal size and contained a little milky food. Its mucous lining was pale, covered with glairy mucus, ecchymosed, and slightly mammillated at the pylorus, but without any signs of ulceration or cicatrices. The intestine, beyond slight congestion of its Peyerian patches and prominence of the solitary follicles, showed nothing abnormal. The spleen was small and shrivelled, and its pulp in a liquid condition; but the liver, gall-bladder, and bile-ducts, with the kidneys and the pancreas, were apparently normal. The adrenals both showed remarkable changes. The right one was, in its lower part, quite hard and calcareous, while the left was represented by a caseous, nodulated, cubical mass two and a half inches in diameter, which on section showed rounded cheesy areas of a yellow colour, separated from one another by bands of darker-coloured fibrous tissue. Each supra-renal mass was perfectly circumscribed, but surrounded by a considerable amount of thickened connective tissue, in which many of the nerve fibres connected with the solar plexus were implicated. No change, however, was observed in the surrounding ganglia or in neighbouring lymph glands.

Barnsley.

A CASE OF RUPTURE OF THE UTERUS OCCURRING AT THE FIRST ONSET OF LABOUR.

By WM. HARRIS BEST, L.S.A. LOND.

As rupture of the uterus early in labour is of very rare occurrence, I think the following case should be recorded.

The patient, aged thirty-two, mother of seven children, of good physique and accustomed to work hard in household matters, but always having plenty of good nourishment, was attended in her previous confinement by myself, about

eighteen months before the present one. She never had any miscarriage or other symptom of syphilis. I find the following note in my case-book relating to her last confinement: "Long and tedious first and second stages; pelvis roomy; presentation first cranial. Ergot was of decided benefit in arousing uterus to stronger action during second stage. On the fifth day I found on visiting my patient that she was dressed and downstairs, so I immediately ordered her back to bed, where she remained until the tenth day. No ill effects apparently followed this early rising beyond slight increase of discharge. This, her eighth, confinement commenced in the following unusual manner. She and her husband went to bed as usual about 11 P.M., she feeling perfectly well at the time. Very shortly after they had been in bed she said to her husband, 'I believe my confinement is coming on.' A few minutes after that she said, 'I am sure it is so; you had better get up at once.' After he had got up she hurried him off, saying it was coming on quickly. As I was not at home when the message arrived my assistant went immediately. On his arrival he found the nurse there, and was told by her that shortly after the husband had left a smart hæmorrhage had occurred from the vagina; there was ample evidence of this in the condition of the bedclothes near the patient. But one pain occurred and was followed by a gush which she thought was the liquor amnii following the sudden rupture of the membranes. The hæmorrhage ceased when the nurse changed her from the right to the left side; continuous pain was from this time felt on the left side of the abdomen. After waiting about three-quarters of an hour, as labour pains did not come on, I was sent for. On my arrival I found the patient had rather an anxious look on her face. The left-sided pain, though not severe, became so if the abdomen was handled or if she was moved or attempted to move herself. She appeared very nervous and upset, so that it was difficult to tell definitely whether the pain was very acute or the tenderness very great, as she cried out as soon as the vulva was touched in making a vaginal examination. There was practically no collapse, and the depression was only such as might have been produced by a slight hæmorrhage. Her pulse was fairly good, 80 beats to the minute. The patient appeared very much disturbed at the prospect of being touched or examined. The pain was confined to the left side and was not severe, the patient talking in an ordinary way and not complaining unless she attempted to move. On vaginal examination I at first failed to reach the presenting part or, indeed, the os; on inserting the whole hand into the vagina, however, I could get my middle finger inside the os only about one-third of an inch, but felt nothing definite. Though the patient said she had felt movements of the child shortly before labour I could not hear the foetal heart sounds. Abdominal palpation yielded no definite result as the patient could not bear its being done properly. Nothing definite was thus made out by either examination. The patient now begged to be left alone for a time, and as her pulse remained fairly good and there was but little pain we did so. Neither labour pains nor hæmorrhage occurred for the next hour; her pulse remained about the same, and she became rather more comfortable. At this stage the case looked like either a placenta prævia or slight accidental hæmorrhage, the pulse keeping good, and the patient not complaining of feeling faint or exhausted appeared to place concealed hæmorrhage or ruptured uterus out of the question. As at this time the patient's condition appeared to be improving rather than going back I decided not to use any means for bringing on labour, at least for a time, other than plugging the vagina and orifice of the womb, which latter would answer the double purpose of preventing further external hæmorrhage and keep up a slight reflex stimulation on the womb. This was carefully done with iodoform wool pellets. A few hours after this the patient did not appear to have altered much. She took nourishment and kept it down; her pulse was, however, quicker, her face looked more anxious, and a feeling of sickness was complained of. Her temperature in the mouth was 101° F. I now decided to endeavour to accelerate labour by resorting to more active measures. No hæmorrhage followed the removal of the plugging. On

making a vaginal examination a hard indistinctly fluctuating mass was found in front of the anterior vaginal wall and remained after the bladder was emptied. A Barnes' bag was with difficulty passed through the os, the difficulty not arising from the rigidity of the os or any malposition of it, but from its great height. Ergot was given by the mouth freely. No real labour pains followed, though about an hour afterwards the bag was found in the vagina and the os readily admitted two fingers. Still no presenting part could be definitely made out. The next size Barnes' bag was easily passed, and after a time, on its removal, three fingers could easily be passed through the os, and a shoulder was found presenting. Without much difficulty, by means of the bipolar method of version, a foot was brought down into the lowest and posterior part of the uterus. The child was found to be dead, skin peeling off the foot. The passive condition of the uterus during removal of the child was noticeable. No blood or liquor amnii up to this time had escaped. A rupture in the anterior uterine wall could now be detected. The placenta, which was found to be quite free in the uterus, was easily brought away, the uterus remaining flaccid. Hypodermic injections of ether and ergotin were now given, as the patient complained of feeling faint. She quickly revived. The uterus could not be made to contract, though not even an ordinary amount of external hæmorrhage occurred. An iodoform and eucalyptus suppository was left in the upper part of the vagina with its apex passing through the external os, and repeated every six hours. Sickness gradually increased, and the patient died thirty-six hours after the birth of the child with symptoms of peritonitis and exhaustion. No post-mortem examination could be obtained."

The points worthy of particular notice in this case appear to be (1) the very early stage at which rupture occurred; (2) the absence of any other exciting cause than the faulty position of the child (no marked anteversion of the uterus being made out); and (3) the comparative mildness of the first symptoms occurring after so grave an accident.

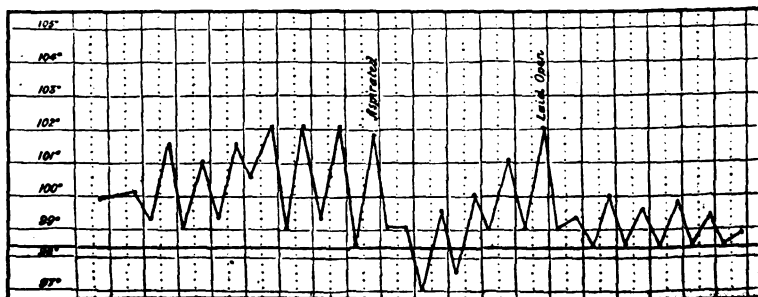
Ilford, Essex.

NOTE ON THE RELATION BETWEEN DYSENTERY AND LIVER ABSCESS.

BY A. W. D. LEAHY, M.D. DURH., F.R.C.S. ENG.,
SURGEON-MAJOR, INDIAN MEDICAL SERVICE.

SOME observers have of late gone the length of denying that any connexion exists between dysentery and abscess of the liver. It is possible, therefore, that notes of the following case may prove of interest to the profession, for I think it demonstrates the connexion which existed between an attack of subacute dysentery and the subsequent formation of an abscess in the right lobe of the liver.

A European male, aged twenty-nine years, was attacked by dysentery on June 18th, 1894. The actual dysenteric attack was comparatively slight in character, confining him to his



bed for five days only; but after the disappearance of the more urgent symptoms he continued to suffer from diarrhoea until the end of July. He was under the treatment of Dr. J. F. P. McConnell and was quite well by July 23rd. On the last day of August, 1894, he began to suffer from fever, his temperature going up to 102° F. in the evening and falling to 99° 6' in the morning. To get rid of this fever he went to Darjeeling on Sept. 8th, and returned

thence to Calcutta on Oct. 1st free from fever. The patient consulted me on Oct. 26th for a recurrence of the fever, and, though I carefully examined his liver on that day, there were no physical signs of anything being amiss with the organ. I saw no more of him until Nov. 29th last, when he sent for me, and I found him in bed suffering from great pain in, and with some tenderness of, the hepatic region. His temperature showed a daily rise of from two to three degrees, and never reached the normal limit in the morning. The symptoms during the earlier days of his illness were somewhat masked, but their obscurity gradually cleared up, and on Dec. 12th distinct enlargement with slight bulging of the liver was made out just below the right costal arch. On Dec. 16th this swelling was aspirated and ten ounces of typical hepatic pus were withdrawn. This pus was immediately examined under the microscope by Professor D. D. Cunningham, and was found to contain amœbæ coli in abundance. Four days later the abscess was freely opened and a large drainage-tube inserted. The patient made rapid strides towards recovery, and at the date of writing this the wound in the liver has healed and he is able to take carriage exercise daily. As regards the rapid cure it is needless to say anything, for it is an ordinary successful case of liver abscess treated by free incision and drainage, without washing out the sac with any of the numerous antiseptic solutions. The interest of the case appears to me to lie in the following. A young man, hitherto perfectly well, is attacked by dysentery in the month of June. The dysenteric attack lasts until the latter part of July. In the month of November, after an interval of four months, more or less pyrexial in character, he develops distinct symptoms and physical signs of an abscess in the right lobe of the liver. This abscess is aspirated under precautions that prevent the admission of any air, and the pus thus obtained is immediately subjected to examination under the microscope and found to contain the amœbæ of dysentery. It is known that in cases of dysentery these amœbæ coli are present in the stools and in the walls of the gut which are undergoing dysenteric ulceration. It is also known that one property possessed by these organisms is motility and the power of transporting themselves. May it not then be assumed, looking at this case, that the organisms found in the pus from the liver abscess have had their origin in the previous dysenteric process and have travelled from the ulcerated gut to the liver? Their presence in the liver in this case was a *fact*, and the observation of this one fact is worth many theories. Kartulis, Councilman, and Lafleur have all observed the presence of these amœbæ in cases of abscess of the liver. How the amœbæ get to the liver from the diseased gut must at present be largely a subject for speculation. Do they travel up through clots which block the lumen of vessels opened up by the ulcerative process of dysentery? Or do they reach the liver by way of the lymphatic system? We also know but little as to the part played by them in causing the abscess. They are comparatively large motile bodies, and it cannot be said whether they, by their presence, cause the breaking down of the liver substance, or whether they only act as carriers of some septic poison, which by its irritant properties gives rise to the abscess.

The practical value of the case I have recorded rests, I think, upon three points—viz., (1) the known date of the previous attack of dysentery; (2) the subsequent formation of the abscess in the liver with the pyrexial interval; and (3) the presence in the pus from the abscess of the amœbæ of dysentery. These three points are so closely connected that I think it may safely be affirmed that so-called single tropical abscess of the liver does in some cases owe its existence to a previous attack of dysentery and is due to the amœbæ finding their way from the diseased part to the liver.

Annexed is a chart showing the patient's temperature during the progress of the case.

Calcutta.

FOREIGN UNIVERSITY INTELLIGENCE.—Vienna: Professor Max Gruber, who is already on the Council of Hygiene, has been elected a member of the municipality. Dr. Max Salzmann has been recognised as a *privat-docent* in Ophthalmology. Prague: Professor Wilhelm Czermak has been appointed to the chair of Ophthalmology in succession to Professor Schnabel.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

THE series of cases of diphtheria treated by antitoxin which appear in the subjoined reports form a valuable contribution to the subject, and confirm the opinion that the remedy is one of considerable efficacy. The cases, being all treated in hospital and the diagnosis in each controlled by the bacteriological test, were observed under conditions favourable to the formation of a just appreciation of their character and of the influence of antitoxin upon them. We would draw particular attention to the fact that no less a proportion of the cases reported from University College Hospital than six out of thirteen necessitated tracheotomy, and that of these tracheotomised subjects only one succumbed. Another fact of interest is that of death from suppression of urine after seven weeks' illness in a case of pharyngeal diphtheria, and a clue to this exceptional course is probably afforded by the fact that one of the kidneys was atrophied and cystic. It might be also suggested that the defective renal elimination in this case had some relation to the roseolous rash which appeared on the skin during treatment. In his remarks on these cases it will be seen that Mr. Bunch notes that a rash appeared in three cases, in each case accompanied by a rise in temperature. His suggestion as to the possibility of the fluid containing some impurity is one deserving of the most careful scrutiny. We publish in another column (p. 949) the judgments of several well-known German physicians, and the motion adopted by the Congress of Internal Medicine, meeting now at Munich, on the subject.

UNIVERSITY COLLEGE HOSPITAL.

THIRTEEN CASES OF DIPHTHERIA TREATED WITH ANTITOXIN; REMARKS.

(Under the care of Dr. FREDERICK ROBERTS.)

EVIDENCE as to the value of antitoxin in the treatment of diphtheria is being accumulated, and there is no doubt that this remedy has proved successful in many cases. At the recent discussion at the Royal Medical Society of Vienna, Dr. Monti, Dr. Hein, and Dr. Unterholzner gave statistics of eighty-three cases which had been treated by them, with a mortality of only 18.07 per cent. Dr. Kolisko at the same meeting reported that from post-mortem examination of fatal cases in which the serum had been used he had found the membrane much less firmly attached to the mucous membrane than in the fatal cases treated by other methods. Many of the accounts of patients who have died show that they were treated at a late stage; in fact, when almost dying—at a period, in fact, when no improvement could be expected from any treatment. The following thirteen cases of diphtheria were taken into University College Hospital during the months of December and January last, and were all injected with antitoxin within a short time of admission. Of these cases two were fatal—one on the third day through broncho-pneumonia, and the other through suppression of urine after seven weeks' illness. During the same period another case of diphtheria was admitted, but in a moribund condition, the child dying before antitoxin could be injected. Six cases out of the thirteen had tracheotomy performed, and of these one was fatal, the other fatal case being one of pharyngeal diphtheria in which the larynx was not affected. The antitoxin injected was in every case that obtained from the British Institute of Preventive Medicine. The bacteriological examinations were made by Dr. H. R. Smith, Dr. Paul, and Mr. Watts. For the

notes of these cases we are indebted to Mr. J. L. Bunch, house physician.

CASE 1. Tracheotomy; rash; recovery.—The patient, a boy aged nine years, was admitted on Dec. 1st, 1894, with dyspnoea and recession, but with no membrane visible in the throat, this being apparently the second day of the illness. Tracheotomy was performed, and 20 c.c. of antitoxin were injected into the lumbar region. On the 2nd the dyspnoea was relieved, but still no membrane could be seen. On the 4th a rubber tube was substituted. On the 16th the temperature rose to 103.2° F.; the child complained of acute pains in the limbs; and a papular eruption appeared on the limbs, trunk, and face. The glands at the angle of the jaw were enlarged, but no joints were swollen. On the 18th the rash had disappeared, and the pain in the limbs diminished, but the breathing became laboured, and a tube had to be inserted again through the tracheotomy wound. On Jan. 7th, 1895, the temperature rose suddenly to 104°, and some fluid was detected in the left knee-joint. The patient was discharged on Jan. 10th without paralysis. No albumen was present at any time, but typical bacilli were found in cultivations from the trachea.

CASE 2. Tracheotomy; recovery.—The patient, a girl aged nine years, was admitted on Dec. 8th, 1894, with membrane on both tonsils and on the uvula, this being the third day of illness. Twenty c.c. of antitoxin were injected. On the 9th the membrane had spread to the trachea, and the temperature was 103.6° F. Tracheotomy was performed, and another 10 c.c. of antitoxin were injected. On the 10th the membrane was less, the maximum temperature being 102.2°. A trace of albumen was now present in the urine. On the 11th the membrane was diminished in extent and patchy; the temperature was 101°. On the 16th the membrane disappeared, but there was one-fourth albumen. The temperature was 100°. The patient progressed but slowly and was kept in hospital until Feb. 8th, 1895, her knee-jerks not having returned. On admission diphtheritic bacilli were found in cultivations, but in another cultivation made on Feb. 7th only streptococci, staphylococci, and diplococci were present.

CASE 3. Tracheotomy; erythematous rash; recovery.—The patient, aged five years, was admitted on Dec. 19th, 1894, with membrane on both tonsils and stridulous breathing. Twenty c.c. of antitoxin were immediately injected, and tracheotomy was performed later in the day. On the 20th the child was breathing quietly, and the temperature had fallen from 102° to 100.6° F. On the 21st no membrane was present in the throat, but the tonsils were raw and bleeding. On the 27th an erythematous rash appeared on the forearms and chest, but there were no pains in the limbs. On Jan. 2nd, 1895, a diffuse rash came out all over the body, accompanied by a slight rise of temperature. On the 4th the rash had disappeared. The patient was discharged on Jan. 12th quite well. Cultivations showed typical bacilli. A slight trace of albumen was present.

CASE 4. Pharyngeal diphtheria; recovery.—The patient, aged six years, was admitted on Dec. 17th, 1894, on the third day of illness, with membrane on both the tonsils and soft palate. Twenty c.c. of antitoxin were injected. On the 18th the membrane had not diminished, and another 10 c.c. of antitoxin were injected. Some albumen was present. The temperature was 102° F. The membrane decreased slowly until the 27th, when it disappeared. The patient was discharged on Jan. 7th, 1895, without any paralysis, but a faint cloud of albumen. Cultivations showed diphtheritic bacilli.

CASE 5. Nasal and pharyngeal diphtheria; recovery.—The patient, aged two and a half years, was admitted on Dec. 20th, 1894, after two days' illness. Membrane was present on both tonsils, and there was a discharge from the nose. Twenty c.c. of antitoxin were injected. On the 21st the nasal douche brought away casts of the turbinate bones. Membrane was still present on the 23rd, and another 5 c.c. of antitoxin were injected. This was followed by disappearance of the membrane on the 24th, and of the swelling around the angle of the jaw. The patient was discharged on Jan. 5th, 1895, quite well, but a cultivation was made from his throat on Feb. 18th. This showed a complete absence of the diphtheritic bacilli, which were abundantly present on admission.

CASE 6. Pharyngeal diphtheria; erythematous rash; suppression of urine; death after seven weeks.—The patient, a girl aged four and a half years, was admitted on Dec. 23rd, 1894, after two days' illness. She was the sister of the last-mentioned patient. She had membrane on both tonsils and on the soft palate; the temperature was 103.2° F., but there was no albumen in the urine; 20 c.c. of antitoxin were

injected during the course of the day. Cultivations from the throat showed numerous bacilli diphtheria. On the 24th there was still a good deal of membrane, but the highest temperature was 101.6°. On the 28th membrane was still present, and nasal douches brought away a large piece of membrane. There was one-eighth albumen. On Jan. 1st, 1895, a diffuse red rash came out over the body, and the temperature rose in the evening to 102°. There were no pains in the limbs. There was one-fifth albumen in the urine. On the 8th no membrane was to be seen. The urine seemed scanty, and when measured was found to be only six ounces during the previous twenty-four hours. There was one-fifth albumen in the urine. The latter was secreted only in small amount from now until the patient's death, not exceeding twelve ounces in any one twenty-four hour period. The albumen gradually decreased, and by Jan. 23rd had entirely disappeared. The child seemed to be fairly well in herself, but was kept in bed, as no knee-jerks were obtainable and the palate moved badly. On Feb. 6th she had an attack of dyspnoea and became cyanosed, having passed only three ounces of urine during the previous twenty-four hours. There was now so much difficulty in swallowing that she had to be fed with a nasal tube. On the 8th, while being fed with the nasal tube, she died suddenly. The amount of urine passed in twenty-four hours for the last few days of life was as follows: Jan. 29th, 9 oz.; 30th, 10 oz.; Feb. 1st, 8 oz.; 2nd, 7 oz.; 4th, 5 oz.; 5th, 6 oz.; 6th, 3 oz.; and 7th, 6 oz. At the necropsy Dr. Poore found the right kidney to be large and congested, weighing three ounces; the left kidney was small, cystic, and weighed only half an ounce. Dr. Sidney Martin found degeneration of all the peripheral nerves examined, both sensory and motor.

CASE 7. Tracheotomy; broncho-pneumonia; death.—The patient, aged one year and a half, was admitted on Dec. 21st, 1894, with considerable recession, being obviously very ill. This was stated to be the fourth day of illness. Tracheotomy was performed. On the next day there was no change for the better, and 20 c.c. of antitoxin were injected. On the 23rd the child was cyanosed, breathing rapidly and shallowly, and rales were heard all over the chest. Another 5 c.c. of antitoxin were injected, but the patient never rallied and died the same morning. At the necropsy membrane was found to have extended into the second bronchial ramifications, and broncho-pneumonia was present. Cultivations showed numerous bacilli.

CASE 8. Pharyngeal diphtheria; recovery.—The patient, aged six and a half years, was admitted on Jan. 2nd, 1895, with membrane on both tonsils and on the soft palate, and one-third albumen in the urine; 10 c.c. of antitoxin were injected. The membrane was less next day, and so was the albumen, and on Jan. 4th no membrane was to be seen. On Feb. 16th the knee-jerks were still absent. Typical bacilli were found in cultivations.

CASE 9. Pharyngeal diphtheria; recovery.—The patient, aged thirty years, was admitted on Dec. 30th, 1894, after three days' illness, with membrane on both tonsils and on the uvula. Fifteen c.c. of antitoxin were injected. The membrane gradually diminished and had disappeared by Jan. 2nd, 1895. No paralysis supervened.

CASE 10. Tracheotomy; recovery.—The patient, aged one year and a half, was admitted on Jan. 15th, 1895, with considerable recession, but no visible membrane. Tracheotomy was performed, and 15 c.c. of antitoxin were injected. On the 16th the temperature was 104° F., but the breathing was much relieved. On the 17th the temperature fell to 100.4°; some amount of bronchitis was present. Improvement was uninterrupted until Feb. 4th, when the patient was discharged. No albumen was detected at any time, and no paralysis supervened. Numerous typical bacilli were found.

CASE 11. Pharyngeal diphtheria; recovery.—The patient, a man aged twenty years, was admitted on Jan. 23rd, 1895, with membrane on one tonsil and on the uvula, and a trace of albumen in the urine; 18 c.c. of antitoxin were injected into the subcutaneous tissue of the abdominal wall. On the 24th the membrane was more patchy, less in amount, and less firmly adherent to the tonsils. The tonsils were, however, swollen, inflamed, and in places appeared to be ulcerated. The patient seemed to be pretty well in himself, though rather pale and anæmic. On the 26th no membrane was to be seen. He was discharged on Feb. 4th without any paralysis or other sequelæ. Cultivations on blood serum showed colonies of diphtheritic bacilli and some cocci.

CASE 12. Tracheotomy; some paralysis when discharged.—The patient, aged two and a half years, was admitted on

Jan. 6th, 1895, after a week's illness, with membrane on both tonsils and in the trachea. Tracheotomy was immediately performed, and 10 c.c. of antitoxin were injected. The temperature rose to 102.4° F. during the night, but there was less membrane to be seen next day. The urine contained one-half albumen; 8 c.c. of antitoxin were again injected. On the 9th another 5 c.c. of antitoxin were injected, the temperature being 101.6°. The membrane gradually diminished and finally disappeared by the 11th; there was now only a trace of albumen. Considerable difficulty was experienced in trying to do without the tracheotomy tube, and it could not be left out altogether until the 22nd. The patient was discharged on Feb. 8th with weakness of the right side and the knee-jerks absent, but was readmitted on the 13th under the care of Dr. Poore with lobar pneumonia. Numerous bacilli were found soon after his admission.

CASE 13. Pharyngeal diphtheria; slight paralysis.—The patient, aged ten years, was admitted on Jan. 29th, 1895, with membrane on both tonsils and on the uvula, and a trace of albumen in the urine, having been ill three days; 10 c.c. of antitoxin were injected, and again 10 c.c. next day (the 30th). The throat cleared up gradually, and by Feb. 4th no membrane could be seen. The knee-jerks were absent from an early stage of the illness, and were still absent on March 1st. Diphtheritic bacilli were found in cultivations.

Remarks by Mr. BUNCH.—The percentage of deaths (15.4) in this series of cases is considerably below the average of deaths from diphtheria, and even of those cases previously treated with antitoxin in University College Hospital. The number of cases is, of course, too small to afford statistics of value, but it may certainly be said that the cases were at least of average severity. The antitoxin previously used in University College Hospital was obtained from a different source to the Institute of Preventive Medicine, but the objection urged against the latter that the injections are rather bulky was found in practice to be of little weight, for the swelling soon subsided, and in no case was inflammation set up around the point of injection. There was, however, some amount of tenderness, varying with the age of the patient. The three cases in which a rash appeared after the injection of antitoxin are of interest, for in every case the eruption was accompanied by a rise of temperature, and in one case by rather severe pains in the limbs, causing the child to cry out with pain. In this case the rash appeared fifteen days after injection, and presented an appearance markedly resembling that of röheln. In another case the rash came out nine days after injection, and was more of an erythematous character. In another child a rash appeared twice with an interval of six days, the first time eight days after injection. It seems possible that some impurity or septic material was contained in the fluid injected, for the strictest antiseptic precautions were taken to sterilise the syringe and needle, and disinfect the skin. Two of the cases which thus developed a rash progressed very slowly, and one eventually died from suppression of urine. Though the total number of deaths was so small, it could not be said that the membrane disappeared immediately after antitoxin had been injected, or even that the albumen always diminished, for in one case membrane was seen fifteen days after the first injection, and albumen appeared in the urine a few days after the injection, though none was present on admission. One of the children on whom tracheotomy was performed was only one and a half years old, but she stood the operation well, and recovered rapidly.

BROMLEY AND BECKENHAM FEVER HOSPITAL.

THREE CASES OF DIPHTHERIA TREATED WITH ANTITOXIN SERUM; TRACHEOTOMY PERFORMED IN TWO OF THE CASES; RECOVERY IN ALL.

(Under the care of Dr. G. W. DAVIS and Mr. R. A. SHANNON.)

WE are hearing much more hopeful accounts of the results of tracheotomy and intubation in diphtheria under the antitoxin treatment in our large hospitals than was the case a few months ago, but we cannot at present furnish statistics on this point. The communication to the Société Médicale des Hôpitaux of MM. Lebraton and Magdelaine, besides furnishing evidence of the general value of the remedy when used by them at the Hôpital des Enfants Malades, gives also some account of the results obtained when it was necessary to perform one of these operations. Two hundred and fifty cases were treated by

the antitoxin treatment in a period of three months, with a mortality of 9.2 per cent. After tracheotomy (the cases requiring it are always serious) there was a mortality of 37.5 per cent. After intubation the mortality was 15.9 per cent. when those dying within twenty-four hours after admission from lung complications or general intoxication were deducted. The three cases here reported were all of them affected with undoubted diphtheria, proved by bacteriological investigation in one of the cases, and clinically evident in the other two. Mr. Shannon and Dr. Davis believed that not one of the cases would have recovered but for the use of antitoxin.

CASE 1.—A male child, eighteen months old, was first seen at midday on Oct. 17th, 1894. The infant was suffering from diphtheritic sloughs on both tonsils, croupy cough, and inspiratory retraction of the intercostal spaces and ensiform cartilage; the temperature was 102° F. (The Clinical Research Association confirmed the diagnosis by telegram on the 18th: "Many Klebs-Löffler bacilli.") At 12.30 P.M. seven minims of Aronson's antitoxin were injected into the left forearm. At 4 P.M. the arm was swollen and red. The cough was very croupy in character; the child refused all food. There was marked retraction of the supra-clavicular and infra-clavicular area in inspiration. At 10 P.M. the retraction was more marked. There was retraction of the entire sternum in forced inspiration. A second fifteen minims of antitoxin were injected into the right forearm. On the 18th, assisted by the parish nurse, Dr. Davis administered chloroform and performed tracheotomy at 1 A.M. At 10 A.M. the child breathed easily. The tube was cleaned every two hours. At about 6 A.M. the patient became very collapsed, but rallied. At 12 (midday) there was abundant membrane in the tube: one pint of milk had been taken since the operation. On account of the offensive character of the stools three grains of calomel was ordered. At 4 P.M. the tube, nearly choked with membrane, was difficult to clear. The child took milk well. The wound was becoming sloughy. At 8 P.M. he was pale and ceased to care for his milk; the membrane was increasing in quantity, and the temperature was 100.8°. A third fifteen minims of antitoxin were injected into the left forearm. On the 19th sixteen ounces of milk had been taken during the night. From this time the child passed from Dr. Davis's care to that of Mr. R. A. Shannon of the Bromley and Beckenham Joint Fever Hospital. On the 28th it was necessary to clean the cannula every two hours night and day; the whole tube was removed every day, but great embarrassment and lividity occurred, so that it had to be replaced. The membrane from the cannula was sent to the Clinical Research Association, and the following report was received: "No bacillus diphtheriae; numerous streptococci and staphylococci." On the 30th a soft rubber tube was substituted for the silver one. A drop or two of a solution of menthol in olive oil (two grains to the ounce) was introduced into the tube every half hour, after the suggestion of Dr. Roux. Very severe coughing followed upon the introduction of the rubber tube. At 4 A.M. on Nov. 2nd the matron was urgently called by the night nurse, and found the child apparently dead and cold. The tube had been coughed out, one of the eyelet holes for the tape having split. With commendable presence of mind she replaced the tube and performed artificial respiration, and had the satisfaction of seeing the child revive. The tube was held in place until another could be obtained. On the 8th a fenestrated rubber tube was substituted. On the 17th the child was quite well, but it was found impossible to do without the tube. The child was discharged wearing the tube, in the hope that after remaining some days at home he might be removed to a general hospital. The air of a poor and crowded home set up symptoms which threatened septic pneumonia, so that on Nov. 21st Dr. Davis sent him to St. Thomas's Hospital, asking if he could be admitted and an endeavour made to wean him of the tube; this was done, and he was discharged cured on Jan. 11th without the tube. Whilst at St. Thomas's Hospital a second tracheotomy was performed below the first, and the trachea above dilated.

CASE 2.—On Nov. 13th, 1894, a girl four years of age was admitted into the Bromley and Beckenham Fever Hospital with severe diphtheritic involvement of the fauces and tonsils, the glands about the angle of the jaw were involved on either side, and the involvement of the trachea was marked with loss of voice and a very bad croupy cough, associated with marked inspiratory retraction. On the 15th the case was one of extreme gravity; the child was voiceless, with a dull,

opaque, bluish-white complexion, was unable to take any nourishment, and from time to time vomited; there were also attacks from time to time of such severe dyspnoea that the case looked extremely hopeless. Under these circumstances Messrs. Shannon and Yolland, medical officers of the hospital, invited Dr. Davis to a consultation on the case, and it was the unanimous opinion that tracheotomy was the only chance. Dr. Davis, having the instruments at hand, was invited to operate, and tracheotomy was performed. He supplied some of Aronson's antitoxin to Mr. Shannon, who injected it as follows: at 4 P.M. on the 15th fifteen minims of antitoxin were injected; at 4 P.M. on the 16th ten minims of antitoxin were injected; at 10.30 A.M. on the 18th eight minims of antitoxin were injected, and fifteen minims at 4 P.M. The rule was adopted to inject every six hours so long as the temperature remained above 100° F. On the 27th the tube was finally removed, and the child was discharged cured on Dec. 8th, 1894.

CASE 3.—A male child eight years of age was seen by Dr. Davis during the afternoon and in the evening of Nov. 20th, 1894. The case was considered from the first to be very grave. The temperature was 102.4° F., the tonsils and fauces were covered with membrane, which had involved the trachea, so that the boy could scarcely utter a sound, and the inspiratory retraction was very marked. The case appeared to be quite hopeless without recourse to tracheotomy, but the parents would not consent to this. At 7 P.M. Dr. Davis injected twenty minims of antitoxin into the left forearm, and the next morning the boy was removed to the Bromley and Beckenham Fever Hospital and was discharged as cured on Dec. 8th. It should be added that, although the evidence clinically in this case was to us both conclusive, the Clinical Research Association reported upon the culture box which Dr. Davis sent as follows: "Evidence of diphtheria probable, not certain. The appearance of the culture is not suggestive of diphtheria. The culture consists: (1) of staphylococci; (2) of larger cocci, probably pneumococci; (3) of a minute bacillus; and (4) of a very few somewhat large bacilli, suggesting degenerate bacillus diphtheriae."

Remarks by Dr. DAVIS.—The three cases were all partly under my care and under that of Mr. Shannon when they were in the Bromley and Beckenham Fever Hospital. Concerning Case 1 I have suggested to a manufacturer that for the future it would be well that the shield of rubber tubes should be backed throughout with canvas; at present that part of the shield perforated with holes for the tape is not so backed. In the diagnosis of diphtheria I should be inclined to use bacteriological evidence as affirmative, but not as of negative value in cases in which the clinical aspect of the case pointed to diphtheria. Bryant's tubes were those used in the tracheotomies.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Case of Large Pelvic Hydatid successfully treated by Perineal Incision and Drainage.

An ordinary meeting of this society was held on April 9th, the President, Mr. HUTCHINSON, being in the chair.

Mr. REGINALD HARRISON described a case of Large Pelvic Hydatid successfully treated by Perineal Incision and Drainage. The patient, a physically fine and otherwise healthy man, aged forty-five years, had never suffered any illness before the present. Nine years ago he began to have trouble about the bladder and rectum. This increased to such an extent that he was compelled to resort to large doses of morphia for relief and was disabled from work. In 1893 he left Australia and came to London. Mr. Harrison saw him shortly after his arrival, at the suggestion of Dr. Batten. There was a very large tumour occupying the pelvis and lower part of the abdomen, extending almost to the umbilicus. The pain and difficulty about passing water and motions were excessive. Careful examination and the history led to the conclusion that the tumour consisted of one or more hydatid cysts. In October, 1894, an incision was made through the perineum, corresponding with a lateral lithotomy, but without opening the urethra. The cyst was

reached, and about half a gallon of fluid and cysts was evacuated. The cavity was washed out and drained. The greatest relief was experienced. The cavity gradually contracted and the wound healed. The patient was now in perfect health. The question for consideration in the case of such like pelvic hydatids was as to where the opening should be made—whether through the abdominal wall, through the rectum, or by incision through the perineum, as in the case related. The last method was considered to be the best.

Dr. JOHN HARLEY remarked that in the forty-ninth volume of the Society's Transactions he had brought together over 100 cases of hydatid tumour with a view to prove the futility of simple puncture in these cases, a method which was likely to be adopted by physicians. In the St. Thomas's Hospital Reports he had collected a further 96 cases, and all went to show that a radical cure of a hydatid cyst could not be effected without the discharge of the parent cyst, and the healing of the cavity left after its removal. Puncture was often followed by shrinkage, suggestive of cure, but later either suppuration might occur or slow contraction with all its attendant troubles.

Mr. DURHAM said that hydatids of the abdomen and pelvis were common, but cases precisely like the one previously reported were rare, and successful treatment of them was still more rare. In the case described the hydatid was fixed in the fibrous tissues between the bladder and the rectum, and was not movable, like most abdominal hydatids, except those of the liver. He referred to a case which was admitted into Guy's Hospital under his care with intestinal obstruction and difficulty in passing water. An exploratory operation was undertaken to discover the nature of the trouble, and on opening the abdomen a hydatid cyst was discovered fixed in the pelvis. He opened the cyst, evacuated its contents, and sutured the cyst wall to the abdominal wall. The patient died four days afterwards of acute peritonitis, and at the necropsy a condition was found apparently much like that in Mr. Harrison's case.

Mr. WARRINGTON HAWARD said that a complete cure depended upon the completeness of the evacuation of the cyst. He could not help thinking that in some cases of pelvic hydatids drainage would be very difficult from the perineum. He had to treat a case of pelvic hydatid a few years ago, in which he was able to be confident of the diagnosis because another hydatid cyst existed higher up in the abdomen. In that case he hoped that a complete removal of the pelvic hydatid would have been possible, but the lower part of the cyst was intimately connected with the bladder and rectum, and its pressure on the former viscus had caused retention of urine. If a pelvic hydatid projected up into the abdominal cavity it was better to open the peritoneum and stitch the cyst to the abdominal wall; there would then be no difficulty about cleansing the abdominal cavity and drainage; besides, the abdominal section would render it possible to decide whether other hydatid cysts were present or whether the cyst itself was removable, as in a case recorded by Mr. Jonathan Hutchinson, jun.

Mr. TARGETT gave the reasons which induced him to regard all these cysts as having their origin between the muscular coat of the bladder and the sheath of the rectovesical fascia. By dissection of all available specimens he had shown that the cysts lay in this position, and in certain dry specimens the vasa deferentia were seen to be separated from the bladder by the cyst. By experiment he had found that it was easy to make such a separation; the finger easily separating the fascial sheath from the vesical muscular wall. In certain cystic protrusions and malignant growths of the bladder developing backwards there was a similar disturbance of the relation of the vasa deferentia to the bladder wall. Hydatid cysts could not arise secondarily in this position. They might rarely begin, as Dr. Fagge had described, by falling into the pelvic cavity after perforating the walls of the stomach, but this method of origin must be very rare. In the cysts which arose under the pelvic fascia the embryos were deposited from the venous plexuses, and the same thing was true with regard to hydatids of bone; they were usually found in the cancellous ends of long bones or in the vertebrae. In bone they were commonly primary, and were often the only hydatid deposit in the body. In Mr. Hunter's case the bladder projected eight inches above the pubes, and a recent dissection showed it to bear the same relations to the vesiculae seminales as the other specimens referred to.

The PRESIDENT said that some years ago he had published several cases in which recovery resulted from a single aspiration. One such case of hepatic hydatid he some years later

had to treat by evacuation. At the present time he was prepared to agree generally that evacuation should be practised whenever the cyst was large or the hydatid dead. He had seen several instances in which hydatids were passed by the urine.

Mr. HARRISON, in reply, said that the question whether abdominal section should be performed was carefully weighed. The length of time which the cyst had lasted, the downward pressure which it had exerted, and the ease with which the dependent portion of the cyst could be reached, led him to the conclusion that the perineal method was the best.

MEDICAL SOCIETY OF LONDON.

Congenital Chorea. — Facial Hemiatrophy. — Friedreich's Disease. — Case after Removal of a Papilloma of the Bladder by Suprapubic Cystotomy. — Syphilitic Disease of both Knee-joints. — Large Renal Sarcoma from Child aged Three Years. — Subcutaneous Nodules in an Infant. — Devergie's Pityriasis Rubra Pilaris. — Rudimentary Ear. — Macrocheilia. — Restoration of Nose by means of Transplanting part of Middle Finger of Left Hand.

An ordinary meeting of this society, devoted to the exhibition of clinical cases, was held on April 8th, the President, Sir WILLIAM DALBY, being in the chair.

Dr. G. JOHNSTON showed a boy aged twelve the subject of Congenital Chorea. He was born at term, the labour being natural, and the movements had continued ever since, involving the arms, legs, and face, and occasionally he had long shivering inspirations. The movements, though bilateral, were most marked on the left side; they ceased during sleep. There had been no fits and no rigidity, and the deep reflexes were brisk but not exaggerated. — Dr. A. GARROD said that he had a case under his care which precisely resembled the case shown. In his patient there was feeble mental development, but the child was by no means an idiot. — Dr. SHUTTLEWORTH said that the case was interesting because, together with the chorea, there were athetotic movements suggestive of lesion of the Rolandic area; the boy was nevertheless free from spastic rigidity. The London School Board had established several centres where children of this class could be trained.

Dr. BEEVOR showed a case of Right Facial Hemiatrophy in a girl aged twenty in whom there was no family or previous history of importance. Two years ago two teeth in the right upper jaw decayed and broke away, and six months later, without any injury, she noticed a dimple in the right cheek, which had gradually increased till now. There was marked thinning of the cheek, with falling in of that side, the measurement from the middle line of the upper lip to the meatus auditorius externus being a quarter of an inch less on the right side. The muscles of the face and for mastication were normal, and reacted to faradisation; in fact, the former reacted to a weaker current on the right than on the left side. The tongue and soft palate were normal. The bones of the face and the nasal cartilages were not affected. Sensation to touch, pain, heat, and cold was normal. Taste was not affected. The disease was considered to be in the trophic fibres of the fifth nerve, which, according to Mendel, were in the upper root of this nerve.

Dr. LEONARD GUTHRIE showed a boy aged nine years who presented early symptoms of Friedreich's Disease. There was no family history of the complaint. The symptoms dated from his learning to walk at the age of three. They were: (1) unsteadiness on standing markedly increased when the eyes were closed and the heels kept together; (2) a reeling gait and inability to "toe a plank"; (3) slight rhythmical tremors affecting the whole body and increased on exertion; (4) slight incoordination of the hands in executing fine movements; (5) complete absence of knee-jerks. Sensation was everywhere normal. Muscular sense was unimpaired. There were no ocular symptoms and no deformities. Speech and intelligence were unaffected. The sphincters acted normally. No definite tabetic pains had occurred. Headache and vomiting were absent. He had been under observation for four months, and the symptoms were slightly on the increase. The differential diagnosis of the case was discussed. Dr. HECTOR MACKENZIE said he had exhibited a similar

case which was an isolated one, no other member of the family being attacked. — Dr. ORMEROD said that it was probably a case of Friedreich's disease, although it appeared to be diagnosed by two symptoms only—namely, a peculiar gait and absence of knee-jerk. Other symptoms described in Friedreich's original cases were absent, such as peculiar speech, nystagmus, and family proclivity. — Dr. BEEVOR agreed in the diagnosis and said that these cases were now recognised much earlier than they used to be. — Dr. COLMAN remarked that two other symptoms were present—a general tremor of the trunk when at rest and slow nodding movements of the head and trunk.

Mr. SWINFORD EDWARDS showed a case after Excision of a Papilloma from the Bladder. The patient was a man aged fifty-four, who had suffered from intermittent hæmaturia commencing three months ago; there was also right lumbar pain. The growth was removed by suprapubic cystotomy and the wound had quite healed.

Mr. WARING showed a woman forty-five years of age who first presented herself to him with Syphilitic Disease of both Knee-joints. Later she returned to the hospital, and an affection of the knee-joints was found similar to that seen in Charcot's disease. There was marked swelling, especially of the right knee, but the knee-jerks were exaggerated. There was increased vesical irritability. The syphilis had been acquired ten years previously, and had been treated with iodide of potassium, but not with mercury.

Mr. HERBERT ALLINGHAM showed a Renal Tumour weighing two and a half pounds which he had removed from the right side of a child aged three years. The child was at the present time in good health. He stated that the growth had not at present been examined microscopically. It arose from the capsule of the kidney, and the supra-renal body was free. There were no urinary symptoms and the ureter was dropped back after ligation.

Dr. ABRAHAM showed a female infant who for ten weeks had suffered from Multiple Subcutaneous Nodules. The larger ones had become directly connected with the skin, and fluctuated. They were scattered all over the body. He thought that they were multiple tuberculous granulomata. — Mr. LEOPOLD HUDSON said that he had seen three very similar cases within the last eighteen months at the Hospital for Sick Children. The last, sent him by his colleague Dr. A. Garrod, was associated, like the case shown, with a bad attack of thrush. The multiple lesions proved on exploration to be abscesses, and their evacuation was followed by a rapid convalescence.

Dr. ABRAHAM showed a boy aged six years who was the subject of Pityriasis Rubra Pilaris. The present attack had developed within three weeks. Such cases were rarely seen in children; the boy had had a similar attack two years ago, and had got well. The affection was of the xerodermic type.

Mr. ASTLEY BLOXAM showed a child sixteen months of age with a Rudimentary Ear on the right side. There was also a dimple between the angle of the jaw and the mouth. — Sir WILLIAM DALBY said that he had seen a number of these cases. Sometimes there were as many as three rudimentary ears on the same side. Occasionally in such cases as that shown there was imperfect development of the labyrinth on the opposite side.

Mr. BLOXAM then showed a girl aged twelve who had a Deformity of the Chin, which had existed from birth. It involved the cheek to a slight extent, and consisted of some dilated lymphatics with enlarged bloodvessels as well. He proposed to dissect it out.

Mr. BLOXAM lastly showed a middle-aged man whose Nose had been destroyed by Tertiary Syphilitic Disease. An attempt had been made at Netley to form a new nose from the skin of the forehead, but this had not been very successful. An amputated child's finger was then attached to the part, but this refused to adhere. The middle finger of the man's left hand was stiff and useless to him, so an incision was made down its anterior surface and the tendons dissected out. The finger was then attached in the position of the nose, the arm being supported by plaster of Paris. Later the soft tissues at the root of the finger were divided on each side by the actual cautery and the bone divided, the distal phalanx with the nail having been previously removed. The ultimate result was the formation of a very presentable nasal organ, an ala on each side being subsequently fashioned from the tissues of the cheek.

OBSTETRICAL SOCIETY OF LONDON.

Temperature, Pulse, and Respiration during Labour and Lying-in.—Ovariectomy in Women over the age of Eighty Years.—Exhibition of Specimens.

A MEETING of this society was held on April 3rd, Dr. F. H. CHAMPNEYS, President, being in the chair.

The following abstract of a paper by Dr. PROBYN-WILLIAMS and Mr. LENNARD CUTLER upon Temperature, Pulse, and Respiration during Labour and Lying-in was read. The writers first considered the effect of labour. With regard to temperature they find that their results coincide with those of Dr. Giles. With regard to pulse they find: 1. *Rate*: The low rate of the pulse after delivery, as given in the text-books, is exaggerated. In one hundred cases of normal labour observed in connexion with this point they found that in 76 the rate was diminished, in 11 it remained stationary, and in 13 it was increased after the end of the third stage. In this series the average decrease between the rates during the first stage, and half an hour after the end of the third, was eleven beats per minute (from eighty-nine in the first stage to seventy-eight after delivery). Parity and the length of labour have some influence on this fall; and after the administration of chloroform during labour it is common to find the pulse remaining high after delivery. In 19 cases of post-partum hæmorrhage there was an average rise of nineteen beats per minute (seventy-eight during labour, ninety-seven after delivery). 2. *Tension*: This, as estimated by tracings made with Dudgeon's sphygmograph, is usually above normal during labour, but is occasionally low, notably in one case in which delivery was followed by considerable hæmorrhage. *Respiration*.—After delivery there was on the average a fall of one respiration per minute (23 during labour, 22 after delivery). After the administration of chloroform this decrease was not observed. The effects observed in connexion with lying-in were as follows:—*Temperature*.—The average temperature of 100 cases varied between 98° and 99°F., being higher in the evening than in the morning. The highest average temperature was reached on the first day and was higher in primiparæ than in multiparæ. Rupture of the perineum had no appreciable effect on the temperature during the puerperium. *Pulse*.—(1) *Rate*. The writers do not agree with the statements in the text-books that the pulse is normally very slow during the first week, but found that the average rate of 100 cases was never lower than 72. The pulse-rate was faster in the morning than in the evening throughout this series. (2) *Tension*. In a few cases the tension is diminished by delivery; but in the majority it is increased. Whatever may be the tension of the artery during labour, and whether it rise or fall after delivery, within twenty-four hours it has always increased so much that it is at least as great as, and generally greater than, the tension during labour. This increased tension may persist throughout the puerperium, and commonly lasts longer in multiparæ than in primiparæ. *Respiration*.—The rate of respiration was found to vary between twenty and twenty-two per minute. It tends to follow the pulse-rate in being higher in the morning, and not the temperature, which is higher in the evening.—Dr. DAKIN congratulated Dr. Probyn-Williams and Mr. Lennard Cutler on their very important paper. Their observations on the temperature, which were made under circumstances most favourable for accuracy, showed what was the typical chart of a lying-in woman—namely, one differing in no way, except for some slight exaggeration of the evening rise and morning fall, from that of a person in ordinary health. The chart of the cases where perineal rupture was present showed the efficacy of the antiseptic methods in use at the General Lying-in Hospital at the present time, for it did not differ practically from that of cases where there was no rupture. The pulse-rate which they found to be the average was perhaps more interesting, as it was opposed in some degree to what was stated in the text-books. Their results were, however, what most of those who had large experience of lying-in women would expect. As regarded the tension of the pulse, they again were at variance with what had been hitherto accepted. Fritsch and Meyburg found that the tension was diminished; and it became difficult to reconcile this with the slower rate. Dr. Probyn-Williams and Mr. Cutler's results showed that the pulse obeyed the ordinary laws of the circulation in these circumstances, and explained the tendency to a slow

pulse by the high tension always present. Their results explained also the frequency of pulse which often preceded post-partum hæmorrhage, if it were assumed, as it fairly might be, that the suddenly increased arterial tension which normally occurred was due to a retraction of the vessels in unison with the retraction of the uterus. Then, if retraction of neither uterus nor arteries were complete, there would be, as happened in the cases in the paper, a low tension and rapid pulse on the one hand and a relaxed and bleeding uterus on the other. It is possible that the increased rapidity observed by Dr. Probyn-Williams and Mr. Cutler after the administration of chloroform was due to diminished tension, and the tendency to post-partum hæmorrhage, believed by some to exist in women who have had chloroform during their labour, might be thus explained. Dr. DAKIN had never seen this effect from the drug. One effect of its administration was that the child at birth was often very lethargic, and did not begin to cry vigorously at once without considerable stimulation.—Dr. REMFRY considered that the rise in pulse-rate after chloroform might be due to the fact that in the cases recorded chloroform had only been given in tedious labours and when instrumental or other manipulations had been necessary.—Dr. HORROCKS thought the increased rate of the pulse in post-partum, as in any other form of hæmorrhage, was physiological. Theoretically, half the amount of blood in the body could do the same work in a given time if it were circulated with double the velocity. The increase in number of heart beats was an attempt to increase this velocity *pari passu* with the loss. The precise way in which the loss of blood set up the increased rate was not perhaps known, but no doubt it was through the vaso-motor system. He could not agree with Dr. DAKIN regarding retraction of the heart and arteries. As a matter of fact, so long as the heart was completely refilled with blood there was no retraction. If it were under-filled there would be some retraction, and if it were not refilled at all there would be complete retraction during each diastole. The increased size of the left ventricle during pregnancy was a hypertrophy, and its subsequent diminution was an involution.—Dr. AMAND ROUTH asked for more information as to the effect of chloroform upon the temperature of the lying-in woman. He thought the administration of chloroform by lowering the heat of the body might in a measure account for the difficulty in reviving children after its use, which, as Dr. DAKIN had stated, was not infrequently observed.—Dr. DUNCAN agreed with Dr. Probyn-Williams and Mr. Cutler in questioning the accuracy of the statement made in text-books that the pulse-rate became slower after delivery. In years gone by he (Dr. Duncan) used to dread post-partum hæmorrhage if the pulse kept up to 110; but he found his fears were groundless, as he had never had a case of this accident, whilst a good many of his patients had a pulse of over 100 for some hours after delivery. He thought a high pulse-rate was met with most often in the upper classes of society, where a neurotic temperament was not rare.—The PRESIDENT said that a paper of this kind was much needed to test and correct accepted views, which were apt to be quoted from book to book without sifting. The chief point in debate seemed to be the pulse. In his experience this was often rapid, especially after excitement, either mental or bodily, without any undue loss of blood. But in this case the beats were distinct and the tension good. The pulse of hæmorrhage was running, the beats not well separated, and the tension low. Such a pulse often preceded hæmorrhage and betokened a general vaso-motor condition affecting the heart, arteries, and uterus.

Dr. LEONARD REMFRY read a paper on Ovariectomy in Women over the Age of Eighty Years. Ten cases were recorded, all of whom had recovered. The list included operations in England, America, Australia, and Germany. One patient, aged eighty-three years, suffered also from epithelioma of the vulva. Dr. Remfry saw her in August, 1894, and the epithelioma was at once freely removed. In November there were no signs of recurrence, and the internal tumour being larger, ovariectomy was performed; her convalescence was satisfactory. The paper concluded with some details of the various cases and remarks on the powers of resistance in aged people.—Mr. BUTLER SMYTHE congratulated Dr. Remfry on the success of his case complicated with epithelioma, and asked if any mental symptoms had been observed previously to the operation. The patient had been under his care on two occasions, but had absolutely declined to have the tumour

removed. Her mind then seemed to be exceedingly weak, and her conduct and language extraordinary. She had been to several hospitals "to show herself to the doctors," but would not submit to any operative measures beyond aspiration of the cyst, which was twice performed. It was most gratifying to hear from Dr. Remfry that up to the present time there had been no recurrence of the epithelial growth.—Dr. LEWERS hoped that the after-history of the case as regards the vulvar epithelioma would be given to the society, as in his experience recurrence was much more likely to occur early than in cases of epithelioma of the cervix. Dr. Lewers mentioned a case under his care where, after apparently complete removal, recurrence took place in the inguinal glands five months after operation.—Dr. HEYWOOD SMITH said that in his case, referred to in the paper, the tumour was of enormous size (47 lb.), and prevented the patient from moving freely about. The adhesions to the abdominal wall were very strong, so that he had to leave a piece of the cyst wall the size of a dinner plate attached to the inside of the abdomen.—The PRESIDENT said that it must be remembered that people of eighty years and upwards were selected cases; they had outlived their contemporaries, and might be expected to be unusually sound. Dr. Remfry's paper illustrated the fact that cases which would not seem favourable often turned out well, and that a selection of ovarian cases on *a priori* grounds was unsatisfactory. The good results of operation for ovarian tumour with pregnancy illustrated the same fact.—Dr. REMFRY, in reply, said that the mental condition of the patient with epithelioma was perfectly satisfactory during her stay in hospital, except during convalescence, when she was irritable and difficult to manage for three or four days. There had been no recurrence of the epithelioma, which was excised in August, 1894. It was always necessary to verify a patient's age by obtaining if possible the birth certificate. He considered that after ovariectomy in old women nutrient enemata should be administered in order to prevent shock.

The following specimens were shown:—

Dr. CULLINGWORTH: (1) Embryo and Clot from a Tubal Abortion; (2) Diffuse Uterine Myoma.

Dr. DUNCAN: (1) Myoma undergoing Myxomatous Degeneration removed by Hysterectomy; (2) Oedematous Myoma removed by Hysterectomy; (3) Double Tubo-ovarian Cysts; (4) Dilated Tubes and Cystic Ovaries (early stage of tubo-ovarian cysts).

Dr. LEWERS: Tubal Gestation of Three Months operated on before Rupture.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Treatment of Empyema in Children.—Secondary Malignant Disease of the Lung or Pleura.

A MEETING of this society was held on April 5th, the President, Dr. BANNING, being in the chair.

Dr. COUTTS read a paper on the Treatment of Empyema in Children. He considered that there was a chance of cure by aspiration in cases with small cavities that are recognised in their early stages. If there were no improvement after two aspirations he thought that the method was inadvisable. Statistics were given of twenty-seven cases treated by simple incision, and of sixty-one cases treated by rib resection. Notwithstanding the unfavourable results of the former as compared with the latter, Dr. Coutts thought it should be tried in the more debilitated cases. After opening the chest he advocated washing out not only in cases with offensive discharge but in those of large dimensions with high temperature. He gave statistics of forty-three cases of empyema in children under the age of two years with twenty-seven deaths. Empyema is in itself so fatal at an early age that the responsibility for the high mortality does not rest on one operation or another. Although here again the statistics were favourable to the method of rib resection, Dr. Coutts was, on the whole, inclined to the opinion that simple incision was preferable in these infants.—Dr. MAY referred to the treatment of empyema after operation by immersing the patient in a warm bath.—Mr. BIDWELL mentioned that he had known caries of rib to follow resection for empyema in children, and therefore he was inclined to recommend simple incision in any case where the pus was not fetid; he thought, too, that the patient's stay in hospital was shorter after

simple incision than after resection of rib. Washing out was only employed when the pus was offensive, and in children he had found a warm bath of bichloride of mercury (1 in 10,000) very satisfactory. He had treated two cases by washing out combined with immediate closure of the wound; in one case the result was satisfactory after a second operation, and in the other resection of rib was subsequently required.—Dr. COUTTS replied.

Mr. STEPHEN PAGET read notes of three cases of Secondary Malignant Disease of the Lung or Pleura. Case 1: Early stage of cancer of the pleura, secondary to cancer of the breast, with a note on the removal of the whole mammary gland without removal of the nipple. Case 2: Advanced cancer of the pleura with pleural effusion, secondary to cancer of the breast, with a note on the value of repeated aspiration in such cases, and on the sudden sleep that sometimes follows the sudden return of the lungs to their natural action. Case 3: Huge sarcoma of the lung secondary to subperiosteal sarcoma of the femur, with a note on the possibility of making a diagnosis in this case between a solid growth and an effusion; and on the influence, if any, of amputation at the hip-joint in preventing recurrence of the disease in these cases, the value of the inhalation of oxygen, and the use of Dr. Coley's erysipelas toxin. He said that the cases showed the value of a medical opinion in a surgical case, and of a surgical opinion in a medical case. They also raised important questions as to the diagnosis of these cases, and as to their treatment, both preventive and palliative.—Mr. MACADAM ECCLES pointed out the frequency with which recurrence occurred above the line of incision after amputation of the breast for cancer. With regard to the utility of amputation at the hip-joint for sarcoma of the thigh, he referred to two cases which were free from recurrence two and a half years after operation.—Mr. BIDWELL deprecated the practice of leaving the nipple when amputating the breast for cancer; he also advocated the complete removal of the pectoral muscle in all cases where the growth invaded the muscle.—Mr. PAGET replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Three Cases of Laryngeal Paralysis.—Graves' Disease.—Chronic Pharyngitis.

A MEETING of this society was held on March 20th, Dr. J. S. TAW, President, being in the chair.

Mr. GRAY read a paper for Mr. STEWART and himself on Three Cases of Laryngeal Paralysis. They divided laryngeal paralysis into: (1) neuropathic paralysis—(a) from central lesions, (b) from lesions of the superior laryngeal nerve, and (c) from lesions of the recurrent laryngeal nerve; and (2) myopathic paralysis. They illustrated this division by cases of paralysis of the superior and recurrent laryngeal nerves respectively and also a case of bilateral abductor palsy, which they claimed for the myopathic variety.—They also read a short communication on the Surgical Treatment of Graves' Disease, with some Considerations on its Pathology. They narrated two cases of Graves' disease for which isthmoidectomy had been performed, with very rapid improvement in the patients' symptoms. They discussed the alternative operation of removing half the gland with the isthmus, and claimed for isthmoidectomy equal efficacy and much less risk. Referring to the pathology of Graves' disease they passed in review the various theories laid down and arrived at the conclusion that the theory that answered all the facts best was the one which held that Graves' disease is a primary disease of the thyroid gland, and that the symptoms are due to a hyperplasia with exaggerated functions of the gland—in short, to hyperthyrea, just as those of myxoedema are now universally agreed to be due to the opposite condition of the thyroid, athyrea. They gave all the arguments for this view—especially the appearances seen microscopically in the gland (as summarised by Professor Greenfield in the Bradshaw Lecture of 1893)—the known symptoms of overdose of any of the thyroid preparations and the result of operations.

Mr. MACKIN read a paper on Chronic Pharyngitis and claimed that in the causation and maintenance of this condition the gouty and rheumatic diathesis was in the majority of cases the most prominent factor.—The President, Miss

Gray, Dr. Cattle, and Dr. Tresidder spoke, and Mr. Gray and Mr. Mackie replied.

Some Points connected with the Question of Operation in Acute Intestinal Obstruction.

A MEETING was held on April 5th, Dr. J. S. TEW, President, being in the chair.

An address was delivered by Mr. W. H. A. JACOBSON, of Guy's Hospital, on Some Points connected with the Question of Operation in Acute Intestinal Obstruction. He drew attention to the great mortality attending these operations and inquired why progress had not been so rapid as in many other branches of abdominal surgery. The small intestine was a peculiarly vital part, and in cases of obstruction there was not only local damage, but also far-reaching collapse on account of the important nerves at the root of the mesentery. It was futile to compare operations for the relief of internal obstruction with herniotomy; in the latter the operation was practically extra-peritoneal, while in the former the sac was the whole peritoneal cavity. A large proportion of cases were, and must necessarily remain, fatal, partly on account of the inherent vulnerability of the parts and the attendant collapse, and partly on account of the inability of surgical skill to detect or relieve the seat of strangulation. Cases of obstruction by bands, some internal herniæ, some cases of gall-stones, and some intussusceptions were among those most favourable for operation; while the least hopeful, or almost hopeless, were cases in which complicated snaring and matting of the small intestine or severe volvulus were found. Another favourable class for operation was that in which acute obstruction supervened upon an unsuspected chronic obstruction. The unsatisfactory results of operation had led many practitioners to advocate a purely medical treatment. No doubt some cases so treated recovered, but they were probably cases of incarceration, not of strangulation. Enemata by the long tube were useless for severe acute obstruction. In discussing the question of operation he remarked that every case should be submitted to exploration if the patient's condition warranted it, and, provided the surgeon had a clear knowledge of how far it was safe to go, he preferred a tolerably free incision and described the method of rapidly searching for the obstructed point. No operation should be unduly prolonged; if the obstruction was not readily found it was better to open a distended coil, insert a Paul's tube, and close the abdomen.

Reviews and Notices of Books.

King's College Hospital Reports. Vol. I., Oct. 1st, 1893, to Sept. 30th, 1894. Edited by NESTOR TIRARD, M.D., F.R.C.P.; W. WATSON CHEYNE F.R.C.S., F.R.S.; JOHN PHILLIPS, M.D., F.R.C.P.; and W. D. HALLIBURTON, M.D., F.R.C.P. London: Adlard and Son. 1895.

THE appearance of the names of four editors upon the title-page of this volume seems to have been necessitated by the complex nature of the task undertaken. From the subtitle we learn that the work comprises the Annual Report of King's College Hospital and the Medical Department of King's College, and, as the College includes numerous scientific laboratories, the labour of collecting material must have been considerable. That this should be the first volume of reports issued from this source may cause some surprise, which will not be diminished by the most cursory examination of the value of the various papers and reports. Professor Watson Cheyne, in a post-prandial speech, considers that King's men are "too modest and retiring." The clinical reports alone indicate that there may be some truth in this remark; but they afford evidence of abundant vitality and good material and render full justification for the appearance of another annual volume, in spite of the crowded condition of medical literature. The first paper is an instalment of a historical sketch of the college and hospital by Professor Curnow, which is especially interesting in tracing the origin of King's College, University College, and the University of London. Dr. Beale writes on the Curable Stage of some Incurable Maladies, chronic rheumatoid arthritis receiving the greater share of attention. Dr. Duffin contributes Clinical Considerations on

the Abstraction of Blood. Dr. Tirard writes a short note upon a case of Functional Albuminuria met with in hospital work and illustrates the subject by a brief comparison of similar conditions which have come under his notice. Dr. Ernest White deals with the importance of Psychological Medicine in relation to the General Practitioner. A paper on Sneezing, read by Dr. Greville MacDonald before the King's College Medical Society, is conceived in a lighter vein, but is essentially practical. Dr. Silk is equally satisfactory in his exposition of the Principle of Selection as applied to the Administration of Anæsthetics. Mr. McHardy gives further experiences of the Artificial Maturation of Immature Senile Cataract by Trituration, but somewhat impairs the appearance of the book by marginal notes. Pelvic Suppuration in the Female supplies Dr. John Phillips with a subject for an instructive paper. Mr. Burgbard gives his results in the Treatment of Gonorrhœa and Gleet by means of the Urethroscope. Mr. G. L. Cheatle has a short illustrated paper on Bursitis, and Dr. Aldren Turner gives an interesting account of the Value of the Discoveries of Sir Charles Bell. The medical and surgical reports have not been arranged upon the same system, but there may be much to be said in favour of each plan. Dr. Whitfield, the medical registrar, gives rather full notes of selected cases of interest. Mr. Cargill, the surgical registrar, has prepared a somewhat elaborate General Table of Surgical Cases, while Messrs. Rose, Watson Cheyne, Carless, and Beale deal more fully with the cases of interest that have been treated by them respectively. Dr. John Phillips supplies reports upon the Obstetrical Department and the Gynæcological Wards. Reports by Dr. Hayes and Messrs. McHardy, A. H. Cheatle, and Underwood deal with special departments and are somewhat brief. Dr. Dalton gives a careful classification of the work in the Pathological Department. The reports from the various Practical Departments and Laboratories, in the table of contents attributed to Dr. Halliburton, appear to have been written by different hands; at any rate, other initials are attached to the Historical Sketch of the Anatomical Department, a sketch which will please a former generation of students by its kindly picture of Partridge. A somewhat novel feature is supplied by the pages which record What Old King's Men are Doing—a list likely to be studied with interest by old King's men. The volume reflects great credit upon all concerned in its production, especially when the initial difficulties of such an undertaking are considered. In the preface the editors appeal for "sympathetic indulgence" in starting a new venture. Careful consideration of the work in this volume leads to the conclusion that sympathy should be extended rather to those who in future will have to maintain the same high standard.

A Handbook of Hygiene. By Surgeon-Major A. M. DAVIES. London: Charles Griffin and Co. 1895.

DURING the last few years a very large number of works on hygiene and public health have been issued from the press, and the cry is "Still they come." We are glad, however, to welcome Surgeon-Major Davies's book, for we feel that he has had ample opportunity during the years in which he was assistant-professor in the school of hygiene which Parkes founded to make himself one of the masters of the science, and he has therefore a right to speak. The author claims but little originality; his aim has been to make himself acquainted with what has been written by approved authorities, to compare and weigh different statements, and to digest the information into as small a compass as seemed advisable, while omitting nothing of real importance. The book, which is about the same size as Willoughby's "Health Officer's Pocket-book," contains some 580 pages and will doubtless be very useful to medical men and to officers of the

Army Medical Staff serving abroad, where, as often happens, only books of a minimum size can be carried. Taking the old saying that "a man can live three weeks without food, three days without water, and three minutes without air" as his guide, Surgeon-Major Davies has considered the three chief needs of man in the order of their relative importance. There are also chapters on the Removal and Disposal of Sewage, on Clothing, on Habitations, on Personal Hygiene, on Soils and Sites, on Climate and Meteorology, on the Causation and Prevention of Disease, and on Disinfection. The appendix contains a useful comparison of metrical and English weights and measures, and notes on solutions for chemical analysis, on cultivation media, and on some of the elementary points in statistics. Though all the subjects treated of are necessarily condensed, the book is well and clearly written, and is pleasant to read. The author has succeeded in bringing the work wonderfully well up to date—not an easy matter in these days of rapid progress. It is sufficiently illustrated and we feel we can recommend it. The book is appropriately dedicated to the memory of Dr. F. de Chaumont.

LIBRARY TABLE.

Text-book of Anatomy and Physiology for Nurses. By DIANA CLIFFORD KIMBER, Graduate of Bellevue Training School, Assistant Superintendent, New York Training School. New York and London: Macmillan and Co. 1894.—This work is written in a clear and easy style, and is fully illustrated with excellent engravings. The various chapters follow the order usually adopted in anatomical treatises, commencing with the bones and passing on to the joints, muscles, sanguineo-vascular system, lymphatics, respiratory organs, alimentary canal, urinary organs, skin, nervous system, organs of special sense, and finally the female generative organs. With the description of these several parts is incorporated an ample and very satisfactory account of their mechanical and physiological functions. The book consists of 260 large octavo pages, and probably contains more anatomical and physiological information than is likely to be required by the class of readers for whom it is designed. A considerable amount of histological detail is introduced, and some paragraphs on embryology as well. The authoress expressly defends this in her preface, but many persons will nevertheless adhere to the opinion that the majority of nurses will profit but little by instruction on the subject of the peritoneal endothelium (p. 91), or multipolar nerve cells (p. 200), or the embryonic development of bloodvessels and corpuscles (p. 117). Amid the profusion of highly-finished engravings the reader will perhaps feel the absence of a simple diagram showing the surface areas corresponding to the contents of the chest and abdomen—an extension, in fact, of that shown on p. 154. The volume is handsome in appearance and leaves nothing to be desired in point of mechanical execution; but its treatment of the subject is far too copious and extensive for the purposes of the average nurse, and the next edition will be greatly benefited by free retrenchment of anatomical details.

Posological Table. By WILLIAM CRAIG, M.D. &c., Edin. Edinburgh: E. and S. Livingstone.—This is a useful little book, containing a tabular arrangement of all the Pharmacopœial preparations, with their doses and methods of administrations. A table on Poisons and an Index of Diseases with Appropriate Remedies are included. In our opinion tables of the latter class are of very little use, especially when under the head of Diseases we find symptoms such as "dropsy" and "jaundice" tabulated.

The Last Abbot of Glastonbury and his Companions. By FRANCIS AIDAN GASQUET, D.D., of the Order of St. Benedict. London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 1895.—These biographical sketches carry the reader back to

monastic life in England during the reign of Henry VIII. The commanding position of Glastonbury Abbey among the English religious houses naturally entitles its Abbot to the chief place in the volume, the other subjects of portrayal being Hugh Cook, last Abbot of Reading, and Thomas Marshall, or Beche, last Abbot of Colchester. The author considers that the origin of Glastonbury Abbey was of a date previous to the Christianising of the Anglo-Saxon settlers in England. He does not occupy himself with its history until the year 1525, when Cardinal Wolsey appointed Richard Whiting, a monk belonging to the community, to be the abbot. Great political and ecclesiastical upheavals were at that time imminent. In less than ten years Henry defied the authority of the Pope, and required the clergy of the kingdom to swear allegiance to himself as head of the Church. Abbot Whiting and his community, fifty-one in number, accordingly made the required declaration in 1534. Henry, however, resolved to include in his anti-papal measures the destruction of the monastic system, and his agents found that the law of royal supremacy provided an easy means of attack. Abbot Whiting, having been interrogated at the Abbey by special Royal Commissioners, was sent to the Tower in 1539 on a charge of treason, and in November of that year was executed at Glastonbury and his body quartered. Such lamentable cruelties seem to have been inseparable from religious strife in that intolerant age; the wholesale suppression of the monasteries was, moreover, a ruthless act unworthy of a powerful monarch and a great misfortune to the cause of art and learning. The volume is profusely illustrated, chiefly with charming photo-engravings of monastic architecture.

MAGAZINES AND REVIEWS FOR APRIL.

The Phonographic Quarterly Review.—The success which has attended the efforts of a few medical men to form a Society of Phonographers and the interest which several prominent members of the profession have taken in the movement would lead us to suppose that phonography is destined to become a useful adjunct to medical teaching. To those proficient in the art, and even to those who have but a tyro's acquaintance with it—for the outlines are clearly and beautifully lithographed—the appreciative sketch in the quarterly before us of Dr. Jameson, C.B., written by his old teacher Dr. Gowers, will be perused with feelings of pride. It is by his own choice, Dr. Gowers tells us, that the man who is entrusted with the charge of a kingdom remains simple Dr. Jameson, the title by which he is so well known. As the circumstances under which Dr. Jameson first went to South Africa are but little known, and as an erroneous account has been given in a recently published book, we translate that portion of the article which gives the facts as told to the writer by Dr. Jameson himself. While resident medical officer at University College in 1878 one of the staff went into his room and asked him if he knew a man who would go out to South Africa to take up a partnership there. It was three months before the expiration of Dr. Jameson's two years' term of officership. For a moment he was silent, and thought, "I have no definite prospect here; it is hard to make way; this is sure." He replied, "I will take it, sir." "But you have to go at once," said the questioner. "I will take it, sir," repeated Dr. Jameson. Two days later the future administrator of the British Chartered Company's territories left England. This is so characteristic of the quiet determination of the man that it is worth recording, and has no doubt had a great deal to do with his success. "The Political Status of the Uitlander," by a Uitlander, will be found a fresh contribution to the proper understanding of an old problem, relating to the same part of the empire with which Dr. Jameson is so intimately connected. Another article well worth reading is a short account of the elements of the

hieroglyphic system used by the ancient Egyptians. It will be remembered that Dr. Thomas Young, a member of our own profession, shared with the great French orientalist, Jean François Champollion, the honour of discovering the meaning of the hieroglyphics on the Rosetta Stone and thus threw a flood of light on the meaning of ancient Egyptian writing. Dr. Norman contributes an article on the Evolution of the Post Office Savings Banks.

The English Illustrated Magazine.—The April number of this magazine has a very good list of names—George Gissing, Stanley Weyman, and Archdeacon Farrar amongst others. There is an article upon Sandwich Men, which is a pathetic account of a much-to-be-pitied class. Miss Violet Hunt, deserting her usual dialogue form, has a short story called an "Encore," which is to be commended for the absence of inaccuracy in the account of the heroine's illness. The typical illnesses of fiction writers are, as a rule, of a kind unknown to pathologists, and we are always thankful when we come across a writer who successfully avoids these pitfalls.

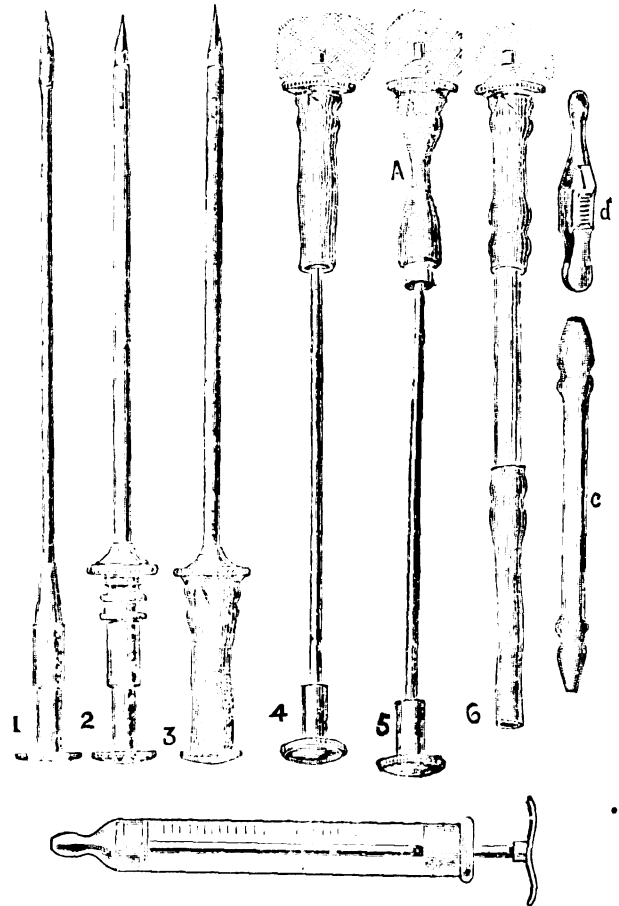
New Inventions.

A NEW INSTRUMENT FOR EXPLORING AND DRAINING CAVITIES.

THE instrument which I am about to describe, of which a short notice appeared in THE LANCET of March 30th in the report of the Clinical Society, has been used many times in the wards of St. Bartholomew's Hospital, and in the hope that it may prove generally useful I venture to bring it before the profession in your columns. It is intended for exploring, draining, or aspirating any cavity, is simple, free from taps and screws, portable, readily cleaned, and can be boiled in a test tube. The instrument consists of a cannula and trocar made in three sizes. The cannula differs from Potain's in having the mount smooth inside, so that the air-tight chamber on the trocar fits directly into it without intervening tap (Fig. 2). The trocar (Fig. 1) has a thick neck half an inch long; its air-tight chamber is a solid metal cylinder, smooth outside, and without any concealed washer or packing within; the trocar can be drawn back through it until the point is buried, but no further. Before use, a piece of rubber tubing one inch and a half long is fitted on to the mount of the cannula, and secured by a thread tied round in the groove provided. When the trocar is put inside, the rubber covers the air-tight cylinder and also the neck of the trocar; it is now ready for use (Fig. 3). The instrument is thrust into the cavity and the trocar drawn back into its cylinder (Fig. 4); in doing this it is well to hold the cylinder at A, lest it be drawn out of the cannula with a jerk. The cylinder is then given a slight twist to ensure that it is loose, and is withdrawn through the rubber tube by steady traction on the trocar; when the rubber is wet and traction is exerted steadily it comes out quite smoothly. While withdrawing the cylinder, the rubber is pinched with finger and thumb, or clamped with bulldog forceps to prevent ingress of air (Figs. 5 and 6).

The cannula is thus left in the cavity ready fitted with drainage-tube. If, now, exploration is intended, a glass syringe is inserted into this tube; if drainage or aspiration is required the tube is pinched again and the syringe replaced by a glass tube (Fig. 6) previously connected either with a long drainage-tube full of water (Fig. 6) or with a Potain's bottle. Failing the bottle, a Higginson syringe will replace it for aspiration, especially if the valves of the latter are out off and the fingers used instead. Each cannula has a blunt rod as well as a trocar to match. To clean the inside of a cannula after use, draw a few threads of soft white darning cotton through it by means of a loop of silver wire provided. Two pairs of bulldog forceps go with each set of trocars, the set being sent out in a neat metal box, which can easily be carried in the pocket. One pair of forceps is used to clamp the drainage-tube, and keep it full of water until fixed. My syringe, for exploring with my cannula, is a ten c.c. glass syringe, the glass having no metal attached to it, so that it is readily

cleaned. The plunger is of asbestos, it can be compressed by an adjustable metal disc, so as to insure always an accurate fit in the barrel. The screw cap in general use in such syringes is replaced by a rubber cork lined and capped with metal, it is more convenient than a screw cap, and is, I am told, much easier to make. The handle of the piston is very comfortable to hold. Every part of the syringe takes to pieces, and can be boiled. Attached to a hypodermic needle, such as is sent out with the trocars, by a stout rubber tube, this syringe does excellently for injecting antitoxin, and has been used for the purpose in the diphtheria ward at St. Bartholomew's Hospital. A pair of test tubes is sent out with the syringe, in which trocars, cannulae, rubber tubes, and hypodermic needle can be boiled; they have rubber caps with a slit in the top, which allow the tube to be boiled nearly full, without the water bumping out, the steam escaping through the slit. Before boiling make the slit



gape by pulling down the cap, and after, close it by pushing up the cap, and the tube will remain sterile until required. The syringe and test tubes are sent out in a box together, with or without four feet of drainage-tube; in hospitals the latter need not be carried, being always obtainable. With a box of trocars in one pocket, and the above in another, the practitioner is ready for the exploring and draining of nearly any pleuritic or ascitic effusion. For the rare cases where the syphon action of the drain-tube full of water is insufficient, and it is nevertheless necessary to withdraw the fluid without incision, he must carry or borrow a Higginson syringe. The Potain's bottle is, of course, better if at hand. The practitioner is also equipped for the injection of antitoxin, and he carries his sterilising apparatus with him. In tapping the abdomen I find it best to lay a small pillow across the patient's knees to support the instrument and keep its end well down inside. The trocars and cannulae are made by Messrs. Arnold and Son of West Smithfield, and the syringe and test tubes by Messrs. Baird and Tatlock of Cross-street, Hatton-garden.—GEORGE C. GABBATT, M.B.,

Late House Physician, St. Bartholomew's Hospital, and Hospital for Diseases of the Chest, City-road.
Little Tew, Enstone, Oxon.

THE LANCET.

LONDON: SATURDAY, APRIL 13, 1895.

THE *raison d'être* of a medical society being the interchange of opinions upon pathological, clinical, and therapeutical facts, it is clear that the members should be of one mind as to the essentials of medicine and pathology. The introduction amongst them of persons who, having gained the necessary qualifications to practise, enter upon their profession by repudiating the bases of its science, and adopt a name which affirms this openly, is both undesirable and unseemly. It was, therefore, with some surprise that we learnt a short time since that at least one of our metropolitan societies comprised some so-called "homœopaths" amongst its members. Now it seemed to us that—because as in the matter of consultation upon an individual case so also in a conference upon any question of scientific interest there can be no common ground between the homœopath and the general body of the profession—it would be important to learn whether any means were generally adopted which would ensure that such societies should be free from members of this class. Accordingly we addressed a letter to the hon. secretaries of thirty-six medical societies (eighteen London and eighteen of the leading provincial ones), asking for information, firstly, as to whether any members of the medical profession who were avowedly homœopaths were members of the society; and, secondly, whether there was any rule or regulation with reference to the admission or exclusion of homœopaths. We received replies from sixteen of the London and fifteen of the provincial societies, for which we tender our thanks to the gentlemen who sent them.

There is a striking uniformity in the information thus furnished to us. With only two exceptions the first question is answered in the negative, the majority in the direct manner, the rest more cautiously stating that they (i.e., the hon. secretaries) "are not aware" of any such members. It is within the bounds of possibility that a comparison between the various rolls of members and the names contained in the publication known as the "Homœopathic Directory" would reveal some striking concordances even in the most select of the societies. But if this be so the members in question have been careful in their action in the society, just as they are sometimes careful in their communications to medical journals, to keep their peculiar tenets in the background. There are, however, two societies, both, singularly enough, devoted to the same special line of study, where the presence of one or more homœopathic members is acknowledged. From the one society we learn that "this society has at least one member who is avowedly a homœopath"; from the other that there are three such members, two of whom joined at the formation of the society, whilst the third was elected subsequently, "and did not then practise homœopathy." In the case of this latter society two out of the three homœopathic members had offered papers for reading, but the council, after discussion, declined to have them read—a practical illustration of the incon-

venience attending the inclusion of homœopathic practitioners in the ranks of a medical society.

As regards the second question, one only of the London societies and three of the provincial have rules against the admission of homœopaths as members. In the majority of the societies reliance is evidently placed upon the fact that nomination from personal knowledge is required, and on the power of the ballot-box. Whether these safeguards are sufficient may well be questioned when consideration is given to the wholesale manner in which ballots are taken at the leading societies. There would be less chance of a practitioner of this kind in a provincial town gaining admission to a society than there is in London; but obviously the important thing is to enforce circumspection on the part of those who nominate. The metropolitan society referred to has always had the excluding regulation in its by-laws, and it is now proposed to make this by-law read as follows: "Subscribing members must be duly registered medical men, but no one shall be a member or eligible for election as such who is practising as a homœopath, or engaged in carrying on, or assisting in carrying on, any form of irregular practice, or who is resorting to any methods for procuring patients or practice which is derogatory to the practice of medicine, surgery, or obstetrics as a profession. And the council shall have power at any time to remove from the roll of the society the name of any member who shall be proved to have transgressed or to be transgressing this law."

This is explicit and is not unworthy of imitation by older and larger bodies. It is all very well for a society or its council to express or give an opinion as to the "unadvisability" of admitting homœopaths, and to open the doors to all registered medical practitioners, as most of these societies do; but then they have only themselves to blame if perchance it be shown that papers have been accepted and read by avowed homœopaths, or other "irregular practitioners," and discredit accrue therefrom to the society.

Nor is it on the ground of tenets alone that the "homœopath" should be excluded from a properly regulated medical society. The fact is that the practice of homœopathy in the strict sense is as infinitesimal as its dosage. What the profession generally have to complain of, what they justly resent, and the ground upon which they are right to decline coöperation is that in practising, as he is bound to do in every department except the limited one of drug treatment, the homœopath follows the canons of medical and surgical practice as universally laid down. He calls himself a "homœopath," and maybe he joins the staff of a "homœopathic hospital," but for all that is done in that hospital—or, for the matter of that, out of it, too—the cognomen has no real meaning, except in so far as it deludes a public only too ready to be impressed by every fanciful medical theory.

OUR contemporary, *Blackwood's Magazine*, in its last issue deals with the old but still ever fresh and insistent question, the habitual criminal, and how civilised society should deal with him. If inquiry and discussion sufficed to solve a difficult problem, and remove one of the greatest sores in the body politic, we might fairly expect to be soon rid of the habitual offender, for few questions are more frequently or more earnestly discussed; but there is reason to fear that

the progress achieved has not been at all commensurate with the efforts put forth. Our contemporary lays down three preliminary dicta—viz., first, that the present method of dealing with our habitual offenders, vagrants, beggars, and inebriates is almost, if not entirely, void of deterrent effects; secondly, that some treatment other than that carried out by our prison system is necessary; and thirdly, that reform is urgently required in our liquor laws. "Hitherto," says the reviewer, "Government inquiries and social science discussions have been conducted as if the principal point to be ascertained was how the existing habitual offenders could be improved. The greater part of the labours of the Departmental Committee now sitting seems so far to have been expended in that direction. We venture to submit that these labours would be much more profitably bestowed if they were devoted to the purpose of stopping the source of supply rather than of dealing with the ready-made offender." This is, no doubt, sound and true. The habit of crime, like the habit of intemperance, is almost, though happily not altogether, ineradicable. As in disease, so in crime, preventive treatment is much easier and more fruitful than curative treatment. We think, however, that it cannot be justly alleged against our legislators that they have been indifferent to measures intended to strike at the root of the genesis and propagation of crime. The industrial school and reformatory system, popular education, and sanitary reform have always had as either their direct or indirect object the removal of conditions that favour the development of the habitual criminal. The subject in its purely legal or political aspects is somewhat outside our province, but the writer in *Blackwood* sees clearly that it is also a question of health, hygiene, and *morale*, and to these phases of the problem we may profitably direct the attention of our readers. A great political leader once said that one of the fundamental duties of the statesman was to endeavour to make well-doing easy and ill-doing difficult. This is profoundly true, and medicine has much to say on the subject to which the statesman would do well to listen. *Ex nihilo nihil*. The habitual criminal is not a *lusus nature*, but a necessary, though deplorable, product of false and unsound conditions of domestic, social, and political life.

The reviewer says truly that one of the great causes of our social evils is that the mass of the lower classes are so deplorably deficient in the knowledge of "how to live." He urges that the children in our schools should be taught some of the frugal and thrifty habits of the poor in France and Germany, that "the rudiments of thrift and order, of thorough cleanliness and regularity in daily life, of gentleness and politeness, of kindness and consideration towards one another, should be instilled into them as the very essence of their existence." Further—and here he touches on matters regarding which the medical profession can have much to say—he urges the importance of improving the housing of the poor, of providing more light and air, open spaces, recreation grounds, and the like. This is all most true and wise, but we are happy to think that the public conscience is by no means asleep on this aspect of the question, and that immense progress has been and is being made. Our artisan population is certainly much the best housed of any European nation, and we do not think that in any country of Europe the general

principles of hygiene and sanitation have permeated the popular mind so widely as they have done in the United Kingdom. It is hardly necessary now to stop to prove that every effort put forth to render life among the lower classes brighter and more wholesome is an indirect blow at the development of intemperance and crime. This is universally admitted by everyone competent to give an opinion on the subject, and our chief present need is to stir up public authorities everywhere to enforce principles the correctness of which is indisputable. The great danger of municipal and other such bodies is that they may fail to have the courage of their convictions, and that they may allow considerations of economy or self-interest to over-ride the public welfare. One of the saddest reflections that can occur to us is the thought of how far practice in these matters falls short of admitted principles. We tamper with Nature's laws because obedience to them is very costly or very inconvenient, and sooner or later Nature takes a terrible revenge upon us.

A minor but still important phase of the evolution of crime is the difficulties which the poor encounter in obtaining wholesome and properly cooked food. There can be no doubt that bad food, intemperance, and crime represent a very common link of causation. As regards the quality of the food-stuffs offered for sale in our markets, we are probably ahead of most nations, but in knowledge of cookery and in skill in turning every food material to the best account we lag most deplorably behind. Education might do much in this particular, but it must be education directed to this specific end. Cookery-classes are now becoming general and deserve every encouragement, but, unhappily, the poor have too often neither the time nor the means to profit by them. We need the general establishment of working men's kitchens, such as those which have been founded so successfully in Vienna, where the poorer classes could obtain an appetising and wholesome meal at a minimum of cost, and we trust the day is near when such institutions will be general in this country. Facilities for popular recreation are another important item in the process of cutting at the sources of crime, and here, too, we think there is considerable progress. It is exceedingly important that popular amusements should be conducted under wholesome hygienic conditions and be kept as free as possible from morbid excitement of any kind.

While we thus lay stress on the material and physical causes that affect the production of crime, we by no means argue that these exhaust the subject. There is, of course, a moral and psychical side of the question. On this, however, we do not propose on the present occasion to enter.

AN event which created considerable interest in medical Scotland on March 28th was the business that took place at the General Council of the University of St. Andrews. There probably never was an occasion on which so large a General Council was known in this University, and there certainly was never one in which so many graduates of medicine were present at one and the same time. Graduates arrived from all parts of the country, and the station-master at Leuchars is reported to have said that he never before had had "such a number of doctors passing through his hands." The reason of so much interest had relation to the establishment of

two new medical chairs in the University, a chair of *Materia Medica* and a chair of *Anatomy*. For some time past an attempt has been made to blend the University of St. Andrews with the University College of Dundee, in order to establish a complete school of medicine, with various degrees as in the other Scotch Universities. The difficulty of making a complete union rested practically in the division of powers and of chairs, the two amalgamating bodies being largely incompatible for union. St. Andrews, as is well known, is one of the oldest and most classical of the Universities, an ancient seat of learning, quiet, retired, and by ages dignified—a school, in short, having a remarkable and ancient history. The University College of Dundee, on the other hand, is quite a modern school, well equipped, ready for work, full of youthful vigour, but in the opinion of some determined to win more than a mere partnership when united to the older body. It seemed, we understand, to St. Andrews men as if the old University were going to be transferred to Dundee, that the living University would be in Dundee, and that the ruins of St. Andrews would remain as an archaeological appendage over the water. Degrees might still be conferred with the after-ceremonial of capping within the time-honoured walls, and some antiquated chairs might still be the seats of some of the professors; but the life was to be in Dundee, and everything was to date henceforth from that active commercial centre. Most of the graduates in medicine felt it a pity to make such a vital change, but it was almost *un fait accompli*. The situation has, however, recently entered a new phase.

The late Mr. DAVID BERRY, of Coolangatta, near Sydney, a Fifeshire gentleman, left the ancient University some time ago a legacy of £100,000. There was a tendency indicated by his trustees for the University Court of St. Andrews to turn this munificent bequest to the purposes of medicine and science in the University itself. We cannot say with certainty that this was the sole cause of a rupture between St. Andrews and Dundee, but it had its bearing and has had its full share in the dispute that has been going on, and which has come now to so distinct a difference that it has been proposed to dissolve the union between the two institutions altogether, or at least to make such an alteration that they shall re-start on a different basis from that which had previously been expected. In January last, therefore, it was proposed in the University Court of St. Andrews that two chairs should be founded in the University and endowed out of the Berry bequest, to be called respectively the Berry chair of *Materia Medica* and the Berry chair of *Anatomy*, with a view to giving two *anni medici* at St. Andrews. The University Court, by a small majority, passed its resolution to this effect; but as the decision was considered even by some of the members of the University Court itself to require wider confirmation, and as it was opposed by many of the Senate, the matter came before the University General Council at the meeting held on March 23rd to which we have called attention, when the following resolution, moved by Professor PERTIGREW and seconded by Sir BENJAMIN W. RICHARDSON, was carried by 74 votes to 38: "That the General Council heartily approved of the action of the University Court in founding from the Berry Bequest

two additional chairs at St. Andrews as calculated to improve the general usefulness of the University, and resolved that every available means be taken by the Council to secure their success as well as that of the extended medical school at St. Andrews as a whole." Two amendments for negating this resolution were put to the meeting, but both were lost, and the effect of the resolution, it is believed, will be that competent professors will be elected, and that St. Andrews will be enabled to prepare medical students during their first two years of study. There will be then, with chairs already existing, chairs of *Anatomy*, *Physiology*, *Chemistry*, *Natural History*, *Materia Medica*, *Physics*, *Botany*, and *Mathematics*, all of them doing good work for students who are preparing to undergo the more practical teaching of the profession in the wards of a hospital. The seconder of the resolution advocated the new plan energetically. He maintained that these preliminary studies would take the place of the old apprenticeship system in medicine, which had its unquestionable advantages, and he urged that anatomy itself could be taught with far greater benefit elsewhere than within a hospital. Students, he contended, would be following an unhealthy study under the healthiest conditions that could be obtained, and sick people would avoid the risk of being exposed to the danger arising from the student leaving the dissecting-room to go at once round the sick ward. There was, of course, some opposition to this argument, but the majority of the voters seemed to be in favour of the change.

The decision, given on Monday last in the House of Lords, in regard to the powers of the Scottish University Commission will, of course, have to be taken into account. For the moment it seems to be decidedly in favour of St. Andrews University maintaining its present attitude.

Annotations.

"Ne quid nimis."

THE PRESIDENCY OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

It must be gratifying to Sir J. Russell Reynolds to find that his services as President of the Royal College of Physicians of London have been recognised by the Fellows, who by 76 votes out of 80 have elected him for another term of office. This practically unanimous vote will be endorsed by the profession in general, who acknowledge in the President one who has worthily merited the honours bestowed on him by his Sovereign and his College. In accordance with custom, before retiring from his year of office Sir Russell Reynolds delivered an address, reviewing the work of the College during the past year, and sketching in clear and appropriate language the main facts in the careers and the individual characteristics of those Fellows who have died during this period. It was, he admitted, an innovation to include in this list the most distinguished on the roll of Members, Dr. Greenhill, but the new departure was fully justified, not only by the fact that long since Dr. Greenhill had been selected for the Fellowship, which he had declined, but also by his singular pre-eminence as a scholar and his fine and honourable character. The pupil of Arnold, and contemporary at Oxford with A. P. Stanley and Newman, his classical attainments led him more in the path of literature than of science, and enabled him to unlock

the treasures of ancient medical writers for the benefit of his countrymen. The singularly varied career of Dr. Brown-Séquard was sketched in bold outline, and the opinion expressed by Sir J. Russell Reynolds that the fame of the successor to Claude Bernard would rest on the work done in his earlier days rather than that of his later life is doubtless true. The unobtrusive career of Dr. Little, who although a physician became through his personal affliction the leading authority on a department of orthopaedics; and the single-minded, just, and honest character of Octavius Sturges, whose election as Senior Censor (within a few weeks of his untimely death) had been universally approved as a fitting testimony to his worth; the genial Withers Moore, and the venerable Bisset Hawkins, whose name had long appeared as the oldest Fellow on the College roll; and, lastly, the industrious and painstaking career of Daniel Hack Tuke, who has left behind him many a *litera scripta* as well as affectionate regard to keep his memory green—gave material for the records of men who had worthily maintained the honour of the College of which they were distinguished ornaments. They were depicted in faithful terms by the President, than whom none could have better fulfilled the duty; and the vote of thanks accorded to him, on the motion of Sir Richard Quain, was certainly well earned.

THE PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

In electing Mr. Christopher Heath to the presidential chair the Council of the Royal College of Surgeons of England have taken a course which was very generally expected of them, which was amply justified by the public, private, and scientific character of their nominee, and which will give genuine pleasure to all sections of the profession. Mr. Heath is known to the whole of the surgical world as a fine exponent of his art, and as a wise, practical, and liberal-minded man, and we are certain that in his capable hands the office will shirk none of the responsibilities that are its inseparable burden, that its dignity will be fully maintained and its utility amply proven.

"ILLEGAL VACCINATION."

It is, unfortunately, notorious that there is a large amount of irregular and inefficient vaccination in this country, and there is every reason to believe that it is increasing. An illustration of this appears in the report of the last meeting of the Lincoln board of guardians, which had under consideration a communication from the Local Government Board containing extracts from a memorandum by Dr. Bruce Low appended to his report as inspector of public vaccination in the union. The extracts were as follows:—

"During the course of my inspection of public vaccination in the Lincoln Union it came to my notice that the wife of a qualified medical man, Christopher Montgomery Davidson, M.R.C.S., L.S.A., was in the habit of vaccinating a large number of cases at her husband's surgery. The certificates for such children were signed 'C. Davidson.' While visiting cases vaccinated by the Lincoln public vaccinator in the poorer parts of Lincoln, I and my colleague, Dr. Reese, who accompanied me, came upon children who had been vaccinated by Mrs. Davidson. Careful questioning of the mothers elicited the fact, in each of the cases we inquired into, that the children had been vaccinated and inspected by Mrs. Davidson, who took from the mother the certificate, saying she would send it to the vaccination officer. In none of the cases where we interviewed the mothers had Mr. Davidson been present at the vaccination or inspection, nor had this gentleman at any time seen the child's arm during the course of its vaccination. Vaccination officer says that Mrs. Davidson's name is Eliza, and that the character of her handwriting is of a very similar character to her husband's, in fact he cannot distinguish between them. In 1892 some 332 cases, and in

1893 395 cases were certified by 'C. Davidson.' Many of the cases done by Mrs. Davidson are stated to have only one scar. This lady vaccinates weekly, and I am told the number done by her grows, the mothers being attracted by the fact that only one mark is made when desired."

Mr. Davidson is not one of the public vaccinators, but it was decided to transmit to him a copy of the report and ask for an explanation. It is provided in the Act that a vaccination performed and certified by an unqualified medical practitioner will not protect the parents of children who obtain such certificates from being liable to prosecution. On the other hand, we opine that the General Medical Council would take notice of a qualified practitioner signing certificates of cases he has not seen. The incident further illustrates the laxity with which the term "successful" is used in application to vaccination. That "one mark," no matter how obtained, can be returned as a successful vaccination proves that the vaccination laws, however well framed as regards the public service, have no control over others, who do not hesitate to practise vaccination inefficiently at the request of persons whose sole desire is to evade the intention of the law whilst obeying its letter. The small-pox statistics of the past decade would have presented a different aspect than they do had vaccination been carried out by all practitioners with the efficiency demanded by the Local Government Board of its public vaccinators. The country will surely expect from the Royal Commission a definite pronouncement on such anomalies as are illustrated by this Lincoln case.

WHAT IS "PREMATURE DISCHARGE" FROM A FEVER HOSPITAL?

ALTHOUGH we are asking this question it may be at once confessed that we see no immediate prospect of being able to answer it; but we raise the issue as affording opportunity for some remarks upon the subject. From time to time we have narrated and discussed in our columns instances in which cases of infectious disease, notably scarlet fever, have occurred in houses shortly after the return to them of patients from fever hospitals; and the question has arisen as to whether these fresh outbreaks were due to careless discharge on the part of the hospital officials or to other causes. We are tempted once more to touch upon this extremely interesting and to medical superintendents of fever hospitals very important subject, since we notice that in recent reports to the Islington sanitary authority the medical officer of health makes reference to cases of scarlet fever which have arisen shortly after the return to certain houses of children discharged from one of the metropolitan fever hospitals. The first case to which we will refer was that of a boy who on admission to hospital was, according to the medical superintendent, suffering from eczema and not, as certified, scarlet fever. It appears, however, that the child developed scarlet fever four days after admission, and that eight weeks from the time of attack was examined for discharge. At this time the child is stated to have recovered from scarlet fever, but to have been still afflicted with an eczematous condition of the hands and feet. Sixty-two days after the onset of scarlet fever the child was discharged, and some four days later the child's sister developed scarlet fever. The medical attendant considered the discharged child had not completely desquamated, and the medical officer of health, on his attention being called to it, reported concerning the child, "His hands are desquamating profusely, while his feet are so to a much less extent." The child was returned to hospital, and the medical officer of health considered it had been prematurely discharged. The next case regarded as prematurely discharged was admitted to hospital on Sept. 22nd and sent out on Nov. 23rd. On Nov. 28th a brother with whom the child slept on the night of its discharge developed scarlet fever, as shortly afterwards did two other children. The medical officer of

health inspected the discharged child on Dec. 6th, and found on its head "three large and thick patches of dandruff, while over the eyebrows there was slight but very perceptible desquamation." With regard to the first case, there appears to have been a difference of opinion as to the meaning of certain conditions seen on the hands and feet. Profuse desquamation on the hands, nine weeks after the onset of scarlet fever, is certainly, in our experience, somewhat unusual. The second case was retained in hospital approximately nine weeks, and on being examined two weeks after discharge was said to be desquamating on the eyebrows. In both instances scarlet fever broke out in the houses shortly after the return of the patients from hospital, and it is, we think, a legitimate inference that these fresh attacks were due, directly or indirectly, to the returned cases. The question, however, would seem to be whether the appearances observed on the second child's eyebrows and head eleven weeks after attack were such as to justify the conclusion of premature discharge; or whether such conditions may not, quite apart from scarlet fever, be frequently found on children's faces and heads. Again, is there not such a thing as recurrent desquamation, and may not a patient discharged with a clear skin subsequently in a fresh environment evince a partial redesquamation? There is, perhaps, at the present time a tendency to regard the fact of scarlet fever developing in a house shortly after the return to it of a discharged hospital patient as evidence of carelessness on the part of the hospital officials; but it is against conclusions of this kind that we would here enter a protest. Before such a decision can be legitimately arrived at it is surely necessary that the details of disinfection practised at the patient's home should be thoroughly gone into, and this even in face of the fact that a discharged patient evinces signs of separating cuticle. We published in THE LANCET of April 6th a paper read by Dr. Joseph Priestley before the Epidemiological Society. In that paper he states that, although during the small-pox epidemic in Leicester he sent to their homes 120 children in every stage of desquamation after scarlet fever, not a single second case occurred. That there is sometimes carelessness in the discharge of patients we are far from denying, but at the same time we are not prepared to admit that the disinfection of houses is always carried out in a manner calculated to effect its object. These "return" cases will, experience seems to teach us, sometimes occur in spite of the utmost care, and the fault, if such it be, may at times lie at the door of the fever hospital, and at others at that of the sanitary authority. When, however, regard be had to the fact that a child discharged from a fever hospital has been for weeks inhaling a more or less highly infected atmosphere, is it not contrary to expectation, as it certainly is to experience, to suppose that any process of disinfection at present known to us, short of destruction of the patient's life, can be absolute; and would it not therefore tend to diminish the chances of "return" cases if parents were advised, where possible, to avoid placing a child fresh from a fever hospital in the same bed with a susceptible brother or sister?

THE CHITRAL EXPEDITION.

THE expedition to Chitral has begun well as far as our military success and the impression which this is calculated to have on the hill tribes, with their strong fatalistic superstitions, are concerned. But the Government of India cannot have gone into this campaign in the present state of Indian finances with a light heart, for it is evident that it will cost many lives and much money before it is over. Our quarrel is exclusively with Umra Khan, and we have to force our way through to Chitral; but there is every reason why we should try to secure, if possible, the friendship, and not the enmity, of the mountain tribes through whose territory we

must pass to get there. The political situation seems to be a complicated one, and it is most unfortunate that it has been forced upon the Indian Government by the unjustifiable action of Umra Khan. The topographical difficulties to be overcome are very great in a mountainous warfare of this nature; passes have to be scaled and taken and rivers to be crossed; and setting aside the fighting and the laborious nature of the marches, the transport of food, baggage, ammunition, and the provision of an adequate amount of water *en route* are no easy matters. The force was compelled by the political and military necessities of the case to start at once, and it is always difficult to obtain the requisite amount of animal transport on such occasions, as everybody knows who has ever taken part in such expeditions. As regards the fighting qualities of the force there can be no doubt, and there need be no misgiving in this respect. So far they have done extremely well, and there is every reason to hope that Surgeon-Major Robertson and the British garrison at Chitral are safe and can hold out until successfully relieved. Meanwhile it is satisfactory to learn that according to intelligence received at the India Office the wounded are doing well.

LAMP ACCIDENTS.

ON Friday, the 5th inst., no less than seven lives were lost owing to the upsetting or explosion of lamps. At Canning Town the mother of a family upset an oil lamp, an explosion is said to have followed, and the shop where the accident happened was at once in a blaze. The flames spread very rapidly, and five children who were asleep in one of the rooms were suffocated. The other accident was due to the explosion of a spirit lamp, two children being burned to death. The many instances which have occurred of deaths from the upsetting or explosion of lamps do not yet seem to have taught the users of lamps the obvious lesson. There are plenty of safety lamps now in the market at prices to suit all pockets, and we believe the London County Council is doing good work in the detection and destruction of lamps which are little less dangerous than a dynamite shell; but much still remains to be done with regard to the education of those who use lamps, and are compelled by stress of circumstances to buy them cheap.

THE TREATMENT OF FROST-BITE.

THE occurrence of frost-bite is more common in some parts of America than it is in England, but nevertheless it occurs sufficiently often to render a paper on its treatment one of interest to all medical men. Dr. Hermance of Philadelphia publishes his experience in the *Philadelphia Polyclinic* of March 9th. He divides the dermatitis of frost-bite into two classes, firstly, cases in which the injury is so severe that vesicles or blebs are formed; and, secondly, milder cases which go on to recovery without the formation of vesicles. Of thirty patients selected at random for consideration five applied for treatment immediately upon finding that the parts were becoming numb. The five patients were subjected, firstly, to prolonged rubbing with snow, followed by douches of ice-water, and afterwards applications of ichthyol ointment (25 per cent.). The remaining twenty-five patients did not apply for relief until the parts had begun to exhibit pain and increase of heat. Of these twenty-five, eighteen were treated with ichthyol ointment (33.3 per cent.), four with benzoated collodion, and three with a solution of nitrate of silver (10 per cent.). Twelve of the whole number of thirty cases were seen twenty-four hours after the first dressing. All had been treated with the ichthyol ointment, and all reported relief from pain experienced to a great extent immediately upon application, and lasting in most cases for more than twelve hours. Eight of these cases exhibited blebs upon the affected parts; the vesicles were punctured, the serum

drained, and a second dressing of ichthyol ointment applied. The remaining four of the first group were so completely relieved that they were discharged without further treatment. Of the remaining eighteen cases returning in from forty-eight to ninety hours after first treatment, two of the three patients who had been treated with nitrate of silver were discharged cured; two of four treated with benzoated collodion reported increase of pain, and blebs had formed; while in the other two treatment had failed to modify the course of the affection. Eleven cases thus remain unaccounted for; these were all treated with ichthyol ointment at the primary dressing, and eight were discharged after having received a second dressing of ichthyol. Of the total thirty, nine were of a serious character, in which there were lesions of the entire skin, and in some cases of the superficial fascia; these cases were treated with ichthyol ointment until the parts became raw and exposed when acetanilid ointment (10 per cent.) was applied. In a certain number of cases (five) the destruction of cutis was so great, and the disturbance of the vaso-motor mechanism so serious, that treatment failed, and nothing could be done except to wait until nature threw off the injured tissues and to assist in the meantime by keeping the parts aseptic.

IS TERRESTRIAL HELIUM A NEW DISCOVERY?

IN our issue of two weeks ago we announced the discovery, by Professor Ramsay, of another new gas, which, in company with argon, he obtained from the mineral clèveite, by merely acting upon it with sulphuric acid. This new constituent proved to give the spectroscopic characters of an element hitherto supposed to exist in the sun, to which therefore the name helium was given. Professor Ramsay has obtained a considerable quantity of this mixture, we learn, and hopes soon to be able to report upon its properties; and since helium has been regarded as much lighter even than hydrogen the determination of its actual density promises to be of unusual interest. If helium could be obtained in tolerable quantity, what an important bearing it might have in aeronautics. Thus, if it be much lighter than hydrogen its lifting power would be much greater, and the cumbersome and clumsy dimensions of our present balloon, it is easy to see, could be reduced with very great advantage. Was this wish father to the thought, we wonder, when, more than fifty years ago, Edgar Allan Poe, in his narrative of the adventures of Hans Pfaall, referred to the use of a gas much lighter than hydrogen for inflating the balloon in which he undertook his thrilling journey. The passage referring to the preparations for the balloon voyage is so remarkable in connexion with recent chemical discoveries that we reproduce it in its entirety. Thus, after referring to the purchase of numerous instruments and materials for experiments in the upper regions of the upper atmosphere, Hans goes on to write:—

"I then took opportunities of conveying by night, to a retired situation east of Rotterdam, five ironbound casks, to contain about fifty gallons each, and one of a larger size; six tin tubes, three inches in diameter, properly shaped, and ten feet in length: a quantity of a *particular metallic substance, or semi-metal*, which I shall not name, and a dozen demijohns of a *very common acid*. The gas to be formed from these latter materials is a gas never yet generated by any other person than myself—or at least never applied to any similar purpose. I can only venture to say here that it is a *constituent of azote*, so long considered irreducible, and that its density is about 37·4 times less than that of hydrogen. It is tasteless, but not odourless; burns, when pure, with a greenish flame; and is instantaneously fatal to animal life. Its full secret I would make no difficulty in disclosing but that it of right belongs (as I have before hinted) to a citizen of Nantz, in France, by whom it was conditionally communicated to myself. The same individual submitted to me, without being at all aware of my intentions, a method of constructing balloons from the membrane of a certain animal,

through which substance any escape of gas was nearly an impossibility. I found it, however, altogether too expensive, and was not sure, upon the whole, whether cambric muslin with a coating of gum caoutchouc was not equally as good. I mention this circumstance because I think it probable that hereafter the individual in question may attempt a balloon ascension with the novel gas and material I have spoken of, and I do not wish to deprive him of the honour of a very singular invention."

The italics, *which are not ours*, might well have been at the present juncture. Could it possibly have been the conception purely of a highly imaginative and poetic mind, or had Edgar Allan Poe really learned from a friendly philosopher of the existence of a gas lighter than hydrogen, and whose discoveries may not have reached us for a host of conceivable causes? Perhaps Professor Ramsay or Lord Rayleigh will explain.

INFLUENZA PRECAUTIONS IN MANCHESTER.

JUDGED by the weekly returns of the medical officer of health for the week ending March 23rd—the last which has reached us—the mortality occasioned by influenza appears to be still in the ascendant, the deaths in the week referred to having numbered 33, as against 23 for the previous week. Having regard to the persistence of the malady, Dr. James Niven has, we notice, recently issued a placard setting forth briefly the precautions it is expedient that those attacked and exposed to infection should take. After indicating the symptoms of the disease and referring to its infectivity, Dr. Niven advises workpeople to wear warm clothing and to avoid unnecessary exposure during the prevalence of the disease; and he also points to the importance of paying special attention to the cleanliness and ventilation of factories and workshops, with the view, we presume, of diminishing the risks of infection and promoting recovery. Dr. Niven has done well to issue this notice, and it will do good if only it induces those attacked not to return to work too soon. Unfortunately, we fear many of the workers of Manchester can only partially follow the advice of their medical officer of health; but we trust, for the sake of themselves and those dependent upon them, they will do what they can. If the financial loss to the community of Manchester which the after-effects of influenza have already entailed could be worked out and expressed in figures, it would be a strong inducement to a proper appreciation of Dr. Niven's placard.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

THE appeal issued by the authorities of the Royal Medical Benevolent College in connexion with the approaching festival should come with force to all successful or moderately successful members of the profession. The chair will be taken by the Right Honourable Arthur J. Balfour, M.P. When a statesman of the first rank and with innumerable engagements accepts such a duty, the least that members of the profession whose benefit is contemplated can do is to support him by their presence or their substantial sympathy. A larger subscription is urgently needed to keep up the present annual outlay in charity of £6000. There is a sound of good news for the pensioners of the College. The scheme for improving their condition has received important help from the will of the late Dr. Bowen. The Council hope to be able to raise the annuities of all non-resident pensioners, and that the recipients will be enabled to spend their declining years with their friends. This can only be done, however, in perpetuity by the generous support of the subscribers. The school is open to all classes. The Foundation scholars—fifty in number—receive an education of the highest class and are boarded, clothed, and maintained at the expense of the College. They are elected by the governors from the necessitous orphans o

such medical men as would be eligible for pensionership. Besides these there are about 185 resident pupils. If the sons of medical men, they are charged £60 a year for education, board, &c.; if not, they are charged £70 a year. The introduction of the sons of other than medical men is not only a source of gain and profit to the College, enabling it to do more helpful and benevolent work for the necessitous members of the profession, but it is a distinct advantage to introduce scholars with other callings in view than the medical, and representing other classes. Variety is most desirable. There is the same variety and all-roundness in the teaching. Though science teaching is principally considered, with three laboratories and a lecture theatre, there is a good classical school, where the education is mainly classical, but with a due addition of mathematics, French, German, Latin, natural science, history, geography, and last, though not least, English. The school is recognised by the Conjoint Board as a "school of science," and pupils are prepared for the matriculation examination of the University of London. Special arrangements are made for army candidates, and two boys have recently been prepared for Sandhurst. The ten medical scholarships at the hospital schools in London, ranging from 90 to 125 guineas, and other scholarships or exhibitions at the universities, tend greatly to facilitate the career of any meritorious boy. It will be an inducement to all who are benevolently disposed to give liberally at the approaching festival to know that their donations or subscriptions will go only to the general fund for pensioners or Foundation scholars. We learn that H.R.H. the Prince of Wales has consented to lay the foundation stone of the new buildings contemplated by the council in June.

THE ANTIQUITY OF MAN.

In the current number of the *Nineteenth Century* Professor Prestwich adduces some new facts in support of the great antiquity of man on this planet. The history of opinion on this subject is curious. So recently as 1847 the Geological Society declined to publish a paper which aimed at showing that man co-existed with the extinct quaternary mammalia. Then came the researches of M. Boucher de Perthes, near Abbeville, which proved the existence of human weapons in the quaternary beds containing the fossils of the mammoth, woolly rhinoceros, hyæna, reindeer, &c. Then Professor Prestwich, Sir John Evans, and others showed that undoubted worked flints were present in shingle containing mammalian remains, and so men of science became satisfied that palæolithic man existed in post-glacial times. Here the question rested for a time, but in the course of time inquiry was naturally directed to the problem whether the relics met with in the valley drifts were the work of the earliest race of men. "The workmanship on some specimens of the palæolithic implements was not very much inferior to that of neolithic times, and what was known of the human frame indicated but slight, if any, inferiority in its physical structure to that of modern man. All led one to suppose that ruder ancestors preceded palæolithic man." The most important recent discoveries have been on the North Downs in Kent. Here implements of various kinds—scrapers, drills, hand-picks, roughly chipped flints, &c.—have been found, and Professor Prestwich is disposed to assign a very high antiquity to them. These implements appear to have been used for hammering, for breaking bones, for scraping skins, bones, and sticks, and for chipping and trimming other stones for use. He believes that their age must be assigned to some time previously to, or contemporaneously with, some part of the glacial period. According to Professor Prestwich the appearance of palæolithic man—that is to say, the man of the valley drifts—does not extend probably beyond a

distance of about 20,000 to 30,000 years, and his disappearance at about from 10,000 to 12,000 years, from our own time. Other authorities, such as Croll, have assigned a much more remote period; but while absolute agreement on a matter so difficult is not to be expected, it is evident that geologists are more and more becoming of opinion that a very high antiquity of man is practically certain.

THE MIDWIFE QUESTION.

AN inquest was held on the 3rd ult. at Gainsborough on the body of a woman who had died in childbed, being attended by a midwife until late in the labour, when a medical man was sent for. The patient died from, according to the verdict, "internal rupture." The coroner made the very admirable remark that "midwives were very good when a doctor could not be got, that though in Gainsborough they had every medical facility, still a certain class would persist in employing a midwife, and that the deceased had lost her life simply from not having proper medical attendance."

"GLASS, WITH CARE."

It is noteworthy that serious inconvenience and even injury may result from the most trifling imprudence. A few days ago a barman accidentally fell, broke a bottle he had in his pocket, and received a wound in the leg from the broken glass which caused him to be laid up in hospital. His was a very simple, though an expensive, act of carelessness. Most persons must plead guilty to having repeatedly offended in like manner, and the lesson clearly taught by this accident to all such need not be impressed by further demonstration. For obvious reasons an injury by broken glass is especially troublesome, and it constantly gives rise to subsequent suffering due to retention of broken fragments in the wound. A little forethought in carrying or in handling and opening bottles will usually prevent such awkward consequences of incaution as that above related. Its exercise is the more advisable since bottle glass, even when new, is not guaranteed as free from cracks or other defects.

A NEW ILLUMINANT.

MOST persons have at times noticed a not offensive but peculiarly pungent odour given off from gas stoves in which from insufficient air-supply the combustion is more or less imperfect. This is acetylene, C_2H_2 , a poisonous gas especially fatal to vegetable life. It has hitherto been the practice to estimate the higher hydrocarbons of coal gas in terms of olefiant gas or ethylene, C_2H_4 ; but Professor Vivian Lewes has shown that in the flame they are all resolved into acetylene, and that, having the highest possible percentage of carbon, it is the most powerful of illuminants. Till recently its preparation in the pure state has been difficult and costly, but since it has been found that calcic carbide when slaked evolved this gas, in accordance with the equation $CaC_2 + H_2O = CaO + C_2H_2$, at the rate of over five cubic feet per pound, and that by heating together chalk and carbon of any kind in the electric furnace the carbide is produced at a cost of about £4 per ton, it is proposed to employ acetylene for enriching poor gas either at the works or in the house of the consumer or to burn it in specially constructed lamps. If its poisonous character be understood its strong penetrating odour will be a sufficient safeguard. In this respect it contrasts favourably with carbon monoxide, CO, the most poisonous constituent of coal gas, and a product of incomplete combustion which is quite inodorous. The cost of acetylene would probably be about 7s. per 1000 cubic ft., but its illuminating power is 240 candles, or fifteen times greater than the gas at present supplied to London. Still the tendency to deposition in the

form of soot of the excess of carbon which may possibly escape combustion is an almost insuperable objection to all processes for employing these very high hydrocarbons, and it would perhaps be better to seek "more light" in the direction first pointed out by Drummond in the limelight, and followed by Dr. Auer von Welsbach in his incandescent gas burner, only seeking a less fragile material for the "mantle" than the present form, which is composed of certain rare earths.

PAIN FOLLOWING EXTRACTION OF TEETH.

AT a recent meeting of the Odontological Society of Great Britain a very interesting case of pain following the extraction of a tooth was brought to the notice of the members by Mr. Storer Bennett. The patient, who was a female aged twenty-three, had suffered pain, periostitic in character, from an upper third molar. The tooth was removed without difficulty, but the socket remained intensely painful for the next twelve days, in spite of the repeated applications of such remedies as strong carbolic acid, tincture of aconite, cocaine, and hot poppy fomentations. During this period the socket granulated healthily, except at its apex, where on examination a spot about the size of a pin's head was discovered, which appeared white in colour, and caused on being touched the greatest agony. Thinking that the case was due to the exposure of the end of nerve Mr. Bennett treated it by "division of the nerve just below the surface of the wound." The result was completely satisfactory, the pain ceasing immediately after the operation.

THE NATIONAL LEPROSY FUND.

A SUBCOMMITTEE, consisting of Sir Joseph Fayrer, Sir W. Guyer Hunter, and Mr. Hutchinson, was appointed by the National Leprosy Fund in January, 1894, to conduct such further investigations as to the nature and causes of leprosy as might seem desirable, and it may be remembered that this subcommittee announced in our advertisement columns that they were prepared to offer honoraria of fifty guineas each for the best reports on the following subjects:—(1) On the facts as to the recent increase of leprosy at the Cape and its present prevalence in South Africa; (2) on the history of the decline and final extinction of leprosy as an endemic disease in the British Isles; (3) on the extent to which leprosy prevails in Persia and neighbouring countries, and its supposed causes; (4) on the prevalence of leprosy in the islands of the Pacific, and the supposed exemption of certain groups; (5) on the conditions under which leprosy at present prevails in China, Cochin China, Batavia, and the Malay Peninsula; (6) on the conditions under which leprosy has declined in Iceland, and the extent of its former and present prevalence; (7) on the history of leprosy in Madagascar, and the conditions of its present prevalence; (8) on the reputed recent increase of leprosy on the Australian continent, its extent and possible causes; (9) are there any islands in the East Indian seas wholly free from leprosy, and, if so, in what do their conditions differ from those in which it prevails? (10) the best essay on any subject connected with leprosy (the honorarium for this essay was, if the committee thought fit, to be added to any of the preceding). We have received from the subcommittee and adjudicators of the awards the names of the gentlemen who have gained prizes in the different subjects, and they are as follows:—On the Facts as to the Recent Increase of Leprosy at the Cape and its Present Prevalence in South Africa: S. P. Impey, M.D., Medical Superintendent, Robbin Island. On the History of the Decline and Final Extinction of Leprosy as an Endemic Disease in the British Islands: George Newman, M.D. On the Conditions under which Leprosy has declined

in Iceland and on the Extent of its Former and Present Prevalence: Edward Ehlers, M.D., of Copenhagen. On the Reputed Recent Increase of Leprosy on the Australian Continent; its Extent and Possible Causes: Ashburton Thompson, M.D. On the Conditions under which Leprosy prevails in China, Cochin China, Batavia, and the Malay Peninsula: James Cantlie, M.B., of Hong-Kong. On some of the subjects for which prizes were offered no essays have been received. Some of those which were sent were not considered by the subcommittee to be sufficiently full to meet the terms of the competition. We are asked to announce that unsuccessful authors can have their manuscripts returned on application at 1, Park-crescent, Regent's-park.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE trustees of the will of the late Mr. William A. Guesdon have informed the Lord Mayor of London that in pursuance of the powers vested in them by the will they have chosen certain charitable institutions to participate in the estate generally. Under the scheme it is understood that a sum of £45,346 1s. 3d. in Consols is to be transferred into the names of the Official Trustees of Charitable Funds, who will remit the dividends on the Consols to the Lord Mayor of London for the time being, in trust for the Hospital Sunday Fund. We congratulate the Council of the Fund on this handsome augmentation of their income, and trust that it may be a long time before the trustees in whom the discretion is vested will find a charity more worthy of their assistance. The interest on a further sum of £9069 4s. 3d. has been left to the Mansion House Poor-box.

THE CONFERENCE ON SANITARY PROGRESS AND REFORM AT MANCHESTER.

THE annual meeting of the Manchester and Salford Sanitary Association on April 24th will inaugurate a conference to extend over three days. It is promoted by the association in connexion with the district councils for the registration of plumbers in the northern and midland counties. The former will occupy the Wednesday and Thursday, and the latter part of Thursday and Friday. The subjects to be chiefly dealt with in the first part of the Conference are Air Pollution, Sanitation of Schools, Recreation—both Physical and Mental, and Woman's Work in Sanitary Reform. Addresses and papers are promised by Sir R. Rawlinson, Sir B. W. Richardson, Cardinal Vaughan, Lord Meath, Mr. Charles Roberts, and others. An International Health Exhibition is to be held in St. James's Hall, which will open on April 22nd and close on May 11th. It is under distinguished patronage and will be on an extensive scale.

THE MODERN TRAINED NURSE.

SIR DYCE DUCKWORTH has always taken a deep interest in nursing and in the Royal British Nurses Association, of which he is vice-president, and in an address delivered before this body the other day he laid stress upon various important points connected with the profession of nursing, and not the least of these was the absolute necessity, as he pointed out, of a nurse being subservient to the medical man. The old style of nurse has so entirely disappeared that the patients and practitioners of this generation can hardly realise how much the successful treatment of disease owes to the help of an intelligent, trained woman; and this expression, *trained*, means, as Sir Dyce Duckworth clearly pointed out, not only medical and physical knowledge, but tact and silence. The abbot of a Nitrian monastery once gave one of his monks as a rule of life the first verse of the psalm commencing, "I said I will take heed to my ways, that I offend not with my tongue." "When you can keep that rule," he said, "come, and I will give you another." Tradition has it

that the worthy monk never arrived at the second. Be this true or not, it shows how the tongue in all ages has been regarded as an unruly member, and all nurses ought to remember to be absolutely silent as regards anything they may see or hear outside their own immediate duties. The Hippocratic oath still remains the canon for every attendant on the sick, either nurse or medical practitioner, and on this point Sir Dyce Duckworth rightly spoke with great earnestness.

LORD ROSEBERY'S HEALTH.

WE had hoped to be able to announce that the Premier was now entirely restored to his usual health. Unfortunately, however, his recovery is not yet quite complete, although he is making good progress. It is chiefly owing to want of sufficient sleep that his convalescence is retarded. Lord Rosebery is able to take riding and walking exercise daily—a fact of good import, as there can be no better remedy for insomnia than healthily acquired fatigue.

THE ISOLATION HOSPITAL ACT IN WORCESTERSHIRE.

THE Worcestershire county council, to which Mr. George Frobroke is medical officer of health, has exhibited considerable activity in the matter of joint hospital districts, and two such districts have recently been formed. In both instances one or more of the constituent authorities petitioned the county council, under the provisions of the above Act, that certain joint hospital districts should be constituted, and in each case an inquiry was subsequently made under Section 6 of the Act by the county medical officer of health. The council considered a *prima-facie* case made out and, after local inquiry as provided for by the Act had been held, the Bromsgrove, Droitwich, and Redditch, and the Malvern hospital districts were established. A hospital committee has in each case been provided for by the order, and such committees are possessed of extensive powers as regards management &c. They have, however, no power to raise money by loan for the purposes of a hospital. Such powers would appear to be alone possessed by the county council, who, with the consent of the Local Government Board, are, by the Local Government Act, 1888, empowered to borrow for the purpose indicated. It seems, too, that under the Isolation Hospitals Act, 1893, any money so borrowed must be repaid to the county council by the local authorities with interest at the rate of 4 per cent. We shall look forward to the further development of affairs in connexion with these two districts, and we note with pleasure that in the Malvern district provision is already made for a separate small-pox hospital. The committee in each instance is composed of representatives from the local areas concerned, and the county council have no representation upon them.

UNHEALTHY AREAS IN LEEDS.

LIKE most large cities, Leeds suffers to-day from the ignorance or indifference of our forefathers in "the good old times" as to the conditions necessary for healthy town life, in being compelled to spend large sums of the ratepayers' money in order to remedy ancient blunders. The sanitary committee has just obtained the sanction of the Council for the preparation of a scheme for dealing with one notoriously unhealthy district of seventy-seven acres. This is a large undertaking, and the medical officer of health, Dr. Cameron, is to be congratulated on his courage in attacking sanitary evils so boldly, and in being so loyally supported by his committee and by the Council. The district has long been known as "a standing menace to the health of the city." Forty years ago typhus fever constantly prevailed, but the people objected to inter-

ference by the sanitary authority, so that "the aid of a posse of police had to be sought when typhus fever patients were removed to hospital." And its old reputation has been well kept up, for the death-rate is 30 per cent. more than the average of the city, including this area, notwithstanding many attempts to improve its sanitary condition. It is proposed to open out the district by running through it certain main roads, which will be a great public convenience; to alter certain levels and steep gradients; to pull down and demolish bad property, but to leave standing large works and public buildings. The cost is roughly estimated to be between £300,000 and £400,000. The sale of the cleared land is expected to bring in a good round sum. The scheme proposed divides the area into five sections, to be dealt with separately and not all at once. In the discussion on the question one gentleman said, "What about the Leylands? There was not a dirtier place in Leeds; people slept in the cellars there and yet did not die." This weighty argument did not prove effective, for in the end the resolution of the sanitary committee was carried by 47 to 5. On the question of rents one speaker said: "The Corporation had the power to build back-to-back houses, which could be erected and let at a minimum rent." If this power is acted on it will be a notable instance of retrograde progression which Leeds will surely not take.

THE ETIOLOGY OF LOCOMOTOR ATAXY.

DR. PITRES of Bordeaux has made extensive investigations in the hope of throwing light upon the still doubtful points in the etiology of this disease. His first results were published in a thesis by Dr. Bereni and comprised 225 cases. The influence of syphilis was found to be great but not overwhelming, and was by no means in keeping with recent ideas on the subject. In considering those cases in which the etiology was certain there were 125 out of 225—i.e., 55.5 per cent.—and even in many of these cases the syphilis was associated with other causes of tabes dorsalis as hereditary joint affections, alcoholism, sexual excess, &c., so that the exact percentage which could safely be attributed to syphilis was reduced to 22.33 per cent. Of the other patients about 33.44 per cent. had no sign of previous syphilis, and twice during his experience Dr. Pitres has seen tabetic symptoms precede syphilitic manifestations, so that these statistics tend to show that though syphilis is a cause it is not by any means the only one, but that many other conditions also play their part in setting up the disease. There is also in Dr. Bereni's work a chapter on the investigation of the heredity of tabes, but no direct tendency to inheritance was found.

TRAINED NURSES AT A WORKHOUSE.

SINCE the issue of the circular from the Local Government Board at the beginning of the year upon workhouse administration, in which special stress was laid upon the absolute necessity of supplying good nurses, numerous boards of guardians, at any rate in Sussex, at once gave the matter their attention. A board in South-west Sussex appointed a head nurse and two assistants, but the time they did duty at the workhouse was so short as to be able to be counted by the hours. At the first meeting of the board after the arrival of the nurses the master stated: "They defy the authority of the master and the matron, and find fault with everything, in short." An important point, it appeared, was that the nurses refused to bath the vagrants. In that the nurses were workhouse nurses, the guardians considered that this was part of their duty, but the head nurse held quite a different opinion, and one in which the medical officer concurred. So short a time had the nurses been in the workhouse that their appointment had not been confirmed, and by mutual consent they

remained but a very hours in the service of the guardians after their meeting. It was admitted by more than one member of the board that the nurses had been the means of discovering many imperfections which otherwise, perhaps, for some time to come would have continued to remain dormant—one beneficial result of the Local Government Board's circular. It is needless to add that the whole matter is to receive the full consideration of the guardians, and we hope means will speedily be adopted whereby such a state of things which has existed in the workhouse in question will entirely disappear.

THE Radcliffe Travelling Fellowship at Oxford has been gained by Mr. Arthur C. Latham, M.A., M.B., Ch.B., of Balliol College. Mr. Latham graduated as a First Class in the Final Natural Science Schools in Physiology in 1892 and a Second Class in the Final Natural Science School in Chemistry in 1890. He obtained a University Scholarship at St. George's Hospital, London, 1893, open to students of Oxford or Cambridge. Mr. Latham is a son of Dr. P. W. Latham, the late Downing Professor of Medicine in the University of Cambridge and the present Senior Censor of the Royal College of Physicians of London.

MR. H. J. WARING, M.S., M.B., B.Sc., F.R.C.S., of St. Bartholomew's Hospital, has been awarded the Jacksonian Prize of the Royal College of Surgeons of England. The exact title of his Jacksonian Essay is "The Diagnosis and Surgical Treatment of the Diseases of the Liver, Gall-bladder, and Biliary Ducts." Mr. Waring holds the appointments of Senior Demonstrator of Anatomy, and Demonstrator of Operative Surgery, at St. Bartholomew's Hospital; and Assistant Surgeon to the Metropolitan Hospital.

In another column will be found a report of the first day's proceedings of the German Congress of Internal Medicine, which has been taking place this week at Munich under the presidency of Professor von Ziemssen. The discussion upon the Antitoxin Treatment of Diphtheria was one of great importance and had been anticipated with interest.

SIR JOSEPH LISTER was received by the Prince of Wales at Marlborough House on April 9th, and was presented by His Royal Highness with the Albert medal of the Society of Arts, which had been awarded to him in recognition of his application of antiseptic methods to practical surgery.

THE Festival Dinner of the Royal Medical Benevolent College will be held at the Queen's Hall, Langham-place, on Wednesday, May 15th. The Right Honourable Arthur J. Balfour, M.P., will take the chair.

THE REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1893.

(Concluded from p. 828.)

WITH regard to the prevalence of enteric fever—that scourge of our European troops serving in India—the returns for 1893 show that there has been a slight decrease in admissions and deaths. The improvement, we are told, is hardly appreciable, however, in Bengal and Madras, but more marked in the Bombay Presidency. At Sialkot, Agra, Meerut, Lucknow, Bareilly, Umballa, Rawal Pindi, and some other stations the disease was specially prevalent, the admission-rate ranging from 49.3 at Sialkot to 21.7 per 1000 at Bareilly.

At Agra, where the admission-rate was 42.6 and the death-rate 12.43, there was a circumscribed outbreak in the East Surrey Regiment, in which no less than 42 occurred out of a total of 48 cases in the garrison. Mr. Hankin, the chemical examiner and bacteriologist for the North-West Provinces, found, it will be remembered, typhoid bacilli in the aerated water and in the *dahi* (eaten in the shape of cream, cheese, or sweetmeat) supplied to the regiment. As regards the greater liability of the young soldier recently arrived in India to be attacked with this fever there can be no doubt. It is a matter which has been already threshed out, and the evidence in the present is but a repetition of that in former reports. A comparison of the relative liability of European troops, native troops, and gaol population to enteric fever shows its very unequal incidence upon Europeans and natives in India.

	Per 1000.			
	1882-1891.		1893.	
	Admissions.	Deaths.	Admissions.	Deaths.
European troops	14.7	4.13	20.0	5.29
Native troops	0.3	0.09	0.3	0.04
Gaol population	0.2	0.10	0.3	0.16

From some of the descriptions recorded of the post-mortem appearances in natives it is not clear that they were all really cases of enteric fever. The Goorkha regiments seem, on the whole, to be more liable than other native troops to this disease—a fact which possesses some interest. Our knowledge of the etiology, causes, and pathology of enteric fever in India cannot be said to have been greatly advanced of late. Assuming that the disease depends upon the Eberth-Gaffky bacillus, the question narrows itself into an investigation into the life-history of that bacillus and the way in which it finds an entrance into the human body. It seems clear that ordinary domestic filters are incapable of removing pathogenic microbes from water. The barrack filters at present in use in India apparently afford little or no protection to the troops; indeed, it is questionable, as we have said, whether they are not sources of danger. We repeat that every care should be taken to secure a good and pure water-supply at its source and to keep it free from all contamination. The Pasteur-Chamberland or Berkefeld filters should, we think, replace the filters ordinarily used in India. It might be very advisable, too, if some economical and easy method of destroying typhoid excreta by fire could be adopted. Some observers entertain the view that all the cases of enteric fever encountered in India, although clinically and pathologically allied to that fever in other countries, are either not necessarily identical with it in causation or, assuming that they are all of the same nature and attributable to one and the same specific cause, that the generation and reproduction of this cause do not take place exclusively in the human body. Be all this as it may, however, it is clearly our duty to search out and remove those causes which have been already established. Although the part which sewer air, for example, may play in its production may be still open to doubt, and in the case of India there are no sewers except in some of the cities and large towns, the evidence that has been adduced in regard to contaminated water and milk as causes of this fever does not seem to admit of any doubt. The difficulty in regard to some outbreaks in India is to explain on this theory the relative or absolute immunity of children and women on such occasions.

The amount of inefficiency in the European army in India attributable to venereal diseases is, we may almost say, appalling, especially when we consider the impaired health and subsequent constitutional effects of syphilitic infection. During 1893 there were, we are told, 2619 men, or the strength of nearly three regiments, constantly in hospital for venereal diseases.

The report under review has, as usual, an interesting table showing the results of a tour of Indian service upon European corps. Out of 872 men in one regiment who came to India sixteen years before only 8 returned with it: 66 had died, 114 had been invalided, 8 returned to England, and the remainder had been transferred to other regiments or discharged from the service.

The proportion of married to unmarried soldiers in India is 2364 of the former to 69,422 of the latter; in other words, the percentage of married to total strength is 3.29. The statistics regarding the women show a great improvement in 1893 in respect of admission and death-rates upon those of 1892, which were unusually high. The chief causes of death among soldiers' wives were enteric fever, puerperal fever, childbirth, and remittent fever. In the Bengal Presidency the death-rate was 16.26 per 1000, in Madras 7.66, and in Bombay 15.85.

The children of the army in India, amounting to a strength of 5662, had an admission-rate of 554.9 and a death-rate of 39.03 per 1000 respectively in 1893. There were no deaths recorded from cholera, and only 4 from enteric fever, the ages of the children ranging from infancy to fifteen years and upwards.

There were 6382 officers on the strength of the army in India on July 1st, 1893. The death-rate of officers of the British service was 10.67 per 1000, and of the Indian service 8.82; the difference is due to the larger number of deaths from enteric fever among the former, the respective numbers being 11 and 1, and the explanation of the difference, we are informed, and no doubt correctly, is probably due to the fact that officers do not join the Indian service until they have served for a year or two with a British regiment in India.

As regards the native army of India its average strength was 127,091. The year 1893 is stated to have been one of the most healthy in its history. The cholera mortality was the lowest on record. The admission-rate was 862, the deaths from cholera were 0.20, from all causes 10.29, and including absent deaths 12.81 per 1000 respectively. The chief causes of death were pneumonia and other respiratory diseases, remittent and intermittent fevers. Pneumonia caused 33 per cent. of the total mortality, and other respiratory diseases 13 per cent. It is pointed out in the report that a comparison of the diseases of the native troops and those of Europeans shows how much less the former suffered from enteric fever, heat-stroke, and venereal diseases, while, on the other hand, the Europeans suffered less from influenza, pneumonia and other respiratory diseases, dysentery, and scurvy. While the admission ratio for venereal diseases in the European army in 1893 was 466 per 1000, it was only 36.4 per 1000 among native troops. Many causes may be assigned for this great difference; for instance, the restraining influence of caste, the temperate habits, smaller pay, and frugality of the native soldier.

We pass over that section of the report dealing with the galls of India and come to that of the vital statistics of the general population. As regards the principal diseases which contributed to the mortality of 1893, we find that cholera was less prevalent than in 1892 with the single exception of Assam; small-pox was also less prevalent; the fever mortality in Berar, Lower Burma, and Mysore somewhat greater; and dysentery and diarrhoea prevailed with greater severity only in Berar. The fall in cholera prevalence and mortality was general in almost every Indian province. The number of deaths from cholera fell from 762,695 in 1892 to 218,113 in 1893. In the Punjab the decline was from 76,000 to 639, in the Central Provinces from 40,000 to 557, and in Rajputana from nearly 27,000 to 314. Nothing serves to mark the marvellous difference between an epidemic and a non-epidemic cholera year better than figures of this sort. The great and abiding cause of mortality among the native population of India is fever, or what is returned as such. The total mortality from this cause is so enormous that it dwarfs that from all other causes.

There is an important memorandum, illustrated by a diagrammatic map, on the influence of railways in the dissemination of cholera, by Surgeon-Major J. Lewtas, M.D., officiating statistical officer to the Government of India in the sanitary and medical departments. He finds, as the result of a very careful and elaborate inquiry, that there is no ground for such a belief. Cholera is not more frequently manifested or more rapidly carried about from place to place than it was in pre-railway days, nor does cholera follow the lines of railway. If railways were the means of disseminating cholera they would obviously carry it in any direction indifferently, which they do not. Of course, cases of cholera may be thus carried, but they do not seem to have any influence on the course of an epidemic. In the Bengal Presidency the direction of an epidemic is always upwards—towards the north-west frontier; an epidemic moving downwards is unknown.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE extraordinary meeting of the Fellows for the purpose of the annual election of President was held on the 8th inst. The President, Sir J. Russell Reynolds, opened the proceedings by a few well-chosen remarks of sympathy at the loss sustained by the profession and the Royal College of Surgeons of England in the death of Mr. J. Whitaker Hulke, whose sterling characteristics he admirably sketched. The President then proceeded to deliver his annual address. The College roll now contained the names of 303 Fellows, 497 Members, 5 Licentiates prior to 1859, 12 extra-Licentiates, and 5970 Licentiates. Six Fellows had died during the past year—viz., Drs. Brown-Séquard, Little, Sturges, Withers Moore, Bisset Hawkins, and Hack Tuke. Mention was made of the inspection of the examinations by the General Medical Council and of matters of finance, the latter including the attempt of the Inland Revenue to make the College amenable to the Corporation Duty (1885), from which the College claimed exemption in consideration of its function as an educational body. The claim was under consideration, but would be pressed further, if necessary. In referring to the award of the Moxon Medal to Sir W. Jenner, the President observed that it was a remarkable circumstance that this medal, founded in honour of one of the most distinguished Fellows, should have been awarded to two physicians of whom he was young enough to have been the pupil—viz., Sir A. Garrod and Sir W. Jenner. The acquisition of the portrait of Sir A. Clark, painted by Mr. R. Lehmann, was referred to, and the munificent foundation of the Weber-Parkes Prize and Medals by Dr. Hermann Weber suitably acknowledged, as also was the gift of the Goldsmiths' Company to further researches on the antitoxin treatment of diphtheria. The lectures delivered at the College during the past year were enumerated, and the work of the Committee on the Nomenclature of Diseases stated to be far advanced. As regards the University of London, the President said that there was good reason to hope that the subject of the appointment of a Statutory Commission would be brought into the House of Lords after Easter. The conferment of a knighthood upon Dr. J. C. Bucknill, and of baronetcies upon Dr. John Williams and Dr. Russell Reynolds, was also mentioned. The President then proceeded to give obituary sketches of the deceased Fellows, and of Dr. Greenhill, a distinguished Member of the College who had declined the Fellowship when offered to him. At the close of the address a vote of thanks to the President was unanimously adopted on the motion of Sir R. Quain, seconded by Sir Dyce Duckworth.

The election of President was then taken, when it was found that Sir J. Russell Reynolds had received 76 votes, Dr. Wilks 2, Dr. Bastian 1, and Sir A. Garrod 1, there being eighty-one Fellows present and eighty voting.

Sir J. Russell Reynolds was then inducted into office by the Senior Censor (Dr. Latham) and having made the declaration returned thanks to the Fellows for having chosen him for the third time to preside over the College.

On the motion of the Treasurer, seconded by the Senior Censor, it was resolved that the College undertake the expenses attending the publication of the biography of Sir Henry Halford, formerly President of the College, which had been prepared by Dr. Munk, the librarian.

Communications were read from the Royal College of Surgeons of England relative to the representation of the Royal College of Physicians at the memorial service held at St. James's Church, Piccadilly, on the occasion of the funeral of the late Mr. Hulke; and also a letter from Mr. Wilmott, on behalf of Mrs. Hulke, expressing her sense of the sympathy shown by the College in her bereavement.

Dr. Henry de Fomartin having resigned his Membership on account of his undertaking practice at Montpellier under conditions which would require him to dispense medicines, the resignation was accepted by the College.

The alteration in By-laws CLXII. and CLXIII. was moved for the second time by the Registrar and adopted.

A report from the Committee of Management embodying the substance of a reply to the report of the Inspector of the General Medical Council upon the examination for the diploma of Public Health was received. Dr. Heron moved that the

report be referred back to the committee for re-consideration and amendment. The motion was seconded by Dr. Thorne Thorne and the discussion upon it shared in by Sir Dyce Duckworth, Dr. Stevenson, and Dr. Norman Moore. Dr. Heron's amendment was carried by 20 votes to 12.

A supplementary report from the Committee of Management, recommending that Mr. Thomas Cooke's Course of Operative Surgery be recognised as fulfilling the requirements of the Regulations for the present year on the same conditions as heretofore, was adopted, and the Comitia adjourned.

THE HEALTH OF THE ITALIAN ARMY.

To the *Ispettorato di Sanità Militare* our thanks are due for a report on the health of the Italian army in 1893—a report which may be described as more than ever satisfactory, the improvement registered in 1892 being more than maintained.

The admissions into hospital for 1893 were 80,208—a figure which includes 11,468 whose admission was renewed for "continuazione di cura"; so that, these being deducted, the number of troops on the sick list was really 68,744.

Those admitted into the military hospitals, the garrison infirmaries, and the special infirmaries were 78,132, of whom 2336 came from other hospitals. The number, therefore, of admissions from the corps shrinks to 75,796, comprising 104 accommodated in canvas casual quarters, and 6708 admitted "in osservazione."

The admissions into convalescent quarters were 1733, of whom 1629 had been transferred thither from the hospitals and 104 contributed by the corps.

In the civil hospitals the admissions of troops amounted to 13,032, besides 59 coming from the other hospitals. Among them were 88 who had to be accommodated in divers lunatic asylums, as well for cure as to be kept under surveillance ("in osservazione").

The greatest absolute number of troops admitted into the civil hospitals was in the division of Leghorn—a priority, however, which proportionally to the respective mean force, belongs to the division of Perugia. The smallest number of admissions under this head is contributed by Turin.

The greatest contingent of patients came from the field artillery; next in order come the infantry of the line, the cavalry, "i distretti" (district service), the artillery in forts, the engineers, and the "bersaglieri." The smallest contingent was that of the carabinieri. As a whole, the mean proportion of disease and of days under treatment in 1893 was lower than that of the preceding quadriennium.

With regard to the months in which the number of soldiers on the sick list was greatest the minimum was reached in February and the maximum in March and April; in May the increase began again to diminish, and continued in that direction, save in July, when a slight rise was noticed, due to the greater fatigue of the soldiers in the summer exercises. The minimum of disease was in November. The mortality also was at its highest in April and at its lowest in February.

The accentuation of disease in March and April, with the consequent exceptional mortality, is due to the arrival of the recruits, who in the first month of their service give always a large contingent of invalids. From the report, however, we gather that on the whole in 1893 the sanitary conditions of the army were in all respects better than throughout the whole preceding quadriennium.

The military divisions, taken singly, presented no slight difference in the mean proportions of the patients admitted, of the dead, and of the "riformati" (those dismissed the service for illness), per 1000 of the respective mean force. Taking the statistics of the last five years, we gather that the mean of sickness in all the years was exceeded in the divisions of Perugia, Rome, Naples, and Bari; that it was never attained in the divisions of Turin, Milan, Brescia, and Genoa; that in 1893 that mean was exceeded in the divisions of Ancona, Chieti, Rome (Sardinia), Perugia, Naples, Bari, Catanzaro, and Messina; and that all the other divisions remained "disotto" (under). The maximum of sickness was still maintained by the division of Perugia, and the minimum by that of Genoa.

As to the different arms of the service, the greatest contingent of maladies belongs to the infantry, after which comes the fort artillery ("artiglieria da fortezza"), while for surgical operations the cavalry and field artillery had the pre-

eminence. The cavalry also had the greatest number of eye diseases. For venereal diseases the most prominent were the foraging companies ("compagnie di sussistenza"), the artisan companies of the artillery, and the engineers. The minimum was presented by the Alpine corps.

In 1893 the maladies of the respiratory organs were under the average (except in the case of pneumonia); as were also enteric fever, measles, most fevers and cachexia, influenza, articular rheumatism, and venereal and syphilitic ailments. An augmentation, however, was shown in scarlet fever, infective cerebro-spinal meningitis, with the addition of some cases of Asiatic cholera, this latter being wholly absent in 1892. Infective cerebro-spinal meningitis appeared with the arrival of the recruits of the various corps.

The number of deaths among the troops during 1893 was 1412, or in the proportion of 6.6 per 1000 of the mean force; hence again a diminution of 7.1 per 1000.

Mortality above the collective average was shown by the sanitary companies, the "distretti," the cavalry, and the royal carabinieri; the same mean was not reached by the foraging companies, the Alpine corps, the "bersaglieri," the artillery, the engineers, and the military penal establishments. The maximum was found in the sanitary companies, the minimum in the foraging companies. The mortality in 1893 was below the average in the infantry, the "bersaglieri," the cavalry, the artillery, the engineers, and the military penal establishments, and above it in the other corps.

In 1893 for every month there was a lower mortality than that of 1892, except for March, April, July, and October. April furnished the greatest number of deaths, February the least. The greater mortality of April was caused by the arrival of the recruits called in March.

In the military divisions the mean of the mortality was exceeded in the divisions of Alessandria, Cuneo, Brescia, Piacenza, Genoa, Ancona, Chieti, Rome, Perugia, Salerno, Bari, and Palermo. In all the other divisions, including the island of Sardinia, the mortality was below the mean. The maximum death-rate was reached by the division of Bari, and the minimum by that of Ravenna.

"POST-INFLUENZAL MENINGITIS."

BY T. C. MAXIME,

OF THE FACULTÉ DE MÉDECINE, LYONS.

It may be of interest to the readers of THE LANCET if I give a brief account of "post-influenzal meningitis," upon which Dr. Roque, Chef de Clinique to Professor Boudet of the Hôtel Dieu, Lyons, gave a learned exposition on March 19th. The subject is one which has been much discussed and reported upon of late by medical authorities, both in Paris and Berlin; but it is not a new point in post-influenzal affections, at any rate at Lyons, where it has been studied and described since 1839. In meningitis following influenza, which is rarely fatal, death hardly ever resulting from the influençal affection itself, there is no lesion whatever to be found at the necropsy either in the brain or medulla. The affection is carried by the special action of the toxines secreted by the influençal microbes producing inhibition phenomena, toxines which appear to have a very special predilection for the nerve centres.

Sometimes, though the event is rare, in cases of patients dying from meningitis which has supervened on influenza suppurating lesions of the brain and meninges are found, but these cases are not instances of post-influenzal meningitis strictly so called; it is rather a secondary affection brought out by influenza—a true meningitis preceded by influenza, and due to a streptococcus, staphylococcus, Koch's bacillus, or more often to the pneumococcus. But these cases of suppurative meningitis succeeding influenza are very rare, for out of the records of thousands of cases collated by Dr. Roque from various sources, there are only eleven deaths due to this sequel to "la grippe." Other cases belong to the category of post-influenzal meningitis strictly so called, which have a gravity of their own, symptoms quite similar to those of true meningitis, but none the less essentially very benign in nature, the brain not being injured by the progress of the malady itself. (It might have been damaged previously). Dr. Roque was induced to again put forth his views by the occurrence of a case under his care which unfortunately proved fatal, and in which a necropsy

was made. "This patient was admitted into the Hôtel Dieu a short time ago for influenza, having no special features and running a mild course, so that only the routine treatment was prescribed and no exceptional notice was taken of the case. But one day the patient was attacked with intermittent delirium, shortly afterwards becoming almost continuous, which together with other special symptoms attracted particular attention. Careful examination showed paralysis of the external recti muscles of the eyeballs, and very acute pains in the head, especially in the frontal region. Then the palsy involved the other recti. The patient had vomiting of cerebral origin, rigidity, retraction of the head, tenderness over the nuchal muscles, violent excitement requiring restraint at times, and, in a word, all the phenomena of meningitis; but it was remarkable that in spite of all this there was no marked rise of temperature, which ranged from 38° to 39° C. Suitable treatment was adopted and a favourable issue was foreseen, the condition, indeed, beginning to improve, when the patient's temperature suddenly rose and death ensued. One hardly knew what to think of this anomalous fact, and the necropsy was carefully made. Now although this patient had presented all the symptoms of meningitis there was absolutely no lesion found in the brain, no special change of any kind although several sections were made. Yet if, as stated above, post-influenzal meningitis be a very benign affection, why did this patient die, especially in this anomalous manner? The explanation is simple; it was because he had been attacked with a secondary cardiac affection, for the right auricle was found to be filled with a firm coagulum sending prolongations into the vessels and ventricle."

To sum up, post-influenzal meningitis is a benign affection which advances with violence, but which has not actually ever any serious issue. The meninges are not in the least injured, and the affection is brought about by the special action on the meninges of the toxins secreted by the influenza microbes, and not by the microbes themselves; toxins for which the cerebro-spinal fluid probably serves as a receptacle, just as this fluid is one of the best culture media for microbes in local disease. This wholly peculiar action of the toxins of the influenza microbes is, moreover, confirmed by the fact that the subjects of influenza who do not have post-influenzal meningitis do not escape presenting very marked symptoms of prostration, hypochondriasis, and depression (lasting a month or so)—phenomena which may be regarded as highly attenuated forms of the action on the nerve centres produced by the toxins.

Lyons.

THE CONGRESS OF MEDICINE IN MUNICH.

THE DEBATE ON THE ANTITOXIN TREATMENT OF DIPHTHERIA.

THIS Congress, which was opened on April 2nd, was attended by a great many leading medical men. The chair was taken by Professor Ziemssen of Munich. In his presidential address the chairman said that in his opinion at no period of the history of medicine were there such zeal and assiduity as at the present time. Undoubtedly progress in medical science depends mainly on the quiet work in hospital wards, in dissecting-rooms, and in laboratories; but periodical meetings enable the representatives of the different branches of medicine to compare their results and to know each other's views. It had always been, and he hoped always would be, the principle of this Congress to consider medicine as a unity, and therefore to maintain the connexion of internal medicine with surgery and pharmacology. The principal task of science was *rerum cognoscere causas*. Medicine had passed through the periods of anatomical and pathological research, and now had arrived at the era of etiology. We now try first to learn the causes of the different illnesses, and then to base the treatment on this knowledge. The antitoxin method, which would be the principal theme of this year's meeting, was a good specimen of the new era in the art of curing, as it was really founded on etiological examinations.

Baron von Feilitzsch, the Prime Minister of Bavaria, then welcomed the Congress in the name of the Government, the Mayor Brunner in the name of the city of Munich, and Professor Beyer on behalf of the University. Prince Ludwig Ferdinand of Bavaria (who is himself a medical man) was elected honorary president, and Professor Wiederhofer

(Vienna), Professor Bollinger (Munich), and Professor Leyden (Berlin) vice-presidents. Dr. Hochhaus (Kiel), Dr. Klemperer (Strasburg), and Dr. Sittmann (Munich) acted as secretaries. After these introductory proceedings the Congress began its work by a debate on the Antitoxin Treatment of Diphtheria, Professor Heubner delivering the first address.

Professor Heubner declared himself persuaded that a new epoch dated from Behring's invention. There was no doubt that Bretonneau's diphtheria was influenced by the remedy. Although he fully appreciated the difficulty of judging medical questions by the means of statistics, he pointed out that the mortality of diphtheria in Berlin had fallen from 44 per cent. to 21 per cent. The same fact was remarked wherever the remedy was used. It was, therefore, quite impossible for him to believe that this lowering of mortality was due to a weakness of the "genius epidemicus." In his statistics he had, of course, only reckoned the cases which were characterised as real diphtheria by the presence of Löffler's bacillus. All the other cases of diphtheria-like disease where this bacillus was not found he proposed to term "diphtheroid." The following effects of antitoxin could be noted:—1. That it has an influence on the course of the temperature; in diphtheria there is generally an access of fever after a few days of normal temperature. In antitoxin cases this has rarely ever happened. 2. That the pseudo-membranes are more easily loosened. 3. That the progression of the diphtheritic infiltration is stopped. The larynx can be kept free by early injections; but in cases where the larynx was already attacked the antitoxin did not prevent laryngo-stenosis. 4. That the intubation tube can be removed in a much shorter time. An absolute reduction in the number of albuminuric cases was not stated, but it was remarkable that the greater part of those patients who were injected on the first day remained free from albuminuria. The paralysis and the cardiac debility were not influenced by the remedy. The immunising effect was not at all sure and seemed to last only for a few weeks; the doses proposed by Dr. Behring appeared to be much too small for this purpose. Of complications Professor Heubner mentioned the angelo-neurotic eruptions as caused by the serum; they did partly produce rather disagreeable symptoms. That the antitoxin could bring about nephritis was not all proved. He finally repeated his opinion that only a very early commencement of the treatment would give favourable results.

Professor Baginsky (Berlin) reported 525 injected cases. Whilst the average mortality of the illness in Berlin was 41 per cent., the antitoxin cases had only a death-rate of 15 per cent. In August and September, when the supply of serum failed, it rose again to 51 per cent. He had observed a great amelioration of the patient's general state, which, however, was only remarked on the second or third day after the injection, and a lowering of the temperature. In many cases he had seen a sudden stopping of the local affection; as in Professor Heubner's cases, the larynx, if not yet attacked, remained free; intubation could be performed with more success, so that tracheotomy could nearly totally be done away with. Sudden death from cardiac debility was very rare, and myocarditis was seldom found by post-mortem examination. The serum had no bad effect on the kidneys, nor was phenol present in the urine. It appears that carbolic acid, if combined with antitoxin, offers no phenolic reaction. Paralysis was, however, more frequent than before, maybe because more children remain alive. Sometimes suppuration at the place of the injection was observed, principally when the latter was made, not under the skin, but into the muscular substance. The rashes are not of great importance, and in diphtheria had occurred before the new method was used. He warmly recommended a continuance of the antitoxin treatment.

Professor Wiederhofer (Vienna) expressed the same opinion as Professor Heubner and Professor Baginsky.

Professor von Ranke (Munich) said that all his cases were of three or four days standing when treatment was commenced. Of 96 patients, 63 had still laryngo-stenotic symptoms. In 21 of those 63 cases laryngo-stenosis very soon disappeared; in 42 intubation was performed; of these 13 died. The intubation period was much shorter than before. He thought that the antitoxin was able to prevent the diphtheritic process from descending to the larynx and the lungs.

Dr. Kohts (Strasburg) said he had not seen very marked benefit, some cases excepted, where the local affection seemed to disappear more quickly than before.

Dr. Grawitz (Berlin) reported his experiments of *intravenous* injection of blood serum on rabbits and dogs. He had observed an extreme dilution of the blood, caused by the attraction of water from the tissues and the raising of the secretion of the kidneys. The *subcutaneous* injection of blood serum had the same effect. Patients who had been treated with antitoxin also showed an increase of water in the blood. After ten or twelve hours this hydremic state passed away and was followed by a decrease of the quantity of water. Dr. Grawitz concludes from these facts that it was still an open question whether the action of the antitoxin depends only on the increase of succulence in the tissues or is a really antitoxic one.

Dr. Seitz (Munich) had had the same good results as Professor Heubner and others. He alluded to the alleged injurious effects of the serum and denied them to be of any importance. Like other observers, he had remarked an increase of the exanthemata, whether the serum was only prophylactically used or used as a cure.

Dr. Stintzing (Jena) was of quite a different opinion from the greater part of the physicians present. He warned the meeting to be very reserved in its judgment; it was, in his opinion, undeniable that diphtheria was now much milder than in any former year. He said it would be at least four or five years before he could give a definitive opinion about the efficacy of the new method.

Dr. Trump (Graz) gave an account of his bacteriological investigations in diphtheria cases. He found three specimens of bacilli: (1) the genuine Löffler bacillus; (2) other bacilli which were not pathological; and (3) a so-called pseudo-diphtherial bacillus which in cultures resembled the Löffler bacilli, but if inoculated in animals appeared not to be pathological. He had stated: 1. That in children affected with diphtheria the real Löffler bacillus is present also on other mucous membranes, especially on the conjunctiva and on the vulva, without producing any pathological alterations. 2. That Löffler's bacillus remained a very long time alive. He had cultivated it from a child eighty-two days after the disease was over. The virulence, however, was weakened, so that it produced only a local irritation in a guinea-pig. He had found in the mucous membranes of the eye and the nose of children who had never had diphtheria the typical Löffler bacillus. As this was principally the case in hospital patients he was of opinion that the bacillus had been introduced there by patients who came back from the diphtheria ward. 3. From these facts he concluded that persons who themselves did not offer any symptoms of diphtheria can infect other people. This infection he understood as a mere contagious one. Therefore the disinfection of the patients' homes and goods is not sufficient to avoid the propagation of the disease; the latter can only be prevented by the immunisation of the patients themselves. For this purpose the immunising qualities of antitoxins would prove to be of the greatest use.

Dr. Rauchfuss (St. Petersburg) agreed with the other speakers about the good qualities of the antitoxin, but he mentioned that myocarditis was more frequent; perhaps that might be due to the fact that a greater number of patients remained alive.

The discussion being closed the Congress, on the proposition of Professor Heubner, adopted the following motion: That this meeting is of opinion that no harm had been done to the patients by the antitoxin treatment, that the majority of observers had seen good results, and that the experiments concerning immunisation were not yet sufficient and should be continued.

CHOLERA.

THE influence of season in connexion with cholera outbreaks and epidemics in countries where that disease is prevalent, such as India, is often very striking, and it has even been said to override every other influence. Be this as it may, it is a matter of ordinary observation that the cholera of any year is not a manifestation throughout each month of the year, but there is a succession of manifestations alternately with seasons of dormancy. The cholera cause is revitalised, renewed, or reproduced, and manifests itself with certain force at certain seasons, varying to some extent with its geography. A spring cholera and a monsoon and autumn cholera are recognised, for example, in India, and

it very commonly happens in countries that have been invaded by an epidemic that a manifestation of its presence occurs about the end of March and at this season. We know that epidemic cholera has of late years prevailed in Russia; it has not yet died out there; it has only been dormant and hibernating, and the disease has of late manifested itself afresh, but mainly in a sporadic form in certain provinces and districts of that country. There have been some cases reported also in Turkey and Constantinople, and there has been a severe outbreak in the quarantine lazaretto of Camaran in the Red Sea. The first cases were reported about the end of last month. The lazaretto is at present occupied with numerous Mecca pilgrims, and a large number have recently passed through on their way to Djedda, to be soon followed by others—hence this outbreak may have much significance and importance. In another part of the East—namely, China—we learn that an outbreak of the disease among the Expeditionary Force is causing great anxiety to the Japanese Government.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF PRESIDENT.

A QUARTERLY MEETING of the Council was held on the 4th inst., Mr. Reginald Harrison, the Senior Vice-President, being in the chair.

The Council then proceeded (as reported in our last issue) to the election of a President for the remainder of the collegiate year, the vacancy being caused by the death of Mr. J. Whitaker Hulke, F.R.S. Mr. Christopher Heath was elected. Mr. Harrison then vacated, and Mr. Heath took the chair.

The Committee for General Purposes recommended that the portraits of John and William Hunter presented by the Hunter Ballie family, which had been recently received, should be reframed, and this was agreed to.

The Jacksonian Prize for an essay on the Diagnosis and Surgical Treatment of Diseases of the Liver, Gall-bladder, and Biliary Ducts was adjudged to Mr. H. J. Waring, the author of the dissertation bearing the motto "*Si torrens jecur, queris idoneum*." It was resolved that Mr. Waring should be requested to attend the next ordinary meeting of the Council on May 9th to receive the Jacksonian Prize.

Mr. Rivington, as chairman of the Jacksonian Committee, submitted two subjects for the Jacksonian Prize for the ensuing year, 1896, and the Council selected the following: "The Pathology, Diagnosis, and Treatment of Diseases of the Prostate Gland."

Two subjects were also submitted for the next Collegial Triennial Prize, and the Council selected "The arrangement and topography of the different parts of the gastro-intestinal canal in man, with special reference to the variations in their relation to the peritoneum and the occurrence of abnormalities; the subject to be illustrated from development and a comparison with the customary arrangement in other mammalian animals."

A report, dated March 18th, 1893, from the Committee of Management of the Conjoint Examining Board was read, dealing with the arrangements for the third and fourth examinations under the new regulations, and the suggested examination in ophthalmic medicine and surgery. These matters were then referred to a special committee, composed of the President and Vice-Presidents, Mr. Hutchinson, Mr. Bryant, Sir William MacCormac, Mr. T. Pickering Pick, Mr. Howse, Mr. Howard Marsh, and Mr. Morris. The report also dealt with the recognition of several institutions as places of instruction in chemistry, physics, practical chemistry, and biology, the recognition of a course of laboratory instruction in public health at the Westminster Hospital Medical School, and the recognition of the City of London Hospital for Diseases of the Chest as a place of study during the fifth year of the curriculum. These portions of the report were approved and adopted.

A report, dated March 8th, 1895, from the Laboratories Committee was read, approved, and adopted. It was as follows:—

1. *The work in diphtheria for the Metropolitan Asylums Board.*—(a) Examination of material for diagnosis. Since Jan. 1st 1145 specimens have been examined and reported

upon. In some cases the report is issued on the same day that the specimen arrives; but in the majority of cases the examination necessitates as much as twenty-four hours' work. An accurate record has been kept of the examination of each case, including the various organisms found. During the first seven weeks the director with two assistants examined all the cases, but since the third week in February Mr. Card has relieved the director of the superintendence of the microscopic examination of some of the specimens. The work goes on very smoothly, and is now being accomplished more rapidly than at first. The director has undertaken to report fully to the Metropolitan Asylums Board on every 500 cases examined. (b) The preparation of antitoxin serum. After some unavoidable delay the Metropolitan Asylums Board placed at the director's disposal stabling for fifteen horses at Tooting; four horses are being prepared, all of them are in good health, and in three cases the treatment is well advanced. As soon as these horses are ready the supply of serum will be ample, and it is intended that one or two reserve horses shall be prepared. It is probable that the serum will be ready for use at an early date.

2. *The Goldsmiths' Company's grant for researches on the antitoxin treatment of diphtheria, &c.*—The Committee, seeing their way to placing a certain quantity of antitoxic serum at the disposal of investigators, have for the purposes of experiment determined to make a grant of £100 to Dr. Sidney Martin for the purpose of working out the action of the antitoxic serum when used to counteract the effects of various poisons separated by him from the membrane and from the spleen in cases of diphtheria. This appears to the Committee to be a most important question, and one that must be settled before the mode of action of antitoxic serum can be understood, and they feel that no one can better undertake this work than Dr. Martin. The Committee have some other lines of research under consideration, on which they will fully report to the Colleges in due course.

A letter was read—signed by the President, Vice President, and Secretary of the Royal College of Surgeons in Ireland—expressing the regret of that College at the death of the President of the Royal College of Surgeons of England. It was moved and carried unanimously that the thanks of the Council be conveyed to the Royal College of Surgeons in Ireland for the kind words of sympathy contained in their letter.

A letter was read from the Registrar of the General Medical Council stating that Mr. Charles Tomes has been appointed by that Council as Visitor of the Dental Examinations of the College, and that he will visit and inspect these examinations during the present year.

Mr. Hutchinson moved: "That steps be taken to obtain busts of the late Sir William Savory, Bart., F.R.S., and the late Mr. J. W. Hulke, F.R.S." The matter was referred to a committee consisting of the President, Vice-Presidents, and Past Presidents to consider and report.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6611 births and 4280 deaths were registered during the week ending April 6th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 35.0 to 23.4 per 1000, further fell last week to 21.1. In London the rate was equal to 19.0 per 1000, while it averaged 22.6 in the thirty-two provincial towns. The lowest rates in these towns were 10.9 in Croydon, 13.1 in Huddersfield, 15.2 in Plymouth, 15.4 in Nottingham, and 15.7 in West Ham; the highest rates were 26.9 in Birmingham, 27.0 in Blackburn, 28.5 in Oldham, 31.9 in Preston, and 33.0 in Burnley. The 4280 deaths included 274 which were referred to the principal zymotic diseases, against 314 in each of the two preceding weeks; of these, 93 resulted from whooping-cough, 53 from measles, 51 from diphtheria, 38 from diarrhoea, 21 from scarlet fever, 17 from "fever" (principally enteric), and one from small-pox. No fatal case of any of these diseases occurred last week either in Bristol, Bradford, or Birkenhead; in the other towns they caused the lowest death-rates in Newcastle-upon-Tyne, Gateshead, and Huddersfield; and the highest rates in Manchester, Cardiff, Salford, and Burnley. The greatest mortality from measles occurred in Cardiff, Sheffield, and Bolton; and from whooping-cough

in Norwich, Salford, Preston, Burnley, and Portsmouth. The mortality from scarlet fever and from "fever" showed no marked excess in any of the thirty-three large towns. The 51 deaths from diphtheria included 23 in London, 5 in Birmingham, 4 in Manchester, and 3 in West Ham. One fatal case of small-pox was registered in Derby, but not one in London or any other of the large towns. There were 53 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, April 6th, against 57, 58, and 55 at the end of the three preceding weeks; 7 new cases were admitted during the week, against 12, 14, and 10 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1519, against 1615, 1587, and 1555 on the three preceding Saturdays; 143 new cases were admitted during the week, against 184 and 161 in the two preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 1448 to 497 in the five preceding weeks, further fell to 427 last week, but were 17 above the corrected average. The causes of 69, or 1.6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Salford, Leeds, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the five preceding weeks from 42.8 to 25.4 per 1000, further fell to 24.7 during the week ending April 6th, but exceeded by 3.6 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18.9 in Perth and 20.0 in Edinburgh, to 26.6 in Dundee and 30.3 in Aberdeen. The 713 deaths in these towns included 25 which were referred to whooping-cough, 22 to measles, 17 to diarrhoea, 3 to small-pox, 3 to "fever," 2 to diphtheria, and 2 to scarlet fever. In all, 74 deaths resulted from these principal zymotic diseases, against 115 and 90 in the two preceding weeks. These 74 deaths were equal to an annual rate of 2.6 per 1000, which was 1.3 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 27 and 26 in the two preceding weeks, were 25 last week, of which 13 occurred in Glasgow, 5 in Dundee, and 4 in Leith. The deaths referred to measles, which had been 48, 56, and 35 in the three preceding weeks, further declined to 22 last week, and included 7 in Edinburgh and 7 in Aberdeen. The 17 fatal cases of diarrhoea exceeded by 3 the number in the preceding week, and included 9 in Glasgow. The 3 deaths referred to different forms of "fever" corresponded with the number in the preceding week, and included 2 in Dundee. The fatal cases of diphtheria, which had been 9 and 5 in the two preceding weeks, further declined to 2 last week. Of the 3 deaths from small-pox, 2 were recorded in Glasgow and 1 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 313 and 199 in the two preceding weeks, further declined to 189 last week, but were 74 above the number in the corresponding week of last year. The causes of 62, or nearly 6 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 42.4 to 48.6 per 1000 in the three preceding weeks, declined again to 43.3 during the week ending April 6th. During the thirteen weeks of last quarter the death-rate in the city averaged 37.1 per 1000, the rate during the same period being 26.0 in London and 30.5 in Edinburgh. The 290 deaths registered in Dublin during the week under notice showed a decline of 36 from the number in the previous week, and included 11 which were referred to the principal zymotic diseases, against 7 and 12 in the two preceding weeks; of these, 4 resulted from whooping-cough, 3 from small-pox, 3 from diarrhoea, 1 from "fever," and not one either from measles, scarlet fever, or diphtheria. These 11 deaths were equal to an annual rate of 1.6 per 1000, the zymotic death-rate during

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—MARCH, 1895.
(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1896.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths of infants under one year to 1000 births.				
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Bacterial fever.	Other continued fevers.	Puerperal fever.	Krysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Whooping-cough.	Typhus fever.	Bacterial fever.	Other continued fevers.	Diarrhoea.		Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.
LONDON...	4,392,346	41	880	527	2	119	4	13	369	—	1955	58	1	77	38	114	203	1	18	1	55	598	15	10,107	370	193
West Districts.																										
Paddington	122,756	2	6	23	—	5	—	1	6	—	25	27	—	—	—	—	—	—	—	—	—	—	7	0.7	270	28.7
Kenington	167,671	—	24	14	—	5	—	—	12	—	43	59	—	—	—	—	—	—	—	—	—	16	1.2	346	28.9	
Hammersmith	108,428	—	35	21	—	5	—	—	6	—	63	78	—	—	—	—	—	—	—	—	—	14	1.1	239	28.7	
Fulham	117,746	—	33	21	—	5	—	—	6	—	63	78	—	—	—	—	—	—	—	—	—	14	1.1	239	28.7	
Chelsea	99,930	—	16	7	—	2	—	—	6	—	33	45	—	—	—	—	—	—	—	—	—	8	0.8	212	21.4	
St. George Hanover-square	74,037	—	13	11	—	2	—	—	6	—	31	50	—	—	—	—	—	—	—	—	—	8	0.8	212	21.4	
Westminster	64,003	—	4	14	—	2	—	—	1	—	25	50	—	—	—	—	—	—	—	—	—	8	0.8	212	21.4	
St. James Westminster	23,149	—	6	6	—	—	—	—	1	—	11	62	—	—	—	—	—	—	—	—	—	4	2.3	55	31.0	
North Districts.																										
Marylebone	137,392	9	28	12	—	5	—	—	7	—	61	68	1	1	2	2	8	—	1	—	—	16	1.5	367	34.8	
Hampstead	77,592	—	20	7	—	—	—	—	5	—	33	55	—	—	—	—	—	—	—	—	—	6	0.8	124	20.8	
St. Pancras	233,543	—	60	24	—	6	—	—	35	—	124	69	—	—	—	—	—	—	—	—	—	6	0.8	124	20.8	
Islington	335,929	—	95	18	2	6	—	3	26	—	150	69	—	—	—	—	—	—	—	—	—	33	1.8	562	31.4	
Stoke Newington	35,294	—	4	2	—	—	—	—	2	—	8	30	—	—	—	—	—	—	—	—	—	33	1.8	562	31.4	
Hackney	215,623	—	35	23	—	3	—	—	17	—	78	47	—	7	1	3	8	—	—	—	—	22	1.3	62	28.9	
Central Districts.																										
St. Giles	37,654	1	2	2	—	1	—	—	2	—	8	28	—	1	—	—	—	—	—	—	—	—	3	1.0	101	35.0
St. Martin-in-the-Fields	13,576	—	8	4	—	—	—	—	1	—	5	48	—	—	—	—	—	—	—	—	—	—	3	2.9	82	30.8
Strand	22,586	—	8	4	—	—	—	—	1	—	14	81	—	—	—	—	—	—	—	—	—	—	3	2.9	82	30.8
Holborn	32,188	4	3	3	—	5	—	—	5	—	16	65	—	3	1	1	2	—	—	—	—	4	2.3	70	40.5	
Clerkenwell	65,036	—	12	3	—	—	—	—	6	—	33	65	—	—	—	—	—	—	—	—	—	4	1.6	97	39.3	
St. Luke	40,763	—	2	2	—	1	—	—	1	—	12	38	—	—	—	—	—	—	—	—	—	5	1.4	171	34.3	
City of London	33,824	—	2	2	—	—	—	—	1	—	5	19	—	—	—	—	—	—	—	—	—	1	0.4	79	30.5	
East Districts.																										
Shoreditch	122,932	—	13	8	—	3	—	—	9	—	30	32	—	7	1	3	11	—	—	—	—	22	2.3	331	35.1	
Bethnal Green	130,061	1	20	13	—	—	—	1	21	—	59	59	—	2	—	2	2	—	—	—	—	9	0.9	309	31.0	
Whitechapel	75,820	—	9	11	—	2	—	—	2	—	22	38	—	1	—	1	4	—	—	—	—	5	0.9	167	28.7	
St. George-in-the-East	45,227	—	8	4	—	3	—	—	5	—	20	58	—	2	—	2	6	—	—	—	—	7	2.0	121	34.9	
Limehouse	66,885	—	20	10	—	—	—	—	5	—	38	87	—	1	—	1	6	—	—	—	—	15	3.4	152	34.8	
Mile End Old Town	104,443	—	27	18	—	—	—	—	10	—	56	67	—	1	—	1	4	—	—	—	—	13	1.6	211	20.4	
Poplar	171,250	—	54	27	—	10	—	—	19	—	111	85	—	6	—	5	11	—	—	—	—	27	2.1	402	30.6	
South Districts.																										
St. Saviour Southwark	26,570	—	1	3	—	2	—	—	—	—	6	29	—	—	—	—	—	—	—	—	—	1	0.6	68	33.4	
St. George Southwark	60,168	1	15	6	—	3	—	—	5	—	18	39	—	3	—	2	3	—	—	—	—	5	1.1	186	40.3	
Newington	119,358	—	17	5	—	2	—	—	12	—	36	79	—	—	—	—	—	—	—	—	—	20	2.2	353	39.6	
St. Olave Southwark	13,065	—	1	2	—	—	—	—	6	—	20	30	—	—	—	—	—	—	—	—	—	3	3.0	32	32.0	
Bermondsey	83,861	1	17	5	—	2	—	—	5	—	45	47	—	—	—	—	—	—	—	—	—	6	0.9	208	32.3	
Rotherhithe	40,713	10	20	8	—	10	—	—	6	—	45	47	—	—	—	—	—	—	—	—	—	8	2.6	92	29.5	
Lambeth	284,883	1	43	22	—	3	—	—	27	—	109	50	—	—	—	—	—	—	—	—	—	39	1.8	682	31.2	
Battersea	165,130	1	39	26	—	16	—	—	18	—	80	63	—	—	—	—	—	—	—	—	—	29	2.3	349	27.6	
Wandsworth	185,956	1	53	53	—	16	—	—	25	—	106	74	—	—	—	—	—	—	—	—	—	12	0.8	360	22.2	
Greenwich	252,737	1	68	53	—	16	—	—	13	—	113	84	—	—	—	—	—	—	—	—	—	27	2.5	528	28.5	
Camberwell	175,183	7	34	9	—	5	—	—	12	—	24	38	—	—	—	—	—	—	—	—	—	12	1.9	400	28.8	
Lewisham (excluding Fenge)	82,410	1	5	9	—	1	—	—	8	—	15	15	—	—	—	—	—	—	—	—	—	1	0.8	182	173	
Woolwich	42,768	—	3	3	—	—	—	—	3	—	12	40	—	—	—	—	—	—	—	—	—	3	1.0	70	23.5	
Lee	38,832	—	6	4	—	—	—	—	2	—	24	51	—	—	—	—	—	—	—	—	—	4	0.8	110	23.5	
Plumstead	61,494	—	18	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

* Including 31 cases of membranous group.

† Including deaths from membranous group.

the same period being 1·4 in London and 2·3 in Edinburgh. The 4 fatal cases of whooping-cough exceeded the number recorded in recent weeks. The deaths referred to small-pox, which had been 4, 5, and 1 in the three preceding weeks, rose again to 3 last week. The three fatal cases of diarrhoea corresponded with the number in the previous week, while the mortality from "fever" showed a marked decline. The 290 deaths registered in Dublin last week included 44 of infants under one year of age and 111 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons almost corresponded with the numbers in the previous week. Three inquest cases and 3 deaths from violence were registered; and 96, or nearly a third, of the deaths occurred in public institutions. The causes of 17, or nearly 6 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MARCH, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during March in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 5·8 per 1000 of the population, estimated at 4,392,346 persons in the middle of this year. In the three preceding months the rates had been 8·4, 7·0, and 5·9 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Paddington, St. Giles, City of London, St. Saviour Southwark, St. Olave Southwark, and Woolwich; while they showed the largest excess in Fulham, Strand, Limehouse, Poplar, Rotherhithe, Camberwell, and Greenwich. The prevalence of small-pox in London showed a slight decline during March, 41 cases being notified during the month, including 10 in Rotherhithe, 9 in Marylebone, 7 in Greenwich, and 4 in Holborn sanitary areas. The Metropolitan Asylum Hospitals contained 54 small-pox patients at the end of March, against 16, 51, and 66 at the end of the three preceding months; the weekly admissions averaged 11, against 3, 10, and 15 in the three preceding months. The prevalence of scarlet fever in London during March showed a slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in Fulham, Strand, Limehouse, Poplar, Rotherhithe, Wandsworth, Camberwell, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1485 scarlet fever patients at the end of March, against 1865, 1633, and 1569 at the end of the three preceding months; the weekly admissions averaged 145, against 171, 148 and 141 in the three preceding months. The prevalence of diphtheria in London showed a slight increase during March; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Limehouse, Mile End Old Town, Poplar, Rotherhithe, Battersea, Camberwell, and Greenwich. There were 435 cases of diphtheria under treatment in the Metropolitan Asylum hospitals at the end of March, against 521, 515, and 461 at the end of the three preceding months; the weekly admissions averaged 62, against 93, 71, and 50 in the three preceding months. The prevalence of enteric fever in London showed a slight decline during the month under notice; among the various sanitary areas this disease showed the highest proportional prevalence in Poplar and Camberwell. Erysipelas was proportionally most prevalent in St. Pancras, Holborn, and Rotherhithe sanitary areas. The 13 cases of puerperal fever notified during March included 3 in Islington, 3 in Lambeth, and 2 in Battersea sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, March 30th, the deaths of 10107 persons belonging to London were registered, equal to an annual rate of 30·0 per 1000, against 17·7, 18·3, and 30·3 in the three preceding months. This high rate was principally due to the epidemic prevalence of influenza. The lowest death-rates during March in the various sanitary areas were 20·8 in Hampstead, 22·9 in Stoke Newington, 23·3 in Plumstead, 23·5 in Lee, 23·8 in Woolwich, and 25·2 in Wandsworth; the highest rates were 35·0 in Westminster and St. Giles, 35·1 in Shoreditch,

38·6 in Newington, 39·3 in Holborn, 40·3 in St. George Southwark, and 40·5 in Strand. During the four weeks of March 508 deaths were referred to the principal zymotic diseases in London; of these, 203 resulted from whooping-cough, 114 from diphtheria, 77 from measles, 55 from diarrhoea, 38 from scarlet fever, 20 from different forms of "fever," (including 1 from typhus fever, 18 from enteric fever, and 1 from an ill-defined form of fever), and 1 from small-pox. These 508 deaths were equal to an annual rate of 1·5 per 1000, against 1·6 and 1·5 in the two preceding months. No fatal case of any of these diseases was recorded last month in Stoke Newington or in Woolwich; in the other sanitary areas they caused the lowest death-rates in Paddington, Hampstead, City of London, St. Saviour, Southwark, Wandsworth, and Plumstead; and the highest rates in St. Martin-in-the-Fields, Limehouse, St. Olave Southwark, Rotherhithe, and Greenwich. Only 1 fatal case of small-pox was registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 13; this fatal case belonged to Marylebone sanitary area. The 77 deaths referred to measles were little more than a third of the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Hackney, Holborn, Shoreditch, Limehouse, Poplar, and Battersea. The 38 fatal cases of scarlet fever were 23 below the corrected average number; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 114 deaths from diphtheria almost corresponded with the corrected average number; this disease showed the highest proportional fatality in Westminster, St. Martin-in-the-Fields, Mile End Old Town, Camberwell, and Greenwich sanitary areas. The 203 fatal cases of whooping-cough were 84 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. James Westminster, St. Luke, Shoreditch, Limehouse, Newington, Lambeth, and Lewisham. The 18 deaths referred to enteric fever were little more than half the corrected average number; there was no marked excess of "fever" mortality last month in any of the sanitary areas. The 55 deaths from diarrhoea were within one of the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was as much as 36 per cent. below the average.

Infant mortality in London during March, measured by the proportion of deaths under one year of age to registered births, was equal to 193 per 1000, and considerably exceeded the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. Giles, St. Luke, City of London, Whitechapel, Mile End Old Town, and Wandsworth; and the highest rates in Fulham, Westminster, St. James Westminster, St. Martin-in-the-Fields, Strand, and Newington.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR FIB JAMES R. A. CLARK, Bart., F.R.C.S. Edin., retires from the service, receiving a gratuity. Surgeon-Captain Vere E. Hunter to be Surgeon-Major. Surgeon-Captain Frederick T. Skerrett, F.R.C.S.I., from half-pay, to be Surgeon-Captain, vice A. Wright, seconded.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—10th Bombay Infantry: Surgeon-Major Adey to the Medical Charge, vice Surgeon-Captain Arnim, transferred permanently to the Civil Department, and Surgeon-Lieutenant B. H. F. Leumann, M.B., Officiating Medical Officer, to act as Civil Surgeon. 29th Bombay Infantry: Surgeon-Captain Heath to the Medical Charge, vice Surgeon-Major Adey, transferred. Surgeon-Captain T. W. Shaw, M.B., (Bombay), is confirmed in the appointment of Medical Officer 1st Regiment Central India Horse, and of the Gocna Political Agency. Surgeon-Majors H. McCalman and D. C. Davidson have respectively delivered over and received charge of the Dharwar Prison, and Surgeon-Captain S. E. Pratt, M.B., B.S., and Brigade-Surgeon-Lieutenant-Colonel C. T. Peters, M.B., have delivered over and received charge of the Bijapur Prison. Surgeon-Major A. Milne (Bombay Establishment), Deputy Assay Master, Calcutta, is transferred to Bombay as

Deputy Assay Master. Surgeon-Captain Whitcombe, on return from leave of Surgeon-Major Maitland, has been transferred to general duty, Poona.

NAVAL MEDICAL SERVICE.

Staff-Surgeon H. X. Browne is appointed to the *President*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major Arthur O. Wiley, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve of Officers. Surgeon-Captain William Chalmers-Cowan to be Surgeon-Major.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel C. Whipple, 3rd Battalion the Devonshire Regiment, resigns his commission; also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Duke of Cornwall's Light Infantry: Surgeon-Lieutenant J. W. Haughton is appointed Second Lieutenant. Surgeon-Captain (Honorary Surgeon-Major) R. C. M. Pooley resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the battalion on his retirement. 2nd Volunteer Battalion the King's (Shropshire) Light Infantry: Surgeon-Captain C. H. Gwynn, M.D., to be Surgeon-Major. 1st (Ross Highland) Volunteer Battalion Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Surgeon-Lieutenant C. Mackenzie, M.B., resigns his commission.

OVERCROWDING AND DEFECTIVE VENTILATION IN RELATION TO PNEUMONIA.

The writer of the article on the "Sanitary State of the German Army" in the March number of *The Medical Magazine*, advertising to the prevalence of pneumonia in the armies of Germany and France and the alleged infectious nature of the disease, alludes to his own experience of this so-called infectious pneumonia during the war in South Afghanistan. Attendants on the sick were freely attacked, and the general opinion then was that the malady was most infectious. The men were greatly overcrowded and every aperture was closed to keep out the cold, which was extreme, so that the atmosphere in which they lived was very foul. The disease rapidly spread, and under these conditions no doubt manifested infectious properties; but the writer adds that, given pure air and free ventilation, he is convinced there is no danger of the disease spreading by reason of propinquity alone from the sick to the healthy. There is no doubt that overcrowding and foul air are very powerful predisponents, at any rate, to attacks of pneumonia in winter and early spring, especially among those who have previously suffered from malarious disease. The lungs in such subjects become congested, inflamed, and hepatized with almost the ease and rapidity with which the spleen swells in attacks of ague. This has been the experience of medical officers serving with troops in India and in campaigns in that country; the disease may spread in foul and unventilated tents and buildings with the apparent rapidity of typhus. A great many years ago there was an outbreak of pneumonia in the ironclads of the Mediterranean fleet, almost resembling an epidemic, attributable, no doubt, to a similar cause—bad ventilation. An infection can apparently be manufactured under certain conditions.

SURGEON-GENERAL SAVILLE MARRIOTT PELLY,
C.B., F.R.C.S. ENG.

Surgeon-General S. M. Pelly, who died suddenly on the 3rd inst. at his residence, Lee, aged seventy-six, retired in 1870 with the rank of Inspector-General. He was attached to the Bombay Army and served with the Sind Irregular Horse during the campaign of 1844-45 against the border tribes of Cutch. He was present at the capture of Shahpoor, for which he was mentioned in the despatches. He also served under Sir C. Napier, 1846-47, and was with the Sind Horse under Major John Jacob. During the Mutiny campaign in 1857-58 he served with the 2nd Regiment Light Cavalry in Rajpootana. Under Napier in 1867-68 he acted as principal medical officer of the Indian Medical Department throughout the Abyssinian campaign, for which he received the Companionship of the Bath. For his services during the Mutiny campaign he received the Indian medal and clasp for Central India. We have in type an extended obituary notice of this distinguished officer, but owing to pressure on our space we are unable to print it this week.

INDIAN ARMY REORGANISATION.

The reorganisation of the Indian Army under the Act of Parliament of 1893 has been effected. The military control hitherto exercised by the Governors in Council of Madras and Bombay is at an end, and the Indian Army is now a unified army. The Commander-in-chief in India, Sir George White, has supreme command. The Bengal Army is divided into two, that for the Panjab and Bengal, and with the armies of Madras and Bombay will form the four great commands under their respective generals and staff. The principal medical officer of the Panjab command is Surgeon-Colonel Harvey, I.M.S., and of the Bengal command Surgeon-Major-General Walsh, Army Medical Staff.

The epidemic of measles unfortunately continues to spread among the boys on board the training ship *Impregnable* at Devonport. More than fifty cases have been removed to the Royal Naval Hospital, and all newly-arrived boys are received in the gunboat *Circus*.

The transport *Warwick Castle* is daily expected to arrive at Portsmouth with nine patients for Netley from Bermuda.

Correspondence.

"Audi alteram partem."

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—I have read the letters about the London and Manchester Assurance Company. I have fifty-seven patients on my list for this company, and receive £2 17s. on quarter day, which in a small practice is not to be despised. None of the patients I have been called to attend have been in a position to pay a bill, and if I object to any member as being of too good a social (or rather financial) position, I believe if I write to the secretary the agent is told to take them off my list. The money I receive from the London and Manchester Assurance Company, though small, is better than any other club I have had to do with—e.g., Hearts of Oak, Oddfellows, Rechabites, &c., because the money is paid regularly and the secretary is never "hard up" and asking the medical man to wait a month or two (once I had to wait fifteen months for the local secretary of a club to pay up). The average pay is also better than our provident dispensary, which has a maximum of 4d. a week for any family. A family of eight pays me 4d. In the case of the London and Manchester Assurance Company I get 8d. a week for the same, and the reduction from 1s. a quarter to 10d. only takes place when I have 100 members on my list. All the medical men I have consulted who are on it seem pleased with it, and there are now 1200 qualified men engaged with the company. Should any of us resign we are bound to give three months' notice by next quarter day. I must be guided by the conduct of others as to resigning. If I feel it my duty I shall do so, though I am no doubt popular from the fact that my list nearly doubles every quarter, and in about eighteen months I shall probably draw nearly £100 a year from the company, and I can ill afford to lose the money. It is only fair to the company to say that though they pay us less than they collect, yet in many cases the people on our list cease payment at once, yet the company pay us all the same. The subject is a large one, and I have not been concise, but I should be glad to hear the views of the profession further through your columns, if possible.

I am, Sirs, yours very truly,

C. C.

April 4th, 1895.

To the Editors of THE LANCET.

SIRS,—I feel sure the above subject, chosen by "A General Practitioner," is a strong one and ought to be taken up by the medical profession generally, so that it can be thoroughly ventilated and amply digested by all young practitioners. At the same time, I think if the term "Medical Aid Companies" were used instead of mentioning one, perhaps a more general conclusion will finally be arrived at. Mr. Woodward's letter is extremely amusing, especially when one glances at the figures given at the end of this letter. I question very much if the managing director has ever had the opportunity of inspecting such statistics before, although he rushes into

print to laud his company's doings, and to try to cover the system of "touting" which certainly exists in a determined way, but at the same time ridiculed by both directors and local managers alike. As my intention in this correspondence is only to give a few figures, I must not go further into this matter, but will on another occasion, if wished, go into greater detail. Being compelled through ill-health to leave town, I took a couple of years' rest, and as an opportunity cropped up for me to enter into, and carefully watch, the medical aid system, I decided to throw my whole time and energy in it. A certain sum—£100—was guaranteed to me; but before I commenced I positively refused to allow anything unprofessional to be done. Having settled thus far my duties commenced, after taking the wise precaution to obtain a surgery about a mile and a half from my house, so that I could keep a very accurate account of all proceedings. Now, if our friends will kindly look through the few following figures (which I can give in more detail if needed), they will see that when Mr. Woodward, in his letter of March 30th, talks of pecuniary assistance to the medical profession he speaks of something which he has certainly not inquired into, or otherwise his mathematics must have been grossly neglected; for the simplest rules only are needed to produce a result exactly opposite to those suggested in his letter.

The figures are given for one year, from March 25th, 1894, to March 25th, 1895, when I resigned:—

	No.	No.
Bottles to June quarter	480	—
Visits " " " " " " " " " "	—	131
Bottles to September quarter	568	—
Visits " " " " " " " " " "	—	168
Bottles to December quarter	873	—
Visits " " " " " " " " " "	—	441
Bottles to March quarter	579	—
Visits " " " " " " " " " "	—	248
Total bottles for year	2500	—
Total visits for year	—	988

	£	s.	d.
Cheque to June quarter	6	5	2 on 400 cards.
" " September quarter	10	19	9 " 374 "
" " December quarter	15	10	7 " 696 "
" " March quarter (but approximate)	16	0	0 " 700 "

Total cheque for year 48 15 6

Now if this grand sum be divided by the number of bottles and visits I think a large fee of 3½d. will be the result. I now leave the pecuniary advantages—of Mr. Woodward—to the medical profession, young and old; at the same time I have a host of other information which I am prepared to communicate. I am, Sirs, yours faithfully,

April 3rd, 1895.

ALEXANDER M. MOORE.

To the Editors of THE LANCET.

SIRS,—One would imagine from Mr. Woodward's letter in your issue of March 30th that in supplying medical relief to policyholders his society's only motive is to inculcate self-help in those who object to receiving charity. I think I can supply another motive. I am a medical referee to an assurance society which does a very large business among the poorer class. The local agent of this society called upon me and asked if I would allow him to "run" a medical club in conjunction with his ordinary business, for unless he could "promise them the doctor in time of illness" he could not get people to insure their lives through him, and he was utterly unable to compete against the agents of the "London and Manchester," who held out the medical club as an inducement to people to insure through them. This agent assured me that wherever he went in search of "lives" the first question was, "Can we have the doctor as well?" The medical man is thus a sop with which to procure other business. The "touts" of this society are all-powerful, and do not appear to be under any proper control from headquarters.

I am, Sirs, yours faithfully,

BETA.

April 8th, 1895.

To the Editors of THE LANCET.

SIRS,—I am pleased to see the correspondence about this company. Were the members allowed entrance confined to

the lower working class, and the healthy of such, there might be something in its favour even at the fee paid by the company for each. But I deny that it is confined to the lower working class. I know scores of exceptions, as I can instance. I know a man who entered who paid a medical man not much short of £30 for considerably less than twelve months attendance upon a member of his family, and he was well able to pay it as he was a considerable property owner; a schoolmistress, single, with salary about £80 a year; publicans in good trade; employers of labour; people who can employ domestic servants; people with shops doing good business; people with pianos, and who can afford music lessons for their children; clerks and well-to-do artisans, earning 30s. a week and over; people who come to the medical man's surgery, gloved and well-dressed, frequently without the usual bottle, often ignoring surgery hours, and expecting to be attended to or visited at any hour. Then the delicate one or ones of the family are frequently those entered. There is no medical examination. I know the company can reply that the medical man has power to reject whom he thinks unhealthy if they come early under observation, but if the rejected happen to have been private patients of his, in most instances he or she feels sore and leaves him, and the agent thinks he has a grievance because, I suppose, he loses the entrance fee. I know of people with uterine disease, hernias, ulcers, old age &c. entered. There is a proposal form with questions as to health to be filled up by the proposer. May I ask the managing director how often the proposer fills this up himself or herself? or if the agent fills it up, how often he puts the questions down on it to proposer or parents if it happens to be a child? How often the questions are seen at all by the proposer? To do the London and Manchester justice, I believe there are other companies which pay medical referees even less, but even this is a grievance, as sometimes those in the London and Manchester think they are in something "genteel" and say they are not ordinary "club patients." I can vouch for foregoing statements.

I am, Sirs, yours faithfully,

April 8th, 1895.

INTERESTED.

"THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON."

To the Editors of THE LANCET.

SIRS,—In reply to a statement appearing in your issue of March 30th, we beg you will insert the following answer. The committee of the Women's Hospital are strongly of opinion that it would have been a more dignified course for the Medical Society to have taken if they had requested the Editors of THE LANCET to publish the whole correspondence, and not an entirely inaccurate, prejudiced, and misleading statement such as they have done, deliberately suppressing all the opinions of the Hospital Committee. To the public the verdict of the Southampton Medical Society may sound as a voice of great importance, but this attack has been conducted principally by the committee of the society, consisting of nine gentlemen, and the committee of the Women's Hospital have every reason to believe three of these gentlemen have taken no active part in the deliberations, and that of the other six, three are on the staff of another institution, including the chairman, and at least one of the answers to a request from the Hospital Committee was sent to this committee without the answer being brought before the whole society, and the resolutions were passed by a body of twenty-seven gentlemen out of a society of fifty members. It may be of interest in weighing the importance of the deliberations of the Southampton Medical Society for it to be known that at least three prominent members of the profession (one a gentleman who has been present at a large number of the operations performed, one who from actual experience knows how the work is carried on) have resigned their membership of the Southampton Medical Society, as they entirely disapprove of and disagree with the action some members of the society have taken. After a few explanatory remarks, the committee wish to tabulate the allegations, insinuations, or charges (it is rather difficult quite to know which is the correct word), which with much difficulty they have abstracted from the rambling compositions of Mr. Bullar and the printed statement of the Medical Society; then to answer these statements one by one; and finally to bring a few prominent facts clearly before the medical profession. To save repetition we enclose you the whole of the correspondence, and we will only refer to each letter, which references you will doubtless verify.

It has been reported to several members of the committee that patients who have attended the hospital have been

sought out and catechised as to the opinion &c. that were given them, and that in some cases "evidence" has been committed to writing. Such reports naturally shake the confidence of the committee as to the unprejudiced nature of the attack that has been made, although the committee were loth to believe that any member of the Southampton Medical Society could have adopted such a reprehensible method, seeing how well it is known that great care must always be exercised in accepting any statements made by patients—especially women—about one medical man or hospital to another practitioner or institution. The committee hoped these reports would have been contradicted by the Medical Society answering these questions as to "when" and "by whom" the evidence was obtained that warranted the society in making the accusation it has done. A large bulk of the statements of the Medical Society can easily be disposed of, as the committee have already expressed their view on friendly criticism as opposed to hostile attacks (Letter 2, p. 6), and on questions of management as well as on questions of finance (see Letter 2, p. 7), which they are of opinion are matters concerning the subscribers, and not Mr. Bullar. As far as the committee are able to discover, the charges which Mr. Bullar has tried to make are—(1) against the constitution, work, and management of the hospital; (2) that the hospital is not free; (3) that the medical officer reported on the nursing staff; (4) that the secretary has not access to the books; (5) that the question of finance is not sufficiently explicit in the reports; (6) that operations are recklessly and unjustifiably performed, and results are not sufficiently reported; (7) that the staff is deficient; (8) that the committee have not proper control; (9) there are no rules; (10) that five operations have been done without proper consultation; (11) that the committee refused a committee of inquiry; (12) that Dr. Playfair supported the view; (13) that Dr. Playfair has resigned; (14) that Mr. Elliot has no special knowledge of the diseases peculiar to women; (15) that operations have been advised, not performed, and the patients are now alive and well.

1. As regards "constitution," the committee have answered (Letter 2, p. 6). As regards "work" this will be referred to again. As regards "management," again we refer to Letter 2, p. 5. The committee clearly stated that they thought it incredible that a professional man should endeavour to prejudice an existing institution by bringing forward questions of this kind, which can have no bearing whatever upon the present work of the hospital or its utility as a public institution. The committee have pointed out in their report that the hospital has laboured under many disadvantages during the past—the death of a lady who took an active part in starting the hospital, and the loss of the chairman of the committee, the Right Rev. Bishop Perrin, who left Southampton when he was created Bishop of Columbia. All this was known to the Medical Society, who seized on this opportunity to attack the institution. 2. The statements made by the Medical Society are not true. No hospital patient has to pay £2 2s. a week, and the arrangements made for defraying the expense of in-patients is a matter which concerns the subscribers, and not Mr. Bullar or the Southampton Medical Society. The actual arrangements are as follows:—Originally the out- and in-patients were treated in the same building—which arrangement ceased upon the advice of the medical staff, as they found it was inadvisable to perform serious operations in a building to which out-patients came, and in consequence arranged (as a temporary measure, until they could build permanent premises) with their medical officer to receive their two beds in a ward in his private hospital for the exclusive use of hospital patients. The same kind of arrangement was employed by the founders of the Hospital for Women at Birmingham many years ago, where it was found that the presence of out-patients in a building where serious operations are performed is seriously prejudicial to the latter. In the majority of cases patients have been treated without payment of any kind, but on account of the low state of the funds of the hospital some patients have been asked if they could afford to pay a small sum towards the out-of-pocket expenses, and this they have gladly done, from sums varying from 5s. a week up to, but never exceeding, £2 2s. a week, only four ever having paid this latter amount. No patient has ever been refused treatment on account of inability to contribute towards her expenses, and as it has been insinuated by the Medical Society that their medical officer might have derived some pecuniary benefit by

this arrangement the committee are glad of this opportunity of giving a most emphatic denial to this most unworthy conclusion. 3. Refer to Letter 2, p. 7. This was fully answered and the committee considered Mr. Bullar's remark as impertinent. The medical officer will continue to report from time to time, to the committee, on such matters of so great importance as that of nursing. One great reason for giving this report was that through the kindness of Mr. Lawson Tait one of his most experienced nurses resided here for some months, in order to teach some of the nursing staff who nursed hospital in-patients Mr. Tait's special details in nursing abdominal section. Reports regarding nursing are regularly included in the Medical Board's annual report at the Birmingham Women's Hospital. 4. This at first sight appears an error of management. The reply of the secretary of the Southampton Women's Hospital intended politely to convey to Mr. Bullar the fact that the books were inaccessible to the hon. secretary for the purpose of giving information and statistics to any person who chose to ask for these for the purpose of formulating attempts to damage the institution. 5. This the committee have referred to, and decline to receive interference on the point from the Southampton Medical Society, as being one purely of finance and affecting themselves and their subscribers alone. The accounts we published in the printed reports of the hospital, which are in your possession. 6. This the committee consider the pith of the whole attack, and, in order to raise a definite issue, the committee will confine themselves to dealing with the 24 cases referred to by Mr. Bullar.

Nineteen out of the 24 cases were seen by Mr. Lawson Tait, and operation proved in each case the diagnosis was correct. This leaves a balance of five cases. These latter operations were as follows: (1) pyo-salpinx (successful, with recovery); (2) suppurating hæmatocele (intra-peritoneal, urgent); (3) cystic ovaritis (intra-peritoneal, urgent); (4) chronic salpingitis and ovaritis (intra-peritoneal, urgent); (5) pyo-salpinx (intra-peritoneal, urgent). Ample assistance was always procured; as a matter of fact, a member of the Southampton Medical Society itself was present in four of the five cases and thoroughly approved of everything that was done, and the committee have been personally assured of this by the member himself, and the specimens in Mr. Elliot's possession amply prove the wisdom and propriety of operating in these cases. It may be well here to state that, although this charge was never absolutely definitely framed, it was hinted at both in print and by various members of the society to their various patients, and has been used as a weapon and (what the Medical Society has considered) a powerful argument against the hospital. Knowing this, Mr. Lawson Tait and Mr. Elliot thought it would be the fairest way to read a paper on all the cases which had been operated on, and Mr. Lawson Tait wrote and made this offer to the Southampton Medical Society, but apparently the society was loth to hear the truth, and preferred to continue to cast innuendoes "about what they knew," as they treated the offer with absolute and most discourteous silence, never even acknowledging to the committee the receipt of Mr. Tait's letter. The committee do not think they need refer any further to this matter. All this was clearly stated in the correspondence, but suppressed by the Southampton Medical Society. It may be also well to add that all professional information asked for by the Southampton Medical Society was immediately given. (See tables at end of Letter 2.) The statistics were copied from the books, and the only cause of complaint could but be that they had not been properly published. In the report that was next published the committee gave additional information on the subject of the operations—more information than is to be gleaned from the published reports of any other institution in the town—and in the face of this the Medical Society have seen fit to use this complaint as a weapon against the hospital in their statement published in THE LANCET. The committee, in Letter 2, pp. 6 and 7, express their views about ratios as to number of operations, and to avoid repetition they beg to refer you to such letter. The committee cannot deal with ratios, but with facts and individual cases. The committee venture to think that you will agree with them that it is not fair to compare a hospital like the Chelsea Hospital for Women, dealing with an enormous number of cases, to a small hospital in a provincial town carried on for a special purpose, to which naturally only a comparatively small number would go. 7. It may be so in the opinion of the Southampton Medical Society, but it is the

opinion of the committee that it is "sufficient" and "efficient." We refer in connexion with this statement to Mr. Lawson Tait's letter, bearing date Oct. 22nd, 1894, published in THE LANCET, explaining the reason for the constitution of the staff of which the Medical Society complained. 8. The committee beg to state they have absolute control. 9. The rules which have been made from time to time have been drawn up, and are printed in the last report. Notwithstanding their knowledge of this, the Southampton Medical Society make complaint of it in THE LANCET. 10. This is so. As referring to the 24 operations, it is stated that Mr. Lawson Tait saw 19 of the cases. Of the other 5 cases above referred to, 2 were cases of emergency (Cases 2 and 5); 1 Mr. Lawson Tait was prevented from being present at (Case 4) owing to illness, and the other 2 were cases demanding operation. In each of these cases, as before stated, the most efficient and able assistance was procured, and the committee are satisfied that every care and precaution has been taken, and there is absolutely no cause for complaint. 11. This seems a serious offence in the eyes of the Medical Society, but the committee of the Women's Hospital have been unable to come to the conclusion that the attack made upon them by the Medical Society is of a genuine and public-spirited character, and they therefore took the view—and still strongly maintain it—that they would not listen to the proposal for a committee of inquiry until they, as the responsible body, had been informed *clearly and definitely*, not as mere vague insinuation, what the charges were which they were called upon to answer. The committee think that had they been acquainted with detailed charges and failed to investigate them *satisfactorily*, then the Southampton Medical Society might have thought they had a ground on which to base their suggestion. The committee offered to investigate any such charges and to *fully acquaint the Medical Society with the action they had taken in the matter*. The committee did refuse the proposal, and see no reason to alter their opinion; but it must not be thought from this that the committee of the Women's Hospital ever had any desire to avoid publicity. The Southampton Medical Society held out as an inducement to the committee to accede to their request "that further publicity would thus be avoided." To this somewhat extraordinary proposal the committee replied: "And we refuse to join with the Medical Society in any arrangements which would have the effect of concealing anything which, in the public interest or in the interest of medical science, should be known." We trust, however, from the full information that we have afforded, you will readily see that the committee have nothing whatever to conceal, and you are quite at liberty to publish the whole of the correspondence that has passed, and they would be only too ready to consider and accept *bona-fide* suggestions for the improvement of their institution. 12. The committee exceedingly regret having publicly to express their views on this point, but it is necessary to do so. They are of opinion that Dr. Playfair has treated them in a most discourteous manner. He listened to the accusations of the Medical Society. He never communicated with the committee or the staff of the hospital to which his name was attached, and the committee of the Women's Hospital received a letter from the *Secretary of the Medical Society*, to whom Dr. Playfair had written, saying he strongly approved of the proposal of the Medical Society as to holding a committee of inquiry. Dr. Playfair, *without being fully informed of the facts*, expressed his opinion, agreeing with the Medical Society, and therefore the committee of the Women's Hospital did not see the necessity of taking Dr. Playfair's advice into consideration. The committee are of opinion that Dr. Playfair should have resigned before throwing in his lot with the party adverse to the interest of the hospital, or declined to have given an opinion until he had received the view of the Hospital Committee. 13. Dr. Playfair has resigned under the circumstances stated above, and under the circumstances the committee see no reason to regret the course he has taken. 14. The committee very much regret that they are called upon to defend the reputation of one of their medical officers. The committee prefer to take the opinion of those gentlemen who know Mr. Eliot and know from actual experience and observation what his capabilities in this particular branch of practice are. And, apart from these opinions, the fact that Mr. Eliot has for some years past worked with Mr. Lawson Tait (witnessing Mr. Tait's operations, and operating himself under Mr. Tait's immediate observation) is quite sufficient to warrant the committee of the hospital in again endorsing the statement referred to in THE LANCET by the

Medical Society, and they are quite conscious of the fact that the success that has attended the work under their control is in a large measure due to the fact that Mr. Eliot has been and is always availing himself of every opportunity to acquire a knowledge of the most modern methods of treatment in this particular branch of practice, and the view the committee hold is fully borne out by the statement contained in Mr. Tait's letter. 15. It is almost incredible that a body of gentlemen could publish such a statement. In no one single instance have the Medical Society asked for information, but seem quite ready to rely on the bare statement of a hospital outpatient. The committee are quite content to leave criticism of this statement in the hands of the public, and especially those of the public who are acquainted with hospital outpatients. They strongly condemn the action of the society in publishing such a paltry accusation without making any effort to verify the statement in one single instance. It savours of the lack of candour and of the prejudice and narrow mind which have characterised the whole of this action.

It now only remains to prominently call attention to a few facts: (a) If the attack of the Medical Society was unprejudiced and promoted in the public interest, it is most extraordinary that every point in favour of the hospital has been deliberately suppressed in the statements sent to THE LANCET. (b) That the Medical Society has avoided and shirked in every possible way every offer from the committee of the Women's Hospital which would have enabled them to have arrived at the real facts of the case. *They would not hear a statement from Mr. Tait and Mr. Eliot on all the operations performed*, still maintaining (or insinuating) that operations were recklessly performed. They would not state any single case in support of these many accusations, although they have been repeatedly urged to do so by the Hospital Committee. (c) That gentlemen who are senior in the profession, and whose opinions are most valuable, have in consequence resigned their membership of the Southampton Medical Society. (d) The committee have only one object in view, and that is in a particular branch of science to bring the highest possible advantages of modern art and surgery within the reach of some of the poorer women in this town. (e) That in no other institution in the neighbourhood could a patient receive the advice of a surgeon of Mr. Tait's special experience.

In conclusion, and reviewing the whole correspondence and actions of the Medical Society, the committee cannot help drawing attention to the opening remarks of Mr. Bullar's first address, in which he carefully defines "professional jealousy" in its "good form" and its "bad form." The committee cannot discover the former—they sincerely hope it is not the latter.

(Signed)

A. F. FORBES, M.A.,
Chairman of the Committee.

H. C. PHILLIPS, Hon. Sec.,
Southampton Women's Hospital.

April 6th, 1895.

* * We have received with the above letter copies of all the documents referred to therein. We cannot assume the position of arbitrator, but it seems to us that both indictment and answer might well have been shorter and more specific and categorical in character.—ED. L.

"SATISFYING (OR NOT) THE EXAMINERS."

To the Editors of THE LANCET.

SIRS,—May I be permitted through your columns to ask the following question? Why is such mystery practised in the results of the examinations of the Royal Colleges of Physicians and Surgeons of England? To illustrate this, a medical student competes for an examination. He fails, and has not the satisfaction of knowing whether his failure is due to the written or oral part of his examination. The information he obtains is, "he has not satisfied the examiners." If such a system as the publication of the marks he had obtained in the several parts of the examination was observed I think the dissatisfaction which now exists would be at an end. Although a candidate is voiceless in the matter, still the Colleges of Physicians and Surgeons would, I should imagine, in reason concede to any system which would tend to advance the welfare of medical students.

I am, Sirs, yours faithfully,

University College Hospital, April, 1895. C. TILBURY FOX.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—In your impression of the 30th ult. "M.R.C.S. &c." states with reference to my previous communication on this subject: "Whilst entirely agreeing with him [the writer] that assuming the title of 'Doctor' without a degree entitling one to it should be considered infamous conduct 'in a professional respect,' I cannot agree with him as to the deception practised on the public." If "M.R.C.S. &c.," then, agrees with me that no medical practitioner should be allowed to assume the title of "Doctor" "without a degree entitling one to it," how can he reconcile this first position with the subsequent sentence in his letter? "Let all 'M.D.'s be called physicians, and ordinary diplomates 'Doctors'; for, whatever our qualification is, we are 'doctors.' Why should we not be allowed to say so?" Why should not the licentiates be allowed to do what he holds to be "infamous conduct in a professional respect"? The fact is that many of them do so, and do it without challenge from either the General Medical Council or the bodies from which they hold their qualifications. The "deception practised on the public" is to my mind quite clear. When a man practising medicine, surgery, or any of their collateral departments—such as dentistry, &c.—prefixes his name with the style "Dr.," he certainly leads the public to infer that he is in possession of the degree of "doctor of medicine," and whether intended to deceive or not, if the public are naturally led to misapprehend the act is legally construed as criminal. The whole crux of the question lies between an academic distinction and a vulgar appellation. It is the former and not the latter that a gentleman is expected to put on his door-plate or visiting card. I have never instituted an irrelevant comparison between "licentiates" and "doctors" in respect of medical or general culture. This is a matter entirely outside the argument. I do not regard the mere possession of the doctorate degree as any guarantee of either medical or general acquirements, as I know hosts of "doctors" who are as capable of reading Hebrew as they are of translating their diplomas; but if the "licentiates" consider themselves equal in culture and general acquirements to the "doctors," why do they assume a title which they do not possess? Mr. Pike, in the same number of THE LANCET, says that he has repeatedly applied to the Edinburgh College of Physicians for guidance on this matter, and that he has always received the reply that "my legal title as 'licentiate' was that of physician." Then why does he use any other than his "legal title," even if the College of Physicians is weak-kneed enough to connive at his professional use of a distinction to which on his own showing he has no legal claim?

I am, Sirs, yours faithfully,

Glasgow, April 7th, 1895.

D. CAMPBELL BLACK.

To the Editors of THE LANCET.

SIRS,—I fancy that Mr. A. de W. Baker is not well informed on the state of practice in general if he imagines that matters will "tell seriously against the London corporation and schools" unless some device is found for conferring the title of "Doctor." As a matter of fact, I happen to practise in a degenerated London suburb where medical men, not being graduates, one after the other, without the slightest ceremony, confer the title upon themselves, and this in a far more ostentatious fashion than the respective universities would probably care to have their own legitimate titles displayed. Indeed, one gentleman, who resided in the neighbourhood in its palmy and refined times, and who might in vulgar and popular estimation be considered the leading practitioner, I believe, did so from the first. No doubt it may be conceded that on the whole the title is so diversified that it confers more of a social than intellectual distinction. Be this, however, as it may, it is obviously absurd for practitioners, not being graduates, to advance individual claims on purely intellectual lines to a title they do not possess.

I am, Sirs, yours truly,

London, April 9th, 1895.

M.R.C.S.

DISINFECTION OF SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—Dr. Priestley's paper, an abstract of which appeared in THE LANCET of April 6th, is a valuable contribution towards elucidating the advantageous results obtained by

the inunction of scarlet fever cases with the oleusaban eucalyptus oil. His results, obtained from 120 cases treated in the Leicester Fever Hospital, confirm my statements that albuminuria rarely occurred (his cases were as 1 to 10 of those treated in the ordinary way); that desquamation was hastened (his cases were discharged from hospital a week earlier than the others, saving 14s. a case, or £84 on the 120 cases); that there were few or no deaths (his deaths were 1.6 per cent. to 4.3 per cent. in those under other treatment). The cases with suppurative complications were about the same. These, I maintain, are chiefly due to hospital infection by the streptococcus pyogenes, as we get few or none of these cases in private practice whether treated by eucalyptus or not, and therefore this must be taken into consideration when estimating the results of the eucalyptus treatment. I have before stated that in 156 cases treated in their own homes at Bexley there were no suppurative complications; and I think that Dr. Little of Wimbledon stated at the discussion of Dr. Priestley's paper that he had none there, and most of his eucalyptus-treated cases were discharged from hospital at four weeks and all before the fifth week.

Dr. Priestley says that "it would be manifestly unfair to include cases with only initial symptoms—e.g., sickness, headache, and sore-throat," in the treatment. But these are the cases on which the antiseptic treatment has most effect in checking the fever and sequelæ. Used thus early during the initial symptoms the poison is destroyed, or it is deprived of much of its power for mischief. If the inunction is delayed until the rash is fully out the poison has produced those changes in the epithelium and the tissues which lead to complications. The pseudo-scarlatinal cases, where the evidence of infection is confined to the throat, with, in some cases, a slight rash behind the ears for a few hours, are capable of infecting others, as I have witnessed, and should be treated antiseptically. Cases of scarlet fever occur without any rash being observed, as well as small-pox without pustules, or with only two or three, and if it is desired to stop the spread of infection no mild case of this description should be neglected.

The questions to be decided by those who are investigating the treatment by eucalyptus inunction are: 1. Does it check or stop infection? 2. Does it lessen or shorten the fever? 3. Does it shorten the period of desquamation? 4. Does it prevent albuminuria? 5. Does it reduce the number of deaths? I, as well as many others, say it does all this, and it is for its opponents to prove by adequate experience that it does not. The first question is best tested by treating the cases at their own homes without isolation, as I have done, and allowed other children to enter the patient's room unrestricted after he has been inunctioned and the air of the room well saturated with the vapour of the oil.

I am, Sirs, yours faithfully,

Teddington, April 8th, 1895.

J. BRENDON CURGENVEN.

"THE NORMAL PRÆCORDIA IN CHILDHOOD."

To the Editors of THE LANCET.

SIRS,—With reference to the annotation on this subject in your last issue giving the results of Dr. Whitney's observations on the limits of the (superficial) cardiac dullness in children at various ages, I would point out that his conclusions are altogether at variance with the observations of Stürck on 300 healthy children, quoted in your columns by the late Dr. Sturges.¹ Dr. Whitney's principal conclusion is that after the age of seven or eight years the area of dullness becomes enlarged, the upper border rising often to the second left interspace, and the apex beat, originally within the nipple line, falling to its outside. Stürck found, on the other hand, that the area diminished with the child's age, falling between the sixth and twelfth years by the width of a rib, and that the apex beat, which was at first outside the nipple line, became internal to it after the age of six years. Dr. Garrod² has made some tracings of the area of dullness in children, which generally accord with Stürck's conclusions. It is curious that statements so diametrically opposite in their tenour should be put forward by apparently careful observers. As the dimensions of the superficial cardiac dullness depend mainly upon the extent to which the organ is overlapped by the edges of the lungs, it is of essential

¹ THE LANCET, vol. i. 1894, p. 653.

² Brit. Med. Jour., vol. i. 1894, p. 561.

importance that in all instances noted, not only should the heart itself be healthy, but the lungs also should be healthy and of good development and the thorax of normal shape. Inattention to these points may account for some of the discrepancy. In one of Dr. Garrod's cases "physiological albuminuria" was stated to be present; the heart is not generally, in my experience, normal in the subjects of that condition. Dr. Peacock³ has pointed out the influence of full expansion of the lungs, as in those who lead lives of active exertion, in altering the position of the heart. The organ sinks in the chest under these conditions, but it rises, and is small and shallow, in those with weak and ill-developed lungs. It is true that this would apply less in the case of children, yet here also there is much variation in the functional activity of the lungs. Further, in children the existence of the thymus glands furnishes a disturbing element; its gradual atrophy (vanishing at puberty) should allow the edges of the lungs to approach nearer to one another and so diminish the area of cardiac dullness, agreeing thus with Stürck's view. I am inclined to think that, when we take all these circumstances into account, we must admit that there is great variability in the extent of this area in healthy children. As to the site of the apex beat of the heart in childhood, my own limited observation has shown that this is found in very young children to be in or outside the mammary line, and that it travels inward during later childhood to take up the position natural to adult life. This accords with the statements of Stürck and not with those of Dr. Whitney.

I am, Sirs, yours truly,

Finsbury-square, E.C., April 8th, 1895. R. HINGSTON FOX.

THE PRESENT POSITION OF THE OBSTETRICAL SOCIETY OF LONDON.

To the Editors of THE LANCET.

SIRS.—This society was instituted for the promotion of knowledge in all that relates to obstetrics and the diseases of women and children. The laws regulating its affairs were, therefore, drawn up for a scientific society. At the present time the council has launched upon a career of political agitation, acting as the deputy of the Midwives Institute and the Society for the Promotion of Registration for Midwives. As a result, the name of the society and such prestige as it possesses, are being used to foster legislation to which there are very grave objections, and which has not been submitted to the Fellows for their approval. The President, who stated to the House of Commons Committee that "if he was a poor woman he should prefer to be attended by a really well-trained midwife than an overworked doctor," and the Chairman of the Midwives Board, who has publicly stated "that, from his own experience of the enthusiasm that women, as a rule, brought to bear upon the training, a candidate at the end of three months' training would be able to put to shame in a midwifery examination an ordinary medical student of three years' training," are fair examples of the school of thought represented by the large majority on the Council. With such very poor ideas of the knowledge and capacity of the men for whose teaching and training they and their class are responsible it cannot be a matter of astonishment that the rules of the society have been strained to breaking point for the promotion of legislation intended to facilitate the removal of the practice of midwives from the hands of the medical profession, and in fact to place it on the Continental basis.

The question now arises—Is it the wish of the Fellows that the society should be used as a means to further this end? The rules of the society admit of no discussion on the subject except at the annual meeting held in February, and the Council brought forward nothing at this year's meeting of a contentious nature. At the annual meeting every Fellow is summoned by letter, a week's notice being given, and it is quite clear that the business brought forward by the President in his address should have been brought forward by the council on that day. However, stealing a march on those who are opposed to his views on midwives' registration, he takes the field when he is absolute master of the situation. At ordinary meetings of the society and at meetings of the Council he is the sole authority, and although it is quite clear from a perusal of the laws that it was never contemplated that the President

would introduce contentious business into his address, and take up the position of a partisan in a matter of politics, yet he does both, and allowed Dr. Griffith to propose a resolution of an important character at the ordinary meeting in March, in defiance of the spirit of the rules. At the next ordinary meeting, when, after the reading of the minutes, I attempted to call attention to this resolution, the President prevented my doing so, on the ground that my action was against the laws of the society. Now I am informed officially that the only means of testing the feelings of the society upon the important question of its approval of the introduction into the sphere of the society's activity of political questions, and of the action of the President and the council, is by representations to be made to the council by three Fellows that they desire the repeal or alteration of some laws, and it has been suggested to me that the best course to pursue is to send an appeal to the council signed by as many Fellows as possible to summon a special meeting to consider the propriety of the repeal of Chapter XV. of the Laws, which relates to the Board for the Examination of Midwives. Sitting on the council, as I do, I have objected absolutely to the course pursued, because the members of the council were not elected this year by their constituents with any mandate to alter in any way the character and objects of the society, which have always been scientific in character. Moreover, the laws of the society do not admit of any practical check being placed on the action of the council; it is elected upon general and scientific grounds and not upon political basis at all. Under these circumstances I shall be glad to receive as many names of Fellows as possible, and as soon as possible, who desire the repeal of Chapter XV. of the Laws to be considered by the society.

I am, Sirs, your obedient servant,

Hatfield, Herts, April 8th, 1895.

LOVELL DRAGE.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Recent Murder of an old Man and Attempted Murder of a Boy.

THE inquest on the body of the old man, Edward Moyse was resumed and concluded by the city coroner, Mr. T. E. Sampson, yesterday. The case was alluded to in a recent letter. It caused much excitement at the time, in consequence of the critical state of the principal witness and of the circumstance that the perpetrator of the crime was not known. A man has, however, since been arrested by the police, and the coroner's jury yesterday returned against him a verdict of "Wilful murder." The evidence of Mr. Paul showed that the deceased had in all probability been stunned by a blow on the face and killed by subsequent blows with a hatchet or some similar weapon. Dr. Musson, one of the resident medical officers of the Northern Hospital, stated that the boy Needham, when admitted into that institution at an early hour on Feb. 19th, was suffering from shock and loss of blood, and was in a terrified condition when anyone touched him. He had fifteen cuts on the head, six of which extended to the bone, and in three places the skull was fractured. He had also two cuts on the back of the right hand and the left hand was bruised; the upper lip was cut and the right shoulder slightly bruised. The operation of trephining was performed, and the boy recovered sufficiently to be able to identify his assailant. He also gave evidence at the inquest and identified the prisoner (Miller), who was present, as the man who had assaulted him.

Coroners' Inquests and Medical Evidence.

Referring to the leading article in THE LANCET of last week on coroners' inquests, it may be repeated here what has been stated before, that the present city coroner avails himself in all important cases of expert evidence, at the same time the rights of the practitioner first called to the case are always scrupulously respected. In Liverpool the practice used to be to send for the nearest medical practitioner in cases of accident or urgency. Now the hospital ambulance has largely supplanted those gentlemen who would formerly have been called upon to attend such cases, these being now attended by the ambulance surgeon in the first instance and the resident staff afterwards. The present city coroner has expressed regret that the law does not permit him to remunerate medical practitioners for such

³ Reynolds's System of Medicine, vol. iv., pp. 65, 86.

assistance as they may be able to give him in cases where he does not consider it necessary to hold an inquest. If he possessed such power it might reduce materially the number of inquests.

April 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Presentation to Professor Sir William Turner.

LAST week the veteran Professor of Anatomy in Edinburgh University was presented with his portrait in recognition of his services to anatomy and to the University of Edinburgh. The presentation was made in the large theatre in presence of a large number of friends and admirers. Sir James Russell presided. Professor Cunningham, who had acted as secretary to the presentation committee, intimated a large number of apologies and regrets for absence. Sir James Russell, in making the presentation, referred to the valuable services rendered to science by Sir William Turner's work, and also spoke of his invaluable services to the University as an administrator. Many were tied to him personally because of what he had done for them, for the lessons of untiring industry, indomitable perseverance, and clearness of order and method which he had taught them. Sir William Turner, in acknowledging the gift, referred to the time, twenty-eight years ago, when he was appointed to the chair in succession to John Goodsir. In 1854 he had been appointed a demonstrator under Goodsir, and he considered it fortunate that he had been early brought under the influence of a man of such marked personality, vigorous intellect, and so original in his conceptions. He referred to the changes brought about in the University by the Universities Commission, but expressed his unbounded confidence in the Scottish University system. He referred to the work he had had to do as an administrator in the University and said that he thought teaching anatomy was one of the best preparations for a business life, because it tended to make one methodical and orderly in the arrangement of facts and clear and precise in expression. Sir William Mair proposed the vote of thanks to Sir James Russell. The portrait is by Sir George Reid, P.R.S.A., and is acknowledged on all hands to be one of the artist's most successful efforts.

The McEwan Hall.

The McEwan Hall at the new buildings of the Edinburgh University is rapidly approaching completion, and it has been intimated that Mr. McEwan is to make arrangements with the University Court by which the hall may be used by the Lord Provost and magistrates for important civic functions. The hall will accommodate 3000 persons.

Health of Edinburgh.

The epidemic of influenza has practically passed in Edinburgh. Measles is still epidemic, there having been 239 intimations of fresh cases last week; there were also 7 fresh cases of small-pox and 1 death.

Perth.

During the same week the number of deaths at Perth was only 11, showing a mortality rate per 1000 of 18.9. This is the lowest mortality recorded for the week in the eight principal towns in Scotland, the highest being that of Aberdeen, 30.3. One case of diphtheria was registered at Perth and one at Edinburgh, the only towns where this disease made its appearance during the period under mention.

Aberdeen University Buildings Extension.

On account of the contributions coming in so slowly it has been found impossible meantime to carry out the building extension scheme at Marischal College in its entirety. It has accordingly been resolved to drop for the present the proposed block in front. The south and north wings will be finished by towers according to a modified scheme which will require £16,000 to complete. If £10,000 of this be raised otherwise, Mr. Charles Mitchell, LL.D., of Jesmond Towers, Newcastle, will add to his previous generosity by a gift of the balance of £6000, besides £1000 for a clock for the Mitchell Tower. The modified scheme will permit of the natural philosophy classes being, as arranged, located at Marischal College for the benefit of the medical students. It also provides for the widening of Broad-street from Long-

acre to Littlejohn-street and the removal of the Greyfriars Church from its present site. The result will be the throwing open to uninterrupted public view of the quadrangle, including the fine polished granite obelisk in memory of Sir James McGregor—so long connected with the Army Medical Department—and the handsome buildings surrounding the quadrangle, while the new Mitchell Tower will crown the background in an imposing manner. A tender has been accepted for the new electric organ for the Mitchell Graduation Hall, the cost being 1000 guineas. Among additional subscriptions from India just received by the hon. treasurers of the buildings extension scheme may be mentioned: Surgeon-Colonel R. Harvey, £100; Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie, Malabar Hill, 100 rupees; Dr. G. Watt, C.I.E., 100 rupees; Surgeon-Lieutenant-Colonel R. L. Dutt, 50 rupees; Surgeon-Major S. H. Dantra, 100 rupees; Surgeon-Captain D. M. Davidson, Gurdaspore, 50 rupees; Surgeon-Captain A. Alcock, 100 rupees; and Surgeon-Captain J. Murray, 100 rupees. His Excellency the Viceroy gives 200 rupees, and there are various subscribers in the Civil Service, besides civil engineers and clergymen.

Sad Death of a Young Physician.

It appears that Mr. John Pye Farquharson, M.B., C.M. Aberd., assistant to Dr. Mitchell, New Deer, had been in the habit of reading in bed by candle-light. About three o'clock on the morning of Wednesday, the 3rd inst., Dr. Mitchell, who slept in the room below, was aroused by a moaning sound coming from Dr. Farquharson's room, and proceeding thither found the room full of smoke, the bedclothes smouldering, and its occupant in an unconscious state. Though Dr. Farquharson had no recollection of how it came about, it is clear that he had fallen asleep and by some movement brought the bedclothes in contact with the light. Dr. Farquharson, who was very severely burned, died on the 6th inst. from the effects of his injuries. He was the elder son of Mr. P. Farquharson, a member of the Aberdeen Town Council, and graduated M.B., C.M., at the University of Aberdeen in 1891, and was for a time resident medical officer of Ardwick Provident Dispensary, Manchester. He was well known while a student at Aberdeen as a player of Rugby football, and was exceedingly popular with his classfellows.

Vaccination in Scotland

In the annual report of the Registrar-General for Scotland for 1894 there are contained the statistics of vaccination relating to the children born during 1893. These show that of 127,155 children born in Scotland, 108,117 or 85.028 per cent., were successfully vaccinated. In 2474 cases certificates were granted by medical officers, being at the rate of 1.946 per cent. of the whole births; in 509 cases the children were certified to be insusceptible of vaccination in consequence of some constitutional peculiarity, being at the rate of 0.4 per cent.; 273 children, or 0.215 per cent., were insusceptible from having been vaccinated, but by persons who were not qualified to grant certificates to that effect; and one child was insusceptible from having had small-pox; 12,781 children, or 10.051 per cent. of the whole births, died before vaccination; and 3000 children, or 2.359 per cent., were removed from the district in which they were born before vaccination, or in some other way unaccounted for. It is noted that the proportion of children constitutionally insusceptible and of those who died before vaccination were considerably above the average for the preceding ten years. Further statistics are given showing that of the 114,374 children alive at the age of six months, 108,117, or 94.524 per cent., were successfully vaccinated. These figures are fairly concordant with those of England and Wales, the proportion of the successfully vaccinated being, however, somewhat higher in Scotland. Appended to the statement as to vaccination is an instructive return of the small-pox mortality in Scotland since 1855, including a table showing the ages at death during several periods, the percentages being as follows:—At ages 0 to 5: 1894, 16.81 per cent.; 1885-94, 14.52 per cent.; 1875-84, 20.19 per cent.; 1865-74, 28.41 per cent.; 1855-64, 75.03 per cent. At ages 5 to 20: 1894, 10.62 per cent.; 1885-94, 10.75 per cent.; 1875-84, 25.96 per cent.; 1865-74, 28.96 per cent.; 1855-64, 12.19 per cent. At ages 20 to 60: 1894, 66.37 per cent.; 1885-94, 69.89 per cent.; 1875-84, 52.89 per cent.; 1865-74, 41.54 per cent.; 1855-64, 12.67 per cent. At 60 and above: 1894, 6.2 per cent.; 1885-94, 4.84 per cent.; 1875-84, 0.96 per cent.; 1865-75, 1.09 per cent.; 1855-64, 0.11 per cent. The returns for 1894 are not completed; they comprise only

113 deaths in eight principal towns, but the figures are interesting as showing the notable change in age-incidence of the small-pox deaths in that of the three decades subsequent to the Vaccination Act coming into operation, compared with that of the ten years preceding this (in 1855-64). It will be seen that the relative mortality has shifted from the earlier to the later periods of life in a striking manner.

Caitness County Council is to erect a hospital (twelve beds) in the town of Thurso. As hospital accommodation for rural districts in the county it is proposed to rent suitable houses.

April 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Down District Asylum.

I FIND from the report of the resident medical superintendent, Mr. Nolan, for 1894 that during the year there were 623 cases under treatment. There were 72 discharges and 50 deaths, and there was an excess of 2 males and 79 females over the normal limit of accommodation. The unusually high number of admissions (159), higher than any other since the opening of the asylum in 1889, may be taken not as indicating a proportionate increase of insanity in the county, but as due to the extension of more enlightened views regarding the nature and treatment, rather than as a rapid growth of insanity. There was a history of heredity in 33.3 per cent., but, owing to the very imperfect family histories obtained from the class from whom the patients are drawn, and their natural reticence to give information on such a subject, it may be safely assumed that this percentage is very much under the real number. As asylums are now much more appreciated than formerly it is, although a paradox, a fact, as Mr. Nolan states, that the wiser we grow the more insane will be found in our asylums.

Belfast City and District Lunatic Asylum.

At the monthly meeting of governors, held on April 8th, the resident medical superintendent stated that there were at present in the house 231 males and 137 females over the normal accommodation. The proposed alterations at Purdysburn, when completed, will afford accommodation for 75 male patients, but will give no accommodation for female patients, and, as the County Antrim Asylum will not be ready for at least twelve to eighteen months to come, additional accommodation, even for chronic patients at Purdysburn, would be urgently needed. It was decided to discuss the whole matter of providing for this increase of patients at the next meeting.

The Purdysburn Sewage Scheme.

A very large and important deputation of people in the district of Purdysburn appeared before the Board of Governors on April 8th, to protest against the proposal to carry any of the sewage into the local river. After the deputation had been heard Alderman Graham, M.D. (one of the Governors), who is chairman of the Public Health Committee of the City Council, said he had always disagreed with this sewage scheme, as he condemned all systems, such as the one suggested, of the chemical treatment of sewage as unsatisfactory. What success had been achieved in certain places was only in the way of abating, not of removing the evil. A long discussion followed, and it was stated that the Board of Control had approved of the sewage scheme. Some of the governors thought the best way out of the difficulty would be to pipe the sewage to the city sewers; but this scheme, it was shown, would be most expensive. Finally, it was settled to refer back the whole matter to the committee for further consideration. It is quite evident that the question of what plan to adopt in reference to the sewage of the Purdysburn Asylum will be a most difficult one.

Armagh Sewage Scheme.

The Armagh Town Commissioners having received a sealed order from the Local Government Board to execute certain work with regard to the sewage of that city, have had plans furnished to them by Mr. Peddie, engineer to the Ulster Sanitary Association, for an entirely new system of sewage,

which, I hear, is to provide for disinfection of the sewage on the chemical plan. On April 8th a deputation appeared before the Board urging that if the sewer complained of, and in regard to which the recent investigation was held, was put right the command of the sealed order would be satisfied. They urged that this would be much less expensive than the proposed new scheme. The chairman said that the sealed order went further than the deputation seemed to think. It did not particularise the place complained of, but said that the sewers in the urban sanitary district were to be set right. Even taking the river complained of alone, it would entail a complete renovation of the sewerage of the city. The committee appointed by the commissioners having gone most minutely into the scheme (and most of them were ratepayers themselves), considered that the plan was as cheap as one as could be secured. The report dealing with the site of the sewage works was adopted. As Mr. Peddie had stated there would be no smell from the site of the works, it was decided it should be placed near the city and the expense of carrying it outside the municipal boundary be saved.

The Winter Session at Belfast.

The winter session, both at Queen's College and at Hospital, came to an end on April 11th. The class examinations will be held next week.

The Battle of the Clubs at Cork.

The local papers recently announced that one of the clubs had increased the salary of their recently-appointed medical officer in recognition of the satisfactory manner in which he had discharged his duties. As I do not object to giving further publicity to the generosity of this club, I may mention that a few months ago the members of the club appraised the value of the services of their newly-appointed surgeon at 5s. per annum per member, which sum was to pay for attendance on the members and their families. The club has now—no doubt after mature deliberation—decided on further augmenting the income of their medical officer by presenting him with an additional shilling. It is recognised on all sides that the present comparatively healthy condition of the city is an aid to the clubs in their contest with the local profession, as few consultations are required, and the amount of work thrown on the imported medical men is well below the average. But if much sickness prevailed the exacting members of societies would soon become discontented owing to their limited staff being unable to visit patients at one and the same time in different parts of the city. The numerous communications received by the local committee indicate the widespread interest taken in the movement initiated by the Cork doctors, and I have no doubt a blow will be struck in various other quarters at the tyranny of the clubs. Even a protest has been raised in far-away Fiji. A letter addressed to one of the newspapers published there has been forwarded to us, in which the writer contrasts the action of working men when as employers they are dealing with members of the medical profession and when, on the other hand, they want to exact for themselves increased wages from the "bloated capitalist." I have but one word to add: the Cork doctors are as united and determined as ever.

The Witchcraft Case at Clonmel.

The magisterial inquiry has resulted in the return of seven of the prisoners for trial on the capital charge; but, from the evidence given on the last day of the investigation, it would appear that the presence of some of the prisoners whilst part of the atrocity was being enacted was due to the fact that the husband of the unfortunate woman flourished a knife which he threatened to use. In that way he compelled one of the men to assist him in burying the body, and prior to its removal he stated that as he could not drive out the devil through the chimney he would drive her out through the door. Afterwards he was evidently seized with remorse on becoming convinced that it was really his own wife that he had so cruelly done to death. The charge against the "herb doctor" was dismissed on the ground that he had no connexion with the case further than prescribing for the poor patient.

The Payment of Locum Tenents of Dispensary Medical Officers.

As I have already mentioned, Mr. Blanchard caused his solicitor to write to the Middleton Poor-law guardians threatening legal proceedings in case they should persevere in refusing to pay him for discharging the duties of one of the dispensing medical officers during the absence of the latter

owing to ill-health. The important question raised was as to whether the guardians or their medical officer should be held responsible to Mr. Blanchard for his fees. The Local Government Board have now decided that the guardians should pay, and this decision will of course rule many other similar cases.

Veterinary College for Dublin.

The preliminary arrangements for the projected veterinary college in Dublin are now well advanced, and the terms of the charter are being considered by the legal authorities. The next important step will be the introduction of a Bill dealing with the financial question.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Diagnosis of Diphtheria.

SINCE the important communication of Dr. Roux at Budapest was made, I, doubtless in common with a good many of my confrères, made it a matter of routine to determine bacteriologically the nature of any affection of the throat characterised by a secretion deposited on the tonsils. Hitherto it has only been at the laboratory of the enterprising journal, *La Presse Médicale*, that the gratuitous diagnosis of these cases has been possible in Paris, although some capable druggists undertake the task at a moderate price. This lacuna in the arrangements for the prompt tackling of diphtheria has induced the municipal council to create a special department for this purpose at the Laboratory of Micrography of the city of Paris, in the Montsouris Observatory. Here the practitioner will be supplied on application with tubes of gelatinised serum and a spatula for the preparation of the culture at the bedside. The tube returned to the laboratory, the result will be transmitted to the medical man within twenty-four hours. The sum of 10,000 fr. was on April 6th voted towards this laudable object.

Student Soldiers.

It has always been a matter of surprise that the energies of the medical recruit should be wasted on drills and exercises of a purely military character, and that his special knowledge should not rather be utilised in the hospital wards during his term of service. This blid policy was more to be wondered at when it was a matter of common knowledge that, on the outbreak of war, the supply of surgeons would inevitably fall far short of the demand. The present Minister of War has appreciated the incongruity, and has consequently just decided that, after having undergone a short course of instruction in soldiering, student-recruits will in future be employed as *infirmiers* in the wards. Students have cause to rejoice at this sensible decision, for the application of the new regulation will necessarily keep them more in touch with their future occupations, and render their presence in the ranks less a waste of time, from a medical point of view, than has hitherto been the case.

A Monument to the late Professor Villemain.

On Sunday, the 31st ult., there was unveiled in the Cour Boussais, at the Val-de-Grâce Military Medical School, a statue of the late Dr. Villemain, known to the profession for his remarkable researches into the nature of tuberculosis. The Minister of War was represented by Dr. Colin, *Inspecteur-Général du Service de Santé*, and all the available members of the *Corps de Santé* were present, as well as the students of the Val-de-Grâce and such civilian practitioners as MM. Berger, Landouzy, Hanot, Perrier, Herard, &c. Discourses were delivered by Dr. du Cazal, *médecin-principal*, and Dr. Colin, the latter observing in the course of his remarks that the army surgeon should never forget that he is the chief consoler of the soldier serving far away from his home.

The late Professor Georges Pouchet.

The late regretted Professor of Comparative Anatomy at the Muséum d'Histoire Naturelle, who died on March 29th of last year, and was buried at Père-Lachaise, had gathered round his grave last week a few sorrowing friends come to witness the unveiling of a monumental souvenir of a great savant. Two brief discourses were delivered, one being by Dr. Dumontpallier, vice-president of the Société de Biologie, to which corporation the deceased left all his fortune.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Rare Diseases of Joints.

AT the last meeting of the Vienna Medical Society Professor Kolisko described some rare diseases of the joints. Syphilitic disease of the joints may be either acute or chronic, the former condition being characterised by serous effusion into the articulation and by inflammatory appearances. He exhibited the knee-joint of a man whose leg had been amputated. The patient's mother had been infected during her pregnancy; he himself has always been healthy, and was the father of healthy children. The joint was ankylosed, the articular surfaces being grown together, with the exception of some narrow spaces. The central parts of the femur were eroded and permeated by a white callus. The surface of this bone was also covered by a layer of osseous substance, which was specially indicative of syphilis. Professor Kolisko describes the following characteristic marks of joint affections associated with tabes: (1) distension of the capsule by serous effusion; (2) proliferations in the synovial membrane; (3) atrophy of the articular extremities; and (4) spontaneous fractures. Contrary to the opinion of French writers, who assume a trophic disturbance, Professor Kolisko explains these processes on the theory that through the insensibility resulting from tabes dorsalis the patient does not feel concussions, and does not fix his joints. If an articulation affected with a neuropathic disease were fixed in an early stage the process could be stopped. French authorities affirm that in spontaneous fractures the bones become porous in consequence of inflammation of their nerves; but Professor Kolisko supposes the incoördination of movement and the want of support from normal muscular action to be the true causes. A third rare disease of the joints is arthritis pauperum, which is very painful, and only attacks the small articulations of the hands and feet of people exposed to privations. The joints are flexed, proliferations occur on the articular extremities, and there may be displacement of the first phalanx on the head of the metacarpal bone.

Death of Dr. Gauster.

By the death of Dr. Gauster, who passed away on March 25th, the profession of medicine in Vienna loses one of its best known members. Born in Vienna about sixty-eight years ago, he studied at the School of Medicine there, and eventually adopted lunacy as his special subject. Immediately on obtaining his diploma, in 1851, he became assistant director of the Lunatic Asylum of Lower Austria, and in 1888, Professor Schlager having died, he was appointed director. In the fulfilment of his responsible duties he gained universal esteem. His principal works were: *Moral Insanity*, 1879; *Mental Degenerations*, and the *Influenza Epidemic in the Vienna Lunatic Asylum in 1889-90*, and its *Influence on Phrenopathics*. He was also on the Council of Hygiene. Dr. Gauster succumbed to an attack of pneumonia. The funeral took place on March 28th, and was attended by a large gathering of Vienna medical men.

Blindness caused by a Vermifuge.

Dr. Gross¹ relates the following case. A man aged forty-four years after a dose of castor-oil took thirty-two capsules of a vermifuge. In the evening he fainted away, and when admitted to the hospital was found to be suffering from mydriasis and total want of light perception, but without visible change in the fundus oculi. Symptoms of atrophy of the optic nerve subsequently appeared. Each capsule contained ethereal extract of male fern and pomegranate root bark, of each 0.25 gramme (4 grains). Dr. Gross recommends calomel given in half-gramme doses (= 7½ grains) as far the most satisfactory of all the numerous remedies proposed for tænia solium.

The Otological Society.

The inaugural meeting of this society took place on March 28th. Its purpose is the promotion of aural surgery by means of scientific reports, demonstrations, discussions at the meetings, and an annual congress. Professor Josef Gruber was elected president; Professor Pollitzer, vice-president; Professor Urbantschitsch, manager; and Dr. Pollak, secretary.

April 7th.

¹ Pester Medicinisch-chirurgische Presse.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Patrons of Industry and the Ontario Medical Act.

As indicated some months ago, this new political party proposed to introduce a measure which would greatly alter the existing law regarding the practising of medicine in this province. That they have been true to their promise is quite evident from the Bill presented to the Legislature on March 8th last, whilst for brevity it is to be commended, being composed of only eighteen sections; yet for a measure to lay before a House it seems but the offspring of ignorance, and as a result iniquitous. The Ontario Medical Act as at present in the Revised Statutes is the result of legislation at different times since 1850, and has been considered as good a Medical Act as can be found in any country, and now this particular political party, pursuing a destructive course, apparently aims at free trade in medicine. As an example of the destructive process, Section 3 reads: "Sections 17, 18, 20, 23, 25, 26, 27, 30, 31, 33, 34, 35, 36, 37, and 38 of the said Act (the Ontario Medical Act) are repealed." Section 4 is somewhat like it, and refers to the Act of 1891: "Sections 1, 3, 4, 5, 6, 7, and 8 of the Act passed in the fifty-fourth year of Her Majesty's reign are repealed." The purport of the proposed legislation is to take away the powers at present possessed by the Medical Council to control examination and registration, handing them over to the Government under the Department of Education, all fees from examinations to be funded with the provincial treasurer. The Board of Medical Education is to consist of three members of the Medical Council, one representative of each medical school, two homeopaths, and two appointed by the Government, and the fee for registration is placed at the figure most suited to the farmer's pocket—viz., \$5 or £1. The power of removal of name from the Roll is taken from the Council and vested in the senior county court judge. "Unworthy conduct" includes fraudulent advertising, habitual drunkenness, transmission of contagion or infection, or any violation of the Public Health Act, the issuing of false or blank death certificates, neglect to register births and deaths, conviction in any action for damages from injury, and negligence, ignorance, or want of skill. The time of limitation for malpractice is extended from one to two years. Section 16 relates to the licensing of midwives, and is in keeping with the other clauses of the Act. It is sought to license any woman of "good character" who proves by evidence "taken on oath before" any local board of health "that she has successfully performed the office of midwife in at least ten cases of confinement"; she shall on payment of the nominal fee of 4s. 2d. to the treasurer of the municipality be licensed to practise midwifery in the municipality for two years. The framer of the Bill has added the words, renewable upon "the production of similar evidence of good character." The licensed (!) modern "Sairy Gamps" are to be protected from the penalty for practising without registration and for falsely pretending, a proviso which I think entirely nullifies the provisions for licensing. The measure virtually permits the practice of midwifery by any woman. Sufficient has been stated of this Bill to indicate the manner the "Patrons of Industry," who claim to represent the farming community, wish to treat the practice of medicine in Ontario.

Provincial Expenditure on Hospitals &c.

Last year the revenue derived from succession duties was applied to the maintenance of hospitals and charities. The estimated revenue was \$70,000, whilst the actual amount received was over \$150,000, being only \$40,000 short of the amount actually expended on these institutions. The provincial treasurer, in his Budget speech, stated that he hoped in the near future the revenue from the succession duties would cover the grants under this head.

Insane Asylums in Ontario.

The seven institutions of the province have accommodation for 4586 patients. On Dec. 31st, 1894, there were 4441 inmates. That the service is efficient no one denies, that cost of management is kept at a low figure is a fact, but I cannot but notice that the Government are receiving medical services of a high quality at a figure much below that usually paid on this continent, and I venture to say that the salaries of those in this particular service might be increased without a charge being made of "high salaries."

It would appear that the Government make a boast of paying low salaries to professional employés, for the Budget states that, whilst the cost *per capita* for medical service in New York State is \$14.34, yet in the province it is only \$5.33. In the case of employés the comparison is not so great, being \$70.63 in New York to \$32.17 in Ontario, and the cost per inmate in the adjoining State is \$184.77 to \$127.32 with us, the difference of salaries paid to the medical staffs being nearly \$40,000.

Insurance Murders.

Public attention has for the past few weeks been directed to several cases of this class. In one in the western portion of the province the deceased was found under a fallen tree, it being claimed that death was due to the blow received from the falling tree; there had recently been over £6000 of insurance placed upon the victim's life. As a result of the inquest two persons were committed, charged with the murder, both being found guilty at the assize and sentenced to be hanged, since which one has confessed that they first killed their victim with an axe, placing subsequently the body under the fallen tree. The second case is more complicated, owing to the deed with which two are charged having taken place nearly three years ago in Toronto. A young man upon whose life there was a large insurance was supposed to have been accidentally killed by the weight (200 lb.) of a hoist having fallen and crushed his skull. Suspicion was not aroused until insurance was sought for—some £60,000—upon his sister's life, who in the meantime had married one of two brothers in whose warehouse the supposed accident happened. The body has been exhumed, and the evidence of the medical experts at the preliminary investigation is alleged to show that the injuries to the skull were not caused by the hoist weight. The two brothers are now awaiting trial on a charge of murder.

Toronto.

Obituary.

JAMES HARMER SOMERVILLE, M.R.C.S. ENG., L.S.A.

THE announcement of the death of Mr. Somerville has caused profound sorrow in Bloxwich and the adjoining parts of the county of Stafford, where his family had long been domiciled, and where he himself had for many years in his professional capacity enjoyed the confidence and esteem of all ranks of society. His father, the late Mr. James Somerville, was a well-known practitioner in the district, and was in due course succeeded by his son, who gained the diploma of the Royal College of Surgeons of England in 1861 and that of the Society of Apothecaries in 1863. Activity and energy were the distinguishing features of Mr. Somerville's character. He acquired some prominence in the local political organisations, and delighted in outdoor sports as long as his strength permitted. Latterly, however, his health declined, and, though not more than fifty-five years of age, he found his strength unequal to the fatigues of his extensive practice. It was hoped that a visit to Hastings would be beneficial, but a residence there of some weeks did not produce the desired result, and the end came peacefully on March 28th. The funeral took place at Bloxwich churchyard on April 1st, and was attended by a very large gathering of sympathising friends and by a company of the 2nd Battalion South Staffordshire Regiment of Volunteers, to which the deceased was assistant surgeon. Mr. Somerville was twice married and is survived by his widow. His eldest son resides in Walsall.

JOHN REEKS, M.R.C.S. ENG., L.S.A.

THE announcement of the death of Mr. John Reeks, which took place at his residence at Southwick, Sussex, on April 5th, was received with profound regret by his friends and patients. Mr. Reeks had an attack of influenza some three or four weeks ago, from which he really never recovered. Born at Elcott, in Berkshire, he was educated at Newbury, in the same shire. In 1879 he went to St. Bartholomew's Hospital, where he gained the degrees of M.R.C.S. Eng. and L.S.A. in 1884. For some time he was the assistant medical officer at the small-pox camp at Darenth, and was in practice for several years at Forest Gate. In 1887 he went to Southwick,

succeeding the late Mr. Nathaniel Jarvis. Mr. Reeks was most popular in the district, where he had an extensive practice, and his demise leaves a notable blank in local society.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. Moritz Gauster, Director of the Lower Austria Insane Asylum. The most notable of his earlier papers, while he was district medical officer in Stein, was one on the Infection of Human Subjects by Anthrax. This attracted the attention of the Government, and he was called to Vienna and appointed member of the Medical Council. He took a great interest in popularising hygienic knowledge and wrote a manual on this subject for schoolmasters. He also published a good many papers in professional journals and annuals on Mental Disease, especially on its connexion with Alcoholism and Influenza.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated:—

Wednesday, April 3rd:—

Anatomy and Physiology.—Lawrie Hugh McGavin, Joseph Elford Dupigny, and Hereward Evelyn Croker Fox, students of Guy's Hospital; Matthew Henry Gregson Fell and Richard Harte Lloyd, St. Bartholomew's Hospital; Ernest Charles Lambert and Walter Biscoe Silas, Westminster Hospital; John Charlton Briscoe, George Augustus Roberts, Colton Taylor Lewis, and Frederick Augustus Hadley, King's College, London; Harold Douglas Singer, St. Thomas's Hospital; Frank Atthill and Harold Arthur Thomas Fairbank, Charing-cross Hospital; Harold Shuttleworth Barwell, St. George's Hospital; Thomas Henderson Dugon, London Hospital; George Baynton Forge, London Hospital and Mr. Cooke's School of Anatomy and Physiology.

Anatomy only.—Mr. George Fernandez Mitchell Clarke, Charing-cross Hospital. Nineteen gentlemen were referred in both subjects and two in anatomy only.

Thursday, April 4th:—

Anatomy and Physiology.—Joseph Arthur Mawson, Yorkshire College, Leeds; Gilbert Bahn Thwaites, Bertram Mitchell Young, and John Francis McLean, St. Thomas's Hospital; Parkinson Osborne Gruber, St. Bartholomew's Hospital; William Ellis Morgan, Charing-cross Hospital; Theodore Marles-Thomas, John Llewelyn Jones, and Campbell Dykes, University College, London; Henry Neville Coltart, St. George's Hospital; George Louis Atkinson and Thomas Hudson Gardner, King's College, London; Arthur Trevor Richardson-Jones, Oxford University and King's College, London; Harold Sugden Crapper, Guy's Hospital; Robert McKay, Middlesex Hospital; John Mayor Wilson, Middlesex Hospital and Royal College of Surgeons, Edinburgh; Hillel Jacob Farhi, Syrian Protestant College, Beyrut, and London Hospital; and Wilfred Joseph Lubeck, Medical College and University, Madras.

Anatomy only.—Martin Clover, University College, London. *Physiology only.*—Thomas Howard Body, Guy's Hospital; and Frederick Arthur Johns, London Hospital.

Fourteen gentlemen were referred in both subjects, two in anatomy, and two in physiology.

Friday, April 5th:—

Anatomy and Physiology.—Stanley William Randolph Colyer, Charing-cross Hospital; Frank Poarac Bond, Westminster Hospital; William Taylor Milton, Philip Turner, Charles Leopold Granville Chapman, Robert Fell, Septimus Benjamin Cullen Carter Adolphus Pennington and Thomas Percival Berry, Guy's Hospital; David Samuel Robert Halstead Dixon, Edmund Howard Barrett, and Alexander Stoker Gardiner, St. Mary's Hospital; William Trethowan Rowe and Robert Raines, St. Bartholomew's Hospital; John Alfred Barnes, John Ellis Kilvert, and Thomas Hoban, St. Thomas's Hospital; Montague Dixon and Percy Glyn Savours Williams, University College, London; Walter Biggar Bannerman and Ralph Norman, London Hospital.

Anatomy only.—Harold Charles Harrison, St. Bartholomew's Hospital; and Ernest Urquhart Bartholomew, Charing-cross Hospital. Thirteen gentlemen were referred in both subjects, and one in anatomy only.

Monday, April 8th:—

Anatomy and Physiology.—Robert Craker Leaning, Harold Dyer, Frank Charles Lewis, and Frank Sherwill Dawe, St. Mary's Hospital; Seymour Alfred Millen and William Christopher Long, St. Bartholomew's Hospital; Frederick Edward Walker, Francis John Hensley Martin, Walter Henry Maxwell Telling, Francis Harold Rodier Heath, Herbert Melbourne Berncastle, Arthur Ernest Clarke, and Eugene Gilbert Goldard, Guy's Hospital; Sydney Oliphant Bingham, Henry Harold Scott, and Edward Alfred Gates, St. Thomas's Hospital; Humphry Morshead Hart-Smith, Cambridge University and University College, London; Carol Luther Betteson, Cyprian Royston Pike, George Heywood Herbert, and Clement Woodthorpe Chaplin, London Hospital; Arthur Martin-Leake, University College, London; Edward Protheroe Smith and Leslie Milburn, Middlesex Hospital.

Twelve gentlemen were referred in both subjects.

Tuesday, April 9th:—

Anatomy and Physiology.—Shaik Abdur Ruzzak, Herbert Lightfoot Eason, Alfred Cole Ambrose, and William Mussellwhite, Guy's Hospital; Angus Joseph McNab Cudden-Fletcher, St. Bartholomew's Hospital; Ralph Albert Rogers Lankester, University College Hospital; George Wiun and Irwin Walker William Hunter, London Hospital; Thomas Jones, Arthur Ernest Relph, and George Humphry Lucas, Middlesex Hospital; and Alexander Fleming Millar, St. Thomas's Hospital.

Anatomy only.—Alfred Edward Seller and John Maclean Carvell, of London Hospital; Charles Walter Gibson, of Guy's Hospital; Philip Phillips, of Charing-cross Hospital; and Albert Ernest Street, of Charing-cross Hospital, and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—Frank Howard Lawson, of Middlesex Hospital; Nicolas Buendia, of University of Colombia, and Cecil Edward Andrews, of London Hospital.

Thirteen gentlemen were referred in both subjects, five in anatomy, and five in physiology only.

UNIVERSITY OF GLASGOW.—The following have passed the first professional examination (old regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Thomas Small Goodwin, Charles David Picken, Alex. J. T. Swann, and Ernest M. Watkins.

The following have passed the first professional examination (new regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (B., Botany; Z., Zoology; P., Physics; C., Chemistry):—

James Napier Baxter (B., P.), James Freeborn Bennett (Z., C.), William Bennett (B.), William Broad (B., Z., C.), Andrew Brownlie (P.), John Brunton (B., P.), Thomas Bullough Calland (B., C.), Ronald Douglas Campbell (P., C.), James Carruthers, M.A. (P.), Alexander Henderson Cassells (Z., C.), James Robert Chalmers (Z., C.), Andrew Clark (B.), David Macleure Cowan (Z., C.), George Morris Crawford (B., P.), John Cullen (P., C.), Charles Cheven Cumming (Z., P.), Archibald William Wallace Davidson (Z., P.), David William Davidson (Z., C.), John Lithgow Davey (B., P.), James Dick (Z., P.), James Austin Dickie (Z., P.), Frank Lindsay Dickson (Z.), James Drummond (P., C.), Comyn MacGregor Finlay (Z., P.), Matthew Wm. Fraser (Z., P.), John Andrew Garden (B., P.), John Gracie (B., P.), George Henry Fullarton Graves (Z.), Archibald Wilson Harrington (Z., P.), Leslie Charles Broughton Head (Z., P.), John Henderson (C.), Isaac Mackay Huey (Z., P., C.), Thomas Inglis (Z.), Robert Dallas Kennedy (B., P.), Andrew Kerr (Z., P.), David Littlejohn (B., C.), James Grant Milner (Z., P.), Ramsay Millar (Z., P.), Hugh Miller (P.), Norman Macleod Miller (Z., P.), Alexander MacCulloch (B., C.), James Hogg Macdonald (Z., P.), Archibald Turner Macewan (P., C.), Peter Macintosh M'Fadyen (Z., P.), John M'Gillchrist (Z., P.), David Duncan Fraser Macintyre (B., P.), Charles Forbes Maclean (Z., P.), Norman Forbes MacLeod (Z., P.), William Johnston Macleure (B., P.), Alfred Robert MacLurkin (Z., C.), John M'Millan (B., P.), Roderick Reid Macnicol, M.A. (C.), Thomas Neill (B., P.), John Patton (B., Z., C.), Thomas Stephens Picken (Z., P.), William Barr Inglis Pollock (B., P.), Arthur Robin (Z., P.), James Scott, M.A. (Z., C.), John Shaw, M.A. (Z., C.), James Shearer (B., Z., P., C.), Andrew James Smith (Z., P.), David James Smith (Z., P.), James Smith (P., C.), James Johnston Smith (B., C.), William Stewart Stalker (P., C.), Alfred George Stewart (Z., C.), Frederick Richardson Stewart (B., C.), James Douglas Brownlee Stewart (B., C.), Peter Donald Strachan, M.A. (B., C.), James Alexander Sutherland (B., P.), Charles Pinkerton Thomson (Z.), William Brown Thomson (B., P.), Thomas Bird Tierney (P., C.), Alexander Laurie Watson, M.A. (Z., P.), Alexander Simpson Wells (Z., C.), Robert Orr Whyte (B., Z., P., C.), George Henry Wildish (Z., P.), Morgan Watkin Williams (P.), Alexander Wilson (Z., P.), William Wright (Z., P.) and John Doctor Young (Z., C.).

Women candidates.—Sarah Davidson (P., C.), Marjorie King Henderson Fleming (P., C.), Jessie Downie Granger (P., C.), Mabel Hardie (P., C.), Jessie Sophia Beatrix Hunter (P., C.), Mary Longmire (B., P.), Jane Lorimer (C.), Annie Louise M'Ilroy (B., C.), Ina Lochhead M'Neill (P., C.), Mary Lauchline M'Neill (Z., P.), Sara Maude Robertson (P., C.), Maud Spencer (P., C.), Gertrude Florence Fleetwood Taylor (P.), and Grace Lorrain Young (P., C.).

The following have passed the Second Professional Examination (old regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

William Buchan Armstrong, John Tait Bowie, John Ritchie Burns, James Banks Cumming, John James Edgar, George Louis Le Fèvre, Robert Hugh Meikle, John Allan Craigie Macewan, William Fullerton M'Even, Archibald M'Glashan, Lionel Mitchell Mackay, William M'Mullen Pearson, James Hood Rankin, James Rutherford Ratcliffe, Robert Shanks, Joseph Sillars, Archibald Stevenson, and David Lyon Stevenson, M.A.

The following have passed the Second Professional Examination (new regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (A., Anatomy; P., Physiology; M.M. and T., Materia Medica and Therapeutics):—

Alexander Smith Allan (A., P.), Theodore Belchambers Broadway (A., P.), David Louis Cairns (A., P.), Francis James Charteris (A., P.), Joseph Adam Clarke (A., P.), George William Coats (A., P.), James Duncan Cochran (A., P.), Walter Scobie Findlay, M.A. (A., P.), James Finlayson Fleming (A., P.), Adrian Andrew Forrester (A., P.), Lawrence Whitaker Harrison (A., P., M.M. and T.), Alexander Lawrie (A.), William Mitchell Lindsay (A., P., M.M. and T.), William Glen Liston (A., P., M.M. and T.), John MacDonald (A., P.), James M'Haffie (A., P.), David M'Kail (A., P.), James M'Queen, M.A.

(A., P.), Normal Emil Henry Scott (A., P.), Alexander Bankier Sloan (A., P.), Samuel Macfarlane Sloan (A., P.), David Steele Smith (A., P.), James Strong (A., P.), Matthew Logan Taylor (A., P.), Walter Lewis Thomson (A., P.), William Watson (A., P.), Ernest Watt (A., P.), Edward Roberts Weir (A., P.), William Wyper (A., P.), and David John Young (A., P.).

Women candidates.—Daisy Annabella Murdoch Clark (A., P.), Margaret Elizabeth McNeill (A., P.), and Jessie Hawkesworth Smith (A., P.).

The following have passed the third professional examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

A., including Pathology.—John Allan, Samuel Anderson, B.Sc., John Ritchie Brown, William Burns, Malcolm Campbell, John Divine, Matthew Dunning, Thomas McGibbin Fletcher, Daniel McIntyre Glen, George Hanson, Allen Iredale, John William Jackson, John Knight, John Walker Munro, William Milroy McFarlane, John Souttar McKendrick, Hugh McLaren, John McLaws, Thomas Duncan Newbigging, Harry Couper Patrick, David Shedden Service, James Craik Taylor, Noel Charles Echlinz Ward, Henry Whitehouse, and James Eric Wilson.

Women candidates.—Mary Baird Hannay and Madge Speirs Maclean. *B., not including Pathology.*—Alfred Charlton, Duncan Drummond, George Henry Beck Harvie, Robert Hastie, James Hogg, Edwin Brooke Jago, John Marshall, Samuel Martyn, John Robert Gordon Phillips, James Malloch Robertson, Neil Robson, Wm. Kerr Russell, and Ernest Fred. Doctetti Walker.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—

SCHOOLS OF SURGERY.—Class prizes winter session, 1894-95. Descriptive Anatomy: Junior, W. J. Anglim, first; H. M. Clarke and J. M. Crawford (equal), second; senior, F. J. Palmer, first, and R. H. D. Pope, second. Practical Anatomy: First year, S. R. Godkin, first, and J. J. Huston, second; second year, M. W. Falkner, first, D. Hadden and J. Leventon (equal), second; third year, A. S. Greeze, first, and A. McMunn, second. Practice of Medicine: D. Kennedy, first, and W. M. Power, second. Theoretical Surgery: A. I. Eades, first, and D. Kennedy, second. Midwifery: G. A. Robinson, first, and J. A. McMunn, second. Physiology: F. J. Palmer, first, and D. Hadden, second. Chemistry: W. J. Anglim, first, and S. R. Godkin, second. Pathology: G. A. Robinson, first. Physics: W. J. Anglim and D. A. Fitzgerald (equal), first, and M. Gavin, second. The schools opened on Monday, April 1st, for the three months' courses of Operative Surgery, Practical Chemistry, Pharmacy, Public Health, Forensic Medicine, Materia Medica, Histology, Biology, and Dissections.

SOCIETY FOR THE PREVENTION OF HYDROPHOBIA AND REFORM OF THE DOG LAWS.—A meeting of the General Committee of the Society for the Prevention of Hydrophobia was held on the 8th inst. at 25, Cavendish-square, W., Professor Victor Horsley, F.R.S., in the chair. In the chairman's report reference was made to the communications which had passed between the Board of Agriculture and the society's executive on the subject of the Dogs Bill, and also to the prevailing epidemic of rabies and hydrophobia in Yorkshire, Lancashire, and other northern counties and in Ireland. It was pointed out that but for political considerations the policy advocated by the society and endorsed by the highest medical authorities, as well as by many of the most important dog-breeders and dog-owners throughout the country, would doubtless be carried into effect by the Government of the day. It would only be when the pressure of these combined forces of instructed and responsible opinion became too great for any Government safely to resist that the object for which the society was formed would be accomplished. This object, it was needless to say, was the total extinction of rabies and hydrophobia from the United Kingdom by a system of universal muzzling for at least twelve months, coupled with rigid and permanent quarantine. The attitude of the general public, except during the scare created by an epidemic of rabies, was one of apathy and indifference. It was useless therefore to expect the assistance which many causes derive from a public movement or demonstration in their favour. The aims the society had in view would therefore be best promoted by securing the increased adherence of members of the medical profession and men of influence generally (especially of those recognised as leaders of opinion in canine matters), so that when the proper moment arrived the society would have sufficient support behind it to convince any Government that the subject was not a question of party politics, but of public welfare. Since the last meeting of the committee liberal contributions to the funds of the society have been received from the Duke of Northumberland (president of the society), the Duke of Westminster, the Earl of Coventry, Sir Joseph Lister, Bart., Sir James Whitehead, Bart., and many others.

PUBLIC BATHS IN SOUTHWARK.—The vestry of the parish of St. Saviour, Southwark, have erected public baths and wash-houses in Lavington-street, at a cost of £40,000, inclusive of £10,000 for the site. There are two swimming baths, the first-class, which is 120 ft. long by 48 ft. wide, and the second-class, which is rather smaller. There are also first and second-class private baths, and in the wash-houses separate compartments are provided for twenty-four workers. The formal opening took place on April 6th, in presence of a large company.

NORTH RIDING INFIRMARY, MIDDLESBROUGH.—The annual meeting of this hospital was held on April 4th, Alderman J. F. Wilson, J.P., presiding. The report showed that there had been a considerable increase in the number of in-patients, and that the expenditure had exceeded the income by £108. Adding the deficiency brought forward from the previous year, the total indebtedness is £252, for the diminution of which special efforts are being made by public appeals and by an exhibition to be held in the town hall in the autumn. There is great need for a new operating room, the estimated cost of which is £900.

CIVIL RIGHTS DEFENCE COMMITTEE (PRESIDENT, THE RIGHT HON. THE EARL OF STAMFORD).—The Committee append a further list of subscribers to the Anderson Privy Council Appeal Fund. At the meeting of the Committee on March 15th, 1895, the following resolution, moved by General Graham and seconded by Mr. Foulerton, was unanimously adopted: "That the thanks of the Civil Rights Defence Committee are due and are hereby tendered to Dr. Branch and the members of the Leewards Branch of the British Medical Association for their generous and practically unanimous support to this committee in the defence of the civil rights involved in Mr. Anderson's case and for their support and sympathy with Mr. Anderson in his arduous and protracted struggle for the defence of these rights. That such support, coming from the West Indies, where the attack upon those rights occurred, is of special value, and is especially appreciated by the committee." Additional subscribers to the Anderson Privy Council Appeal Fund to March 31st, 1895:—

Anonymous sympathiser, per Mr. A. M. Lee	£1 1 0
Dr. Dukes, Rugby, as per list—	
Mr. T. Duke, M.A., Rugby	£0 5 0
Mr. Sutton Pratt, Rugby	0 5 0
Mr. Bernard Belton, Rugby	0 5 0
Mr. W. A. E. Waller, Rugby	0 5 0
Dr. J. H. Simpson, Rugby	0 10 6
Mr. W. G. Groves, Woodford Green	1 10 6
Members of the Leeward Islands Branch of the British Medical Association (collected by Dr. W. J. Branch, St. Kitts)—	0 5 0
Mr. J. D. Bell, Nevis	0 10 0
Dr. W. J. Branch, St. Kitts	1 1 4
Dr. J. H. Cooke, Nevis	0 10 0
Mr. M. P. Duke, Montserrat	0 10 6
Mr. A. E. Edwards, Antigua	0 10 6
Mr. W. H. Edwards, Antigua	1 1 0
Mr. J. Foreman, St. Kitts	0 10 6
Dr. F. J. Freeman, Antigua	0 10 6
Mr. W. H. Fretz, St. Kitts	1 0 10
Mr. J. S. Gabriel, Antigua	0 10 6
Dr. P. J. Huggins, Nevis	0 10 0
Dr. G. H. Mapleton, St. Kitts	1 0 10
Dr. H. A. Nicholls, Dominica	1 1 0
Dr. F. L. Norris, Montserrat	0 10 6
Mr. J. N. Rat, St. Kitts	0 10 6
Mr. R. E. Semper, St. Kitts	0 10 6
Mr. A. L. Wykeham, Antigua	1 1 0

12 0 0

It is particularly requested that all subscriptions to the present fund be sent direct to the Manager of the Union Bank of London (Chancery-lane Branch) and be made payable to the "Anderson Appeal Fund Account."

THE REMUNERATION OF DISTRICT MEDICAL OFFICERS IN WALSHALL.—The sick poor of Walsall are likely to be the gainers by the settlement of a question at issue between the board of guardians and one of their medical officers. This gentleman, having stated that he was unable without assistance satisfactorily to fulfil the duties of his office, the finance committee of the board recommended that a grant of £15 be made to him for cab hire in urgent cases. This proposal of the committee was not endorsed by the board, but at a subsequent meeting held last week when counsels prevailed, and the advocates of economy made a tardy retreat from their indefensible position. Dr. McKinstrey is to be commended for the firmness of his attitude under the circumstances.

LITERARY INTELLIGENCE.—Mr. Lewis will issue immediately in his "Practical Series" a new volume on *Surgical Diseases of Children*, by Mr. D'Arcy Power, M.A., M.B. Oxon., F.R.C.S. Eng.

THE METROPOLITAN HOSPITAL.—The annual meeting of this hospital was held on April 8th on the premises in Kingsland-road, Mr. Joseph Fry presiding. The report showed that 781 in-patients were admitted during 1894, and that there were 78,000 attendances of out-patients. Special arrangements have been made for the attendance of Jewish out-patients on two days of the week, and two wards have been set apart for Jewish in-patients, providing beds for seven men and five women. The hospital dinner will be held on June 13th, and Mr. Leopold de Rothschild has promised to preside.

COOKERY AND FOOD EXHIBITION.—His Serene Highness General Prince Edward of Saxe-Weimar, K.C.B., has consented to open the Eighth Universal Cookery and Food Exhibition to be held at the Portman Rooms on May 7th. The soldier cooks of the Grenadier, Coldstream, and Scots Guards will be allowed, by special permission of the Commander-in-Chief, to take part in the competitions, and the Army School of Cookery, Aldershot, by permission of the general officer commanding, will demonstrate the methods of cooking army rations.

FOOTBALL CASUALTIES.—On the 28th ult., during a match at Brentford between the Brentford Early Closing Association and the North London Wanderers Club, one of the visiting team fractured his leg and was taken to the Brentford Cottage Hospital. On Saturday last the captain of the Scarborough Ebor (Association) Club, while playing for his club, sustained a fracture of his left leg. On the same day a young man aged twenty-two years, in a match between the Radford and Carrington Evening Continuation School teams, fractured his leg and was admitted to the Nottingham General Hospital.

CAMBRIDGE UNIVERSITY.—The following gentlemen have passed the University examination qualifying them for the functions of medical officer of health: William George Armstrong, Martin Ashley, M.B., Frank George Bushnell, M.D., Charles Buttar, M.B., B.S., Allan Gordon Russell Cameron, M.B., B.S., Edgar Godfrey Carpenter, John William Henry Eyre, M.B., B.S., Andrew Mearns Fraser, M.B., M.S., John William Frank Jewell, M.B., B.S., Harold Jossé Johnson, M.B., Harry Angell Lane, John Henry M'Gee, James Stevenson Morton, M.B., B.S., George Percy Shuter, M.B., B.S., and William James Johnstone Stewart, M.B., M.S.

ILKLEY HOSPITAL AND CONVALESCENT HOME.—The annual meeting of this institution, which has now been in existence for sixty-six years, was held at the hospital on April 3rd, Mr. A. Harris presiding. Patients are not ordinarily received all the year round; and the annual report stated that last season the hospital was open for thirty-two weeks, the number of patients being 1018. Dr. Johnstone, the medical officer, reported that of these there were 955 who were either cured or materially benefited. The invested capital approaches £8000, but last year's expenditure exceeded the income by £168, and increased subscriptions are urgently needed.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A well attended meeting of the South-Western Division was held at the City Asylum, Bristol, on Thursday, April 4th. Dr. Nicolson was in the chair. On the motion of the Chairman, seconded by the Hon. Secretary, a vote of condolence with Mrs. Tuke and family was adopted. It was decided to hold the next meeting on Tuesday, Oct. 15th, at Exeter. Dr. Hubert Bristowe and Dr. Blackford read interesting and valuable papers. Dr. Law Wade's motion on the question of granting gratuities to the widows or orphans of asylum officials who may die after long service or be injured fatally in the discharge of their duties was unanimously agreed to, and the Hon. Secretary was instructed to forward copies of the resolution to the council of the association, also to the medical superintendents of public asylums and hospitals in the division. Owing to the lateness of the hour Dr. MacDonald's paper on the Nursing Staff was postponed till the next meeting. There were several visitors present, and the members and visitors afterwards dined at the Grand Hotel.

MEDICAL MAGISTRATE.—On the recommendation of the Duke of Westminster, Lord Lieutenant of the county, the Lord Chancellor has placed Mr. George Okell, M.R.C.S., Surgeon-Lieutenant-Colonel 3rd V.B. Cheshire Regiment, on the Commission of the Peace for the county of Chester.

MUNIFICENT GIFT.—According to the *Times* Mr. Henry Harben of Hampstead, who has taken great interest in the North-West London Convalescent Homes Fund for Working Men, has decided to erect at his own expense a building at Littlehampton to cost £20,000. The home will contain reading-rooms, &c., and all the latest improvements, and will be lighted throughout by electricity. The work will be put in hand forthwith.

PRESENTATIONS.—Dr. Francis T. Richardson, of Rothbury, Morpeth, was entertained by his friends on the 2nd inst. at a complimentary banquet at the Queen's Head Hotel, on his leaving the district to take up his residence in Edinburgh, and was presented at the same time, as a mark of their respect, with a small souvenir in the shape of a pair of gold-rimmed eye-glasses and a gold-headed cane. The chairman, Mr. W. Forster, of Burradon, in making the presentation on behalf of the subscribers, expressed the general regret felt at Dr. Richardson's departure from amongst them, after half a century's residence. The articles offered for his acceptance were not of great intrinsic value, but he knew they would be prized none the less on that account. On March 30th Mr. J. Kay Tomory, M.B., of Halkirk, was presented by his patients with a purse of sovereigns accompanied by a request that the sum contributed should be devoted to the purchase of a horse and riding outfit. The value of the gift is enhanced by the fact that it consisted largely of small amounts given by the working classes in the district.

THE DANGERS OF ELECTRIC MAINS.—The committee of the members of the Royal Society and the Institution of Electric Engineers appointed to confer with the electrical adviser to the Board of Trade with regard to the circumstances connected with the formation in large quantity of an alkaline deposit in the mains of the St. Pancras electric supply and the presence in this deposit, in some cases, of sodium or potassium, have, it is announced by the *Times*, issued their report. It has already been proved that sparks may be caused by the incrustation itself, and now it appears that the metals just mentioned have been found to exist in the free state in the incrustation, and that they are probably produced from the electrolytic decomposition of alkaline salts, chiefly derived from the soil and conveyed by moisture along the fibres of the wooden bearers towards the negative conductors. It is accordingly recommended that these bearers should be replaced by devices impervious to moisture, and a longer insulating surface between the conductors and the bearers is advised. Steps should also be taken so that the conduits may be inspected throughout their length. Coal gas is, however, regarded as the primary source of danger. The report is signed by Major Cardew, Lord Rayleigh, Professor T. E. Thorpe, Professor Crookes, Mr. R. E. Crompton, Mr. Alexander Siemens, and Mr. Alex. B. W. Kennedy.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Undersized Flat Fish.

THE Government have introduced a Bill making it illegal for any person to "import, export, buy, sell, expose for sale, consign for sale, or have in his possession for sale," a sole or plaice not exceeding eight inches in length, or a turbot or brill not exceeding ten inches in length. The Bill confers on officers of Customs, Board of Trade, fishery committees, and other public bodies ample powers of search and detention.

Reforms in Egypt.

Lord Cromer has made to the Foreign Office another report on the finances, administration, and condition of Egypt and the progress of reforms in that country. In a section devoted to the sanitary department his lordship says that under the intelligent direction of Rogers Pasha much progress has been made. New dispensaries have been opened. The number of patients treated in Government hospitals has increased. An infectious diseases hospital at Cairo has been completed. An English physician is about to be placed in charge of the lunatic asylum. Three new hospitals at Damanhour, Fayoum, and Beni Souef are in course of construction. Slaughter-houses are being built in

several provincial towns. A vaccine institute has been completed. Sixty-six mosques have been placed in a sanitary condition, and 121 cemeteries have been dealt with under the Sanitary Decree passed in January, 1894. Lord Cromer quotes Rogers Pasha to this effect—viz., "It is an undoubted fact that the population is gradually beginning to appreciate the advantages of medical institutions, whether hospitals or dispensaries. Demands are now constantly made for the creation of new dispensaries and hospitals throughout the country, and it is a matter of the deepest regret that the resources of the department should be so limited as to prevent these demands being complied with." In his concluding sentence Lord Cromer expresses the hope that some portion of the general reserve fund may eventually be devoted to sanitary improvements.

HOUSE OF COMMONS.

THURSDAY, APRIL 4TH.

The Tuberculosis Commission.

Mr. Shaw-Lefevre, President of the Local Government Board, replying to a question put by Lord Wolmer, said he must disclaim any personal responsibility for the delay in the issue of the report of the Royal Commission on Tuberculosis, which was largely due to the long illness and death of the chairman, Lord Basing. There had been no delay since the appointment of a new chairman, and he believed that the report was signed on the previous day. A supplementary report by one of the Commissioners was now being printed, and it was expected that this would be signed shortly, and both reports would then be presented.

Factory and Workshop Legislation.

Mr. Asquith, Home Secretary, in replying to a question on this subject by Sir Charles Dilke, said that to extend the interpretation of the term "workshop" so as to include a warehouse not connected with a factory or workshop, where the work carried on was mere packing or bottling, and not in any sense the making or adapting for sale of the article, would be a very great extension of the Factory Acts, and would bring within their operation the establishments of most wholesale grocers, chemists, and drapers. Many of the provisions of the Acts were not really appropriate to the work carried on in these places, and the duty of inspecting them would necessitate a very large increase in the present staff. He must not be understood as holding that warehouses of this kind might not properly be made the subject of statutory regulation; but he thought that if they were to be dealt with, as in the case of shops, there should be special legislation on the subject.

New Legislation for Coal Mines.

Mr. Asquith, on behalf of the Government, introduced a Bill to amend the Coal Mines Regulation Act of 1887. In doing so he explained that the Bill proposes in effect to carry out the recommendations of the Royal Commission with regard to the making of special rules as to explosives and so forth in mines which are dangerous from the presence either of coal damp or coal dust, and makes one or two changes which experience has shown to be necessary with regard to deductions made in the wages of the miners in respect of the presence of foreign materials in coal they turn out.

FRIDAY, APRIL 5TH.

Female Labour in Factories.

Sir Charles Dilke asked the Home Secretary whether, in their recent visits to textile factories for the purpose of making inquiry as to the opinion and wishes of the women workers with regard to overtime, the inspectors had seen the women in the presence of their employers. Mr. Asquith replied that an isolated case appeared to have occurred in which the opinion of the operatives was asked in the presence of the employers, but this was entirely contrary to the usual practice of the factory inspectors, and instructions had been issued which would prevent its recurrence. It was clear that when operatives were questioned in the presence of their employers the inspector might fail entirely to ascertain their real opinions and wishes.

MONDAY, APRIL 8TH.

The Accommodation for Ships' Crews.

Mr. Bryce, President of the Board of Trade, said, in the course of a reply to Mr. Havelock Wilson, that such steps as his department were able to take without fresh legislation with regard to the recommendations of the Royal Commission on Labour affecting Seamen had already been taken, and the question of increasing the minimum crew space allowance would be considered when an opportunity for legislation occurred. All British merchant vessels were required to have for each seaman or apprentice a space of not less than 72 cubic feet, and penalties were provided for contravention of this requirement. Complaints had, however, recently been made to the Board of Trade that in certain vessels carrying Lascar seamen only the space (36 cubic feet for each man) required by the Indian Act had been provided. The owners of these vessels had been informed that the provisions of the Imperial Act must be complied with, and the matter was receiving the careful attention of the Board of Trade surveyors. Representations had also been made to the Secretary of State for India.

Guardians and Infirmary Visitation.

Mr. Macdonald addressed a question to the President of the Local Government Board with reference to a visit recently paid by two guardians at a late hour of the evening to the infirmary of the St. Olave's Union, Southwark, and the complaint made by the medical officer on the subject. Mr. Shaw-Lefevre, in his reply, said his attention had been called to the matter, and he found the facts were substantially as the hon. member had stated them. The Local Government Board had not thought it expedient to fix the hours during which a guardian might visit the workhouse or infirmary; but they had expressed a decided opinion that the case would be a very exceptional one in which it would be proper that a guardian should pay such a visit late at night, and that to justify his doing so there ought to be strong *prima-facie* grounds for believing that special and unusual circumstances rendered the visit necessary. The Board had also stated that a visit late at night ought not to be paid to a sick ward, unless it had been previously ascertained from the medical officer that it would not be detrimental to any of the sick occupants of the ward.

TUESDAY, APRIL 9TH.

Quarantine.

Mr. Shaw-Lefevre, answering a question put by Sir Francis Powell, said that a Bill was in preparation on the subject of quarantine, but as there were many interests concerned he was unable to say when it would be introduced.

The Ventilation of School Buildings.

Sir Francis Powell called the attention of the Vice-President of the Committee of Council on Education to the provisions in the new code for ventilation by enlarged inlets and outlets, in addition to the windows, and asked whether they were not likely to lead to inconvenience and danger to health. Mr. Acland, in reply, said that the size of the ventilators proposed was not unduly large. The teachers, he added, would of course exercise a discretion in opening and shutting windows. It was hoped that the provision would be beneficial and not injurious to the health of the children.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on this subject held another meeting on Tuesday, April 9th, with Sir Walter Foster in the chair.

Mr. James Hamilton, President of the Glasgow Provision Trade Association, examined by the chairman, said that the butters mainly sold in Scotland, apart from home products, came from Denmark and the colonies, and were of good quality; indeed, he thought there was not a large quantity of adulterated butter of any kind sold in Scotland. As to the presence of water in butter, he did not think it would be safe to fix a legal standard, because in its application it would affect injuriously many men honestly engaged in the making of butter, and, moreover, would lead to a general deterioration in the quality of the butter put upon the market. A very large quantity of margarine was sold in Scotland, but very little of it was sold fraudulently. In experience, it was found that the people who strictly conformed to the provisions of the Margarine Act were the people who sold most margarine in Scotland. He had to complain that the Act was not enforced with sufficient stringency, and he recommended that the Government should appoint and pay special inspectors to see to this matter. Margarine he regarded as a good, useful, and suitable article of food, and he would do nothing to interfere with its legitimate sale. He would not have licences for dealers in margarine nor would he prohibit mixtures or the colouring of margarine. Indeed, all he desired was to see the existing law properly enforced.

Mr. Van den Bergh, member of a firm of margarine makers in Holland and Germany, said he was appointed by the London Chamber of Commerce to give evidence on the sale of margarine. Last year his firm turned out 66,000,000 lb. of margarine, all of which was shipped and branded as margarine. In their factories they used from 80,000 to 100,000 lb. of milk per day. He admitted that the colour of margarine as sold resembled very closely that of butter, but it was coloured not to imitate butter, but to make it attractive. If not coloured, margarine would not be appreciated by the public even if sold at a cheap price, and he believed that any interference with the present system of colouring would be disastrous to the margarine trade. He failed to see why margarine should be singled out and coloured pink or blue. He was not in favour of having margarine sold in separate shops. On the whole, he considered that if the present Act were stringently enforced it would be quite sufficient to protect the public. The fines now imposed were quite heavy enough, for upon a third offence no less a fine than £100 could be imposed. He was in favour of travelling inspectors being appointed and of the Customs authorities being compelled to take samples of produce that came into the country unmarked. He should like to see mixtures sold as such, and not, as they were at present, as margarine.

Mr. McCallum, a member of a London firm of butter and margarine importers, who attended at the request of the London Chamber of Commerce, expressed the opinion that the wholesale houses dealt in a perfectly honest fashion with margarine, and the fraud took place after the article left them. He also denied that margarine was coloured in order to make it resemble butter, and he thought that mixtures should be allowed in the interests of the public.

The Committee then adjourned, not to meet again until after the Easter recess.

BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Boulevard Saint-Germain, Paris.

Huitième Congrès de Chirurgie, Lyon, 1894-95. pp. 903.

APPLETON, D., & Co., New York.

Transactions of the Sixteenth Annual Meeting of the American Laryngological Association, held in Washington, May and June, 1894. pp. 181.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London, W.C.

Our Teeth: Care and Preservation. By V. Ditcham, M.D., D.D.S., L.D.S. 1895. pp. 52. Price 1s.

BAILLIÈRE, TINDALL, & COX, AND F. WARNE & Co., London.

The Spirit of Cookery: a Popular Treatise on the History, Science, Practice, and Ethical and Medical Import of Culinary Art, with a Dictionary of Culinary Terms. By J. L. W. Thudichum, M.D., F.R.C.P. Lond. 1895. pp. 701. Price 6s.

BALE, JOHN, & SONS, Great Titchfield-street, Oxford-street, London.

An Inquiry into the Etiology of Rôtheln (German measles). By Donald W. C. Hood, M.D. Cantab., F.R.C.P. Lond. 1895. pp. 55.

CALCUTTA CENTRAL PRESS COMPANY, Calcutta.

A Medico-Topographical Account of Jeypore. By Brigade-Surgeon Lieutenant-Colonel T. Holbein Handley, C.I. 1895. pp. 128.

CHURCHILL, J. & A., New Burlington-street, London.

The Schott Methods of the Treatment of Chronic Diseases of the Heart. By W. Bezley Thorne, M.D., M.R.C.P. Illustrated. 1895. pp. 79. Price 5s.

Surgery: Its Theory and Practice. By William J. Walsham, M.B., C.M. Aberd., F.R.C.S. Eng. Illustrated. Fifth Edition. 1895. pp. 786. Price 12s. 6d.

The Treatment and Education of Mentally Feeble Children. By Fletcher Beach, M.B., F.R.C.P. Lond. 1895. pp. 32. Price 1s. 6d.

COX, HORACE, Bream's-buildings, Chancery-lane, London, E.C.

Horses, Asses, Zebras, Mules, and Mule Breeding. By W. B. Tegetmeier, M.B.O.U., F.Z.S.; and C. L. Sutherland, F.Z.S. 1895. pp. 166. Price 5s. net.

ENGELMANN, WILHELM, Leipzig.

Lehrbuch der vergleichenden Pathologie und Therapie. Von Dr. G. Schneidmühl. Erste Lieferung. 1895. pp. 208.

FUNK & WAGNALLS COMPANY, Fleet-street, London, and New York.

A Standard Dictionary of the English Language, upon original plans, under the supervision of J. K. Funk, D.D., Editor-in-Chief. Vol. ii., M to Z. 1895.

LEWIS, H. K., Gower-street, London, W.C.

A Manual of Gynaecological Practice for Students and Practitioners. By Dr. A. Dührssen. Translated and edited from the Fourth German Edition by J. W. Taylor, F.R.C.S., and Fred. Edge, M.D. Lond., M.R.C.P., F.R.C.S. Illustrated. 1895. pp. 241. Price 6s.

LONGMANS, GREEN, & Co., London.

A Primer of Evolution. By Edward Clodd. Illustrated. 1895. pp. 186. Price 1s. 6d.

LYONS, JAMES B., State Printer, Albany.

Eighth Annual Report of the Managers of the St. Lawrence State Hospital for the Year 1894. 1895. pp. 210.

MACMILLAN & Co., London.

The Cambridge Natural History. Edited by S. F. Harmer and A. E. Shipley. Vol. iii.—Mollusca, by the Rev. A. H. Cooke; Brachiopods (recent), by A. E. Stanley; Brachiopods (Fossil), by F. R. C. Reed. 1895. pp. 535. Price 17s. net.

MASSON, G., Boulevard Saint-Germain, Paris.

La Voix modifiée par les Inhalations. Par Dr. A. Sandras. 1894. pp. 107.

PATRIDGE, S. W. & Co., Paternoster-row, London.

Benjamin Townson: a Record of a Doctor's Life and Work. By his Daughter. pp. 168. Price 2s.

PENTLAND, YOUNG J., Edinburgh and London.

Outlines of Zoology. By J. Arthur Thomson, M.A., F.R.S.E. Second Edition. Illustrated. 1895. pp. 620.

Atlas of the Diseases of the Skin. Illustrated. By H. R. Crocker, M.D., F.R.C.P. Fasciculus 9. Price 21s. net.

SEGO, J. P., & Co., Regent-street, London.

General Surgery and Pathology for Dentists. By Edmund W. Roughton, B.S., M.D. Lond., F.R.C.S. Illustrated. 1895. pp. 134.

SLKVIN, E. P., Barclay-street, New York.

Edwards' Hygiene, with Anatomy and Physiology, being an amplification of Edwards' Catechism of Hygiene. By Jos. E. Edwards, A.M., M.D. pp. 435.

STEINHEIL, G., Paris.

Cystite et Infection Urinaire. Par Dr. Max Melchior. 1895. pp. 385.

Chirurgie du Rectum. Par E. Quénu et H. Hartmann. 1895.

Chirurgie de l'Urethre, de la Vessie, de la Prostata. Par V. Rochet. 1895. pp. 286.

URBAN & SCHWARZENBERG, Wien und Leipzig.

Pathologie und Therapie der angeborenen Hüftverrenkung. Von Professor Dr. A. Lorenz. 1895. pp. 420.

A Study of Erysipelas: by J. Selva, M.D.; reprint from the *New York Medical Journal*: 1894.—Société des Ambulances Urbaines de Bordeaux; *Compte-Rendu* No. 3; année 1893 (G. Gounouilhon, Bordeaux, 1894).—Ueber den derzeitigen Stand der Bestrebungen einer Serumtherapie der Syphilis, nebst praktischen Vorschlägen zu einer solchen; von Dr. E. Spiegler (L. Bergmann & Co., Wien, 1895).—The Natural History of Plants, Part 12 (Blackie & Son, London); price 2s. 6d. net.—Willing's British and Irish Press Guide, 1895 (J. Willing, 162, Piccadilly); price 1s.—Magazines for April: Strand Magazine, Picture Magazine, London Home.

BRIGGS, WM. P., L.R.C.P., L.M., L.F.P.S. Glasg., has been reappointed

Medical Officer of Health for the Wighton Rural Sanitary District.

BUCHANAN, GEORGE S., M.D., B.Sc. Lond., has been appointed Medical

Inspector to the Local Government Board.

BUIST, A., M.D., F.R.C.S. Edin., has been appointed Parochial Medical

Officer for Dunblane, vice Brown.

BURDWOOD, JAS. W., L.F.P.S., L.M. Glasg., has been reappointed

Medical Officer of Health for the Bourne Rural Sanitary District.

CLEGG, WALTER, M.R.C.S., has been appointed Medical Officer of

Health to the Boston Rural District Council.

COLBY, J. G. E., M.B., B.Ch. Oxon., L.R.C.P. Lond., F.R.C.S., D.P.H.

Camb., has been appointed Medical Officer of Health for the Malton

Rural Sanitary District and the Norton Rural Sanitary District.

COOPER, C. E., M.B., B.C. Cantab., has been appointed House Physician

to the City of London Hospital for Diseases of the Chest, Victoria-

park.

DAVIES, W. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical

Officer for the Western Sanitary District of the Llandilofawr

Union.

DICKIN, E. P., M.B., C.M. Edin., has been appointed Assistant House

Surgeon to the General Infirmary, Northampton.

DREAHER, J. B., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed

Medical Officer of Health to the Ashbourne Rural District Council.

DUNLOP, ROBERT S., M.B., C.M. Edin., has been appointed Medical

Officer to the Parish of Dalmellington and to the Dalmellington

Iron Company, vice R. MacLachlan, deceased.

EDMONDSON, C. R., M.B., C.M. Edin., has been appointed Senior House

Surgeon to the Royal Southern Hospital, Liverpool.

EVANS, A. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical

Officer for the Buckley Sanitary District.

FLEMING, C. E. S., M.R.C.S., has been reappointed Medical Officer for

the Eighth Sanitary District of the Bath Union.

FLOWER, FRKD. J., M.R.C.S., L.M., has been appointed Medical Officer

of Health to the Warminster Rural District Council.

GANGE, F. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical

Officer of Health to the Faversham Rural District Council.

GILLES, L., M.R.C.S., L.R.C.P. Lond., has been appointed Second

Assistant Medical Officer to the St. Marylebone Infirmary, vice

R. J. Smythe, resigned.

GUNN, F. W., M.D., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been

appointed Medical Officer for the Fourth Sanitary District of the

Morpeth Union, vice Forrest, resigned.

HARPER, T. E., L.R.C.P. Lond., has been appointed a Junior Assistant

Medical Officer of Holloway Sanatorium Hospital for the Insane,

Virginia Water.

HAWORTH, F. G., M.B., C.M. Glasg., L.R.C.S. Edin., D.P.H. Camb.,

has been appointed Medical Officer of Health to the Darwen Urban

Sanitary Authority.

HOLLIS, H., B.A., M.B., B.C. Cantab., has been appointed House

Surgeon to the General Infirmary, Northampton.

KEMPE, CHAS. M., M.R.C.S., has been appointed Medical Officer of

Health to the Shoreham Urban District Council.

LENTAIGNE, JOHN, F.R.C.S.I., has been appointed Visiting Surgeon to

the Children's Hospital, Dublin.

MACKINTOSH, ANGUS, M.D. Glasg., L.F.P.S., L.M., has been appointed

Medical Officer to the Clay Cross District Council.

MARSH, JAMES, M.B., C.M. Edin., has been appointed Second House

Surgeon to the Royal Southern Hospital, Liverpool.

NUTHALL, R. L. S., L.R.C.P. Lond., has been appointed Assistant

Medical Officer, with charge of the Male side, of Holloway Sanatorium

Hospital for the Insane, Virginia Water.

OSWALD, LANDELL ROSK, M.B., has been appointed Medical Superintendent

of the City of Glasgow Asylum, at Gartloch.

PARKINSON, J. PORTER, M.D., M.R.C.P. Lond., F.R.C.S. Eng., has been

appointed Medical Registrar to the Westminster Hospital.

POLAND, JOHN, F.R.C.S. Eng., has been appointed Surgeon to the City

Orthopaedic Hospital, vice E. T. Chance, deceased.

RICHARDSON, RICHARD T., M.R.C.S., has been reappointed Medical

Officer of Health for Trowbridge.

ROBERTS, E. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been

appointed Medical Officer for the Hawarden Sanitary District.

ROBERTSON, JOHN, M.D., L.R.C.S., L.M. Edin., has been appointed

Medical Officer of Health to the Cockerham Urban District

Council.

RODEN, PERCY A., M.B., C.M. Aberd., has been reappointed Medical

Officer of Health to the Droichead Town Council.

SANDERSON, J. A., L.R.C.P. & S. Edin., has been appointed Junior House

Surgeon to the Royal Southern Hospital, Liverpool.

STAUNTON, M. C., M.D., B.Ch., has been appointed Visiting Surgeon to

the Children's Hospital, Dublin.

THORNE, J. M., L.R.C.P. Lond., M.R.C.S., has been appointed Consulting

Surgeon to the Retford Cottage Hospital.

WARR, JOHN W. L., L.R.C.P. Lond., M.B.C.S., has been reappointed

Medical Officer of Health for the Fourth Sanitary District of the

Barnstaple Union.

WATSON, W., M.R.C.S., has been reappointed Medical Officer of Health

to the Rochester Town Council.

WILSON, R. M., M.D., B.Ch. Dubl., has been appointed Honorary

Medical Officer to the Derbyshire Hospital for Sick Children.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BARROW, GEORGE A., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Bolton Infirmary for twelve months.

BEVAN, RICHARD, L.R.C.P. Lond., M.R.C.S., D.P.H. Eng., has been reappointed Medical Officer of Health for the Lydd Urban Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BRADFORD INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100

per annum, with board and residence.

BRADFORD INFIRMARY AND DISPENSARY.—Junior House Surgeon,

unmarried. Salary £50 per annum, with board and residence.

BRISTOL ROYAL INFIRMARY.—House Surgeon. Salary £100 a year, with

apartments, board, and washing.

CAMBRIDGE LUNATIC ASYLUM, near Cambridge.—Clinical Assistant.
CONVALESCENT HOSPITAL AND SEA-BATHING INFIRMARY, Southport.—
Resident Medical Officer. Salary to commence at £150 per annum, with board, lodging, and washing.
DENBIGHSHIRE INFIRMARY AND GENERAL DISPENSARY, Denbigh.—
Honorary Medical Officer.
GENERAL INFIRMARY, Birmingham.—Assistant House Surgeon, for six months. Residence, board, and washing provided.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—
Resident House Physicians.
HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Surgical Registrar, for one year. Honorarium of £40 at the expiration of that term.
HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Anaesthetist, for one year. Honorarium of £15 15s. will be voted at the expiration of that term.
HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident Medical Officer for six months. Salary £60, with board and residence. Also House Physician, for six months. Salary £20, with board and residence in the hospital.
KENT COUNTY LUNATIC ASYLUM, Barming Heath, near Maidstone.—
Fourth Assistant Medical Officer and Pathologist, for two years (unmarried). Salary £175 per annum (rising £5 a year), with furnished quarters, attendance, coal, gas, garden produce, and washing. Applications to Mr. F. R. Howlett, 9, King-street, Maidstone.
MIDDLESEX HOSPITAL, W.—Assistant Surgeon.
NEW HOSPITAL FOR WOMEN, 144, Euston-road.—Qualified Medical Woman as Pathologist. Also a Clinical Assistant for the Out-patient Department.
NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer, for six months. Salary at the rate of £50 per annum attaches to the senior post.
ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon, for six months. Rooms, commons, and washing provided.
ROYAL SOUTH HAMPSHIRE INFIRMARY, Southampton.—Assistant House Surgeon for six months. £10 will be given at the end of that period if found satisfactory. Board and lodging provided.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—
Resident Medical Officer, for six months. Salary at the rate of £100 per annum, with furnished apartments and board.
ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant, for six months. Board and residence provided.
UNIVERSITY OF GLASGOW.—Two Examiners. The appointment will in each case last till Dec. 31st, 1896, at the rate of £50 annually.
WESTERN-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary attached to the Hospital. Salary £60 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BRODIE.—On April 9th, at Chesterfield-street, Mayfair, the wife of Dr. Brodie, of a daughter.
CAMERON.—On April 5th, at 9, Elm-street, Clapham-common, the wife of Albert Cameron, M.B., C.M. Edin., of a son.
CROOK.—On April 4th, at Kepton, Derbyshire, the wife of Herbert G. Crook, M.A., M.B., of a son.
CROOKSHANK.—On April 5th, at Midan Babel Louk, Cairo, the wife of H. B. Crookshank Pacha, F.R.C.S., Director-General of Prisons, of a daughter.
DAVENPORT.—On Feb. 5th, at Chung King, Western China, the wife of C. J. Davenport, F.R.C.S., of the London Missionary Society, of a daughter.
DEVEREUX.—On April 7th, at North House, Tewkesbury, the wife of W. Devereux, M.A., M.B. Cantab., of a daughter.
DIMMOCK.—On April 2nd, at Chatham House, Victoria-avenue, Harrogate, the wife of A. F. Dimmock, M.D., of a son.
RELTON.—On April 6th, at Church-street, Rugby, the wife of Bernard Relton, M.R.C.S., &c., prematurely of a son (stillborn).
REYNOLDS.—On April 8th, at 81, Hornsey Rise, N., the wife of Austin Edward Reynolds, M.R.C.S., L.S.A., of a daughter.
ROLLESTON.—On April 7th, at Upper Wimpole-street, W., the wife of H. D. Rolleston, M.D., F.R.C.P., of a son.
THOMSON.—On April 1st, at Payton-street, Stratford-on-Avon, the wife of Dr. Arthur Thomson, of a daughter.
WARBURTON.—On April 4th, at Langland, Northwood, Rickmansworth, the wife of A. Warburton, M.R.C.S., L.R.C.P., of a son.

MARRIAGE.

ANDERSON STUART-PRIMROSE.—On Sept. 18th, 1894, at Toowoomba, Queensland, Professor Anderson Stuart, University of Sydney, to Dorothy, second daughter of F. A. Primrose, Esq., and granddaughter of the Hon. Bouvier F. Primrose, C.B., Moray-place, Edinburgh, Scotland.

DEATHS.

HARDLEY-WILMOT.—On April 6th, suddenly, Chester Fairley-Wilmot, M.D., B.S. Durh., Senior Assistant Medical Officer at Middlesex County Asylum, near Tooting, in his 28th year.
MEYMOTT.—On April 3rd, at Ludlow, Henry Meymott, M.R.C.S., in his 89th year.
PELLEY.—On April 3rd, at Woodstock House, Lee, Kent, Surgeon-General S. M. Pelley, C.B., late Bombay Army, aged 76.
REEKS.—On April 5th, suddenly, at Southwick, Sussex, John Reeks, M.R.C.S., L.S.A., aged 38.

IN MEMORIAM.

BECKETT.—In affectionate remembrance of Henry Arnold Beckett, a true, faithful, and able friend and servant of THE LANCET for nearly forty years, who died on April 11th, 1894, in his 68th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 10th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
April 4	30.09	N.E.	39	38	64	44	38	0.02	Cloudy
" 5	30.24	W.	41	39	76	51	39	...	Cloudy
" 6	29.64	S.W.	45	45	75	51	40	...	Cloudy
" 7	29.30	W.	50	46	62	51	45	...	Cloudy
" 8	29.79	S.W.	45	43	81	57	40	0.07	Overcast
" 9	29.91	S.W.	52	50	105	65	45	...	Overcast
" 10	30.01	S.W.	53	50	103	65	48	...	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "To THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

THE LATE MR. J. W. HULKE, F.R.S., P.R.C.S., &c.

MESSRS. BAILLIÈRE, TINDALL, AND COX have sent us a portrait which they have published of the late President of the Royal College of Surgeons of England. The picture has been printed in photogravure by Messrs. Barraud, and is admirable alike as a portrait and as a work of art. Its size, including frame and mount, is 12 in. by 14 in., and the published price is half a guinea. The subscribers intend to follow this portrait by a similar one of the late Sir William Savory.

Mr. John W. Gibson.—The General Medical Council take notice of these matters.

"THE BACTERIOLOGICAL TEST OF THE PURITY OF WATER."—
To the Editors of THE LANCET.

SIRS,—In the last issue of THE LANCET attention is called (p. 835) to a book by Professor Hankin on the process of testing water for microbes for the use of municipal engineers and others. Can you tell me where this pamphlet is to be obtained?—I am, Sirs, yours faithfully,

A. B. C.

* The pamphlet in question is printed and published at the "Star Press" Artillery Bazaar, Agra, price 8 annas.—ED. J.

MEDICAL PRACTICE BY TOUTING.

WE append a number of illustrations of this new system. We are deluged with them. The system must soon come under the notice of the examining authorities, whose disciplinary powers should be used for its repression. We shall revert to a more detailed notice of the evil on an early occasion.

DEGENERATION OF MEDICAL METHODS AT CLAPTON, N.E.

WITHIN a very recent period Clapton and Lower Clapton were neighbourhoods where high professional methods were the rule. We trust the following is only an exception proving the rule:—

"12, Lower Clapton-road (near Clapton-square). Dr. Bremner carries on Practice at the above address. Hours of Consultations: Morning, 9 to 11.30; Evening, 6.30 to 9.30. Fees: Advice with Medicine, from 1s.; Visit with Medicine, 1s. 6d. Midwifery, Vaccination, &c."

We venture to hope that Dr. Bremner has broken the traditions of Clapton without due consideration, and that he will not defend the circulation of such a card as the above.

MEDICAL ADVERTISING AT NOTTING HILL AND THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

WE have had forwarded to us a circular which, we are informed, is placed either under the door or in the letter-box of houses in the neighbourhood. The most prominent features of the bill are the names of "Dr. Bluett," 11, Addison-terrace, W. (registered as M.R.C.S. Eng., L.S.A.), and Dr. Pillow, 1, Pembroke-gardens, W. (registered as L.A.H. Dublin, M.D., M.S. R.U. Ireland). The circular is scattered broadcast, and contains not a syllable of restriction as regards wage-limit or social condition. We appeal to Mr. Bluett and Dr. Pillow to say whether they approve of such methods; and we would appeal to some leaders of the profession who like to encourage thrift whether they sanction this indiscriminate appeal.

A CURIOSITY IN MEDICAL ADVERTISING—A TREBLY QUALIFIED MEDICAL MAN "RUN" BY A DRUGGIST!

ANY description would spoil the following:—

"Messrs. Briggs and Co., chemists, 65, Battersea Park-road, beg to intimate that a trebly qualified registered practitioner now resides at above address. Charges: Advice and medicine, 1s.; confinement, 10s. 6d.; home visits, 1s.; vaccination; necessary home visits and medicine for a week, 4s. 6d."

It would be interesting to know more of the personality of the modest gentleman who with three qualifications allows himself to be "covered" by druggists.

MEDICAL ADVERTISING AT THE CAPE.

MR. H. WHEATLEY HART, J.P., Cathcart, Cape Colony, asks our opinion on the following card advertisement from the *Farmers' Chronicle* (Cathcart) of Jan. 11th, 1895. The card is indefensible. The profession in the colonies is as dependent as that in the mother country on the traditions of practice and even more so. A door-plate is the only announcement to be commended. We trust Mr. Nangle will on reflection agree with us:—

"A card.—Dr. E. C. Nangle has commenced practice in Cathcart, and may be consulted at his residence, the cottage lately occupied by Mr. G. J. Taylor, next door to the Standard Bank."

MEDICAL ADVERTISEMENT BY POSTER (20 IN. BY 15 IN.), CAMBERWELL.

THIS is an imposing advertisement. The medical man's name is a conspicuous feature in this bill, and runs as follows:—"Dr. Gallie, 129, Camberwell-road." He is the sole medical officer of the slate club, which "wants" healthy men between seventeen and forty-five, and offers them, besides medical attendance, benefit in sickness, and their families so much at death. Dr. Gallie might be supposed from his description in the Medical Directory to be superior to this kind of thing. He is M.B. Glasg. and C.M., 1882, Member of the British Medical Association, medical officer of Camberwell Provident Dispensary, and surgeon to the P Division of Police. Surely such relations should have restrained Dr. Gallie from consenting to such an unseemly exhibition of his name. If graduates of ancient universities and police surgeons and members of the British Medical Association are to be allowed such licence, what are we to expect in others?

"THE LIQUEFACTION OF HYDROGEN ACCOMPLISHED."

To the Editors of THE LANCET.

SIRS,—A reference to the "Digest," Section 224:4 will refer your readers to an article published in THE LANCET, January 19th, 1878, reporting the liquefaction of oxygen, nitrogen, and hydrogen as one of the greatest discoveries of the year.

I am, Sirs, yours truly,

Boundary-road, N.W., April 6th, 1895. R. NEALE, M.D. Lond.

Justice, a correspondent, points out the frequent appearance of the name and private address of the honorary secretary of the Medical Board, 30, Harcourt-street, Dublin, in the newspaper advertisement of the Meath Hospital and County Dublin Infirmary. The honorary secretary should have his communications addressed to the hospital itself.

THE LATE INSTITUT VIKERAT.

THE following circular was issued by the Institut Viquerat of Geneva. In spite of the merits of the serum of the ass as a cure for phthisis we learn that the institute has been closed, and that M. Perron, the Geneva banker, who is believed to have found the capital necessary for the undertaking, has acquiesced in the cessation of the manufacture of the fluid.

"HEALING OF CONSUMPTION AND VARIOUS CASES OF TUBERCULOSIS."

"Discoveries of Dr. Viquerat.

"Every one knows that consumption has two different phases; in the first the tuberculosis bacillus is alone to his destroying work; in the second two others microbes are coming on with the first and hasten the course of sickness, which is then complicated with suppuration. The prepared serum of the ass discovered by Dr. Viquerat cures absolutely tuberculosis, that is no more to argue with the numerous recoveries made. But prepared ass serum alone cannot overcome consumption in her last phasis, when suppuration and hectic fever have come to complicate the trouble. It was then of importance for completing the deed, to add, to ass serum speciale serums appropriated for suppuration. Dr. Viquerat has searched a long time, and, one of those serums form his second great discovery. The goat furnish this serum. In November 1894 the Institute had announced that those serums would be ready in March 1895; but the preparation has been made a little sooner. The action of those serums takes soon away the hectic fever and suppuration. It ensue (this dreadful complication no more existing) that the physician has only the single tuberculosis to heal. And, it is now known that the prepared serum of asses; heal perfectly tuberculosis in some months. Then, with those discoveries, all no-cachectic consumptives who have sufficiently healthy lungs to subsist could revive to health, but, one must understand, that science cannot do more: make again organs that have disappeared. To heal every sickness, organism shall offer sufficiently power to help the struggle against the trouble. All persons troubled with weak chest, all kind of tuberculosis, and the consumptives who wishes to place themselves under the medical treatment of the Institute, will be able to do so by coming to Geneva for the length of the cure. They will be able to settle in the numerous hotels or boardinghouses in the town, and can be attended at their lodgings, when momentarily unable to come to the Institute. The price of the medical treatment is 350 f. monthly. The Institute having momentarily a relatively little quantity of anti-suppurative serum, the patients affected with suppuration and hectic fever, shall register themselves as soon as possible. They will be treated in the range of inscription. Please send with the registry a cheque or postal order of 25 frs, it will be worth on the treatment price. The registry is unnecessary for the patients who have single tuberculosis, the Institute having enough anti-tuberculous serum for all demands. Patients are advised that Dr. Viquerat occupies itself exclusively of the laboratory works and that the treatment in the Institute is placed under the direction of the clinic chief physician M. Dr. Jacot. All what concerns the Viquerat's Institute shall be addressed to Mr. Ch Perron.

"Ch. PERRON,

"Director of Viquerat's Institute.

"Côte-Drize, Geneva, 25 January 1895."

MR. II.—We never depart from our rules in these matters. We can neither recommend individual practitioners nor suggest treatment.

A WARNING.

To the Editors of THE LANCET.

SIRS,—A tall fair woman, stating she is a Russian and destitute, is calling round the neighbourhood of Harley-street complaining that a medical man of whom she has begged for some time will not give her any more money. He has helped her on several occasions, but on having a report from the Charity Organisation Society declined further assistance, and has placed the matter into the hands of his solicitor, Mr. Robert Todd, of 1, York-buildings, Adelphi, who would like to hear from anyone to whom she may apply. I write this to put the members of the profession on their guard. I am, Sirs, yours truly,

April 9th, 1895.

M.D.

WANTED, A HOME.

To the Editors of THE LANCET.

SIRS,—Can you or any of your numerous readers inform me of a home where the sons of a deceased medical man, who has left no provision for them, can be taken in free, or with very small premium?

I am, Sirs, yours faithfully,

April 10th, 1895.

J. N.

J. C. B.—There may be some business or legal reason for the advertisement sent us for which the parties to it are not responsible. We do not feel called on to comment upon it.

L.S.A.—Our correspondent is at liberty to describe himself on his door-plate as "Physician and Surgeon," whether he does so or not being a matter of taste. His neighbour is clearly wrong in prefixing "Dr." to his name.

THE CASE OF MR. C. BRYAN TOWNSEND.

The following donations have been received in addition to those already announced and are hereby thankfully acknowledged:—

Dr. G. Fielding Blandford	£1	1	0	Dr. George Macdonald	£3	3	0
A "Sympathiser," per Dr. V. Dickenson (London)	3	3	0	Dr. James Black (London)	0	10	0
Dr. E. W. Emtage (Holeworth)	0	5	0	Dr. F. G. Burghard	1	1	0
Dr. A. Watson (London)	0	5	0	Dr. E. Nettleship	3	3	0
Dr. T. Morton (Kilburn)	1	1	0	Dr. W. H. Fenton	2	2	0
Dr. C. W. Chapman (London)	1	1	0	Dr. Wharton P. Hood	5	0	0
P. G. ...	0	10	0	Dr. Cheadle	2	2	0
E. E. ...	0	10	6	Dr. G. Anderson	2	2	0
Dr. W. T. O'Grady (Swinton)	1	1	0	Dr. William Hunter	1	1	0
Dr. R. Paramore (London)	0	10	6	Dr. Woodhouse Braine	2	2	0
Sir Henry Thompson	3	3	0	Dr. R. B. Townsend (Oxford)	1	0	0
Dr. C. A. Ballance	2	2	0	Dr. W. P. Herringham	1	1	0
Dr. Cullingworth	1	1	0	(London)	3	3	0
Dr. E. Clifford Beale	1	1	0	Dr. Pearce Gould	0	10	0
Dr. Ed. Liveing (London)	1	1	0	P. G. ...	0	10	0

Further donations are earnestly invited by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

Inquirer.—It is now necessary for a practitioner who desires to practise in France and possesses English degrees or licences to pass at least the two final examinations required for the French M.D. degree. For this a knowledge of French is indispensable. The old diploma of *Officier de Santé*, which at one time was commonly taken by English practitioners, is now abolished.

Cedric has omitted to supply us with his name and address.

RUPTURE OF THE QUADRICEPS EXTENSOR TENDON.

To the Editors of THE LANCET.

SIRS,—I was called at 11 P.M. on the 22nd ult. to a postman who was said to have injured his knee. On his way home after a long day's work he stumbled when about a quarter of a mile from his house, and in endeavouring to check himself from falling backwards he heard a distinct snap and felt a sharp pain above his right knee-joint. With great difficulty he hobbled home. On examination I found the patella intact, but abnormally movable. The upper border of the bone was sharply defined, and above it was a distinct gap, in which subcutaneous ecchymosis was evident. In this region there was dull aching increased by pressure. There was total inability to extend the right leg. Mr. Kirkpatrick, who saw the case next day, agreed in my diagnosis of rupture of the quadriceps extensor. As this accident appears to be rare, we thought it might interest the readers of THE LANCET. The patient thinks that the tendon was weakened by his former occupation of shoemaking, in which there is constant hammering over the region in question. It would be interesting to hear of recent similar cases in hospital practice and what treatment has been found successful. The patient in question is sixty-two years of age, healthy and active.

I am, Sirs, yours faithfully,

Woodbridge, April 1st, 1895. EDWARD C. B. ISOTSON, L.S.A. Lond.

* When a violent contraction is made by the quadriceps extensor muscle of the thigh in order to avert a fall any one of four lesions may occur. By far the commonest is a transverse fracture of the patella, and this is especially likely to happen if the knee is flexed. Very rarely it happens that the ligamentum patellæ or the tendon of the quadriceps extensor gives way, and these two lesions seem to occur with almost equal frequency. But rarer still is rupture of the substance of the muscle itself; for Delon was able to collect thirty-six cases of rupture of the tendon of the quadriceps, but only six cases of rupture of the muscle. The above case is an interesting example of rupture of the quadriceps tendon. The treatment of this condition merely by rest and splints gives very fair results and useful limbs; but with due antiseptic precautions a more energetic treatment may sometimes be adopted, for Chaput in 1889 sutured the ruptured tendon in one case with a perfectly satisfactory result (*Société de Chirurgie*, Paris, December, 1889).—ED. L.

A QUESTION OF FEE.

To the Editors of THE LANCET.

SIRS,—What could be considered a reasonable fee to charge the Rural District Council for each visit to the isolation tents, which are a mile and a half from my residence? I am, Sirs, yours truly,

INQUIRER.

* Without further particulars it is a little difficult to answer our correspondent's question as precisely as we could wish. Assuming, however, as we do, that the arrangement proposed is to be a special and temporary one, and that our correspondent is to advise as to the general control of the camp, we think a fee of one guinea per day, to include, if necessary, more than one visit, would be a fair remuneration.—ED. L.

HILL'S PATENT EGG-CUP.

AN ingenious novelty in culinary appliances has been forwarded to us by the Premier Egg-Cup Co., 22, Imperial-buildings, Ludgate-circus, E.C. It resembles a deep, rather narrow porcelain tea-cup without a handle, having a German silver lid, which screws on. The raw egg is cracked and the contents turned neatly into this cup; then the lid is securely fixed, and the whole boiled just as if it were an egg in the shell, but for a minute or two longer than the usual time. The cup can be lifted out of the water with wire tongs, and after being wiped is sent to table unopened. The lid being then unscrewed, the contents are eaten just as out of the natural shell. A practical trial has fully justified the description given by the vendors, an egg cooked in this way being equal to an ordinary boiled egg, and free from the wateriness and loose texture of a poached egg. An obvious advantage is that the cook can make sure of the soundness of an egg before sending it to table, and two or more small eggs may be conveniently combined in one of the larger sizes of cup.

C. B. M. S.—We see nothing to object to in the arrangement suggested. It is certainly true that there is much need of instruction in the elements of good home nursing; and it cannot be given more carefully or with more precaution against abuse than by a medical man.

PRACTICE IN NEW ENGLAND.

To the Editors of THE LANCET.

SIRS,—Can any of your readers say what chances a Scotch graduate would have for medical practice in the New England States of North America if he were to go out there? Information through your columns will be gratefully received.—I am, Sirs, yours faithfully, April 9th, 1895. X. Y. Z.

* In our opinion a Scotch graduate would have no obvious claim on the attention of the public in these particular States. America is well supplied with universities, ranging from the very good to the very bad, all of which give the title of M.D. to their students, while the New England States are by geography likely to attract the graduates of the Canadian Universities also.—ED. L.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Mr. F. Campbell Bayard and Mr. Williams Marriott: The Frost of January and February, 1895, over the British Isles.—Mr. Birt Acres: Some Hints on Photographing Clouds.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—3 P.M. Mr. A. D. Michael: On the Form and Proportion of the Brain in the Oribatidae and in some other Acarina.

NORTH-WEST LONDON CLINICAL SOCIETY.—8.30 P.M. Clinical Evening.

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Clinical Cases. Dr. Alexander Morrison: On Syncopal Brady Cardia.

Communications, Letters &c. have been received from—

- A.**—Mr. J. W. Alexander, Rainhill; Anderson's Coll. Med. School, Glasgow, Sec. of.
- B.**—Dr. A. Bronner, Bradford; Mr. J. Barclay, Glasgow; Mr. T. B. Browne, Lond.; Mr. D. Biddle, Kingston-on-Thames; Mr. T. H. Benson, Lond.; Mr. C. Birchall, Liverpool; Miss R. Beckett, Lond.; Messrs. Blondeau et Cie., Lond.; Birmingham Gen. Hosp., House Governor of; *Birmingham Daily Post*, Publisher of; Bristol Roy. Infy., Sec. of; Bradford Infy., Sec. of; Beta.
- C.**—Dr. O. Carit, San José, Costa Rica; Brig.-Surg.-Lieut.-Col. W. Hill Climo, Lond.; Mrs. A. Chapman, Lond.; Messrs. F. Comar and Son, Lond.; Messrs. Condy and Mitchell, Lond.; Messrs. J. and A. Churchill, Lond.; County Asyl., Dorset, Med. Supt. of; Cripples Nursery, Lond., Lady Supt. of; C., Lond.
- D.**—Mr. G. Duncan, Berlin; Mr. E. De Sinner, Lond.; Dr. D. L. Davies, Criccieth, Carnarvonshire; Messrs. W. Dawson and Sons, Lond.; Messrs. Dakin Bros., Lond.; Demonstrators of Anatomy, Edinburgh; D. M., Leeds.
- E.**—Mr. F. R. L. Edwards, Manchester; Mr. E. F. Eliot, Southampton; Examinations, Lond.
- F.**—Dr. R. W. Felkin, Edinburgh; Mr. W. B. Forbes, Lond.; Fulbourn County Asyl., Clerk of; Fortes, Lond.; Forceps, Liverpool.
- G.**—Dr. G. C. Garratt, Lond.; Mr. J. Greenway, Southampton; Mr. J. Gay, Lond.; Mr. S. A. E. Griffiths, Lond.; Messrs. R. W. Greeff and Co., Lond.
- H.**—Dr. G. Herschell, Lond.; Dr. F. Hawkins, Reading; Mr. J. Hutchinson, Lond.; Mr. W. H. Hale, Lond.; Mr. A. Haviland, Douglas; Mr. J. Heywood, Manchester; Haskin Wood Vulcanising Co., Lond.
- J.**—Dr. H. Jones, Lond.; Dr. P. P. Jennings, Tonyandy; Dr. W. O. Jennings, Paris; Mr. H. K. Johnstone, Margate; Mr. J. G. Jefferson, Lisburn.
- K.**—Dr. H. R. Kenwood, Lond.; Mr. C. B. Keetley, Lond.; Mr. R. V. Ker, Dundee; Messrs. Krohne and Sesemann, Lond.; Kensington Hosp. for Women, Sec. of.
- L.**—Dr. J. F. Little, Lond.; Mr. J. B. Lamb, Lond.; Mr. S. C. Lawrence, Tilt Cove, Newfoundland; Mr. T. Laffan, Casbel; Mr. B. Lord, Manchester; Mr. R. C. Lucas, Lond.; Messrs. Lucius and Brüning, Lond.
- M.**—Dr. W. Marcet, Lond.; Dr. J. D. Malcolm, Lond.; Dr. J. B. Maurice, Marlborough; Mr. R. Mosse, Lond.; Mr. F. Marshall, Lond.; Mr. W. Macphail, Lond.; Mr. A. Mulliner, Northampton; Mr. J. Moir, Leytonstone; Messrs. Mather and Crowther, Lond.; Messrs. Macmillan and Co., Lond.; Messrs. E. Macfee and Co., Lond.; Maltine Manufg. Co., Lond.; M.D., Addison-gardens.
- N.**—Mr. A. Neve, Kashmir.
- O.**—Mr. J. Oliver, Lond.
- P.**—Dr. S. R. Philipps, Virginia Water; Mr. A. L. Phillips, Salisbury; Mr. Y. J. Pentland, Edinburgh; Mr. F. T. Paul, Liverpool; Messrs. Parke, Davis, and Co., Lond.
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- S.**—Dr. J. A. Shaw-Mackenzie, Lond.; Dr. F. H. Simmons, Johannesburg; Mr. W. Seagill, Colchester; Mr. J. B. Smith, Lond.; Messrs. Street Bros. Lond.; Messrs. Stubbs, Bradford; Messrs. G. Street and Co., Lond.; Messrs. Stubbs, Landport; Standard Malt Extract Co., Lond.; Society for the Prevention of Hydrophobia, Enfield, Hon. Sec. of; Sanitary Committee, Truro, Sec. of.
- T.**—Dr. F. Tresilian, Lond.; Dr. H. C. Thompson, Osborne; Dr. C. B. Taylor, Nottingham; Mr. J. Thin, Edinburgh; Surg.-Lieut. B. G. Turner, Afghan, India; Rev. A. Tooth, Croydon.
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Wand, Leicester; Mr. L. D. Ware, Camborne; Mr. J. R. Whitaker, Edinburgh; Messrs.

J. Wright and Co., Bristol; Weston-super-Mare Hosp., Hon. Sec. of.

Letters, each with enclosure, are also acknowledged from—

- A.**—A. B. Z., Lond.
- B.**—Mr. J. H. Booth, Chesterfield; Mr. E. G. Byrne, Cardiff; Capt. F. Beauclerk, Lond.; Beaufort, Lond.; Butterworth, Lond.
- C.**—Dr. A. Cameron, Lond.; Dr. E. N. Carless, Devizes; Mr. J. Carter, Lond.; Mr. L. Cooke, Aspall; Crown Accident Insurance Co., Bristol, Sec. of; Cumberland, Liverpool; Claret, Lond.; Conifer, Lond.; C., Lond.
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- K.**—Dr. C. B. Ker, Glasgow.
- L.**—Mr. S. C. Lawrence, Tilt Cove, Newfoundland; Mr. R. A. R. Lowry, Londonderry; L., Ashford.
- M.**—Dr. G. A. Mason, Lond.; Dr. Y. McClure, Chesterfield; Dr. J. McNaught, Manchester; Dr. P. C. MacNalty, Winchester; Mr. McLeod, Edinburgh; Mrs. Maunsell, Lond.; Messrs. F. G. Moore and Co., Lond.; Marlborough-road, No. 7, Bradford; M.R.C.S., Lond.
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- W.**—Dr. W. H. Williams, Dwyran; Mr. H. J. L. Wales, Oundle; Mr. G. C. Willis, Bath; Mr. A. Willson, Sheffield.
- X.**—X. Y. Z., Lond.

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An Address

ON

THE MEDICAL PROFESSION: ITS PLACE AND PROGRESS.

Delivered before the North London Medical and Chirurgical Society on April 11th, 1895.

By JAMES GREY GLOVER, M.D. EDIN., &C.,

PRESIDENT OF THE NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY;
VICE-PRESIDENT OF THE CLINICAL SOCIETY; DIRECT REPRESENTATIVE OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL, &C.

GENTLEMEN,—You will not expect from me an address comparable to those with which we have been favoured many times in the short history of this society—not least in the course of the session now drawing to a close—from men of eminence in the consulting ranks of the profession or in those regions of pathological and biological research whose work makes the last part of the nineteenth century memorable in the history of medicine and of Queen Victoria. Mine will be the humbler function of reviewing from the standpoint of a general practitioner the ground we occupy as a profession; of noting the principal changes I have seen in practice and estimating their importance, and possibly of forecasting the lines of probable development and progress of medicine. There are some who take a gloomy view of the future of the general practitioner, who think that between the consultant and the specialist, backed by the hospital system, not free, it is admitted, from great abuse, he is likely to be extinguished, or at the very best relegated into a position entirely secondary and subordinate, similar to that of the old apothecary. It is curious to notice, in contrast to this, an opposite set of fears which, it is said, occur occasionally to the consultant class. I have heard it said that consulting surgeons are concerned at the growth of surgical aptitude among their pupils, and at the boldness with which they undertake feats of surgery, the only consolation being the occasional scrape in which these audacious young gentlemen land themselves, for escape from which they have to appeal to their superiors. It is always dangerous, however, to prophesy the future of any great branch of medical work. I lately heard on the best authority a very striking illustration of this, and as I have the kind permission of those principally concerned to mention it I gladly use it. It has reference to a period seventy years back, and to a then young physician who afterwards became distinguished—I mean Dr., afterwards Sir George, Burrows. My informant is Mr. Willett, son-in-law of Sir George Burrows. When it was determined that Dr. George Burrows, having graduated in Cambridge, should commence practice in London as a physician, Sir William Lawrence called on Dr. Burrows's father, Dr. Mann Burrows, to induce him to dissuade his son from starting as a physician in London—i.e., as a hospital and consulting physician—because in his (Sir William Lawrence's) opinion physicians would soon cease to exist through there being no demand for them in London, adding that if the son were determined to be a physician he might succeed in Manchester or some other large provincial town or centre. Those who remember Sir Wm. Lawrence will best know how striking this illustration is. He was one of the acutest of men and the most far-seeing. Yet nothing can be further from the fact than his forecast. Sir George Burrows lived to be one of the most successful and eminent physicians of London; the number of consultant physicians has been largely multiplied, and so has their success, and if there has been any difference the movement has certainly been from the provinces to the metropolis rather than from the metropolis to the provinces. Such extreme views as I have quoted correct each other, and we may conclude that, the great social conditions of life remaining the same, and the great wants of human nature in a medical respect being subject to but little variation, there is likely to be the same steady demand for medical service and its different forms and grades as exists now, and that it will depend very much on the profession itself how far it will be consulted and on what terms. Certainly, there seems no reason at present, despite the growth of specialism, to

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think that the general practitioner will cease to be much needed in the economy of things. The facilities for special study in medical education are being multiplied in every medical school of any consequence, and it will be the fault of the medical student if on finding himself a practitioner he has not a knowledge of the elements of all the specialisms, which it has never been so easy to gain before. Before leaving this subject I wish to say a word on the great importance in the curriculum of medical education of a certain amount of pupillage in general practice. Some of us have been partially successful in the General Medical Council in getting this truth recognised: I am pleased to add, with the concurrence of such leaders as Sir Wm. Gull, Dr. Wilks, Sir James Paget, and others. Just as men need to have lessons in hospital practice, so they need lessons in general practice. The practice is quite different. The very cases are different, and their management and even treatment are different. But especially the cases are different. The great bulk of the cases that constitute general practice are conspicuous by their absence in the wards of a hospital and would be considered uninteresting, so that it is possible for a distinguished student, and even one who may have been a resident physician and surgeon, on commencing general practice, to find himself in considerable difficulties alike of diagnosis and of treatment. One great enemy of the general practitioner, and especially of the young general practitioner, is not so much the specialist as the generalist—that arch-generalist, the prescribing chemist—with his ready platitudes of diagnosis and his equally ready remedies for every complaint, from that of the teething infant to that of the ailing woman or man on whose health the happiness of a whole family depends. I sincerely believe that one of the best ways of meeting this unfair competition is the education of the medical student in common diseases—in the perception of their importance and in a readiness to recognise and relieve them. The tendency is rather to make light of them. This tendency should be denounced. A child with a distended tooth sac is not to be relegated to chemists. It is on the verge of convulsions or diarrhoea or bronchitis, and is not to be put off with a powder or a diarrhoea mixture. The profession must keep in touch with the common diseases of the common people or it will hand over whole branches of practice to the druggist, and we shall hear more of the hardness and the decline of general practice. I magnify the office of the general practitioner in his responsibility for the treatment of ordinary cases, believing with Sydenham, who said:—"Nevertheless I have always thought it a greater happiness to discover a certain method of curing even the slightest disease than to accumulate even the largest fortune, and whoever compasses the former I esteem not only happier but better and wiser too. With respect to practice I declare that I have faithfully set down all particulars also that I have contributed to the utmost of my abilities that the cure of diseases might, if possible, be prosecuted with greater certainty after my decease, being of opinion that any accession to this kind of knowledge, though it should teach nothing more pompous than the cure of the toothache or corns, is of much greater value than all the vain parade of refinements in theory and a knowledge of trifles, which are perhaps of as little service to a physician in removing diseases as skill in music is to an architect in building." But, though I think strongly that the success of the profession is largely dependent on its familiarity with the common diseases of the people and on sympathetic readiness in the use of means for their relief—in other words on the efficiency, sympathy, and accessibility of the general practitioner—I am under no delusions as to the abolition of the higher branches of professional work. No man recognises more cheerfully than I do the increasing earnestness and authority of consultants and their value in the economy of things. The most experienced general practitioner best knows the comfort and the satisfaction of calling to his aid men, whether young or old, whose studies, or genius, or experience, or practice in the various parts of our vast empire, have added to our knowledge of disease, or whose skill in the treatment of difficult cases has been recognised alike by the public and the profession. It would be strange indeed, and as discreditable as strange, if in a wealthy nation and with a social life ever becoming more complicated and exacting, the necessities for such authoritative members of the profession did not multiply and if their rewards did not increase. I am tempted here to quote Mr. Gladstone, speaking in 1890 at Guy's Hospital of the great start taken by the profession in the last century in the

time of Freind and Mead: "That profession has been steadily rising in power, in influence, and in general respect from that date to this, and it is my belief it will continue to rise. The growth of civilisation, as we call it in a large and comprehensive, but in a very loose and indefinite phrase, carries with it the production of many new forms of infirmities and disease, and men's wants in the medical sphere are the opportunities of the medical man." Lord Salisbury has spoken, too, within a year or two in very important terms of the profession and its work. It was on the same occasion at Guy's Hospital that Mr. Gladstone made two remarks on the financial aspects of our calling that deserve our attention. He referred with satisfaction to the great professional fortunes that were accruing to medicine, and secondly he complimented us on our independence, and said there was no great profession which had dipped its hand so modestly and moderately into the public purse. So far so good, but Mr. Gladstone's friendly remarks need this reply: The great medical fortunes might be counted on one's fingers or even one's thumbs, and have not kept pace with the growth of national wealth. If a statement could be got of the average net income of the profession it would surprise our financiers who tax us so complacently. Secondly, I shall have to show in a few minutes that if the profession has kept its hands out of the public purse more than other professions, it has done an enormous amount of unpaid or ill-paid work for the poor, and has been allowed to do it in a way scarcely creditable to the State or to the public.

So much for the ground we occupy as a profession in its two main divisions of the general and the consulting practitioners. There need be no jealousy between them, and there should be no rivalry. They should help each other and sympathise with each other, and respect each other's functions. Neither of them singly is equal to the whole care and cure of disease. They should coöperate; and I know no place for bringing them to a better understanding of each other and of disease than such societies as that of which we are members. Here they can each make their own special contribution to the illustration of disease and stimulate one another to a deeper study of it; and if there is any root of bitterness or element of friction amongst us, this is the kind of place for its full and friendly discussion. I know that our larger societies have not been so used. Perhaps, rightly so; but I am disposed to think that this exclusion of all medical ethics and politics from the societies has been carried a little too far. No one would regret more than I should the distraction of our scientific societies by frivolous or petty questions of medical or ethical politics; but there are some such questions which are neither petty nor frivolous, which involve the very reputation and efficiency of the profession, and on these, I think, our medical societies, because they are in the main scientific societies, might occasionally confer with advantage to the harmony and solidarity of the profession. For want of such conferences between the consulting and general branches of the profession one is pained occasionally to see indications of a want of sympathy between these branches, as if their interests were different.

Any review of the place and progress of the profession since I have known it would be very incomplete which did not take note of the enormous development of medical work done in the way of preventing disease. The State under the lead of such men as Mr. Chadwick and Sir John Simon has come to see that disease is an immense factor in the retardation of the progress of society, and that it is largely preventable. In a time when the notion of personal liberty in all directions grows almost excessively, there is one direction in which it is being discouraged and denied—that is, the liberty to have avoidable disease, to live in an insanitary house, or to generate smoke or other nuisance that may be injurious either to one's self or to one's neighbours. The subject of certain avoidable or communicable diseases is no longer a free agent or master of his own house. His illness is a matter of public importance and must be communicated to the public authorities. The chief agent in this communication is the medical practitioner. In a large proportion of the cases the patient is taken or voluntarily goes to public institutions to be treated gratuitously by medical officers appointed by the State or by a Board created by law. In my younger days the only public medical officers were the parish doctor and the medical officer of the workhouse. Now, one of the most important factors in a parish is the Medical Officer of Health, who, through his "authority," has enormous powers over property and over the liberty of individuals. A question was put in Parliament the other

night by the members for Islington which implied not only the power but the duty of the State in such institutions to practically incarcerate a patient with scarlet fever if need be for the best part of 100 days. Such duties and such relations of the medical profession immensely increase its importance and its responsibility. It needs in its facts to be unimpeachable and in its judgment to be impartial. While other professions are rather losing touch with the State, are threatened, in the language of the day, with "disestablishment," ours seems to be undergoing a sort of opposite process. So bent is the State on the prevention of disease—so properly bent—that the very material of our work is lessened by its operations. The profession is supposed to be the great mainstay of the Vaccination Laws, and by some foolish people to be so on selfish grounds. "Of course we approve the Vaccination Laws because we like the vaccination fees"; so runs the argument, forgetful that the vaccination fees are very small, and that a good long illness of six weeks would be much more profitable to the profession. It is certain that either for the prevention of disease or its cure the State will not on this side of the millennium be independent of the medical profession. It is sad to think that so far it is poorly paid; that its most illustrious members are but slightly regarded by the State and conspicuous by their absence in her great councils. But this will not always be so. We are, after all, the most indispensable of the professions, and if we were only true to each other we could compel very different recognition both from the public and from the State. The medical officers of the Services have often set their civil brethren an example in this respect, of a little more dignity and unanimity of demand, and the sooner we follow the example the better. The profession has long accounts to settle with the public and with the State. In its way—a really shabby way—the State has made medical provision for actual paupers; but *pauperism* is going out of fashion. We no longer speak of pauperism, but of poverty. This difference is accentuated in the case of all medical relief, so that the State has called on its medical officers to give relief to citizens to whom it would give no other relief, and who are to lose no right of citizenship by accepting it, but who would lose such right by accepting other forms of relief. What is the meaning of this exceptional position of medicine unless it be that it is indispensable. This is a cheap way on the part of the State of using its medical officers for those who are not-veritable paupers. The public in its philanthropic capacity does very much the same thing. It allows the medical profession to do its medical charity. There is a huge population so poor or so improvident as to have no regular understanding with a medical man, but who rush to him in emergencies and who ring his bell urgently at midnight when all other good citizens are fast asleep, and expect to be attended to on grounds of humanity. I agree that there is something so pitiful in the emergencies of disease that this is almost inevitable; but I am amazed that the public or the State has so long left all this work to be done by anybody or anyhow without thought of its own responsibility to the profession which does it. I will give you an example of what I mean, not inapt at this time, when the question of midwives is before the public and the profession. I was asked to see a poor but respectable woman with seven children, lately confined. She had been delivered by a midwife, who had to call a medical man out of his bed to remove an adherent placenta, which he did efficiently. The woman was much blanched, besides being the subject of chronic phthisis. I found, only by categorical inquiry, that while the midwife had her 10s. 6d. fee, the medical man had had no fee for his obstetric services, and apparently expected none. Has society, has the State, no duties towards the medical man who does the good Samaritan in this way? Is the public for ever to have all this medical charity done vicariously? We shall see. Now that the decent poor are to be helped without taint of pauperism the scandal of medical charity at the expense of the medical profession alone must be removed.

I have left myself so little time that I must say but a few words on the principal changes which I have seen in practice and their significance, without any severity of arrangement or any pretension to exhaust the subject. I think the following headings would include the chief facts: 1. The introduction of *anæsthesia*. 2. The disappearance of the antiphlogistic treatment of disease and the introduction of one which aims at supporting the powers of nature, by which it is recognised that disease is chiefly combated. 3. The doctrine of *sepsis* and the application of antiseptics to

surgery, medicine, and midwifery. 4. Increased care in the study of the *causes* of disease and the discovery in many diseases of the bacteriological nature of their cause. 5. Increased care and time in the *diagnosis* of cases, especially in the determination of the element of pyrexia by the use of the clinical thermometer, in the use of bacteriology, &c. 6. In Midwifery the shortening of the second stage of labour by the more common and early use of the forceps and the improved treatment of placenta prævia, and, above all, the protection of the lying-in woman from all contamination with specific contagia by extreme cleanliness, their careful exclusion, and the use of antiseptics. 7. The recognition of the relation of great groups of disease to an underlying and often inherited diathesis or constitution. 8. The enlargement of our conception of therapeutics as embracing much besides mere drugs; a more open mind for new remedies, with unabated respect for old ones; more or less successful attempts at theories of the mode of action of drugs. Each one of these headings would be worth a separate address by a capable speaker. I am only giving you the impressions made on a general practitioner who has had neither the time nor the ability to go deeply into the questions which they cover. Looked at cursorily and in their combination they show a broadening and strengthening of the very basis of medical science and an enormous addition to the beneficial and curative powers of the profession. The first change I have noticed is Anæsthesia. This discovery alone would have conferred lustre on the history of medicine in this century, but it is too obvious and too big a fact for more than mere mention here. I notice next the Disappearance of the Antiphlogistic System. There can be no doubt that this is a great improvement. Though it is doubtless true that there are cases which would be mechanically relieved by a moderate and careful phlebotomy, it must still be admitted that the old practice, which added the complication of anemia to every acute disease and not a few chronic ones, was one of those errors which can only be regarded as the result of the undue reign of mere authority and imitation. As to the theory of change of type of disease by which this change of practice was sought to be covered and explained, I have a very limited belief in it. The ordinary acute pneumonia, which, occurring in a single member of a family and going through the typical stages made familiar to us by Bennett, Fox, and other writers, is very much the same thing as I used to see as a youth. I am aware that this ordinary pneumonia is considered by many physicians as "an infectious disease" depending on a micro-organism invariably found in the diseased lung. But surely there is another pneumonia abroad which, if not new or newly recognised, has been recognised with fresh vividness, with its qualities of asthenia and of infectiousness, which place it altogether in a separate category. I would especially refer in this connexion to the report of our distinguished neighbour, Dr. Ballard, on the epidemic of pneumonia in Middlesbrough in 1888, which affected 1633 persons out of a population of 97,608 and caused 369 deaths, or 16·7 per cent., which he called a specific fever, like which (specific fevers) it possessed the quality of communicability from the sick to the healthy, either immediately through proximity, or mediately through food or otherwise. "It has seemingly," he adds, "its own specific *contagium vivum*, 'the bacillus pneumoniæ' of Klein, which he has captured, isolated, and studied"; with which, by inoculation or in the way of food, he produced a similar fatal pneumonia in mice and guinea-pigs. I have myself known three deaths from pneumonia of adults within as many weeks in a country house with every comfort and luxury in it. I make the less excuse for allusion to this epidemic as it has had too much interest for us in recent influenzal seasons, and because its investigation by Dr. Ballard on behalf of the Local Government Board is one of the best illustrations of the thorough and deep investigation of the nature of disease which contributes the best basis for means for its prevention and treatment. I will not detain you in any laboured vindication of the value of the sustaining and restorative treatment of disease as compared with the antiphlogistic; but I will only add my belief that this theory is occasionally pushed too far, especially in the old, and that both stimulants and food are stuffed down the patient's throat in a mechanical sort of way, to his embarrassment rather than his advantage, as if he were a cask for the passive reception of such things, and not an organism with digestion and every other function in abeyance. We have to remember that food and nourishment are only good in as far as they can be appropriated and assimilated—that all beyond this creates

discomfort and difficulty for the loaded and disordered organs. The Antiseptic system needs no laudation from me who have no claim even to praise that of one who early discerned its significance, and has looked with ever-increasing admiration on its success. It has revolutionised surgery, and seems to me the greatest improvement since the discovery of the ligature by Ambrose Paré. It is impossible for those who did not live in pre-antiseptic days to know the difference in surgery. The finest surgery was marred by the frequent appearance of septicæmia in a few days from the operation, and when this did not happen the wound or the compound fracture was often the seat of a suppurating that yielded pints of matter, and not infrequently a lively brood of living and by no means microscopical animals—which stank and poisoned other patients in turn. Three words will express for all time the chief achievement of Sir Joseph Lister: "He abolished pus." And if the achievement seems at first sight somewhat less than that of Paré, as the loss of pus is less terrible than the loss of blood, yet in other respects the merit is greater, as the intellectual process by which the system was established was more subtle and profound. In its application to midwifery and gynecology the Antiseptic principle has been unspeakably beneficial, and has saved and is destined to save thousands of lives. It has especially rescued lying-in hospitals from a discredit which threatened their extinction. It is only fair to say that Semmelweis in 1847 in a way anticipated the antiseptic system in the matter of midwifery, but only in a way. Be this as it may, we owe to the system introduced so ploddingly, through evil report and good report, by Sir Joseph Lister an extension of operative surgery undreamt of before his day and a success of it which is simply brilliant, and which brings it into serious competition with medicine in many fields hitherto regarded as the exclusive domain of the physician. I must here emphasise the two great achievements of recent midwifery proper which, after the antiseptic system, strike me as its greatest improvements. The first is the freer and earlier use of the forceps, shortening the duration of the second stage of labour, which, as Sir James Simpson showed, had much to do with the complications and disasters of the after puerperal condition. True we have heard much more of late years of accidents to the perineum. But these have been carefully and antiseptically dealt with. I may mention one little precaution of my own which I have found effective for the prevention of such accidents, which is, of course, better than the most scientific suturing—viz., when you use forceps to procure the aid, where possible, of a brother practitioner to take charge of the perineum. This is a very simple precaution and in out-of-the-way places perhaps an impracticable one. But I can commend it from experience. The next great achievement of midwifery is the improved treatment of Placenta Prævia, by which the patient, after the nature of the case is clear, is practically not left till delivery is accomplished. It is gratifying to think that this improvement is most honourably associated with the names of British obstetricians, notably Dr. Barnes, Dr. Braxton Hicks, and Dr. Murphy of Sunderland. The last physician has published a record of sixty-three cases with only two deaths, and in one of these the patient was moribund when first seen. My fourth point is the improved care and means in Diagnosis especially—e.g., in the determination of the question of pyrexia, or otherwise, by the use of the clinical thermometer, in the application of bacteriology, and, I would add, the closer and more practical study of physiology in its bearing on the problems of health and disease. I need not detain you with illustrations of this proposition. I have only met with one member of the profession who did not use a clinical thermometer, though I have known many, including myself, who use it too infrequently. I am persuaded that no instrument does so much to put us on our guard and to save us from grave neglect of diagnosis; for after all many of our errors come from carelessness and off-handedness. Having once ascertained the existence of pyrexia, we are on the safe road to find out its significance in the particular case. Of course, the mere absence of pyrexia is no guide in a large proportion of our graver cases. It would be presumptuous in me to enlarge on the part played and to be played by Bacteriology in diagnosis. We seem to be at the mere threshold of a new region of light. But already which of us is not indebted to it for aid? I am sorry that a resolution in the General Medical Council, moved by Dr. Philipson and seconded by myself, for securing more attention to this subject in medical education was lost. Of course, this was from no inadequate sense of the subject

In the minds of the members of the Council, but from their assuming that it will be taught. Meantime most busy practitioners will be thankful to be members of the Clinical Research Association, which quickly determines for us the bacteriological or other facts of any given secretion. It is no slight proof of the increased carefulness of practitioners, that in six months this association has examined 2000 specimens sent from various parts of the country. It is only fair to medical teachers to say that physiology and all other fundamental subjects are now taught in a practical way with a view to their bearing on the great problems of health and disease.

I have not left myself time to speak of the changes to be noted in larger conceptions of therapeutics and more accurate views as to the action of medicines. Though mere drugs are no longer regarded as the be-all and end-all of the practitioner, they were never more indispensable than now. The discovery, for example, of Laveran's bodies—the essential cause of ague and so admirably illustrated lately for this society and for the profession by Dr. Patrick Manson—has not superseded the use of quinine. Rather has it afforded fresh demonstration of its power, for it is found to destroy these very bodies and cause their disappearance from the blood. How real and persistent is the reputation of our old remedies—quinine, mercury, opium, alkalies, and iodide of potassium; but how much our store of remedies has been enriched by the addition of the bromides, salicin and its compounds, atipyrin, phenacetine, pilocarpine, iodoform, nitrite of amyl, nitro-glycerine, boric acid, &c. We are deluged, indeed, with new medicines, and they come to us in quantities which are embarrassing. Still, truth compels us to admit that they come in pharmaceutical forms which are a great improvement on old ones. The admirable preparations of active drugs for hypodermic use enable one to carry a medicine-chest in the pocket of our coat, and to minister to urgent symptoms when medicine in ordinary forms administered by the mouth would be rejected. The wonders wrought by thyroid feeding—of which a happy instance was recorded at our last meeting by Mr. King—are a revelation. It is perhaps premature to speak dogmatically of the treatment of diphtheria by antitoxin; but it is significant to notice the lower range of mortality from diphtheria in the metropolis since its introduction, and we have good reason to hope that a new realm of therapeutics has been sighted. Very remarkable, too, are the results of alimentation and massage in properly selected cases, and of the action of natural waters to be found in our own and other countries. The direct introduction of antiseptics into the trachea and bronchi in cases of phthisis and other forms of chest disease has been lately shown by Mr. Colin Campbell and others to be both practicable and beneficial. Speaking generally we have outlived the idea that disease is to be treated by drugs alone. But we are no nearer the time when they can be dispensed with or administered in impalpable quantities without injustice to our patients and unfaithfulness to our art. The forecast from such achievements as I have summarised I shall leave to my audience. The subject is tempting, but your time is gone, and I must bring my address to a close. I cannot do so without a word of gratitude to my colleagues generally and the secretaries, who have so well piloted the society through a session of some anxiety and difficulty, and have provided us with admirable material for professional instruction and reflection. I can imagine nothing better for a man in general practice than to be a member of such a society as this, if not of more than one. By contact with fellow practitioners and by seeing constantly a number of interesting cases he keeps his knowledge of disease and its remedies fresh. Differences of opinion are adjusted, and where that cannot be men still learn to respect each other and each other's views. Let us do what we can to promote these great ends of all medical societies and in every other way to advance the harmony, the reputation, and the usefulness of the profession of which we all feel it an honour to be members.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin*: Dr. R. Langerhans, *privat docent* in Pathological Anatomy, has been granted the title of Professor.—*Gießen*: Dr. Sommer of Würzburg has been appointed Extraordinary Professor of Mental Diseases.—*Turkief (Dorpat)*: Dr. Babnoff of Moscow has been appointed Professor of Hygiene; Dr. Ignatovski of Kiev has been appointed to the Professorship of Forensic Medicine.—*Strasbourg*: Dr. Cahn has been promoted to an Extraordinary Professorship of Medicine.

The Lancelian Lectures

ON

THE DIAGNOSIS, PROGNOSIS, AND PROPHYLAXIS OF INSANITY.

Delivered before the Royal College of Physicians of London on March 28th and April 2nd and 4th, 1895.

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LECTURE III.¹

Delivered on April 4th.

THE PROPHYLAXIS OF INSANITY.

MR. PRESIDENT AND GENTLEMEN,—I come now to the third portion of my subject—the prevention of insanity. On Jan. 1st, 1894, there were registered as of unsound mind, according to the Report of the Commissioners in Lunacy, 92,067 people in England and Wales alone. How many more there were unregistered no one can tell. That it is a large number is certain. That it will increase and is increasing I think there can be no doubt; for the public in general resents and resists the new and cumbersome Lunacy Law to the utmost of its power, and will continue to do so. The consequence is that patients are treated at home and are not registered, and the early treatment, which is admitted by all to be essential to recovery, is but rarely adopted. A controversy exists, and has existed for many years, as to whether insanity is increasing or not. We read in the Commissioners' Report that the number of registered lunatics and idiots in 1894 exceeded that of 1893 by 2245; but this, we are told, can be easily explained, and is no proof that insanity is increasing. My own belief is that we can deduce but little from such figures. If insanity does not increase it is to be inferred that the recovery-rate and the death-rate must decrease to account for this large accumulation of cases. I have nowhere seen any statement that insanity is decreasing, or that nervous disease is diminishing in frequency or intensity; and *a priori* reasoning would lead us to think that the reverse is the case—that the environment in which we live is becoming more and more complex, and that there must be a corresponding complexity of brain centres and functions with more and more instability and liability to disorder and deterioration. I know that this view has been called pessimistic, and that there are some whose opinions I greatly value who deny that there is any increase of complexity, and who point to brilliant men who live and are well in spite of hard brainwork. This does not, in my opinion, disprove my position, but only shows that the strong and the naturally selected escape the dangers which overwhelm the weak, who by natural inheritance and less fortunate environment succumb to nervous disorder. I shall come back to this part of my subject presently, when I speak of the rearing and training of those who are threatened with nerve or mind trouble. I wish first to say something about the great cause of insanity—hereditary taint. There is no need for me to argue before an audience like this upon the existence of such a cause of insanity or to raise any question as to the transmission of the disease by inheritance. Few medical men, even of those whose practice does not lie amongst the insane, can pass many years without its being brought under their notice. Young persons of both sexes break down, we know not why. The parents may assign this or that as a reason, but they are keeping back the true cause. The patients are too young to have acquired insanity; they have not been exposed to the changes and chances of life; they have not known the cares and anxieties of poverty and the condition of those who have to support a family on very small means; they have not failed in business or been disappointed in their ambition; they have not taken to drinking; their insanity is idiopathic, constitutional—derived from their forefathers; and insanity is inherited not only from insane parents, it may come from those who are afflicted with other nerve disorders, as epilepsy or dipsomania, and along with insanity we find in a family the disorders which I have

¹ Lectures I. and II. appeared in THE LANCET of April 6th and 13th respectively.

named and all the series of neuroses with which you are familiar. But statistics of inherited insanity we do not possess. Statistics of cancer, statistics of phthisis, two other hereditary diseases, we are able to arrive at and to argue upon. The reason of this is that cancer and phthisis kill their victims, and the record appears in the Registrar-General's list of deaths. But insanity does not kill except in a few cases. People become insane and may live for years in this condition, dying eventually from some other disease, which is tabulated as the cause of death. Two patients have lately died under my care. One, a woman, had been in the same asylum for fifty years. She died from an apoplectic seizure; the other, a man, had been forty-one years in the asylum and died from prostatic and bladder trouble. Not deriving any assistance from the Registrar-General, we are driven to the information we get from the relatives of patients and our own knowledge and observation. The former—the facts imparted by friends—are absolutely untrustworthy. That insanity exists in a family is denied with the most unblushing boldness. I recollect the case of a gentleman who was about to be married. The relatives of his intended heard in some way or other that his family was not altogether free from this disease, and they put some plain questions, not to him, but to his relatives. They were told in the most positive terms that nothing of the kind existed, though at the very time the gentleman was the committee of an insane aunt, and other suspicious cases had occurred. The marriage took place. Within six weeks the gentleman was in a foreign asylum. He recovered, again to break down, and after a series of recurring attacks he died in an asylum in three or four years a hopeless epileptic. Fortunately there was no issue of the union.

Mr. Francis Galton, who has, as you know, studied the question of heredity, tells us in his book on "Natural Inheritance" that when he issued his inquiries as to the "Records of Family Faculties" insanity was not asked about, as he did not think it wise to put too many disagreeable questions. No doubt he thought that the answers he was likely to receive on this point were not likely to add much to our knowledge. Without information, and accurate information, we can do little by dint of our own observation. There are but few of us who have the opportunity of observing many families through three or more generations. Here and there we come across certain insane persons in a family, and may be aware that in the preceding or following generation there have been others. But for the purposes of our investigation we want to know not merely these black spots and blights in the family tree, but the history of all the others, the half insane, the neurotic, the phthisical, the healthy. Is the family tending to decay and extinction, or is it reviving, throwing off its unhealthy branches, and with recuperated vigour ascending again to its proper racial place? We want to know the conditions of the one or the other of these terminations. Doubtless the environment has a good deal to do with the result, but inheritance has as much or more, and this is a matter more under the control of the interested parties if they will only suffer themselves to be controlled by our advice.

We may roughly divide insanity into that which is inherited and that which is acquired; but no one cause of acquired insanity at all equals heredity as a producer of mental disease. If we could stamp out all the insanity which owes its origin to inherited instability we should have gone a long way towards the extirpation of insanity as a whole, for a great deal of the mental breakdown which is apparently acquired is due to hereditary weakness. A large amount may be acquired through alcoholic indulgence; but if we closely examine the cases where alcohol is the exciting cause, in how many we find hereditary predisposition. Sometimes the alcoholic craving is inherited or it may come from ancestors who were not themselves inebriates, but showed some other form of mental or neurotic disease. Again, look at the insanity which is due to overwork or worry, to shock, disappointment, or religious excitement. Some such exciting cause may be found in many cases, but behind it we may perceive a predisposing cause, hereditary taint. How many a patient who is said to have suffered from worry has evolved his worry out of his own nervous, fidgety constitution. The things which are worries to him would be nothing to a more stable mind. And the same with work. What is healthy occupation to one becomes a burden too heavy to be borne by another who collapses under its weight. The same with losses and shocks and with religious strain. If we wish to save our race from gradual mental decay, and not only to

preserve life from such ills as syphilitic diseases but to raise up a strong and vigorous breed of healthy men and women, it is absolutely necessary that more attention shall be paid than has been done hitherto to the selection of the individuals who are about to marry and reproduce.

If men and women were racehorses or shorthorns or greyhounds their breeding would be regulated, and all diseased or faulty stock would be carefully eliminated, and all in-breeding would be, as a matter of course, avoided. But being what we are, thinking only of ourselves and our own self-gratification and nothing of the future race, we arrange our own unions, and nobody has the right or the power or the courage to prevent us when we have attained to years of discretion—viz., the statutory age of twenty-one. Many have thought and more have hoped that some day legislation may concern itself with this subject and prevent the union of persons one of whom has been insane or is specially threatened with the disorder. Vain hope. Legislation will not even annul the bond which ties a man or a woman to a partner, perhaps quite young, who is hopelessly insane and will remain so for the space of a long life. We can only trust that by education, by continual ventilation of the subject and exposure of the evils arising from its neglect, public opinion may in process of time be directed towards it, and people will be forced to look upon the act of giving birth to an insane child as a cruel sin. If we examine a family in which insanity exists—where, for instance, one or other of the parents has shown symptoms of mental disorder—we shall probably find that not all the children become insane; indeed, the majority may escape altogether. This may be due partly to a better constitution inherited by some than by others from healthy forefathers, and partly by the environment of some being more conducive to mental health than that of others. But it is impossible to forecast with certainty what will be the fate of this or that child. Some may break down early at puberty or adolescence, while others may show no indication till they attain old age; nay, they may escape altogether, and yet in the next generation the inherited taint may show itself.

For the prevention of insanity we would, if we could, forbid the marrying of unsuitable persons, persons who by reason of inheritance or being themselves neurotic or unhealthy or inebriate are likely to have diseased children. If there is insanity in the family we shall have to consider in how many members and in how many generations it has shown itself. If it has occurred in one of the parents, what was the age of the parent at the time of its appearance? Did it appear when the parent was young, at a time when it must obviously have been inherited, or did it manifest itself later in life with a cause and a history which showed it to have been acquired? What was the age of the parent when the child was born, and was it born before or after the disorder commenced in its parent? If the taint appears to be slight and the individual is strong and healthy and free from all neurotic symptoms, we then have to look at the other side of the union, at the partner that he or she is about to take. If this one's family history is absolutely free from inherited disease and the individual is sound in body, no great opposition can be offered if he or she is willing to undertake the risk, but that there is a risk ought to be clearly explained. On the other hand, if there is a taint of insanity on this side also, if the parties are cousins or either is eccentric, nervous, weak-minded, ultra-religious, or ultra-emotional, the union should be forbidden, not only on account of the offspring, but for the sake of the parties themselves. The effect of the knowledge of this family disorder may have a disastrous influence on their lives and may cause the greatest misinterpretation of actions and trial of tempers. Whatever difficulty we may experience in advising as to the marriage of those in whose families insanity exists, there will be much less when we are consulted about men or women who have already had an attack of this disorder. When the individual is a girl we are at once confronted with the popular and prevalent idea that marriage is a cure and sovereign remedy for such disturbance, and advisers, even medical, say to the parents, "get her married." They think this will cure any remnants of the past attack and be a certain preventive of any in the future. Our advice on the subject is often taken and but rarely followed. The attack will be concealed from the knowledge of the other party, if this is possible, or will be minimised and spoken of as nervous or hysterical, or it will be denied altogether. I hold a strong opinion that people who have been insane ought not to marry at all, that they ought not to inflict on their

partner for life the anxiety and even danger of another attack. No one who has had one attack of insanity can be pronounced free from the risk of another. Insanity is a disease which confers no immunity on its victims like some we have to treat. On the contrary, each attack, if there be more than one, adds to and does not take away the liability to succeeding ones, in this respect following the example of its congeners such as epilepsy or neuralgia. And besides the risk and danger to the partner in the marriage there is the question of offspring. In this there is far greater danger for the woman than the man, for the former has to face the periods of pregnancy, parturition, and it may be lactation, and what numbers do we see who break down after childbirth who had they remained single might have led a happy and a useful life.

Patients and their friends when recovery takes place from an attack of insanity fondly imagine and flatter themselves that they will never have another. They rake up some little circumstance which they think was the cause and argue that it will not occur again; and if they ask us our opinion on the subject it is not easy for a physician to say to one just convalescent and rejoicing in the return of reason and hopeful of the future—it is not easy to say to such a one: "You will surely break down again; you will be as bad as you have been lately, and you should shape your life with this idea ever before you." It would be thought very hard, injudicious, and unkind were we to say this; so we let our patient go and make him or her happy. Nevertheless we ought to advise that no marriage should take place and set before the friends the risks thereof. People with this tainted inheritance do, however, marry without advice, very often in spite of it, and when married they break down, recover perhaps, and break down again. The wife may have puerperal mania at one or more of her confinements, the husband may show symptoms of the disease at an early period. Now, holding the opinion that I do as to the necessity of preventing inherited insanity, I must say that in my judgment people who have had attacks of the disorder ought to have no more children. What can be more lamentable than to see a woman break down in child-bed, recover, break down again with the next child, and so on for six, seven, or eight children, the recovery between each being less and less, till she is almost a chronic maniac? I have known this to occur more than once, and doubtless some of you have had a similar experience. For the sake of the mother and the father, to say nothing of the children, there ought to be an end of their begetting when insanity follows the birth. I have a case in my mind where this succession of attacks occurred a number of times—six or seven at least. Both parents—father and mother—died in an asylum. There was insanity in both the father's and mother's family. The children are growing up. The eldest developed dipsomania at an early age. What the others will develop remains to be seen. I do not confine these observations to cases where the mother has become insane after marriage. The same applies to fathers who have had attacks of insanity. There is not, of course, the same personal risk to the father that there is to the mother—the risk of dying in an acute attack of puerperal insanity or of becoming through such an attack permanently insane; but there is the same risk for the children—the same chance of bringing into the world a progeny which shall hand on this heritage of insanity or all the other varieties of neurotic disease.

After hereditary transmission there is probably no cause of insanity which exercises so potent an influence as alcoholic drink. To estimate the extent of this we must go to the reports of the medical superintendents of our pauper asylums, many of whom mention it as bringing a large proportion of patients under their care. The proportion differs much according to the locality and the class of population from which the patients are drawn. As we go from south to north the numbers increase, Cornwall, Devon, and Dorset furnishing the least. These are for the most part agricultural counties, with few large towns. When we examine the reports of asylums in the midst of large manufacturing towns or mining districts the numbers increase, for wages are higher, habitations and life unhealthy, and drunkenness prevalent. And it has been observed that the admissions from this cause are more frequent when trade is good and wages high. When the reverse is the case or when strikes diminish the spending power of the workman the number of the admissions falls. So long as drinking remains as it is it will be impossible, I think, to say that insanity is diminishing, at any rate among the lower classes. The spread

of temperance principles, the advance of education, the improved sanitation of dwellings and workshops, and the influence of wholesome recreation for the mind as well as the body will, we must hope, gradually check the drinking that at present prevails; but I must not take up your time by dilating on this subject. That drinking has greatly diminished among the educated classes is beyond a doubt. A certain amount of insanity is produced still by alcohol, together with alcoholic paralysis and dementia, but there is far less among the higher than among the lower classes. The proportion, however, of drinking women is, I fear, greater among the former than among the latter. If we look at the statistics of our public asylums the number of males whose insanity is caused by drink largely predominates, but of the alcoholic cases brought under our notice in private practice a very large proportion are those of ladies. And this will be the case till legislation enacts that such shall be compulsorily detained in inebriate resorts. At present scarcely one will place herself under care and treatment, and the Act is almost a dead letter so far as women are concerned.

From time to time we may have it in our power to give advice concerning the bringing up of threatened children, the children of parents in whose families insanity exists, or who have already themselves shown symptoms of the disease. If the insanity is on the mother's side the child should not be suckled by her, but should have a good wet-nurse. And this for two reasons: the mother's nights should not be disturbed by having to wake and nurse the child; and, secondly, a good wet-nurse is more likely to efficiently nourish it. Nourishment is most essential, and such a child is favourably placed if it is fat, and is badly off if thin. This will depend not only on food, but also on sleep. Of this it cannot have too much. It should be encouraged to sleep as much as possible and at regular times, so that the habit may be engendered and adhered to, and this sleeping—sleeping by day as well as by night—should be kept up for many years, till it is five or six years of age. Children who have plenty of food and sleep are not likely to be troubled by fits or convulsions, but if any should take place they are of grave import, and the cause should be carefully looked for and, if possible, the evil averted. Some nervous children are troubled by nightmare, "night horrors." Judicious care and soothing are needed, judicious treatment by day and the rigid exclusion of all terrifying subjects such as ghost stories, tales of robbers or spectres, threats of bogies or policemen, and the like. Parents are often little aware of what goes on in the nursery behind their backs and what harm their children are deriving from those placed in charge of them. They may be even taught habits of self-abuse by nurses in order to keep them quiet; and their treatment by parents may be equally injudicious if the latter are themselves peculiar and extreme in their views, violent in temper, or capricious. They may spoil them at one time by indulgence in food or drink, they may frighten them at another by intemperate quarrels and noise, or they may dose them with religion till the children loathe it or become the veriest little hypocrites. Dr. Clouston tells us of a little boy aged four "who by dint of constant effort on the part of his mother was so sensitive as to right and wrong that he never ate an apple without first considering the ethics of the question as to whether he should eat it or not; who would suffer acute misery, cry most bitterly, and lose some of his sleep at night if he had shouted too loud at play or taken more than his share of the cake, he having been taught that these things were 'wrong' and 'displeasing to God.' But the usual amesthesia that follows too keen feeling succeeded the precocious moral intensity in this child, for at ten he was the greatest imp I ever saw, and could not be made to see that smashing his mother's watch, or throwing the cat out of window, or taking what was not his own, were wrong at all." The egotistic nature of those who inherit the insane diathesis I have already mentioned, and this ought to be kept in view in the education of all children born with such a lot. There is much in home life to encourage such egotistic selfishness. It may be an only child or the first child, possibly a delicate child requiring much watching and care. It is easy to foster this selfishness, and much caution should be observed to avoid so doing. The child should have the society of others, should be taught to consider its playmates first and itself last, to share its toys and luxuries, and be good-natured and generous. It should be taught to be considerate towards servants, to be kind and not cruel to dumb animals. Cruelty

to the latter is a constant concomitant of weak mind. School, even at an early age, is a benefit to many such children—girls as well as boys. They are taken away from the injudicious spoiling of home, and are compelled to consider their companions and not themselves. They have to obey orders, to observe proper hours, to learn discipline and regularity, all of which may be novelties to them. To many the first going to school is a veritable plunge in a cold bath, but like the latter is highly bracing and wholesome.

There are two sorts of children about whom we may be consulted—the dull and backward and the preternaturally sharp and precocious. The first may not be an idiot or imbecile, but may be backward, slowly developed, and at the age of twelve may approximate in capacity to a child aged seven. Such a one requires special tuition and treatment. It is useless to place him in a form of other boys of the same age and expect him to do the same lessons and compete on the same terms with the others. Still worse is it to punish an unfortunate boy of this class because he does not know his lessons and to set him down as lazy or idle, and cane him because he is dull and accounted as obstinate. Incalculable harm may be done to a boy or girl by mistakes of this kind. The education must be fitted to the capacity, and the tutor must discover whether such a child has a special aptitude for any one branch of knowledge—music, drawing, carpentering, or mechanical engineering. It often happens that there is some latent talent which is well worth cultivating. Then there is the precocious boy—bright, intelligent, quick to learn, the pride of his teachers. If he goes to a private or preparatory school he will be seized upon as one who will win scholarships and bring glory on the school, and he will be crammed for this purpose and will have to contend at the age of twelve or thirteen against a host of other little victims at one of our public schools. I have marvelled at the amount which can be crammed into a boy at this early age. But if a hundred contend for ten scholarships it is obvious that ninety must return empty handed, and these children must at this early age undergo the disappointment of failure. The evils of continual examinations have attracted the attention of many besides the members of our profession. Some six or seven years ago Mr. Auberon Herbert drew up a protest against the system which now prevails, the spirit of place-getting and prize-winning in education, and the dominant position assigned to examinations. It protested against the evils resulting from the intellectual racing of boys and girls against each other, and warned parents that the physical ill-effects were often not disclosed at the moment. It laid special stress on the harrowing and depressing effect which reading with a view to satisfy the examiner's mind necessarily has on the student. It spoke of the hurtful consequences of this, of the temporary strengthening of the rote-faculties to the neglect of the rational faculties, the rapid forgetfulness of knowledge thus acquired, the cultivation of a quick superficiality and power of skimming a subject, the consequent incapacity for undertaking original work, and the desire to appear to know rather than to know. I cannot quote this at length, but it was printed in the *Nineteenth Century* in 1888. Many agreed with it, for it was signed by some hundreds. Amongst them were 377 teachers, including many university tutors, the headmasters of many schools, and no less than 130 ladies who were concerned with the education of girls and cognisant of the evils produced by the sacrifice of education to examination. And besides the teachers it was signed by 62 members of our own profession, including some well-known Fellows of this College. Mr. Herbert has also published not only the names of the signatories, but also between 200 and 300 letters from those who have expressed to him their views on the subject. They bewail the evil, but many do not see clearly what is to be substituted in place of examinations, especially the competitive examinations for Government appointments. The headmaster of Eton says that if the system of competition by examination cannot be altered the conditions of examination can be ameliorated. He speaks of the great increase of the number of boys wearing spectacles, even at Eton. "Many a bright, keen intellect of ten to twelve," he says, "has become dull and blunt and has lost its temper by fifteen or sixteen owing to over-preparation with a view to scholarships." The headmaster of Wellington College is equally severe upon the evils of the competitive system. "It seems to make real education, wholesome development of the natural tastes and faculties, impossible. It kills originality and even intellectual interest. We live in

a hurry which allows no knowledge to root itself." And if the evil is great for boys it is ten times greater for girls. Many boys are compelled to go in for examinations, for those "abominations," as one gentleman calls them, the Civil Service and Sandhurst drill. But very few girls are. Few have to earn their livelihood in some walk of life to be gained by competitive examination, and of many of the prizes thus to be gained it may with certainty be said that the game is not worth the candle. We ought not to treat knowledge as a commercial commodity. Nothing nowadays is to be learned unless it will pay, unless it will tell in an examination, and is to be estimated at a pecuniary value. And this is not confined to the middle and upper classes. Says one gentleman: "Every child, the weak or the strong, regular or irregular, who enters an English elementary school is a grant-earning machine. To get the highest grant all must be brought up to the same level in the allotted time. It follows, therefore, that children of naturally slow development must be more or less overtaxed, to the permanent injury of their brain power, and that the bright, intelligent, healthy children have to 'mark time' in their studies while their less gifted fellows are crammed with the necessary amount of knowledge. What are the results? Children are passing out of the State-aided schools of to-day by thousands without having gained a love of learning—in fact, with a positive dislike of acquiring knowledge."

Gentlemen, I have seen—I feel certain that many of you have seen—disastrous effects from pressure of examinations upon boys and girls. They are crammed for examinations; they fail to pass, or fail to gain the prize for which they are competing. The end of all the long and wearisome toil of cramming and grinding is failure. Conceive what this means to the young and developing brain and mind. Many break down in the mere preparation and never get to the examination point. One boy I certified, for it was necessary to send him to an asylum, who had been kept for hours and hours practising the violin. I do not even know that there was any intention of making this boy a professional player, but his father was musical and wished his son to be a proficient. A girl I saw had been practising an equal number of hours daily on the piano to pass some examination or win some prize at the Academy of Music. Not only is there a rage nowadays for competitive examinations, and every school and college and other educational institution must hold out a number of money prizes as baits to catch pupils, but the ordinary pass examinations are divided and subdivided till their number is multiplied indefinitely, and the student has constantly in front of him an examination in some subject or other on which for the time he must concentrate his whole mind, but which is to be completely thrown aside as soon as it is passed, when another has to be taken up in its place. A student's career in our own profession, for example, has not for its aim the acquiring of knowledge, but the passing of examinations. He has no time for the study of disease at the bedside. His knowledge of disease is got out of text-books, or after his examinations are over he must begin by post-graduate courses to learn something about it. Where all this subdivision will lead to at last it is difficult to see. Be it remembered that I commenced by speaking of the education and rearing of the weakly, of those who by reason of a faulty inheritance are likely to succumb to an over-pressure which may not be hurtful to the strong. It is no argument against the evil of such over-pressure to point to the strong, to those who by constitution and favouring circumstances rise without stress or difficulty above their fellows. That there are many such among us we know, and are glad thereof—men who can row in the eight, play football and cricket, and take a first class; but my subject is the prevention of insanity in those predisposed to it, and these are not to be treated like the strong. Unless care is taken the end may be that of a young man who was under me some few years back, who achieved five first classes at Oxford and died from general paralysis at thirty-seven. Weak by constitution, and having an inherited taint, he developed organic brain disease by over-exertion.

In the bringing up of the predisposed several things must have special attention. The first I will mention is the importance of not subjecting such children to narrow and fanatical views of religion. Self, self-inspection, the perpetual consideration of self, are among the characteristics of incipient insanity, and to encourage all this is manifestly the worst thing that can be done. Children suffer terribly in this respect from narrow-minded and bigoted parents who,

convinced that they are right, seek to force upon their offspring their peculiar ideas, and often bring about a hatred of everything religious, if they do no worse. How often has one seen at school that the worst and most vicious young scapegraces were the sons of rigid, uncompromising clergymen. At home such boys are kept so free from vice and in such ignorance of what it means that when turned loose in the freedom of school life they revel in the new-found pleasure and drink deep, regardless of the consequence. Another effect is to make these children dreadful little hypocrites. They have to play a part at home, not daring to divulge their true likes and dislikes, and I have seen long pious letters and pious poems from a girl written to such parents when, as I happened to know, she was as wicked and depraved as any I have met. The next thing to be guarded against is the habit of self-abuse. Children have been taught this by nurses in order to keep them quiet and make them go to sleep. They may also be taught it by other children. I have been told by some women that they have found it out by themselves. I am aware that much nonsense is talked with regard to this habit. Parents who wish to conceal the insanity of their family are ever ready to assign self-abuse as the cause of an attack in one of their children if it can be shown that the patient has ever indulged in this vice, no matter how rarely. Great harm, too, is done by exaggeration of the consequences, as is so frequently seen in the literature disseminated by all the tribe of quacks who prey upon the nervous and frighten them with the hobgoblin of spermatorrhœa and the like. The neurotic, however, are those most likely to suffer from the habit and most prone to indulge in it to excess, and there can be no question that it causes insanity in not a few. Many boys, I feel sure, contract the habit without knowing that any harm can come of it. Ought boys to be warned against it or not? A discussion on this question took place at Bristol last summer, and opinions were given for and against it. My own belief is that boys should be warned, but not girls, who are far less likely to be taught it by others. Since the Bristol meeting my view has been confirmed by the headmaster of one of our chief public schools, who has requested the parents of the boys to take care that their sons are warned against the practice. The habit, if already contracted, should be stoutly resisted, and hard exercise and play, plain living, and the absence of stimulating food and drink should be inculcated with this view.

It would be a good thing if all boys and girls with an hereditary taint were brought up to abstain totally from alcohol. There is always a risk of these neurotic individuals taking to drinking. What is insanity in one generation often appears as inebriety in the next, and they are not likely to give up easily such a habit and craving if once established. Often inebriety is directly inherited. I lately saw a young man aged twenty-four who was emerging from an attack of delirium tremens, one of many he had already had. He began to drink hard at the age of fifteen. His father and mother both drank themselves to death and the son was following their example, and we have at present no law to prevent him. Such young people should be taught to abstain. It will be no hardship if they have never known what wines and spirits are, and they should be made clearly to understand and recognise the reason why such abstinence is enjoined. It is far easier to abstain from childhood than to revert to abstinence in later life.

When boyhood is passed the young man has to choose a profession, and the young woman also, perhaps, has to seek a livelihood in some walk of life. Great are the difficulties which lie in the way of either. The young man is beset almost everywhere by the terrors and evils of competitive examinations. Truly our forefathers were exempt from difficulties which surround us. Appointments could be obtained in the various branches of the Civil Service which offered a steady career pre-eminently fitted for nervous youths, where hours were short, the work light and free from anxiety, and holidays long. Nowadays these posts can only be got by competition. Then there was the army, which was adapted to others. A commission could be bought, and if the lad was not fit for foreign service it could be sold. Now a severe examination has to be passed before Sandhurst can be reached, and many fail and are disappointed after years of cramming. For lads who were not studious and liked an out-door life farming had charms and a livelihood might be earned by the cultivation of the soil; but who at the present time would

bring up his son to farm land in this country and climate? Nay, it is difficult to choose a profession for a lad with a nervous inheritance, even if he has plenty of brains and can pass examinations with ease and credit. Take the Civil Service of India, which, I suppose, is the highest prize to be gained by examination. It by no means follows that the lad who is able to gain a high place in this is best fitted to be an Indian civil servant. If he is one of the clever but nervous individuals of whom I have been speaking, he will have to face the dangers of a tropical climate, perhaps in a very unhealthy place. He will have great responsibility at a very early age, for "he may have to administer a district with a population of thousands of human beings. He has to deal with races a large number of whom are highly intellectual, and their management and contentment require not a man of mere ill-digested knowledge, but thought, judgment, self-restraint, and propriety."² Many young men whom I have known have succumbed to the climate and the work, and have been obliged to abandon the service. I hold the Indian climate to be extremely dangerous to all who inherit a predisposition to neurotic disease. The same may be said of our army and of those who, successful in examination, pass into the line. Formerly one met men who had passed their lives in the army without ever having been in India. In the days of the East India Company our own regiments did not go there in the numbers they do now, and we kept troops in colonies where now there are none. Now all our soldiers have to spend a considerable time in India or, what is worse, in Burmah, and many come home suffering from brain disorder. My own opinion is that no one who has had an attack of insanity ought to return to India, and I know the authorities are disinclined to allow them, but if they cannot they are practically shelved. The professions imply examinations, hard work, perhaps long waiting and little success. The Church is not suited for a neurotic man. It is an emotional life. He may have difficulties of belief, doubts and scruples of conduct. He will see much sickness and suffering which he is powerless to relieve. It is not difficult to point out the occupations which are unsuited to the neurotic man; it is more difficult to say what is the most suitable. That will be best which entails least worry and responsibility, which does not involve money losses or troubles, or great and sudden disappointments. Moreover, it is very important that every man should have beyond his everyday work some amusement, pursuit, occupation, or hobby—call it what you will—which shall be a relief to him after his daily task, a paragon or by-work, as Plato calls it, which shall be at once a food and a rest to his mind. A man's daily task may be a very monotonous and routine business, which is not enough to occupy a healthy brain; on the other hand, it may be anxious and worrying. In either case it is good for that man to leave his business behind him at his office and devote his energy to something else at home. If we look through the lists of our learned societies—the Antiquaries, the Linnean, the Entomological, the Geological, nay, even the Royal—how many names do we find of busy men engaged in daily work—city men, solicitors, clergy—who refresh and recreate their minds with these studies and pursuits; and how often do we find a man in business break down, and hear that, apart from his business, he has no thought, no occupation, no amusement. He goes to business early and returns late, and the morning and the evening newspaper are all that he reads from Monday morning to Saturday night. Of the occupation best fitted for women I can say but little, for time forbids. It is easier, I think, to find work for them than for men. But that which so many nowadays wish to take up—namely, nursing—is most unsuitable. Nursing is for the strong, bodily and mentally. It involves great anxiety, great responsibility, and loss of sleep, and therefore is the last calling which the predisposed should follow. When he has chosen or entered on a profession, and very often before he has done either, the young man falls in love and wants to marry. He is not likely to consult our profession as to whether he shall do this, or if he consults us he will not follow our advice unless it should happen to agree with his own wishes. In many cases where the predisposition is strong and the individual manifestly unhealthy and neurotic, we should certainly advise him to abstain, especially if his means are small and pecuniary difficulties are sure to arise if a wife and family have to be kept.

² Sir W. Gregory.

These young men generally become engaged first, and then come and consult us as to whether they ought to marry. Were they to ask our advice before they have set their hearts on any particular girl, we should advise them to be sure and select one who was free from all tendency to neurotic disorder and in whose family nothing of the kind has existed. Not an easy thing to discover, I grant, owing to the secrecy with which such a history is concealed; but if a man is prudent and not over-hasty he may learn a good deal of a family before he proposes to contract a marriage with one of its members. And above all, let him avoid a connexion with one of his cousins, for if there is a latent taint it will be intensified by such a union. Marriage for a woman is still more serious than for a man, for she has before her child-bearing with all its dangers. Some women with feeble health and frail physique we should certainly advise never to marry. All who have insanity in their families marry at their peril, and those are the best off who have no children. Such women certainly ought not to marry poor men and have the additional burden of narrow means, the care of a family with but little help, and the ever-present cost of medical attendance and nurses.

Can a man or a woman do anything towards preventing insanity? This is a question sometimes put to us, more frequently, however, with regard to the prevention of a recurrence by those who have suffered from an attack. In many young persons the insanity occurs at so early an age, and is so manifestly due to inherited predisposition, there having been no trouble, sickness, or anything perceptible to cause it, that it is to be feared that no advice that we can give will enable the individual to escape the malady. Nevertheless, the direction to be observed it is not hard to point out. We have seen that in insanity there is an exaggeration of the self or subject consciousness and of the egotistic feeling, which rises to a morbid state when the mind is diseased, but may exist in a less degree in a person who is not insane but is of an insane temperament and predisposed by inherited taint. It is important that such a man or woman should correct as far as in them lies this tendency to egotism and selfishness, should not give themselves up to thinking only of themselves, to brooding over their troubles, paying attention only to their own health, and caring only for their own gratification and pleasures. That this self-consciousness often ends in insanity we know, and from *a priori* reasoning we should expect it so to do. It is clear also that in such a case there is no adjustment of the individual to his surroundings, and this is what constitutes insanity. We see what direction a man ought to take to lead a healthy mental life; that he must not live for himself, but take thought for others, feel sympathy with others, and help and defend others. He must adjust himself to his surroundings, and not strive to adapt the latter to his own whim and wish. All this may be difficult for a man suddenly to do who has never done it hitherto. It is less difficult to train a child in this direction, for it is the direction in which all children should be brought to walk, and more especially those who are predisposed to neurotic disorder. One has seen such at school—eccentric boys who are peculiar in their dress and ways, clever perhaps in some things, but erratic and unsatisfactory. Such boys are rarely gregarious. They do not adjust themselves to their surroundings, but lead for the most part solitary lives, just as the insane do. They amuse themselves alone and nobody knows much about them. It is one of the great advantages of the enforced games at a public school that a check is put thereby on the solitary wanderings of such boys, and for a time, at any rate, they have to congregate with their fellows.

In conclusion, Mr. President and Censors, I beg to thank you, first, for the honour you have done me in appointing me the Lumsden Lecturer for this year, and, secondly, for the patience with which you have listened to my imperfect discourses.

THE Duke of Westminster will introduce a deputation of the Church Society for the Promotion of Kindness to Animals and the Church Sanitary Association to the President of the Local Government Board on Monday, May 27th, asking that in conjunction with the Board of Agriculture a joint departmental inquiry may be instituted by which may be brought about, on the one hand, the betterment of the condition of animals generally, and, on the other, the improved health of the human community as the result of improved conditions of meat supplies.

THROMBOSIS OF THE INTRACRANIAL SINUSES SECONDARY TO SUPPURATIVE DISEASE OF THE MIDDLE EAR.¹

BY WILLIAM MILLIGAN, M.D. ABERD.

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ONE of the most important and at the same time most dangerous of intra-cranial complications secondary to suppurative disease of the middle ear is thrombosis of the venous sinuses. Any or all of the sinuses in immediate relation with the temporal bone may become thrombosed as the result of infective middle-ear disease, but the one most frequently found implicated is the sigmoid sinus. The relation of this sinus to the mastoid antrum, mastoid cells, and middle ear will at once offer a ready explanation of this fact. The intervening bony septum between the antrum and the sinus is frequently very thin and perforated at numerous points for the passage of small veins along which infective material is readily transmitted. Septic infection in such cases is preceded by the formation of an extra-dural abscess. In like manner the bony septum intervening between the floor of the middle ear and the jugular bulb is so thin and so riddled with vascular foramina that septic products and pyogenic organisms are readily conveyed to the jugular sinus, with the result that septic thrombosis is readily induced. The petrosal sinuses, both superior and inferior, and the cavernous sinus may likewise become affected, either as the result of direct extension from the middle ear or indirectly from extension of an already existing thrombosis in one of the other intracranial sinuses. Septic thrombosis is as a rule the result of prolonged infective disease of the tympanic mucous membrane and its adnexa, although at times it does occur as a consequence of acute diseases affecting the mouth, pharynx, tonsils, &c., in which rapid extension to the middle ear has taken place along the course of the Eustachian tube. When occurring in the course of chronic suppurative middle ear disease it is usual to find extensive changes in the surrounding bony parietes. This osseous erosion is induced in consequence of the prolonged suppurative disease of the tympanic mucous membrane, which serves the double function of mucous membrane and of periosteum. In rare cases no bone lesion is discoverable, the infective products having been carried directly along the numerous vascular channels existing around the middle ear. Thrombosis of the lateral sinus is most frequently found between the ages of twenty and thirty. It is rare in children and old people. The male sex would appear to be more frequently affected than the female. It is a point worthy of note that in the male thrombosis is most frequently right-sided; in the female, according to Robin, it is most frequent upon the left side. Sinus phlebitis runs a somewhat irregular course. At times death takes place rapidly from exhaustion and collapse; at other times, however, pyæmic metastatic deposits occur in the lungs, liver, kidneys, spleen, joints, &c., and death ensues from gradual loss of strength and marasmus. In other cases, again, a fatal issue may be induced as the direct result of the toxic effect of the pyæmic blood upon the central nervous system or may simply be due to hyperpyrexia. The diagnosis of septic thrombosis is at all times somewhat difficult and frequently is merely a diagnosis of probability. Thrombosis may, however, be fairly assumed to exist if in the course of chronic suppurative middle-ear catarrh there is a sudden cessation of discharge accompanied by persistent pain in and around the ear, a high temperature with marked fluctuations and frequently repeated rigors, vomiting, rapid pulse, and constant headache. Ballance² in an able article states that the following group of symptoms occurring together are pathognomonic of the disease: (1) a history of a purulent discharge from the ear for a period of more than one year; (2) sudden onset of the illness with headache, vomiting, rigors, and pains in the affected ear;

¹ A communication made to the Manchester Medical Society on Dec. 5th, 1894.

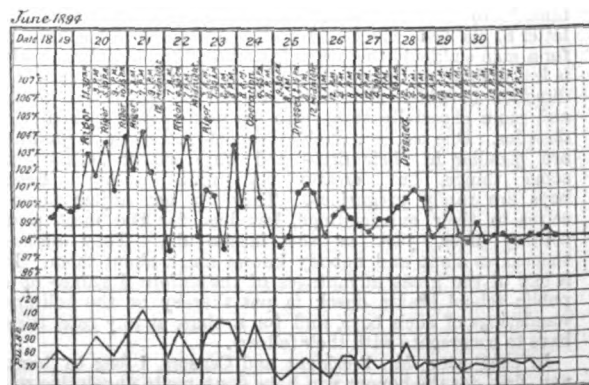
² THE LANCET, May 17th and 24th, 1890.

(3) an oscillating temperature, reaching from 103° to 105° F. and then dropping below 100°; (4) vomiting repeated day by day; (5) a second, third, or more rigors; (6) local oedema and tenderness over the mastoid or in the course of the internal jugular vein; (7) tenderness on deep pressure at the posterior border of the mastoid process and below the external occipital protuberance; (8) stiffness in the muscles of the back or side of the neck; (9) optic neuritis. It must not be forgotten, however, that infective sinus thrombosis may exist along with other intracranial lesions—e.g., abscess or meningitis. Thus we may have cases of thrombosis: (1) with meningitis, (2) with intracranial abscess, or (3) with meningitis and abscess. In such cases the symptoms due to the thrombotic process usually, however, gain the ascendancy, and may mask other lesions of equally serious import. The difficulties of determining at times which is the predominant intracranial affection are so great that in every case where doubt exists it is advisable to follow a definite course of operative procedure. Such a course has recently been mapped out by Urban Pritchard² and consists in: 1. Thoroughly opening the mastoid antrum and exploring the mastoid cells. 2. Failing to find sufficient evidence to account for the whole of the symptoms, the wound in the skull should be enlarged backwards so as to expose the middle and posterior cerebral fossæ above and below the lateral sinus, which should be explored by means of a hypodermic syringe. At the same time extra-dural abscesses may be carefully looked for. 3. If a clot be found in the sinus the internal jugular vein should now be tied, and the sinus opened and cleared of its contents. 4. If there is any suspicion of cerebral or cerebellar abscess exploratory puncture may be made above and below the sinus and the pus if found evacuated. The pathological changes which take place consist of a thickening of the coats of the sinus, desquamation of its endothelial lining, and formation of a thrombus. As the thrombosis is almost invariably infective in origin the clot rapidly undergoes disintegration, and the particles thus formed mix with purulent exudation formed from the inflamed walls of the sinus, with the result that small emboli teeming with micro-organisms are carried away in the blood stream to become impacted in the capillaries of some such distant organs as the lung, liver, or kidney, with the consequent formation of embolic abscesses. Within the skull and around the walls of the sinus plastic exudation occurs. This exudation rapidly disintegrates and forms a purulent layer of varying extent, or, in other words, leads to the formation of an extra-dural abscess. If, on the other hand, the visceral layer of the sinus be the one principally implicated, an acute infective lepto-meningitis rapidly ensues. This may remain as a local inflammatory affection in the neighbourhood of the sinus or may become generalised. The same process may happen in any one of the sinuses already mentioned. Thus, when the internal jugular vein has become thrombosed an abscess may be found in the neck; when the cavernous sinus the abscess may be found in the peri-orbital connective tissue. The bone in the immediate neighbourhood of the affected sinus undergoes certain marked changes. These changes consist in deep pigmentation and erosion of the osseous substance. Pigmentary deposits are also found upon the adjoining surface of the cerebrum in the case of lateral sinus thrombosis, upon the under surface of the temporo-sphenoidal lobe in the case of superior petrosal thrombosis. The systemic pathological lesions will depend upon the duration of the accompanying pyæmic process and upon the particular organ implicated. Thus in the case of the lung an infarction due to pulmonary embolism is produced. This rapidly disintegrates and a pulmonary abscess is thus produced. These abscesses may be multiple and small or may by coalescence occupy a considerable portion of a lobe. In the same way splenic and renal infarcts lead to splenic or renal abscesses with their accompanying symptoms. The differential diagnosis of infective sigmoid sinus thrombosis from such other intracranial complications secondary to purulent middle-ear disease as meningitis and cerebral or cerebellar abscess is as a rule not particularly difficult; but, as has been previously mentioned, thrombosis may, and frequently does, exist in conjunction with one or more of the above-named conditions, so that an accurate estimate of the cases is at times almost impossible, and hence the necessity of operative interference proceeding in definite order. In meningitis, which is usually suppurative in character, the temperature is high, and remains high, the pulse is rapid, of small volume, and frequently irregular. Symptoms due to meningeal irritation are also present—e.g.,

retraction of the back of the head, strabismus, &c. In abscess the temperature after the first rise falls either to normal or more usually becomes subnormal, the pulse and respirations are slow, and the cerebral faculties are dull and apathetic. In thrombosis, on the other hand, there are frequent and marked irregularities in the temperature chart, accompanied usually by recurring rigors, profuse perspirations, and symptoms of pyæmic involvement. The prognosis in such cases is necessarily very grave, and until within quite recent years the condition was looked upon as practically hopeless. The possibility that the thrombus may become transformed into connective tissue and by blocking the sinus prevent the dissemination of septic products through the system should not be too much relied upon. Most cases which are left to themselves terminate fatally. In 1886 Victor Horsley, in a paper read before the Clinical Society of London, made the very valuable suggestion that the internal jugular vein should be tied so as to prevent the dissemination through the system of the disintegrating and septic clot, qualifying this statement, however, by saying that the operation should be performed only when the first indications of embolism had appeared. More recent investigations have, however, shown that as soon as the diagnosis has been made operation should be undertaken. The earlier the channels along which septic emboli may be conveyed to more distant organs are shut off by ligature from the main blood stream, the better for the patient. Delay at this stage adds greatly to the patient's danger. The duty of the surgeon is clearly to add no element of risk to what may be fairly called a condition of extreme danger. In this country excellent operative work has already been done in this direction by Ballance, Lane, Bennett, Macewen, Parkin, Parker, and many others.

CASE 1. *Uncomplicated sinus thrombosis secondary to old-standing infective middle-ear disease.*—The patient, a young man aged twenty-five years, had suffered from right-sided, suppurative middle-ear disease for many years. Discharge from the ear had been almost continuous, although never very profuse. No pain had been complained of, nor had the patient ever suffered from tinnitus or vertigo. A few days prior to the onset of serious symptoms the patient had contracted a severe chill owing to being exposed on a particularly wet night and to his having been obliged to sit in wet clothes for some hours. This was followed by pain in the ear, radiating over the corresponding temporal region, and by a complete cessation of discharge from the ear. The pain having gradually increased, I was asked by Dr. Brown of Chorlton-road to see the patient

FIG. 1.



along with him upon the evening of Monday, June 18th, 1894. Upon examination the following notes were made. The aspect of the patient was pale and anxious, the skin was clammy, the tongue furred, the bowels constipated, and the urine high coloured. The temperature was 99.4° F., and the pulse 74. Examination of the right ear revealed a very small quantity of fetid discharge within the meatus. After syringing, the membrana tympani was found perforated in its posterior inferior segment. No granulation tissue was seen and no carious area of bone was detectable with the probe. Pressure over the mastoid process produced slight discomfort. The tissues between the angle of the

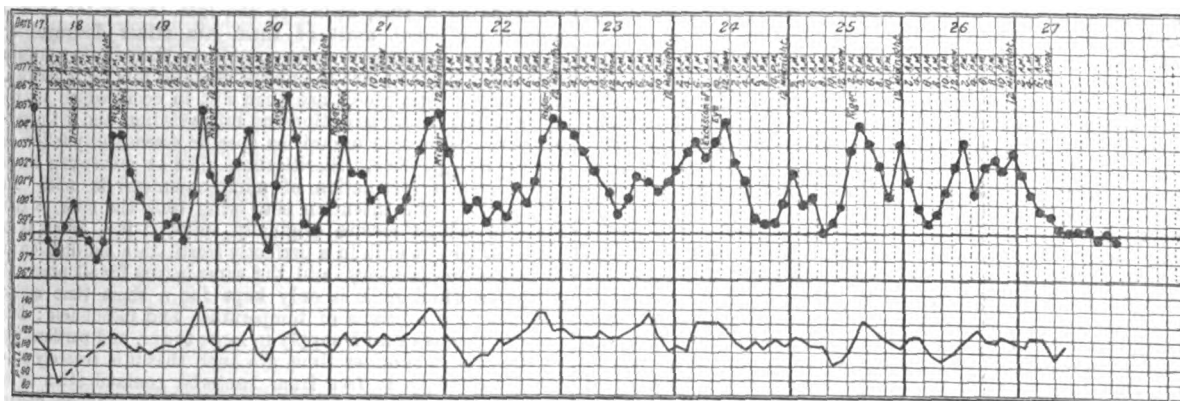
² Archives of Otolaryngology, vol. xxiii., Nos. 1 and 2.

jaw and the mastoid process were puffy, and pressure in this region was accompanied by severe pain. Careful palpation showed that either a chain of enlarged glands existed or that some fulness in the internal jugular vein was present, but which of the two could not be definitely stated. Dr. Brown, upon visiting his patient the same afternoon, had noticed a slight rigor, and this fact, in conjunction with the history and appearances of the ear, made me suggest the advisability of removing the patient to the Manchester Institution for Diseases of the Ear, in order that an operation might be performed the moment an accurate diagnosis could be made. The patient was accordingly removed the same night. The following morning the temperature was 100° and the pulse 86. The condition of the ear was as before. Boracic fomentations were ordered to be applied every half hour, and the ear was kept frequently flushed with a warm solution of bichloride of mercury (1 in 2000). Three grains of calomel were also given. The following day, June 20th, the patient had a well-marked rigor at 11.30 A.M., the temperature reaching 103° . At 5.30 P.M. there was another rigor, the temperature reaching 103.5° ; and at 10.15 P.M. the same evening a third rigor took place, the temperature reaching 104° . The pain in the head had by this time greatly increased, and the swelling in the neck had become at least twice the former size and was extremely sensitive to touch. Examination with the ophthalmoscope showed the existence of optic neuritis of the right disc, but no deviation from the normal upon the left side. The pupils were equal and reacted readily to light. As the position of the patient was now becoming critical it was decided that the best course to

small Volkmann's spoon was now introduced through this opening and the thrombus, which was partially adherent to the walls of the sinus, was scraped away. A quantity of pus and purulent debris also escaped. As the clot was removed from the torcular end of the sinus free hæmorrhage took place. This was immediately controlled by packing the open end of the sinus with iodoform gauze and iodoform and boracic acid powders. After as much of the clot had been scraped away as was possible the proximal portion of the sinus and the upper portion of the jugular vein were irrigated with a warm 1 in 2000 bichloride solution until the fluid escaped freely into the neck. The operation was now completed by extending the bone wound forwards until the mastoid antrum was freely exposed. The interior of the antrum, which was filled with granulation tissue and purulent debris, was curetted and a free communication formed with the middle ear. The parts were then carefully dried, dusted with iodoform and boracic acid powders, and dressed in the usual way. The subsequent history of the case was uneventful, the patient making a rapid and good recovery.

CASE 2. *Cavernous sinus thrombosis secondary to acute suppurative middle-ear disease.*—It has been already mentioned that infective thrombosis secondary to middle-ear disease is usually a complication of old-standing trouble and that it usually attacks the sigmoid sinus, but exceptions to this rule are occasionally found. In the following case the thrombosis supervened upon an acute attack of suppurative middle-ear disease, and involved the cavernous sinus, with the formation of an acute pyæmic abscess in the retro-ocular connective tissue. Late upon the

FIG. 2.



adopt was to tie the internal jugular vein in the neck, to expose the lateral sinus, open it, and clear out the thrombus which from the previously detailed symptoms was supposed to be present. The patient was accordingly put under an anæsthetic, and an incision was made from a point half an inch behind the attachment of the external ear down over the mastoid process to a point upon a level with the lower border of the thyroid cartilage. Very considerable difficulty was experienced in finding the internal jugular vein owing to the swollen and matted condition of the cervical structures; and as the anæsthetic was being badly borne it was decided to postpone the operation, and to try by freely stimulating the patient to arouse his vitality. Beef-tea, brandy, milk, eggs, and quinine were freely administered. During the two following days the patient had several rigors. He partook freely of nourishment and apparently gained strength. On the 24th he was again put under an anæsthetic and the operation resumed. The incision in the neck was prolonged for another inch and a half, and a careful dissection made until the carotid sheath was reached. This was immediately opened, and two ligatures were placed round the vein at a distance of half an inch from one another. The vein was then divided between the ligatures. Above the upper ligature the vein was felt to be tense as if it contained some firm substance. A three-quarter-inch trephine was now applied immediately over the region of the lateral sinus and a disc of bone removed. The opening thus made was enlarged by means of gouge and bone forceps until one inch of the vertical portion of the sinus was exposed. The sinus felt firm to the touch and no pulsation was visible. A longitudinal slit was now made through the outer wall of the sinus. Very little blood escaped. A

evening of Sunday, July 16th, 1893, I was summoned to the country to see a child who was suffering severely from the effects of acute suppuration of the middle ear. The patient, a girl aged nine years, had complained during the preceding fortnight of pain in the right ear, accompanied by a profuse purulent discharge. The ear trouble was considered secondary to an attack of sore-throat, which in turn was suspected by the medical attendant (Dr. Whitaker) to have been of scarlatinal origin, a case of scarlet fever existing in the house at the time. During the day preceding my visit intense pain over the right mastoid process had been complained of. The previous history of the patient had been good, and never at any time had there been evidence of ear trouble. Upon examination the right external meatus was found full of pus. After syringing, a small pulsating perforation was seen in the posterior inferior segment of the membrana tympani. The superior posterior meatal wall close to the attachment of the membrana tympani was found prolapsed. The tissues over the right mastoid process were slightly infiltrated and cedematous. The slightest pressure over the region of the mastoid antrum produced pain, and even gentle percussion made the child shriek. The temperature was 105° F., the pulse 120, the tongue furred, and the surface of the body dry and burning. Great headache was complained of, and the child lay coiled up in bed with her hands tightly clasped over the forehead, which position she said eased the intense suffering. The opinion arrived at was that acute empyema of the mastoid antrum secondary to acute suppurative middle ear disease existed, and an immediate operation was advised. With the assistance of Dr. Whitaker the operation was begun at 1 A.M. on

Monday. The mastoid antrum was opened in the usual way, and was found to contain a small quantity of thick creamy pus. The perforation in the membrana tympani was freely enlarged, and a warm 1 in 2000 bichloride solution syringed from the antrum through the middle and external ears. A drainage-tube was now inserted into the antral cavity, the parts dusted with iodoform powder, and the usual dressings applied. At 8 A.M. the same morning the patient's condition was found to be much more satisfactory. The temperature had fallen to 97.4°, and the pulse to 86. The pain had also become much relieved, and the child was able to partake freely of nourishment. During the day, however, the temperature began to rise again, and by 4 P.M., when the wound was dressed, the temperature had reached 100°. The following day, July 19th, the patient had a severe rigor, the temperature reaching 103.5°. Profuse diarrhoea of an extremely offensive character accompanied this rigor. Severe pain over the abdomen was complained of, and copious vomiting followed. A dose of calomel was given and the body was sponged with tepid water, while hot fomentations were applied over the surface of the abdomen. Hot boracic fomentations were also applied to the ear. Free discharge of pus followed. The same evening at 10 P.M. the temperature reached 105°, but no rigor was observed, although the child complained of feeling very cold. A consultation now took place between Dr. Whitaker, Dr. Gillibrand, and myself, and the opinion arrived at was that thrombosis of one or other of the adjoining intracranial sinuses existed, and further operative interference was advised. The idea was to expose the sigmoid sinus, to thrust a hypodermic needle into it, and if found thrombosed to open and clear out the thrombus while at the same time ligaturing the internal jugular vein. The guardians of the child, however, absolutely refused to allow anything further to be done. During the following three days the condition was shortly as follows. On July 20th she had a rigor at 8 A.M. The temperature was 104° and the pulse 114. Cold pack was employed and effervescent antipyrin given internally. She had a rigor again at 4 P.M. The temperature was 105.8° and the pulse 145. Intense pain was complained of in the abdomen, slightly relieved by hot fomentations. The stools were very offensive. On July 21st she had a rigor at 4 A.M. The temperature was 103.6°; during the day she complained of pain referred to the back of the right eyeball. The pupils were equal and reacted to light. There was no optic neuritis. She had another rigor at 10 P.M. The temperature was 104.6° and the pulse 132. On July 22nd her general condition was somewhat better. There were no rigors. The temperature at 4 P.M. was 101° and the pulse 120. She was taking nourishment and stimulants freely. Slight oedema of the right upper eyelid was noticed, and slight blurring of the right optic disc. The ear was discharging freely. There was no special pain about the mastoid region, and no puffiness along the course of the internal jugular vein. On July 23rd the patient had a rigor at 2 A.M. The temperature was 104.4° and the pulse 124. During the day the oedema of the right upper eyelid became more marked. Intense optic neuritis was present, and excruciating pain was complained of behind the right eyeball, which was now protruding from the socket. On July 24th the pain behind the eye was very severe, the right upper eyelid was very oedematous, and there was marked protrusion of the eyeball. The temperature at 6 A.M. was 103° and the pulse 130. At 9 A.M. the right eyeball was excised by Dr. Gillibrand. The orbital cavity was found full of foul-smelling pus. At 12 P.M. upon the same day the temperature was 104.2° and the pulse 126. The stools were dark in colour and offensive. During the rest of the day her condition was much more comfortable. On July 25th the temperature at 8 A.M. was 100.2° and the pulse 102. Boracic fomentations were applied to the eye and ear. Towards evening great pain was complained of in the head and throat. She had a rigor at 6 P.M. The temperature was 104.2°. On July 26th the temperature fluctuated very considerably. Her general condition was better on the whole. She had a slight headache. The stools were still very offensive. On July 27th the temperature had been gradually falling. Her general condition was much better. She slept well and took considerable quantities of nourishment and of stimulants. From this time the patient gradually improved, and in a few weeks' time appeared perfectly well. Nine months afterwards I had an opportunity of again examining the child, when the following note was made: "Her general condition excellent; perforation of right membrana tympani healed; cicatrix hardly visible. Hearing power: right side $\frac{1}{2}$ of the normal.

Mastoid wound completely healed, good linear scar." The above case is of peculiar interest as it affords an illustration of thrombosis following an attack of acute suppurative middle-ear disease and also of implication of the cavernous sinus followed by purulent thrombosis of the ophthalmic veins and retro-ocular abscess. Whether the cavernous sinus was implicated as the result of an extension of the thrombotic process from the superior petrosal sinus, or whether the sigmoid sinus was the one primarily affected and extension to the cavernous sinus took place secondarily must remain matter for conjecture.

Manchester.

STERILISATION OF MILK.

By ALFRED H. CARTER, M.D., F.R.C.P. LOND.,

SENIOR PHYSICIAN, QUEEN'S HOSPITAL; PROFESSOR OF THERAPEUTICS, MASON COLLEGE, BIRMINGHAM.

STERILISATION of milk which is intended for the food of infants or invalids cannot be dismissed as a mere antiseptic fad, for it derives its sanction from no less an authority than nature herself. The milk of all healthy animals is sterile at the time of its secretion and discharge, and under natural conditions it is derived in this state direct from the breast. It does not long remain sterile. From the moment it is exposed to the air it becomes contaminated with various micro-organisms, both fermentative and saprophytic, and occasionally with those of a pathogenic nature. On their introduction into the body they cause little or no inconvenience as a rule, owing to the fact that in the healthy alimentary canal most of them are either destroyed or exposed to conditions unfavourable to their further growth and development; but in unhealthy states it is far otherwise. Fermentative processes are then apt to occur which set up more or less active irritation and inflammation, and in the presence of pathogenic organisms specific disease may follow in susceptible persons. Sterilisation aims at preventing these risks by the destruction of micro-organisms in milk. In other words, the intention is to bring back the milk to the state in which nature originally supplied it. When it is possible to get milk in a perfectly fresh state sterilisation is of course unnecessary, and the same is true for all practical purposes when milk is only kept for a short time under favourable conditions of temperature and cleanliness; but the conditions of milk-supply in large towns, and particularly to the poor in summer time, are such that it is scarcely possible to obtain it free from bacterial contamination of a serious kind without special precautions. It is under circumstances of this kind that the principle of sterilisation may be beneficially applied. By merely bringing milk to the boiling point for a few minutes the majority of micro-organisms may be destroyed; but it requires prolonged exposure to a considerably higher temperature in order to secure complete sterilisation. For practical purposes, however, complete sterilisation is unnecessary. It must be borne in mind that boiled milk undergoes fermentative change almost as quickly as raw milk on free exposure to the air, so that in order to secure the advantages of boiling milk it must either be consumed soon afterwards or subsequent contamination must be prevented. The latter can readily be effected by boiling in bottles (soda-water bottles by preference) the mouths of which are plugged with cotton-wool. The plugs should of course remain *in situ* until the moment that the contents are required for use. This simple method of sterilisation carries with it a very considerable advantage, and if it were uniformly practised in preparing food in hot weather there is no doubt that diarrhoeal affections would be far less frequent than they are. A great variety of apparatus has been devised on this principle, but so far as I am aware they offer no decided advantage to the small consumer over ordinary boiling, which can be carried out in every household, however humble.

It would seem *prima facie* that there was little more to be said on the subject; but it is a matter of general experience that while milk sterilised by boiling is most valuable in the prevention and treatment of gastro-intestinal disorders, not only in infants but in adults, yet as a permanent food it does not fulfil the requirements of perfect nutrition. For a permanent food it is essential that it should possess the element of freshness, or at least contain a due proportion of

some fresh ingredient, in the absence of which scorbutic troubles are apt to arise. Now there are strong reasons for believing that boiling does to a large extent devitalise milk and deprive it of its fresh properties. As to what these properties really are, we have no precise knowledge. That this devitalisation is something more than a mere figure of speech is demonstrated by the fact that perfectly fresh milk has a bactericidal action, like fresh blood, which gradually passes off as the milk loses its freshness. It has been shown that this effect is abruptly destroyed by raising milk to the boiling point. Interesting as this matter is, there is no occasion for my present purpose to dwell upon it further. Again, all the best observers agree in asserting that boiled milk is somewhat less digestible than raw milk, a result which must be attributable to some chemical change or changes induced by boiling. Thus, according to Leeds¹ and Koplik² other changes are determined by boiling. It coagulates the lactalbumen; it separates out some of the fat, so that it runs together to form little spots of pure butter; it breaks up the milk-sugar more or less completely; and the casein is coagulated by rennet with greater difficulty. The question then arises as to whether it is possible to destroy the organisms which milk contains without rendering it less digestible. Pasteur has shown that exposure of milk for a short time to a temperature of 131° F. is sufficient to prevent its turning sour, while Koch, Klein, and many others have proved a temperature of 151° to 158° maintained for five minutes is sufficient to destroy all non-sporebearing organisms. Now, so far as can be ascertained, the chemical composition of milk is not seriously disturbed by temperature of this grade, while ordinary fermentative and putrefactive changes are indefinitely postponed or altogether prevented. In order to distinguish this method of treating milk from that by boiling it has been called "pasteurisation." For the purpose of preventing the growth and development of bacterial spores which still retain their vitality it is most desirable that the milk should be quickly cooled as soon as the process of pasteurisation has been completed. Pasteurised milk has been largely used by Freeman, Waldstein, and others in America, who report excellent results. There are some differences in the length of time for which the pasteurising process is continued in the practice of different physicians, varying from twenty minutes to an hour and a half. Dr. Waldstein has invented a most simple and ingenious apparatus for pasteurising milk, which has been submitted to me for trial and an opinion of its merits. I may describe it in his own words:—"I have

composed of three separate divisions, soldered together in such a manner that it is practically of one piece. Between the inner and outer chamber an air-space of one-sixteenth of an inch is interposed, from which the heated air escapes by holes punched in the top. When it is to be used both compartments are filled with boiling water, the rack containing the bottles is submerged into the inner one up to the milk-line, then covered over with the lid, and allowed to remain upon the stove during an hour and a half. The milk in my apparatus never reaches a higher temperature than 72° C. (160° F.), never one below 70° C. (158° F.); the water around the bottles is soon reduced to and remains at 75° C. (167° F.) or a little over, and the water in the outer compartment is kept boiling during the entire time." It should be pointed out that in order to prevent undue separation of fat, and also with a view of reducing the risk of subsequent bacterial development to a minimum, it is essential that the milk should be quickly cooled at the conclusion of the process. This can readily be done by removing the rack with its bottles from the tin, and plunging it into cold water and keeping it there. I had a good deal of difficulty at first in the breakage of bottles caused by this proceeding; but with a better class of bottles than those supplied with the apparatus these accidents seldom occur. During the last six months the apparatus has been in use at the City Infirmary and the Queen's Hospital, and has given considerable satisfaction. It is easy to use, children and other patients for whom it has been employed like it, and in no single instance has it been found to disagree. It appears to be more readily digested than raw milk, and several instances have come under my notice in which it has agreed when raw milk has disagreed. This may be partly due to the fact that the curd on coagulation is looser and more flaky than is the case with ordinary milk, but it is probably due chiefly to the much less liability to undergo acid fermentation. I have had some few complaints of constipation among young children, but in some of these it was unquestionably due to lime-water which had been added to the milk, and in no case was it troublesome. I have also used it in a case of ulcer of the stomach and in two cases of typhoid fever, and in all three it answered very well. I am wishing to try it in some of those cases in which there is a stubborn idiosyncrasy against milk, occurring generally in gouty subjects with a tendency to acid dyspepsia, but as yet I have had no opportunity of doing so. Dr. Waldstein says, however, that in these cases he has never failed with the addition of a teaspoonful of a $\frac{1}{2}$ per cent. solution of hydrochloric acid to each cupful of milk. In further support of what I have said I will turn to a brief series of consecutive cases, kindly reported for me by my colleague, Dr. Short.

CASE 1.—A man aged fifty-six years had chronic gastritis and pain after all food, especially milk. He was ordered pasteurised milk. For the next five days he gradually improved, and there has been no recurrence of the pain.

CASE 2.—An infant aged twenty-one months had otorrhoea, foul stools, and diarrhoea at intervals. Milk and lime-water had been administered without relief. Pasteurised milk was then ordered. In seven days the character of the stools had greatly improved; there were only two daily movements, as against four and five previously. This treatment was continued for a month, and the patient then returned to his ordinary diet. There has been no return of the diarrhoea.

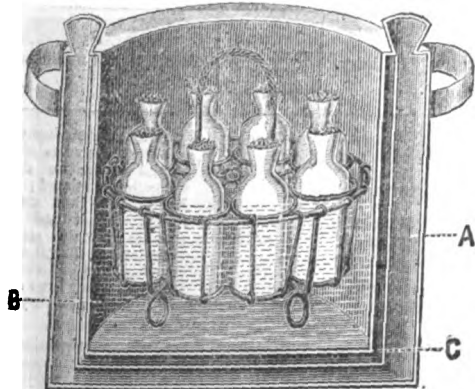
CASE 3.—A man aged twenty-nine years had extensive phthisis. He had vomited every morning for three weeks, in spite of changing his breakfast hour. Pasteurised milk was ordered. For twelve days he did not vomit, and he then returned to his ordinary diet. The patient has not vomited since.

CASE 4.—The patient was a female infant aged nine weeks, a twin child, very small and ill nourished, suffering from diarrhoea and vomiting. She was put on pasteurised milk, with lime-water and cinnamon water. The sickness stopped, but the bowels still remained loose and death ensued a month later.

CASE 5.—A female infant aged one year had diarrhoea and vomiting. For three weeks she had ordinary milk and lime-water without relief. She was then put on pasteurised milk, three parts milk and one part water. She gradually improved and gained a little flesh. The diarrhoea ceased, and vomiting was seldom.

CASE 6.—The patient was a man with gastro-ectasis following ulceration, with frequent vomiting. In this case the vomiting was not affected by the pasteurised milk unless the stomach was washed out once a week.

P. HARRIS & CO. LTD.,
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A OUTER WATER JACKET
B INNER WATER CHAMBER
C INTERVENING AIR-SPACE.

made use of a patented idea of my brother, Dr. M. E. Waldstein, in constructing this apparatus. The principle underlying it is very simple. It turns upon the reduction and equal maintenance of the temperature of the water in an inner compartment, B, separated from an outer one, A, in which the water is kept boiling, by an air-space, C, which is larger or smaller according to the difference of temperature which it is desired to obtain. The apparatus is made of tin and is

¹ American Journal of the Medical Sciences, June, 1891.

² Archives of Pediatrics, June, 1891.

In conclusion, I will quote the Sister of one of the children's wards in the City Infirmary, who has used pasteurised milk as a routine food for many of the children under her charge. She says that it has answered better for all-round use than any artificial food she has tried, that it is especially useful in cases of chronic diarrhoea, and that for green offensive stools it seems to be a certain remedy. I venture to submit that with this evidence before us pasteurisation of milk is worthy of our attention, and that Waldstein's apparatus is a cheap, simple, and effective method of carrying it out in practice. The apparatus can be obtained from Messrs. Philip Harris & Co., Limited, Birmingham, at a cost of 12s. 6d.

Birmingham.

CASE OF MOLLUSCUM FIBROSUM.

By F. K. GREEN, F.R.C.S. ENG.,

SURGEON TO THE BATH ROYAL MINERAL WATER HOSPITAL; ASSISTANT SURGEON TO THE ROYAL UNITED HOSPITAL, BATH.

THE following case of molluscum fibrosum may be considered interesting on account of the large size, peculiar appearance, and situation of one of the mollusc growths.

A man sixty-one years of age was admitted into the Bath Royal United Hospital on Dec. 12th, 1890, under my care, during the absence of my senior, Mr. Fowler. The patient was a man of stunted growth and dull and feeble intellect. He was dark-complexioned and, with the exception of the face, his skin was thickly freckled; in some places the skin was pigmented over an area the size of a sixpenny piece. The most striking feature about him was the peculiar hypertrophy of the skin and subcutaneous tissue of the left side of the face, which caused it to hang in folds, resembling somewhat the face of a bloodhound. These folds of skin hung down two inches below the level of the jaw. They felt quite soft and evidently contained nothing but loose connective tissue and a little fat. The patient said that his mother had



told him that his face had always been more or less in this state, and that when born there was an excrescence the size of a horse bean on that side; also that the deformity had been much more marked, the hanging folds of skin being larger than at present. On the trunk and limbs were innumerable warty growths and subcutaneous tumours, mostly of very small size. The warty growths were both sessile and pedunculated, and most abundant on the trunk, the subcutaneous tumours being almost entirely distributed over the limbs, and of variable size. The largest of these tumours was a sessile one in the episternal notch. It was roughly oval in shape and about an inch and a quarter in length, very soft, and much puckered on the surface. The next in point of size was situated on the scalp in the left parietal region and was of irregular shape. About two inches below the right nipple was a pedunculated tumour as large as a bean; two upon the right buttock had bases larger than a shilling and stood out prominently beneath the skin. They were all soft to the feel. The patient was admitted on account of a large endosteal sarcoma involving the whole of the left forearm, which I amputated soon after admission. The

stump healed quickly, but a cough developed, and symptoms of sarcoma of the lung appearing he was transferred to the medical side of the hospital, where in a few weeks he died.

Necropsy.—This revealed extensive sarcoma of the lungs, which under microscopic examination showed large spindle cells. A peculiar feature in this case was the extensive freckling or pigmentation over the body. Curiously enough in looking through an odd volume of the Irish Medical Transactions for the year 1828 I found a similar case recorded by Dr. John Crampton, with an excellent engraving of the patient. The noteworthy features in the case were the large size of the mollusc growths and "large freckles and dark-brown olive spots of various shape and size occupying the cuticle in patches." It would be interesting to know if the coexistence of molluscum fibrosum and pigmentation has been noticed by dermatologists. Perhaps it is only coincidence. Dr. Liveing has pointed out that "it is highly probable that these outgrowths exist in an undeveloped form at the time of birth, though they may be too small to be detected." In the case I have narrated it would certainly appear from the mother's statements that the growth on the face was well developed at birth. The stunted body and feeble intellect of the patient were especially marked, and support the observation of Hebra that molluscum fibrosum occurs very often in people with mind and body imperfectly developed.

Bath.

TWO CASES OF SYPHILIS WITH EARLY NERVOUS MANIFESTATION.

By HENRY LEE, F.R.C.S. ENG.,

CONSULTING SURGEON, ST. GEORGE'S HOSPITAL AND QUEEN CHARLOTTE'S Lying-IN HOSPITAL;

AND

J. A. SHAW-MACKENZIE, M.B. LOND., M.R.C.S. ENG.

As bearing on the late discussion initiated by Mr. Hutchinson at the Royal Medical and Chirurgical Society, Dr. Shaw-Mackenzie has Mr. Henry Lee's kind permission to forward the only two cases he can find of early nervous manifestations, out of 2750 cases of syphilis in some of Mr. Lee's case-books. Whether they are true secondary lesions is apparently uncertain. That they followed primary syphilis within two years is undoubted.

No.	Sex.	Age.	Primary.	Date of secondary nervous affection.	Description of manifestation.
1	F.	14	Sore on labium noticed for two months the size of a shilling piece.	Two months.	Dyspnoea; tracheotomy; convulsive movements of limbs; partial coma for a week; sphincters relaxed; death. Necropsy.—Dura mater adherent, thick and red in patches; brain congested; ventricular walls soft, with fluid effusion; tonsils puckered and purulent; very large quantity of mucus fills larynx and pharynx.
2	M.	32	History of syphilis, vide Mr. Lee's "Lectures on Syphilis"	Eighteen months.	Loss of power right side of body, with difficulty in speech; at 23 months facial paralysis of left side, ptosis of left eyelid, and right arm powerless; death. Necropsy.—Dura mater has partly fibroid, partly caseating, and degenerating tumours, varying in size to a florin piece; similar masses were found in the Sylvian fissures; left optic nerve atrophied from pressure of growths. Microscopic examination by Dr. Whipple showed spindled nuclei in fibrillated network; the softer parts showed degenerated cells and broken-down fibrous tissue. No fibrillation was evident in the earlier growths; the liver substance was studded with transparent nodules of newly formed fibrous tissue.

The following cases of patients presenting themselves with late nervous manifestations are taken from the same source:—

No.	Sex.	Age.	Primary and secondary.	Date of primary nervous affection.	Early treatment.	Late nervous manifestation not secondary to bone lesion.
1	M.	37	Sore papular eruption; ulcerated throat.	16 years	Pills, 2-3 years	Loss of smell and taste.
2	M.	—	History of syphilis.	30 years	?	Loss of smell and taste.
3	M.	—	"	6 years	Pills of red iodide, 6 weeks.	Loss of sexual power; tremors; aphasia; unsteady gait; difficulty in swallowing; death.
4	M.	—	"	16 years	At Aix twice.	Impotence; advancing melancholia; suicide, though under care of trained male attendant.
5	M.	—	"	10 years	(?)	Impotence; mental depression.
6	M.	40	"	16 years	Pills	Patches of numbness in anterior thighs, also in fingers; variable superficial cutting pains; tremors; knee-jerks deficient; mental depression.
7	M.	50	"	20 years	Mixed	Locomotor ataxy affecting sensory roots.
8	M.	40	"	5 years	Baths	Vague persistent headache, dimness of sight, reduced sexual power.
9	M.	—	"	2-3 years	Baths	Vague headaches and dizziness.
10	M.	—	"	30 years	(?)	Slight hemiplegia; died a year later of apoplexy.
11	M.	60	"	18 years	Pills, 2 years	Malnutrition; mental depression; deficient sexual power; neurasthenia.
12	M.	40	Hard sore	17 years	Baths	Deafness; loss of energy; noises in head.
13	M.	—	History of syphilis	3 years	Baths	Ringings in ears.
14	M.	—	"	—	—	—

Mr. Lee's case-books show further cases in the later stages of syphilis of neuralgia of the nerves of the back, sciaticas, debility, rheumatic pains, muscular twitchings, slight losses of muscular power, numbness and deafness, loss of smell, delusions, three to twenty years after primary history, whilst particulars of eleven other cases are found in his lectures on Syphilis. Mr. Lee has met with but comparatively few affections of the nervous system as the result of syphilis, and these he can account for by want of care in the primary stages. He considers it essential in the treatment of early syphilis that exposure to air should be avoided as much as possible, and he cannot remember a single case of gross lesion of the nervous system or internal organs following the careful and detailed primary use of the calomel fumigation bath. In a paper by Dr. Shaw-Mackenzie¹ he stated that many cases of late syphilis which had been treated by mercury internally in the primary stage or irregularly seemed to be intolerant to the further beneficial effects of mercury; also that he had been struck by the few manifestations of syphilis in patients who had been treated from two to thirty years previously for primary syphilis by the calomel bath. He would submit that a method which makes the least demand on a patient's constitution, which does not conduce to digestive troubles and malnutrition, may also, in aiding elimination through the skin, prove truly prophylactic against the later manifestations of syphilis.

Savile-row, W.

¹ THE LANCET, May 6th, 1893.

A CASE OF IDIOPATHIC RUPTURE OF THE HEART.

By DUDLEY W. COLLINGS, M.B.,
SENIOR HOUSE SURGEON, TOTTENHAM HOSPITAL.

A MAN, aged fifty-three years, was admitted into Tottenham Hospital on Aug. 7th, 1894, with the following history. He had lived a temperate, sedentary life, being troubled only by dyspepsia and a weak heart. He denied ever having suffered from rheumatism or rheumatic fever. His father died suddenly of heart disease. He had been in his usual state of health and at work up till Aug. 1st, 1894, on which date he felt "out of sorts." On the 2nd he experienced severe pain in the præcordium, and felt too ill to leave



Anterior view of heart and bases of lungs. A small piece of wood is inserted in the rupture. The upper wound, in the left auricle, was made during the necropsy.

his bed. On the 3rd he was worse and sick after food. On the 5th, about midday, his speech became rather thick, but recovered its natural tone later on. At tea-time his mouth was noticed to be drawn to the right side and his left eye was partially closed. The left arm became paralysed, followed by loss of motion in the left leg. On his admission on the 7th he was found to be well nourished, but looked old for his years. He answered questions clearly and explicitly, though with some slight hesitation. The left side of his face (lower part), left arm, and left leg were paralysed. The tongue was deviated to the right on protrusion. The sphincters were unaffected. There was no pain. The heart sounds were faint and there were no added sounds. At about 11 A.M. on Aug. 8th he was moved on to a water-bed, his body and head being kept horizontal, great care being taken to avoid any sudden

movement. At 6 15 P.M. his pelvis was raised to allow of the introduction of a bed-pan and almost instantaneous death ensued. At the post-mortem examination a prolonged and careful search failed to reveal any macroscopic change in the brain, its vessels, or the meninges. On opening the pericardium it was found to be filled with blood clot, and on washing this away a laceration about one and a half inches in length was found in the left lateral wall of the left ventricle. The aperture was closed by recent clot. The cavities of the heart were dilated, the walls thin and in an advanced stage of fatty degeneration. No valvular disease was present. The aorta and its main branches were atheromatous. Both lungs contained calcifying tubercle; the abdomen was loaded with fat; the spleen was soft and friable; the kidneys were engorged, but otherwise healthy. Although the patient's death followed such a slight movement as that of raising his buttocks, and which was apparently "the last straw," he had been able to survive a considerable journey (from Waltham Abbey to Tottenham) in a cab on the previous day. My cordial thanks are due to Dr. Rasch, visiting physician to the hospital, for his permission to publish this interesting case.

TWO CASES OF DIPHTHERIA TREATED BY ANTITOXIN.¹

By A. J. RICHARDSON, M.A., M.D. CANTAB.,
ASSISTANT PHYSICIAN TO THE SUSSEX COUNTY HOSPITAL.

CASE 1.—The patient was a girl aged seven years and six months. On Sept. 11th she was said to have had tonsillitis, but to have completely recovered by the 15th. On the evening of Sept. 20th there was copious epistaxis. On the 21st, on the right side of the uvula and anterior pillar of the fauces, there was a shallow, raw-looking ulcer, and the left nostril was filled with a greyish-white membrane down to the orifice. The pulse was 130 and the temperature 101° F. The urine contained over 0.05 per cent. albumen. The patient was given perchloride of mercury and lactic acid (one drachm to the ounce) applied locally. On the 22nd with a nasal speculum a white substance could be seen far back in the right nostril. On the 23rd the temperature reached 102° 2', and the child was distinctly worse. On the 24th the urine contained over 0.03 per cent. albumen. At 7 P.M. 0.7 c.c. of Aronson's antitoxin was injected. On the 25th the patient could breathe better through the nose. She was very restless in the afternoon and her temperature rose to 103°. On the 26th the ulcer on the uvula was nearly well. No membrane could be seen in the nose, but the temperature was still keeping over 102° and the albumen had increased to 0.2 per cent.; 1.2 c.c. of antitoxin injected. On the 17th she complained of pain in the legs, and after the most careful examination the knee-jerks could be only doubtfully obtained; anyway, there was very slight reaction. The fauces and nose looked well, but she complained of ear pain. On the 28th pus issued from the right ear. The patient could not hear the ticking of a watch on contact, and the tympanum was perforated. On the 30th the ear was quite free from discharge, and she heard a watch at three inches. The throat and nose looked well, but the temperature reached 103° 2', and the albumen was over 0.1 per cent.; 1.7 c.c. of antitoxin was injected. On Oct. 2nd the temperature was subnormal and the pulse 92. Albumen, 0.01 per cent. On the 3rd the temperature was subnormal, the pulse 104, and there was no albumen. The knee-jerks were very glib. Since then the child has made an uninterrupted recovery.

CASE 2.—The patient was a woman, the mother of the above. On Sept. 23rd a small yellowish patch was seen between the pillars of the left fauces. The temperature was 103° F. Steam and lactic acid were applied locally, and perchloride of mercury given. On the 24th albumen was 0.1 per cent. The yellow patch had grown a little. There was a separate raised white patch between the uvula and the anterior pillar. In the evening a third patch had appeared on the left tonsil. The temperature was 100° 2'. 1 c.c. of antitoxin was injected. On the 25th, in the morning, the yellow patch had come round the anterior pillar and spread

downwards. The white patch and the third patch remained as on the previous day. In the evening the yellow patch had receded; the edges of the white patch were raised and everted, while the third patch remained as before. On the 26th the yellow patch and the third patch were smaller; the white patch of membrane shed. The temperature was 99° 2'. On the 28th the throat was absolutely clear. The temperature was normal and the urine free from albumen. The patient has since progressed without any bad symptoms.

Remarks.—The cases were not in any sense treated with a view of determining the merits of antitoxin; still, the circumstance that both failed in any way to improve until the antitoxin was injected is noteworthy. The mother received her dose on the second day of the disease, and the child much later, so the cases bear out what has been written—that the sooner antitoxin is administered the better is the recovery, and that the later in the disease the larger is the dose required to produce benefit. The estimations of albumen were by Brandenburg's method (checked by Esbach's tubes), but only on particular samples, not on the mixed urine of twenty-four hours. The disease is attributed to an arrangement by which a current of air was allowed to pass through the dustbin into the house.

Hove, Brighton.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF PREGNANCY IN ONE HALF OF A UTERUS SEPTUS BICORNIS.

By E. G. EMERSON ARNOLD, L.R.C.P. LOND., M.R.C.S. ENG.,
SENIOR OBSTETRIC HOUSE PHYSICIAN TO ST. THOMAS'S HOSPITAL;

AND

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JUNIOR OBSTETRIC HOUSE PHYSICIAN TO ST. THOMAS'S HOSPITAL.

A WOMAN aged twenty-two years was attended in the Maternity Charity of St. Thomas's Hospital on Feb. 4th, 1895, in her third confinement. On examination the left shoulder was found presenting with the arm prolapsed. The patient had been in labour for upwards of twelve hours, and the os was fully dilated. On passing the hand into the uterus in order to perform version, after the patient had been put under chloroform, there was felt, close against the uterine wall and just above the child's head, which was lying in the left iliac fossa, a thick projecting edge of tissue, the nature of which was not at the time apparent. Delivery was effected by version, the child, a full term male, being stillborn. On examining after delivery it was found that the uterus consisted of two distinct cavities, divided by a septum reaching as far as the position of the internal os, and the fundus presented a median depression separating two divergent cornua. The placenta and membranes were found occupying the right and larger half of the uterus, the left side being empty, but lined by a soft membrane, easily breaking down under the finger. It was now obvious that the projecting edge previously felt had been the lower end of the septum pressed against the left uterine wall. The placenta and membranes were expressed without difficulty, and, some hæmorrhage occurring, a hypodermic injection of ergotinine was administered, after which the uterus contracted well. The patient made satisfactory progress until the tenth day, when a rise of temperature occurred. An intra-uterine douche was given and a large quantity of shreds of decidua tissue evacuated from the left cavity, and these continued to pass for some days afterwards. The temperature gradually fell again to normal, and there were no further untoward symptoms. Abdominal palpation immediately after delivery showed the right half of the uterus to be markedly larger than the left, but a day or two later the left half appeared to be slightly the larger of the two. At the end of a week or ten days both sides felt of equal size. The patient has had two previous pregnancies, the first resulting in the birth of a living child at term, and the second in a miscarriage at the sixth

¹ Notes on these cases were read at the meeting of the Brighton and Sussex Medico-Chirurgical Society, Oct. 6th, 1894.

month. No interference was necessary, and nothing occurred to lead to the diagnosis of the abnormality on either of these occasions. The patient first menstruated at the age of thirteen years, and the catamenia have always been regular and rather profuse. All three pregnancies have been attended throughout by complete amenorrhœa. The pelvis showed no increase in width, such as has been noticed in some cases of double uterus. The promontory of the sacrum was somewhat prominent, and there was some contraction of the conjugate diameter of the brim, without, however, those changes in the external measurements characteristic of the rachitic flattened pelvis. The measurements were: diagonal conjugate, 4½ inches; distance of iliac crests, 10½ inches; distance of iliac spines, 9½ inches. Our best thanks are due to Dr. Cullingworth and Dr. Cory for permission to publish this case.

REMARKABLE CASE OF PERFORATION OF EYEBALL.

By H. A. BRYANT, M.R.C.S. ENG. &c.,

RESIDENT MEDICAL OFFICER, COUNTY HOSPITAL, DURHAM.

ON April 3rd a man twenty-one years of age attended the Durham County Hospital with the history that, while walking beside his cart with a friend, he was suddenly struck with something in the right eye, causing him intense pain and loss of sight. On examining him I found a lacerated perforating wound the size of a hemp seed about three-sixteenths of an inch from the outer margin of the cornea, out of which some of the vitreous was escaping. The conjunctiva was congested, there were blood in the lower half of the anterior chamber, but not blocking up the pupil, loss of tension, and sinking in of the iris and lens. Loss of sight both for light and objects was complete. Ophthalmoscopic examination could detect nothing, no reflex being present, and no foreign body could be seen with focal illumination. About four hours after the accident the man was put under chloroform, and I passed a probe into the wound for about an inch in a downward, backward, and inward direction, encountering what seemed to me to be some soft foreign body. As it could not be removed the eyeball was enucleated. On examining the eye afterwards, embedded in the back part of the vitreous a knot of whipcord, evidently from the end of a whip, was found, which must have penetrated the globe and passed through the vitreous. The lens was uninjured. The patient made a good recovery, and left the hospital seven days after the operation. On questioning him he was quite at a loss as to how the accident could have occurred, declaring that his own whip was in the cart, and that no one anywhere near was flicking one about. The case is that of an accident which almost everyone is liable to, and it shows what considerable force there is in a flick of a whip which can penetrate such a tough body as an eyeball.

DISLOCATION OF THE LOWER JAW DURING AN EPILEPTIC FIT.

By CECIL F. BEADLES, M.R.C.S. ENG., L.R.C.P. LOND.,

ASSISTANT MEDICAL OFFICER, LONDON COUNTY ASYLUM, COLNEY HATCH.

A CASE of dislocation of the lower jaw during an epileptic fit is such a rare event that the following is worthy of being recorded. It occurred in a youth aged twenty who had been an inmate of Colney Hatch Asylum about two years and a half. He is the subject of chronic mania, with delusions, is often excited and quarrelsome, and has frequent epileptic fits, occurring more especially during the night, but which interfere but little with his employment on the grounds during the day. He has a somewhat imbecile expression, with a peculiar, hesitating, slow manner of speech; moreover, his lower jaw has the appearance of being rather loosely articulated. Dislocation of the right condyle occurred during the night while the patient was in a severe fit, and its reduction was effected without difficulty when he recovered from it. I have been unable to discover that this rare event has previously happened in this asylum, although some years ago there were two male patients who could put their jaws out and replace them with ease; neither of these was epileptic. Erichsen does not mention epileptic fits as a cause of this variety of dislocation.

A Mirror

OF

HOSPITAL PRACTICE BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL BERKSHIRE HOSPITAL.

CASE OF DOUBLE BASIL PNEUMONIA ASSOCIATED WITH PREGNANCY, HEART DISEASE, AND BRONCHITIS, AND FOLLOWED BY EMPYEMA; RESECTION OF RIBS; RECOVERY; REMARKS.

(Under the care of Dr. FRANCIS HAWKINS.)

THERE is no doubt that pneumonia is one of the most serious complications of pregnancy, and although several cases are on record where the patient has recovered, its onset is rightly regarded with great anxiety by the physician. Dr. Rendu¹ has in a clinical lecture devoted to this subject entered fully into a consideration of it. That the disease is aggravated by pregnancy is proved by statistics, which show a mortality of 8 to 9 per cent. He further states that the more advanced the pregnancy the graver the pneumonia, the cause of this being partly mechanical, from diminution of hæmatisation; but, in addition, the heart at this period is already fatigued, and the kidneys to a certain extent altered by pregnancy, thus bringing about a serious pathological condition. The frequency of abortion, which aggravates the situation, appears to be due to the fact that the foetus dies from infection, and the uterus hastens to free itself. Dr. Rendu considers that abortion renders the patient's state more serious, and that dangerous symptoms are apt to develop very rapidly after it. This case, it will be noted, was apparently less fitted than usual to cope with the disease on account of the cardiac affection.

A woman aged thirty-five years was admitted to the Royal Berkshire Hospital on April 5th, 1894, complaining of pain in the left side, cough, and slight expectoration, all of which had commenced suddenly three days before and were not preceded by shivering or vomiting. The thorax, which was well formed, moved but slightly on the left side during inspiration. The physical signs on this side were slight vocal fremitus, absolute dullness over the infra-scapular region, marked dullness over the lower part of the inter-scapular and over the whole of the infra-axillary regions, the breath sounds tubular in character over all the above regions, a small amount of fine crepitation, and a great increase of vocal resonance. On the right side there were no abnormal physical signs. The first cardiac sound was decidedly impure, but there was no absolute murmur. The temperature was 99.6° F. and the pulse 108. The patient was at about the fourth month of pregnancy. On April 7th pain was felt in the right side of the chest, which now moved less freely in respiration, and over the infra-scapular region there was dullness with tubular breathing. The highest temperature (at 3 A.M.) was 102.5°; the pulse was 128. On the 9th the general condition of the patient was very bad, the dyspnoea being very marked and the lower lip cyanosed. The signs of consolidation of both bases were still present. The highest temperature (at 3 P.M.) was 102.6°, the pulse was 132, and the respiration 55. Liquor strychniæ was given every four hours. On the 10th the dyspnoea was less and the lower lip was not cyanosed. The highest temperature (at 11 A.M.) was 100.8° and the lowest was 98.6°. The pulse was 120 and the respiration 50. On the 11th, which was the day of crisis, or ninth day of the disease, the temperature in the forenoon was 98° and the general symptoms were rather less urgent. At 10 P.M., however, there was severe dyspnoea with constant hacking cough, and the pulse rose to 130. Digitalis and ammonia were now administered. (At first the patient was ordered brandy, which she took till the 10th, when port wine was substituted.) On the 15th the patient was not so well and complained of pain in the right posterior axillary line; there

¹ Journal de Médecine et de Chirurgie Pratique, Paris, vol. i., 1893, Sajous' Annual of the Universal Medical Sciences, vol. ii., 1894, H. 13.

was, however, no evidence of pleurisy, nor was the pain relieved by leeches. On the night of the 20th she had a very severe attack of dyspnoea, accompanied by pain all over the chest. Physical examination gave no signs of any morbid condition other than general bronchitis with pneumonia undergoing resolution, and a dilated heart. The digitalis, which had been stopped for a time, was resumed and the patient improved. Subsequent examinations showed only dulness of the right base, with tubular breathing distinct but diminishing. On May 1st the right side of the thorax scarcely moved in respiration, vocal fremitus was absent, and the dulness was increased in area, but the breath sounds were audible; the heart was slightly outside the line of the nipple. An exploratory needle introduced in the right posterior axillary line between the sixth and seventh ribs gave exit to clear fluid; a full-sized trocar was afterwards inserted at the same point, but no fluid came. On the 8th, no further attempt to aspirate having been made, there was no movement of the right side of the thorax during respiration, vocal fremitus was absent, there was dulness posteriorly and laterally, the breath sounds were inaudible, and there was slight egophony. Over the right infra-clavicular region Skodaic resonance was well marked. The apex beat was approximately one inch and a half outside the left nipple line. Aspiration now yielded more than two pints of clear fluid. On the 15th, six weeks after the commencement of the illness and five weeks after the crisis, there was slight vaginal hæmorrhage without uterine pains. Two days later severe pains were felt in the lower part of the abdomen, and a foetus between the fourth and fifth months was expelled, together with placenta and membranes. On the 19th there was an attack of urgent dyspnoea, and the physical signs showed an accumulation of pleural fluid, which on exploratory puncture was found to be purulent. A free incision being resolved on, and the patient's condition precluding the use of any general anæsthetic, cocaine was injected at the spot indicated, ice was applied externally, and an opening was made through which a pint and a half of pus escaped. On June 9th, as the purulent discharge from the drainage-tube continued and the lung did not expand much, chloroform was administered and Mr. W. J. Maurice excised portions of the eighth and ninth ribs. A drainage-tube was inserted, and the discharge was considerable until about July 16th. On Aug. 2nd there was some general movement of the right side of the thorax, and the apex beat was inside the left nipple line. A few days later the patient went to the seaside, and on Aug. 24th the tube was discontinued. On Jan. 30th, 1895, the right side of the thorax was found to move fairly well; the percussion note was slightly impaired over the right infra-scapular region, but the breath sounds were distinct. The apex beat was now inside the nipple line, and a well-marked systolic bruit was heard. The operation wound was quite healed. In March the right lung was fully expanded, the difference on auscultation and percussion of the two sides being but small. The cardiac murmur was variable in its distinctness.

Remarks by Dr. HAWKINS.—Pneumonia when associated with pregnancy is by nearly all writers regarded as being extremely dangerous, abortion invariably taking place. I know of but one case other than that now under review where abortion occurred and recovery followed. According to several authorities, including Dr. Wilson Fox, pre-existing heart disease, from which my patient suffered, is another most serious complication of pneumonia, increasing the mortality to 30 and 50 per cent. The present case therefore seems to show that pneumonia, even under the most unfavourable circumstances, if early brought under treatment and managed with strict attention to certain practical details, is a disease which ordinarily tends towards recovery.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.

ANEURYSM OF THE AORTIC ARCH IN A YOUNG WOMAN;
NECROPSY; REMARKS.

(Under the care of Dr. A. CHRISTY WILSON.)

THIS case is interesting on account of the unusual conditions alluded to by Mr. Armit in his remarks. Dr. Bristowe¹ writes on this subject: "Aneurysm is a far more common affection in males than in females, mainly on account

of their different avocations, and it belongs almost exclusively to adult life. It is a disease, indeed, chiefly of advanced years; still, it not infrequently occurs, both in men and women, between the ages of thirty and forty, and especially in those who have led debauched lives and have suffered from the conditions which produce endoarteritis." Aneurysm of the aorta has, however, been observed at a much earlier age. Dr. Penden² showed a girl aged twelve, at the St. Petersburg Medical Society, with the following signs: to the right of the sternum there was a slightly prominent dull area which pulsated; the pulse in both wrists was delayed relatively to the apex beat; a double murmur was heard loudest over this area. There were no symptoms. When six years old she had fallen and struck her right side, and since that time she had had moderate pains in that region. Mr. Edgar Willett³ brought before the Pathological Society a specimen removed from the body of a girl aged four, showing a sac, the walls of which were thick and well formed, which communicated with the descending portion of the aortic arch. He considered that it might have been produced by the breaking down of an enlarged lymphatic gland, the contents of which had passed into the aorta. The child had died from pericarditis.

A woman aged thirty-three (according to her friends) was found bleeding profusely from the mouth whilst walking in the street, and was taken to the Infirmary at noon on March 23rd, 1895. She was seen to have lost a great quantity of blood before admission, and continued to do so after. The blood was vomited as well as coughed up, and was frothy, arterial and alkaline. The quantity of blood lost was not known, owing to the fact that much had been lost in the streets, and when in the room where she was first brought the patient was extremely restless, throwing herself about, so that only a portion was collected in vessels. When first seen she was extremely pallid, with widely dilated pupils, and the radial pulse was scarcely to be felt at the wrist. She was still spitting and vomiting blood profusely. At Dr. Wilson's request (under whose care the case was admitted) Mr. Armit injected ten minims of ergotin hypodermic solution, but did not succeed in controlling the hæmorrhage to any marked extent. After about fifteen minutes she became less restless and the hæmorrhage diminished and ceased, but the patient was so collapsed that she was unable even to swallow ice or iced water. The voice was markedly changed, being of that peculiar staccato, breathless type so typical in extreme anæmia. There were dyspnoea and bubbling sounds heard by the unaided ear, indicating the presence of a considerable quantity of blood in the air vesicles. In less than three-quarters of an hour another smaller attack of hæmorrhage occurred, but subsided quickly. Mr. Armit gave orders that if she did not have a return of hæmorrhage in a couple of hours she was to be carefully moved on a stretcher into one of the wards. This was done at a little past four. At five o'clock another hæmorrhage, not very profuse this time, set in, and the patient died very soon after. Mr. Armit had thus no opportunity of examining her chest or abdomen during life, and so did not form a definite diagnosis as to the cause of the hæmorrhage. On inquiry he found that she had been ill for about two years, and had suffered chiefly from lung symptoms—i.e., cough, expectoration, dyspnoea, &c., and some laryngeal trouble, indicated by a change in the voice. He could get no definite reliable history as to the patient's previous habits, but was informed that she was not temperate. On Monday, March 25th, Mr. Armit made a post-mortem examination. She was found to be a well-nourished woman with a moderate amount of subcutaneous fat. On opening the chest the left lung seemed to be adherent to the chest wall at the apex, but on minuter examination it was found that there was a large aneurysm springing from the third part of the arch of the aorta on the posterior aspect and concavity, which was inseparable from the lung and could only be detached from the chest wall with great difficulty. It had ruptured into the lung nearly at the extreme apex, which was to some extent consolidated, partly from engorgement and partly from inflammation. The whole aneurysmal pouch was about the size of a cricket-ball, or slightly larger, and had thick walls, especially anteriorly and towards the middle line and below. The interior was very irregular and was covered with deposited clots of varying sizes and shapes. The vessels coming off the arch seemed

¹ Science and Practice of Medicine.

² Sajous' Annual of the Universal Medical Sciences, 1891, vol. i., p. 6.

³ Transactions of the Pathological Society of London, 1892, p. 38.

entirely to have escaped pressure, but the left recurrent laryngeal nerve was found to be tightly stretched and pushed outwards around the aorta. Mr. Armit was much struck with the marked localisation and limitation of the disease to the apex of the left side of the chest. There was no atheroma, calcareous degeneration, or other changes visible in the aorta or other vessels, nor could he find any visceral or other indications of syphilis, gout, or lead poisoning. The spleen, liver, kidneys, adrenals, pancreas, heart, right lung, and bladder appeared to be normal, although very pale. In the pelvis he found a cystic growth, which was adherent to the parietes. This was a medium-sized multilocular cyst of the left ovary, while there was a small cyst in the right ovary. The larynx was not changed. The stomach and intestines contained frothy arterial blood, and were stained, but not ulcerated or otherwise affected.

Remarks by Mr. ARMIT.—It seems to me that an aneurysm of the concavity of the arch of the aorta, situated in the third part, occurring in a young woman who has no other signs of arterial decay, and rupturing high up into the apex of the left lung, is a very rare condition. If she had been examined during life I take it that the altered laryngeal voice (paralysis of the left vocal cord), and perhaps some inequality of the pupils due to the compression of the sympathetic nerve, together with dulness at the left apex, bronchial breathing, a systolic murmur, and perhaps expansile pulsation, would have been the signs that would have led to a correct diagnosis.

Medical Societies.

HARVEIAN SOCIETY OF LONDON.

Clinical Study of some of the more Important Forms of Abscess.

A MEETING of this society was held on April 4th, Mr. D'ARCY POWER, Vice-President, being in the chair.

Mr. HOWARD MARSH read a paper on the Clinical Study of some of the more Important Forms of Abscess. He began by stating his view that when pus was known to be present in a part it should be evacuated without delay, for not only was it an excretion—something which was outside the pale of the economy, and which could serve no useful purpose—but it did mischief in many ways: by producing tension in acute cases, and in chronic cases by burrowing and by leading to the formation of pockets and tortuous passages lined with granulation tissue, which maintained suppuration and which moreover was often tuberculous. Pus also produced erosion of adjacent structures and might make its way into (a) the large joints, and (b) the large bloodvessels. Mr. Marsh showed nine specimens from the Museum of St. Bartholomew's Hospital illustrating this formidable accident. These included instances in which the three carotids, the thoracic, and the abdominal aorta, the external iliac, and the femoral had been opened by abscesses, and he had known the gluteal and the internal pudic similarly involved. Indeed, there was probably no large artery in the body which had not been opened in this manner. The occurrence was very likely to be fatal. Sometimes the abscess concerned was quite small. As to diagnosis, Mr. Marsh remarked that, though fluctuation was usually depended upon as the evidence that matter had formed, it was a symptom that was available in only a minority of cases—namely, in large chronic abscesses. It postulated several conditions which in acute abscesses were often absent—viz., a sufficient quantity of pus to admit of to and fro displacement, a firm background, pliant superjacent soft parts, superficial position, and absence of great tenderness. In numerous instances of acute abscess several of these conditions were absent. The indications then to be depended on were (a) elasticity, (b) pitting on pressure, (c) the tender spot, and (d) the soft spot. Attention was then directed to particular abscesses. Acute abscesses of bursa should be evacuated before the wall burst and pus was widely extravasated; and in glands before the capsule burst and the surrounding connective tissue and skin were involved. A very formidable abscess was that beneath the gluteus maximus, which might follow disease of the lumbar spine, the hip-joint, or the sacro-iliac articulation. The great difficulty was that

pus burrowed widely under the muscle and that adequate drainage could not be secured. He had known four such cases to be fatal. Another abscess very likely to produce serious difficulty was the post-mammary. Here wide burrowing occurred and sinuses obstinately refused to heal. He had met with two instances in which the breast had been removed, all other treatment, including free drainage, scraping, and prolonged rest, having failed, after long trial, to secure sound healing. A third variety of abscess referred to was that which follows either tuberculous periostitis of a rib or the periostitis of a rib sometimes met with (as Sir James Paget had described) after typhoid fever. In these cases the abscess is often situated behind the ribs, and can be reached only through an intercostal space. He had lately met with two instances in which a large flattened abscess cavity was found between the costal cartilages and the pleura in the immediate vicinity of the internal mammary artery. In such cases the lining membrane of the abscess must be completely cleared away, drainage provided, and rest and perfect asepsis maintained; otherwise burrowing will continue, and, as he had several times seen, separation of the cartilage from the rib will probably occur. A fourth variety of abscess sometimes lead to a condition the exact explanation of which was apt to escape recognition. When a deposit of tubercle occurred in the deeper strata of the subcutaneous tissue wide undermining of the integument might occur, and one or more sinuses might form which obstinately refused to heal. A boy was lately in hospital who had two sinuses of long duration in the occipital part of his scalp. The scalp was undermined over an area four inches in diameter. The pus contained tubercle bacilli. The undermined scalp was freely divided, so that the whole cavity was exposed. All the granulation tissue was scraped away and the flaps were readjusted. The parts now healed. Similar examples had been met with in the leg (so that the affection closely simulated necrosis of the tibia), in the forearm, and in other parts. The diagnosis is easily made by finding that the sinuses nowhere pass beyond the subcutaneous tissue (none pass through the deep fascia or traverse the periosteum) and by observing also that wide undermining in a horizontal plane has occurred. The treatment consists of complete exposure of the whole cavity, thorough scraping and careful readjustment, and the use of uniform pressure.

Mr. D'ARCY POWER in commenting upon the paper first expressed the thanks of the Harveian Society to Mr. Marsh for the interesting nature of his communication. He then called attention to the great importance which should be attached by every class of practitioner to a thorough knowledge of suppuration, for in no other case did such apparently trivial conditions lead so frequently to great issues. He asked Mr. Marsh whether he would kindly give the society the benefit of his experience upon the question as to whether absolute rest retarded or prevented the formation of abscesses in diseases of the spine and joints. Mr. Power also asked Mr. Marsh whether he would not lay it down as an axiom that it was advisable to endeavour to obtain union by first intention in every case where such a result seemed possible rather than to drain an abscess as a routine proceeding. Mr. Power also asked what Mr. Marsh recommended should be done in cases where large masses of caseating material lay remote from the joint when the patient otherwise appeared to be cured of the disease from which he had suffered. His own method was to evacuate them completely if he thought that he could obtain primary union, but if this was doubtful he left them alone, as he thought that they were much less likely to do harm if left untouched than if they became septic.

Mr. PEYTON BEALE drew attention to the great value and interest of the specimens which Mr. Howard Marsh had so kindly brought illustrative of the bursting of abscesses into large bloodvessels. He related a case which he had had under his care at the Great Northern Central Hospital about two years ago. The patient was a boy aged fourteen who had a sinus of many months' duration leading down to the back of the femur and opening externally on the lower and outer aspect of the thigh. In operating to remove the necrosed bone which existed both the popliteal artery and vein were so rotten from their proximity to the suppurating sinus that they unfortunately burst during the operation, and about three inches of each had to be at once excised. Collateral circulation had of course been established previously, and the boy made a good recovery.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Adjourned Discussion on the Legal Definition of Sewers and Drains.

A MEETING of this society was held on April 8th, Mr. S. R. LOVETT, President, being in the chair.

After Mr. F. Vacher, M.R.C.P., F.R.C.S. Edin., Medical Officer of Health to the Cheshire County Council, had been unanimously elected President for the ensuing year, the adjourned discussion on Mr. H. C. Jones's paper on the Legal Definition of Sewers and Drains was resumed, Drs. T. O. Dudfield, Kempster, R. Dudfield, Willoughby, and others taking part. The question at issue in the numerous cases constantly coming before the Courts of Summary Jurisdiction, many of which are followed by appeals, was really that of the liability of the local authority or of the owners of the property for the abatement of nuisances arising from, and the proper maintenance and repair of, any given structure or channel, the incidence of the liability depending on the decision of the courts as to whether the structure were a sewer or a drain, and the difficulty presenting itself almost exclusively in the cases of the combined drainage of several houses. The statutory definitions of a drain required its connexion—(1) with one house only or buildings within the same curtilage, and communicating with a cesspit or with a "sewer into which the drainage of two or more buildings or premises occupied by different persons was conveyed;" or (2) "the drainage of any group or block of houses by a combined operation under the order of any vestry or district board," &c. This second definition, though contained in the Metropolitan Local Management Act, 1855 Section 250, and in subsequent Acts, was omitted in the Public Health Act, 1875, which was still in force throughout England and Wales beyond the metropolis, although combined drainage was general enough in provincial towns. This omission was to some extent met by Section 19 of the Public Health (Amendment) Act, 1890, which enabled the local authority to take action on complaints made under Section 41 of the principal Act of Nuisances, arising from such drains and to apportion the cost as private improvement expenses, but this Act was an adoptive one, and even where adopted it introduced a new complication by substituting the words "belonging to different owners" for "occupied by different persons." This section not having been incorporated into the Public Health (London) Act, 1891, the question of ownership or occupation did not arise; but besides the ambiguity attaching to the expression "curtilage," on which judges had differed in the case of block dwellings as to whether the spaces between the blocks could be considered as a curtilage or must be deemed a street, there was always the difficulty of proving whether the local authority had expressly approved any particular drain connected with several houses as a combined drain, or not. It appeared that if the approval were given in general terms, or were inferred from the authority having neglected to express any objection of disapproval, such an arrangement was *de facto* a sewer the repair or alteration of which devolved on the authority itself. Doubtless there would in future be greater caution in giving a general or a tacit sanction to such combined drains, but the *onus probandi*, so difficult in the case of buildings constructed ten, twenty, or thirty years ago, should rest on the person seeking to divest himself of responsibility for a faulty arrangement rather than on the ratepayers collectively, as represented by the local authority. The result of the discussion was a unanimous resolution that, in view of the chaotic state of the present laws on the subject, the London County Council should be urged to avail themselves of the powers inherited by them from the Metropolitan Board of Works to make by-laws on the drainage of houses throughout the metropolis. A petition to Parliament for an amendment of the law was also proposed; but, in consideration of the present state of Parliamentary business, was deferred for future consideration.

MANCHESTER MEDICAL SOCIETY.

Case Illustrating the Difficulty of Diagnosing the Exact Position of a Pulmonary Cavity.—Nephrectomy.—Typhoid Fever.—Renal Surgery.

A MEETING of this society was held on April 3rd, the President, Mr. F. A. SOUTHAM, being in the chair.

Dr. THOMAS HARRIS brought forward a patient who in all probability was suffering from a Pulmonary Cavity, but in whom the physical signs were so slight and indefinite as to render it impossible to diagnose the position of the cavity. The patient was a young woman twenty-one years of age, who had enjoyed good health until fourteen months ago, when she was taken severely ill with symptoms of an acute pneumonia. This illness confined her to bed for six months, and she had never been well since. Even during the first three days of her illness she stated that her expectoration was extremely foul and offensive. It was, however, very small in amount to commence with, but when she had been ill three days it gradually increased in amount, and during the next twelve months she stated she had been bringing up about a pint of foul, fetid matter every twenty-four hours. The patient had been under Dr. Harris's observation for about two months, at the commencement of which period she was bringing up twelve ounces of fetid, purulent expectoration in the twenty-four hours, this quantity being more or less evenly distributed during that period, and, except when she first awoke in the morning, there was no part in the twenty-four hours when she brought up a greater quantity than at any other period. The temperature during the first four weeks during which she had been under observation had been irregular, but had never exceeded 102° F. During the last four weeks the temperature had been practically normal, and the expectoration had diminished to five ounces in the twenty-four hours. The only abnormal physical signs which the patient presented were impaired resonance and weak respiration over the apex of the right lung. When she first was admitted to hospital two months ago an occasional sonorous rhonchus and a few bubbles were audible over the same part, but latterly there have been no adventitious sounds anywhere to be detected. The expectoration had been repeatedly examined for tubercle bacilli with negative results. Guinea-pigs had also been inoculated with the expectoration, but no tuberculosis had developed in them. The case was regarded as probably one of a cavity of a non-tuberculous nature in the apex of the right lung, resulting from an attack of acute pneumonia. An exploring needle had been several times introduced with negative results. The case was interesting as illustrating the difficulty which existed in localising a cavity with sufficient precision to warrant the adoption of surgical interference.

Mr. E. STANMORE BISHOP showed a young woman aged twenty-one years from whom he had removed a Hydronephrotic Kidney, and presented the specimen, consisting of a greatly dilated capsule with almost perfect absorption of all secreting tissue. The ureter in this case had an abnormal origin, springing from the lower extremity of the kidney, so that when the latter rotated forwards and downwards, in which position it was found, the ureter became bent over its lower extremity and thus occluded. During the operation the kidney was incised, allowing the escape of forty-eight ounces of fluid, sp. gr. 1002, which contained albumen and chlorides, with small amounts of blood and pus. No calculus existed. The patient made a rapid convalescence, though a measly rash appeared on the third day on the chest, arms, and legs, disappearing on the sixth day. No other symptoms of measles were present. Five weeks afterwards the patient was in perfect health.

Dr. DRESCHFELD communicated some Notes on Typhoid Fever. After having spoken of the difficulty of distinguishing, especially in the fæces, the typhoid bacillus from the bacterium coli commune, he pointed out that occasionally the sputum and (in some cases of pneumo-typhoid) the urine contained the typhoid bacillus, and these secretions, therefore, should be disinfected. In the fæces the bacillus was rarely formed before the eighth or ninth day of fever, and from observations made by Dr. James Richmond in the Pathological Laboratory of Owens College it appeared that a short time (from six to ten days) after the cessation of the fever the typhoid bacilli were no longer present in the fæces. From this it is evident that the alvine discharges from convalescent patients are no longer a source of further infection. Dr. Dreschfeld gave some instances of infection from the ingestion of oysters, and pointed out that typhoid fever might be communicated by other articles of food; that the typhoid bacilli grow very readily and on most vegetables, and these by being washed or watered with contaminated water may contain the germs of fever; insects also by coming in contact with contaminated sewage or with typhoid dejections may carry the typhoid organism and deposit it on fruit. A certain family predisposition to typhoid fever was then recognised.

and an instance was given of such a group where seven members of one family were affected with typhoid fever within a few weeks. As to the treatment of typhoid fever, statistics showed that though the mortality from typhoid fever had very much decreased in England when considered per population (in 1871 the mortality per 1,000,000 was for England 371, for London 267, for Manchester 450; in 1892 it had fallen for England to 137, for London to 102, and for Manchester to 240), the case death-rate, or the relation of the mortality to the morbidity as shown by the reports of some of the largest fever hospitals such as the Metropolitan Asylums Board, the Monsall Fever Hospital, &c., still shows a mortality of over 17 per cent. This compares unfavourably with the mortality observed in some of the large German and American hospitals where the treatment by the cold bath is carried out systematically. As yet the good effect of the antiseptic treatment which is now largely adopted in England, and which has many advocates, is not apparent from the statistics. At the Monsall Hospital, where this treatment had been tried for some time, the mortality somewhat diminished, but was still over 13 per cent.

Mr. G. A. WRIGHT also made some remarks upon recent cases of Renal Surgery.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Ectopia Testis.

A MEETING of this society was held on March 28th, the President, Mr. MAKEIG JONES, being in the chair.

Dr. KEELING showed two Dermoid Ovarian Cysts removed a week before from a married woman aged twenty-seven years who had borne two children. One of the cysts was laid open, showing solid fatty contents interspersed with hair. The patient was making a good recovery.

Mr. SNELL introduced cases of Optic Atrophy following Fracture of the Skull, and other patients.

Dr. PORTER showed a well-marked example of Albuminuric Retinitis.

Mr. MAKEIG JONES showed a woman aged forty-six with Double Optic Neuritis who first came under his notice last year with a tumour of the left upper jaw, which rapidly subsided under treatment with biniodide of mercury. She was next seen about three months ago, when she had severe hemicrania on the left side, which soon got well under the old treatment. She came again last week with the pain on the opposite side of the head, and spasm and pain of the right forearm. There was double optic neuritis, worse on the right side, with old anterior synechia of both lenses. Some months after marriage (twenty-four years ago) she had inflammation of both eyes for months. She had had twelve children and three miscarriages. The first children died directly after birth, and some of the children now alive showed well-marked signs of congenital syphilis.

Mr. PYE-SMITH showed a case of Double Excision of the Hip. The patient was a girl aged ten years. She was admitted into the Sheffield Public Hospital in June, 1893, with symptoms of left hip disease. A long splint was applied, but an abscess formed and was opened in January, 1894. Before this the right hip had begun to show signs of disease; an abscess formed, and the joint was excised on May 16th, 1894. It had quite healed by July 1st. A sinus continuing on the left side this hip was also excised on Sept. 7th, 1894. It was quite healed by Sept. 25th. The anterior incision was made in both cases, the carious head and part of the neck only being removed and temporary gauze drainage being used. The patient was walking about the ward before Christmas, but she caught measles and was removed to the Fever Hospital. When now exhibited she could stand and walk with a somewhat waddling gait and could walk well with the aid of two sticks. There was free movement in the hip in all directions. The wounds were sound, and there was no pain.—Mr. Pye-Smith also showed a man on whom he had operated seven and a half years ago for Spasmodic Torticollis by excising part of the spinal accessory nerve. He had been shown in 1888,¹ and he had resumed work and gradually regained more and more the use of his sterno-mastoid and trapezius muscles.

Dr. CLARKE (Chesterfield) read a paper on a somewhat unusual case of Ectopia Testis.

Dr. ARTHUR HALL and Dr. ADDISON exhibited and demonstrated numerous Physiological and Anatomical Preparations lately added to the museum of the Medical School.

The President, Mr. Arthur Jackson, Dr. Dyson, Mr. Snell, Mr. Richard Favell, Dr. Sinclair White, Mr. Atkin, Dr. Arthur Hall, Dr. Rhodes, and Dr. Addison took part in the discussions.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Treatment of Diphtheria by Antitoxin—Traumatic Stricture of the Urethra—Tumour in the Region of the Sella Turcica.

A MEETING of this society was held on April 2nd, the Vice-President, Dr. ADOLPH BRONNER, being in the chair.

Dr. HONEYBURN read notes on two cases of Diphtheria which he had recently treated with Antitoxin. The first case was a child aged six years, who was seen on Jan. 18th, 1895, suffering from croup. There was no visible membrane; the temperature was 103° F. After the injection of Klein's antitoxin there was a gradual improvement, the membrane being easily coughed up. The second case was a child aged three years with croupy symptoms. The temperature was 101.4°. After the injection of antitoxin marked improvement took place. There was a slight rise in temperature after the injection, followed by a fall to normal. Dr. Honeyburne referred to the importance of making a bacteriological examination in all doubtful cases. After the injection of antitoxin the children were well in two days.—Dr. A. Bronner, Dr. Bell, Dr. Kerr, Dr. Evans, Dr. S. Lodge, Mr. Horrocks, Dr. H. Bronner, and Dr. Goyder spoke on the paper, and Dr. Honeyburne replied.

Mr. HORROCKS described a case of Traumatic Stricture of the Urethra in which he had cut down on and excised the stricture, uniting the divided ends of the urethra with sutures and draining the bladder from the perineum. The wound healed well, and the result was very satisfactory.

Dr. WOOD described a case of Tumour in the Region of the Sella Turcica, which occurred in a man admitted for a fracture of the leg. The symptoms noted were a drooping of the right upper eyelid, dizziness, and mental dulness. The right eye showed corneal opacities and anterior polar cataract, the vision being $\frac{1}{20}$. In addition there were diarrhoea, vomiting, and headache. Later on dysphagia came on, necessitating feeding by means of a tube, followed by left-sided hemiplegia and the formation of a bed-sore on the right buttock. The day before the patient died a discharge of pus came from the nose and mouth. There was no fever. On post-mortem examination there was a tri-lobed enlargement, $1\frac{1}{2}$ in. by $2\frac{1}{4}$ in., of the pituitary body, which did not press on the second nerve, but had eaten its way into the nasal cavity. Microscopically the growth was an adenoma of the anterior lobe of the pituitary body.—Dr. A. Bronner, Dr. Kerr, Dr. Goyder, Mr. Horrocks, and Dr. Major discussed the case, and Dr. Wood replied.

Reviews and Notices of Books.

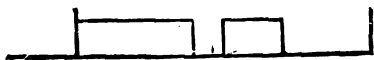
Clinical Diagrams for Recording Cases of Heart Disease. By GEORGE HERSCHELL, M.D. Lond. London: Baillière, Tindall, and Cox. 1894.

THE graphic method of recording physical signs is of unquestionable value as an adjunct to notetaking. When pursued on a systematic and simple plan it can be made to afford a mass of information which can be appreciated at sight. From time to time various *schemata* have been put forward by clinical observers—as to which we can only say that, as a rule, the simplest are the best. Dr. Herschell in the diagrams he has prepared is evidently of this opinion also. For it will be seen that he gives three chest outlines in order to record respectively in cases of cardiac disease: (a) the areas of pain and tenderness; (b) the areas of murmurs; and (c) the areas of dulness and impulse. By this means he obviates the overcrowding of a single diagram by many signs. The outlines are further marked by vertical lines corresponding to the mid-sternal, parasternal, mammillary, and anterior axillary lines,

¹ Brit. Med. Jour., 1888, vol. i., p. 272.

whilst there are introduced two horizontal lines—viz., one at the line of the fourth rib and the other at the lower boundary of the costal arch. We hardly see the necessity of these latter lines, which do not correspond with the ordinary areas of the chest. Each plate contains, further, a series of outlines to represent the sounds of the heart and their rhythm, which are utilised for the graphic representation of alterations in sounds and murmurs on a plan which, in most respects, is tolerably familiar, and was, if we mistake not, first introduced by Professor Gairdner into clinical medicine. The accompanying figures will explain the use to which they are put. Fig. 1 is the schema

FIG. 1.



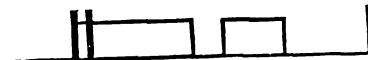
of normal heart sounds, of which four reproductions are given to be used for each of the valvular areas. Fig. 2

FIG. 2.



denotes accentuation of the second sound. Fig. 3 indicates

FIG. 3.



reduplication of the first sound. Fig. 4, a post-diastolic

FIG. 4.



murmur. Fig. 5, increased intensity of first sound and

FIG. 5.



diminished intensity of second sound. Fig. 6, a double

FIG. 6.



murmur accompanying but not replacing the heart sounds. Fig. 7, systolic and presystolic murmurs. Fig. 8, systolic

FIG. 7.



FIG. 8.



murmur followed by a diastolic one prolonged into the period of long silence. We have no doubt that these outlines will be found serviceable, and need only add that they are issued in books containing twenty-five diagrams, with or without directions for their use.

Digestive Proteolysis, being the Cartwright Lectures for 1894.
By B. H. CHITTENDEN, Professor of Physiological Chemistry in Yale University, New Haven, Conn., U.S.A. Tuttle, Morehouse, and Taylor. 1895.

THIS book really contains an excellent epitome of the present views held upon the questions concerned in the

digestion and utilisation of the proteid food stuffs. It is a reprint of the author's Cartwright Lectures which were delivered in 1894 before the Alumni Association of the College of Physicians and Surgeons of New York. The processes of absorption and the changes which the products of proteolysis undergo in different parts of the body and their probable fate are subjects which are of inestimable importance, and the publication in the present form of the views of so well-known an authority as Professor Chittenden will be welcomed alike by the pathologist and physiologist. In Lecture I. the author deals with the general nature of proteolytic enzymes and of proteids, in which will be found some very interesting observations on the theories of enzymic action, with special reference to catalysis. Just as water serves as a go-between in effecting certain (or is it all?) chemical changes, so with the proteolytic enzymes, pepsin, and trypsin. "They are the go-betweens, making possible the union of the proteids with water by combining with the proteid molecule, and thus paving the way for both hydration and cleavage." Lecture II. discusses proteolysis by pepsin-hydrochloric acid, with a consideration of the general nature of proteoses and peptones; and Lecture III. is devoted to the proteolysis by trypsin and the absorption of the main products of proteolysis. The concluding remarks of the author on the effects of the proteoses and peptones once they have passed outside the limits of the alimentary tract are of particular importance. "It is very evident," he writes, "that beyond this stage these bodies may be passed about from organ to organ and from secretion to secretion, inducing changes here and there in their course, but suffering very little change themselves. The main efforts of the system are directed to the removal of these unwelcome strangers as speedily as possible, for their marked physiological action renders them somewhat dangerous visitors. As normal products of digestive proteolyses they are never found beyond the limits of the gastro-intestinal canal, but undergo retrogression in their passage through the epithelial cells of the intestinal wall, being presumably converted thereby into serum-albumen, which can be directly utilised for the nutrition of the body, a conversion which is plainly dependent upon certain inherent qualities of the living epithelial cells, and is doubtless of the nature of a dehydration." It is superfluous to commend this book, as we are confident that there is not a student of this subject who has no need to be conversant with the views of an authority of the standing of Professor Chittenden.

Archives de Physiologie Normale et Pathologique. Directeurs: MM. CH. BOUCHARD, A. CHAUVÉAU, and J. MAREY. Cinquième Série. Tome VI. No. 4. October, 1894. Paris: G. Masson.

THIS, the last, part of the sixth volume of the *Archives de Physiologie* contains, besides some extracts, the following original articles:—1. Researches on Heterogeneous Osseous Graft, by M. A. Mossé. 2. On the Alterations in the Number and Size that occur in Erythrocytes with Varying Altitude, by Dr. A. Mercier, in which it is shown that in accordance with the observations of Viailly residence at great altitudes greatly augments the number of the red corpuscles in the blood. 3. Further Researches on Shock, by M. H. Roger. 4. New Measures of the Electrical Conductibility and Physiological Work of the Nerves, by Professor Aug. Charpentier. 5. On the Prolonged Resistance of Highly Vascularised Tissues to Gastric Digestion, by M. Ch. Contrejean. 6. On the Cause of Death after Extirpation of the Supra-renal Capsules, by Nicolas di Dominici of Naples. 7. On the part played by the Adiabatic Transformation of Gas in the Performances of Registering Apparatus for Compressed Air, and on the Pulsation of the Ventricles, by M. Ch. Contrejean. 8. Physiological Observations on a

Velocipedic Record, by Dr. Philippe Tissé of Bordeaux. The course was a long one, upwards of 350 miles, and was accomplished in twenty-four hours with an injudicious dietary, but without injurious fatigue. 9. Researches on Muscular Respiration, by M. J. Tissot. 10. On the Progressive Changes in the Air occurring during Asphyxia in a Closed Vessel, by M. Laulanié. 11. On the Excitability of Rigid Muscles, by M. J. Tissot. 12 and 13. Contribution to the Study of the Mechanics of Gastric Digestion in the Bird, and on the Innervation of these Parts, by M. Maurice Doyon. 14. On the Action of the Bile and Urine on Thermogenesis, by M. M. A. Charrin and P. Carnot. 15. On the Vaso-dilator Action of Strychnia, by M. C. Delezenne. 16. On the Optometer of Young, by M. Tscherning. 17. On the Saline Digestion of Fibrin, by M. A. Dastre.

A Pharmacopœia, including the Outlines of Materia Medica and Therapeutics, for the Use of Practitioners and Students of Veterinary Medicine. By the late RICHARD V. TUSON. Fifth Edition. Revised and Edited by JAMES BAYNE, F.C.S. London: J. & A. Churchill. 1895.

TWENTY-SIX years have elapsed since the first issue of the late Professor Tuson's little Veterinary Pharmacopœia, and now it has reached a fifth edition. During this somewhat long period the work has been kept up to the times and has served its purpose, as the present edition testifies. Primarily designed for the use of veterinary practitioners and students, it has not deviated from the original arrangement and is a very handy manual of what it professes to be. The veterinary profession is well supplied with works of this class, but Tuson's book is likely to hold its ground so long as it is edited by such a competent and careful authority as his successor at the Royal Veterinary College, Professor Bayne, who appears to have accomplished the task entrusted to him with judgment and skill.

First Aid to the Injured and Management of the Sick: the Bearer's Companion. By Surg.-Capt. E. J. LAWLESS, M.D. Brux. Edinburgh and London: Young J. Pentland. 1894

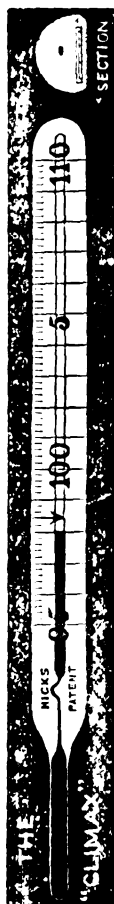
SURGEON-CAPTAIN LAWLESS has endeavoured to arrange the subject of first aid instruction to suit the requirements of those attending regimental classes, being of opinion that the "Medical Staff Corps Manual" is scarcely adapted to the more limited needs of a regimental bearer section or of a Volunteer brigade bearer company. The book is divided into two parts, each of which is furnished with an appendix. Part I. deals with First Aid, and is divided into twelve "outline" lessons, which the author hopes will be of use not only to members of volunteer and of civil ambulance classes, but also as a syllabus from which surgeon-instructors and lecturers may elaborate their courses of lectures. Part II. treats of Sick Nursing, Field Hospital Organisation, the Elementary Principles of Health and of Sick Diet, &c. The stretcher exercises, wagon, and handcart drill are taken from the Medical Staff Corps Manual of 1893. In the preface Surgeon-Captain Lawless suggests to the committee of the St. John Ambulance Association that it should introduce a scheme to encourage its certificated pupils to volunteer for Brigade Bearer Company Service. He thinks that there are many men who will not enroll as ordinary volunteers but who would serve as "ambulance soldiers," and that in our county towns the sixty men, with a knowledge of "first aid," could be enrolled to form the brigade bearer companies our Volunteer brigades are so much in need of. We think this an excellent suggestion. The book has been carefully thought out, but it appears to us to contain more information and more technical knowledge than are necessary for the public or for an "ambulance soldier." Like other books of the kind lately published, it errs in that it goes too deeply into many questions which should, in our opinion, be left to the qualified practitioner of medicine. It sets forth in some portions a knowledge which we believe to be dangerous in half-educated hands. The

Appendix to Part I. consists of questions and answers. They may serve a useful end, and they certainly suppose a knowledge more suitable to the public than the text of the book would lead us to expect. The chapter on Equipment exhibits some truths which the Volunteer authorities will do well to take to heart. The Appendix to Part II. contains a Bearer's Form of Sick Report for Medical Office and a Table of Poisons. The latter cannot, we take it, be intended for a medical officer, but it certainly is far too deep for a non-professional person. The book will prove a help to the instructors of military ambulance classes; it is illustrated with forty-nine engravings and is sufficiently indexed. The "get-up" of the book is a credit to the firm which issues it.

New Inventions.

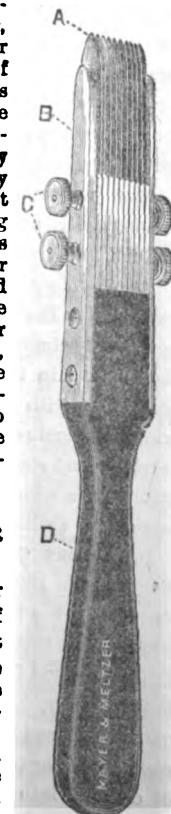
AN IMPROVED CLINICAL THERMOMETER.

MR. JAMES J. HICKS of Hatton-garden has forwarded us a specimen of his "Climax" Clinical Thermometer. The principal obstacles to perfection in previous clinical thermometers were the divisions and figures: firstly, because being cut on the surface of the glass they might hold dirt, and possibly convey infection; secondly, because constant wiping was apt to remove the black and make it impossible to read the figures and divisions until they had been recoloured. These two obstacles have been overcome by the "Climax" thermometer. The divisions and figures, instead of being cut on the glass, are placed on a separate transparent scale which is inserted in the body of the thermometer. The readings are therefore clear, distinct, and will never fade, while the risk of conveying infection is minimised, because the surface of the thermometer, being perfectly smooth, can be easily rendered aseptic. At night-time, by holding the thermometer with its back to a candle or other light, the divisions and figures are easily read. The price varies from 60s. per dozen to 108s. per dozen, according to whether the instrument has a magnifying tube or not, and also whether the bulb is made specially sensitive or otherwise.



AN IMPROVED MULTIPLE LINEAR SCARIFIER.

EVERYONE who has used Squire's scarifier must have experienced the difficulties of cleaning the instrument and rendering it aseptic. Messrs. Mayer and Meltzer have overcome these drawbacks, and have made for me an instrument with such improvements as have added greatly to its value. The blades, ten in number, are double-edged and are fastened to the arms of the handle with two bolts, which are held in position and secured by milled heads. The arms are prolonged to a quarter of an inch from the points of the blades and act also as a guard. This instrument can be taken to pieces, cleaned, and put together in a few minutes, and I have used it with most satisfactory results in lupus and rosacea.



A, The blades.
B, The arms.
C, The milled heads.
D, The handle.

G. STOPFORD TAYLOR,

Hon. Physician to the Liverpool Hospital for Cancer and Skin Diseases.

THE LANCET.

LONDON: SATURDAY, APRIL 20, 1895.

IN countries which serve as the breeding ground of cholera—that is to say, in those climates where the disease may be said to be indigenous and where all the natural agencies, conditions, and influences are favourable to its development—it is only to be expected that the agencies outside man should come to be regarded as its sole manufacturers and disseminators. But in order to trace satisfactorily the progress of this and other epidemics disease has to be studied on a small scale where the number of its factors is reduced to a minimum. The history of cholera as a large epidemic has to be deduced from the aggregate of a number of authenticated data about its movement in relation to time and space. The steps of its progress can be more accurately followed in countries where the disease may be regarded as an imported exotic, and by the observers of a local outbreak which possibly forms a very small part of a general epidemic. The number and seeming complexity of the phenomena present during an epidemic are in themselves confusing; it is impossible to ascertain all the conditions and to separate the relevant from the mass of irrelevant facts. That there are some agencies present of which we are still ignorant, in what is called “a cholera year,” which are absent in other years, must, we think, be admitted by all who will compare the remarkable statistical differences between them. In India, for example, the figures for 1892 and 1893 serve to mark the marvellous difference between an epidemic and non-epidemic year. But it is at this point that the volume just issued by the Local Government Board, embracing a series of reports and papers on cholera in England in 1893, with an introduction by Dr. THORNE THORNE, the medical officer of the Local Government Board, is so valuable. The reports and papers deal with small and not overwhelming numbers. They take up the history of the disease in this country, trace out its introduction and connexion with importation, its relation to the results of bacteriological researches and local conditions, public water services, and states of public health. They furnish, in short, information which could only be obtained by the combined labours of skilled inquirers.

Dr. BARRY gives a summary account of the disease in England in 1893. There were in all sixty-four localities involved, of which fifteen were metropolitan sanitary districts. The total number of attacks was 237, and of these 135 terminated fatally. In most of the affected localities—that is to say, in forty-two out of the sixty-four—only single cases occurred. The mortality rate of those attacked reached 47 per cent. The first definite case of importation of cholera into England in 1893 was in June, and others followed; but it is worthy of remark that there was no extension of the disease from these cases. It was in August at Great Grimsby that the earliest indications of cholera in England occurred, and at the adjoining district of Cleethorpes, and almost at the same time the disease appeared

at Hull. There is no doubt that there was ample opportunity for the introduction of cholera into these Humber port towns in 1892 and subsequently, but the precise time and method of its introduction and the exact date of its earliest manifestations cannot be definitely fixed. Dr. THORNE THORNE is probably quite right in thinking that cholera had made its way into Grimsby and Cleethorpes and acquired a foothold there some time before the fact was recognised. Dr. REECE, in his report on this outbreak, acquits the water service, but attaches importance to the influence of faulty conditions of sewerage and drainage. The probable diffusion of the infection by “trippers”—there were 235,000 excursionists in the six months from May to October booked to Grimsby and Cleethorpes by a line of railway—is described and illustrated in maps showing the topographical distribution of cholera in England during 1893. But one of the most interesting and important points raised in the report is in connexion with the alleged exposure of the oyster beds at Cleethorpes to the effluent from the town sewers, and the suspicion that oysters and other shellfish may have contributed to the diffusion of the disease. About this Dr. THORNE THORNE expresses himself very cautiously and contents himself with remarking that, so long as there is any risk of shellfish being exposed to any such pollution, it is impossible to assert that their use as an article of diet may not be concerned in the production of this class of disease. It is right to add that a correspondent writing to the *Standard* of the 15th inst. states very emphatically that the “set” of the tides at Grimsby and Cleethorpes is such that no taint can possibly be conveyed to the oyster beds from the sewage. Still, the subject is well worth further investigation.

There is one lesson which the medical history of 1893 teaches—viz., that it is impossible to devise any method which shall prove a perfect safeguard against the introduction of cholera into different places, and that it is not so much the introduction of such cases as the local insanitary conditions and surrounding circumstances affording a means for the diffusion and development of the infection that have to be feared. We cannot devise a net for catching disease germs, but we can clear away all muck-heaps in which they can germinate and grow. The fact that there were so many solitary attacks, or attacks limited to two or three cases, is very creditable to our English system of public health administration and to the methods designed and adopted by the Health Department of the Local Government Board.

We must not omit to add that the volume submitted by the medical officer of the Local Government Board is illustrated by a number of maps and plates of a very thorough and exhaustive kind, and affords abundant evidence of the care and ability which have been brought to bear upon the various subjects of which it treats. It must be consulted by all who are interested in the history of cholera in this country in 1893. It contains also a history of the diarrhoeal outbreak at Greenwich Hospital and the observations of Dr. KLEIN on the reputed cholera material submitted to him for examination and report.

IN a remarkable passage of his interesting and now famous book, “The Foundations of Belief,” Mr. BALFOUR discusses the relative part played by reason and authority in

regulating the opinions and practices of mankind. As many of our readers are no doubt aware, the distinguished writer holds the view that authority is the dominant factor, and that the influence of reason *quâ* reason is comparatively insignificant. "At every moment of our lives," he says, "as individuals, as members of a family, of a party, of a nation, of a Church, of a universal brotherhood, the silent, continuous, unnoticed influence of authority moulds our feelings, our aspirations, and our beliefs. It is from authority that reason itself draws its most important premises. It is in unloosing or directing the forces of authority that its most important conclusions find their proper function. And even in those cases where we may most truly say that our beliefs are the rational product of strictly intellectual processes, we have in all probability only got to trace back the thread of our inferences to its beginnings in order to perceive that it finally loses itself in some general principle which, describe it as we may, is in fact due to no more defensible origin than the influence of authority." In a later passage Mr. BALFOUR affirms that "it is Authority rather than Reason to which, in the main, we owe not religion only, but ethics and politics; that it is Authority which supplies us with essential elements in the premises of science; that it is Authority rather than Reason which lays deep the foundations of social life; that it is Authority rather than Reason which cements its superstructure." With Mr. BALFOUR'S views on ethics, politics, and religion we are not concerned, but we may without presumption inquire how far these somewhat sweeping statements are true of science, and more particularly of our special field—*viz.*, medicine.

That the great majority of mankind take their views on science second-hand—*i.e.*, on authority—is no doubt quite true—is, in fact, almost a truism. We all believe that the earth goes round the sun, but it is only the minority who understand or consciously realise the reasonings by which COPERNICUS upset the Ptolemaic astronomy. Every educated person knows that bodies are attracted towards each other directly in proportion to their mass and inversely as the square of the distance, but comparatively few have followed and deliberately accepted the Newtonian argument. We all know that the blood contains innumerable myriads of tiny corpuscles, but comparatively few have verified the fact by microscopic examination. This is almost self-evident even without the help of Mr. BALFOUR'S stately and sonorous periods. But is it a true inference from these facts that our views on the solar system, or on gravitation, or on the composition of the blood are non-rational or extra-rational? Surely not. We accept a certain view, not in deference to the authority of COPERNICUS or NEWTON, but because we know that the proofs in support of those views are accessible to us if we choose to look into them, and that they are competent to support the conclusions drawn from them. Science knows nothing of authority *quâ* authority. Her most precious maxims are search, inquire, observe, see for yourself, accept nothing without evidence; but science is long and life short, and the bulk of mankind have neither the time nor the capacity to undertake the observations and experiments necessary for the verification of the scientific doctrines which claim attention.

The place of authority in medical science is without doubt a large one. The influence of HIPPOCRATES was immense, widespread, and is by no means even yet exhausted. GALEN ruled the Middle Ages in medicine as truly as AUGUSTINE ruled them in theology. In modern times the Brunonian Theory had an immense vogue quite incommensurate with its merits, and at the present day the Germ Theory insensibly permeates all our views on pathology. There are reasons why the influence of authority is necessarily greater in medicine than in the exact sciences. We cannot bring medical theories to the touchstone of experience and proof as we can bring a fact of astronomy or chemistry. Life is a mystery; disease is an even greater mystery; and it is idle to expect that theories in pathology or therapeutics can be subjected to any offhand or decisive experimental test. The facts are too numerous, too subtle, too closely interlocked to permit of rapid and secure conclusions. Hence the life-long observation and the slowly accumulated experience of a great physician or surgeon possess an intrinsic value, and medical science would be much the poorer if this were not so. But the appeal is always to the fact and not to the dogma, to nature and not to the teacher. In medicine we are ever engaged in a double process—*viz.*, accepting a theory or working hypothesis and subjecting it to constant test and revision. We accept the germ theory on authority, but the practical fruits of asepsis and antiseptics admit of daily experiment and observation. We believe that salicin or nitrite of amyl or strophanthus is a valuable remedy in the first instance on the authority of a distinguished teacher or experimentalist, but ultimately on the results of our own individual experience. Medicine, like other departments of science, does not encourage a blind submission to authority, but rather impels her votaries to the daily accumulation of fresh facts and the daily trial "whether these things be so." A reverent scepticism is the only possible frame of mind for the sincere scientific inquirer. He looks on nature solely with the view of penetrating her secrets, and he accepts every demonstrable fact, no matter how unwelcome or how inconvenient.

It is in the field of therapeutics that the influence of authority is the most potent and perhaps most pernicious. The abuse of blood-letting and mercury are melancholy examples of the evil effects of authority in medicine. We should ever be on our guard against accepting any sweeping dictum unless we can support it by solid evidence. There is no doubt at the present day much routine therapeutics that is simply traditional, and many drugs in the Pharmacopœia are there by "divine right" of custom and authority rather than by personal merit. But at the present day authority is everywhere on the wane, and the tendency is in all cases to refer theories to the test of experience. We should be sorry if the influence of so distinguished a writer as Mr. BALFOUR were thrown entirely into the scale of authority—at least, in the field of science. Science has her adherents, her devotees, her martyrs, but she has no priests. She opens her arcana to all who will patiently look upon them. Patience, humility, and labour are the keys which unlock all her treasures. The true practitioner of medicine must chiefly "practise"—suffering humanity permits him no choice in the matter—but he will also observe, test, accept,

reject, and press towards the goal of surer knowledge and higher art. He will as little as may be lean on authority, and trust as much as possible to the daily patient investigation of the laws and processes of nature.

WE print to-day the third of Dr. BLANDFORD's Lumleian Lectures on the Diagnosis, Prognosis, and Prophylaxis of Insanity, and we are certain that this, the concluding one, will be found by our readers as lucid, learned, and informative as its predecessors. The subject-matter of these addresses lends itself agreeably to comment, for it invites debate from all directions. Questions of fact and questions of fancy, the laws of our country and those of WEBER-FECHNER, education with its dilemmas, heredity with its fallacies and its truths, religion, and therapeutics are all involved; and if the politician and humanitarian find serious food for reflection in these problems, no less does the humourist, whether bitter satirist or broad jester, see in them material for the exercise of his wit. Every discussion on insanity must invade the province of the highest physiology, where the outcome of exact knowledge is supplemented or obscured by transcendental speculation, while it must be prepared to deal with points of material detail whose redemption from triviality and even comicality will only be apparent to those who know. It is not our intention to follow Dr. BLANDFORD from point to point in these interesting topics, for the admirable clearness of his lectures makes all exposition unnecessary; but we desire to commend his remarks upon the tyranny of the modern examination system, which were received by the Royal College of Physicians of London with uncompromising approbation, to the close attention of our readers, so suggestive and important do they seem to us.

"I have seen," says Dr. BLANDFORD, "disastrous effects from pressure of examinations upon boys and girls. They fail to pass or they fail to gain the prize for which they are competing. The end of all the long and wearisome toll of cramming and grinding is failure. Many breakdown in the mere preparation and never get to the examination point. Every school and college and other educational institution must hold out a number of money prizes as baits to catch pupils but the ordinary pass examinations are divided and subdivided till their number is multiplied indefinitely, and the student has constantly in front of him an examination in some subject or other on which for the time he must concentrate his whole mind, but which is to be completely thrown aside as soon as it is passed, when another has to be taken up in its place." These words must not be construed as a sweeping indictment of modern educational methods in general, for it must be remembered that the speaker is only alluding to cases where there exists some predisposition to nervous breakdown. He is not denying that there are very many—an immense majority—of our young people perfectly able to stand the tests which the examination system of to-day lays upon their intelligence, their temper, and their self-restraint. He recognises that for the many who are normal the trials are not necessarily too severe. These need come to no harm, and often thrive mentally and bodily under a discipline to which

they are able to properly respond. And it is equally obvious that those who are abnormal—those who are mentally deficient or unstable—will not acquit themselves with satisfaction in higher examinations, and that the attempt to compel them to do so may be fraught with mournful consequences. So far the question is simple enough, as questions always are simple where the extremes are concerned. But when the medical man is called upon to advise in a case where the mental qualities of the student are not displayed to casual view, where the want of ballast or balance is by no means evident, his proper course may be difficult to see. And such cases are not infrequent, and possibly are growing in frequency. For to us Dr. BLANDFORD's view, that *a priori* reasoning would lead to the supposition that nervous disease is increasing among us as the environment in which we are now living becomes more complex, and thus induces a corresponding complexity of brain centres and functions with more and more instability and liability to disorder and deterioration, seems sadly reasonable. And upon this it follows that there must be with us now a larger class whose possible nervous breakdown is all in the natural order of things, even though there are not enough symptoms present to the eye of the parent to arouse suspicion and perhaps almost nothing subjective or objective from which the medical adviser can predict the impending trouble. How far should his desire to employ proper methods of prophylaxis against a tendency to nervous breakdown lead a medical man to preclude a boy or girl from entering upon a competition, or a series of competitions, while he knows that every lucrative avenue of modern life is barred by examinations?

We do not ask with any idea of attempting to answer—a general answer can be given—but only with the intent to bring before our readers the seriousness of the position in which the medical adviser may find himself, and to urge upon them, in the spirit of Dr. BLANDFORD's words, not to give way to any parental optimism that the child will grow out of "it," where "it" is a sign of mental insufficiency, but to lean ever to the side of caution, and to recommend in such cases the abatement of examination tests. When such an audience as that before which Dr. BLANDFORD was speaking receives with applause words of warning against the possible evils of educational pressure, the existence of such evils must be held proven. It becomes, therefore, the duty of every practitioner to whom the welfare of a child is confided to deal boldly with the point. The question of money, of a career, possibly of a brilliant future for the child, will be very clear to every parent, so that the advice to withdraw a boy or girl from competitions, success in which should enable him or her at an early age to achieve independence, will not be received gratefully by any parent unless it can be enforced by accurate demonstration of the good sense of the recommendations. And in many cases it is impossible to demonstrate to the layman the slender signs and unsubstantial symptoms upon which the advice has been based. Nevertheless, it is the practitioner's duty where he has a child to deal with who exhibits in character or mannerism any evidence of nervous instability to insist that to force such a child upon a course of examinations is to court for him or her a terrible fate.

Annotations.

"No quid nimis."

THE RESEARCH SCHOLARSHIPS OF THE GROCERS' COMPANY.

It will be probably well known to such of our readers as it most urgently concerns that applications for appointment to these scholarships must be made during the month of April in each year, so that this seems to us a fitting time to briefly announce the conditions under which they are granted. The scholarships have been designed as stipends for those engaged in research into the etiology and possible preventive treatment of important diseases. Candidates, who must be British subjects and at their first candidature under the age of thirty-five, must apply for appointment to the Clerk of the Company, Grocers' Hall, E.C., during the month of April, and such application must be accompanied by an exact statement of the nature of the proposed research and unexceptionable testimonials as to the candidate's ability to conduct the same. The Court of the Company reserve to themselves all discretion as to the appointments, taking every pains to estimate the relative importance of the subjects of research brought under their notice, and in particular the relative probability that the research would result in the desired increase of knowledge. In appointments to scholarships preference within certain limits will be given to gentlemen already holding scholarships who desire to continue their work, this preference being dependent, of course, upon the advances made in the research. All researches are to be conducted under conditions of time and place satisfactory to the Court, so that reasonable facilities may be given to the Court for observing their progress. In bringing these facts before our readers we are only echoing, we are certain, their thoughts when we compliment the great City Company on its enlightened benevolence.

QUASI-MEDICAL IMPOSTORS AND THE PRESS.

EVERY charlatan must congratulate himself that his commerce in the fears and the credulity of mankind is so lightly regarded by public opinion. It matters not that his medicalisms may be as old or older than his generation, and may have done service in medical practice to the limited extent of their powers before his very being was thought of. It is of no moment that his diagnoses, like his knowledge and like the testimonies of his grateful "patients," are of the most imaginative character. If he will profess enough and loudly enough, truth apart, he may long remain the adored of numerous dupes. If he should err—and in this respect he is most human—he has ample dexterity in handling excuses. The Press overflows with his self-laudation and with the gibes which, emboldened by his own great ignorance and that of a simple multitude who worship him, he casts at the honest labour of scientific medicine. It must ever appear to instructed persons a marvellous thing that men of this type should thrive as long as they do by the practice of such open and unabashed imposture. Yet, after all, the success of their speculations is not unaccountable. In order to explain it we have to make due allowance for the action of shrewd and unscrupulous business capacity upon the minds of simple and unsuspecting people, many of whom are still to be found everywhere. We must remember, too, that the principle of *caveat emptor* continues to rule the affairs of daily life. This explains the complaisance with which many tales of diseases treated by the magic of some quack mixture, showing in every line the evidences of fabrication, are published at length in the daily press. How far this principle may be allowed to carry us is a question as yet unfortunately not settled by any legislative order. When, however, we find

that journals of repute and authority are capable of lending their space without comment to the base purposes of a nostrum-seller, we cannot but feel that an offence has been committed against many readers who are accustomed to trust them as competent sources of information. It is clearly undesirable that medical practitioners, even if blessed with that leisure which they lack, should engage in barren argument with irresponsible persons who admit not even the premisses of scientific teaching. It is their still higher privilege to show, by the skill and care of their methods, as well as by the firm and judicious exercise of that authority which must go with their knowledge, what can and also what cannot be accomplished by the art which they practise. In so doing we consider that they are justified in expecting to receive the frank support of all sections of the Press without the addition of insinuations published by mercenary wonder-workers.

THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

WE announced last week the appointment of Dr. G. Seaton Buchanan as a medical inspector of the Local Government Board. Quite apart from his relationship to Sir George Buchanan, late medical officer to the Board, his claims to consideration were very high. His medical career has throughout been a very distinguished one; he is a Doctor of State Medicine in the University of London, and he has for several years devoted himself to the practical study of the infectious fevers and of the work of a medical officer of health. He is certain to maintain the traditions which marked his father's successful official career. But we regret to say that the vacancy, which was created somewhat suddenly and unexpectedly by the resignation of Dr. Hubert Airy, was due to increasing ill-health on Dr. Airy's part. Dr. Airy has done work in relation to epidemiology and to the etiology of disease of which any worker may feel satisfied; and if he has of late years undertaken duties which, though not of less importance, have brought him less than formerly under public notice, it has been due to slow but increasing failure of health. In his retirement he will carry with him the kindest recollections and sympathy of all his colleagues; and many others who will recall him will have in recollection a cultured and refined personality which always secured for him the friendship and esteem of all who were capable of appreciating his high qualities. We can only wish for him all the enjoyment which may be possible, in view of the circumstances with which his retirement from public office is associated.

THE IDENTIFICATION OF BLOODSTAINS.

THE third volume of *Medico-Legal Studies*,¹ compiled and recently published by the Editor of the *Medico-Legal Journal*, New York, contains an interesting epitome of the present position of our knowledge bearing upon the identification of bloodstains. In regard to chemical tests—the guaiacum test and the production of crystals by the addition of common salt and glacial acetic acid (Teichmann's crystals)—it is stated that these several tests, while reliable in determining whether the matter examined contains blood or not, are of no value and throw no light whatever upon the question as to whether it was the blood of man or of animals that was examined. The application of the exceedingly delicate instrument, Sorby's spectroscopic eye-piece, is next described, and it is said that by its means the late Dr. Richardson of Philadelphia was able to detect the 3000th part of a grain of blood on an axe-handle supposed to have been used in a case of murder. The succeeding section, on the value of the microscope in the differentiation of the blood of man and of domestic animals, contains a really valuable collection of material which

¹ *Medico-Legal Studies*, vol. iii., by Clark Bell, of the New York Bar and Editor of the *Medico-Legal Journal*, 67, Broadway, New York. 1885.

every medico-legal practitioner would do well to have by him. The illustrations are not a matter for congratulation, but the tables of the micrometric dimensions of the blood corpuscles of mammals are useful. On the whole, the conclusion—which is founded upon the evidence of well-known toxicologists like Professor Theodore Wormley, Professor Reese, who edited the American edition of Taylor's "Medical Jurisprudence," Dr. Richardson of Atlantic City, Dr. Stevenson of Guy's Hospital, and others—appears to be that with a skilled and careful microscopist and a good instrument of high powers it will generally be possible to distinguish a human bloodstain from that of any of the lower animals with the possible exception of the guinea-pig and opossum. This subject is, however, one upon which it is well known that there exists a diversity of opinion amongst the leading authorities.

SWALLOWED HALFPENNIES.

A DEATH is reported from Chorley of a young woman who eight years ago swallowed a halfpenny, but had suffered no inconvenience from it. Death was caused, according to the paper, by sudden sickness and the consequent rupture of a bloodvessel. She vomited a green corroded halfpenny. *A propos* of this case a corroded and attenuated halfpenny has been shown us with the following authentic history. A boy three years old on Nov. 12th, 1874, swallowed a bronze halfpenny. Consultations were held, but the coin neither passed nor could be reached. Occasionally he had difficulties of swallowing, which he had to overcome by stretching his neck to one side and changing his position, but otherwise he had no pain or inconvenience. At an early stage of the case he used to bring up a little stained mucus. On Sept. 21st, 1888, the halfpenny was brought up unexpectedly and without effort or vomiting, the boy having swallowed it just thirteen years and ten months previously. He has since been entirely free from symptoms. The halfpenny was very thin and light and gave the impression that it might have been gradually dissolved had it not been so happily got rid of. Its weight was 57 grains, that of a new bronze halfpenny being 86 grains.

THE DEATH AT ROCHFORD WORKHOUSE.

AN inquest was held at Rochford Workhouse on Wednesday, April 3rd, when certain facts were elicited that seem to us to call for more publicity among medical men than they have yet received. Charles Phillips, a pauper inmate, died on the previous Saturday after removal from the padded cell attached to the institution. Dr. L. L. James, the medical officer of the workhouse, stated that the death occurred from erysipelas, the result of injury and shock. Evidence went to show that Phillips was not of sound mind. He was not in the slightest degree violent, but simply old, feeble, and childish, and as he was seen to fall down twice against his bed, once striking his head against the locker, it is not suggested that the injuries were other than self-inflicted accidents. But the immediate cause of the shock which contributed to the sad end was made the subject of dispute at the inquest, under circumstances which did not display the guardians of the parish in an attitude of particular wisdom. The patient had been removed to the padded cell upon instructions received by the master of the workhouse and unknown to the medical officer. The cell was a cold, indiarubber-lined chamber, badly ventilated, and therefore most unfit for the reception of an aged, enfeebled, bruised man, and the evidence of the medical officer went to show that the removal of Phillips to it on two extremely cold nights contributed to his death. The jury concurred in the medical officer's view, returning the following verdict: "The deceased died from erysipelas

resulting from injury to the eyes, which was purely accidental, and also caused by being removed from the warm infirmary to the cold padded room," and adding to it a rider to the effect that in their opinion the guardians should have consulted the medical officer before putting deceased into the padded room. The rider is one that we entirely approve of. Padded rooms are useful in a course of treatment in certain cases, and their employment, like all other details of medical treatment, should be strictly under the physician's jurisdiction. They are designed to assist the patient by preventing him from injuring himself, and it is an absolute abuse of their purpose to transform them into convenient places for the irresponsible stowing away of the sick. The insufficiency of the nursing staff of the institution was also revealed at the inquest, as the evidence went to show that three old feeble paupers, "one of whom had to be accommodated with a chair," had been told off to take care of others so sick and helpless as to require constant attention.

"MIND THE WHIP."

THE resident medical officer of the County Hospital at Durham sends us a note, which we publish in another column, on a sad accident which has happened before and will happen again—whose infrequency, indeed, strikes us as almost remarkable. The patient while walking beside a cart with a friend suddenly felt that he had been struck in the eye, intense pain and total blindness being the result. A foreign body in the interior of the globe having been diagnosed the eyeball was removed, and a knot of whip-cord discovered embedded in it. This is an accident against which it would seem impossible to guard, and many of us must shudder to think that it has been no fault of our own or of our cabman that it has not happened to ourselves. In particular is it an accident likely to happen to the rider in hansoms, for he cannot see the movements of the driver, which certainly conduce not infrequently to the smart flicking of the fare over the face through the open window. From the expected blow, even though the period of possible expectation be of the briefest, the interior of the orbit is generally safe, for the first wincing movement is to close the lids. But the rider in hansoms gets no warning at all. When we attempt in our mind to estimate the number of people carried in hansoms during, say, a year, and, drawing upon personal experience, credit a large proportion of them with an unexpected stripe from the whip across the face, we wonder that more eyes are not sacrificed to the unskilful or careless brandishing of the hansom cabman's whiplash.

THE EXAMINATION OF SCHOOL CHILDREN'S THROATS.

THE prevention of the spread of infectious disease through the agency of schools is certainly one of the most difficult duties which devolve upon the medical officer of health. On the one hand, he is prompted to school closure or the exclusion from school of children from infected localities or houses; and on the other he is anxious as far as possible not to interfere unduly with the educational work of the institution and the prospect of the Government grant. In many instances it is obviously no easy matter to determine which course to pursue. In this connexion we note that Mr. Wellington Lake, the medical officer of health of the Guildford and Woking rural districts, has recently made a practice of examining the throats of children on the reassembling of the schools in his district, and it must certainly be said—as, indeed, we have frequently pointed out—that there is much in favour of this course. Mr. Lake uses for his purpose nickel-plated tongue depressors, several clean

towels, and a laryngeal mirror; and after the inspection of each child's throat the tongue depressor is carefully cleansed in a basin of hot water, the contents of which are frequently changed. This cleansing of the spatula is a very important point, and too much care cannot be exercised. Boiling water would theoretically be the safest course, but there are certainly practical difficulties in the way of using it—such, for instance, of maintaining the water at boiling point and cooling the spatula after immersion. Probably Mr. Lake's method carefully carried out is all that is necessary, though perhaps the immersion of the spatula in a disinfectant solution and then in the hot water would be a course better calculated to disarm theoretical criticisms which have to our knowledge been made. Mr. Lake's plan is to exclude from school every child presenting the least signs of a sore-throat, and he has succeeded in keeping most of such cases from school until the throat has become normal. In cases of enlarged tonsils or elongated uvula he advises removal. Mr. Lake reports that since he has adopted the measures above referred to he has noticed a remarkable diminution of diphtheria in those districts where the disease formerly persisted, and that the occasion for school closure does not seem to arise either from diphtheria or scarlet fever, as in addition to the above measures he exercises a rigid control over infected houses and their inmates. Mr. Lake points out that to some extent his practice plays havoc with the school attendance as it necessitates excluding all cases of sore-throat, however trivial. He thinks, however, that the Education Acts should be adapted to the times, and that children excluded by the medical officers of health should, for statistical purposes, be regarded as having continued their attendance.

THE ORAL INSTRUCTION OF THE DEAF.

A MEETING composed of medical men and others interested in the education of the deaf and dumb was held on the 5th inst. at 26, Golden-square, for the purpose of hearing a lecture from Mr. S. Schöntheil, for many years head master of the Jews' Deaf and Dumb Home, on the most modern and scientific method of training the deaf and dumb, so as to enable them to use articulate speech and to give them a full command of language. The lecturer opened the proceedings by introducing several of his pupils and testing the results of their training by exercises in pronunciation, lip-reading, dictation, recitation, reading, and answering miscellaneous questions. Through this searching ordeal the pupils passed very successfully. Most people are aware of the enormous difficulty entailed in teaching the deaf to speak; where a child is stone-deaf the obstacles are greatly enhanced and the intonation is apt to be specially faulty. In this respect Mr. Schöntheil's pupils acquitted themselves with marked success. The lecturer explained that in the case of several the instruction imparted to them had first of all proceeded on a faulty basis, and that in consequence they had been compelled to unlearn much that they had first learnt. Nevertheless, steady progress had been since achieved, and the results were considered very promising by the experts present. Mr. Schöntheil then expounded in his paper the aim of the oral method to restore the deaf to the society from which his defect tends to cut him off and laid special stress on the endeavour which he considered ought to be made to avoid distortions of the face and raucous sounds. After giving examples of the lines of thought by which the instruction of the deaf was to be conveyed, he concluded with pointing out the strong necessity for having properly trained teachers of the deaf and for devoting special and individual attention and kindness to each pupil. Mr. Charles E. D. Black, formerly secretary to the Royal Commission on the Deaf,

testified to the high opinion formed by the Commissioners of the results of Mr. Schöntheil's teaching, and added that he had no doubt that with the more favourable conditions under which, as he understood, Mr. Schöntheil was now working, the results which would be attained would be even more successful than heretofore.

THE ROYAL COMMISSION ON TUBERCULOSIS.

It will be remembered that this Commission was appointed in July, 1890, with the following reference: "To inquire and report what is the effect, if any, of food derived from tuberculous animals on human health, and, if prejudicial, what are the circumstances and conditions with regard to the tuberculosis in the animal which produce that effect upon man." This reference resulted from the desire of the Government to obtain an authoritative scientific opinion on the public health aspect of the question before it could deal with the numerous complaints made by meat and milk traders of the great diversity of practice in dealing with this class of food that exists in different places. The Commission of 1890 met under the chairmanship of Lord Basing, the other members being Professor Brown, Sir George Buchanan, Dr. Payne, and Professor Burdon Sanderson. On Lord Basing's death in October of last year the experimental inquiries of the Commission were not completed, and the Commission was reorganised with Sir George Buchanan as chairman. We understand that this Commission has now agreed upon its report, which will be presented to Parliament in the course of next week.

THE CLINICAL RESEARCH ASSOCIATION.

WE have received the small handbook of the Clinical Research Association, Limited, in which are carefully and clearly set forth the aims of the association and its methods of work. As there seems to be some little misunderstanding as to the objects and position of this association the appearance of this little work is well-timed, and we cannot but think that many of those who take the trouble to study its pages will come to the conclusion that it will be advisable for them to join the association. The Clinical Research Association has for its object the provision of a clinical laboratory equal to, or better than, many of those connected with the various schools of medicine and hospitals; which laboratory shall be open for the carrying on of the work required by those engaged in general practice who, with the best will in the world, have neither time nor opportunity to make those irregular or tedious observations which are often required to complete a diagnosis. Such a laboratory has often been suggested, but the difficulty of carrying on, side by side, original investigation for the sake, merely, of what is to be found out and the same investigation in return for a definite fee has always cropped up. We are glad to see, however, that the association has taken the bull by the horns, and has laid down the proposition that in pathology and clinical research the labourer is worthy of his hire just as much as when the same labourer is feeling a pulse and writing a prescription. The work of the association is not done for old pupils, for old teachers, or for personal friends, and, therefore, a fee is expected for each investigation as surely as one is expected for a consultation. The association undertakes to examine sputum for tubercle bacilli and for other micro-organisms, for lung tissue, &c. The examination of urine, blood, pus, vomit, and faeces is undertaken; tumours and diseased tissues are investigated, and specimens taken from the throats of diphtheria patients are examined and analyses of drinking water and poisons are made. Although the fees for these examinations appear to be somewhat low we suppose that the association can afford to send good reports in consequence of the number of specimens that they have to examine. In

fact, it is acknowledged that a large proportion of the examinations which are undertaken could not possibly be reliable at the price charged unless the association received a large measure of support from the profession, so that a number of examinations of the same character may proceed side by side. The association already numbers over 850 members, and over 2300 specimens have been examined and reported upon during the past six months. This is an exceedingly good record, and the association, if it continues to be as well managed as it apparently is at present, should ultimately be very successful indeed. Through its agency the best opinions are placed at the disposal of every member of the association, and the gain to diagnostic accuracy arising from such work must be enormous. We wish the association the success it deserves.

THE REAPPOINTMENT OF MEDICAL OFFICERS OF HEALTH.

WE have called attention in our columns from time to time to the insecurity of these appointments, and for the benefit of the community it would be well if the Local Government Board would formulate some regulations which would prevent the annual reappointment of such officers. To subject the medical officer of a district council to annual re-election is an anomaly which ought not to exist and practically is an incentive to avoid doing anything which might offend some of its members. Last week Mr. Hannah, the medical officer of health for Abram, a colliery district in Lancashire, retained his appointment by the casting vote of the chairman only. He has held the appointment for nineteen years and discharged the duties conscientiously and with great ability; no fault could be found with him in this respect. He has, moreover, been subject to annual re-election. This time the new district council advertised the appointment, and an opponent was brought in the field—with the result that the casting vote of the chairman was required for Mr. Hannah to retain the appointment held so long by him. Why should the health officers (medical officer and sanitary inspector) be the only officers subject to such a rule? Why not the clerk and surveyor also? Even the board itself is not subject to an annual re-election. Medical officers of health should now bestir themselves in regard to the tenure of their appointments.

ON CATCHING COLD.

MARK TWAIN once wrote a paper pointing out the appalling danger of going to bed as exemplified in bills of mortality. For one person who died out of his bed several hundreds succumbed in bed, and now we have Mr. Ashby-Sterry drawing attention to the same thing. Hitherto he has hymned in graceful verse pantaloons, frills, and the tempestuous petticoat, and now, *quantum mutatus ab illo Hectore*, he lauds the pyjama. In a recent number of the *Graphic* he says:—

"I have a theory that most people catch cold at night after they are in bed, and it is to this fact I attribute a great deal of the violent colds, the bronchial catarrhs, and influenza which have recently been so prevalent. The temperature goes down suddenly in the night, and people catch cold when they are asleep without knowing it. This evil is to be counteracted, not by piling on a lot of heavy blankets, but by wearing thick, close-fitting garments of a pyjama-like nature and warm socks on the feet. If this system were adopted I am quite certain that it would be found beneficial."

There is common sense in this. People unquestionably may catch cold in bed, especially if they are at all restless and so kick the bedclothes off. In that event, if only clad in a thin cotton nightshirt, they are sure to catch cold, whereas if clad in pyjamas, not necessarily thick but made of some woollen material, the chance of a chill is much lessened. Our ancestors, even as late as the eighteenth century, went to bed, as Malory centuries earlier phrased it, "as naked as

a needil"; but only the hardiest of them survived. We, however, are cast in more tender moulds, and require protection by night as well as day. The feminine portion of the community will, we fear, not adopt Mr. Ashby-Sterry's suggestion, for though, as an eminent authoress once remarked, "a woman looks so down-trodden in her nightdress," still that vesture offers opportunities for ornament which pyjamas, at best unlovely garments, never do. Perhaps the Rational Dress Society may take the matter up, and Mr. Henry Holiday might turn his attention to devising a really artistic as well as hygienic night-gear.

THE AGE-CONSTITUTION AND THE DEATH-RATE.

THE closer dependence of the death-rate on the age-constitution than on the sanitary condition of a community, rendering it absolutely necessary to reduce the former to a common standard before any conclusions can be drawn as regards the public health, is well known to statista, but little understood by the general public or their local representation. A striking illustration is given by Mr. May, medical officer of health for Aston Manor, in his report for last year. The age-constitution of the population as given at the last two censuses was:

	Under 5 years.	5—10	10—15	15—25	25—35	35—45	45—55	Over 55
1881	157	131	110	191	156	113	74	68
1891	127	123	119	204	162	113	68	74

This enormous reduction in the child population and relative increase of ages between fifteen and thirty-five, those of lower mortality, is wholly due to a continuous decline in the birth-rate during the last fifteen years, which has shown itself in a reduced death-rate, and more palpably in the fact that, though the population had increased between 1881 and 1891 from 53,842 to 68,633, the demand for school accommodation was almost stationary. Thus far the change in constitution has had an apparently favourable influence on the death-rate, but if it continue to operate it will lead to an accumulation of persons over forty-five years of age and be followed by a steady rise in the death-rate, however excellent the sanitary condition of the district may be, when the authorities will be as eager as they are now unwilling to have the recorded death-rates "corrected."

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

AT a recent meeting of the London School Board a report of the school management committee was adopted to the effect that three medical men should be appointed to examine cases in which medical certificates were produced to account for non-attendance at school. Whether it is supposed by the members of the Board that medical certificates are forged by parents who desire to keep their children from school we are not informed; but that seems hardly likely to be the explanation, for the detection of a forgery would not require the services of a medical practitioner. It is, indeed, hardly possible to avoid the inference that the Board has thus put a slight upon the medical profession by affirming the necessity for the supervision of the certifying medical practitioners in respect of this trivial matter of school attendance. We are sorry to be driven to this conclusion, and we feel that in view of it we may fairly invite the majority of the School Board to reconsider their decision. The men whom they refuse to trust in this small matter are the same men to whose absolute discretion and approved skill the weightiest matters are unreservedly entrusted both by law and the custom of society. It is something new and by no means agreeable to the profession at large to have a

municipal body arrogating to itself the right to appoint overseers and to criticise in this way the discharge of our professional duties, and we may add that such interference actually attempted would not only provoke strong and just resentment on the part of the medical men, but would certainly result in the adoption of measures to make that sentiment effective. Upon this point the Board would seem to be very vulnerable, seeing that Mr. Diggle has pointed out that the Board has no power to enforce the presentation of a medical certificate at all. To give it, therefore, is purely a courtesy on the part of the medical attendant, and if this courtesy is to be made the occasion of vexatious interference on the part of the Board all that he will have to do in self-defence will be to refuse the certificate and inform his patient that the Board has no power to exact it.

THE DIFFUSION OF SMALL-POX.

THE three weeks which have elapsed since we noticed this subject have been weeks of quiescence of small-pox in England, whilst Wales has been, practically, entirely free from the disease. In London, in the three weeks ended with Saturday last, April 13th, there were but 25 fresh cases of small-pox and not one registered death therefrom. The patients remaining under treatment at the close of any one of those weeks have never exceeded 60 in number, and were last Saturday below 50. These data are eminently satisfactory, especially in so far as the type of the disease is concerned. Both Peterborough and Bedford, which have contributed cases in the period under discussion, have apparently got rid of threatened trouble, and nearer home the suburbs have escaped also and almost without exception. In the Midlands the Manor of Aston, the city of Birmingham, and Smethwick have had experience of small-pox, but to a very limited extent, though Wolverhampton had multiple attacks last week. Derby, while registering one death, has had no fresh cases so far as we can learn. Liverpool has had but some half dozen cases, and not one death. Northward, we learn of the invasion of South Shields and Jarrow, about a dozen cases within the past month being recorded in the two towns. In Dublin, whilst matters are mending as compared with former periods, there has not been much decrease in the last fortnight and the first week of the present month, though taken collectively the total of admissions was only 58, as against 95 in the three weeks next preceding. The end of the third week of March found 58 acute cases and 100 convalescents under isolation, whilst the close of a fortnight later found only 120 under isolation, though the acute cases had risen to 63. During the three weeks there were 9 deaths, of which 2 were in vaccinated adults aged over twenty years, and 7 in unvaccinated persons, 1 aged under five and 1 under twenty, the remaining 5 being in adults aged twenty years and over.

A MATTER OF ETIQUETTE.

In our issue of April 6th we commented upon the remarkable views held by the majority of the vestrymen of St. George's, Southwark, as to the ethics of one medical man visiting the patients of another. Dr. Waldo declined to do this without the consent of the medical man in charge of the case. The matter was referred to the Works Committee, and at the vestry meeting held on the 9th inst. the following resolution of this committee was read: "That in any case where the surveyor is of opinion any suspicion is attached to an employé he shall notify the medical officer of health, who shall accordingly visit the man, the vestry undertaking to be responsible for any irregularity in respect thereto." Dr. Waldo refused to allow himself to be compelled to commit such a breach of medical etiquette and the matter was referred back to the

committee. The object of the vestry is to prevent malingering, and in this resolution the committee practically say they can trust neither their employ nor his usual medical man. We can imagine the howls of virtuous indignation which would arise if the ratepayers held a meeting and passed the following resolution: "That in any case when the ratepayers are of opinion any suspicion is to be attached to one of their employés"—we take it that a vestryman is an employé of the ratepayers—"the medical officer of health shall be notified, and shall accordingly visit the man, the ratepayers undertaking to be responsible for any irregularity in respect thereto." Vestrymen are but human; they are sometimes ill, and have been known to attend vestry meetings and committee meetings irregularly; although, being unpaid employés, the ratepayers could not adopt the suggestion of the vestryman who said: "Nothing acts so nicely on a sick man as for him to be on half-pay. It does more good to him than medicine." Dr. Waldo will have the sympathy not only of his professional brethren but of every other right-thinking man in the stand he is making for the unwritten canon which governs the relations between medical men.

THE LEICESTER BACTERIOLOGICAL INSTITUTE.

IT has on several occasions been laid down that there should be in every populous centre in the kingdom a bacteriological laboratory in which might be conducted investigations of various kinds, for the same reason that every municipality now finds it essential for its complete official equipment to have a public analyst and laboratory. Of the large Midland towns, Leicester has been the first to provide such a laboratory for the training of resident medical men and others in bacteriological methods and to make provision for the examination of pathological and bacteriological specimens. This laboratory, which has been fitted up by Messrs. J. Richardson and Co., Limited, has been placed under the direction of Dr. J. A. Turner, the medical officer of health. In the prospectus before us nothing is said as to work already done, but the objects for which the institute is established are (1) to investigate the means for preventing and treating the various infectious and other diseases, and to provide a place where original work may be carried on for this purpose; (2) to provide instruction in bacteriology to medical men and advanced students, especially for those residing in the Midlands; (3) for the diagnosis of disease by means of bacteriological and other processes; and (4) to prepare, supply, and test any protective or curative material. The scheme is sufficiently ambitious, but there can be no doubt that under energetic and judicious guidance it may be brought to a successful issue, though we think that there will have to be a little more definiteness and crystallisation of idea as regards the aims of the institute than can be gathered from the prospectus sent out.

THE HOLLOWAY SANATORIUM INQUIRY.

WE have received from Dr. Charles Mercier a letter on this subject. The letter itself is too long for insertion, and part of it refers in detail to evidence adduced at the recent inquiry held by Mr. Gally, Q.C., and Dr. Savage, on which we have purposely avoided commenting until the report of the commissioner and his assessor is published. The inquiry, it will be remembered, was held apparently as a direct consequence of an extremely violent attack made by several newspapers on the character and management of the institution generally, on the ground that in one case a coroner's jury had reported that in their opinion "the medical supervision had been insufficient, and that the mechanical restraint was excessive and too long continued." The most important part of Dr. Mercier's letter is an emphatic and dignified protest, with which we most cordially agree, against the licence of language which the writers of these journalistic articles

have employed without adducing any evidence to justify them. He quotes such phrases as: "If ever in this world a poor helpless wretch was done to death by inhuman barbarity and criminal negligence that man was T. W.—. In all the blood-stained annals of modern lunatic asylums there is not to be found a more sickening and horrifying story." "It is a story of the slow torturing to death of a helpless maniac by methods the barbarity of which must be apparent to the most callous observer. The perpetration of such a crime," &c. Dr. Mercier points out that neither at the coroner's inquest nor at the recent inquiry was there any attempt to prove such abominable charges, "nor even to repeat them before the very tribunal which is constituted for their investigation." Exaggeration and profusion of abusive epithets do harm and tend to cause a reaction even when there is a good case; and where they are used from imperfect acquaintance with the subject and from hasty interpretation of facts they are sure to recoil sooner or later on those who unjustifiably employ them. The care of the insane is one of the most anxious and wearing occupations which a medical man can follow. The medical officers of our asylums are a body of men second to none for humanity and the constant display of practical sympathy. They deserve and should be able to rely on public coöperation and support in their difficult and delicate work, and we regret and deprecate extremely the gruesome language which many modern journalists allow themselves to employ when speaking of useful institutions and of the physicians in charge of them.

THE annual dinner of the Volunteer medical officers will take place at Limmer's Hotel, George-street, Hanover-square, on Wednesday, April 24th, at seven o'clock, when Sir Wm. Guyer Hunter, K.C.M.G., will preside. Those intending to be present should communicate as early as possible with Surgeon-Lieutenant Eddowes, M.D., mess secretary, 25, Old Burlington-street, W.

WE continue our report of the thirteenth meeting of the German Congress of Internal Medicine. We have before now had to criticise the proceedings at scientific gatherings on account of the obtrusiveness of the picnic element, but this Congress is, and has always been, a quiet and thoughtful meeting of medical men, and from its joint deliberations practical good has before now resulted.

WE have received the report of the inquiry held by Major Cardew into the circumstances connected with the recent explosions on Southwark Bridge. The responsibility seems, on the surface, to be about equally distributed between the Electric Lighting Company and the Gas Company: but we shall return to the matter later.

THE right carotid artery and the third part of the right subclavian artery were simultaneously ligatured on Tuesday last by Mr. Page in the Royal Infirmary, Newcastle-on-Tyne, for innominate aneurysm. This is the first time that this operation has been performed in that hospital.

Pharmacology and Therapeutics.

FLUORIDE OF SODIUM AS AN ANTISEPTIC.

La Semaine Médicale of March 20th says that fluoride of sodium has been used with success by Dr. Tuffier of Paris in cystitis, and more recently by Dr. Blaizot of Doulon-lès-Nantes, in the form of an aqueous solution of the strength of 1 in 100 or 1 in 200, as an antiseptic wash for the bodies of patients suffering from infectious disease, as a mouth wash, as a vaginal injection in chronic or subacute vaginitis, and in the treatment of erythema in newly born infants, in which it

was very efficacious. It possesses the property of dissolving albuminous substances, which may possibly account for its good effects. It cleans the skin exceedingly well and gives rise to a delightful feeling of softness and coolness, both when employed externally and when applied to mucous surfaces—as, for example, when it is used as a mouth wash, for which it is eminently suitable.

PHYSIOLOGICAL AND THERAPEUTICAL EFFECTS OF CONDURANGO.

The physiological and therapeutic effects of condurango and conduragine, which is not an alkaloid but a resinogluco-side of a complex nature, have been studied by a large number of European and American observers during more than twenty years, but there is still great want of agreement amongst them.¹ The most remarkable observation on the physiological action of condurango which has been made is perhaps that of Dr. Guyenot, whose experiments in Dr. Dujardin-Beaumetz's laboratory in the Hôpital Cochin in Paris led him to believe that this drug exerts a toxic effect on the nervous system, but not until twenty-four hours after its injection into the body. This may possibly afford an explanation of the somewhat contradictory results reported by previous observers. It may be remarked that Gianuzzi and Buffalini ascribed to condurango tetanising powers. Lauder Brunton² found that when the preparation employed is deprived by filtration of the coarse particles of the bark no tetanic symptoms are produced, though when these are not removed the injection of the watery extract into the jugular vein causes an animal to die with opisthotonos. As to the therapeutic effects of condurango, the observations in the Hôpital Cochin fully confirm what has been stated by many observers as to its usefulness in ulcer and cancer of the stomach in relieving the gastralgia, catarrh, hæmatemesis, and vomiting, and in improving the appetite; but lend no support to the statements made by Drzewski, Barkman, Barth, and others that it actually cures cancer of the pylorus. According to K. Wagner³ the effect of condurango on the digestive functions of dyspeptics and cancer patients is slight and inferior to that of nux vomica, while it is quite incapable of producing much effect on the gastric juice. According to Chelissoff it is the pancreatic juice and the bile that are chiefly increased. Condurango may be administered in powder, decoction, tincture, or wine.

EFFECTS OF CURDS ON INTESTINAL PUTREFACTION.

According to K. Schmitz⁴ cheese and curds as well as milk and kephir exert a marked anti-putrefactive action on the proteid matter in the intestines. This subject has been recently investigated by Dr. Gaseroff⁵ in Professor Chudnovski's clinical laboratory, St. Petersburg, the subjects of the nine series of observations made being all healthy and well-developed hospital employes. He found that under the influence of curds the absolute quantity of ethereal sulphates was diminished—in some instances by as much as one-half—and that the ratio of the ethereal to the preformed sulphates was increased; also that the weight of the body increased. His results point to the retardation of putrefactive processes in the intestine by curds, though whether it is really the casein or, as Schmitz is disposed to believe, the lactose which is the active agent must still be looked upon as an open question.

TANNIN IN ENTERITIS.

Tannin, though a very valuable and powerful drug, has, when given in large doses, so serious an effect on the stomach, producing nausea and vomiting, and, indeed, almost cauterising the mucous membrane, that its use is necessarily much restricted. Professor Meyer of Marburg, however, recently discovered a combination of tannin with acetic acid which passes through the stomach unchanged, and, therefore, without doing any injury, but on entering the alkaline intestinal tract it breaks up, tannin and acetate of potash being formed. That this has a very powerful effect on the intestine was shown by experiments on animals, and subsequently by clinical observations in Professor Müller's polyclinic in Marburg, of which a short account is given

¹ Nouveaux Remèdes, Nos. 5 and 6, 1895.

² THE LANCET, May 3rd, 1894.

³ Archives Générales de Médecine, February, 1892, quoted in Nouveaux Remèdes, loc. cit.

⁴ Zeitschrift für Physiologische Chemie, xix., 373, and Journal of the Chemical Society, October, 1894.

⁵ Vrach, March 2nd, 1895.

In an article by Dr. C. Künkler.⁶ There were forty-one patients, mostly children, who nearly all suffered from chronic enteritis. Many of them had been already treated with but little success by means of naphthalin and bismuth, but they were all, as far as could be ascertained under the conditions of out-patient practice, very greatly benefited, most of them, indeed, really cured, by tannigen. Dr. Künkler recommends that at the commencement of an attack of enteritis a powerful disinfectant, as naphthalin or calomel, should be given in combination with the tannigen, and that the latter can subsequently be continued for some little time after the catarrhal symptoms have passed off in order to allay the irritability of the intestinal canal and to guard against a possible return of the attack. Tannigen, which is a yellow, tasteless, insoluble powder, must not be given in milk but in boiled water or oatmeal grouts (Hafergrütze). It has been shown to be quite harmless in doses of forty-five to fifty grains, but generally three to seven and a half grains per diem are sufficient. The children in the polyclinic were ordered a grain and a half to three grains three times a day, infants a few weeks old taking the smaller dose; older children and adults were sometimes given the larger dose, and occasionally as much as seven and a half grains.⁷

SALIPYRIN IN MENORRHAGIA AND METRORRHAGIA.

The value of salipyrin in various forms of uterine hæmorrhage, which has been noticed by Zurbelle, Kayser, and Bigelow, has been very carefully tested by Dr. E. G. Orthmann by observations on thirty-two patients in Dr. Martin's polyclinic in Berlin.⁸ Fourteen were cases of purely functional menorrhagia. In three the menorrhagia was associated with salpingitis and oöphoritis. In the remaining fifteen the hæmorrhages were irregular, and were classed under the head of endometritis hæmorrhagica; four of these were associated with metritis, perimetritis, or oöphoritis, four more were consequent on parturition or abortion, and the rest were due to previous operations on the tubes or ovaries. The salipyrin was always given in the form of lozenges containing fifteen grains each. The patient took three daily, commencing a day or two before the hæmorrhage was expected and continuing them throughout the whole time it lasted, the total number of lozenges taken being from twenty to seventy. With respect to the results observed, in the severe menstrual hæmorrhages a marked improvement occurred in seven cases, and a complete cure was effected in two. The pain associated with the hæmorrhages was also greatly relieved. Of the four cases of metrorrhagia complicated by metritis, perimetritis, or oöphoritis two were improved, as also were all those following parturition or abortion, but there was much less success with the operation cases. Of the whole thirty-two cases twenty were more or less beneficially influenced by the treatment, the most marked success being obtained in the simple menorrhagia subsequent to parturition or abortion. In no instance were any of the unpleasant by-effects ascribed to salipyrin observed, not even when seventy lozenges were given. Dr. Orthmann thinks the results observed are quite sufficient to warrant his recommending other practitioners to give salipyrin a trial in suitable cases of uterine hæmorrhage.

LORD CROMER'S REPORT ON EGYPT, 1894.

THE British Consul-General's annual report on the finances, administration and condition of Egypt during 1894, is much shorter this year than usual, occupying only fifteen foolscap pages against twenty-one in 1893 and thirty-nine in 1890, when for the first time Lord Cromer (then Sir Evelyn Baring) drew up a comprehensive statement explaining the general progress of administrative reform. There are, however, several appendices by the head of the Public Works Department and other officials, which collectively take up about as much space as the main portion of the document.

According to his invariable custom Lord Cromer commences with revenue and expenditure, and in a few short paragraphs recapitulates the entire history of Egyptian

finance since 1882.¹ Now, although as a rule questions of finance do not enter within our province, still as it is unquestionably true that money and sanitation are inextricably associated we may be excused for devoting a short space to this section. In the first place, we cannot refrain from expressing our admiration at the extremely lucid treatment by Lord Cromer of what he very rightly calls a complicated subject. It would be impossible to be more explicit, and at the same time explanatory, within reasonable limits. At the end of 1894 the excess of revenue over expenditure for the twelve months amounted to no less a sum than £E.785,000, or considerably more than three-quarters of a million sterling, the Egyptian pound being equal in value to twenty shillings and sixpence. When the estimates were framed the anticipated surplus was set down as £E.530,000, but owing to enhanced receipts and lessened disbursements "the net result was £E.255,000 better than the estimate." These figures, as Lord Cromer further observes, may be considered as very satisfactory, but unfortunately there is a reverse side to the medal. As the outcome of influences, chiefly international, which are all explained in the clearest possible manner, "the real available surplus for 1894" amounts to £E.155,000 only; the balance—"namely, £E.630,000—cannot, for one reason or another, be touched by the Egyptian Government" without the unanimous consent of the Powers, a consummation devoutly to be wished, but which, unfortunately, "there seems to be little prospect of securing."

As regards the future, with especial reference to the possible provision of any considerable sum for sanitary work, the outlook cannot be said to be encouraging. The Estimates for 1895 provide for a nominal surplus of £E.660,000, but the real surplus is not expected to surpass a paltry £E.11,000. With the exception of £E.150,000 "being part of the cost of constructing a dam near Assouan," the *status quo* of 1894 is maintained, but Lord Cromer's explanation of the reasons that compel this cheese-paring cannot be gainsaid. "The agricultural depression, coupled with the artificial embarrassments due to the international engagements into which the Egyptian Government has entered have produced a situation which renders the exercise of strict economy more necessary than ever. The execution of some public works, which would have been of great benefit to the Egyptian population, may have to be postponed. The same may be said of other administrative reforms which would involve an increase of expenditure. If prices fall still further the difficulties of the situation will naturally be aggravated, but at present I see no reason for alarm in connexion with the financial situation. Nothing has as yet happened to inspire doubts as to the continued solvency of the Egyptian Treasury. The Egyptian Government, in spite of the international engagements by which its freedom of action is curtailed, should be well able to deal with the present difficulties of the situation."

In common with all who wish well to Egypt and desire to see our intervention in her affairs crowned with success, we can only bow to the inevitable and hope for better times. In this connexion the pertinency of some further remarks by Lord Cromer must be generally admitted. "It is essential that all who are in any degree responsible for the administration of Egyptian finance should bear in mind that the first and greatest interest of the people of Egypt is to maintain the Egyptian treasury in that position of assured solvency which, after great efforts, was secured only a few years ago. Any measures which would endanger that position, or which would in any way shake the credit of Egypt, are strongly to be deprecated. The revenue must be made to balance the expenditure. The commencement of a new floating debt is above all things to be avoided."

There is no denying the cogency of Lord Cromer's contention, and yet, on the other hand, it is equally impossible to avoid thinking that the immense reserve funds which at the present moment belong to Egypt and are allowed to remain comparatively unproductive might be utilised to the utmost advantage for the execution of urgent sanitary and other works. That Lord Cromer shares this opinion is evident, but he does not care to discuss the question at length, because any remarks he might make upon it "might only serve to increase the irritation which unquestionably exists in connexion with the manner in which the subject has been treated." Amongst other important—well nigh essential—measures, the drainage of Cairo has to

⁶ Allgemeine Medicinische Central-Zeitung, Feb. 13th and 16th, 1895.

⁷ For Prof. Meyer's original paper see Deutsche Medicinische Wochenschrift, Aug. 2nd, 1894.

⁸ Berliner Klinische Wochenschrift, 1895, No. 7, quoted in Allgemeine Medicinische Central-Zeitung, 1895, No. 25.

¹ By an obvious error this date is printed 1892 in the report, and yet in more than one English newspaper the mistake is rather unpardonably perpetuated.

be relegated to an undated future, and yet "the redundant balances held, in one form or another, by the Egyptian Government" amounted on Dec. 31st, 1894, to no less a sum than £ E.4,127,000.

Prisons.—Turning to matters more legitimately within our province, it is highly satisfactory to find the following encomium of a department that may be said to have been created by the present administrator: "In few branches of the Egyptian administration has greater progress been made during the last few years than in the prison department, of which Dr. Crookshank is the director-general. Those prisons which have been built under Dr. Crookshank's superintendence by prison labour can bear comparison with any similar institutions in Europe." This is very high praise indeed, but it is thoroughly well deserved. Crookshank Pasha has been in Egyptian employment ever since the beginning of our occupation, and at one time, because he had not performed impossibilities, he had to withstand a vast amount of adverse criticism which unhappily was not altogether confined to quarters whence it might reasonably have been expected. Tenacity and determination in a good cause are, however, not unusual characteristics among our countrymen, and in the present case these qualities were developed in a marked degree. The result is most encouraging, and we trust that at no distant date the Director-General of Egyptian Prisons may have the satisfaction of administering a department as near perfection as possible in every respect. At present, however, for causes entirely beyond the control of Crookshank Pasha, there is still much to be desired. "Overcrowding, with all its attendant evils, still exists in the provincial prisons; neither can it cease until considerable sums of money, which it is impossible for the Government to provide at present, are spent. A portion of the General Reserve Fund might very usefully be devoted to the construction of new prisons." Lord Cromer's concluding remarks on this subject will be read with interest. "The prison receipts amount to about £E 2000 a year, which are employed in improving and extending existing prison accommodation, but this is not nearly sufficient to meet the requirements of the department. I am glad to be able to add that a sum of £1500 has been granted for the adaptation of an existing building at Alexandria to the purposes of a small juvenile reformatory capable of holding from 100 to 150 boys. An institution of this sort is much required. It is impossible to go over any of the prisons in Egypt without being struck by the youth of many of the prisoners, who should certainly on every ground be separated from adult offenders." It is very much to be desired that the reform here indicated should be extended so as to embrace the entire country. The herding of juvenile offenders with hardened criminals cannot but be productive of the most serious consequences. Egyptian children as a rule are bright, intelligent, and well disposed; if preserved from evil associations the majority of the youthful delinquents would doubtless grow up into reputable members of the community. Quite recently we heard of a society that was got up under British auspices for the protection of Egyptian donkeys and horses, a most desirable object no doubt; but would it not be better if the benevolent people who want to benefit Egypt were to direct their energies and their subscriptions towards some scheme for the amelioration of their own species? A Juvenile Rescue Association for Egypt would have ample scope, and if well directed could not but be productive of a vast amount of good.

Sanitary Department.—Here, too, Lord Cromer apportions praise in no stinted fashion. "The remarks which I have made in respect to the Prisons Administration apply equally to the Sanitary Department. Under the intelligent direction of Rogers Pasha much progress has been made. New dispensaries have been opened. The number of patients treated in Government hospitals has increased. An infectious diseases hospital at Cairo has been completed. An English specialist is about to be placed in charge of the lunatic asylum. Three new hospitals at Damanhour, Fayoum, and Beni-Souef are in course of construction. Slaughter-houses are being built in several provincial towns. A Vaccine Institute has been completed. Sixty-six mosques have been placed in a sanitary condition; 121 cemeteries have been dealt with under the Cemetery Decree passed in January, 1894." All this indicates considerable progress and is very satisfactory as far as it goes, though, of course, as Rogers Pasha would be the first to admit, the general insanitary condition of the country

remains practically unchanged. All comes to those who know how to wait, however, and perhaps in time the Director-General of the Sanitary Department may be given the means to accomplish the thorough cleansing of Egypt. It is certainly true that the thin end of the wedge has been inserted. The sanitation of mosques and cemeteries is an undoubted indication of better things to come, and Lord Cromer's last observation in this section, though vague, is encouraging—"It is to be hoped that some portion of the General Reserve Fund will be eventually devoted to sanitary improvements." Elsewhere the Consul-General writes: "But the department is much crippled for want of funds. Thus Rogers Pasha writes to me: 'It is an undoubted fact that the population is beginning gradually to appreciate the advantages of medical institutions, whether hospitals or dispensaries. Demands are now constantly made for the creation of new dispensaries and hospitals throughout the country, and it is a matter of the deepest regret that the resources of the department should be so limited as to prevent these demands being complied with.'"

When the Egyptian Government dispensaries were first started in 1887 a mistaken idea seems to have prevailed that it was hoped to make money by them. Even Rogers Pasha seems to have entertained this opinion, for in his first annual report (1892) he writes: "The dispensaries of the country are worked at a loss. . . . The general failure of the dispensaries." The idea really was to vulgarise—as the French say—the knowledge of European modes of treatment amongst the *fellahin*, and in this way help in the general work of reformation. The budget allotted to the Sanitary Department did not admit of the multiplication of hospitals, so the dispensaries were adopted as a sort of compromise. It is very satisfactory indeed to find now that the population is beginning to value these much criticised institutions and that their number is being added to.

VENEREAL DISEASE AND SANITATION AT DOVER.

IN respect to the prevalence of venereal disease among the troops and the attending social circumstances, it would be difficult to find a greater contrast than that afforded by the town of Dover as compared with Aldershot. At the latter town, as already explained in these columns,¹ much of the trouble is due to the fact that the soldiers start from there for foreign service, and that Aldershot is the place where soldiers who have married without leave are too often compelled to abandon their wives. These women, being generally without resources, often drift into prostitution. The soldiers quartered at Dover have, on the contrary, returned from foreign service, or else are young recruits sent there to fill up vacancies in the regiments. Also Dover is a much larger town, and offers much better prospects of employment for any soldier's wife abandoned by her husband. Then Dover possesses charitable institutions which cannot be created in so small a town as Aldershot. Lady William Seymour, for instance, takes very active interest in all that affects, directly or indirectly, the families of the soldiers. No soldier's wife is known to be in distress at Dover, and as the help given is not State help, but organised by private charity, no distinction would be made between women married with or without leave to soldiers. Such a woman, if abandoned, would certainly be helped to return home; and among the women on the town none are known to be soldiers' wives. Nevertheless, there is a great deal of immorality, and one-third of the soldiers in the hospitals are suffering directly or indirectly from venereal disease. Yet even this state of things is considered an improvement on the past. Here, as at Aldershot, everyone agreed that the tone of the rank and file had greatly improved. The men were better educated, cleaner, and more sober. The increase of sobriety is an important factor. When soldiers suffering from venereal disease are questioned they generally connect their illness with some bout of drunkenness; otherwise, they maintain, they would have been able to resist the allurements of the women in the streets.

In spite of this more favourable state of affairs regret is very generally expressed that the Contagious Diseases Acts

¹ THE LANCET, March 30th, 1896.

were abolished. The police especially lament the deplorable effects produced on the conduct and morality of shop girls, servant girls, and other young women which result from the abrogation of these Acts. Formerly, if a young girl was seen constantly in the streets besporting herself with soldiers the police would call on her parents and warn her in their presence. Now the police are absolutely powerless and are obliged to witness scenes which they know full well must generally culminate in immorality without being able even to remonstrate. But the town authorities, especially during the last twelve months, have been displaying more than usual severity in prosecuting the owners of disorderly houses. Much controversy prevails in the town as to the wisdom or otherwise of such action, which may certainly drive the evil more under the surface, but is less likely to diminish its extent. The effect of such prosecutions, it is argued, may act as a restraint on women. If, as some alleged, the Contagious Diseases Act encouraged men to immorality, it certainly had the effect of checking women; and it is now proposed to attain the same end by the alarm which the publicity given to the prosecution of a disorderly house naturally creates. Should, however, this policy prove successful, it will only accentuate that grievance which has so much increased since the abolition of the Acts, and which is now the principal subject of complaint. The fact is that soldiers are less and less inclined to frequent regular prostitutes, but this does not mean that they are any the more virtuous. It means that they court a more respectable class of girls, and thus a countless number of shop girls, work girls, but more particularly of servants, become their mistresses. On this phase of the question a great deal of evidence can be obtained at the homes for fallen women. About a year ago a petition was sent from a home for fallen women at Dover to the military authorities with the initials and particulars of all cases given. These statistics showed that during the previous seven years on an average three out of every four women assisted had been seduced by soldiers. Whether it be a coincidence, or whether some special measures were taken, it so happens that since this statement was made the proportions have completely altered; for out of 37 women received in 1894 only 11 had been seduced by soldiers, and out of the children born 9 were attributed to civilian and only 5 to soldiers. It is generally the youngest and the most inexperienced girls who are the most easily led astray by soldiers, and for them especially the Contagious Diseases Acts were a terror and an effective check. In the discussion that arose on this subject at the International Congress of Hygiene held in London in 1891 it was stated that at the Chatham Lock Hospital 58 per cent. of the women were only sixteen years old; and that the magistrates of that town certified that in spite of the Criminal Law Amendment Act juvenile prostitution was more common since the abolition of the Contagious Diseases Acts. The Poor-law guardians coincided in this opinion. At Dover we were able to obtain details concerning 72 women who had been assisted at a home for fallen women and who had all suffered from syphilis. One of these girls had primary syphilis when she was only thirteen years old. Another had secondary syphilis at the age of fourteen. Another was seduced when thirteen years old, had secondary syphilis when fourteen, and gave birth to a child when fifteen years old. A fourth was violated by her grandfather when eleven years old, was sent to the workhouse, which she left when fourteen, and then contracted primary syphilis; at sixteen she suffered very severely from secondary syphilis, and, though not cured, is now walking the streets of Dover. All these five girls are now well-known Dover prostitutes. Four other girls were fifteen years old; 3 had primary and 1 secondary syphilis; 1 of them gave birth to a child while ill. Eight girls were sixteen years old; 6 had primary and 2 secondary syphilis. At seventeen years 3 had primary and 5 secondary syphilis. At eighteen years 4 had primary and 1 secondary syphilis. At nineteen years 5 had primary and 1 secondary syphilis. At twenty years 8 had primary and 3 secondary syphilis. Thus, out of a total of 72 cases no less than 46 were minors and 8 were under sixteen years of age. Several of these women gave birth to syphilitic children; many of them are now in the streets of Dover. It is well known that they have not been efficiently cured, yet nothing can be done to prevent their spreading the disease among the troops and the civil population. Some persons have expressed the desire to see syphilis placed among the infectious diseases for which compulsory notification is obligatory. It is not necessary to insist on the impracticability

of such a measure. Legislation based merely on sentimental and moral grounds is not likely to meet with much approval. All the State can hope to do is to regulate unwholesome industries, and a woman who earns her living by immorality is pursuing an unwholesome industry that endangers the health of the community, the sufferers being not only the guilty, but also many innocent children, wives, and others. That her victims are in the first instance also guilty of offending against good morals is not the point at issue, since such purely moral offences are not punished by the law. But the law does try to check the spread of disease. The law does regulate and inspect unwholesome industries. There is no law affecting the consumer of bread or of milk, but there are many laws on bakehouses and on dairies. It will be said that the question of morality is not involved in these trades; yet it is wrong, it is opposed to our sense of moral rectitude, to make bread or sell milk under conditions likely to cause ill-health; and it would be equally wrong to encourage such trades by purchasing bread or milk under unwholesome conditions. The law, however, finds it most practical to deal only with the person who trades, who sells, and not with the purchaser. Now there are women in the streets of Dover who are known to be diseased who obtain their living by means that spread this most serious disease; and though a milkman who kept his milk near an open drain would at once be prosecuted nothing can be done against these women. In the meanwhile, the British taxpayer has to supply an enormous sum for the maintenance of an army, though the effective strength of this force is very considerably reduced by the prevalence of venereal disease among the soldiers.

In respect to general sanitary matters Dover again affords a complete contrast to Aldershot. The ground, far from being new, has been inhabited for centuries. But if for ages the soil had been contaminated it was one of the first towns in England to avail itself of the Sanitary Act of 1848. When this law was enacted the corporation at once set to work to replace the tub system then in vogue by a general system of drainage. Though there was not in those days half the present population Dover spent £80,000. To overcome the insufficiency of level a pumping station was established in the lower part of the town, which raised the sewage so that it can flow into the sea by gravitation. It is, however, only necessary to pump two hours before and two hours after high tide. The outfall is between the Admiralty Pier and the Shakespeare Cliff, and its length has been extended several times. The original loan raised for drainage purposes was paid off thirty years ago, and Dover boasts of being not only one of the first towns to adopt the system of drainage, but also of having been the first to pay off its debt. The waterworks are likewise a municipal enterprise. Wells were sunk in the chalk near the Castle. The water is pumped up into a reservoir. It is very pure water, but rather hard. No method, however, is employed to soften it. There are hardly any wells in the town, and those that have been found are closed on the ground that they contain foul water. The supply is equal to 6 000 000 gallons per week, and the water rate is not high—about 13s. on a rateable value of £48. This brings in about £4000 a year, and of this a good half is net profit. Formerly there used to be taps over the water-closets, and these were often left running all night. Then the water-supply would fall short, and the sewer air entered the pipes. A large number of inspectors had to be appointed. They succeeded in preventing this waste, and the town was able to give a constant supply to all the houses.

When the borough was extended a very considerable increase of rain-flow was taken into the main sewer that runs inland up the valley. Here there is a great deal of subsoil water, which even in dry weather half fills the main sewer, and is useful in diluting the sewage and in flushing the sewer. But the surface rain water is in a great measure drained into a stream that passes through the centre of the town. The rainfall from the back yards and the back portion of the roofs of the houses goes into the sewer; but the rain water from the streets and the front roofs is conveyed by surface-drains to the stream. The worst and most difficult part of the drainage of Dover is that of the streets running parallel with the beach. From the corner of East Cliff to Hawkesbury-street, where the pumping station is situated, the distance is 5300 feet. The East Cliff corner is 25.5 feet above the Ordnance Datum, and Hawkesbury-street 14.3 feet. Indeed, throughout the central part of Dover a fall of scarcely more than 10 feet can be

obtained. Here some alterations will have to be effected. Self-cleansing sewers cannot be obtained under such conditions. As it is there are often small floods in and about the pumping station. But it is probable that all the houses in this neighbourhood will be pulled down and replaced by docks when the harbour works are more advanced. The abolition or the raising of this district will, however, make the fall of the sewers even less than it is at present. Thus an important, a radical alteration for the drainage of a portion of the town will become necessary. Works which were commenced shortly after 1848 can scarcely be expected to meet modern exigencies and the requirements of the very great increase of population which has taken place since that time. It will, however, remain to the lasting honour of Dover that this town was among the first to lead the way in effecting those reforms that have so materially contributed to reduce the death-rate of the towns of England.

THE CONGRESS OF MEDICINE IN MUNICH.

(Continued from p. 950.)

April 2nd.

THE THERAPEUTIC ACTION OF FERRUGINOUS COMPOUNDS.

PROFESSOR BUNGE (Basle), having referred to the importance of the part played by hæmoglobin in the animal economy, said that it is very improbable that iron in the form of inorganic salts introduced into the human body by the food becomes converted into hæmoglobin by synthesis. The case is otherwise with organic ferruginous combinations such as are present in the yolk of egg in the form of nucleo-albumins, from which the hæmatogen originates. Several combinations of iron exist in milk and also in vegetables, the latter containing a considerable amount, but milk only a small quantity. This seems to be incompatible with the fact that milk contains all the elements necessary for the growth of a young organism; but this deficiency is compensated in young animals by a very large reserve stock of iron derived from the placental circulation, and when this stock is exhausted they instinctively begin to take vegetable food. The same is the case in the human subject. The iron necessary for her offspring has been in process of accumulation by the mother not only during her pregnancy but ever since her arrival at puberty. Perhaps the appearance of chlorosis is caused by the fact that the solid tissues of a woman abstract iron from the blood without giving anything in return. This compensation can only be effected by means of organic preparations of iron, which alone are absorbed; whether they are assimilated is very doubtful, and, therefore, the best way to provide the human body with the necessary amount of iron is by the dietetic use of ferruginous vegetable products. Ferruginous drugs only act by suggestion—the iron which is to be assimilated must be obtained from the market-garden, and not from the pharmacy.

Professor Quincke (Kiel) stated that he had made investigations as to the quantity of free iron in the tissues, and had found that it increases or decreases according to the chemical qualities of the ferruginous preparations ingested. According to him there are three varieties of iron compounds present in the human body: (1) that in the tissues; (2) the reserve stock; (3) that in the circulation. Ferruginous preparations he divides into six classes: (1) ferrocyanic combinations, which have no influence on the organism; (2) blood, which is usually held in reserve, but may be usefully given in anæmia; (3) diluted hæmoglobin; (4) citrate of iron, which does not coagulate albumen; (5) insoluble combinations, which, if subcutaneously injected, are in course of time absorbed; (6) the other oxides and suboxides of iron. These form albuminates in the stomach and intestines, and are but slightly absorbed in the normal body; perhaps more so in anæmia, where they became directly assimilated. He is persuaded of the efficacy of ferruginous preparations, especially of the suboxides and albuminates; but is not of opinion that organic compounds are preferable to inorganic, the inorganic iron being changed in the intestines into an organic combination. Sufficient experiments have not yet been made on the therapeutical value of hæmoglobin. He finally remarked that drugs cannot be dispensed with in the treatment of chlorosis.

Dr. Heubner (Berlin) said that infants ought not to be fed too long upon milk.

Dr. Siegfried (Rippoldsau) thought that ferruginous medi-

cines in conjunction with residence in mountainous localities would be successful.

Dr. Zimmermann (Basle) did not agree with Professor Bunge's opinion that the quantity of iron in the food was sufficient, and thought that suitable iron preparations were therefore necessary.

Dr. Nothnagel (Vienna) advised chlorotic patients to stay some weeks in bed at the beginning of the treatment.

Dr. Edlefsen (Hamburg) recommended the administration of hydrochloric acid with iron preparations.

Dr. Ewald (Berlin) thought that this combination should be used only when the gastric hydrochloric acid was ascertained to be deficient.

April 3rd.

THE DEBATE ON THE ANTITOXIN TREATMENT OF DIPHTHERIA. — (Continued.)

Dr. Treupel (Freiburg) reported that he had made injections of 200, 600, 1000, and 1500 antitoxin units on rabbits and dogs. Their general state, the temperature, the respiration, and the blood pressure remained normal; skin eruptions or changes at the places of injection were not observed. In the urine there was for some time after the injection a small quantity of albumen, but no microscopical elements, such as casts. It is probable that the albumen in the urine consists of albumose or peptone. It is doubtful whether albuminuria is a constant symptom after the injections, whether it is special to antitoxin, or whether it depends merely on the injection of blood serum in general.

Dr. Siegert (Strasburg) had concluded from his experiments: (1) that the injection of antitoxin produces albuminuria, diminution of the quantity of urine, and increase of its specific gravity, these symptoms being more aggravated when the kidney is irritated; (2) that the injection of carbolic acid causes no albuminuria, but an increase of the diuresis and of the specific gravity; (3) that an injection of carbolic acid diminishes the effect of antitoxin; (4) that an intravenous injection of 10 cubic centimetres of antitoxin No. II. is very well tolerated by healthy rabbits; (5) that a subcutaneous injection of defibrinised horse serum kills a rabbit in from two to four days, the changes in the urine being the same as after antitoxin injections; (6) that a subcutaneous injection of 10 cubic centimetres horse serum with carbolic acid produces the same changes, but the animals do not die. Dr. Siegert declared that he was far from asserting that these results would be repeated in the case of the human subject.

Dr. Vierordt (Heidelberg) was not of opinion that the course of the fever in diphtheria, as suggested by Dr. Heubner, has anything characteristic. He ranked himself among those medical men who reserve their judgment as to Behring's methods.

At this point the discussion was closed, and Dr. Heubner's motion, given at the end of the report of the first sitting, was adopted.

April 4th.

THE PATHOLOGY AND TREATMENT OF TYPHLITIS.

Professor Sahli (Berne) described typhlitis and perityphlitis as inflammations which arise from the interior of the intestine and in course of time attack the walls of the cæcum, the vermiform appendix, and the surrounding tissues. This infection is caused by the presence of pyogenic bacteria in the cæcum. The marked swelling in perityphlitis results from an infiltration of the tissues round the cæcum, the vermiform appendix, the peritoneum, the omentum, and the fascia transversalis. This swelling becomes still more increased by the accumulation of faeces. Every case of typhlitis with palpable swelling is attended by suppuration, but these cases nevertheless often recover, the pus partly being absorbed and partly finding its way spontaneously into the interior of the bowel. The disease at the outset should be treated by opiates and absolute rest, together with total abstinence from food. When there is no improvement within three days an operation becomes necessary. An immediate operation should only be performed if the patient suffers from continuous fever, if he is seized with shivering, and if the temperature and the pain suddenly increase after an apparently favourable initial stage of the disease. To avoid relapses the vermiform appendix must be removed, even if the pus is spontaneously evacuated into the intestines.

Professor Helferich (Greifswald) said that the presence of pyogenic bacteria produces purulent catarrh of the mucous membrane of the cæcum; and if the mucous membrane is abraded by the passage of faeces the resulting suppuration

easily penetrates through its walls. As soon as the symptoms of suppuration—fever, pain, and sweating—are recognised an operation should be performed. It would be wrong to wait till the abscess becomes palpable or to rely on the possibility of spontaneous cure. Above all, the symptoms of approaching perforation of the peritoneum should be attentively observed. Appendicitis, of course, is often present without any grave symptoms and only becomes manifest by a sudden aggravation of the patient's general state.

Dr. Sonnenburg (Berlin) made a distinction between simple and purulent appendicitis. The former he has observed in twelve cases post mortem; it is characterised by the absence of all grave symptoms affecting the temperature and the pulse, and by a short and mild course. These cases should be treated expectantly. Purulent appendicitis, which begins with shivering, vomiting, diarrhoea, severe pains, &c., should be operated on. Where the abscess has opened through the intestine the vermiform appendix must be removed.

Dr. Curschmann (Leipzig) stated that in his experience the mortality was at the rate of 5.4 per cent. in 452 cases. He did not agree with Professor Sahli that all cases were purulent. There is also a sero-fibrinous exudation. The swelling in perityphlitis often arises from accumulation of faeces, sometimes also from a matting together of the infiltrated tissues. He declined to give general rules for operating, for in this disease it is essential to take into consideration the circumstances of each case.

Dr. Aufrecht (Magdeburg) said that cases should be distinguished according to the site of the exudation. The disease is less dangerous when the exudation is merely extra-peritoneal, and much more dangerous where there is phlegmonous infiltration of the tissues behind the caecum. In the latter case an immediate operation is necessary, but in the former it is permissible to wait till an abscess results.

Dr. Quincke (Kiel) thought that accumulation of faeces is seldom a cause of real typhlitis. Very often the administration of an enema effectually relieves the patient. This treatment, of course, should only be used when no alarming symptoms are present.

Dr. Augerer (Munich) reported some cases where after a comparatively short time symptoms of grave ileus appeared. The post-mortem examination only showed a small intussusception.

Dr. Sonnenburg remarked that he had also seen cases of this kind. He was of opinion that these symptoms arise from an autointoxication of the body by bacteria.

Dr. Heubner (Berlin) stated that in such cases even a very early operation had not succeeded in averting the death of the patients.

April 5th.

SUBCUTANEOUS NUTRITION.

Dr. Leube (Würzburg) said that for this method of nutrition only fatty substances are suitable. In order to show that fat is really absorbed and assimilated Dr. Leube injected fifty grammes of butter under the skin of emaciated dogs. After the injection fat was once more found to be present in the subcutaneous tissues and in the internal organs of the animals. Chemically it proved to be partly the natural fat of the dog and partly butter. When the animals were kept without food it again disappeared, so that it had evidently been consumed like the natural fat of the body.

THE ABSORBENT POWER OF THE RECTUM.

Dr. Posner (Berlin) reported that he had injected solutions of aniline colours into the rectum of rabbits, and that in from twelve to fifteen minutes they were totally absorbed. This fact should make physicians very cautious in giving drugs by the rectum.

Dr. von Ziemssen and Dr. Riper agreed with Dr. Posner. Dr. von Noorden recommended the administration of quinine by the rectum in whooping-cough.

OTHER PAPERS.

At the final sitting Dr. Rumpf (Hamburg) read a paper on the treatment of Enteric Fever by injections of cultures of the bacillus pyocyaneus. His experiments were of course made on animals only.

Dr. Taoma (Magdeburg) made some observations on the Elastic Tissue of the Arterial Walls and on Angeliomalacia.

Dr. Noorden described a new means for the early diagnosis of Diabetes Mellitus. He administers glycoside to patients who either from natural or hereditary predisposition are suspected to suffer from diabetes, and if this substance appears in the urine the case must be treated as diabetic.

Dr. Ott spoke on Nucleo-albumins.

Dr. Dehio (Dorpat) discussed Cardiac Myofibroma and its clinical symptoms.

Many other papers were also read before the Congress, which exigencies of space compel us reluctantly to leave unrecorded in our columns.

The arrangements made for the comfort of the visitors were excellent, and the reception on behalf of the profession of Munich was very cordial. It was a subject of general remark that a very great number of visitors came not only from the German Empire, but also from Austria, Switzerland, the Russian Baltic provinces, and other countries where German is spoken.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the water-supply of the Parish of Lympham, by Mr. T. W. THOMPSON.—This inquiry was undertaken owing to a complaint by the county council of Somerset to the effect that the then existing rural sanitary authority of Axbridge had failed to provide the parish of Lympham with a proper water-supply. The parish is a scattered one. The water-supply is derived from certain wells, and also to a large extent from ponds, ditches, &c.; and so scarce or bad is it at times and in certain places that some people send out of the district for a supply which is brought in by water-carts. Of the wells Mr. Thompson says that they are of a generally unsatisfactory character; they contain mere surface water, and they are situated in such proximity to drains, privies, cesspools, and highly polluted ditches that they cannot fail to become contaminated. Even the so-called parish well is situated in a grass field which is occasionally manured, and it has within about ten yards of it an offensive and almost stagnant ditch, into which a privy and the drainage of a cottage discharge. It would be bad enough if the Lympham people were content with such water for their own consumption and purposes, but they palm it off on others and make money out of the transaction. Thus dairy-farming is the principal local industry; milk is largely produced there, and it is either distributed to large towns or made into cheese. Everyone knows how large a share water-supply has to do with such operations, and it is well, as far as Lympham is concerned, that it should also be known that even where Lympham dairy farmers take the trouble to send elsewhere for their drinking-water, and thus evidently admit the unfitness of their local supply for dietetic purposes, they were found to be using that local supply for "dairy operations," including a so-called cleansing of milk-vessels. In one case cans were "cleansed" with water from a dry-steined well alongside a pig-yard. But perhaps the most unsatisfactory circumstance in this Lympham inquiry is the weak attitude adopted by the now happily defunct rural sanitary authority, who, having had several schemes of water-supply under consideration, and having informed the Local Government Board that one scheme had been found not only the least expensive, but the most feasible, practically say that because the parish have rejected it they dare not proceed unless the scheme is "ordered to be carried out." We can only hope that the new district council will hold a higher view as to its duties, and that in the evidence before them they will take away the reproach of Lympham and of those of its inhabitants who imagine that a water-supply which is subject to the constant risk of very filthy pollutions is good enough for a parish which thrives on transmitting dairy products to neighbouring populations, and does not hesitate to use such water in the various operations necessary to the preparation of those products.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Whitechapel Urban Sanitary District.—The condition as regards nationality of a considerable proportion of Whitechapel may be judged by Mr. J. Loane's remark that "a stranger coming into some of the streets of Spitalfields might be excused for doubting that he was in the capital of England at all"; and it appears from Mr. Loane's current report that in 1894, 1046 foreigners were added to the Whitechapel population. The birth-rate of the district was a high

one—i.e., 40·3 per 1000, as against a rate for the whole metropolis of 30 per 1000. The general death-rate for the district was in 1894 20·3 per 1000, that in the model dwellings was 18·3 per 1000, and the zymotic death-rate in the same buildings 3·8 per 1000. Mr. Loane states that he finds considerable difficulty in carrying out the provisions of the Housing of the Working Classes Act, 1890; the magistrates, he thinks, do not exhibit any sympathy towards the Act in question. Mr. Loane's report embraces the reply of the Whitechapel Sanitary Committee to Dr. Hamer's report on the sanitary condition of Whitechapel, and we are glad to see that the sanitary authority have decided to add two more inspectors to their staff.

Salisbury by the Sea Urban Sanitary Authority.—Dr. W. W. Stainthorpe, in his current report for the district, records an interesting, and in a certain degree an amusing, conflict of interests which took place between his sanitary authority and the Cleveland Water Company. This company issued notices to a large number of its customers ordering that the water waste preventers flushing the waterclosets should be so reduced in capacity as to supply only two gallons of water to each flush. The sanitary authority, being advised of the insufficiency of two gallons, endeavoured to persuade the water company to rescind their order, and waited as a deputation upon the company. The directors, however, refused to repeal their order, and the sanitary authority thereupon issued a circular intimating to the water consumers that, inasmuch as the water company declined to allow a sufficient flush, it was desirable that the consumers should flush their closets *before* as well as *after* use. We are afraid that this alternative will hardly be equivalent, from the point of view of utility, to the three-gallon flush after use, but possibly it may have the effect of bringing about a compromise with the company. At all events, this is a further illustration, if such be needed, of the undesirability of water-supplies being in the hands of companies instead of sanitary authorities.

Carlisle Urban Sanitary District.—Mr. William Brown, in his last annual report, states that among the prosecutions instituted during the year for the exposure of food unfit for consumption was one having reference to two salmon affected with a salmon fungus (*saprolegnia ferax*). The defence set up by the defendant was based in the main upon a statement contained in the twenty-first annual report of the inspector of salmon fisheries that "the salmon disease appears to be a purely cutaneous affection, and the fish appear to die partly from irritation and consequent exhaustion and partly perhaps from the drain on their resources caused by the production of so large a mass of vegetable matter at their expense. The flesh of a diseased salmon, however extensive the morbid affection may be, presents no difference in texture or colour from that of a healthy fish, and those who have made the experiment declare that the flavour of a diseased fish is as good as a healthy one." As it appears that both the condemned salmon had numerous "discharging surfaces" on various parts of their bodies we are glad to see that no one else was allowed to make a further experiment and that the defendant was heavily fined.

St. Ives Urban Sanitary Authority.—Mr. J. M. Nicholls' annual report for 1894 indicates that some progress has been made in the sanitary condition of St. Ives during the year. Among the improvements either accomplished or in progress may be mentioned a new scheme for draining the town, a better system of scavenging, a new water-supply, and the adoption of modern by-laws. We note, however, that the scavenging is entrusted to a contractor, and that the district possesses neither an isolation hospital nor a disinfecting apparatus. Mr. Nicholls, in referring to the Adoptive Acts, apparently includes among them the Dairies, Cowsteds, and Milkshops Order. We may point out, as we have done on several other occasions, that the Order is in no sense adoptive, but that its provisions are obligatory upon all sanitary authorities. Perhaps, however, Mr. Nicholls is referring to the adoption of regulations under Section 13 of the Order.

Maldon Rural Sanitary District.—Dr. Thresh records, in his 1894 report for this district, two cases of diphtheria in which the evidence pointed to a cat as the source of infection. The two patients were seen to be nursing a cat in a dying condition, and two or three days later both were attacked with diphtheria. Unfortunately the cat was killed and buried before any opportunity of a bacteriological examination offered itself. Dr. Thresh, in the report before us, reminds the Maldon rural sanitary authority that the sewage

outfall of Burnham is near the oyster beds, and that the sewage is discharged into the river without filtration or treatment of any kind. Dr. Thresh expresses the opinion that there is danger in discharging crude typhoid-infected sewage near the beds in which oysters are fattening. Out of nine cases of typhoid fever notified from the Maldon rural district during 1894 no less than seven occurred at Burnham. Out of the seven cases referred to, two were oyster diedgermen, one was a night watchman on the oyster beds below the sewage outfall, and one was a nightsoil driver working at Shoeburyness.

Waltham Holy Cross Urban Sanitary District.—Mr. J. Damer Priest suggests in his report the desirability of making by-laws in regard to the keeping of poultry, rabbits, &c., in confined backyards. The water-supply of the district seems to be far from satisfactory, a large number of wells in it being polluted. The mains of the East London Water Company are, it seems, laid in almost every street, and it would appear that the sanitary authority which preceded the present district council were far from energetic in carrying out the provisions of the Public Health Act, 1875, in the matter of water-supply. Doubtless the new council will rapidly make up for the apathy of their predecessors.

Newton Abbot Rural Sanitary Authority.—Mr. W. Harvey supplies in his report on this district an account of the outbreak of water-borne typhoid fever which occurred in Lustleigh in 1894. The house in which the first case, an imported one, was treated was a detached one situated in a large garden traversed by a mountain stream supplying cottagers lower down with water. The stream in question became specifically polluted, probably by waste water in which infected linen had been washed, and conveyed the disease to the cottagers drawing their supplies from the stream. Curiously enough, the people in the cottages below the first infected house complained that the water of the stream had an odour of carbolic acid. The sanitary authority had not, it appears, been without due warning of the danger to which this unprotected stream was liable, as a few years ago an outbreak of diarrhoea, described as almost of choleraic intensity, occurred in the same row of cottages as that now in question, and had its origin in the same water-supply. Wiser counsels have at last prevailed, and the stream has now been piped. There will, Mr. Harvey remarks, be no more epidemics from this cause.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6105 births and 4160 deaths were registered during the week ending April 13th. The annual rate of mortality in these towns, which had declined in the five preceding weeks from 35·0 to 23·4 per 1000, further fell last week to 20·5. In London the rate was 19·3 per 1000, while it averaged 21·4 in the thirty-two provincial towns. The lowest rates in these towns were 14·0 in Swansea, 14·1 in Croydon, 16·1 in Portsmouth, 17·3 in Huddersfield, and 17·8 in Halifax; the highest rates were 24·6 in Manchester, 24·9 in Wolverhampton, 25·5 in Birmingham, 26·7 in Bolton, and 28·2 in Preston. The 4160 deaths included 330 which were referred to the principal zymotic diseases, against 314 and 274 in the two preceding weeks; of these, 103 resulted from whooping-cough, 68 from measles, 57 from diphtheria, 50 from diarrhoea, 26 from scarlet fever, 20 from "fever" (principally enteric), and one from small-pox. No fatal case of any of these diseases occurred last week in Wolverhampton, Derby, Huddersfield, and Gateshead; in the other towns they caused the lowest death-rates in Hull and Sunderland, and the highest rates in Cardiff, Blackburn, Plymouth, and Manchester. The greatest mortality from measles occurred in West Ham, Plymouth, Bolton, and Manchester; and from whooping-cough in Brighton, Liverpool, Manchester, Salford, Oldham, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the thirty-three towns. The 57 deaths from diphtheria included 27 in London, 5 in West Ham, 5 in Cardiff, and 2 each in Manchester, Salford, and Leeds. One fatal case of small-pox was registered last week in Birmingham, but not one in London or in any other of the thirty-three great towns. There were 47 small-pox patients under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 58, 55, and 13 at the end

of the three preceding weeks; 9 new cases were admitted during the week, against 14, 11, and 7 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1463, against 1587, 1555, and 1519 on the three preceding Saturdays; 117 new cases were admitted during the week, against 184, 161, and 143 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 1448 to 427 in the six preceding weeks, further fell to 398 last week, and were 10 below the corrected average. The causes of 61, or 1.5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Bolton, Oldham, Preston, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Bradford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the six preceding weeks from 42.8 to 24.7 per 1000, was again 24.7 last week, and was 4.2 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 20.6 in Perth and 21.1 in Edinburgh to 26.1 in Paisley and 31.1 in Aberdeen. The 714 deaths in these towns included 30 which were referred to measles, 30 to whooping-cough, 15 to diarrhoea, 6 to scarlet fever, 4 to "fever," 3 to diphtheria, and not one to small-pox. In all, 88 deaths resulted from these principal zymotic diseases, against 90 and 74 in the two preceding weeks. These 88 deaths were equal to an annual rate of 3.0 per 1000, which exceeded by 1.4 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 56, 35, and 22 in the three preceding weeks, rose again to 30 last week, of which 10 occurred in Edinburgh, 8 in Leith, and 6 in Aberdeen. The deaths referred to whooping-cough, which had been 26 and 25 in the two preceding weeks, increased to 30 last week, and included 20 in Glasgow and 3 in Greenock. The 6 fatal cases of scarlet fever exceeded the number recorded in any recent week, and included 5 in Glasgow. The deaths referred to different forms of "fever," which had been 3 in each of the two preceding weeks, were 4 last week, of which 3 occurred in Glasgow. The fatal cases of diphtheria, which had declined from 9 to 2 in the three preceding weeks, were 3 last week, all of which were registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 199 and 189 in the two preceding weeks, further declined to 161 last week, but were 54 above the number in the corresponding period of last year. The causes of 52, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 48.6 and 43.3 per 1000 in the two preceding weeks, further declined to 29.2 during the week ending April 13th. During the thirteen weeks of last quarter the death-rate in the city averaged 37.1 per 1000, the rate during the same period being 26.0 in London and 30.5 in Edinburgh. The 196 deaths registered in Dublin during the week under notice showed a decline of 94 from the number in the preceding week, and included 6 which were referred to the principal zymotic diseases, against 12 and 11 in the two preceding weeks; of these, 2 resulted from "fever," 2 from small-pox, 1 from diarrhoea, 1 from whooping-cough, and not one either from measles, scarlet fever, or diphtheria. These 6 deaths were equal to an annual rate of 0.9 per 1000, the zymotic death-rate during the same period being 1.6 in London and 2.7 in Edinburgh. The fatal cases of small-pox, which had been 5, 1, and 3 in the three preceding weeks, were 2 last week. The deaths referred to different forms of "fever," which had been 2, 4, and 1 in the three preceding weeks, were 2 last week. The mortality from whooping-cough and from diarrhoea showed a decline from that recorded in recent weeks. The 196 deaths registered in Dublin last week included 30 of infants under one year of age, and 74 of persons aged upwards of sixty years; the deaths both of

infants and of elderly persons showed a marked decline from the high numbers in recent weeks. Three inquest cases and 3 deaths from violence were registered; and 75, or more than a third, of the deaths occurred in public institutions. The causes of 14, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

A VACANCY will shortly occur in the Principal Medical Officership at Devonport by the retirement of Surgeon-Colonel F. H. Welch. Brigade-Surgeon-Lieutenant-Colonel Riordan has been appointed Principal Medical Officer at Cork in succession to Surgeon-Colonel Maunsell, transferred to Bombay. Surgeon-Captain Forde has been transferred from York to Dublin. Surgeon-Captain Morris has been posted to Cork and Surgeon-Captain Elliot to Belfast. Brigade-Surgeon-Lieutenant-Colonel Boileau, Surgeon-Major Loughheed, and Surgeon-Captain Freeman have been granted sick leave from India. The following Surgeon-Lieutenants have been posted to the stations named: Harrison, Chester; Howell, Hounslow; Lawson, Portsmouth; Steel, Chatham; Profeit, Edinburgh; Kiddle, Devonport; Stadden, Whitehead, Perry, Heaton, and Morison, Ireland; Tomlinson, Dover. Surgeon-Colonel Churchill has embarked for Madras.

ARMY MEDICAL STAFF.

Surgeon-Captain John Francis Bateson, M.B., from the Seconded List, to be Surgeon-Captain, vice J. H. Daly, placed on temporary half-pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following are appointed the Principal Medical Officers of the four commands:—Punjab: Surgeon-Colonel R. Harvey, at present Inspector-General of Civil Hospitals. He has proceeded home owing to ill-health. Bengal: Surgeon-Major-General T. Walsh, A.M.S., at present Principal Medical Officer, Madras Army. Madras: Surgeon-Colonel C. E. McVittie (Madras), at present Principal Medical Officer, Southern District. Bombay: Surgeon-Major-General J. Warren, A.M.S., as at present. Surgeon-Colonel G. C. Ross, Administrative Medical Officer and Sanitary Commissioner, Central provinces, is appointed Inspector-General of Civil Hospitals, Bengal. Surgeon-Captain C. J. Sarkies is appointed to the Medical Charge of the Baroda Residency in addition to his duties as Medical Officer, 8th Regiment Bombay Infantry. Brigade-Surgeon-Lieutenant-Colonel W. F. Burnett, A.M.S., is appointed to officiate as Principal Medical Officer, Madras District. Surgeon-Major A. Keogh is directed to proceed from Madras to Barrackpore for duty. Surgeon-Major C. B. Maitland assumes Medical Charge of the 1st Bombay Lancers at Neemuch. Surgeon-Captain A. Stables proceeds in Medical Charge of the 1st Battalion East Lancashire Regiment, moving on Field Service.

NAVAL MEDICAL SERVICE.

Fleet-Surgeons Robert William Williams and William Graham are placed on the Retired List at their own request.

The following appointments are notified:—Fleet-Surgeon W. Graham to the *Thunderer* for service in Pembroke Dockyard. Staff-Surgeons: J. E. Penn to the *Derestation*; G. F. Wales to the *Wildfire* for the *Sans Pareil*. Surgeons: E. J. Morley to the *Pique*; C. H. Upham to Plymouth Hospital; P. H. Boyden, M.B., to the *Thunderer*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain James Walker Beattie, M.B., 1st Durham Volunteer Artillery (Western Division, Royal Artillery) to be Surgeon-Captain.

YEOMANRY CAVALRY.

Suffolk (the Duke of York's Own Loyal Suffolk Hussars): Surgeon-Captain R. H. Lucas resigns his commission; Henry Charrington Martin, M.D., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion, the Suffolk Regiment: Surgeon-Major J. S. Holden, M.D., to be Surgeon-Lieutenant-Colonel. 2nd Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Captain S. Johnston, M.D., to be Surgeon-Major. 1st Volunteer Battalion, the Royal Welsh Fusiliers: Llewelyn Frederick Cox, Gent., formerly Lieutenant, to be Surgeon-Lieutenant. 4th Volunteer

Battalion, the East Surrey Regiment: Surgeon-Captain E. J. Lawless to be Surgeon-Major.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Surgeon-Lieutenant H. W. G. Macleod, M.B., to be Surgeon-Captain.

THE CHITRAL EXPEDITION.

Our daily contemporaries have kept our readers fully acquainted with the rapid progress of events in connexion with this expedition, which has been conducted with great ardour and heroic energy, and promises to have a dramatic ending. People in this country can have but a faint idea of the almost insurmountable obstacles and difficulties of a campaign of this nature. The march of Sir Robert Low's force has so far been a very arduous one; the natural obstacles have made strong demands upon its physical energies and engineering skill, to say nothing of the opposition from hostile tribesmen. The Malakand, Kotgala, and Kamrani passes have been traversed and the Swat river crossed, and a number of other difficult passes and physical obstacles have still to be encountered and overcome before the march to Chitral has been accomplished. Meanwhile another portion of the Relief Expedition—the troops from Gilgit—under Colonel Kelly and Captain Borrodalle, in spite of the intense cold, violent snowstorms, and numerous cases of frost-bite and snow blindness, have succeeded in a brilliant march and military undertaking by advancing over the Shandar Pass, which is 12,000 ft. high and some ten miles distant from a peak of an altitude of 21,000 ft. The enemy was encountered and defeated near Gasht, our garrison at Mastuj has been relieved, and Colonel Kelly's force is now probably fast advancing on Chitral itself or has already reached it. The loss of Colonel Batty, who was killed while in command of the Corps of Guides in their fighting retreat towards the broken bridge over the Panjkora, will be deeply regretted. We believe we are correct in saying that no less than three of his brothers had previously lost their lives in the field in Indian warfare. The health of the troops, apart from the cases of frost-bite and snow-blindness to which we have alluded, is understood to be excellent, and the wounded are doing well. From all accounts it would seem that, as Umra Khan's brother is a prisoner, Umra Khan, who is stated to be suing for peace, will himself soon be compelled to yield. There is every prospect of the expedition being soon terminated satisfactorily, but let it end how it may it will prove, we suspect, to have been an enormously expensive one to the Indian Government.

THE VOLUNTEER MEDICAL STAFF CORPS AT NETLEY.

The London companies of the Volunteer Medical Staff Corps arrived at Netley on the evening of April 11th for their annual training at the Royal Victoria Hospital. The advance party arrived on the previous afternoon. The strength was as follows: six officers and 195 non-commissioned officers and men, of whom twenty were bandsmen. One-half of the men present were students of medicine from the various London hospitals. The officers at the training were Surgeon-Lieutenant-Colonel A. T. Norton, V.D., F.R.C.S. (senior surgeon to St. Mary's Hospital), commanding; Surgeon-Captain D. M. O'Callaghan, A.M.S., adjutant; Surgeon-Captains J. E. Squire, T. H. Openshaw (assistant surgeon to the London Hospital), and W. E. Raw, and Lieutenant and Quartermaster Pilling. Between Good Friday and Easter Monday, in addition to ward and sentry duty, the parades, drills, inspections, &c., two lectures were delivered by Brigade-Surgeon-Lieutenant-Colonel Evatt. On Saturday he chose for his subject "The Reason for the Existence of the Volunteer Medical Staff Corps," and on Monday "The Duties of the Medical Staff Corps in the Field," showing the various stages in the transport of the wounded from the fighting line to Netley Hospital. The Volunteers left Netley for London on Monday evening. During the time of the training the weather was very bright, with a north-east wind prevailing. The companies presented a very creditable appearance.

SMALL-POX IN CALCUTTA.

An epidemic of small-pox is prevailing in Calcutta at the present time, and it is stated that no less than 20,000 people have been vaccinated in Calcutta during the past month. Dr. Simpson, the health officer, has applied to the municipality for the use of two houses in addition to the existing accommodation to convert into small-pox hospitals, one for natives to consist of fifty beds, and the other, of twenty beds, for Europeans.

The Queen's Birthday will be celebrated in London alone

on Saturday, May 25th, and at all other stations, naval and military, on the preceding Friday.

Correspondence.

"Audi alteram partem."

"THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON."

To the Editors of THE LANCET.

SIRS.—I had hoped to have been spared the necessity of writing to you on the affairs of the Southampton Free Hospital for Women, but I am compelled to do so by the astonishing statements made with regard to me in the letter addressed to you by the chairman and honorary secretary of the committee of that institution. In this they say: "The committee exceedingly regret having publicly to express their views on this point, but it is necessary to do so. They are of opinion that Dr. Playfair has treated them in a most discourteous manner. He listened to the accusation of the Medical Society. He never communicated with the committee or the staff of the hospital to which his name was attached, and the committee of the Women's Hospital received a letter from the secretary of the Medical Society, to whom Dr. Playfair had written, saying he strongly approved of the proposal of the Medical Society to hold a committee of inquiry."

As an answer to these indictments may I beg you to do me the favour of publishing the following correspondence:—

1.

"31, George-street, Hanover-square, W., Jan. 10th, 1895.

"To the Honorary Secretary of the Southampton Free Hospital for Women.

"SIR,—I have had sent to me a circular signed by the honorary secretaries of the Southampton Medical Society, in which they suggest that a committee of inquiry into the work and management of the Women's Free Hospital should be appointed. Will you do the favour of informing me, as consulting physician to the hospital, whether it is the intention of your committee to agree to this proposal? In my opinion it is one which should at once be carried out. When the work and management of a charitable institution such as yours have been publicly impugned full enquiry should be courted. Nothing could be better for such an institution than a favourable report from a qualified and unbiased committee of investigation. If this proposal is declined the public will naturally come to the conclusion that there is something which it is wished to conceal.

I am, &c.,

"W. S. PLAYFAIR."

2.

"1, Clifton-villas, Hill-lane, Southampton, Jan. 11th, 1895.

"Dr. Playfair, Women's Free Hospital.

"DEAR SIR,—I am in receipt of your letter, which I will lay before my committee. I beg to inform you that a special subcommittee has the question under consideration, who no doubt will acquaint you with the facts of the case.

Yours faithfully,

"H. C. PHILLIPS, Hon. Sec."

The promised communication never reached me, but nearly a month afterwards I learnt from another source that it had been decided not to appoint the committee I had recommended. On this I wrote as follows:—

3.

"31, George-street, Hanover-square, Feb. 9th, 1895.

"To the Hon. Secretary of the Women's Free Hospital.

"SIR,—I understand that your committee has declined to accede to the nomination of an independent committee of inquiry such as I referred to in my letter dated Jan. 10th. Under these circumstances I beg to place in your hands my resignation of the post of consulting physician to your hospital.—I am, faithfully yours,

"W. S. PLAYFAIR."

This correspondence, I think, plainly shows: 1. That it is not the fact that I "never communicated with the committee" of the Women's Free Hospital. 2. That I did not resign my post as consulting physician until after the committee had decided upon not appointing a committee of investigation, as I had urged them to do. When the advice of a consultant is not acted on I do not see what other course is open to him. 3. That my communications were not "most discourteous." 4. That I did not suggest that the "Southampton Medical Society should hold a committee of enquiry," but that one should be appointed which was "unbiased" and "independent." 5. That I have expressed no opinion as to the questions at issue between the Southampton Free Hospital for Women and the Southampton Medical Society.—I am, Sirs, yours faithfully,

W. S. PLAYFAIR.

George-street, Hanover-square, April 13th, 1895.

"COLOUR VISION AND ACCIDENTS."

To the Editors of THE LANCET.

SIR,—The importance of perfect colour vision for mariners and railway servants is unquestioned in the minds of ophthalmic surgeons. It is not so, however, in the minds of railway directors and Board of Trade officials, nor, to some extent it would seem, in the minds of members of the medical profession. It is to these members of the profession that (by the kindness of the Editors of THE LANCET) I would appeal to weigh well the reasons that have induced their ophthalmic brethren to make it a burning question of the day, for unless the profession as a whole are convinced that no colour-blind men should be employed wherever red and green signals have to be interpreted, and where their wrong interpretation may mean loss of life and appalling disaster, it is certain that the lay officials who have the final voice in the matter will be unconvinced. In a recent number of THE LANCET¹ Dr. Gowers, in a letter on "Colour Vision and Accidents," asks a series of questions which should not pass unanswered, although I am not sure whether they are asked inquiringly or doubtingly. "For many years," he says, "keen attention has been paid to this question and examinations instituted. Has any accident during this time been brought home to defect in colour vision?" The reply to this question can be best given by quoting cases supplied by Mr. T. Bickerton.² (Case 1, quoted from the *Shipping and Mercantile Gazette and Lloyd's List*, June 29th, 1881: "The pilot of the *City of Austin*, which was lost in the harbour of Fernandia, Florida, last April, is proved to be colour blind. In this way, it would appear, he mistook the buoys, and his mistake cost the owners 200,000 dollars (£40,000). An examination showed that at a distance of more than six feet he could not distinguish one colour from another. The physicians attribute the defect to an excessive use of tobacco.") Case 2, quoted by the same authority, is recounted in a letter from Messrs. McIntyre and Co., Liverpool shipowners: "Our ship *Corbet Castle* collided in the South Channel, bound from Dundee to Cardiff in 1879, with the *T. H. Ramien*, due, as far as we can now make out, to the colour blindness or short-sightedness of the chief officer."

It is clear, then, that accidents have occurred in consequence of defects in colour vision. Dr. Gowers' next question is, "Has any railway servant, found by Holmgren's test to have defective colour vision, been confronted at night with red and white lights and failed at once to distinguish one from the other and to state correctly which was white and which was red?" I do not know whether I am wrong in supposing that what Dr. Gowers meant to contrast were red and green lights, the signals which are most often confused, and that white was printed by mistake, but this is of little consequence to the argument, as it seems clear that what he means is, Have colour-blind men been taken on to the permanent way and there failed to name correctly the colours of the signals? The reply is again "Yes." Professor Holmgren records the following case in point.³ "A locomotive fireman at one end of a private railroad was examined by the railroad surgeon and declared to be completely colour blind. Nevertheless, he was allowed to continue at his work, and he started out as fireman on the next train. The surgeon at once telegraphed the 'director of traffic,' who was at an intermediate station. The director received the telegram a quarter of an hour before the train was to arrive on which was the fireman. He at once improvised a practical test in this way: he ordered a stationmaster a few miles further on to show the 'stop signal' (a red lantern), contrary to what was customary, on the side of the road the fireman had his place on the engine. He then got on the engine and told the engineer not to notice the false 'stop signal' but keep boldly on, no matter what happened. Thus prepared the train went on. The director warned the fireman to carefully watch the signals on his side, and so the train approached the 'stop signal.' When quite near the director called out, 'Why don't you slow up? Didn't you [to the fireman] see the stop signal?' 'No,' he quietly replied, 'all is clear; the stationmaster has shown the usual white light.' This test was naturally striking and convincing. The consequence was, of course, self-evident. Arrived at the other

end of the road the director had the fireman tested by another railroad surgeon. He naturally also reported the man to be colour blind, and the fireman was dismissed for ever from a locomotive."

The next question Dr. Gowers asks is a similar one applied to sailors: "Has," he asks, "any similar fact been established as to red and green lights in the case of sailors?" The circumstances may be considered on all fours with those of railway men, for the colours used are the same, the lanterns are much the same, and the illumination is usually identical. The colour blindness that would lead to an accident in a railway official would be capable of leading to an accident in a sailor. The reply to the question may be found in two more quotations, again from Mr. Bickerton.⁴ The first is to be found in the annual report of the Supervising Inspector-General of Steamboats to the Secretary of the Treasury, dated Washington, 1880, and reads as follows: "On the night of July 5th, 1875, there was a collision near Norfolk, Virginia, between the steam tug *Lumberman* and the steamship *Isaac Bell*, the former vessel bound to, and the latter from, Norfolk. The accident occurred at about 9 P.M. on an ordinary clear night, under circumstances which until recently seemed more or less mysterious. The master of the steamer and all his officers made oath that at the time the signals were made to the tug the latter was from one to two points on the steamer's starboard bow, and consequently the steamer's green light only was visible to the approaching vessel. Yet the master of the tug, whose statement was unsupported by any other testimony, asserted that the steamer's red light was exhibited, and signaled accordingly. The discrepancy in the statements was so great that many persons uncharitably charged the master of the tug with being intoxicated, although no evidence was ever offered in support of the charge. By this accident ten persons lost their lives. Upon a visual examination of this officer under the rules during the past summer, and during which time there had been no question as to his sight, by the surgeon of the Marine Hospital at Norfolk, he was found to be colour blind, two examinations having been accorded him with an interval of ten days between them." In the second case, although no accident occurred, it sufficiently points the moral to be pertinent to the question:⁵ "The steamer *Neera* was on a voyage from Liverpool to Alexandria. One night, shortly after passing Gibraltar at about 10 30 P.M., I went on the bridge, which was then in charge of the third officer, a man of about forty-five years of age, and who up to that time I had supposed to be a trustworthy officer and competent in every way. I walked up and down the bridge until about 11 P.M., when the third officer and I almost simultaneously saw a light about two points on the starboard bow. I at once saw it was a green light and knew that no action was called for. To my surprise the third officer called out to the man at the wheel, 'Port!' which he was about to do, when I countermanded the order and told him to steady his helm, which he did, and we passed the other steamer safely about half a mile apart. I at once asked the third officer why he had ported his helm to a green light on the starboard bow, but he insisted it was a red light which he had first seen. I tried him repeatedly after this, and although he sometimes gave a correct description of the colour of the light he was as often incorrect, and it was evidently all guesswork. On my return I applied to have him removed from the ship as he was in my opinion quite unfit to have charge of the deck at night, and this application was granted." But supposing we knew of no accidents occurring as the result of colour blindness, it would not prove that they never happen, and we should still be justified in insisting that our trains and our ships should not be officered by colour-blind officials. We may not know of any accidents having occurred through the man who comes round and taps the wheels of the railway carriages being deaf. Yet if we knew that a deaf man were doing the work we should hardly be satisfied if he told us that, although he could not hear the bell note, there was a vibratory thrill which communicated itself to him and told him all was right. We expect the axles to be periodically tested, and we expect that the work shall be done by men who are not handicapped by the loss of any faculty.

In an annotation in THE LANCET⁶ the question is asked whether, because a man is colour blind, it necessarily follows

¹ THE LANCET, March 2nd, 1895.

² Colour Blindness and Defective Eyesight in Officers and Sailors of the Mercantile Marine, 1890, p. 16.

³ Control of Defective Vision on Land and Sea. B. Joy Jeffries, 1883, p. 6.

⁴ Op. cit., p. 16.

⁵ Mercantile Marine Reports, vol. xiv., No. 162.

⁶ THE LANCET, March 23rd, 1895.

that he cannot tell that there is a difference between a red and a green or be conscious which light is shown. Ordinarily a colour-blind engine-driver can distinguish the signals, not by the colours, but by the difference in the intensity. The obvious meaning of the writer is that as long as the signals can be differentiated it is unfair, or at least unnecessary, to impose more stringent tests. Now, as the colour-blind do not see the colours to which they are blind, it follows that the effect would be the same as changing the coloured signals now in use for white lights and conveying the messages "safety," "danger," and "caution" by turning the light up or down, increasing or diminishing the intensity that is, according to the required signal. Everyone would recognise at once the dangers incidental to signaling by such means; a "bright light," a "medium light," or a "dull light" would be judged not only according to the personal equation of the observer, but also according to the surrounding circumstances. And yet this is how the colour-blind see the colours. On a foggy night, on a snowy evening, or on a misty morning the colour-blind sailor or engine-driver must make due allowances before he can decide whether a light is red or green. His decision depends on a mental process which has to weigh many pros and cons before it can make a deduction. He must enter into an elaborate mental argument with himself whilst travelling at railway speed before he can decide how he shall interpret the signal. The effects of cloud or rain, of fog or smoke, the overshadowing of surrounding trees or buildings, must be duly weighed, even the condition of the lantern itself must be considered before he can decide whether the signal is bright, medium, or dull. All this cerebration must be instantaneous, and it would be a little late when he had ruined valuable rolling stock, to say nothing of its contents (which may be passengers), to find that he had made a slight error.

I am, Sirs, yours faithfully,

W. M. BEAUMONT,

Bath, March 30th, 1895.

Surgeon to the Bath Eye Infirmary.

"WHAT IS 'PREMATURE DISCHARGE' FROM A FEVER HOSPITAL?"

To the Editors of THE LANCET.

SIRS,—In your issue of the 6th inst. you published in the Parliamentary Intelligence the reply of the President of the Local Government Board to questions put to him by the members for Islington on the above subject. In this reply he has been made to state, on information supplied to him by the clerk to the Metropolitan Asylums Board, that there appeared to be no justification for attributing the illness of the father and children to any infection caused by the premature discharge of William Holland from hospital; and that in the case of the two children who had died there was "strict evidence that the disease was diphtheria and not scarlet fever." As I am to some extent responsible for the information on which the members of Parliament based their questions, allow me to say that I hold copies of the death certificates of these children, one of which states that the cause of death was (a) scarlet fever, twelve days, (b) diphtheria, nine days; and the other (a) scarlet fever, (b) nephritis. These children both died in hospital, and, of course, their deaths were certified by the hospital physician. This being so, I entirely fail to discover where the clerk to the Metropolitan Asylums Board obtained his "strict evidence" that the children did not die from scarlet fever, which in each case was the primary certified cause of death, and which was, in the opinion of their private medical attendant, undoubtedly contracted by the too early discharge from hospital of another member of the family suffering from this disease. After all, the question at issue is not, Did these children die from diphtheria? but, Did they suffer from scarlet fever presumably contracted by the premature discharge of William Holland from hospital? I hold that the evidence of the death certificates of the Metropolitan Asylums Board's medical officers is conclusive on this point, and that the children did suffer, as I have alleged, from scarlet fever in the first instance, and that it is impossible for the clerk, in the face of such certificates, to justify the statement for which he has made the President of the Local Government Board responsible.

In your last issue you ask the question, "What is the 'premature discharge' of a patient from hospital?" To this I reply, the return of a patient to his home in an infective condition, irrespectively of the length of time he may have

been under treatment in hospital. I know that at times it is very difficult to state positively that a patient, particularly one who has suffered from scarlet fever, is free from infection. But I hold that in these days of bacteriology it ought to be possible to clear up a doubt as to the condition of a patient before his discharge. Dr. Priestley has recently demonstrated to his entire satisfaction that it is possible by means of treatment with eucalyptus oil so to disinfect patients that they may be discharged with perfect safety to their homes, and he has, in fact, sent a large number of cases of scarlet fever to their homes without having any "return" cases. If to proper and efficient washing and bathing, and cleansing of the mouth and fauces be added the removal of the patients to convalescent wards before final discharge from hospital, then I think there would be fewer return cases than at present. Why the Convalescent Hospital at Winchmore-hill is not more fully used than it is a question I cannot pretend to answer. I hope it is not due to economic reasons, for surely it is the falsest economy to send patients from the acute wards of a hospital to their homes with the almost certainty of conveying with them—it may be in their mouth or throat, or even in their lungs—the poison of the wards which they had just left, for thereby new cases will be created, which of course must entail additional expense for treatment on the parents or on the ratepayers. This subject of the discharge of patients is of the utmost importance to the public, some of whom, I regret to say, have had their faith in hospital isolation much shaken by the recurrence of "return" cases, and I therefore trust that the Metropolitan Asylums Board will endeavour to devise means to prevent the recurrence of any ill results in future.

I am, Sirs, yours faithfully,

ALFRED E. HARRIS,

Islington, April 17th, 1895.

Medical Officer of Health.

To the Editors of THE LANCET.

SIRS,—I have read with much pleasure in THE LANCET of April 13th your interesting annotation, "What is 'Premature Discharge' from a Fever Hospital?" The question is asked, is there not such a thing as recurrent desquamation after an attack of scarlet fever, and may not a patient discharged with a clear skin subsequently in a fresh environment evince a partial redescquamation? I think few of those who have had an extensive experience of this disease have not seen such cases from time to time. It appears to me that the daily antiseptic warm bath so often neglected by the parents after the discharge of the child from the fever hospital would not only act as a preventive in the spread of the disease to others in cases of premature discharge, but also in those of recurrent desquamation.

I am, Sirs, yours faithfully,

C. S. LEE.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—Your correspondent who signs himself "C. C." must surely be playing a game at figures within himself if he thinks he approaches this momentous question (I use the word momentous advisedly) by gravely stating that £2 17s. on quarter day "is not to be despised." As a matter of fact, the question is one, although it *prima facie* only appears to immediately refer to the above company, who are undoubtedly a most honourable company, and, I venture to state, deal as liberally with their medical officers as their narrow financial margin will permit. The question, however, practically at stake is a very broad one indeed, nor does it refer especially to this company, or any other company or "friendly society," but is simply this: Can nothing be done to put a stop to the abominable system of allowing medical services to be put up to auction by the touters of commercial concerns, and thus having onerous and responsible duties knocked down at an old song? I repeat, this is the broad question at stake. Clearly, medical men are not competent to protect their own private interests, to say nothing of the public, otherwise they would not nibble at the ground bait offered by the commercial world; and even the happy recipient of £2 17s. per quarter would do well to bear in mind that "all is not gold that glitters," and I can tell him, if he will pardon me, that such as he are worth their weight in gold to the commercial world. Now, Sirs, to come exactly to the point, and we need not clog our

heads with figures, as we simply have to stand face to face with one or two very patent facts to solve this question once for all, which, if I shall not shock your correspondents, I will state in broad Saxon-English, even at the sacrifice of all literary refinement. One of these is that as a profession we have to live; (2) somebody must keep us; (3) the aristocracy cannot do so, as their minority is so insignificant that they cannot even keep West-end consultants; (4) the upper middle-class cannot keep us, as they stand likewise in too small a minority, and even these nowadays are for the most part as poor as church mice. It follows, therefore, that the remuneration of our profession, be it little or nothing, must in the aggregate, so far as concerns general practitioners, proceed from the lower middle and working classes, and it is precisely upon the former of these classes more especially that commercial men are playing irreparable havoc. This is sufficiently proved in provincial towns, where private practice has suffered a deficit which it would be absurd to contend has met its equivalent in the remuneration to the medical officers of friendly societies, and although the managing director of the London and Manchester Industrial Assurance Company states without "hesitation" that their officers gain as much from their members as they would regarding those members as private patients, the system, I submit, is to all intents and purposes, so far as the interests of our profession are concerned, one and the same, and that is of touting the public and offering medical services up to auction as aforesaid. In conclusion, Sirs, be it observed if these classes are to have incessantly dinned into their ears by the itinerant touters of enterprising companies the doctrine that a spirit of thrift, economy, and independence can be maintained on their behalf by these societies on payment of mere nominal fees, we may calculate almost to a dead certainty that another decade or two will complete the insolvency of our profession—that is to say, if it is not already complete.

I am, Sirs, yours faithfully,

CLEMENT H. SERS.

Queen's-road, Peckham, S.E., April 11th, 1895.

To the Editors of THE LANCET.

SIRS,—Your correspondent "C. C.," in THE LANCET of April 13th, writing in defence of the above company, compares it favourably with other clubs—Hearts of Oak, Oddfellows, Rechabites, &c.—and hints at irregular payment by these latter. I may say that these clubs where I live pay quite as much—some, I believe, more—than the London and Manchester. But the object of my writing to you is to draw attention to a point not yet alluded to in your correspondence, certainly not by "C. C.": that there is no comparison whatever between the work required of medical officers by any clubs which admit *women and children of all ages without medical examination*, and clubs, such as those referred to, which are for *men only*, who enter in the prime of life and have all to pass a medical examination. These latter are usually of the true working class (though there are exceptions even in these clubs, exceptions mostly due to rise in life after entrance), and require very much less attention in every way than a club of women and children. Men—working men—usually turn up at the surgery. Women and children in clubs, many of them not of the true working class, usually require to be visited. Children have their teething, convulsions, mumps, measles, scarlet fever, &c. to go through; women their uterine irregularities, climacteric troubles, and many other ailments peculiar to their sex. In short, Sirs, the visiting list of any general practitioner, as is well known to the profession, contains very few men in proportion to women and children.

I am, Sirs, yours faithfully,

April 15th, 1895.

EQUITY,

To the Editors of THE LANCET.

SIRS,—I have been greatly interested in the correspondence that has lately appeared in your columns concerning this society, and you will doubtless consent to publish my contribution. I notice that a good many of the letters are written by medical men who do not belong to the society and are simply writing from hearsay. You will probably admit that reliable evidence from a medical referee of the society is required, and such I am in a position to supply. The expressions "sweating" and "degrading" are freely made use of, but I have not seen anything yet to support the

charge of sweating by this society as being in any way different to the prices obtained for other contract work. The letter of Mr. A. M. Moore is certainly worth perusing, but I cannot understand what kind of a society he had got hold of, and am not surprised that he resigned. The payment of the London and Manchester Society is princely compared to it.

I give the figures for visits paid to members during 1894:

	Visits.	Quarterly payments at 1s. per member.
January	49	£30 6s.
February	49	
March	12	
April	14	£29 5s.
May	32	
June	9	
July	42	£31 3s.
August	26	
September	10	
October	93	£23 3s.
November	45	
December	54	
Total	435	£119 17s.

I have not included in the above two patients who had 40 or 50 visits, and who paid for the attendance at a somewhat reduced fee. The number of bottles of medicine I can only estimate, because I kept no record of them, but I put them down at 1200, which is about the same proportion as in Mr. Moore's list. Let us see how it works out as regards payment for actual work done: 435 visits at 2s. per visit come to £43 10s., leaving £76 7s., or 1527 shillings, for 1200 bottles of medicine. I do a lot of work amongst the poor, and I only wish I could get paid at this rate for all of it. I also give you the figures for the past quarter of this year:—

	1895. Visits.	Quarter salary.
January	117	£31 14s.
February	138	
March	96	
	351	

It must be remembered that the influenza epidemic was raging during these months and it struck down people wholesale in my district. Although this last quarter does not pay, I have no doubt that I shall make up for it in the summer. I may add that the above work was conscientiously done (and not by an assistant) and proper drugs supplied. If it were not so I should have no chance of keeping up the list to its present number. When influenza was about I was very busy, visiting in February between 50 and 70 patients daily. If other medical men would give their experience we could then form some idea if "sweating" exists. Abusing the society without arguing on facts will, I am afraid, not carry conviction to many minds.

Now, with regard to the abuses which undoubtedly do exist—viz., touting, people joining who are in a position to pay proper fees, &c. In my experience these cases form a very small percentage of the whole; they are not countenanced by the head office, and are due to the energetic indiscretion of the agents and collectors. The points to be considered are: Is "medical aid" a system which ought to be encouraged? Does it encourage thrift amongst the working classes? Do we medical men get more money (to put it bluntly) out of that class as a whole by this method than by charging ordinary fees? If these questions can be answered in the affirmative, and in these days when political economy and thrift among the working classes are so much talked about it will require a good deal of evidence to prove a negative, then I submit that the abuses complained of can and ought to be remedied. I have never done any parish work, but I know some friends who do, and from what I have seen of it I have come to the conclusion that I am better paid than the "parish doctor" in proportion to the work. There is another point, with your permission, I should like to say something about, and that is the fees paid by the poor people. I observe that the South-West London Medical Society has passed a resolution condemning the practice of charging fees as low as 1s. 6d. Of course, there is nothing to prevent the members of any society passing any resolution they choose, but if they think that medical men who carry on practice in a poor district ought not to charge low fees, such as 6d. and 1s., I can only say they are absurdly mistaken. I fail to see how a working man with wife and family earning between 20s. and 25s. a week can afford to pay 1s. 6d. for medicine and 2s. 6d. for a visit. The fees must be regulated according to the means of the patient, and it is impossible to lay

down a hard-and-fast rule. It seems a pity that "A General Practitioner" sneers at medical men who charge low fees by using the expression "valuing his services" and "estimating his capabilities at 1½d. per week." It is nonsense to say that we are "degrading the profession" by attending the poor at fees they can afford to pay. I thank God, Sirs, that I am able and willing to do it, for I take it to be impossible to degrade our profession by such noble work as healing the sick and helping the poor. I am afraid some of your correspondents think that the public exists purely for the benefit of the profession; I am inclined to think that the profession exists for the benefit of the public. Although I have spoken as above in favour (in accordance with my experience) of "medical aid," I do not consider myself bound to stick up for it through thick and thin, and am quite open to conviction, though at the same time mere abuse will not affect me.

For obvious reasons I do not desire my name to be published, but enclose my card.

I am, Sirs, yours faithfully,

London, S.W., April 15th, 1895.

ONE INTERESTED.

To the Editors of THE LANCET.

SIRS,—In view of the attacks made on the above association in your columns, I ask permission to offer a few observations on the matter, having acted for more than two years as one of its medical officers.

I may premise my remarks by a concise rehearsal of the articles of my belief on the subject of clubs: I believe the less a medical man has to say to them the better, they being simply a development of trades unionism for the purpose of extorting unjust terms from a profession too incoherent and individually selfish to resist such. Unfortunately, however, one is confronted with the awkward fact that a considerable portion of the population consists of persons either too poor to pay even the lowest medical fees (especially when illness is protracted or work scarce) or too dishonest to pay anyone. Clubs are therefore a necessity—an unpleasant one no doubt, but a satisfactory alternative to bad debts. This being so, the question arises, "What is a reasonable club fee?"

As the London and Manchester Industrial Assurance Company has been pilloried in your columns, it being alleged to be a system of "sweating" medical men, I would challenge those who make these charges to adduce examples of "sick clubs" or benefit societies which pay a higher rate of remuneration than one shilling per quarter per member. This is, I believe, the fee fixed by the Foresters, Oddfellows, and other societies, the medical officers of whom, so far from being ashamed of their connexion with such, are in very many cases careful to note such appointments in the pages of the Medical Register and directories. Sick clubs in connexion with various churches and chapels offer even a smaller remuneration; nevertheless, I find that my medical neighbours are content to act as their medical staff without remonstrance.

Passing from the question of fees I shall now proceed to the charge of "touting." Is it to be understood from the grave charges which have been made that the *modus operandi* of the agents of the London and Manchester Industrial Assurance Company consists in going from door to door, libelling all medical men except their own medical officers, who approve of or connive at such unwarrantable action? I do not for one moment believe that such a charge can be substantiated. Isolated cases of improper solicitation by agents may, and I have no doubt do, occur, nevertheless I believe such to be the exception and not the rule. Further charges against this company are that it is controlled by laymen for their own aggrandisement, and combines life assurance with the providing of medical attendance. Are the Foresters and other benefit societies managed by members of our profession, and do they exist merely for the relief of the sick? No one in their senses would assert such. Before assuming that it is unprofessional for a medical man to accept office from a lay body, it must first be proved that such body either calls on him to perform duties unbecoming a professional man, remunerates him insufficiently, or treats him with a want of courtesy or respect due to the profession in general or himself personally. Another alleged grievance against this association is that when members join such a society they sever their connexion with their old and tried medical adviser. I presume this objection applies with equal force to a great many other medical clubs. Some time since a slate club was formed in my district by a

pseudo-philanthropist. Under the mellowing influence of a "high tea" gratuitously supplied many members were enrolled. Their medical supervision was confided to a medical neighbour admittedly on the ground that he had several "shops" in various parts of the district, and numbers of my patients were thus involuntarily placed in the hands of this shopkeeping member of the profession. I have shown that the fees paid by the London and Manchester Industrial Assurance Company, if small, are equal or in excess of those paid by other societies offering medical assistance to the poor; while, so far from its medical officers being, as one of your correspondents alleges, "in bondage," I most emphatically assert, from my own experience, that they are free from any lay dictation and are treated with the utmost courtesy. So far from discouraging such an undertaking, I believe it to be deserving of support, as it does for us what we appear incapable of doing for ourselves—viz., evolving a scheme by which the really necessitous classes may obtain medical relief on reasonable terms.

I am, Sirs, yours faithfully,

April 11th, 1895.

FAIRPLAY.

To the Editors of THE LANCET.

SIRS,—Let me quote from the *Devon Evening Express* a few words from a report of a recent inquest, which illustrates well the baneful results of "touting" under the "medical aid" system, as mentioned in Mr. A. M. Moore's letter which appeared in THE LANCET of the 13th inst. "The Coroner: Was the child insured?—A.: Yes, sir, from birth; I did so to keep the insurance man away.—Asked to explain the latter statement, witness said the insurance agent kept bothering him to insure the child's life, and he thought the easiest way out of it was to do so. (Laughter.)" There can be no doubt that the touting exists, and the evidence of it, though laughable to the public, has its most serious side for the medical profession.

I am, Sirs, yours faithfully,

Elstow, Exeter, April 8th, 1895.

M.D.

ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Will you allow me to call attention to the fact that the possible dangers arising from imperfect admixture of chloroform and ether in the A.C.E. compound anæsthetic, so ably demonstrated by Dr. Truman, may be obviated by nebulising the mixture in Oppenheimer's globe inhaler or some similar apparatus; as also that by using nitrous-oxide gas as the atomising agent with ether alone (by preference) you get an ideal anæsthetic, scarcely any cyanosis, speedy insensibility, rapid recovery, and, so far as my experience goes, no sickness?—I am, Sirs, your obedient servant,

CHARLES BELL TAYLOR, M.D.,

Surgeon to the Nottingham and Midland Eye Infirmary.

April, 1895.

ANÆSTHESIA FOR LOWER ANIMALS.

To the Editors of THE LANCET.

SIRS,—Attention was recently drawn to the urgent need there is that all lovers of animals should set their faces against operations being performed upon horses and farm stock without recourse being had to the alleviating influence of anæsthetics. Just as surgery now practised upon the lords of creation has widened its boundaries within the past few decades to an enormous extent, so have operations upon their more lowly fellows—the beasts that perish—been multiplied and been rendered more complicated. In the older days the mere suggestion of chloroforming a horse or a sheep was received with a smile, but owing to the advent of wiser counsels the more enlightened among stock breeders have at the present day adopted chloroform as a routine companion to the red-hot iron or the knife. Mr. John Moore, M.R.C.V.S., of Manchester not long ago communicated a valuable article upon the subject. In it he stigmatises operations done without chloroform as "veritable and revolting acts of cruelty and butchery," and indicates that many veterinary procedures are rendered failures because chloroform is not used. Mr. Fleming, himself a strong believer in the routine employment of chloroform for all save the most trifling of operations, assigns as the causes which prejudice men against its use the supposed difficulty of obtaining and maintaining anæsthesia and the attendant expense. Possibly such reasons

had weight in former days; at present they have none. Methylated chloroform is by no means an expensive luxury, and the admirable apparatus which Krohne and Sesemann make for veterinary use in the stock farm at once renders chloroformisation simple and entails quite a trivial expenditure, as the quantity of the drug required is very small. This apparatus is in principal a large Junker's inhaler, with face-pieces specially designed to meet the requirements of the stock farmer. Nor, as a matter of fact, is even this apparatus necessary; an apparatus constructed from a nosebag answers perfectly well. Horses perhaps require more chloroform than other animals, and the cost in their case is estimated by Mr. Moore at 2d. per head; cattle cost far less. The troublesome stage of excitement which to the inexperienced proves a bugbear can, as Fleming and others have pointed out, be lessened or abrogated by the use of a less diluted vapour during the early stages of the anaesthesia. If "crowded on" at first, little difficulty ensues in the later stages. The danger from overdosage in horses and cattle seems, if the most experienced of our veterinary surgeons are to be trusted, quite minimal. Indeed, it is said you cannot kill a horse by chloroform inhalation. For sheep, which are subjected to most painful mutilations, chloroform can be easily employed. How any humane person can deny these patient dumb things so slight a mitigation to their teleological existence it is difficult to say, unless we admit, with the poet, that "only man is vile." The operation is better performed and fewer hands have to be employed when chloroform is used. For castration of calves also and the "ringing" both of bulls and swine chloroform has been widely used, and has rendered the procedure at once more easy and more scientific. Firing of horses is now, notably in the case of favourite hunters, commonly performed under the anaesthetic, and certainly no man can be called merciful who is not "merciful to his beast" in the matter of chloroform. A further point, and one of no slight importance, is the much better results which follow operations undertaken upon animals which have been chloroformed. In a report before me I find that lambs so treated compared most favourably with those subjected to the barbarous handling in vogue in less enlightened farms, while the same may be said with regard to horses and cattle. The rough-and-tumble butchery of the pre-chloroform era of veterinary surgery has little to commend it when compared with the precise methods and accurate results obtained by scientific exponents of veterinary surgery such as can be arrived at by the aid of chloroform. If owners of horses and farm stock and of pets once realised that chloroform for their animals meant not only immunity from pain, but also ensured better results and less risk of failure or accident, there is no doubt that they would insist upon the use of the anaesthetic, and would see that it was given efficiently and in the best way.

I am, Sirs, yours faithfully,

ANÆSTHETIST.

April 10th, 1895.

FATAL HUMAN GLANDERS FROM A NON-FATAL CASE IN THE HORSE.

To the Editors of THE LANCET.

SIRS,—Mr. Garstang's interesting paper on Glanders¹ is a valuable addition to our knowledge of the causation and treatment of that disease. In it he proves that a non-fatal case of discharge from the nostrils of a horse is capable of producing glanders in the human subject, a fact which, though not unknown, is too often lost sight of by medical practitioners as well as by the public. For that reason the following fatal case may be of interest. On May 26th, 1894, I saw a man in consultation with his usual attendant. He then showed the well-known signs of chronic glanders, and on making inquiries I found that a short time before his attack he had been in charge of a horse that suffered from symptoms of general disease with nasal discharge, from which, however, the animal recovered. The point of infection in our patient was on the upper lip, and the submaxillary and cervical glands became quickly affected, those of other parts of the body being subsequently implicated. The patient was afterwards removed to Cork, where he died with symptoms of pyæmia. Dr. T. G. Atkins of that city saw him before his death, and independently made a similar diagnosis of chronic glanders. A medical man who examined the patient also acknowledged that the attack was one of glanders, but did not think that it could have been con-

tracted in the way I have mentioned, as in his opinion the disease is always fatal in the horse. Mr. Garstang's paper has effectually answered the latter objection, and I briefly allude to the above case as it supports the view so clearly propounded in the article referred to and proves the need for greater care in the handling of horses suffering from any discharge from the nostrils.—I am, Sirs, yours faithfully,

Bandon, April 11th, 1895.

J. J. WELPLY.

THE PREVENTION OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—Seeing so much in THE LANCET lately as to the etiology and prevention of small-pox, I think a short account of the ideas entertained by the Dyaks of Borneo on the subject, and of the mode of application of them by one of their number, might prove amusing, if not instructive, to some of your readers. In the year 1889, while acting as principal medical officer to the Sarawak Government a case of small-pox occurred among the Sarawak Rangers, a corps composed of Sea Dyaks. The case was isolated, and the whole corps (as I thought) was vaccinated. Three or four, I forget which, other cases occurred, only one of which was confluent, and which proved fatal. I afterwards got the following history of this case from the sergeant-major. The Dyaks believe that a devil presides over each epidemic disease, but are not so smart but that a clever Dyak might trick them. While I was vaccinating he slipped over from the unvaccinated to the vaccinated group without being noticed, and told his companions that in such a crowd the "small-pox devil" would never notice it, but think that he had been vaccinated with the rest. The Dyaks said that the "devil" was sharper than the man; I attributed it to non-vaccination, but the Anti-Vaccination League would probably say it was a mere coincidence.—I am, Sirs, yours truly,

J. WIDMER ROLPH,

Medical Officer, Pahang Corporation, Limited.

Kuantan, Pahang, March 6th, 1895.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—Dr. Campbell Black infers from my letter more than he has any right to do, and evades my contention. I stated that so far as I had been able to ascertain the title of "Dr." as applied to medical men was a "courtesy" one, on a par with that of "Rev." amongst divines, and that no legal question was involved. I also pointed out that Dr. Black would do better to spend a little money in satisfying himself as to the legal question if still in doubt about it. I am so satisfied on the point that I do not care to do it. I very seldom use the title of "Dr." myself, and have a door-plate inscribed "Physician and Surgeon." If, however, this quibble about a courtesy title is carried much further I shall be inclined to ask whether the M.D. confers the title of Physician without the sanction of one of the Royal Colleges. I believe it used not to do so. The whole squabble appears to me puerile and unworthy. Why cannot Dr. Black and others unite with us in our battle against real abuses, such as that of "medical charities," that of "medical aids," and the general tendency to depreciate and undervalue medical services? Surely this would be better than tilting against windmills, and if Dr. Black will do this I care not whether he calls me "Dr." or "Mr."; but he should not assume a knowledge of the amount of brass in my door-plate from a general statement of opinion on an open subject.

I am, Sirs, your obedient servant.

Loughborough, April 11th, 1895.

J. B. PIKE.

P.S.—I may say that in communications from the Royal College of Physicians of Edinburgh I have repeatedly been addressed as "Dr.," and, knowing the position the College takes on the subject, have written to complain of the indignity, which, however, shows the common custom of using the courtesy title.

"A MODERN IMMORTAL."

To the Editors of THE LANCET.

SIRS,—In an annotation headed "A Modern Immortal," which appeared in THE LANCET of Feb. 9th, 1895, the credit

¹ THE LANCET, March 16th, 1895.

of the discovery of anæsthesia is given to Morton of Massachusetts—"Morton, to whom belonged the immortal honour of having been the first to demonstrate that prolonged anæsthesia could be safely produced by means of ether." It is simply for the sake of justice and truth that I write to declare that there is strong evidence to show that Dr. Crawford W. Long, practising in the town of Jefferson, in the State of Georgia, deserves the credit of having been the discoverer of prolonged anæsthesia by means of ether. His first operation under ether narcosis was done in March, 1842—four years before the time of the supposed discovery by Morton. The facts of the case are well brought out by Dr. Luther B. Grandy,¹ of Atlanta, Va., in an article in the *Virginia Medical Monthly*, October, 1893, by means of which he was forced into a contest with Dr. W. R. Hayden (of viburnum compound fame), who bitterly urged the counterclaim of Morton. As an evidence of the great amount of doubt in regard to Morton's claims of priority there is a white marble monument in Boston (where Morton publicly made known his supposed discovery) which bears the simple inscription: "To the Discoverer of Anæsthesia." Does that show that it is acknowledged, even by the people who saw what was done, that Morton was the discoverer? On the contrary, there stands in Paris a marble statue of Crawford W. Long, an enduring witness to the truth; and the Georgia Legislature will place his statue in the National Gallery of Statues in Washington as a fitting recognition of the immortal greatness of her son. Marion Sims published a piece on the subject in the *Virginia Medical Monthly*, May, 1877, in which it is demonstrated beyond practical doubt that Long is the true "modern immortal." It is in the interest of all science that the truth be known, and that not the slightest deviation from it be allowed; and I hope that in this case the truth will surely prevail. *Fiat justitia, ruat cælum.*

I am, Sirs, yours very sincerely,

Lynchburg, Va., March 13th, 1895.

S. P. PRESTON, M.D.

"PROVISION FOR YOUNG IMBECILES."

To the Editors of THE LANCET.

SIRS,—As a guardian of the poor in a country union I ask to be allowed to say a few words in confirmation of the needs of which Dr. Shattleworth has written. On coming to a country union from the metropolitan district I was astonished to find that no provision was made for idiots or imbeciles beyond the county lunatic asylums for adults. I found idiot children running about in the sick wards of the workhouse without any special care or attempt at training, while in a London union they would at once have been sent off to Darenth. This difference in the mode of treatment between London and the country I am utterly unable to understand; the children can only become worse till they are hopeless and have to be sent to the asylum for adult lunatics. Inquiries at all the county asylums for idiots showed that two or three were willing to take pauper children who were thought to be capable of improvement, and after much trouble I succeeded in getting two sent to the asylum at Star-cross, a journey of great expense, and with accommodation entirely inadequate to the needs of all the southern counties. As the subject has been discussed by Poor-law authorities during many years it is almost incredible that no action has yet been taken; we can only go on stating facts till the county councils are impressed with the need of establishing asylums sufficient for the needs, not only of pauper children, but of others also who by timely training might be saved from becoming life-long burdens on the rates. But in asking for educational asylums I would not limit the demand to the most hopeful of the children in workhouses. I would like to see all idiots and imbeciles removed, for the nurses in those institutions are far too few to be able to take proper care of them, and are already in almost all instances overworked. Let the worst as well as the best among them be removed and classified in an asylum, where each and all could have the best care and not be placed, as I have seen them, in wards with lunatics and adults. I would only add that the opening of many more schools or homes for the feeble-minded, who can hardly be classed with either idiots or imbeciles, is urgently called for, the two or three already existing being utterly inadequate for the number of such to be found in every workhouse and pauper school, and who are

unable to benefit by the instruction given there. I may add that I am convinced the numbers far exceed those given in the recent report of the Local Government Board.

I am, Sirs, yours faithfully,

April 11th, 1895.

LOUISA TWINING.

"THE RESULTS UPON THE TESTICLE OF LIGATURE OR DIVISION OF THE VAS DEFERENS."

To the Editors of THE LANCET.

SIRS,—At the conclusion of his interesting lecture on the above subject, published in THE LANCET of April 13th, Dr. Joseph Griffiths deals briefly with the matter as affecting man, and sums up as follows: "It would hence seem that mere division, ligature, or occlusion of the vas deferens does not lead to atrophy of the seminal tubules; but if in case of division there is, in addition, some damage to the other structures of the cord, destructive changes, followed by atrophy and ultimate disappearance of the seminal cells, are liable to occur." As having a practical bearing upon this question, may I be allowed to call attention to a short communication which I published in THE LANCET of March 7th, 1891, upon "The Effect of the Division of Certain Constituents of the Spermatic Cord" &c. ? In that communication I recorded three cases in which to my knowledge not only the vas deferens but also the spermatic veins and artery, with the other structures which go to complete the formation of what is commonly designated the spermatic cord, had been completely divided without any apparent damaging effect upon the nutrition of the testicle, a condition of things of which, so far as I am aware, no previous mention had been made in surgical literature. From these cases and from some other evidence which had come under my notice I drew the following deduction: "that division of the vas deferens, spermatic veins, and spermatic artery [i.e., practically the whole spermatic cord] is not necessarily followed by sloughing or even by subsequent wasting of the testicle provided that a perfectly aseptic condition of the wound is maintained." At the date of my communication the time which had elapsed since the division of the structures indicated was not, perhaps, sufficient to permit of a reliable prognosis as to the final condition of the testicle in these cases. I have, however, quite recently had an opportunity for examining one of the patients concerned, and found the testicle (more than four years after the division of the cord) of normal size and consistence, and with its peculiar sensation indistinguishable in character and intensity from that of the opposite organ. The fact that I am unaware of any similar instance having been recorded is my main excuse for troubling you with this letter.

I am, Sirs, yours faithfully,

WILLIAM H. BENNETT.

Chesterfield-street, Mayfair, W., April 15th, 1895.

"PULEX IRRITANS."

To the Editors of THE LANCET.

SIRS,—In your annotation in THE LANCET of April 6th regarding the means of destroying this irritating pest one plan not mentioned upon one occasion gave exceptionally good results. The matting of my bungalow in Java suddenly became infected with myriads of fleas, so numerous that the legs, covered only with loose white trousers, were instantly coated with a living mass. Strong quassia tea was freely used as a wash to the mat-covered floors, and the swarms vanished as by magic.—I am, Sirs, yours truly,

April, 1895.

RICHARD NEALE, M.D. Lond.

"ILLEGAL VACCINATION."

To the Editors of THE LANCET.

SIRS,—In the annotation under the above heading in THE LANCET of April 13th you deplore the increase of irregular and inefficient vaccination. That such an increase is a stern reality and fraught with most pernicious consequences must be the experience of every general practitioner, however limited his experience may be. After pointing out the extreme laxity with which the term "successful" is used in its application to vaccination you further add: "The small-pox statistics of the past decade would have presented a different aspect than they

¹ *Virginia Medical Monthly*, October, 1893, February, 1894, March, 1894, and June, 1894.

do had vaccination been carried out by all practitioners with the efficiency demanded by the Local Government Board," and you express a desire for some definite pronouncement on this subject in the forthcoming report of the Royal Commission. Now, if this august body should advocate the abolition of vaccination as a compulsory measure this decision would be held by many to be distinctly condemnatory of the Jennerian theory. But would the enforcement of such a recommendation be of any material detriment to the cause of vaccination? Probably not. In fact, probabilities point in the opposite direction. If vaccination was purely voluntary, the consequences would be that those who submitted to it would do so from a firm belief and conviction in its efficacy as a protective, and with a view to procure the desired result would use their best endeavours to have it performed thoroughly and efficiently, and not in the perfunctory manner in which it is now so often done simply to meet a Parliamentary requirement. Under present circumstances, from the inefficient way in which the operation is often carried out, it is well nigh impossible for the general public to form any just estimate or in any way appreciate the true protective value of vaccination against small-pox, for there are hosts of individuals going about their daily avocations sincerely believing that they are almost absolutely proof against their dreaded foe, and each one of these individuals who is struck down by small-pox is regarded by the general public as a further proof of the uselessness of vaccination because he has been vaccinated and is yet afflicted, whereas in very many cases the operation performed on him was about as efficacious as in ancient days was the assumption of an amulet with mystic rites. It is obvious, then, that the larger the majority of the efficient cases out of the total of those operated on the less must be the difficulty of the public in recognising the true value of vaccination as a protection from small-pox, for they will be unable to point to vaccinated patients among the sufferers. Hence in years to come the more efficient performance of vaccination—and the more efficient because it is voluntary—must lead to a greater prominence of its real merit, and the general public will learn from living object-lessons to believe in a theory which a beneficent Government has failed to establish by legislation.

I am, Sirs, yours faithfully,

Worthing, April 13th, 1895.

W. T. WYATT.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Manchester Chamber of Commerce on Lead Poisoning.

ON JAN. 5th attention was directed to a case of lead poisoning at Newton Heath, where evidence was given at the inquest as to the conditions under which work was carried on. At the meeting of the Chamber of Commerce on the 10th inst. the question of dyeing with chromic lead colours was brought up. The Chemical Sectional Committee laid certain resolutions before the Board, illustrated by a number of sample hanks of yarn which had been dyed by the chairman of the committee—some with chrome lead colours, the rest with other colouring materials—for purposes of comparison. The Board substantially adopted the resolutions of the Sectional Committee as follows: 1. "That the dyeing of goods with chrome lead colours, and especially the handling of goods dyed with these colours, is injurious to the people employed, unless special provisions are made and due precautions taken, and unless the workpeople heartily coöperate in making use of the appliances provided for their protection." 2. "That in view of the fact that the wearing of goods next to the skin coloured wholly or partially with chrome lead dyes under certain conditions may be injurious to health, it is desirable to substitute these dyes by others derived from innocuous colouring matters of similar colouring properties." 3. "That it would be an injustice to the dyeing trade to place any restrictions upon the colouring of goods by chrome lead colours unless such restrictions are also extended at the same time and to the same degree to the importation to this country and its colonies of such coloured goods, also to the dyeing trade of India, in which country very considerable quantities of goods are so dyed, one dyeworks alone being stated to turn out 20,000 lb. of yarn per day dyed with chrome lead colours." 4. "That the attention of merchants and their clients be called to the injurious effect of chrome

lead colouring materials, and to the existence of others less injurious to health, producing similar colour effects, of which there are several." Commenting on this discovery of a fresh Indian trouble the *Manchester Courier* says: "The dyeing of cotton goods with chrome lead colours appears to be fraught with a double share of the evils of lead poisoning." It not only injures the health of the workpeople employed, but "it is capable of slowly poisoning people who wear cloth thus dyed next their skin." These facts have evidently impressed the mind of the Chamber, and "the directors warn merchants and their clients of the baneful influences which lurk in tissues displaying the gaudy colours derived from chrome lead," and call their attention to the existence of other less injurious colouring matters which might be substituted. As the *Manchester Courier* says: "Lancashire manufacturers might be depended on to make the change if the matters rested with them alone." But the compliment is a somewhat doubtful one, for it is equivalent to saying that they would do right if there were no temptation to do wrong. Unluckily, India is a formidable competitor, *ergo* the third resolution, that it would be an injustice to restrict the use of these chrome-lead dyes unless it was done all round; and the paper asks: "What would it profit this country for its merchants to sacrifice the profits of chrome-lead dyeing if Indian and other competitors only took advantage of their conscientiousness to make a greater use of the poisonous colours than ever?" It does not believe the Anglo-Indian Government will "surrender all at once to this challenge of the Manchester Chamber of Commerce on the subject of this free trade in lead-poisoning," so the poor manufacturers, it is to be feared, must let their conscientiousness go. When commercial interests are in conflict with ethics and morals the latter run much risk of defeat; but it is a sorry doctrine that because you poison your neighbour I will do likewise.

A Publican's Responsibilities.

IN MY last communication a conversation was mentioned that took place at an inquest between Mr. Smelt, the deputy coroner, and a jurymen as to supplying drink to a drunken man, in which some strong remarks were made by the former on the responsibility of the publican if the man came to his death as a result. Since then the publican has had to appear at the City Police-court, charged with selling beer to a man already drunk and with permitting drunkenness. According to the evidence the man Flanagan and his wife had some drink together in a beerhouse. The wife then went home, but he adjourned to the defendant's, where he had a further quantity of drink, and by eleven o'clock was very drunk. In spite of this the publican's wife served him with some porter in a bottle, and suggested to another customer, who was also drunk, that he should see Flanagan home. It was stated at the inquest that as the men were going up the steps at the Jersey-street workmen's dwellings Flanagan fell back and received injuries to the head from which he died. At the court the widow said he had suffered from heart disease, and had been upset by the recent death of his father. It was said also that he was a good deal excited at the last public-house he visited, and in the court the story of the fall was somewhat modified, as his guide said he sank down or collapsed instead of falling backwards, as stated at the inquest; but at any rate he fell down the steps and fatally injured his head. The defendant's solicitor contended that heart disease and not drink was the cause of the fall, and that it was the existence of the former that led the landlady to send a man home with him. How she ascertained the condition of his heart is not stated. The publican said he was sober, but nothing seems so difficult for a publican as to make out the diagnosis of drunkenness. The summons was dismissed, the presiding magistrate saying there was a doubt in the case, and they had decided to give the benefit of it to the defendant.

Paupers' Tea.

IN February last the *City News* published a new and improved dietary table which had been prepared for the Salford Workhouse. The weekly cost of food for old men was to be raised from 1s. 6½d. to 1s. 11½d., that of old women from 1s. 4½d. to 1s. 9½d., and of children up to sixteen years of age from 1s. 9½d. to 2s. 3½d. This amounts to an increase of about 20 per cent. on the old expenditure, but, as the editor says, "no one would charge the guardians with extravagance even under the increased scale." In the issue of the 6th inst. it is stated that the improved dietary

does not appear to have come into operation yet, but the guardians are preparing for it "by effecting economies in other directions." It states that one of the new guardians drew attention to the quality of the tea still supplied to inmates, by whom it is said to be irreverently called "munko." It is made in the proportion of one ounce to eleven pints of water. The new guardian, whose taste cannot as yet have been educated up to workhouse tea, says "the compound is unfit to drink," and complains that the guardians have contracted with a retail dealer for tea at twopence a pound less than last year—i.e., at a shilling a pound instead of one and twopence. It seems that the strength of the tea was overstated in February, for instead of eight pints to an ounce nearly eleven pints of water are used. "Three-farthings worth of tea to eleven pints of water!" We are often told of the injurious effects of strong tea, from which, however, the Salford guardians do their best to save their "inmates," being due to the tannin and bitter extractive dissolved up by prolonged infusion. This is apparently disbelieved by the authorities at Withington, one of our largest local workhouses, and one supposed to be under the most scientific and philanthropic management. Here the tea is put into a canvas bag, dropped into the copper or cauldron, and infused—for three minutes or for five so as to get as little tannin as possible? By no means. They want to get all, tannin, extractive, and anything else that will come out, so it is infused for forty minutes! But although at this workhouse an ounce and half are used where Salford uses an ounce, the tea is said to be "very bad"—so bad, indeed, that the old women do not take milk with it, as it would destroy all flavour that might remind them of tea. The ratepayers should be remembered, and no extravagances indulged in by sentimental guardians; but with regard to tea a pitiful economy seems to be used.

The Corporation and Infectious Disease.

Hitherto the treatment of infectious disease in Manchester has been carried on by the Royal Infirmary under an arrangement with the corporation. For many years this plan has worked well, and the infirmary has done much to earn the gratitude of the citizens by the disinterested labour it has gone through in relieving the city of a great responsibility. The recent threatened invasion of cholera, and the serious epidemic of small-pox through which we have passed, made it necessary for the city to provide increased hospital accommodation for infectious disease on a large scale, in addition to that afforded by the infirmary at the Monsall Fever Hospital. These and other circumstances have gradually led to the opinion that it will be best for the city to acquire the hospital from the infirmary, and take charge itself of the treatment of infectious disease. The small-pox epidemic was a costly visitation, for it led to the expenditure by the corporation of £16,706 for new pavilions at Monsall, of £2204 for a temporary hospital at Withington, and of £4668 for a supplementary convalescent home at Clayton. The question of the transfer, though in a nebulous condition at present, is sure to come prominently forward before long, and so also is the necessity for a small-pox hospital at a sufficient distance from population. There has long been a bitter cry from Newton Heath against the treatment of small-pox at Monsall.

April 16th

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

St. Andrews Ambulance Association.

ON April 13th Dr. Alexander Thom's class, which has been conducted under the auspices of the St. Andrews Ambulance Association, along with his ordinary yearly volunteer class, was examined by Dr. Simpson, medical officer of health for Perth. Fifteen candidates presented themselves, six of them being for second examination with a view to obtaining the medallion. All the candidates passed, and the examiner expressed himself as being highly satisfied with the general knowledge displayed and with the acquaintance shown in practical bandaging and stretcher drill. As six of the candidates were constables of police the public may be satisfied that in this part of Scotland at least mistakes are not likely to be made between cases of illness and drunkenness which arrive at the police cells.

Unwholesome Food.

During March 4049 lb. of beef, 43 lb. of mutton, 140 lb.

of "offal," and 757 lb. of fish were seized by the Aberdeen sanitary inspector and destroyed by magistrates' order or with owners' consent as unfit for human food. During the quarter January—March the city analyst, besides examining five genuine samples of butter, one of milk, and four of oatmeal, found two specimens of butter containing 60 per cent. foreign fat, one sample of water "unfit for drinking or cooking," one specimen of milk with "metallic impurity of non-injurious character," one of oatmeal containing 7 per cent. foreign granules, and another containing 3 per cent. foreign granules.

Proposed Memorial of a Donor of Medical Bursaries.

The late Mr. George Thompson of Pitmedden presented to the University of Aberdeen the sum of £6000 in 1882 to found medical bursaries, and a further sum of £3000 in 1886 to institute a travelling fellowship in medicine. Emeritus Professor Struthers writes from Edinburgh to an Aberdeen newspaper suggesting that a marble bust of Mr. Thompson, or a replica of his portrait in Aberdeen town hall, should be obtained for the hall of the University. In the course of his long career Mr. Thompson was Lord Provost of Aberdeen for three years, and represented that city in Parliament for five years.

The First Instance of Cremation in Scotland.

The remains of Mrs. Elizabeth Haining Laurie were cremated at the Western Necropolis, Maryhill, on Saturday afternoon last, at her special request. This is reported to be the first case of disposal of the dead by burning in Scotland.

A Medical Volunteer Camp.

The 1st Aberdeen Medical Staff Corps, under Surgeon-Captain Macgregor, will go into camp at Birkhall, Ballater, on Thursday, May 30th, and will remain under canvas till the following Monday.

Of 48 candidates 27 have passed the medical preliminary examination at the University of Aberdeen.

April 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Poor-law Guardians in Ireland.

THE *Dublin Journal of Medical Sciences* of this month contains an interesting paper by Dr. Dickson on Women as Poor-law Guardians. It would appear from it that the number of female guardians in England has very greatly increased since a woman was, for the first time, elected at Kensington in 1875. In 1887 there were fifty women guardians, while there are now in England no less than 800. In Ireland we are differently circumstanced, for the Act of Parliament of 1838 relating to the Poor-law administration here contains the distinctive expression "male person." No such phrase is to be found in the English Poor-law Amendment Act of 1834 and accordingly no legal objection to the election of women has ever existed in England. It is interesting to note that women seem to have failed to discover their eligibility in this regard for more than forty years.

Mercer's Hospital, Dublin.

I regret to note the death of Mr. McGuckin, who was long and honourably known as the registrar of this hospital. He was well known to many of the medical profession in Ireland and, indeed, also to the general public, as the father of the eminent tenor, Mr. Barton McGuckin.

Small-pox in Enniscorthy.

An outbreak of small pox has recently occurred in the town of Enniscorthy, the disease having been transferred in all probability from Dublin, for the man in whom it first showed itself had paid a visit to the metropolis exactly twelve days before. Although he remained there but a few hours, during which he drove across the town to return with his wife, a surgical convalescent from a hospital to which small pox is not admitted, he seems to have caught the disease and carried it home with him. Since that date—i.e., during the last five weeks—twenty-four cases have occurred, of which one proved fatal. It is interesting to note that the patient, a child eleven months old who died, was one of five unvaccinated children, all of whom were attacked with the disease in its confluent form, in marked contrast to the mild variety which afflicted the patients who had been vaccinated. The local authorities have made every effort to cope with the disease by revaccination, isolation, &c. The arrangement for the latter proved,

however, quite insufficient, so that it has now become necessary to build special sheds in the neighbourhood of the fever hospital for that purpose.

The Royal College of Surgeons in Ireland.

The council of the Royal College of Surgeons has accepted the gift of a portrait of Mr. Henry Gray Croly, senior surgeon to the City of Dublin Hospital and formerly President of the College. The portrait, which is at present being exhibited at the Royal Hibernian Academy, was presented by the influential committee who organised this testimonial to Mr. Croly.

Intermediate Examination in Natural Science.

A medical man writes a sensible letter to the local daily journals in which he suggests that elementary biology should be included amongst the subjects for examination by the Intermediate Commissioners in 1896. Elementary botany has hitherto been required, but from girls only, while zoology has been altogether omitted. Many of the universities and licensing bodies specify biology as a compulsory subject. It would certainly smooth the path of the medical student who had adopted the programme of the Intermediate Commissioners if elementary biology had been one of the subjects in their curriculum.

The Calamity at Mountstewart.

Not alone in the north but in every part of Ireland regret has been felt at the calamity in Strangford Lough, by which eight lives have been lost. These, with the exception of two boatmen, were all trusted servants of Lord and Lady Londonderry at Mountstewart House, and persons of experience and character, whose loss will doubtless be much felt. The empty boat has been found, but up to this, the 16th inst., none of its occupants or anything to account for the disaster.

The Battle of the Clubs at Cork.

One grievance the Cork club medical officers complained of was that for a miserable pittance they are obliged to attend not only the club member, but also his family, the latter often including grown-up sons earning quite as much as their father. Not alone that, but the clubs generally regarded all persons dependent on the member as part of his family, and the practitioner was often called on to prescribe for uncles, aunts, and even mothers-in-law. However, I am glad to find that one of the imported medical men is not in sympathy with such a liberal widening of the family circle, and he has adopted what I am sure will prove a very effective method of defining what shall be the smallest amount of work he need do for his equally small remuneration. On being recently called to visit a club member's brother he went without demur, but on the completion of the attendance he very much surprised the member by furnishing him with a bill for medical services rendered. The member was so much unaccustomed to that sort of thing that he actually lodged a complaint against the medical officer at the next meeting of the club. He received abundance of sympathy from his brother members, but some of the more prudent told him that under present circumstances they could not think of fighting with their medical officer. Possibly the hint will not be lost on the other imported medical men, and the clubs may learn before long that certain disadvantages are likely to accrue from the attempt to procure medical services at ridiculously low prices.

The Cork Ophthalmic Hospital.

I have already mentioned that considerable friction exists with regard to the selection of a site for the new buildings. Engineers have given opinions for and against the position which had been all but decided on. The general committee were naturally perplexed, but their difficulties were still further increased by finding that the ladies' committee were waging a newspaper war amongst themselves. Lady Arnott, whose name was prominently identified with the recent successful bazaar, opposed the adoption of the proposed site, and referred to the large sum of money she had been instrumental in collecting. Other members of the ladies' committee promptly replied that Lady Arnott had done good service as treasurer, but that the heat and burden of the day had fallen to the lot of some seventy or eighty lady collectors. The net result of the controversy has been that other sites are under consideration. Lady Arnott has resigned, and the general committee have requested her to withdraw her resignation.

The Conjoint Board of the Irish College of Surgeons and Apothecaries' Hall, Dublin.

Dr. Edward Townsend, Professor of Practice of Medicine

at the Cork Queen's College, has been appointed Examiner to the joint board of the Irish College of Surgeons and the Apothecaries' Hall, Dublin. Comparatively few of the Cork students become candidates for that qualification, but those of them who may present themselves for the examination will, I am sure, be glad to find a professor from their own college amongst the examiners.

The County Kerry Infirmary.

Dr. W. B. Hayes of Tralee has been unanimously appointed surgeon to the County Kerry Infirmary. Dr. Hayes studied in Cork and Dublin, and obtained his degrees at the Royal University of Ireland. He afterwards went to San Francisco, where he enjoyed a lucrative practice, but was obliged to return home owing to the ill-health of his father, Dr. J. Hayes, a highly esteemed practitioner in Tralee and coroner for the district. Dr. Hayes' appointment to the Infirmary is certain to give general satisfaction in the neighbourhood.

The Hospital for Children, Temple-street, Dublin.

Dr. M. C. Staunton and Mr. J. Lentaigue have been appointed surgeons to this hospital.

April 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Anti-streptococcus Serum.

On the 23rd ult. M. Marmorek introduced to the notice of the Société de Biologie the important discovery of a serum which appears to be endowed with curative and prophylactic properties *vis-à-vis* of the diseases caused by the streptococcus. It was found that when that micro-organism was passed many times through the system of the rabbit its virulence was greatly augmented, a culture introduced subcutaneously killing a rabbit in thirty hours with a dose of 0.000,000,000,01 c.c. This exceptionally active microbe retains its virulence in cultures and generates a toxine of vastly greater power than had been prepared up to that date. Previously immunised animals inoculated with this powerful microbe and those which receive a strong dose of the toxine it generates furnish a serum which is preventive and curative in its action. Rabbits which have a few hours before inoculation received a dose of this serum resist the action of the poisonous streptococcus above mentioned. Moreover, the inoculation of the culture may precede the administration of the dose of serum with the same result—survival. M. Roger stated at the same meeting that M. Charrin and himself had vaccinated rabbits and then a horse against the streptococcus, and found that the injection of the serum of these vaccinated animals conferred a certain immunity against the action of the streptococcus. A woman affected with puerperal fever, whose temperature had oscillated around 39°C. for a week, and whose condition was most serious, was given an injection of 8 c.c. of the serum without benefit. The next day double the quantity was injected, and on the third day 25 c.c. were given; on the fourth day the temperature had fallen to normal and remained so, the woman quickly recovering. Another puerperal case, also in M. Charrin's wards, but of a milder type than the first, was similarly cured. What struck MM. Roger and Charrin more particularly was the prompt improvement in the general condition and the sensation of *bien-être* experienced a few hours after the injection. It was noticed also that, contrary to the rule in puerperal septicæmia, the period of convalescence was extremely short in duration, the patients being out of bed in five or six days. MM. Roger and Charrin extended their researches into the region of another disease caused by the same micro-organism—viz., erysipelas. We know that erysipelas, when affecting the adult, is capricious in its evolution, but generally ends in recovery. In the newborn, however, erysipelas is almost invariably fatal. The above-named observers (MM. Roger and Charrin) have recently¹ had the opportunity of treating a case of the kind in the person of a weakly infant weighing 2600 grammes, and reared in an incubator in the special pavilion attached to M. Budin's wards at the Maternité. Recovery ensued in a few days. During the illness the weight of the child had fallen from 2780 grammes to 2600 grammes. Weight was, however, quickly gained, no less than 400 grammes being put on in thirteen days. The method has also been tried on a woman aged twenty-five years, who, twenty days after her confinement,

¹ Société de Biologie, March 30th.

was attacked by pseudo-membranous sore-throat, complicating measles. Bacteriological examination revealed the presence in the secretion of the streptococcus and the staphylococcus. The woman was well in a few days. The serum appears to be quite destitute of toxic properties, for no untoward symptoms were noted during the treatment. M. Marmorek further reports² that he has, in conjunction with Dr. Chantemesse, applied the method to the treatment of forty-six cases of erysipelas. All ended in recovery, excepting in some case in which death was accidental. Twenty-four hours after an injection of 10 c.c. the temperature had fallen, and complete recovery occurred in forty-eight hours. It is stated that this treatment prevents albuminuria consecutive to erysipelas, and that when present the serum treatment promptly effects its disappearance. The profession will await with eager curiosity the further developments of the application of this new arm directed against the inroads of that mischievous germ, the streptococcus. Should M. Roger's hopeful anticipations be realised serotherapy will have made one more step in advance, and suffering humanity will have good reason to be thankful to such ardent workers as Richet and Héricourt, Charrin and Marmorek, and especially to Roger himself, who can claim the credit of the discovery.

The Purification of Filters.

Dr. Guinochet, Pharmacien-en-chef of the Charité Hospital, Paris, has recently indicated the precautions necessary for the continued efficient working of filters, and more especially of the Chamberland-Pasteur apparatus. In the case of ordinary filters the *bougies* must be unmounted, well brushed, and rinsed in cold water, and then plunged, totally if possible—but total submersion is not necessary—for a liberal quarter of an hour in a 1 in 1000 solution of permanganate of potassium. The *bougie* is then removed from the solution, well shaken, and finally rinsed once more in cold water and replaced in the filtering apparatus. The water that filters through the *bougie* is at first coloured, but after a few minutes' working it becomes quite clear, and can be utilised for drinking purposes. This method of sterilisation may be employed for porcelain, stone, or asbestos filters, and is said to be as efficient as it is simple, the permanganate sterilising in the cold every part of the filter. Beyond this it cleanses the porcelain *bougies* by oxidising the glutinous organic matter which chokes the pores. The small quantity of the permanganate that may remain after the sterilising process is over in the pores of the filter is in nowise hurtful to health. But whatever method of sterilisation may be employed the flow is gradually lessened. Dr. Guinochet finds that if after the permanganate process (using this time a 5 per 1000 solution) the same manœuvre be repeated with a 1 in 20 solution of bisulphite of sodium the normal flow was restored. The bisulphite solution is prepared by adding 50 c.c. of a solution (density 1.300) of the commercial salt to 950 c.c. of water. It is as well to add to this solution each time it is used for this purpose 5 c.c. of ordinary HCl per litre. A Chamberland-Pasteur filter may be permanently kept microbe-free by (1) a daily superficial scrubbing with a brush; (2) a weekly (or bi-weekly, if the water to be filtered be very impure) sterilisation with a cold 1 in 1000 permanganate solution; (3) a trimestrial and thorough cleansing with, first, a 5 in 1000 permanganate solution, and then a 1 in 20 bisulphite solution.

A Protest by Hospital Surgeons.

Acting in direct opposition to the Commission de Surveillance of the Assistance Publique, the Prefect of the Seine has, at the instigation of Dr. Seyron (Director of the Assistance Publique), signed the following new regulations: (a) Paris is henceforth divided into hospital districts. A patient cannot in future be received into any other than the hospital of the district in which he resides. (b) The out-patient departments are transferred from the hospital physicians and surgeons and confided to young practitioners who have completed their term of service as *internes*. These regulations, which have not even been submitted for the approval of the Conseil Supérieur of the Assistance Publique, have raised quite a storm, and elicited a lively written protest signed by every hospital surgeon in Paris. The signatories contend that the restriction of the right of the poor hospital patient to choose the establishment wherein, and the surgeon by whom, he may desire to

be treated is a violation of a liberty which every poor man has a right to enjoy. They point out that certain surgeons gain celebrity for certain operations, and they regard the new territorial system as an arbitrary measure *vis-à-vis* of the poor man, who should have as much right as the rich man to choose his own surgeon or hospital. With regard to the dissociation of hospital surgeons and the out-patient rooms, the signatories question if the substitution of young and inexperienced practitioners for themselves will benefit the poor applicants. They maintain that in selecting for admission into their wards the more acute and operable cases they are acting quite reasonably. As for the *chronics*, they say that it is for the Assistance Publique to provide for their hospitalisation and not for them (the surgeons) to encumber their wards with sufferers who may lie therein for months unbenefited. In conclusion, the signatories complain that their advice was never asked in the matter, and they wash their hands of the consequences that are bound to result from the application of what they characterise as a mischievous innovation.

Le Banquet de l'Internat.

This annual function will take place at the Hôtel Terminus on the 20th inst. The *internes* of the Paris hospitals—in other words, the *élite* of the students of the Faculty—will gather to dine under the genial presidency of the ever-popular Professor Tillaux, who will doubtless receive a warm reception from his young friends.

April 16th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Puncture of the Spinal Canal.

At one of the last sittings of the Berlin Medical Society Professor Fürbringer read a paper on Puncture of the Spinal Subarachnoid Cavity. This operation is performed both for diagnostic and for curative purposes. The puncture is made through the ligaments of the third and fourth lumbar vertebral arch by means of a rather small trocar with a long cannula. The fluid must not be aspirated, but must be allowed to flow freely through the cannula. The pain of the operation is sometimes rather severe, but totally disappears after a short time. Professor Fürbringer has made punctures in eighty-six patients more than 100 times without any ill effect. By this means the bacillus of tuberculosis was found in thirty of the thirty-seven cases of tuberculous meningitis, where the diagnosis was doubtful. In twenty-seven of these cases the diagnosis was verified by necropsy. He is therefore of opinion that this operation will become of the same value for the diagnosis of tuberculosis as the microscopical examination of sputum or exploratory punctures of the pleural or peritoneal cavities. In one case of acute idiopathic cerebro-spinal meningitis the presence of pus was recognised. In one case of acute meningitis, for which no obvious cause could be found, the fluid contained an enormous mass of bacteria which appeared to be identical with the pneumococcus. In all cases of increased cerebral pressure the pain was relieved, but only for a short time; in particular, four patients suffering from cerebral tumours felt better after the operation. Professor Fürbringer's results were confirmed by Professor Fränkel, Professor Heubner, and others. Dr. Freyhan said that the proportion of albumen in the fluid obtained by puncture could be easily ascertained. This, he asserted, was of great diagnostic importance, as the proportion of albumen was always greater in cases of meningitis and cerebral tumour than under normal conditions. Sugar was never found in the fluid. In cases of cerebral apoplexy where the blood had penetrated into the cerebral ventricles the fluid was found to contain a large amount of blood; there was much less blood in cases of subdural hæmatoma, and none at all in epidural hæmatoma.

The German Medical Press Union.

A Union of the Medical Press was formed at the last meeting of the German Association, and its rules are now published in the medical journals. Its aims are to raise the position and increase the influence of the medical press and to support its interests on every occasion, especially at medical congresses and meetings. To this end the union makes a claim to be represented on the committees of congresses and to exercise an

² Ibid.

influence on their organisation. It also intends to facilitate the work of the press by appointing special union reporters at the medical societies and providing the journals belonging to the union with these reports. It will also join in protecting the general interests of the profession and the press against encroachments on the part of the authorities and the public. Editors of medical journals which have been in existence for at least two years are eligible for membership. During 1895 the seat of the union will be in Berlin, Professor Eulenburg (*Deutsche Medicinische Wochenschrift*) acting as chairman, and Professor Posner (*Berliner Klinische Wochenschrift*) as secretary. The editors of all the important medical journals have already joined the union.

The Cycle as an Ambulance Carriage.

A new ambulance carriage has been invented by Dr. Hönig of Berlin. It is not drawn by horses or men in the ordinary way, but is propelled by cyclists and consists of a kind of litter resting on a frame with five wheels, three in front in the form of an ordinary tricycle, and two at the back. The drivers accordingly sit one at each end of the litter, which is covered by a removable roof with little windows and a pneumatic bell, so that the patient can communicate with the drivers. Beneath the litter are boxes for dressing materials, instruments for first aid, &c. Dr. Hönig suggests that his invention would be useful in small towns for which a horse ambulance is too expensive. It brings the surgeon and his assistant very quickly to the scene of an accident and enables them to remove the patient to the hospital without loss of time. The general opinion here is that the new system will require a greater proficiency in the art of cycling than the majority of medical men possess. The carriage was shown in the drill-ground of the fire brigade to surgeons attached to hospitals and the police, as well as to officers of police and the fire brigades, and to other gentlemen connected with the ambulance service.

The late Professor Lothar von Meyer.

Lothar von Meyer, Professor of Chemistry at the University of Tübingen, died in that town on April 12th. Although he was not a medical man his name will ever be connected with medical science, and especially with physiological chemistry. He was the first to prove the action of hæmoglobin in the function of respiration, its affinity for oxygen and for carbon monoxide (CO). He also made valuable researches on the poisonous effects of carbon monoxide. Latterly he abandoned medical chemistry and devoted himself exclusively to theoretical chemistry. He was born in 1830 in Varel (Oldenburg) and became successively *privat-docent* in Breslau, Professor in Göttingen, and Professor in Tübingen.

March 15th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Professor Celli on Bathing.

Is it as well known in the British Isles as it is on the Continent that an English physician is the originator of sea-bathing? It is a fact that not before 1750, when Dr. Richard Russell published his treatise on the virtues of sea water (or, to give it its full title, "*De Tabæ Glandulari et de Usu Aquæ Mariæ in Morbis Glandularum*") were the healing virtues of the sea-bath understood or the practice of sea-bathing generally resorted to. Till then there seems to have been a horror of the sea; and, indeed, we know that in mediæval times a compulsory dip in its waters was a sentence often passed on the public offender. In the earlier decades of last century Western Europe suffered heavily under "king's evil," the popular name for that tuberculous affection which scourged all classes, from peer to peasant. Dr. Russell, a Sussex practitioner, had observed that dwellers on the coast, guided by instinct apparently, used to drink of the sea water, bathe in it, even wash their sores in it, and bind them up with seaweed. Having noted the practice long enough to be satisfied of its efficacy, this medical man did not wait for a chemical or physiological theory of its *modus operandi*, but began to prescribe it to his patients with the best results. His treatise, mentioned above, diffused his experience among his contemporaries, so that silently but steadily the English coasts became dotted with villas and cottages, the nucleus hamlets

which, from their sea-bathing advantages, grew into towns. By the close of the century Germany had adopted the practice, then Belgium, and then France, one of whose physicians, Dr. Lefrançois of Dieppe, in 1812 wrote a book on the virtues, internal and external, of sea water, and raised his native town into a much-frequented health resort. From bathing in the sea bathing in fresh water came to be more largely indulged in, till Dr. Andrew Combe's "*Principles of Physiology applied to the Conservation of Health*" (Edinburgh, 1834) set forth with fascinating clearness the vital importance of the skin as a great waste pipe, and the practice of "tubbing" became general in the British Isles, whence it has slowly found its way into the more refined classes abroad. True, this latter was a revival of the ancient Roman use of the bath, which had long lapsed into desuetude; but it was a revival on sound physiological principles, to which it owes the almost fanatical rigour with which it is maintained in all well-ordered British households. Wherever available, in suitable weather the running stream is justly preferred to the bath from the pipe, and all over Europe the great rivers are being more and more utilised for what is at once a hygienically valuable and physically pleasurable exercise. These and a host of cognate facts and considerations were all *en évidence* before the distinguished audience addressed the other evening by Dr. Angelo Celli, Professor of Hygiene in our university, whose participation some five years ago in the International Congress of Hygiene and Demography held in London reflected so favourably on the Roman school. But the point to which he drew the attention of his hearers with most insistence was the quality of the river water in which bathing is practised, the principles it contains in solution, even the solids that it carries down with it from the soil through which it flows. The Tiber, he showed, has chemical properties which explain its health-giving advantages for the bathers in it—the sand to which it owes its colour, transported from Tuscany and deposited by floods along its banks, having a distinctly antagonistic effect on the "*bacteri malarici*"—so much so, indeed, as to make its course "*una vera zona coibente*" (a true restrictive zone) against the poison. Statistics were adduced to demonstrate that the health of the Tiberine population, even where the river flows through malarious tracts, is better than that of the people who occupy regions unhaunted by the fever. Its wealth in carbonates and salines gives it an exceptional advantage over its sister streams, rendering it, as a bathing medium, more akin to the sea than any other Italian river. Its very density is, *per se*, another of its virtues, and brings it nearer the mud bath than most of its rivals having an equally swift and steady flow. Swimming under such conditions, especially in sultry weather when the relaxation of the pores admits of a freer action on and through the skin, is, he contended, one of the most beneficial exercises open to youth, of which the exceptionally favoured students of Rome were, he was glad to think, ever ready to avail themselves. The address, coming from a practical physiologist and scientific sanitarian like Professor Celli, carried conviction to an audience in which the lay as well as the professional public was largely represented, and his colleague, Professor Postemski, who holds the chair of Clinical Surgery in the University, was but the spokesman of all present in thanking the lecturer for his vindication of the Tiber as a bathing ground—a vindication, be it added, not more effective than opportune. A distribution of prizes followed for the greatest proficiency in swimming, and the names of the winners afforded gratifying proof that the health-giving pastime is not incompatible with the steadiest application to university work, whether in the class-room or the clinical ward.

April 16th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Effect of Cold on Diphtheria Antitoxin.

ALTHOUGH in a temperate climate the question of the effect which low degrees of temperature have upon diphtheria antitoxin may not appear one of great practical importance, it is very distinctly so in a country like Russia, where for half the year the thermometer hovers about the Fahrenheit zero, and where, consequently, packets of the

serum sent through the post may be exposed to excessive variations of temperature. Two observers have published the results of experiments undertaken to test the effect of cold upon the serum, particularly with regard to its antitoxic properties. It is impossible to quote the details of these experiments here. The results were as follows. Dr. Gorianski, working in the Imperial (Oldenburg) Institute of Experimental Medicine in St. Petersburg, concluded that "serum which has undergone prolonged exposure to low temperatures loses part of its anti-diphtheritic properties. This loss is considerable, for a quantity of serum one and a half times greater than the maximum dose was unable to neutralise a minimum fatal quantity of diphtheria toxin." In these experiments the serum was exposed to temperatures varying from +29° to -4° F. Dr. Rojanski, on the other hand, whose experiments were done in Professor Filatof's laboratory at the Children's Clinique in Moscow, came to quite different conclusions. He found no difference between serum which had been exposed to cold and that which had not. "From certain experiments," he writes, "it might even be concluded that serum which has been exposed to cold has stronger antitoxic properties than that which has not." He is careful, however, not to commit himself to this conclusion. The discrepancies between his own and Dr. Gorianski's results he attributes to individual differences in susceptibility to the diphtheria poison in the guinea-pigs experimented on. It should be added that Dr. Gorianski used Behring's serum, and that this became cloudy after exposure to cold; while Dr. Rojanski used serum prepared by Dr. Gabritchevski in the Moscow Bacteriological Institute, and this remained throughout quite clear.

The Perm Zemstvo Asylum Case.

A particularly bad case of ill-treatment of asylum patients by their attendants recently came to light in the town of Perm, the capital of one of the most easterly governments of Russia in Europe. It is satisfactory to be able to add that exemplary punishments have been meted out to the offenders. The incidents occurred in the Asylum of the Perm Zemstvo. The superintendent, an army *feldscher* named Mymin, on the night of Feb. 26th (during Carnival week) sent out for a magnum of *vodka*, which he and five ward attendants proceeded to drink. During the night a patient who had been making a noise was struck by one of the attendants; the patient struck back, and a fight followed, in which the four other attendants and two other patients joined. The attendants, who were probably intoxicated, beat the three patients so severely that two of them subsequently died. The superintendent, though awakened, refused to interfere. The court before which the case has been tried has inflicted the following sentences: the attendants are to undergo four years' imprisonment with hard labour, and the superintendent is condemned to exile to Siberia, with deprivation of all rights.

Trional, Chloralose, and Somnal as Hypnotics.

Dr. Kbmielefski of Odessa published in a recent number of the *Meditzinsko Obozrenie* an instructive article upon the relative value of trional, chloralose, and somnal as hypnotics. He found that in asylum practice trional is a fairly certain and rapid sleep producer, but that it is contra-indicated in melancholia, hypochondriasis, or whenever any mental depression is present. It should be exhibited in 1 gramme doses, which may subsequently be increased. Chloralose is somewhat less certain in its action; the amount required to produce sleep varies much in different cases and at different times in the same person. It acts more rapidly than trional, but the sleep is less prolonged. In doses larger than 0.5 gramme slight symptoms of poisoning (spasms, &c.) frequently appear, but they soon pass away, and need not cause alarm. It never causes headache or other unpleasant after-effects which sometimes follow the use of trional. It may be given in cases where trional is contra-indicated, as in melancholia, hypochondriasis and psychoses accompanied by depression. If there is any gastro-intestinal disorder chloralose is, it is stated, almost the only hypnotic which can be given for a prolonged period without harm. Somnal was found in the few cases in which it was given to be a valuable and reliable drug. It produced sleep indistinguishable from natural sleep. In some respects it possesses advantages over trional or chloralose. It is, however, contra-indicated if any gastro-intestinal disturbance be present, as it tends to increase this.

April 14th

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Insuring the Lives of Children.

IN the discussion of a Bill before the Massachusetts Legislature prohibiting insurance companies from writing policies upon the lives of children under ten years of age, in that child-insurance is an incentive to crimes, a member of the Society for the Prevention of Cruelty to Children said that she had found families where the children were deprived of the most ordinary necessities of life, while the money for the insurance of a dying child was set aside awaiting the call of the agent. She knew of a case where the money received for the death of a child was spent on unnecessary display at the funeral, and she could not induce the parents to divert a cent of it to the purchase of food for other children who were suffering for the want of it and were receiving charity. She also told of a mother who, while one child lay dead, was lamenting that two younger ones and her phthisical husband had not been taken instead, because they were all insured and were not wage-earners, while the dead one was. A girl fourteen years of age, so emaciated that the witness could span any part of her arm with the fingers of one hand, was taken away by the society from her parents to prevent them from starving her to death, and it was subsequently learned that her life was insured, and the witness believed she was being murdered to secure the insurance money. This system results in children being deprived of the necessities of life to secure money at their death. They are thus compelled to pay for their own funerals. Who was benefited by such an insurance investment? Not the child, for it is half starved during its brief life, and can receive nothing when it is dead. Not the parents, for after depriving them of the necessities of life they get nothing but a white coffin and a hearse. But it is the insurance companies that make large sums of money for themselves and agents out of this method of extorting money from the poorest classes of people. On the part of the insurance companies it is represented that the mortality among insured children is less than among those who are not insured, that the average policy upon the life of a child less than ten years old is not more than would pay the expenses incident to a funeral, and that people from all classes in all parts of the country take advantage of the system.

The Growth of the Camphor Tree in California.

There is an effort being made to grow the camphor tree in California, which gives some hope of the transference of the world's commerce in that gum from Formosa to the United States. Camphor sold twenty years ago at ten cents a pound, but is now over a dollar a pound, owing to the destruction of trees in Formosa. The report of the United States Department of Agriculture states that the large and increasing quantities of this drug consumed in all civilised countries make the question of its continuous production and regular supply a matter of considerable importance. It is a well-known fact that the sublimation of the crude camphor from the wood is conducted in a primitive, careless way, which causes great waste. The camphor laurels of Formosa are gradually being destroyed under the careless system employed by the Chinese gatherers. In fact, they have been entirely exterminated along the seaboard, and the wood is now obtained from the forests along the frontier, between the settlements of the Chinese and the inland mountainous regions still occupied by the aboriginal population. The camphor gatherers are thus continually exposed to the assaults of the natives, and this interrupts the prosecution of the industry. No attempts are made towards planting other trees to take the place of those destroyed, and a sufficient quantity of the drug is obtained only by constant encroachment upon the territory of the Formosans. This destruction of the trees still further in the interior at every new move gradually exhausts the supply.

Death following the Injection of Antitoxin.

The death of two persons immediately following the injection of so-called antitoxin excites a profound interest in the medical profession. The facts are as follows. A boy from the country while visiting his uncle in Brooklyn developed diphtheria; as he gradually grew worse under treatment the physician obtained a bottle of antitoxin. An injection of this fluid was made, and the boy died

three hours after. On the following day a seventeen-year-old daughter of the uncle complained of a sore-throat. The physician obtained another bottle of the antitoxin, and it was administered. After receiving the injection the girl said she felt a tickling sensation all through her body. She then fell on the lounge in convulsions and was dead in ten minutes, despite the physician's efforts to save her. Her face turned black almost immediately after receiving the fluid. The physician states that the girl's death was a mystery to him, and he could only account for it by crediting it to some powerful poison in the bottle of antitoxin. He had used the remedy for some time with gratifying results, and always got it at the same place. The colour was the same as that he had used, being pink. He had never witnessed such a terrible death. There had been a mistake somewhere in bottling the fluid. The amount injected was between two and three drachms, which came in each bottle. The bottle was put up in a box in Germany, and bears the date of shipment, Jan. 30th last. The necropsy revealed nothing abnormal.

Inspections at Quarantine by Electric Light.

The rules regarding quarantine inspection have heretofore required that they should not be made between sunset and sunrise. This rule often caused great inconvenience to passenger ships. Frequently they would arrive just after sunset in the summer, and the passengers would be compelled to remain on board from eight to twelve hours, often in sight of their homes. The health officer, after consultation with the managers and agents of the principal steamship companies in the transatlantic passenger trade regarding the inspection and clearance of passenger and other vessels at night, conceived the idea of inspecting immigrants by the aid of powerful electric lights. This is to be done by having a detached cluster of burners arranged so that it can be carried on board of a steamer and connected by a switch or other apparatus with the electric lighting system of the steamship. To perfect this arrangement all of that class of ocean-going passenger vessels known as express steamers will be fitted with a connecting arrangement of switches, to permit the connexion of the health officer's cluster of burners. This system will come into effect immediately, and all such steamers will be passed, provided they arrive at quarantine before nine o'clock in the evening. Another important result of this method is the prompt boarding of all vessels subject to quarantine. A man is stationed where he can see the approach of incoming steamers, and it is his duty to give immediate warning of an approaching vessel and the boarding-boat promptly goes towards it. It is not compelled to anchor, but proceeds at slow speed, with sufficient headway to keep steerageway on the vessel.

Powers of Health Boards.

Two persons recently arrived in Brooklyn from places infected with small-pox whom the health board quarantined for observation during the period of incubation. The case was brought into the courts, and the higher court sustained the board. It held that as these persons came from infected places they were liable to communicate the contagion and hence were proper subjects for isolation and detention, which was clearly within the scope, powers, and duties of the board to enforce. The prevention of small-pox is of such paramount importance as to justify all reasonable means for its accomplishment. The propriety and wisdom of the course pursued by the board is beyond criticism; its acts have all been within the lines of statutory authority, and they have been discreet and in evident good faith in the presence of an impending pestilential danger.

March 31st.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Annual Reports of Hospitals.

The annual report of the Sydney Hospital showed the amount of work done at this institution. During 1894, 3266 in-patients were admitted, and the average number of beds occupied was 250, the largest number occupied at one time being 285. Of the admissions, 1401 were urgent cases without any recommendation, 1197 had Government orders and 182 subscribers' orders, while 486 contributed to their maintenance. The percentage of mortality on admissions was 11.8, and of 297 deaths 111 died within twenty-four

hours of admission. In the out-door department there were 113,968 attendances. The directors state that the fact that the expenditure of last year has been kept down to its fullest possible limit, without detriment to the welfare of the patients, is due to the watchful care and economy exercised by the medical superintendent, Mr. George Armstrong. From the balance-sheet it appears that the excess of expenditure over income was £1217. The annual report of the Hospital for Sick Children, Glebe, Sydney, showed that during the year 486 patients had been treated in the general hospital, of whom 389 had been discharged cured or relieved, 16 had been discharged incurable or unrelieved, 33 had died, and on Dec. 31st 50 remained in the institution. In the diphtheria cottage 143 patients had been treated; of these 73 had been discharged cured, 68 had died, and 2 remained in the hospital on Dec. 31st. There had been 1319 patients in the out-door department, with 4256 attendances. The increase in the work of the institution had been remarkable, the cases treated in the general hospital having been one-third as many again, and the out-patients' attendances more than twice as many, as during the previous year. The balance-sheet showed that the patients' payments amounted to £405 17s. 9d. and public donations and subscriptions to £1497 1s. 9d. The expenditure was £4185, of which the sum of £3027 12s. 10d. was for hospital maintenance. The Chairman, Mr. Justice Stephen, in moving the adoption of the report, said that the fears entertained with regard to the establishment of the diphtheria cottage had not been realised, and it was clear that while it benefited the whole community it did not inflict any injury on the inhabitants of Glebe. The medical officer's report showed that during 1894 there had been an increase of 124 admissions over the returns of the previous year. No less than 80 different diseases had been treated, and there had been 50 cases of hip disease, 40 cases of typhoid fever, and 40 cases of pneumonia. Operations requiring the administration of an anæsthetic numbered 300. There had been 143 cases of diphtheria, 73 of which were cured, and 68 patients, or 47.5 per cent., died. Of the 68 deaths 16 or 23.5 per cent., occurred within twenty-four hours after admission. The Government had arranged for regular shipments of diphtheria antitoxin from Germany, and the remedy would be supplied to the hospital. Dr. Tidswell had been appointed Government Bacteriologist, one of whose duties would be the manufacture of antitoxins.

Inquests in Melbourne during 1894.

During the year 1894 381 inquests were held in the city of Melbourne. Of these, 125 were on deaths due to accident, 38 were suicides, 12 by gunshot wounds, 6 by poison, and 6 by hanging. Infanticides numbered 25, a comparative decrease, probably due to the action of the Infant Life Protection Act. Drink was responsible for a large share of the deaths. Of 33 suicides 11 were excessive drinkers, and of the 125 accidental deaths 21 were due to drink. Of those found dead 7 were drinking heavily when last seen alive, 11 died from alcoholic pneumonia, and 8 well-known drunkards died from cerebral hæmorrhage. The total of the "drink cases" was 71. The inquests under the Infant Life Protection Act on infants boarded out numbered 74.

Charge of Malpractice.

Dr. Henry M. Fenwick, of Carlton, Victoria, who was recently committed for trial by a coroner's jury on a charge of manslaughter, was further charged at the Carlton Police-court, in conjunction with two nurses, with performing an illegal operation on two separate occasions. The patients operated on and a nurse who was present gave evidence against Dr. Fenwick, who was committed for trial.

Case of Anthrax.

What is said to have been the first case of anthrax in the human subject in Victoria occurred recently in the person of a stockowner, who had been engaged in inoculating sheep with Pasteur's vaccine against the disease, and while so doing accidentally ran a needle into his hand. Anthrax oedema set in, and the anthrax bacilli were found in the tissues. He was promptly treated with free incisions and the application of pure carbolic acid, and recovered without constitutional symptoms.

Hospital Nurses' Hours of Duty.

A question was recently asked in the Victorian Parliament as to the hours during which nurses in the metropolitan hospitals are on duty, and the Premier replied that from inquiries he found the average was eleven hours per day. This, however, is reckoning from the time they enter the wards till they go to

bed, and includes meal times. At the Melbourne Hospital the actual working hours are about eight and a half. At the Alfred Hospital each nurse is allowed a clear twenty-four hours off duty every week in addition to a fortnight's annual vacation. Some correspondence on the subject has been published in the daily press, some nurses affirming that the hours are too long, others that they are not, and the opinions seem about equally balanced.

Cases of Cerebral Surgery.

At the last meeting of the Medical Society of Victoria ten cases of cerebral surgery were shown. The first was a patient aged thirty, under the care of Mr. G. A. Syme. When first seen in August, 1893, the symptoms were epileptiform, convulsions beginning in the right side of the face, spreading to the right arm and leg, and then becoming general. They were preceded by a sense of constriction in the throat and a numb feeling in the tongue and right side of the face. For some days after the attack the right side of the face and the tongue were paralysed, and the speech thick. Vision, visual fields, and optic discs were normal. There was no vomiting, and no loss of sensation. There was no personal or family history of tubercle, and no history or evidence of syphilis. It was concluded that there was some irritation of the cerebral cortex over the face and tongue centres, probably a tumour, and operation was advised, but not agreed to until Oct. 22nd, 1894, when the patient had become much worse, suffering from aphasia and agraphia, paralysis of the right side of the face and tongue, and paresis of the right hand. The fits had become more frequent and more severe, and he had pain in the left parietal region. The skull was trephined over the face and tongue centre, and a tumour 2.3 by 1.9 inches in size and two ounces and a half in weight removed. It grew from the dura mater and pressed on the lower portion of the ascending frontal convolution and the posterior part of the second and third frontal convolutions. The tumour was encapsuled and microscopically was a small round-celled sarcoma. Speech and motion were gradually recovered, and when shown nearly four months after operation the paresis of the face and tongue was hardly noticeable, the speech was good, he could write perfectly, had no pain, and had had no fits. There was no evidence of recurrence. The second case was under the care of Dr. W. Moore. The patient, aged nine, was suddenly seized with a convulsion, and became unconscious, with right hemiplegia. She had suffered from a discharge from the left ear for several years, which became worse, with earache and pain on the left side of the head ten days previously. The temperature was 102.6° F. A diagnosis of temporo-sphenoidal abscess was made, and the skull trephined in the usual way. The brain was explored in several directions with a grooved director and a trocar and cannula, but no pus was found. After the operation the temperature became subnormal, and the pulse 60. The paralysis and aphasia remained. Five days afterwards the wound was reopened and the brain again explored, when pus to the extent of about two ounces was evacuated from the temporo-sphenoidal lobe. The abscess was drained, and the patient gradually improved, regaining speech and power in the leg, but the arm remained weak, with some contraction of the fingers.

The Etiology of Summer Diarrhoea of Infants.

Dr. R. R. Stawell has been investigating this subject in Melbourne and arrives at pretty much the same conclusions as those reached by inquiries into the causes of this very prevalent complaint in other parts of the world. He has been unable to satisfy himself that any atmospheric condition other than increased temperature has any appreciable or constant influence upon the disease. The increased temperature acts as a causative factor, because at about 60° F. putrefactive processes and toxicogenic germs first become active, and not by causing great depression in the patient, as the charts he had made out showed that the greatest prevalence of the disease was not at the time of the greatest heat; the breast-fed infants are not affected. He thinks there is a small number of delicate children who suffer from diarrhoea in consequence of putrefactive changes in sound food after it has been swallowed.

Two Cases of Didelphic Uteri, with Hematocolpos and Pykopolpos.

In the February number of the *Intercolonial Quarterly Journal of Medicine and Surgery* Dr. F. C. Batchelor of Dunedin records two cases of the above rare abnormalities.

In each case there was a double uterus and a double vagina. Retention of the menstrual fluid occurred in the right vagina in one case and in the left in the other. As a result of distention a rupture occurred through the upper portion of the vagina in both cases, and an escape of the retained menses followed, but not completely. Subsequently septic changes ensued in the pent-up secretions, causing pykopolpos.

Obituary.

SURGEON-GENERAL SAVILLE MARRIOTT PELLY, C.B., F.R.C.S.

SURGEON-GENERAL PELLY, who died on April 3rd at Woodstock House, Lea, Kent, was the last surviving son of the late Judge John Hinde Pelly, of the Indian Civil Service and a brother of the late Major-General Sir Lewis Pelly, K.C.B., K.C.S.I., M.P. He was one of seven sons, six of whom entered one or other of Her Majesty's services, and three attained to the rank of general officers. Born in India, he was sent to England for education, and made his home with a relative, the baronet of the same name. He was then placed at Winchester, where, owing to the marvellous facility he had of getting out of scrapes he received the nickname of "Proof Pelly." As an instance of the good luck which never deserted him, he used to relate how that once, when staying with friends in Gloucestershire, he took compassion on a poor stray dog that had found its way into the grounds. Whilst in the act of fondling it he was startled by the arrival of the whole country side, armed with guns and staves, in search of this very dog, which was mad and had already bitten several persons. On leaving Winchester he began his medical education at the Bristol Royal Infirmary, where he was for some years dressing pupil under Mr. Birchard Smith, then the senior surgeon, and where an uncle on his mother's side was on the hospital staff. He next entered as a student of Guy's Hospital at the time when Bright and Addison were physicians, and Astley Cooper was still alive. It is interesting to note that Dr. J. G. Swayne, whose name is so intimately associated in all our memories with the Bristol Medical School, was a fellow student of Pelly both at Bristol and Guy's. He was a student when Sir Astley Cooper died in 1841, and was one of those who lined the way to the hospital chapel, in the vault of which the body of that distinguished surgeon is deposited. After finishing his professional studies he entered the Indian Medical Service, and was soon ordered to the front. He was present in July and August, 1843, with a field force under Major Blood in the southern parts of Sind, and served with the Sind Irregular Horse during Sir C. Napier's campaign in 1844-45 against the predatory tribes on the borders of Cutchee, and in the surprise and capture of Shahpoor on the night of Jan. 15th, 1845, being favourably mentioned in the despatches by Captain Jacob. He was present with the army of observation at Bhawalpoor under Sir C. Napier in 1846-47, and with the Sind Horse during the pacification of the frontier of Sind in 1847-48 under Major (afterwards General) John Jacob. He served with the 2nd Regiment of Light Cavalry in Rajpootana during the Mutiny campaign in 1857-58, and was present as senior medical officer at the attack on Nimbhaira, the action of Jeerun, and throughout the siege of Neemuch under Captain Simpson, joining afterwards in the pursuit of Tantia Topee with the column under Brigadier Parke. At the conclusion of the war he received the Indian medal and clasp for Central India. For many years he was resident in Sind, and when he was moved on to Poona the *Sindian* of that date contained the following paragraph: "Dr. Pelly will be much missed in the circle he leaves to-day. He is one of the oldest residents among us, having seen service since about the year 1844. He knows the country thoroughly and has watched the progress of its various communities from the first. We still entertain a hope that he may again return to Sind, where he is so well known and so universally popular." As he rose in his profession he became Inspector of Prisons in the Bombay Presidency, and at his suggestion the Government introduced gardening as prison labour, whereby a great saving was effected; for not only was the health of the prisoners greatly benefited by this open-air exercise, but all the vegetables required by the inmates were thus obtained without purchase. When

the Abyssinian expedition was determined upon he was selected for the post of principal medical officer of the Indian Medical Department, and he served throughout the campaign in 1867-68 under Sir Robert (afterwards Lord) Napier. For his services during this expedition he was recommended for the K.C.S.I., but as it was found that this knighthood could only be conferred for services rendered in India he was rewarded by a Companionship of the Bath. Meanwhile he had risen in his profession to be Deputy Inspector-General of Hospitals in the Bombay Presidency, and he retired as Inspector-General in 1870. After his retirement he lived for many years in Dublin, but came to London a few years ago to be near his brother, who was at that time representing Hackney in the Conservative interest. At the quinquenary festival of Winchester College, held two years ago, Surgeon-General Pelly was among the oldest of the Old Wykehamists present, and this visit to the scenes of his boyhood afforded him the keenest sense of pleasure. He was a man of a most warm-hearted and genial disposition, making friends wherever he went, being universally respected for his uprightness and gallantry. Firm in will and strong in action, brave and courteous, punctilious in matters of honour, yet kind, gentle and forgiving, he possessed all the qualities most to be admired in a soldier and a surgeon. He retained to the last a very remarkable intellectual vigour and an activity of body worthy of a man twenty years younger. In his retirement he amused himself chiefly with his lathes, turning out all kinds of articles useful and ornamental, having always had a strong taste for engineering. Among other things he made an electric clock, every wheel of which he forged with his own hands, and he had been at work at an electric stethoscope which was to enable every member of a class to listen to the same heart whilst the physician was demonstrating its defects. He enjoyed perfect health until five weeks before his death, when he was first seized with angina pectoris, associated with some fever, apparently influenza. Dr. Green, of Lee, who attended him, discovered a mitral bruit and gave him relief by medicine and rest; but attacks of cardiac asthma became frequent, and a week before his death Dr. Pye-Smith saw him in consultation. He died suddenly (as had been anticipated) whilst sitting in his chair, on Wednesday, April 3rd, aged seventy-six. He leaves a widow, two sons (the Rev. Stanley Pelly and Captain Saville E. Pelly), and two daughters.

GEORGE HENTY, M.D. ST. AND., M.R.C.S. ENG.,
CAMDEN TOWN.

The death of Dr. Henty removes from north London an old practitioner, aged seventy-seven, who took an active part in all that interests the profession and in much that interests the public. Dr. Henty was born at Chatham and educated at the Grammar School, Rochester. He was afterwards assistant for six years in Princes-street, Hanover-square, to Dr. McDonald. Thereafter he qualified and went into practice at West Malling, and afterwards at Newington, Kent. In the latter place he lived sixteen years, and was medical officer of health. He interested himself in getting a railway station built and other improvements. In 1865 he returned to London and settled in Camden Town, where he had been working until within a few days of his death, which was due to pneumonia; for some months past, however, his health had been much impaired. For seven years he was medical officer to the Aged Pilgrims' Society. He was also medical officer to the Foresters' club. Dr. Henty was an active promoter of the Great Northern and Central Hospital. He was a member of the committee. Though partly responsible for the clause in the constitution under which pay patients are now admitted, he strongly disapproved of the method by which that clause has been put into force. He was also lately hon. sec. of the N. District of the Metropolitan Counties Branch of the British Medical Association, and in this connexion exerted himself against all questionable methods of practice. For the year 1893-94 he was President of the North London Medical and Chirurgical Society. His genial nature and his large experience made his company always acceptable in medical circles.

JAMES JOHNSTON, M.B., M.R.C.P. LOND., M.R.C.S. ENG.

DR. JOHNSTON, who passed quietly away on April 11th in his seventy-second year, had for many years held a prominent place among the medical profession in Birmingham. He

was the son of Mr. Thomas Johnston, a well-known inhabitant of the town, and studied medicine at Queen's College, becoming a member of the Royal College of Surgeons of England in 1844, and Bachelor of Medicine of London University in 1846. Having settled in Birmingham he in course of time came to have one of the largest practices in the town. About 1867 he went to live some miles away, at Wyde Green, a small place close to the ancient borough of Sutton Coldfield, of which town he was for three successive years elected warden. In 1874 he became a Member of the Royal College of Physicians and shortly after this was appointed honorary physician to the Queen's Hospital and to the Hospital for Children. In 1875 he was elected President of the Midland Medical Society, and in 1879 President of the Birmingham Branch of the British Medical Association. About 1897 he left Wyde Green and resided in Birmingham for the remainder of his life. Dr. Johnston lived an honourable, just, and useful life, and was universally esteemed. He was twice married, and four of his sons follow their father's profession.

WILLIAM METCALFE, L.S.A. LOND.

THE little village of Clapham, near Lancaster, has just sustained a heavy loss in the death of its medical man, William Metcalfe, L.S.A. Lond. The deceased had been ailing for nearly two years from obscure abdominal symptoms, which became accentuated some two months ago, and he gradually sank from exhaustion and died on April 8th at the early age of thirty-four. A necropsy showed the cause of death to have been stricture of the small intestine and melanotic sarcoma affecting the stomach and bowels. His terrible sufferings were borne with great fortitude. He was a student of St. George's Hospital, London, and in 1888 he entered into partnership with Mr. Bradley of Benthams, with whom he was connected at the time of his death. He was a successful practitioner and endeared himself to a large *clientèle*, who will long miss his cheery voice and smile.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced: Dr. Rinaldo Ossola, Lecturer in Forensic Medicine in the University of Roma.—Dr. Wladimir Tomsa, Professor of Physiology in the Bohemian University of Prague.—Dr. Richer, Professor of Therapeutics in the Amiens Medical School.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board in the subjects indicated at the quarterly meeting of the Examiners under the four years' regulations, viz:—

Part I., Chemistry and Physics:—

Bentley, Harry, Owens College, Manchester.
Carter, Joseph, King's College, London.
Cooper, Frank, Mason College, Birmingham.
Evans, John, St. George's Hospital.
Henerey, John Philip Edmund, St. George's Hospital.
Lindsay, Alexander William Crawford, St. Bartholomew's Hospital.
Macmaster, Hugh, Sydney University and Surgeons Hall, Edinburgh.
Oliver, Norman Henry, Guy's Hospital.
Owen, John Griffith, Charing-cross Hospital.
Russell, Francis John, London Hospital.
Simpson, Fred. Algernon, Cambridge University and St. Mary's Hospital.
Sykes, Reginald, Yorkshire College, Leeds.
Whyte, Frederick William, Queen's College, Belfast.
Willson, Arthur Herbert, Oxford University.

Part II., Materia Medica and Pharmacy:—

Agnew, Colville Smith, Charing-Cross Hospital.
Ayre, Frederick John, St. Mary's Hospital.
Carter, Wilfred Becher, St. George's Hospital.
Clarke, Huntley, St. Bartholomew's Hospital.
Collier, Robert Stanley, Yorkshire College, Leeds.
Corfield, Edward Carruthers, St. Bartholomew's Hospital.
Dakin, Thomas Burns, London Hospital.
Davies, Thomas John, Middlesex Hospital.
Day, James John, Middlesex Hospital.
Dearden, Charles Henry, Yorkshire College, Leeds.
Evans, David Edward, London Hospital.
Fanning, William Joseph, St. Thomas's Hospital.
Ferguson, James Herbert, St. George's Hospital.
Herbert, Herbert, London Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Cádiz*: Dr. P. Ramon y Cajal has been appointed Professor of Histology.—*Freiburg*: Dr. Goldmann has been promoted to an Extraordinary Professorship of Surgery, and Dr. E. Jacob to an Extraordinary Professorship of Dermatology.—*Prague (German University)*: Dr. W. Czermak of Innsbrück has been appointed to the chair of Ophthalmology in succession to Dr. Schnabel.—*Vienna*: Dr. Julius Schnitzler has been recognised as *privat-docent* in Surgery.

HER Royal Highness Princess Mary Adelaide, Duchess of Teck, is to be present at the annual meeting of the Factory Girls' Country Holiday Fund on Monday, April 29th. By the kind permission of the Master and Wardens of the Haberdashers' Company the meeting will be held at their Hall in Gresham-street. Alderman Sir David Evans, K.C.M.G., who will preside, will be supported by the Archdeacon of London, the Rev. and Hon. J. G. Adderley, Mrs. Garrett Anderson, M.D., Lady Frances Balfour, Sir Gainsford Bruce, and others.

FOOTBALL CASUALTIES.—On the 12th inst., at Shipley, in a match between the Shipley and District teams, the Bradford wing three quarter back fractured the fibula of his left leg and was conveyed to the Bradford Infirmary.—On the 13th inst., at Northallerton, in a Richmondshire League match between the Northallerton Thistles and Northallerton Central teams, a player dislocated his ankle.—On the same day, at Redruth, during a match between the Plymouth and local teams, one of the visiting half-backs sustained concussion of the brain; and at Burnley, in a League match, two members of the Sunderland team received injuries—namely, the foot of the half-back and captain of the team was caught by an opponent, and the "sudden jerk twisted his leg, almost wrenching his kneecap off," while the other player dislocated his humerus. On the 15th inst., at Armley, in a game between the Burley and Stanningley Clubs, a player received a kick and was removed to the infirmary, but the injury was found to be only slight.

ROYAL METEOROLOGICAL SOCIETY.—At a meeting of this society held at the Surveyors' Institution on the 17th inst. Messrs. F. C. Bayard and W. Marriott communicated a paper on the Frost of January and February, 1895, over the British Isles. The cold period which commenced on Dec. 30th and terminated on March 5th was broken by a week's mild weather from Jan. 14th to 21st, otherwise there would have been continuous frost for sixty-six days. Temperatures below 10° F., and in some cases below zero, were recorded in parts of England and Scotland between Jan. 8th and 13th, while from the 26th to the 31st and from Feb. 5th to 20th temperatures below 10° occurred on every day in some part of the British Isles. The coldest days were Feb. 8th to 10th. The lowest temperatures recorded were -17° at Braemar and -11° at Buxton and Drumlanrig. The mean temperature of the British Isles for January was about 7°, and for February from 11° to 14° below the average, while the mean temperature for the period from Jan. 26th to Feb. 19th was from 14° to 20° below the average. The distribution of atmospheric pressure was almost entirely the reverse of the normal, the barometer being highest in the north and lowest in the south, the result being a continuance of strong northerly and easterly winds. The effect of the cold on the public health was very great, especially on young children and old people. The number of deaths in London due to diseases of the respiratory organs rapidly increased from Feb. 2nd to March 2nd, when the weekly number was 1448, or 945 above the average. Rivers and lakes were frozen, the ice being more than ten inches thick. The frost will long be remembered for its effect on the water-pipes all over the country, in many cases householders being without water for more than nine weeks. As the result of inquiries Messrs. Bayard and Marriott find that mains have frozen which have been laid as low as 3 ft. 6 in. from the surface of the ground to the top of the pipe. It appears, however, that the nature of the soil had far more to do with the depth to which the frost penetrated than the intensity of the frost itself. From a comparison of previous records they are of opinion that the recent frost was more severe than any since 1814.

WIGAN MEDICAL SOCIETY.—An ordinary meeting of this society was held on April 11th, the President, Mr. Wm. Mitchell Roocroft, being in the chair. The President gave his address and read a paper on a Plea for Early and Thorough Excision of the Breast for Cancer. After going fully into the pathological histology of breast cancer he pointed out how necessary it was to remove the breast with all the diseased tissues and glands if recurrence of the disease is to be prevented. A vote of thanks was accorded to the President for his able and valuable address, on the motion of Dr. R. Prosser White, seconded by Mr. E. H. Monks. The remainder of the time of the meeting was occupied in showing cases. Mr. Hugh E. Jones showed: (1) Double Optic Neuritis in a boy eleven years of age; (2) Inclusion Cyst of Eyeball. Mr. Lowe: (1) a case of Traumatic Atrophy of Upper Extremities and Scapular Muscles in a male adult; (2) Erb's Paralysis in a youth aged eighteen years. Mr. Hardman: (1) a case of Scorbatus in a girl aged seven years; (2) a specimen of Ileocolic Intussusception. Dr. R. Prosser White: a case of Purpura. Mr. Berry (hon. sec.): a case of Double Osteotomy performed six months ago.

HUNTERIAN SOCIETY.—An ordinary clinical meeting was held on April 10th, at the London Institution, Mr. Charters J. Symonds, President, being in the chair. Dr. Arnold Chaplin showed a case of Transposition of the Viscera in a healthy girl aged nine. Dr. Galloway showed three cases of Skin Disease: (1) Lichen Planus diffused over the body and limbs of a man aged twenty-eight; (2) the same disease localised about the knees and thighs of a woman; (3) a case of skin disease affecting almost, but not quite, exclusively the limbs of a child aged two years and a quarter, closely resembling lichen planus, but actually caused, Dr. Galloway thought, either by drugs or a micrococcus. Dr. F. J. Smith, Mr. Cotman, and Dr. Chaplin spoke on the cases. Mr. Openshaw showed the following cases: (1) Webbed Fingers (total) in the Left Hand of a little Child, with Partial similar Deformity in the Other Hand; (2) an Enormous Naevus in the Cheek of a Boy aged about twelve, growing since infancy and involving the Palate as well; (3) Double Cephalæmatoma in a Child four weeks old; (4) and (5) two cases of Trephining for Cerebral Abscess, one on either side of the Brain; (6) a case presenting almost identical symptoms to 4 and 5, leading Dr. Hughlings Jackson to diagnose Cerebral Abscess, but the patient gradually got well without any operation. Mr. Cotman showed a case of Intermittent Pulse in a man aged seventy-three; the condition was apparently quite physiological.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Easter Recess.

THE two Houses of Parliament are in recess. The House of Lords adjourned on Tuesday, April 9th, and the House of Commons a day after, and both will resume on Monday, April 22nd.

The Case of Dr. M. J. Calahan.

Mr. William Redmond has given notice that on the day the House resumes he will direct the attention of the Chief Secretary to the Lord Lieutenant of Ireland to the case of this gentleman who after receiving an appointment from the Nenagh Board of Guardians and Dispensary Committee was subject to certain injurious treatment by the Local Government Board.

The Fisheries Bill.

When this Bill comes on for second reading Mr. T. R. Buchanan, many of whose constituents are deeply interested in the matter, will bring forward a motion calling upon the Government to introduce provisions with regard to the regulation of trawling.

Institutions for Idiots.

A Bill has been introduced into the House of Commons to exempt from poor and other local rates all registered institutions for the care, training, and education of idiots and imbeciles. The Bill is backed by Mr. Round, Mr. Ainsworth, Sir Frederick Mappin, Mr. Maclure, Mr. Tomlinson, Mr. Allison, and Sir William Houldsworth, and has been put down for second reading on Monday, May 6th.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADOLPHUS, J. F. P., M.R.C.S., has been appointed Resident Medical Officer at the Camberwell New Workhouse.

ARKLE, O. J., M.D., M.R.C.P., has been appointed Assistant Physician to the Charing-cross Hospital.

BAMBER, H., M.B., C.M. Glasg., has been appointed Medical Officer for the Tynemouth Sanitary District of the Tynemouth Union.

BOND, E. T., M.D. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Gloucester Combined Sanitary Districts.

CAPEE, H. N., L.R.C.P. Lond., M.R.C.S., has been appointed Junior Medical Officer to the Brookwood Asylum, Woking, vice Shepherd, resigned.

CHIDLEY, T. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Clinical Assistant to the Richmond District Lunatic Asylum, Dublin.

DAVIS, W. T., L.R.C.P. Lond., M.R.C.S., has been appointed a District Medical Officer for the Llandilofawr Union.

DUGGAN, MOTHERWELL, M.R.C.S., L.R.C.P., L.M. Edin., has been appointed Medical Officer of Health to the Bowdon Rural Sanitary District.

EVANS, F. W., M.D., C.M. Aberd., M.R.C.S., has been appointed Honorary Assistant Physician to the Monmouthshire and South Wales Infirmary.

EVANS, WM. O., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health and District Medical Officer and Public Vaccinator for the Buckley Sanitary District of the Hawarden Union.

FINCH, H. J., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Royal Surrey County Hospital, Guildford.

FLEMMING, C. E. S., M.R.C.S., has been reappointed Medical Officer for the Eighth Sanitary District of the Bath Union.

GRIFFITHS, P. R., M.B., B.S. Lond., M.R.C.S., has been appointed Honorary Assistant Surgeon to the Monmouthshire and South Wales Infirmary.

GUY, WILLIAM, F.R.C.S., L.R.C.P., L.D.S. Edin., has been appointed Dental Surgeon to the Royal Infirmary, Edinburgh.

LEA, ARNOLD W. W., M.D., B.S. Lond., F.R.C.S. Eng., has been appointed Assistant Lecturer on Obstetrics and Gynaecology to the Owens College, Manchester.

MADDLOW, W. H., M.B. Durh., L.R.C.P. Lond., F.R.C.S., has been appointed House Surgeon to the Taunton and Somerset Hospital, vice Bain, resigned.

MILNER, CYRIL W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Nottingham Dispensary.

PATERSON, J., M.B., M.S. Glasg., has been appointed Medical Officer for the Berriew Sanitary District of the Forden Union, vice Morgan.

REDINGTON, J. M., L.R.C.S., L.M., L.R.C.P. Irel., has been appointed *pro temp.* Assistant Medical Officer to the Richmond District Lunatic Asylum, Dublin.

SMYTH, E. J., M.B., B.S., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Birmingham Workhouse Infirmary.

SQUIRE, E. H., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Lexden and Winstree Union.

TAYLOR, H. S., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the Clayton Hospital, Wakefield, vice Hutley, resigned.

VACHELL, H. R., M.D., C.M. Aberd., M.R.C.S., has been appointed Honorary Assistant Physician to the Monmouthshire and South Wales Infirmary.

VERNON, H. H., M.D., F.R.S. Edin., M.R.C.S. L.M., has been appointed Medical Officer of Health for the Southport Urban Sanitary District.

WATERFIELD, R., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Clinical Assistant to the Richmond District Lunatic Asylum, Dublin.

WILSON, R. M., M.D., B.Ch. Dub., has been appointed Honorary Medical Officer to the Derbyshire Hospital for Sick Children, vice Wright, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM CITY ASYLUM.—Resident qualified Clinical Assistant. Board and apartments provided.

BRADFORD INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

BRADFORD INFIRMARY AND DISPENSARY.—Junior House Surgeon, unmarried. Salary £50 per annum, with board and residence.

CHARING-CROSS HOSPITAL, London, W.C.—Curator and Pathologist. Salary £100 per annum.

CHelsea.—Temporary Assistant Medical Officer for the Workhouse and Infirmary. Salary at the rate of £120 a year, with furnished apartments, rations, washing, coals, and gas, and an allowance of £2 7s. 6d. for the period in lieu of beer. Applications to the Clerk to the Guardians, 250, King's-road, Chelsea.

CONVALESCENT HOSPITAL AND SEA-BATHING INFIRMARY, Southport.—Resident Medical Officer. Salary to commence at £150 per annum, with board, lodging, and washing.

HOSPITALS FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Surgical Registrar, for one year. Honorarium of £40 at the expiration of that term.—Anaesthetist, for one year. Honorarium of £15 15s. will be voted at the expiration of that term.—Medical Officer as House Physician for six months; unmarried. Salary £20, with board and residence in the hospital.—Resident Medical Officer as House Surgeon for six months; unmarried. Salary £20, with board and residence in the hospital.

LIVERPOOL STANLEY HOSPITAL.—Senior House Surgeon. Salary £20, with board, &c.

MIDDLESEX HOSPITAL, W.—Assistant Surgeon.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Albany Memorial, Queen-square, London, W.C.—Registrar for two years. An annual honorarium of 50 guineas attaches to the office.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho-square, London, W.—Resident Medical Officer for six months. An honorarium of £10 10s., with board, residence, and washing.

PARISH OF ST. MATTHEW, Bethnal-green.—A male Second Assistant Medical Officer for the Workhouse at Waterloo-road, E., for six months. Salary £40 per annum, with rations, furnished apartments, and washing. Applications to the Clerk, Guardians' Offices, Bishop's-road, E.

PLYMOUTH BOROUGH ASYLUM, Ivy-bridge, Devon.—Locum Tenens, Medical, for four weeks. Terms, £3 3s. per week, with board and lodging.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. £10 will be given at the end of that period if found satisfactory. Board and lodging provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer, for six months. Salary at the rate of £100 per annum, with furnished apartments and board.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant, for six months. Board and residence provided.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, Albert Embankment, London, S.E.—Lecturer on Physiology.

UNIVERSITY OF GLASGOW.—Two Examiners. The appointment will in each case last till Dec. 31st, 1896, at the rate of £50 annually.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary attached to the Hospital. Salary £20 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BURD.—On April 8th, at Okehampton, the wife of George V. Burd, Surgeon, of a daughter.

DUKA.—On April 11th, at Jasper House, Wetherby-road, S.W., the wife of Albert Duka, M.A., M.R.C.S., &c., of a son.

GWYTHYR.—On April 11th, at Upper Woburn-place, Tavistock-square, the wife of James Gwyther, M.B., of a daughter.

HENDERSON.—On April 6th, at Via Cavour, Florence, Italy, the wife of Thomas Henderson, M.B., C.M., M.D., of a son.

MARRIAGES.

HEBBLETHWAITE—BARNARD.—On April 18th, at the Parish Church, Owston, Lincolnshire, by the Rev. H. E. Clarke, Vicar, assisted by the Rev. Canon Andrews, Vicar of Saxilby, assisted by the Rev. J. Pettifore, Alfred George Hebblethwaite, M.R.C.S. Eng., L.R.C.P. Lond., of Devonshire-street, Keighley, eldest son of George Hirst Hebblethwaite, Esq., of Westroyd Mirfield, to Annie Blackburn, third daughter of John Barnard, Esq., C.C., of Hemdyke House, Owston Ferry.

LONGTON—PONTIFEX.—On April 15th, at the Consulate, Pau, France, George Harold Longton, M.R.C.S., L.R.C.P., youngest son of Dr. Longton, J.P., The Priory, Southport, to Ella Constance Clark, fourth daughter of Major W. Pontifex, of Chilworth Manor, Guildford.

MORNIHAM—JESSOP.—On April 17th, at the Parish Church, Leeds, by the Rev. Canon Stratten, Vicar of St. Paul's, Leeds, assisted by the Rev. E. Spencer Gough, Rector of Barmingham, the Rev. Arthur Needham Claye, Vicar of Brigg, and the Rev. A. R. Light, Curate of St. Michael's, Headingley, Berkeley George Andrew Moynihan, M.S. Lond., F.R.C.S., of 5, Woodhouse-square and 33, Park-square, Leeds, only son of the late Captain Moynihan, V.C., 8th (King's) Regiment, to Isabella Wellesley, second daughter of Thos. Richard Jessop, F.R.C.S., of Rounday Mount and 32, Park-square, Leeds.

OLIVE—PRICE.—On April 16th, at Christ Church, Leeson-park, Dublin, by the Rev. Canon Neligan, D.D., Eustace John Parke Olive, M.A., M.D. Cantab., F.R.C.S. Eng., of Leamington, to Annie Gordon, eldest daughter of Rev. Wm. Guari Price, Knock, Belfast.

DEATHS.

FORSYTH.—On April 12th, at Smalley, Derby, Thurstan Forsyth, L.M. Dub. (1864), L.R.C.P. Ed., L.S.A. Lond. (1871), aged 55.

HENTY.—On April 11th, at his residence, Camden-road, N., George Henty, M.D., aged 77.

HOLMAN.—On Jan. 25th, on board the *Ganges*, William Holman, Surgeon, eldest son of Commander Robert Holman, R.N.

SKIPTON.—On April 14th, at his residence, Sweet Briars, Liscard, Cheshire, in his 66th year, Deputy-Surgeon-General (Retired) Samuel Stacy Skipton, M.D.

VINRACE.—On April 9th, at Bromford House, Six Ways, Birmingham, Selina Emelin, the beloved wife of John Vinrace, M.D. Interred at the cemetery, Barnes, S.W., April 17th.

WEBB.—On April 10th, at Kingsbridge, Devon, Florence Phoebe, the devoted wife of William Henry Webb, M.D., aged 45.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 18th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Apr 11	30.45	N.E.	45	43	98	58	40	...	Hazy
" 12	30.25	S.E.	44	40	105	57	40	...	Bright
" 13	30.35	N.E.	49	43	101	56	37	...	Cloudy
" 14	30.18	N.E.	42	42	100	55	36	...	Overcast
" 15	29.94	N.E.	41	40	88	58	39	...	Overcast
" 16	29.73	N.E.	46	44	87	67	41	0.03	Overcast
" 18	29.59	S.W.	51	50	75	57	46	0.04	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.). At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Samuel West: Case of Pleuritic Effusion (Serous) of Eighteen Months' Duration; tapped forty times, and side then incised; ultimate complete recovery, with complete expansion of lung and little flattening of side.—Dr. Archibald Garrod: Case of Scleroma Neonatorum ending in Recovery.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-sq., W.).—Dr. Felix Semon: On the Probable Pathological Identity of the Various Forms of Acute Septic Inflammations of the Throat and Neck, hitherto described as Acute Edema of the Larynx, Edematous Laryngitis, Erysipelas of the Pharynx and Larynx, Phlegmon of the Pharynx and Larynx, and Angina Ludovici.

WEDNESDAY.—HUNTERIAN SOCIETY.—8.30 P.M. Mr. F.R. Humphreys: On the Desirability of Forming an Organisation with the view of Correcting the Grievances arising from the Abuse of Hospitals, Dispensaries, and Clubs.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Lucas Benham and Mr. Silcock: A case of Acute Intestinal Obstruction due to Volvulus of the Sigmoid; Abdominal Section; Recovery.—Mr. Golding-Bird: Cases of Early Erosion in Inflammation of the Sacro-iliac Joint.—Mr. Mansell Moullin: Two cases in which Orchotomy was performed for Enlargement of the Prostate.—Mr. Bowly: A case of a Large Intra-thoracic Cystic Gout causing Dyspnoea and treated by Operation.—Mr. Arbuthnot Lane: A case of Extensive Degenerating Nævus of the Bladder.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—SOCIETY OF ARTS.—8 P.M. Mr. James Douglas: Recent American Methods and Appliances employed in the Metallurgy of Copper, Lead, Gold, and Silver.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. George Forbes: Alternating and Interrupted Electric Currents (I.). GRESHAM COLLEGE.—6 P.M. Dr. Symes Thompson: The Climate of Egypt and Sea Voyages. (First Gresham Lecture.) SOCIETY OF ARTS.—8 P.M. Mr. Wm. Gowland: Art of Casting Bronze in Japan.

WEDNESDAY.—GRESHAM COLLEGE.—6 P.M. Dr. Symes Thompson: The Climate of Egypt and Sea Voyages. (Second Gresham Lecture.) SOCIETY OF ARTS.—8 P.M. Mr. R.E. Crompton: The Use of Electricity for Cooking and Heating.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Dewar: The Liquefaction of Gases (I.). GRESHAM COLLEGE.—6 P.M. Dr. Symes Thompson: The Climate of Egypt and Sea Voyages. (Third Gresham Lecture.) SOCIETY OF ARTS.—4.30 P.M. Mr. J.W. Parry: The Coming Railways of India and their Prospects.

FRIDAY.—GRESHAM COLLEGE.—6 P.M. Dr. Symes Thompson: The Climate of Egypt and Sea Voyages. (Fourth Gresham Lecture.) ROYAL INSTITUTION.—9 P.M. Mr. John Hopkinson: The Effects of Electric Currents in Iron on its Magnetisation.

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Mr. Arnold Dolmetsch: English Music and Musical Instruments of the 16th, 17th, and 18th Centuries (with illustrations upon original instruments). (I.)

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

QUACKERY.

To the Editors of THE LANCET.

SIRS.—The following account of quackery rampant in the West of England may interest some of your readers, although I fear it is by no means unique.

There lives in a neighbouring town a herbalist and "cancer curer," who pays us periodical visits here and swindles the people with an impudence and impunity scarcely credible to anyone unacquainted with the gullibility of the public in all matters medical. One market-day in the present month he stood with his vehicle in the market-place here. By his side was a girl he professed to have cured. She had been a club patient of mine, and endorsed all his statements—I daresay in perfect good faith. He went on to say that this girl had been under my care for many months (mentioning me by name), and under that of another medical man, and had received no benefit whatever, kindly remarking that he did not wish to say anything against us, but that "doctors do not understand these cases." He, on being consulted, at once saw it was a cancer and cured her. He then drew attention to the suppositions "cancer" contained in a bottle hanging at the side of his cart. The above account has been given to me by credible witnesses present in the crowd. Now for the real facts of the case. This young woman was under my care for some time suffering from scrofulous disease at the lower third of the femur, several pieces of bone coming away. She then went into hospital for a considerable time, and on her return continued under my care until the sinus was healed, some thickening of the soft tissues remaining. For this she seems to have consulted the herbalist, who gave her some very irritating ointment, which she was to rub in daily, and which, he said, would bring away a lump, which she was to bring to him. Of course, the ointment produced a slough, which in due time separated, and was transferred to the bottle and dignified by the name of "cancer," and the girl will go to her deathbed firmly believing she has been cured of a cancer which never existed. He then told the people that for this case he had received only thanks, but that for future cases he should charge £10—£5 to be paid down and £5 on completion of the cure.

This is not the only case that has come under my immediate observation. In November last I received a message from another patient, a married man, saying that he was in intense pain and, it was feared, would be dead before I could arrive. I found him with all the symptoms of irritant poisoning, and his mother gave me the following information. Three weeks before this time he had consulted the herbalist, who informed him that he was suffering from the inevitable tapeworm, and gave him a draught and a powder, for which he charged ten shillings, instructing him to wait until "four days before the full of the moon," then fast for twenty-four hours, and finally mix them together and swallow the lot. He did so, and was rewarded by violent pain in the bowels, constantly vomiting, fifteen liquid stools,

ending in a state of collapse, the worm being conspicuous by its absence. The medicine bottle had been destroyed—whether as part of the spell or as a wise precaution in case of unpleasant results I know not. The patient continued under my care for four weeks, and, I believe, was afterwards treated as an out-patient at a hospital. I doubt whether it would be wise to advertise the fellow by taking any public cognisance of him or his doings. I have therefore only sent him a verbal message to the effect that he has very narrowly escaped a charge of manslaughter, and a caution not again to make free with my name. As he carefully avoids using any such title as "M.B." (Medical Botanist), &c., it is possible that he need not trouble himself about the law; but in that case what practical advantage have we from our long and expensive course of study? If a law to meet such cases exists, who is to put it in force? For my own part, of two evils I prefer the lesser, and do not propose to risk the loss of time and money and incur the worry incident to putting the law and its glorious uncertainty in motion.

I am, Sirs, yours faithfully,

March 26th, 1895.

A TWENTY YEARS' SUBSCRIBER.

TREATMENT OF DIPHTHERIA BY SULPHITE OF MAGNESIUM.

To the Editors of THE LANCET.

SIRS,—Since the treatment was brought forward in your columns by Dr. Brownlow Martin some eighteen months ago I have adopted it in all the cases of diphtheria that have come under my care, and have followed, as far as I could, the general indications given for its application—viz., frequent insufflations, tabloids, and a gargle occasionally; and herewith I give a short summary of the results obtained from ten cases of undoubted diphtheria. Of those ten there were two deaths and eight recoveries. The first, a baby fifteen months old, died five hours after it was first seen, and in its case any treatment whatever would have been unavailing. The second, aged thirty-two years, died after six days' illness from pure asthenia, went steadily down, and succumbed from an overdose of diphtheritic poison, notwithstanding a literal deluge of sulphite.

Of the recoveries six ran a course varying from fourteen to twenty-eight days, counting from the appearance to the disappearance of the last trace of membrane, each exhibiting throughout that period the usual and characteristic intermissions and exacerbations so peculiar to diphtheria, and the onset of each recurrence of symptoms coinciding with a re-formation or extension of the membrane, and the intermissions or subsidence of symptoms with successive separations. As an illustration of this, the most usual course, let me give briefly the case of a girl aged six years. I was called to see her on Jan. 30th, 1895, and found the temperature 103° F., with a patch on the right tonsil, &c. I at once gave instructions that the sulphite powder be applied once every hour during the day, and twice during the course of the night; a supply of tabloids was given, and also a mouth wash of the sulphite supplied by way of variation. She was docile and obedient child, and submitted patiently to the treatment in all its details, which I knew were rigorously carried out. By Feb. 2nd all general symptoms had subsided and the temperature was normal, with only a small speck on the right tonsil. Although the tongue was still dirty and coated, we began to hope that her recovery would prove permanent. In this, however, we were disappointed, because by Feb. 3rd a fresh onset occurred irrespectively of the most persistent exhibition of sulphite, and the temperature rose again to 103°, with now a patch on the left tonsil. By Feb. 5th again both tonsils were clear of membrane, and all the symptoms had again subsided. These alternate subsidences and recurrences continued, the diphtheritic membrane invading successively the soft palate, the left side of the uvula, and ultimately the posterior nares; and the last of the membrane was coughed up on Feb. 20th, the tongue began to clear, and convalescence thenceforward was uninterrupted. In the remaining two cases no recurrences or relapses took place, the patch disappearing twenty-four hours after the treatment was begun. As regards sequelæ, a man aged twenty-eight years, one of the six cases, suffered from exceptionally severe paralytic sequelæ, so that at one time his life was very much despaired of. Beginning with paralysis of the soft palate and dysphagia, there followed presbyopia, paralysis and paresis involving the lower limbs, upper limbs, the abdominal and thoracic muscles, and ultimately the sphincters were temporarily implicated too.

I offer no remarks on the results of this treatment. Every case had sulphite powder freely and frequently applied; still my colleague has a record quite as successful with boracic acid and glycerine applications. In my hands I cannot see that the course of the disease has been materially shortened or modified, the majority relapsing under its most persistent administration. That it exerts some influence on the membrane I am prepared to admit; but from former experiences of diphtheria I should like to draw attention to the important and often very misleading feature—viz., that the membrane of diphtheria, quite irrespectively of treatment, seems to be shed or to separate spontaneously after some thirty-six or forty-eight hours from its appearance, re-forming again rapidly and repeatedly—of course, in bad cases. In estimating, therefore, the potency of any treatment this fact must be clearly borne in mind. In conclusion, I regret to have to admit that my confidence and reliance on this sulphite treatment grow less, and if pharyngeal cases can only be overcome or checked after an average three weeks' continuous treatment, what success can we be assured of in dealing with laryngeal cases?

I am, Sirs, yours faithfully,

April 15th, 1895.

JOHN SUTHERLAND, M.B., B.Sc. Edin.

AN APPEAL.

We gladly give publicity to the following appeal:—

"A lady, the daughter of a medical man, has supported herself for the last twenty-five years by teaching; but ill-health has prevented her from continuing to gain a livelihood by this means. She has since started a boarding-house, and is urgently in need of help. Debts to the amount of £150 have been incurred, and her furniture is likely to be taken, and thus her last means of carrying on a home, which is just beginning to maintain her, will be lost. Will any member of the profession assist? Any subscriptions will be received and duly acknowledged by J. Blake Maurice, M.D., F.R.C.S., Lloran House, Marlborough."

"MEDICAL ADVERTISING AT NOTTING HILL AND THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION."

To the Editors of THE LANCET.

SIRS,—In your issue of the 13th inst. you call attention to a circular referring to the Notting Hill Dispensary and the Metropolitan Provident Medical Association. Will you kindly allow me to state the facts of the case?

The Notting Hill Provident Dispensary—an institution of more than thirty years' standing—has recently been transferred to this association to be carried on as one of its branches. In connexion with the reorganisation of the dispensary a new medical staff has been appointed, and changes made in the hours of attendance, scale of payments &c. The circular to which you refer was drawn up to inform the existing members of the dispensary of these alterations. It was intended only for them, and was not printed with a view of being distributed broadcast, as your note seems to imply. Owing to a misunderstanding, which I much regret, and for which the medical men were in no way responsible, a few copies were given to persons who were not members of the dispensary. I may say that only 500 were printed, and many are still on hand. It is quite contrary to the principles of this association to issue circulars or handbills for general distribution, containing the names of the medical men; and in this case the gentlemen mentioned had no knowledge whatever that the circulars were being given to anyone but members. I enclose a list of our council &c., from which you will see that the association would not be likely to countenance unprofessional advertising by or for the medical men attached to its various branch dispensaries.

I am, Sirs, yours faithfully,

CHAS. H. WARREN,

Secretary, Metropolitan Provident Medical Association.
Lamb's Conduit-street, W.C., April 16th, 1895.

To the Editors of THE LANCET.

SIRS,—Referring to a statement appearing in your issue of the 13th inst. concerning the Notting Hill Branch of the Metropolitan Provident Medical Association, we beg you to insert the following reply from us.

We emphatically disapprove of such a method as you allege has been adopted in advertising this institution, and are much pained and annoyed at the publicity which has been given to our names; we have never authorised any such circular to be "scattered broadcast." We have written to the secretary of the Metropolitan Provident Association for an explanation, and we find your informant has grossly misrepresented the facts. We think before giving such publicity to a false report which casts an ethical slur on two members of the profession you should have exercised a little more care.

It is unnecessary for us to defend the Metropolitan Provident Medical Association. We have asked the secretary to forward you their annual report. We believe it to be a genuine provident institution. Amongst the members of the council are Sir Spencer Wells, Sir Sidney Waterlow, Mr. Timothy Holmes, and many other well-known philanthropists. It receives grants from the Hospital Sunday Fund, the Drapers' Company, the Goldsmiths' Company, the trustees of the London Parochial Charities, &c. It is a philanthropic institution, and we shall take care that so long as our names are associated with the Notting Hill branch the rules and objects of the association shall be adhered to.

We are, Sirs, your obedient servants,

G. MALLACK BLUETT, 11, Addison-terrace, W.
HENRY PILLOW, 1, Pembroke-gardens, W.

. We have also had the pleasure of an interview with Dr. Pillow, who assures us that the circular in question has not, so far as either he or Mr. Bluett is aware, been scattered broadcast or placed either under the door or in the letter-box of houses in the neighbourhood, and that he has caused careful inquiries to be made and can find no evidence whatever of such a practice having been carried out. We have pleasure in publishing the above letters and in accepting the assurance of Dr. Pillow and Mr. Bluett that they emphatically disapprove of such a method as was alleged to have been adopted. At the same time, we wish to express our regret that they have suffered pain and annoyance. There must always be risks of misconstruction when the private addresses as well as the names of practitioners appear on circulars whose destination is probably left in the hands of lay officials. Would it not be feasible in the case of such an institution as the Metropolitan Provident Medical Association to arrange some other means by which the actual members of the association could be made acquainted with the address of the medical officer whose services they wished to secure? It seems a little hard that honourable members of the profession should have to suffer misconstruction of their motives from such a cause.—ED. L.

MEDICAL SCHOOLS AND MEDICAL ADVERTISEMENT.

WE can so much attention is being given to the system of medical advertising and to the evils which it entails it would be unfair to restrict our criticisms to those advertisements which are direct and decidedly vulgar. Advertising must be taken in a larger sense and must be held to include all undue obtrusion of one's name, fame, or faculty before a newspaper public. This may be done in many indirect ways. Over some of these the medical practitioner may have little control. But wherever he has control it is his duty to be firm in its exercise, and to forbid the publication of his name. There are many cases in which medical men allow their names to appear from mere inadvertence, and others with regard to which they are, as a letter which we publish this week shows, never consulted till they see them published. Our attention has been directed to the advertisement of the names of the medical staff of a metropolitan school. We are asked if this is professional. Our answer is that such particulars are out of place in the lay press. The general arrangements of the school, fees, and so on may be advertised in this way, but the names of leading physicians, and surgeons, and accoucheurs are unnecessary and unseemly.

Surgeon-Captain C. H. Hale.—1. Full information can be obtained in Laveran's "Thesis on Paludism" and the Monographs of Marchiafava and Celli, translations of which are among the recent publications of the New Sydenham Society.—2. Baker, Holborn.

"DRUGS CONTRA-INDICATED IN PREGNANCY."

To the Editors of THE LANCET.

SIRS,—Your Paris correspondent in the LANCET of March 9th conveys to us the opinion of M. Huguenin that "at the head of drugs dangerous to the pregnant woman must be placed the sodium salicylate, ergot of rye, salicylic acid, and salol." If in your judgment this view is debatable, I beg to submit as it *propos* the following brief narrative:—

In THE LANCET of Feb. 7th (p. 327) and July 11th (p. 75), 1891, notes are given by Dr. Finzi upon "white infarction" of the placenta as a cause of fetal death, and of the opinions of Dr. W. L. Reid of Glasgow relative to the frequent occurrence of this condition in mothers evidencing a decidedly rheumatic history. Not long after these publications the writer was consulted by a fellow countrywoman as to her prospects of ever having a living child. She gave me to understand that her first parturition terminated (eighteen months before) in the birth of a stillborn and perfectly well-nourished male child, which had apparently been dead for several days, during which period she had felt no fetal movements, though previously actively maintained. From the statements of her husband, an intelligent eye-witness of all that occurred, and those of the nurse, I gathered that there had been disense of the placental structures of very decided character, and that it was the opinion of the expert accoucheur in attendance that this condition had been fatal to the infant. Upon interrogation I learned that the parents of my patient had both died from diseases incidental to the cardiac affections following acute rheumatism, and that she was herself subject to subacute attacks of it. Her urine, examined periodically, showed a constantly high specific gravity (1030 to 1036) and great excess of uric acid. My plan proposed included the continuous exhibition of salicylate of soda, salicylate of quinine, or salol p.r.n., with labour to be artificially induced soon after the termination of the eighth month. Upon the occurrence of pregnancy soon afterwards, the date of which could be accurately known, I communicated my plan of procedure to Dr. W. L. Reid of Glasgow, and was fortunate enough to secure his approval "under all the circumstances." As a result the patient passed on in due course, seldom a week going by without daily doses of the remedies indicated, the urine maintaining a specific gravity of 1020 or lower, with greatly lessened acidity, and the general condition, after the early distress of nausea, "quite as good as could be expected," to use her own terms of description. Labour was induced (by the introduction of a bougie) on the date and day proposed six months before, and was terminated naturally by the birth of a living and perfectly nourished female child, which weighed over seven pounds. The placenta was not markedly abnormal, though there might be a suspicion of degeneration commencing on the maternal surface opposite the insertion of the funis, and at points upon its extreme margin. My patient had a perfectly healthy convalescence, nursed her daughter adequately and with much satisfaction to herself for more than six months, when a recurrence of menses, with concomitant symptoms, led to the adoption of artificial regimen. The infant at eight months weighs about sixteen pounds and has had scarcely an hour's illness.

Your obedient servant,

April 15th, 1895.

AN AMERICAN PHYSICIAN.

"A QUERY."

To the Editors of THE LANCET.

SIRS,—At page 909 of your issue of April 6th, in reply to a query in reference to insurance against accident and sickness for medical men, you state that the Medical Sickness Annuity and Life Assurance Society "covers the sickness risk." This implies that accidents are not provided for. Would you, therefore, kindly amend your reply by stating that this society insures against accident as well as sickness?

I am, Sirs, yours faithfully,

F. DE HAVILLAND HALL.

Chairman, Medical Assurance Society.

Wimpole-street, W., April 15th, 1895.

THE CASE OF MR. C. B. TOWNSHEND.

THE following donations have been received in addition to those already announced and are hereby thankfully acknowledged:—

Mr. W. Domett-Stone (London) ...	£2 2 0	Dr. Felix Semon ...	£2 2 0
Mr. Henry J. Butlin ...	2 0 0	Dr. F.B. Lawson (Brighton) ...	0 5 0
Dr. C. R. Walker (London) ...	1 1 0	Dr. Sharkey ...	2 2 0
Sir B. W. Richardson ...	1 1 0	Dr. T. Carter (Yorks) ...	1 0 0
Dr. Meredith Townsend ...	0 10 0	Æsculapius Masonic Lodge 2410, per Dr. ...	
Mr. Herbert W. Page ...	3 3 0	Thos. Dutton ...	2 2 0
Dr. Andrew Wynter (Beckenham) ...	0 10 0	Dr. Pearson (London) ...	1 1 0
Dr. Walter Edmunds (Lambeth) ...	2 2 0	Dr. T. Whipple (London) ...	1 1 0
		W.M.K. ...	0 5 0
		Mr. Geo. Lawson ...	5 0 0

Further donations are earnestly invited by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

"MEDICAL PRACTICE BY TOUTING.—ADVERTISEMENT BY POSTER IN CAMBERWELL."

To the Editors of THE LANCET.

SIRS,—A friend of mine has just brought to my notice an article in your columns animadverting upon Dr. Gallie and his name appearing upon the bills of our mission slate club. I have already apologised to him for most unwittingly compromising him. May I add through your columns that such an impression as your correspondent notes would never have entered my mind, nor the minds of any of the slate club committee? Dr. Gallie was never consulted about the bill nor knew anything about its publication. The only reason his name appeared as it did was that it might help our men's guild slate club. We never dreamed that it would help him by advertising his name; nor do I think it would. If it is a breach of medical etiquette that the practitioner attending members of a slate club should allow his name thus to appear on a poster, then I repeat the deed was done before Dr. Gallie knew anything of it. I regret extremely that he should have been in any way thought to have committed any such breach of etiquette as your correspondent implies.—I am, Sirs, yours obediently,

April 13th, 1895.

J. TETLEY ROWE, Trinity Missioner.

LANGLEY DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow us through your columns to inform intending subscribers to the Langley Defence Fund that the subscription list is shortly to be closed? Since the first notice was published the following additional subscriptions have been received:—

Dr. Clapton ...	£2 2 0	Mr. Parrott ...	£1 1 0
Dr. Routh ...	2 2 0	Dr. Reid ...	1 1 0
Mr. Jollye ...	2 2 0	Mr. F. W. Smith ...	1 1 0
Dr. Gallie ...	1 1 0	Smaller sums ...	2 0 6
Dr. Wharton Hood ...	1 1 0		

As the amount hitherto subscribed falls far short of the sum that Mr. Langley has had to pay to his solicitors it is hoped that more may still be received. It will be remembered that the action for damages arising out of a midwifery case was dismissed with costs so soon as the evidence of Dr. Cullingworth and Dr. Herman had been heard, but that the plaintiff's pecuniary position was such that the entire costs fell upon the defendant. Either of us will be pleased to receive subscriptions.—We are, Sirs, yours faithfully,

April, 1895.

W. RIMBOLD, 2, Surrey-square, S.E.
LAURISTON SHAW, 10, St. Thomas's-street, S.E.

OPHTHALMIA FOLLOWING INFLUENZA.

To the Editors of THE LANCET.

SIRS,—I have seen so many cases of ophthalmia following an attack of influenza during the recent epidemic that it seems certain there is a causal relation existing. That this should be so is not surprising, as the tendency of the disease is to affect mucous membranes. The conjunctivitis has been in all cases troublesome, lasting from one to two weeks, and requiring usually more than one change of treatment. The amount of muco-purulent discharge has been less than is commonly associated with catarrhal ophthalmia. The inflammation has affected both ocular and palpebral conjunctiva. In one case I have seen it complicated with phlyctenular disease of the margin of the cornea.

I am, Sirs, yours truly,

Rickmansworth, April 9th, 1895.

H. W. WEBBER.

WANTED, A BED-REST.

To the Editors of THE LANCET.

SIRS,—Can any of your readers tell me which is the most useful and economical form of bed-rest?—I am, Sirs, yours truly,

April 15th, 1895.

SUBSCRIBER.

During the week marked copies of the following newspapers have been received:—*Manchester Chronicle, Alloa Circular, New York Herald, Scotsman, Cornish Telegraph, Isle of Man Times, Yorkshire Post, Westmeath Examiner, Chorley Guardian, Ayr Observer, Northern Echo, Sheffield Independent, Devizes Gazette, North Devon Observer, Newcastle Journal, Glasgow Evening News, Whitehall Review, Manchester Guardian, Leicester Post, Brighton Argus, Wigan Examiner, Builder, Sussex Daily News, Birmingham Gazette, West Briton, Bury Guardian, Bath Journal, Brecknock Beacon, Kentish Express, Huddersfield Daily Chronicle, Yorkshire Herald, Architect, Times of India, Boston Independent, Cumberland Advertiser, Pioneer Mail, Brierley Hill Advertiser, Bristol Times, Derbyshire Courier, Bradford Observer, Kensington News, Southend Echo, Southport Visitor, Denbighshire Free Press, The Clerk of the Weather, Star, Johannesburg, Blackpool Herald, Poor-law Officers' Journal, Auckland Times, Norwich Mercury, Colchester Gazette, &c. &c.*

Communications, Letters &c. have been received from—

A—Mr. H. E. Armstrong, Lond.; Mr. H. W. Allingham, Lond.; Messrs. T. & M. Armstrong, Lond.; Archives of Pediatrics, New York; *Anæsthesia*, Lond.; Publishers of: A. B. C.; Dr. A., Lond.; Asterion; A. P., Lond.

B—Dr. G. F. Blandford, Lond.; Dr. Lauder Brunton, Lond.; Dr. A. Bronner, Bradford; Dr. C. E. Baker, Lond.; Mr. D. Birchall, Liverpool; Mr. D. Biddle, Kingston-on-Thames; Mr. B. Bradley, Lancaster; Mr. H. A. Bryant, Durham; Messrs. Blondeau & Cie, Lond.; Messrs. Baker and Sons, Lond.; Birmingham City Asyl., Med. Supt. of; Brin's Oxygen Co., Lond.

C—Dr. R. W. Carter, Weymouth; Prof. W. H. Corfield, Lond.; Brig.-Surg.-Lieut.-Colonel W. Hill Climo, Colchester; Mr. W. Cook, Birmingham; Mr. G. Cleghorn, Marlborough, N.Z.; Miss Candy, Lond.; Messrs. Cassell and Co., Lond.; Messrs. Crossley, Moir, and Co., Lond.; Messrs. J. A. Carveth and Co., Toronto; Cortland Wagon Co., Lond.; Commercial, Church, and Colligate Agency, Lond.; Cymro, Lond.; Claret, Lond.

D—Mr. H. N. Dixon, Northampton; Messrs. Domeier and Co., Lond.; Devonshire Hosp., Buxton, Chairman of; Delancey Fever Hosp., Sec. of; Delpha, Lond.

E—Dr. F. H. Edgeworth, Bristol; Mr. T. C. Eager, Woking; Mr. J. Evans, Oswestry; Eureka Window Sash Fittings Co., Blackburn.

F—Dr. J. E. Forster, Lond.; Mr. C. F. Forshaw, Bradford; Messrs. Fannin and Co., Dublin; Messrs. Forsaith, Lond.

G—Mr. J. R. Gill, Kingsbridge; Mr. J. Greenway, Southampton; Miss J. A. Galloway, Glasgow; Messrs. Galloway, Matthews, and Co., Lond.; Messrs. J. P. Gray and Son, Cambridge; Messrs. R. W. Green and Co., Lond.; Globe Advertising Co., Lond.; Gammia, Bath.

H—Dr. E. Hawkins, Dudley; Dr. H. C. Highet, Singapore; Dr. S. Hyde, Buxton; Surg.-Capt. C. H. Hale, Fort Napier, Natal; Mr. J. Heywood, Manchester; Mr. T. G. Horder, Cardiff.

I—Junior.

K—Dr. W. Kidd, Lond.; Mr. P. J. Kavanagh, Long Sutton; Mr. E. C. B. Kerin, Lond.

L—Dr. R. Lee, Lond.; Dr. A. Lorand, Vienna; Mr. B. Lord, Manchester; Messrs. Lee and Nightingale, Liverpool; Messrs. Langton, Bardon, and Co., Lond.; Lace Web Spring Mattress Co., Sandiacre; Liverpool Stanley Hosp., Sec. of; Liq. Carnis Co., Aston Clinton.

M—Dr. M. Mackintosh, Lond.; Dr. E. J. Moore, Bordeaux; Mr. R. W. Marston, Berne; Mr. J. McC. McCarthy, St. George's; Messrs. Maw, Son, and Thompson, Lond.; Messrs. T. Meadows and Co., Liverpool; Messrs. Maple and Co., Lond.; Messrs. Milton and Co., Lond.; Messrs. Mather and Crowther, Lond.; Medico-Legal Congress, New York, Sec. of; Med. Congress, Eleventh International, Genoa, Gen. Sec. of; M.B., Manchester; Marcus, Lond.; Maltine Manufg. Co., Lond.; Medicus, Lond.; M.B. (Lond.), London.

N—Mr. R. N. Nason, Nuneaton; National Hosp. for Diseases of the Heart, Lond., Sec. of; National Hosp. for the Paralyzed, Lond., Sec. of; North, Lond.

O—Surg.-Lieut.-Col. J. O'Reilly, Guildford; Messrs. Oppenheimer, Son, and Co., Lond.; Oxford House Institute for Trained Nurses, Lond., Matron of.

P—Mr. Y. J. Pentland, Edinburgh; Mr. J. B. Pike, Loughborough.

R—Dr. G. Rankin, Warwick; Mr. J. T. Rowe, Lond.; Mr. Carl Ricker, St. Petersburg; Messrs. J. Richardson and Co., Leicester; Messrs. Robertson and Scott, Edinburgh; Royal Meteorological Society, Lond., Assistant Sec. of; Roxburgh Press, Lond.; R. O. P.

S—Dr. J. Sutherland, Netherfield; Dr. E. Seaton, Lond.; Dr. J. Sargent, Worthing; Dr. L. E. Shaw, Lond.; Dr. J. G. Swayne, Clifton; Mr. J. B. Smith, Lond.; Mr. P. R. W. de Santi, Lond.; Messrs. Simundt, Slater, and Co., Lond.; Messrs. H. Schweitzer and Co., Lond.; Messrs. G. Street and Co., Lond.; Messrs. Stubbs, Lond.; Messrs. Simpson, Roberts, and Co., Liverpool; Messrs. Souter, Mackenzie, and Co., Dover; St. Luke's Hosp., Sec. of; Salford Royal Hosp., Sec. of; Saarbach's News Exchange,

Mainz; Sapiens, Lond.; Surgeon, Sheffield.

T—Dr. A. Thbm, Crieft, N.B.; Dr. B. M. Taylor, Greenburg, U.S.A.; Mr. J. Thin, Edinburgh; Miss L. Twining, Tunbridge Wells.

U—University College, Bristol, Dean of.

V—Mr. E. W. Von Tunzelmann, Chefcoo.

Letters, each with enclosure, are also acknowledged from—

A—Mr. W. Adams, Lond.; Mr. R. R. Anderson, Carmarthen; Aston Union, Clerk of; Alpha, Mile End; A. B. C. D., Lond.; A. H. Lond.; Akassa, Lond.; Asculapius, Lond.

B—Dr. B. Blair, Goole; Dr. T. M. Bunce, Arbroath; Dr. I. McW. Bourke, Lond.; Mr. G. S. Birt, Ipswich; Mr. J. S. Buck, Eaton Socon; Mrs. A. L. V. Balbirnie, Plumtree; Beta, Lond.

C—Dr. W. R. Carter, Warwick; Mr. H. Case, Manchester; Mr. D. J. Carroll, Clonmel; Mr. A. Copen, Lond.; Mr. T. E. Cantillon, Little Island; Messrs. G. Curling and Co., Lond.; Chesterfield Hosp., Sec. of; C.C.C., Lond.

D—Dr. W. H. Day, Lond.; Dr. A. A. Duke, Littlehampton; Rev. S. Douglas, Coatsbridge, N.B.; Señor D. Arango, Taipeng Penang; Mr. A. H. Dawes, Lond.; Messrs. Down Bros., Lond.; D. A., Lond.; Delta, Lond.; D. M., Lond.; D. M., Leeds.

E—Mr. J. A. Byton-Jones, Wrexham; Experienced, Lond.

F—Fortis, Lond.; F. W. C., Lond.

G—Mr. J. Greenway, Southport; Mr. C. J. Green, Preston; Mr. H. W. G. Green, Weymouth; Mr. J. H. Goldwin, Rochester; Gamma, Bath.

H—Mr. J. H. Hatfield, Lond.; Mr. A. G. Hebblethwaite, Keighley; Dr. H. Brighton; H. D., Lond.; H., Lond.; Health, Lond.; Hotspur, Lond.

I—Islington 155, Liverpool; International News Co., Lond.

J—Dr. J. F. Jameson, Horley; Dr. P. P. Jennings, Tonypandy; Mr. Y. M. Jones-Humphreys, Abercaddwyll; J. R. S., Lond.

K—Dr. N. Keith, Campbeltown.

L—Dr. H. Levin, Zürich; Dr. G. H.

W—Dr. F. J. Waldo, Lond.; Mr. A. Walker, Rotherham; Mr. J. H. Wilson, Alfreton; Mr. A. Watts, Lond.; Weston-super-Mare Hosp., Sec. of.

Y—Yorkshire Coll., Leeds, Sec. of; *Yorkshire Post*, Leeds, Propr. of; Young Wales, Lond.

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An Inaugural Address

UPON

THE WORK OF THE OBSTETRICAL SOCIETY IN RELATION TO THE EXAMINATION AND REGISTRATION OF MIDWIVES.

Delivered before the Society on March 6th, 1895,

By FRANCIS HENRY CHAMPNEYS, M.A.,
M.D. OXON., F.R.C.P. LOND.,

PRESIDENT OF THE SOCIETY; OBSTETRIC PHYSICIAN TO
ST. BARTHOLOMEW'S HOSPITAL.

[DR. CHAMPNEYS commenced his address by a historical review of the position of English midwives, in which he proved their antiquity and showed that movements in favour of their regulation dated from early in the seventeenth century. He continued:]

PROPOSALS FOR THE REGULATION OF MIDWIVES.

In 1813 the Society of Apothecaries endeavoured to persuade Parliament to pass enactments for the examination and control of midwives, making it penal for any woman to practise without a licence gained after examination and given by the committee of the district in which she lived. There were to be twenty-four districts, including London, each with a properly constituted board.¹ In 1869 Dr. Farr, of the Registrar-General's Department, suggested to the Obstetrical Society the investigation of the causes of infant mortality, which was very great, especially among the newly born.² A committee was appointed and a paper of questions sent to every Fellow: "(1) What proportion of births is attended by medical men and by midwives? (2) Are the midwives instructed?" 1. It was stated, in reply, that among the poor population of villages 30 to 90 per cent. were attended by midwives. The same proportion obtained in the large provincial towns, and especially in large manufacturing towns, while in the small manufacturing towns the proportion was less. 2. In answer to the second question, replies in the negative were received from all parts of the country.³ In 1892 the General Medical Council passed two resolutions. 1. In March Dr. (now Sir Henry) Acland proposed, and Dr. Stokes seconded, the following resolution, which was carried: "That a committee be appointed to consider and report whether the General Medical Council has power to make rules for the special education of women, such as may entitle them to obtain a qualification to be certified by the Council, and that the committee do further report for what purpose such qualifications (if any) should be granted." 2. "What are the most desirable means for educating, examining, and certifying in respect of them, with especial reference to midwifery, the management of medical institutions, dispensing, and nursing?" In proposing the motion Dr. Acland stated that "the Medical Act gave the Council the power of providing for the medical necessities of the people." In seconding the motion Dr. Stokes said: "Midwives were practitioners, to a certain extent, of a branch of surgery and medicine. The interests of that large number of the poor who came under the care of these female practitioners ought to be cared for. The Council should not be an examining body, but it should register the qualifications derived from other licensing bodies."⁴

BILLS FOR THE REGULATION OF MIDWIVES.

The following is a brief summary of the various Bills which have been framed for the examination and registration of midwives:—1. In 1813 the Society of Apothecaries, as has been already stated, tried to get Parliament to legislate on this subject, but without success. 2. The Bill of 1878 was part of the Medical Act originally, and was promoted by the General Medical Council. The portion of it referring to midwives was dropped, as it was feared that it might cause confusion between midwives and medical men if both were included in the same Bill. It was introduced into the House of Lords by the Duke of Richmond. 3. A Bill was framed

in 1882 by the British Medical Association, but was never presented to Parliament. 4. A Bill was prepared in 1890 by the Midwives' Institute, amended by the Obstetrical Society, the British Medical Association, and a Select Committee of the House of Commons, but was talked out on the second reading by Mr. Bradlaugh, because he disapproved of midwives being required to produce a certificate of moral character before registration, while medical men were not required to do so. The Bill was dropped on the understanding that a Select Committee should be formed to consider the whole subject. On Nov. 29th, 1889, the General Medical Council resolved: "That this Council regards the absence of public provision for the education and supervision of midwives as productive of a large amount of grave suffering and fatal disease among the poorer classes, and urges upon the Government the importance of passing into law some measure for the education and registration of midwives." In April, 1891, the Royal College of Physicians of London appointed a committee to report on the Midwives Bill, and this report expresses the conviction that legislative action is desirable in order to secure the due education, examination, and registration of midwives; and it further recommends that a Parliamentary Select Committee should be asked for, before whom the question might be fully investigated with a view to legislation.⁵

SELECT COMMITTEES.

On June 17th, 1891, a Select Committee of the House of Commons, appointed to investigate the question of the registration of midwives, reported as follows:—

Report of the Select Committee of the House of Commons on Midwives' Registration, June 17th, 1891.

"Your committee have sat six times and have taken most valuable and important evidence from medical men and practitioners in various spheres of practice both in favour of and opposed to the registration of midwives, and also from trained and experienced midwives. This evidence has shown that there is at present serious and unnecessary loss of life and health and permanent injury to both mother and child in the treatment of childbirth, and that some legislative provision for improvement and regulation is desirable. They have also had evidence showing that there is a wide field for training in midwifery now unused connected with parish infirmaries and home practice in populous places. Their inquiries had been cut short by the approaching early dissolution of Parliament, and they therefore report the evidence, and recommend a continuation of the inquiry in the next session of Parliament."

Another similar committee on Aug. 8th, 1893, reported thus:—

Report of the Select Committee of the House of Commons on Midwives' Registration, Aug. 8th, 1893.

"Your committee have sat four times, and have taken most valuable and important evidence, which, with that given last year at six sittings, includes that of distinguished medical men and women in various spheres of practice, both in town and country, and also from trained and experienced midwives from various districts. Your committee are of opinion that a large number of maternal and particularly infants' deaths, as well as a serious amount of suffering and permanent injury to women and children, is caused from the inefficiency and want of skill of many of the women practising as midwives without proper training and qualification. They find that amongst the poor and working classes both in the country and in towns the services of properly trained midwives have been eminently successful and of great advantage to the community. As proved by the evidence before your committee, the services of midwives are a necessity, and, consequently, every precaution should be taken to discourage the practice of women who are ignorant and unqualified. Your committee are of opinion that by legislative enactment no woman should be allowed to call herself or to practise as a midwife except under suitable regulations, but that the term 'registered midwife' should be protected and restricted to those who have been properly trained and who alone should be placed on the Midwives' Register, and that the vested interests of untrained midwives should be efficiently protected by inserting in any future Bill a clause to the effect that any woman who produces evidence that she is in practice as a *bona-fide* midwife at the time of the passing of the Act shall, without formal registration, be allowed to continue

¹ Aveling, pp. 153-4.

² Transactions of the Obstetrical Society, vol. xi., 1869, p. 24.

³ Ibid., pp. 132 and 997.

⁴ Aveling, English Midwives 1872, pp. 175-6.

⁵ Midwives' Institute pamphlet, p. 6; Brit. Med. Jour., vol. i. 1891, p. 986.

her calling under the term 'midwife' alone, but shall not be permitted to assume any other title whatsoever. Your committee therefore recommend that a system of examination and registration of midwives should be established, and that for the purpose of admission and examination of women desiring to act as midwives the General (Medical) Council shall be invited to frame rules for regulating: (1) the admission to the Register either by (a) practice or (b) examination, or by both; (2) the conditions of admission to such examinations; and (3) the conditions of such examinations. These rules and regulations should, in the opinion of your committee, be subject to confirmation by the Privy Council; and in the event of the General Council failing to make such rules as the Privy Council can confirm your committee recommend that the Privy Council should invite some other medical body or forthwith cause the rules and regulations proposed in the foregoing paragraph to be framed for the purposes required, and that such rules shall take effect as if they had been made by the General Council and confirmed by the Privy Council. Your committee also recommend that the duty of carrying out locally the provisions of the Act that will be required should be placed in the hands of the county councils. They also are of opinion that greater facilities for the study of midwifery should be provided in workhouses and lying-in hospitals. In conclusion, your committee desire to refer to the apprehension expressed by certain witnesses belonging to the medical profession, lest their interests might be injuriously affected by an improvement in the status of midwives. The great preponderance, however, of medical and other evidence, having regard to both the authority and number of the witnesses, was to a contrary effect. Your committee, therefore, whilst giving due consideration to the expression of such fears, believe that the suggested injury is not likely to prove serious, and they are of opinion that medical men will not only be relieved of much irksome and ill-paid work, but also that improved knowledge on the part of midwives will induce them to avail themselves more frequently, and at an earlier stage than at present, of skilled medical assistance in time of emergency and danger. On this point your committee had full and substantial evidence."

[Dr. Champneys then quoted from the address, of the President, Sir Richard Quain, at the opening of the fifty-fifth session of the General Medical Council, words showing the Council to be in favour of Government education and registration of midwives, though unable to undertake the duties of detail or local arrangements. A charge of the Recorder to the grand jury at the Old Bailey on Jan. 8th, 1894, was quoted, also in support of the compulsory registration of midwives. Dr. Champneys likewise set forth regulations for midwives in foreign countries. He continued:]

THE HISTORY OF THE OBSTETRICAL SOCIETY.

We now come to deal with the history of our own society in relation to this question. On Nov. 4th, 1870, the Council passed a resolution in favour of the institution of a voluntary examination for midwives.⁶ This resulted from a committee under the presidency of Dr. Hall Davis. At the annual meeting of the society on Jan. 3rd, 1872, the scheme of such an examination, with by-laws, was presented to the society and passed unanimously. It is essentially the same as at present, and the law referring to the granting of the certificates runs thus: "V. That, on satisfying the Board of Examiners as to her qualifications the midwife should receive a diploma certifying that she is a skilled midwife competent to attend natural labours." At the annual meeting, Jan. 6th, 1875, the President (Dr. Tilt) in his address said: "Last year Lord Aberdare and Mr. Stansfeld were in office; they favourably entertained the views repeatedly brought forward by the society, and they were prepared to bring in a Bill for the better education and registration of midwives, when a change of Ministry convinced your Council that the question must be left in abeyance. . . . Ours is the only civilised country that has left unregulated the midwifery of the humbler classes, and it is a disgrace to obstetric medicine that there should be no means of preventing an incompetent and drunken woman from assuming the name and the duties of a midwife." In 1873 the Council referred the matter of branch examinations and registration of midwives to a committee, who reported as follows: "The Obstetrical Society of London, having had repeatedly and urgently brought before its notice the sacrifice of human life and

health occasioned by the practice of ignorant midwives, has already instituted an examining board for testing the knowledge of women desiring to follow the calling of a midwife, and has granted certificates to those who have satisfied its examiners." It then proposed methods for branch examinations and for the registration of midwives.⁹ On June 8th, 1877, the President, Dr. West, informed the society that a deputation had waited upon the Lord President respecting the examination and registration of midwives.¹⁰ At the annual general meeting, Jan. 2nd, 1878, the President (Dr. West) again referred to the subject as follows: "His Grace the Lord President of the Council expressed himself as favourable to the principles which the scheme embodies. It was afterwards laid before the Medical Council, who approved its object. In order to correct various legal and technical imperfections it was submitted to Mr. Roscoe, the legal adviser of the College of Physicians." The President then proceeded to deprecate the postponement of a settlement of this question till that of the admission of women to the profession was settled, and he pointed out that if women were admitted to, and even if men were excluded from, the medical profession, the poor, especially in the country districts, would be just as ill provided as at present. He urged the duty of the society, not as medical men, but as citizens, "to secure some guarantee that the poor shall not continue to be exposed to an ignorance and unskilfulness against which the Government of every other civilised country has protected them."¹¹ In 1879 the President (Dr. Playfair) informed the society at the annual meeting that "the principles of the scheme [for the examination and registration of midwives] not only met with the approval of the Medical Council, but were embodied by His Grace the Duke of Richmond in the Medical Acts Amendment Bill, which, but for the troubles in the East, would, there is every reason to believe, have passed both Houses of the Legislature."

THE CERTIFICATE OF THE OBSTETRICAL SOCIETY.

The following is the form of certificate drawn up by the solicitor to the Society, and hitherto in use. It dates from March, 1887¹²:—

"Obstetrical Society of London.

"We hereby certify that _____ has passed to our satisfaction the examination instituted by the Obstetrical Society of London, and that she is, in our opinion, a skilled midwife, competent to attend natural labour."

(Signatures of President, Chairman, Honorary Secretaries, and Examiners.)

(Undertaking signed by the Midwife)

"I undertake to abide by all the rules and regulations of the Obstetrical Society with regard to the duties and conduct of midwives, and to submit to the jurisdiction of its Council in the decision of all matters relating to my conduct as a midwife. I further agree that in case I shall hereafter be convicted of any criminal offence, or be guilty of any act or conduct which in the opinion of the Council renders me unfit or unworthy to hold its diploma, the same may be forfeited by a resolution of the Council, in which case I will, on receiving notice in writing of such resolution, to be served either personally or by leaving the same at my then present or last known place of abode in the United Kingdom, forthwith give up such diploma to the President, or to one of the Secretaries for the time being of the Society; and I agree that my name may be removed from the Register of Midwives kept by the Society, and I promise thenceforward to desist from the use of any designation or title implying possession of such diploma.

(Signature of Midwife.
Seal of the Society.)"

The Council were expressly advised that no technical meaning attached to the word "diploma," and that it had precisely the same meaning as "certificate." In 1889 the chairman of the Board for the Examination of Midwives reported that the Society had added a declaration or *sponsio* (see above), which each midwife would have to sign, in which she agrees to submit to the jurisdiction of the Council in all matters relating to her conduct as midwife, and to give up her diploma if the Council shall consider her conduct such as to render her unworthy to hold it. This she signs in a book and also on her certificate.¹³

CORRESPONDENCE BETWEEN THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY.

On Jan. 4th, 1893 the Council considered the following letter from the Registrar of the General Medical Council:—

"General Medical Council, 299, Oxford-street, London, W.,
"December —, 1892"

(Before December 16th.)

"Sir,—In reference to the giving of certificates or diplomas in midwifery, the General Medical Council, at its recent session, passed the

⁶ Council Minutes, p. 243.

⁷ Transactions of the Obstetrical Society, vol. xiv. 1872, p. 21.

⁸ Ibid., vol. xvii., 1875, p. 33.

⁹ Council Minutes, p. 281.

¹⁰ Transactions of the Obstetrical Society, vol. xix., 1877, p. 138.

¹¹ Ibid., vol. xx., 1878, p. 13.

¹² Council Minutes, p. 642.

¹³ Transactions of the Obstetrical Society, vol. xxxi., 1889, p. 71.

following resolution, which, in the President's name, I have been directed to communicate to you: 'That the President be requested by the General Medical Council to point out to the institutions and persons who grant such certificates that the certificate should be expressed in such a form as not to lead to the impression that it is a legal qualification to practise midwifery.'

"I am, Sir, yours faithfully,

"W. J. C. MILLER, Registrar."

The following resolution was passed by our Council: "That the Secretary be requested to reply to the President of the General Medical Council, to enclose a copy of the diploma of the Society, and to point out that it is merely an expression of opinion on the part of the Society, and that it does not express any opinion as to the competence of the midwife, except so far as concerns natural labour."¹⁴ At the annual meeting, Feb. 1st, 1893 the Chairman of the Board for the Examination of Midwives, after quoting the proportion of failures in successive periods, and their steady diminution owing to increasing competence of the candidates, defined the scope of the Society's certificate as follows: "When it is remembered that the Society's certificate is merely an expression of opinion by the Society that the holder of it is competent to attend natural labour, and that no legislation has taken place, either for the purpose of preventing uncertified persons from calling themselves midwives or even for registering midwives, it is plain that the work which the Society has voluntarily undertaken and carried on for twenty-one years is highly and increasingly appreciated by the midwives and by the public generally."¹⁵ On April 4th, 1894, the Council considered a letter from the Lancashire and Cheshire Branch of the British Medical Association protesting against the promotion of legislation for the registration of midwives.¹⁶ On July 4th, 1894, the Council considered the following resolution from the General Medical Council of May 22nd: "That, in the opinion of the Council, to issue to any person not legally qualified for registration any certificate of competency or other document so framed as to bear a colourable resemblance in appearance or phraseology to a diploma conveying a right to act as a medical practitioner, is a proceeding which directly contravenes the spirit of the Medical Acts, and is accordingly liable to be visited with the condemnation of the Council. The President is, therefore, requested to repeat a warning, already given to certain institutions, and to urge the registered practitioners connected with institutions granting the certificates to nurse-midwives to carefully reconsider the terms in which they are framed, so as to bring them into harmony with this resolution." To this (which was apparently a circular sent to a large number of certifying institutions without distinction, in which no statement appears that the General Medical Council had anything to find fault with in the certificate of the Society) the following reply was sent: "That the General Medical Council be informed that, with regard to the printed resolution passed May 22nd, a copy of which was sent to the Obstetrical Society, the certificate of the Society was drawn up many years ago with a view to avoid the possibility of its being used as a diploma conveying a right to act as a medical practitioner; that it has been subjected to legal criticism on this point, and has been framed in accordance therewith. The Council of the Obstetrical Society feel sure that the General Medical Council appreciate the care which has thus been exercised in accordance with the views expressed in their resolution."¹⁷ On Monday, Dec. 3rd, 1894, the General Medical Council passed the following resolutions: (a) "That the Council, being of opinion that certain documents issued by various societies or persons as diplomas of education and examination in midwifery are 'colourable imitations' of diplomas conferring a legal right to admission to the Medical Register, and both contravene the spirit of the Medical Acts and are calculated to deceive the public, hereby give notice that from the present date the issue of such 'colourable imitations' by registered practitioners will be regarded as conduct infamous in a professional respect." (b) "That in the opinion of the Council the form of the certificate now before the Council, and purporting to be granted by the Obstetrical Society of London on July 20th, 1894, is such that it may be regarded as a document coming within the purview of the foregoing resolution; and that this opinion be communicated to the President and Council of the Obstetrical Society."¹⁸ This action

was taken at the instigation of the Lancashire and Cheshire Branch of the British Medical Association, whose object is stated above.¹⁹

THE SECTION OF THE MEDICAL ACT.

The section of the Medical Act referred to by the General Medical Council runs as follows:²⁰ "If any registered medical practitioner shall be convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or shall after due inquiry be judged by the General Medical Council to have been guilty of infamous conduct in any professional respect, the General Medical Council may, if they see fit, direct the registrar to erase the name of any such practitioner from the Register." In a debate in the General Medical Council, May 22nd, 1894,²¹ Mr. Wheelhouse claimed that "an attempt was made to evade the conditions of the Medical Act of 1886, and to institute an entirely new class of practitioners, who were only to be partially educated, and in midwifery only." Dr. MacAlister said the Council had no power to prevent persons practising without a diploma, and it was preposterous that they should be asked to say that any person giving a testimonial to another person was guilty of infamous conduct. Such certificates gave no legal qualification to practise, and it was never intended that they should; they were simple testimonials that in the opinion of certain gentlemen a person was qualified to do a certain thing. He had constantly given testimonials to his pupils that in his opinion they were qualified to act as house surgeons or house physicians, but should be very sorry indeed to be charged with infamous conduct for so certifying to his personal knowledge. These certificates were of the same nature. What they were really asked to do was to say that no woman should help any other woman in her labour unless she had a licence to practise. That mere statement was sufficient to show that the whole agitation was preposterous. There were between 10,000 and 15,000 midwives at this moment, and they could practise, whatever the General Medical Council or the Obstetrical Society might do to prevent them. Was it better or worse that these women should have absolutely no education or that some of them should be educated? To prevent any examination or testing of their somewhat imperfect education was to stop that education altogether. The resolution, as proposed, was itself an illegality, and it would not be sustained in the law courts.

[Dr. Champneys then quoted opinions of the medical press in favour of the registration of midwives, and gave the statistics of the examination of the Obstetrical Society since 1872, which showed a regularly increasing number of candidates, with a total number now on the register (including January, 1895) of 2166.]

THE SCHEDULE ISSUED TO CANDIDATES BY THE SOCIETY.

The following is the schedule issued to candidates by the Society:—

OBSTETRICAL SOCIETY OF LONDON.

Regulations for the Examination of Midwives.

The Obstetrical Society of London grants a diploma, certifying that the bearer is a skilled midwife, competent to attend natural labours, on the following conditions:—

Each candidate must submit to the honorary secretaries of the society—

- (a) Sufficient evidence of good moral character.
- (b) A certificate showing that she is not under twenty-one years of age.
- (c) Proof of having personally attended not less than twenty-five labours under supervision satisfactory to the Board of Examiners.

Each candidate will be required to pass (1) a written and (2) an oral and practical examination in the following subjects:—

- (a) The Elementary Anatomy of the Female Pelvis and Generative Organs.
- (b) The Symptoms, Mechanism, Course, and Management of Natural Labour.
- (c) The Indications of Abnormal Labour, and the emergencies which occur in practice.
- (d) Haemorrhage, its varieties, and the treatment of each.
- (e) Antiseptics in Midwifery, and the way to use them.
- (f) The management of the Puerperal state, including the use of the Thermometer and the use of the Catheter.
- (g) The management (feeding included) of new-born Children.
- (h) The duties of the Midwife with regard to the Patient, and with regard to the seeking of Medical advice.

The written examination is held at the Society's Library on the second Wednesday of the months of January, April, July, and October, at 8 P.M.; the practical and oral examination from one to two weeks later.

The fee for the examination is one guinea; in the event of candidate failing to pass half the fee will be returned.

¹⁴ Council Minutes, p. 673.

¹⁵ Transactions of the Obstetrical Society, vol. xxxv., 1893, p. 46.

¹⁶ Council Minutes, p. 686.

¹⁷ Ibid., p. 702.

¹⁸ THE LANCET, Dec. 8th, 1894.

¹⁹ THE LANCET, Dec. 8th, 1894.

²⁰ Medical Act, 1858, 21, 22 Vict., cap. xc., s. 29.

²¹ Brit. Med. Jour., May 26th, 1894.

Successful candidates will be required to sign the declaration quoted above.

OBSTETRICAL SOCIETY OF LONDON.

Examination of Midwives.

This schedule is to be filled up and returned to the honorary secretaries, Obstetrical Society, 20, Hanover-square, W., together with the examination fee (21s.), at least fourteen days before the date of the examination—

Name (Full Christian and Surname to be stated).	{
Age.	
Married, Widow, or Single.	{
Present Address.	{
Permanent Address.	{
(a) Certificate of Good Moral Character.	{
(To be filled in and signed by some responsible person, whose address must be stated, who can vouch for the character of the Candidate.)	
(b) Certificate of Age.	{
(A Certificate of Registration of Birth should be sent in; or, if that cannot be obtained, one must be entered here showing that the Candidate is not under 21 years of age, and signed by some responsible person, whose address must also be stated.)	
(c) Certificate of Attendance on Labours.	{
I certify that the above-named has attended not less than twenty-five labours.	
Signed _____	

(No Labour can be counted among the 25 certified unless the Candidate has repeatedly examined and watched its progress, and has diligently attended the Lying-in for at least ten days.)

THE VALUE OF MIDWIVES.

[After stating that it was not his intention to discuss whether midwives are a good or an evil, Dr. Champneys continued:]

The following propositions appear to be established: 1. Any person is at liberty by the law of the land to render aid to any other in time of sickness, if desired. 2. Any person is at liberty by the law of the land to receive such aid from any other. 3. Unskilled aid leads to lamentable consequences to poor mothers and children. 4. "Midwives are a necessity." It follows that midwives, who are a "necessity," must either be unskilled, with lamentable consequences, or skilled, to render services "eminently successful and of great advantage to the community." It also follows that the supply of skilled midwives can only be maintained by some method securing at least a minimum of experience and skill. As regards the experience of examination of midwives and medical students, my own judgment is that, within much narrower limits, midwives who pass our examination give evidence of theoretical and practical knowledge which would not disgrace students who pass the Conjoint examination; this is also the opinion of all of whom I have asked this question—and they are many. The question is not whether midwives shall exist, but whether they shall be as bad or as good as possible. To put the question briefly, absence of examination and registration of midwives means widespread loss of life and health to mothers and children; for not only are midwives a "necessity," but there is no power to prevent any of the Queen's subjects from acting as a midwife. The opposition which has sprung up aims at the abolition of midwives; but it is quite beyond the power of the agitators to do this, and they know it. What they think they can do is to prevent their examination and registration, and they have aimed at our Society as the principal obstacle in their way. As we have seen, this attack, if successful, would merely result in the destruction of life and health of many poor mothers in England. Is it too late to appeal to those who have joined this agitation with insufficient knowledge to consider the misery entailed by the infection conveyed by such women as would alone remain, and the nameless horrors perpetrated by them?

THE INTERESTS OF THE POOR ARE THE ONLY INTERESTS WORTHY OF CONSIDERATION.

As doctors, we have a right to exist only so long as we are required. Midwives have precisely the same claims. If they are required, they will exist; if they cease to be required, they, like us, will cease to exist. Doctors are made for the sick, and not the sick for doctors. A patient is a person who requires a doctor; a doctor is not, in the same sense, a

person who requires patients. A patient is not, primarily, an organism for excreting so many guineas or shillings per annum as an aphid exudes syrup at the titillation of an ant or a cow secretes milk under the blandishments of a dairy-maid. This is a fact often forgotten. If a poor woman requires a doctor for her confinement she can have one. If she prefers a midwife she can have one—trained, certificated, and comparatively safe; or she can have one untrained, uncertificated, ignorant, septic and fatal.

Besides this, our profession claims, or accepts without protest, the title of "noble" which is so often bestowed on it. To what does it owe its nobility? Surely to the unselfishness which is one of its best traditions. Our profession glories in postponing its private interests to the good of the public. It has abolished profit making by secret remedies, and has come to look upon it as really (and not in the sense of the General Medical Council) "infamous." Why is it more infamous for a medical discoverer to make money out of his secret knowledge than for a man in business, such as a brewer, to do the same? Simply on account of this claim of "nobility." In what other profession can you parallel the enthusiastic propagation of the great class of remedies which began with Jenner's vaccination, and have been so marvellously extended at the present day; or of the wholesale benefits of preventive medicine? It is to be remembered that every such improvement means, in the first instance at least, loss of income to the whole profession. And yet no medical man has ever been known to protest against measures for the preservation of life and health, "though it were to his own hindrance." I confess that the bacillus of cholera seems to me to stand on the same footing as those of septicæmia, and that the profession whose glory it is to endeavour to destroy the one should not regard with levity the chances of the spread of the other. I have said that our profession stands alone in its attitude in this respect. Yet I imagine that other professions, who make no such claim to pre-eminent virtue—as, for example, the legal profession—would stand aghast at a proposition which would be likely to set their fellow countrymen by the ears, even if they saw their own profit in such an event. I think that there is little "nobility" to be seen in the present agitation.

REGISTRATION OF MIDWIVES THE BEST PROTECTION OF THE POOR.

The malpraxis of midwives is an argument often used against them. For the malpraxis of unregistered midwives there is no remedy but the common law. Against the malpraxis of registered midwives the undertaking signed by each of our midwives (quoted above) protects the poor, even where the law could not touch the offender.

REGISTRATION OF MIDWIVES THE BEST PROTECTION OF MEDICAL MEN.

The same undertaking guards doctors against the usurpation of medical functions, such as prescribing, by midwives. Any of our midwives so acting is liable to be struck off the register and deprived of her certificate. These irregularities on the part of midwives are simply the result of absence of proper control. Over uncertificated midwives no control is possible so long as they keep clear of the law. Over our own midwives we have a very considerable hold by means of the undertaking signed by each successful candidate, and quoted above. If offences by midwives holding our certificate were only reported to us we would deal with them.

THE LENGTH OF TRAINING OF MIDWIVES.

Among many arguments against the registration of midwives may be mentioned one—that the present length of their training is insufficient. This is purely a matter of money. The midwives are poor women, and find it difficult to procure the money to pay for their present training and examination. In many cases this is provided, partly or entirely, by their more wealthy friends, and often with the view of acquiring the services of a midwife for a country district. In many foreign countries the expenses are defrayed by the State. Until midwives are subsidised, either by the State or by some other extraneous body, it is useless to expect an increase in the length of their training. The means of subsistence must be provided somehow; if by the midwives themselves the course of training must necessarily be short; if it is desired to lengthen it (an object much to be wished) the money must be provided by extraneous aid. But some training is better than no training at all.

THE INTERESTS OF DOCTORS NOT PREJUDICED BY PROPERLY REGULATED MIDWIVES.

But we must remember that the Select Committee (quoted above), after hearing the evidence for and against the proposition that midwives injure doctors, pronounced emphatically that the reverse was the case, and it is within the knowledge of Fellows that midwives are in some districts actually provided by doctors to help them with cases of natural labour among the poor. And even some of our medical schools make use of them.²² It is hard to imagine that the few shillings, which is all that many of the poor can afford for a confinement, can in any sense repay a medical man for the time expended, or that the bodily handing over of all such cases to trustworthy midwives would be anything but an unmixed relief to the hard-worked doctor of poor districts. I expect the real difficulty is the fear of the loss of a connexion, in the absence of a universal agreement in a district to this effect, loyally kept.

THE MOTIVES OF OUR SOCIETY.

The motives of our Society in instituting and carrying on this examination have been (I state it without any qualification) absolutely unselfish and disinterested. We began the work because there was no other competent body to begin it; we have continued it purely from public spirit. We have sought again and again to be allowed to transfer it to a State-regulated machine. For years our examiners did the work without a farthing of remuneration, generally on a night which was their only relief in the course of the tedious task of examining for the Conjoint Board. Our motives in this respect have been tacitly acknowledged, except by an occasional writer to one of the journals. To any such innuendos the answer is plain—the Society never ceases to beg to be relieved of its responsibilities in this respect and of its emoluments. Such, gentlemen, is our infamy.

THE ACTION OF THE GENERAL MEDICAL COUNCIL.

The action of the General Medical Council is still an enigma to us. It might be conceivable that its opinion was that the abolition of midwives was desirable had it not, in common with all the highest and most competent bodies, repeatedly and strongly stated that the examination and registration of midwives were highly desirable, thus emphatically endorsing the work of our Society. But, as its verdict has over and over again been in favour of such work, it is a little difficult to understand so violent a deviation as its last communication. Perhaps this is the parable of the importunate widow over again; and perhaps it has, in a moment of annoyance, vented its wrath, not against those who have troubled its repose, but against an unconscious and innocent object. That it, like other representative bodies, is afflicted with the restlessness of "Irish members," who are not always Irishmen, is quite possible. That it is not in possession of the facts or history of the question is almost certain. It is, indeed, scarcely to be expected of a body containing at the present time not a single English obstetric physician. We do not yet know of what we are accused. That the Act of Parliament ever contemplated so violent a distortion of plain English as is implied by the application of the word "infamous" to work like ours, undertaken twenty-three years ago, and carried out at the cost of much time, thought, and hard work, in a public-spirited and self-denying manner ever since, is inconceivable. That it should threaten to apply such a word to a body of men such as those who have been mainly responsible for the work carried, I venture to think, its own refutation and condemnation. That those who framed the Medical Act ever contemplated the classification of (alleged) defects in a certificate together with murder, theft, and unnatural offences is unthinkable. I have little doubt that when the General Medical Council realises that it is asked to play the rôle of a puppet of a party of interested practitioners its own sense of dignity and of the purposes for which it was created will come to its aid; indeed, this is plainly foreshadowed in one of the speeches which I have quoted. If the General Medical Council is free to call any person or any act "infamous" when it chooses the position of every medical man is most unenviable. What is to prevent the application of this word to the shape of a collar or the colour of a tie? But it is incredible that the Legislature ever intended to hand over any profession to an arbitrary and irresponsible tyranny such as this would be. Indeed, in a recent case in the Court of Appeal, Feb. 23rd, 1894, the Master of the Rolls adopted a definition prepared

by Lord Justice Lopes as applicable to the case—namely, if a medical man in pursuit of his profession had done something with respect to it "which would be reasonably regarded as infamous by his professional brethren of repute." In the face of the work which our Society has done and of the names of the men who have done it, including practically all the leaders of our branch of the profession in London, it is too absurd to think that our action, or their action, would have the remotest chance of "being regarded as infamous by their professional brethren of repute." Surely, in any movement for the saving of the lives of poor women the General Medical Council ought to stand side by side with those who for twenty-three years have been working for this object in a way which ought to command their respect, rather than to run the risk of appearing for a moment as the partisans of a trades-union. That it should appear for a moment in such a light has been a great and painful shock to us. To have such an epithet as "infamous" applied to us makes us no nearer infamy than before, though I confess that I imagined that work such as ours, carried on merely with the object of helping and protecting the poor, deserved another name. But I believe that neither Sir John Williams, Dr. Watt Black, nor I, who have acted firstly as chairmen of the Midwifery Board and afterwards have been called to the presidential chair, and are therefore, perhaps, the most "infamous" among "infamous" men, feel the least ashamed of our work, conscious as we are of our own integrity and of the great injustice which has been done to us all. As regards the form of our certificate, if the General Medical Council had told us that they thought it open to objections we should have at once done what we are now doing, asked for its criticism with a view to their removal. To have helped us to remove any cause of offence would have earned our gratitude. I cannot but think that when it has mastered the subject and had time to think the General Medical Council will regret what it has done, not only towards men as honourable as any of its members—whose life and work are well known to it—but to a meritorious and public-spirited society.

It is a significant fact that the number of candidates for our last examination has hardly ever been exceeded, not less than 114 women having presented themselves, and that in spite of our having held our certificate in abeyance.

If there is one thing certain in the world it is the ultimate triumph of right. It may be opposed—it may be misunderstood—it may be reviled—it may have to suffer; but "Magna est veritas, et prævalebit."

Since the above was written the following communication has been received from the General Medical Council:—

General Council of Medical Education and Registration of the United Kingdom, 299, Oxford-street, London, W., March, 1st, 1895.

SIR,—In answer to your letter of Jan. 14th, 1895, I have to inform you that the Executive Committee of the General Medical Council has passed thereon the following resolution (whereof you will find a copy on the next page).

I am further directed to inform you that the committee passed, in regard to certain other certificates that had been submitted to the Council, the following resolution (whereof you will also find a copy on the next page).

I am, Sir, yours faithfully,
W. J. C. MILLER, Registrar.

Dr. William Duncan,

Hon. Sec. of the Obstetrical Society of London.

Resolved—"That the Executive Committee are of opinion that the words in the diploma 'a skilled midwife competent to attend natural labour' are open to legal objection, seeing that under the Medical Act (1886) Midwifery is one of the three branches in which a regular practitioner must pass an examination in order to obtain a registrable qualification."

"The above-cited words suggest that the holder has a registrable qualification. This both contravenes the spirit of the Medical Act of 1886 and is calculated to deceive the public."

"Again, the formal character of the document, which is described on its face as a diploma, is fitted to deceive the more ignorant part of the public—that part which most needs protection."

"That the Executive Committee request the President and Council of the Obstetrical Society of London to inform the General Medical Council, within one month, what steps they have taken to bring their certificate within the terms of the resolution of the Council."

Resolved—"That as this Council has been instituted to regulate the education of practitioners in medicine, surgery, and midwifery, as well as to enable the public to distinguish between qualified and unqualified practitioners, the Executive Committee cannot approve of any document professing to qualify persons for any practice in medicine, surgery, or midwifery, issued by any body or institution which is not a medical authority under the Medical Act."

The Executive Committee further declare that medical practitioners, who sign such documents, will be liable to the censure of the Council in accordance with the following resolution passed by the Council on May 22nd, 1894.²³

"In the opinion of the Council, to issue to any person not legally

²² Guy's Hospital Gazette, Feb. 9th, 1895.

²³ Minutes, vol. xxxi., p. 45.

qualified for registration any certificate of competency or other document so framed as to bear colourable resemblance in appearance or phraseology to a diploma conveying a right to act as a medical practitioner is a proceeding which directly contravenes the spirit of the Medical Acts and is accordingly liable to be visited with the condemnation of the Council.

The Council of the Society has already taken steps with the view of removing all causes of offence, now for the first time specified, from its certificate. This it would have done in the first instance had it received the necessary information. In doing so it by no means acknowledges that such causes of offence are well founded.

AN ANALYSIS OF THE CASES OPERATED UPON WITH THE MURPHY BUTTON UP TO DATE.

By JOHN B. MURPHY, A.M., M.D. CHICAGO,
PROFESSOR OF SURGERY AND CLINICAL SURGERY, COLLEGE OF
PHYSICIANS AND SURGEONS, CHICAGO; PROFESSOR OF SURGERY,
POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, &c.

A SUFFICIENT time has now elapsed to warrant a complete report of the cases operated on by means of the button and to justify us in drawing conclusions as to the field of its usefulness. The advantages and disadvantages of the device were at first theoretical; they were later sustained or controverted by the results in experiments and in a small number of cases; finally, we have now a very large number of cases from which to draw conclusions, and a sufficient number, I believe, to enable us to make valuable deductions for our guidance in the future. We will consider the cases in groups, and we will pay particular attention to the fatal cases, and endeavour to determine the cause of the fatality—whether it was a result (a) of the disease itself; (b) of the general condition produced by the disease; (c) of the operation; (d) of failure in obtaining a perfect result at the seat of approximation; (e) of a sequel of the operation; or (f) of intercurrent causes. With this general plan as a guide we will take up the subject as follows.

GASTRO-ENTEROSTOMY FOR MALIGNANT DISEASE BY LATERAL APPROXIMATION.

Of this variety we had 27 cases with 9 deaths. In the first fatal case the patient had suffered from severe hæmorrhage for four weeks preceding the operation, and it was hoped that by performing a gastro-enterostomy a contraction of the stomach would take place, and possibly hæmorrhage. The operation was performed in seven minutes, but the bleeding continued as before and ended fatally four days later. The necropsy showed a perfect approximation. In the second fatal case the patient died of exhaustion forty-eight hours after the operation. A perfect approximation was found. In the third fatal case the patient was very much emaciated and depressed before operation and died twelve hours after. The necropsy showed a perfect approximation. The fourth death occurred from exhaustion in twelve hours. The fifth death was in a case in which the smallest-size button was used, as the operator had no other at the time. The button was so small it was impossible for it to hold a sufficient amount of the tissue to retain the margin of a thick wall, as of the stomach, within its grasp; the wall slipped away from the clasp of the button, and the contents escaped into the peritoneal cavity and caused death. The smallest-size button should never be used in any operation on the stomach. The sixth death occurred from circumscribed peritonitis on the third day. On post-mortem examination the approximation was perfect, and in the stomach was found a large ulcer which was probably the source of the infection. There was also cancer of the pancreas, liver, and other organs, all of which contributed to lessen the resistance of the tissues against infection. In the seventh death the patient died of exhaustion four days after operation. There was perfect approximation, no infection, and the button was still in position. In the eighth fatal case the patient died on the seventh day from general suppurative peritonitis. The necropsy showed perfect approximation and the button still in position; the cause of the peritonitis was not given. The ninth death was from septic peritonitis. The button was not pressed tight enough, and one edge of the stomach had slipped away. It will be noticed that four of the nine deaths were from exhaustion, two from imperfect operation,

and three from peritonitis from infection at the time of operation. Are we justified in operating in these extremely emaciated, cachectic patients with cancer of the pylorus? The patients as a rule survive the operation but a very short period of time, when they succumb to the marasmus of the disease, and not to the effects of obstruction of the pylorus. It is my opinion that patients who are not in a condition to stand a pylorotomy should not be operated on. The relief obtained, even where gastro-enterostomy is successful, is so limited that it does not justify the danger and discomfort produced by the operation, notwithstanding that the operation can be performed with the button in from five to seven minutes. These patients suffer much more from shock in operation than those with non-malignant disease, and the regenerative power of the tissues in a patient with malignant disease is much impaired. Therefore in this class of cases I scruple with the point of a needle the surfaces of the peritoneum of the stomach and intestinal wall where they are brought in contact; this hastens the primary adhesions and increases the rapidity of definitive union. A few interrupted sutures half an inch from the button between the intestine and stomach may be necessary where there is great traction of the coil of intestine approximated, but I have so far not found a case in which I considered it indicated. I prefer the Von Hacker position, though the Wölfler may be used. I believe with Dr. Willy Meyer that the former favours the passage of the button into the intestine. If the cancer involves but a small portion of the stomach in the neighbourhood of the pylorus the most satisfactory operation in its ultimate result is a division of the duodenum two inches below the pylorus, closing the proximal end with a Czerny-Lambert suture and joining the distal end to the posterior wall of the stomach with the button. In non-malignant strictures of the pylorus this is the only operation that should be performed. Where the approximation has been made to the anterior wall of the stomach the button has dropped back into the stomach in four cases; in none of them did it give any unpleasant symptoms, and I believe it would have passed as soon as the stomach contracted to its normal size and the patient was up and about. I have not used the oblong button for this operation and do not consider it necessary, as the results so far prove that the opening made by the circular button is ample, and that the scar does not contract. The oblong button has, however, certain merits. It produces a larger opening; it is more easily inserted than the circular, and passes through the intestine with greater freedom as its diameter is only $\frac{1}{2}$ in. The only two cases in which it has been used are the following:—Case reported by Dr. Joseph D. Bryant of New York: "Diagnosis, fecal fistula of long standing. There had been several previous operations for its closure. Operation, May 9th, 1894. Lateral approximation of ileum to descending colon with oblong button (2½ in. in length); button was easily inserted. Convalescence was uneventful. Button passed on fifteenth day." Case reported by Dr. Willy Meyer of New York: "Male aged twenty-two years. Fistula in right inguinal region. History of appendicitis; abscess opened; fecal fistula followed. Laparotomy, May 31st, 1894. Chronic appendicitis; appendix embedded in dense adhesions, perforated; resection of appendix; loose tampon; appearance of fistula which baffled treatment. Aug. 16th, 1894, ileo-colostomy by Murphy's oblong button. Its two halves could be tied in with great ease and did not require a longer slit in the gut for insertion than the ordinary button. Recovery. Button voided without any difficulty on the tenth day."

CONCLUSIONS.

1. Gastro-enterostomy should never be performed on an extremely cachectic patient.
2. The Von Hacker position is preferable.
3. A supporting suture outside of the button is not necessary except for the relief of tension.
4. In non-malignant stricture of the pylorus the end of the duodenum should be united to posterior wall of the stomach.
5. Pylorotomy by the method described below should always be resorted to where possible.
6. The patient should receive liquid nourishment immediately after the effects of the anæsthetic pass away.

PYLORECTOMY.

Pylorotomy is always the most desirable operation for malignant stricture of the pylorus, as it is the only operation

that offers hope of prolonging the life of the patient for a considerable time. When it is successful the patient regains his usual vigour rapidly and is in good physical condition until the disease recurs. The period of immunity frequently extends over many months and occasionally years. By the use of the button the operation of pylorotomy is relieved of its greatest dangers—viz., shock and leakage at the seat of approximation. The operation is best performed in the following manner:—First, ligate the mesentery on the upper side of the stomach, pylorus, and duodenum as a broad pedicle with from three to four double ligatures and cut between. Second, ligate the mesentery on the under side in the same manner; the pylorus can then be lifted well up into the abdominal incision. Third, pack thoroughly around with gauze and place two clamps on the stomach, one above and the other below the place to be incised. Fourth, a circular incision is then made in the stomach, including the peritoneum and muscularis; this is pushed back half an inch and the mucous membrane cut off; the latter is rapidly closed with a continuous suture; the serosa and muscularis are then closed with a continuous Lembert. Two clamps are placed on the duodenum and it is excised. Fifth, one half of the button is then placed in the end of the duodenum and the other half in the posterior wall of the stomach, one inch from the line of suture, and pressed together. We had four operations of this kind reported, with three recoveries. In all of the latter the button passed on through the duodenum. The first case was that of Dr. A. H. Ferguson, operated on on July 25th, 1893. The patient is still living and in excellent health, having gained sixty pounds in weight. The second case was that of Dr. Willy Meyer's. The patient died several months after the operation. The third case died five days after operation. The patient was in an extremely emaciated condition, and though the operation lasted only forty minutes, he was in a critical state all the time until he died. The fourth case was reported by Dr. M. H. Everett, Lincoln, Nebraska. The patient, a male, aged thirty-five years, first complained of stomach trouble eleven years ago. He had never been free from pain since. Five years ago he commenced to vomit, and during the five years he had not passed a day without vomiting. He came under my charge in November, 1894. His stomach was very much distended and there was a tumour perceptible at the pylorus. An operation was performed on Dec. 18th, 1894. An incision in the median line four inches in length was made; the tumour was drawn out; there were no adhesions; the tumour was as large as a small turkey egg. The mesentery was ligated and divided. The stomach was incised one inch from the growth, and a Czerny-Lembert suture used; the duodenum was divided one inch from the growth; an incision in the posterior wall of the stomach was made and the duodenum joined to it with the button; certainly not five minutes were spent in making the anastomosis; the abdomen was closed without drainage. The temperature next day was 99° F. for a few hours, after which time it remained normal. The button was passed fourteen days after operation. A wonderful change is noticeable in the man. He has not vomited; his appetite is enormous; and at this day, twenty-two days after operation, he has gained twenty pounds. The tumour was found to be a fibroma.

CHOLECYSTODUODENOSTOMY.

The operation of cholecystoduodenostomy by this method and the results are most satisfactory. We have 38 operations reported for cholelithiasis, with 37 recoveries and 1 death. The patient lived for seven days following the operation. There was continuous hæmorrhage from the laceration of the liver from the separated adhesions. A large quantity of blood was found in the peritoneal cavity post mortem; a perfect union existed between the bowel and the gall-bladder, and there was no peritonitis. These results were obtained by twenty-two different operators. In my first article on this subject I recommended the removal of only a sufficient number of gall-stones to allow of the insertion of the button. I early abandoned this method, as I saw that it was possible for calculi to remain in the diverticula of the gall-bladder after the button had passed. That this was well grounded was shown in a case referred to me by Dr. J. H. Hoelscher. Two years after the operation she was again attacked with colic in the region of the gall-bladder. A cholecystostomy was performed, and two large calculi were found in a pocket at the upper end of the cystic duct. The gall-bladder from the fundus down to the calculi, a distance of two inches and a half, had contracted to a tube about the diameter of a lead pencil. The stones were crushed and removed. The

patient made an excellent recovery. This is the only case in which there was a recurrence of the symptoms after the operation, and supports the view advanced by me in my original article that the gall-bladder would contract to a tube, and that the opening between the gall-bladder and the intestine would become so small by the contraction of the gall-bladder that it would not admit fæces into the tract. We have had no case of infection of the liver or gall tracts reported as a result of the operation. Failure of union has not occurred in a single case. This is a most striking contrast in this particular to the results obtained with the suture. The theoretical objection expressed that the button might drop into the gall-bladder and be retained there has not been supported by a single case. The danger of hæmorrhage in patients suffering from cholæmia is very great; and the greatest precaution should be exercised in lacerating adhesions in this class of cases, as the hæmorrhage may continue for days and even weeks. The operation of cholecystenterostomy for malignant disease was very unsatisfactory, as there were eight performed with seven deaths. Two died from shock; one from twisting of the small intestine, producing a volvulus before making the approximation. In one case the gall-bladder was so friable from malignant disease that it tore when the sutures were inserted, and after the button was placed in position and the abdomen closed the friable wall gave way and peritonitis ensued. In all of the others the approximations were found perfect on post-mortem examination. While the mortality from the operation is great, not one of the deaths could have been attributed to the method. Still, they all tend to show that the operation for malignant disease is not a justifiable one; and in many of my recent exploratory operations, when I have found a large carcinoma in the pancreas, duct, or neck of the gall-bladder, I have abandoned the operation, and all of the patients have survived the exploration. Cholecystenterostomy is contraindicated in gangrene of the gall-bladder. These cases should be opened and drained externally, and the peritoneum thoroughly protected by packing. The indications for the operation of cholecystenterostomy are: (1) obstruction to the common duct; (2) obstruction to the cystic duct, where cholecystectomy is impracticable; (3) chronic cholecystitis, with thickening of the wall of the gall-bladder; (4) fistula of the gall-bladder where the patient is emaciated from the loss of bile; and (5) carcinoma of head of the pancreas in its early stage.

INTESTINAL APPROXIMATION.

It is in this field that the button has been of the greatest practical value. The pathological conditions demanding its use in this class of cases greatly endanger the life of the patient. The cases may be well classified as follows:—(1) Resection of the bowel for gangrene: (a) for internal obstruction, and (b) for hernia; (2) resection of bowel for cure of fæcal fistula; (3) resection for malignant growths; (4) resection for perforations of intestine, both traumatic and pathological; and (5) resection of the rectum. Of the resections for gangrene of the bowel from internal obstruction we have 14 cases with 1 death. The patient was a child that had suffered from a four weeks' obstruction; she was so weak and emaciated when operated upon that she never rallied, and died in twenty-four hours. Of the resections for gangrenous hernia there were 12 cases with 2 deaths. The first case died forty-eight hours after an operation for strangulated umbilical hernia which had perforated into the abdomen; general septic peritonitis existed at the time of the operation. The necropsy showed continuation of peritonitis, perfect approximation, and the button in position. The second case was a very interesting one, the patient having had a congenital hydrocele of the testicle with an inguinal hernia in a separate sac. The sac of the hydrocele connected with the sac of the hernia at its neck. The patient after a severe exertion found his hernia down and painful. It was reduced in the usual manner, but the pain and vomiting continued. Six days after the obstruction occurred he was brought to me by Dr. Hanna of Winfield, Iowa, who had seen him only a few hours before and made the diagnosis. I found the hernial sac free and empty, but a Littré involving four-fifths of the circumference of the bowel was strangulated in the small opening of the hydrocele sac. This knuckle had perforated into the sac, and the lining of the sac was gangrenous from the infection. A resection of five inches of intestine was made with an end-to-end approximation, the approximated intestine returned, and the abdomen dressed open. The patient's bowels moved six times within the next eight hours. He did not vomit, but his pulse increased in

OPERATIONS ON THE INTESTINES WITH THE MURPHY BUTTON.

TABLE I.—RESECTION, END-TO-END APPROXIMATION.

No.	Date.	Operator.	Diagnosis.	Operation.	Recovery.	Death.	Remarks.
1	Dec. 8, '92	Walker	Strangulated hernia	Resection of intestine, 4 in.	1	—	First end-to-end approximation by button Oct. 21, 1893. Patient in perfect health.
2	April 3, '93	Andrews, E. W.	Femoral hernia, gangrene	Resection of intestine, 18 in.	1	—	Nov. 21, patient in perfect health.
3	June 5, '93	Murphy	Intestinal strangulation	Resection of intestine, 2 in.	1	—	Time for approximation five minutes and a half.
4	July 10, '93	Murphy	Umbilical hernia, gangrene, peritonitis	Resection of intestine, 5 in.	1	—	Forty-eight hours' continued peritonitis; perfect approximation.
5	Oct. 17, '93	Ruth	Tumour of caecum	Resection of caecum and colon, 2 in.	1	—	Nov. 15, excellent health; obstruction six months; child six years.
6	Nov. 12, '93	Bouffler	Femoral hernia, five days' obstruction	Resection of intestine, 4 in.	1	—	Time four minutes and a half.
7	March 25, '93	Sutton	Closure of artificial anus without resection.	Lateral anastomosis	1	—	Aug. 20, excellent health.
8	Sept. 10, '93	Murphy	Faecal fistula	Lateral anastomosis without resection	1	—	Time six minutes; Oct. 24, well; fistula closed.
9	'93	Rogers	Inguinal hernia, gangrene	Resection of intestine, 10 in.	1	—	Button passed seventh day.
10	Sept. 23, '93	Murphy	Faecal fistula	Lateral anastomosis	1	—	Time seven minutes.
11	July, '93	McCall	Faecal fistula, gangrene	Lateral anastomosis	1	—	—
12	Oct., '93	Marcy	Cancer of rectum	Resection of rectum, 4 in.	1	—	Discharged twentieth day.
13	Nov. 16, '93	Cordier, A. H.	Cicatricial band of ileum	Entero-enterostomy	1	—	—
14	July 8, '93	Bacon	Stricture of rectum	Bacon's operation on rectum	1	—	May 31st, good calibre; neither pain nor discharge; rectum soft and pliable.
15	Jan. 14, '93	Murphy	Annular stricture of rectum	Application of button	1	—	—
16	Sept., '93	Beck, C.	Carcinoma of pylorus	Maydl's operation	1	—	Died subsequently from cancer; post mortem perfect union where button was used; no peritoneal adhesion.
17	Dec. 11, '93	Ferguson	Cancer of caecum	Resection of caecum	1	—	—
18	Feb., '93	Beck, C.	Faecal fistula	Duod-jejunostomy	1	—	Button passed twentieth day.
19	Jan. 14, '94	Ferguson	Faecal fistula	Resection of ileum	1	—	Button passed sixteenth day.
20	Jan. 30, '93	Keen, W. W.	Carcinoma of hepatic flexure of colon	Ileo-colostomy	1	—	Death forty-seven days later; ulcer of ascending colon; perforation.
21	Feb. 3, '94	Price, J.	Sarcoma of sigmoid flexure	Resection, 6 in. of sigmoid	1	—	Button passed ninth day.
22	Feb. 24, '94	Meyer, W.	Carcinoma of pylorus	Pylorotomy	1	—	Button voided twenty-first day.
23	March 3, '94	Meyer, W.	Sarcoma of ileum	Resection, 15 in. of ileum	1	—	—
24	Jan. 2, '94	Dodge, W. T.	Faecal fistula	Resection, 3 in. of ileum	1	—	Button voided eighth day.
25	Feb. 16, '94	Dodge, W. T.	Faecal fistula	Resection, 3 in. of colon	1	—	Button passed eighth day.
26	May, '94	Dodge, W. T.	Ileum adherent to ovarian cyst	Resection of ileum	1	—	Patient died eleven days later from complication; union perfect; button found in rectum.
27	*Jan. 15, '94	Lane, W. A.	Sarcoma of meso-sigmoid	Resection, 12 in. of colon	1	—	Button voided on eighth day.
28	May 9, '94	Bryant, J. D.	Faecal fistula (had five previous operations)	Ileo-colostomy	1	—	Oblong button used for first time; passed on fifteenth day.
29	May 14, '94	Shrady, G. F.	Faecal fistula	Lateral approximation	1	—	—
30	Feb. 12, '94	McBurney, C.	Tumour of caecum	Ileo-colostomy	1	—	Infection occurred; see details in history.
31	April 27, '94	Albee	Carcinoma of colon	Lateral anastomosis	1	—	Growth to be resected.
32	Dec. 12, '93	McBurney & Murphy	Faecal fistula	Lateral approximation	1	—	Button passed on ninth day through fistula.
33	April 1, '94	Davis	Adherent ovarian cyst	Entero-enterostomy	1	—	—
34	Feb. 28, '94	McLaren	Strangulated hernia	Entero-enterostomy	1	—	Six inches of sigmoid removed.
35	Nov. 11, '93	Ricketts	Carcinoma of ileum, obstruction	Resection, end to end	1	—	Time for operation ten minutes; death from shock in ten hours.
36	Jan. 29, '94	Midgilton, W. D.	Carcinoma of rectum	Resection of upper part of rectum	1	—	Resection, 2½ in.; completely cured; button passed on twelfth day.
37	Feb. 27, '94	Ferguson, A. H.	Cancer of caecum	Extirpation of caecum, 14 in. of bowel	1	—	Death four weeks later, diarrhoea; necropsy—perfect approximation; opening large as button.
38	Feb. 27, '94	Stewart, W. W.	Gangrenous hernia	Resection, 10 in. small	1	—	Patient in extreme condition; button passed thirteenth day; rapid convalescence.
39	March, '94	Reed, Chas. A. L.	Carcinoma of caecum	Resection of part of caecum	1	—	Button passed twenty-second day.
40	March, '94	Copeland	—	Resection	1	—	—
41	April 2, '94	Newton	Neoplasm of mesentery	Resection, end to end	1	—	Button passed fourteenth day; patient small child.
42	April 7, '94	Dennis	Strangulated hernia	Resection of ileum	1	—	Button passed twenty-second day; wound suppurated; faecal fistula closed twenty-seventh day.
43	May 11, '94	Outerbridge	Carcinoma of transverse colon	Resection, end to end	1	—	Time for operation one hour forty-five minutes; several inches of transverse colon resected.
44	May 12, '94	Meyer, W.	Intussusception, myxo-sarcoma	Resection of ileum, 3 in.	1	—	Button passed eleventh day; perfect recovery.
45	June 1, '94	Cobb, J. O.	Syphilitic stricture	Anastomosis around stricture	1	—	Died fourteen days after, pneumonia; anastomosis perfect.
46	June 4, '94	Murphy, J. B.	Faecal fistula	Resection, end to end	1	—	25 in. of small intestine removed. Opening made by button in previous operation dilated from 3½ to 5 in.
47	June 13, '94	Shimoneck, F.	Strangulated hernia	Resection, end anastomosis	1	—	Button passed on eighteenth day.
48	June 15, '94	McCallum, J. L.	Strangulation of ileum	Resection, end to end	1	—	12 inches of ileum resected.
49	June 16, '94	Meyer, W.	Intestinal obstruction, sarcoma, intussusception	Resect on ascending colon, 12 in.	1	—	Button passed eleventh day; discharged July 24th; died of marasmus Aug. 14th, 1894; necropsy, multiple sarcoma.
50	June 17, '94	Davis, F. A.	Penetrating wound of abdomen, laceration of intestine	Resection, end to end	1	—	Patient never rallied from shock caused by injury, and died in three hours.
51	June 18, '94	Lillenthal	Carcinoma of transverse colon	Resection, 6 in. transverse colon	1	—	Button used 1½ in. in diameter; passed eighteenth day without pain.
52	June 21, '94	Cochens, F. W.	Strangulated hernia	Resection, end to end	1	—	Resection of 26 in.; button passed 180 hours after operation.

OPERATIONS ON THE INTESTINES WITH THE MURPHY BUTTON—continued.

TABLE I.—RESECTION, END-TO-END APPROXIMATION—continued.

No.	Date.	Operator.	Diagnosis.	Operation.	Recovery. Death.	Remarks.
53	June 23, '94	Meyer, W.	Carcinoma of rectum	Resection of rectum 8 in., Kraske Rehn	1	Death July 22; gangrene of lower end of sigmoid with fecal fistula above line of union; button accomplished purpose admirably.
54	June, '94	Cushing, W. B.	Malignant uterine myoma	Resection, 6 in. descending colon	1	Six inches of descending colon embedded in tumour resected with it.
55	Aug. 31, '94	Beck, C.	Carcinoma of cæcum	Resection of cæcum	1	Ends of intestine sutured; lateral anastomosis with button No. 3.
56	Sept. 9, '94	Jones, W. B.	Malignant stricture of sigmoid	Resection, 3 in. of sigmoid	1	Death five days after operation of peritonitis. No effort at union from infection.
57	Sept. 13, '94	Davis, T. A.	Fæcal fistula	Resection, 4 in. of small intestine	1	Fistula from gangrenous hernia.
58	Sept. 14, '94	Peck, G.	Appendicitis—adhesions	Resection, 4 in. of small intestine	1	Obstruction, after operation for appendicitis, from adhesions.
59	Sept. 13, '94	Parkhill, C.	Fæcal fistula (appendicitis)	Resection of ileum	1	End of ileum cut off from cæcum and attached higher up.
60	July 15, '94	Beaver, D.	Gangrenous hernia—fistula	Resection of 3 in.	1	Button passed on seventeenth day; temperature never reached 100° F.
61	Oct. 16, '94	Carpenter, J. G.	Intestinal obstruction	Resection, late anastomosis around stricture	1	Patient died on eighth day of angina pectoris; bowels moved four times in first twenty-four hours, and continued to move regularly.
62	Oct. 23, '94	Peck, G.	Intestinal obstruction	Resection, 6 in. of sigmoid	1	The contraction was produced by adhesions and a fecal fistula following an operation for pyosalpinx two years previously.
63	† Sept. 27, '94	Swain, P.	Intestinal obstruction	Resection, 5 in. of ileum	1	Obstruction existed a long time; proximate end 12 in.; distal contracted; button voided tenth day.
64	Oct. 25, '94	Mullins, C. D.	Intestinal obstruction, four months' standing	Anastomosis of ileum and colon	1	Child in extreme condition when operated on, having had four weeks of intestinal obstruction; death in twenty-four hours.
65	July 5, '94	Day, Donald D.	Intestinal stricture	Resection, 10 in.	1	Button voided in two months, producing no unpleasant symptoms; bowels moved regularly from time of operation.
66	Aug. 7, '94	Williams, R. R.	Double rupture of intestine, traumatic	Resection (double)	1	Both buttons voided eighteen days; patient died from extensive laceration of bladder.
67	July 11, '94	Abbe, R.	Ileo-colic anastomosis	Resection of caput coli	1	Patient died from obstruction by hardened feces in button, notwithstanding ileostomy.
68	June 9, '94	Summers, J. E.	Intestinal obstruction (five days) by malignant growth of sigmoid	Anastomosis around tumour	1	Patient in extreme condition; resection not deemed advisable; anastomosis made in ten minutes; death from shock in twenty-five hours.
69	June 13, '94	Summers, J.	Tuberculosis of tube involving sigmoid	Removal of tube, resection of 5 in. of sigmoid	1	Tuberculosis involved 4 in. of sigmoid; perfect recovery.
70	June, '94	Hartmann	Ileo-cæcal inflammatory adhesions	Resection of cæcum	1	Resection of adherent ileum, cæcum, and colon.
71	June 1, '94	Abbe, R.	Cancer of descending colon.	Resection of growth and loop of intestines	1	A special large size button 1½ in. in diameter used; fitted intestine snugly; sloughing of bowel over button due, I fear, to tension and pressure of metal on account of large size and weight; button from former anastomosis in some cases found resting in loop close to growth; caused no inconvenience (April 27th, 1894); death from peritonitis.
72	Nov. 24, '94	Murphy, J. B.	Gangrenous femoral hernia, four days	Resection, 8 in. of ileum	1	A sac full of feces; bowel ruptured; resection to s. and tissue; drained; four bowel movements in six hours; perfect recovery.
73	July 19, '94	Bell, J.	Intestinal obstruction; perforation; adhesions	Resection, 4 in. of small intestine	1	Bowel ulcerated; perforation sutured; abdomen closed; recovery; tumour not removed.
74	Sept. 11, '94	Bell, J.	Intestinal obstruction; tumour involving bowel	Resection, 3 in. of sigmoid with tumour (cancer)	1	First button found free in splenic flexure above the obstruction, caused no trouble; sigmoid and tumour resected; time two hours; elastic tube used to prevent escape of feces; operation difficult; death four days later; ends of bowels both gangrenous in whole circumference; perforation had taken place just beyond the border of the button; fatal peritonitis.
75	Oct. 12, '94	Bell, J.	Femoral hernia; gangrene	Resection, 11 in. of ileum	1	Sac contained effusive bloody serum; second resection necessary; abdomen closed and radical cure made; perfect recovery; primary union; button voided tenth day.
76	Nov. 1, '94	Murphy, J.	Ileus	Resection, 4 in. of small intestine	1	The intestine was bound down by a band of fibrous tissue; resection; button passed twenty-first day; recovery.
77	Oct. 15, '94	Ullmann	Cancer of cæcum	Resection, 26 in.	1	Patient made an excellent recovery and was exhibited before Medical Society six weeks after operation.
78	Dec. 18, '94	Everett, M. H.	Tumour of pylorus	Resection, 4 in. of stomach, 2½ in. duodenum	1	Button passed thirteen days after operation; uneventful recovery.
79	Dec. 30, '94	Murphy, J. B.	Strangulated inguinal hernia; six days	Resection, 5 in. of small intestine	1	Bowel gangrenous, perforated; congenital hydrocele sac full of pus; large quantity of serum in peritoneal cavity; bowels moved six times in first twenty-four hours; pulse increased continuously in frequency; delirium; no vomiting; death from sepsæmia in thirty hours.
80	Nov. 7, '93	Griffith, J. D.	Rupture of intestine, septic peritonitis	Resection, 5 in.	1	Gas and feces passed off freely through the bowel; death in twelve hours from sepsis and shock.
81	Dec. 18, '93	Griffith, J. D.	Stenosis, ileo-cæcal	Ileo-colostomy	1	Button passed twenty-first day.
82	Mar. 20, '94	Griffith, J. D.	Gunshot wound of large intestine	Resection	1	Death sixty hours after operation from obstruction by adhesions of intestines in a sharp angle at seat of operation, producing obstruction.
83	July 7, '94	Wiggins, F. W.	Double perforation, traumatic	Double anastomosis	1	Line of union in both places barely visible; pressure, atrophy almost complete at seat of adhesions, where adherent bowels protected line of union.
84	Aug. 16, '94	Meyer, W.	Fæcal fistula	Ileo-colostomy	1	Along button used in this case, which passed on tenth day without pain or difficulty.
85	Sept. 30, '94	Wittwer, H. E.	Carcinoma of pylorus	Pylorectomy	1	Time consumed in operation forty minutes; death from exhaustion fifth day. Necropsy—peritoneum dry; no peritonitis; firm union of end of duodenum to posterior wall of stomach; button still in position; stomach very much contracted and full of cherry pits, lime beans, and grape seeds, many of them had passed through button.
86	Oct. 24, '94	Plettner, A.	Carcinoma of cæcum	Resection of cæcum	1	Button passed on fourteenth day without being noticed by patient; discharged on twenty-first day.
87	Oct., '94	Reeve, J. C.	Fæcal fistula (hernia)	Lateral approximation	1	Button voided on fifteenth day; uneventful convalescence; rapid improvement in condition.
88	Sept. 20, '94	Bacon, M. W. & Cory, A. L.	Pyosalpinx tubes adherent	Resection of transverse colon, 8 in.	1	Button voided on eighth day; uneventful recovery.
89	July 1, '94	Davis, T. A.	Fæcal fistula from hernia	Resection, 4 in.	1	Button voided on twentieth day; uneventful recovery.
90	Nov. 9, '94	Lee, E. H.	Gunshot wound of abdomen	Resection, double	1	Two large perforations of large mesenteric arteries, very profuse hæmorrhage; twelve perforations of bowel; two resections of about 12 in.; time of operation forty-seven minutes; patient exsanguinated. Necropsy—no peritonitis; perfect approximations; death thirty-six hours after operation from shock and hæmorrhage.
91	Jan. 18, '95	Fenger, C.	Obstruction of ileum after appendicitis	Anastomosis around obstruction	1	Adhesions so extensive could not be liberated, and lateral approximation considered best.

OPERATIONS ON THE INTESTINES WITH THE MURPHY BUTTON—continued.

TABLE II.—CHOLECYSTENTEROSTOMIES IN NON-MALIGNANT CASES.

No.	Date.	Operator.	Diagnosis.	Operation.	Recovery. Death.	Remarks.
1	June 11, '92	Murphy, J. B.	Cholelithiasis	Cholecystodu- denostomy	1	—
2	Oct. 19, '92	Murphy, J. B.	Cholelithiasis	"	1	—
3	Nov. 23, '92	Murphy, J. B.	Cholelithiasis	"	1	—
4	Dec. 18, '92	Murphy, J. B.	Cholelithiasis	"	1	—
5	Jan. 31, '93	Lee	Cholelithiasis	"	1	—
6	Feb. 20, '93	Murphy, J. B.	Cholelithiasis	"	1	—
7	April 6, '93	Mayo	Obstruction of com- mon duct	"	1	Patient seventy-one years old.
8	April 28, '93	Foster, W. D.	Gall-bladder fistula, obstruction of common duct	"	1	Fistula closed without operation.
9	May 6, '93	Murphy, J. B.	Cholelithiasis, occlu- sion of common duct	"	1	—
10	May 22, '93	Murphy, J. B.	Cholecystitis, im- paction	"	1	—
11	June 1, '93	Fabrique	Hepatic colic, im- paction	"	1	—
12	June 1, '93	Rogers	Closure of biliary fistula after cholecystotomy	"	1	Tenth day removed button through fistula.
13	July 18, '93	Hartmann	Cholelithiasis	"	1	—
14	Aug. 3, '93	Ferguson	Dropsy of gall- bladder	"	1	—
15	Sept. 20, '93	Lane, W. A.	Cholelithiasis	"	1	—
16	Oct. 20, '93	Luken	Cholelithiasis, ob- struction of common duct	"	1	—
17	Oct. 26, '93	Hartmann	Cholelithiasis, ob- struction of cystic duct	"	1	—
18	Nov. 7, '93	Murphy, J. B.	Cholelithiasis	"	1	—
19	Jan. 6, '94	Dunn	Cholelithiasis, ob- struction of common duct	"	1	—
20	Feb. 13, '94	Murphy, J. B.	Cholelithiasis	"	1	Button passed eighteenth day with twenty-six stones. Two 3-in. stones removed.
21	Feb. 24, '94	Abbe	Obstruction of common duct	"	1	—
22	Feb., '94	Barrows	Biliary fistulas	"	1	—
23	Oct. 16, '93	Ferguson, A. H.	Gall-stones	"	1	Excellent recovery.
24	Feb. 6, '94	Moffat, H.	Cholelithiasis after cholecystotomy	"	1	Previous cholecystotomy Nov., '93 14 calculi removed; symptoms returned and cholecystenterostomy.
25	Feb. 22, '94	Ferguson, A. H.	Gall-stones	"	1	Excellent recovery.
26	March, '94	Bradley	Obstruction of common duct	"	1	Post mortem, profuse hemorrhage from liver where it had been torn during operation in freeing adhesions. Approximation perfect. Time of operation forty minutes. Death from exhaustion on seventh day.
27	March 23, '94	Ferguson, A. H.	Gall-stones	"	1	Excellent recovery.
28	April 17, '94	Mynter	Cholelithiasis, en- larged gall-bladder	"	1	Rapid recovery. Button passed twenty-second day—126 gall-stones.
29	May, '94	Bradley	Cholelithiasis, dila- tation of gall- bladder	"	1	150 calculi. Button passed forty days after operation.
30	May 16, '94	Parkhill, C.	Gall-stones	"	1	Button passed twenty-second day. Convalescence uneventful.
31	July 26, '94	Burdick, G. G.	Cholelithiasis	"	1	Button passed fourteenth day. Large calculus allowed to remain in choledochus.
32	Aug. 17, '94	Middleton, W. D.	Cholelithiasis, ob- struction of chole- dochus	"	1	Gall-bladder found contracted to size of Hickory nut; stone such that size removed; obstruction due to fibroid degeneration along entire length of duct. Smallest size button used; rapid convalescence.
33	Sept. 8, '94	Murphy, J. B.	Cholelithiasis, ob- struction of cystic duct	"	1	Time of operation twenty minutes. Difficulty in pressing calculus from duct back into bladder; 60 calculi removed.
34	Sept. 15, '94	Murphy, J. B.	Cholelithiasis, ob- struction of cystic duct	"	1	Gall-stones as large as filberts impacted in cystic duct removed through gall-bladder, which was full of mucus; no bile; patient never had jaundice or colic. Time of removing calculus and making anastomosis six minutes; time of entire operation sixteen minutes.
35	Sept. 15, '94	Werder, X. O.	Cholelithiasis	Cholecystjejuno- stomy, closure of fistula	1	Button passed twenty-seventh day.
36	Nov., '94	Murphy, J. B.	Cholelithiasis, cholecystitis	Cholecystjejuno- stomy	1	A pure cholesteroline calculus 2 in. in diameter removed. Button passed eighteenth day, after vomiting. Largest size button used.
37	—	{ Johnson, G. B. Long, J. W. }	Cholelithiasis, occlusion of common duct	Cholecystduo- denostomy	1	Gall-bladder firmly adhered to colon; Paquelin cautery used for hemor- rhage; gall-stones removed; button passed nineteenth day with two stones. Uninterrupted recovery.
38	Nov. 11, '94	Morris, E. V. D.	Cholelithiasis, en- larged gall-bladder	Cholecyststero- stomy	1	3 ounces of bile in gall-bladder; time thirty minutes; discharged from hospital in sixteen days; button voided in eleven days.
39	Jan. 14, '95	Lindsey, C.	Cholelithiasis, cholecystotomy, fistula	Cholecyststero- stomy	1	Fistula continued discharging after cholecystotomy, Aug. 4th. Operation with button thirty minutes; uneventful convalescence.

OPERATIONS ON THE INTESTINES WITH THE MURPHY BUTTON—continued.

TABLE III.—CHOLECYSTENTEROSTOMIES IN MALIGNANT CASES.

No.	Date.	Operator.	Diagnosis.	Operation.	Recovery. Death.	Remarks.
1	March, '93	Weir	Cancer of pancreas, liver, omentum, and gall-ducts	Cholecystenterostomy	1	Exhaustion; perfect approximation.
2	May, '93	Murphy, J. B.	Cancer of duodenum, pancreas, gall-ducts, and liver	Cholecystojejunostomy	1	Four days; ileus from volvulus; loop of jejunum twisted upon itself.
3	Feb. 2, '94	King, E. W.	Carcinoma of pancreas	Cholecystoduodenostomy	1	No peritonitis; cholémie hæmorrhage from all mucous surfaces of the body; death on fourth day.
4	March, '94	Mynter	Stenosis of common duct	Cholecystoduodenostomy	1	No peritonitis; perfect adhesions; multiple carcinoma of pancreas and liver; death from prostration.
5	Sept. 24, '94	Hartley, F.	Malignant obstruction of common duct	Cholecystocolostomy	1	Button passed.
6	Jan., '93.	Dawbarn, R. H. M.	Cholelithiasis	Cholecystoduodenostomy	1	It was found on introducing the suture that a carcinoma of the gall-bladder as well as gall stones existed. When the sutures were introduced they tore through the cancerous wall as if it were wet paper; the smallest sized button was finally placed and the intestine approximated; death from septic peritonitis; necropsy showed the friable gall-bladder gave way from the clasp of the button. As far as I can learn this was the first time the button was used in New York. Dr. Dawbarn comments: "This case should not count against the method for the reasons mentioned; I have repeatedly demonstrated upon the cadaver that the operation is simplicity itself."
7	Feb. 27, '93	Griffith, J. D.	Cholelithiasis, cholæmia	Cholecystenterostomy	1	Patient had large hæmorrhagic spots all over body at time of operation; necropsy showed large extravasations throughout entire intestine track; no peritonitis; death from exhaustion.
8	March 13, '93	Griffith, J. D.	Cholelithiasis, impaction of stone in duct	Cholecystenterostomy	1	Operation greatly prolonged on account of adhesions; connexion to jejunum.

TABLE IV.—GANGRENE OF THE GALL-BLADDER.

1	March 15, '94	Long, J.	Gangrene of gall-bladder	Resection of gangrenous portion; cholecystenterostomy	1	Gall-bladder extensively gangrenous; contained 195 calculi; death in twenty-four hours; temperature reached 106°; sepsis.
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TABLE V.—GASTRO-ENTEROSTOMY.

1	Sept., '92	Murphy, J. B.	—	—	1	—
2	May, '93	Wiener	—	—	1	Four days; continued hæmorrhage from cannula; perfect union.
3	Aug. 9, '92	Murphy, J. B.	—	—	1	Seven minutes.
4	June 7, '94	Logan	—	—	1	—
5	Dec. 29, '92	Barbat	—	—	1	Necropsy, forty-six days; perfect union; no contraction.
6	July 25, '92	Ferguson	—	Pylorotomy & gastro-duodenostomy	1	Time eighty minutes; Sept. 3 patient in good health.
7	March, '93	Schede	—	Gastro-enterostomy	1	Exhaustion; perfect approximation.
8	March, '93	Schede	—	Gastro-enterostomy	1	—
9	Feb. 2, '94	Ferrier, M.	—	Gastro-enterostomy	1	Exhaustion, eighteen hours; perfect union.
10	July 21, '93	Middleton, W. D.	Stricture of pylorus	Gastro-enterostomy	1	Uneventful recovery; patient, up to date, has gained 42 pounds.
11	Dec., '93	Reed, Chas. A. L.	Carcinoma of pylorus	Gastro-enterostomy	1	Button passed nineteenth day; patient died four months later.
12	April 19, '94	Bressler	Obstruction of pylorus	Gastro-enterostomy	1	Death four weeks later; exhaustion; button found at splenic flexure of colon; retained by band of adhesion; no obstruction.
13	April 20, '94	Mynter, H.	Carcinoma of pylorus	Gastro-enterostomy	1	Vomiting ceased; patient left hospital in three weeks.
14	May 5, '94	Quenu	Epithelioma of stomach	Gastro-jejunostomy	1	Time of operation one hour fifty-five minutes; uneventful recovery; up in eighteen days; great increase in weight.
15	May, '94	Mynter, H.	Carcinoma of pylorus	Gastro-enterostomy	1	Smallest size button used, which could not possibly grasp tissue, and was never intended for that purpose; the wall of stomach slipped out of its embrace and allowed contents to escape; death ensued from exhaustion in twelve hours; a running suture is not necessary if proper sized button is used.
16	—, '94	Mynter, H.	Carcinoma of pylorus	Gastro-enterostomy	—	—
17	July, '94	Middleton, W. D.	Carcinoma of pylorus	Gastro-enterostomy	1	Exhaustion; largest button used; patient very weak and emaciated previously to operation from constant vomiting; death on third day; post mortem was revealed circumscribed peritonitis about site of operation; approximation perfect; stomach eroded by a great ulcer 3 inches in diameter; pancreas and other organs involved.
18	July 6, '94	Meyer, W.	Malignant stricture of pylorus	Gastro-enterostomy	1	Rapid recovery.
19	July 4, '94	Mayo, W. J.	Carcinoma of pylorus	Gastro-enterostomy	1	Death fourteen days after; broncho-pneumonia; necropsy; perfect union; button liberated; opening twice as large as button.
20	July 23, '94	Meyer, W.	Carcinoma of pylorus	Gastro-enterostomy	1	Patient still in hospital, doing well.
21	Sept. 13, '94	Lyman, C. B.	Carcinoma of pylorus	Gastro-enterostomy	1	Necropsy; very large carcinoma involving large portion of stomach and duodenum; no peritonitis; perfect approximation; button in position; death from exhaustion on fourth day.
22	Sept. 30, '94	Bryant, E. A.	Carcinoma of pylorus	Gastro-enterostomy	1	Button No. 3 (1 inch in diameter) used, which was voided on sixteenth day; no pain, fever, or vomiting after operation.
23	Sept. 26, '94	Jaboulay	Carcinoma of pylorus	Gastro-enterostomy	1	Button No. 3 used, which passed on fourteenth day; patient made an excellent recovery.
24	Aug. 23, '94	Case, C. E.	Carcinoma of pylorus	Gastro-jejunostomy	1	Necropsy; perfect union at seat of approximation; button still in position; death on seventh day from general suppurative peritonitis.
25	Oct. 12, '93	Griffith, J. D.	Carcinoma of pylorus and duodenum	Gastro-jejunostomy	1	Died two weeks later of exhaustion; patient seventy-two years, and very much emaciated.
26	Nov. 10, '93	Griffith, J. D.	Carcinoma of duodenum and liver	Gastro-jejunostomy	1	Button not pressed tight enough; one edge loose; death from septic peritonitis.
27	—, '94	Monod	Carcinoma of pylorus	Gastro-enterostomy	1	Button voided on twelfth day; Doyen's procedure approximating intestine to posterior wall of stomach through perforation in transverse mesocolon.
28	Oct., '93	Buecking	Carcinoma of pylorus	Gastro-enterostomy	1	Time for operation sixteen minutes; patient died some time after of exhaustion; necropsy showed a perfect union.

! Dr. Murphy's table omits the diagnosis of these nine cases and the operation in the first five.

frequency, and he died thirty hours after the operation with all of the symptoms of auto-intoxication from the decomposing proteids that had been retained in the alimentary canal. There was no peritonitis. This case shows how important it is to act upon the symptoms of obstruction following an apparently complete reduction of a hernia. Of resections for fecal fistula with end-to-end approximation I have had nine cases reported, all of which recovered. Here the results show that the operation of resection with end-to-end approximation promises much more for the patient than the lateral approximation both for the immediate relief of the fistula and the permanent cure, and I now perform it in all cases in preference to the lateral. We have a total of 41 resections for non-malignant diseases, with 2 deaths. If to these be added the seven cases by Dr. Joseph Price, the details of which I have not received, with six recoveries, we have a total of 48 cases with 3 deaths. The first death was due to continued peritonitis and the second to auto-intoxication. In Dr. Price's case the death occurred from shock twelve hours after operation. The operation was the removal of an enormous universally adherent fibroid, also the excision of several inches of the bowel and a portion of one ureter. These results, obtained in the hands of many operators, certainly indicate that the question of operation in gangrenous hernia, internal obstruction, and fecal fistula is definitely settled—i.e., that resection with end-to-end approximation gives all that can be expected in the way of results.

Resection of the intestine for malignant disease with end-to-end approximation does not give us as good results as for non-malignant, as is the case with all operations for malignant disease. Still, when we review and analyse them, they are a great improvement over those obtained by other methods, and on the whole very satisfactory. There were 30 operations with 7 deaths. These include 8 resections of the cæcum with one death. The causes of death in the malignant cases were as follows. In one case infection from without during operation; a perfect approximation was found at the necropsy. One case from shock ten hours after operation. One case from peritonitis. The specimen showed that there was no evidence of effort at union at the seat of approximation, and that the peritonitis was present from the time of operation. In one case which died from peritonitis a special large-size button (one inch and a half in diameter) was used; it fitted the intestine too tightly and produced a sloughing over the surface of the button with perforation. It is important that the button should fit easily in the intestine. One case had fatal peritonitis. The gangrene of both ends of the bowel was attributed to the length of time that the ends were compressed during the operation, and this conclusion is certainly supported by the fact that both ends were gangrenous and that the perforation occurred not at the seat of the pressure atrophy, but beyond the margin of the button. The intestinal clamps which I use on the intestine to prevent the escape of feces and gas cannot produce this condition, as they do not compress the parallel artery of the bowel in the triangle made up by the division of the peritoneal surfaces of the mesentery and the wall of the bowel. This artery is the most important one for the nutrition of the bowel. In one case death occurred shortly after operation, but the cause was not reported. Finally, one case died from exhaustion. Resection for perforations of intestine, traumatic and pathological, with end-to-end approximation. The mortality from perforations, both from gunshot wounds and for perforating ulcers, has always been very great, not that the danger exists in the operation, but in the dangers of the pathological conditions themselves. Luche, in his collection of 322 cases, found that where the operation was performed within twelve hours after the perforation the mortality was 58.2 per cent.; later than twelve hours, 79.5 per cent. In bullet wounds of the abdomen the collapsed condition of the patient, the profuse hæmorrhage, and the shock upon the nervous system all contribute very greatly to the mortality. We can estimate with great accuracy the position of the wound in the bowel by calculating the course of the bullet from the point of entrance to the position in which it is lodged. The bullet commonly passes either (1) from before backwards, in which case we have one or two perforations, or (2) transversely, then we have many perforations in close proximity—i.e., we may have as many as ten or twelve perforations within twenty inches of intestine. The operation should be a resection of the entire perforated coil, an end-to-end approximation, with drainage of the cavity. Where the perforations are a greater distance apart double resections may be made and two

buttons inserted as in a case reported by Dr. R. R. Williams of Manning, Iowa. The operations for pathological perforation of the intestinal tract are, as a rule, postponed too long. The profession has not yet extricated itself from the erroneous belief that the symptoms of collapse occur immediately after the perforation takes place. I would enunciate the following rule, and it should be impressed on the mind of every practitioner. The manifestations of perforation into the peritoneal cavity depend upon the character and quantity of material admitted into the cavity and the pathological changes produced thereby in the peritoneum. By this I mean that the symptoms are not the result of the perforation *per se*, but the result of the pathological changes produced by the result of the perforation.

LATERAL APPROXIMATION.

In cases of fecal fistula resection should be performed in preference to lateral apposition; the same is true in cases of malignant disease. In cases of extensive adhesions it may be impracticable to resect, and lateral approximation must be performed. Of lateral approximations 12 were reported: 5 for malignant disease, with 2 deaths, and 7 for simple obstruction; all recovered.

RESECTION OF THE RECTUM.

This operation has been simplified in its most trying mechanical part—i.e., the drawing down and approximating the upper to the lower segment, suturing it there, and still retaining the sphincter intact. We have reported 3 resections with recoveries, and 2 lateral approximations; that is approximations around the strictures with a pressure atrophy of the stricture, a method in which the button is used, devised and described by Dr. Bacon.¹ The operation of resection with removal of the sacrum (Kraske) and end-to-end approximation with the button was first done by Dr. Henry O. Marcy of Boston.² The method of procedure for resection of the rectum is as follows:—1. In order to do the operation without removing the coccyx or sacrum (Kraske), it is necessary to be able to reach the upper margin of the carcinoma with the index finger. 2. The sphincter should be dilated until it is completely paralysed; the cancer should be drawn down with forceps, and the rectum packed with gauze above. 3. A puckering string should be inserted in and out through the wall of the rectum half an inch below the carcinoma and left perfectly loose. 4. A circular incision is now made through the entire wall of the rectum, a quarter of an inch above the suture, and between it and the carcinoma. 5. The carcinoma and rectum are then liberated from the surrounding connective tissue, and drawn down as a cylinder into the lower segment of the rectum, and the separation continued until well above the carcinoma. 6. Half an inch above the carcinoma another puckering string is inserted, and a circular incision is made a quarter of an inch below this, cutting out the carcinoma. The gauze packing is then removed. The male portion of the button in which is threaded extremely heavy braided silk, double-drawn through the cylinder, is placed above, and the upper puckering string tied around the cylinder of the button and cut short. The stem is held with a small forceps. 7. Slide the female portion of the button over the string and press it up until it barely catches the end of the male cylinder, just sufficient to hold. 8. Make a small parallel incision in the lower segment of the rectum over the coccyx and half an inch below the first puckering string inserted. Through this pass a strand of iodoform gauze for drainage outside of the button. (This may be removed on the third or fourth day, if necessary.) 9. Draw the button well down and tie the first puckering string around the conjoined cylinders; cut the suture short and press the button together by making traction on the cord and pressing up from below. 10. Have the bowels loose before the operation and keep them loose after the operation until the button loosens itself or can be liberated by slight traction about the tenth day. The traction cords may be left in until the button is removed.

CONCLUSIONS.

1. The cicatrix produced with the button does not contract.
2. Size No. 1, $\frac{1}{2}$ in., or No. 2, $\frac{3}{4}$ in., should be used for cholecystenterostomy. I prefer No. 2.
3. End to end, side to side, and end to side of the small intestines should be made with button No. 3, $\frac{3}{4}$ in. in diameter.

¹ The New York Medical Record, Dec. 10th, 1892.

² Medical Record, June 26th, 1894.

4. End to end and side to side of large intestine should be made with button No. 4. 1 in. in diameter.

5. A special large size, 1½ in. in diameter, with a long male cylinder, may be used in some cases of resection of the rectum with advantage, but it should not be used unless it fits loosely.

6. In intestinal obstruction resection with end to end union gives better results than lateral approximation, and should always be performed when practicable. The same operation should always be done in gangrenous hernia. In faecal fistula the bowel should be resected and united end to end.

7. The patients should receive liquid nourishment as soon as the effect of the anæsthetic passes off. The bowels should be made to move as soon as possible after the operation and frequent evacuations kept up.

8. If the button does not pass in three or four weeks, the rectum should be examined, as it may rest just inside the sphincter.

9. There has been one case reported of occlusion of the button by faecal impaction in the cylinder. This can be easily avoided by a mild cathartic immediately after operation.

10. When returning the intestines to the abdomen, they should be placed in parallel lines, especially at the seat of approximation, to prevent sharp curves and obstruction. This occurred once with the button; many are reported following suture.

11. There is no danger from obstruction from the button, as not a single case has been reported. This proves that the deductions made by Choput of Paris from experiments on the cadaver are erroneous.

12. There is no danger of extension of the pressure atrophy beyond the line of pressure.

13. Primary adhesion may be hastened in malignant cases by abrading the peritoneum with a needle. It is unnecessary in non-malignant cases.

14. A supporting suture is never necessary to secure union, and should only be used to relieve tension when the viscera approximated are forced out of position.

15. The mucous membrane should be pushed down in the cup of the button before closing it; if redundant it should be trimmed off with the scissors. It should never be allowed to protrude between the edges of the button when the button is closed.

16. While the button is easily inserted, the pathological condition requiring the operation may demand the greatest surgical skill to secure a favourable result.

17. The following points regarding the construction of the button should be noted before using it. (a) The spring catches should hold firmly in all positions and should be made of a metal that will not be corroded by acids. (b) The elastic pressure cup should be on the male half of the button—never on the female. (c) The edges of the pressure surfaces should be very smooth—hemispherical in shape. (d) The spring under the pressure cup should not be too strong. (e) There have been defective buttons on the market. The following firms are at present manufacturing perfect buttons: J. J. Ryan and Co., Chicago; Truax, Greene and Co., Chicago; Geo. Tiemann and Co., New York; W. F. Ford and Co., New York; Down Brothers, London, England; Sharp, Smith and Co., Chicago; Franz, Kratzmuller and Co., Chicago and Berlin.

18. If the button appears at the opening of the fistula after lateral approximation, do not try to force it through the opening—it is unsurgical; open the abdomen and (a) press the button back to the anastomotic opening and through the latter on down the intestine, and it will pass; or (b) make a longitudinal incision in the bowel and take it out.

THE LINCOLN COUNTY HOSPITAL.—From the 125th annual report of this hospital we learn that the number of patients admitted during the past year was 982, the largest ever admitted since the erection of the institution, and an increase of 142 as compared with those admitted the previous year. Including those remaining as in-patients at the beginning of the year, the total number treated was 1068; of these, 481 were cured, 91 relieved, 319 made out-patients, 32 died, 65 were discharged unrelieved, and 80 remained in hospital at the close of the year. The average length of residence in the hospital of each patient was five weeks, and the weekly cost of maintenance £1 2s. 2½d., as compared with £1 3s. 7d. the preceding year. The total number of out-patients was 4093.

MALIGNANT DISEASE OF THE COLON SIMULATING MOVABLE KIDNEY.

By HENRY MORRIS, M.A., M.B., F.R.C.S. ENG.,
SURGEON TO THE MIDDLESEX HOSPITAL.

CASE 1. *Malignant disease of the ascending colon mistaken for movable kidney and causing a large perinephric abscess.*—On Oct. 20th, 1889, I was asked to see a married woman aged about forty-three years, who was suffering from a large swelling in the right lumbar region which had been treated as a movable kidney for some months previously. She had recently partly recovered from a severe attack of right-sided pleurisy, and had gone to Worthing for change of air; but a few days after her arrival at the seaside she became very ill with fever, rigors, and a rapidly developing swelling of great size in the right side of the abdomen. She was seen by Mr. Augustus H. Collet, who sent her home in an invalid carriage and communicated with me to take charge of the case. When I saw the patient she was in great distress with much fever, shivering, and considerable œdema of the right loin. The whole right side of the abdomen was distended and dull, and in front there could be readily felt a hard movable mass not unlike the kidney, but situated rather lower than the normal position of that organ. I was told that this somewhat reniform mass had been known to exist for several months, that it had been very movable, and had been regarded by a distinguished obstetric physician and by a general physician as a movable kidney. The large general swelling, with pain, sense of fulness, and œdema in the loin, had only made itself evident a few days. I regarded the case as one of perinephric abscess, and advised that it should be immediately opened, but suggested a physician seeing her before the operation, and Dr. Wilks was accordingly called into consultation. Dr. Wilks agreed that an incision should be made through the loin. This was done on the following day. A very large quantity of pus was evacuated, and two enormous pieces of sloughed cellular tissue were withdrawn. These, when spread out, were large enough to cover a full-sized joint dish. The movable mass was felt to be riding upon the front of this abscess, and sank back into the loin after the evacuation of the pus and when the patient was turned upon her back. The abscess soon healed; the patient immediately improved and became convalescent, but there was no appreciable change in the size of the movable mass. On Dec. 26th there was evidence of renewed inflammation in the loin; a fresh abscess formed and burst on the night of Dec. 29th, through the centre of the scar of the incision. The second abscess soon healed, but still the mass remained, and, after another consultation with Dr. Wilks on Jan. 25th, 1890, it was decided to examine this by laparotomy. On Jan. 28th Mr. Norton gave the anæsthetic, and with the assistance of Mr. Andrew Clark and Mr. Leopold Hudson I made an incision in the right semilunar line to explore the tumour. It proved to be a broad, annular, malignant growth in the wall of the ascending colon and cæcum, and though still movable at its anterior surface it was very tightly bound down by adhesions posteriorly, so that for this reason, as well as on account of the extent of the infiltration of the bowel, excision was not deemed advisable. There was no occasion to perform colotomy as there was no intestinal obstruction. On Feb. 5th all the sutures were removed, and the patient was convalescent from the exploratory operation. The subsequent symptoms were pain, occasional constipation, flatulence, and general weakness, and towards the end emaciation, but no intestinal obstruction throughout the illness. She died on August 13th, 1890, somewhat rapidly, and with symptoms suggestive of ulceration and perforation of the bowel.

CASE 2. *Cancer of descending colon simulating movable kidney in front of perinephric abscess.*—A gentleman forty-seven years of age was sent to me by Mr. Court of Staveley on Feb. 1st, 1887, with the following history. During the preceding six months the patient had suffered on and off with a pain in the left ilio-costal space. About four months ago he had an attack of colic, the pain being in front of the abdomen. He had always been temperate. He had lost about two stones in weight during the six months and had become weaker. For some time a hard smooth mass had been felt, on deep pressure, immediately below the ribs, associated with some tenderness on firm pressure on the loin. He had not been equal to

following his employment since Jan. 17th. On Jan. 21st he had a rigor. At the time I saw him there was much pain over the left kidney, extending back into the loin and down towards the groin in front. His temperature was 100° F. and the pulse 94; the respiration was normal. He was thin and haggard-looking; he walked with a limp, and with his trunk bent somewhat forwards and to the left side. There was a well-defined, somewhat movable, hard swelling felt through the front wall of the abdomen in the position of the left kidney. The left loin felt full and hard and was slightly bulged backwards. It was dull on percussion, and the skin, though not actually cedematous, had a look suggesting that it was so. His urine had a specific gravity of 1030; it contained no sugar or albumen, but he had some increased frequency of micturition, getting up at night to urinate. He was very thirsty. Mr. Court wrote: "The lump, whatever it is, I feel persuaded is at the bottom of his trouble. His symptoms rather point to the kidney, but the swelling is hardly in the normal position of that organ. Is there an abscess with irritation transferred down the psoas muscle? or is there a malignant growth? This latter would account for all his symptoms, but I cannot make up my mind what the exact nature of the growth or swelling really is." To me it appeared that Mr. Court's opinion was as near as one could go, and I wrote down in my case-book: "A perinephric abscess in left loin, with tumour in neighbourhood of left kidney." On Feb. 5th the patient came up for an exploratory operation, but by this time the symptoms had somewhat changed. His temperature since I saw him on the 1st had been 103° at night and 101° in the morning. There was more fulness and hardness in the loin. The skin of the loin looked red, and was decidedly cedematous and the loin was very tender. On Feb. 6th, in Mr. Court's presence, I made an incision into the loin, and evacuated a quantity of very offensive pus from a large riddled space behind the kidney, which extended upwards to the diaphragm and downwards to the pelvis. During the convalescence the discharge assumed a fecal character. The patient returned to Derbyshire on Feb. 22nd with a sinus, which showed marked signs of closing. He did not live long afterwards, however, but died on May 12th, 1887, greatly emaciated. Fæces and pus were again discharged through the fistula, and Mr. Court informs me that at the post-mortem examination he found the descending colon involved in an ulcerated cancerous mass, the left kidney largely destroyed by the same disease, and there were numerous small secondary deposits in the omentum. Both the kidney and colon communicated with the old abscess sac, which was full of fecal matter.

These two cases show the disposition of malignant disease of the colon to cause widespread suppuration in the cellular tissue of the loin and to present a tumour in the lumbar region, which, especially if it excites any renal irritation, is not unlikely to be regarded as of renal origin, and when movable to simulate movable kidney. I might refer to another case, which I saw with Mr. T. W. Nunn and Mr. Balding of Royston, in which I opened a large perinephric abscess, due, there is every reason to believe, to malignant disease of the sigmoid flexure.

Cavendish-square, W.

THE EYESIGHT OF SCHOOLBOYS IN 1894.

By A. ST. CLAIR BUXTON, F.R.C.S. EDIN.,
SURGEON TO THE WESTERN OPHTHALMIC HOSPITAL.

FOR some years past I have from time to time called attention to the unsatisfactory condition of eyesight prevalent among children educated in Board schools. Many a time I have pleaded their cause, though, I fear, with but indifferent success. There are still countless numbers of little ones whose eyes are quite unfit for the close work they have to do, and who are compelled to get through their daily routine as best they may. There is still the same ignorance among their elders, who mistake faulty vision for dulness or worse; and there appears to be still the same degree of apathy on the part of the authorities, whose duty it should be to see that those under their charge and control are in every respect fitted and properly equipped for the task they have to accomplish. The House of Commons has had the matter brought to its notice more than once, but as far as I know the only result

has been a promise that an investigation should be made in some selected schools. What the upshot of this inquiry was, how it was conducted and by whom, or whether it ever took place, is more than I can tell. Feeling strongly on the subject, and finding no evidence of any improvement in the methods of the Education Department being likely to occur, I have devoted no small portion of my leisure during the year 1894 to an independent inquiry. This has been made among boys of the upper and middle classes in grammar schools, in private educational establishments, and in the course of ordinary practice. And here I would tender my thanks to those masters who have so kindly made my work as easy as the circumstances permitted.

On the whole a fairly large number of boys have been subjectively tested for visual acuity and for manifest astigmatism, with what results the following table will show. It may be taken for granted, without much fear of contradiction, that, whatever be the proportion of imperfect vision existing in the higher classes of society, the proportion is still greater, and probably much greater, in the lower grades. Unhealthy surroundings, badly lighted and badly ventilated rooms, overcrowding, want of proper exercise, insufficient food, &c. conduce largely to this. The facts are bad enough even with well-fed and well-cared-for boys, as my table will show. What must they be in the case of those others whose lot and surroundings are in every way less favourable?

Normal. A	Subnormal.				
	B	C	D	E	F
§ and §	§ and §	§ and less than §	§ and §	§ and less than §	§ and § or less
Good	Good with 1; fair with 1	Good with 1; bad with 1	Fair with each	Bad	Very bad
Per cent. 63.54	Per cent. 7.22	Per cent. 4.33	Per cent. 7.58	Per cent. 5.05	Per cent. 12.27

It must be remembered that hypermetropia greatly exceeds myopia in frequency of occurrence, and that the subjects of the former kind of refractive error are often not aware that their eyes are in any way at fault until they are troubled by the accommodation beginning to be "fagged out." This happens, for the most part, in young adult life at an age exceeding that of the schoolboys now under consideration; consequently it is highly probable that a good percentage of those boys whose acuity of vision for distant types is shown as normal in my table are really hypermetropes. It would not be an exaggeration to say that at least 10 or 15 per cent. of the so-called normal boys, Class A, will find difficulty in using their eyes for close work before they are twenty years old; so that, roughly speaking, one may say that very little, if anything, more than half the number of boys examined are really normal as regards vision. This statement is further borne out by the following fact. Of all the boys tested (with Snellen's distant types and the astigmatism fan) nearly 15 per cent. were found to be astigmatic with one eye only, and over 17 per cent. with both eyes, many of the boys who showed evidence of this error (either in one eye or in both) being those who had been able to read the six-metre type at the full distance with each eye, and who consequently figure as "Normal," Class A, in my table.

The difference of opinion which seems to prevail between various observers as to whether bad sight is increasing in England or whether it is not might surely, with some advantage to the public, be removed, and the whole matter cleared up by some such plan as I have adopted in the present instance, but on a much larger scale, repeated at stated intervals—say, of three years. Perhaps some of my younger confrères with sufficient enthusiasm and with more leisure than I can command may think it worth while to carry out this suggestion. If it should be established beyond dispute not only that the average eyesight of our growing boys and girls is decidedly mediocre, but also that the trouble is on the increase (as I am sure it is), then perhaps something may be done towards remedying the evil. My actual figures from which the table was drawn are: number of boys tested, 2493—i.e., in Class A, 1584; Class B, 180; Class C, 108; Class D, 189; Class E, 126; and Class F, 306. The number of boys astigmatic in one eye was 360, and in both eyes 441. Upper Wimpole-street, W.

"CANCER HOUSES."

BY A. HAVILAND, M.R.C.S. ENG.

MR. SAMUEL G. SHATTOCK in his Morton Lecture, delivered at the Royal College of Surgeons of England on May 3rd, 1894,¹ after stating that my conclusions, drawn from my collection of statistics in England and Wales, "were that cancer was most prevalent along the courses of rivers which seasonally flood their banks, and especially where, from the flatness of the country, the floods were retained; the districts about the Thames and Severn and Mid-Devon and Yorkshire rivers were especially noteworthy."² went on to remark: "But there were lesser areas where the endemic character was still more highly pronounced. The best of such was that described by Mr. Law Webb in his paper on the *Etiology of Cancer*.³ Mr. Shattock then briefly gave an abstract of the cases reported by Mr. Webb, which through his kindness I am enabled to give in full. Mr. T. Law Webb, after referring to my views and my statement "that a study of the Registrar-General's returns shows the existence of 'cancer fields' and 'cancer areas' in this country, and that soil and situation have much to do with the mortality from this disease," adds: "I would go further and suggest that there are 'cancer houses' and cancerous water or water-supplies." "I shall quote," he writes, "a series of cases bearing upon these questions. It will be noted that I assume one cause for all the various forms of carcinoma. This is not postulating too much, for could there be diseases more widely differing from each other clinically than lupus, phthisis pulmonalis, and pulpy disease of a joint, which are all, nevertheless, acknowledged to be due to the presence of a single irritant, the tubercle bacillus? And I fail to see why scirrhus, rodent ulcer, epithelioma, or any other forms of carcinoma may not proceed from one and the same cause, whatever that may prove to be.

"CASE 1.—In a village not two miles from my residence are two houses under one roof, with a drain system and water-supply common to both. I will call these dwellings No. 1 and No. 2. Twenty-six years ago a man aged twenty-eight, living at No. 1, suffered from cancer of the rectum, of which he died. The diagnosis was confirmed by examination post mortem. The house was next occupied by Mr. J. M— and his wife. This gentleman, aged about sixty, two years after the death of the previous tenant was treated for cancer of the stomach, of which malady he died after three months' illness with constant vomiting. His widow continued to live in the same house, and died ten years later, aged sixty-five, from cancer of the rectum. A mass of tumour substance protruded externally before she died. She was ill about six months. Before her death, however, Mrs. B—, aged fifty, who resided next door at No. 2, was found to be suffering from cancer of the breast, which proved fatal in eight months. After the death of Mr. J. M—'s widow No. 1 was occupied by three maiden ladies. Of these, Miss P— died four years ago from cancer uteri at the age of fifty-eight. She was assiduously nursed by Miss F—, who also died last winter with all the symptoms of cancer of the stomach; her age was sixty-one. The other lady still survives in fairly good health. None of these people were blood relations, nor can I discover that any of them had a family history of cancer. This is therefore a remarkable sequence of carcinoma cases; and in my limited research into the literature of the subject I have met with nothing like it.

"CASE 2.—In a group of cottages much nearer to my house nine cases of cancer have been treated in the past fifteen years. These dwellings are grouped together and do not occupy much more than an acre of ground. All the inhabitants use water from a certain pump situate by the roadside and close to a filthy hovel. There are twenty houses in all; one cottage enjoying a bad pre-eminence for dirt and discomfort furnished three cases of cancer out of the nine mentioned above. In order to enter this hovel one has to stride across a small cesspool in front of the door-step. Here eight years ago lived an old man with epithelioma

of the lower lip. I removed the growth and was disappointed to find that no sooner was the operation wound healed than difficulty in swallowing was noticed, and in about four months he died of malignant stricture of the gullet. His widow continued to live in the same cottage, and so also did a male lodger who had been with the old couple some years. This old fellow, a hardy, healthy looking old man of sixty, working as a road maker, came to me two years ago for the removal of an epithelioma of the lower lip. This I excised, and he remains well so far with no recurrence of the growth. The widow, however, last year consulted me about a sore in the skin of her back over the sacrum, which troubled her greatly. It spread slowly and would not heal. Though it looked more like a patch of lupus than anything else I strongly advised excision. This was eventually done in a thoroughly effectual manner by Mr. Barling, and up to the present time there has been no recurrence. Microscopic examination of the growth leaves no doubt as to its nature, as it has the usual structure of epithelioma. It will be noted that these three cases were not related; nor were any of the remaining six cases akin. In no one of the nine was there a family history of malignant disease.

"CASE 3.—I will quote but two more instances of what I have called 'cancer houses.' In one a domestic servant suffered from cancer of the breast in 1864. Many years after a gentleman who had long lived in the same house died of cancer of the bladder in 1890.

"CASE 4.—In the other an elderly man died eighteen years ago from cancer of the rectum. He was at one time under the care of Mr. Furneaux Jordan, who confirmed the diagnosis already made of malignant disease. Eight years ago his wife also died of cancer of the rectum. She had continued to reside in the same house."

In a subsequent paper on "Endemic Cancer," published in October last,⁴ Mr. T. Law Webb adds this note to Case 3:—"A lady who has for many years paid an annual visit to this house, staying some weeks on each occasion, tells me that her maid, who always accompanied her on these visits, died in 1893 from cancer of the uterus. It is singular that the inhabitants of this dwelling do not drink the water from their own pump on the premises. For some reason not very evident they prefer the water from a pump situated close to a row of old cottages four hundred yards lower down the valley. In these cottages I attended a woman with cancer of the breast in 1875, and another with cancer of the uterus in 1885. The pump is close to the houses, and not far from the cesspool." Following this note Mr. Webb gives some additional illustrations.

"CASE 5.—In 1868 a maiden lady, living at No. 5 in a terrace in which were five houses, died from cancer of the breast. Her brother, who had formerly lived at No. 1, kept a public-house two miles away. He died from cancer of the mouth. His widow continued the business for some years and then retired, coming to reside in the above-mentioned terrace at No. 1. She died soon after from cancer of the uterus, in 1884.

"CASE 6.—An accountant in a village near here died from cancer of the breast in 1869; his housekeeper died in the same house from cancer of the stomach in 1885; and in the year 1894 the gentleman who succeeded to the duties of the deceased accountant succumbed to cancer of the tongue complicated with disease of the lungs. He occupied the same rooms as his predecessor. The water used in this house comes from an open well by the roadside.

"CASE 7.—The wife of an ironworker died from cancer of the uterus in a certain row of cottages in 1867. The man soon married again, and continued to live in the same house ten or twelve years. He then moved to a house nearer to his work, where he soon after died from heart disease. His widow died in 1892 from cancer of the uterus. The water used for drinking, in the row first mentioned, was a mixture of surface water and spring water from a roadside spout.

"CASE 8.—A patten-maker died in 1875 from cancer of the rectum; his widow died in the same house, also from cancer of the rectum, in 1884; and a daughter who had lived for many years with these old people died from cancer of the breast in 1888. Drinking water was obtained from a pump a few yards from a cesspool.

"CASE 9.—A labourer, who lived in a block of houses near to the Severn, died in 1876 from cancer of the rectum. His widow died in the same house in 1877 from cancer of the bladder. In this case the diagnosis was confirmed by a

¹ Abstract of the Morton Lecture on Cancer, by Samuel G. Shattock, F.R.C.S. Eng. THE LANCET, May 19th, 1894.

² Geographical Distribution of Disease in Great Britain. Second edition, p. 266, Cancer. Swan, Sonnenschein, and Co.

³ Birmingham Medical Review, vol. xxxii., December, 1892.

⁴ Ibid., October, 1894.

post-mortem examination. The water used for drinking by these people was from a roadside well half a mile distant.

"CASE 10.—In 1885 a furnaceman died from obstruction of the bowel of an obscure kind. A post-mortem examination revealed the presence of a button-shaped mass of carcinoma in the sigmoid flexure of the colon and also secondary growths in the anus and perineum. He died in one of two cottages forming a single building lying back from the road in a garden. In 1893 a woman died in the other cottage from cancer of the uterus. Both these houses use water from the same well, which is near the privy. There is no drainage whatever. A cesspool receives everything, and is emptied once in five or six years."

I consider the above cases to be so interesting, and so typical of what probably is taking place more or less all over Great Britain, that I am anxious to call the attention of the medical profession to them, and especially that of my fellow workers in this investigation. With regard to the possibly polluted water-supply in those cases I may refer your readers to what I have already published in THE LANCET.⁵ I may remark that I did not read Mr. Shattock's Merton Lecture until August, when I at once communicated with Mr. T. Law Webb, who readily placed at my disposal all the particulars of the localities in which his cases occurred. At that time I was engaged in the investigation of cancer in the catchment basin of the river Wey in the Farnham district of the Thames basin, and had just unearthed one of those "cancer houses" which I have long had reason to believe contribute their share towards keeping up the endemic character of this class of malignant diseases, especially when situated in favourable conditions.

CASE 11.—In a hollow ("bottom") on the border land of Surrey and Hampshire, where one of the tributaries of the river Wey—formed by the springs issuing from the point where the lower green-sand (Hythe beds) rests on the Atherfield clay, and on which lies the wealden clay—for a short time forms the county boundary until it is lost in Frensham Pond, there stand a few cottages, in one of which there has been a succession of cases of cancer. This hollow, or "bottom," is one of several which flank the lower green-sand ridge and its spurs that culminate in Hindhead Hill (895 ft.). The part of the "bottom" on which the cottages stand is about 390 ft. above sea level and is enwalled by heath, heather, and bracken-covered ridges of greensand rising to between 500 ft. and 600 ft. within a radius of half a mile. The upper part of the "bottom" is comparatively dry, but as one descends and approaches the 450 ft. level the soil gets damper, until alders, rushes, and moss are met with growing luxuriantly, and everything apparently sodden. The house in which the cases occurred stands about 20 ft. above the stream (which sometimes floods its banks), and is not now occupied, as a new one has been lately built close by. A man aged sixty-eight, to whose case from the old house my attention was first drawn, contracted epithelioma of the lip and died in the opposite "bottom," to which he had migrated a few years ago. He informed me that his grandmother first died from cancer, then her son, and, thirdly, her grandson, his cousin, all of whom had been operated upon but died. He then contracted the disease whilst living in the same house where the others lived and died, but he subsequently left his native hollow and lived in one on the opposite side of the ridge, where he died last summer. The river Wey, which waters Farnham and Frensham, floods its banks at times in many places; and coincident with this fact is the high death-rate in the Farnham district from cancer among females at and above thirty-five years of age.

In addition to the above cases I find two others reported from France. Dr. S Duplay, professor of clinical surgery at the Medical Faculty of Paris, and Dr. Cazin, chief of the laboratory of the Charité Hospital, in their lectures on the Contagiousness and Inoculability of Cancer,⁶ refer to the two following cases:—

CASE 12.—Dr. Kiessinger has reported the occurrence of a veritable epidemic of cancerous disease in a group of three houses at Oyonnax, where four cases of cancer came under his personal observation in the space of four years. In all four patients the affection could apparently be traced to contamination with the dressings from a case of scirrhus of the breast.

Several instances of "house epidemics" of cancer have been collected by Dr. O Guelliot of Reims, some of which were observed by himself and the rest by various writers.

CASE 13.—Dr. Fabre has also published a number of original observations, including one by Dr. Lambert Mollière of a series of four cases of cancer occurring in less than ten years among the occupants of a house under circumstances which, according to the observer, preclude all possibility of a mere coincidence.

Dr. Duplay concludes by stating that "the evidence in this direction is not sufficiently conclusive to permit of a definite opinion. I shall therefore dismiss the subject without further discussion. The facts above enumerated appeared to be worth mentioning, if only because they confirm Professor Metchnikoff's hypothesis (in favour of the peptospermal theory) that cancerous neoplasms might possibly belong to a group of miasmatic diseases capable of being propagated by spores formed outside the organism."

I believe with Mr. T. Law Webb that if such cases were more thoroughly sought after and recorded than they hitherto have been much light would be shed not only upon the etiology of cancer, but upon the causes that promote its increase and extension, a knowledge of which in the sequel may lead to the enforcement of greater caution in the treatment of this class of malignant diseases.

Buxton.

THE THERAPEUTICS OF PAPAIN.

By EDWARD G YOUNGER M.D. BRUX., M.R.C.P. LOND.,

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THE FINCHLEY DISPENSARY.

INDIGESTION, either as a primary disorder or secondary to some other departure from health, notably in tuberculosis, is so frequent a symptom among hospital patients, and when left untreated is productive of such marked deterioration in the general health, that one is tempted to try with an open mind remedies which appear to possess properties likely to restore the functional activity of the digestive apparatus, or which at least will do the work which nature, handicapped by the fact that part of the machinery is out of gear, leaves undone. Among the digestive ferments there is one which apparently possesses properties peculiar to itself, one, moreover, which is stated to produce its effects under conditions less rigidly defined than pepsin, in that it converts proteids into peptones in either an acid or alkaline medium. Inasmuch as this indifference to the reaction of its medium enables the drug to continue its action in the intestines after leaving the stomach, one is justified in anticipating that satisfactory results might be obtained in cases in which pepsin fails to attain the object in view, which is, of course, complete gastro-intestinal digestion. These considerations have led me to employ Finkler's papain—for this is the digestive agent I refer to—somewhat extensively during the past year in the treatment of various forms of dyspepsia. The results on the whole have been so satisfactory that I think a brief account of some of them may be deemed worthy of publication. I have before me the record of some fifty cases in which I have prescribed papain. By far the greater number of these patients were young women and girls who were suffering from atonic dyspepsia as a troublesome concomitant of amenorrhœa, neuralgic dysmenorrhœa, menorrhagia, incipient phthisis, and some forms of hysteria, and in nearly all my success with the drug has been most marked and rapid. The other cases in which I gave papain were those of patients suffering from the dyspepsia of a more advanced stage of phthisis, from chronic bronchitis, and valvular disease of the heart. Here, too, I usually succeeded in alleviating the symptoms directly referable to the digestive trouble, which, of course, was all I was entitled to hope for. I append brief notes of twelve cases picked out almost at random principally from my outpatient records. It will be observed that where benefit ensued from the use of the drug the improvement was, as a rule, unmistakable after the ingestion of the first dose or two.

CASE 1.—A pallid woman aged twenty-one years, with waxen complexion, came under my care in September, 1893. She had enlarged and flabby tonsils, and complained of pain in swallowing together with general languor and debility. Her menses were regular, but profuse and painful. Her throat trouble soon yielded to simple treatment by chlorate of potash and hydrochloric acid, and she took iron (principally in the form of ammonio-citrate) until Sept. 14th, 1894, with

⁵ Increase of Cancer, its Probable Cause, THE LANCET, Aug. 9th, 1890.

⁶ The Medical Press, Jan. 16th, 1889, pp. 58-59.

considerable benefit to the general health; but at this date she complained of pain in the epigastrium coming on almost immediately after meals and after taking the medicine. She was also constipated. I ordered one grain of papain, five minims of dilute hydrochloric acid, and chloroform water to one ounce, to be taken three times a day after meals, together with five grains of aloes and iron pill to be taken every night at bedtime. The relief was immediate and marked, and she has complained of no dyspeptic symptoms since. The anæmia is steadily improving and she is still continuing the treatment.

CASE 2.—A young woman aged nineteen years, first seen on Aug. 4th, 1894. She was anæmic and complained principally of pain and flatulence coming on almost immediately after meals, with occasional waterbrash. Menstruation was regular, but had been painful and excessive. I prescribed a mixture of subnitrate of bismuth with bimeconate of morphine, which I afterwards supplemented with Bland's pill. She did not appear to derive any benefit from this treatment, so on Sept. 1st I put her on papain with hydrochloric acid and gentian, continuing the Bland's pill. The pain was much relieved after a few doses, but the flatulence and waterbrash did not entirely leave her until Oct. 6th. She is now quite free from dyspeptic symptoms, and her general condition is steadily improving except in respect of the menstrual irregularities, which continue to give her trouble.

CASE 3.—A woman aged twenty-two years came to me on Sept. 16th, 1893. She was by occupation a seamstress, and worked about eleven hours a day. She was pale and thin, and complained of intense pain at the epigastrium, coming on shortly after a meal and lasting for more than an hour. She said she thought she had been losing flesh for some time past. The menses were normal; the bowels were confined. Auscultation revealed dullness over the right apex, with bronchial breathing, bronchophony, and some rather fine crepitation, but she did not cough much, her principal troubles being those referable to the dyspepsia. She obtained passing relief from a bismuth mixture, and was then put on the ammonio-citrate of iron, when the dyspepsia straightway returned, not being relieved this time by bismuth. I then prescribed papain with dilute hydrochloric acid, which gave her immediate relief, and this treatment she is still under, with the addition of five grains of Bland's pill twice a day. Her digestion is now accomplished without any trouble, and she has increased in weight. Her lung trouble remains about the same.

CASE 4.—A young woman aged nineteen years came under observation on Nov. 24th, 1894. She said her life was made a burden to her by the periodical recurrence of pain in the stomach supervening immediately after meals, lasting about an hour and accompanied by flashings and heartburn. The appetite was variable, being sometimes almost in abeyance and sometimes ravenous, but at present very poor indeed. She was markedly anæmic, with a small pink spot on either cheek. The chest sounds were normal, menstruation was regular, and the bowels regular. I ordered her one-grain doses of papain with hydrochloric acid and gentian, to be taken thrice daily after meals, with five-grain doses of Bland's pill twice a day. At her next visit she reported herself as much better, the pain and heartburn having ceased to trouble her almost with the first dose of the medicine. She no longer becomes flushed after meals, and the appetite has improved. She has asked to be allowed to continue the treatment.

CASE 5.—A young woman aged eighteen years came to me on August 25th, 1894, with a history of having felt languid and unwell for five or six months, with pain in the epigastrium coming on half an hour after food and lasting an hour. There was no vomiting. The menses had never been regular, and she had seen nothing for over two months. The bowels were constipated. I ordered the usual dose of papain with acid thrice daily, with a ferruginous pill. I saw this patient again on Sept. 1st, when she stated that the pain in the stomach had quite gone, having markedly improved after the first dose. On Sept. 15th she reported herself as "ever so much better." She has not returned since that date, so I presume she considers further treatment unnecessary.

CASE 6.—A young woman aged nineteen years came to me on Sept. 1st, 1894, complaining of acid vomiting coming on half an hour after taking food, unaccompanied by pain. This state of things had lasted upwards of three months, with the result that she had been gradually getting thinner. The appetite was commonly ravenous. The menses were fairly regular, but profuse. I detected nothing abnormal in the

chest, but she looked pale and pinched. I ordered papain in one-grain doses, with acid. When I saw her again on Sept. 8th she told me the vomiting had ceased at once after taking the medicine; in fact, the dyspeptic symptoms for which she had consulted me now troubled her so little that she was anxious to be given a tonic. Under a mixture of ammonio-citrate of iron, however, all the symptoms returned in an aggravated form, and she came back begging to be put back on the old medicine. The papain again gave her almost immediate relief, and she continued the treatment until able to dispense with its assistance.

CASE 7.—A somewhat emotional woman aged twenty-five years, subject to mild attacks of hysteria, had suffered from "pain over the heart," increased after meals, for three months in July, 1894, with flatulence and eructation. She menstruated every three weeks. The bowels were irregular. The lungs were normal on auscultation. The heart's action was rapid, but there was no evidence of valvular mischief. Under papain and Bland's pill she professed to be improving greatly (and she certainly looked much better), when on Oct. 20th she came back in a highly hysterical condition and said she was very much worse. I ordered her a mixture of bromide of potassium and valerian and have not seen her since. She was certainly improving under the papain, but the hysterical element rendered her a very unsatisfactory patient to deal with.

CASE 8.—A woman aged fifty-eight years came to me in July, 1894, with a history of Graves' disease extending over ten years, which had been aggravated by an attack of influenza the previous Christmas. For the last three years she has had more or less oedema of the ankles. Her principal complaints now were palpitation of the heart and vomiting directly after the ingestion of food. She was markedly cachectic and there was slight general enlargement of the thyroid gland. Proptosis was very marked. The lungs were fairly normal, but the heart was rapid and most irregular, with an occasional intermission; there was no murmur. I ordered papain with hydrochloric acid and digitalis, under which the vomiting promptly ceased. She improved in many ways until Oct. 31st, when, the stock of papain being temporarily exhausted, I ordered a bismuth mixture to go on with. The urgent vomiting returned, and at her next visit she begged to have her old medicine. This afforded the desired relief and she is still continuing the treatment.

CASE 9.—A woman aged twenty years came under my notice on Sept. 24th, 1894, and complained that for three months past she had been troubled with pain directly after taking food, so intense that she was afraid to eat. The menses were every fortnight, sometimes scanty and sometimes profuse. The chest sounds were normal. Her aspect was very anæmic. In this case papain with aloes and iron pill failed to give relief, so a week or so later I gave her some bismuth and bimeconate of morphine, under which she is improving at the present time.

CASE 10.—A young woman aged eighteen years came to me on Sept. 29th, 1894, complaining of pain at the epigastrium coming on after meals and running through to the back between the shoulder-blades. She felt sick, but did not actually vomit. She was very anæmic, and the menses, though regular, were scanty. The pain absolutely disappeared after the first dose or two of papain, and she improved so much that in a short time she felt well enough to discontinue the treatment.

CASE 11.—A woman aged twenty-four years had been under treatment for anæmia off and on ever since she was nineteen, in addition to which she suffered from dysmenorrhœa and constipation. She was never satisfied with any medicine for long together and would often disappear for several weeks or months and give some other institution a turn. On Nov. 7th, 1894, she came complaining of frightful pains after meals, not accompanied by vomiting, and she looked very pale and ill. I ordered her a mixture of papain. At her next visit she looked much better and grudgingly admitted that the pain was better after taking the medicine. I lost sight of this patient, so I am unable to say whether permanent benefit followed the treatment.

CASE 12.—A woman aged twenty years came to me on Nov. 20th, 1894. She said that since an attack of influenza a year ago she had been troubled with a cough with scanty frothy expectoration. There had been one attack of slight hæmoptysis five months ago. Menstruation was regular, but scanty. The bowels were regular. The appetite was poor. Of late she said she always felt sick after food and often

vomited. Her mother died from phthisis. Nothing abnormal could be made out on auscultation of the lungs, but the heart's action was rapid and heaving, and there was a slight systolic murmur at the apex conducted outwards. In order to relieve such of the symptoms as were referable to the stomach I ordered her a mixture of papain, and the vomiting forthwith ceased. She is still under treatment.

CASE 13.—A man aged fifty-one years came on Sept. 15th, 1894, complaining principally of pain and vomiting after meals, from which he had suffered off and on for seven years. There was some consolidation at the apex of the left lung. The vomiting ceased at once under papain, though the pain did not entirely disappear under the treatment. I then combined small doses of morphine with the papain, under which the pain and other symptoms disappeared, and he was soon enabled to discontinue his attendance.

I have chosen these cases pretty well at random in order to show in what instances papain did good and also those in which it either did not afford relief or had for some other reason to be discontinued. In uncomplicated cases of atonic dyspepsia papain appeared to exert very beneficial effects, and in the instances in which this was the case I was struck by the almost immediate relief thus obtained. In only three cases in which I have prescribed the drug did it apparently fail, but in two of these (Cases 7 and 9) the patients were emotional women in whom the dyspepsia was associated with subjective symptoms of a hysterical character. The third case was that of a man aged forty-six years, an alcoholic, who suffered from dyspepsia with waterbrash, which yielded to bismuth.

Mecklenburgh-square, W.C.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF DIABETES INSIPIDUS.

By ROBERT J. LEE, M.D. CAMB., F.R.C.P. LOND.,
LATE PHYSICIAN TO THE HOSPITAL FOR CHILDREN, GREAT ORMOND-STREET.

A YOUNG woman nineteen years of age was for many years the subject of diabetes insipidus. The malady was attributed to a fall from a hayrick when she was about four years old, and up to the time when she had the attack about to be described, which occurred last June, there was nothing unusual to record. The chief trouble during those years was thirst, particularly during the night, which led to the drinking of between three and four quarts of water after going to bed and getting up in the morning. The illness, which commenced in June, followed immediately after exposure to the strain of an examination, and retention during some hours, without permission to leave the room, caused great suffering each time it occurred. Great weakness followed immediately; the symptoms of diabetes ceased, and there was no thirst during the night. When the case came under the care of my friend, Mr. James Kingston Barton, the great state of prostration and feverishness led to the suspicion that this was some form of remittent fever, and soon it was considered proper to report the case to the medical officer of the parish. The skin was highly congested, the pulse quick, and the temperature, when Mr. Barton first took it, in the morning was 102.5° F. and in the evening 104.5°. It continued like this for a week and then fell for a fortnight two degrees morning and evening. Then it rose three degrees—that is, to 103° and 105°—for a week, and fell again lower than it was before. In this way from June 22nd to Aug. 22nd the state of fever continued without any symptoms of intestinal disorder or of other serious nature except attacks of nasal hemorrhage so violent as to cause great alarm. During the next month a gradual fall of temperature to the normal took place, and gradually the night thirst returned, so that by the middle of September there was nothing to note except great prostration and not enough strength to allow of the patient being moved to the seaside till some weeks further had passed. By degrees during the winter the patient's strength has been restored to some extent, but not entirely to its former state, and the case seems to deserve notice in the interest of those who may be exposed in examinations at

schools, where such easily prevented accidents are possible. So far as treatment deserves notice, it may be remarked that no effect seemed to be satisfactory, and that not until the symptoms of returning diabetes displayed themselves did there appear to be any sign of improvement. It is strange to have a person in whom the healthy condition of the kidneys is one favouring excessive secretion of urine, and that any interference with this action is liable to serious constitutional disturbance. If this case recalls similar cases to others it would be interesting if they were recorded, and would help us to comprehend the curious and inexplicable phenomena that appear in diabetes in its various forms.

West Kensington, W.

SWALLOWING OF A PIN BY A CHILD.

By JAMES TILLY, M.D. ST. AND., L.R.C.P. EDIN.,
M.R.C.S. ENG.

INSTANCES of a pointed metallic body passing harmlessly through the alimentary tract are sufficiently unusual to justify the publication of the following case. A child aged five years having swallowed a pin on the evening of Nov. 21st, I directed that solid food, such as rice pudding &c., should be taken, and also gave a mixture containing tincture of opium, tincture of lavender, and chloroform water. On the evening of Nov. 23rd the pin was voided per anum, firmly packed in a solid cylinder of feces, having consequently traversed the alimentary canal in forty-eight hours. It may be described as a small scarf-pin, having a total length of almost an inch and a half. The head is circular, flat, very thin, and nearly three-eighths of an inch in diameter; the stem is of brass, slender, and very sharp, and its upper part is bent so that the stem is parallel to the plane of the head. The diagram gives a good idea of the size and shape of the pin.

Chiswick.

ON ABSORBENT DRESSINGS, ASEPTIC AND CHEAP.

By ARTHUR NEVE, F.R.C.S. EDIN.,
SURGEON, KASHMIR MISSION HOSPITAL, INDIA.

FIFTEEN years ago there was no consensus of opinion with regard to the best materials for surgical dressings. Listerism was introducing everywhere the use of gauze with mackintosh outside. Gamgee and others were working with absorbent material, whilst tow and ordinary cotton-wool were the staple dressings elsewhere, and carbolic oil the favourite application. As a rule the dry dressings were not aseptic, and the antiseptic dressings were not dry. The introduction of medicated absorbent cotton-wool and wood-wool reconciled these two methods; gauze dressings have also been used dry for many years, and many of the old crude applications have been banished, so that in the hospitals of Europe the same cardinal principles are everywhere recognised and to a great extent the same materials adopted. It may be assumed that surgeons are now satisfied with the ample choice of sterilised or antiseptic and absorbent gauzes or wools, but that managers of hospitals and war officials are less content with these changes, which have involved "an altogether astounding increase in expense." The question of cheapness cannot be altogether set on one side. It is not a question of antiseptic *versus* aseptic surgery, but of *cheap versus expensive antiseptic* appliances. The French War Department has adopted peat as the best cheap absorbent dressing. Peat-moss appears to have been used successfully in Russia for the last ten years. Suggested by Leisrink, it was soon used by Schede, Hagedorn, and others. I tried it for a time, but soon fell back upon sawdust pads, which have now been our staple dressing material for over ten years. Thomas of Liverpool and others have used them in England. These have now been introduced by Surgeon-Lieutenant-Colonel Lawrie into the hospitals and dispensaries of Hyderabad State. They are cheap. In Kashmir sawdust costs about sixpence a hundredweight. The muslin bags can be made at the rate of about 500 for £1. They can be made aseptic or antiseptic. We impregnate the pads the day before use with a 1 in 2000 solution of mercuric zinc cyanide. They can be easily

sterilised in a Cathcart's or Schimmelbusch's oven. They are absorbent, but not too drying. Surgeons who have used moss have found it too drying, as the discharges crust underneath it, and the moss needs damping from time to time. Sawdust pads will absorb twice their own weight of pus or serous discharge. Absorbent wool frequently allows a small amount of discharge to penetrate to the bandages. This seldom happens with well-adjusted pads. They are exceedingly light and comfortable and, if well made, adapt themselves to the shape of any surface. The sawdust should not be too fine or the muslin too coarse.

Kashmir, India.

A Mirror

OF

HOSPITAL PRACTICE BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

THE following cases under treatment at St. Thomas's and St. Mary's Hospitals illustrate difficulties which may occasionally arise in making a correct diagnosis as to the nature of a tumour in the renal region. Hepatic enlargements on the right side, splenic enlargements on the left, ovarian tumours, or accumulations of fecal matter in the large bowel—these are well recognised as sometimes closely resembling renal tumours, and the surgeon remembers them as conditions to be eliminated in coming to a true opinion as to the exact seat of the tumour. The symptoms produced by some other growths in the lumbar region are shown by these cases as well as by those under the care of Mr. H. Morris which we publish at p. 1047.

ST. THOMAS'S HOSPITAL.

A CASE OF CARCINOMA OF THE LEFT KIDNEY OF UNUSUAL DURATION; NEPHRECTOMY; RECOVERY; REMARKS.

(Under the care of Mr. WILLIAM ANDERSON.)

THE history of an enlargement noticed for six years in the region of a kidney which proved to be the seat of a carcinomatous growth is unusual, more especially as hæmaturia, one of the most characteristic symptoms of such a disease, was absent throughout. As regards removal of such growths of the kidney, Mr. Greig Smith¹ writes: "In all cases where the disease has been known to exist for some months, where the growth is large, and more particularly if it is firmly adherent in the loin, no operation is advisable. In a word, for malignant disease nephrectomy is a justifiable procedure only in a few specially selected cases." In this patient there appeared to be no evidence of secondary growth, and the result of the operation fully justified the removal of the kidney. We are of opinion that statistics of the operation of nephrectomy for malignant disease would show a greatly diminished primary mortality at the present time. The case to which Mr. Anderson draws attention in his remarks is one which shows the close resemblance between a malignant growth of the large bowel in front of the kidney and a tumour of the kidney itself. The difficulty thus caused in coming to a correct diagnosis does not often present itself in actual practice, but should be borne in mind. It would be very much increased if a renal growth had extended into the overlying bowel and produced destruction of its wall. Such a case has been recorded by Dr. Peacher;² there was extensive adhesion between the tumour (a primary hard carcinoma) and the colon, with numerous perforations of the latter, allowing of the escape of fecal matter into the peritoneum. For the notes of this case we are indebted to Mr. Finch White.

The patient, a woman aged fifty-one years, was admitted into St. Thomas's Hospital on Jan. 3rd last, with a tumour

on the left side of the abdomen. The growth was first noticed six years ago (nine months after the birth of her last child) as a painless prominence of the size of a fowl's egg, situate near the level of the umbilicus. She had lost flesh during the few previous months, but remained fairly strong, and had suffered from no functional disturbance except a slight cough with occasional expectoration of a little bloodstained mucus. There was a family history of strong tuberculous predisposition, but none of malignant growth. On admission she was a tall, thin woman, somewhat emaciated, but showing no sign of prostration. Local examination demonstrated a tumour of irregularly rounded outline, and about the size of an ostrich egg, projecting below the costal border on the left side; it could be traced backwards into the loin, downwards as far as the iliac crest, inwards to the median line, and above as far as the line of gastric resonance. It was dull on percussion, insensitive to pressure, and was freely movable within certain limits, but appeared to have connexions at the back of the abdominal cavity. The descending colon ran down on the outer side of the mass. The urine contained a trace of albumen, but no other evidence of visceral disease was ascertainable. It was considered that the growth was most probably renal or omental in origin, but in any case an operation was desirable. On Feb. 4th Mr. Anderson opened the abdomen through the left linea semilunaris. The great omentum was exposed, and on drawing this up the posterior parietal peritoneum and the left colic vessels were found to be tightly stretched over the tumour, while the descending colon was pushed over to the left. The colic vessels were ligatured and the peritoneum was divided, exposing a smooth, rounded, slightly lobulated growth which could be traced backwards to its origin from the upper end of the left kidney. It was carefully isolated, the pedicle of the kidney was exposed, and the renal vessels with the ureter were divided into three segments, which were ligatured separately. The whole mass was then detached and the abdominal wound closed. The supra-renal capsule was not seen during the operation, and no enlarged glands could be felt. Little blood was lost, but an enormous number of ligatures was required. The shock of the operation was rather severe but not grave, and the patient was in good condition on the following morning. The temperature remained normal in spite of an attack of bronchial catarrh until the end of the week, when a slight rise occurred. On removing the dressings a quantity of inodorous pus escaped from the lower angle of the wound. The discharge gradually ceased, and the patient left the hospital on March 24th. The tumour was pronounced by Mr. Shattock to be a carcinoma involving the upper third of the kidney.

Remarks by Mr. ANDERSON.—This was a case in which, from the position and mobility of the growth and the absence of pathognomonic symptoms, a positive diagnosis was almost impossible. Two alternative opinions as to its nature were hazarded, and one of these was found to be correct, but it would not have given rise to any great astonishment had the tumour proved to be something of a different kind. It is still somewhat difficult to reconcile its undoubted malignancy with the long history given by the patient and with the absence of indications of cachexia. The following brief outline of a second case, under treatment at the same time, serves to illustrate further the difficulty that may arise in the interpretation of local signs in this region. The patient, a woman aged fifty years, was admitted into St. Thomas's Hospital with a large oval tumour occupying the left loin and extending upwards to the area of gastric resonance and downwards into the pelvis. It appeared to correspond exactly to the region of an enlarged kidney, and this impression was supported by a marked diminution in the excretion of urea, and by the presence of a small quantity of albumen in the urine. All the other functions were normal except for an occasional attack of diarrhoea, to which the patient had paid little attention. A diagnosis of renal tumour was formed with some confidence, and it was proposed to remove the growth by a free lumbar incision. On cutting down at the back of the loin a kidney of perfectly normal aspect was exposed, and the tumour sought was felt in front of the organ. A second incision was then made in the left semilunar line and the disease found to consist of a carcinoma of the descending colon, the wall of the gut being replaced by an enormously thick mass of new growth, while the lumen evidently remained sufficiently large to allow free passage to fecal matters. The wound

¹ Abdominal Surgery.

² Sajous' Annual of the Universal Medical Sciences, 1889, G. 30.

was closed and the patient rapidly recovered. She left the hospital a fortnight later, not only none the worse for the exploration, but expressing herself as feeling much better and more comfortable than before. These examples, with many others which the experience of every surgeon can furnish, will show that it behoves the operator to approach in a tentative spirit even the cases in which he is most inclined to form a positive diagnosis, that he may be ready for any surprise, and undisconcerted in action should the conditions prove to be what he least looked for. Fortunately we may now resolve our doubts with a minimum of risk to the patient, and with a hope that the exploration, even though it go no farther, may afford a relief that science has yet to explain.

ST. MARY'S HOSPITAL.

OBSCURER "RENAL SYMPTOMS"; CANCER OF ASCENDING COLON; RESECTION; DEATH; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

IN considering the diagnosis of such a case as the following it must not be forgotten that the probable mistake made occurred a year before the patient came under treatment at St. Mary's Hospital. At that time the tumour would be much less distinct and the difficulty in coming to a correct opinion much greater. This does not, however, detract from the importance of the case from a clinical standpoint, but is rather emphasised by what Mr. Owen says of the former operator. There are many other abdominal swellings which must be considered by the surgeon in making a diagnosis of movable kidney before he can feel confident that the tumour which he feels is the kidney—viz., impacted feces in the colon; ovarian tumours, especially small ones with long pedicles; tumours of the parovarium; hydrosalpinx; enlargements of the gall-bladder; deposits in the pylorus, inflammatory or malignant; tumours of the omentum; dermoid tumours of the intestinal wall; and pancreatic growths. As a rule the diagnosis is easy and the surgeon is unlikely to make a mistake; Mr. Owen's case shows the necessity of a careful consideration of the symptoms and accurate examination of the abdominal tumour. For the notes of this case we are indebted to Mr. W. D. Wiggins, clinical clerk and dresser.

The patient, a man aged fifty-five years, was admitted into the Thistlethwayte Ward of St. Mary's Hospital on last New Year's Day. He looked very worn and ill, and he remarked that he had lost four stone in weight during the past three years. He said that his troubles began about four years ago with a dull, dragging pain in the right loin, which sometimes extended across the abdomen, but generally shot down into the right groin. The pain came and went irregularly, lasting six or ten minutes and disappearing completely between the attacks. He steadily got worse, and a little more than a year ago he went into a hospital, where the surgeon under whose care he was told him his distress must be due to the fact that he had a "floating kidney," and that it ought to be cut down upon and stitched in its proper place. To this operation he said he submitted, and a long, linear scar running obliquely over his right lumbar region seemed to confirm his statement. The man further said that the very day after that operation he had recurrence of his old pains as severely as ever, and that on informing his surgeon of this he had received the explanation that the kidney must have broken loose again. The operation produced no improvement whatever. On the other hand, the pains, which were steadily increasing up to the time of the operation upon the kidney, continued to increase subsequently, so that when he applied for admission to St. Mary's Hospital he compared them to "a thousand knives." He had also been troubled with loose, blood-stained actions of the bowels. On examination a hard, tender, and circumscribed tumour could be felt deeply in the region of the beginning of the ascending colon, well above the level of the cæcum. It was hard and tender, and was evidently the starting-point of all his pains. Whilst examining this mass it was noticed that distended pieces of intestine in the neighbourhood were struggling to rid themselves of flatus, which was apparently divided up into hard, ball-like masses. Indeed, so vigorously was the peristaltic action being carried on that the gas was locked up in the segments of the bowel under such tension as to convey, at a first touch, the idea of the

balls being solid. But they were resonant on percussion, and presently changed their position or disappeared altogether. The man was given to understand that he had a large cancerous mass which was blocking his bowel, and that though in all probability it could not be removed, an operation might be performed with the view of getting the contents of the bowel beyond the blockage. On Jan. 4th a free incision was made through the right semilunar line, and a hard mass of the size of the fist was found in the colon as it ascended in the renal region. Mr. Owen proposed connecting the ileum with the colon above the obstruction, but on one of his colleagues urging that this might afford the patient but short or imperfect relief, he resected the bowel and connected the divided ends by a Murphy's button. The growth proved to be a columnar epithelioma which almost entirely blocked the colon. Below the obstruction the muscular wall of the intestine was greatly thickened, with the object of forcing onwards the liquid and gaseous contents. On the evening before his death there was a very slight escape of feculent fluid from the wound, and the conclusion formed was that the suture was not watertight. At the post-mortem examination it was found that a perforation had occurred upon the distal side of the bowel where the thin intestinal wall pressed against the edge of the button. The man was so weak, however, when the discharge was noticed that it was not considered practicable to open up the wound and examine for a leakage.

Remarks by Mr. OWEN.—I have published this case with but a brief account of the clinical details and of the operative procedure in order that I might call attention to the uncertainty which may attend the diagnosis of "floating kidney," for I assume that this man had not at any time a floating kidney. The evidence, so far as I can read it, is very circumstantial and all against such a theory. Nevertheless, that apparently was the diagnosis made before the operation by one of the most practical, scientific, and illustrious surgeons of the day. A cancer in the middle part of the ascending colon would give rise to dull aching and pains which the patient would almost certainly associate—at first, at any rate—with his kidney; and as the mass developed, and the bowel became more and more loaded and distended, the lumbar aching would increase on account of pressure upon the psoas and the lumbar nerves. This pressure would especially be felt by the genito-crural branch, and so it came about, I think, that the patient complained of pain shooting into the groin and into the region of the cord and testis. Had these symptoms been associated with blood in the urine they might have suggested the presence of a renal calculus, but there was no history of hæmaturia. Accounts as given by patients of their former medical attendants, as of their symptoms, are usually untrustworthy. It is quite possible that the operator never suggested that this man had a "floating kidney"; but the scar gives unmistakable evidence of the kidney having been cut down upon in the loin, and this, the man said, was for the relief of pains which, except in degree, were identical with those for the relief of which I unsuccessfully removed the intestinal growth. During the operation which I performed I saw nothing to suggest that the kidney was in the least likely to shift its position. My opinion was that from the very beginning the case had been one of slowly but surely advancing cancer of the bowel.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — A meeting of this society was held on April 10th. Mr. Flemming showed a patient with an Uncommon Form of Skin Disease, and a specimen of Ulcerative Endocarditis. Dr. Aust Lawrence read a paper on Backward Displacement of the Gravid Uterus, and illustrated the communication with diagrams. Dr. J. E. Shaw and Mr. Paul Bush read a paper on a case of Tumour of the Brain involving the upper portion of the superior frontal convolution in which there was loss of motor power in the left arm and leg, especially in the movements of the shoulder- and hip-joints. The patient died three weeks after removal of the growth, and at the necropsy a portion of new growth was found bulging into the longitudinal fissure. Mr. Munro Smith showed lantern slides and specimens, prepared by Dr. Davies and Dr. Dawson, of Pneumococci found in the Bladder in a case of cystitis following pneumonia. Dr. Davies showed some interesting lantern slides of Photographs of Patients suffering from Small-pox; also micro-photographs of the Bacillus of Typhoid Fever, Tetanus, and Diphtheria.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Pathological Identity of the Various Forms of Acute Septic Inflammations of the Throat.

An ordinary meeting of this society was held on April 23rd, the President, Mr. HUTCHINSON, being in the chair.

Dr. FELIX SEMON read a paper on the Probable Pathological Identity of the various forms of Acute Septic Inflammations of the Throat hitherto described as Acute Oedema of the Larynx, Edematous Laryngitis, Erysipelas of the Pharynx and Larynx, Phlegmon of the Pharynx and Larynx, and Angina Ludovici. In his introduction he fully stated the reasons which had induced him, in spite of the absence of bacteriological evidence of his own, to submit his ideas on the question of the nature of acute septic inflammations of the throat and neck to the judgment of the society. He next showed the confusion which at present existed in the nomenclature of these inflammations, and defined his own position by expressing his conviction "that the various forms of acute septic inflammation of the throat and neck, hitherto considered as so many essentially different diseases, were in reality pathologically identical; that they merely represented degrees varying in virulence of one and the same process; that the question of their primary localisation and subsequent development depended in all probability upon accidental breaches of the protecting surface through which the pathogenic micro-organism, which caused the subsequent events, found an entrance; and that it was positively impossible to draw at any point a definite line of demarcation between the purely local and the more complicated, or between the oedematous and the purulent forms." This thesis was then proved—from the clinical point of view—by the communication, in order of ascending severity, of fourteen cases in point (two of them with full notes of post-mortem examinations) which had come under Dr. Semon's observation. It was shown that from the slightest cases, the septic nature of which could well be doubted, to the most severe and rapidly fatal ones, complicated by pleurisy, pericarditis, pneumonia, peritonitis, and septic infection of the central nervous system, such gradual and imperceptible transitions were met with, and that, again, the serous forms of inflammations so insensibly passed into the purulent forms, that often the greatest difficulties occurred in correctly registering a case in accordance with the present terminology. Dr. Semon then endeavoured to draw a consistent clinical sketch of the course of these inflammations, and to explain the differences in their primary localisation and their various extensions. Next he discussed the various objections which could be raised against his views—viz.: (1) that no proof had been adduced that the milder cases given in his list were really of septic origin; (2) that the different primary localisations in these cases spoke against their identity; (3) that the variations in the fever curve also seemed to show that the individual cases were due to different pathological processes; and (4) that the fact of the exudation sometimes being of a serous, sometimes of a purulent, character from the bacteriological point of view militated against his view of the identity of the pathological process causing these different forms of septic inflammation. In answering these objections he particularly dealt with the importance of the tonsils as forming a natural portal for the invasion of the organism by pathogenic microbes, and from the bacteriological point of view showed by quotations from Jordan's papers that his ideas, revolutionary as they might appear from the clinical aspect, in reality constituted a simple clinical application of general bacteriological principles to a certain group of septic inflammations. In conclusion, he urged the necessity of a sweeping revision of our present nomenclature concerning acute oedematous affections of the larynx.

The PRESIDENT thought that Dr. Semon was not really making an advance, but was falling back on old-fashioned views which had not been departed from by some. He was prepared to go even further than him, and to say that many of these diseases were transmutable. He doubted if oedema of the larynx was the same thing as erysipelas of the larynx, but the one might develop from the other. He believed that there was a contagious form of catarrhal

laryngitis. He had seen a case of oedema of the larynx which ended fatally, and which appeared to be produced by exposure to cold, and not by exposure to septic influences. The virulence of these diseases might undoubtedly be intensified by transmission.

Dr. DE HAVILLAND HALL said that the older writers entertained the view that these affections were identical. Four years ago Dr. Semon spoke at Berlin much to the same effect as in the paper now produced, and this induced Dr. Hall to look up his cases for the past seventeen years. As the result of that search he asserted his belief that erysipelas of the larynx, phlegmonous pharyngitis, and angina Ludovici were so similar that the slight difference in their starting point was not a sufficient reason for making a different classification necessary. He recorded seven cases. The first, in a man aged twenty-one, started in the pharynx and implicated the larynx, the temperature rising to 106° F. The patient recovered and no albumen was found in the urine. The second case occurred in a man aged forty-nine, started in the pharynx, but did not involve the larynx. The patient died from pulmonary oedema, and albumen was found in the urine. In the third case, that of a female aged fifty, the pharynx was first involved and the disease afterwards extended to the larynx; albumen was found in the urine, and death occurred from exhaustion. This illustrated the old saying that when erysipelas extended internally the result was worse than when it extended externally. A man aged thirty-six was the subject of the fourth case; the disease involved the pharynx and larynx, and was a typical instance of angina Ludovici; tracheotomy was performed, but death resulted. The fifth case occurred in a man aged twenty-five; it commenced in the larynx and extended to the pharynx. There was no albumen in the urine, and recovery ensued. The sixth instance, in a woman aged fifty-four, commenced in the larynx and extended to the fauces; there was no albumen in the urine, and recovery ensued. The seventh and last case occurred in a woman aged fifty-six and involved the larynx; there were right pleurisy and pneumonia of both bases; albumen was present in the urine, and recovery resulted. All these cases presented much the same clinical picture, and he regarded them all therefore as identical.

Mr. LOCKWOOD said that much would turn upon the sense in which the term "pathological identity" was used; for identity of bacteriological invasion was not necessarily the same thing as identity of disease. In acute angina Ludovici there was a streptococcal invasion, and the same was highly probable of acute inflammation of the pharynx, larynx, and tonsils. But an acute abscess might be found in the arm due to staphylococcus aureus, and a peritonitis might exist due to the same streptococcus, but yet no one would say that the diseases in the arm and peritoneum were identical; it was necessary that there should be identity in the tissues which were attacked. In these inflammations about the neck and throat it was improbable that there was an identical bacteriological invasion in all. In one case, for instance, staphylococcus pyogenes had been found, while in other cases the presence of bacilli had not been given the prominence it deserved. Fœtor was common in angina Ludovici, and this was always due to a bacillus. In one case, again, bacilli were found which produced gas, and such a case could not be considered bacteriologically the same as those in which the streptococcus pyogenes was found. As to the tissues attacked there was the widest difference; in one case the invasion might be about the epiglottis and in another about the tissues of the neck. Though there was a clinical resemblance between these diseases, yet angina Ludovici often betrayed considerable clinical differences, due to a variation in bacterial invasion. Cutaneous erysipelas of the neck could not be described as angina Ludovici; it was very different, and the three varieties of erysipelas differed considerably amongst each other.

Dr. SHARKEY said that he agreed with the conclusions drawn by Dr. Semon from the clinical point of view. In the St. Thomas's Hospital Reports for 1892 he published three cases of angina Ludovici. The first was in a man aged thirty-four, who complained of diarrhoea, and three days later had a sore-throat. The case rapidly proved fatal, and at the necropsy lymph was found in both pleurae, and an acute inflammation with abscess was localised about the epiglottis. The second case occurred in a man aged twenty-nine, and developed equally rapidly; pneumonia supervened and tracheotomy was performed. At the necropsy an abscess was found in the

submucous tissues about the base of the tongue. The third case occurred in a man aged thirty-nine, malaise being followed by sore-throat and pneumonia, and a hard swelling developed in the upper part of the neck below the mouth. The whole of these cases were instances of acute primary suppurative cellulitis of the neck, all occurring near enough to the larynx to produce intense oedema of the epiglottis, and the infection he regarded as probably of septicæmic origin. It was necessary to define what we meant by pathological identity, whether it referred to the question of some definite tissue being involved or to the localised or generalised nature of the disease. He thought on the whole that this clinical group of cases resembled each other as much as did examples of any one disease in other organs.

Mr. BUTLIN said that the subject, which was sufficiently complicated before, had been made still more so by the paper. The assertion was that these diseases were all septic and that they were identically the same disease. Mackenzie in his work had already included these affections with the exception of Ludwig's angina under one head, and with regard to Ludwig's angina no accurate description of it existed. There was no sufficient proof in the paper that these diseases were identical either in their appearances, their physical structure, their clinical characters, or their pathology. In a case like that of erythema nodosum we could be sure of the identity of the disease in different individuals; epithelioma also we could recognise from its clinical appearances and its structure. Tuberculosis differed enormously in its clinical characters, but its identity could be verified by the discovery of the anatomical tubercle coupled with the peculiar bacillus. In the diseases proposed to be classed as identical very few bacteriological examinations had been made and very few inoculation experiments performed. Then the paper quoted observations to show that no less than ten microbes might produce the same pathological condition and ten conditions might be the result of the action of one microbe. Though he had hoped that order and harmony might be evolved out of the group of conditions brought together, he was bound to admit with profound sorrow that after hearing the paper he was more confused than ever.

Mr. HARRISON CRIFFS said that he sympathised with Dr. Semon in his desire for uniformity, but he could not admit that that goal had been attained. Many different pathological conditions might produce a similar affection. He referred to a case, under the care of the late Mr. Luther Holden, in which the patient suffered from gangrene of the thumb of the type of the acute septic gangrene of Larrey. The arm was amputated and the patient at first did well, but three days afterwards the throat began to swell. The swelling attained very large dimensions and was covered with black patches, and was evidently due to the same cause as the gangrene of the thumb, and in both parts of the body gas was developed in the tissues. Death ensued after twenty-four hours from suffocation. In the second instance a child had suffered from facial erysipelas, but had got well. A few days later the mother was taken ill with sore-throat; the swelling increased rapidly, and she died from suffocation. The cause in that instance was undoubtedly erysipelas. In other parts of the body we might meet with swellings produced by different causes, and the neck was no exception to this rule.

The debate was adjourned till the next meeting.

MEDICAL SOCIETY OF LONDON.

Serous Plevritic Effusion treated by Multiple Tapping and afterwards by Incision.—Sclerema Neonatorum ending in Recovery.

An ordinary meeting of this society was held on April 22nd, Dr. COUPLAND, Vice-President, being in the chair.

Dr. S. WEST related a case of Serous Plevritic Effusion of eighteen months' duration for which the chest was tapped thirty-seven times and the side then incised, the result being complete recovery with full expansion of the lung and but little flattening of the side. The patient was a woman aged thirty-one years whose illness dated from September, 1891, fluid being diagnosed in January, 1892. In June, 1893, when Dr. West first saw her, he immediately tapped the abdomen and the fluid did not return. He next tapped the pleura, and ninety ounces of serous fluid were removed by a syphon tube, the lung expanding freely, which was remarkable considering that it had been compressed by the fluid for eighteen months. The tapplings were continued at frequent intervals

for nearly twelve months, and the operation was performed thirty-seven times in all, the fluid remaining serous throughout. He hoped to complete the cure by paracentesis alone, but the patient's friends became impatient, and at last he had to consent to the side being laid open. An empyema of course developed. The fever became hectic, the patient rapidly lost flesh and strength, and soon was as ill as when he first saw her. It seemed hopeless to look for her recovery, but when at her worst she suddenly began to mend without any obvious reason, convalescence gradually set in, and from this time was uninterrupted. The points of interest in the case were (1) that after the side had been full of fluid for twelve months and more the lung should not be bound down, but should be capable of rapid re-expansion; (2) the number of times that the side was tapped and the probability that complete cure might have been obtained in this way; (3) the fact that after thirty-seven tapplings the fluid remained clear and serous as at the first, and that, too, in spite of air having been admitted more than once into the pleura; (4) the opening of the side for a simple effusion; and (5) the ultimate complete recovery with practically no deformity and perfect re-expansion of the compressed lung.—Dr. DE HAVILLAND HALL referred to a case which he brought forward, together with Mr. Goodsall, two years ago. Tapping was resorted to thirteen times, and 705 fluid ounces of clear fluid were drawn off altogether; the patient recovered. As there was a syphilitic stricture of the rectum it was thought that the lesion of the pleura might be syphilitic also. Up to the present time he had made up his mind that he would not open a case of simple serous effusion, and he would even go beyond thirty-seven tapplings before doing so; the precarious condition of Dr. West's patient after the opening of her chest still more fortified his opinion and confirmed his fears.—Dr. ROUTH remarked that the opening of the abdomen in tuberculous disease had proved to be curative, and he did not see why this should not prove to be equally true with regard to the lung.—Dr. COUPLAND remarked that the case appeared to be unique. Could it be strictly called inflammatory? The cause of the effusion might be a local one and due to some local disturbance of the circulation. In an obstinate case of clear serous effusion into the pleura he had resorted to opening the chest, and this was followed by very serious symptoms for a time, but ultimately recovery ensued.—Dr. WEST, in reply, referred to the strong family history of tuberculosis in the case. There was a history of acute onset, and the case was one that would have commonly been classed as an inflammatory effusion. He did not think that empyema could set up tubercle, but that interference in tuberculous subjects frequently led to the development of acute tuberculosis. As most cases of tuberculous peritonitis got well by tapping it was unnecessary to resort to opening the abdomen.

Dr. ARCHIBALD GARROD then read a paper on a case of Sclerema Neonatorum ending in recovery. The patient was a male infant first seen by Dr. Garrod at the age of five weeks. At birth induration was noticed upon the buttocks, and had extended until it covered the entire back and involved the dorsal aspects of the upper arms and thighs. The indurated area did not pit on pressure; the outline was sharply defined and maplike. There was pink mottling in places. The legs could not be fully extended either at the hips or thighs, and in the popliteal spaces there was a well-marked hidebound condition. The infant was otherwise in good health, and slept and took the breast well. There were no signs of visceral disease, and the rectal temperature was 98.2° F. Within the next week some diminution of the induration was noticed, and improvement was steady from that period. As the hardness cleared up no pitting was obtained on pressure, and instead of decreasing evenly in all directions isolated islets of induration remained upon the arms and elsewhere. Within four months recovery was complete. The treatment employed was inunction of cod-liver oil, and for four weeks inunction of blue ointment. The nature of the case was discussed and reasons were given for regarding it as an example of sclerema rather than of oedema neonatorum. It was shown by reference to certain recorded cases of sclerema that the case was one of a well-defined group, the members of which exhibited close resemblances in their clinical features, and all ended in recovery. It was suggested that possibly such cases might turn out to constitute a third category, distinct both from the typical fatal sclerema and also from oedema neonatorum. Although the improvement was perhaps more rapid during

the period when mercurial inunction was employed, it had already commenced before the blue ointment was prescribed, and continued without interruption after it was stopped.—Dr. KESER said that it was not often that cases of this kind were seen to recover. He had a severe attack himself, and his brother died from it; his own recovery was attributed to warmth and diet. He had seen some incomplete and abortive cases of this disease. The first was a child born six weeks before term; it was weak, thin, had digestive disturbance, and suffered from bronchitis when a fortnight old. At the age of seven weeks the skin of the penis was noticed to be hard, and in two days the hardness had spread to the lower abdomen. It improved; then relapsed, and then ultimately the disease disappeared, the child dying afterwards from broncho-pneumonia. In the second case the child was born at term, but had been badly fed. At the age of one month induration was found in the left gluteal region, and it extended to the thigh and lumbar regions; the temperature was subnormal. The child was kept warm and on a full diet, and it recovered. In the third case the child, aged one month, developed a patch on the left cheek and ear, but these disappeared without any treatment. In Dr. BARRS' case the skin was red, and the parts involved were those touched by the napkin. The first case of which he had found a description occurred in 1718 at Ulm and was attributed to a maternal impression, the mother while pregnant having gone to a church and looked attentively at some statues.—Dr. COLCOTT FOX said that the disease was rare and was less common in England than it used to be. In certain typical cases of sclerema and of œdema respectively they could be distinguished from one another, but in many instances it was difficult to make a distinction. The first case he had seen was one of isolated bosses over the deltoid. Sclerema was said usually to begin over the lower extremities, to spread upwards, and to involve the face. In œdema the dependent parts of the body were particularly involved—the back, the buttocks, the back of the arms and the calves, but not so often the face.—Dr. COLMAN said that in most of the published cases of this affection the descriptions were indefinite and confused. In sclerema, which was usually fatal, there was an increase of fibrous tissue in the skin, whereas in œdema, which was usually recovered from, there was a physical alteration in the subcutaneous fatty or areolar tissue. It should be remembered that the skin of a new-born child was very different from that of a grown child or of an adult, and œdema would not pit in new-born children as it would in an adult. Most cases of sclerema had been put down to syphilis, but the fact that they had recovered under anti-syphilitic treatment was not sufficient evidence of syphilis. In two cases of œdema neonatorum he had found post mortem very evident visceral syphilis.—Dr. GARROD, in reply, said that in the case he had related the temperature had been depressed a degree or two; there was a nodule in the parotid region, but not distinctly on the face. The trouble commenced in the buttocks and spread upwards. The mercurial treatment might have hastened the recovery, but it did not initiate it.

BRITISH GYNÆCOLOGICAL SOCIETY.

Adjourned Discussion on the Dangers of Morphia in Gynaecological Practice.—Exhibition of Specimens.

A MEETING of this society was held on April 11th, Dr. CLEMENT GODSON, President, being in the chair.

Dr. LEITH NAPIER, continuing the discussion on Dr. Macnaughton Jones' paper,¹ said that too much stress had been laid in the paper on the influence of temperament. He concurred with the author's adoption of Zambaco's classification of morphia patients: (1) those suffering from chronic painful disease who had daily recourse to morphia; (2) those who had been cured of such affections but continued to use the drug; and (3) those who indulged in morphia for the mere pleasure it afforded. He called attention to some symptoms of the morphia habit which had been overlooked in the paper, such as sickness severe enough to contra-indicate the drug even when pain was great, various cutaneous rashes, and general pruritus. Women were more susceptible to morphia than men were, reacting readily to its exciting as well as to its sedative action. He held strongly that whilst morphia should be given for relief of pain, less potent drugs should replace it

in insomnia and neuroses; for instance, the bromides, lactophenin, chloralimid, erythrina, sulphonal, and paraldehyde.

Dr. C. A. MERCIER said that not everyone who took morphia habitually was a morphinomaniac. Thus De Quincey indulged in an opium debauch at frequent intervals from 1804 to 1812; at no time during these eight years was he a slave to the drug. In 1813 a severe and painful illness led him to the daily use of laudanum, and it was only then that it obtained a complete mastery over him. He describes himself in 1816 as sitting down every night with a quart decanter of laudanum at his elbow, and he drank it without measure and without stint. The absolute dependence upon morphia and not the mere indulgence in it, however frequent or prolonged, constituted morphinomania. De Quincey was able to abandon the habit, and did so at the cost of intense suffering, without, as far as they knew, any external assistance or advice. But he never used the hypodermic syringe. It was a matter for consideration whether the tyranny of morphia administered by the syringe was not far more dominating than when it was taken by the mouth. Dr. Macnaughton Jones had pointed out that attention was first called to the prevalence of the morphia habit in 1864, and it was about that time that the syringe came into fashion. It was a remarkable fact that a successful means of breaking morphia-takers of their habit was based upon the much greater facility with which it could be abandoned when taken by the mouth. A large proportion of the daily ration of morphia could be cut off without great distress: the crux was reached when the daily quantity was reduced to one or two grains. At this stage the syringe should be abandoned, and double or treble the quantity given by the mouth. It was then possible to rapidly diminish and at last to altogether abolish the dose without occasioning any very severe distress to the patient. The conclusions that he ventured to put before the society were that the syringe should be reserved for cases of great agony requiring immediate relief; that a long course of opium, when needed, should be given in other ways; and lastly, that it was almost criminal to entrust a patient with a syringe for the self-administration of morphia.

Mr. J. F. WOODS (Hoxton House Asylum) said that he had met with six cases of the morphia habit. One was that of a medical man admitted under certificate and suffering from delusions. He had been taking twenty grains daily, hypodermically. After an attempt at suicide he was allowed his syringe, with an attenuated solution of morphia, so that instead of two grains (as he thought) he was taking one-twentieth of a grain for a dose. He improved rapidly and left in two months. After an interval he had a relapse and was again cured; some time afterwards he committed suicide by taking an overdose of chloroform. Another case was that of a woman aged forty-nine years who had taken morphia for fourteen years, having begun it under the direction of a medical man for uterine pain. On admission she gave up four syringes and two bottles of morphia. On stopping the drug she suffered from great restlessness, but he was able to cure her by hypnotic suggestion. She made rapid progress and gained two stones in weight. He heard from her last week, and she was then quite well.

Dr. T. OUTTERSON WOOD thought that it was not in asylum practice that the majority of cases were met with—it was rather among borderland neurotics; and that when their condition passed into certifiable disease recovery was rare.

Mr. W. D. SPANTON (Hanley) hoped that gynæcologists would not be held responsible for all the evils of morphia, for among men the habit was relatively more common than was usually supposed. Under no circumstances ought a syringe to be placed in the hands of a patient.

Dr. FITZGERALD (Folkestone) said that he would confine his remarks to the use of morphia in painful and hopeless malignant disease. It was the duty of every conscientious physician not only to alleviate pain where a cure was impossible, but also to ensure a painless death when the end came.

Dr. MORTON, while admitting the great value of morphia in such cases as cancer, thought that in dysmenorrhœa and allied conditions it was only very rarely needed; there was here a large scope for the recent antipyretic and analgesic drugs.

Dr. MACNAUGHTON JONES, in reply, emphasised the fact that his paper dealt only with the influence of temperament on the susceptibility to morphia intoxication. He had proved the contagiousness of the habit in some cases. Sterility was one of the acknowledged results of morphinism, and he

¹ THE LANCET, March 23rd, 1895.

gave an instance in which conception occurred after the habit was cured. Reviewing the treatment of the morphia craving he touched on the various plans: by abrupt stoppage (Lewinstein); more gradual lessening (Erlenmeyer); and the middle course of ceasing to give the morphia after a gradual decrease of the quantity had been carried over a period of from eight to twelve days. The last plan, combined with the use of various hypnotics, had given him the best results; treatment by alcohol, chloral, opium itself, the substitution of water, nitro-glycerine, &c., all failed. But it was no part of his object to discuss treatment. His main proposition was that in women suffering from subjective pain and pain arising out of functional disorders of the uterus and ovaries the risk of using morphia subcutaneously was great.

Mr. W. D. SPANTON showed the following specimens:

(1) very large Cyst with Cystic Ovary removed from a married woman aged thirty years; (2) Renal Calculus of Phosphate of Calcium weighing 980 grains removed by Right Nephrolithotomy from a married woman aged forty-three years; and (3) an Imperfectly Developed Ovary with large Graafian Follicle removed from a married woman aged thirty years. In all these cases recovery followed.

Dr. LEITH NAPIER showed an Obstetric Forceps with a New Lock, the invention of Dr. Bourke.

KIDDERMINSTER MEDICAL SOCIETY.

Removal of Testes for Enlarged Prostate, with notes of two Surgical Cases.—Scarlet Fever.—Exhibition of Cases.

A MEETING of this society was held on April 5th, Mr. D. CORBET, President, being in the chair.

Mr. J. L. STRETTON gave a further report on the Removal of Testes for Enlarged Prostate in a patient whose case was read at the last meeting. When discharged from the infirmary on Feb. 20th he was able to walk about; his urine was clear and was passed naturally. A few days later he again became delirious and much exhausted, and although he recovered temporarily he gradually lapsed into the same condition, and ultimately died on March 16th. At a necropsy on the following day the body was found to be emaciated, the bladder distended with urine, its coats much thickened, and its internal surface very irregular, large muscular bands traversing it in all directions. The prostate was about the size of a bantam's egg and exhibited no signs of tubercle. That the operation gave the patient relief there is no doubt; it materially reduced the size of the prostate and restored the power of micturition. Had it been undertaken at an earlier date, before his constitution was so much impaired, it would probably have prolonged his life. A woman aged seventy years was admitted on March 5th with Strangulated Umbilical Hernia. She had been ruptured six or seven years, but had always been able to return it. It had been strangulated about thirty-six hours, and she had had faecal vomiting, her general condition being unsatisfactory. An incision was made over the tumour, and the bowel, which was dark and congested, was returned after the ring had been nicked, the edges were freshened and brought together with deep sutures, and the skin wound closed. The operation from the commencement of the anaesthetic occupied less than half an hour. She passed flatus on the second day, the bowels acted on the fourth, and the stitches were removed on the sixth; her general condition had improved and she appeared to be going on quite well. Two or three days later she passed blood in her urine and became restless. She could not tolerate the catheter, and her symptoms became so grave that a further operation was out of the question. She died on April 1st. At a necropsy twenty-four hours after death there was complete closure of the aperture at the site of operation and no signs of peritonitis. The bladder was thickened and contained two phosphatic concretions; there were two cavities in the right kidney containing pus, and a small ovarian cyst on the left side. Mr. J. L. Stretton urged the importance of simplifying such operations to ensure their rapid performance, especially as there was the possibility of other organs being involved, as in this case, without presenting any symptoms. A man aged twenty-two was bitten seven or eight years ago by a horse about the upper part of the abdomen and two cicatrices were left. Two years ago the present condition commenced and had been gradually increasing. He was a well-developed healthy looking man. Over the lower part of the right chest in front was a large mass of new growth which was irregular in outline

and had a mottled purple and red colour; it measured at the base 4 in. across and 2½ in. from above downwards. At the lower end of the sternum was a similar mass 1½ by 1¼ in. They were freely movable on the deeper tissues and had a soft elastic feel at places. Both tumours were removed by one incision, leaving a large surface which could not be covered by skin. He made an uninterrupted recovery. Skin grafts were planted from time to time, and the whole had healed in three months. Microscopical examination showed round-celled sarcoma.

Dr. EVANS showed a case of extreme Enlargement of the Thigh Bone following Fracture.

Dr. P. E. DAVIES brought forward a female child aged eleven years suffering from Congenital Syphilis with well-marked Ulceration of the Soft Palate, which he considered a rare condition.

The PRESIDENT read a paper on Scarlet Fever.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Impacted Gall stone.—On certain Abnormalities of Convolution and Structure in the Brains of the Insane.—Exhibition of Specimens.

A MEETING of this society was held on April 5th, Mr. A. W. Mayo Robson, Senior Vice-President, being in the chair.

Dr. CHADWICK reported a case of Impacted Gall-stone (Jaundice, six years' duration), where a solitary attack of biliary colic (January, 1889) was followed by jaundice, which persisted till death six years later (December, 1894). The case when seen in 1892 was regarded as one of malignant disease, there being hepatic enlargement, tenderness on pressure, and much ascites, without any obvious splenic enlargement. When seen in 1894 the abdomen was retracted, there was no ascites, the spleen was enormously congested, and there was copious hæmatemesis, followed by death in a few days. An impacted gall-stone was found post mortem. The case was interesting on account of its long duration. Xanthelasma was present in 1892, but was not demonstrable in 1894. No indication of any malignant change was apparent anywhere.—The case was discussed by Mr. Mayo Robson, Dr. Eddison, Dr. Major, and Dr. Barrs.—Dr. Chadwick replied.

Dr. W. LLOYD ANDRIEZEN (West Riding Asylum) gave a demonstration on certain Abnormalities of Convolution and Structure in the Brains of the Insane, illustrated with several specimens of crania and of brains in epileptic idiocy and imbecility, including also imbecile brains in which the patients were not subject to epilepsy. Dividing the insanities into two great classes, at one extreme of which hereditary vice of organisation prevailed, it was shown that the above pathological specimens came within the above category. The insanities at the other end of the scale include such as mania, melancholia, stupor, the toxic insanities (like alcoholic), &c., with the last of which he had fully dealt elsewhere. These latter presented no striking anomalies of conformation or convulsion, and many of them might be conveniently included under the term "acquired" insanities. After showing that a large intermediate group of insanities existed between these two extremes of the scale—a group which he would with Marel, Magnan, Krafft-Ebing, and others designate as a "degenerative" group, it was shown how these degenerates frequently exhibited not only certain psychical characters or stigmata, which stamped them as such, but also physical characteristics of physiognomy and of brain and bodily conformation (somatic stigmata). Reserving fuller details on these for a separate communication, it was shown that in epileptic idiocy and imbecility the condition of cranial asymmetry was a striking and preponderating feature; and this the speaker proceeded to correlate with anomalies of brain development in these subjects. Case 1: An epileptic imbecile, fits since the age of four, right arm paralysed (with sclerosis and atrophy of the left Rolandic area in the brain) but liable to some active (tonic and clonic) movement when a fit occurred. The condition was one mainly of microgyria with atrophy and sclerosis of convolutions on the left side generally, and with these a parallel atrophy of the right lobe of the cerebellum was also shown to exist. Case 2: An epileptic idiot, fits since infancy.

1 On Some of the Newer Aspects of the Pathology of Insanity. Brain, 1894.

general. The left hemisphere was of fair size and development; the right hemisphere was atrophied and sclerosed very beautifully and uniformly over the supra-marginal, occipito-angular, and temporo-sphenoidal regions (externally and mesially) over an area corresponding very accurately to the distribution of the posterior cerebral artery. The anterior and middle cerebral area had practically not suffered. The significance of this in connexion with syphilitic and alcoholic disease in the parents was shown, and further examples given of such diseases in the parents affecting the brain development of the child. Case 3: An epileptic idiot, microcephalic, showed disseminated microgyria in small territories (upper frontal, parieto-angular, &c.), unevenly scattered through both hemispheres. Other cases of epileptic idiocy were described and by the aid of photographs their pathogenesis was discussed, the conclusion being arrived at that a sclerotic overgrowth of the neuroglia fibre cells (diffuse or focal, and in the latter case often corresponding to a particular vascular territory) with a corresponding slow irritation, destruction, and finally atrophy of the nerve cells and fibres in the same area underlay the phenomena of epileptic idiocy and imbecility. Further details were given of several epileptic imbecile brains (about fifteen) examined microscopically, and one of a case of "focal epilepsy" in which the area of brain cortex excised in a surgical operation by Mr. Victor Horsley, was also investigated by the lecturer. Each and all of these concurred in showing the above type of lesion (diffuse, with small focal destructions of nerve tissue), all pointing to the same pathogenic basis in epileptic idiocy and imbecility, and in focal epilepsy. (Full details would be published later in a memoir in course of preparation.) In the brains of simple—i.e. non-epileptic—imbeciles and idiots such lesions as the above were absent, and the convoluted forms might be, and often were, plump and well formed, though inclined to simplicity of arrangement. These were to be looked upon as general arrests of development primarily. Amongst others was shown the case of a congenital idiot (non-epileptic), speechless, dirty and degraded in habits, finally dying from phthisis at an adult age (thirty), which realised such a plumpness and yet simplicity of general brain convolution, and in which no condition like microgyria was present. (All cases of hæmorrhages, parencephaly, traumatism, &c. involving destructions of brain tissue *ab extra* were excluded from the present research to prevent complications in the study.) Further remarks were also made on pachymeningitis hæmorrhagica, and on the hardness and structure of the cranial bones in the insane.

Dr. ADOLPH BRONNER (Bradford) showed a case of Caries of the Attic in which Stacke's operation had been performed. There was a history of discharge from the ear off and on for eight years, with occasional attacks of severe pain. Perforation of Shrapnell's membrane was found and treated for several months. The ossicles were then removed, and extensive disease of the bone found. The external ear was drawn forward, the cutaneous part of the external meatus cut through and pulled out, and the diseased bone removed by chisel and sharp spoon. The ear was replaced. After five weeks no rough bone could be felt. The wound behind the ear was kept open by lead wire.—Dr. Bronner also showed a case in which Trichiasis of the Upper Lids had been treated by transplantation of mucous membrane of the lip. An incision was made along the edge of the lid below the cilia parallel with the skin and a strip of mucous membrane of the lip inserted into the incision and attached with catgut sutures. In the other eye a piece of the skin of the upper lid was transplanted. The mucous membrane seemed to heal quicker than the skin.

Dr. HELLIER: Large Subperitoneal Myoma removed from Uterus.

Mr. LITTLEWOOD: (1) Vermiform Appendix removed from a case of Recurrent Appendicitis; (2) Tumour of the Lower Jaw weighing 30 oz. (twelve years' growth).

LIVERPOOL MEDICAL INSTITUTION.

Lung Cavity Incised and Drained.—Two cases of Cleft Palate to show the Natural Voice some years after operation.—*Rhinoliths.*—Treatment of Delirium Tremens.—Modern Miracles of Healing.

A MEETING of this society was held on April 18th, the President, Mr. CHAUNCEY PUZEY, being in the chair.

It was proposed by Mr. LOWMESE, seconded by Mr. BARK,

and carried, "That a subcommittee be formed to consider the recommendations of the Select Committee of the House of Commons on Death Certification."

Mr. CLEGG read notes of a case of Cavity of the Lung which he had incised and drained, and also referred to similar cases which had been under his care but which he had not operated upon.

Mr. CLEGG also showed two children about eight years of age on whom he had operated for Cleft Palate some four years before; in both instances the voice had been very materially improved.—Messrs. Rawdon, Harrison, and Murray made remarks.

Mr. BARK read a note on Rhinoliths and related the case of a woman aged twenty-six, seen in November, 1893. She complained of blockage of the right nostril, purulent discharge, frontal headache, and epiphora. These symptoms had been coming on for three years. After cocaineising the right nostril a jelly-like mass could be seen on the floor of the nose, with white calcareous points shining through it. The mass was immovable, being firmly embedded in granulations. Under chloroform considerable force was required to extract the stone. The granulations were subsequently removed by the cold snare and galvanocautery. The patient made a good recovery. Mr. BARK said that nasal calculus was a sufficiently rare condition to make it advisable to report this case. He entered at some length into the causes for the formation of these stones and the way in which they could be best detected.—Dr. PERMEYAN made some remarks on this paper.

Mr. DAMER HARRISSON read a note on the Treatment of Delirium Tremens. He referred especially to the violent mania which sometimes occurred in robust drunkards after injury or otherwise. He advocated a return to the plan introduced by Graves of first depressing the patient by antimonial wine and then giving narcotics, but he preferred chloral rather than opium. Dr. Macfie Campbell, Dr. Rawdon, Mr. Nicholson, Dr. Carter, Dr. J. Wigglesworth, and the President discussed Mr. Harrison's paper.

Dr. IMLACH read a paper on Modern Miracles of Healing. He brought forward five women, all of them examples of the Holywell cure. One of them had been in the Royal Infirmary upon two occasions, each time for a month, with swelled right leg; she was told that there was plugging of the lymphatics, and upon the board at the head of her bed the disease was entered as elephantiasis. The swelling began in the ankle and rose above the knee. Rest, massage, bandaging, and other treatment having proved useless her parents took her to Holywell last autumn; after bathing in the water the swelling began to disappear, and was gone in a few days. A photograph of the swollen leg was shown to the meeting. Another cure which had been under Dr. Oliver of Newcastle-upon-Tyne, and had been already described in THE LANCET,¹ was carefully examined by those present at the meeting. There were also three examples of chronic rheumatism. Previously to their visit to Holywell they had been for many years martyrs to rheumatism and all medical treatment failed to relieve them. They had all been cured by a visit to the well last autumn and had passed through the severe winter without an ache or pain. Dr. Imlach thought that to question miracle was mere foolishness, and to question the cure was impossible. What remained was to determine scientifically *what* was cured, and this was no easy matter. He referred to the cures at Lourdes and expressed a hope that medical men would assist in investigating the actual worth of the Holywell recoveries. An interesting discussion followed the reading of the paper, in which the President, Dr. Sumner, Dr. Glynn, and Mr. Head took part.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

The Treatment of Severe Hæmorrhage by the Infusion of Normal Saline Solution.—Exhibition of Specimens.

A MEETING of this Section was held on March 29th, Dr. R. D. PUREFOY, the President, being in the chair.

Dr. GLENN, having expressed his indebtedness to Dr. Smyly, briefly described the five methods of using Normal Saline Solution in Severe Hæmorrhage—namely (1) Munchmeyer's injection into the connective tissues; (2) Ponfick's

¹ THE LANCET, March 16th, 1895.

intra-peritoneal infusion; (3) rectal injections; (4) intra-venous infusion; and (5) intra-arterial infusion, either centripetal or centrifugal. Munchmeyer's method he considered too slow, but recognised the value of the accompanying massage, especially when applied to the abdominal walls, as the large reserve of blood held by the abdominal veins is thus encouraged to flow towards the heart. Intra-peritoneal infusion was employed in several laparotomies, three or four pints of normal saline solution being left in the peritoneal cavity with markedly good results; the patients recovered with exceedingly slight shock considering their loss of blood, the only special feature being an intense thirst which persisted for twenty-four hours. Rectal injections can be employed at the will of the operator at any time during an operation. These methods, though useful, have in no degree the value of the remaining two—intravenous and intra-arterial infusion—at least so far as the immediate treatment of profuse hæmorrhage is concerned. Having glanced at transfusion of blood and its difficulties when employed in private practice, he quoted Jennings's conclusion: "We know that blood excels saline fluid on nutritive grounds, but the dynamic effect of the operation being that generally required to restore suspended animation, saline fluid will usually be found sufficient." Sir Spencer Wells first suggested the infusion of normal saline solution in England, founded on experiments during the cholera epidemic of 1848. Lande and Bischoff in Germany—Jennings, Arbuthnot Lane, and Herbert Spencer in England—were its pioneers. The apparatus used in Dr. Glenn's cases was one made by Collin of Paris, and was found admirable, being simple, easy to work and to keep aseptic. The rate of injection was recommended to be three ounces per minute as a maximum, on the authority of Panum. "Slowly and regularly" is generally the most important thing in the operation. The temperature will depend on the apparatus used, as allowance must be made for cooling in passing through. The quantity depends on individual requirements; certainly we should go on until a slowing of the pulse with an increase of volume is noticeable. Worm-Müller has shown that an increase of blood to the extent of four-fifths of the normal amount can be borne without injury to the individual into whom it is injected. The injection of large quantities has been followed by more favourable results than were obtained when smaller amounts were employed. Horrocks used two to six pints, Herbert Spencer one and a half to two pints, Bernard Pitts two to eight or ten pints, while in Dr. Glenn's cases eight pints were the maximum; the addition of alcohol is of no benefit. The advantages of arterial infusion in fat anæmic patients were pointed out, the stimulation of the medulla oblongata by the centripetal method being emphasised. The absolute importance of all bleeding points being secured was dwelt upon, and a warning was given against over-hastily using it in post-partum hæmorrhage. Dr. Glenn then read notes of seven cases of the use of this method in gynecological practice, in three of which the patient recovered.—Dr. TWEEDY said that he had seen most of the cases infused, and had himself infused eight other cases. He agreed with Dr. Glenn as to the enormous improvement that took place in the patient's pulse and appearance, but considered it to be very transitory. He believed that the saline infusion acted as a stimulant to the heart, and that it had saved several lives by warding off impending syncope. It, however, flowed out of the vessels nearly as quick as it went in. There were free urination and perspiration. In one case fluid poured from a drainage-tube in the abdomen ten minutes after infusion. A patient very rarely dies from absolute want of blood; it is shock that kills her. Nearly as many blood corpuscles have been found in a woman who died from hæmorrhage as in a chlorotic girl. The patient dies because the heart is too sluggish, not because it has nothing to contract on. He had used a simpler instrument than that shown by Dr. Glenn. If he was not absolutely sure of his asepsis he would not ligature the vein, but would only put on a compress and bandage, following Dr. Stoker's advice.—Dr. A. SMITH had seen several cases infused with saline solution, but only with temporary improvement. He had done it two or three times himself. In one case the ligature had slipped from an ovarian pedicle. The patient was very collapsed. He reapplied the ligature and put saline solution into the abdomen, and found slight improvement, which died away very soon. He then put the patient in an exaggerated Trendelenburg's position and got great improvement. The patient recovered. He looked on the case as one

of auto-infusion. He had another very similar case in which Trendelenburg's position seemed to do a great deal of good. He was not a strong advocate for transfusion. He thought the principal question was, "When to transfuse?"—Mr. S. M. THOMPSON said that he had seen transfusion used in 1868 for cholera. There was great temporary improvement, but the patients never recovered.—Dr. BATE mentioned that in Berlin six months ago he had seen a case of miscarriage in which two or three pints of saline solution were put into the breast, distending it enormously. He examined the breast two or three days afterwards and found that it had quite regained its normal size. The patient derived great benefit from the injection and recovered.—Dr. SMYLY said that he remembered Dr. Beatty reading a paper on a case in which Dr. Robert MacDonnell had infused defibrinated blood; the woman made a good recovery. When assistant in the Rotunda he saw transfusion performed, followed by death from pulmonary embolism. He had no hesitation in saying that the present was a very great improvement on the old method. He had not seen any evil results follow from the salt-and-water method, and patients had recovered whose condition appeared to be hopeless. In answer to Dr. Smith's question of "When to transfuse?" he would say, "When in doubt, operate." Salt-and-water was the best stimulant that could be given. He had had one patient transfused simply for shock and not for loss of blood. He thought that the credit of reintroducing this method in Dublin was altogether due to Dr. Glenn.—Mr. LANE agreed with Dr. Tweedy and Dr. Smith in the nature of the temporary effect produced in the majority of cases of transfusion. He had seen Dr. Macan use an instrument very similar to Dr. Tweedy's, but provided with a graduated glass jar, which was an improvement. If the effect of the saline infusion was only to stimulate a sluggish heart the question would have to be considered whether alcohol or some other stimulant would not do as well.—The PRESIDENT said that the first successful case of transfusion occurred when he was at the Rotunda. It was done by Dr. R. MacDonnell, and one of the students furnished the necessary blood, eight ounces, which was defibrinated. A much smaller quantity was used than is used now. It was when a secondary collapse had set in, several hours after delivery, that the transfusion was done.—Dr. GLENN, replying, said that as regards the quantity infused he thought the present results, in which pints instead of ounces were used, were more favourable. Other stimulants, as alcohol and ether, were always used in conjunction with infusion of saline solution. He considered the instrument used by himself to be superior to Dr. Tweedy's. The latter would require nine feet of tubing if the infusion was into an artery, but in his he could get the necessary pressure with the syringe. In Dr. Smith's cases the elevation of the legs could not have been the cause of the patients recovering, considering the very small amount of blood in the legs. The advantage of Trendelenburg's position was that the abdomen was raised and pressure applied to it. The manner of infusion described by Dr. Bate was merely Munchmeyer's method into the connective tissue. It was an unsatisfactory method, as it was too slow. Infusion was very unsuccessful in cholera.

Dr. SMYLY exhibited specimens of Uterine Myoma, Epithelioma of the Cervix, Double Pyosalpinx, Interstitial Salpingitis, and Ovarian Cystoma.

Dr. F. W. KIDD exhibited a Submucous Fibroid removed from the Uterus by enucleation.

SECTION OF PATHOLOGY.

A Rare Tumour.—Fibro-myoma of Tongue.—Dentigerous Tumour of the Neck.—Orbital Tumour.—Malignant Disease of the Ear.

A meeting of this Section was held on April 5th, Dr. J. A. SCOTT, the President, being in the chair.

Dr. PARSONS read a paper on the Microscopical Section of a Rare Tumour.—Professor M'WEENEY thought that the growth was justly called a cylindroma, but that it did not belong to that class which occurred from hyaline degeneration of the bloodvessels, because the hyaline strands were very closely placed together, and there were very few cells. He had himself seen only one case of cylindroma. It occurred in the hard palate and was adherent to the bone. It was removed six times, recurring each time.—Dr. PARSONS agreed with Professor M'Weeny that the tumour must first have been very vascular. It was three years since the tumour was removed, and he had not seen the patient since.

Professor M'WEENY showed a Fibro-myxoma, an encapsuled, translucent, yellowish tumour about the size of the kernel of a hazel-nut, removed from the tongue of a man aged twenty-three years. There was no history of syphilis, either congenital or acquired. Histologically examined after fixation in Foh's reagent, the tumour proved to be a fibroma, with here and there so much structureless or faintly fibrillated ground substance as to justify the name myxoma.

Professor M'WEENY also showed a Congenital Dentigerous Tumour removed from the left side of the Neck of a woman aged twenty-three years. The tumour, which was small at the time of birth, had increased steadily until, at the time of operation, it had attained the dimensions of a good-sized orange. It was subcutaneous, with deep attachments, and sprang from the level of the hyoid bone, to which it was adherent by a sort of process. To the naked eye it seemed made up of a dense fibroid stroma, in which were embedded numbers of cysts, averaging the size of a pea, filled with mucoid material. The trabeculae between these cysts were dense and thick, and contained many bars and nodules of cartilage, as well as several immature-looking teeth. In the growth were also calcified corpora amylacea and other structures of a doubtful nature.

Mr. ARTHUR BENSON and Mr. GRAVES communicated the notes of a case of Orbital Alveolar Sarcoma in a man aged fifty-five years. The growth seemed to start from the region of the lacrymal sac and was about the size of a small hen's egg, hard and lobulated. It protruded forwards in the region of the left lacrymal sac, and over it the skin was tense, thin, and adherent to the apex. The eye was pushed forwards and outwards to a considerable extent. The fundus of the eye was normal, and the motions of the globe were but little impaired. After removal of the growth the eye returned almost to its normal position when the wound healed.

Mr. STORY described a fatal case of Malignant Disease of the Middle Ear, the first he had observed in eighteen years, during which period over 12 000 aural cases had come under his observation at St. Mark's Hospital. The patient was a man about thirty years of age from whose middle ear a polypus was removed in September, 1894. The polypus returned again and again after removal, necrosis of part of the temporal bone showed itself, and the patient finally died from exhaustion within six months after the removal of the first polypus.—Professor SCOTT showed microscopic sections of the tumour in the ear and of a secondary growth in the neck, both of which he regarded as sarcomatous.—Dr. BENSON said he saw the case before the present diagnosis was arrived at, and the idea of malignant growth had never occurred to him. At that time it looked very like a severe case of mastoid implication as a sequence of middle-ear disease.—Mr. STORY, replying, said that before the microscopical examination was made he thought it was probably an epithelial growth. The patient died, not from perforation of the malignant growth into the cranial cavity, but from exhaustion, with difficulty in deglutition, which came on simultaneously with loss of speech.

Reviews and Notices of Books.

The Evolution of the Diseases of Women. By W. BALLS-HEADLEY, M.A., M.D. Cantab., F.R.C.P. Lond., Lecturer on Midwifery and the Diseases of Women at the University of Melbourne, &c. London: Smith, Elder, and Co. 1894.

THIS is in many ways a somewhat exceptional and bewildering book, if we are to regard it, as we suppose we must, as belonging to medical literature. The author is a teacher of midwifery and of the diseases peculiar to women at the University of Melbourne—that is to say, of two subjects essentially practical—and it might have been expected that a work by him on the Diseases of Women would have dealt with this subject practically, in a manner that would have afforded help to the practitioner who has to recognise these diseases and to relieve them as far as the present state of our knowledge permits. On the other hand, if the author desired to write a work on political economy, or on social questions, and more especially on the relation between the sexes, it was obviously unnecessary to attempt to combine with it a book

on the Diseases of Women. Such familiar works as "Esther Waters" and "The Woman Who Did" are examples to the point. It seems better to leave questions of social philosophy to the novelist rather than to combine them with the teaching of matters strictly medical. In the preface we read: "Evolution is the mode of progress of the world. Nothing is, that is not the gradual development of events. Progress for good or evil is the sequence of Nature. The destruction of a nation is the culmination of the effects of destructive agents. Death, except when solely from accident [is an accident 'the gradual development of events'?] or effluxion of time, is but the manifestation of undue waste of vital action, the neglect of an evident causation. It is an evolving destruction. In woman this is peculiarly apparent. Her life, as woman, is a wonderful vicissitude. Her destruction comprehensible, prognosticable, remediable." Chapter I. deals with the relation between the sexes. On page 2 we find a paragraph on dolls, which though, no doubt, true enough, and in some respects interesting, is scarcely gynaecology. We take exception, however, to the statement that boys do not play with dolls. Up to a certain age they certainly not unfrequently appear to enjoy playing with them as much as little girls do. The late Dr. Matthews Duncan began one of his clinical lectures with the words, "Who in this world can say what anyone means by endometritis?" This is how Dr. Balls-Headley defines it: "Endometritis is an evolutionary inflammation of the membrane lining the uterus, and though frequently affecting this structure throughout the organ may be of the cervix only, or of the body, the condition differing in accordance with the variation in the anatomy of these parts and the manner of the causation. This is the central essential disease in evolutionary pathology, is exceedingly common, and is worthy of the utmost consideration." In giving the symptoms of cervicitis the author says: "There is sterility when the canal is blocked by the cohesive mucous plug." Has anyone ever seen an os uteri that was not occupied by a cohesive mucous plug? We think not; and we doubt if anyone has ever seen the os uteri blocked by it. As regards the prognosis of this condition he says: "The prognosis is that the disease will be continuous with evolutionary progress if not surgically treated, and sterility, except in the mildest cases in which the disease is not really confirmed, is certain." It is difficult to understand what is meant by the first part of this, but the latter part—that sterility will be certain in cases where the cervical canal is occupied by adhesive mucus—appears to us quite at variance with the general experience. Indeed, the use of the word "blocked" is an index to the kind of way in which the author combines statements of fact with statements involving a theory that may or may not be true. To say that there is always mucus present in the cervical canal normally is a statement of fact; to say that the canal is "blocked" by such mucus involves the view that it exercises a detrimental influence in some way or other—a view that is, in the opinion of the best authorities here, altogether incorrect. An example of the author's system of reasoning is afforded by the following quotation, in which it will be seen that endometritis is ascribed to overdress: "The evil of overdress is apparent; but it is due to the deficiency of marriage and the misapplied competition of attraction. At first the young girl, with inherent instinct, properly expects that the attraction of her sex, as in the case of the birds she sees, and of all creatures, will be sufficient to insure her a mate. No mate offers. She attempts to increase her attraction, and spends all her money on adornment. Still she is unwed. Time advances; she buys bonnets, dresses, bangles, white and tan shoes; and, if comparatively poor, is perhaps deficient in underclothing; she is dressed far beyond her station, and therefore that of her probable husband, frightening such men from her side.

..... She finally grows thin and atrophies—a wasted woman—and in future, should she be dependent on her own exertions, as are so many women in this age, a drudge to sustain her body in food, unselected, and hopeless : and evolutionary disease, such as endometritis, may ensue." And again, in the chapter on the Granular Os—by which, we suppose, is meant the slight erosion round the os uteri, so commonly seen that, in its slighter degrees at all events, men of moderate views have come to regard it as scarcely pathological—"endometritis occurs by the chronic congestion of unsatisfied passion with exacerbations." The author is of opinion that "no woman with granular os is free to the last days of her life from the risk of super-development of malignancy on the granulations." There is no sort of scientific evidence that there is a causal relation between slight erosions of the cervix and malignant disease, and the sentence we have quoted is only true in so far as it implies that no woman at all is free from the risk of malignant disease. The book is full of similar instances of loose reasoning. So far as we are able to follow the author it appears that he ascribes nearly all the ills to which female flesh is heir to unsatisfied sexual passion, aggravated by tight-lacing, forgetting how frequently in actual practice we find that the patient enjoyed perfect health till she married, and how often all her troubles are found to date from then. We know, or if we do not it is not for want of frequent telling, that statistics may be made to prove pretty well anything; but their power in that respect sinks into insignificance compared with a system of reasoning that assumes whatever is necessary for the argument—a system by which the author has satisfied himself that slight erosions lead to cancer, that endometritis is due to overdress, and that subinvolution of the uterus may be the cause of diabetes.

Cod-liver Oil and Chemistry. By F. PECKEL MÖLLER, Ph.D.
London : Peter Möller, 43, Snowhill, E.C. 1895.

THE curious title of this book would suggest that the author had conceived in his mind the utility perhaps of presenting to the reader a mental lubricant as it were before he is brought to grapple with the difficult subject of architectural chemistry, which is subsequently dealt with, and which occupies by far the greater portion of the volume. In that sense there seems to be no reason why we should not expect the issue of similar works with "castor oil and chemistry," "eucalyptus oil and chemistry," and so forth, for their titles. The fact is, the author is a consummate exponent of the theories of chemical constitution, and a good writer, while at the same time he possesses an interest in the cod-liver oil industry; he was not content, therefore, with giving a dissertation merely upon the chemistry of cod-liver oil, but also pure chemistry—a task which a perusal of the second portion of the work will show he was well qualified to undertake. Hence we welcome both contributions, despite the fact that we are inclined to suggest—so excellent is the treatment of both sections—that they might have been separated into two distinct volumes. To cod-liver oil the author devotes 111 pages, each lettered in Roman numerals after the manner of a preface. The account of Norway, its history, geography, its people, and their customs and habits, which involves a reference to the temperance problem, is full of interesting and entertaining reading, enlivened now and again as it is by a drollness and witticism of method which is occasionally employed even in the treatment of more occult things. Chapters on the various fisheries of which Lofoten is the centre follow, until in Chapter XLIII. the reader is presented with an excellent account of the manufacture of cod-liver oil, the modes of dealing with the fresh liver, and the various processes used for the extraction of the oil. Peter Möller's process (that of a relative, we presume, of the author), by which all the

disagreeable and detrimental qualities of the oil due to decomposed albumens were removed, was first introduced in 1853, and consisted in the treatment and extraction of the perfectly fresh liver by means of steam. The oil so obtained was a vast improvement, inasmuch as it was clear in colour, practically free from nauseating taste and smell, and consequently, as the author puts it, "a thing of delight from the consumer's point of view" and "an improvement of no small importance from the doctor's point of view." Next in order succeed a useful pharmaceutical chapter and an important chronological synopsis of chemical researches on cod-liver oil, together with new chemical researches contributed by P. M. Heyerdahl, than whom there is no greater authority on the composition and constitution of cod-liver oil. The author scouts the idea of the value of cod-liver oil being due to certain so-called "active constituents," as, for instance, certain alkaloidal bodies which have been isolated, so it is stated, from the liver, but which he says are not "normal constituents of pure cod-liver oil, inasmuch as valeric, cupric, and gadinic acids, gaduin, ammonia, trimethylamine, alkaloids, and such substances are partly decomposition products, formed in the hands of the analyst whilst conducting his operations, and partly products of bacterial activity after the oil has left the hepatic cells." His view, on the other hand, that cod-liver oil acts not by influencing the tissues, but by becoming part and parcel of them, or in other words by being simply food substances which in one way or another possess special advantages distinguishing them from other and ordinary foods, thus justifying their adoption as therapeutical agents, is, we think, the correct one. And, as he aptly puts it, "to attempt to find some such body in cod-liver oil is just as likely to be successful as would be an endeavour to find an active principle in, say, bread."

Part II. is a very remarkable production and treats of the law of atomic linking. We use the word "remarkable" because this section simply bristles with an excellent series of diagrams illustrative of the architecture of complex organic substances. The author offers an apology in the introductory remarks which we cannot accept, because, as we would assure him, it is wholly unnecessary. He refers to the "good old days" when "doctors calmly poured drugs down their patients' throats without knowing or much caring to know anything of their nature." "This simple method is now supposed to be rather out of date, and certainly the more intimate a physician's knowledge of his remedies the more likely is he to use them successfully." He then cites as an illustration the subject closest to his interest—cod-liver oil. Thus, owing to Heyerdahl's researches, already alluded to, it has been shown that "the views hitherto held regarding the nature of cod-liver oil are quite erroneous, and that we must now look upon that remedy in an entirely different light." Again, "without a certain intimacy with the views and theories of modern chemists and physicists it is impossible to understand or appreciate these and similar researches, and if anything in the following pages makes it easier for the busy practitioner to get at and grasp the facts of organic chemistry, then the writer's aim will have been fully accomplished." Could a writer possibly have any worthier aim in view? Anyone who cares at all for the advance of medicine, especially therapeutics and pharmacology, will not only thoroughly approve these observations, but will be grateful to Dr. Möller for the enormous labour he must have expended in his endeavour to show, in the most graphic and intelligible way, how a knowledge of the constitution of bodies generally must eventually place the administration of remedies on a more real and scientific basis, and so give the practitioner a stronger hold than ever over the mysteries and ravages of disease. We cordially commend this unique and clever work to our readers.

MAGAZINES FOR APRIL.

THE April number of the *Veterinary Journal and Annals of Comparative Pathology*, like the preceding numbers for the year, gives evidence of the change of editorship which took place in the early part of the year. Especially is this the case in the purely editorial department. The first article is an essay on Diseases Communicable from the Lower Animals to Man, read before the Edinburgh Medical Society by Mr. R. Peech, in which are considered some points in the history of the anthrax, glanders, and tubercle bacilli. A case of Pleuro-pneumonia of the Horse by Mr. F. B. Byrne is described, whilst the same author contributes a note on Labrum Poisoning, and indicates that an oleaginous aperient followed by demulcents and stimulants is perhaps the best treatment for this condition. Other papers, on Albuminuria in Cattle, by Edward H. Curbishley, M.R.C.V.S., and Simple Contusions and Some Sequelæ by Peter Moir, M.R.C.V.S., complete this portion of the journal. The editorial article is occupied with a discussion on Board of Agriculture appointments and examinerships and the advisability of keeping these confined to members of the veterinary profession. As, however, the question is discussed much more fully in the reports of the societies, where a good deal of feeling seems to have been engendered, the article may be simply a *résumé* of the feeling of these societies. A paper on Biliary Cirrhosis of the Liver in Cattle (Picton Cattle Disease) by Dr. Wyatt Johnston is reported together with a discussion in which Dr. Brydon and Dr. McKachran take part. An interesting note on the late Joseph Gamgee is also given. Reviews, which are not so numerous as usual, and reports of societies make up a sufficiently interesting number.

The *Veterinarian* for April, 1895, like its colleague, the *Veterinary Journal*, affords internal evidence, in addition to that contained on the cover, of a change of editorship. Both of the journals are now edited in Edinburgh. We have evidence of this in the number of the *Veterinarian* before us in the fact that the first two papers are both by Edinburgh authors, one entitled "Telephony," by Professor C. Ewart, on Lord Morton's well-authenticated experiments with breeding from the Arabian horse and the quagga. We are glad to see that Professor Ewart intends to repeat these experiments, and if they are successful they will be a severe blow to the theories of Weissmann and his school. Professor Mettam contributes an interesting paper on the Rudimentary Metacarpal and Metatarsal Bones of the Domestic Ruminants. Mr. J. A. W. Dollar has an interesting paper on Luxation of the Patella, in which he maintains that the patella is, as a rule, not truly displaced, but only retained at a certain point of its ordinary travel; where displacement does occur, however, it is always outwards, and must be accompanied by injury of the internal lateral ligament. Editorial notes and clinical cases, followed by abstractive notes and reviews, complete the number, from which it may be gathered that the *Veterinarian* under its new editorship is likely to be as vigorous as it has been during any period of its existence. An entirely new departure has been made in this number, as, by an arrangement with the editor of the *Veterinary Record*, which appears weekly, the reports of the various veterinary societies are reprinted, not in the body of the journal, but as a kind of supplement, so that although they do not form a part of the journal they may be kept as a permanent record of the proceedings of the different societies. This is an exceedingly good arrangement and one that might well be adopted in other monthly journals, the supplement being paged consecutively and perfectly separate from the body of the journal.

Archives de Physiologie. Publiées par MM. BOUCHARD CHAUVÉAU and MAREY, 5ème Série, T. vii., No. 2. Avril, 1895.—The chief articles contained in this number of the *Archives* are: 1. Experiments on Pancreatic Diabetes and

the Mechanism of the Regulation of Normal Glycæmia, by M. M. Kaufmann. In this article M. Kauffmann shows that the division of the nerves of the liver does not materially modify normal glycæmia, and that some material is produced by the pancreas which either acts directly on the liver or on the tissues generally. 2. A Study of the Auscultation of the Respiratory Apparatus, by M. E. Castex. In this memoir the author endeavours with some success to give a scientific explanation of the various respiratory sounds. 3. Researches on the Mechanism of Organic Oxidations, by MM. J. E. Abelous and G. Biarrès. 4. New Researches on the Influence of Intra-vascular Injections of Peptone on the Coagulability of Blood in the Dog, from which it appears that in dogs rendered immune against the anti-coagulating power of peptone the intravenous injection of this albuminoid no longer prevents the coagulation of the blood, because the organism of these animals no longer secretes under the influence of the peptone the substance which renders the blood incoagulable, and which probably proceeds from the liver or the intestines, by M. Contejean. 5. On the Variations of Temperature and of the Degree of Vaso-dilation in Diphtheritic Intoxication Artificially Induced, by MM. J. Courmont and M. Doyon. 6. Variations in the Virulence of the Poison of the Viper, by MM. C. Phisalix and G. Bertrand. Variations were observed which were associated with the locality where the viper was found and the season of the year in which the poisons—echidnase and echidnotoxine—of the viper were injected. 7. On the Mode of Action of the Nervous System upon the Production of Hyperglycæmia, by M. Kauffmann. 8. On the Elimination of Iron by the Urine, by M. Louis Lapicque. 9. On the Innervation of the Thoracic Duct, by MM. L. Camus and E. Gley, showing that this duct receives both constricting and dilating nerves from the great sympathetic. 10. On the Variations of Blood-pressure in the Veins, by M. C. Dalezanne, showing the very curious inverse relation which exists between the pressure in the renal and femoral veins. 11. On the Influence of the State of Sensibility of the Stomach on Gastric Chemistry, by MM. Paul Sollier and E. Parmentier. 12. On the Effects of Total Extirpation of the Stomach (in the Cat), by MM. Carvallo and V. Pachon. 14. Effects of Thyroidectomy in Reptiles, by Dr. H. Cristiani. 15. On the Toxicity of the Urine after Thyroidectomy, by Dr. Paul Masoin. 16. On Inhibition of the Tone and Movements of the Stomach in the Dog, by M. Maurice Doyon. 17. Trophic Changes in Cells dependent on Bacterial Secretions, by M. A. Charrin. 18. Fibrinolysis, by M. A. Dastre.

The Journal of Physiology. Edited by M. FOSTER, M.D., F.R.S., and J. N. LANGLEY, F.R.S. Vol. XVII. No. 6. April, 1895. London: Clay and Sons.—The principal contents of this part, in addition to the short accounts of the Proceedings of the Physiological Society, are:—(1) J. W. Pickering: Notes on the Action of Chloro- and Cyalo-caffeine; (2) J. A. Menzies: On Methæmoglobin, with a plate, and (3) on the Action of Certain Acids on Blood-pigment; (4) Dr. Sydney Ringer and Arthur G. Phear: the Influence of Saline Media on the Tadpole; (5) E. Waymouth Reid: Electrical Phenomena during Movements of the Iris, with an illustration; (6) Dr. Archibald Garrod: A Contribution to the Study of Uroerythrin, with a plate; (7) Arthur Edmunds: the Effect of Saturating Normal Urine with Certain Neutral Salts; (8) W. T. Porten: the Path of the Respiratory Impulse from the Bulb to the Phrenic Nuclei, with eleven illustrations.

The Ophthalmic Review. Edited by Mr. J. B. LAWFORD, Dr. MACLEHOSE, Dr. GROSSMANN, Mr. PRIESTLEY SMITH, Dr. JOHN STORY, and Dr. EDWARD JACKSON. London: J. & A. Churchill.—This number contains a paper by Mr. Ernest Maddox, entitled Simple Optical Notes, in which a useful method of testing the strength of concave glasses is given, followed by an interesting note on the Aberration of

the Eye. Dr. W. George Sym describes a case of Lenticulus Posterior, and Mr. James W. Barrett records a case of damage to vision caused by watching an eclipse of the sun.

Analytical Records

FROM
THE LANCET LABORATORY.

(1) FERRATIN. (2) LACTOPHENINE.

(C. F. BOEHRINGER & SOHN, W. ALDRICH, NEAR MANNHEIM. LONDON: DOMFIER & CO., 13, ST. MARK-HILL, E.C.)

FERRATIN is being introduced as a new iron derivative of acid albumen which may be obtained by extraction from pig's liver. It is, however, artificially prepared from egg albumen and chemically pure iron salts held in alkaline solution. Both artificial and natural ferratin occur in the form of a fine powder of rusty colour, odourless and tasteless. It contains 7 per cent. of iron, and it does not act injuriously, it is stated, on the teeth, while it is rapidly absorbed and said not to interfere with the digestive functions. The specimen we examined proved very slightly soluble in water, the solution being of a pale-yellow colour, which, when agitated, frothed in identically the same way as solutions of egg albumen. On adding hydrochloric acid to the powder, perchloride of iron is at once formed, and albuminous flocks are thrown out. On adding caustic soda to this acid liquid the reverse action takes place—that is, the iron is thrown out as perhydrate, and the albumen dissolves to form albuminate. Heated on platinum foil, ferratin emits a powerful smell of burnt feathers, and after a time pure ferric oxide remains. The constitution of ferratin is sufficient reason for believing it to be the greatest service in anæmia and other conditions of blood impoverishment in which iron is indicated, and we are hardly surprised to learn on this score also that excellent clinical results of its use have been recorded.

Lactophenine is described as a new antipyretic and anti-neuralgic, acting in general like phenacetin, but possessing over the latter the additional advantage of a permanent soothing effect. It is a phenetidine, being a lactic acid derivative of para-phenetidine, in which the acetic acid attached to the ammonia residue has been replaced by lactic acid, so that it might be properly called lactylphenetidine. It is a white crystalline powder not unlike phenacetin, sparingly soluble in cold but freely soluble in hot water, from which it crystallises on cooling. Like antipyrin and phenacetin, it is said to cause a rapid reduction of the temperature of the body, especially when it has been artificially raised. At the same time, however, lactophenine produces a state of hypnosis and diminishes considerably the sensitiveness to painful influences. In rabbits, even sensation and voluntary movements may, according to Dr. Jaquet,¹ be completely abolished, and the reflex excitability nearly so, without respiration and heart action being perceptibly affected. Although phenacetin has a similar soothing effect, it appears to be exerted to a much greater degree when lactophenine is substituted, the effect observed on animals calling to mind a urethane narcosis. It has been used with good effect as an analgesic in migraine, nervous headache, rheumatic trouble, and in the neuralgia of influenza.

BEEF EXTRACT TABLETS.

(J. CHRISTIE RENNICK, BOND COURT HOUSE, WALBROOK.)

These tablets will be found convenient for the extemporaneous preparation of soup. It is particularly satisfactory to find that the maker is alive to the great importance of using meat fibre as alone affording in a preparation of this

kind a source of nourishment, the extractives of beef serving merely as stimulant and restorative, much in the same way as a mixture of spirits and water. Microscopic examination thus revealed the presence of muscular fibre. Analysis gave the following results: moisture, 18.30 per cent.; meat extractives and fibre 75.8 per cent., containing 11.13 per cent. nitrogen; ash, chiefly phosphate, 5.90 per cent. The tablets represent, therefore, a concentrated and convenient form of food, each (1 oz.) being sufficient to make on simply stirring in boiling water for about five minutes one pint of good, palatable, and nourishing soup.

(1) MALT EXTRACT JELLY (MALTO-PEPTONE).

(2) MALT EXTRACT JELLY (MALTO-PEPTONE) WITH COD-LIVER OIL.

(MALTO-PEPTONE CO., 101, LEADENHALL-STREET, E.C.)

The sticky consistence of malt extract preparations, excellent though they are in all other respects, has undoubtedly proved an obstacle to their exhibition in many instances, and the presentation, therefore, of these valuable therapeutic agents in the form of a firm and attractive-looking jelly is a fact which many practitioners will welcome. We have recently submitted to examination specimens of both malto-peptone malt-extract jelly, and the same combined with cod-liver oil, with very satisfactory results. We find that the jellification process does in no degree affect the standard malt value of the preparation—indeed, the degrees of concentration and of digestive activity are not in the least respect inferior to malt extracts of established repute, although it is evident that some small quantity of a jellifiable substance must be introduced to make a jelly of the extract. This is substantiated to some extent by the fact that in our experiments we succeeded in separating a small quantity of gelatine. We regard this improvement as an introduction in practical medicine of considerable importance, since it is calculated to induce the easy acceptance of a valuable remedial agent the stickiness of which frequently proves obnoxious to many patients.

FERRET BRAND POLISH SOAP.

(GRIMER, MORTON, AND GODDARD, BOTOLPH HOUSE, EASTCHEAP, E.C.)

The combination with soap of a mechanical detergent is very effective both for cleansing and polishing purposes. This is broadly the basis of Ferret brand soap, since on treatment with boiling water a clean, white, insoluble silicious residue may be separated, while soap enters into solution. It is obviously useful for a variety of purposes, amongst which may be reckoned the cleaning of the door-plate and of harness; it does its work well.

KATHREINER'S MALT COFFEE.

(C. M. PATTENHAUSEN, 40, GREAT TOWER-STREET, E.C.)

While we are not disposed to admit some of the statements contained in a pamphlet relating to these preparations—as, for instance, that “coffee is one of the greatest evils that exist” because it contains “a rather considerable portion of the strong poison caffeine” (or coffeine, as it is misspelt)—yet coffee substitutes are doubtless acceptable, assuming of course that the flavour and aroma are equally pleasing, to not a few who cannot tolerate, through some susceptibility, the original article. The above preparation seems to us to have really secured these advantages for the first time. It consists of dark-brown malt berries, sticky to the touch and exhaling the agreeable aromatic smell of freshly roasted coffee. About one-third part is, we find, soluble in hot water, yielding a pleasant-tasting liquor very closely resembling genuine coffee infusion. As a result of roasting, much of the original starch of the malt has been converted into dextrine (torrefaction), while part of the albuminous substances is no doubt to some extent changed into certain aromatic bodies. The decoction may be regarded as possessing dietetic properties superior to coffee, for

¹ Correspondenzblatt für Schweizer Aerzte in Basel.

it contains part of the nourishing constituents of malt; but in regard to stimulating effects it can obviously possess no value referable to caffeine, although it is very probable that certain other stimulating substances are developed during the roasting process. On the whole, therefore, we regard the preparation as a probably valuable addition to this class of beverage and food; it is certainly a satisfactory coffee substitute.

FAVARA'S JUICE OF THE GRAPE (MOSTI DI SALUTE FAVARA).

(O. FAVARA AND CO., 52, LEADENHALL-STREET, E.C.)

This preparation is described as consisting of the juice of grapes pressed out of the sweet ripe grapes in the cold by a special process and then concentrated. It is a dark-red somewhat viscid fluid, which when diluted with water possesses the peculiar sweet and agreeable flavour of the dark variety of grape. It is said further to be sterilised, non-alcoholic, and unfermented. This we quite believe, although it is not surprising that in our analysis we found a small proportion of alcohol. Thus, on distillation the density of the distillate proved to be 0.9983, which would be equal to 0.89 per cent. alcohol by weight, 1.13 per cent. by volume, or 1.97 per cent. proof spirit in the original fluid. The expressed juice of the grape is, of course, so susceptible to fermentative change that it would be remarkable to find it absolutely free from alcohol. As will be seen, however, the quantity is small and quite negligible on "temperance" grounds. The solid matters, amounting to 65.16 per cent., consisted chiefly of grape sugar and the characteristic constituents of the fruit; the mineral matter, amounting to 0.83 per cent., was quite reddish-brown from the presence of a marked amount of iron, and contained also carbonate, sulphate, and phosphate of potassium. There can be little doubt, therefore, of its genuineness, and, that being so, it may be regarded as offering in some degree the tonic and invigorating properties for which certain pure wines are esteemed. It is satisfactory to add that we obtained no evidence of injurious preservatives having been employed.

PINOZA CIGARETTES.

(LUSBY'S PINOZA TOBACCO CO., 10, MINORIES, E.C.)

The fact that the inhalation of pure pine oil is sometimes attended with benefit in certain affections of the respiratory organs has doubtless led to the idea of impregnating tobacco with the oil to effect, in a more or less agreeable way, the same thing. The Pinoza cigarettes yield a tolerable amount of oil when submitted to the action of a current of steam, the oily drops separating from the condensed water. When smoked the presence of pine oil in the mouth is unmistakable, and is not at all disagreeable. It may be true that pine oil volatilised in this way would exert a soothing effect, but we are inclined to think also that the tobacco at the same time would lead to irritation in cases of sore-throat and bronchial catarrh. The cigarettes burn remarkably well despite the presence of the oil, and the tobacco employed is obviously selected especially for the purpose. Pinoza cigarettes are also made containing a much larger proportion of oil.

(1) STANDARD MALT EXTRACT.

(2) STANDARD MALT EXTRACT AND COD-LIVER OIL.

(THE STANDARD MALT EXTRACT COMPANY, 23, BILLITER-STREET, E.C.)

It is quite admissible to apply the word "standard" to this preparation, inasmuch as we find it possesses a remarkable degree of digestive activity, being stronger in this respect than many preparations we have previously recorded. Nor is its high diastasic power gained at the expense of taste, which is excellent, being entirely free from that acidity and burnt flavour which not infrequently characterise similar preparations. This extract, as might be expected, affords an excellent vehicle for the administration of cod-liver oil, the same company's preparation representing this combination

appearing as a true emulsion under the microscope, while its taste, which is pleasantly aromatic, is acceptable.

HYGIENIC COFFEE.

(THE LONDON HYGIENIC DEPOT, 68, LAMB'S CONDUIT-STREET, W.C.)

We find that this preparation is regarded as hygienic because it contains neither *caffeine* nor chicory. It consists of a dark-brown branny substance, which doubtless yields a nourishing and wholesome enough infusion, but we cannot speak favourably of its flavour, which compares very indifferently with the agreeable aroma of freshly ground coffee. The statement that it is free from caffeine and chicory is correct, our attempts to extract the former by well-known methods being futile.

SUNFLOWER COCOA ESSENCE.

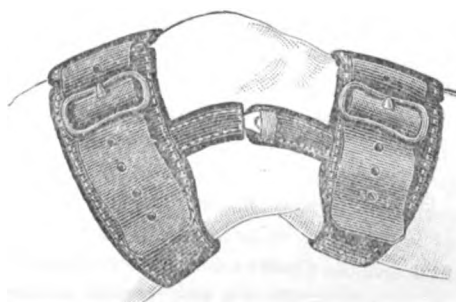
(SUN COCOA AND CHOCOLATE MANUFACTURING CO., LIMITED, NEWCASTLE-STREET, ALDGATE, E.C.)

A superior-grade cocoa free from added starch and sugar. It yields 4.20 per cent. mineral matter, of which 1.40 parts are soluble and 2.80 parts insoluble in water, while the alkalinity of the soluble portion is equal to 0.56 per cent. K_2O . There is no evidence, therefore, of the use of alkali to render the cocoa so much more "soluble."

New Inventions.

A SUPPORT FOR THE KNEE-JOINT.

A NEW pattern of support for the knee-joint has been recently brought out by Mr. J. H. Haywood, surgical appliance manufacturer, Castle-gate, Nottingham. It consists of two flexible steel bands, well padded, and secured by straps and buckles, which encircle the limb above and below the joint, and are connected by flat-jointed steel rods extend-



ing on either one or both sides of the knee, as may be necessary. In ordinary use these joints move freely, but when fixation of the knee is required they can be made rigid. It is claimed for the apparatus that it can be adapted to cases of fractured patella, and that it supports the joint without the chafing and constriction occasioned by knee-caps of other materials, such as leather. It is easily put on and taken off, either under or over the trousers, and in this respect will be useful to miners, labourers, railway men, cyclists, &c. It can be readily cleaned, it is inexpensive, and very durable.

THE PATENT PNEUMATIC VACCINATION SHIELD.

THIS is an annular cushion made of very thin indiarubber and inflated with air. The central aperture is about an inch and a half in diameter, and the thickness of the ring is about half an inch. It is extremely light and soft and is provided with three ribbons, two of which are tied round the infant's arm and the third is fastened to the sleeve of the clothing. The makers are Cole's Pneumatic Shield Company, Limited, 79, Lower Gardiner-street, Dublin.

THE LANCET.

LONDON: SATURDAY, APRIL 27, 1896.

THE probable production in man of tuberculosis having its origin in food from tuberculous animals is a question of perhaps more immediate importance to preventive medicine than any other of the numerous public health aspects of tuberculosis. We have never held that a complete solution of the many problems of this disease in man is to be found in his opportunities of infection, and we have been led to look with some reserve upon recent advocacy of preventive measures apparently based on a restricted view; but clearly if infective tuberculous matter is demonstrated to exist with any degree of frequency in food, and to be dangerous to human consumers, we have to deal with a condition of great moment to the health of the country. The issue of the report of the Royal Commission on Tuberculosis will, therefore, be studied with considerable interest. For some time prior to the appointment of the Royal Commission it had been felt by sanitarians that a careful examination of the facts would show that a regulation of our food-supply *quâ* tuberculosis was urgently demanded, and that in this matter we were already far behind the practice of public health organisations on the Continent; while, on the other hand, stock owners and others engaged in the meat and milk trades were complaining that in districts where tuberculosis was dealt with they were suffering considerable hardships for an object they scarcely understood and which they were disposed to think fanciful. Accordingly a commission of experts in public medicine and agriculture was appointed in 1890 under the chairmanship of Lord BASING, and was reorganised last year under that of Sir GEORGE BUCHANAN. We publish elsewhere an abstract of the carefully reasoned report now issued. As might have been anticipated, it leaves no room for doubt that "the actual amount of tuberculous disease among certain classes of food animals is so large as to afford to man frequent occasions for contracting tuberculous disease through his food," and states the Commission's belief that an appreciable part of the tuberculosis that affects man is obtained through food. Accepting this position as demonstrated by the inquiries referred to in the report, we would now draw attention to some of the circumstances and conditions under which this potency for harm is found to exist. As regards meat—we note that beef is principally in question—we find that the Commissioners consider that of the dangers in the dressed carcass afforded respectively by tuberculous organs unremoved, by minute tubercle in or among muscle substance, and by contamination of the surface of the meat (it may be of healthy carcass) with tuberculous matter brought by the knives and cloths of the butcher in the process of dressing, the last is much the most considerable; and they point out that, provided all tuberculous parts are removed and care is taken to secure the meat substance from contamination in dressing, a great deal of meat from tuberculous animals may be consumed without risk. The risk cannot be removed with any certainty by cooking, for tubercle in the tissues

away from the surface does not lose its infectiveness in any process of cooking, neither does the tuberculous matter originally smeared on the surface that comes to be included in the centre of meat made into rolls. As to milk in the next place, the report carries conviction that there is one condition necessary for it to be infective—namely, that it must come from a cow with tuberculous disease of the udder. The Commissioners point out the means of recognising this disease, and draw attention significantly to its rapidity of onset and to its occurrence in any stage of tuberculosis in the cow; and with regard to the extreme virulence of milk, even diluted, from such a cow the reader of the report can have no doubt whatever.

The facts ascertained by the Commission are, perhaps, hardly unexpected, but they now rest upon a secure basis of inquiry and experiment. And we turn with some anxiety to consider the public health aspect of its report. In the interests of the health of the community, and particularly of children, it is clearly the duty of the State to deal with the question thoroughly. We do not minimise its administrative complexity. The problem of ensuring in practice the detection of tuberculosis in milch cows and prompt action in cases of tuberculous udder disease is by no means free from difficulty. And still more difficult is it to ensure safety in meat if it can only be obtained by skilled supervision of the operations of slaughtering and dressing. For although this report adds weight to the rightly increasing demand for public abattoirs (in which alone can the needful supervision be secured), yet it is clear that provision of them would not deal with the large class of "dead meat" that might be extensively contaminated before its importation. Nevertheless, the danger to public health shown by the Commission to exist admits of no neglect, and there can be no question that much can be done to lessen it in this country—indeed, we have only to look to the regulation of food supply in Germany and Denmark to see how much may be and already has been done in this direction. Of one thing we are convinced, that no efficient action can be taken on this question unless it is pursued on a carefully planned administrative policy, adequately advised and controlled from its medical aspects. Such policy can only be carried out by a medical department of the State. For the State tuberculosis as it affects human health must cease to be something totally different from tuberculosis as it affects cattle, and in this, as in other cases, matters vitally affecting the health of the kingdom should not be made a matter for any public department to slur over when it finds itself confronted with the question.

DR. GLOVER's address at the North London Medico-Chirurgical Society, which we published in THE LANCET of April 20th, presents many points of interest. Most of his hearers would appreciate his judgment in leaving to men of special training the discussion of such subjects as the methods of bacteriology, and in choosing for his theme the work and prospects of medical practice. As a general practitioner he could not but enter somewhat deeply into questions affecting the relation of consultants to members of his own section of the profession. Needless to say, he does not forget what is due to either party. The opinion

expressed by Sir WILLIAM LAWRENCE that pure physicians would soon become obsolete in London is not shared by Dr. GLOVER. As he truly observes, while the medical wants of mankind remain the same as now there will be the same demand for medical service in its different forms and grades. There is, nevertheless, a certain truth and force in the saying of the eminent surgeon already referred to, and Dr. GLOVER shows how the extension of scientific medical teaching and its universal similarity tends inevitably to level the distinctive barriers once existing among medical men. There are some who would reduce the outflow of knowledge intended to meet the requirements of young men about to engage in general practice to a current of considerably less volume than the liberal provision to be placed at the disposal of a coming consultant. We are not of their number, nor, we observe, is Dr. GLOVER. On the contrary, he hails the advent of a period in education when any and every student is understood to acquaint himself with the elements of all the specialisms. A knowledge like this, at once general and particular, must of necessity greatly strengthen and extend the utility of its possessor. It represents so much clear gain to general practice and through this channel to the public, especially to that larger section of it whose means are limited. It must also in a degree, by engendering a habit of self-reliance, render the modern practitioner to some extent independent of professional allies. This is even more true in its application to the medical than to the surgical department of practice, inasmuch as diseases which are usually included within the province of the physician are more frequently met with than are at all events any but the minor occasions for surgical interference. After making every allowance, however, for the natural and right exercise of this result of better instruction there will remain a large margin of doubt and of difficulty in connexion with the duties of the profession where the experience of consulting advisers will find its opportunities of service. The fact that it is aided at such times by the increased intelligence of both the consulting parties cannot but greatly enhance its practical value to the sick. There is an irregular variety of specialism, if we may so describe it, with which it is imperative for the general practitioner to be well acquainted—the knowledge of common and trivial diseases. Dr. GLOVER has done well to call attention to this subject. A revival of the system of pupilage, in his opinion, constitutes one of the best methods of ensuring an acquaintance on the part of young medical men with this wide field of professional responsibility.

The relation of the public as a whole and of the State to the medical profession was discussed at some length by Dr. GLOVER. It is characterised, he observes, by a close and growing intimacy. There is here indeed, as he says, no tendency to medical disestablishment, but rather the reverse. Unfortunately for the medical side of this partnership no feasible scheme of endowment or remuneration for services rendered appears as yet to have been imagined. What movements of justice, gratitude, or remorse may have stirred the corporate mind of the central government it would be rash to suggest. On one point our own view has long been clear—namely, the advantage to the State itself of the adequate representation of the medical profession in both Houses of

the Legislature. We have seen that there constantly arises in the conduct of ordinary medical practice the necessity for an interchange of views between those who are concerned with the treatment of disease. Where the State intervenes, as it oftentimes must in the interest of public health, a similar necessity arises. It becomes *de facto* the custodian of public security in relation to disease. Its attitude in this case if it be deprived of professional medical advisers would be in the highest degree irrational. If, then, such advisers are so essential a part of its administrative machinery, what, we would ask, is more natural or more needful to the commonweal than that the position of these medical advisers should be fully recognised and their aid in counsel rendered secure, constant, and inalienable by such acknowledgment?

Dr. GLOVER, during the course of a professional career which began forty years ago, has seen many changes, both in our conceptions of morbid phenomena and in our modes of treatment. It would be superfluous to describe these in detail. They now form part of the solid fabric of medical science, the articles of a creed which is no merely empirical dogma. We pass on to read the lesson which with him forms the appropriate conclusion of much excellent matter—namely, that the contact of minds in social intercourse and in our common work and duty of clinical observation keeps our knowledge fresh. It is the general practitioner's misfortune that the necessities of his ordinary duties allow so little leisure for the study of problems in the treatment of disease. We are certain, however, that in proportion to his interest in this field of research, if it be duly translated into action, will be his success as a practitioner. The importance of maintaining a right relation towards all professional brethren requires no comment. Both ends are most happily served by a connexion with medical societies. Their value has long been recognised by members of the profession, though not always sufficiently, perhaps, by general practitioners. We would, therefore, the more strongly recommend such associations to these latter, who should not only belong to them, but should take active part by furnishing clinical cases, notes, or other material for discussion at the periodical meetings.

IN another part of our present issue we publish an address by Dr. CHAMPNEYS, which discusses at length the matters in dispute between the Obstetrical Society and the General Medical Council. Dr. CHAMPNEYS speaks as the President of the Society, and therefore with authority. It will be well to try to make clear the views which he expounds and to see how far they accord with those of the General Medical Council. This is the more necessary as the General Medical Council will meet towards the end of May, and the adjustment of any differences will be a portion of the business of the Council. In a few words, Dr. CHAMPNEYS may be said to rely on the following propositions for supporting his defence of the action of the Society in supplying those women who pass its examination with "diplomas" testifying to their "skill" in natural labour. His points are as follows:—

Midwives exist and have existed from the beginning. The question is not whether midwives shall exist, but whether they shall be as bad or as good as possible. Dr. CHAMPNEYS

maintains that the difference means an immense difference in the well-doing of lying-in women and their children. The action of the Society was the result of an investigation into the causes of great infantile mortality, especially of newborn infants, suggested by Dr. FARR. This investigation showed that from 30 to 90 per cent. of the poor in villages were attended by midwives; and secondly, that the midwives were not instructed. The action of the Society is perfectly disinterested, as is shown by its constant efforts to hand over the work of examination and certification to a body authorised by law for the purpose. The examination and registration of midwives have been carried out under legal sanction in nearly all foreign countries and have been aimed at in some form in our own country since 1616 when PETER CHAMBERLEN begged the same of JAMES I. The Medical Council and the medical press have advocated such a policy. Such examination will best keep midwives in their proper place and check all irregular practices on their part. Dr. CHAMPNEYS denies that the interests of the profession are affected by the creation of a class to attend the poor for a few shillings. The form of words and the diploma have not been adopted without the advice of the solicitor of the Society.

Our readers would do well to read for themselves the condensed report of the address itself, and of the correspondence which has passed on the subject between the Council—or, rather, its Executive Committee—on the one hand and the Society on the other. The duty of the Council is very simple. It is an executive body, created for administering Acts of Parliament, the chief object of which is to supply the public with duly qualified practitioners, and “to enable persons requiring medical aid to distinguish qualified from unqualified practitioners.” Here is a very literal and a very responsible duty from which the General Medical Council cannot escape even if it would. It cannot be indifferent to any action on the part of registered members of the profession—over whom alone it has any jurisdiction—who do anything calculated to confuse the distinction between qualified and unqualified practitioners. It is inconceivable that the Obstetrical Society or its distinguished leaders should intentionally or knowingly do anything of this sort. To their own minds and to the minds of the General Medical Council, or to the mind of a lawyer, it is obvious that the document given to a midwife who has passed the Society's examination has no legal character, and that the woman who has it has no legal advantages over the woman who is without it. But it is undoubted that in giving an imposing-looking document, calling it a “diploma,” and guaranteeing the quality of “skill” in the possessor of it they convey to many of those whose interest it is to know the difference between “qualified and unqualified practitioners” an impression that she is a qualified person. Such persons are of the poor and uneducated classes—the classes that use midwives. It is unmistakable that on them such an impression is made. Not only so, it is within our knowledge that it is made on some of the women themselves who receive the document, and they draw a distinction between the certificate which they get from a lying-in hospital and the “diploma” they receive from the Obstetrical Society. We have no doubt that those who framed the diploma of the Obstetrical Society did not anticipate that the words and character and name of their paper could produce such an impression; but now that the point is raised and pressed it would be strange if they did not cheerfully and earnestly meet the

wishes of the Council by altering the wording of the document. The correspondence they have published shows their disposition to do so, and we shall be disappointed if before the General Medical Council meets the difference is not adjusted. The Council cannot be charged with indifference on this subject. It has felt its own responsibility and has expressed very definite opinions. But that is no reason why it should not insist on mere amateur certificates being clearly distinguished from documents conferring legal privileges and advantages. The members of the Obstetrical Society will admit that the great improvements in midwifery date from the time when it was brought into line with the other great branches of medical science—medicine and surgery. Once dissociate it from these and from the great principles of hygiene and therapeutics, and the mortality and misery of lying-in women would be quadrupled. The midwife is not a practitioner. She is a special nurse acting under the direction and supervision of the medical profession. It has been our contention throughout that provision should be made in every parish for the poorest person attended by a midwife in any irregularity of labour to have the immediate benefit of a qualified practitioner. We are glad to see that this is Dr. CHAMPNEYS' own view, for he says (the italics are ours): “*A system by which midwives in a district should be placed under the direction of a leading local practitioner would be beneficial to the poor and to midwives.*” We should then cease to hear complaints of midwives acting as medical women.” We look forward hopefully to the settlement of this dispute without hardship to lying-in women and without any concession of the principle that in the long run the poorest lying-in woman is to have the benefit of a fully qualified medical practitioner.

Annotations.

“*Ne quid nimis.*”

HOSPITAL PATIENTS AND IMMORALITY.

AN extraordinary statement was published in many of our contemporaries on Sunday last that “the number of patients attending the London hospitals would be reduced quite 60 per cent. if the people developed the power of self-restraint and self-control.” This statement is said to have been made at a meeting of the Young Men's Christian Association on the preceding evening by Mr. Albert Carless, M.B., M.S., assistant surgeon to King's College Hospital. He is further stated “to have referred to a continual increase of immorality, and claimed that the result was being felt in a very noticeable manner in all London hospitals.” Such a statement by a responsible officer in one of our great metropolitan hospitals, unless made on accurate statistics, is much to be deplored, as it must tend to check the contributions of the charitable and to lead to many anxious inquiries by the subscribers and donors to our hospitals. Will Mr. Carless explain how he arrives at this percentage among the patients treated at his own hospital as well as at the other great metropolitan hospitals? Mr. Carless, in seeing out-patients at a hospital where no fees are charged, will, of course, prescribe for a large proportion of venereal diseases; but has he not forgotten the large number of non-surgical out-patients, the casualties, the special affections, and the in-patients, which are daily attended in his and

the other great general hospitals? There are no statistics bearing on these points in the recent issue of the reports of King's College Hospital or in those of any other hospital, and we fail to find any justification for such a sweeping assertion. The recommendations of Mr. Carless to the young men of London are well advised, but such unguarded statements by an important medical officer at a leading hospital will do great injury to such institutions, and should not have been made unless there is statistical evidence forthcoming to prove their accuracy. Has Mr. Carless this evidence? If he has, would it not have been better, in the interests of hospital management, for him to have submitted it to the committee of his hospital with some practical suggestions, rather than have given publicity to such opinions at a meeting at Exeter Hall, where they could not be gauged, corrected, or verified?

THE PRIVATE HOSPITAL CASE.

THE injunction sought by the Earl of Pembroke to restrain the defendants from using the house which they had purchased in Fitzwilliam-square, Dublin, as a private hospital has been granted. That the matter was important and the arguments intricate may be deduced from the strength of the Bar employed, which included no less than eleven counsel of high position, as well as from the time occupied by the case. The house in question was leased by the late Earl of Pembroke to a Mr. Warren, from whom the defendants held it as sub-lessees. The original lease contained a covenant which enumerated several trades or businesses which should not be carried on in the house, and concluded with the words "or any other offensive or noisy trade, business, or profession whatsoever." The whole case turned on the interpretation of these "general words," and the question whether a hospital came within them. It has now been decided in the affirmative, and this square, the houses in which are all similarly circumstanced as regards lease, is well-nigh secure against intrusion on the part of hospitals. It is, however, possible that the defendants may take the opinion of the Court of Appeal on the matter, and the Vice-Chancellor in making the order for the injunction decreed that it was not to come into operation until June 1st, in order that an opportunity of doing so should be afforded.

OVERCROWDING AND UNDERSTAFFING AT ISLINGTON INFIRMARY.

SOME of the Islington guardians are, it appears, by no means pleased at being reminded of the overcrowded and unsatisfactory condition of one of the chief institutions under their care, and they do not accept in the spirit in which it is offered the counsel of the Local Government Board. From a recent report of one of the Board's inspectors it would seem that there are, or were, in the infirmary no less than 168 patients over the certified number, while in the workhouse, which is itself overcrowded, are 160 sick inmates. In addition to this, we are told that the medical staff is inadequate, the nursing staff too small, and the accommodation meagre. This is certainly a somewhat appalling category of the omissions, if not commissions, of the guardians past and present; and we are glad to see that Sir Walter Foster spoke in no uncertain terms to a deputation of the guardians which recently waited upon him as to the course they should pursue, even though it necessitated a very material expenditure. The guardians, it is said, recognise the necessity of further accommodation, and they have at the present time two schemes before them, one for erecting a new infirmary at Bowes Park at an expenditure approaching £200,000, the other for enlarging the present accommodation at St. John's-road at a cost of about £50,000. It was in connexion with this latter scheme that the deputation above referred to waited upon

Sir Walter Foster, and commenting upon his observations at that interview one of the guardians is reported to have said that his "language towards the deputation was disgraceful," and that "he had told them not to consider economy, but to squander thousands of pounds to maintain officialism." This guardian's remarks most certainly have afforded some amusement to his colleagues. What connexion there is between providing accommodation for the sick and infirm of Islington in keeping with the spirit of the times and "officialism" we fail to see; nor is it clear why expenditure so incurred should be regarded as "squandering." We imagine, however, that the guardians as a whole do not share the opinion of their colleague, but that they will recognise the necessity of facing this important question and of dealing with it in a broad and comprehensive manner, and not in such a way as to require frequent alterations, tinkering, and deadlocks. A new infirmary will, we are fully aware, occupy considerable time in building; but in the meantime we trust that the guardians will not postpone the necessary additions to their staff or wait until some serious accident brings scandal upon the institution.

EXPERIMENTS ON NORMAL SLEEP.

AMONGST the numerous papers that were read, or were taken as read, at the International Congress at Rome last year, and which now appear in the first volume of the Reports (or "Atti") just issued to members, is one by Professor I. Tarchanoff of St. Petersburg, who has made some experiments on sleep in puppies varying in age from three weeks to three months. At this age the animals have a strong disposition to sleep—sleeping even when the brain is exposed for experiments on the motor area, or when the carotid is exposed to enable the blood-pressure to be taken, or when they are exposed to cold and fasting; under any of these conditions the act of stroking the head and back for a few minutes will ensure the supervention of sleep; adult dogs, on the contrary, will not thus sleep unless some narcotic has been administered. Position of the body exerts a distinct influence. Thus puppies lightly strapped to a plank were placed some in a horizontal and others in a vertical position, and of the latter some were held with the head downwards and others with the tail down. It was found that stroking and caressing only failed to induce sleep when the head was downwards. In accordance with this was the fact that the excitability of the cortex of the cerebral hemispheres, and particularly of the psycho-motor centres, notably diminishes during normal sleep, so that a test electrical current which when the animal was awake was quite sufficient to excite movements, after it had been put to sleep by stroking had to be strengthened by several—sometimes as much as ten—milliampères to produce the same effect. Experiments made under the same conditions, when the carotids were exposed and connected with a kymograph, demonstrated that the arterial pressure fell during sleep from twenty to fifty millimetres, and that when the animal woke it returned to its former height. These facts are quite in accordance with the statements and observations of Mr. Durham that the brain is anæmic during sleep. Further experiments were made by Prof. Tarchanoff on animals, in which the spinal cord was divided between the dorsal and lumbar regions, from the immediate effects of which injury the animals had recovered. Prof. Tarchanoff set himself to ascertain what the effect of the section was on the reflex acts of the posterior paralysed limbs, as compared with the corresponding acts of the anterior unparalysed limbs. The stimulus applied was the induced current of a Dubois-Reymond's induction apparatus applied by means of needles embedded in the skin, and the results obtained were that whilst the duration of the reflex

acts in the posterior limbs, innervated by the lumbar portion of the spinal cord, remained unchanged during sleep, that of the anterior extremities innervated by the spinal cord and brain underwent a notable depression during sleep, so that on some occasions the current, previously effective, required to be considerably strengthened before any reaction occurred. Hence Prof. Tarchanoff, using the same phraseology as that long ago employed by Marshall Hall, observes that "the spinal cord never sleeps." He thinks, further, that the brain is not during sleep inactive in all its parts, but is, on the contrary, a source of a depressor action propagating itself to all parts of the cord which are in perfect continuity with the brain.

INCREASED REMUNERATION OF DIVISIONAL SURGEONS OF THE METROPOLITAN POLICE.

WE are glad to be able to inform our readers that the Secretary of State for the Home Department has agreed to grant, on the recommendation of the Commissioner of Police, Sir E. Bradford, an increase in the rate of pay hitherto allowed to the divisional surgeons for their attendance on the members of the Metropolitan Police Force. This will in some instances amount to an important item at the end of the year.

COUNTRY HOLIDAYS FOR POOR CHILDREN.

A VERY beneficent work is being carried on by the Children's Fresh-Air Mission, which provides holidays in the country for juveniles from the poor districts of Holborn, Clerkenwell, and St. Luke's. Since 1882 there have been 26,000 little ones favoured in this way, the number last year being 3014. The localities resorted to are very numerous, Minster in Kent last year heading the list with 389 such visitors, and Stokenchurch in Oxfordshire coming next with 260. A fortnight is the usual duration of this happy change from the unwholesome courts and alleys of London to the green fields and lanes of the country, from which the youngsters return to their parents in improved health and spirits, and with an enlargement of their ideas on the subject of natural scenes and objects. The offices of the Mission are appropriately fixed at St. Peter's Schools, Onslow-street, Clerkenwell-road.

THE NEW STREET DANGER.

THE recent reports of Major Cardew on the circumstances connected with the comparatively new street danger arising from the firing of gas by electricity are by no means reassuring or calculated to allay public anxiety. We have absolutely no pledge that the conditions which led to the explosions and disruptions of the pavements in certain of our highways might not obtain elsewhere at any moment. In the last return, for instance, which deals with the Southwark Bridge explosions, Major Cardew finds it is difficult to account for the firing of the gas which undoubtedly was escaping from the gas mains, but he seems confident that it was not by means of the electric lighting mains, as there were none in the vicinity of the explosions. Other causes are consequently sought after, and a lighted match thrown carelessly away or a spark struck by a horse-shoe or wheel is suggested. In that case the question arises as to why explosions of this kind did not occur before electric lighting came into existence. The position, it seems to us, is practically this: electricity has brought to light the fact that gas mains are imperfectly laid down, so that in many instances they seriously leak; and in turn coal gas retaliates, so to speak, on its rival by showing that the mains through which it courses are not exempt from the same charge. It is a curious case of a *quid pro quo* between the two. Competition is looked upon as serving

best the interests of the public, but in this case we may claim some exception. "It must be admitted," Major Cardew says, "that the main cause of the Southwark explosions was the defect in the gas-pipe, and it again directs attention to the very serious danger to the public arising from the condition of the gas-pipes in many districts and the way in which they are laid and supported, a danger which is continually increasing owing to the spread of the use of wood paving and other impervious surfaces, and which is temporarily intensified by every severe frost. No remissness on the part of the gas companies can, however, relieve the Electric Lighting Company of the duty of thoroughly complying with Regulations 14 and 15 by sufficiently protecting their conduits and street boxes against an accumulation of gas." We repeat, the danger may still be lurking beneath our streets, and we earnestly appeal to the Board of Trade not to lose a single moment in compelling both gas and electric companies to take all the precautionary steps it is possible to take and thereby to remove a risk of a very serious kind from our crowded highways.

THE EFFECTS OF ABLATION OF THE STOMACH IN THE CAT.

IN the part just published (April, 1895) of the *Archives de Physiologie*, MM. J. Carvallo and V. Pachon give the results of an experiment upon the cat which they performed as a kind of control experiment to those made by other observers, as by Czerny and Kaiser, Filipi and Monari, in which the animal selected was invariably the dog. In the cat it is possible to practise complete gastrectomy, and in one of the cases recorded, in which the animal died after forty-eight hours, union between the oesophagus and the duodenum was found to be complete when the necropsy was made. In another case, in which the animal weighed two kilogrammes, it was living and healthy three and a half months after the operation, and then weighed two and a quarter kilogrammes. It was fed on milk and on a mixture of milk, yolk of egg, and rice. The digestion of milk alone was not perfect, the fæces being liquid and containing clots of undigested milk. The mixture of milk, yolk of egg, and rice was, on the contrary, perfectly digested, as were also fragments of cooked meat, of cheese, and a *purée* of potatoes. All three classes of aliment—albuminoids, fats, and farinaceous substances—were therefore digested in the agastric cat as perfectly as in the agastric dog. Vomiting only occurred on two occasions.

SCHOLASTIC REFORM IN GERMANY.

WE learn from a French source that an innovation of a somewhat peculiar nature has been adopted by the scholastic authorities in Germany. In future the pupils in all public schools are to be divided into two classes—the intelligent and the stupid. The brighter spirits comprised in the first category are to receive instruction in the higher branches of learning, whereas the dullards—once their mental inferiority has been finally adjudicated upon—will be taught the rudiments only. But, it may be asked, by whom is the line of demarcation to be drawn? Whose shall be the invidious task of separating the sheep from the goats? Now, although it is pretty well known that disagreeable duties of an extraneous character are frequently imposed upon members of the medical profession, still we imagine that the answer to the foregoing inquiry will come as a surprise to the majority of our readers. The differentiation between the youthful Teutons is not to be made by their own pedagogues, as might be supposed, neither is it to depend upon competitive examination. Medical men, general practitioners apparently, are to perform the selection, being credited with an ability to arrive at an authoritative decision after an inspection of each child's cranium and general physical development. Not only will they be required to discriminate, by virtue of

their physiological attainments, between budding geniuses and imbeciles, a comparatively simple undertaking—they will also be saddled with the responsibility of determining the fate of that far more numerous class whose mental capacity verges on mediocrity. The diagnosis of disease is by no means an easy feat, but inasmuch as the physician has all the necessary data before him, in one form or another, he may not unreasonably be expected to arrive at a correct conclusion. When, however, he is called upon to prophesy, as it were, regarding such a very problematical affair as the future development of a child's brain, his judgment must to a large extent be based upon conjecture. Dull children not infrequently grow up into brilliant adults, and *vice versa*. On the whole we are inclined to think that this, the latest of pedagogical innovations, is not likely to turn out a conspicuous success.

ANOTHER EXPLOSION AT WALTHAM ABBEY.

WHATEVER may be the practical advantages of cordite for ammunition purposes, there still comes evidence, unfortunately, of the fearful risk run by those engaged in its manufacture. It is reported that an explosion took place on Monday afternoon last at the cordite works, Waltham, where a full charge of 28 lb. of cordite was being pressed in a hydraulic press, which appears to be the essential part of a new compressing process. Two men and three boys were injured, the injuries of one of the former being very serious. The cause of the explosion does not appear to be known, but we are loth to believe that the strictest precautions are not taken to avoid the least possible chance of accident. The latest accounts, however, state that the explosion was due to the cordite becoming dry, owing to the press being left open during a "shift" of workmen. The results of the slightest negligence in the operations concerned in the preparation of powerful explosives of this class may have so serious a consequence and so far-reaching an effect as to demand the strictest supervision. It will be remembered that since the occurrence of a series of disasters which befel the operatives in the cordite factories at Waltham during the last few years a committee appointed to inquire into the matter recommended certain important changes in the management and organisation of the manufacturing processes. We trust that these recommendations were acted upon without the slightest delay.

CHANGES IN THE BLOOD IN YELLOW FEVER.

A MOST valuable and instructive series of articles on the Natural History (Symptoms and Pathology) of Yellow Fever by Dr. Joseph Jones of New Orleans is at present appearing in the *Journal of the American Medical Association*. In the issue of March 16th the condition of the blood in this disease is considered. That the blood undergoes profound changes during the period of febrile excitement of yellow fever is manifest even to the casual observer in the impeded capillary circulation, purplish, jaundiced, and dusky hue of the surface, livid blotches, passive hæmorrhages from slight abrasions, blistered surfaces and hæmorrhages from the ears, eyes, mouth, gums, and gastro-intestinal mucous membranes, which in some cases are characteristic of the succeeding period of calm or exhaustion. The changes of the blood appear to be continuous from the time of the introduction of the poison to the fatal termination. According to Dr. Jones the alterations of the blood in yellow fever consist chiefly in: 1. Such an alteration of the chemical and physical properties of the fibrin and albumen as leads to the transudation of the latter through the excreting structures of the kidney. 2. Various degrees of alteration and diminution of the fibrous element. In some cases there is an almost entire disappearance of this

element. This disappearance appears to be due to the direct action of the febrile poison and not so much to the action of ammonia. From this alteration in the amount and character of the fibrinous element it results that the blood coagulates imperfectly and the clot is voluminous and soft. 3. While the red blood-corpuscles are very slightly diminished in yellow fever they present under the microscope certain peculiar appearances, which appear to be referable to the action of extraneous matters in the blood. 4. Increase of the extractive matters of the blood. 5. Increase of the fatty matters. 6. Accumulation of bile in the blood in consequence of the profound lesions of the liver induced by the febrile poison, and in consequence of the failure of the excretory function of the kidneys. Many of the changes of the blood, as well as certain cerebral symptoms, may be dependent upon the presence and action of the biliary constituents. The serum presents a golden colour, this being due to the presence of bile. 7. Accumulation of the urinary constituents, and especially of the urea and phosphoric acid, sulphuric acid, chloride of sodium, and carbonate of ammonia, in the blood consequent upon the profound lesions induced by the febrile poisons and its products upon the kidneys. 8. Rapid dissolution of the coloured corpuscles after the blood is abstracted from the body either during life or after death. 9. Rapid putrefaction of the blood of those suffering from yellow fever after its abstraction from the living body or from the large vessels after death.

MILK FOR INFANTS.

MUCH as cows' and women's milks may vary in composition among themselves, as may also that of the same individual at different times, the essential distinction between the two milks lies in the larger percentage of casein in that of the cow and in the tougher consistence of the coagulum produced by the gastric secretion. The latter defect is to some extent overcome by malting, and the former may be adjusted to the infant's digestive powers by diluting the milk with water or by dividing the milk into two portions, coagulating the casein in one with rennet, removing the curd, and mixing them again. The former is open to the grave objection that dilution reduces the fat and the sugar, neither of which were in excessive amount, equally with the casein, and, though milk sugar and cream may be added, cream itself contains very uncertain proportions of fat and cannot again be perfectly incorporated with the milk, the fat globules having to some extent coalesced. In the latter process the proportions of fat and sugar are undisturbed; but it is tedious, and the tendency of the milk to "turn" is increased. Gaertner has recently taken advantage of the action of the centrifugal separator to retain in a diluted milk the full percentage of the fat. Fifty litres of fresh milk and the same of water are poured into the separator, which is made to revolve at such a rate that the two outgoing streams shall be equal. The separation of the fat is thus incomplete, and a large proportion of the watery solution passes out with it, the percentages of casein and of fat being in the original milk, say, 3.6 and 3.5, in the diluted 1.8 and 1.75, and in the cream and separated, or rather in the rich and poor milks, respectively 1.8 and 3.3 and 1.8 and 0.2, those in good nursing mother's milk being, according to Pfeiffer of Wiesbaden, 1.7 and 3.1. If, then, milk sugar be added in the proportion of 3.5 grammes to the litre the composition becomes identical with the very richest human milk. An incidental advantage accruing from the centrifugal rotation is that the rich milk is completely freed from the suspended particles of dung, dust, &c., which in virtue of their greater specific gravity gather round the sides of the drum, forming a scum, which is fatal to young pigs. These particles are the chief vehicles of the microbes which set up putrefactive

changes in a fluid which, though unstable, is absolutely germ-free and aseptic as it issues from the breast or udder, and to this difference many of the evils of artificial feeding are doubtless due. Gaertner's, if not actually sterile, is more easily sterilised than other milk.

THE HEALTH OF THE RT. HON. T. H. HUXLEY.

WE are glad to learn that Professor Huxley not only is holding his own, but that during the last two days there has been a steady, if slight, improvement. His condition is, of course, serious, as he is still suffering from the effects of influenza and bronchitis; but the strength is well maintained, the digestion better, and the appetite returning.

MEDICAL SOCIETIES AND HOMŒOPATHS.

THE West London Medico-Chirurgical Society has adopted the by-law quoted in our columns on the 13th inst. It has thus made it impossible for anyone practising so-called homœopathy to be nominated as a candidate for the membership of the society, and has also provided for the expulsion of any member who joins the ranks of homœopathy. The society is to be congratulated on having taken a step which propriety and harmony alike demand.

LONDON POST-GRADUATE COURSE.

THE summer term demonstrations and lectures will be given at Great Ormond-street, Queen-square, Moorfields, Blackfriars, Bethlem, London Throat, King's College Hospitals, and Cleveland-street Sick Asylum. The instruction will include Diseases of Children, of the Nervous System, of the Eye, of the Skin, of the Mind, of the Throat, Nose, and Larynx, &c., and Bacteriology. The fees are £1 1s. for eight lectures, and £2 2s. for sixteen. The term will commence on Monday, May 6th, and will end on Monday, July 1st. A prospectus can be obtained from the secretary, Dr. Fletcher Little, 32, Harley-street, London, W.

DIPHTHERIA IN LONDON.

IN the four weeks ended with last Saturday diphtheria has manifested some wide differences, both as regards amount and fatality, within the metropolis. Thus its weekly notifications have ranged between 130 and 170 and fatal attacks between 23 and 31, though the greatest deviation from the corrected average of deaths for any one of those weeks has been 5, and the mean of the averages and actual deaths for the whole period differs only by a unit—namely, average 27 and deaths 28. The total of deaths in the four-weekly period was 111, or just under half that of the similar period of 1894, in the several weeks of which the corrected average was exceeded by as many as 23, 30, 31, and 37 respectively. In the matter of notifications the current year shows for the period being treated a weekly average of less than 150, whereas that for 1894 yields upwards of 200; and in the matter of death-rate per cent. of cases 1895 gives just under 20, against 27 last year, the highest weekly mortality being in the present year 24, and in 1895 as much as 33 per cent. of notified cases. Comparison of the period in question with the four weeks of the present year immediately preceding does not leave a very favourable impression as regards attacks, as the 488 notified cases of the earlier period have been replaced by a total not far short of 20 per cent. in excess, and this, though the lesser total, is made up of sanitary district numbers, which were in seven instances upwards of 20, and ran as high as 46 in Greenwich and 57 in Camberwell. As showing the wide diffusion of the disease we may mention that in this same earlier period not one of the forty-three sanitary areas escaped invasion, though it is true that four had only a single notification each in the period. Thus,

we have at present an epidemic which is of smaller proportions than in 1894, though not showing signs of decrease as compared with earlier weeks of the current year, either in amount of disease or of death. Last week the admissions to hospital were 35, and the patients remaining under treatment 441, against 435 three weeks before. There were 15 deaths in Greater London, of which as many as 9 occurred in the West Ham district.

SIR JOHN BUCKNILL.

OUR contemporary the *Globe*, in its issue of the 19th inst., has a short paragraph respecting the visit of the Commander-in-Chief to Exeter on May 24th for the purpose of unveiling a statue erected by public subscription to commemorate the services rendered by Sir John Bucknill in connexion with the foundation of the Volunteer force. In congratulating Sir John Bucknill upon the fact that his memory is thus to be perpetuated, we cannot at the same time congratulate our contemporary upon its accuracy in heading the paragraph, "The late Sir John Bucknill." As far as our information goes he is "yet alive," and we trust that he may long have the opportunity of seeing with his own eyes the mark of honour erected to him in Exeter.

DEATHS UNDER ANÆSTHETICS.

A CHILD four years of age, weakly, rickety, and with unhealthy flabby tissues, recently became the subject of tonsillotomy at the Dudley Dispensary. The child was placed in an almost upright position on the porter's knee before an open window. Chloroform was then given from a folded towel; care was taken that free dilution with air was permitted, and two drachms in all were used. The child took the anæsthetic well, although it appears that the tonsils were very large and interfered with respiration. In from thirty seconds to two minutes breathing stopped and cyanosis came on. The child was placed on the floor and tracheotomy performed, but upon artificial respiration being practised normal breathing was resumed for a few seconds, and the child opened and closed his eyes. The heart then failed and death took place, micturition and defecation occurring. The necropsy showed enormous tonsils, glands which encircled and constricted the trachea at its bifurcation and the bronchi; slight catarrh and possibly slight narrowing of the windpipe existed. These notes are kindly supplied by Dr. E. Hawkins. The chloroform was analysed and found free from impurities. The difficulties of such cases are notorious, but we cannot help thinking it was ill-advised to increase the risks, as was done in this case, by placing the child in an almost upright posture. There is no doubt that if such children, flabby and weakly as they are, with an impaired respiratory passage and lowered vitality, are given an anæsthetic for tonsillotomy they should be carefully prepared, should have good, nourishing but easily assimilable liquid food two or even one hour before the operation, and if chloroform is given they should be placed in the recumbent position. A further death more or less connected with the anæsthetic has occurred in London. Mr. Atwood Thorne has kindly communicated the following particulars. The patient, a small, stout woman, who was in labour, was attended from St. Mary's Hospital. She had had seventeen previous confinements. When seen she was in a somewhat exhausted state, with a pulse-rate of 140; she had been in labour twenty-four hours. Mr. Thorne gave chloroform, and attempted to rotate the head digitally, as it was in the fourth vertex position; failing this the child was successfully delivered with forceps. Chloroform, which had been given for twenty minutes, was then stopped, three or four drachms having been used. Fifteen minutes later, when the woman was apparently coming out of

the anæsthetic quite naturally, she suddenly took a few deep breaths, became cyanosed, and respiration ceased. The tongue was protruding out of the mouth. The heart was still beating, and continued to do so for about ten minutes, but in spite of attempts made to restore the respiration it never recommenced. The necropsy, besides showing the usual "fatty degeneration of the heart," revealed no fact helping to explain why this woman died. The period at which the dyspnoea occurred and the cyanosis resemble cases of pulmonary embolism; but if this may be excluded it is possible that there was medullary hæmorrhage (which is known to have occurred under anæsthetics) involving the respiratory centre. Unfortunately the necropsy was not made for ninety hours, so that much of the value of the investigation is, from the point of view of science, wholly lost.

THE PREVENTION OF OVERLAYING.

It is a simple matter to expose and condemn the practice which is mainly accountable for the overlaying of infant children. Neither is there any difficulty in prescribing the only possible preventive of this so-called accident. A box, a basket—in short, any one of twenty simple contrivances—might form an extemporised crib in cases where a cradle or cot-bed is not obtainable. Consequently, there is no excuse for the too often fatal custom which allows an infant to sleep with its parents. Unfortunately, it is only too easy to let ill alone and to do nothing by way of precaution. The careless, the indolent, and the drunken (it is notorious that the great majority of cases of overlaying have occurred on Saturday night¹) continue to neglect even such an elementary safeguard as that we have mentioned. The obvious result, as we learn from a statement recently made by Mr. C. L. Drew, is that from 600 to 800 inquests are annually held in London alone upon overlain children. There is a natural reluctance to invoke the aid of legislation in restraint of every fault in domestic management, but it must be evident that we have here sufficient justification for such assistance. The case is, indeed, one which very strongly suggests the necessity of increased popular instruction in this subject by means of the Press and every other available channel. We are clearly of opinion, however, that some deterrent is also called for, such, for example, as the imposition of a reasonably heavy fine in all cases where the precaution of using a separate bed of some sort for children has been overlooked.

THE PATHOLOGY OF THOMSEN'S DISEASE.

It is barely twenty years since there was described in the *Archiv für Psychiatrie* an affection characterised by singular muscular phenomena in several members of one family. The affection, since known by the name of the physician who then first described it, has been studied by many observers, amongst whom may be especially mentioned Professor Erb, who termed the condition "myotonia congenita." The main features of the affection, apart from its hereditary character, consist in an increased volume of muscular masses, suggestive of a kinship to pseudo-hypertrophic paralysis, accompanied by notable impairment of power, and the assumption of a state of tonic spasm on the contraction of the affected muscles. There is, further, an increased excitability to faradism and galvanism, with a tendency to the reaction of degeneration. Moreover, Professor Erb found that ensuing on the "closure contraction" of galvanism there occurred a series of slow and regular undulatory contractions, which gradually spread from the negative to the positive pole, a phenomenon which he termed the "myotonic reaction." Hitherto no opportunity has occurred for full observation of the morbid anatomy of

Thomsen's disease, but a paper in the *Revue de Médecine* for March by Dr. Déjérine and Dr. Sottas supplies this deficiency. It is founded upon the case of a man who first came under observation at the age of thirty-two, having since infancy suffered from this affection. It was characterised in him by marked hypertrophy of the muscles of the lower limbs and trunk, and less obvious change in those of the upper limbs. All the muscles of the body were rigid when in contraction, and were but slowly relaxed; the myotonic reaction was present. The patient succumbed at the age of thirty-seven from acute nephritis. No change was found in the nervous system, central or peripheral, but an examination of the muscular system, specimens being taken from all parts, afforded an insight into the nature and progress of the lesions therein. These lesions consisted, in the first place, in a nuclear overgrowth, following which the muscular substance proper apparently becomes swollen, the fibrinæ becoming fused together, whilst the transverse striation is retained or is even more pronounced than normal. Measurement showed a notable increase in the diameter of the affected fibres. There is, further, a like increase in the interfibrillar protoplasm, rendering the "Cohnheim's fields" more distinct. In more advanced stages the muscular substance disintegrates, and vacuolar spaces are formed in and between the fibres. It is remarkable that the connective tissue does not undergo any hyperplasia, nor is there any excess of adipose tissue as in pseudo-hypertrophic paralysis. It may be remarked that the changes described in this paper agree in the main with those found by others who have examined fragments of the hypertrophied muscles excised during life; but the record of Dr. Déjérine and Dr. Sottas is far more complete, since they had the opportunity of tracing the changes from early to advanced stages. It is pointed out that the hypertrophy commences and is most marked in those muscles which are the most exercised, and it is concluded that in Thomsen's disease we have to do with a "hypertrophy of functional origin." The affection thus ranks with the group of dystrophies of the muscular system known as primary myopathies.

THE RELIEF OF CHITRAL.

NOTHING more exciting has taken place for some time than the race between the forces to win the honour and glory of relieving Surgeon-Major Robertson and his beleaguered companions in Chitral. The display of pluck and energy, and the exhibition of splendid audacity, alternating with periods of suspense and doubt during the absence of news, have imparted a dramatic force to the military incidents as they have unfolded themselves from day to day. The fact, too, that the exhibition of daring and endurance was most conspicuous on the part of the smaller and weaker force touched the public sentiment and caused the brilliant and remarkable march of Kelly's force to be followed with great sympathetic interest. The fortitude and manly qualities brought out in this expedition have made people feel that so long as these endure the interests of this country are safe, and that, whatever the emergency, there would always be men ready to do their "level best." The lads that go out as officers to India and elsewhere leave England with the corners of the British flag grasped unconsciously in their hands and spread it over the four quarters of the globe. And not only have the pluck and endurance of the officers and men of the British army been fully exemplified, but the splendid qualities of the native army of India have been emphasised on this occasion. Defying climate and disease, labouring and fighting under a tropical sun or amidst icebergs with the same indomitable perseverance, scornful of difficulty and defeat, the forces have pursued their way. The marches that have been made, the mountain passes that have been crossed—the height of the Shandur Pass is

¹ Vide THE LANCET, Aug. 20th, 1892.

12,000 ft. above the sea level—and the physical obstacles that have been surmounted by the different columns taking part in this expedition will cause the relief of Chitral to occupy a memorable place in military history. Spite of floundering in snow, crossing ice-fields, and encountering storms, and in face of extreme difficulties in the transport of the necessary war material and food, the men, one and all, native and European, have apparently gone ahead, fighting with nature and man, with undaunted spirits and excellent health. The medical history of the expedition, when it comes to be written, will, if less exciting, be as interesting as its military history.

MR. PASSMORE EDWARDS AS A HOSPITAL PATRON.

MR. PASSMORE EDWARDS must be a many-sided man. He is the reputed proprietor of papers which traduce medical research and whose columns are open to every faddist who will decry the methods by which, and the men by whom, medical science is established. But he is always ready to open a hospital, or even take part in the proceedings of a medical school, and to put down a substantial sum for providing poor people with the very medical service that is decried in his papers. It is not for us, perhaps, to do more than look with awe, if not with admiration, on a gentleman whose sense of duty enables him to play such diverse parts. The last act of this good man's life was to open a new wing of West Ham Hospital, the cost of which he is defraying. By this act of beneficence Mr. Passmore Edwards supplies twenty-four new beds, in which patients will receive all the benefits of medicine that accrue from the studies and the researches so severely and suspiciously regarded in Mr. Passmore Edwards' papers. We can only take note of the fact, and conclude that deeds are more than words, that Mr. Edwards, after all, has a high opinion of medicine and of those who practise it, and that when he allows his papers to be the medium of contrary opinions he is so conscious of their absurdity as to believe that they will not be acted on.

SOLAR OBSERVATIONS WITH THE UNPROTECTED EYE.

Dr. GEORGE MACKAY of the Royal Infirmary, Edinburgh, has done good service in pointing out the dangers of observing eclipses and solar phenomena with the naked eye in a pamphlet he has written on this subject and in the *Ophthalmic Review*. He cites the case of Galileo, who is said to have lost his vision in this manner. Sir Isaac Newton was equally imprudent, and permanently damaged his retina by looking at the sun for a moment through a telescope. He, in fact, narrowly escaped complete loss of central vision, for he long suffered from a scotoma, or central darkness, and although he partially recovered from this condition, it was only necessary for him to think of the lesion to cause an image of the sun's disc to rise before him. Dr. Reid, the Professor of Moral Philosophy at Glasgow, was also a sufferer, and when he observed the passage of Venus in May, 1761, took no precaution to diminish the brilliancy of the light, the result being that all the objects he looked at appeared to be deformed. In this case there was probably in the first instance some subretinal effusion and the retina did not perfectly reapply itself to the choroid. Dr. Mackay has met with no less than seventeen cases of persons in whom the vision was impaired as the result of the investigation with the unprotected eye of the eclipses of 1890 and 1891. Still more recently Dr. James Barrett of Melbourne has reported a case in which an eclipse of the sun was watched for a quarter of an hour by a girl aged seventeen; but in this case some precautions were used, as she protected her eyes with coloured glasses, two of which were blue and the other two red and yellow respectively. A haze

or central misty spot was noticed in the course of a fortnight, which remained unaltered after the lapse of three months. It is obvious that no inspection of sun spots or other solar phenomena should be made with an ordinary telescope under any circumstances, and that great circumspection should be used in watching the phenomena, even through coloured glasses. Probably all trouble could be averted by looking at the image of the sun as reflected from a fragment of blackened glass.

THE University of Glasgow has just conferred the degree of LL.D. *in absentia* on Surgeon-Major Laurence Augustine Waddell, who graduated at Glasgow in 1878 as M.B. and C.M. (with honours), entered the Indian Medical Service, and while stationed in Calcutta wrote several papers on the pharmacology of Indian medicinal products. He also made a collection of Sikhim birds, which he fully described and afterwards presented to Dr. William Hunter's Museum in Glasgow University. He is, moreover, an adventurous traveller, being one of the few who have penetrated into the territory of the Grand Lama of Thibet and studied the religious system of that country. He has recently published a work entitled "The Buddhism of Thibet or Lamalism." Surgeon-Major Waddell was for some time editor of the *Calcutta Medical Journal*.

A CONFERENCE on sanitary progress and reform was opened at Manchester, on the 24th inst., in the presence of a large number of representatives from all parts of the country. The inaugural address was delivered by Dr. Simpson, who referred to the great strides made of late years in matters relating to sanitation in its various branches. The proceedings extend over three days. We hope to print Dr. Simpson's address next week in full.

THE annual conversazione of the Royal Society will be held on Wednesday, May 1st.

THE REPORT OF THE ROYAL COMMISSION ON TUBERCULOSIS.

THE report of the Royal Commission on Tuberculosis was presented to Parliament on the 22nd inst. As appointed on Nov. 14th, 1894, it consisted of Sir George Buchanan (chairman), Professor Browne, Dr. J. F. Payne, and Professor Burdon Sanderson, and the report receives the assent of all its members.¹ This Commission succeeded to the Royal Commission of 1890 on the death of the chairman, Lord Basing, and its report is based upon evidence received and inquiries originally instituted by the original Commission. Mr. Leopold Hudson, F.R.C.S., has throughout acted as secretary. The terms of the reference made to the Commission were: "To inquire and report what is the effect, if any, of food derived from tuberculous animals upon human health, and, if prejudicial, what are the circumstances and conditions with regard to tuberculosis in the animal which produce that effect upon man."

Lines of Enquiry.—It appears that the Commission, after examining a number of distinguished pathologists and physicians and making inquiries by letter among medical officers of health and others, came to the conclusion that they had not sufficiently definite evidence on the matter referred to them. Accordingly, they instituted inquiries—(1) by Professor McFadyean into the means of recognising the tuberculosis in animals during life; (2) by Dr. Sidney Martin, as to the influence upon lower animals of food of tuberculous origin; and (3) by Dr. Sims Woodhead, as to the effects of cooking processes upon food from tuberculous animals; and

¹ A memorandum by Professor Browne concerning the effect of the Commission's investigations upon food salesmen is appended to the report.

it is upon the results of these investigations that the report is chiefly based.

Influence upon animals of food of tuberculous origin; influence upon man.—Briefly dismissing as unsatisfactory any direct evidence of the effect of food of tuberculous origin upon man, the Commission relies upon the experiments conducted for it on lower animals, and these show, then, firstly, that uncooked food (meat or milk) derived from tuberculous animals, whether consumed by rabbits, guinea-pigs, cats, or pigs, produces tuberculosis in a considerable proportion of each; secondly, that tuberculous matter added if only on one occasion to the ordinary food of any of these animals causes a still larger proportion to become tuberculous. The facts and figures about these animals, together with an account of necessary control experiments, are given, and they prove to the Commission that tuberculous matter exists in ordinary food derived from a tuberculous animal, and that when this food is consumed by lower animals it is capable of producing tuberculosis among them. Following this is Section 22 of the report: "We cannot refuse to apply, and we do not hesitate to apply, to the case of the human subject the evidence thus obtained from a variety of animals that differ widely in their habits of feeding—herbivora, carnivora, and omnivora. As regards man, we must believe—and here we find ourselves agreeing with the majority of those who gave evidence before us—that any person who takes tuberculous matter into the body as food incurs some risk of acquiring tuberculous disease." Next, after stating explicitly that tuberculosis is to be regarded as the same disease in man and in food animals, the report considers the nature of human tuberculosis liable to originate in food. It will be observed that the Commission takes the view that no distinction is to be drawn in nature between tuberculous diseases originating in food infection and those originating in other ways. They point, however, to the probability that the greatest effect of food infection is to be found in the tuberculous intestinal lesions of children.

Prevalence of tuberculosis in food animals. Recognition of it.—The knowledge which the Commission has been able to obtain of the prevalence of tuberculosis among animals brought for slaughter in the United Kingdom appears to have been but small, seeing that in none of our public abattoirs is systematic inspection made for tuberculosis with anything like the precision employed in many places on the Continent. Accordingly, we find the report quotes from the records of slaughter-houses both in Berlin and Copenhagen, having reason to believe that they present a broad resemblance to the conditions of tuberculosis among animals brought for slaughter in this country; and such statistics as are available for the United Kingdom confirm them in this view. The percentages of animals found to be tuberculous in Copenhagen (1890-93) and Berlin (1892-93) respectively were: oxen and cows, 17.7 and 15.1; swine, 15.3 and 1.5; calves, 0.2 and 0.23; sheep, 0.0003 and 0.003. Attention is drawn to the greater prevalence among cows than oxen, and among both as compared with calves. The rest of the report deals chiefly with food from cattle. Of diagnosis of tuberculosis during life the Commissioners speak very guardedly. The literature of the subject and the results of Professor McFadyean's special inquiry convinces them that extensive tuberculous disease may exist in cattle that appear to all clinical tests to be in perfectly good health. And they are clearly indisposed to believe that a completely trustworthy test of the presence of tuberculosis has yet been proved to exist in the reaction to tuberculin. "Professor McFadyean finds, in his own hands, that this test substance has frequently led to erroneous inferences. He records, as the total outcome of his experiments, that he received wrong indications from tuberculin about the presence or absence of tubercle in cattle in the case of twenty-four animals out of seventy-five; nevertheless, he sums up his report by the statement: 'I have no hesitation in saying that, taking full account of its imperfections, tuberculin is the most valuable means of diagnosis in tuberculosis that we possess.' And we understand that, since the time of Professor McFadyean's experiments, the method of using tuberculin as a test has been much improved, and that it is now regarded as affording more trustworthy indications for diagnosis."

Circumstances determining danger to man from meat and milk of tuberculous origin. (a) *Danger from meat.*—The circumstances of danger from meat are next discussed in several pages of the report, and the conclusions of the Commission, chiefly based on Dr. Martin's experiments, are set forth in a closely reasoned argument which is difficult to

summarise. Tuberculosis of the animal is chiefly a disease of organs which are for the most part removed in the process of dressing. Some organs, however, may be left in the dressed carcass, although "to a practised eye it is hardly possible that tuberculous matter in these organs can escape detection." Apart from such tuberculous masses, the material of tubercle, even in advanced cases, is not often found in the ordinary butcher's joint, certainly very rarely in muscle substance, although small tuberculous lymphatic glands may occasionally be found, for instance, in the intermuscular fat. "Yet there is always a difficulty in making sure of the absence of tuberculous matter in any part of a carcass that shows evidence of tubercle elsewhere." The report now considers the results of Dr. Martin's experiments with the substance of meat prepared in the ordinary way from tuberculous animals, but taken free from any obvious tuberculous mass. In these experiments he tested the infective quality both by inoculation of portions of the meat into test animals and by giving it to other test animals as food. In the meat substance of twenty-one tuberculous cows (cows were found the most convenient animals in these researches) he "could not get visible evidence of tubercle except in two instances, and there it was of very small amount. He records the results of his other tests as follows: 'Of eight cows (mild tuberculosis) the meat of one gave positive results in one animal from inoculation; none by feeding. Of eight cows (moderate tuberculosis) the meat of three gave positive results in four animals from inoculation; none by feeding. Of five cows (generalised tuberculosis) four gave positive results either by inoculation or by feeding, one only out of the four appearing to answer to both tests.' The animals which had yielded affirmative results to his test of minute examination were not among the last five; they were in the group of cows with 'moderate tuberculosis,' and had given no result by feeding test animals with meat from their carcasses, though meat from one of the two had, upon inoculation, responded to the test."

These results were thus completely out of accord with the determinations Dr. Martin had made of the presence or absence of demonstrable tubercle in each case. And in an able argument the Commissioners explain the views he took of his results—namely, that the power of infection of meat from these carcasses is mainly due, not to tuberculous matter left in the meat *in situ*, but to matter carried from tuberculous organs in the process of dressing by the butchers' knives or cloths and thus smeared freely over the carcass. It is obvious that the danger of such a proceeding must increase *pari passu* with the amount and distribution of the tuberculosis in the animal. While accepting this as the chief danger of the meat, however, the report observes that "To have demonstrated this extrinsic way of rendering dangerous the meat substance of tuberculous animals is to destroy all evidence that might otherwise have been attained respecting the wholesomeness or unwholesomeness of the proper meat substance towards Dr. Martin's test animals." The report continues with this observation: "We note in passing that this method of endangering the meat substance could not have been detected upon carcasses from which the organs, together with any 'grapy' deposit, had been removed; and it is pertinent to observe, in connexion with a contamination so effected, that this extrinsic danger to harmless meat (or to meat that was, for all that is shown to the contrary, harmless) might just as well be encountered by meat from another animal (whether pig, sheep, or calf, or cow) that was perfectly free from tubercle, but only had happened to be the next animal brought to the same slaughterer." Upon the bearing of the conclusions so arrived at the Commissioners state that they are prepared to believe, with Dr. Martin, that if sufficient discrimination and care were exercised in taking meat from tuberculous cattle a great deal of meat from them might, without danger, be consumed by the community; and they point to the practice of public abattoirs on the Continent as being founded on the same belief.

They proceed to summarise the precautions that Dr. Martin advises: "He would advocate, as a principle, that the operations of slaughter and dressing should be done under skilled supervision, with the object of securing the removal and destruction of every part of a carcass that contained any tubercle whatever, and also the destruction of the whole carcass in cases where the animal was found to have

* Section 104, p. 31.

advanced or generalised tuberculosis. He indicates, for the assistance of any meat inspector, various evidences of the disease having reached that more serious stage. For the rest, Dr. Martin sees no objection to the sale of meat-substance from carcasses which have shown only localised tuberculosis, and from which every particle of tubercle has been skilfully removed; provided always that, in every subsequent process of preparing the meat for sale, due care be taken to guard the saleable portions from contamination by tuberculous matter." The Commissioners state their opinion that these suggestions are based on well-ascertained pathological facts, and that the supervision recommended would tend in an important measure to the security of the public. Yet they show their appreciation of the difficulties of obtaining this security for all meat, especially for imported meat when the conditions under which the carcass was prepared cannot be ascertained. "It is hardly necessary to point out that little evidence about the more serious degrees of tuberculosis in the animal would be discoverable in carcasses from which the organs had been removed, and that this is habitually the case with so-called 'dead meat,' whether English or foreign. Still, there are indications in such a carcass, to the eye of an experienced inspector, of the more dangerous forms of tuberculosis having existed in the animal."

(b) *Circumstances determining danger from milk.*—Upon this matter the report is able to be much more definite and to adduce striking evidence (based upon differential experiments made by Dr. Martin) to show that the milk of a tuberculous cow is only infective when it comes from a tuberculous udder. The Commissioners set forth their experiments, which seem conclusive. They point out that the udder affection is not peculiar to the advanced stage of tuberculosis, but that it may occur in slighter cases. They also draw attention to the great virulence of milk from this source, and point to the fact that the mixed milk from all four teats of a cow with tuberculosis of one quarter of the udder only proved to be every whit as infectious as milk from the tuberculous quarter alone. Further, butter, skimmed milk, and buttermilk from a cow with a tuberculous udder are actively infectious. In Section 62 the rapidity with which tuberculosis may attack the udder is noted, and an observation of Dr. Woodhead is quoted in which he says that on several occasions he has found tuberculosis of the udder developed during the interval of a fortnightly inspection of cows. The Commission comes, therefore, to the conclusion: "The withdrawal from dairies of every cow that had any disease whatever of her udder would form some approach to security against the serious danger incurred by man from the use of tuberculous milk, but it would not be an adequate security. The presence in a dairy of a tuberculous cow, as Drs. Martin and Woodhead have shown, is a decided source of danger to the public, especially having regard to what we have learnt respecting the rapid development of tuberculosis in the udder, and the degree of danger to milk consumers incurred by the invasion of the udder in tuberculous cows. It follows from the observations here recorded that it is of supreme importance to the consumers of milk that the existence of any tuberculous disease of the udder should be ascertained without delay. Now there is no difficulty whatever about recognising the presence of some abnormal condition in a cow's udder, and the presence of such condition, whatever it be, demands that the judgment of a responsible expert should forthwith be obtained about its nature, unless, indeed, the owner prefers to slaughter the cow without delay. If the expert finds tubercle bacilli in the milk the cow has dangerous tuberculosis of the udder. If he does not find them he may apply the further test of inoculating some susceptible animals with the milk, and thereby learn the nature of the udder disease. By this test he will very rarely be misled. Obviously the cow must be in seclusion, and every particle of her milk must be treated as highly dangerous, during any delay that can be permitted for diagnostic purposes, and until the disease has been proved not to be tuberculosis."

Influence of cooking upon tuberculous meat and milk.—As a result of Dr. Sims Woodhead's experimental researches the Commission reports that while in ordinary cooking the temperature on the surface of the joint is sufficient to destroy the infective quality of tuberculous matter in that situation, yet cooking, no matter by what method, cannot be relied upon to sterilise such matter below the surface. Particular attention is drawn to Dr. Woodhead's remarks upon "rolled" meat, which is specially likely to contain in its interior either tuberculous serous membrane or tuberculous

matter originally smeared on the surface in the preparation of the slices into rolls. Agreeing with Dr. Woodhead's observations, the report expresses the belief that no ordinary cooking would destroy infective material in such rolls, and that these, in point of fact, "probably form the maximum of danger to meat consumers." In order to destroy the infectiveness of tuberculous milk the Commission warmly advocates boiling, and evidently regards with suspicion any advice to the public to attempt to sterilise milk by heating it to a temperature short of boiling point.

The following is the recapitulation appended to the report.

RECAPITULATION.

"We have obtained ample evidence that food derived from tuberculous animals can produce tuberculosis in healthy animals. The proportion of animals contracting tuberculosis after experimental use of such food is different in one and another class of animals; both carnivora and herbivora are susceptible, and the proportion is high in pigs. In the absence of direct experiments on human subjects we infer that man also can acquire tuberculosis by feeding upon materials derived from tuberculous food animals. The actual amount of tuberculous disease among certain classes of food animals is so large as to afford to man frequent occasions for contracting tuberculous disease through his food. As to the proportion of tuberculosis acquired by man through his food or through other means we can form no definite opinion, but we think it probable that an appreciable part of the tuberculosis that affects man is obtained through his food. The circumstances and conditions with regard to the tuberculosis in the food animal which lead to the production of tuberculosis in man are, ultimately, the presence of active tuberculous matter in the food taken from the animal and consumed by the man in a raw or insufficiently cooked state. Tuberculous disease is observed most frequently in cattle and in swine. It is found far more frequently in cattle (full grown) than in calves, and with much greater frequency in cows kept in town cow-houses than in cattle bred for the express purpose of slaughter. Tuberculous matter is but seldom found in the meat substance of the carcass; it is principally found in the organs, membranes, and glands. There is reason to believe that tuberculous matter, when present in meat sold to the public, is more commonly due to the contamination of the surface of the meat with material derived from other diseased parts than to disease of the meat itself. The same matter is found in the milk of cows when the udder has become invaded by tuberculous disease, and seldom or never when the udder is not diseased. Tuberculous matter in milk is exceptionally active in its operation upon animals fed either with the milk or with dairy produce derived from it. No doubt the largest part of the tuberculosis which man obtains through his food is by means of milk containing tuberculous matter. The recognition of tuberculous disease during the life of an animal is not wholly unattended with difficulty. Happily, however, it can in most cases be detected with certainty in the udders of milch cows. Provided every part that is the seat of tuberculous matter be avoided and destroyed, and provided care be taken to save from contamination by such matter the actual meat substance of a tuberculous animal, a great deal of meat from animals affected by tuberculosis may be eaten without risk to the consumer. Ordinary processes of cooking applied to meat which has got contaminated on its surface are probably sufficient to destroy the harmful quality. They would not avail to render wholesome any piece of meat that contained tuberculous matter in its deeper parts. In regard to milk we are aware of the preference by English people for drinking cows' milk raw—a practice attended by danger on account of possible contamination by pathogenic organisms. The boiling of milk, even for a moment, would probably be sufficient to remove the very dangerous quality of tuberculous milk. We note that Your Majesty's gracious commands do not extend to inquiry or report on administrative procedures available for reducing the amount of tuberculous material in the food supplied by animals to man, and we have regarded such questions as being beyond our province."

THE SURGICAL CONGRESS IN BERLIN.

(FROM OUR BERLIN CORRESPONDENT)

FIRST SITTING, ON APRIL 17TH.

THIS Congress was opened in the great hall of the Langenbeck House under the presidency of Professor Gussenbauer (Vienna). After the introductory proceedings the President mentioned that American surgeons propose to hold international surgical congresses at regular intervals and ask this meeting to approve of their intention. The Congress was of opinion that a more detailed programme ought to be brought before it, and authorised the President to take the necessary steps to this end.

Cerebral Surgery.

Professor von Bergmann (Berlin) read a paper on the Progress of Cerebral Surgery. He said that although increased knowledge of the physiology and pathology of the brain had enabled surgeons to deal with cerebral diseases much circumspection was necessary in this branch of surgery. The procedure in operations on the brain is now quite different from what it formerly was. Instead of the chisel and the trephine we now use a circular saw driven by an electric engine, which works with speed and certainty and can easily

be stopped. He would not to-day speak on the subject of tumours, but only on the other indications for operative interference. In 1889 he had suggested that Jacksonian epilepsy might be influenced for the better by trephining, but he now wished to modify this opinion, as he had found only those cases benefited where a cyst or some other palpable cause of the disease was present. Cerebral abscess must always be operated on. Its diagnosis is easy if the etiology is considered. The principal cause of cerebral abscess is inflammation of the middle ear; it is usually situated in the temporal lobe. The operation in those cases should commence with the tegmen tympani. A decided advance is the operation for suppurative thrombosis of the sinus, which, of course, often follows suppuration within the mastoid process. The sinus can be arrived at from the tegmen tympani. In the first place, an exploratory puncture is made, and if it yields pus the opening must be enlarged and filled with iodoform gauze. In cases of increased cerebral pressure trephining is to be performed also, the effect of the puncture lasting for only a short time. The puncture of the spinal canal in the lumbar region suggested by Professor Fürbringer, and mentioned in the last number of THE LANCET, Professor Bargmann believed to be of great diagnostic value.

Dr. Ledderhose (Strasbourg) had seen a case of cerebral injury where paralysis of the limbs was on the same side as the lesion of the brain. Several cases of this kind have been reported in surgical literature, and are caused by congenital abnormalities in the decussation of the cerebral fibres.

Dr. Eiselsberg (Vienna) described the methods of closing apertures in the skull. These apertures, he said, may arise from three causes—traumatic lesions, the effects of zymotic diseases, and neoplasms. They can be dealt with in two ways: by König's method, which consists in covering them with periosteal flaps; or by that of Kraenkel, who uses plates of celluloid. In one case after the implantation of the celluloid an epileptiform convulsion ensued, so that he was compelled to remove the celluloid and then found a large hæmatoma beneath it. He therefore advises the performance of two separate operations.

Dr. Fraenkel (Vienna) claimed as an advantage of the celluloid implantation that it prevents adhesions of the dura mater, which sometimes happen in cases where König's operation is performed.

Dr. Czerny (Heidelberg) said that he had not been so fortunate as others in applying celluloid plates. He recommended the implantation of pieces of the tibia.

The Surgical Treatment of Graves' Disease by Extirpation of the Thyroid Gland.

Professor Mikulicz (Breslau) discussed the Surgical Treatment of Graves' Disease by Extirpation of the Thyroid Gland. He has performed this operation several times with good results. The nervous symptoms very soon disappeared after the operation, and the general state of the patient became better. The next effects are decrease of the cardiac trouble, and ultimately of the exophthalmos. As a proof of the good effect of the operation, Professor Mikulicz asserted that he had never seen patients so grateful as those who had been operated on. He does not believe that the operation only acts by means of suggestion. He is of opinion that Graves' disease must be regarded as a toxic process originating in the thyroid gland.

Professor Kocher (Berne) reported that in the last 900 cases operated on by him the method of total extirpation was wholly abandoned, and only the partial operation was performed. Since proceeding in this way he has not had any cases of cachexia strumipriva except in one instance, where the remaining part of the gland was found to be atrophied. This case was cured by the internal administration of thyroid gland. Although he was well satisfied with his results, the mortality being only 12 per cent., he hoped that the number of operations would soon be reduced, and that internal medication would be substituted. He made a very remarkable communication, describing the influence of the internal administration of thyroid extract and phosphate of potassium, and showed several photographs of patients where the reduction of the gland after the use of these internal remedies was very obvious. His address was listened to with much interest, and caused a great sensation.

Professor Mikulicz said that the internal use of thymus gland was also able to reduce the goitre.

Professor von Eiselsberg (Utrecht) had not found this to be the fact in his experience.

Dr. Schuchardt (Stettin) showed a case in which sup-

purating peritonitis, caused by a perforating ulcer of the stomach, had been successfully treated by operation.

SECOND SITTING, ON APRIL 18TH.

The Etiology of Movable Kidney.

Professor Küster (Marburg) discussed the Etiology of Movable Kidney. He was of opinion that this condition always arises from mechanical causes. During respiratory action, especially in women who wear tightly laced corsets, and whose abdominal walls have become thin by reason of repeated pregnancy, the ribs exercise a pressure which in course of time loosens the kidney. Direct violence, such as a fall or a blow, may also be the cause of the displacement. Rupture of the kidney in men and movable kidney in women arise often from the same cause. It is remarkable that 93 per cent. of the total cases of rupture of the kidney happen in men and only 7 per cent. in women, whereas 93 per cent. of the cases of movable kidney occur in women and only 7 per cent. in men.

Dr. Lindrer (Berlin) said that mechanical causes alone were not sufficient to explain these cases; traumatic lesions produce movable kidney only when a congenital disposition exists. The lengthening of the renal vessels proves that the cases are congenital.

Dr. Küster replied that this lengthening of the renal vessels is only found in patients who have for a long time been the subjects of this condition, and that it must accordingly be regarded as a consequence and not as a cause of the abnormality.

Dr. Kölliker (Leipzig) reported a case where after a severe injury (a boy had been thrown into the air by four others and had fallen on his lumbar region) a rupture of the kidney was produced. The wound was enlarged and filled with iodoform gauze, thereby avoiding the necessity for extirpation. The boy completely recovered, and his urine is at present normal.

A Series of Operations on the Stomach.

Professor Mikulicz reported 103 Operations on the Stomach with 23 deaths. It was remarkable that 13 deaths in 35 patients happened during the first ten years, whilst in the last three years and a half out of 68 patients 10 only died. This fact proves that the results are rendered more and more satisfactory by the improvements in surgical methods and by the increasing dexterity of the surgeon. The non-success of operations for carcinoma depends on the weakness of the patient. To improve their general state he uses subcutaneous injections of saline solutions. When the practicability of an operation is doubtful he recommends the making of a very short abdominal incision from 2 to 4 centimetres in length (= from $\frac{1}{2}$ to $1\frac{1}{2}$ in.), so that one finger may be introduced and the abdominal organs explored. If an operation is inadvisable the small wound can easily be closed by sutures and the patients need not be confined to bed. After gastro-enterostomy the patients lived on an average for six months, but after resection for a year and a half. He accordingly prefers the latter operation, those cases of course excepted where the lymphatic glands and the peritoneum are attacked. The operative procedures, Professor Mikulicz said, could scarcely be improved, but an earlier diagnosis might be the means of saving many cases.

Dr. von Eiselsberg recommended the excision of the growth and the closing of the ends both of the stomach and of the duodenum by sutures. This done, a regular gastro-enterostomy follows, and the chyme easily passes through the new aperture.

Dr. Doyen (Rheims) said that the pain in nearly all painful diseases of the stomach is localised in the pylorus. Dilatation of the stomach arises, in the absence of any mechanical cause, from spasmodic contractions of the pylorus. Seven patients who suffered from severe dyspepsia and fourteen who were the subject of gastric ulcer without stenosis were completely cured by gastro-enterostomy.

Dr. Fischer (Strasbourg) said that in gastrostomy a secure union of the stomach with the abdominal walls may be difficult. In such cases he recommended that the stomach should not be opened, but that the patient should be fed by a cannula similar to Pravaz's, but of course much larger. He pushes the cannula through the walls of the stomach lying in the abdominal wound and injects a quantity of fluid food, milk, &c. In course of time the opening in the stomach is enlarged and a fistula is formed.

Intestinal Invagination.

Dr. Rydygier (Cracow) discussed Intestinal Invagination.

The cases are usually treated too long by internal remedies, and accordingly come too late to a surgeon. The mortality is, therefore, very high (75 per cent.), especially in acute cases. The treatment in both the acute and the chronic form should consist in immediate laparotomy. Disinvasion should always be tried; if it does not succeed resection of the intestines becomes necessary. He has had twelve cases, of which three were successful, whilst according to former statistics none of the patients recovered. Enterostomostomy and the formation of an artificial anus should never be attempted, the result of these operations always being rapid irritation.

(To be continued.)

THE REPORT OF THE ROYAL COMMISSION ON OPIUM.

THE Royal Commission appointed in June, 1893, to inquire into the question of the Indian traffic in opium was admittedly composed of men eminently qualified to conduct such an investigation, and they have, after an unusually protracted and exhaustive inquiry, at length made their report. The result can only be described as a crushing blow to the anti-opium faddists. A very large amount of evidence was taken, of such variety, strength, and character as to leave no doubt on the subject. There was a marked preponderance of testimony in favour of the view that the common use of opium in India is a moderate use leading to no evident ill-effects, and that excess is exceptional and condemned by public opinion. Such is the gist of the report which, with one dissentient (Mr. H. J. Wilson, M.P.), was signed the members (nine in number) of the Commission. The truth is that however well meaning the anti-opium party in this country may be their statements, when brought to the test of facts and impartial inquiry, have been shown to have been either ridiculously exaggerated or even altogether unfounded. We must take human nature as it is, as it exists all the world over irrespectively of the colour of the skin, and nowhere do we find that men and women regulate their life and customs by some abstract rule of perfection, for the very simple and sufficient reason that they cannot. The needs and requirements of life, its burdens as well as its joys, the hunger, fatigue, weariness, sickness, or *ennui* that falls to the lot of so many, have to be taken into account as well as its sources and seasons of joyfulness and exhilaration. In a large measure the conditions of our lot in life mould us into what we are, and everywhere give rise to a craving of some sort or other for such things as will exhilarate or soothe us and, if even temporarily and delusively, bring us into harmony with an environment out of which we cannot escape. But are we in a position in this matter to cast a first stone at Eastern nations? If we reverse the situation and suppose that the natives of India had sent a commission to this country to inquire into the drink question—into the sum spent per head by our population on alcohol, and the degradation, misery, and crime which are too often the outcome of it all—can there be any reasonable doubt that the evils traceable to alcohol here would appear to such a commission enormous, and those arising from the abuse of opium there, in India, altogether insignificant in comparison with them. No doubt the inordinate use of opium is a great evil, but so far that matter is an inordinate consumption of tea or tobacco. But the use of opium, if common enough in the populations of India, is nevertheless a moderate use and has not been shown to be by any means harmful—rather the reverse considering the conditions to which the people are exposed and under which they have to live. The medical and expert evidence brought before the Commissioners convinced them that the use of the drug was not harmful, and witnesses from every part of India testified to the belief in opium as the common domestic medicine of the people, and that it was commonly had recourse to by the rural population in malarious and damp districts as a prophylactic against fever and for the relief of diarrhoea, rheumatism, and other complaints. Quite apart from the merits of this belief the Commission considers that its existence has been conclusively established by such a mass of evidence and observation as to represent public opinion on the subject. In fact, the Commission which many

hoped had gone out to curse the existing system has ended by blessing it altogether. Opium is, under certain circumstances, a sort of diet to many of the poorest classes in India—and the poorest are extremely poor there; it economises the fuel and eases, as it were, the animal machine of the hard-working coolie in times when the demands upon his muscular and nervous energies are great and his food-supplies small. The Mussulman troops take their dose of opium with far less injury to themselves than the navy takes his beer or the miner in the Peruvian Andes consumes his coca leaf. A prohibition of the growth of the poppy and the manufacture of opium in British India, the Commission declares, has not been shown to be necessary or to be demanded by the people; and as regards its prohibition in the protected States it could only be effected by an arbitrary exercise of power which would probably be resisted by the native rulers and their people; in brief, the prohibition of opium would be strongly opposed by the great mass of the population of India and a source of financial embarrassment to its Government. The report is a long one, and there is also a memorandum appended to it by Sir J. B. Lyall on the historical part of the question in India and China, and a very able paper by Sir W. Roberts dealing more especially with the medical aspect of the question.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6407 births and 4127 deaths were registered during the week ending April 20th. The annual rate of mortality in these towns, which had declined in the six preceding weeks from 35.0 to 20.5 per 1000, further fell last week to 20.3. In London the rate was 18.8 per 1000, while it averaged 21.4 in the thirty-two provincial towns. The lowest rates in these towns were 16.1 in Bradford and in Derby, 16.4 in Cardiff, 16.8 in Nottingham, and 17.0 in Oldham; the highest rates were 26.3 in Salford, 26.6 in Blackburn, 27.8 in Huddersfield, 29.7 in Manchester, and 34.5 in Bolton. The 4127 deaths included 336 which were referred to the principal zymotic diseases, against 274 and 330 in the two preceding weeks; of these, 115 resulted from whooping-cough, 89 from measles, 57 from diphtheria, 31 from diarrhoea, 24 from scarlet fever, 19 from "fever" (principally enteric), and one from small-pox. The lowest death-rates from these diseases were recorded in Bristol, Nottingham, Derby, Halifax, and Bradford; while they caused the highest rates in West Ham, Norwich, Bolton, Manchester, and Salford. The greatest mortality from measles occurred in Plymouth, Manchester, and Bolton; and from whooping-cough in Swansea, Oldham, Wolverhampton, Blackburn, Salford, and Bury. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 57 deaths from diphtheria in the thirty-three towns included 30 in London, 5 in West Ham, and 5 in Manchester. One fatal case of small-pox was registered in Liverpool, but not one in London or in any other of the thirty-three towns. There were 35 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 20th inst., against 55, 53, and 47 at the end of the three preceding weeks; 4 new cases were admitted during the week, against 11, 7, and 9 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1514, against 1555, 1519, and 1463 on the three preceding Saturdays; 162 new cases were admitted during the week, against 161, 143, and 117 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 427 and 398 in the two preceding weeks, further declined to 389 last week, but slightly exceeded the corrected average. The causes of 79, or 1.9 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Leeds, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns,

which had been 24.7 per 1000 in each of the two preceding weeks, declined to 21.7 during the week ending April 20th, but exceeded by 1.4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18.2 in Dundee and 19.3 in Greenock to 21.9 in Leith and 23.0 in Aberdeen. The 623 deaths in these towns included 32 which were referred to measles, 17 to whooping-cough, 10 to diarrhoea, 8 to small-pox, 7 to diphtheria, 4 to scarlet fever, and not one to "fever." In all 78 deaths resulted from these principal zymotic diseases, against 74 and 83 in the two preceding weeks. These 78 deaths were equal to an annual rate of 2.7 per 1000, which was 1.0 per 1000 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 23 and 30 in the two preceding weeks, further rose to 32 last week, of which 10 occurred in Leith, 7 in Edinburgh, 5 in Glasgow, and 5 in Paisley. The 12 deaths referred to whooping-cough showed a decline of 13 from the number in the preceding week, and included 14 in Glasgow. Of the 8 fatal cases of small-pox 7 were recorded in Glasgow and 1 in Edinburgh. The deaths from diphtheria, which had been 2 and 3 in the two preceding weeks, further rose to 7 last week, of which 3 occurred in Glasgow and 2 in Edinburgh. The fatal cases of scarlet fever, which had been 5, 2 and 6 in the three preceding weeks, were 4 last week and included 3 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 189 and 161 in the two preceding weeks, further declined to 132 last week, but were 27 above the number in the corresponding week of last year. The causes of 27, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 43.6 to 29.2 per 1000, rose again to 29.7 during the week ending April 20th. During the past three weeks of the current quarter the death-rate in the city has averaged 34.1 per 1000, the death-rate during the same period being 19.0 in London and 20.2 in Edinburgh. The 199 deaths registered in Dublin during the week under notice showed a slight increase upon the number in the preceding week, and included 3 which were referred to the principal zymotic diseases, against numbers declining from 12 to 6 in the three preceding weeks; of these, 1 resulted from small-pox, 1 from scarlet fever, 1 from "fever," and not one either from measles, diphtheria, whooping-cough, or diarrhoea. These 3 deaths were equal to an annual rate of 0.4 per 1000, the zymotic death-rate during the same period being 1.7 in London and 2.9 in Edinburgh. The fatal cases of small-pox, which had been 3 and 2 in the two preceding weeks, further declined to 1 last week. The death referred to scarlet fever was the first recorded within the city since February last. The 199 deaths registered in Dublin last week included 39 of infants under one year of age and 65 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons showed a further decline from those recorded in recent weeks. Two inquest cases and 3 deaths from violence were registered; and 60, or nearly a third, of the deaths occurred in public institutions. The causes of 24, or more than 12 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS AND VACCINATION IN EGYPT.

The Egyptian Sanitary Department has issued an interesting tabular statement showing the number of births, deaths, vaccinations, and revaccinations that were registered throughout the entire country during 1893 but unfortunately, owing to the non-existence of an accurate census, the compilation is shorn of well nigh half its value. The only Egyptian census of recent times was taken in 1882 the year of the Arabi disturbances, and, as might be expected, the results are now pretty generally admitted to be altogether untrustworthy. According to the 1882 estimate—for it is a misnomer to call the document a census—the population of Egypt at that time consisted of 6,817,265 souls, of whom 225,216 were said to be nomads, but the statistics now issued go far to prove that the total number of sedentary inhabitants was greatly understated. During the year 1893 314,929 births and 190,305 deaths were

registered amongst the native portion of the community. Taking the population at 7,000,000, these figures give a birth-rate of 45 and a death-rate of 27 per 1000, both far above the average; whereas if we adopt 8,000,000 as more probably representing the real number of Egyptians the ratios fall to 39.3 and 23.8 per 1000 respectively, a condition of things more in accordance with the rates obtaining elsewhere. It must also be borne in mind in this connexion that registration in Egypt is in its infancy, and that, chiefly with a view to avoid the conscription, the tendency in many districts is to avoid in every possible way the inscription of births. Returning to the document in hand, we find that 1988 foreigners died in Egypt during the year 1893; and that the births in the same category numbered 1021. As regards vaccination 300,447 primary operations were performed with success and 2391 with non-success, these totals being together equal to upwards of 95 per cent. of the births; 1686 revaccinations were carried out with satisfactory results, but in 407 instances the subjects proved refractory. At Suakin alone did the deaths (167) outnumber the births (64); and it is noteworthy that the vaccinations without success, which elsewhere were inconsiderable, should have amounted in this district to nearly one-third of the total number. The birth-rate may be said to have been exceptionally high throughout the whole country, but in Upper Egypt it was still more remarkable. In the provinces of Minieh, Assiout, Guirgneh, and Keneh there were in the aggregate 72,484 births and only 33,170 deaths, considerably less than half. At that rate the population ought to increase. From a footnote we learn that the declaration of births and deaths is obligatory among natives only. Deaths occurring amongst foreigners have, however, to be verified, and permits for burial are only issued on the certificate of a recognised medical man or sanitary agent. Natives and foreigners are alike bound by the decree which renders vaccination compulsory (Dec. 17th, 1890). To any person who was conversant with Egypt under the old régime the valuable information so unostentatiously furnished in this brief document must afford conclusive proof of the immense progress that has taken place since England entered into occupation in 1882. Ten years ago it would have been simply impossible to have rendered such a return. Ten years ago registration was practically unknown, and vaccination nearly so. The latter duty was in the hands of the village barbers, who were in the habit of keeping the vaccine—mixed with scab matter and blood—between two *plaques* of dirty glass. Immense progress has unquestionably been made, but the want of a census renders the work of the registration department trebly hard. Dr. Engel Bey has worked unceasingly and untiringly at his important task, and richly merits a reward. There is probably no country in the world where a census could be so easily taken as in Egypt, or where the cost would be less.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE - SURGEON - LIEUTENANT - COLONEL GEORGE ANDREW, M.B., retires on retired pay (dated April 24th, 1895). The under-mentioned Surgeon-Majors to be Surgeon-Lieutenant-Colonels:—Henry Charlesworth; John C. Dorman, M.B.; George H. Le Motte, M.D.; William L. Chester, M.B., Edward A. Mapleton, M.B.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, Indian Medical Service, is granted the temporary rank of Surgeon-Colonel whilst President of the Medical Board, India Office. The following appointments are announced:—Surgeon-Captain J. S. S. Lumsden, to Medical Charge of the 40th Bengal Infantry; Surgeon-Captain G. H. Frost, from 22nd Bengal Infantry, to Medical Charge of the 45th Sikhs; Surgeon-Major G. S. A. Ranking, Secretary to the Board of Examiners, Calcutta, temporarily to the Charge of that portion of the office of the Home Department which is in Calcutta when the Government of India are at Simla; Surgeon-Captain C. H. James, on duty with the Sanitary Commissioner, Punjab, to officiate as Civil Surgeon of Rohtak; Surgeon-Lieutenant P. P. Kilkelly, to officiate in Medical Charge, 4th Bombay Cavalry; Surgeon-Lieutenant B. H. F. Leumann to Medical Charge, 17th Bombay Infantry; Surgeon-Captain E. G. R. Whitcombe to Medical Charge,

8th Bombay Infantry. The services of Surgeon-Captain A. W. T. Buist-Sparkes, M.B. (Bengal), are placed temporarily at the disposal of the Government of the Punjab. Surgeon-Major James Cleghorn, M.D., to be Surgeon-General and Sanitary Commissioner with the Government of India; Surgeon-Colonel D. O'C. Raye, M.D., to be Inspector-General of Civil Hospitals, Punjab; Surgeon-Colonel J. H. Newman, M.D., to be Administrative Medical Officer and Sanitary Commissioner of the Central Provinces; Surgeon-Colonel W. P. Warburton, M.D., to be Inspector-General of Civil Hospitals, North-West Provinces and Oudh. Brigade-Surgeon-Lieutenant-Colonel M. M. Galloway returns to Bombay on relief by Surgeon-Colonel Maunsell. Surgeon-Captain A. G. Moores, A.M.S., has left Lucknow for Peshawar to do duty with the General Hospital for British Troops, Chitral Relief Force. Brigade-Surgeon-Lieutenant-Colonel J. Smith, Madras, retires from the service on a pension of £500 per annum. The Queen has approved of the following promotions among the officers of the Indian Medical Service, and they are accordingly gazetted:—*Bengal Medical Establishment*: To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel Frederick Augustus Smyth. To be Surgeon-Captain: Surgeon-Lieutenant Bruce Gordon Seton. *Madras Medical Establishment*: Surgeon-Lieutenants to be Surgeon-Captains: Robert Henry Elliot, Robert King Mitter, Wilfred Ernest Arbutnot Armstrong. *Bombay Medical Establishment*: To be Surgeon-Captain: Surgeon-Lieutenant William Carr Sprague, M.D. Her Majesty has also approved of the retirement from the service of the under-mentioned officer: Surgeon-Lieutenant-Colonel Thomas Robinson, Bengal Medical Establishment.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon George Curtis has been placed on the Retired List at his own request, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

The following appointments are announced:—Fleet-Surgeon William E. Bennett to Sheerness Dockyard. Staff-Surgeons: J. L. Barrington to the *Inflexible*; C. W. Sharples to the *Unicorn*, temporary. Surgeon A. F. Harper to the *President*, additional.

MILITIA MEDICAL STAFF CORPS.

Harold Edward Mottis, Gent., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion, the Suffolk Regiment: The under-mentioned Surgeon-Lieutenants are appointed Second Lieutenants:—Henry Cecil Harper, Charles Franklin Wright. 2nd Volunteer Battalion, the East Surrey Regiment: The under-mentioned Gentlemen to be Surgeon-Lieutenants:—Thomas Brushfield, M.B., Frederick Robert Hird. 1st Volunteer Battalion, the Royal Sussex Regiment: Surgeon-Lieutenant C. W. J. Chepmell, M.D., to be Surgeon-Captain. 1st Dumfriesshire: Surgeon-Lieutenant-Colonel J. E. Brodie, M.D., from the 3rd Volunteer Battalion, the Highland Light Infantry, to be Surgeon-Lieutenant-Colonel.

VOLUNTEER INFANTRY BRIGADES.

Clyde Brigade: Surgeon-Lieutenant-Colonel J. E. Brodie, M.D., 1st Dumfriesshire Volunteer Rifle Corps, to be Brigade-Surgeon-Lieutenant-Colonel.

THE HEMP DRUGS COMMISSION.

The Commission of Inquiry instituted by the Indian Government examined 700 witnesses. Its report, with a resolution of the Governor-General-in-Council thereon, has recently been published. As a result of the inquiry it appears that there are no such marked ill-effects, physical, mental, or moral, attendant on the use of hemp drugs as were popularly ascribed to them before the present inquiry was made. There was a complete break-down in the evidence in support of the popular impression that these drugs are a fruitful source of insanity. There has, in fact, been a great deal of popular prejudice and exaggeration as to the evil effects arising from the use of hemp drugs and ganja. Those interested in the matter may be referred to an article in the *Times* of the 22nd inst., under the head of "Indian Affairs," which deals fully with the subject. The Government of India refuses to entertain any measures for total prohibition, but is willing to put restrictions compatible with fairness on the use of hemp drugs.

FILTERS AND INFECTIOUS DISEASES.

We are glad to notice that, under the above heading, the *Pioneer Mail* of the 4th inst., calls attention to the fact that

the water filters commonly used in India are "little better than microbe traps." We have frequently adverted to this subject, and to the delusive nature of the reliance that is placed in filters in general use as a safeguard against the communication of water-borne diseases. They afford no real protection against the micro-organisms of cholera and typhoid fever. The evidence obtained in the French Army, on the other hand, on the use of the Pasteur-Chamberland filter is most favourable, and M. de Freycinet has called attention to the remarkable effect which the introduction of this filter has had in diminishing the prevalence of enteric fever in that army. We have more than once suggested that this or the Berkefeld filter, should be experimentally tried in India as a substitute for the ordinary barrack filter now used there.

LEPROSY IN INDIA.

The decision of the Government of India in regard to the leprosy question in that country, about which it will be remembered there was a Commission of Investigation some time ago, has been published in the *Gazette of India*. The Government considers that the extent to which leprosy is propagated by contagion is small, and is, therefore, unable to approve of the compulsory segregation, either absolute or partial, of lepers, except those who are vagrants. The alarm about the increase of leprosy in India is said to be groundless. The Governor-General in Council has no reason to dissent from the general conclusion of the Leprosy Commission that leprosy does not prevail in India to such an extent as to constitute a general or universal danger, and that the means by which we must look forward to secure its diminution are improved sanitation and better dietetic conditions.

DEATH IN THE SERVICES.

Deputy Surgeon-General Samuel Stacy Skipton, M.D. (retired), A.M.S., aged sixty-five, at his residence in Cheshire, on Easter Sunday. He graduated at St. Andrews University in 1852 and joined the Army in 1854. In 1866 he was appointed surgeon; was promoted to surgeon-major in 1873 and brigade-surgeon in 1884; and retired with the hon. rank of deputy surgeon-general in 1885. He was attached to the 49th Regiment in the Crimea from July 23rd, 1855, including the siege and fall of Sebastopol (medal with clasp and Turkish medal), and to the 14th Light Dragoons in the Central India campaign under Sir Hugh Rose in 1858; and was mentioned in despatches.

THE COMMANDER-IN-CHIEF.

Some of our readers will probably have noticed that Mr. Morton asked the Secretary for War whether the Commander-in-Chief was about to resign, and, if so, whether the Government intended to carry out the recommendation of the Hartington Commission. Mr. Campbell-Bannerman, in reply, said that he had no knowledge of there being any foundation for the rumour referred to. As regards the course to be followed on the occurrence of a vacancy, he repeated what he had said in September, 1893, that after the recommendation made by the Royal Commission he could not conceive of any appointment of a permanent nature being made to the post of Commander-in-Chief.

VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned Officers of the Volunteer Force:—*North-Eastern District: Rifle*: 2nd Volunteer Battalion, the Princess of Wales's Own (Yorkshire Regiment): Surgeon-Lieutenant-Colonel William Taylor Colby, M.D. *North-Western District: Artillery*: 5th Lancashire: Honorary Assistant Surgeon William Henry Cocker. *Eastern District: Rifle*: 3rd (Cambridgeshire) Volunteer Battalion, the Suffolk Regiment: Surgeon-Captain Francis Mears Beckett.

SALE OF POISONS IN INDIA.

Out of twenty-five cases of poisoning brought to notice last year in Burmah the chemical examiner says fifteen were cases of arsenic poisoning. This supplies, the *Pioneer Mail* remarks, additional evidence in favour of the proposals made to the Indian Medical Congress by Surgeon-Captain Evans for restricting the sale of arsenic.

The office of the Principal Medical Officer of the Madras Army is to be permanently removed from Madras to Ootacamund.

The *Malabar* sailed from Bombay on April 4th, with sixty-seven patients for Netley.

Sixteen invalids left China on April 14th for Netley.

Correspondence.

"Audi alteram partem."

"PROPHYLAXIS OF INSANITY."

To the Editors of THE LANCET.

SIRS,—Dr. Blandford, in his address on the Prophylaxis of Insanity, refers to the all-important question of marriage. In an article I wrote in the *Journal of Psychological Medicine*, vol. vii., in 1881, I gave some rules for the guidance of those who consulted me on the subject. I had previously written on the same subject in the same journal in 1875. In our present ignorance of the origin of the mysterious inheritance of disease I can only offer these rules as of approximative value. I must premise that these rules have a wide bearing, as they not only have regard to insanity, but to all hereditary diseases, for in a treatise I wrote on the Nature and Treatment of Hereditary Diseases in 1869 I contended that all hereditary diseases are interchangeable. 1. If there be a constitutional taint of any kind in either father or mother on both sides of the contracting parties, the risk is so great as almost to amount to a certainty that their offspring would inherit some form of disease belonging to the class to which these investigations refer. 2. If the constitutional disease is only on one side, either directly or collaterally through uncles or aunts, and the contracting parties are both in good bodily health, the risk is diminished one-half, and healthy offspring may be the issue of the marriage. 3. If there have been no signs of constitutional disease for a whole generation we can scarcely consider the risk materially lessened, as it so frequently reappears after being in abeyance for a whole generation. 4. If two whole generations have escaped any symptoms of hereditary disease we may fairly hope that the danger has passed and that the morbid force has expended itself.

I am, Sirs, your obedient servant,
J. M. WINN, M.D.

Goldhurst-terrace, Hampstead.

"INTERSTITIAL KERATITIS AND SYNOVITIS."

To the Editors of THE LANCET.

SIRS,—Dr. Crawford Thomson, in THE LANCET of April 6th, alluded to a paper of mine written in 1870,¹ in which I reported four cases of parenchymatous keratitis associated with acute rheumatism. Since 1870 my views on that and many other subjects have undergone important modifications. That paper was, as I now acknowledge, a somewhat crude attempt to explain what was then, and still remains, a difficult problem. The association of synovitis with interstitial keratitis was then a very unfamiliar phenomenon. Mr. Jonathan Hutchinson had indeed recorded two cases and had recognised synovitis as an occasional feature of inherited syphilis. Very few cases, however, had then been recorded, and even now their number hardly justifies the construction of a theory. I am inclined, however, to subscribe to Dr. Crawford Thomson's views as being on the whole most in harmony with the recorded facts. I would venture to put the matter in the following form. A certain cachexia, whether it be in the form of *anæmia* or *misère*, is favourable to the development of parenchymatous keratitis and to synovitis. This particular cachexia may be arrived at either by the road of inherited syphilis or by other roads, such as disordered menstruation, and a slight local exposure to irritation or injury sets up the local mischief. Still, the number of recorded cases without some indications of inherited syphilis, and even those with those indications, is so small that I do not think it is as yet safe to generalise. The proposed experiments on the joints which Dr. Crawford Thomson promises to undertake and record will be most valuable; but I cannot quite accept the conclusions drawn by Dr. Crawford Thomson from Wagenmann's experiments on the artificial production of keratitis. Dr. Crawford Thomson's paper is most suggestive, and it is hoped that his future researches may lead to some definite conclusions. There is, however, one point which should not be omitted—viz., the records of the temperature

chart. These were omitted in my four cases, as Dr. Crawford Thomson justly points out, but he falls into the same error in recording his own unique case of "unilateral keratitis with unilateral synovitis." He remarks simply that there was "no feverishness," but gives no details as to temperature, which might have afforded valuable hints, especially as to the probability of there being any rheumatic complications. In Mr. Clutton's valuable paper in THE LANCET of Feb. 27th, 1886, there is the same omission.

I am, Sirs, yours obediently,
W. SPENCER WATSON.

Henrietta-street, W., April 18th, 1895.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—As I was a referee to the above company I have taken considerable interest in the correspondence in your columns respecting it. I think the directors must be aware, or if not this correspondence will have opened their eyes to the fact, that a class of people have gained and are gaining entrance to their medical aid society whose incomes are far from "meagre" and who are quite in a position to pay proper charges for medical attendance; and, further, that the presence of such people in a medical aid society is giving rise to a feeling in the medical profession strongly adverse to the well-being of such societies. Certain of your correspondents have pointed out instances of such abuse, and most of those who have written in defence have admitted that such abuses exist.

Now, Sirs, I have on my list many members whom I am pleased to attend for the remuneration offered by this company, but I have also on my list far too many others whose position or income is such that I would infinitely rather attend for nothing than receive the small sum paid per annum for them and consider that it discharges their obligation to myself. I quite think, Sirs, that the directors do not wish for such people, who usually enter singly; but the local agents like them—they pay regularly, do not require to be called on weekly for premiums, and insure for higher sums, paying 3d. or more weekly. In consequence of this, harm is done to the poor struggling member who has entered his wife or children, paying 1d. for each weekly as premium. The better-class or richer member entering frequently with some ailment of gravity, quite able to pay, gets and requires ten or twenty times the attendance for just the same sum as his poorer neighbour, who has entered his fairly healthy family, a uniform charge of 1½d. per week for medical aid being added to each premium, no matter what that premium may be, and so the poor man is paying for the richer, whose presence as a member is threatening the existence of a society which was established, I take it, for such people as the former. I would point out, Sirs, to the directors that a very few well-off members can do this. Say that out of a list of 100 members for whom the remuneration paid by the company at 4s. per member would come to £20 a year, there are 10 or even 5 per cent. able to pay an account of a few pounds each. This would cover, or more than cover, the yearly stipend of the whole, and a grave wrong is done to the profession. Five or ten per cent. out of the hundreds of thousands of members this company possesses would make a goodly array, and their exclusion from such societies would be a benefit alike to the really poor man and to the medical practitioner. I think, Sirs, I could show the directors a remedy to a considerable extent for this evil—namely, to make the local agents submit all proposal forms to a medical referee. I have been told that a referee, who is or was a director himself, examines everyone proposed in his district. Let the directors allow similar liberty to all referees and instruct their agents to inform all proposing to enter that the medical referee may refuse to accept or may claim the right to examine, and the well-off and the unhealthy members will disappear and the greatest grievance against this and kindred companies will be removed. I know at present the company will remove members objected to by medical officers, but in that case such members, once they are admitted, feel themselves to have a distinct grievance against the referee and company; besides, this is not going far enough: if they are to be stopped let them be stopped in the beginning before they become members, and let such companies instruct their

¹ Transactions of the Clinical Society, vol. iv., pp. 1-7.

agents that well-to-do people are not under any circumstances to be proposed for medical aid.

I am Sirs, yours faithfully,

April 22nd, 1895.

A REFUSEE.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS—Dr. Campbell Black in the latter portion of his letter in THE LANCET of March 16th has exposed an old sore without suggesting a likely remedy. Practice for gain in any department of medicine or surgery is not forbidden by law to persons who do not possess a valid qualification; and so long as he does not pretend to be legally qualified by adoption of titles specifically designated in the Medical Act there is nothing to prevent any individual, educated or not educated, from practising. The law is also very largely violated with impunity because there exists no public body or functionary charged with its enforcement; but the fact that the Dental Association, which has taken up the duty of public prosecutor on behalf of the speciality, has never ventured to attack one of the numerous unqualified quack dentists who adopt the title of Doctor is enough to suggest the difficulties which lie in the way of vindication of the law. That construction of laws for protection of the public and professions is not beyond the power of statesmen is sufficiently evident. An attempt by an unqualified man to practise as a solicitor meets with speedy punishment, and such an abuse as assumption of titles and practice by unqualified adventurers in the legal profession is virtually impossible. By the Veterinary Surgeons Act, 1831 similar protection is afforded the veterinary profession, and under it unqualified farriers have been punished merely for displaying a sign inscribed "Veterinary forge." The public are thus prevented so far as possible from mistaking unqualified pretenders for educated practitioners; and dumb brutes are also thus far safeguarded against the torments which unscientific "veterinary surgery" so often inflicts upon its victims. The Medical Act devised to provide for men protection the same as the Veterinary Act affords to brutes dates from 1858; the Dentists Act from 1878. Under neither of these Acts has any serious attempt been made to check the evils they were intended to prevent; and in no instance have proceedings under these Acts been taken against infamous quacks known to professional authorities, and often to the police, as men openly pursuing a career of crime. It can, I believe, be proved that quackery forming a potent factor in deterioration of the public health puts money ultimately into the pockets of legitimate practitioners; but if the unselfishness of the profession in seeking to put a stop to glaring abuses cannot be proved it can at any rate be demonstrated that enforcement of stringent laws would operate in the main for the benefit of the classes whose claim upon the guardianship of the State is surely paramount. It can hardly be believed that amendment of the law would be long delayed if once the case, supported by the voice of the profession, were fully and fairly laid before the Legislature.

I am, Sirs, yours faithfully,

Cavendish-square, March 16th, 1895.

HENRY SEWILL.

To the Editors of THE LANCET.

SIRS.—Mr. J. B. Pike deserves the thanks of all lovers of justice for his able and spirited defence of the rights and privileges of physicians. It is a fact well known to the public and the profession that a physician is a doctor, though it is not every doctor who is a physician. Let me recommend all carping critics to look out the word doctor in any good English dictionary, and then reflect upon their own small-mindedness. Until the year 1859 it was a *sine qua non* that a candidate for the L.R.C.P. Edin. should be an M.D.; and no M.D., no matter how eminent a university, could practise as a physician within the jurisdiction of the Edinburgh College without its licence. Until the last score of years or so the Dublin College of Physicians actually granted by its Charter to its licentiates the title of "Doctor of Medicine." At the passing of the Medical Act of 1858 it was the custom of the London College of Physicians to address all licentiates as Doctor, and in many old medical works by the most eminent of the profession in London may be seen upon the title-page, after the author's name, "M.D. of the College of Physicians of London." Now it may be readily seen that all this is so merely because it has been for generations the polite custom to style a

physician by the courteous title of Doctor, and this title has become a part of the rights and privileges of physicians from ancient usage. It is still more important in these days that all duly qualified physicians should do their utmost to uphold the dignity and status of their several Colleges, when so much of their powers was allowed to lapse by the passing of the Medical Act in 1858, and thereby M.B.'s and M.D.'s were permitted to practise medicine in all parts of Her Majesty's dominions without being first licensed by one of the Colleges of Physicians; and it should be borne in mind that an M.B. or an M.D. in virtue of such degree alone is not legally entitled to call himself a physician any more than an LL.B. or an LL.D. is entitled to call himself a barrister. It is not every barrister who is an LL.D., nor is it every physician who is an M.D. From time immemorial barristers have been called counsel, and from time immemorial physicians have been called doctors; and as it is the custom of Bachelors of Medicine to assume the title and prefix of Doctor (even in the face of by-laws of the Universities specially directed against such a practice), it cannot in common fairness be objected that Licentiates in Medicine should use the same title upon the strength of their being physicians. For the information of Dr. D. C. Black, M.D., whose letter of March 16th I have only just read, I should like to state, as an outsider, that I am not surprised at his two motions submitted to the Faculty of Physicians and Surgeons of Glasgow being rejected by a majority, because, with regard to the first, it was a self-evident fact that Licentiates of the Faculties, being surgeons, are not as such entitled to be styled Doctor; and, with regard to the second, that, two other independent Colleges being concerned, such a motion could not be regarded otherwise than as a gratuitous insult to those two Colleges, whose licentiates would probably deem it a piece of unwarrantable interference upon the part of the Faculty had such a motion been carried. I quite agree with Dr. Black that "if the mere Licentiate of the Faculty is to be permitted to assume the title of 'Doctor' on the strength of a single surgical qualification, what is to prevent the L.R.C.S. Edin., the M.R.C.S. Eng., the L.S.A., and the L.A.H. Dub. from doing the same thing?" But, Sirs, I take it that this is not the real point at issue, and I am humbly of opinion that if the governing body of the Faculty at Glasgow, together with the other medical corporations and medical faculties in the universities, would direct their attention to the putting down of quackery, the detection of bogus M.D.'s and of unqualified and illegal practice of all kinds, so rampant in advertisements particularly, they would earn the admiration of the profession generally, including that numerous body, the physicians, who are doctors but not M.D.'s.

I am, Sirs, yours faithfully,

Ramsgate, April 22nd, 1895.

CHARLES COTTON.

P.S.—As a remedy for this complaint, which is extremely chronic, I would like to suggest to all those of the profession who are interested in this matter that they should loyally place as affix to their names the source from which they derive their prefix, as, for example, the M.D. Lond. would appear as Dr. Blank, M.D. Lond.; the M.B. Oxon. as Dr. Blank M.B. Oxon.; the F.R.C.P. Lond. as Dr. Blank, F.R.C.P. Lond.; the L.R.C.P. Edin. as Dr. Blank, L.R.C.P. Edin., and so on. If this were universal, I feel sure that the petty jealousies of angry and disappointed men would no longer be periodically aired in the medical press; that the public would then be able to understand what their medical adviser really was; and that medical titles would become really titles of honour and like the various titles of knighthood, all of which have a common prefix but are vastly different in their sources, as, for example, the ordinary knight bachelors, bannerets, baronets, and those of the well-known orders.

"PROVISION FOR YOUNG IMBECILES."

To the Editors of THE LANCET.

SIRS.—I was very glad to see in your issue of the 30th ult. that Dr. Shuttleworth had drawn attention to the want of proper provision for young imbeciles. The question has been too long neglected. Four years ago, speaking at the North-Western Poor-law Conference, I drew attention to the fact that England will very soon have to take, not a second, but a fifth or sixth place as regards provision for the feeble-minded and epileptic. Four years ago a Bill was brought before the French Parliament, the first clause of

which reads as follows: "Chaque département est tenu d'avoir un établissement médical, destiné à recueillir les idiots et arrétés, à les éduquer et à les doter d'un métier manuel. Plusieurs départements pourront se grouper pour ouvrir cet établissement à frais communs." The Bill has since been amended so as to compel each department to provide two buildings, one for ordinary idiots and the other for epileptic idiots, and with this amendment I thoroughly agree on account of the pernicious effect that the association of epileptic and non-epileptic idiots has upon such cases. The cry has been raised against county councillors who, like myself, advocate proper provision that we are proposing to spend an enormous sum of money for which there would be no return. I believe that those who raise that cry are utterly ignorant of what they are talking about or they would know that the want of proper provision for these cases throws a very heavy burden upon the poor-rate. Returns obtained from the various boards of guardians show that in one year 715 weak-minded women passed through 105 workhouses, and at 56 workhouses it was stated that 366 of these women were leading immoral lives. Anyone who will take the trouble to go through the cases of weak intellect that were noted by the Metropolitan Association for Befriending Young Servants will find case after case where the mothers of illegitimate feeble-minded children are in the asylum or the imbecile wards of the various workhouses—a life-long burden on the ratepayers. It is not only the numbers in the workhouses we have to think about; there are large numbers of these cases at home where it is utterly out of the power of the parents to give them that amount of education which they are capable of receiving. The result is that as years roll on and the parents die these cases come on our asylum books. I am very glad to think that a very large number of the Lancashire boards are in favour of proper provision, and the matter is now under the consideration of the Plans Committee of the Lancashire Asylums Board, and I have little doubt but that practical results will follow.

I am, Sirs, yours truly,

JNO. MILSON RHODES, M.D. BRUX.,

Chairman of the Chorlton Board of Guardians.
Didsbury, Manchester, April 20th, 1895.

"DISLOCATION OF THE LOWER JAW DURING AN EPILEPTIC FIT."

To the Editors of THE LANCET.

SIRS.—Mr. C. F. Beadles mentions a case of this kind in THE LANCET of April 20th. Allow me to name another. A woman aged thirty-two, weak-minded, an epileptic since ten, dislocated her jaw in a fit four years ago; it was replaced with some little difficulty. Since then the same accident has occurred frequently, and now it does so once or twice a week. And the patient can and does produce it at will; if she is put out she will put her jaw out, and thus signify her displeasure. She is also able to reduce it herself.

I am, Sirs, yours faithfully,

Hornsey-lane, N., April 22nd, 1895.

EDWARD CALTHROP.

"THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON."

To the Editors of THE LANCET.

SIRS.—Our society have no intention of carrying on a newspaper correspondence with the committee of the Women's Hospital, for the truth cannot be elicited in that way. We must, however, mention that the resignations from our society, of which the hospital committee endeavour to make a strong point, were not of "senior members of the society" but simply of four non-resident members. Our society have acted in what they consider to be the public interest in demanding an inquiry. They have brought grave charges against the hospital—namely: (1) That the unusual frequency of operations performed and the number of instances in which operations have been advised though not performed, and now proved to have been unnecessary, taken in conjunction with the admission of the hospital committee that proper consultation has frequently been omitted, give rise to a grave suspicion that some of the operations have been unjustifiable; (2) that the management of the hospital is unsatisfactory; and (3) that the financial arrangements are incompatible with the term "free." And this society would add

that the omission of all mention of operation in the death certificates of certain patients who have died after operation is irregular and much to be deprecated.

If the committee of the Women's Hospital believe, as they say, that the action of the Medical Society is the result merely of a mean and despicable professional jealousy, and if, as they further say, the committee of the hospital have nothing to conceal, let them show the courage of their opinions and agree to an inquiry being held by impartial and competent persons. The Medical Society is prepared to justify its position before any such tribunal; but the suggestion that the hospital committee, who are accused of mismanagement, should sit in judgment on themselves is obviously absurd. If the committee of the hospital prefer that the matter should be thrashed out in a court of law, let an action for libel be brought. Our society will defend such an action and plead that the statements they have made are true in substance and in fact. Unfortunately, our society has no power to force an inquiry, but if after this the hospital committee decline it, the medical society and the thinking portion of the public will need no stronger evidence to convince them that there is something to conceal, notwithstanding the statement of the hospital committee to the contrary. The medical society has now discharged its duty to the public and to itself, and declines to have any further correspondence with the hospital authorities, except for the purpose of an inquiry.

We are, Sirs, yours faithfully,

R. D. H. GWILLIM.

NORMAN ALDRIDGE.

April 24th, 1895.

Hon. Secs., Southampton Medical Society.

To the Editors of THE LANCET.

SIRS.—With reference to a letter from Dr. Playfair in your issue of April 20th, I beg to say that a reply will be sent at as early a date as possible.

I am, Sirs, yours faithfully,

H. C. PHILLIPS, Hon. Sec.

Clifton-villas, Hill-lane, Southampton, April 24th, 1895.

PUBLIC AND PRIVATE VACCINATION.

To the Editors of THE LANCET.

SIRS.—As a public vaccinator I must protest against the doctrine of voluntary vaccination as put forward by a correspondent in your last issue. The fault lies in the law and not in the operation or operator—i.e., while it is compulsory on the part of public vaccinators to put from three to four or more vesicles on the arm the private practitioner revels in uncontrolled liberty, and virtually does as his patient bids him. I know a public vaccinator who puts on the regulation quartette in his official capacity, and actually stops at two where the mother backs her request or command with half-a-crown. Surely the law is faulty here, and the less said about the operator the better. The medical conscience is as elastic as the general conscience, and it never more required a tonic of the moral kind than in the present day.

I am, Sirs, yours faithfully,

April 23rd, 1895.

PUBLIC VACCINATOR.

LIFE ASSURANCE SOCIETIES.

To the Editors of THE LANCET.

SIRS.—I enclose copy of a letter received by me from an insurance agent in the neighbourhood. If his statement as to other medical men is true, which I doubt, it is evident that the medical profession has only itself to blame for its diminishing income. The only reason for thus sharing the fee is the hope of taking these cases from a brother practitioner; and this almost dishonest sharing is therefore a dead loss to the profession at large. I sent the letter to the head office, and received an answer expressing astonishment and repudiating and condemning any such arrangement.

I am, Sirs, your obedient servant,

DEVONIAN.

April 5th, 1895.

DEAR SIR.—In the event of my getting any life assurance proposals in your district, would you be willing to do as other medical men—allow me half your fee for examination? The fees are, as you know, 10s. 6d. for £100. Hence, if any one insured for £100 the fee would be 10s. 6d. Would you take 5s. 3d. and allow me the other 5s. 3d.? I enclose stamped and addressed envelope for your reply.—I remain,

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Effect of a Dream.

LOVERS of the marvellous have the opportunity of finding a strange coincidence in a story recently told at the coroner's court here. A girl aged thirteen disappeared from her home; her disposition was taciturn and sulky, which, coupled with her expressed apprehension of water, led to the worst fears being entertained by her parents. Her body was subsequently found in the canal. The aunt of the deceased, hearing that the girl was missing, dreamt that she was walking along the bank of the canal, and while looking into the water saw the face of her niece. The police were asked to drag the canal at the spot indicated in the dream; they did so, and at once found the body. Such was the simple story told at the inquest, a statement which if made in a novel would be ascribed to the powers of the writer's imagination.

Death of Mr. John Baines.

At the age of seventy-six this well-known figure in the local medical profession passed away on the 20th inst. Mr. Baines was essentially a type of the old school. Disdaining the aid of horses he daily walked his round for many years. His advice was held in high esteem by a large number of the poor, by whom he was considered a high authority, particularly in cases of midwifery. His habit was to wear a full coat with pockets arranged all round, containing midwifery forceps, bottles, and a number of useful things, not the least important of which was a gimlet which he was wont to stick into a convenient place to hang up his coat. In some of the poorer tenements he visited this precaution was one which commended itself, and in many ways proved of value. His genial form and kindly manner will be missed among a considerable number of the working class in the town.

Female Slavery.

The periodical discussion about the long hours of shop assistants has lately been revived. The tendency of things to find their level by the ordinary action of supply and demand appears to be unequal to the solution in this instance. Too many female shop assistants and not enough servant girls—this is the main cry. Some are disposed to add to the category of ills of these two classes the grievances of nurses and teachers. With some show of reason it is argued that nurses who have to walk long distances to attend to their patients necessarily arrive in a tired and often jaded condition, in which their services cannot be adequately rendered. No doubt under these circumstances the patients suffer. The remedy could well be applied by limiting the area of their duties, which would mean an increase in the number of nurses in any given district. Occupation, and efficiency in the work done would be the outcome of a laudable policy, which would result in a greater good to a greater number.

Saltley Sewage Farm.

The work of the Tame and Rea District Drainage Board, which comprises in its area the disposal of the sewage of Birmingham and adjacent districts, is of an extensive and interesting nature. The board carries on an extensive market gardening business, as well as that of stock-breeding and feeding, milk selling, and fruit growing. The farm consists of 1300 acres, of which 800 are irrigated by gravitation, 247 are occupied by roads, buildings, works, &c., and fifty-three are of turf for grazing &c. The labour on the sewage farm costs about £6 per acre. Various details connected with the produce and its value have been set forth in an interesting manner, which affords matter for comparison of agricultural items, and will repay perusal. The total amount of loans negotiated on account of the farm is £426,115 and the whole of that amount has been expended. The sum contributed by the rates is about £34,000 per annum. The average loss on the farm accounts for the last seven years has been £2688 per annum, many reasons of a satisfactory kind being adduced to account for this deficit. It is stated that the area of the farm is to be increased soon by 180 acres, arrangements for the purchase being already made. An undertaking of such magnitude possesses an interest for the ratepayers, and affords ground for reflection in times of depression in trade and agricultural competition.

April 23rd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Death of the Rev. Canon Whitley, D.D.

ON Monday last, at the vicarage of Bedlington in Northumberland, died the Rev. Canon Whitley at the ripe age of eighty-seven years. There was no better known or more universally beloved clergyman in the north of England than the deceased canon. Senior wrangler in 1830, he came to Durham in the year 1833 and was intimately connected with the University from that time till 1855. In 1854 he became vicar of Bedlington. At the death of Dr. Headlam, the first President of the College of Medicine at Newcastle-upon-Tyne, Dr. Whitley, then an honorary canon of Durham, was unanimously elected President, and continued in office from 1864 till the year 1872, when he was succeeded by the late Dr. E. Charlton. At Bedlington Dr. Whitley was identified with every public movement. For many years he presided at the Bedlington Petty Sessional Court and at the local board. Last year he laid the foundation stone of the local waterworks, when he was presented with a silver trowel by Mr. J. Trotter, who finished his remarks with the following words: "In short, the name of Canon Whitley was a household word in every house in the district, and was synonymous with all that was good, just, and benevolent." Few of the men with whom the Canon was intimate remain, but his old friend and colleague, Dr. Dennis Embleton, is still in Newcastle, the Nestor of his profession. Canon Whitley might have been with us yet but for an unfortunate accident. A few weeks ago he fell whilst alighting from his carriage, and the shock so upset him that he died.

Dental Hospital for Newcastle-upon-Tyne.

In these days of special hospitals it is strange that a city of the size of Newcastle should be without a dental hospital. It is mainly due to the energy of Mr. Markham, a leading dentist in Newcastle, that yesterday the Right Worshipful the Mayor opened, in a prominent thoroughfare, a dental hospital for the town and district. The movement has been well supported by the dentists, and there can be no doubt that the hospital will be a great success and a boon to the poor of the neighbourhood.

Illegal Sale of Chlorodyne.

At the Newcastle-upon-Tyne county court a few days ago a druggist's assistant was prosecuted by the Pharmaceutical Society for selling chlorodyne. The defence was that the assistant thought the drug was a patent medicine. A fine of £5 was inflicted by Judge Greenwell, and his honour remarked, "An apprentice is absolutely prohibited from selling poisons." Considerable importance must be attached to this action of an apprentice by the Pharmaceutical Society, as a barrister was sent from London to conduct the case.

Newcastle-upon-Tyne, April 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University General Council.

THE statutory half-yearly meeting of this body was held last week, and as there was no business of outstanding importance there was a small attendance. Sir William Muir presided. The report by the committee on ordinances was submitted, and dealt with the ordinances issued since last meeting of the council. The ordinance dealing with the powers of the chairman of the general council had been modified in the direction recommended by the council. Approval was expressed of a new ordinance repealing a section of a previous one in which it was provided that "no person shall be appointed an examiner who is not a member of the general council of one or other of the Scottish Universities." The report of the finance committee was then submitted, which shows that last year there was a surplus of £4500. It states that "the expenditure continues to show a tendency to increase, as is obviously necessary if the University is to maintain its high standard of efficiency in competition with other academic institutions. In particular the staff of lecturers has been and is being considerably increased. It is perhaps not strictly within the province of the committee to

criticise the *personnel* of the appointments which have in some cases been made to lectureships, but they desire to say that the method frequently adopted of appointing a professor's assistant to lecture upon a subject cognate to the chair is not calculated to achieve that independence of thought and action which is needed for the higher and specialised branches of knowledge." The total number of students in medicine was last year 1560 against 1951 in 1891-2 and 1736 in 1892-3.

Unusually High Death-rate in Edinburgh.

During the month of March the total number of deaths was 820, making a death-rate of 35.97 per 1000. From 1890 to 1894 the death-rate varied from 15 or 16 to over 20 per 1000 during the corresponding month. The deaths from diseases of the chest were 438 and from zymotic diseases 111. The zymotic cases included 85 from measles, 6 from scarlet-fever, and 4 from small-pox.

Graduation Ceremony at Edinburgh University.

The spring graduation ceremony took place last week, the ceremony at this time being mainly for the conferring of honorary degrees and degrees in arts. Professor Seth delivered the address and dwelt upon the changes in the arts curriculum brought about by the Universities Commission.

Memorial to Dr. Peter Lowe.

A tablet to the memory of Dr. Peter Lowe, the founder of the Faculty of Physicians and Surgeons of Glasgow, has recently been erected in the nave of the Cathedral as the result of a movement on the part of the council of the Faculty. Dr. Lowe was buried in the Cathedral churchyard, one of the prominent features in which is a quaint and curiously carved monument erected over his grave. This monument bears the date 1612, and it is its somewhat time-worn condition that has suggested the necessity for another memorial. This has taken the form of a magnificent bronze tablet set in a marble slab; it bears in relief a number of figures, the principal one symbolising the spirit of healing. Underneath is the inscription copied from the old tomb. The ceremony of unveiling was performed by Dr. Bruce Goff, the President of the Faculty, in the presence of a number of the leading practitioners from Glasgow and the neighbourhood.

Graduation Ceremony at the Glasgow University.

The spring graduation ceremony took place on the 17th inst. As is usual at this time of the year the great majority of the graduates came from the Arts and Divinity Faculties. Six gentlemen, however, received the degree of M.D., one of these, Dr. P. H. Abercrombie of London, being awarded commendation for his thesis on Turbinotomy in Nasal Stenosis: analysis and notes of sixty-six cases. Amongst those who received the honorary degree of LL.D. were Professor Thorpe, F.R.S., chemist to the Inland Revenue Department, Somerset House, and Dr. Laurence Waddell, I.M.S. The last mentioned is a graduate in medicine of the University, and during his residence in India has distinguished himself by his studies of natural history and of the native religions. One specially interesting feature of the ceremony was the "capping" of two ladies, each of whom received the M.A. degree. These are the first ladies who have taken the arts degree in the University of Glasgow. Medicine has here been beforehand, the Queen Margaret College of the University having provided four medical graduates in 1894.

The Medical Schools, Glasgow.

The summer session at the University and the extra-mural schools commenced on the 22nd inst. At Anderson's College several changes in the teaching staff have taken place. Dr. T. K. Dalziel (who has previously lectured on forensic medicine) has been appointed lecturer on Surgery in the place of Dr. James Dunlop, resigned. The vacancy thus created in Forensic Medicine has been filled by the appointment of Dr. R. M. Buchanan. Dr. Erskine takes the place of Dr. Barr (transferred to the University) as lecturer on Diseases of the Ear; and Dr. Pearson Munro becomes lecturer on Public Health.

Presentation to Dr. T. K. Dalziel.

The members of the Glasgow Police Force have presented Dr. T. K. Dalziel with a handsome hall clock bearing a suitable inscription on the occasion of his retirement from the post of casualty surgeon to the central police division. Dr. Dalziel has held this position for ten years, and one of his duties has been the instruction of the police in ambu-

lance work. The presentation was made by Superintendent Orr.

Clinical Demonstrations for Practitioners.

The members of the Glasgow Southern Medical Society, on the invitation of Dr. Middleton, substituted for their usual evening meeting on the 11th inst. a clinical demonstration in the Royal Infirmary. Dr. Middleton showed a number of patients, charts, microscopic specimens, &c., and in the course of his remarks expressed the opinion that it would be a great advantage to many members of the profession and would considerably extend the usefulness of the hospitals if some arrangement were made by which the practitioners of the city could have an opportunity of systematic attendance on clinical work in the infirmaries. He thought this could only be done satisfactorily by appointing a certain hour, say one day a week, when the physician in charge of the wards would attend and give demonstrations specially for practitioners; qualified medical men could not be expected to attend at the ordinary clinical instruction of medical students, and moreover, elementary teaching was not what was required. If his suggestion was adopted they would have something in the shape of a permanent post-graduate clinical course. On the motion of Dr. John Brown, the President of the society, a cordial vote of thanks was passed to Dr. Middleton for his instructive and interesting demonstration, and the members generally expressed warm approval of his proposal to increase the facilities for post-graduate clinical work.

Glasgow: Women Candidates for the Triple Qualification.

As showing the increasing popularity of medicine as a career for women, the number of women amongst the successful candidates at the April examinations for the Triple Qualification is somewhat striking. In the Final Examination of 44 successful candidates 6 were women; in the Third Examination the women numbered 6 out of 11 successes; in the Second 6 women passed and 22 men; and in the First the numbers were 5 women and 7 men.

The Royal Infirmary, Dundee.

About the end of the present year the Dundee Royal Infirmary will be in possession of a new operating theatre, designed according to modern requirements and embodying all the most recent suggestions and improvements. It will be a spacious, well-lighted room, provided with seats for forty students; the floor will be made of Taratza and will measure thirty feet by twenty-five; the walls will be covered with smooth tiles. Ample provision has been made for the admission of light; there will be a large circular skylight in the roof, a very wide bow-window on the north side, and a smaller window on the west side. Between the wards and the theatre is the anæsthetic room, the communication of which with the theatre is closed by an iron folding door. The washing basins are of glass and their waste-pipes discharge outside into the open air. Arrangements will be made for promptly washing every part of the interior of the theatre with a hose-pipe. There is a special room for the sterilising of instruments and dressings. Both gas and electric light are provided, and warmth is supplied by steam pipes and radiators. The estimated cost of the new structure is £1500.

April 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Treatment of Hydrophobia.

At a meeting of the Armagh board of guardians, held on April 16th, a resolution was carried unanimously that as, owing to the absence in Ireland of any Pasteur institution for the treatment of hydrophobia, patients have now to be sent to Paris at large expense and often at great personal inconvenience, the time has come when a Pasteur Institute should be established in Dublin, and that the Local Government Board be requested to take such steps as may be necessary to meet so grave a public requirement.

Omagh District Lunatic Asylum.

At the last monthly meeting of the governors of this asylum it was decided to increase the salary of the assistant resident medical superintendent, Mr. West, to £215 per annum.

North of Ireland Branch of the British Medical Association.

The spring meeting of the above society was held in

Belfast on April 18th and was largely attended. Dr. Lindsay introduced a discussion on Pneumonia, dealing with a variety of its features, as bacteriology, etiology, temperature, diagnosis, treatment, &c.; and Professor Whitley, Dr. Thompson (Omagh), Dr. Calwell, Dr. Bingham, Dr. Boyd, and Dr. Dempsey also spoke. Professor Byers then read a paper on Recent Views as to the Management of Labour, in which, amongst other matters, he dwelt fully on the great importance of abdominal palpation in the conduct of labour, a method which gave more information than vaginal examination to the medical attendant, and was safer for, and less objectionable to, the patient herself. In the discussion which followed Dr. Fraser, Dr. Kevin, Dr. Darling (Lurgan), and Dr. Dempsey took part. Dr. Howard Sinclair showed a case of Spastic Paralysis in a child; Dr. Darling, a huge Fibroma of the Ovary; and Professor Byers, the specimens (Cystic Ovaries, Papilloma of Fallopian Tube and Broad Ligament, and portion of Enlarged Uterus) removed in a case of double ovariectomy and hysterectomy. It was decided that in future the meetings of the North of Ireland Branch shall be held at twelve o'clock, as at this time country members will be better able to attend.

Downpatrick Water-supply.

At the meeting of the Downpatrick board of guardians held on April 20th a declaration in reference to the present state of the storage reservoir at Tanaghmore was received from Dr. Heron and Mr. Maguire, two of the members of the Ratepayers' Protection Committee, and was ordered to be inserted on the minutes. Among other matters they say the greater part of the reservoir bottom consists of soft peat bog without any firm skin or upper layer on it; and that portions of the surface appear to have been loosely sprinkled with stones forming a single thin layer wholly insufficient as a covering for the bog to keep the water from contact with it and consequent pollution. The water that remained in the reservoir they found exceedingly foul and exhibiting a scum on the surface, and showing evidence of contact with boggy material.

The Ambulance Waggon.

In 1892 one of the Belfast merchant princes, Mr. Allen, of Stormount Castle, presented a fully-equipped ambulance to the city. This was on Aug. 2nd, 1892 and during the remainder of that year it was called upon 16 times. In 1893 there were 45 calls; in 1894, 392 calls; and up to the present date of the current year, 191 calls; in all, 644 sufferers have been relieved since Mr. Allen's gift. The expense of the horsing and the working of the waggon has been met by the Police Committee of the City Corporation, who gave it in charge to the Fire Brigade. Mr. Parker (the superintendent of the Fire Brigade), himself an enthusiast in ambulance work, and his men, who have been trained in ambulance work by Dr. H. L. McKisack, have undertaken this duty, and are doing it most admirably. It became evident to the city coroner, Mr. Finnegan, that a second ambulance would be needed, and he brought the matter before the local committee of the St. John Ambulance Association, who cordially approved of the scheme, and appointed a subcommittee to carry out the project. The coroner raised the necessary funds for the purchase of the new waggon, which on April 20th was named "Londonderry" by the Marchioness of Londonderry. In doing so she said she was herself the proud possessor of the certificate of the St. John Ambulance Association. She trusted the waggon would be the means of relieving a great deal of suffering in the future. The ambulance vehicle is the largest pneumatic-tyred in the world. The body of the carriage has been made lofty to obtain the very best ventilation. It will carry two patients, with one, two, or three attendants. The springs are specially made to prevent vibration, and the wheels are rubber-tyred so as to minimise noise. The wood work is of ash panelled with walnut and highly varnished, so that it can be washed and disinfected if necessary. There is a folding step to work with the doors as they open or shut. Altogether, it is a most perfect machine of its kind.

The Mountstewart Boating Accident.

Nothing further has transpired in reference to the sad boating accident to Lord Londonderry's servants at Strangford Lough, County Down. It is said that an oar and a luncheon basket have been found, but no clue whatever has been discovered as to the bodies, and the report that the boat has been found is not correct. There is an extremely strong current at the mouth of the Lough, running at the rate of ten miles an hour between Portaferry and Strangford, and it

is feared that the bodies may have been carried out to sea by the tide.

The Cork Mercy Hospital.

The annual report of the Mercy Hospital has been issued by the board of governors. It points out that the hospital has been enlarged by the addition of two private houses adjoining it. The number of surgical and medical extern patients has diminished somewhat owing, it is suggested, to a change in the hours of attendance; but a large increase has taken place in the department for diseases of the eye, ear, and throat, the numbers recorded for that special branch being 14,453 externs last year and 11,432 the previous year, and 134 operations this year and 22 the previous year. The balance-sheet showed that the hospital is in a healthier condition financially than it had been some previous years. An anonymous correspondent writing to one of the daily papers directs attention to the above figures, and makes the modest proposition that part of the funds specially collected for the Ophthalmic Hospital should be handed over for the benefit of the Mercy Hospital.

A Strange Case of Attempted Suicide.

A gentleman holding a very important Government appointment endeavoured to commit suicide in a wood near Crosshaven under very sad circumstances. Owing to his mental condition having caused grave anxiety to his relatives special precautions were taken for his protection; but he managed to elude the vigilance of his attendant, and when discovered it was found that he had cut his throat with a razor and inflicted frightful wounds on his face and left forearm. It was afterwards ascertained that prior to leaving his residence he had tied his hands together, and the wound on his left forearm was probably inflicted in the endeavour to set himself free. From a psychological point of view it would be interesting to analyse the train of thought that passed through the unfortunate patient's brain prior to his having tied his hands. Did he feel that he was being goaded on to suicide by an irresistible impulse, and whilst reason was still comparatively dominant did he take such precautions as he could devise for his safety; or, on the other hand, which is perhaps less likely, was he anxious to save his relatives from the stigma attaching to suicide, and did he endeavour to make the case appear to be one, not of self-destruction, but of murder? The desire to save the feelings of relatives was singularly exemplified some years ago by the action of a distinguished gentleman who committed suicide and had left beside him a slip of paper on which was inscribed the one word "Mad."

Rabies in Cork.

Rabies is causing a good deal of concern to some of the boards of guardians in the county of Cork, as, apart from any other consideration, the amount of expenditure involved is becoming considerable. If the guardians order the destruction of animals bitten by a rabid dog they are obliged to recompense the owners; but the principal expense is incurred in sending to Paris any of the poorer classes who may have been bitten by rabid dogs. The usual custom is to have the patient accompanied by a relieving officer, and travelling expenses, together with the cost of maintenance, come to a considerable sum.

The Local Government Board sent a communication to the Bansha Dispensary Committee informing them that Dr. Browne, medical inspector, had reported that on visiting Bansha Dispensary he found the medical officer in a most excited state and evidently suffering from mental aberration. The inspector recommended that the medical officer be relieved from duty, and the committee at once acted on the suggestion.

April 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Influenza followed by Infection with Bacillus Coli.

DR. SIREDEY¹ had recently under his care a man aged twenty-nine who, admitted into hospital on the fifteenth day of a well-marked attack of influenza, with slight congestion of the lungs and very limited effusion into the left pleural cavity, had besides a temperature oscillating around 40° C. (104° F.), and also intense albuminuria and symptoms of

¹ Société Médicale des Hôpitaux, April 19th, 1895.

serious general infection of the system. Despite the absence of typhoid stools, the onset of coma on the third day after admission led to puncture of the spleen for diagnostic purposes. The product of the puncture yielded no trace of Eberth's bacillus, but there was discovered the bacillus coli, which was also found in the urine and in the blood of the lungs. The man died with uræmic symptoms. The necropsy failed to bring to light any typhoid lesions. The left kidney was the seat of intense inflammation, there being present also a voluminous white infarct. This case reminds one of the forms of infective nephritis studied by Vidal, and which were characterised by typhoid symptoms. It is probable that many infective diseases besides influenza end fatally on account of the onslaughts of this mischievous germ on enfeebled tissues.

Microbes and Wood Pavement.

The grave charge has been formulated against wood pavement of constituting a favourable nidus for the cultivation of germs; indeed, the theory has been advanced that the serious epidemic of influenza that visited this capital in 1889-90 owed its inception to this cause. M. Miquel now comes forward to reassure us on this head by proving experimentally that wood paving is not so deleterious to public health as has been represented. A décigramme of sawdust is collected from the bottom of a hole bored into the wood pavement by means of a drill sterilised in a flame and then allowed to cool, the sawdust is diluted with 100 c.c. of sterilised water, and the mixture is sown on nutritive gelatine. The number of colonies is counted at the end of thirty days of culture at a temperature of 20° to 22° C. Newly laid pavement composed of pine blocks yields a dust at a depth of 3 centimetres which gives 650 germs per gramme of dust, or rather less than one per milligramme. Pavement laid six, eight, or nine years ago was likewise examined, care being in this case taken to remove by previous scraping to a depth of 1 or 2 millimetres the superficial crust developed by the traffic. In the pavement of the Faubourg St. Honoré, composed of Landes pine and laid in 1887, 1 gramme of sawdust at the surface produced 1,400,000 bacteria. At a depth of 5 centimetres this number had diminished to 4200. In pitch-pine pavement laid in 1889 in the Rue St. Lazare and the Rue de Rome the superficial sawdust yielded per gramme 1,004,000 bacteria, whereas at a depth of 2 centimetres only 500 were found. In the same way the Rue Marbeuf pavement, laid in 1886, gave at the surface 1,365,000 germs per gramme, and 4200 and 3100 at depths of 2 and 5 centimetres respectively. This goes to prove that wood pavement does not allow any penetration of germs, which remain adherent to the superficial layers. Paris mud, dried at a temperature of 30° to 35° C. yields an average per gramme of pulverised mud of from 40 to 50 million bacteria.

Antistreptococcic Serum.

Inquiries having been addressed from England to Messrs. Roberts and Co., the well-known chemists of the Rue de la Paix, regarding the possibility of procuring a supply of this product, the matter was referred to me. I at once wrote to Dr. Roger, a translation of whose courteous reply I append for the information of your readers:—

"4, rue Perrault.
"DEAR FRIEND,—Heartily thanks for the note which you addressed to THE LANCET, and I am very glad to learn that English medical men have taken an interest in my modest researches. Until now I have vaccinated only two horses, these providing me with quite an insufficient amount of serum; the animals are bled every fortnight or twenty days, and at present I furnish those medical men with serum who require it. But, as you see, no practical solution presents itself. It would be well if some druggist prepared it, but a perfectly reliable man would be necessary. Meanwhile I distribute serum whenever I have it, and I keep a little for the purpose of continuing my researches. With best thanks and sincere regards,—Yours,

"April 23rd.

ROGER."

ROME.

(FROM OUR OWN CORRESPONDENT.)

Cerebro-spinal Meningitis.

SOMETHING like a panic pervaded the arsenal of Spezia from the comparatively sudden and widely diffused malaise of a clearly infective character that recently visited the personnel, naval and military. It was at its worst in the Vivera barracks and on board the *Italia*, and before the

medical authorities had time to report upon it a clamour arose in the lay press as to the remissness of the hygiene and the general incompetence of the sanitary and clinical service. Official inquiry has promptly put an end to these charges. There has been neither individual remissness nor general incompetence. The "malaise" in question has turned out to be cerebro-spinal meningitis, a too familiar scourge of the armies and navies of all countries, and its prevalence as well as gravity has been reduced, or rather dwarfed, to quite inconsiderable proportions. Of the combatant force it seems only six were attacked, three of them belonging to the crew of the *Italia* and three to the 93rd Regiment of Infantry quartered in the Vivera barracks. The non-combatant cases were really *une quantité négligeable*. There have been no deaths, and the result of the inquiry has been to confirm once more the established induction that cerebro-spinal meningitis is an infective malady which, *par excellence*, runs an epidemic course from December to June, and is most formidable in the spring; that it is favoured by the assemblage of individuals *en masse*, as in garrisons and on board ship; and that among these it selects the younger recruits, particularly after severe drill or work. Another finding of the official inquiry has been that the *Italia* more than maintains the character of the magnificent Italian iron-clads for hygienic efficiency, and that the Vivera barracks have a quite satisfactory record from a sanitary point of view. I may add that the attempt to prove that the epidemic had been propagated to the civilian population broke down completely, after the special report counter-signed by the Syndic of Spezia, Signor Paita, member of the Chamber of Deputies.

Argon.

One of our ablest physicists, Dr. Massimo Tortelli, has just delivered a lecture, before the Circolo dei Naturalisti, on "Argon e la Chimica dell' Atmosfera," argon being the new atmospheric gas discovered not more than three months ago. Cavendish, he showed, had, before his death in 1810, succeeded in isolating, but not in identifying, this body, owing doubtless to the imperfect means of analysis available at that time. Chemical science, indeed, is full of such partial anticipations—Avogadro's hypothesis, for example, having been so far in advance of his contemporaries that it had fallen into oblivion until, with the discovery of new facts, it was resuscitated and put on a really scientific basis by the present occupant of the Chair of Chemistry in the Roman University, Professor Stanislas Cannizzaro. Dr. Tortelli's lecture, full of incidental matter peculiarly interesting to the medical climatologist, is one of a series which evokes the greatest interest in the profession. The lecture announced for the week following is on the much-debated theme "Il Lavoro Utile dei Microbi nella Società," and will be delivered by Dr. Giuseppe Sanarelli, Professor of Hygiene in the University of Siena.

The Health of the Pope.

The Holy Father, in spite of the fatigues inseparable from Easter-tide, is in good health and eager to get out of doors. Since December last he has not once descended to his favourite Vatican Gardens, where, besides enjoying the incomparable amenity of the walks and parterres and shady tufts and fountains, he always interests himself in watching the cultivators at work and in questioning them as to their progress. The Commendatore Dr. Laponi, however, has postponed this open-air exercise till the weather has become steadier and warmer, the snow still lingering on the Apennines and acting as a refrigerator over all Central Italy.

Dr. Baccelli.

The general elections are imminent, and a strong committee has been for some time at work to secure the return of the Minister of Public Instruction, Dr. Guido Baccelli, who sits for the third division of Rome. There is no doubt of his coming in at the top of the poll, his popularity as a citizen being hardly second to his prestige as a Minister and his distinction as a clinical teacher and consultant.

Professor Karl Posner.

Among the eminent *forestieri* now with us the Professor of Internal Medicine in the University of Berlin has been cordially welcomed at the Accademia Medica di Roma. He has already seen much of our clinical work under the congenial auspices of the President of the Accademia, Dr. Baccelli.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Antitoxin Treatment in Austria and Hungary.

EVER since that memorable meeting of the Vienna Medical Society when Professor Wiederhofer entered the lists against Professor Kassowitz the question of serum treatment has been the order of the day. The medical journals publish articles on both sides, and sometimes new remedies are proposed for diphtheria, hydrogen peroxide for instance. In a report presented at a meeting of the Hungarian Medical Society Professor Purjesz (Klausenburg) accused Dr. Behring of having over-hastily published his remedy, and Dr. Alldi related a case where the prophylactic injection of antitoxin (100 normal units) had caused fatal nephritis in a girl three years old. On the other hand, Dr. Vucetic (*Vienna Medical Journal*) notes the following effects of antitoxin: (1) it has an advantageous influence, and this influence may be accelerated by early injection; (2) the false membranes are more easily loosened; (3) the unfavourable effects for the greater part are dependent upon idiosyncrasy; and (4) the antitoxin treatment is a temporary prophylactic against diphtheria. But between the eulogists and the opponents of antitoxin stand those who follow the old principle: *Medio tutissimus ibis*.

Disintegration of Bodies after Interment.

A lecture on the above subject was recently delivered by Dr. Kratter, Professor of Forensic Medicine at Gratz, at a meeting of the society called "Flame," which advocates the practice of cremation in Austria. The series of changes begins with the distribution of the blood. When the blood is no longer propelled by the action of the heart it sinks to the dependent parts of the body, following the law of gravitation. The vessels soon become unable to resist the blood pressure, and the consequence is that the blood and the fluids of the tissues become extravasated, elevating the epidermis in blisters, which burst and allow all the fluid to escape. This process takes two months. From the complex molecules composing the human body more simple combinations are gradually formed, and in an early stage the albuminates give rise to ptomaines, products resembling vegetable poisons. What we term cadaveric poisoning is not caused by the above-mentioned substances, but by living organisms. Many insects, especially flies, assist in the decomposition of the corpse. When one genus of these perishes a second arrives to continue the work of destruction. First come the muscle destroyers, then the fat destroyers, and finally those that form humus. The soft parts of a full-grown body are decomposed within two years, a space of time which may be prolonged by want of some conditions, such as warmth, moisture, and the access of air. The fluids of the corpse generally suffice to start the decomposition; if they are deficient the bodies turn to mummies, such as have been found in some graves of Germany and Piedmont, whereas abundance of moisture produces adipocere. Seeing that the same oxidation products (CO_2 , HNO_3 , H_2SO_4) occur in the last stage of decomposition as in combustion these processes are to be considered as ultimately identical.

Dermatological Society and Congress.

At the last meeting of this society Dr. Nobel, assistant to Professor Lang, exhibited three cases of Lupus which had been treated by excision and transplantation, the diseased tissues having been removed by dissecting off the entire floor of the ulcers. The wounds healed and the scars resulting from them were not very perceptible. In consequence of these gratifying results Professor Neumann recommended the radical treatment, except in the case of lupus on the ala nasi, where skin grafting and cauterising were more successful. The general secretary of the congress to be held under the auspices of the German Dermatological Society at Gratz on Sept. 23rd, 24th, and 25th has announced that there are two subjects to which special attention will be directed: (1) Pemphigus, introduced by Kaposi (Vienna) and Roentgen (Berlin); and (2) Syphilis, introduced by Neisser (Breslau) and Caspary (Königsberg).

Echinococcus Cyst of the Omentum.

Dr. Frank at a recent meeting of the Vienna Medical Society exhibited an echinococcus cyst remarkable by reason of its position. The patient, a woman twenty-six years of age, suffered from a tense fluctuating tumour, which could be felt

above the symphysis pubis, and was supposed to be cysto-ovarian. The cyst was removed by laparotomy and was found to be of an ovoid form, measuring in its long diameter 17 centimetres ($=6\frac{1}{2}$ inches) and in its transverse diameter 13 centimetres ($=5\frac{1}{4}$ inches). It contained a turbid yellow fluid, the sediment of which consisted of scolices in a state of fatty degeneration, whereas the wall of the cyst was covered with numerous sterile secondary vesicles. In 1892 Professor Albert exhibited a similar case, and the late Professor Billroth explained that cysts of the omentum owed their origin to the bursting of an echinococcus of the liver. In this case no implication of the liver was observed during the operation.

April 22nd.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board in the subjects indicated under the "five" years' regulations, viz:

Part I., Chemistry and Physics:—

Archer, John Alfred, Mason College, Birmingham.
Ashmore, Arthur, Yorkshire College, Leeds.
Barron, Robert Macpherson, Guy's Hospital.
Blatchford, William Nichols, University College, Bristol.
Bradbury, John Cecil Openshaw, Cambridge University.
Brownrigg, Joseph, University College, Liverpool.
Burgess, Percy Charles, Middlesex Hospital.
Carlyon, Arthur Farrington, Middlesex Hospital.
Carr, Henry Brookes, Guy's Hospital.
Charlton, John Fitzgerald, Charing-cross Hospital.
Cook, Lewis, Westminster Hospital.
Cope, Gilbert Edgar, Westminster Hospital.
Daly, Frederick James Purcell, London Hospital.
Driscoll, Louis Cornelius, Charing-cross Hospital.
Dyer, Walter Percy, St. Bartholomew's Hospital.
Gee, Claude Alfred Heath, University College, Bristol.
Harris, Robert James, St. Thomas's Hospital.
Hayes, Arthur Herbert, St. Bartholomew's Hospital.
Hodgson, Robert Edward, St. Mary's Hospital.
Humphreys, Jack Edmund, Charing-cross Hospital.
Johnson, William, Guy's Hospital.
Kirkconnel, Edward Birchall, Owens College, Manchester.
Lamborn, William Alfred, Middlesex Hospital.
Longthorn, Jonathan Harry, Yorkshire College, Leeds.
May, Harry John, London Hospital.
Nunn, John Wilfred, St. Bartholomew's Hospital.
Palmer, William Grimes, Cambridge University and Guy's Hospital.
Perks, Alfred, Guy's Hospital.
Pritchett, George William Morris, University College, London.
Purkis, Dennis Woodley, St. Bartholomew's Hospital.
Rickard, Cecil Rodney, Middlesex Hospital.
Sanders, James Herbert, London Hospital.
Sells, Charles Bernard, Guy's Hospital.
Shoosmith, Louis Stephen, St. Mary's Hospital.
Speers, William Gordon, St. Mary's Hospital.
Stevens, Stanley, St. Bartholomew's Hospital.
Stratford, Howard Blenheim Martin, Oxford University.
Thomas, Harold Sebert, St. Bartholomew's Hospital.
Thwaites, Henry, London Hospital.
Tongue, George Preston, St. Paul's School, West Kensington.
Ward, Percy Harold, Guy's Hospital.
Wood, Charles Herbert, University College, London.
Wright, Thomas James, Guy's Hospital.

Part II., Practical Pharmacy:—

Allen, Walter Francis, London Hospital.
Bryan, Clement Arthur Douglas, Guy's Hospital.
Deas, Percival Bruce, St. Mary's Hospital.
Erlinger, Frederick Kinard, University College, London.
Francis, William Vere Chalmer, Westminster Hospital.
Griffith, John Richard, London Hospital.
Holmes, Willmot, St. Mary's Hospital.
Oxley, James Charles Stewart, St. Thomas's Hospital.
Pocock, Arthur Robert George, University College, London.
Sherren, James, London Hospital.
Williams, Eric Wadlow, St. Mary's Hospital.

Part III., Elementary Biology:—

Asten, Walter, Mason College, Birmingham.
Atkinson, George James Smith, St. Paul's School, West Kensington.
Bagshawe, Herbert Vale, Guy's Hospital.
Baker, Dodington George Richard S., University College, London.
Baker, William Lincoln, St. Mary's Hospital.
Barlow, Edward Hovenden, Guy's Hospital.
Bartlett, Ernest John Reeve, King's College, London.
Bartlett, Basil Sorley, University College, London.
Beard, Joseph, Firth College, Sheffield.
Bell, John Cunningham, University College, London.
Bennett, William Frederick C., Firth College, Sheffield.
Betts, Alfred John Vernon, Westminster Hospital.
Biggs, Reginald, St. Bartholomew's Hospital.
Black, Guy, St. Thomas's Hospital.
Blake, Percy Ryall, London Hospital.
Bolman, Christopher Osmond, University College, Bristol.
Boursot, Basil John, St. Bartholomew's Hospital.

Brown, Thomas Walker Stanley, Guy's Hospital.
 Brown, Thomas Warren, St. Bartholomew's Hospital.
 Butler, Harold Branson, St. Bartholomew's Hospital.
 Carter, Robert Markham, St. George's Hospital.
 Cathcart, George Elliott, St. Bartholomew's Hospital.
 Causton, Albert Edward, Guy's Hospital.
 Clarke, Edward Murray, University College, Cardiff.
 Cocke, Robert Sturgeon, King's College, London.
 Compton, Maurice Winzar, St. Thomas's Hospital.
 Compton, Spencer Langley, University College, Bristol.
 Cook, Lewis, Westminster Hospital.
 Cooke, Reginald Torriano, St. Bartholomew's Hospital.
 Cooper, Walter Edward, University College, London.
 Corbett, Sidney D'Alton, St. George's Hospital.
 Cornish, Charles Vivian, St. Bartholomew's Hospital.
 Cornish, Phillip Alfred, Middlesex Hospital.
 Crawley, Herbert Edward, Oxford University.
 Crompton, Richard Henry, University College, Liverpool.
 Davies, Daniel, St. Bartholomew's Hospital.
 Dismore, Henry Bertram, Guy's Hospital.
 Dodd, Stanley, Westminster Hospital.
 Douglass, William Claughton, St. Bartholomew's Hospital.
 Dowman, Charles Darby Allen, St. Bartholomew's Hospital.
 Dudding, John Scarbrough, London Hospital.
 Dudgeon, Leonard Stanley, St. Thomas's Hospital.
 Durand, William Arthur, Westminster Hospital.
 Edington, Ernest Adolphus, University College, London.
 Edmonds, Charles John Ernest, St. Thomas's Hospital.
 Edwards, Charles, Guy's Hospital.
 Edwards, David Richard, University College, Cardiff.
 Ekins, Charles Maxwell, University College, London.
 Esser, Samuel Jonathan David, London Hospital.
 Evans, Arthur John, University College, London.
 Evans, Sydney James, Guy's Hospital.
 Everington, Francis Edgar, St. Bartholomew's Hospital.
 Facey, Reginald Ambrose, St. Mary's Hospital.
 Farquharson, Charles Henry, St. Mary's Hospital.
 Fawcett, Basil, St. Thomas's Hospital.
 Fenton, Thomas Gerald, St. Thomas's Hospital.
 Flewitt, Charles York, Mason College, Birmingham.
 Flint, Harold Edwards, St. Bartholomew's Hospital.
 Forbes, Cyril Donald Edward, St. George's Hospital.
 Forrest, Bertie Thomas, St. Thomas's Hospital.
 Francis, James Bernard Chalmers, Westminster Hospital.
 Fyfe, Robert James, Firth College, Sheffield.
 Goble, Edwin Wallace, Guy's Hospital.
 Gould, Reginald, London Hospital.
 Graham, William Earnest, St. Bartholomew's Hospital.
 Greaves, Herbert Stanley, St. Bartholomew's Hospital.
 Green, Samuel Morris, University College, Liverpool.
 Grenfell, Pascoe Beville, St. Bartholomew's Hospital.
 Gubbins, John Gaspard, St. Thomas's Hospital.
 Haig, Thomas Baker, St. Bartholomew's Hospital.
 Halliday, John Rutherford, London Hospital.
 Hamilton, William Gavin, St. Bartholomew's Hospital.
 Hammeton, George Herbert Leonard, Firth College, Sheffield.
 Hartley, John Dawson, St. Bartholomew's Hospital.
 Harvey, Joseph Frederick, Mason College, Birmingham.
 Hawkes, Alfred Ernest Underwood, University College, Liverpool.
 Hearn, Edward Michael William, London Hospital.
 Hearn, Ethelbert, Firth College, Sheffield.
 Hemstead, Henry, University College, Bristol.
 Herklots, Gerald Andreas, University College, London.
 Hicks, Charles Edward, Guy's Hospital.
 Higson, Thomas, Owens College, Manchester.
 Hobbs, Albert Remington, St. Mary's Hospital.
 Hollicks, Hubert Harry, Mason College, Birmingham.
 Holmes, Willmot, St. Mary's Hospital.
 Hope, Walter Bayard, Guy's Hospital.
 Horsburgh, Charles Bethune, University College, Bristol.
 Hubert, Edgar Hamilton, St. George's Hospital.
 Humby, Harry Robinson, St. Bartholomew's Hospital.
 Humby, John Daniel Dawson, St. Bartholomew's Hospital.
 Hunt, John William, St. Mary's Hospital.
 James, Frederick William, University College, London.
 Jefferriss, Iain McKinnon, King's College, London.
 Jones, Bertrand Seymour, St. Thomas's Hospital.
 Kelly, Thomas Thelwell, Guy's Hospital.
 Kerfoot, Stanley James, London Hospital.
 Lamb, Ralph, University College, Liverpool.
 Leclézio, George Joseph Alexis, St. Bartholomew's Hospital.
 Lee, Charles, Firth College, Sheffield, and Guy's Hospital.
 Leonard, William Hugh, St. Bartholomew's Hospital.
 Lewis, Ivor Cadwaladr, St. Bartholomew's Hospital.
 Loosely, William Henry, Guy's Hospital.
 McClintock, John, King's College, London.
 McLachlan, Arthur Ronald, Guy's Hospital.
 Mason, Herbert Alfred, Firth College, Sheffield.
 Mayne, William Boxer, University College, London.
 Miller, John, Owens College, Manchester.
 Mitchell, Edward Percival, Guy's Hospital.
 Muir, Berthold, Guy's Hospital.
 Neave, Sheffield, St. Bartholomew's Hospital.
 Oates, James Christopher, Mason College, Birmingham.
 O'Hea, John, St. Bartholomew's Hospital.
 Olvey, John Michael Abraham, St. Thomas's Hospital.
 Parsons, Ernest Alsager, Mason College, Birmingham.
 Perks, John, St. Bartholomew's Hospital.
 Pinches, Horace George, St. Thomas's Hospital.
 Pinker, Henry George, St. Bartholomew's Hospital.
 Pomeroy-Trood, Scobell, St. Bartholomew's Hospital.
 Price, Edwin Edgar Montague, Mason College, Birmingham.
 Price, Sydney Edgar, Mason College, Birmingham.
 Prichard, John Llewelyn, University College, Liverpool.
 Prins, Henry Mallock, University College, London.
 Pugh, Arthur Bailey, St. Bartholomew's Hospital.
 Randolph, William Henry, St. Bartholomew's Hospital.
 Rodil, Juan José, Guy's Hospital.

Rogers, Frederick Colin, St. Mary's Hospital.
 Rowland, Frank, Mason College, Birmingham.
 Sanders, Edward Arthur, King's College, London.
 Scorch, Ernest John, Firth College, Sheffield.
 Scott, Edward Fletcher, Guy's Hospital.
 Shelton, Arthur Izod, University College, London.
 Shorland, George, Guy's Hospital.
 Simpson, Graham Seales, Guy's Hospital.
 Smith, Alan Ayre, Guy's Hospital.
 Smith, Leonard Satchwell, Mason College, Birmingham.
 Smith, Sydney, University College, London.
 Smith, Thomas Shalden, St. Mary's Hospital.
 Smith, Thomas William, Charing-cross Hospital.
 Softly, Alfred Ernest, St. Thomas's Hospital.
 Speirs, William Clark, St. Mary's Hospital.
 Stephens, Henry Zouch, St. Thomas's Hospital.
 Sykes, Walter, Owens College, Manchester.
 Takaki, Yashihiko, St. Thomas's Hospital.
 Talbot, Ashby West, Guy's Hospital.
 Thomas, Alfred Messer, Guy's Hospital and Durham University.
 Thomas, William Murray, Guy's Hospital.
 Thompson, Cecil Charles Brandon, St. Bartholomew's Hospital.
 Thompson, Henry Bates, Mason College, Birmingham.
 Thornley, Robert Lewis, St. Bartholomew's Hospital.
 Tredgold, Alfred Frank, London Hospital.
 Twaot, Frederick William, St. Thomas's Hospital.
 Velenski, John Charles, London Hospital.
 Vickers, Thomas Hedley, St. Mary's Hospital.
 Vincent, Ralph Harry, St. Bartholomew's Hospital.
 Visger, Charles, University College, London.
 Wakefield, Walter, Mason College, Birmingham.
 Walker, Robert, St. Bartholomew's Hospital.
 Waters, James, Middlesex Hospital.
 West, John Arthur, St. Bartholomew's Hospital.
 Ward, Oswald Erasmus, Mason College, Birmingham.
 Weston, Herbert Ernest, St. George's Hospital.
 Wethered, Ernest, St. Bartholomew's Hospital.
 White, Cyril Charles Coleby Kirke, St. Bartholomew's Hospital.
 Wilkinson, Edgar Sheldon, St. Bartholomew's Hospital.
 Williams, Eric Wadlow, St. Mary's Hospital.
 Wilson, Hugh Cameron, St. Mary's Hospital.
 Winterbotham, Rayner, University College, London.
 Woodforde, Robert E. Heighes, St. Bartholomew's Hospital.
 Woodhill, Henry Gilbert, St. Bartholomew's Hospital.
 Wright, Thomas James, Guy's Hospital.

Part IV., Elementary Anatomy :—

Acland, Hugh Thomas Dyke, St. Thomas's Hospital.
 Agate, Henry St. Annaud, St. Mary's Hospital.
 Alderson, Percy Francis, Middlesex Hospital.
 Allen, Walter Francis, London Hospital.
 Anley, Frederick Eustace, Charing-cross Hospital.
 Atkins, John, Guy's Hospital.
 Aubrey, Thomas, University College, Bristol.
 Austin, Elfred Chalmers, St. Mary's Hospital.
 Bagshawe, Herbert Vale, Guy's Hospital.
 Baker, Arthur Russell, St. Bartholomew's Hospital.
 Baker, William Lincoln, St. Mary's Hospital.
 Barlow, Edward Hovenden, Guy's Hospital.
 Barnes, Arthur Stanley, Mason College, Birmingham.
 Bartlett, Ernest John Reeve, King's College, London.
 Bastian, William, University College, London.
 Baxter, Charles Thomas, Middlesex Hospital.
 Beale, Hanway Richard, St. Thomas's Hospital.
 Beard, Joseph, Firth College, Sheffield.
 Beaumont, Noel Charles, St. Bartholomew's Hospital.
 Bell, John Cunningham, University College, London.
 Bennett, Charles Harold, St. Mary's Hospital.
 Bennett, William Frederick Cockayne, Firth College, Sheffield.
 Bevan, Arthur, St. Thomas's Hospital.
 Black, Guy, St. Thomas's Hospital.
 Blake, Frederick James Guy, Yorkshire College, Leeds.
 Blake, Percy Ryall, London Hospital.
 Bostman, Christopher Osmond, University College, Bristol.
 Borrow, Frederick Charles, St. Bartholomew's Hospital.
 Bourdas, Ernest Clarkson, St. Thomas's Hospital.
 Brockwell, John Brocas Chambers, Guy's Hospital.
 Brook, Francis William, Guy's Hospital.
 Brown, Alexander, King's College, London.
 Browne, Thomas Walker Stanley, Guy's Hospital.
 Bryan, Clement Arthur Douglas, Guy's Hospital.
 Bullen, Edward Henry, St. Mary's Hospital.
 Burgess, Percy Charles, Middlesex Hospital.
 Burrows, Harold, St. Bartholomew's Hospital.
 Calvert, Hubert, St. Thomas's Hospital.
 Carter, Robert Markham, St. George's Hospital.
 Causton, Albert Edward, Guy's Hospital.
 Chapman, Donald Poyntez, Charing-cross Hospital.
 Chetwood, Thomas, London Hospital.
 Clarke, Edward Murray, University College, Cardiff.
 Clarke, Henry Hugh Rose, St. Thomas's Hospital.
 Coleman, Frank, Charing-cross Hospital.
 Coleridge, Alfred, University College, Bristol.
 Collins, John Moore, St. Bartholomew's Hospital.
 Compton, Spencer Langley, University College, Bristol.
 Cook, Lewis, Westminster Hospital.
 Cooke, Reginald Torriano, St. Bartholomew's Hospital.
 Cooper, Walter Edward, University College, London.
 Cope, Gilbert Edgar, Westminster Hospital.
 Corbet, Sidney D'Alton, St. George's Hospital.
 Cornish, Charles Vivian, St. Bartholomew's Hospital.
 Cornish, Phillip Alfred, Middlesex Hospital.
 Cunningham, John Francis, St. Thomas's Hospital.
 D'Aguilar, John Burton Stockwell, University College, Bristol.
 Danks, Walter Seymour, St. Bartholomew's Hospital.
 Davey, John Bernard, Middlesex Hospital.

Davis, Alexander Montague, Mason College, Birmingham.
 Davies, Arthur Gerald Capel, Guy's Hospital.
 Davies, Daniel, St. Bartholomew's Hospital.
 Davies, Enoch Howell, University College, Cardiff.
 Deas, I. cervical Bruce, St. Mary's Hospital.
 Denny, Herbert Reginald Harry, Guy's Hospital.
 Densham, Alec, Guy's Hospital.
 Dick, Walter, University College, London.
 Dismorr, Harry Bertram, Guy's Hospital.
 Dodd, Stanley, Westminster Hospital.
 Double, Meredith Sedgwick, Charing Cross Hospital.
 Drake-Brockman, Henry George, St. George's Hospital.
 Dudding, John Scarbrough, London Hospital.
 Dudgeon, Leonard Stanley, St. Thomas's Hospital.
 Dunstan, Walter Robert, London Hospital.
 Edington, Ernest Adolphus, University College, London.
 Edmunds, Charles John Ernest, St. Thomas's Hospital.
 Edwards, David Richard, University College, Cardiff.
 Elwes, Frederick Fenn, Middlesex Hospital.
 Evans, Arthur John, University College, London.
 Evans, Sydney James, Guy's Hospital.
 Farquharson, Charles Henry, St. Mary's Hospital.
 Fawcett, Basil, St. Thomas's Hospital.
 Fenton, Thomas Gerald, St. Thomas's Hospital.
 Flewitt, Charles York, Mason College, Birmingham.
 Foster, Henry Bertram, Guy's Hospital.
 Fowler, Edwin Samuel George, Yorkshire College, Leeds.
 Frear, Alexander, St. Mary's Hospital.
 Frost, Cecil Scarlett, St. Bartholomew's Hospital.
 Frost, Joseph Reginald, University College, Bristol.
 Fyffe, Robert James, Firth College, Sheffield.
 Gaff, James, St. Thomas's Hospital.
 Gandy, Thomas Hall, St. Bartholomew's Hospital.
 Gee, Claude Alfred Heath, University College, Bristol.
 Goble, Edwin Wallace, Guy's Hospital.
 Goode, George Ernest, London Hospital.
 Goodman, Harold, St. Bartholomew's Hospital.
 Goodwin, William Richard Power, St. Mary's Hospital.
 Graham, William Ernest, St. Bartholomew's Hospital.
 Greaves, Herbert Stanley, St. Bartholomew's Hospital.
 Grenfell, Pascoe Beville, St. Bartholomew's Hospital.
 Gribbell, William Ernest, St. Mary's Hospital.
 Gubbins, John Gaspard, St. Thomas's Hospital.
 Haig, Thomas Baker, St. Bartholomew's Hospital.
 Harris, Herbert Stocker, St. Thomas's Hospital.
 Hartley, John Dawson, St. Bartholomew's Hospital.
 Harvey, Joseph Frederick, Mason College, Birmingham.
 Hawes, Colin Sadler, St. Bartholomew's Hospital.
 Hawker, Herbert, University College, London.
 Haydon, William Chatterley, St. Mary's Hospital.
 Hearn, Edward Michael, London Hospital.
 Heath, Philip Maynard, University College, London.
 Higgins, Hugh Arthur, Guy's Hospital.
 Higson, Thomas, Owens College, Manchester.
 Hodgson, Harold West, London Hospital.
 Hodgson, Robert Edward, St. Mary's Hospital.
 Hollick, Hubert Harry, Mason College, Birmingham.
 Horsburgh, Charles Bethune, University College, Bristol.
 Horton, Horatio Nelson, Middlesex Hospital.
 Hubert, Edgar Hamilton, St. George's Hospital.
 Hughes, Frank Percival, University College, Bristol.
 Hunt, John William, St. Mary's Hospital.
 Ingram, Percy Cecil Parker, University College, Cardiff.
 Inman, William Sam, Firth College, Sheffield.
 James, Charles Willmot Wanklyn, University College, Bristol.
 James, Frederick William, University College, London.
 Jeaffreson, Dudley, St. Bartholomew's Hospital.
 Jefferiss, Frederick Burroughs, King's College, London.
 Jefferiss, Iain Mackinnon, King's College, London.
 Jones, Arthur Webb, St. Thomas's Hospital.
 Jones, Bertrand Seymour, St. Thomas's Hospital.
 Lamb, Ralph, University College, Liverpool.
 Lamborn, William Alfred, Middlesex Hospital.
 Lees, Charlie, Charing-cross Hospital.
 Leggatt, Claude Edward Heisch, St. Mary's Hospital.
 Leonard, William Hugh, St. Bartholomew's Hospital.
 Lewis, Ivor Cadwaladr, St. Bartholomew's Hospital.
 Lewis, William Edward Vaughan, Mason College, Birmingham.
 Lilley, Ernest Lewis, Charing Cross Hospital.
 Loosely, William Henry, Guy's Hospital.
 Low, George Harvey, St. Bartholomew's Hospital.
 McEnery, Ambrose Richard, University College, Bristol.
 McMullen, William Halliburton, King's College, London.
 Mason, Herbert Alfred, Firth College, Sheffield.
 Mayne, William Boxer, University College, London.
 Meredith, Richard William Herbert, Middlesex Hospital.
 Merry, Edward, London Hospital.
 Miller, John, Owens College, Manchester.
 Mitchell, Edward Percival, Guy's Hospital.
 Morgan, John David, St. Mary's Hospital.
 Morley, Arthur Solomon, St. George's Hospital.
 Morris, Herbert Edward, Guy's Hospital.
 Moss, Bertram Wilmore, Guy's Hospital.
 Muir Berthold, Guy's Hospital.
 Munro, Donald John, Guy's Hospital.
 Muter, Charles William, King's College, London.
 Neave, Sheffield, St. Bartholomew's Hospital.
 New, John Sherwood, University College, London.
 Nicholls, Percival Thomas, Middlesex Hospital.
 Nitch, Cyril Alfred Rankin, St. Thomas's Hospital.
 Nutt, Harold Rothery, St. Mary's Hospital.
 Oates, James Christopher, Mason College, Birmingham.
 O'Hea, John, St. Bartholomew's Hospital.
 Olivey, John Michael Abraham, St. Thomas's Hospital.
 Orford, Herbert John, Mason College, Birmingham.
 Osborn, Alfred Gelsthorpe, Guy's Hospital.
 Parsons, Ernest Alsager, Mason College, Birmingham.
 Passmore, William Henry, Charing Cross Hospital.
 Paul, John Frederick, St. George's Hospital.

Peach, William Frank, St. Mary's Hospital.
 Peck, William Edward, University College, London.
 Peirce, Thomas James, St. George's Hospital.
 Perrin, Thomas, St. Thomas's Hospital.
 Pinches, Horace George, St. Thomas's Hospital.
 Pollard, Herbert Dean, London Hospital.
 Pooley, John Milnes, St. Mary's Hospital.
 Pretty, Harold Cooper, University College, London.
 Price, Edwin Edgar Montague, Mason College, Birmingham.
 Price, Sydney Edgar, Mason College, Birmingham.
 Pring, Charles Herbert, University College, Bristol.
 Prins, Henry Mallock, University College, London.
 Pugh, Arthur Bailey, St. Bartholomew's Hospital.
 Randolph, William Henry, St. Bartholomew's Hospital.
 Ransford, Alan Carpmal, Guy's Hospital.
 Reeve, Herbert Midgley, Guy's Hospital.
 Reid, Archibald Douglas, King's College, London.
 Rodil, Juan José, Guy's Hospital.
 Rogers, Frederick Colin, St. Mary's Hospital.
 Rowland, Frank, Mason College, Birmingham.
 Russell-Risien, Ernest, St. Bartholomew's Hospital.
 Rutter, Thomas Francis, Guy's Hospital.
 Sanders, Edward Arthur, King's College, London.
 Sanders, James Herbert, London Hospital.
 Scorch, Ernest John, Firth College, Sheffield.
 Scott, Edward Fletcher, Guy's Hospital.
 Scott, Sydney Richard, St. Bartholomew's Hospital.
 Scott, Henry Martin, Charing-cross Hospital.
 Serase, James John Sheat, St. Bartholomew's Hospital.
 Secretan, Walter Bernard, Guy's Hospital.
 Segreda, Francisco Arturo, Guy's Hospital.
 Sells, Lionel, St. Thomas's Hospital.
 Sheehan, Michael, Queen's College, Cork.
 Sheldon, Arthur Izod, University College, London.
 Sherren, James, London Hospital.
 Simpson, Graham Scales, Guy's Hospital.
 Simpson, John Edgar, University College, London.
 Smith, Alan Ayr, Guy's Hospital.
 Smith, Percy Nelson, St. Mary's Hospital.
 Smith, Sydney, University College, London.
 Smith, Thomas Shalden, St. Mary's Hospital.
 Softly, Alfred Ernest, St. Thomas's Hospital.
 Speers, William Gordon, St. Mary's Hospital.
 Speirs, George Benjamin Arnes, St. Mary's Hospital.
 Sprague, Francis Henry, St. Mary's Hospital.
 Sprawson, Cuthbert Allan, King's College, London.
 Staines, Tom Fenn, King's College, London.
 Stanley, Edmund Hamilton Blake, University College, London.
 Stephens, Henry Zouch, St. Thomas's Hospital.
 Stevens, Stanley, St. Bartholomew's Hospital.
 Stevens, Warwick Alan George, Guy's Hospital.
 Stewart, Walter Graham, Guy's Hospital.
 Stock, Philip Graham, University College, Bristol.
 Stokes, Percy Southwall, Firth College, Sheffield.
 Stratford, Howard Martin Blenheim, Oxford University.
 Swan, Russell Henry Jocelyn, Guy's Hospital.
 Takaki, Yoshihiro, St. Thomas's Hospital.
 Tallot, Ashley West, Guy's Hospital.
 Taylor, Henry Christopher, St. Mary's Hospital.
 Thomas, Harold Sebert, St. Bartholomew's Hospital.
 Thomas, William Murray, Guy's Hospital.
 Thompson, Joseph Bernard, University College, London.
 Townroe, Eugene Dunbar, St. George's Hospital.
 Tredgold, Alfred Frank, London Hospital.
 Truman, Dudley Beckett, King's College, London.
 Trumper, William Arthur, St. Mary's Hospital.
 Turner, Frank Douglas, Guy's Hospital.
 Twort, Frederick William, St. Thomas's Hospital.
 Vaughan, Arthur Llewellyn, St. Bartholomew's Hospital.
 Vawdrey, Percy Llewellyn, St. Bartholomew's Hospital.
 Velenski, John Charles, London Hospital.
 Vickers, Thomas Hedley, St. Mary's Hospital.
 Vine, Alfred Bertram, Middlesex Hospital.
 Visger, Charles, University College, London.
 Von Rosen, Alfred Dittlof Benedictus, St. Mary's Hospital.
 Walker, Lewis Augustus, St. Bartholomew's Hospital.
 Ward, Oswald Erasmus, Mason College, Birmingham.
 Waters, James, Middlesex Hospital.
 Waters, Walter James, St. Thomas's Hospital.
 Watson, Robert Nimmo, Westminster Hospital.
 Wells, Albert John Walton, St. Bartholomew's Hospital.
 Wells, Hardy Vesey, St. Mary's Hospital.
 Weston, Alfred Fullam, St. George's Hospital.
 Wethered, Ernest, St. Bartholomew's Hospital.
 White, Charles Vaughan, St. Thomas's Hospital.
 White, Cyril Charles, Coleby Kirke, St. Bartholomew's Hospital.
 White, Percy Walter, University College, Bristol.
 Wilkes, Alfred Ernest Frear, Mason College, Birmingham.
 Williams, Eric Wadlow, St. Mary's Hospital.
 Williams, Sydney Bice, University College, Bristol.
 Winterbotham, Rayner, University College, London.
 Woodcock, Henry Chadwick, St. Mary's Hospital.
 Wood-Hill, Henry Gilbert, St. Bartholomew's Hospital.
 Wright, Thomas James, Guy's Hospital.

SOCIETY OF APOTHECARIES OF LONDON. — The following gentlemen were admitted Licentiates in April:—

J. MacD. Troup, W. H. Daw, T. H. Hunt, J. H. P. Vivian, and A. H. Trevor.

The following candidates have passed in the subjects indicated:—

Surgery.—W. Allen, Birmingham; W. H. Daw, London Hospital; F. W. Gale, St. Bartholomew's Hospital; J. Hepple, Leeds; T. H. Hunt, Leeds; T. H. P. Peers, Charing-cross Hospital; G. R. Smith, Manchester.

Melicine, Forensic Medicine, and Midwifery.—C. N. Barton, St. George's Hospital; W. H. Daw, London Hospital; B. Heiden,

Guy's Hospital: T. H. Hunt, Leeds; A. S. Lawrence, Middlesex Hospital; J. M. Troup, King's College.
Medicine and Forensic Medicine.—G. P. Y. Hulbert, Birmingham and Charing-cross Hospital; J. H. P. Vivian, St. Thomas's Hospital.
Medicine and Midwifery.—J. Hepple, Leeds; and E. P. Hewitt, St. Mary's Hospital.
Medicine.—H. G. Jones, St. Mary's Hospital; and W. McCall, Charing-cross Hospital.
Forensic Medicine.—J. W. F. Graham, St. Bartholomew's Hospital; and A. H. Trevor, Guy's Hospital.

EDINBURGH UNIVERSITY.—The following gentlemen have received the under-mentioned degrees:—

Bachelor of Medicine and Master in Surgery.—James Andrew Gibson; Thomas Smith.

Bachelor of Science.—George Waterston Miller; William Morrison, M.B., C.M.; James Alexander Murray.*

* Passed with special distinction in zoology and comparative anatomy.

FOREIGN UNIVERSITY INTELLIGENCE.—*Vienna*: Dr. Max Herz and Dr. Franz Chrostek have been recognised as *privat-docents* in Medical Pathology.

VACCINATION GRANT.—Mr. Philip Edward Hill, M.R.C.S., public vaccinator for the No. 1 district of the Crickhowell Union, has been awarded, for the ninth time in succession, the Government grant for efficient vaccination.

CENTENARY OF THE ABERNETHIAN SOCIETY.—A conversation in commemoration of the centenary of the Abernethian Society will be held at St. Bartholomew's Hospital on May 1st. Former St. Bartholomew's men will welcome this opportunity of meeting the friends of earlier days, and will find that exceptionally effective arrangements have been made for the evening's entertainment. The History of the Abernethian Society will form the subject of an address by Dr. Norman Moore. Messrs. F. A. Smith and T. Ashby Barron are the honorary secretaries.

THE NEED FOR PUBLIC SLAUGHTER-HOUSES.—At a meeting of the Church Sanitary Association, held at the Church House, Westminster, on Tuesday last, under the presidency of Dr. Norman Kerr, a paper contributed by Dr. Francis W. Clark, medical officer of health, Lowestoft, on "The Need for Public Slaughter-houses" was read by the Rev. Canon Reith. The writer of the paper said there were numerous Acts designed to prevent the adulteration of food, but the motive of these had been, for the most part, the purely commercial one of depreciated value, and not the hygienic one of wholesomeness. The cocoa and vinegar sold by the grocer were sampled, and penalties inflicted if they were not pure; but when it came to our meat supplies people were content to purchase anything provided only that "it looked all right." Few sanitary authorities had seen the wisdom of providing for the due and proper slaughtering and the adequate inspection of all animals for human food, and a lesson might well be learnt from our Continental neighbours, who were far ahead of us in this respect. The slaughtering of animals for food was an operation which must necessarily be attended by a certain amount of nuisance and danger to the health of those in the immediate vicinity, unless it was carried out with the most ample sanitary conveniences and appliances, and therefore the English system of private slaughter-houses must be fraught with danger to the public health. The stabling of cattle, sheep, and pigs in the actual slaughter-house itself were among the least of the defects of these private slaughter-houses, while overcrowding, deficiency of light and of ventilation were to be found in almost all of them. The greatest danger, however, of the English system of slaughtering arose from the failure to detect and destroy all diseased and unwholesome carcasses, and as a consequence much flesh was constantly offered for sale, especially in the poorer quarters, which was unfit for human food. It was unquestionable that tubercle could be conveyed to man by the ingestion of the flesh of tuberculous cattle, and it was an admitted fact that an appreciable proportion of English cattle were tuberculous. One of the most important factors in the prevalence of consumption throughout England was the unrestricted use of milk from tuberculous cows and the eating of imperfectly cooked tuberculous beef. The public must be taught that they cannot estimate the quality of meat by a mere casual inspection, and he hoped that the Church Sanitary Association and the clergy generally would try to rouse public opinion to a truer recognition of the value of sound and wholesome food. After some remarks from the Chairman, Canon Reith, the Rev. M. C. F. Morris, and the Rev. E. C. C. Parr, the proceedings closed.

MEDICAL MAGISTRATE.—Dr. James Smith Watson of Blackburn has been placed on the Commission to the Peace for that borough.

The festival dinner of the Royal Hospital for Children and Women, Waterloo Bridge-road, S.E., will be held at the Whitehall Rooms, Hôtel Métropole, on Saturday evening, May 4th, 1895, at 7 P.M. The Hon. W. F. Danvers Smith, M.P., will preside.

FOOTBALL CASUALTIES.—On the 13th inst., during a match on the Chanonry grounds between the Aberdeen and Clachnacuddin teams, a player fractured his left clavicle.—At Redruth on Saturday last in a match between the Cornwall and Redruth teams a home forward badly fractured his leg.

ROYAL BRITISH NURSES' ASSOCIATION.—The last sessional lecture of the season was delivered at 17, Old Cavendish-street on Friday, April 19th, before an appreciative audience by Miss Annesley Kenealey, the subject being *Women as Lecturers*. The chair was taken at 8 P.M. by Dr. C. Gage Brown, C.M.G. A discussion took place at the conclusion of the lecture.

DR. G. A. W. WATSON, assistant to Dr. Briscoe, met with a fatal accident at Chippenham. He had been attending a patient at Spire View, London-road, and on coming out attempted to mount his horse, but the animal reared and threw him. Mr. Wilson was first on the scene, and subsequently Dr. Briscoe arrived, but despite every care Dr. Watson never regained consciousness and passed away. He came from Strichen, Aberdeen, and was an M.A. and M.B. of Aberdeen University.

PATHOLOGICAL DEPARTMENT, UNIVERSITY COLLEGE, LIVERPOOL.—Owing to the liberality of Mr. George Holt, the founder of the chair, the department of Pathology and Bacteriology at University College, Liverpool, has been provided with temporary accommodation in Ashton Hall, a house adjoining the College, which has been purchased and most efficiently equipped for the purpose. The apparatus and fittings necessary for teaching and private research are very complete. The new institute is now ready for occupation and will be formally opened at the beginning of the summer session. It consists of three floors, containing separate laboratories for the study of morbid anatomy and histology, bacteriology, experimental and chemical pathology and research. In addition there are photographic rooms, balance room, library, students' rooms, workshop, stable accommodation, and lodges for attendants.

ÆSCULAPIUS LODGE OF FREEMASONS.—The last meeting of this lodge for the present Masonic year was held at the Café Royal, Regent-street, on the 10th inst. There were a large number of members and some visitors present. G. Crawford Thomson, M.D., was unanimously elected Master for the ensuing year, and J. Pickett, M.D., treasurer. In consequence of Dr. G. Danford Thomas having been offered a warden's chair he was not again a candidate for the office of treasurer, which office he has so ably filled for four years. Thomas Dutton, M.D., M.R.C.P. Edin., was reappointed secretary; Leonard Wilde, M.D., M.R.C.P. Lond., was admitted to the third degree; and George Herschell, M.D. Lond., M.R.C.S. Eng., was admitted into Freemasonry. T. H. Openshaw, M.B., F.R.C.S. Eng., was proposed as a joining member. Two guineas out of the charity fund were voted for Mr. C. Bryan Townshend's case, and 3 guineas for a widow of a medical Mason; £3 10s. was collected for the late Brother Surgeon-Major Parke's Memorial Fund, 2 guineas being previously voted by the lodge. The secretary reported that he had already received the names of most of the medical Grand Officers as patrons in support of the smoking concert, to be given at the Portman Rooms, to all medical Masons who may visit London during the meeting of the British Medical Association. The lodge was then closed; the brethren afterwards dined together.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Easter Recess.

THE House of Commons brought its holiday to a close on Monday, April 22nd. The House of Lords met on the same day, but only for formal business, and adjourned again until Tuesday, April 30th.

The Bovine Tuberculosis Commission.

The report of this Commission has at last been presented to Parliament. It was laid on the table in manuscript on April 22nd, and is now being printed with a view to publication.

The Age Limit in Factories and Workshops.

Sir John Gorst, in anticipation of the committee stage of the Factories and Workshops Bill, has given notice of his intention to move the insertion of a clause to the effect that no child under the age of twelve years shall be employed in a factory or workshop. The present limit is eleven years.

Health Arrangements in Prisons.

In the report of the Departmental Committee on Prisons a section is devoted to the subject of health. The Committee refer to the common assertion that not only is the ratio of insanity far higher in prisons than among the general population, but that prison life itself is a potent cause in its development, and they arrive at certain general conclusions. They think that an early opportunity should be taken of appointing an additional member of the Prisons Board, who should be a medical man, the new office taking the place of the present medical inspectorship. They point out that detection of disease in its earliest stage taxes the skill of the practitioner to its fullest extent, and that in mental diseases this is especially the case. Here medical men of great skill and experience, but without any special training in this department of their art, are undoubtedly at a disadvantage. It appears to the Committee, therefore, that it might with advantage be made a condition of medical appointments in prisons that the candidate should produce evidence of having given special attention to the subject of lunacy. In Belgium the services of physicians specially conversant with mental disorders are retained for the purpose of detecting cases of incipient insanity which might have escaped a less practised eye, and the Committee think that some step of this kind might perhaps be taken, especially with a view of inspecting convicts during their period of isolation. Later the Committee say that in some of the larger prisons it appears to them that the work incumbent on the medical staff is such as to render it very difficult for them to give the detailed and prolonged attention to individual cases which alone can secure the sifting out of such as require special treatment. On the curative and preventive effects of outdoor exercise and labour the Committee state that their medical witnesses were practically unanimous. There are undoubted obstacles to this in the limited space which surrounds most prisons and in the fact that the supervision of prisoners in the open air necessitates some increase in the staff of wardens. Nevertheless the Committee regard the object in view as so important as to justify great efforts and some expense with the view of effecting it so far as may be practicable. With regard to weak-minded prisoners the Committee recommend that they should be concentrated so far as is possible in special prisons and put under special medical supervision, and that it should be considered whether it is right to treat such persons as ordinary criminals.

HOUSE OF COMMONS.

MONDAY, APRIL 22ND.

Sea Squalls and Loss of Life.

In the course of a question addressed to the Board of Trade, Mr. Harry S. Foster called attention to a letter written by the coxswains of the Walmer and Deal lifeboats, stating that in their experience it was very difficult to distinguish at times what was required when they saw signals fired at sea, and that on several occasions they had launched their boats at the risk of their lives in answer to signals supposed to be distress signals, only to find that the vessels firing them did not require assistance.—Mr. Burt, replying on behalf of the Board of Trade, assured the hon. member and the House that the existing distress signals are quite distinctive, and that if they are properly used no confusion should arise. They were international signals and had worked well for many years, and the Board of Trade saw no occasion for further action or inquiry with regard to them. If the signals were improperly used claims for salvage might be made under the Merchant Shipping Act against the masters and owners of the ships so using them.

The Factories and Workshops Bill.

Nearly the whole time of the House at this sitting was occupied with a second reading debate on this measure. Without exception, the speakers expressed approval of the general scope of the Bill, although many of them advocated important changes in its several provisions. When the debate was over and the Bill read a second time it was decided, on the motion of Mr. Asquith, to refer the Bill to the Grand Committee on Trade in order that it may be thoroughly discussed in detail.

Mr. Stuart Wortley, the Under Secretary of State for the Home Department in the late Administration, made some reference to the provision requiring medical practitioners to notify certain classes of disease. This provision, he said, would have great statistical value, and might not be without preventive usefulness, but he was curious to know how the medical profession regarded it. If the Home Secretary was able to assure them that the medical profession had been made aware of the provision and did not offer any serious objection to it, then he would be satisfied and say no more upon the subject.

Mr. Tennant, who is Mr. Asquith's private secretary, and, therefore, spoke with a certain measure of authority, assured the hon. gentleman that there could be no difficulty in this connexion, because the provision simply embodied the principle of the Infectious Diseases (Notification) Act of 1889, which had worked admirably and produced most excellent results.

Mr. Henry Broadhurst called attention among other things to the cutlery trade in Sheffield. In the four years from 1888 more than half the cutlers and grinders who died in that city died from chest and throat diseases, and this mortality was caused mainly by the inhalation of particles of grit and stone. The medical officer of Sheffield had described in a recent report the shockingly unhealthy conditions in which large numbers of men carried on their work, and seeing that Sheffield was, on the whole, a rich and enterprising place and possessed a great municipality, he suggested as a means of getting at the root of this evil that municipal workshops should be erected and the poor workers released in this way from their present unhealthy dens.

Mr. Asquith made a long speech explaining further the position of the Government. In one of the clauses there would be found, he said, a prohibition as to the use of lead in the process of tinning or enamelling metal hollow-ware cooking utensils. That was founded upon evidence given before, and recommendations made by, committees that had inquired into these industries. He was satisfied that the best manufacturers did not employ lead, and that its use for that purpose was found to be most injurious. The Government had provided by Clause 30 that in certain industries, such as the making of wearing apparel, the temperature should be kept up to not less than 60° F. Complaints had been made to the Home Office by the lady inspectors, who went through the shops in London and other large towns, that during winter a number of persons employed in dress-making had to carry on their occupations in rooms which were either not warmed at all or were very insufficiently warmed, and under conditions, therefore, of great discomfort and risk of injury to health. As to the bake-houses, he proposed when the Bill got into Committee to add to the clause which deals with them a provision prohibiting for the future the use of underground premises. He was satisfied from what master and man alike had told him that both were agreed that for the future the trade ought not to be carried on in underground cellars. With regard to overtime, he did not in the least disguise the fact that he should have been glad if possible to put a stop to it altogether, but he trusted the concession made in the Bill, which was a compromise between the extreme views on the one side and the other, would be received with general acceptance.

TUESDAY, APRIL 23RD.

The Indian Government and the Purchase of Opium.

Sir Edward Grey, replying to a question by Mr. Selwyn, said that Sir James Westland was correctly reported to have stated in his Budget speech at Calcutta that the Indian Government had made arrangements for the purchase of crude opium in Malwa. The Secretary of State had no information as to the amount it was intended to purchase. Such arrangements were within the discretion of the Government of India, and did not require the sanction of the Secretary of State. Similar purchases of Malwa opium for the supply of the Indian demand had been made in previous years when the supply of Bengal opium had been short.

WEDNESDAY, APRIL 24TH.

Sale of Intoxicating Liquors (Ireland) Bill.

The House gave a second reading to this Bill, which proposes to extend Sunday Closing to the five cities now exempted—namely, Dublin, Belfast, Cork, Limerick, and Waterford; to close public-houses all over Ireland at nine o'clock on Saturday evenings; and to increase the limit qualification for bond-fide travellers from three to six miles.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- ADAMS, E. G. B., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon for six months to St. Bartholomew's Hospital.
 BEHRENDT, M. R. J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Brumby and Frodingham Urban Sanitary District.
 BELDEN, F., M.B., B.S. Camb., L.R.C.P. Lond., F.R.C.S., has been appointed Senior House Surgeon for six months to St. Bartholomew's Hospital.
 BOWES, T. A., M.B., B.S. Camb., has been appointed Senior House Surgeon for six months to St. Bartholomew's Hospital.
 BROWN, DAVID, B.Sc., M.D. Lond., has been appointed Physician to the Taunton and Somerset Hospital.
 BUCHAN, A. HILL, A.M., M.B., C.M., has been appointed House Physician to the Leith Hospital.
 BURLAND, H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Finedon Urban Sanitary District.
 BURTON, R. G., M.D., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Greentord Urban Sanitary District.
 CAMERON, A. W., M.B., C.M., has been appointed House Surgeon to the Leith Hospital.
 CHRISTOPHERSON, J. B., M.B., B.S. Camb., has been appointed Junior House Physician for six months to St. Bartholomew's Hospital.
 CHUTE, J., M.D., B.Ch. Dub., has been appointed Medical Officer of Health for the Kingston Urban Sanitary District.
 COLBY, F. E. A., M.B., B.C., L.R.C.P. Lond., M.R.C.S., has been appointed Ophthalmic House Surgeon for six months to St. Bartholomew's Hospital.
 COLBY, J. G. E., M.B., B.Ch. Oxon., L.R.C.P. Lond., F.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the Malton Rural Sanitary District and the Norton Rural District.
 COLLYER, B., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Senior House Physician for six months to St. Bartholomew's Hospital.
 COENSKILLOR, RICHARD, L.R.C.P., L.M. Edin., has been appointed Medical Officer of Health for the Clitheroe Rural Sanitary District.
 CROSS, E. W., L.R.C.P. Lond., M.R.C.S., has been appointed Obstetric Assistant for six months to St. Bartholomew's Hospital.

CROSSMAN, F., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon for six months to St. Bartholomew's Hospital.

DRAKE, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon for six months to St. Bartholomew's Hospital.

ELIAS, JAMES, M.R.C.S., L.S.A., D.P.H. Camb., has been appointed Medical Officer of Health for the Borough of Neath, vice Dr. J. W. Thomas, resigned.

FISHER, O. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Surgeon to the Jamaica Naval Hospital.

FLOYER, W. W., M.B. Lond., M.R.C.S., has been appointed Medical Officer for the Thorpe Sanitary District of the Chertsey Union.

FRASER, F., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon for six months to St. Bartholomew's Hospital.

GALBRAITH, WILLIAM, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the South Gosforth Urban Sanitary District.

HAINES, J. W., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Belgrave Hospital for Children.

HUMPHRY, E. S., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon for six months to St. Bartholomew's Hospital.

LANG, G. CAMPBELL, M.B., C.M., has been appointed Visitor for out-door cases to the Leith Hospital.

LEE, W. B., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Junior House Physician for six months to St. Bartholomew's Hospital.

LEWIS, F. H., M.B., B.Ch. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Physician for six months to St. Bartholomew's Hospital.

MALLER, CHARLES BOOTH, L.R.C.P., M.R.C.S., L.S.A., L.M., has been appointed Medical Officer and Public Vaccinator for the Bonvilston District of the Cardiff Union.

MILROY, J. CUNNINGHAM, M.D. Edin., has been appointed Junior House Surgeon to the Royal Albert Edward Infirmary, Wigan, vice Richard S. Hardman, resigned.

MITCHELL, A. M., M.B., B.Ch. Camb., has been appointed Senior House Surgeon for six months to St. Bartholomew's Hospital.

MOXEY, VINCENT, has been appointed Honorary Medical Officer to the Holloway and North Islington Dispensary.

MURPHY, J. R., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Physician for six months to St. Bartholomew's Hospital.

ORME, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer at the Infirmary, Parish of St. Pancras.

PECK, W. G., M.B., B.S. Camb., has been appointed Surgeon to H.M.S. Pilot.

PERRAM, C. H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Senior House Physician for six months to St. Bartholomew's Hospital.

PHILLIPS, L. C. P., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon for six months to St. Bartholomew's Hospital.

RAWLINGS, J. D., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Senior House Physician for six months to St. Bartholomew's Hospital.

ROGERS, R., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Junior House Physician for six months to St. Bartholomew's Hospital.

SEVSTER, R., M.B., B.S. Camb., L.R.C.P., M.R.C.S., has been appointed Extern Obstetric Assistant for six months to St. Bartholomew's Hospital.

SHARPIN, WALTER ARCHDALE, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Royal United Hospital, Bath.

SLOMAN, S. G., Junr., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Farnham Urban District Council.

TAYLOR, GEO., has been appointed Public Analyst for the Parish of Hackney.

TAYLOR, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Netley Urban Sanitary District, vice Wigin.

TODD, L. B., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the County Hospital, Leicester, vice Watkins, resigned.

WATERS, A. C., M.B., B.S. Durh., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Southend-on-Sea, vice Jones.

WHITE, C. P., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon for six months to St. Bartholomew's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the hospital.

CHARING-CROSS HOSPITAL, London, W.C.—Curator and Pathologist. Salary £100 per annum.

DENBIGHSHIRE INFIRMARY AND GENERAL DISPENSARY, Denbigh.—Honorary Medical Officer.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis-road, Shadwell, E.—House Surgeon. Board, lodging, &c., provided.

FARRINGTON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn-circus, E.C.—Honorary Physician. Also Resident Medical Officer. Salary £100 per annum, with apartments and attendance.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident House Physician for six months; unmarried. Salary £20, with board and residence in the hospital.—Resident Medical Officer as House Surgeon for six months; unmarried. Salary £20, with board and residence in the hospital.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistant.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician to Out-patients. Applications to the Secretary, Offices, 27, Clement's-lane, E.C.

PARISH OF ST. PANCRAS.—Dispenser for the St. Pancras Workhouse. Salary £110 per annum, with dinner daily. Applications to the Clerk to the Guardians, Vestry Hall, Pancras-road, N.W.

ROTHERHAM HOSPITAL AND DISPENSARY.—Resident House Surgeon for three years. Salary £100 per annum, with rooms, washing, and commons (exclusive of alcoholic drinks).

SMEADLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—Junior Physician. Honorarium of £40 for first six months, and afterwards at the rate of £120 per annum, with board, lodging, &c.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, Albert Embankment, London, S.E.—Lecturer on Physiology.

WEST RIDING ASYLUM, Wadstey, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board &c.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary attached to the Hospital. Salary £20 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BYHAM.—On April 16th, at Spalding, the wife of Wm. L. Byham, L.R.C.P. Edin., of a son.

DOLAMORE.—On April 12th, at Queen Ann-street, W., the wife of W. H. Dolamore, M.R.C.S., L.R.C.P., &c., of a son.

FITZMAURICE.—On April 16th, at Horsted Keynes, Sussex, the wife of Richard Fitzmaurice, L.R.C.P. Edin., District Medical Officer, of a son.

HAWES.—On April 15th, at St. Stephen's-crescent, W., the wife of Francis Brunel Hawes, L.R.C.P., L.R.C.S.I., of Dolores, Pisagua, Chili, of a daughter.

HORSLEY.—On April 19th, the wife of Victor Horsley, F.R.S., of a daughter.

STROVER.—On April 17th, at Sandy, Beds, the wife of Herbert C. Strover, L.S.A. Lond., of a son.

WYNCOLE.—On April 19th, at Buckfastleigh, South Devon, the wife of J. W. Wyncoll, M.B., of a son.

MARRIAGES.

ABERCROMBIE—RANKIN.—On April 18th, at Bellahouston Parish Church, Glasgow, Peter Henderson Abercrombie, M.D., to Jessie Deans, second daughter of the late C. D. Rankin, Esq., of Carlton House, Bellahouston.

BULL—WHITE.—On April 20th, at St. George's, Edgbaston, by the Rev. F. H. Ward, M.A., Vicar of St. John's, Sparkhill, Birmingham, Edwin George Bull, M.B. and C.M. Univ. Edin., M.R.C.S. Eng., of Sparkhill, to Elizabeth Grace, daughter of William White, Lyndhurst, Chad-road, Edgbaston.

CARR—GRIFFITH.—On April 24th, at the Brixton-hill Wesleyan Church, John Walter Carr, M.D., of 19, Cavendish-place, W., to Jessie, daughter of Walter Griffith, of Palace-road, Streatham-hill.

CLARKSON—WRIGHT.—On April 18th, at 14, Belhaven-terrace, Glasgow, by the Rev. Thomas Adamson, B.D., Robert Durward Clarkson, M.B., C.M., B.Sc., Falkirk, eldest son of Robert Clarkson, Esq., Toravon, Stirlingshire, to Emily Burlton, second daughter of William Wright, 14, Belhaven-terrace.

GIDLEY—LUCAS.—On April 18th, at St. John's-the-Evangelist, Clifton, by the Rev. A. C. Anstey, assisted by the Rev. G. Forrester of Cullompton, Gustavus G. Gidley, M.R.C.S. Eng., L.R.C.P. Lond., of St. Andrews Villa, Cullompton, Devon, to Constance Mary, widow of the late Rev. W. F. Lucas.

HIND—BARKER.—On April 18th, at St. Peter's Church, Stockton-on-Tees, by the Rev. W. Chichester Barker, M.A., Vicar of Rostrevor, County Down, brother of the bride, assisted by the Rev. Henry Woodman, M.A., Vicar, Henry Hind, F.R.C.S., to Annie Charlotte Barker, daughter of the late William Barker, F.R.C.P. Irel.

KANTHACK—HENSTOCK.—On April 17th, at Fairfield, Liverpool, Alfred A. Kanthack, M.D., second son of B. Kanthack, British Consul, Pará, Brazil, to Lucie, second daughter of the late John Henstock of Edgemoor, Edge-lane, Liverpool.

MCCANN—BOWYER-GRAHAM.—On Tuesday, April 16th, at Marylebone Parish Church, F. J. McCann, M.B., C.M., M.R.C.P., 47, Welbeck-street, Cavendish-square, London, to Lady Charlotte Ellen Gwendolin Bowyer-Graham, of Penne House, Leigh, Somerset, and Hawksley Hall, Devonshire.

OGLE—PERFECT.—On April 17th, at St. John's Church, Lewes, Sussex, John Gilbert Ogle, M.D. Oxon, fourth son of Rev. James Ambrose Ogle, M.A., Vicar of Sedgford, Norfolk, to Edith Madeleine, third daughter of the Rev. A. P. Perfect, B.D., Rector of St. John's, Lewes.

SALTER—MYHILL.—On April 18th, at Holy Innocent's Church, Hornsey, Stephen Thomas Salter, M.A., M.B. Cantab., &c., of Crouch End, to Edith Mary, only daughter of Henry William Myhill of Crouch End, late of Calcutta.

DEATHS.

BEAMISH.—On April 17th, at High Barnet, Rev. Samuel Stephen Beamish, M.D., M.R.C.S.

BIRD.—On April 16th, at Osnaburgh-street, Regent's Park, John Bird, M.R.C.S., in the 84th year of his age.

BLASHFIELD.—On April 18th, at Marmora-road, Honour Oak, S.E., Capel Whitmore Blashfield, M.R.C.S., aged 75.

MILES.—On April 10th, at Rome, Edwin Josiah Miles, M.D., aged 65.

STEPHENSON.—At 3, Rubislaw-terrace, on April 14th, Janie Lydd Henston, wife of Wm. Stephenson, M.D., Professor of Midwifery, University of Aberdeen.

WEBB.—On April 12th, Sidney Roberts Webb, M.D. Edin., of the Baptist Missionary Society, Wathen, Congo Free State, aged 28.

WYATT.—On April 17th, George Robert Wyatt, M.D., F.R.C.S., aged 81.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 25th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Apr 19	29.80	S.W.	48	47	106	64	47	0.04	Cloudy
" 20	30.01	S.W.	57	52	101	64	48	...	Bright
" 21	29.95	S.W.	55	54	84	62	52	...	Cloudy
" 22	29.94	S.W.	54	51	99	69	51	...	Overcast
" 23	29.59	S.W.	55	52	100	64	52	0.11	Cloudy
" 24	29.70	S.W.	54	50	111	65	46	...	Cloudy
" 25	29.43	E.	52	51	69	55	49	0.03	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopedic (2 P.M.), City Orthopedic (4 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M. and 8 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M. and 8 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Dr. C. Hubert Roberts: On the Common Form of "White Leg" after Confinement.

THURSDAY.—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—Card Specimens at 8 P.M. Papers:—Dr. P. H. Miles: A New Operation for Ptochus.—Mr. E. Treacher Collins: On Blood Staining of the Cornea.—Mr. W. H. Jessop: A case of Severe Hemorrhage from an Ulcer of the Palpebral Conjunctiva. And other papers.

HARVEIAN SOCIETY.—8.30 P.M. Mr. Bernard Pitts: Some Remarks on the Surgery of the Rectum.

FRIDAY.—WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Case:—Dr. Seymour Taylor: (?) Abdominal Aneurysm of Aorta. 8.30 P.M. Papers:—Dr. Wm. Hunter: Antipyretics, their Use and Abuse.—Dr. Cagney: Peripheral Neuritis, its Diagnosis and Treatment.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

During the week marked copies of the following newspapers have been received:—

Somerset County Herald, Taunton News, Westmeath Examiner, Leicester Post, Sussex Daily News, Brighton Argus, Montrose Review, Newcastle Leader, Building News, East Essex Advertiser, Eastern Morning News, Hampshire Independent, Alnwick Gazette, Scotman, Liverpool Courier, Arbroath Herald, Bradford Observer, Birmingham Mail, Sheffield Independent, Science Signings, Local Government Chronicle, City Press, Mining Journal, Weekly Free Press and Aberdeen Herald, Bristol Mercury, Leeds Mercury, Colchester Gazette, Portobello Advertiser, Liverpool Daily Post, Scarborough Post, Yorkshire Post, Builder, Toronto Daily Mail, Architect, Times of India, Reading Mercury, Pioneer Mail, Hertfordshire Mercury, Courrier de la Presse, West Middlesex Standard, Surrey Advertiser, Local Government Journal, Sanitary Record, Elgin Courier, Kelso Mail, West Middlesex Advertiser, Banffshire Advertiser, Observer, Citizen, Evening Telegraph (Dundee), Islington Gazette, Derbyshire Courier, Scottish Highlander, St. Bartholomew's Hospital Journal, Llandudno Directory, Kendal Mercury, &c.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

A POLITE REJOINER.

WE have received the following anonymous communication, accompanied by a newspaper cutting pasted on a postcard, for which we had the privilege of paying one penny as being "contrary to the regulations." If this is the only answer homoeopaths can give to our arguments, further remarks on the subject would seem not to be called for:—

"Put this in your pipe and smoke it. Perhaps it will tend to cool your ardour after last week's Editorial Leader.

"The Duchess of Teck will on Tuesday, July 9, open the new building of the London Homoeopathic Hospital in Great Ormond-street, Bloomsbury."

"April 18, 1896."

J. B. R.—Probably the number of cases attended in the workhouse would suffice; but she must put the question to the body whose certificate is to be sought.

H. W. Bayly.—There are no such institutions. Application must be made to the matrons of the hospitals at which the applicant desires to be trained.

COMMERCIAL MEDICINE.

To the Editors of THE LANCET.

"SIRS,—I enclose a circular, which together with an appended statement of business sent to me by an enterprising firm of surgical instrument makers, reached me the other day. With the circular there was a post-office order for 15 francs, this constituting a commission of 25 per cent. on the orders taken from my patients since 1892. I am informed that such a reprehensible transaction is quite common here in Paris, but it is as well that our confrères in England should know that we English physicians practising in this city do not lend ourselves to such undignified proceedings. I need hardly say that the post-office order has been returned with an intimation that the code of professional morality prevailing in my own country forbids any such levelling relations between physician and fournisseurs des hôpitaux.

I am, Sirs, yours faithfully,

Paris, April 23rd, 1896.

J. H. BARNARD, M.D.

"AN APPEAL."

Dr. J. B. Maurice, Lloran House, Marlborough, asks us to acknowledge the following sums on behalf of the lady whose case we published last week:—Dr. Champneys, £2; Dr. Domett Stone, £1 1s.; K. (Taunton), 10s. 6d. Further subscriptions will be thankfully received by Dr. J. B. Maurice, at the above address.

INJUDICIOUS FRIENDS AND NEWSPAPER PUFFS.—ISLE OF MAN.

We have received a paragraph from the *Isle of Man Times* on the intended departure—not just yet—of a practitioner, we regret to say, from ill-health. Much is pardonable in words of praise of a parting medical man whose health is impaired. But it is very different when the newspaper is made the medium of describing the merits of his successor. We will not suppose that either the retiring gentleman or his successor is responsible for the puff that appears in our contemporary. They will readily see that if every practitioner in the island were to be so befriended by newspapers the profession would be placed in a very undignified light, and we feel confident that we shall have their concurrence in condemning this style of paragraph.

Junior.—The information as to the case is not very complete, but a course of the ammonio-citrate of iron with iodide of potassium for some time will probably improve things. Has our correspondent tried antipyrin for the dysmenorrhœa?

C. G. H.—Yes, if it be worth the trouble; but we are not prepared to say on whom the claim should be made.

A. B. C.—All such details should be matters of contract.

ON THE TREATMENT OF IMBECILES, DEDUCED FROM PERSONAL OBSERVATIONS IN NATURAL HISTORY.

To the Editors of THE LANCET.

SIRS,—I do not know whether any of your readers have ever noticed the enlargement of the skull consequent to the growth of the cerebrum in the human species in middle or late life as the result of travelling to distant places; but I can personally testify such growth most unmistakably evident even to the extent of nearly an inch, under circumstances like those above described, at the ages of thirty, forty-five, and sixty. Another instance may be noticed in the superior proportion of the cerebrum to the cerebellum, equal to the human proportion, in birds whose power of locomotion exceeds that of the human race. This is further supported by the fact that apterous birds, as the emu, ostrich, and apteryx, do not possess this proportion and are singularly deficient in animal instinct. I do not mention this as a merely curious incident in natural history, but that, if it can be proved correct, it might lead to some improvement in the management of patients suffering from deficient cerebral development. Firstly, all the idiot asylums should be so far affiliated that patients might be removed in regular succession, say once a year, from one house to another. Change of scene would do more to develop the intellect than any kind of in-door attempt at instruction; and on arrival at a new station they should be shown about the streets and suburbs of their new location. I think this matter is well worth looking into and investigating thoroughly by the faculty concerned in such cases and by the authorities under whom they act.

I am, Sirs, yours faithfully,

WALTER SCARGILL.

Colchester, April 6th, 1895.

THE CASE OF MR. C. B. TOWNSHEND.

The following additional subscriptions have been received and are hereby gratefully acknowledged:—

Mr. W. H. Brown (Leeds), per Mr. Henry Morris...	£2 2 0	Dr. C. Y. Biss (Harley-street)	£0 10 6
Semper Fidelis	0 10 6	Galen	1 0 0
Mr. Jas. G. Macaskie (Belford)	0 5 0	F.R.C.S.	0 10 0
Mr. T. Carter (Richmond) ...	1 0 0	Mr. J. Cesar (Sherries) ...	0 10 6
Mr. G. W. Wickham (Winchester)	0 5 0	Dr. E. Hotham Townsend (London)	2 0 0
Dr. T. Rutherford Adams (Croydon)	1 2 0	Anonymous	0 0 1
Dr. A. B. Wells (Cuckfield)	2 2 0	Dr. F. P. Burroughs	0 5 0
Mr. Thos. Corbett (Droitwich)	0 10 6	Dr. A. U. Carter (London) ...	2 2 0
Dr. Wm. Travers (Phillimore-gardens)	1 1 0	Mr. Alden (Bridport)	1 1 0
		Mr. Walsh (Stonyhurst) ...	1 1 0
		M.A., M.D.	0 10 0
		Mr. W. A. Wetwan (Bridlington Quay)	0 10 0

Further subscriptions of the smallest amount (*vide* above) will be thankfully acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

HEALTH OFFICERS AND NOTIFICATION FEES.

Constant Reader.—A medical officer of health is entitled to the same fees under the Infectious Disease (Notification) Act in any and every sanitary district as any other medical man, with the single exception that he can, in respect of notification certificates arising out of his "public" practice, lay claim only to the sum of 1s. in place of the 2s. 6d. to which he is entitled for certificates of notifiable disease in regard of "private" patients.

REMOVAL OF NAMES FROM THE REGISTER.

Mr. T. Garrett Horder.—The point is of great importance. Our correspondent should supply all the facts in detail to the General Medical Council before its approaching meeting, with a request for its further action in the matter. It is obvious that local registrars should be informed of removals from the Register for infamous conduct.

FREE HOMES FOR EPILEPTICS.

R. W. (Newcastle-on-Tyne).—The provision for the unfortunate patients mentioned by our correspondent is at present most inadequate. Recent cases which are likely to receive benefit from in-patient treatment are admitted for a limited period into both the free and the contributing wards at the National Hospital for the Paralyzed and Epileptic, Queen-square (Secretary, Mr. Burford Rawlings), and the Hospital for Epilepsy and Paralysis, Portland-terrace, Regent's-park (Secretary, Mr. Howgrave Graham). For chronic cases there was until recently no provision whatever; but during the last few years three institutions have been established in this country for the admission of epileptics—viz., one for men and women at Maghull, near Liverpool; one at Chalfont in Buckinghamshire, founded by the National Society for the Employment of Epileptics (Secretary, Mr. G. P. Gaskell, 12, Buckingham-street, Strand); and the "Home of Rest for Epileptics" founded by the Countess of Meath at Godalming in Surrey, to which women and girls only are admitted. Not one of these useful enterprises, however, is at present receiving sufficient financial support from the public to enable it to admit patients without payment, although efforts are being made, we understand, at the Chalfont colony to start a special fund for this purpose. But at present payment has to be made by the patient and his friends, or by local boards of guardians, several of which are already supporting inmates both at Chalfont and Godalming. Admission to any of these homes, however, is conditional on there being no marked mental deterioration or alteration. For those epileptics who are imbecile, demented, or liable to dangerous impulses there are no public institutions available except the workhouse and the asylum. Abroad, both on the Continent and in America, the State recognises its responsibility for making provision for epileptics, and before long there is reason to hope that a similar arrangement will be made in this country.

A. B.—The fact of the tea becoming cloudy when cold is no indication of any harmful quality in the water. If our correspondent is in any doubt about the fitness for drinking of the treated water she had better send a sample to the county analyst for examination and report.

Asterion.—Our correspondent would be justified in pointing out the excess of title. It would be going a little too far to demand an apology.

TRAINING OF NURSES IN AMERICA.

To the Editors of THE LANCET.

SIRS,—A lady who is about to enter a hospital in New York for training as a nurse is anxious to know whether her holding an American certificate is likely to militate against her success on her return to England to practise. As I am not aware what repute a nurse trained in America would hold here, I should be glad if you would express an opinion.

I am, Sirs, yours faithfully,

April 25th, 1895.

"HOC AGE."

NATIONAL HEALTH SOCIETY.

The annual distribution of medals and certificates will take place (by kind permission of the Duke of Westminster) at Grosvenor House on May 11th. Her Royal Highness Princess Christian has consented to be present on this occasion, and several eminent speakers will address the meeting. Members of the society are invited to attend.

Inquirer.—The use of preservatives in milk is open to objection; but the least objectionable antiseptic, perhaps, for this purpose is borax. The only satisfactory and scientific way of preserving milk is to sterilise it by means of steam, sealing the vessel containing it before air can enter.

"WANTED, A BED-REST."

To the Editors of THE LANCET.

SIRS,—In answer to "Subscriber," I can with confidence recommend the "Core Bed-rest," made by Messrs. Arnold and Sons, as one of the most useful, practical, and economical. I have had them supplied to several of my patients, who one and all speak of their comfort and easy adjustment.

I am, Sirs, yours truly,

Weston-super-Mare, April 24th, 1895.

GEORGE B. FRASER.

MEDICAL PRACTICE AT ASHTON-UNDER-LYNE.

The following is in print:—

"Dr. — has opened the Independent Dispensary for the Benefit of the Working Classes at 88, Katherine-street, Penny Meadow, Ashton, where he may be Consulted Daily from 9 a.m. till 12 noon, and from 6 p.m. till 9 p.m. Fees:—Advice and Medicine only, 6d.; Visits within a Mile of the Dispensary, 1s."

We have omitted the name of the practitioner.

Mr. H. D. Kendall.—We would gladly assist our correspondent if we could; but it is impossible for us to reply to individual cases.

J. K. W.—We would suggest that application should be made to the Registrars of each of the Colleges concerned.

Communications, Letters &c. have been received from—

- A.—Mr. W. F. Adams, Amritsar, India; Mr. B. V. Allen, Lond.; Mr. F. W. Alexander, Lond.; Messrs. Arnold and Sons, Lond.; Abernethian Soc., Lond.; Hon. Sec. of: Army Medical Department, Lond.; Director General of: A. M. K., Lond.
- B.—Dr. I. McW. Bourke, Lond.; Dr. G. S. Buchanan, Bridport; Mr. L. A. Bidwell, Lond.; Mr. H. W. Bayley, Stonehaven; Mr. J. F. Bullar, Southampton; Mrs. K. Behnke, Lond.; Mrs. Barrett, Witham; Messrs. Bryce and Rumpff, Lond.; Messrs. Barr and Son, Lond.; Messrs. Battle and Co., Neuilly-sur-Seine; Messrs. Burgoyne, Burdicks, and Co., Lond.; Messrs. P. Blakiston, Son, and Co., Philadelphia; Bolton Union, Clerk of; Birkenhead Borough Hosp., House Surgeon of.
- C.—Dr. A. T. Cabot, Massachusetts; Mr. R. C. Coward, Lond.; Mr. A. Crerar, Maryport; Mr. Clark, Wolverhampton; Mr. T. W. Cave, Nottingham; Messrs. Cassell and Co., Lond.; *Charlotte Medical Journal*, U.S.A., Editors of; *Carriage Insurance Co.*, Lond.
- D.—Dr. T. Dutton, Lond.; Dr. J. Davies, Maestig; Mr. T. Dixon, Lond.; Mr. L. S. Dudgeon, New Barnet; Messrs. J. DeFries and Sons, Lond.; Messrs. Davy, Yates, and Hicks, Lond.; Messrs. Down Bros., Lond.
- E.—Dr. B. L. Eastman, Burlington, U.S.A.; Dr. F. W. Eulich, Preston; Edinburgh Univ., Sec. of; Electrical Standardising Institution, Lond., Sec. of.
- F.—Rev. J. C. Fellowes, Stockton-on-Tees; Mrs. Fitch, Wimbledon; F.R.C.P., Lond.
- G.—Dr. A. E. Garrod, Lond.; Mr. H. R. Greene, Woking; Mr. J. Greenwood, Southport; Mr. A. C. Greenwood, Lond.; Mr. G. Griffiths, Trowbridge; Messrs. R. W. Greeff and Co., Lond.; Gateshead, Town Clerk of; Grafton Galleries, Lond., Manager of; Gamma, Lond.
- H.—Dr. J. Holmes, Whitefield; Mr. T. E. Hayward, Haydock; Mr. W. Hazell, M.P., Lond.; Mr. O. Holst, Eastbourne; Mr. C. G. Heard, Hunnamby; Mr. H. Hughes, Flint; Mr. T. J. Haythorne, Liverpool; Mr. H. G. Howse, Lond.; Mr. J. Heywood, Manchester; Mr. G. T. Holloway, Lond.; Messrs. J. Haddon and Co., Lond.; Messrs. A. Hunt and Co., Lond.; Messrs. T. Hopkinson and Co., Nottingham; Messrs. Haaseinstein and Vogler, Geneva; Home for Epileptics, Maghull, Hon. Sec. of; Howard Assoc., Lond.; Home, Lond.
- I.—Isis, Lond.
- J.—Sir George Johnson, Lond.; Dr. W. Jamieson, Belfast; J.E.W., Lond.; J. B. B.
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In Inaugural Address

ON

SANITARY PROGRESS AND REFORM.

Delivered at a Congress held in Manchester on April 24th, 1895.

By HENRY SIMPSON, M.D. LOND.,

CHAIRMAN OF THE MANCHESTER AND SALFORD SANITARY ASSOCIATION;
CONSULTING PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

LADIES AND GENTLEMEN,—No one can sympathise with you more keenly than I do in the disappointment you must feel at the loss of the pleasure and profit you would have derived from the address we hoped to hear from Sir R. Rawlinson, and we all share in the regret that his health would not allow of his being present with us to-day. I therefore trust to your forbearance and generosity while I venture to occupy a portion of your time this morning with a few discursive remarks. My first and most pleasant duty is to welcome you most cordially on behalf of the Sanitary Association of Manchester and Salford to this Congress, and as some of those present may know but little of this local voluntary association, you will perhaps allow me to say that it was founded in 1852 by a few gentlemen, some of whom were members of my own profession, others were clergymen, and others philanthropic laymen. Its objects were simple: (1) to promote attention to personal and domestic cleanliness, temperance, and the laws of health; and (2) to aid the constituted authorities in the promotion of sanitary improvement. The association has endeavoured to carry out these objects by: (1) the visitation of districts requiring special sanitary inquiry (one notable instance of this was the exhaustive investigation in 1888 by Dr. Thresh, now the medical officer of health for Chelmsford, into the causes of the excessive mortality of a district in Ancoats; this investigation gave a distinct stimulus to the efforts of the corporation, and was shortly followed by the condemnation of certain parts of the district by the medical officer of health as unhealthy areas); (2) familiar and well-illustrated lectures have been given in schoolrooms or elsewhere to working people; (3) there has been also the distribution of short tracts, lectures, or leaflets to the poor by ministers of religion, school teachers, and the various agents of societies employed in district visiting; and (4) the investigation and discussion of sanitary questions, and the publication of papers have also been carried on. At that time there was much cause for searchings of heart in the condition and surroundings of large masses of the population of Manchester. For a few years after the formation of the association the death-rate varied from 37.2 to 35.7 per 1000; then from 1856 to 1860 it fell to 31.6 per 1000, and the hopes of the sanitarians were raised; but in the five following years it rose again, and in 1865 was 39.0 per 1000. Though the record for Manchester was a bad one, it did not stand alone. Liverpool—of which city Manchester is supposed to be a rival in other respects than the rate of mortality—had a still higher death-rate, and for many years they possessed the discreditable distinction of being the two most unhealthy towns in the Kingdom, sometimes one and sometimes the other holding the first place. If the value of these figures is questioned from qualifying circumstances not having been taken into account, the mortality under fifteen years of age “avoids the errors arising from changes in the quality of the adult populations,” and we find that in 1861—not a particularly bad year—the rate for Manchester was 47.5 and for Liverpool 53.4 per 1000. As regards the causes of this great mortality, the geographical situation and the geological formation on which the city rests may be put aside as not affecting it specially. But the earlier records of the association show infractions of the common laws of health, which are invariably followed by disastrous results, for there is no forgiveness for those who break the laws of nature. In a report by Dr. Ransome and Mr. Royston, read at the Social Science Congress in 1866, the following are named among the causes that tend to raise the death-rate: “The narrow courts, the back-to-back houses all overcrowded with inmates, the faulty drainage, the open and fetid cesspools teeming with filth, the atmosphere charged with impurities and noxious gases, and the neglect of all

precautions against the spread of infectious disease.” Then follows a description of some parts of the town in 1854, showing that very little change had taken place during the interval. The streets were narrow and winding, and but little intersected, so that movement of air was impeded. Here and there great blocks of buildings were crowded together. Numerous courts passed out of these streets, entered by narrow arched passages, and closed often at the ends by high buildings. Sometimes these courts were a few yards wide, sometimes only a few feet, but they were lined with houses on both sides up to six or eight, or more, in number; and the sanitary arrangements were in thorough keeping with the wretched surroundings. Whole streets of back-to-back houses were common, cellar dwellings abounded, and in almost every street and court the cesspools and middens were overflowing. In some houses seven, eleven, twelve, thirteen, and even sixteen persons were living in a space with only sufficient air for the proper supply of one. Night visits were paid, and the state of things disclosed was not one we should connect with a high state of civilisation. The rooms were most offensive, the ceilings often so low as scarcely to allow of a man standing up; and lying huddled together in the same bed were men, women, and children, without regard to age or sex, and for the most part naked. Some lay on bedsteads, but the majority on the floor. Often enough four or five were in a bed lengthwise with one or two across the foot. “In every instance the windows were found closed and the inlets for air stopped up.” This life of moral and physical degradation is not one we can think of without horror and loathing; it is not one to make us glow with pride and self-gratulation on the decency, comfort, and brightness of our happy English homes. At that time the corporation had no medical adviser, and the health committee, notwithstanding its anxiety for the well-being of the city, often needed a guiding hand. This association, therefore, urged upon the authorities again and again the necessity for the appointment of a medical officer of health. As the writers of the report referred to said: “By the present method of administration authority is so much weakened and responsibility so much diluted by division that no real change for the better can be made without a complete remodelling of the sanitary department of the corporation and the appointment of a responsible medical officer of health.” And in the same year (1866) the late Mr. Turner, the eminent surgeon, at that time chairman of the Sanitary Association, addressed a communication to the authorities, urging on them the importance of making such an appointment. In one paragraph he says: “The reduction to practice of sanitary science is not, as is sometimes supposed, a mere affair of removing what are called nuisances; it involves a great deal more than this—the carrying out of building regulations, so as to secure due ventilation, supplies of water, house drainage, the management of incidental outbreaks of contagious diseases, so that their unnecessary diffusion be prevented, and the skilful carrying out of right methods of disinfection in periods of apprehended pestilence.”

As the result in great part of the representations of the association, the late Mr. John Leigh was, in 1868, appointed medical officer of health for Manchester. He was an accomplished, scholarly, and able man, and for many years did good service to the city by his earnest advocacy of sanitary improvement. He was followed in 1889 by Dr. Tatham, through whose exertions much was done to ascertain the extent of the sanitary evils under which we suffered, and to set in motion important remedial measures. We owe to him, moreover, a most valuable series of Life Tables for Manchester, first published in 1892, and afterwards extended so as to include certain recently added out-townships, which will, in his own words, “allow of the formation of a definite opinion as to how the healthiness of the people, measured by their mortality, compares with what it should be according to Life Table standards.” But, as most of you are aware, Dr. Tatham was soon lost to Manchester, and is now at the head of the Statistical Department of the Registrar-General's Office. Great was the lamentation of those interested in sanitary progress when they were deprived of his valuable services, though they were proud and glad that he should receive this recognition of his great merits, and much anxiety was felt with regard to his successor. But Manchester is sometimes, perhaps, more fortunate than her deserts, and is especially happy in the fact that Dr. Niven has already proved himself, as was anticipated by those who knew his great ability and distinguished career, worthy to follow

Dr. Tatham. And I must not pass over without mention the name of the chairman of the sanitary committee of the corporation, Alderman Walton Smith. We hear of men of one idea, but though he is a man of many ideas, he is at the same time, if I may say so, a man with one aim, with one object in life—namely, to leave Manchester a healthier city than he found it. Hospital accommodation for infectious diseases, and the removal or satisfactory improvement of unhealthy dwellings, have occupied much of his attention; and happy is it for the dwellers in our crowded towns, straggling as too many of them have to do for bare existence, when men are to be found who will devote their lives without fee or reward to helping those who cannot help themselves; and I may say here that by his warm co-operation with the medical officer of health, courts and blind alleys have been opened out, light and air have entered the dark places of the city, and thousands of unhealthy dwellings have been removed or put into a satisfactory condition—and the work is going on still. As the result of the various agencies at work for a number of years, the death-rate has gradually declined from 39 to 24 or 25 per 1000. With fewer deaths there has been less grievous sickness; the general standard of health has been raised, and the working hours of the labouring classes have been less broken in upon by illness. As Dr. Ransome says in a letter to the Lord Mayor on behalf of the association advocating the maintenance of a high status for the medical officer of health: "The result (of this fall in the death-rate) has been an enormous monetary saving to the community, represented directly by increased working time, and a corresponding reduction of expenses for medical attendance and funerals, amounting annually to many hundreds of thousands of pounds," so that the only sufferers have been the medical profession and the undertakers. But set against this the diminution of pain, sickness, and sorrow, the increased brightness and pleasure of life, and you will almost cease to pity the undertakers and the medical men. Much, however, remains to be done. The death-rate of the entire area gives little or no indication of the salubrity or otherwise of its various parts. In Dr. Tatham's recently issued report on the health of Manchester for the years 1891 to 1893, inclusive, the variation in the incidence of mortality is strikingly shown, for while Moston, one of the out-lying districts, has a corrected death-rate for the three years of 16.84 per 1000, that for Ancoats is 36.92. But even this gives too fair a picture, for, as he says, "there are considerable areas in the City of Manchester where the conditions of life are so unsatisfactory that the people die there at the average rate of 52, 56, and even 58 per 1000." But the deplorable waste of human life still going on amongst us tells most heavily on the young, and infantile mortality—i.e., "the proportion of deaths under one year of age to 1000 births"—is very great. The average for the three years varied much in the different districts, ranging from 164 in the northern division to 222 in the old township of Manchester. This mortality, however, is nearly doubled among those poor waifs born out of wedlock, of whom 411 per 1000 in the whole city perished, and in South Manchester the rate was 437. It seems almost a mockery to talk of progress in the face of such figures as these; and they abundantly prove that there must be no standing still—that the warfare against ignorance, crime, and disease must be waged with unflinching, persistent energy.

When we ask how this fight is to be fought it is well to consider the conditions necessary for healthy life. At first sight these seem simple enough, and apparently easy of attainment. We want pure air, pure water, shelter, food and clothing, and we must be temperate in all things. The first comes to us as a free gift, bestowed with lavish hand, but from birth to death we spend our time in vitiating it. In exchange for every breath we draw, gaseous and animal matters more or less deadly are given back, and if the air were still and gases not diffusible we should soon die by involuntary self-murder. Hence the need for efficient ventilation. But few applications of physical science to practice are so unsatisfactory as the various methods of ventilation. Many of them seem to consist chiefly of contrivances intended to thwart Nature's laws, rather than to obtain the end in view by soliciting her aid. Much remains to be done for sanitation in the future by the application of more perfect science, combined with a little additional common sense, to the needs of everyday life. For example, the air-supply must not be obtained from the drains and sewers, as is too often the case. It has been known to occur even in a municipal palace like this. Most of those present

will remember the painful tension in which the feelings and sympathies of the nation were held while the life of the Prince of Wales seemed flickering to extinction from illness thus produced. Nor when the source is pure must the current of air be too rapid, though often enough the current itself is blamed, when the mischief is done by that which it carries with it. No colds were caught last winter on the summit of Ben Nevis. Nor are they taken by those sleeping under the open sky in the prairies of the great North-west, even though the thermometer may be far below zero; but when the comfortable dwelling charged with impure air is reached the chances of escape are few. But in addition to the impurities of the air caused by animal life, there are the thousand-and-one modes of polluting it with trade products. Offensive trades should be carried on with all needful precautions; and if the chemical manufacturers, whose knowledge and ability we all admire, would only exercise a small portion of their fertility of resource in lessening the nuisances they create—nuisances almost more wonderful than the legitimate results of their efforts—they would bring about a happy change in many poor poisoned districts. But a glance at the programme shows that this and kindred topics will be dealt with by gentlemen far more able to do so than I can pretend to be. Of equal importance is an abundance of pure water. Until 1851 a very inferior and inadequate supply was obtained from pumps, wells, rain-water cisterns, some small works on the Medlock and at Gorton, supplemented by water from the Manchester and Stockport Canal and a well in the new red-sandstone. But in that year an abundant supply was obtained from the Longdendale Valley. Still the city grew and grew and its wants increased, so that in 1868 Mr. Bateman, the engineer, stated that the supply would only last a few years. Various schemes for obtaining more were suggested, and in the end the great Thirlmere undertaking was determined on. Terrible was the outcry against the Vandalism and vulgarity of disturbing the beautiful lake—loudest, perhaps, among those who had never been there; but the works went on for eight or nine years, and before they were completed Manchester was more than once or twice dangerously near a water famine. On Oct. 13th last the Thirlmere water was publicly turned on in the adjoining square. And if any of you will visit the lake you will find it still a thing of beauty—changed, no doubt; it is larger and fuller, looking, some may think, more noble than before, although ministering to the needs of hundreds of thousands of our fellow men. In the prosecution of this great enterprise no one rendered such invaluable aid as Sir John Harwood, who has been chairman of the waterworks committee since 1886. We have now an abundant supply for food, cleansing, and manufacturing purposes, as well as for watering the streets and cleansing the courts and alleys.

The housing of the working classes is so vast a question that I must barely touch on it. Two "unhealthy areas" have been cleared of the wretched hovels that crowded the surface and the property purchased by the corporation. It was hoped that private enterprise would have supplied the new dwellings required, but in the end the corporation had to build two large blocks of workmen's dwellings. They have been planned with great care so as to secure for each tenement good light, air, and ventilation. Each is several storeys high, and the one in Oldham-road is in the form of a hollow square enclosing an open space of an acre in extent. This plan of building seems almost unavoidable in towns from the high price of land. But I am not enamoured of these huge barrack-like buildings, where people live one above another, tier above tier, to the height of five or six storeys. Think of the toilsome journeys up and down the lofty stairs, where almost everything has to be carried; of the mothers with their babies in their arms; of what an expedition it must be for the little child down to the earth and the open air when walking is a recently-acquired art. Though separation and privacy may be obtained there must be an absence of many humanising influences. It is true that window gardening may be attempted on a small scale, but there is no little plot of ground to be cultivated in spare hours, and no return in vegetables, fruit, and flowers which does so much to ameliorate the lot of the labourer in many country districts. As a question of municipal politics, the advisability of providing dwellings and letting them at a rent which will not pay is one open to discussion. The ratepayers as a whole are taxed for the comfort and benefit of a few able-bodied citizens who have no apparent claim to such relief. As a question of public health

however, there is no doubt that they are a great improvement on the filthy, insanitary property they have superseded. May we indulge the hope that at some time in the future moving from place to place will be so easy and so cheap that the working classes will be able and wishful to live in country suburbs.

For food and clothing we are dependent on the world beyond "the silver streak." So long as our supplies come regularly we may eat, drink, and be merry. Many no doubt regret the time when we were independent of others for our daily bread, but that time has gone by, and we only hope that our supplies may never be stopped. To keep us absolutely safe with regard to this essential of our existence is, of course, the duty of every Government in power. Sanitation is not a matter affecting us only in the mass; it concerns the family and the individual, but among the majority of adults true ideas and earnestness in regard to health and life seem to permeate slowly. Great attention is now paid to the education of all, and it is to the children who will soon take our places that we must look for carrying on the work. Some there are who are a little doubtful whether, as commonly conducted, the term "education" is quite the correct one to use, and would prefer to speak of "schooling." Be this as it may, the teaching should prepare them for the citizenship which is their lot, and no better lessons can be given than such as will enable them to understand, and will help them to practise, the simple laws of health individually, and lead them on to see and to feel the duty as to matters of health that they owe to the community at large. When may we look for clear skies and pure air? When will polluted streams cease to be open sewers? If all worked together for good we might perhaps dream of a time when each one would do his duty to himself and his neighbour; when the jerry builder would cease from troubling; when the bricksetter, the joiner, and the plumber would do good, honest, well-planned work; when cleanliness and sobriety would be universal; when disease would be lessened and kept more under control. And in a good old age, in the fullness of time, life would silently ebb away like the gently receding tide. But the "ideal future" must be left for Sir Benjamin Ward Richardson to portray in the picturesque language of which he is so great a master, and we must strive, each one of us, as talents and opportunities serve, to improve the present.

A Post-Graduate Lecture

ON

SOME CASES ILLUSTRATING THE SURGERY OF THE CHEST.

Delivered during the West London Hospital Post-Graduate Course on Jan. 6th, 1895.

By STEPHEN PAGET, M.A. OXON., F.R.C.S. ENG.,
SURGEON TO THE WEST LONDON HOSPITAL AND THE METROPOLITAN HOSPITAL.

GENTLEMEN,—With regard to the troubles that may follow simple fracture of the ribs, Dr. West¹ has pointed out that fracture of the ribs is followed much more often by emphysema than by pneumothorax. This he explains by the principle of cohesion. The visceral and the parietal layers of the pleura are two moist smooth membranes, coherent everywhere; if the lung be wounded by a fractured rib driven inward, the close cohesion between the visceral and the parietal layers of the pleura prevents the diffusion of air into the pleural cavity, and thus it is driven into the subcutaneous tissue. Still, there are plenty of recorded cases of pneumothorax after fractured ribs. In one of my cases air, blood, and pus were all present in the pleural cavity. The patient, aged twenty-four, was run over, and was admitted to the West London Hospital at once, with fracture of the tenth and eleventh ribs on the right side far back; she was spitting blood, and loud rales were heard over the right side of the chest. With careful nursing she did well for a week; the spitting of blood ceased, and she was allowed to sit up in bed; but on the eighth day she was weak and ill, and had more pain in her side; the temperature

was 102° F. and the respirations 50. There were signs of pneumothorax in the front of the chest; behind there were signs of a collection of fluid. On the thirteenth day an aspirator was put in at the fifth space, near the angle of the scapula, and eight ounces of dark fluid blood were drawn off. This gave her great relief; but on the nineteenth day it was necessary again to use the aspirator, and this time the blood that was drawn off was mixed with offensive pus. A week later I made a free incision, letting out six or seven ounces of thin, brown, turbid, offensive fluid, mixed with gas, and put in a large tube. No more fluid came out during the operation, but a few hours later there was a profuse rush of it, soaking the bed. She did well after this; the tube was left out on the seventh day. I delayed making the incision in this case because, in spite of the presence of offensive pus in the chest, she was daily gaining ground in her general health, and I was anxious not to run the risk of causing fresh hæmoptysis by giving her an anæsthetic, or of reducing her strength by any operation till it was absolutely necessary.

Acute pneumonia or broncho-pneumonia after fracture of the ribs may be due to other causes besides injury of the lung: such as the shock of the accident, the exposure after it, the sudden enforced rest in bed, the impairment of the movements of respiration, and the difficulty of clearing the bronchi by coughing. A woman aged fifty was run over and admitted under my care with fracture of the third, fourth, and fifth ribs, and laceration of the vagina. Bronchitis was marked on the third day. Two days later there was pneumonia on the same side as the fractures; she lay on the injured side, and hardly moved it in respiration; the whole lung was rapidly involved, her breathing became laboured, and she sank and died on the tenth day. Another case was that of a man aged thirty-nine, who fell out of a cart. He had severe concussion, fracture of several ribs on the right side, other slight injuries, and chronic bronchitis. On the third day he had acute pneumonia, the temperature being 103° F., the breathing laboured, and the face dusky. That night he was bled to ten ounces with immediate relief; he began at once to improve and made a good recovery. Leeches had failed to do him any good, and I feel sure he owed his life to the bleeding. In a case of hæmothorax after fractured ribs bleeding gave relief, though it did not save the patient's life. A man aged forty-five was crushed in a carriage accident; his ribs were fractured, and he sustained a bad compound fracture of the leg. On the third day his pulse and respiration rose to such a height that he was bled to nine ounces. He was greatly relieved and got some sleep, but the relief was only temporary and on the fifth day he died. We found no less than thirteen ribs fractured, seven on one side, six on the other; the right lung was lacerated and there was blood in the right pleural cavity. Probably in such cases as these nothing gives so much relief or is so likely to save life as a moderate bleeding.

Passing from injuries of the ribs to diseases of the ribs, it is worth our while to note how seldom the ribs are the seat of tumours, either innocent or malignant. It is true that in the last stages of melanotic cancer the ribs may become infiltrated with the disease; but with this exception the ribs are rarely attacked by malignant disease, either primary or secondary—not even in cases of advanced cancer of the breast. It is the medulla of the bones that receives the secondary deposits of malignant disease, and perhaps the ribs owe their immunity to their having so little medullary tissue. But, beside this, the distribution of secondary growths in malignant disease is not a mere matter of chance; some parts of the body are much more apt than other parts to receive and nourish the cancer cells that are carried to them by the blood. I once tabulated the distribution of the secondary growths in many hundreds of cases of cancer of the breast, and it is certain that some bones, especially the upper third of the shaft of the femur, are more favourable for secondary deposits than other bones are; the cancer cells may be carried all over the body, but they do not find a congenial soil everywhere.

The diseases of the ribs, then, are mostly diseases of inflammation—periostitis, caries, and necrosis; and most of the patients are tuberculous or syphilitic. As an instance of tuberculous caries a little boy came under my care with a chronic abscess over the lower ribs on the left side in the mid-axillary line. It was incised and

¹ Bradshawe Lecture on Pneumothorax, 1887.

drained, and it healed well; but two months later he came back with caries of the lumbar spine, and where the abscess over the ribs had been there was now a deep depression of the wall of the chest one and a half or two inches in diameter. There is another cause of caries of the ribs besides tubercle and syphilis; it may occur after one of the continued fevers, especially typhoid fever. A man forty years old had typhoid fever in the spring of 1891, and this was followed by periostitis of both tibiae and of one of the lower left costal cartilages. As regards the nodes on the tibiae, one became absorbed, and the other suppurated and healed without exfoliation. The swelling of the costal cartilage suppurated and was incised, but did not heal; and in December, 1892, he had a sinus there three and a half inches long. I cut down and opened it at its lowest point, and scraped a carious patch on one of the costal cartilages, but still it did not heal. In November, 1893, I laid open the whole sinus and found a small, deep, thick-walled cavity, leading to a costal cartilage which was cut right across by caries. I removed the carious ends of the cartilage and the thickened tissues round the sinus, and kept open the greater part of the cavity; but fresh sinuses formed, and these also had to be laid open, and then at last the whole wound healed. Keen³ of Philadelphia collected 69 cases of diseases of bone following one or other of the continued fevers; the large majority were cases of typhoid fever; most of them were those of men; and his list includes almost all the bones in the body. In 22 cases the bones of the head or the face were attacked, in 7 the trunk, in 6 the upper limbs, and in 42 the lower limbs. Necrosis occurred in 50 cases, caries in 12. As regards the interval between the onset of the fever and the onset of the bone disease, in 10 cases it was a fortnight; in 27 it was from three to six weeks; and in 10 cases was more than six weeks. Caries or necrosis of part of a rib, whatever its cause, is so likely to set up sinuses burrowing in all directions, even down the whole length of the abdominal wall, that we are justified in operating on these cases, but the operation must not be done in a half-hearted way; the bone must be scraped or excised, and every sinus must be carefully laid open to the very end.

As regards pleural effusions I should like to mention a case of serous effusion due to cancer of the pleura secondary to cancer of the breast, as it has some points of practical interest. I removed the right breast in March, 1890, and removed a recurrent nodule in November of the same year. In April, 1891, the patient had signs of right pleural effusion; and it is worth noting how quickly the fluid was poured out. On the first occasion I drew off forty-three ounces; ten days later fifty-three ounces; eleven days later thirty ounces; a week later fifty ounces; and eight days later forty-three ounces. Three days later her sufferings came to an end; they had been much relieved by the use of the aspirator, and it was curious to see how she fell asleep after it, just as patients do after tracheotomy. I have seen the same sudden sleep on two or three occasions in a case where I had several times to puncture the abdomen for acute distension—the so-called idiopathic dilatation of the colon.⁴ And another case of non-purulent effusion is worth mentioning here, though I only know of it by hearsay. A young man aged nineteen after some trifling ailment was found to have some enlarged glands in the left axilla. A surgeon in Paris operated on him, making a transverse cut right across the axilla from the pectoral muscle almost as far as the trapezius, and clearing out the glands; after this he used to put his finger into the wound day after day and clear out whatever he could. The young man's blood was examined, and he was declared to have leucocythæmia. Then some obstruction of the lymphatics of the arm set in, and his arm began to exude lymph, to the extent of several ounces daily. The axillary wound was full of indolent granulations; the arm was blistered with vesicles containing lymph; then came signs of pleural effusion on that side of the chest, and the fluid that was drawn off had large flakes of lymph floating in it, and coagulated rapidly to a firm clot. He wasted rapidly, probably from some obstruction of the thoracic duct, and so died.

For exploring the chest a small syringe with a long strong steel needle is better than an aspirator—easier for the

surgeon, less warning to the patient, and less likely to wound the lung; cocaine will do for an anæsthetic provided it be injected under the skin, not painted over it. Of course, one must avoid the intercostal vessels, and the needle must not be thrust through any thick muscle. In one case, an empyema of the right side containing sixty-five ounces, a surgeon had put the needle of the aspirator through the whole thickness of the pectoral muscle; this was followed by an abscess beneath the muscle communicating with the empyema.

If the empyema is already pointing outside the ribs we must of course make a free incision into the swelling, but it does not follow that we shall be able to make out the communication between the swelling outside the ribs and the empyema inside them. I have had three cases of empyema pointing outside the ribs. In one, that of a boy aged nine, an empyema of the left side had already burst through the skin, leaving a fistula, high up, between the second and third ribs, close to the sternum. When one pressed the chest, pus poured from the fistula, but one could not get a probe through it. In another case, that of a young man, an empyema of the right side had pointed over the seventh, eighth, and ninth ribs in the anterior axillary line, and had been mistaken for a simple superficial abscess. I opened it freely, but could not make my way from it into the chest. In the third case, that of a man aged forty-eight, the empyema pointed at the same place, and here, on opening the swelling, I did come straight on a large hole between the ribs into the chest. Thus, in two cases out of three, the place where the empyema pointed was no guide as to the place where one ought to evacuate it. In many cases, of course, one cannot do better than follow the track of the exploring syringe. But it happens to every surgeon now and again to make his opening too high or too far forward for proper drainage of the cavity, and if he does this he had better make his counter-opening at once, or he will certainly have to make it afterwards. As regards the resection of part of a rib, this can hardly be avoided in children; but in adult patients the ribs may be far enough apart to admit a full-sized tube. In one of my cases there were no less than 105 oz. of pus, mixed with large masses of fibrin; but it was all let out by simple incision without resection, and the cavity was healed in a few days. Still, it is a very simple matter to remove an inch of a rib, and it allows the surgeon to examine the cavity with his finger. If the pleura be much thickened it is better to open it with a scalpel than with a director.

There remain for our consideration some important points as to the course, treatment, and termination of cases of empyema.

Empyema may be due to the extension of suppuration downward from the neck or upward from the abdomen, and it may itself extend downward in various directions. Some time ago a child came under my care with a mastoid abscess. This was opened and drained; then came a deep abscess in the neck, which was also opened; then came empyema—all being on the same side. Bouchut⁵ has recorded the case of a girl in whom an empyema of the left side of the chest was due to a long sinus on the left side of the face from caries of the malar bone, and Sir W. Dalby had a case where pus burrowed downwards from the mastoid bone, along the sterno-mastoid, to the lower border of the thyroid cartilage, and also under the splenius and complexus muscles. As regards the downward wandering of empyema, a man aged forty after acute double pneumonia had empyema of the left side. This was opened and drained, and about three weeks afterwards I allowed him to get up; but that very day his temperature began to rise and fluctuate, and he began to lose ground; a few days later, he had pain down the leg, and kept it flexed; then came an acute swelling in Scarpa's triangle, and here I opened a large abscess passing up into the pelvis out of reach of my finger, and also burrowing backward in the thigh, round the inner aspect of the femur, so that a counter-opening had to be made between the hamstring muscles, and then it all healed without any more trouble. A very good collection of cases of this wandering sort of empyema has been published by Bouveret.⁶ Some went into the lumbar region, and one of these pulsed like an aneurysm; others went into the gluteal region; others made their way to the umbilicus. Bouveret points out that

³ Toner Lecture, Smithsonian Miscellaneous Collections, vol. xv, 1873. See also St. Bartholomew's Hospital Reports, 1871, p. 107; 1885, p. 107; and 1887, p. 210; also Stanley, Diseases of Bones, 1849, p. 131, and Sir James Paget's Clinical Lectures and Essays.

⁴ Ogier, Relief of Tympanites by Puncture, 1832.

⁵ Gazette des Hôpitaux, May 15th, 1877.

⁶ Lyon Médical, July, 1892. See also Owen Rees, Brit. Med. Jour., August, 1883; Foot, Dublin Medical Journal, 1873; and Chappet, Dictionnaire de Médecine et de Chirurgie Pratique, article "Ombilic."

this extension of empyema occurs almost always on the left side, and in young people.

As to the after-treatment of empyema, probably we are all agreed that it ought not to be washed out at the time of operation; it cannot be safe to do it while the patient is anaesthetised, so that he cannot tell the surgeon anything, or expel the lotion by coughing. After the first two or three days I usually wash out the cavity once a day; one often finds shreds of lymph and small clots of blood which are doing no good inside it. Of course the lotion must not contain any poisonous substance; and of course it must be of a proper temperature. I know a case where cold lotion was used for washing out a child's chest, and the child died at once. In 1877 Dr. Cayley⁷ published the case of a man aged thirty-six who had repeatedly had an empyema washed out; but one day the washing out was at once followed by convulsions, opisthotonos, and death in sixteen hours. Vallin had a case, that of a man aged twenty-three, where washing out an empyema was followed by convulsions and opisthotonos; death ensued in six hours. Raynaud had a similar case, but the patient recovered. Lorey had a case, that of a man aged twenty-seven; his empyema had been washed out daily for three weeks, and then one morning the washing out was followed by syncope and convulsions; these passed off, and he repeated the washing out that evening; again there was syncope, and again convulsions, and this time the patient died in a few hours. These cases remain unexplained. In all of them the washing had been done day after day, week after week, and nothing had happened. No cerebral embolism or thrombosis was found; none of the post-mortem examinations showed anything special. Dr. Cayley, in his account of the whole subject, can find no definite explanation of it.⁸ The only trouble I have had in washing out was in a young man whose empyema I had washed out daily for a week; one day later I washed rather too hard, and suddenly he had a fit of coughing, a sharp pain in his side, a foul taste in his mouth, and he coughed up a streak of blood, and for some hours he felt very weak and low: no harm came of it—I must have torn some adhesion.

From time to time cases are recorded where the drainage-tube has fallen into the cavity or has been sucked into it. This stupid accident has twice happened to patients under my care. I have collected all the recorded cases I can find, and they make one thing clear—that the tube must not be left there. In both my cases I was able to find it very easily with long, slender urethral forceps, which can pass down a very narrow sinus and then open very wide, so that the whole cavity can easily be explored. The tube generally falls to the back of the cavity and lies alongside of the spine, but if there are adhesions or bands of scar tissue round the opening into the cavity it may get caught among these close to the ribs.

I have to refer to a very unhappy case where the patient suddenly died on being turned on his side for operation. A boy ten years old was admitted with dulness over the whole left side, and marked bulging of the chest wall. Chloroform was given, and he was turned partly over on to the sound side without any bad result. After waiting a little I turned him over a little further and made my incision. At this moment he stopped breathing, but the pulse continued, and the anaesthetist did not at once notify the cessation of the breathing. Then the pulse stopped, and neither by letting out the pus nor by artificial respiration were we able to save his life. No post-mortem examination was allowed. This disaster would probably not have happened if I had first aspirated the chest without taking the boy out of bed at all, or if, as would have been quite easy, I had drawn him just over the edge of the operating table and had then knelt underneath him, and so let out the pus without turning him over.

In two cases empyema was combined with or followed by tuberculous phthisis. In March, 1894, I operated on a young man aged twenty-three for an empyema of the right side containing about two ounces and a half of sero-purulent fluid, and for the next three weeks he did very well, save only that his temperature remained high at nights. As this did not improve I made a counter-opening lower down and

further back, but still the cavity did not close. Then he went home into country air, but still he did not heal; and about three months after he went home he was found to have signs of pulmonary phthisis. In another case, which is now in the hospital, the empyema healed quickly; but there are signs of commencing phthisis of both apices, which were not present when the patient was admitted a month ago.

There is a form of empyema where the pus is intensely fetid, of a horrible gangrenous smell—thin blackish fluid so virulent as to cause sloughing of the muscles all round the wound, with delirium, sweating, diarrhoea, rigors, and great prostration. In one case, that of a man aged twenty-five, I let out more than a pint of thin, blackish, horribly gangrenous fluid. I kept the cavity clean with frequent irrigation, but there was extensive sloughing of the intercostal and trapezius muscles; he never rallied from the state in which he had been since admission, and he died on the tenth day after admission. In another case, that of a woman aged twenty-four, we let out thirty ounces of similar thin, dark, gangrenous fluid. She lay for nearly a fortnight in the same typhoidal state as the first patient, delirious at times, passing everything under her and refusing food; there were the same sweats and diarrhoea and the same sloughing of the muscles round the wound. At last she began to improve, and recovered. There was no evidence in either case during their illness, or in the first case at the post-mortem examination, of gangrene of the lung—no fetid sputa, no shreds of lung tissue in the discharge, and no free air in the pleura.

As regards gangrene of the lung I had an instrument made some years ago with the idea that it might be useful for the evacuation and drainage of deep cavities in the lung, the liver, or the brain. In such cases the pleasure of finding pus is often marred by the difficulty of getting a tube into the cavity without lacerating the surrounding tissues; nor is it easy to be sure that the tube is just the right length. The instrument is a director 7 in. long, cylindrical, the same size all the way, deeply hollowed out, marked in half inches all the way, and cut off short without any handle, so that a tube can be slipped down over it. Four silvered tubes fit smoothly over it, and they are exactly 1½, 2, 2½, and 3 in. long. There is a collar to fit any of the tubes, with holes in it for threads to keep it steady. When you find pus with this director you know to half an inch how deep it lies; then you take a tube, or a bit of drainage-tube, of exactly the right length, and slip it down over the director. Thus you avoid the chance of missing your way or of damaging the tissues with that clumsy and unclean instrument, the polypus forceps.

CASES OF INTESTINAL ANASTOMOSIS BY MEANS OF THE MURPHY BUTTON.

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THE following cases, for the notes of which I am indebted to my late house surgeon, Mr. A. L. Jackson, exemplify some of the uses of the Murphy button in abdominal surgery.

CASE 1. *Carcinoma of the pylorus; gastro-enterostomy.*—A single woman aged fifty-five years was admitted into St. Mary's Hospital on Nov. 13th, 1894, with symptoms indicating obstruction at the pyloric orifice of the stomach. She had for six months previously been unable to retain any solid food in the stomach, but was constantly sick after her meals; she had on several occasions vomited blood, and had been reduced to a condition of extreme weakness and emaciation, her weight, which had been over 9 st. before the commencement of these symptoms, having fallen to 7 st. 2 lb. She had been operated on ten years previously for exomphalos, and the umbilical region was still occupied by a hernial protrusion of considerable size. Somewhat below the normal situation of the pylorus a hard, nodular, and mobile swelling could be detected, and the area of stomach resonance was greatly increased. The diagnosis of carcinoma of the pylorus was made, and it was decided to perform gastro-enterostomy, and if possible pylorotomy. On Nov. 20th the abdomen was opened in the middle line in the epigastric and umbilical regions, and the dilated stomach was at once perceived; on

⁷ Transactions of the Clinical Society, 1877, p. 16.

⁸ Some curious cases are reported by Lépine (Union Médicale, Feb. 1st, 1878) where the evacuation of an empyema or the subsequent irrigation of the cavity was followed by slight temporary loss of power in the upper or the lower limb on that side.

tracing this to the right a hard nodular growth was found implicating the pylorus and the commencement of the duodenum, but adhesions of its posterior surface to subjacent parts rendered impracticable any attempt at pylorotomy. I was, therefore, compelled to content myself with gastro-enterostomy, in the execution of which some difficulty was encountered owing to the numerous adhesions which existed between the great omentum and peritoneal folds in its vicinity. After some delay the small intestine was exposed and followed up to the commencement of the jejunum, into which the male half of a large-sized Murphy's button was introduced; the female segment having been inserted into the lower part of the great curvature of the stomach, the two portions of bowel were accurately approximated. The subsequent course of the case was uneventful; the patient was able to assimilate the ordinary hospital diet within a month from the operation, and on Dec. 25th was able to enjoy the traditional Christmas dishes. She left the hospital on Jan. 12th, her weight being then 8 st. 11 lb. At the present time (April 28th) her condition is eminently satisfactory, the growth seems to be quiescent, and her weight is 10 st. 6½ lb., being an increase of 3 st. 4½ lb. since the operation; the button, however, is still retained, it being now 160 days since its insertion; the only evidence of its presence is an occasional pricking sensation in the epigastric region.

CASE 2. Strangulated inguinal hernia; gangrene of intestine: resection and anastomosis.—A man aged fifty years was admitted to St. Mary's Hospital on Jan. 29th, 1895, suffering from a strangulated inguinal hernia of four days' duration, which four days had been spent in aggravating his condition by means of drastic purgatives and irritating local applications. When summoned to see him I decided upon immediate operation and accordingly cut down upon the large scrotal swelling which was present on the right side; the sac was found to contain a quantity of fetid fluid of brown colour, and the bowel for about two inches in length was black and gangrenous, and in a condition which allowed no hope of its recuperation. The intestine was clamped and five inches of it were resected together with a wedge-shaped piece of mesentery; the divided ends were then brought into contact by means of the medium-sized Murphy button, and the edges of the mesentery approximated by sutures. As the patient was somewhat exhausted it was not considered advisable to attempt the removal of the large hernial sac, but it was rendered as far as possible aseptic by applications of a 1 in 20 carbolic lotion, and subsequently a large drainage-tube was introduced. A few days after the operation the patient had an attack of delirium tremens and had to be kept under the influence of morphia; the operation wound also became septic and discharged a considerable quantity of very offensive pus; further than this a troublesome diarrhoea supervened, and it was only with difficulty that the patient's strength was sustained. Ultimately, however, he rose superior to all these complications and on Feb. 12th was able to take solid food; on Feb. 17th he complained of uneasiness in the rectum, and on examination the button was felt and was without difficulty removed, nineteen days having elapsed since its introduction; after this convalescence was uninterrupted. I have since learnt that this patient is in perfect health; his bowels act well and freely, and he feels as well as he did before the operation.

CASE 3. Strangulated femoral hernia; perforation of intestine: enterectomy and anastomosis.—A female aged sixty-two years was admitted to St. Mary's Hospital on the evening of Feb. 25th, 1895, suffering from a strangulated femoral hernia of seven days' duration. Throughout this period opium had been administered and taxis had been several times tried with no result, and stercoraceous vomiting occurred shortly after her admission. The patient having been prepared for operation I cut into the hernial sac, and there discovered a loop of bowel three inches in length in an acutely strangulated condition. On incising the neck of the sac and drawing down the bowel for a more minute inspection a small perforation was detected at the proximal end of the portion involved. A resection to the extent of seven inches was then effected, and the divided ends were brought together by means of the medium-sized Murphy button. Some difficulty was experienced in securing the vessels at the apex of the wedge-shaped portion of the mesentery which had been removed, and after the bowel had been returned into the abdominal cavity there was considerable oozing therefrom; the loop was, therefore, again drawn out, and a bleeding

point which had hitherto escaped notice was ligatured; the peritoneal cavity was thoroughly cleansed by the introduction of sponges on holders. The patient's rallying powers were insufficient to tide her over the shock resulting from the somewhat protracted operation, and she succumbed thirty hours afterwards. At the necropsy the divided ends of the intestine were found to be in perfect approximation, and some adhesion between the opposed serous surfaces had already taken place; there was no sign of peritonitis, and death could only be attributed to shock.

Remarks.—A perusal of Professor J. B. Murphy's paper in THE LANCET of April 27th prompts me to put on record my at present limited experience of the ingenious contrivance which bears his name and which seems destined to effect a revolution in intestinal surgery. In the list which he has compiled Professor Murphy has included very few cases recorded in this country, and it may be a source of gratification to him to find that his method has met with a far wider recognition among English surgeons than he has hitherto imagined. In proof of this statement I may point out that Mitchell Banks has recorded two cases of enterectomy, of which one was successful;¹ Hamilton² and C. A. Morton³ successful cases of enterectomy; while E. Owen, in THE LANCET of April 27th, describes a case of resection of the intestine for cancer of the colon, and Arbuthnot Lane⁴ describes a pylorotomy and gastro-enterostomy in which (I learn from him) the patient succumbed six days after the operation to the disease, advanced carcinoma of the pylorus. In a previous communication⁵ Professor Murphy has drawn attention to the remarkable reduction in the mortality following enterectomy and kindred operations when performed with his button, and this reduction is rendered even more conspicuous in the light of the cases tabulated in his later contribution. A not unnatural reluctance to publish failures exists in every occupation in life, and surgeons are not altogether exempt from it; but even if all the unrecorded cases where the Murphy button had been used without success could be collected it is doubtful whether they would exceed the unsuccessful cases resulting from other methods, which had in like manner not been deemed worthy of publication. Further, the reduced mortality in intestinal operations with Murphy's button is so remarkable that even if a considerable number of fatal cases was added to the list it would still compare favourably with other methods. Take, for instance, the mortality following resection of the bowel for gangrenous hernia—there are in Murphy's list fourteen cases and two deaths, to which may be added my cases, which will give a total of sixteen cases and three deaths, or a mortality rather under 19 per cent.; and here the element of personal skill may be entirely excluded, for the sixteen cases were in the hands of eleven different operators. The statistics of Zeidler of St. Petersburg⁶ show a mortality of 49 per cent. in 289 cases of primary resection of gangrenous hernia; even if we take into consideration the fact that these figures refer to a far larger number of cases the disproportion between 19 per cent. and 49 per cent. could hardly be accounted for by the difference in the number of cases tabulated. Retention of the button has been known to occur, though I find no mention of it in Professor Murphy's tables; he, however, in his answer to Dr. Wiggan's criticisms⁷ mentions that two such cases had been reported to him. In my case of gastro-enterostomy the button has been retained for 160 days, and the intestinal tract has up till now shown no resentment at its presence. I have not followed Professor Murphy's advice to explore the rectum in the hope of discovering it, for I imagine it has found its way into the disused portion of the duodenum, and so the occasional "pricking sensation" which the patient experiences in the epigastric region may be accounted for; whatever the situation, it is not productive of any signs of irritation, and its retention has been in no way prejudicial to the successful issue of the case. My second case is noteworthy on account of its numerous complications—viz., delirium tremens, severe diarrhoea, and sepsis. The latter was, I believe, unavoidable, for the patient was not in a condition to permit of the prolonged dissection necessary for the removal of a large hernial sac, and had I attempted this the issue of the case might have been different. I decided

¹ Brit. Med. Jour., Feb. 23rd, 1895. ² Ibid.

³ Ibid., April 20th, 1895.

⁴ Medical Press, Aug. 24th, 1894.

⁵ THE LANCET, Sept. 15th, 1894.

⁶ Centralblatt für Chirurgie, 1893, p. 62.

⁷ New York Medical Journal, Dec. 1st, 1894.

to leave an extensive source of sepsis in the shape of a sac which had contained gangrenous bowel in preference to prolonging an operation on a not very promising subject, and I trusted that I might counteract this element of danger by subsequent treatment, and in my humble opinion the result of the case justified the course I pursued. The death of my third and last patient was a source of great disappointment to me, but as far as the button was concerned no blame can possibly be attached to it, for it was proved to have answered its purpose perfectly. As will happen on certain occasions, everything seemed to conspire against a favourable issue: a delay of seven days from the commencement of symptoms of strangulation may justly be instanced as an example of "criminal procrastination," and the administration of opium during that period was an aggravation of the offence, while the difficulty in controlling the hæmorrhage from the mesenteric vessels was the proverbial last straw.

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A CASE OF SCLEREMA NEONATORUM ENDING IN RECOVERY.¹

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ASSISTANT PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, AND TO THE WEST LONDON HOSPITAL.

SCLEREMA NEONATORUM is so rare a disease, and when met with so seldom has any but a fatal ending, that I venture to publish a case which has been recently under my care and which ended in complete recovery, believing that in the present incomplete state of our knowledge of this and allied conditions the period has not yet arrived when such records are superfluous.

The patient, a male infant aged five weeks, was brought to the out-patient department of the Hospital for Sick Children at Great Ormond-street on Nov. 5th, 1894. The mother, a healthy-looking woman, stated that this was her third child. Of the other two the elder was strong and well, but the second died in consequence of a fall at the time of its birth. The last pregnancy was preceded by a miscarriage at the third month. The father was said to be healthy. The family occupies three rooms on a first floor and no history of privation was obtained. The infant was born at full term, the head presented, and there was no particular difficulty at the birth except that the hæmorrhage was somewhat excessive. He was a well-nourished and, except in one respect, a healthy child. There was not, and had not been, any rash upon the buttocks or snuffles. The child was being suckled by his mother, who had an abundant supply of milk, which he took regularly and well. The back of the infant presented a remarkable induration, which extended, like a kind of carapace, over almost the entire dorsal aspect of the body, involving the deltoid regions and upper arms, the buttocks, and the thighs down to and including the popliteal spaces. The skin of the face, front of the trunk, and limbs was perfectly soft and natural. The edges of the indurated area were sharply defined, irregular, and maplike, and there was nowhere any tendency for the hardened to merge into the healthy parts. The skin over the affected parts was stretched, but not shiny, and in places exhibited a pink mottling; it could not be pinched up between the fingers; pressure produced no pitting, but merely rendered the surface pale for a time. The distribution of the induration was remarkably symmetrical. The legs could not be fully extended either at the hips or knees, and when extension was attempted the skin in the popliteal spaces became very tense and shiny. There was no swelling, cedematous or other, of the hands or feet. The child was good-tempered, and the examination did not appear to cause it any pain or discomfort. There were no signs of any disease of the heart, lungs, or other viscera, and there was no intestinal disturbance. The urine was not examined. It was stated that the induration upon the buttocks was noticed immediately after birth, and the places were at first of a deep pink colour. During the first nine days of life the hardness spread down the thighs, but as far as could be ascertained the extension to the back and arms only took place during the fifth week, just before the

infant was brought to the hospital, by which time the colour of the affected parts had become much paler than formerly. No history of any surface exposure to cold air or water could be obtained. Inunction of a drachm of cod-liver oil night and morning was prescribed. The note of Nov. 12th, a week later, states that the induration in the dorsal and lumbar regions was rather less marked, but there was no noticeable change in other parts, except that the redness had practically disappeared. The general health continued good, the infant sleeping and taking his food well. There was no coldness of the skin or extremities, and the temperature taken in the rectum was 98.2° F. On this date inunction of blue ointment was ordered in place of the cod-liver oil. By Nov. 19th there was decided improvement in the local condition. The skin of the back, although it appeared stiffer than that of the normal parts, no longer exhibited marked induration; the hardness in the deltoid regions had disappeared, but a small patch remained upon each upper arm. The hardness of the buttocks and backs of the thighs—i.e., of the parts first affected—was as distinct as ever, but had somewhat diminished in extent, and the hide-bound condition in the popliteal spaces was less marked. It was a noteworthy fact that as the induration cleared up it did not merely shrink at its borders, but isolated patches were left which had become detached from the main area. Moreover, no pitting could be elicited in the regions in which the affection was clearing up. The note of Nov. 26th says that by that date further improvement was evident. A very small patch of induration was noticed in the left parotid region, which had probably been previously overlooked. On Nov. 29th the rectal temperature was 99°, and the induration had still further diminished in extent. On Dec. 13th there were still isolated patches upon the upper arms and extensive induration over the buttocks. On this date the inunction of mercurial ointment was stopped, and that of cod-liver oil was ordered to be resumed. On Jan. 31st, 1895, there was only a small patch of induration upon the outer surface of each thigh and the child could extend its legs well. The arms and back were entirely free. By March 14th the induration had completely disappeared; there was a slight cough, but no abnormal signs were detected in the chest. The infant was good tempered, well nourished, and slept and took the breast well. On April 18th the child weighed fifteen pounds and three-quarters. The temperature in the rectum was 99.4°.

From the typical cases of sclerema neonatorum, upon which the descriptions contained in the text-books are mainly based, the above case presents certain well-marked differences, which, after all, are differences of degree rather than of kind, and which may be briefly summed up as follows: 1. The child, instead of being weakly at birth, was, with the exception of the local condition, in excellent health; nor had he suffered at any period of his brief existence from any pulmonary or intestinal disorder. 2. The temperature as taken in the rectum was at no time exceptionally low, whereas in severe cases the depression of temperature is one of the most conspicuous phenomena of the disease. The rectal temperature of 98.2° in the earlier stages probably indicated some depression, for it is stated that in young infants the temperature is as a rule over 99°, and on later dates the temperature was always somewhat higher in this case. 3. The induration after spreading in the earliest weeks of life became arrested, and instead of succumbing to the disease the patient made a steady and complete recovery. Now the only recognised condition with which sclerema is liable to be confused is the cedema sometimes observed in newly-born infants. There is no doubt that these two phenomena have frequently been confused together, and such confusion permeated the earlier literature of the subject until Parrot clearly differentiated between them, pointing out that Andry and other French authors had applied Underwood's name of sclerema to a quite different condition from that which he intended it to designate. Those who are interested in this question will find the differences between sclerema and cedema neonatorum clearly set out in Henoch's work on the diseases of children, and in a paper by Dr. Ballantyne.² In their general condition infants which are the subjects of sclerema and of cedema are apt to resemble each other somewhat closely, but the integuments of cedematous infants usually pit on pressure, although when there is great tension of fluid this character may be to a great extent wanting. Again, whereas sclerema tends to commence upon

¹ A paper read before the Medical Society of London on April 22nd, 1895.

² Brit. Med. Jour., vol. i. 1894, p. 403.

the dorsal aspect of the body and legs, and thence to spread to the remainder of the surface, oedema is apt to appear in the hands and feet and early involves the abdominal walls and scrotum or labia. I do not think that the case which I have described was one of oedema, for the following reasons: 1. There was no evidence of syphilitic taint in the child, and the history of a miscarriage preceding the pregnancy hardly suffices as evidence of this disease; nor was there any evidence of erysipelatous inflammation, of visceral lesions, nor, indeed, of any recognised cause of oedema. 2. The distribution of the hardness and the manner in which it cleared up, leaving isolated patches which persisted for a long time, seems to me strongly opposed to the diagnosis of oedema. 3. The absence of pitting on pressure even in parts in which the induration was disappearing, and the tension could no longer be excessive, seems incompatible with such a diagnosis. I should, however, mention that when the patient was shown at the Dermatological Society in November, 1894, some of those present expressed the opinion that the condition was rather of the nature of oedema than of sclerema. If I am in error in describing the case as one of sclerema I have erred on good company, for among the published cases of that disease I have found several recorded by eminent observers which were obviously of the same nature as that under consideration.

I may perhaps be permitted to refer briefly to some of these examples. In THE LANCET for 1889³ Dr. Angel Money recorded the case of a female infant aged five weeks. At the time of birth a patch of induration was noticed on the right shoulder and another in the left parotid region. The skin was hardened all over the back of the trunk and on the buttocks and thighs, and in other parts was normal; no mention is made of the colour of the affected regions. The muscles were well developed, the spleen was palpable, but there was no other evidence of visceral disease. The rectal temperature was 99.2°. There was no evidence of syphilis. Up to this time the induration had been spreading, but afterwards steadily decreased, and six weeks later there only remained a small patch, about the size of a pea, in the left parotid region, and one of the size of a sixpenny piece in the left deltoid region. The child continued well and strong. Dr. Money was inclined to attribute the favourable result to the inunction of blue ointment. The resemblance of this case to mine is very striking, and is shown in the distribution of the affection, in the absence of pitting, in the manner of clearing up, leaving detached islets of induration, and in the absence of low body temperature or other signs of ill-health. Dr. Barlow records the case⁴ of a feeble infant first seen nine days after birth. Over the greater part of the back, on the shoulders, and on one thigh the skin had a bluish-red colour, was raised above the surrounding level, and exhibited marked brawny induration. The surface was not hot, and no pitting was elicited on pressure. No glands were enlarged, and there were no signs of heart trouble or of atelectasis. Three days later the induration of the back had extended downwards, and there was some induration on the front of the right arm. A week later the child was brighter and better, but the induration was still spreading, and had involved the nates and backs of both thighs. Seventeen days later the induration was slowly clearing up, and the affected skin was paler. In the course of the following three months the sclerema disappeared entirely with the exception of one or two minute fatty indurations on the middle of the back. The treatment adopted was inunction of the affected parts with camphorated oil, and small doses of cod-liver oil by the mouth. Here the patient was seen at a considerably younger age, and the redness, which in my case had to a great extent disappeared by the time that the child came under observation, was a conspicuous phenomenon. Another example, in which a vividly red area of induration was confined to the buttocks and backs of the thighs of an infant a month old, was recorded by Dr. A. G. Barra.⁵ Grey powder was administered, and the infant recovered. A somewhat similar case will be found recorded by Dr. A. R. Robinson.⁶ Evidently the case which I have described is one of a group of cases tending to recovery, all more or less closely resembling each other, and which, whilst they differ in certain respects from the typical examples of sclerema, exhibit still more conspicuous differences from the oedema of new-born infants as it ordinarily presents itself. Possibly

when future research shall have thrown more light upon these obscure conditions it may turn out that such cases constitute a third distinct group differing in their essential nature from either of the conditions under discussion. Of the morbid anatomy of the condition present in such examples as these nothing is of course known, but we are not without knowledge of the changes present in fatal cases of sclerema. Some writers have described a deposit of stearin-like material in the subcutaneous tissue, suggesting that the fat there present has become solidified, and accordingly the name of fat sclerema has been employed. The theory of fat solidification received support from the observations of Langer,⁷ who states that in young infants nearly all the fat in the body is concentrated into the panniculus adiposus, which is relatively nearly five times as thick as in adults. Langer found that when extracted from the adipose tissue the fat of infants did not completely melt below a temperature of nearly 40° C., so that the ordinary body temperature is not sufficient to keep it completely liquid. This much higher melting point of the fat of infants than of that of adults was found to be due to its containing a much larger proportion of stearin and palmitin, whilst the amount of olein was correspondingly less. There are, however, records of careful post-mortem observations of the skin and subcutaneous tissue of infants dying from sclerema which are not consistent with the above view, and which are equally difficult to reconcile with the clinical features and rapid recovery of such cases as have been quoted above. Thus Parrot⁸ found that the most conspicuous changes were atrophy of the skin and of the subcutaneous fat, and that in consequence of this latter change the fibrous trabeculae of the subcutaneous tissues appeared abnormally numerous and distinct. Ballantyne describes very similar appearances to those observed by Parrot, but he holds that the fibrous tissue increase is real and not merely apparent, and regards the atrophy of the fat cells as secondary to this sclerosis. Langer regarded the fall of the body temperature as the primary phenomenon and the solidification of the fat as the result of the cooling, but he suggests that in cases in which there is no conspicuous fall of temperature a similar result may be brought about by undue surface exposure to cold air or water. He quotes the observations of Sommer, who found that the natural temperature of new-born infants is somewhat higher than that of adults—viz., between 99.8° and 100° F. In cases in which there is a rise instead of the usual fall of temperature Langer ascribes the solidification of the fat to the oxidation and resorption of olein and a resulting elevation of the melting point. There is, however, another way in which we may look upon the relation of the lowered temperature to the sclerema. A conspicuous fall of temperature and early death are the phenomena observed in animals which have been varnished, and it seems at least possible that when the sclerema is universal or very extensive this affection interferes with the cutaneous functions, or more probably with the vaso-motor mechanism, in much the same way as varnishing does. It is true that Senator⁹ found, in the course of some experiments undertaken with a view to the reduction of fever by this means, that very extensive varnishing of the skin in human beings did not produce the effects which are observed when animals are similarly treated; but he attributes this to the fact that small animals have a greater surface in proportion to their bulk, and himself points out that children more closely resemble animals in this respect and are much more sensitive to surface cooling, and that therefore they would be more likely than adults to exhibit a conspicuous fall of temperature under such treatment. On such a hypothesis it is easy to explain the absence of conspicuous lowering of temperature in the cases in which the sclerema is limited to the dorsal aspect of the body. Since there is a tendency for the sclerema when once arrested to recede somewhat rapidly it seems possible that, provided adequate nourishment could be administered and if the warmth of the body were sufficiently maintained by placing the infant in an incubator, the time of most danger might be tided over, and recovery might result in some at least of the graver cases of sclerema neonatorum. All writers agree that external warmth is clearly indicated in such cases, and it sometimes has appeared to have very beneficial results.

In conclusion, a few words must be said about treatment by drugs. I have already mentioned that Dr. Angel Money

³ THE LANCET, vol. i, 1889, p. 526.

⁴ Transactions of the Clinical Society, vol. xvi., p. 262.

⁵ Brit. Med. Jour., vol. i, 1889, p. 994.

⁶ Archives of Dermatology, 1882, vol. viii., p. 337.

⁷ Wiener Medicinische Presse, 1881, pp. 1375 and 1412.

⁸ Clinique des Nouveau-nés: l'Athrepsie, 1877, p. 116.

⁹ Virchow's Archiv, vol. lxx., p. 182.

attributed much efficacy to the inunction of mercurial ointment in his case, for when this treatment was commenced the induration, which had up to then been extending, began to recede. When, however, we turn to Dr. Barlow's case we find that a similar arrest and recovery were observed although no mercurial treatment was employed; and in my case the improvement had certainly commenced during the week which preceded the inunction of mercurial ointment. After the mercurial inunction was stopped the improvement continued uninterrupted, but it is my impression that it was not quite so rapid as during the four weeks of mercurial treatment.

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A CASE OF STRANGULATED OBTURATOR HERNIA IN A WOMAN AGED SEVENTY-EIGHT YEARS TREATED SUCCESSFULLY BY LAPAROTOMY.

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THE number of cases recorded of recovery after strangulated obturator hernia is comparatively small. The following case presents certain points of interest which seem to justify its publication.

A woman seventy-eight years of age was admitted into St. George's Hospital under my care on March 29th, 1895, with a history of having been fairly well, occasional attacks of colic excepted, until four days previously, when, after making a hearty meal of mutton chops, she was seized with violent gripping abdominal pain. Nausea followed almost immediately, and in a few hours vomiting set in. The vomiting continued up to the time of her arrival at the hospital, and for twelve hours it had been stercoraceous. No action of the bowels had occurred for four days. On admission the patient was emaciated and very feeble. There was a strong fecal odour about the breath; the face was "pinched" and had a marked "abdominal aspect." The pulse was weak, and the temperature subnormal. Acute intermittent gripping was complained of, principally below the umbilicus. There was an ill-defined desire to defæcate, but inability to do so. No blood or slime had been voided. The abdomen was only slightly distended, and upon manipulation violent, erratic, and painful peristalsis was excited. Examination by the rectum and vagina gave a purely negative result. Beyond the pain mentioned there was no other severe discomfort of any kind. As the case was clearly one of acute intestinal obstruction, and as no hernial tumour could be detected at any of the abdominal rings median laparotomy was performed at once. Upon opening the abdomen the small intestine as far down as the middle of the ileum was found to be distended; below that point the intestine generally was collapsed. The collapsed portion was traced down deeply into the left side of the pelvis, where it was tightly nipped under the arch of the pubes. Gentle and steady traction served to disengage a strangulated knuckle of gut about two inches and a half long, much congested and in parts ecchymosed; at one spot there was a laceration in the peritoneal surface surrounded by lymph. The damaged part was carefully cleansed and returned into the abdomen. No irrigation was used. Upon examining the left obturator foramen subsequently, it admitted readily the tips of two fingers, which passed through into a smooth sac of about the size of a pigeon's egg. The abdominal wound was united by fish-gut sutures in the usual way. Recovery followed and was uninterrupted. For the first two days there was some weakness, which rapidly passed off. The bowels acted with the aid of an injection of warm water on the fourth day after the operation; the stitches were removed on April 4th, and the patient left the hospital in her usual health on April 17th—i.e., less than three weeks after her admission.

It will be seen from a perusal of these notes that, as often happens in such cases, all the specific signs of obturator hernia mentioned in the text-books were entirely wanting in this instance. There was no fulness in Scarpa's triangle, the characteristic obturator nerve pain was absent, and nothing abnormal could be detected either by rectal

or vaginal examination. The symptoms were, in fact, merely those of acute intestinal obstruction, clearly due—judging from the characteristic, erratic, and painful peristaltic action—either to internal hernia, strangulation by a band, or to volvulus. The absence of distention after so long a period of strangulation and vomiting was a sure indication that the constricting medium was not of the sharp-edged kind. The diagnosis of obturator hernia was quite impossible, as is generally the case, although I mentioned it as being one of the possible conditions existing in the case before operating. The ease with which the hernia was reduced was—considering the time it had been strangulated—noteworthy, but was fully accounted for by the large and round-edged ring. Perhaps the most interesting part of the case is the recovery of a patient seventy-eight years of age after laparotomy under the circumstances described, especially when the damaged condition of the gut and the long period over which vomiting had extended are taken into account. Strangulated obturator hernia is very uncommon, and recovery after operation is rare. I have no recollection of any recorded case of recovery at so late a time of life as this patient's. Recoveries after laparotomy for the removal of ovarian tumours have of course been recorded up to a much greater age; but such cases, I need hardly say, are not comparable with a case like the one now described, in which the patient was suffering from the collapse entailed by strangulation of gut with peritoneal lesion, together with the exhaustion and depression caused by long-continued vomiting, which for some period had been feculent. The case affords, I venture to think, a striking instance of the great vital powers sometimes met with in old people who at first sight would appear to be too feeble to resist any great call upon their strength.

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APOLOGIA PRO ELECTRICITATE SUÂ.

By W. S. HEDLEY, M.D. EDIN.

THOSE who have watched the solid, even brilliant, progress of electrotherapy in recent years acknowledge with regret and not without surprise that there is still a remnant of physicians who seriously doubt its capabilities, who refer to it as a "discredited agent," as something that has been tried and found wanting, or who, falling back upon a favourite phrase, express themselves as "disappointed in it." Of this remnant there is a certain minority even more aggressive in its attitude, more hostile in its scepticism. It is composed of those who roundly assert that neither does there exist any rational basis for the employment of electricity in medicine, nor is there any satisfactory demonstration of its curative effects; that once an agent of undoubted therapeutic promise, electricity now stands forth an admitted failure; that any good results that follow its use are due to psychical influence and rest on the baseless fabric of "suggestion." Scepticism of so pronounced a type is difficult of approach. It is useless to invite attention to the steady evolution of electrical methods in medicine made evident by the history of a hundred years; to point to that first period, the period of static electricity, which, broadly speaking, covered the second half of the eighteenth century, and is associated with the names of Jellibert, Mauduyt, and Bonnetoy; to that second period, commencing with the discovery of the "voltaic pile" (1800), associated with the names of Bischoff, Walther, and Most in Germany, of Sue, Thillaye, and Isnard in France; to that third period, the "period of the induced current," which, springing from Faraday's discovery of the phenomena of electro-magnetic induction (1831), ended with the brilliant work of Duchenne, to a period partly concurrent with the latter, represented by half a century of solid and lasting work bearing on the physiological effects and therapeutic action of the constant current, an epoch which recalls the names of Dubois-Reymond, Pflüger, Remak, Benedict, Brenner, Baierlacher, Ziemssen, Chauveau, Onimus, Legros, Boudet, and terminates about the middle of this century's "eighties" with the epoch-making works of De Watteville and of Erb. Approaching the present time, the apologist points in vain to the milli-ampèremeter, the voltmeter, the coulombmeter, to a period

of improved apparatus, of accurate measuring instruments, of modern currents—to a period, therefore, when the medical man finds himself in a position better than ever before to turn electrical energy into useful work. Equally useless is it, in presence of such a scepticism, to plead for electrical treatment that it ought to be judged by the same standards that apply to other remedial measures; useless to offer demonstrative evidence of the curative results that very constantly follow its efficient application, and to prove that as much at least is known of the nature of electricity and its way of working as is known of the action of many a drug that at the present moment holds an honoured place in the Pharmacopœia. The answer to such an appeal is a shrug of the shoulder or a shake of the head, with the inevitable reference to "suggestion" or "expectant attention." Now, this theory of "suggestion," associated mainly with the names of Möbius and of Rosenbach, may be briefly noticed. It announces the doctrine that electrification is merely a branch of psychotherapeutics, a doctrine which, shallow as it is and shortlived as it will doubtless prove to be, is nevertheless a form of heresy of a more or less seductive kind. Its little band of adherents ought to question themselves as to the reason for the faith that is in them. Before committing himself to such a belief the medical student, who is perhaps more than anyone else likely to be attracted by it, is reminded that in the first place he admits the effects of electricity to be physically and mathematically demonstrable, and in the second place he is aware that "suggestion" is as old as medicine, and that every drug has a psychical as well as a physical side to it.¹ He does not, however, say that because a bread pill may sometimes induce sleep if taken under the impression that it contains opium, that therefore opium acts by suggestion, neither does he say that because the actual cautery is sometimes successfully used in the treatment of hysterical paralysis that therefore the red-hot iron always acts by suggestion.² And from neuralgia he may learn a lesson. No doubt he is familiar with the fact that a neuralgia will often yield with surprising readiness to the galvanic anode; why in such cases, if the remedy act by "suggestion," does a change to the cathode increase the pain?³

The steady progress which a short historical survey makes evident need not obscure the fact that, whatever its position at present and whatever its prospects in the future, the use of electricity in medicine has undoubtedly had a chequered past. It has suffered by the activity of impostors, by the prejudices of its enemies, by the intemperate advocacy of its friends, and perhaps more than all by the crude empiricism of its methods. Those medical men who have attempted its employment have not always duly recognised the fact that the physical problem underlies the biological one, and that it is of vital moment to know something of the nature of the energy they employ. Until comparatively recent years this has scarcely been possible of electricity. Modern electro-therapeutics may in one sense be regarded as the practical outcome of those modern views which, inaugurated by Faraday and developed by his followers, have resulted in the electric dynamo, the electric light, the telephone, and many another application of electrical science to industrial pursuits. In point of fact, medical electricity "came before its time." It sprang from no solid basis of sound electrical knowledge. Carried away by the striking neuro-muscular phenomena that attend its application to living conductors, yet without any adequate knowledge of its physical nature, enthusiasts began to apply it *à tort et à travers*, without method and without measurement, and to all sorts and conditions of disease.

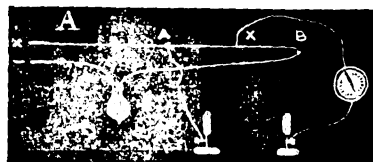
Medicine cannot reasonably cultivate an attitude of aloofness towards an agent to which it owes so much as it does to electricity. None deny that a fast increasing knowledge of neuropathology is largely due to electrophysiological research. Long ago it was pointed out that by the action of electricity on vital structures a surprising accuracy of diagnosis may often be arrived at, and that not only does it enable us to interrogate the neuro-muscular apparatus and ascertain the nature of a lesion, but sometimes even to foretell the duration of an illness.⁴ Electrical methods are now beginning to throw a not less important diagnostic light on a class of obscure gynecological cases where diagnosis is of vital moment, a diagnosis which "at one time will point to operative interference, at another will disarm the surgeon's

hand and show a conservative treatment to be not only possible but almost certainly successful."⁵ It is certain that in the use of the Faradic current of tension and of the galvanic current respectively, for the purpose of distinguishing inflammatory from non-inflammatory pain, gynecology has acquired a real addition to its diagnostic resources. To test the claims of electrical treatment it must be judged by the same standards that apply to the rest of medicine. What conditions is an accredited therapeutic agent expected to fulfil, and in which of these has electricity been tried and found wanting? Its physical and physiological effects are easily demonstrable. It is accurately measurable and under safe, easy, and complete control. Then comes the crucial question, Has electrical treatment made good its claim to curative power? Has it, when brought face to face with disease, had a success as constant and as clear as the average drug? A drug is looked upon as a curative agent because, other conditions being the same, effects follow its administration which without it would be absent. This "method of difference" in establishing the causality of an agent is sufficient for the ordinary affairs of life. Apply it to electrotherapeutics.

The three conventional forms of current hitherto used in medicine—viz., the galvanic, the faradaic, and the so-called "static"—are now supplemented, and to some extent supplanted, by electricity in certain new modalities. There are: 1. Those pulsatory currents produced by the electro-motive force of the ordinary constant current dynamo—currents which for medical as well as for other uses can now be turned on as required, like the water or the gas. 2. There are alternating currents of a more or less perfectly sinusoidal character, the frequency of which may vary from a few alternations to many hundreds or even thousands a second. The ordinary alternating light circuit furnishes a current of this order with a frequency of about 7000 to 10,000 alternations a minute. This as well as the constant current can be safely used through a resistance or a sliding shunt. 3. There are those oscillatory currents produced by the discharge of a Leyden jar, called by Dr. Morton (their discoverer) the "static-induced," which, although produced by an old and familiar apparatus, have every right to be ranked as modern currents. 4. There are currents of high frequency and potential, whose alternations may number hundreds of thousands, millions, or even exceed a billion a second.

1. With reference to currents produced by the constant current dynamo it is to be remarked that although "continuous" or "constant," and always flowing in the same direction, they are not absolutely uniform in strength. They are "pulsatory." They thus differ to some extent in physical nature from the current produced by the uniform electro-motive force of, say, a Leclanché cell. Small as this difference may be from an electro-therapeutic point of view, it must not be lost sight of. It is usually considered that with a 100-volt light circuit current passed through a controlling resistance pain is greater than when supply is drawn from a battery of low voltage. An explanation may perhaps be found in the physical character of the current rather than in its originally high voltage. The current controller or adaptor may be constructed on the principle shown in the following sketch, where A B is a fine platinum wire of

FIG. A.



suitable resistance with a sliding contact at X, which regulates the potential of the patient's circuit. By such an arrangement it is evident that any desired maximum or minimum of potential difference can be secured in proportion as the resistance between the runners (or the runner and the other shunt connexion) varies between zero and the total resistance of the wire. The variation of the difference of potential can be as slow and gradual as is desired. In practice the wire is coiled. The arrangement is, in fact, a "sliding shunt," and supplies, in the opinion of the writer, the best form of current controller or "reducer of potential" for adapting light circuits to medical use. An

¹ Lombroso: *Revue Internationale d'Electrothérapie*, 1894, p. 65. Paris.

² *Ibid.* ³ *Ibid.* ⁴ Erb: *Electrotherapeutics*. Smith, Elder, and Co.

⁵ Apostoli: *Revue Internationale d'Electrothérapie*, 1892, p. 68. Paris.

instrument for the above purpose has lately appeared which, with many excellences, is not without faults. It consists of a rheostat having a total resistance of about 33 000 ohms, with a 16 candle-power lamp placed in circuit with each of the "leading in" wires "to protect the patient in the event of a short circuit." It has been pointed out in THE LANCET how futile is such a device. A lamp cannot be trusted to as a circuit breaker for medical purposes; it may allow twice its proper amount of current to pass before breaking. The magnetic cut-out⁷ is, so far as the writer is aware, the only arrangement yet suggested which can be seriously trusted to for the purpose in question; and even here it is to be remembered that the action is not quite instantaneous. In the adaptor under consideration there is also a third lamp arranged "in shunt" with the rheostat. The throwing in of this shunt reduces the voltage of the 115 volts circuit to 60 volts.

2. Of modern currents the one which will perhaps prove the most important for medical use is that form of alternating current whose curve is of the sinusoidal type. It takes its name from the fact that the current strength "follows the law of sines as regards its variation in time; it is a simple harmonic current"; a current which gradually attains its positive and negative maximum, shows no lost time and no actual interruptions. It is represented graphically by a curve of sines which may be contrasted with the very sudden and dissymmetrical changes of potential shown by the pointed curve of a coil's alternations. Inasmuch as the excitant action of an electric current bears a direct ratio to the suddenness of the fall of potential, it follows that the sinusoidal current will be better tolerated than the more brusque alternation of the coil. But on this very account it is equally evident that the latter for certain purposes can never be supplanted by the current in question.⁷ It appears by the researches of d'Arsonval that in the case of animals submitted to the action of sinusoidal currents an examination of the blood by the usual physiological methods shows a greater intake of oxygen and a greater output of carbon dioxide, a fact which of course in its turn points to increased metabolism throughout the body. A similar increase in the oxidation as evidenced by the increased excretion of urea has been proved by Gautier and Larat as the result of the therapeutic use of currents of alternating light circuits; but these are not of course strictly sinusoidal. They may be used through a rheostat and cut-out or by means of the sliding shunt already described. A small therapeutic alternator in which the rapidity of alternation is under the control of the operator furnishes in the experience of the present writer a current at once more useful and more easy to handle.

3. The so-called "static-induced" current is the direct product of the static machine with condensers. The patient is not insulated, however, but the connecting rods between the two Leyden jars are removed, the inner coatings are connected with the discharging rods, the latter being separated by a small spark gap.⁸ If, now, a rheophore held in each hand be attached to the outer coating of each Leyden jar it is evident that such an arrangement gives two circuits: one, the primary, includes the discharging rods, the spark gap, and the inner coating of the Leyden jars; in the other, the secondary or induced, there are the patient's body, the rheophores, and the outer coating of the jars. A current is thus obtained for which striking physiological effects are claimed; and certainly the ability to secure by its means powerful muscular contraction without pain is as wonderful as it is useful. More remarkable perhaps than the production of a new current from the static machine is the striking revival of an old one. The so-called electrostatic bath, with all its accompaniments and modifications, "soufflé," "douche," "frictions," exactly as described by Mauduyt and the pioneers of the eighteenth century, has once more vigorously pushed itself to the front. It consists, as everyone knows, of the simple placing of the insulated body in connexion with one pole of the static machine. In

explanation of the effects long known to follow its use it is now ascertained that this procedure produces well-determined effects, such as increased skin action effects on blood pressure, increase in the frequency and depth of the respirations, as well as (with the positive bath) an increased excretion of urea and of phosphates. Keeping in view the ever-changing electrical conditions of the air and the influence of the weather upon health, it is not impossible that "the electrics" of the atmosphere will eventually prove the key to treatment by the electrostatic bath.

4. Currents of high frequency and potential are generally obtained for medical purposes by means of the oscillating Leyden jar discharge traversing a solenoid. Such currents may carry energy enough to light a 5 candle-power lamp, and if the human body with its thousands of ohms resistance be at the same time placed in circuit there will scarcely be a perceptible diminution in the brightness of the glow; and yet, notwithstanding the tremendous amount of energy passing, there is scarcely a consciousness of its passage. Pain is absolutely absent. Why this harmlessness, whence this immunity from pain? Many theories have been advanced, all of them perhaps wide of the mark, but probably an inhibitory or "throttling" effect of the nature shown in an experiment shortly to be detailed enters into the question. Whatever the explanation, it is to be noticed that painlessness seems to be the great characteristic of all high frequency work. The physiological effects claimed as the result of passing these high frequency discharges through the body are many, but amongst the most noteworthy are (1) a considerable increase in the nutritive exchanges as evidenced by a greater absorption of oxygen and an augmentation in the carbonic acid exhaled; and (2) a vaso-dilator action on all the bloodvessels, resulting in a fall of blood pressure. Such currents are already emerging from the stage of experiment and promise, soon to bear fruit in actual practice. It is to be noticed that "rapid pure electric alternations" produce no excitatory action on the neuro-muscular apparatus, but seem to exert merely a paralysing or fatiguing influence, or what has been termed a "throttling" effect on the passage of another stimulus. The recent experiment of Lodge and Gotch, which points to this conclusion, is as follows: Taking the physiological limb and applying a stimulus of a rapidly alternating character directly to the nerve, "at the same time as some other well-known one-hundredth volt, stimulus is applied to another part of the same nerve farther from the muscle; it can be shown that rapid electrical alternations, if entirely unaccompanied by static charge or by resultant algebraic electric transmission, evoke no excitatory response until they are so violent as to give rise to secondary effects such as heat or mechanical shock. Yet notwithstanding this inaction they gradually and slowly exert a paralysing or obstructive action on the portion of the nerve to which they are applied, so that the nerve impuler, excited by the feeble, just perceptible, one-hundredth volt stimulus above, is gradually 'throttled' on its way down to the muscle, and remains so throttled for a time varying from a few minutes to an hour after the cessation of the violence."

Turning from this the most modern of currents to that which is the most ancient, the familiar spark of the so called static machine, the attention is arrested by a striking difference. That excitatory action so completely absent in the former is in a marked degree present in the latter. Apart, however, from this great physiological difference the current of pure rapid electric alternations and the static spark have many points in common. Each static spark seems single, but it in reality passes backwards and forwards hundreds of thousands of times. It oscillates, each oscillation growing less and less until the conductor is discharged. It is not to the conductor, however, that attention ought to be directed, but rather to the surrounding medium, to the electrostatic field, to the dielectric strained by electromotive forces, and the insulating power of the air eventually breaking down under the electric stress or tension. At the same time from the discharging circuit "waves of electrical distortion," to and fro disturbances of the ether, spread and radiate in all directions. This is the genesis of what are known as oscillatory currents, currents which are for the most part sinusoidal in character. In all electrical work it is instructive to transfer the attention from the conducting wires to what is going on outside them and to picture the ether disturbed by electromotive forces propagating the disturbances by undulatory or wave movement, until the energy becomes dissipated or taken up by some

⁶ THE LANCET, April 9th, 1892.

⁷ The subject of coils cannot here be entered upon; it is sufficient, however, to remember that the modern instrument furnishes currents of a range and quality far superior to those of the "haradic machine" in ordinary use in this country. This superiority is secured not only by the number and variety of the windings of the secondary coils, but by the nature of the interrupter, which is not a vibrating one and has a separate source of supply to "action" it. The result of such arrangements is that not only is irregularity in action avoided, but a range of rapidity of alternation is obtained varying from the slowest rate (for muscular action) to 30,000 a minute for sensitive effects.

⁸ In practice the circuit is usually broken by a special electrode.

suitable appliance and utilized for work. The energy, however, does not, according to "modern views," travel by the conductor, but through the insulating medium, or dielectric. The conductor, whether it be a wire or a living body, only guides the energy and concentrates it for useful work. Applying this to that very imperfect conductor, the human body, it is evident that the latter may be regarded as an appliance capable of utilising in a variety of ways energy transmitted by the ether. It resembles an ordinary metallic conductor in that it guides the effects transmitted by the ether contained in the dielectric, but it differs from the wire in the fact that the guidance is probably effected by that peculiar form of conduction known as electrolytic; and this leads up to the infinitely important point that electrolytic conduction is probably "invariably accompanied by decomposition, and only occurs by its means." Further, Helmholtz has shown that "the most infinitesimal electromotive force is sufficient to effect its due quota of decomposition." From a different standpoint it may be allowable to think of the ether vibrations springing from some electrical source as impulses communicated, motion added, to the already pulsating atoms of a vital structure. Giving further play to such a train of thought, it is possible to imagine certain of the delicate mechanisms of the human body as "receivers" syntonised for the reception of similarly vibrating ethereal impulses radiating from some given source. The relationship of physiology with physics is strongly brought out in a theory (whether it prove right or wrong) recently suggested by Professor Lodge. It is found that a tube of metallic filings—i.e., a series of loose contacts—diminishes its electrical resistance when exposed to "even the distant neighbourhood of a Leyden jar or coil spark." Such an arrangement is called by Lodge a "coherer," and he suggests that perhaps the eye acts on such a principle. He "wishes to guess that some part of the retina is an electrical organ, say like that of some fishes, maintaining an electromotive force which is prevented from stimulating the nerves solely by an intervening layer of badly conducting material with gaps in it, but that when the light falls upon the retina these gaps become more or less conducting and the nerves are stimulated." This is the so-called electrical theory of vision, and to Professor Lodge, and to him alone, is due the merit of having suggested it. Although the nature of the action of the eye as a detector of radiation is still little better than a guess, it cannot be said that there is anything extravagant in the idea that the hexagonal pigment cells or the rods and cones of the retina act, under the impulse of those ether vibrations which constitute light, in a way almost identical with the action of a coherer. It seems even conceivable that other histological arrangements—e.g., those nerve fibrils which conduct yet only touch and do not anastomose, those motor nerve endings which are only in contact with the sarcoous substance; indeed, any conducting arrangement in the animal body which may be classed as a "bad contact"—may constitute the physiological analogue of what would be electrically known as "a coherer."

Descending from the region of wild dreams and speculations, many of which are still immeasurably short even of the experimental stage, and reverting to a sober survey of medical currents, the attention is arrested by the want of uniformity in their designations. A new nomenclature seems desirable and almost necessary—a nomenclature in which electrical currents for medical purposes can be distinguished by their physical character rather than by the name of a discoverer or the mode of their production. Such a classification has recently been formulated by Professor Houston and Mr. Kennelly, two distinguished physicists to whom electro-therapeutics is already under many obligations. It is pointed out that medical currents can be referred to four main types—viz., continuous, alternating, intermittent, and convective. These are subdivided as follows:—1. Continuous currents may be (1) uniform and (2) pulsatory. The former class is produced by a uniform electromotive force, such as that of a Leclanché cell, and would comprise those currents at present known as galvanic. A pulsatory current is, as already stated, continuous, and always flowing in one direction, but not uniform in strength. Such a current is produced by the constant current dynamo. (Fig. B.) 2. Alternating currents—that is, currents which periodically reverse their direction—may be symmetrical or dissymmetrical; the symmetrical may be sinusoidal (Fig. C) or non-sinusoidal (Fig. D). The electromotive force of the

former is represented by a curve of sines. In a non-sinusoidal alternating current the positive and negative maxima are equal but not smoothly attained, and the graphic representation is of a more or less angular, not of a wavy, character. Voltaic alternating currents are of this type. The most familiar example of the dissymmetrical alternating current is that produced by the ordinary medical induction coil. (Fig. E.) Intermittent currents are oscillatory and non-oscillatory. "An oscillatory current is an alternating current, usually sinusoidal in type, but decaying in amplitude—i.e., each wave is smaller than the preceding one.

FIG. B.

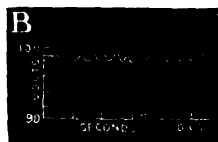
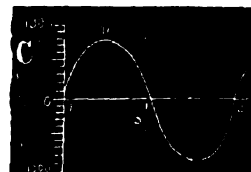


FIG. C.



Oscillatory currents produced by the discharge of a Leyden jar correspond to the 'static induced.' They are usually of extremely brief duration and of very high frequency, a whole series of perhaps ten oscillations being completed in, say, the 20,000th part of a second. Non-oscillatory intermittent currents are produced by the discharges of influence machines through circuits unfavourable to the

FIG. D.

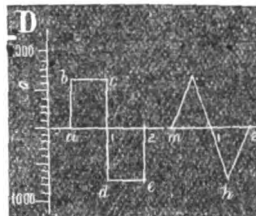
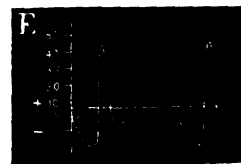


FIG. E.



Figs. B., C., D., E., are after Houston and Kennelly.

development of oscillations. Franklinic currents are of this nature. Convective currents or convective discharges are produced by the convection of electrified particles of air or other material (the static breeze).¹⁰ The classification thus detailed is as follows: (1) continuous current—(a) uniform, (b) pulsatory; (2) alternating—(c) sinusoidal, (d) non-sinusoidal, (e) non-symmetrical; (3) intermittent—(f) oscillatory (g) non-oscillatory; (4) convective—(h) static breeze. Such a nomenclature may require modification, but it is very practical and possesses the great advantage that in the selection of a current for medical purposes the name points directly to its physical character, and in some measure, therefore, to the therapeutic indication it may be expected to fulfil.

Looked at from the standpoint of modern practice, the field of electro-therapeutics seems broadening. No longer limited to strictly local applications, it now embraces those procedures whose aim it is to influence, and which demonstrably can influence, the entire economy. Its object is so to utilise electro-physiological data as to influence innervation, heart action, muscular conditions, respiration, temperature, the oxidations, every functional action and metabolic charge, and not least by the process darkly known as "vaso-motor influence" to modify and control the blood-supply to organs and tissues. There are times when the power of electrification to reach an internal organ will depend not on any direct action inherent in an electric current, but on an influence which, having its starting point in the electrical stimulation of some surface area, and travelling perhaps *via* nerves of common sensation, will strike the spinal cord at some special spot, and reflected thence will find a route by filaments of the sympathetic to some particular organ, an organ thus in neural relationship, through this special segment of the cord, with that area of cutaneous surface which was the site of the electrical stimulation. Such a process not only throws light on the rationale of peripheral electrical excitation, and especially of the action and uses of the faradaic brush, but is

⁹ Lodge: Modern Views, p. 79. Macmillan and Co.

¹⁰ Houston and Kennelly: The Polyclinic, September, 1894. New York.

one of the many points which, if duly weighed, tend to a wider conception of the entire question of treatment by electrical methods. To "kick up" a set of sluggish muscles into action, to stimulate, if such expressions be allowable, the neuro-muscular apparatus into a display of electrical gymnastics, can no longer be considered the sole aim and object of electrification. Such effects doubtless rank amongst the most striking and valued effects of electric currents, but cannot in the presence of those varied and far-reaching influences of the kind that have just been considered any longer claim exclusive possession of the field. The latter view begins now to be clearly reflected in practice. The revived use of the electrostatic bath, the methods of central galvanisation and of general faradisation, and general applications to the entire body by means of the water bath through which sinusoidal or other currents are passing, are procedures which seem to be supplementing and in some measure displacing the more strictly localised forms of application; and now that it is known how to obtain currents of high frequency and potential, and that it has become possible to demonstrate the physiological qualities that belong to them, it becomes probable that there will soon be the opportunity to realise in practice the therapeutic effects not only of passing these high frequency discharges through the body, but of subjecting it without contact with the terminals to a kind of electrical bombardment in the rapidly alternating electrostatic field between them. This is new ground: once broken, it is likely to prove a wide and fruitful field. Progress in this direction is rapid and striking. France, America, and Germany are at the present moment each the active centre of an onward movement in electro-therapeutics, a movement which experimental investigation, clinical observation, and organised association go hand-in-hand to accelerate and to strengthen. Another mark of progress appears in the fact that physiologists begin to recognise that chemical and electrical processes are inseparable from those that have hitherto been called vital, and that electromotive force is very constantly the outcome of physiological action. There are signs that physics begins to "encroach on the domain of physiology and that medical men are more and more turning their attention to physics."¹¹ What has been called "physical biology" or "biological physics"¹² seems already beginning to differentiate itself and to stand out as a special branch of science. It forms a kind of neutral ground where medical and electrical science find a common holding point and a common end. To the medical man his line is clear. With the lessons of experience well in view, he takes his stand upon the broad principles of electro-physics and the known action of electrical currents on vital structures. When such indications fail to guide him and fail they often must, he will not on that account fold his arms in helpless inaction, but falling back upon an enlightened empiricism he will gently feel his way. He will "not ask, but try." He will not be afraid to acknowledge that after all is said therapeutics is to a large extent but a process of cautious experimentation.

Brighton.

HEPATIC ABSCESS FOLLOWED BY AMOEBIC DYSENTERY: OPERATION; RECOVERY.

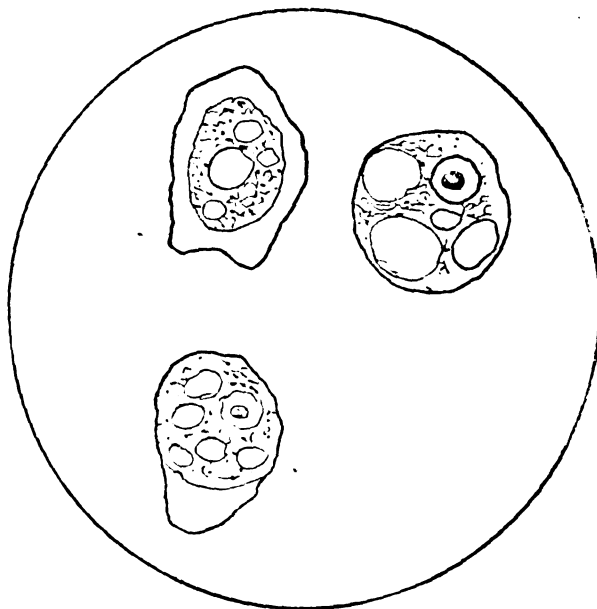
By JOHN CURNOW, M.D. LOND.,

PROFESSOR OF ANATOMY IN KING'S COLLEGE, LONDON; PHYSICIAN TO KING'S COLLEGE AND THE SEAMEN'S HOSPITALS.

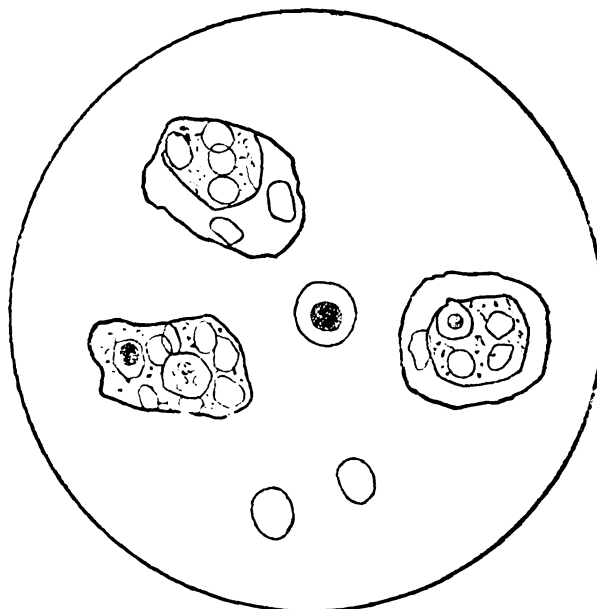
THE following case is of special interest as demonstrating the causal connexion between dysentery and the so called tropical abscess of the liver. In almost every case of hepatic abscess which I have seen at the Seamen's Hospital during the past ten years there has been a history of an antecedent attack of dysentery, but this is the first case in which the causal connexion has been so definitely proved. Murchison's great authority is always quoted against this view, but he seems to have based his conclusions on the statistics of Indian observers rather than on his own experience. The migration of the amœba coli from the intestine to the liver must now take the place of chill, excessive eating and

drinking, tropical climate, and other vague generalities to which tropical abscess is so frequently ascribed. Amœba coli have been found in the pus of a liver abscess by many observers, and also in the dysenteric stools at the same time by pathologists in Germany and in America; but so far as I am aware this is the first occasion in which their coexistence has been demonstrated in this country.

The patient, a Lascar aged forty-two years, was admitted to



the Seamen's Hospital, Greenwich, on Dec. 22nd, 1894. On admission he complained of pain in the right side of the chest, cough, fever, and a feeling of general illness for one week. His general health had been good, and he had had no serious illness. In June, 1893, while in Calcutta, he had an attack of dysentery with some tenesmus and tormina, and passage of blood and mucus. He got quite well in about twelve days, and since then had not been similarly affected,



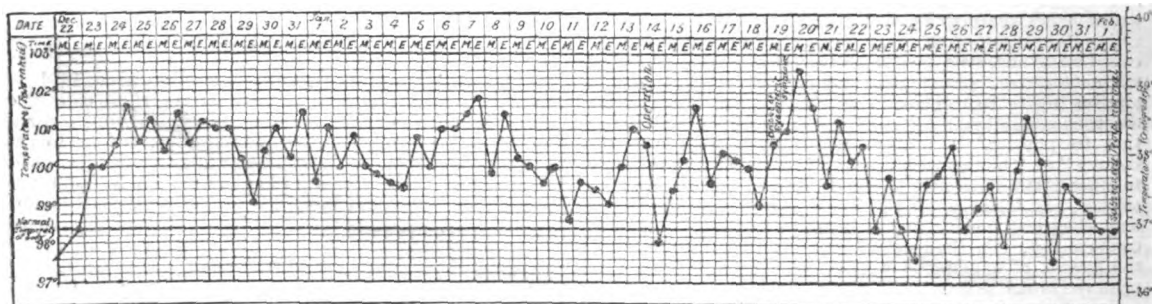
his health being fairly good. He was taken ill with the present attack while on board his ship in the West India Dock. He complained of a constant dull aching pain in the right side and some cough; these symptoms gradually became worse in the course of a few days. On examination he was found to be a poorly nourished man, with an anxious expression and slightly accelerated breathing. There were signs of fluid in the right pleura

¹¹ D'Arsonval, Académie des Sciences, Paris, 1893.

¹² Ibid.

from the angle of the scapula downwards; there were a few scattered catarrhal sounds in both lungs. The heart's apex was beating in the fifth intercostal space, half an inch outside the nipple line. The sounds were healthy. Liver dulness began above at the sixth rib in the nipple line, while behind and in the axilla the upper border of the dulness was indistinguishable from that due to the fluid in the pleura. The edge of the liver could not be felt below the costal margin. There was no obliteration or bulging of the lower intercostal spaces on the right side, but there was slight tenderness on pressure over the liver, and some pain on deep inspiration. The bowels were regular, and the stools normal. The tongue was slightly furred. The temperature (see chart) varied between 100° and 101.8° F., the diurnal variation being about 1°; there were no rigors, but there were occasional irregular sweatings. The condition of the patient began to get worse and the pain in the right side more severe. The right pleura was aspirated on three occasions in different situations, but only ten ounces of clear straw-coloured fluid were withdrawn, after which, however, the signs of fluid disappeared, so that it was thought there had been only a thin layer of fluid lying over the base of the right lung. The position of the heart's apex remained fixed. Aspiration did not improve the condition of the patient, the temperature still remaining high. It was thought very probable that there was an abscess in the liver, and so it was decided to explore that organ if the patient did not improve. On Jan. 13th, 1895, three weeks after admission, the patient had a very severe attack of pain in the right hypochondrium, so the liver was at once explored. From the second puncture some thick, sweet-smelling chocolate-coloured pus was withdrawn. Next morning Mr. W. Johnson Smith, F.R.C.S.,

Specimens of the pus were frequently examined upon the warm stage, but very accurate observations were not easy on account of the density of the pus and the great number of other elements besides the amoebæ. The shape of the living amoebæ was very various and irregular, the commonest variety being oval or pyriform. The outline of every amoeba was very distinct, giving the appearance of a dense investing or limiting membrane. The most noticeable feature was the presence of vacuoles of various sizes, one being commonly noticed to be much larger than the rest. The division of the body of the amoeba into an ecto- and endo-sarc was sometimes noticed, though rarely; this distinction was more marked in the stained preparations. The ecto-sarc was seen to be quite clear and highly refractile, while the endo-sarc, in addition to the vacuoles, contained several blood-corpuscles, resting on a groundwork of granular material. The size of the resting amoebæ was very variable, ranging, in oval organisms, from a long diameter of 70 μ to 20 μ , and a transverse diameter of about 15 μ to 20 μ . The round amoebæ had in most instances a diameter of 20 μ to 30 μ . In some of the amoebæ as many as sixteen to twenty red corpuscles were seen, some retaining their yellow colour, while others were quite devoid of pigment, looking like round or oval colourless discs, in many cases overlapping each other. In the fresh specimens a nucleus was only rarely seen, and then with difficulty. On the warm stage some of the amoebæ were in active movement, altering their position from time to time. These movements were effected by the throwing out of pseudopodia, which became fixed, and the body of the amoeba then merging into the processes which had been thrown out. These pseudopodia were of various lengths, the majority being short, thick, and with round, blunt extremities. No move-



removed about an inch and a half of the seventh rib, lying midway between the nipple and anterior axillary lines. When an incision into the liver was made a large quantity of pus, similar to that removed by the exploring needle, escaped. The abscess was situated in the convex portion of the right lobe, lying fairly superficial, and, as far as could be judged by the finger, of large size. The limits of the cavity could be made out in all directions except upwards and backwards, where the point of the finger reached a small opening, leading presumably into another abscess cavity. A large drainage tube was inserted and the patient sent back to bed. After the operation the general condition of the patient began to improve, but his temperature became higher and more irregular. There was an abundant discharge of pus, at first chocolate-coloured and rather like anchovy sauce, but later it became more healthy and yellow in appearance. The wound was dressed frequently, and the cavity washed out once daily with a weak solution of iodine water, whereupon it quickly began to diminish in size. As the temperature was still high and irregular the right pleura was again aspirated, and nine ounces of clear fluid were withdrawn, with the effect of restoring the pulmonary resonance, and allowing some rough friction sounds to be heard. Three days after the operation the patient had a sharp attack of dysentery, lasting about ten days, which yielded to a daily irrigation of the rectum with a weak solution of quinine, a pill containing mercury, ipecacuanha, and opium being given internally. The temperature came down finally on Feb. 1st, and he made an almost uninterrupted recovery; on April 21st the wound had completely healed, and he was quite well.

Remarks.—The main point of interest in the case, apart from the recovery of the patient, is the discovery of the amoebic dysentery in the pus, from the liver, and in the evacuations.

ments of the protoplasmic granules were noticed. A large number of stained preparations of the hepatic pus was made, the following being the method employed. Some pus was shaken up in a test-tube with five or six times its volume of logwood stain diluted to a claret colour and containing, as a preservative, 1 per cent. of hydrocyanic acid. This was shaken occasionally for two days, and after the pus had settled to the bottom of the tube the clear stain was decanted off, and the residue was washed with camphor water. Some glycerine was poured into the tube and collected at the bottom, into which the stained pus was allowed to settle, and was then ready for mounting. For mounting preparations in Canada balsam the same method was adopted, only that after the pus had been stained and washed it was dehydrated by alcohol, cleared by setting in coal-tar naphtha, and then mounted. In the stained preparations the details of the amoebæ could be more accurately made out than in the fresh specimens. In almost all amoebæ the nucleus was prominent and deeply stained. Besides a large number of red blood-corpuscles and the granular groundwork of the organism numerous cells with deeply stained nuclei were seen and taken to be pus cells. Another interesting feature of the case was the attack of dysentery from which the patient suffered three days after the opening of the liver abscess. Since the first attack eighteen months previously the patient had had no return of the dysentery, so that it is possible that the opening of the abscess which again started the dysentery. The stools were examined microscopically, and besides numerous blood-corpuscles a few dead amoebæ were seen, all of them having a circular outline. The facts that amoebæ were found, although in small numbers, in the stools, and that the dysentery yielded so readily

to large rectal injections of quinine, seem to show pretty clearly the relation of dysentery to liver abscess and of the amoeba dysenteriae to both affections. The length of time from the primary outbreak of dysentery to the onset of symptoms pointing to hepatic abscess is also worthy of note. The diagrams well show the appearance of the amoebae seen under $\frac{1}{2}$ th objective oil immersion, and they were drawn, with the aid of a camera lucida, the exact size as seen under that power. The relative sizes of a pus corpuscle and red blood-corpuscles are also shown. I am indebted to my house physician, Dr. C. W. Windsor, for the history of the case, and I have to thank Mr. Hart, the dispenser at the Seamen's Hospital, for the trouble which he has taken in staining, mounting, and watching the amoebae.

Wimpole-street, W.

CONTRACTED ELBOW, WRIST, AND FINGERS FOLLOWING PRESSURE ON MEDIAN NERVE BY SCAR TISSUE.

NERVE FREED BY OPERATION; SUBCUTANEOUS SECTION OF ALL THE FLEXOR TENDONS AT WRIST; COMPLETE RESTORATION OF FUNCTIONS OF THE HAND.¹

By A. H. TUBBY, M.S. LOND., F.R.C.S. ENG.,

ASSISTANT SURGEON TO THE WESTMINSTER HOSPITAL; SURGEON TO OUT-PATIENTS, EVELINA HOSPITAL FOR SICK CHILDREN, ETC.

THIS case is of considerable surgical interest on account of the cause of the contraction and its duration, the difficulty of finding the site of lesion of the nerve, and the extensive dissection required; but chiefly it is of value as showing that clean division of all the tendons on the flexor aspect of the wrist gives a satisfactory result, and that both flexion and extension of the fingers can be fully restored after so radical a procedure. The details of the case are as follows.

A girl aged four years was brought to me at the National Orthopaedic Hospital on Oct. 20th, 1893, with the history that one year previously she injured the front of the right forearm. She was taken to the German Hospital; but beyond the fact that splints were applied and that subsequently some matter came from the forearm, no further details could be obtained. On examination the right elbow was found to be partially flexed, the forearm fully pronated and the wrist flexed, the thumb and first and second fingers were forcibly bent into the palm, and the third and fourth fingers less so. Sensation was impaired in the outer part of the palm and on the palmar aspect of the thumb and first and second fingers. There was, however, no glossiness of the skin and the nails were intact. On attempting passive movement it was found impossible to either supinate the forearm or extend the wrist, thumb, and first and second fingers, but the third and fourth fingers could be passively moved through an angle of about twenty degrees. About one inch below the bend of the elbow and in the middle line, at the anterior aspect of the forearm, a depressed scar half an inch in diameter was seen. It was somewhat firmly adherent to the deeper structures. Judging from the appearances presented by the limb I thought the history of the case might be somewhat as follows:—Injury to the upper end of the ulna, followed by suppurative and pressure either of a small amount of callos or scar-tissue on the median nerve just after it had passed through the two heads of the pronator radii teres. This idea received confirmation on writing to the German Hospital. In the reply to my letter the house surgeon kindly gave the following details. The patient was admitted on May 20th and left the hospital on June 12th, 1893. The history of the accident was that the child had received a blow on the anterior part of the forearm, which caused a fracture of the coronoid process of the ulna accompanied by considerable bruising. Suppuration had followed, and when the wound had healed the forearm was seen to be flexed and pronated, and the wrist could not be extended. The child was taken into the National Orthopaedic Hospital, and for a month douching with hot and cold water, friction, passive movements, and galvanism were persevered in, but no improvement was noted. I then decided to operate hoping to find the nerve lesion in the

neighbourhood of the elbow-joint. I commenced my incision just above the bend of the elbow and in the centre of the flexor aspect, and carried it towards the hand for four inches. The median nerve was found at the bend of the elbow and traced downwards between the heads of the pronator radii teres until it disappeared beneath the flexor carpi radialis; but it was quite healthy in this region. The incision was then lengthened for two inches and a half, and the flexor carpi radialis cut through at its centre and the ends turned upwards and downwards. The opportunity so afforded was now taken to examine the anterior interosseous nerve in a part of its course, but that, too, was healthy. The median nerve was still further traced out and at two inches and a half above the wrist was found to enter a mass of dense scar tissue. When freed from this the nerve trunk was opaque in colour for an inch of its course and shrunken to half its natural extent. The scar tissue was carefully removed, the two portions of the flexor carpi radialis united by gut sutures, and the wound closed, a few threads of horsehair being left in the centre to serve as a drain. This drain was removed on the fourth day, when it was found that primary union had taken place. At the end of the tenth day all the sutures were taken out as the edges were firmly united. The results, two months afterwards, were that supination and extension were much increased, doubtless owing to division of the flexor carpi radialis at the operation, but the movements of the fingers and wrist were not much improved. It was, therefore, decided to divide the flexor tendons of the wrist. This I proceeded to do by prolonging the former incision to the junction of the forearm and hand, finding the median nerve, and passing a blunt-pointed tenotomy knife underneath it. I cut firmly downwards towards the bone, dividing every tendon which offered any opposition to extension of the fingers and thumb. I think that the palmaris longus, the flexor sublimis and profundus digitorum, and the flexor longus pollicis tendons were completely severed. No attempts were made either to bring the divided ends into apposition nor to unite the proximal to the proper distal parts. The hand and fingers were placed upon a malleable iron splint in the position they occupied before the second operation—that is, the wrist and fingers fully flexed. In ten days' time the splint was removed and the wound was found to be soundly healed. The forearm and hand were then placed in a gauntlet of plaster-of-Paris, with the wrist flexed and the fingers and thumb bandaged into the palm. At the expiration of ten weeks after the operation, gentle extension of the fingers and thumb was begun, and the movement gradually increased till full extension could be obtained. The child was sent out of the hospital wearing a plaster-of-Paris gauntlet, which still kept the wrist flexed, but left the thumb and fingers free. At this time considerable active movement had returned to the hand. For a further period of six months the gauntlet was worn, the little patient coming up twice a week for friction and galvanism.

Result.—A year afterwards the movements of the right forearm and hand were completely restored and the parts were in good position. She could use a knife and a spoon well, write on a slate, and pick up small objects from the table, such as a pin.

Remarks.—The history and the position of the scar were particularly misleading in this case. The nerve lesion was found at a distance of three inches from the superficial scar. It appeared to me that considerable suppuration must have taken place in the forearm, the pus burrowing towards the hand and pocketing around the nerve. The spot where the latter was compressed was probably the farthest point of the pocket. It was the uncertainty at the time of operation as to the exact site of the nerve lesion which led to such an extensive dissection of the forearm; the large wound, however, healed perfectly. It might be questioned if it would not have been sufficient to have divided the flexor tendons in the first place without seeking for the point of pressure on the nerve. This in itself would have been an unsurgical proceeding, and it seems to me that no active flexion of the fingers could have been expected with the nerve pressed upon as it was by dense scar tissue. The complete restoration of active movement is a sufficient proof that the functions of the nerve were in abeyance owing to pressure. That more complete movement was not obtained after the first operation was, I take it, due to the adaptive shortening of muscles and tendons which followed the flexed position of the hand and fingers arising from irritation of the nerve. Mere freeing of the nerve was not

¹ Communicated to the British Orthopaedic Society, Jan. 31st, 1895.

sufficient to correct this, although some immediate improvement resulted. With reference to the important question of section of the tendons of the wrist-joint, this example shows that it can be done with impunity, and even with success. Although no efforts were made to bring the severed ends into apposition, yet perfect union took place. One is aware how often it happens that if the tendons be severed by broken glass or any other accident non-union results. In this case the utmost care was taken to keep the wrist and fingers flexed for ten weeks after the second operation, so that by these means the uniting material became firm. Some experiments² I made on division of the tendo Achillis of rabbits convinced me of the necessity of great care in avoiding premature stretching of the uniting material of divided tendons. I have known it to continue to stretch for fourteen months after the date of operation. Therefore in this case the wrist was kept slightly flexed for a whole year after the second operation. To the fact, then, that the extensors were prevented from pulling upon the weak uniting material of the flexors at the wrist I ascribe in a large measure the complete restoration of the functions of the hand.

Finsbury-circus, E.C.

A CASE OF PSEUDO-HYPERTROPHIC PARALYSIS WITH THE KNEE-JERKS PRESERVED.

By W. S. COLMAN, M.D., M.R.C.P. LOND.,

ASSISTANT PHYSICIAN TO THE HOSPITAL FOR CHILDREN, GREAT ORMOND-STREET; REGISTRAR TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, W.C.

THE following case of pseudo-hypertrophic paralysis presents several unusual features and seems of sufficient interest to be placed on record.

A boy aged ten years was brought to me at the Hospital for Sick Children, Great Ormond-street, on Dec. 29th, 1894, with the following history. He had been quite well and strong, and as forward as other children, till he was five years old, when it was noticed that he was "weak on his legs" and that his calves were unduly large. This weakness continued to increase, but very slowly—so slowly that he was active and could run, play football, &c.—until a year before he came under observation, when he had a severe attack of scarlet fever, and after this he became rapidly weaker, and his football performances were confined to keeping goal. The arms were now noticed to be getting weaker, so that he had difficulty in holding the brush when blacking his boots. He was born at the full term and was a perfectly healthy infant; he walked at sixteen months and could talk when two years old. Beyond the attack of scarlet fever mentioned above he never had any illnesses. His head was "funnily shaped" from birth. The family history revealed nothing important. A brother twelve years old had broken his left arm on two occasions and his right leg once, but presented no other signs of disease. On examination the patient was found to be a rather thin but active-looking boy. There was an obvious prominence on the forehead along the line of the frontal suture, and the skull presented a well-marked scaphoid shape. His intelligence and degree of education were fully up to the standard. He walked with an awkward and rather high-stepping gait. When his feet were off the ground they showed a well-marked "pes cavus" deformity, which disappeared when he stood erect. There was commencing slight contracture of the gastrocnemii on both sides. On examination of the muscles there was great enlargement with weakness of the gastrocnemii and of the vasti externi—the crureus and vastus internus being but little affected on each side. The glutei were very little enlarged. The muscles in front of the leg were little affected. An electrical examination showed over-excitability of the gastrocnemii and vasti externi to stimulation by a faradaic current, a current too weak to produce contraction in a healthy child at once causing a contraction in these muscles, and the reaction was greater on the left side, on which the hypertrophy was also most marked. The reaction of the other muscles to the faradaic current was normal. To the constant current all muscles responded normally. In the upper limb there was considerable weakness of movements

about the shoulder. The deltoids and triceps were enlarged, and notably the infra-spinati on each side. There was some wasting of the biceps, pectorales, latissimus dorsi, and of the muscles of the thumb. The muscles all responded readily to both forms of electrical stimulation. Sensation to all forms of stimuli was normal in all parts. The knee-jerks when he was first seen were extremely active, but after he had been under observation six weeks they became much more moderate. Ankle clonus was not elicited at any time. During the last few months he has had slight difficulty in controlling micturition, and had wetted the bed on several occasions. He had retained control over the sphincter ani, but had to obey any calls very promptly, any hot drink producing a rather loose action of the bowels almost immediately. In all other respects he appeared to be quite healthy.

The chief points of interest are the small number of muscles affected although the disease had been recognised for five years, the retention of the knee-jerks, and the electrical reactions. The preservation of the knee-jerks at so late a period of the disease is so unusual a condition that I have been unable to meet with any recorded case. In this case there seem two possible explanations. The first—to which I incline—is that it was owing to the fact that, although the vastus externus was extremely enlarged, no change could be observed in the vastus internus, whose electrical reactions also corresponded to those of unaffected muscles. It has been shown by Professor Sherrington¹ that the vastus internus is the essential muscle for the production of the knee-jerk. The nerves to the other constituents of the quadriceps may be cut in an animal, but if the nerve to the vastus internus is uninjured the knee-jerk will be elicited as before. In the case of my patient I attribute the retention of the jerk to the escape of the vastus internus, and expect that as soon as that muscle becomes invaded the knee-jerk will disappear. The other possible alternative is that there may be some coexistent gross spinal cord disease; but of this not the slightest evidence could be discovered except the very doubtful evidence from the weakness of the sphincter muscles. The curious over-excitability of the enlarged muscles to faradism is a phenomenon that I have observed before in at least one case of pseudo-hypertrophic paralysis, and presumably is due to an abnormal excitability of unaffected fibres in the muscle, and may indicate some change in the muscle fibres immediately preceding the atrophic process.

Wimpole-street, W.

A CASE OF PULSATING EXOPHTHALMOS.

By ADOLPH BRONNER, M.D.,

SURGEON TO THE BRADFORD EYE AND EAR HOSPITAL, AND LARYNGOLOGIST TO THE BRADFORD INFIRMARY.

THE patient, a married woman aged thirty-six years, saw me on Oct. 23rd, 1894. For five weeks she had had severe "neuralgic pains" in the right side of the head, more marked near the temple. Four weeks ago (one week after the commencement of the pains) she heard a pulsating noise in the right side of the head, accompanied by severe throbbing pains; and she had also noticed that the right eye had become prominent. The pain, noises, and protrusion of the eye were at first very slight and had gradually become worse up to one week before I saw her. During the last week they had remained stationary. When she was excited or bent the head the noises and protrusion became more marked. The patient was a pale, weakly woman and looked fifty years old. The right upper lid drooped, was swollen and tense, with thick veins, and covered the eyeball. The lid could not be lifted up. A thick fold of dark-red conjunctiva protruded between the lids and was larger on the inner side. The lower lid was also swollen. The eyeball protruded forwards and outwards, was divergent, and could not be moved. No pulsation of the eyeball could be seen or felt when the patient was quiet. As soon as the head was bent a slight pulsation was noticed. The eyeball could be pressed back into the orbit to some extent. The conjunctiva bulbi was thick and red and contained many dark veins which converged towards the cornea. On the inner side of the eye there was a soft tumour which seemed to press

² Guy's Hospital Reports, 1891.

¹ Journal of Physiology, vol. xiii.

the eye forwards and outwards. The iris was slightly discoloured; the pupil was large and acted very slowly to light. There was a slight deposit of semi-transparent lymph on the anterior capsule of the lens. The fundus was slightly hazy. The veins were extremely swollen and dark, with peculiar constrictions which gave the appearance of a string of sausages. The disc was slightly congested and the edges slightly blurred. Vision = $\frac{1}{2}$. There was pulsation of the retinal veins. A loud, intermittent, blowing noise could be heard with the stethoscope on the whole of the right side of the head, being most marked over the orbit and temple. On pressure on the internal carotid the noises nearly ceased. The patient was kept in bed for some days. The pain slightly decreased, but otherwise there was no improvement. On Nov. 8th the internal carotid was tied. The noises at once ceased; there has been no pain since. The exophthalmos

into the cavernous sinus. 3. The communication must have been at first small and gradually become larger, as the protrusion of the eyeball increased for three weeks, and as there was no history of a sudden violent pain or sudden intense noise. 4. The vision was fairly good; there was no marked papillitis. This proves that there must have been a free anastomosis between the central retinal vein and the inferior ophthalmic veins. 5. There was no pulsation except when the patient bent the head. This is the second case of pulsating exophthalmos which has come under my notice; the first case is recorded in the Transactions of the Ophthalmological Society, vol. ix.

Bradford.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF EMPYEMA OCCURRING IN A VERY YOUNG CHILD.

BY MALCOLM MACKINTOSH, M.D. GLASGOW.

THE child in question was a female aged four weeks and four days who was found dead in bed beside its mother at an early hour on the morning of April 5th last. The parents are healthy, and the baby, who was born at full term after an easy confinement, showed no sign of anything abnormal. It was fed at the breast and never had any difficulty in taking its food easily and naturally. The mother noticed nothing worthy of remark until the evening before the child died, when she observed that it gasped several times in a way that she had not noticed before; but on referring to the nurse she was told that in all probability it was due to "wind," and the matter was allowed to drop. Post mortem the brain and abdominal organs were found to be free from disease, but on opening the thorax the cause of death was soon discovered. The left pleural cavity was full of pus, and the lung was represented by a small hard mass situated at the posterior part of the chest, which seemed to me never to have expanded at all. The amount of pus present was about eight ounces. It is a very interesting question as to whether the disease was present before birth or was a subsequent development.

Sister's-avenue, Clapham-common.

A CASE OF SPERMATOCELE.

BY T. W. CARMALT JONES, F.R.C.S. EDIN.,

SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL.

ON Dec. 14th, 1894, a man consulted me about a swelling connected with his left testicle. He was twenty-four years of age, and the swelling was first noticed when he was thirteen or fourteen. There was a feeling of weight and some pain, especially at night, and in bed the feeling of weight worried him. He had worn a truss for double inguinal hernia since the age of seven constantly. The swelling did not interfere with cycling, rowing, or wrestling, but he always wore a suspender. He had not gone in for gymnastics. There was no history of a blow, though he used to play football. On examination there was a tense sausage-shaped swelling, apparently in the left cord, projecting for about an inch above the testicle, with a smooth rounded upper end; lower down the swelling became indistinct at the back of the testicle, but below and behind there was again a smooth round-ended swelling projecting below and behind the testicle. No sense of fluctuation could be made out as the tumours were so tense; but on percussion the impulse was distinctly conveyed from one end to the other. The scrotal skin was very thick, and I could not see any light through the tumour. I diagnosed either an old hydrocele or a hæmatocele, and advised tapping. On Dec. 16th I drew off two ounces and a half of opaque, milky-looking fluid with a yellow tinge; it looked exactly like egg and milk, but on standing the yellow colour disappeared and the fluid became slightly brown. After the tapping the whole swelling disappeared alike above, behind, and below the testicle. The



gradually decreased, and the patient made an uninterrupted recovery. She was kept in bed for three weeks. For the first few days there was slight pain on swallowing. Peculiar constant whistling noises were heard for four weeks in the right ear. On Jan. 15th, 1895, the vision was $\frac{1}{2}$. There was very slight swelling of the upper lid, and no exophthalmos. The movements of the eye were normal, except for some slight difficulty in turning the eye outwards. The retinal veins were still much swollen and rather dark. The disc was normal.

This is undoubtedly a case of so-called pulsating exophthalmos, and caused by anastomosis of the internal carotid and the cavernous sinus. These cases, of non-traumatic origin, are more common in women and between the ages of thirty-five and forty-five. There are several rather interesting points in this case to which I will briefly refer. 1. There was no history of a blow or fall, no confinement or serious illness, and no arterio-sclerosis or heart disease. 2. There was intense pain for seven days before the noise was heard or the eye began to protrude. The pain was evidently caused by an aneurysm of the internal carotid, which increased in size for seven days and then broke

fluid was sent to Mr. Wyatt Wingrave for examination, and his report was as follows: "Report upon a specimen of fluid received from Mr. Carmalt Jones, Dec. 18th, 1894.—Quantity: two ounces and a half. Colour: café-au-lait, opaque. Reaction: alkaline. Specific gravity, 1032. Odour: faint; stale fish. Microscopic: (1) spermatozoa (dead), about 5000 in 1 c.mm.; (2) large nucleated round cells undergoing fatty degeneration; (3) fatty spheres about 3μ to 15μ in diameter; (4) granular pigmented spheres 10μ to 40μ in diameter; (5) small irregular granular masses 2μ to 5μ in diameter. Organic matter: fat in abundance, hæmaturia, serum albumen, and nucleo-albumen. Inorganic: chiefly phosphates and chlorides. Coagulation could not be induced except by heating. There were no crystals of either cholesterolin, spermin, or hæmaturia. On extraction with ether some free cholesterolin crystals were obtained. The fluid is evidently derived from a cyst connected with the testicle which has formed some association with the blood. Judging from the presence of pigment, it has been gradual in formation." The last time I saw the patient was on Jan. 16th, 1895. I could find no signs of refilling in the cyst; there was a great deal of thickening about the cord and testicle; he had had no pain, the sense of weight had entirely disappeared, and he had not worn a suspender for more than a week.

Sherborne-lane, E.C.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF STRANGULATION OF THE VERMIFORM APPENDIX IN AN INFANT SIX WEEKS OLD; REMOVAL OF THE VERMIFORM APPENDIX, WHICH WAS SUPPURATING; RECOVERY; REMARKS.

(Under the care of Mr. BILTON POLLARD.)

HERNIA of the appendix vermiformis has been observed both in the inguinal and femoral varieties of hernia—reducible, incarcerated and irreducible, and strangulated. Brieger¹ collected 41 cases of this form of hernia; 20 were inguinal, 15 femoral, and as regarded 6 the variety was not stated. In 6 the appendix was normal. Operation was performed in 28 cases, 16 being cured, 2 cured with fecal fistula following, and 5 died; in 3 the result was unknown. In the earlier cases the result of operation was not so favourable as in the more recent, probably because the condition is now better known, although sometimes very hard to diagnose, and the appropriate treatment adopted. Drs. Bull and Coley² give 6 additional cases in children—2 strangulated, 3 irreducible, and 1 reducible; 1 strangulated and 1 irreducible case died, the patient in the former case being only eight weeks old and almost moribund at the time of operation. The symptoms in strangulation of the appendix vary somewhat extensively, both as regards duration and severity. In a case of strangulation in a femoral sac described by Bayer³ they had commenced eighteen days before admission, and were chiefly local swelling and radiating pain; in another case there was constipation with some degree of prostration, but no vomiting. These are what may be called the dangerous cases, as on account of the absence of urgent symptoms the patients or their friends refuse operation until local or general peritonitis or perforation of the appendix has ensued. The length of the appendix varies from one inch to nine inches and a half, and it is not surprising that it is not sometimes found in the sac of a hernia in children, for its development in them is occasionally unexpectedly out of proportion to that of the adult, whilst its mobility may allow it to slip about. For the notes of this case we are indebted to Mr. Douglas Drew, surgical registrar.

A male infant aged six weeks was admitted on Jan. 22nd

on account of an inflamed, irreducible swelling which occupied the right groin and the right side of the scrotum. The latter had been enlarged since birth. The mother first noticed it when the child was fourteen days old. She pushed the lump up and it disappeared at once. On Jan. 19th the lump appeared again. It was larger than before, and the child became very restless. On the 20th the mother gave it a dose of castor oil, which acted freely the same day. It vomited after the castor oil, the swelling became much larger and harder, and the skin became red. In the evening of the same day the child was brought to the hospital and hot fomentations were applied. On the following day an attempt was made to reduce the swelling under chloroform. Something was felt to go back, but there was no slip or gurgle, and the swelling was not visibly reduced in size. The child vomited once during the day, and the bowels acted twice. Next day (the 22nd) it was, as stated above, admitted. The skin of the right side of the scrotum was red and œdematous. The right inguinal canal and the right side of the scrotum were occupied by a hard and very tender swelling, which was irreducible. Mr. Pollard operated. The tissues were thickened and inflamed. The tunica vaginalis contained a little fluid, and both it and the testicle were inflamed. The vermiform appendix occupied the funicular portion of the sac. It was red, and its middle third was considerably enlarged. A ligature was applied on the proximal side of the swelling. A circular incision was then made round the upper part of the appendix. Only the serous and muscular coats were divided. These were then retracted from the central mucous tube, and the latter was tied with a fine silk ligature at the highest point exposed. The mucous membrane was then divided below the ligature and the appendix was removed. The serous and muscular coats, being released, projected well beyond the ligature. They were inverted by three Lembert's sutures, which were tied over the end of the stump. A second series of Lembert's sutures were inserted, and as they were tied the central tube of mucous membrane was displaced upwards into the cæcum. The stump of the vermiform appendix was reduced into the abdomen, the neck of the hernial sac was ligatured and divided, and the operation was completed in the usual manner, the wound being entirely closed. The child's temperature rose after the operation to 101.6°F. It fell to normal on the following day and continued so afterwards. The wound healed by first intention and the child was discharged on the eighteenth day after the operation. The parts removed at the operation consisted of one inch and a half of the vermiform appendix. At a distance of half an inch from its tip there was an oval fluctuating swelling measuring half an inch in length and containing pus, which lay altogether external to the mucous membrane. The latter was thinned by ulceration opposite the abscess.

Remarks by Mr. POLLARD.—Strangulation of the vermiform appendix is rarely observed. In December, 1890, when operating for the radical cure of a right inguinal hernia, I found the vermiform appendix adherent to the back of the sac and was obliged to excise it preparatorily to ligaturing the neck of the sac. In this case there were severe local signs of strangulated hernia, but the absence of intestinal obstruction seemed to negative the idea that the hernial swelling was composed of intestine. I have met with two cases of strangulated hernia of the ovary which were diagnosed by the local signs of severe strangulation being unaccompanied by intestinal obstruction. Such a diagnosis was in this case out of the question owing to the sex of the child. Strangulation of omentum was a possible explanation of the appearances, but the rapid development and the severity of the local signs of strangulation were opposed to that view. The true explanation was only discovered at the operation. The method of removing the appendix which was employed in this case and in the earlier one already referred to appears to be worthy of remark. The appendix is sometimes simply ligatured and excised—indeed, the possibility of inverting the stump of the appendix and closing it with Lembert's sutures has been denied. It is, I believe, almost impossible to invert the mucous coat, but the serous and muscular coats are very movable and can be readily turned in over the central mucous tube, which is simply displaced upwards as the sutures are tied. By performing a sort of circular amputation and dividing the mucous coat at a higher level than the sero-muscular, as was done in these cases, the inversion of the latter layer and the apposition of serous membrane to serous membrane are

¹ Sajous' *Annual of the Universal Medical Sciences*, 1894, vol. iii., p. 23.

² *Ibid.*

³ *Centralblatt für Chirurgie*, 1876, p. 689.

facilitated. The abscess which was found between the coats of the appendix was apparently dependent on the strangulation and the taxis to which it had been subjected, for the canal of the appendix contained neither pus nor a concretion.

GENERAL HOSPITAL, NOTTINGHAM.

A CASE OF TUMOUR OF THE CORPORA QUADRIGEMINA; NECROPSY; REMARKS.

(Under the care of Dr. W. B. RANSOM.)

THE published cases of tumour of the corpora quadrigemina in which careful and accurate observation has been made are far from numerous, and this case is important, not only from the point of view of diagnosis of such growths, but also from that of treatment. Of course, from the surgical treatment nothing more was expected than a possible relief of some of the pressure symptoms by draining off cerebro-spinal fluid; but although the attempt was only partially successful it would appear to be fully justified by what occurred in a case described by Nothnagel.¹ In that case there were symptoms of tumour of the quadrigeminal bodies after a fall on the head, and after death a small glioma the size of a hazel-nut was found partly on and partly in the corpora quadrigemina; the ventricles of the brain were much distended. For some time before death cerebro-spinal fluid frequently escaped from the nose, a large quantity being often collected. When the flow was interrupted signs of cerebral compression occurred, stronger nystagmus, increase of reflexes, slower pulse, and involuntary escape of urine and faeces. After death, which occurred from coma, it was found that the escape of fluid had occurred through the perineural space of the olfactory nerves, which were atrophied. Sachs,² Thistle and Caven,³ Pawinski,⁴ Tissier,⁵ and Guthrie and Turner⁶ have described tumours of this region in recent years.

A youth aged nineteen years was admitted into the General Hospital, Nottingham, on Jan. 27th, 1894, on account of headache and strabismus. The patient dated his illness from an attack of "influenza" in the second week in December, 1893. After Christmas he resumed work for a week, but had then to stop because of pain in the head and the small of the back. About this time he noticed the strabismus, for which he consulted an ophthalmic surgeon. The head pain had gradually increased; it affected chiefly the temples and forehead, but had occasionally shot to the occipital region. There had been also some gnawing pain in the eyes, especially the left, and the sight of that eye had deteriorated. During the last week he had frequently vomited. There was no history of syphilis. On Jan. 28th the patient's mental condition and speech seemed normal, but he said his memory was not quite what it had been. He was pale and thin, but rather puffy about the eyes. There was slight drooping of both upper lids, more on the left, but both could be raised. There was a constant slight clonic movement of the upper lids, and with each lowering of the lids the eyeballs jerked inwards. The left eye deviated strongly inwards, and when he was told to look to the left this inward deviation was increased. The right deviated inwards to a less extent, and could be moved outwards nearly to the middle line. He could look downwards, but when he tried to look up the eyes turned inwards and very slightly upwards. The pupils were of medium size, the right slightly the larger. Both reacted sluggishly to light and accommodation. There was no facial paralysis. The muscles of the mouth and cheek moved normally; he could shut the eyes tightly and could wrinkle the forehead. The tongue did not deviate and was not wasted. The patient walked fairly well, though the feet were kept wide apart. There was no tendency to fall in any particular direction. Romberg's symptom was absent. The upper limbs presented no paresis, incoördination, or tremor. The knee-jerks and ankle-clonus were not obtained. The plantar, cremasteric, and abdominal reflexes were present, but not exaggerated. The patient complained of severe cutting pain in the forehead and temples, preventing sleep, and of some pain at the nape of the neck. There was some general cranial tenderness, most marked over the eyes. Smell, hearing, and taste were normal. Vision was very

defective. The patient could just read large print with the right eye, but with the left could not do this or count fingers. With the left eye he only just saw an object intercepting the light. Ophthalmoscopic examination showed a considerable pink effusion mottled with white spots over each optic disc. There was no other retinal change. There was no alteration in general sensation on the head, trunk, or limbs. In especial there was no sign of disease of the fifth nerve. He vomited frequently, usually after, but sometimes apart from, food. There was slight nausea. The abdomen was normal. The heart, lungs, generative organs, skin, muscles, and osseous system showed no sign of disease. The specific gravity of the urine was 1014; it contained no albumen or sugar, and no excess of phosphates. On Feb. 4th the headache continued to be intense. The gait was more staggering, the feet were kept wide apart, and the patient tended to fall to the right. There was slight weakness of the muscles of the left angle of the mouth. The clonic spasm of the eyelids and eyes had ceased. On the night of Feb. 9th the patient had a peculiar attack. He suddenly called out that his head was bad, and the nurse then found him with retracted head, very pale, and unable to speak, though he pointed to his throat. He did not seem to have lost consciousness, and there was no spasm of the arms or legs. The attack passed away in ten minutes, but he was very depressed and in great pain for some hours after it. During the last few days the patient had been much more dizzy when up, and could with difficulty walk alone, always tending to fall and to revolve to the right. On Feb. 10th the range of movement of the eyes was diminishing. The knee-jerks were still absent. On Feb. 13th the patient could not walk without support. For the last few days the vision had been gradually failing, so that now with either eye he could not do more than tell when a hand was held between him and the light. The pupils were of medium size, though once or twice they had been rather large, and reacted to light. The headache continued with great severity, and, although the patient's intellect seemed fairly clear, he was becoming very cross and sulky. The temperature since admission had been normal. The pulse had varied from 70 to 90. On Feb. 14th, as a result of a consultation, Mr. Joseph Thompson trephined over the left lobe of the cerebellum with a view of relieving intra-cranial pressure. When the dura mater was incised the cerebellum bulged prominently through the opening. A small drainage-tube was inserted. During Feb. 15th, 16th, and 17th there had been a very copious flow of cerebro-spinal fluid from the trephine hole. The patient had been free from pain, and for the first twenty-four hours after the operation seemed better, but afterwards he gradually became drowsy, then passed into a gradually deepening coma, and died on the afternoon of the 17th. The temperature rose to 103° F. on this day.

Necropsy.—On exposing the trephine wound a hernia cerebelli was found, the bulging portion of the cerebellum being inflamed and soft. On further examination a recent slight meningitis was found spreading from this point to the base of the brain. The rest of the cerebellum was normal. The convexity of the cerebral hemispheres showed no change beyond some engorgement of veins. On making horizontal sections of the hemispheres a patch of soft substance dotted with hæmorrhages was found in the roof of the hinder part of the left lateral ventricle, extending slightly to its outer side and inferiorly continuous with a mass of white growth in the posterior half of the left optic thalamus. The posterior corpora quadrigemina were enlarged, the left more than the right, and consisted of a similar white growth dotted with red which was continuous with that in the thalamus. The anterior corpora quadrigemina were small and almost obliterated. The pons itself was normal. The pineal gland was normal. There was no growth at the base of the skull. Microscopical examination of the growth in the corpora quadrigemina showed it to be a large oval-celled sarcoma.

Remarks by Dr. RANSOM.—In this case we have besides the ordinary signs of cerebral tumour—headache, vomiting, and optic neuritis—the further features of ophthalmoplegia and an unsteady, reeling gait—i.e., the two signs laid down by Nothnagel as pathognomonic of tumour of the corpora quadrigemina. The case differs from some in the fact that the ophthalmoplegia was well developed long before marked ataxy set in. In the earlier stage the diagnosis between growth from the base of the skull, of the corpora quadrigemina or pineal gland, and of the cerebellum was not certain. The loss of knee-jerks and paralysis of the sixth nerves might be explained by the hypothesis of cerebellar

¹ Saisons' Annual of the Universal Medical Sciences, 1889, vol. ii., A 30.

² Ibid., 1891, vol. ii., A 26.

³ Ibid., 1892, vol. ii., A 35.

⁴ Ibid., 1894, vol. ii., A 24.

⁵ THE LANCET, Feb. 2nd, 1895.

tumour pressing on the pons; while the paralysis of separate branches of the third and of the fourth nerve was compatible with a lesion involving them as they pass through the dura mater. Neither of these views, however, accounted for the clonic spasm of the upper lid and internal rectus, while it was not likely that a growth of the base of the skull large enough to cause such intense general symptoms would leave the internal and inferior recti and the nerves to the pupils intact. When the ataxy, barely observable at first, became fully developed the diagnosis of disease of the corpora quadrigemina became more probable. The marked interference with vision in this case is unusual, as in most cases such loss has been slight or very late in appearing. It cannot in this case have been due to implication of the optic thalamus or optic radiations, for it involved firstly and chiefly the left eye. There was never any hemianopia. It is possible that the optic neuritis may have caused it; but, on the other hand, one frequently sees a similar amount of effusion with little or no loss of visual power. The escape of the cells and fibres controlling the pupils and the slight affection of the internal recti are points of interest in connexion with the statements of Hensen and Vöckers as to the arrangement of centres on the floor of the aqueduct of Sylvius. These, the most anterior of the separate centres into which the nuclei of the third nerve are divisible, naturally escape injury from a lesion of the posterior corpora quadrigemina, while the centres for the upper lid, superior rectus, and external rectus are damaged. The paresis of the oral fibres of the left facial nerve and not of those to the orbicularis oculi is remarkable, considering the extent to which the third nucleus was injured. Mendel's view of the origin of the orbicular fibres of the seventh from the nucleus of the third would lead one to expect that these would suffer before the fibres to the mouth.

GENERAL HOSPITAL, SINGAPORE.

STRANGULATED DIAPHRAGMATIC HERNIA; NECROPSY;
REMARKS.

(Under the care of Mr. A. J. McClosky.)

PATIENTS who are suffering from a diaphragmatic or phrenic hernia do not often reach adult age; the large majority of congenital hernias of the kind described were found when necropsies were being made on children. The various ways in which they form are as follows: (1) as a consequence of weakening of the diaphragm in some part, permitting of the protrusion of some of the abdominal contents into the chest; (2) protrusion through a congenital opening in the diaphragm; (3) through one of the natural apertures; and (4) through an opening which has formed as the immediate or remote result of a wound or laceration of muscle. The protrusion is usually on the left side of the body, the presence of the liver being sufficient as a rule to protect the right side. We have, however, published in *THE LANCET*¹ a case of hernia on the right side, and mentioned others by Dr. Cornell, Dr. Hillier, and Dr. Murchison. The signs presented on the side of the chest into which the hernia has escaped are much like those of pneumothorax and may be mistaken for it; sometimes there is dullness on percussion in consequence of effusion or the presence of some of the solid viscera.

A woman aged twenty-two years was brought to the hospital on July 27th, 1894, complaining of vomiting, inability to swallow even liquids, and pain in the left side of the chest and back. The duration of her illness was only two days. She was the mother of two children, the last one being born six years ago. Her bowels were constipated. She had complete oesophageal obstruction, not being able to swallow even liquids. Liquids simply passed down the oesophagus for a certain distance and then welled up without any effort on the part of the patient. She was a well-nourished subject, and had always enjoyed good health. There was no history of injury, and the patient could assign no cause for her illness. She bore an anxious countenance, as of impending death; her body was cold and clammy, and the pulse rapid, small, and thready. The patient was in such a desperate condition—"doubled up," restless, and tossing about on the cot—that a thorough physical examination was almost impossible. She rapidly sank and died six hours after admission into hospital. At the necropsy a diaphragmatic hernia was discovered

at the most common site for such hernia—viz., on the left side. The herniated organs consisted of the stomach, the first part of the duodenum, omentum, spleen, and a few coils of the small intestine. The orifice was situated on the left side of the diaphragm close to its lateral posterior attachments to the ligamenta arcuata; it was circular in shape, smooth-edged, and of such a size as to admit the passage of five fingers. The stomach was "doubled up" upon itself, the greater curvature being uppermost in the left pleural cavity, and looking externally; while that portion of the stomach immediately adjacent to the cardiac end, between the oesophageal opening and hernial orifice, could be seen, tense and shining like a bladder, protruding on the abdominal side of the diaphragm. The pylorus with the first part of the duodenum was low down close to the orifice; the lesser curvature was directed inwards. The spleen lay behind and external to the stomach, against the pleural surface of the diaphragm, while immediately within the orifice were a few coils of the small intestine. The stomach was considerably dilated and presented numerous hæmorrhagic spots on its peritoneal surface; it contained a large quantity of dark-red bloody fluid, with partially digested food substance and shreds of mucus. The mucous membrane was acutely congested and eroded at parts, but not gangrenous. The heart was displaced considerably to the right, not extending to the left beyond the left lateral border of the sternum. The left lung was totally collapsed and pushed upwards against the clavicle, occupying only the supra- and infra-clavicular regions. The bowels were practically empty, the lumen contracted, and the walls atrophied; the mucous membrane presented a normal appearance.

Remarks by Mr. McClosky.—I am of opinion that the orifice in the diaphragm was a congenital malformation because of its situation, its smooth and even margin, its circular shape, absence of any adhesions, and absence of any history of injury or signs of any fracture of ribs.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Abdominal Section for Intestinal Obstruction caused by Volvulus of the Sigmoid Flexure.—Early Eriasion in Inflammation of the Sacro-iliac Joint.—Orchotomy for Enlargement of Prostate.—Large Intra-thoracic Cystic Goitre causing Dyspnoea and treated by Operation.

AN ordinary meeting of this society was held on April 26th, Mr. LANGTON, Acting President, being in the chair.

Dr. LUCAS BENHAM and Mr. SILCOCK related a case of Acute Intestinal Obstruction due to Volvulus of the Sigmoid Flexure. The patient was a female aged fifty-six years who had been affected with chronic mania and partial dementia for more than twenty years as the result of sunstroke in India some time before. She suffered from habitual constipation, which required the administration of simple aperients. She was thin, spare, and somewhat cachectic looking, but usually in fair health. The illness commenced with constipation, which was not relieved by the usual aperients. Sickness followed and became frequent and violent, the vomited matter containing some "coffee-grounds" material, but was not stercoraceous. She was first seen two days after the earliest symptoms appeared, and by that time the abdomen was greatly distended, vomiting occurring after every attempt to swallow. No obstruction could be felt per rectum, and no relief could be obtained by copious enemata &c. On the following day, therefore, the abdomen was opened, under chloroform, and the whole of the colon was found enormously distended, the seat of obstruction being, as was anticipated, in the sigmoid flexure, where the intestine was twisted a half-turn on itself, forming a volvulus. This was reduced. There was no peritonitis. The wound was closed and dressed antiseptically. There was immediate and great relief from the operation. No sickness or distension of the abdomen followed. A large quantity of fæces came away naturally. Slight pyrexia ensued, which lasted for ten days, but there was little other constitutional disturbance except a very dry brown tongue, which Dr. Benham was disposed to ascribe to the iodoform with which the wound was dressed. The last stitches were removed ten days after the operation, and the wound had completely healed a few days later. In a month from the date of the operation the patient was up and

¹ *THE LANCET*, May 16th, 1891: case described by Dr. W. A. Hollis.

about, looking as well as usual. This case was deemed worthy of record, as so few similar successful ones had been as yet reported—viz., only nine in all, and of these only one had occurred in this country. Besides these complete successes a few had also been recorded in which volvulus had been either temporarily or partially relieved by abdominal section.—Mr. PRABCE GOULD said that this subject had been introduced at a previous meeting by Dr. Herringham and Mr. Bruce Clarke. At that meeting he described one case and since then he had met with a second. The patient was a man aged forty years and of weak intellect, who had at one time been in an asylum. The pulse was not rapid and the temperature was normal, but the abdomen was tense and tenesmus was considerable; there was a little sickness. Nothing could be felt through the abdominal wall or per rectum. There was a history of gradual loss of flesh and strength for twelve months. He made a small incision as for inguinal colotomy and found a distended sigmoid flexure lying vertically along the middle line. He opened again in the middle line, and as he could not return the sigmoid flexure he incised it and let out much gas and faecal matter. As the torsion of the gut seemed to be recurrent he fixed it to the abdominal wall. Next day he tried to close the fistula, as the bowels had acted normally, but there was still an escape of faeces.—Mr. GOLDING-BIRD said that the interest of the case lay in the fact that the volvulus did not return, as was usually the case. Could the readers of the paper suggest why this had not happened?—Dr. GLOVEY remarked on the fact that both the cases referred to had been of unsound mind. He had seen a third case of a similar kind in consultation, and that also was in an asylum.—Mr. LANGTON said that he dealt with a case of volvulus two years ago. The patient, a female, presented a history of intestinal obstruction of gradual onset. She was so ill when he operated that he made an artificial anus. She recovered from the operation, but died two years later from influenza. It was a valuable procedure in these cases to empty the distended gut by incision.—Mr. ARBUTHNOT LANE said he had dealt with a case of this sort which was under the care of Dr. Hale White and himself. The patient died a few days after the operation from perforation of a stercoral ulcer in the portion of the sigmoid flexure which had been distended. The proper treatment in these cases was undoubtedly to resect the whole sigmoid flexure and fasten the descending colon to the rectum.—Dr. BENHAM, in reply, said that the bowels were kept empty after the operation, and to this he attributed the absence of return of volvulus.—Mr. SILCOCK, in reply, mentioned the case of a man between sixty and seventy years of age who was under Mr. Norton's care at St. Mary's Hospital, and for whom he suggested the opening of the sigmoid flexure and the free evacuation of the intestinal contents. Three days after operation the abdominal wall became gangrenous, apparently from division of the epigastric artery, for there was no peritonitis. Recurrence in these cases was generally due to the fact that the bowels were not emptied.

Mr. GOLDING BIRD read a paper on Early Erosion in Inflammation of the Sacro-iliac Joint. He detailed cases in which in an early stage of tuberculous disease he had operated upon the sacro-iliac joint, and the method he advanced was an elaboration of one he had employed in a single case fifteen years ago. Its object was, by removal of the iliac surface of the joint, to permit of its thorough exploration and cleansing. The special points upon which he laid stress were as follows: the importance of early recognition of sacro-iliac inflammation (and he insisted upon the value of pain elicited by pressure over the root of the posterior inferior iliac spine); early operation, as in any other tuberculous joints; not to wait for local objective signs; and especially not to wait until disorganization had proceeded to the formation of sinuses. Sinuses were useless as routes to follow in operating, but deliberate removal of the ilium from the posterior inferior iliac spine upwards and forwards over the whole area of the joint was insisted upon. The after-treatment was very simple, and appeared from his cases to be short, an adult patient being able to walk about and bear his weight on the joint by the eighth week.—Mr. CROFT was glad that the theory of early interference in joint disease, of which he had so long been an advocate, had been brought to bear upon sacro-iliac disease, which used to be looked upon as hopeless to deal with surgically, and the patients affected with it were relegated to rest for an indefinite time. They thus often passed through several years of suffering and were unable to carry on their usual occupations.

It was occasionally difficult to establish a diagnosis. In several cases pressure upon the wings of the os innominatum was not sufficient to elicit pain except when the anterior superior spinous processes were pressed towards each other. He had often found it difficult to elicit pain by pressure directly over the region of the joint, and in this he differed from Mr. Golding-Bird. He had not given up splints in the treatment of these cases, but the principle seemed a sound one.—Mr. GOLDING-BIRD, in reply, said that he would adopt splints during the expectant treatment of these cases, but not after operation.

Mr. MANSELL MOULLIN read a paper on two cases in which Orchotomy was performed for Enlargement of the Prostate. The first case was that of a man seventy-four years of age under the care of Mr. Birch of Lower Clapton. The prostate was of enormous size, the urine ammoniacal, and the bladder so contracted from persistent cystitis that it could only hold two ounces of fluid. There was intense strangury; a portable urinal had to be worn constantly, and the patient had to rise fourteen or fifteen times every night, the longest spell of sleep being three-quarters of an hour, in spite of the frequent use of morphia suppositories. Ten days after the operation the patient had dispensed with morphia and could sleep sometimes for an hour and a half. The prostate, as felt per rectum, was decidedly smaller. The stream of urine was larger. The reaction was neutral, and small masses of phosphates were beginning to come away. One month later the urine was acid; masses of phosphates were still coming away, and more could be felt. The strangury had almost gone, and there was only a faint cloud of mucus. The bladder could hold four ounces of urine and was much less sensitive when a catheter was passed, and the general condition of the patient had improved immensely; instead of going rapidly downhill he was gaining ground. The second case was that of an enormously stout man under the care of Mr. Houchin of Stepney. The prostate was exceedingly large, the bladder capacious, and the urine at the time acid with only a little albumen, but there had been repeated attacks of cystitis and hæmaturia; the patient had to use a catheter every hour, day and night, and no urine had been passed spontaneously for upwards of fifteen months. The patient bore the operation well, and everything progressed favourably for a week; then he was seized with extreme dyspnoea, from which he rallied for a time, but the attack returned again and again, with hæmaturia and profuse diarrhoea, and death ensued on the eleventh day. On the two days before death bloodstained urine was passed spontaneously by the penis on several occasions. At the necropsy the heart was found to be soft and fatty, the kidneys (one especially) were cirrhotic, and all the abdominal thoracic organs were loaded with fat. The bladder contained calculus, which had been concealed behind the prostate, and some bloodstained urine. Its walls were deeply congested and ulcerated in places. The prostate, which was uniformly enlarged, was very soft and flabby, and the forefinger could be passed easily down the prostatic urethra. An outgrowth from the prostate that projected upwards into the bladder showed unmistakable signs in its consistence and shape, and in being covered over with wrinkled mucous membrane, of its having undergone a recent diminution in size. It was pointed out that although one of these cases proved fatal and in the other the success, though quite as great as could be expected from what was known beforehand of the condition of the bladder, was not nearly so great as that of Mr. Mansell Moullin's former case, of which an account was given at the last meeting of the British Medical Association, they both of them bore testimony to the fact that enlargement of the prostate, no matter how great it was, disappeared within a very short time after orchotomy had been performed. It was urged that sufficient evidence had been brought forward to justify the assurance being given to those who were suffering from the effects of this disease that if the operation were performed the enlargement would disappear, and unless it had been already hopelessly ruined by cystitis and catheterisation the bladder would recover its power. Mr. Mansell Moullin advocated the use of the word "orchotomy" in preference both to castration and to "orchectomy," which had been suggested in America as being the natural derivative from the Greek, *ὀρχοτομήν*, to castrate.—Mr. LANGTON said that years ago he operated on a man aged sixty-eight years who had an enlarged prostate and acute senile tuberculous disease of the testis on the right side. He performed castration on that side and noticed that this was followed by diminution in size of the corresponding side of the prostate. Later the left testis became also affected

with tuberculous disease, and it was also removed; the prostate then completely shrank. The patient was at present alive and in good health.—Mr. GOLDING-BIRD said that it was of immense importance to publish all cases of castration, in view of the correspondence which had recently taken place on this subject, and observations were required as to whether removal of one testis was followed by diminution of the prostate on the corresponding side. He objected to the term "orchotomy" and thought that if any departure from castration were required the term "orchectomy" might be used.—Mr. PEARCE GOULD said that the year before last he removed the right testis of a man for tuberculous disease; there was no appreciable shrinking of the prostate after that operation. During the present year the other testis had become tuberculous and was also removed. There was a great shrinking of the prostate after the second removal.—Mr. MANSELL MOULIN, in reply, said that he believed that though the removal of one testicle would have no effect on a prostate of normal size, yet an enlarged prostate would undergo unilateral shrinking.

Mr. BOWLBY related a case of large Intra-thoracic Cystic Goitre causing Dyspnoea which was treated by operation. The patient was a woman aged thirty-four years. She had noticed a small swelling in the episternal notch for about two years, and had suffered for the same time from slight shortness of breath. During the few months preceding her admission into St. Bartholomew's Hospital the difficulty of breathing had increased, and she had suffered from attacks of transient but severe dyspnoea. The attack from which she was suffering on admission had followed exposure to cold and wet and was accompanied by nasal catarrh and bronchitis. The swelling in the neck had also increased in size. The patient was found to be suffering from very severe dyspnoea with recession of the chest walls and cyanosis. Her respirations were rapid and her temperature 103° F. An examination of the neck showed very little external swelling to account for such serious symptoms. There was some fulness in the episternal notch, and the thyroid gland felt a little enlarged. When the patient coughed, however, the swelling increased in a most extraordinary manner, and a large rounded mass was suddenly extruded from the chest into the neck and as suddenly disappeared. The way in which the tumour was projected reminded one very much of a sudden protrusion of a large hernia during coughing. The tumour moved very slightly on deglutition. An examination of the chest revealed a large area of dulness behind the sternum and cartilages of the first three ribs and continuous with the area of cardiac dulness. There were loud mucous râles in the trachea and bronchi. The diagnosis was intra-thoracic goitre, and an operation was performed as soon as possible. An incision in the middle line showed that the growth was cystic and attached to the left lobe of the thyroid. The trachea was next opened on account of the cessation of respiration, and the cyst was incised. It contained more than a pint of clear fluid, and when emptied was found to have compressed the trachea backwards and thrust itself between the apices of the lungs. Its walls were very thin and reflected over the large vessels, so that on looking into the cyst the aorta, the innominate, and the carotid vessels were easily distinguished, as was also the base of the heart, on which the cyst rested. The thyroid gland was otherwise not enlarged or diseased, but had been displaced a little by the tumour. The patient made a rapid recovery, and the wound healed in three weeks. When last seen, after an interval of several months, there was no re-collection of the fluid in the cyst.—Mr. GOLDING-BIRD asked why comparatively small unilateral enlargements of the thyroid gland were so frequently accompanied by dyspnoea. He believed that this symptom in many cases was functional. On one occasion, after opening a substernal abscess, he had felt the arch of the aorta.—Mr. BOWLBY, in reply, said that in the case related the cyst had become impacted behind the sternum, and therefore the dyspnoea had an obvious cause.

scientific interest, and of no less practical importance because the antitoxin treatment of diphtheria, probably the first step towards an entirely new field of therapeutics, was the direct outcome of the close study of its phenomena. The first fact to be taken into consideration was that pathogenic bacteria produced their effects on the organism by means of poisons or "toxines" which they elaborated in the fluids of the body, as was well seen in the production of all the symptoms of diphtheria or of tetanus by the inoculation of sterilised culture fluids, without a trace of the bacilli themselves. These toxins were intensely virulent, but others, as that of the pneumococcus, were extremely feeble. The bacilli of diphtheria and tetanus when inoculated did not invade the vascular system, but multiplied in and around the seat of inoculation only, though the toxins they produced were diffused throughout the body. These might be taken as types of toxic diseases; though in the case of tetanus the inoculation of washed spores into a healthy wound produced no effect unless the tissues were lacerated or suppurating, or other bacteria were introduced at the same time and place. In septic diseases, on the other hand, the toxins were feeble, but the bacteria invaded every tissue and fluid of the organism. This was well seen in the study of the coccus of pneumonia in the rabbit. Some, as septicæmic, partook of the character of both, and some acted in one way or the other under different circumstances. We must consider the power of the body to destroy the bacteria or inhibit their growth, and the power of resisting the effects of their toxins, the former factor being most important in the case of the septic and the latter in that of the toxic diseases. Immunity might depend on either condition or on both. It was either natural or artificial and acquired. Fowls, pigs, and white rats were immune to anthrax; birds generally to the pneumococcus; mice to the toxine of diphtheria; and fowls to that of tetanus, just as they were to large doses of morphine. They would, however, succumb to anthrax if depressed by cold and ill fed. An artificial immunity might be acquired in several ways, as by inoculation with a mild or artificially attenuated virus, or by minute doses of a virulent one, or by non-fatal doses of the pure toxine. Anthrax virus could be attenuated by cultivation at a high temperature or by the addition of certain antiseptics. As a rule, immunity obtained by means of the toxins was less permanent than that from inoculation of living microbes. Time was required to establish immunity by means of toxins and such immunity did not last long, both periods being longer the greater the effect of the inoculation. It was easier to render an animal immune to fatal doses of the living bacteria than to those of the toxine; and when this latter immunity was obtained that to the bacteria was also, but the converse did not hold good. A fallacy of observation might, however, arise from the fact that living bacteria were often retained in the tissues long after apparent recovery and called into renewed activity by the injection of toxine, they and not it being the cause of the subsequent fatal attack. In some few cases a very transient immunity had been produced by the intra-peritoneal injection of dead bacteria &c. But of infinitely greater value was that conferred by injection of the serum of a highly immunised animal. The immunity was of far shorter duration than that produced by vaccination, but this method had a therapeutic as well as or even greater than its prophylactic, and unlike vaccinations was available after the disease had developed. This was the antitoxin treatment of diphtheria and tetanus. Turning to the properties of the cells and fluids of the body in their relation to bacteria, Dr. Washbourn referred to phagocytosis as the most seductive theory of immunity. To Metschnikoff, who had studied the process throughout the animal kingdom, we owed all our knowledge of the subject. The amoeba, as was well known, was capable of surrounding and digesting particles of food, including living bacteria. Among these Metschnikoff had observed a small unicellular micro-organism, the microsphaera, which, however, instead of being digested multiplied within the amoeba and ultimately destroyed it. Such a struggle between the invading microbes and the protoplasmic cells of the body occurred, according to Metschnikoff, in every case of infection, ending in recovery or in death as the cells or the microbes were victorious. The struggle and the alternative results were well seen in the Daphnia, a small freshwater crustacean, and the parasitic Monopora, which entered the tissues from the alimentary canal, and in a large number of the invertebrata phagocytes played an important part. Among vertebrata the phagocytes belonged mostly to the class of leucocytes, which Metschnikoff divided into lymphocytes, eosinophiles, neutrophils, and

EPIDEMIOLOGICAL SOCIETY OF LONDON.

Immunity.

A MEETING of this society was held on April 19th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Dr. J. W. WASHBOURN read a paper on Immunity, which was, he pointed out, a problem of the deepest

mononuclear leucocytes. Of these, the two latter, together with the endothelial cells of the lymphatics and kidneys, were phagocytic, even when removed from the body, and that they were capable of thus devouring bacteria in the living animal was easily proved by experiments such as the introduction of anthrax bacilli under the skin of a pigeon or of those of tubercle into the blood of a rabbit, when they would be found to be taken up by the leucocytes and by the endothelium respectively, and successful cultures from such leucocytes showed that the bacteria might resist digestion for some time. The migration of leucocytes through the walls of the vessels in inflammation around the seat of an inoculation was due to a power possessed by various substances of attracting or of repelling amoeboid cells, and known as positive and negative chemotaxis. It could be studied in certain protozoa, as the myxomycetes, and in the vertebrata by inserting under the skin capillary tubes open at one end and containing chemical substances. On removing the tubes after some days the contents, if positively chemotactic, will be filled with leucocytes. That the blood and lymph serum had bactericidal powers was first observed by Nuttall, and carefully investigated by Buchner, Behring, and others. If serum were inoculated with a cultivation, and the number of bacteria present estimated day after day by plate cultures, it was found that they gradually fell off until they disappeared altogether, or after having sunk in number for a time began to increase until they were more numerous than at first. It had been suggested that the serum contained a bactericidal substance called "alexine," and that the bacteria secreted an antagonistic "lysine"; both were hypothetical, but the fact remained that bacteria, if numerous, could resist the undoubtedly bactericidal action of the blood, which was also very easily destroyed by physical agencies such as the exposure of the serum to a temperature of 60°C. The bactericidal property was most conspicuous in inflammatory exudations and was doubtless due to some substance secreted by the leucocytes, among which Hankin first indicated the eosinophile cells as the most active. But the serum was not merely bactericidal; it could be made antitoxic. Behring and Kitasato were the first to show that the serum of animals immunised by inoculation to the poison of diphtheria or tetanus possessed the power when inoculated into others infected with the respective diseases of neutralising the poison and cutting short the morbid process; and the more frequently the immunised animal was injected with the toxine the more powerfully antitoxic its blood became. Ehrlich had shown that two vegetable poisons, ricine and librine, acted in a strictly analogous manner. Serums were thus antibacterial or antitoxic, the latter being antibacterial also. The bactericidal property of a serum was very easily destroyed by heat, but the antitoxic or protective property was not, and the substance in which it resided could not be precipitated without losing its efficacy. It was scarcely necessary to state that all antitoxins were specific or efficient against no toxine but that of the disease whence they were derived. Such were the factors in immunity—viz., phagocytosis, bactericidal substances and protective serums, the last of these being outside of the question of natural immunity. Yet the problem of natural immunity was a complex one, special factors coming in; thus the low temperature of the frog's blood enabled it to resist inoculation with tubercle bacilli, and fowls were unaffected by tetanine as they were by morphine. The blood serum of white rats destroyed anthrax bacilli even out of the body, but their resistance to the action of the pneumococcus could not thus be explained. All such cases Metschnikoff would refer to phagocytosis, but marked phagocytosis might occur and death yet follow; indeed, in the case of rabbits infected with anthrax the bacilli had been seen to escape from the interior of the phagocytes and multiply in the fluids. Again, in the exudation around the seat of inoculations many of the leucocytes were not phagocytes and the exudation serum might be a powerful bactericide. Both agencies were involved in the resistance offered to infection and phagocytosis, very rarely alone. The problem of acquired immunity was further complicated by the introduction of a new and artificial factor—the protective power of the serum. An antitoxin, as that of diphtheria or tetanus, neutralised the paralyzing action of the toxine on the cells, allowing phagocytosis to have full play; for the serum of immunised animals had no bactericidal properties, and the spores of tetanus, if washed free from any trace of toxine and introduced into the body of a susceptible animal, were speedily ingested and destroyed by

the phagocytes. Immunity acquired towards the septic diseases was even more obscure and complex, so that, pending the results of experiments which might throw light on the subject, it was better to refrain from conjecture.

HARVEIAN SOCIETY OF LONDON.

Syncopeal Bradycardia.

A MEETING of this society was held on April 18th, Dr. WILLIAM HILL, Vice-President, being in the chair.

Dr. ALEXANDER MORISON read a paper on Syncopeal Bradycardia. After referring to the literature of the subject he treated it under the following heads: 1. Endocardial bradycardia, in which the chief factor was increased endocardial blood pressure. This bradycardia of overstrain, occurring at all ages, was illustrated by cases. 2. Myocardial bradycardia, due to fatty or fibrotic degeneration of the myocardium, or to changes assumed to exist in the intrinsic neural mechanism of the heart. Cases illustrating this condition in its presyncopeal and syncopeal phases were given, and sphygmograms taken from a case under Dr. Morison's observation were shown. 3. Exocardial bradycardia or that due (a) to reflex and transient nerve irritation, especially in the pneumogastric territory; (b) to poisons, such as digitalis, opium, and chloroform—well-marked pulsus bigeminus caused by digitalis in a case of double mitral disease was illustrated by sphygmograms; (c) to constitutional and extra-cardial diseases, such as rheumatism, syphilis, and meningitis. 4. Compound bradycardia or cases in which various factors played a part difficult to apportion ariht. 5. Doubtful cases, in which well-marked clinical bradycardia could not be ascertained after death to have rested upon a discoverable cause. The etiology of the subject was next considered, and Dr. Morison showed that bradycardia could not be associated exclusively with most anatomical changes, either in the heart or neighbouring organs, because such were much more frequently attended by cardiac acceleration. He ascribed a preponderant rôle to the influence of the cardiac nervous system, the power of which to modify the heart's action rhythmically and arrhythmically was illustrated by several sphygmograms. He laid especial emphasis on the important fact, noted by Dehio as well as by himself and others, that cardiac accelerants had little appreciable effect upon the heart in persistent bradycardia. He showed that this failure to accelerate applied to belladonna, trinitrin, and alcohol alike, as well as to such movements, locomotor or pyrexial, as under normal circumstances quicken the heart. Dr. Morison closed his remarks with references to the diagnosis, prognosis, and treatment of these cases, and quoted two instances, one recorded by Flint, which showed that persistent cardiac bradycardia might result in recovery, and another mentioned by Tripiet, in which iodide of potassium cured a persistent case due to syphilis.

Dr. William Hill, Mr. Peyton Beale, Dr. Cagney, and Dr. Basil Morison took part in the subsequent discussion, and Dr. Alexander Morison replied.

MIDLAND MEDICAL SOCIETY.

Intra-peritoneal Hemorrhage.—Exhibition of Cases and Specimens.

A MEETING of the above society was held on April 24th at the Birmingham Medical Institute, the President, Mr. T. F. CHAVASSE, being in the chair.

Dr. THOMAS NELSON showed a patient with a large Nævus between the thumb and forefinger, about the size of an orange, with a small division extending through between the metacarpal bones of the index and second fingers. It has been slowly growing for twelve years and does not cause any inconvenience.

Mr. F. MARSH showed a girl aged nineteen years whom he had Trephined on March 2nd, 1894, for Epilepsy which had developed after a fall on to the forehead ten years ago. There was a depressed scar about an inch above the left eyebrow. On removing a disc of bone beneath this a small perforation was found in the bone through which the dura mater had protruded and become adherent to the scalp tissues. This was severed and the bone was reimplanted. Primary union took place, and there had been no recurrence

of the fits, although thirteen months had elapsed since the operation.

Mr. F. MARSH also showed a boy aged thirteen years whom he had Trephined on Oct. 5th, 1894, for Headache and Vertigo on slight exertion. About nine years ago the boy fell and struck his forehead against a kerb-stone and had suffered much from headache since. The pain commenced at the site of a slightly depressed scar two inches above the right eyebrow and radiated over the head. A disc of bone was elevated at this spot, but no depression of the internal table was found. The dura mater was, however, adherent. The adhesions were separated and the bone was reimplanted. A rapid recovery was made, and there had not been any recurrence of the symptoms.

Mr. E. LUKE FREER showed a new Spinal Apparatus.

Mr. C. MARTIN showed a cheap and efficient Apparatus for the Sterilisation of Instruments.

Mr. JOHN W. TAYLOR read a paper on Intra-peritoneal Hemorrhage the result of Tubal Pregnancy. The paper dealt first with diffuse hæmorrhage from rupture of the tube, its features, recognition, and treatment, and secondly with localised intra-peritoneal hæmatocele, its causation, consequences, and varieties. The views of Professor Sönger of Leipzig and of the writer regarding "encapsulated" or "solitary" hæmatocele were discussed, and some critical remarks on the general subject of intra-peritoneal hæmatocele concluded the paper.

Reviews and Notices of Books.

Lehrbuch der Allgemeinen und Speciellen Pathologischen Anatomie für Aerzte und Studierende. Von Dr. ERNST ZIEGLER, Professor der Pathologie, Anatomie, und der Allgemeinen Pathologie an der Universität Freiburg. Achte, neu bearbeitete Auflage. Erster Band: Allgemeine Pathologie. Jena: Verlag von Gustav Fischer. 1895. (Text-book of General and Special Pathological Anatomy, for Practitioners and Students. By Dr. ERNST ZIEGLER, Professor of Pathological Anatomy and of General Pathology at the University of Freiburg. Eighth Edition. Vol. I. General Pathology. Jena: Gustav Fischer. 1895.)

THE welcome originally accorded to Professor Ziegler's "Lehrbuch" has been more than justified by the rapidity with which new editions have been called for. Indeed, it is no exaggeration to say that this work marked the opening of a new epoch in the study of pathology, and that it from the first set a high standard of excellence. Its merits were manifold, but above all others may be cited the clearness of literary description and the wealth of admirable illustrations which it displayed. It had succeeded to the favourite text-book of Professor Förster, but in originality and power it left that work far behind. Nevertheless, in these days of scientific progress no text-book can hope to retain a hold on the favour of the student which fails to keep abreast with the increasing knowledge of the times. The author, fully cognisant of this fact, has in each succeeding edition amended and added so much that practically the book has assumed a new form without in the least diminishing its popularity. The enormous strides with which bacteriology has advanced and the problems which surround it have not escaped his notice, and the result is that the first volume has grown considerably in dimensions and in value. Professor Ziegler has with this eighth edition made a new departure in giving it the wider title of "General Pathology," instead of that of "General Pathological Anatomy," which it formerly held. Forming now a bulky volume of upwards of 700 pages, and illustrated by 453 figures, some of which are coloured, and all of which are remarkable for their delicacy and fidelity, it constitutes the best compendium extant of the science. In his prefatory remarks the author justifies his extensive revision, rightly maintaining that the work of greatest utility is not that of a condensed manual, which can only give results and conclusions, but that in

which each topic is treated fully and with due explanation. He recognises that the aim of pathology is to give a clear insight into the processes of disease and to be of practical value at the bedside, and in the book before us he has certainly spared no pains to expound principles and describe the facts on which these are based. The introduction of a section devoted to the causes of disease and of chapters dealing with fever, immunity, and other general questions, has become a necessity, whilst the discussion of inflammation and the vital processes connected with it has been considerably expanded and modified. In the chapter on tumours we have one of the most complete and rational descriptions of the histological characters of these formations. Disorders of development and malformations are also most amply illustrated. But the crown of the work lies in the thoroughly systematised and accurate details of the parasitic affections which form so large a part of infective disease. The utility of the work is enhanced by the ample bibliography appended to each section, and to our thinking the book is one which is quite indispensable to the advanced student of pathology. This is the more evident since it may be truly said to occupy a unique position among text-books.

Elementary Practical Bacteriology, including Bacteriological Analysis and Chemistry. By A. A. KANTHACK, M.D., M.R.C.P., Lecturer on Pathology and Bacteriology, St. Bartholomew's Hospital; and J. H. DRYSDALE, M.B., M.R.C.P., Casualty Physician, St. Bartholomew's Hospital. London: Macmillan and Co. 1895.

THIS is one of the best of the practical handbooks for laboratory instruction that we have met with. Dealing with a difficult and complicated subject, it leads the beginner, by extremely well devised and clear instructions, through all the methods most in vogue, not merely for cultivating and staining micro-organisms, but also for observing the modifications in their life-history effected by temperature, amount of sunlight, the presence or absence of oxygen, and so on. In another section full directions are given for the examination of air, water, and food, as well as for testing the efficiency of filters. In the third section the student is taken through the methods employed for separating the toxines, albumoses, &c., which result from the chemical changes set up by the agency of the various organisms, such as the bacillus diphtheriæ and the ptomaines which result from the putrefaction of proteid matter. The methods employed throughout are described in clear and definite language, and the various steps are given in praiseworthy detail. Many practical handbooks are rendered useless by the directions being too condensed, the writer assuming that the reader is familiar with the details of laboratory work. This defect has been avoided by the authors, who have managed, nevertheless, to keep the book in small compass by omitting all padding. The book is written for those who are attending a course in a well-equipped laboratory, and for such it can hardly be improved upon; but there are many practitioners, both here and in the colonies, who have not had the advantage of laboratory instruction in their student days, but who have taken up the study of bacteriology, and we hope that in future editions the authors will see their way to increasing the usefulness of their work by a short introduction on apparatus, and an appendix on the best method of obtaining pure cultures of the various materials which they prescribe for use in the different lessons.

Directions for Laboratory Work in Bacteriology. By FREDERICK G. NOVY, Sc.D., M.D. Michigan: George Wahr. 1894.

THIS is essentially a laboratory handbook, and has been arranged so that it may be made to serve both as an instruction book and as a note-book, in which drawings and

such additional notes as may be desirable may be made. It is essential in such a book that the teaching should be didactic, and in some cases even dogmatic. The course for which this is a text-book is supposed to extend over twelve weeks, instruction being given daily; and certainly anyone who devotes this amount of time to the subject and carefully follows out the directions given will have acquired a knowledge of the technique and of the elementary facts of bacteriology that will place him in a position to continue the study of the subject and to carry on original investigation. The instructions are in many cases far from complete, but this arises presumably from the fact that the author intended the work simply to serve as a skeleton text-book, the gaps in which are to be filled up from time to time and as individual necessity arises. The book, therefore, in the hands of a student under a good teacher may prove invaluable, but it can scarcely be looked to for much help in clearing up the many difficulties that constantly arise in the laboratory. The lessons are progressive, but two subjects are usually carried on side by side; thus, to begin with, classification and life-history are considered side by side with the preparation of nutrient media and general bacteriological technique. Then follow descriptions of various typical micro-organisms, all of which are carefully drawn up, followed by the various methods in which their study is carried on. The latter part of the book is devoted to what is described as special work—i.e., preparation of tissues, cutting and staining of sections, and the preparation of these sections for the examination of various pathogenic micro-organisms. The testing of disinfectants is then taken up, and at the end is given a very complete list of apparatus and accessories. The work, as a whole, may be recommended as a good laboratory text-book, especially when supplemented by oral teaching.

Illustrated Lectures on Ambulance Work. By R. LAWTON ROBERTS. Fifth Edition. London: H. K. Lewis.

THAT this book has reached a fifth edition so few years after the date of its first appearance is good evidence of its popularity and of its meeting a want. It consists of a course of five lectures and an appendix. In the first lecture the aims of the St. John Ambulance Association are described, the necessity of universal instruction in "first aid" is urged, and a general description of the structure and functions of the human body is given. The uses of the triangular bandage and the application of first field dressings are also described. The second lecture treats of bleeding, the third lecture of broken bones, the fourth lecture deals with sudden attacks of illness, and the fifth lecture with the methods of lifting and carrying the sick and injured. The appendix contains much advantageous information and many useful instructions. The lectures strike us as being too long, and we think the book more suitable to lecturers than to those seeking instruction, who will, moreover, find all that is essential in Shepherd's "First Aid to the Injured"—the well-known little manual issued by the St. John Ambulance Association. The book is copiously illustrated; those illustrations which deal with hæmorrhage and the application of tourniquets are particularly good. Surely it was unnecessary to give a special illustration to depict the well-known "safety pin." In the preface to this addition useful statistics of the work of the St. John Ambulance Association are set forth, and reference is made to the appointments of Surgeon-Major Hutton as "Organising Commissioner" to the Association and of Colonel Thackeray, V.C., as Commissioner of the St. John Ambulance Brigade. The work done by another body, "The Invalid Transport Corps," is also brought into prominence. The fifth section contains fifteen pages on Military Ambulance Organisation, an able summary of a very interesting subject,

and one likely to do something towards "educating public opinion" to the needs so often pointed out by Brigade-Surgeon-Lieutenant-Colonel Evatt and other officers of the Army Medical Staff.

Outlines of Zoology. By E. J. ARTHUR THOMSON, M.A., F.R.S.E., Lecturer on Zoology in the School of Medicine, Edinburgh. Second edition, revised and enlarged, pp. 820, with 266 illustrations. Edinburgh and London: Young J. Pentland. 1892.

THE new edition of this excellent treatise, which is one of Young J. Pentland's students' manuals, has been considerably enlarged, for not only have 180 pages been added, but much space has been gained by relegating details to smaller type. The whole work has undergone systematic revision, facts recently observed being inserted and pains having been taken to make the meaning clearer where there was previously any obscurity. The first chapter, giving a general survey of the animal kingdom, has been rewritten, and the second chapter, on Comparative Physiology, has been added by Miss Marion Newbigin, B.Sc., who, the author states in his preface, has assisted him throughout in the preparation of this edition. A conscientious revision of each chapter appears to have been made, and many new paragraphs and sections have been introduced—such, for example, as those dealing with the development of clepsine, the development of the crustacea generally, and the disposition of the vertebral column in the fish, frog, lizard, and bird; the description of a lizard, of a snake, and so on—all of these being intercalated with the accounts given in the first edition. Many additional illustrations are given. Some improvement might still be made in this direction. For example, the statements made under the head of the nervous system in lizards, that "the brain consists of the usual parts," and under the same head in ophidia that "the brain presents no remarkable peculiarities," supply no information to the student. A good diagram showing the parts would be of much assistance.

In our notice of the work on a former occasion we drew attention to its excellence as a manual of instruction for those preparing for the higher examinations, and it may now be regarded as one of the most reliable at the disposal of the student.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XII. Edited by WILLIAM THOMSON, M.A., F.R.C.S. Dublin: Fannin and Co.; London: Baillière, Tindall, and Cox.

THIS volume contains selected papers read before the various sections of the Royal Academy of Medicine in Ireland, many of them being of much interest. Appended to the text of each paper is a report of the discussion which ensued, a feature which adds to the value of the volume. Of the papers contributed to the Section of Medicine we note one on Pernicious Anæmia by Dr. James Craig, who gives an impartial summary of the growth of knowledge on this obscure subject. He points out that arsenic is not always beneficial, and thinks that the recommendation of Dr. Wm. Hunter to employ intestinal antiseptics is one which might be followed with advantage from what is known of the character of the disease. Mr. J. J. Burgess writes upon Malignant Endocarditis, the case upon which his paper is based being one of great obscurity in a pregnant woman. Abortion occurred during the illness, the course of which was marked by irregular pyrexia, marked nervous symptoms, and finally cerebral embolism. There is a remarkable record of a case of Associated Paralysis of the Portio Dura and Pneumogastric Nerves by Dr. J. W. Moore, apparently depending upon supuration in the sphenoidal sinus; the patient recovered. The subject of Graves' Disease and its points of contrast with Myxœdema are discussed by Dr. James Craig. There is

also a paper on Tetany by Dr. A. R. Parsons, besides others on Influenza, Cancrum Oris in Typhoid Fever, &c. In the Section of Surgery Mr. F. Alcock Nixon describes a case of Removal of a Tumour of the Brain, and details the several plans suggested for cranial topography by Professors Thane, Reid, and Fraser, the last being in his opinion the most reliable. Mr. T. Miles gives with much clearness the grounds for a resort to Laminectomy in Spinal Injuries, and Dr. Kendal Franks records a remarkable case of Fibrous Stricture of the Oesophagus treated by gastrotomy and dilatation from below according to Loreta's method. Mr. J. S. McArdle writes upon Nephrorrhaphy and Nephrectomy. He incidentally mentions that he is not inclined to concur in the opinion expressed by some that nephrectomy is of no use in renal sarcoma. The same surgeon contributes to the Section of Obstetrics a paper on the Operative Treatment of such Herniæ as appear the result of Congenital Defect of Linea Alba, or as the outcome of Laparotomy. In the Section of Pathology there is an exposition of the current doctrines on Immunity in a paper by Dr. J. A. Scott, and also a description of a case of Locomotor Ataxy with Charcot's Disease. A series of plates illustrative of points in the development and morphology of the central nervous system are explained by Dr. Alec Fraser; they formed part of a demonstration given at one of the meetings of the section, and constitute a distinct feature of an instructive and valuable volume.

LIBRARY TABLE.

The Hospital Service Book and Supplement: Short Services for Use in the Wards of Hospitals and Infirmarys. By the Rev. CHARLES PARKHURST BAXTER, M.A. London: Henry Frowde. 1895.—This is the second edition of a useful abbreviation of the Daily and Communion Services of the Book of Common Prayer, together with a selection of favourite hymns. The supplement is mainly for children's use, and contains also a shortened form of the Ministration of Private Baptism. Prefixed are recommendatory letters from the Bishop of London and the Bishop of Southwark (Suffragan of Rochester).

National Viands à la Mode. By M. de Salis. London: Longmans, Green, and Co.—This little book has been written with the laudable desire of giving English housewives the chance of reproducing in their own homes dishes they may have met with abroad. The recipes have been selected from many countries and offer a pleasant change from the ordinary British solid and uninteresting meal. We must advert unfavourably on the want of accuracy in these recipes. No doubt a sensible cook, aided by a mistress who has seen and eaten of the dishes in question, will do very well; but the average servant is notoriously wanting in common sense, and in many of the recipes no quantities are specified. In the Persian recipes, for instance, it would have been better to say, "Take three pounds of lean mutton," instead of "Take the meat of a leg of mutton." An English leg of mutton weighs anything between 6 lbs. and 25 lbs. However, we doubt not that the book will be useful if used with the limitations we have specified.

Clinical Lectures on the Prevention of Consumption. By WILLIAM MURRELL, M.D., F.R.C.P. London: Baillière and Co.—These lectures were delivered last year at the Westminster Hospital and published in the medical press. They form a simply-written and practical statement of a most important subject, and may be profitably read in conjunction with Dr. Ransome's paper entitled "The Consumption Scare," upon which we commented in a leading article on Feb. 2nd, 1895. Notification, Dr. Murrell considers, is at present impossible, but he lays stress on legislative action as regards public hygiene in reference to phthisis, and on personal efforts for guarding against the dissemination of infectious matter.

The Phonographic Record of Clinical Teaching and Medical Science. No. 5. London: Sir I. Pitman and Sons.—Both as regards the quality and quantity of matter which it contains the present number of the *Record*—a double one—is by far the best that has yet been issued. Dr. James Ritchie contributes a paper on the Therapeutical Pathology of Diphtheria which is a remarkably lucid account of a subject very much in evidence just now. Actinomycosis forms the subject of a clinical lecture by Mr. Edward Ward, who has found potassium iodide productive of good results in its treatment. Mr. E. Nettleship supplies an interesting clinical note on Blinding by Electric Light, and there is a useful note on Belladonna Poisoning by Mr. Raymond Johnson. Dr. Julius Dreschfeld and Mr. R. J. Godlee also contribute to the same number.

La Pratique de la Sérothérapie. By Dr. H. GILLET. Paris: J. B. Baillière et Fils. 1895.—This book gives an account of the treatment of diphtheria by the methods of serum therapeutics, intubation, and tracheotomy. The account of the serum treatment is the most interesting part of the book, and its history, modes of preparation, administration, and effects are all made clear, and the explanation is aided by several diagrams and temperature charts. Very full statistics are given, which mostly tend to show the advantages of the serum treatment, but at the same time all sides of the subject are dealt with, and we find a chapter which deals with all the objections—real or supposed—which have been urged against this method of treatment. The chapters on intubation and tracheotomy give accounts of the histories and methods of performing the operations, together with some comparative statistics. The book is very clearly printed and contains numerous illustrations.

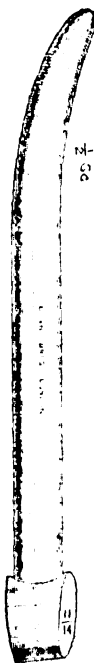
New Inventions.

A NEW FORM OF UTERINE DILATOR.

I WISH to draw attention to a new form of uterine dilator that Messrs. Down Brothers have made for me with great care, and which in my own hands and those of my friends has proved a very useful instrument. Briefly, the construction is as follows. Each dilator is seven inches in length, is made of metal electro-plated, and is hollow and conical. They are a variety of Hegar's dilators, and the sizes are on Hegar's scale; but, unlike his instruments, which are too numerous, advance in complete sizes, and are not so certainly kept clean as a metal instrument. Mine are conical, each dilator covering three sizes Hegar in the first inch and a half and a fourth size in the next inch. My No. 1 starts at 3 Hegar and ends at 6 Hegar, within two inches and a half of the point. No. 2 runs from 4 to 7 Hegar. My last, No. 16, from 19 to 22 Hegar, a size large enough for most purposes. No. 1 is not too large to start with, and when one dilator has passed the next is easily received and used. Messrs. Down have at my request stocked this form of dilator with a slight curve, to meet the predilections of most gynaecologists; but the set I use are perfectly straight, and I have never had the slightest difficulty with them even in cases where I most feared it, and never any of that trouble which one often experiences with the larger size Hegar, which, advancing in complete sizes, is sometimes refused by the cervix.

My apology for troubling you must be that the difficulty I had in finding a dilator reasonably cheap, convenient, and useful for immediate dilatation must have been felt by others whom the usual uterine dilators do not satisfy. I hope the instrument here described will prove of service to such.

G. A. HAWKINS-AMBLEY, F.R.C.S. ED.



THE LANCET.

LONDON: SATURDAY, MAY 4, 1895.

WE have already succinctly set forth most of the results at which the Royal Commission on Opium has arrived.¹ In the opinion of many no necessity had, in reality, been shown for any such inquiry at all, but we think the Government of this country and India are to be congratulated on the fact that it has taken place and that the matter has been fully and impartially considered. We may fairly hope, now that it has been disposed of to the satisfaction of all candid people, that the result will be final, or that, at any rate, it will not come again within "the range of practical politics" for a very long time. The evidence adduced carried conviction to eight out of the nine members forming the Commission—even Mr. A. PEASE, who is supposed to have started with an opposite bias, having been converted. It may be taken as settled that the use of opium in India is extensively common and is attended with a remarkably small amount of injury; that the drug is regarded as a sort of domestic comfort; and that it is practically quite harmless as compared with the use and abuse of alcohol in other countries. There are, of course, cases in which the abuse of opium leads to disastrous consequences, but these are comparatively very rare. The habit of opium-eating in India does not appear to obtain such mastery over a man's nature and to be attended with such an amount of crime and lamentably degrading results as intemperate habits in regard to alcohol do elsewhere; and the prohibition of the use of opium is not only uncalled for, but is, moreover, impracticable and would lead to infinitely greater mischief if it were followed, as it in all probability would be, by the introduction and increased consumption of alcohol among the natives of India. It must be within the knowledge of a large number of medical officers, who have served or are now serving in India, how commonly opium is used in some native regiments; but how very few indeed of those medical officers have ever witnessed any of those evil effects which the anti-opium *fac-dists* declare to be so common, and of which they have drawn such graphic and terrible but imaginary pictures.

Sir WILLIAM ROBERTS, M.D., F.R.S., has set forth his views on the general features and the medical aspects of the question in a separate memorandum annexed to the official report of the Commission. This memorandum will be read with much interest. Sir WILLIAM ROBERTS alludes to the fact, to which we adverted in our article on the report of the Commission in THE LANCET of last week, that the use of opium is only one manifestation of a practice common to all human communities. Articles are consumed for their stimulating, restorative, or soothing qualities, and not because they possess nutritive properties or are articles of food. That the needs and requirements of life create a craving for such articles is abundantly shown by the habits and practices of different races and nations. Opium takes a position intermediate between alcohol and tobacco; but the habitual and excessive use of alcohol is

followed by special organic changes that can be traced both during life and after death, and this is not the case with either opium or tobacco. Sir WILLIAM ROBERTS thinks that the number of opium-eaters in India is likely to be under- rather than over-estimated; that the opium habit is widely disseminated all over India; and that, as it may be practised for years without exciting suspicion, the estimates given of the ratio of opium-eaters to population must be taken with great reserve. He dwells upon the greater tolerance for opium among the natives of India as compared with Europeans, and cites the evidence of Surgeon-Lieutenant-Colonel CROMBIE as regards the very different effect of opium on native and English infants in support of the view that this enhanced tolerance on the part of the native of India is apparently congenital. Many of our Anglo-Indian readers will possibly recall here the chapter "Baby in Partibus" in that interesting little book, "Twenty-one Days in India," by the late GEORGE ABERNETHY-MACKAY, in which the effect of opium surreptitiously administered by the ayah in charge of a European infant is pathetically sketched. Sir WILLIAM ROBERTS cites some illustrations of the large quantities of opium occasionally consumed, but he says that the average tolerance of natives of India, judging from the practice of opium-eaters, appears to range from four to twelve grains of opium per day. There are several interesting points that have yet to be investigated in regard to the use and the natural or acquired tolerance of opium on the part of the natives of India. We have heard that on field service—in such expeditions as, for instance, that for the relief of Chitral at the present time—the Mahomedan troops use opium with much apparent benefit under conditions involving great wear and tear of tissue, and where the fatigue is great and the food-supplies are small or coarse, irregular, and uncertain.

The late Mr. SKEY long ago pointed out the beneficial effect that followed the use of opium in indolent ulcerations affecting aged and enfeebled folk; and Mr. GEORGE POLLOCK has called attention to the remarkable benefit to be derived from the same drug in certain forms of sloughing and destructive disease of the mouth in children. There is evidently still much to be learned about the use of opium in its effect on the nervous system and the nutritive changes of tissue.

LADY PRIESTLEY'S article in the *Nineteenth Century* on "The Penalties of Ignorance" is worthy of perusal by every intelligent householder. It cannot, indeed, be said that the facts therein presented contain any novelty for the members of the medical profession, but they are marshalled with skill and effect, and their general dissemination would undoubtedly be most salutary. It is always depressing to reflect how far in matters connected with personal, domestic, and national hygiene and sanitation practice lags behind knowledge, and hence we should welcome every well-directed effort to bring to bear upon the public the latest results of science. Our profession cannot escape a considerable degree of responsibility in this matter. The press, popular lectures, and other agencies may do much to spread knowledge, but the family physician remains the usual court of appeal in matters that touch health at any point, and his deliverance is generally final. Hence, he must not disdain many

¹ THE LANCET, April 27th, page 1078.

things that may seem a little out of his province, such as the state of the drains, the cistern, the larder, the meat safe, and the like. Disease may lurk in each or all of these, and it would be entirely unworthy of scientific medicine to treat the results of domestic ignorance or carelessness without endeavouring to strike at their causes. As we were recently reminded by Professor ZIEMSEN, medicine is now in the "etiological stage," and there never was a time when the public were quicker to recognise the importance of finding out and removing the sources of disease rather than attempting simply to palliate its effects. The ideas that are now spreading widely among the public are sound and valuable so far as they go—such, for example, as the importance of cleanliness, fresh air, pure water, pure milk, and unadulterated and wholesome food—but they are somewhat vague, and well-meaning but not fully instructed persons much need to be taught how the commonplaces and truisms of hygiene can be transformed into sound and salutary practice. To this end articles like those of Lady PRIESTLEY are valuable contributions. The writer begins by recalling the horrors of hospital practice when sepsis was unknown and unpractised, and, describing an old and insanitary hospital used at the time of the Franco-Prussian war, says with grim truth that "the wounded were carried in hundreds from the comparative safety of the battlefield to this sanctuary of death." Visiting the same hospital after the lapse of some years, the writer found that "the epoch had made its mark. Throughout the corridors a whirlwind of air swept day and night, bath-rooms were established, the wards were untainted; silence, order, and cleanliness—scientific cleanliness—prevailed." Lady PRIESTLEY continues: "Since PASTEUR in the course of his chemical researches dragged the long-hidden cause of disease into light, and opened our eyes to a hitherto unsuspected law of nature, we can no more get rid of the newly revealed facts than we can stop the rotation of the earth. And yet this knowledge, so important in housekeeping, so useful to those who are responsible for the health of others, and which so closely concerns us all, forms no part in the general education of the people. The precious key has been given to us, but so far as domestic life is concerned the gates of knowledge remain closed." The writer's aim is to impress upon every woman who has charge of a household that PASTEUR's discoveries concern her vitally; that the causes which produce disease and those which impair the wholesomeness of food are analogous; that in both cases the cause is frequently a bacterium which requires warmth and moisture for its growth; and that cold, fresh air, ventilation, and the avoidance of damp rob many, perhaps most, of these germs of their capacity for mischief. Visiting a larder in a fine old English mansion where recent scientific teaching had not penetrated she "was deeply interested to find herself in the midst of surroundings which had become more or less familiar to her in visiting various bacteriological laboratories in different parts of the world. It was certainly most fascinating to discover Dame Nature at her work, fulfilling her rôle undisturbed in this most disapproved fashion. Here in the homely larder Nature was having her way unhindered by the scientific mind which in the laboratory keeps all things under control."

Other dangers of a like nature are passed in review by the

writer. Milkshops in close conjunction with filthy mews, poulterers' shops with live rabbits fouling the atmosphere, meat exposed to all the exhalations from public thoroughfares—such are some of the commonest errors, but there are many others of a like nature. No country excels Great Britain in the fine quality of the meat offered for sale, but we are still far from fully realising the necessary conditions for preserving this meat in a perfectly sound and wholesome condition. The results are much waste of good food and much preventable disease. Cold storage is justly commended as one of the best means of averting all this waste and danger to health, and it is satisfactory to know that, long established as an ordinary practice in America, it is becoming acclimatised amongst ourselves. "Cold," as Lady PRIESTLEY says, "is one of the simplest and least objectionable antiseptics that can be used in the case of food, and must not be confused with freezing, which interferes more or less with the flavours of meat and game. In applying cold it is sufficient to preserve exactly the amount of chill that will suspend the vitality of the putrefactive organisms. Meat that is brought from New Zealand and Australia is frozen owing to the distance it has to come, but meat brought from America is simply chilled." The writer laments that the English law is so lax regarding the destruction of presumably diseased meat. The meat inspector is obliged to take each case before a magistrate and is liable to an action for damages if the magistrate takes a different view from his regarding the soundness of the meat. This is a very difficult question, and we are by no means clear that the law on this subject is to be condemned. It is unlikely that any intelligent magistrate will set aside the evidence of an expert, unless for very strong reasons. We should, however, entirely approve of means being taken to safeguard meat inspectors from frivolous actions for damages. The state of farms and farm buildings is passed in review by the writer, and the general neglect of cleanliness and ventilation animadverted upon. We are glad to think that much progress is at present going on amongst us with regard to these matters. Clean and well-ventilated farm buildings mean healthy cattle, healthy cattle mean pure milk, and pure milk means healthy children. Lady PRIESTLEY appositely quotes a remark from one of Sir WILLIAM JENNER's essays, and with this quotation we conclude our notice of a very interesting, valuable, and timely article. "Can we wonder," says Sir WILLIAM JENNER, "that rickets is prevalent among the poor of London? Can we fail to wonder that geography, history, and crotchet work form such large items in the instruction imparted at our national schools and the doctrines of life so small an item? Let the girls there educated be taught that Constantinople is the capital of Turkey if it is of any advantage for them to know it, but let them also learn how to dress, feed, nurse, and lodge an infant so that it may run a fair chance of not swelling the amount of that truly awful column in the Registrar-General's return—'Deaths under one year.'"

THE recent disclosures of the horrible treatment of a woman in Ireland for the purpose of expelling a witch who was supposed to be the temporary tenant of her body are

so repulsive and revolting to educated people of the present day that it is difficult to realise that a belief in the relation of witchcraft to disease was quite general in this country up to a century or two ago. Not only by the unlettered but by the highest intellects in the land witchcraft was regarded as so well established as to be unquestionable. Sir MATTHEW HALE, Sir THOMAS BROWNE, and, if we mistake not, Lord BACON, all gave most positive utterances on the subject. In the middle of last century a captain of the City Guard was burnt in the Grassmarket in Edinburgh on the charge of being a "warlock" or wizard, and the frequency of executions in other countries in the Middle Ages may be imagined from the estimate (no doubt exaggerated) which SPRENGER gives of seven millions, as the number of those executed by judicial process in consequence of the Bull of INNOCENT VIII. making witchcraft a capital offence. The ways in which wizards or witches were supposed to interfere with the well-being of other people were many. They were supposed to prevent speculations becoming remunerative, to interrupt the course of true love, or to impoverish a man by sending a blight on his crops or a murrain among his cattle; and, further, they had the power, it was believed, of inducing disease and causing death in any individual whom they might select for their malevolent purpose. The diseases which seem especially to have been considered as due to such influences were convulsive nervous diseases, wasting diseases, and mental defect or paralysis in children. The revenue of a witch was largely made up by presents from parents to gain the goodwill of this powerful and dreaded person and so avert ill from them and theirs. In other cases they were paid to bring evil upon the donor's enemies, and it is to be feared that in these cases poison was not infrequently employed.

But, returning to more strictly medical cases, we can see a good deal of ground for the popular belief in the presence of unseen agencies. Taking convulsive affections, such as hysteroid or epileptic fits, who that has watched them and seen a frail girl thrown into strange contortions, struggling with sufficient force to tax the strength of several men, can fail to understand the almost universal idea that the bodies of such patients were "possessed" by some powerful mysterious spirit? So again when a girl, who previously was dull and stupid, in a hysterical fit recites with appropriate gesture and strikes difficult emotional attitudes with marvellous accuracy, feats which she cannot accomplish in her ordinary condition, what wonder that bystanders imagine that it is not the patient who is reciting, singing, and acting, but some clever spirit who has taken possession of her?

In various wasting diseases, such as diabetes, cancer, and tuberculosis, in spite of the patient eating freely, if not ravenously, the food does no good, and the patient gets rapidly thinner. The explanation by spirit possession must seem to primitive minds an obvious one, the spirit stealing the food which the patient swallows for his own nourishment. Such ideas of possession are to be found among all the lower and uneducated races, and no doubt were entertained by our ancestors and have been handed down by word of mouth to many of their descendants to-day. But in not very distant times this idea of possession underwent a further development.

Not only was a strange spirit introduced into the body, but the real occupant of the body was carried away and kept prisoner by the fairies, who were under the power of the witches. Later, the body as well as the spirit was supposed to be substituted, and what is called "a changeling" left in its place. Usually this change took place in the cradle, but occasionally, as in the recent case of BRIDGET CLEARY, an adult was supposed to be similarly changed. This belief in changelings can be traced in many old Celtic legends, particularly Irish ones,¹ and is found also in SHAKESPEARE. HENRY IV. is lamenting over the follies of his son and contrasting him unfavourably with HOTSPUR, the Duke of NORTHUMBERLAND'S son, and says:

"O, that it could be proved
That some night-tripping fairy had exchanged
In cradle clothes our children as they lay."²

It is easy in this case also to find some reasonable explanation for the popular belief. Those who see many cases of obviously congenital mental defect in children know how reluctant even educated parents are to admit the possibility of the child having been born otherwise than healthy. A mother will hardly admit, even to herself, the slightest defect in her child's intellect for many months, and even then she believes that it has only just appeared and will assure the physician that it was "a beautiful baby born," but that "since it was vaccinated," had a fall, a fright, or what not, "it has not seemed the same child." In a country where belief in witches and changelings is firmly established, what is more natural than for the mother to snatch at the belief that some trick has been played by the fairies, and that her healthy child has been carried off and an idiotic substitute left? Were this all, no one would care to disturb so comforting a delusion, but, unfortunately, the result of these beliefs in "possession" and "changelings" has been to introduce most barbarous methods of treatment intended to make the quarters the spirit has taken up too hot to hold him. Among the Soudanese at the present day may often be seen most fearful scars—the result of treatment for the expulsion of spirits. If a man has pain in a limb, parallel cuts or chops are made in his arm to allow of the exit of the spirit. If the spirit is located in the trunk—causing colic, for instance—the actual cautery is very freely applied to the abdominal wall to drive the evil spirit out per rectum; and so on. In this country scourgings were frequently performed with the same object, but fire, partly from its theological associations, seems to have been the agent most relied on to expel evil spirits. With reputed "changelings," too, the ordeal by fire seems to have been often resorted to under the idea that if the spirit could be driven away a resubstitution of a healthy body would occur, either at once or after the performance of further incantations or exorcisms. This would appear to have been the belief actuating the Irishman now awaiting trial for causing the death of his wife by roasting her at the fire.

A little more than ten years ago a similar case occurred, also in Ireland, and was reported in the daily press. A woman had a child, apparently paralysed in some way, and the neighbours asserted him to be a changeling and desired

¹ See Kennedy, *Legendary Fiction of Irish Celts*. Macmillan and Co.
² Henry IV., Part I., act 1, scene 1.

to treat the child accordingly. The mother refused, so the neighbours watched their opportunity, entered the house when the mother was away, and roasted the child on a shovel with the usual incantations, causing injuries so severe that they were arrested and put on their trial. With the progress of education all these ideas as to the causation and treatment of disease—plausible and poetical as some of them may be—must die out; and the humaner methods of treatment, founded on scientific observation and experience, will become general, to the great benefit of suffering humanity.

THERE are few annual reports of more interest to the public and the profession than that of the Metropolitan Asylums Board. The Board is not in trouble, like other hospital boards, with the eternal difficulty of making both ends meet. It has had given to it by Parliament the work of supplying hospital accommodation gratuitously to all persons and classes affected with certain infectious diseases, and whenever it thinks that a new hospital is needed, or any new apparatus or laboratory or machinery is required, it has but to dip its hands into the deep pocket of the public and the thing is done. There is no Parliamentary discussion of its budget. All that Parliament has done is to remove the restriction originally attaching to these hospitals as places for paupers and to open them to all comers. The Board seems to appreciate the *carte blanche*. The consequence is that the expenditure in connexion with the hospitals has gone up from £350,000 in 1889 to nearly £600,000 in each of the last two years. There is, of course, much to show for such a huge expenditure. There are nine large fever hospitals, two small-pox establishments, four ambulance stations, three wharves, four ambulance steamers, four imbecile asylums, and a training ship for 600 boys. During the past year the actual work of the hospitals has been less than in the previous busy years. Scarlet fever has fallen almost to a minimum, though it shows, we believe, signs of the normal seasonal rise at the present time. The diphtheritic cases are subject to much less variation. The whole number of cases in 1894 was 34,203, as against 57,093—a difference of 12,890.

What is very striking in the report of the Board, and of much significance to the medical profession, is the growing proportion of admissions to notifications. All the notifications of disease are now passed on to the Metropolitan Asylums Board, and so it is enabled to compare the number of cases notified with the number received into hospital. In 1890 the admissions of scarlet fever cases were 42 per cent. of the notifications; in 1892 they had grown to 48 per cent.; and in 1894 no less than 63 per cent. of all the notified cases of this disease were sent into hospital, leaving only 37 per cent. to be treated at home. We shall not be far wrong in estimating that nearly half of all the serious notifiable diseases are now treated gratuitously in the hospitals of the Board. Well may the expenditure of the hospitals advance by leaps and bounds when so large a proportion of the public consents to accept gratuitous medical service and accommodation, apparently with the entire indifference of Parliament. The excuse for such a huge

extension of the system of gratuitous hospital and medical service is what is called the protection of the metropolis from infectious disease, on which the Board congratulates itself. This may be so. We are in no position as yet to compare the amount of infectious disease in the metropolis as a whole under the system of the Metropolitan Asylums Board with what it was before, for the system of notification has only lately been introduced. But certainly we have still much need of protection. There were in 1894 40,925 notifications of disease under the Act of 1889, as against 67,485 in the previous year, 45,892 in 1892, 26,522 in 1891, and 29,795 in 1890. The allusion of Sir EDWIN GALSWORTHY to the question of antitoxin is in good taste and judgment. He treats the efficacy of the remedy as a point still *sub judice*. He mentions that in November the Board accepted the offer of the Royal Colleges of Physicians and Surgeons to supply it with antitoxin. This supply is one on which they can entirely rely, both as to quality and quantity. It is with such antitoxin that cases are now being treated, at the discretion, of course, of the medical officers, and in spite of the absurd protest of the faddists, who would deny to the dying children of these institutions the benefit of such treatment. In a few months we shall have materials for valuable conclusions on the subject. Meantime, though we have little reason to think that the hopes raised by this method will be disappointed, the dignified attitude for all concerned is one of careful observation and reserve. The Board is also indebted to the two Colleges for the bacteriological examination of the exudations in diphtheritic cases. It had come to recognise the need for such examination by the large number of cases certified and sent as diphtheria which turned out not to be so. This difficulty of diagnosis is mainly to be met by bacteriological examination, for many cases without the specific bacillus have all the apparent characters of diphtheria, and *vice versa*. So urgent is this necessity that the Board contemplates the establishment of a bacteriological establishment of its own at an early date. In connexion with this matter, however, we may direct the attention of our readers to a letter which we publish this week from Dr. THURSFIELD, county health officer of Shropshire, in which he expresses a word of warning "as to the risk of accepting the absence of specific bacilli (even after expert bacteriological examination) as conclusive evidence that a suspicious case of throat affection is not diphtheria."

The comparative leisure of the Board during the last twelve-month as compared with the previous year has been spent in anticipating other times of strain and pressure. The managers have in contemplation the erection of two more fever hospitals, three additional ambulance stations, and an infirmary for imbeciles. Such provisions, even at the public expense, we need not say, imply a great amount of anxious and important work, which in the year involved no less than 526 meetings of the Standing Committees of the Board. We must defer any criticism of the medical work and aspects of these hospitals till we have before us the reports of the respective medical officers, which are always full of valuable material carefully and candidly supplied.

Annotations.

"Ne quid nimis."

THE CHITRAL EXPEDITION.

THE Government of India is certainly to be congratulated on its military servants and on the quality of the services they have rendered, as well as upon the successful issue of an expedition which has been followed from start to finish with keen interest in this country and India. And it was only natural that this should be so, for the incidents have succeeded one another with dramatic force and were well calculated to rouse our admiration and enthusiasm. The little band starting from Gilgit on the first note of danger to the relief of Chitral, under the leadership of Kelly and Borrodaile, made such a brilliant display of pluck and endurance that it riveted attention and tended for the time to dwarf the importance of the achievements that were elsewhere being accomplished. Turn which way we may, there have been exhibitions of intrepidity and fortitude in connexion with this expedition of which the nation may well feel proud. Battye, in command of his regiment of Guides, was, when he met his death, conducting their retreat before overwhelming numbers with a skill and coolness that excited the interest and admiration of all. As regards the beleaguered garrison of Chitral, so long cut off from all communication with the outer world, their situation was desperate and their defence heroic. The siege lasted forty-five days, the besieged lost more than a third of their strength in killed and wounded, and were subjected to repeated and energetic attacks from the enemy, besides undergoing the hardships incidental to such a position from insufficient and bad food and failure of supplies. Surgeon-Major Robertson, who was the Political Agent and Governor of Chitral at the time, reported that "the discipline, devotion, and fortitude displayed under circumstances which required all those qualities are beyond all praise." Where all behaved so well it is extremely gratifying to be able to give a very prominent place to the gallantry and devotion of members of the medical service. Surgeon-Major Robertson, who was himself badly wounded during the siege, showed throughout it that he was worthy of the occasion by his sustained courage, ability, coolness, and judgment; and with regard to another medical officer, Surgeon-Captain Whitchurch, the special correspondent of the *Times*, telegraphing from the camp, Dir, says that in the reconnaissance from Chitral Fort on March 3rd, when Captain Baird was mortally wounded, Surgeon-Captain Whitchurch showed conspicuous gallantry in carrying Captain Baird in on his back. Captain Baird (says the correspondent) was severely wounded, and was momentarily lost sight of, but Surgeon-Captain Whitchurch appeared carrying him. He was not, however, able to do this without interruption, but had to leave him every few minutes to go off and rush a wall at the point of the bayonet so as to make the way home. In this manner Captain Baird was conveyed to the fort, where he expired next morning, after strongly urging Surgeon-Major Robertson to bring Surgeon-Captain Whitchurch's bravery to the notice of the authorities. It is a matter of pride and satisfaction to us as medical journalists to have so often to record the gallantry and devotion of members of the medical services, and we have no doubt that on this memorable occasion such conspicuously brave and devoted services will receive the recognition they indubitably merit.

STREET NOISES.

THE essence of good government has been defined as "the greatest happiness for the greatest number," and it is surely time to reiterate the question whether something

cannot be done to make life less unendurable for those who work with their heads and are compelled to live in great cities. We believe we are correct in saying that in no foreign town and in few other British towns is such licence given to anyone to earn a living by annoying his fellow creatures as in London. From an early hour in the morning the air is thick with the raucous yells of men and boys selling race-cards and halfpenny news-sheets. Later in the day the torment is aggravated by piano organs, so-called bands and street singers, while at a late hour of the night it is quite common to be disturbed by hordes of ruffians with voices like foghorns roaring out imaginary and highly spiced details of a murder which has never happened or some even more unsavoury subject. The police, it appears, are powerless. News-vendors cannot be interfered with if they move on, and they do move on—in a circle. Organs, we fancy, can only be moved from in front of the complainant's door, and as a piano organ is perfectly audible 200 yards away this remedy is useless. There is only one remedy, and that is to compel anyone who wishes to make a noise in the street for the purpose of getting money to pay a heavy licence for the privilege of so doing. No one would object to the sale of papers if it were not accompanied by howls worthy of an eighteenth century madhouse. Rates and taxes rise with the utmost regularity every year, and it is not too much to ask that something should be done to obviate a nuisance which gets yearly worse and worse. The ringing of church bells, which, except those of St. Paul's, are always out of tune, should on no account be allowed in London except for five minutes or so before service. Everyone who goes to church knows perfectly well at what time to go, and those who do not go probably do not want to know. In the ages of faith the ringing of bells drove away devils, but the latter-day fiend who yells "Paiper" and grinds organs is proof against their power, and to ring bells is but to add one more unnecessary noise to the large number of necessary ones which already exist. We have pointed out on several occasions that there is no legal right to ring or toll a bell except before morning and evening prayer or on the occasion of a funeral, and that the ringing of a bell previously to the celebration of the Holy Communion, which often now occurs in the early hours of the morning, is wholly illegal and unwarrantable. It is a great torture to many sick and weakly people.

THE WORK OF THE KENSINGTON FEMALE SANITARY INSPECTORS.

THE services of the female sanitary inspector are not, up to the present time, so frequently requisitioned by sanitary authorities that any apology is needed for briefly drawing attention to the work done by the inspectors belonging to the parish of Kensington, more especially as Dr. Dudfield's last monthly report contains an excellent joint account, by Miss R. Squire and Miss A. Duncan, of the work done by them during the year ending March 30th, 1895. The inspectors report that the registered workshops in the parish of Kensington amount now to 567, as against 448 last year, and all these numerous establishments have, they tell us, been systematically visited. In regard to the warming of the workshops, the inspectors report that during the late prolonged frost, when the mean temperature of the air was for some weeks about 28° F., many of the workshops were found to be without proper means of warming. It appears that efforts were made in many instances to obtain a comfortable degree of warmth by lighting the gas-burners at an early hour in the morning and allowing them to burn until work ceased at night. It is pointed out that this improper use of the lighting provision was accompanied by a closing of all means of ventilation, and that thus "the products of respiration added to those of combustion mingled in the stagnant air for a considerable

number of hours." It is to be regretted, the inspectors observe, that although ventilating gas-burners are in the market they do not find a place in the workshops. Attention has also been paid to the subject of gas iron-heaters, and in many instances the inspectors have been able to get these heaters placed in more desirable situations, and even in some cases removed from the workrooms altogether; and they note with pleasure that in Section 19 of the Factory and Workshops Bill, recently introduced by the Home Secretary, "gas-irons emitting any noxious fumes shall not be used." At the same time they express their regret that the clause has been restricted to steam laundries. In the matter of ventilation they do not write encouragingly, the enforcement of proper ventilation meeting, we are told, with the greatest opposition. As they aptly put it, "provision for maintaining the purity of the air of the room unhappily conflicts with the prejudices of the class whose benefit is chiefly sought thereby." The difficulties are, the inspectors observe, enhanced by the fact that the Public Health (London) Act, 1891, confers no adequate powers for dealing with the subject, and they suggest the insertion in the Factory and Workshops Bill already referred to of a clause requiring workrooms to be at all times efficiently ventilated, with special provision for ventilation during meal-times. Ventilation, the report states, is especially unsatisfactory where the rooms are lighted by skylights, in which the openings, often too small, tend to cause a draught of fresh cold air upon the heads of the occupants. Overcrowding seems to have been to some extent successfully dealt with by the service of "recurring" notices, but the inspectors hail with pleasure the fact that the Factory and Workshops Bill proposes to give a legal definition of "overcrowding." Separate sanitary conveniences for the two sexes have in numerous instances not been found by the inspectors, but the action taken has in all cases resulted in the necessary provisions. In dealing with the improvements effected in the laundries of North Kensington they remark: "Many expressions of appreciation have been received from the women themselves, and it is beyond question that the liability at any time to a 'surprise visit' from the inspector, usually spoken of as the 'sanitary lady,' has produced a good effect." We can well believe this, and we congratulate the "sanitary ladies" on their year's work. A perusal of their report side by side with the Factory and Workshops Bill cannot fail to be both interesting and instructive.

THE SUBSTITUTION OF POTATO OR BEET-ROOT SPIRIT FOR GENUINE BRANDY.

THE British Consul at La Rochelle, Mr. Warburton, in his reports from time to time to the Foreign Secretary has frequently drawn attention to the fact of the falsification of brandy in his district, and his recent remarks upon the practices of English dealers, which to some extent exonerate the French merchants from blame, we regard as serious and important enough to call for some authoritative action. Our point of view is solely, of course, the medical one. Brandy is extensively used in medical practice, in which, as every practitioner knows, it is a powerful agent for good; indeed, its timely administration has without doubt again and again been the means of saving life. It is a consideration of these facts which leads us to appeal to the trade, or the authorities who have some sway over the trade, to redeem French "brandy" from the grave charges made concerning its manufacture. Thus, it is stated on the authority of the British Consul that English dealers request French merchants to sell them an article under the name of cognac at a price so low that it is utterly impossible to supply them with anything but potato or beet-root spirit for the money. It takes eight gallons of wine to make

one of brandy, and the first cost of this gallon is about 8s. It is not fit to use until it has been kept for some years, so that there is the expense of storing, loss, &c. to be borne, with the result that a gallon of pure brandy old enough to drink cannot be purchased for less than 12s. In spite of this the British merchants ask the French merchants to supply "cognac" at from 2s. 6d. to 4s., and the offer of such a price amounts to giving the latter their choice between making up this liquor or losing their custom, and many respectable French merchants are obliged to do so. They argue, justly enough, that there is no deception on their part, as the buyer knows that what they give him at this price is not cognac, and if he sells it in England as such they are not responsible. There is plenty of cognac, further writes Mr. Warburton, to be got in this district old enough for consumption at from 15s. per gallon upwards, according to age and quality, by applying to respectable French merchants, and they are only too glad to supply it, as they deplore the injury done to the reputation of the old brandies of this district by the sale of the unwholesome mixtures which have replaced them of late years. It seems to us that this policy on the part of English merchants is simply suicidal, since a knowledge of these facts is surely calculated to lead consumers and the medical profession to obtain their brandy from a source where a guarantee is furnished that it is made from nothing but wine or fermented grapes. Some of our own colonies, for instance, are turning their attention to brandy-growing, and in view of the above statement they deserve every encouragement on this as well as other grounds.

PULMONARY ANTHRACOSIS.

IN a communication to the International Medical Congress at Rome Dr. Tripler of Lyons combated the idea that anthracosis of the lung is in any sense a specific disease peculiar to miners, and advances arguments to prove that this condition is simply pulmonary tuberculosis modified by the special circumstances of the case. His view is as follows: "The phthisis of miners is simply of a tuberculous nature, but predominantly fibrous, in which the carbonaceous infiltration of the pulmonary tissue, especially as regards pathological products, may be so abundant as to cause the lungs to assume such a peculiar aspect as sometimes to render difficult of recognition the tuberculous lesions thus more or less concealed by the accumulation of the carbon." He believes that when animals are made experimentally to breathe air full of particles of carbon the lungs are simply found surcharged with these particles, but without the inflammatory lesions and sclerosis characteristic of pulmonary anthracosis, and that when miners succumb to accidents their lungs are found in a similar state, but without evidence of tubercle. In spite of these facts which Dr. Tripler regards as well known, he states that there is a tendency to describe pneumokoniosis (pulmonary anthracosis) as an independent malady produced by the inhalation of particles of coal, silica, or oxide of iron. The object of his communication was to bring forward some pathological evidence in support of his own view. In one of his cases the patient had succumbed to "la phthisie charbonneuse," and on post-mortem examination the lungs were found to be full of particles of carbon, and much sclerosed, but further examination demonstrated the existence of a cavity at one apex and the presence of caseated tubercle. It is possible, of course, to argue that the tubercle was a secondary result of the infiltration of the lungs with particles of carbon. Dr. Tripler combats this view. In the case in point the patient had worked for fifteen years in mines without developing any pulmonary lesion, and had ceased from this occupation for six years before showing signs of commencing disease of the lungs. In a second case brought

forward by Dr. Tripler the patient had breathed a carbonaceous atmosphere for thirty-one years without any pulmonary trouble, and finally succumbed to cancer of the stomach. On post-mortem examination the lungs were found to contain particles of carbon widely disseminated, and specially numerous in the lymphatics, but without any sign of tubercle. The writer further argued that the amount of carbonaceous infiltration of the lungs bears no relation to the probability of finding tubercle. The latter may be found in miners with little or much carbon in their lungs, and in those who have spent few or many years in occupations involving the constant respiration of carbonaceous particles. Cases such as those brought forward by Dr. Tripler are, of course, inconclusive, but they must be allowed reasonable weight. They certainly tend to corroborate the view that pneumokoniocis or pulmonary anthracosis is not an independent affection with a definite cause and definite natural history, but simply one of the many varieties of pulmonary phthisis.

"INQUEST AT STAPLETON: A QUESTION FOR THE MEDICAL COUNCIL."

SUCH is the heading of a report in the *Bristol Mercury* of an inquest at Stapleton held by Mr. E. M. Grace concerning the death of Walter John Edward Hinton, aged thirty, a coachsmith. The evidence went to show that the deceased had no local medical attendant, but was taking a certain balsam for which the ordinary charge was 22s. and 11s. 6d. per bottle. Dr. J. Ambrose said he had made a necropsy and found death to have been caused by syncope, though deceased was suffering from advanced phthisis. Life might have been prolonged had he had medical attendance weeks ago, but there was no chance of saving it in the advanced state of lung disease. A letter was read from "Dr. Congreve" of Coombe Lodge, Peckham, London, S.E., to a relative of the deceased, commending the balsam and prescribing for diarrhoea, though suggesting his continuing under the care of a local medical man, observing that the balsam would not interfere with the medicine the local practitioner might order. The coroner intimated that it was his duty and intention to send the letter to the General Medical Council.

DISEASED MEAT AT BLACKPOOL.

A GOOD illustration was afforded recently at Blackpool of the enormous difficulties which may be experienced in bringing a prosecution for the exposure of diseased meat to a successful issue in a court of law. In the case in question a butcher was charged by the Blackpool sanitary authority under Sections 116 and 117 of the Public Health Act (1875) with having exposed for sale certain meat alleged to have been unfit for human consumption. The inspector of nuisances—an officer of fourteen years' experience—seized seventeen pieces of meat exposed for sale in the defendant's shop, and after ample opportunity had been afforded to, and taken advantage of by, the defendant's witnesses to inspect the meat seized it was seen by a magistrate and condemned. The inspector gave evidence as to the condition of the meat, and Dr. Jasper Anderson, the medical officer of health, stated that the changes in the state of the meat were such that it would be dangerous for human consumption. Dr. Anderson was of opinion that the beast from which the meat was taken had been suffering from a chronic wasting disease, but on account of the viscera being absent he was unable to state to what this condition was due. This witness's evidence was practically corroborated by Dr. Leonard Molloy and several other witnesses, among whom were veterinary surgeons and butchers. For the defence a large amount of evidence was brought forward, the witnesses also including medical men, veterinary surgeons, and butchers. As rebutting evidence the prosecution called the county

medical officer of health and Professor Delépine, Professor of Pathology at Owens College, Manchester, both of whom declared that the meat as described by the prosecutor's witnesses would be quite unfit for human consumption. Considerable stress was laid by the defence upon the fact that the viscera of the beast from which the meat was taken had not been examined; but it would surely be unreasonable to make the condemnation of diseased meat exposed for sale in a butcher's shop dependent upon the examination of the viscera. The bench fined the defendant £5 and costs, or two months' imprisonment; but probably, in spite of this, the prosecution must have been a somewhat heavy expense to the Blackpool sanitary authority, as the costs awarded by the bench only amounted to £13 15s. 6d. It is, however, only fair to state that in answer to the defendant's solicitor the bench stated that there was no evidence that the butcher was aware of the meat being unsound. Dr. Anderson is certainly to be congratulated on having been successful in what was obviously a very difficult case, and the evidence shows what very costly proceedings prosecutions of this kind may sometimes become.

A MEDICAL PALÆONTOLOGIST.

IN the Palæontographical Society's volume for 1894, which has just appeared, Dr. Wheelton Hind of Stoke-on-Trent contributes the commencement of a monograph on the Carbonicola, Anthracomys, and Naladites of the Coal Measures. We congratulate Dr. Hind on the energy he has displayed in the production of this work, and we are proud to recognise that the scientific spirit of our profession is sometimes shown in the extension of knowledge not always directly related to medical subjects. The monograph has much valuable information in the introduction and in a chapter headed "Critical Bibliography." The rest of it is naturally almost entirely descriptive. It is accompanied (as are all the monographs published by the Palæontographical Society) by a series of very beautiful plates. A very large number of these drawings are from specimens in Dr. Hind's own collection. For the information of the reader unlearned in geology it may be stated that Carbonicola, with which this volume principally deals, is a genus of bivalve molluscs, probably of freshwater origin, and most closely allied to *Unio* and *Anodon* amongst living genera.

TRAUMATIC GLYCOSURIA.

"EVER since the time of Claude Bernard, who first experimentally demonstrated the existence of the so-called sugar centre in the floor of the fourth ventricle, head injuries have been recognised as playing a certain part in the etiology of some cases of diabetes." Such is the introduction to a paper by Dr. F. A. Higgins and Dr. J. B. Ogden in the *Boston Medical and Surgical Journal* of Feb. 28th. The paper is the result of observations made in 212 cases of head injuries. The writers remark that in addition to permanent glycosuria following traumatism of the head there is another form mentioned by some observers, and of which a number of cases have been reported. This last form is merely transitory, and comes on directly after the traumatism or in a few days. On the other hand, the permanent form of glycosuria occurs at a period of weeks or even months afterwards. After giving an account of the various classes of cases met with they summarise their conclusions as follows: 1. That, after injury, sugar may appear in the urine as early as six hours and disappear within twenty-four, the average time for its appearance, however, being from eight to twelve hours; and for the disappearance of the same from the fifth to the ninth day. 2. That a small proportion of the cases may exhibit a permanent glycosuria from the date of injury to the head. 3. That acetone and diacetic acid are rarely, if ever, found in such cases, excepting where the condition becomes a permanent

glycosuria, and even then probably only after a number of months or years. 4. That, of the twenty sugar cases recorded in the paper, eleven (55 per cent.) had received an injury to the right side of the head, five (25 per cent.) to the left side, three (15 per cent.) to the occiput, and two (10 per cent.) where there was no external evidences of violence. 5. That it is impossible in the present state of the knowledge of the pathology of diabetes and glycosuria to draw any inferences from the necropsies which have been obtained. They are, however, reported in full. 6. There is little to be said in regard to the mortality. Of the twenty cases eight died, six being the direct result of severe injuries, one from intercurrent disease, and one from the probable effects of alcoholism. In the 212 cases sixteen were fatal, 50 per cent. of these having glycosuria. Albumen, together with casts and abnormal blood, was found in every case containing sugar, probably secondary in most instances to the renal irritation produced by the sugar, even though it had been eliminated only a short time.

FEES FOR NOTIFICATION OF DISEASE.

AT the Keighley County Court held on April 24th his honour, Judge Gates, Q.C., said that after further consideration he was satisfied that he was right in deciding at the previous court against the plaintiff in an action brought by Mr. Beckett, L.R.C.P., of Cullingworth against the Bingley Outer District Council to recover a fee for the notification of a case of infectious disease which happened to have been previously notified by another medical man. Leave to appeal was refused. We have not the details of this case before us, but on the general question which is here involved we would recall attention to the letter of the Local Government Board to the Uppingham rural sanitary authority, which was published in our fourth article on Difficulties under the Infectious Disease (Notification) Act,¹ and in which that Board hold distinctly that where two practitioners are called in to visit one and the same patient, either at the same time or successively, "both are, in strict law, required to send certificates of notification, and these must be duly paid for by the sanitary authority." The Local Government Board are not in the habit of giving opinions of this sort except on skilled legal advice, and if the Keighley case referred to comes within the scope of the Board's letter it is one that ought not to be allowed to drop.

IRRIGATION AND CLIMATE.

MR. W. E. GARSTIN, head of the Public Works Department in Egypt, writes as follows in an appendix to Lord Cromer's annual report on that country:—"An unusually large area of land was planted with cotton in 1894. Unfortunately, the cotton worm during the summer and the cold and fogs during the autumn months caused between them such damage to the plants that the yield is estimated to be from 10 to 15 per cent. less than that of 1893." Referring to this statement, a correspondent, who lived for several years in Egypt, would be glad to know whether there is any truth in an assertion, which he has heard made by many people, natives as well as foreigners, that of recent years the climate of the Delta has become much damper than it used to be, and that augmented irrigation, including the holding up of water by *barrages*, is responsible for the change. As far as we are aware the only meteorological records in Egypt that extend back for a considerable number of years refer exclusively to Alexandria, where the climate is quite different from that prevailing inland. The note upon the Public Works Department in the appendix to Lord Cromer's report, referred to, also gives a good deal of information about irrigation,

the *barrage*, drainage, reservoir projects, and crops. What seems to be much required at the present time in connexion with the public works in Egypt is a system of drainage and pumping. Irrigation without drainage gives rise to water-logging of the soil. Every drop of water turned on to the soil should be passed through it and carried away by an effective drainage system, with the exception of that necessarily evaporated by the sun's rays. It is, therefore, probable that there is some measure of truth in the belief that the atmospheric moisture and the prevalence of fogs have somewhat increased, but we are not aware that any changes in this respect have ever been scientifically observed and recorded. As far as we are competent to judge, we should say that the difference between modern and ancient methods of irrigation in Egypt could not produce any marked alteration of climate. The volume of water delivered by the Nile does not vary much from year to year, and the temporary detention of a small portion of it is all that can be laid to the charge of extra irrigation. But some of our readers may, perhaps, be able to supply information on the subject.

IMPORTED FROZEN MILK.

THE rapidly increasing importation of frozen milk from Holland, Sweden, and other places is a serious question, since so far as we can gather there is no guarantee of its being derived from an uncontaminated source. Our own centres of milk production are, of course, placed under strict sanitary regulations, so that as far as possible disease may not be disseminated by the means of so ready a carrier as milk has been proved to be. The efforts, therefore, of our sanitary authorities to prevent milk-borne diseases may, for aught we know, be seriously handicapped. We trust that the Government will make some inquiries into this important and, it may be, very serious matter. The position is absurd and is also alarming if it can be shown that while the strictest preventive measures are taken against the importation of diseased cattle no steps whatever are provided against the importation of milk the consumption of which may possibly be fraught with equally serious issues. The question, too, has an important bearing upon the subjects dealt with by the Royal Commission on Tuberculosis, whose report we considered last week.

CHLOROFORMISATION BY MINIMAL DOSES.

IT is a curious revelation of the uncertainty which exists in the minds of the profession with regard to chloroform that we find such conflicting plans suggested to ensure safety; on the one hand we are told it is almost impossible to kill, while on the other it is averred that to use chloroform at all is little short of committing manslaughter, while the surgeon who desires it is accused of "inciting to kill." Happily such fantastic extremes are seldom found in this country, but when we come to questions of how to give the anæsthetic views as diverse are found to obtain. Simpson's oft-repeated formula, "The chloroform vapour must always be exhibited as rapidly and in as full strength as possible," and Syme's even more trenchant rule, "Do not stint the quantity of chloroform," and the more recently expressed views of the Hyderabad Commission seek salvation in large doses freely given, while others tell us that the only safe way of using the drug is a guttatim method. Thus Mr. Martin Coates, writing in our columns in 1882,¹ stated that he employed chloroform in doses of a few minims at a time, using Snow's inhaler, and believed his results, twenty-four years of active surgical practice without a death, were due to his method. Since then many have adopted minimal doses of chloroform and have been immensely impressed by their success. Messrs.

¹ THE LANCET, Feb. 16th, 1895.

¹ THE LANCET, Dec. 23rd, 1882.

Krohne and Sesemann's apparatus, which we figured and described in our columns,² appears to offer the best method of obtaining a free dilution of chloroform vapour and of reducing to minima the actual quantities used. It would be obviously impossible for us to pronounce that the one safe road to chloroform anaesthesia is through the gate of minimal doses. The remarkable statistics of Simpson, of Syme, of Lister, and of Lawrie show what can be done with unmeasured, unstinted dosage, while Snow's, Clover's, and Junker's instruments show how much safety can be ensured by methods which definitely mix the narcotic with air and permit of the inhalation of a low percentage vapour.

KINGSLERE DISTRICT COUNCIL AND MEDICAL REMUNERATION.

THE *Reading Mercury* of April 27th reports that at a meeting of the district council for Kingsclere "Dr. Maples was awarded £1 per annum for extra duties on account of the parish of Newtown having been transferred from Newbury Union." It would be curious to know what are the details of the extra duty that is to be so handsomely rewarded by the district council. We may anticipate a rush to Newtown as a parish so healthy as to need only so much attention from an officer of health as will be remunerated by less than sixpence a week.

PARALYSIS FOLLOWING NON-DIPHTHERITIC MEMBRANOUS CROUP.

REFERENCE to a case of this character, described in the *Archives de Médecine Expérimentale et d'Anatomie Pathologique* by Dr. Bourges, is made in a recent number of the *Neurologisches Centralblatt*. A boy aged seven developed, after an attack of pseudo-membranous sore-throat, paralytic symptoms affecting the palate, the ocular muscles, and the lower extremities. The mother of the child passed through a similar illness, but without the paralytic sequelæ. Bacteriological investigation of both cases failed to reveal the presence of Löffler's bacillus, but demonstrated the presence of other cocci and bacilli. But, as the writer in the *Centralblatt* points out, the case is a by no means conclusive one, for the membrane in the boy had been treated with a solution of corrosive sublimate on two occasions before the examination was made, and it is possible that this treatment may have been the means of getting rid of the bacilli.

CARDINAL VAUGHAN ON FREE RECREATION.

A PROPOSAL made by Cardinal Vaughan at the late meeting of the Sanitary Conference at Manchester (a report of which will be found in our Manchester correspondent's letter) is of interest as illustrating the progress amongst us of a benevolent socialism. The suggestion aims at the establishment of winter recreation halls in the poorest districts of large cities. In these halls musical and other entertainments will be given and suitable refreshments provided, the latter at cost price. The responsible promoters will be the civil authorities. The scheme thus briefly sketched is not without merit, either in its plan or its intention. There is a tendency in modern legislation, as Cardinal Vaughan observes, towards the recognition of health, comfort, and moral welfare as objects within the scope of its operation. The project above mentioned, moreover, is not in itself novel. It has already found a thousand means of expression in limited and local voluntary agencies, commonly more or less religious in character, but not necessarily so. Extended to the scale proposed by Cardinal Vaughan, however, it draws even more largely upon public charity, and it raises the question whether self-help or municipal assistance furnishes the best means of attaining the end in view. We

believe that the former is still as a rule effectual for its purpose, and that it can be supplemented if required by voluntary aid, and if this be the case any large appropriation of public funds to purposes of recreation seems hardly to be called for. The effect of the civic recreation hall as a competitor with other like voluntary institutions, must also be reckoned with. It has been stated that the proposed scheme is calculated to foster domestic life by providing for the family a common focus of amusement. To a limited degree, no doubt, this is true. At the same time we must remember that order, thrift, industry, and all else that goes to constitute the backbone of family life come less by pleasure-seeking (especially out of doors) than by more deliberate processes of education.

THE PLAGUE AT MACAO.

It seems that several deaths are alleged to have taken place at the Portuguese settlement of Macao from plague, and that the disease is stated to have been prevailing there for about a fortnight. Communication between Macao and Hongkong is quite unrestricted, and this has given rise to a good deal of anxiety at the latter place, where the people are desirous of having a rigid quarantine enforced against the infected settlement. His Excellency the Governor of Hongkong is opposed, however, to any action being taken in this direction, and this has led to the resignation of the unofficial members of the sanitary board. Without further particulars as to the exact nature and extent of the disease prevailing at Macao it is difficult to pronounce any definite opinion on the matter. If the disease be veritably and indeed plague it is indubitably contagious, and if any doubt exists as to the exact nature of the malady all persons coming from Macao should at least be medically inspected, and segregated if necessary. We strongly suspect that local insanitary conditions have a good deal to do with the existence of this and other diseases in China, and that in any case the removal of these should occupy the attention of the people at Hongkong. It can scarcely be, we think, that the Governor and official members of the sanitary board would incur the responsibility of opposing the wishes of the colony in regard to the establishment of quarantine unless they had some grounds for doing so of which we are ignorant at present.

THE STOMACH TEST IN MURDER TRIALS.

In the *Boston Medical and Surgical Journal* of Feb. 28th Dr. Gustav Liebmann contributes a short paper on this subject. He states that the object of this test is to ascertain, by the presence or absence of solid contents or by the intermediary stages of liquefaction of food found in the stomach, how far the process of digestion has advanced, giving thus a clue as to the time at which the death of the victim has taken place, provided the time of the last meal be known. In order to arrive at an exact, or at least approximately exact, conclusion, the first and imperative condition would be a uniformly established schedule of time in which the different phases of digestion should be completed. If there be such a physiological law, from which there is practically no deviation, we should place full reliance upon the test; but if there be, in healthy people even, numerous exceptions or deviations the test must of necessity be open to errors. Dr. Liebmann considers that this latter proposition is the true one. The different variations in the duration of the digestive process depend upon the following conditions: 1. The length of time necessary for the transformation of solids into chyme in healthy individuals varies a great deal according to the digestibility of the different foods. 2. The length of time necessary to expel the ingesta from the stomach into the duodenum in the healthy individual varies according

² THE LANCET, Nov. 3rd, 1894.

to the quantities of food taken. Not only does it take a longer time for larger quantities to be impelled on, but the motor activity of the stomach walls is diminished by the greater distension produced by the larger amount of food present. Thus, pieces of meat are frequently found a day or longer after ingestion. 3. The shorter or longer stay of food depends on the amount of acidity, which varies in different stomachs even within the border lines of health. 4. Much variation even in health is caused by individuality, by presence or absence of pepsin, hydrochloric acid, psychical factors, and emotions (fright, fear, grief, or the opposite, as joy or exaltation). We see, therefore, that owing to the many physiological variations, which do not permit of any reliable deductions even in the healthy, the forensic value of this test must be considerably impaired.

DIRECT LARYNGOSCOPY.

Dr. KIRSTEIN of Professor Senator's polyclinic in Berlin has devised¹ a new method of examining the larynx and trachea, in which the interior of these organs is seen directly and not by the intervention of a mirror or prism. He does not say, however, that his plan is applicable generally, but only that in "many persons" it can be carried out. The patient is placed on his back in the horizontal position with the head hanging down, and an œsophagoscope is introduced. A metal speculum in the form of a tube about ten inches in length can then be passed behind the epiglottis and illuminated by a "Caspar's electroscope" and through it the larynx viewed with the naked eye. It does not do for the observer to wear spectacles, as these rapidly become dimmed with moisture. The tube itself acts as a tongue depressor, being a lever whose fulcrum is the edge of the upper incisors. Dr. Kirstein does not, of course, suggest that this method should ordinarily be employed instead of the common method of laryngoscopy, but he thinks that in some cases it will be found capable of extending usefully our methods of laryngeal and tracheal examination, and he asserts that it is by no means so severe a procedure as may be imagined, and that, especially if cocaine is employed, it causes the patient no distress either at the time or subsequently.

THE AFTER-CARE ASSOCIATION.

THE annual report of the council of the After-care Association for Poor Persons discharged recovered from Asylums for the Insane has just been issued for the year 1894. Attention is drawn to the fact that this association is the only one in this country that offers the special help afforded by it to those poor people who are recovering from insanity. That such people are very often in great need of help when discharged from asylums is well known to medical men, especially those engaged in the treatment of insanity. The general public, though ready enough to think that people are often sent to asylums unnecessarily, is very unwilling to offer employment to those who have recovered from an attack of mental disorder; and the popular belief that a man or woman who has been ill thus may "break out at any moment" and is quite unfit to be trusted in any way is a strongly fixed one. Hence the special need of such an association, which is really entitled to all the help the benevolent can bestow upon it. The number of cases assisted in 1894 was 118, as compared with 81 in 1893, 100 being men and 18 women. Cases have been assisted by being placed in the association's convalescent home, by boarding them in country cottages, by grants of money or clothing, by finding them occupation, and in other ways. It is satisfactory to notice that the receipts from subscriptions and donations show

a fairly large increase for the year. Local district secretaries have been appointed in many districts, and more lady guardians have become members of the society. Instances are given of cases helped during the year. The council invites the warm coöperation of the medical superintendents of the various asylums and guardians of the poor throughout the country. Since the issue of the report the association has, unfortunately, lost the services of its chairman, the late Dr. Hack Tuke, whose interest in this work was well known, and who was also one of its trustees. The secretary is Mr. H. Thornhill Roxby, Church House, Dean's-yard, S.W.

SAMPLES FOR REFERENCE UNDER THE FOOD-AND DRUGS ACT.

WE have frequently commented upon the loopholes of escape which the Food and Drugs Act affords to the seller when those entrusted with the administration of the Act fail to observe, it may be, some slight point when purchasing the sample. In a case reported last week, however, a positive blunder was committed, inasmuch as the bottle containing the sample reserved for analysis at Somerset House was only half full, the seal was not perfect, the cork had been pierced, and the sample measured only three ounces. An analysis by the referees was, of course, impossible, not only on account of the smallness of the sample, but also because the milk, having been exposed to access of air, had undergone certain changes which preclude a satisfactory analysis. As the magistrate (Mr. Bushby) remarked, this was a serious reflection upon the prosecution, as the sample in question had been retained in the custody of the sanitary inspector of the parish, and the case had broken down. The summons was dismissed. In regard to milk especially, or other perishable articles, it would be satisfactory if the Government could see their way to establishing a laboratory especially equipped for the immediate analysis of all duplicates taken under the requirements of the Act, whether their genuineness is suspected or not. This step, it seems to us, cannot be utterly impracticable, but of course it would involve a good deal more work than is done at Somerset House at present; milk, however, is one of the most important members of our food-supply, if indeed it is not the principal article about the quality and purity of which there should be no question.

THE HEALTH OF PROFESSOR HUXLEY.

WE are glad to be able to state authoritatively that the Right Hon. T. H. Huxley has lost no ground during the last few days. His temperature is only very slightly raised, and though he is still troubled by cough and expectoration, he is able to take a fair amount of liquid nourishment, and sleeps well. His general condition remains weak.

WE regret to announce the death of Professor Carl Ludwig, the eminent physiologist, which occurred in Leipzig on April 26th. A short account of his life and work from the pen of our Berlin correspondent will be found in another column. We hope to publish a full obituary notice next week.

A TELEGRAM from Buenos Ayres says that advices received there from Santos announce that yellow fever in its severest form has broken out at Santos, the daily mortality being six.

WE are asked to state that the Clinical Museum, Great Portland-street, is open every Tuesday at 2 P.M., and that there is a demonstration at 4 P.M.

THE subscription list to the Sir Andrew Clark Memorial Fund will shortly be closed.

¹ See a preliminary communication in the Allgemeine Medicinische Central-Zeitung, April 24th, 1895.

REPORT OF THE COMMITTEE ON PRISONS.

I.

In June last year the Home Secretary appointed a departmental committee under the chairmanship of Mr. Herbert Gladstone, M.P., to inquire into a variety of circumstances and considerations having relation to the administration of local and convict prisons and to the treatment of the prisoners confined therein. In their report the committee say that they "could not but be cognisant of the circumstances under which the inquiry was instituted. In magazines and in the newspapers a sweeping indictment had been laid against the whole of the prison administration. In brief, not only were the principles of prison treatment, as prescribed by the Prison Acts, criticised, but the prison authority itself and the constitution of that authority were held to be responsible for many grave evils which were alleged to exist." The committee, therefore, very properly applied themselves to the task not only of examining into present conditions of prison administration, but of endeavouring by inquiry to discover whether any and what better system and methods of treatment could be adopted.

The groundwork of the treatment of convicted prisoners in local prisons is laid down by the Act of 1865, and further provisions, including certain modifications, were introduced by the Act of 1877. Since 1865 the main principles of prison treatment have not been altered, except in detail, and in so far as they may have been affected by the radical change in the administration effected by the Act of 1877. Indeed, it may be said generally that neither those principles nor the administrative system laid down by the Acts of 1865 and 1877 had been brought into question until the present inquiry was instituted. Convict prisons—i.e., prisons for the detention of prisoners sentenced to penal servitude—have been dealt with separately by the Penal Servitude Acts, 1853, 1857, 1864, the Prevention of Crimes Act, 1871, and certain other subsidiary Acts. During the last forty years important alterations have been made in the treatment of prisoners, but continuity in the administration by the directors has been maintained throughout. With these preliminary statements and after acknowledging the great assistance that they have derived from previous inquiries, the committee pass on to a "general review" of the management of English and Welsh prisons, with regard to which they "consider that the long and able administration of Sir E. Du Cane has achieved a large measure of success." At the outset the committee gave a return which shows that while the population has increased the number of convicts and local prisoners has decreased. The number of convicts has diminished from 10,139 in 1877-78 to 4383 in 1893-94; and the local prisoners—i.e., persons sentenced to shorter terms of imprisonment—have decreased in numbers from 20,833 to 13,850 during the same period. The committee say that "the decrease of the prison population cannot be taken as a correct indication of a corresponding decrease in crime." No; it is no more a correct indication of a corresponding decrease of crime than the filling of our churches on Sunday would be a correct indication of a corresponding increase of religion. Churches are built to attract, prisons to deter, and so far as churches and prisons respectively attract and deter, are filled and are not filled, so far may they be regarded as successful in attaining the object for which they were built. For it is obvious that if prisons were made attractive in any degree they would not be fulfilling their functions and their existence would become a stimulus to crime. We would prefer to express the position by stating that the decrease of a prison population cannot be taken as expressing the proportion of influence which the prison system has in bringing about the decrease. Some types of individuals are more impressed and influenced for good by prison life than others.

The general review is summed up in the following terms: "If the condition and treatment of prisoners at the present time are compared with what they were sixty, forty, or even twenty years ago, the responsible authorities can justly claim credit for great and progressive improvement. The bad prisons have disappeared. In the full consciousness of these improvements it was not unreasonable that there should have been a somewhat rigid adherence to the lines of the Prison Acts and great faith induced in the principles which they laid down. Moreover, the various inquiries which have taken

place have all resulted in the general affirmation of the principles which were prescribed by the Acts. This was conspicuously so in the case of the lengthy inquiry into Irish prisons in 1885, when one of the chief efforts of the Commission appears to have been to raise the administration of the Irish prisons to the English level. We do not consider, therefore, that there is reason for general condemnation of a system which resulted originally from careful inquiry and much deliberation, and which was specially and successfully designed to put an end to many glaring and patent evils. Similarly, we do not consider that it is right to lay the burden of all the shortcomings of the prison system on the central prison authorities, who have carried into effect under successive Secretaries of State the Acts approved by Parliament, who have loyally and substantially carried out the various recommendations made from time to time by Commissions and committees, and who, as administrators, have achieved in point of organisation, discipline, order, and economy a striking administrative success. Nevertheless, we feel that the time has come when the main principles and methods adopted by the Prison Acts should be seriously tested by the light of acquired experience and recent scientific research."

The general effect of the passing of the Prison Act of 1877 is next dealt with. By that Act all local prisons were transferred from the local authorities in counties and boroughs to the Government and placed under the authority of a newly constituted Board of Commissioners acting subject to the authority of the Secretary of State. The intention of the Act was to produce an improved and uniform system through the strong and centralised administration of the Government, but at the same time to preserve local influences and the co-operation of the visiting justices by the institution of visiting committees to whom were assigned very extensive responsibilities and powers. In the opinion of the committee the intention of the Act in this respect for the most part has been a failure. The centralisation of authority, they say, has been a complete success in the direction of uniformity, discipline, and economy; but, on the other hand, it carried with it some inevitable disadvantages. "The great, and as we consider the providential danger of this highly centralised system has been and is that, while much attention has been given to organisation, finance, order, health of the prisoners, and prison statistics, the prisoners have been treated too much as a hopeless or worthless element of the community, and the moral as well as the legal responsibility of the prison authorities has been held to cease when they pass outside the prison gates. The satisfactory sanitary conditions, the unbroken orderliness of prison life, economy, and high organisation are held, and justly held, to prove good administration. But the number of recommissions has led us to think that there is ample cause for a searching inquiry into the main features of prison life. From the evidence submitted to us it appears that as a criminal passes into the habitual class, prison life, subject to the sentences now given, loses its terrors as familiarity with it increases." This last sentence is of the nature of a truism, and we can hardly picture in our minds the possibility of any other effect of familiarity with prison life. As regards what we may call the extra-mural requirements indicated by the committee, we would ask whether it has ever been held to be the duty of prison officials, except in so far as they are ordinary citizens, to follow up the discharged prisoner and see what he does or what becomes of him after he has become merged in the general community. The proper treatment of a prisoner is one thing, but the social supervision of an ex-prisoner from philanthropic motives is so voluntary in its character that it is well to detach it as far as possible from the atmosphere of officialism, which is so apt to place the individual in a compromised position, if not actually to damage his prospects. We honestly confess that we have no great faith in the reclamation of "old hands." And why the failure of their reclamation should be tacked on as in any sense due to the centralised system or referable to it we fail to see. The "moral condition" of a habitual criminal when he leaves prison or when he enters it is a veritable *ignis fatuus*; and there are few persons who would undertake to estimate it. Asking the question, Is recidivism increasing? the committee in a tentative way deal with this important subject, and in the end they say that it is difficult to avoid the belief that the proportion of reconvictions during the last twenty years has increased. But the reconvictions take place among the older hands, for it would appear that of every 100 who go to prison a first time seventy do not return, while of those convicted a fifth time as many

79 per cent. do return. This bears out the opinion expressed by the committee that so far as first offences are concerned the present prison treatment in convict and local prisons is amply sufficient for the purposes of deterrence. To our mind the non-return to prison of first offenders is the all-important factor for consideration, and we certainly agree with the committee when they urge that the most determined effort should be made to lay hold of incipient criminals and to prevent them by strong restraint and rational treatment from recruiting the habitual class. The committee point out that the headsprings of recidivism are doubtless in a large measure to be found in the social conditions of the general population. Lads grow up predisposed to crime and eventually fall into it. Mr. Davitt told the committee that he was speaking to an educated habitual criminal in Dartmoor and was pointing out how foolish it was, apart from the immorality of the thing, to risk getting seven years' penal servitude for stolen goods of the value of £10 or £20. The man replied, "Well, yes, that is all right coming from you, but put yourself in my position. I never knew my father or mother; my first recollection is being turned out of a workhouse. I fell among thieves. I got educated in crime. I learned to read and write in prison. Unlike you, I have had no moral training. Now I hold that man is naturally a thief. Take for instance a child in its mother's arms: anything that excites its fancy it wants to get, and if that natural feeling is not corrected by parental training and moral influence and education it gets stronger as the child grows older. Now I am such a product of your civilisation. You allowed me to grow up with these animal instincts uncorrected, and then you send me to prison when I exercise them."

The conclusion arrived at is that the habitual criminals can only be effectually put down in one way, and that is by cutting off the supply (during incipency). The improvement of general social conditions is the work of the community. But the opinion that some of its worst and most dangerous products can be reclaimed by special and skilful prison treatment and that many of these would lead honest lives in different surroundings is emphatically maintained by many of the most capable and experienced witnesses.

THE SURGICAL CONGRESS IN BERLIN.

(FROM OUR BERLIN CORRESPONDENT.)

(Continued from p. 1078.)

SITTING ON APRIL 18TH.—(Continued.)

Congenital Dislocation of the Hip-joint.

PROFESSOR HOFFA (Würzburg) showed some cases of Congenital Dislocation of the Hip-joint which he had treated successfully by operation. He opened the joint after Langenbeck's method and formed an artificial acetabulum in which the head of the femur was inserted.—Professor Lorenz (Vienna) said that it is of great importance in this operation to save the muscles and tendons which are attached to the femur. He accordingly makes the incision in front, carefully avoiding the muscular insertions, and after the opening of the joint at this place an artificial acetabulum is formed and the head of the femur is brought into it by gradual traction.—Professor Mikulicz (Breslau) and Dr. Heusner (Barmen) recommended the treatment by orthopædic apparatus.

Operations on the Pancreas.

Professor Krönlein (Zürich) said that carcinoma of the pancreas was rare, only 6 per cent. of all carcinomata being found in this organ. Growths situated in the small end of the pancreas are the most favourable for operation. He reported a case of sarcoma where the isolation of the pancreas was very difficult and where ligature of the pancreaticoduodenal artery became necessary; gangrene of the colon resulted and caused the death of the patient on the seventh day.

SITTING ON APRIL 19TH.

Resection of the Gasserian Ganglion.

Professor Krause (Altona) has performed this operation several times for trigeminal neuralgia by a method which he has described at former meetings of this Congress. The effect was in all cases very satisfactory. By this operation it was proved that the trigeminal is the gustatory nerve for the apex and the sides of the tongue.—Professor König

(Göttingen) said that he had seen severe hæmorrhage from the middle meningeal artery in the course of the operation.

The Etiology and Histogenesis of Carcinoma.

Professor Tillmanno (Leipzig) accepted the theory of Waldeyer and Ribbertz that carcinoma arises from any sub-epithelial proliferation by which the epithelial cells are isolated and made to grow abnormally. Experiments in support of the alleged zymotic origin of cancers have hitherto been without success, the bacilli found in the growth not being capable of producing real carcinoma in other persons. In patients suffering from carcinoma the growth could sometimes be transferred from one organ to another, but a transfer from one person to another has not yet been proved. Carcinoma often arises from prolonged chemical or mechanical irritation; in particular, the use of tobacco is very dangerous as regards the tongue and lips. Hereditary predisposition is unquestionable. Females and negroes are especially liable to it. Cases of carcinoma are rapidly on the increase, their number being at present four times greater than it was forty years ago.—Dr. Geissler (Berlin) showed a dog to which he had communicated carcinoma by inoculating pieces of a cancer taken from a woman.—Dr. Haussmann (Berlin) believed that the new growth was not carcinoma.—Dr. Friedrich (Leipzig) said that he had made experiments in reference to the therapeutic action of bacteria toxins on malignant growths. In carcinoma no effect at all could be discovered, but he had reason to believe that in sarcoma his researches might be more successful. He hoped to be able to give more particulars at next year's Congress.—Dr. Lassar (Berlin) showed patients with cancers of the skin treated successfully by Fowler's solution.—Professor von Bergmann (Berlin) declared these cases to be not cancers but adenomata of the sebaceous glands. Patients with cancers had very often come to him to be operated on soon after an apparent cure had been effected by Dr. Lassar's method. The growth is then usually much larger, and its removal becomes more difficult than it would have been if the previous arsenical treatment had not been undertaken.—Professor Kocher (Berne) said that the effect of arsenic was only of short duration.—Professor König protested against the publication of methods which have the effect of causing operations to be deferred until too late.

The Diagnosis of Syphilitic Growths.

Professor von Esmarch (Kiel) called the attention of the meeting to Sarcoma-like Syphilitic Growths. Sarcomatoid tumours occurring in patients with other syphilitic symptoms, and very soon reappearing after extirpation, are to be regarded as probably syphilitic. Tumours in the muscles of patients suffering from deferred hereditary syphilis are gummatous in 90 per cent. of the cases. The diagnosis is difficult and only to be inferred from the results of anti-syphilitic treatment.

Tuberculosis of the Knee-joint.

Professor König gave a statistical account of the cases which he had attended in the University Hospital of that town. There were 725 patients suffering from this disease, but he had notes of only 615, of whom 410 (= 65 per cent.) have already died, the great majority (340 cases = 80 per cent. of the total deceased) having succumbed to tuberculosis. Conservative methods were employed for 184 patients; in 150 arthrectomy and in 300 typical resection were performed, and in 91 amputation became necessary. In numerous instances iodoform or carbolic acid was injected into the joint, and in many of these cases operations had to be afterwards performed. He had found, contrary to the experience of other surgeons, that injections of carbolic acid gave a better result than injections of iodoform, the power of moving the joint having been regained by thirteen out of forty patients treated with iodoform, and by twenty-one out of thirty-six treated with carbolic acid.

Ambulatory Dressings in Fractures of Thigh and Leg.

Professor von Bardeleben (Berlin) said that the ambulatory method of Hesselig is now much simplified, the former complicated and rather expensive apparatus being replaced by plaster dressings only. The broken bone is put on a splint till the swelling has reached its acme, and then a very well-fitting plaster dressing is applied, which, being supported by the prominences of the malleoli and the pubic bone, keeps the ends of the broken bone in apposition. A few days after the injury the patient may try to walk and nearly always succeeds in so doing. During last year thirty-nine out of forty-five fractures of the leg and sixteen out of twenty-three

fractures of the thigh were treated in this way. The method, of course, requires constant attention and supervision, and is therefore only possible in hospital.

Appendicitis.

Professor Czerny (Heidelberg) said that the mucous membrane of the vermiform appendix often became abraded by faecal concretions, and that bacteria easily penetrated into the small ulcerations caused thereby. Appendicitis, when acute, may arise from the presence of bacterium coli, and when chronic from the tubercle bacillus or actinomyces. Patients who had to all appearance recovered spontaneously were apt to suffer at a later stage from severe pains, constipation, vomiting, &c., and the appendix had often to be removed afterwards. The prognosis is good, those cases excepted where the appendix is fixed by agglutination to the surrounding tissues.—Professor Krönlein (Zürich) remarked that he had sometimes seen a faecal fistula follow this operation.—Dr. Kürte, Dr. Israel, and Dr. Rotter confirmed this statement.

The After-treatment of Laparotomy.

Dr. Reichel (Würzburg) said that formerly opiates were invariably given after laparotomy, but that at present even laxatives were prescribed in order to remove pyogenic bacteria and their products. Opiates should not be given after simple operations, but they were useful in cases where the intestines were irritated or loosened during the operation; also when symptoms of slight ileus appeared opiates should be tried at first, and if the symptoms do not disappear very soon the peritoneal wound should be opened up. Hemorrhage and peritonitis after the operation also require the peritoneum to be reopened.

SITTING ON APRIL 20TH.

The Sterilisation of Catgut.

Dr. Lauenstein (Hamburg) said that he had found several kinds of bacteria in catgut sold as sterilised. He especially mentioned bacillus subtilis, staphylococcus albus, and micrococcus tetragonus. Suppuration, he was sure, often arose from catgut sutures. In thirty-five out of 149 specimens of catgut he was able to cultivate the bacteria on gelatine. Most germs were present in catgut sterilised by a dry process.—Professor Kocher stated that in his operations for goitre primary union was obtained in only 35 per cent. of the cases when sterilised catgut was used, but in 85.7 per cent. when sterilised silk was used. He has now completely abandoned aseptic sutures, and only employs silk made antiseptic by an alcoholic solution of bichloride of mercury. Since adopting this method he has obtained primary union in every case. The question being very important Professor Kocher suggested the making of a collective investigation, and his proposition was adopted.

Anæsthetics: the Collective Investigation.

Professor Gurlt (Berlin), the secretary of the Congress, read the report on the above subject. The collective investigation has now been going on for five years. This year 52,677 new cases were reported, of which 31,803 were chloroform narcosis with 23 deaths, and 15,712 were ether narcosis with 5 deaths. In 2148 cases narcosis was produced by a mixture of chloroform and ether, in 1554 by the so-called Billroth mixture, in 1425 by ethyl bromide, and in 34 by penthal. The use of ether has much increased. The mortality from chloroform seems to be much greater than that from ether; but very often grave disorders of the respiratory organs, such as pneumonia and bronchitis, result from the inhalation of ether, and death from those complications ought to be regarded as equivalent to death under anæsthetics. Ether was especially harmful after laparotomy.—Dr. Schleich (Berlin) explained his theory of the action of anæsthetics. According to him they are more dangerous the more their boiling points differ from the temperature of the body. He has devised an anæsthetic mixture (chloroform and petroleum ether) whose boiling point is the same as the temperature of the body, and states that he has obtained excellent results, all the disagreeable symptoms (vomiting, &c.) being absent.—Dr. Rosenberg (Berlin) recommended that the mucous membrane of the nose should be brushed with a solution of cocaine before the commencement of the narcosis.—Dr. Rahn (Frankfurt) gave a warning against the use of chloroform near a gas-light, as ethylene chloride is formed.

The Agglutination of Serous Membranes.

Dr. Graser (Erlangen) said that when two serous membranes are put together the agglutination can be divided into

three stages. In the first a small exudation of fibrin takes place, in the second the exudation is increased and the endothelial cells diminish, in the last stage these cells completely disappear and a thick fibrinous stratum lies between the membranes. This fact is in accord with Alexander Schmidt's opinion that fibrinous exudation is always connected with a lesion of the cells. All antiseptic preparations influence the cells and consequently are apt to accelerate the agglutination of serous membranes.

Vaginal Hysterectomy.

Professor Landau (Berlin) submitted a report on Vaginal Hysterectomy after Pean's method.

Resection of the Rectum.

Dr. Schede (Hamburg) described this procedure for the relief of syphilitic stricture. He has performed fourteen such operations, of which twelve were successful. In two cases the operation could not be completed, the ulcers being too high above the anus. This operation is much more difficult than that for carcinoma, but he nevertheless prefers it to colotomy.

At the last sitting Professor von Bergmann was elected President for next year, when the twenty-fifth anniversary of the Congress will be celebrated with great distinction. Professor Thiersch (Leipzig) whose lamented death is recorded in another column, was appointed an honorary member. The attendance of surgeons was much greater than at any of the former meetings, and the company included two well-known British surgeons, Professor Alexander Ogston (Aberdeen) and Mr. Arthur Barker (London).

THE ROYAL SOCIETY CONVERSAZIONE.

It was evident from a glance at the exhibits at the annual soireé of the Royal Society, held on Wednesday last, that the work of the past scientific year had been allocated chiefly and equally to chemistry and electricity. Indeed, the exhibition of 1895 may be regarded as affording a striking instance of the overlapping of these two sciences, and of how every year they are becoming more and more locked up in each other. To the analytic power of electricity, for instance, was largely due the discovery of argon, and the knowledge of the existence of argon led to the discovery of helium, so that in less than six months two most important members have been added to the chemist's list of elements by the aid of this mysterious and marvellous force. The exhibition of helium and argon was naturally expected by everyone, and no one could have been disappointed, for Professor Ramsay was able to show the spectra of argon extracted from air, and also of a mixture of argon and helium extracted from the Norwegian mineral, clèveite. An exceedingly pretty experiment was shown by Professor Roberts Austen of the Mint, consisting of an ingenious arrangement by which the effect of the enormous heat of the electric arc upon refractory metals could readily be seen projected upon the screen. Thus the melting of chromium and other refractory metals in the electric furnace was demonstrated. The temperature for this purpose approaches 3000 C. The chief point of interest in the exhibit of the metals of the platinum group by Messrs. Johnson Matthey and Co. lay in the fact of the great value of the separated metals. Thus a native platinum nugget weighing 158 grs. was on view, while close by it was a palladium ingot 1000 grs. in weight and of the value of £7000, which had been separated from an amount of gold and platinum of the value of two and a quarter millions of money. Oddly enough, Professor Lewes's exhibit illustrating the preparation of acetylene gas (240 candle power) from calcic carbide by merely acting upon it with water, and which is obtained by fusing carbon and lime together in the electric furnace, stood side by side with the interesting specimens collected by Major Cardew in connexion with the recent street explosions caused by electric mains. Specimens of the deposit containing sodium and potassium were shown. Of interest to medical men was the electrical cabinet for use in the wards of a hospital exhibited by Sir Benjamin Ward Richardson. The cabinet contains, in a comparatively small space, all that is required in the wards of a hospital. It is easily movable from bed to bed, and supplies, as required, a continuous and measurable current, an intermittent.

current, a light with reflector for illuminating the throat, and an electric cautery. It is also furnished with a Hughes' electric balance to serve as an aconometer. The current may be supplied from the main which lights the hospital. The cabinet has been constructed by Messrs. Faraday and Sons, under the direction of the exhibitor, for the use of the London Temperance Hospital.

The possibility of the transmission of infection by flies was admirably demonstrated in the series of cultures by Mr. W. T. Burgess. In his experiments flies were placed in momentary contact with a cultivation of *bacillus prodigiosus* (or other suitable chromogenic organism) and allowed to escape into a large room. After some time they were recaptured and caused to walk for a few seconds over slices of sterile potatoes, which were then incubated for a few days. The experiments showed that the flies' tracks on the potatoes were marked by vigorous growths of the chromogenic organism, even when the flies spent several hours in constant activity before they were recaptured. The use of pathogenic organisms in these experiments would be attended with obvious dangers, but the result obtained with harmless microbes indicate the constant risks to which flies may expose human beings, and the necessity of preventing their entrance and subsequent exit in infectious wards was emphasised.

Other exhibits that should be noticed in our columns were the drawings of enlarged finger-prints by Mr. Francis Galton, F.R.S., illustrating the foundation of the finger-print method lately adopted in the police department for ascertaining, first, whether an unknown and unsuspected person is an habitual criminal; and, second, for verifying doubtful identity. Lastly, a living specimen of the *melapterurus electricus* from the River Senegal was shown by Professor Gotch, and during the evening the shocks of this extraordinary animal were conveyed by means of placing the fish in a net lined with tin-foil to several of the company present, while the disastrous effect of the contact of this electric fish with gold fish was also shown. Among the large company received by the president, Lord Kelvin, in the reception room were the Duke of Saxe-Coburg and Prince Alfred of Saxe-Coburg-Gotha, the French Ambassador, the Marquis of Salisbury, and, it need hardly be added, most of the leading representatives of the various branches of science.

SANITATION AT BELGRADE.

It will be remembered that when the International Congress of Hygiene and Demography met at Budapest last year an excursion to Belgrade and to Constantinople was organised. We described at the time the enthusiastic reception given to the congressists at Belgrade and the eloquent speeches made in favour of sanitary reform. So cordial was the reception and so eager did the local authorities and public seem to be in the cause of sanitation that, on returning from Constantinople, our representative again stopped at Belgrade, and was thus able to forward us some account of the sanitary condition of that city.¹ The Servian press gave the fullest possible publicity to our criticisms. This propaganda work has borne good fruit. Schemes of drainage that had for long remained dormant were brought out from among the municipal pigeon-holes, and an engineer, M. Maresch of Graz, was engaged to go over these plans and devise if possible a new and better combination. This done, the municipality determined to submit these different schemes to a small committee of experts, and selected for that purpose firstly Mr. W. H. Lindley, chief engineer of the Public Works Department at Frankfurt-on-Main, who enjoys a European reputation and is the author of the drainage schemes of several large towns; as the drainage scheme must be combined with the construction of embankments to protect the town from the danger of flooding, Professor Zschokke of Zürich, who has built embankments and docks at Rome, Genoa, La Rochelle, Bordeaux, &c., was the second expert chosen to deal with the sanitary interests of the town in a less technical but in a broader and general sense; whilst Mr. Adolphe Smith was selected as the third expert. These gentlemen met in Belgrade during the course of April and examined the plans submitted. There were in all three plans—one submitted some years ago by an engineer from Berlin,

another by an engineer from Mannheim, and, finally, the modifications and alterations of these plans by M. Maresch. The examination of these schemes by the committee of experts has, practically speaking, resulted in the drawing up of a fourth plan. Without entering upon the many details and complications involved by this problem, it may be briefly stated that Belgrade is, for the most part, built on a promontory overlooking the Save and the Danube. The greater part of this promontory consists of a hill some 300 feet high, with ample falls towards the Danube or the Save; but at the base of this hill there is on both sides a strip of low-lying ground which represents about 30 per cent. of the total area it is proposed to drain. To further complicate the situation the level of the water in both rivers varies very considerably according to the time of year, so that a system of drainage which is possible at one season is impossible at another. A height of 66.24 metres above the level of the Adriatic is the zero of the Save. The lowest water-mark ever known there has been 45 centimetres below this zero and the highest water-mark 8 metres above—at least, this was the height attained during the floods of 1888; but this year the record has been beaten to the extent of 2 centimetres, and this while the committee of experts was sitting, so that they were themselves able to see the maximum difficulty known to history. The water then attained the level of 74.26 above the Adriatic, or 8.02 metres above the zero of the Save. If we consider that the sewers and drains must be laid deep in the earth so as to prevent freezing during the very rigorous weather of the winter, houses should not have been built at a lower level than 80 metres, whereas a vast number are on levels of 70 to 72 metres. The drains of these quarters will, therefore, be below the high water-mark.

The municipality entertains strong objections to any sewer outfalls on the Save side, where it is intended to establish bathing stations and where the back currents caused by the Danube might drive the sewage back upon the town. M. Maresch had conceived the bold idea of piercing a tunnel through the hill on which the greater part of Belgrade is built so as to deliver the sewage of the Save side into the Danube. The committee of experts endorsed this proposal, but suggested that the tunnel should be deeper and longer so as to take all the sewage of the Save side. On the other hand, at this depth the outfall will for about sixty days of the year be too low to empty into the Danube. At a height of 80 metres there will be main sewers collecting all the sewage from the high parts of the town, and these can empty into the Danube at all conditions of the water. During the sixty days it will be necessary to pump up the sewage from the low-lying levels into this higher level system. Such, in a few words, is the method proposed for overcoming the local topographical difficulties. The committee of experts further indicated what methods of drainage should be applied to connect the houses with the sewers, and what by-laws should be enacted so that these works might be properly controlled and rendered efficacious. The plans submitted were all based on the combined system—that is to say, on the admission of rain water into the sewers, with the necessary overflows for storm water. It is perhaps unfortunate that there was no scheme on the separate system, by which the sewage and the rain water would be dealt with separately, for it would have been interesting to see what advantages this rival system could have offered in the peculiar circumstances under which Belgrade is situated. The plan proposed, however, is simple, devoid of complications, and easily applied. It is calculated that the study of the details will take a year and the construction of the sewers about five years. Thus in five or six years Belgrade may become in this respect a model town of Eastern Europe. How greatly this will be to the credit of the capital of Servia can only be realised by those who know something of Servian history. It must be remembered that Servia only acquired its independence when the Turks left Belgrade in 1867. Thus this town has not had more than twenty-eight years of free municipal existence. Even then Servia continued to pay tribute to the Sublime Porte till the war of 1876 broke out. The Pashalic of Nisch was only obtained through the Berlin Treaty in 1878, and Servia was not proclaimed and recognised as an independent kingdom before 1880. These dates show that Servia is a totally new country, and yet it is already eager to carry out proper drainage works and to enforce the most progressive sanitary principles. How many much older countries have failed to show such a practical appreciation of sanitation?

¹ Vide THE LANCET, Dec. 22nd and 29th, 1894.

THE ROYAL ACADEMY.

THERE is a curious want this year of really great pictures. An uninteresting evenness pervades the galleries, and some would say that the average is high. This is true in a sense, for examples of bad drawing are few and are confined for the most part to the works of the Academicians. Composition, too, with the same exception, has been successfully studied. In two particulars only is there no improvement. Colour is, if possible, more inharmonious than ever, many of the more important pictures—as, for example, the President's "Flaming June" and Mr. Tadema's "Spring"—being particularly noticeable in this respect. The choice of subjects is equally unfortunate, the number of death-bed scenes—all, fortunately, as unlike the real thing as possible; the number of children at their mothers' knees, of allegories—with ghosts, angels, or fairies, as the case may be; and of Andromedas, Ariadnes, Judgments of Paris, and other classical subjects, being positively monotonous. There appears to be very little sculpture this year, though there are two or three of the nude figures which, if we mistake not, Mr. Onslow Ford made the fashion a few years ago. He exhibits an attenuated girl in bronze, very well modelled, but very ill-nourished, and entitled "Echo." Mr. Thorneycroft's recumbent figure of the late Bishop of Carlisle should not be overlooked. There is a curious drawing which looks like tapestry in the sculpture room. It is one of Mr. Richmond's designs for the decoration of St. Paul's (1713). The water colour room is well filled, and we observe a very clever portrait by Mrs. Jopling (914); a curious, highly finished "Cinderella," by Mr. Southall (962); and "Quietude," an eccentric study of a head, with Dürer's "Melencolia" as a background, by Mr. Lucien Levy (971). "An Alien," a lovely figure, highly finished, but very small, is by Mr. Bulleid (1024). Mr. Clifford makes a new departure in his "Bric-à-brac Shop" (1082).

If we take the galleries in order, omitting portraits, we shall find three or four pictures worth looking at in the first. These are "Spring," by Cecil Rea (38); "Evening," by Mr. Leader; "St. Stephen," by Sir J. E. Millais (18); and "The Fisherman and the Jin," by Mr. Prinsep (25). "The Pot of Basil," by J. L. Gloag (53), is powerful enough but too eccentric, and Isabella cannot have the normal number of vertebrae in her spinal column. In the second room we find Mr. Waterhouse's "St. Cecilia." She is represented in a "walled city on the sea," asleep with two angels playing before her. The artist has experimented and striven with all his might to attain harmony of colour, but has failed, yet his picture in many ways deserves its "place of honour." Mr. Byam Shaw errs in the same manner, but less completely, and his scene from the "Blessed Damozel" (110) has some of the richness of a manuscript illumination. The President's "Maid with the Golden Hair" (139) is pleasing and very complete. Mr. Storey's "Coming Events" (40) has his usual prettiness and the landscape part is good, but not so good as in his "November Sunshine" (81).

In the Great Room the place of honour is filled by Mr. Briton Rivière's "Phœbus Apollo" (160) driving a team of lions in a chariot. We question if he will ever succeed in getting back the foot and leg he has extended over the front of the chariot, but the whole picture is brilliant and spirited to a rare degree. "Ruth" (225) and "Rachel" (216), by Mr. Goodall, are much alike in hardness and dull colouring, but are correctly drawn. It is not possible to praise the picture of an ugly, bloated boy, with a crooked mouth, which Mr. Watts labels "The Outcast: Goodwill" (258), nor is it possible to make out the meaning of the name. There are several fine landscapes in this room, but both Mr. MacWhirter's and Mr. Peter Graham's suffer from wooliness. "Glen Orchis" (201), by Mr. Henry Moore, will be admired, as will two views by Mr. Hook, and Mr. Brett's reminiscence of his native cliffs (232), which is rather spoiled by a spotty foreground. We should also notice the President's graceful "Lachrymæ" (182), and Mr. Poynter's charming little "Ionian Dance" (270), is both well drawn and well finished.

There is little to delay us in the fourth room, but "A Priestess," by Mr. Godward, is firmly handled and not without beauty (304). In the fifth gallery we may pause at Mr. Brett's "Isles of the Sirens" (409) and at Mr. Shannon's cold and unpleasantly anæmic Portrait of a Lady (410). In

gallery six there is a tremendous and overpowering painting by Mr. Herkomer, representing a Bavarian Burgomaster and his Councillors, life size (436). In gallery seven we see Mr. Croft's picture of Napoleon Cheering on his Troops at Waterloo (499). "The Bayswater 'Bus," by Mr. George Joy, is clever, and includes some pretty faces, but there are obvious difficulties in the view. "Evening Glow" (534) is one of Mr. Leader's best pictures this year, though the trees and the watery meadows have so often done duty before. In the eighth gallery we have a fine sea-piece by Mr. Somerscales, "After the Gale: Taking to the Boats" (593), but Mr. Wyllie in a large painting fails to make the Tower Bridge picturesque (611).

In the ninth gallery we have the usual show of small works this year by Messrs. Moore, Dillon, Legsdall, Gow, Mrs. Alma-Tadema, and Miss Montalba. In the next room is a pleasant "Offer of Marriage," by Mr. Sadler (776), and a curious but powerful interior of a Joss House, by Mr. Wetton (761). In the eleventh gallery we must pass over Lady Butler's "Scots Greys on the Morning of Waterloo" (853), and a battle piece by Mr. Caton Woodville (869), and go on to a very powerful Snow Scene by Mr. Farquharson (873). "Toddy at the Cheshire Cheese," by Mr. Dendy Sadler (887), represents a cleverly painted group of old toppers, and is in the artist's best style.

A longer and more careful examination than we have had time to bestow on this year's exhibition will no doubt reveal much that we have missed, but the foregoing notes give only the impressions of a first glance.

CITY HOSPITAL, BIRMINGHAM.

ON the invitation of the chairman of the Health Committee, Alderman Cook, a number of gentlemen interested in the sanitary condition of the borough attended at the site of the new hospital at Little Bromwich on April 24th. So many responding to the request, it was found necessary to organise the visitors into three parties, under the guidance respectively of Alderman Cook, Alderman Dr. Barratt, and Mr. Councillor Lancaster. About 180 were present, lunch being provided by the chairman, whose practical knowledge, sound judgment, and constant attention have contributed largely in making the new scheme successful. The present hospital may be looked upon as one of the most perfect of its kind, replete with every modern arrangement and appliances of the most recent kind; indeed, no efforts or money have been spared to bring it to a degree of completeness which will justify the labour spent upon it. Appended is a plan of the hospital with explanatory notes taken from the programme of the day's proceedings.

The hospital has been erected for the treatment of small-pox cases. It is situated on the east side of the city, about three and a quarter miles from the centre of the town and about 500 yards from the city boundary. The site is about twenty-four acres in extent.

A. Entrance lodge, a red brick building relieved with stone, with half-timbered gables, a covered porch, and a vestibule communicating on one side with a reception-room for visitors or others making inquiries, and on the other with the porter's residence and yard, from which access to the gas and water meters is obtained.

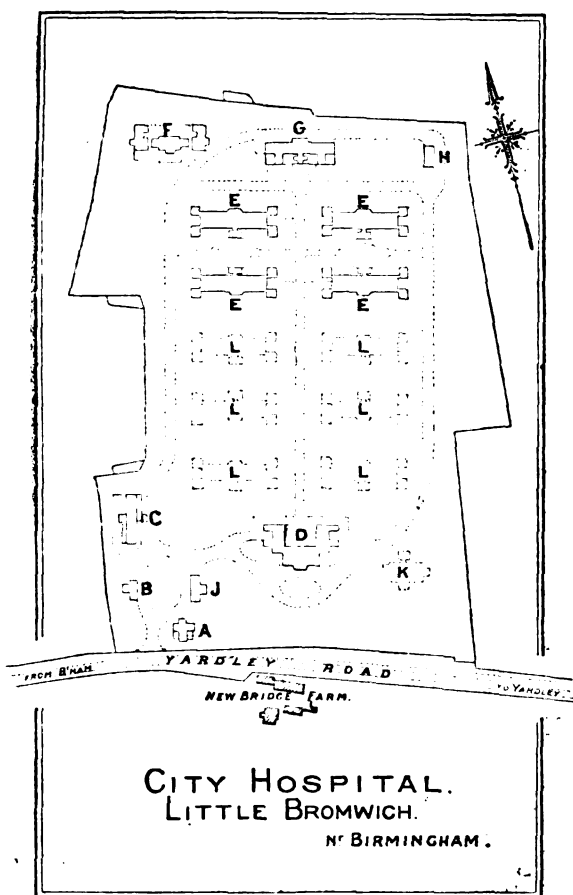
B. Receiving ward. This consists of a single room, with a bath-room leading therefrom, and a small enclosed yard and offices. Here patients are examined and stripped of their clothing, which is sent at once to the disinfecting stations to be purified before being placed in the store connected with the discharging ward. The patients are then taken either directly into one of the pavilions to undergo treatment, or if any doubt exists as to the nature of the case they are placed in the isolation pavilion and kept there for further observation.

C. The isolation pavilion is situated on a by-road; it is arranged for males and for females, and consists of a number of small wards with one, two, or three beds in each as required. The access to each ward is from the open air, but under a covered glass verandah. Special bathing and other sanitary arrangements are made, all securing perfect isolation.

D. Official and administrative departments. This block is divided into three sections, the central containing the medical quarters and matron's apartments, the left-hand side

containing the steward's apartments and stores, messroom, kitchen, and kitchen yard, and the right-hand side containing the servants' accommodation, recreation room, matron's stores, and the officers' laundry. The various departments are so arranged in this block that, whether stores, food, or medicines are required, they are delivered from the lobbies on either side to the attendants or nurses, and conveyed by them directly down the asphalt avenue to the pavilions or other blocks, the person conveying it not requiring to enter this building beyond the serving window. In this block, too, in the lobby leading to the officers' quarters, is placed the telephone, by which communication can be made with the various blocks, and also with the Council House and the general telephone system of the city.

E. The pavilions are four in number. Each has twenty-four beds and consists of two wards 72 ft. by 30 ft., with an allowance of air space to each patient of over 2000 cubic feet. At the ends of the wards are the bath-rooms and water-closets, fitted up with the latest sanitary improvements. Between and connecting the two wards which constitute each



pavilion is the entrance hall, with a duty-room overlooking each ward; also food, pantry, linen, fuel, stores, &c. The wards are heated by open-fire, down-draught stoves, the bath and water-closet blocks being heated by high-pressure radiators from the steam mains. The floors are laid with oak blocks polished with hard paraffin and turpentine. The lighting is effected from the ceiling, the products of the combustion being kept entirely out of the wards.

F. The servants' quarters and cottages for the out-door officers contain kitchens, general sitting-rooms, &c, and a small bedroom. Each one is thoroughly heated, lighted, and ventilated.

G. Laundry, &c.—At the extreme rear of the centre of the site are situated the laundry and disinfecting yard with incinerator, perfect isolation being preserved. The steam disinfecter is of the Washington Lyons type. In the process of disinfection the articles are taken to the yard on the infected side and placed in the jacketed steam receiver. This is closed

up and steam at 20 lb. pressure is introduced. The steam is then exhausted, and the jacket, which is superheated, immediately evaporates all the moisture. The receiver is opened on the disinfected side, the articles being withdrawn thoroughly dry and forwarded to their various destinations. The only means of communication between the infected and the disinfected sides is a glass pane through which the attendants can communicate by speaking loudly. The lower level of this part is apportioned to the engineer's shopping, boilers, coal stores, storage, stabling, ambulance house, &c.

H. In the far corner of the site, on a side road, are placed the mortuary and post-mortem room, fitted up with all the necessary appliances.

J. Discharging ward. This is a small two-storeyed building, with necessary dressing- and bath-rooms. On the first floor, approached by an external doorway, is the clothes store, in which disinfected clothing is stored until required by out-going patients.

The dotted block K shows the proposed position of the nurses' home; and the blocks marked L show where additional pavilions can be erected if necessary.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An ordinary comitia of the College was held on April 25th, Sir J. Russell Reynolds, Bart., President, being in the chair.

John Henry Bryant, M.D. Lond., Louis Leopold Jenner, M.B. Oxon., Theophilus Nicholas Kelynaek, M.D. Vict., and William Barnett Warrington, M.D. Lond., were admitted to the Membership.

Licences were granted to 130 candidates who had passed the recent examinations of the Conjoint Board.

Communications were read from the Royal College of Surgeons of England reporting the proceedings of the Council of that body, and from the Secretary to the British Institute of Preventive Medicine asking the College to nominate a representative to its Council. The request was referred to the Council of the College for consideration.

The following Members nominated by the Council for the Fellowship were balloted for and duly elected:—Frederick William Andrewes, M.B. Oxon.; James Calvert, M.D. Lond.; William Radford Dakin, M.D. Lond.; William Heaton Hamer, M.D. Camb.; Frederic Harry Haynes, M.D. Lond. (Leamington); Patrick Manson, M.D. Aberd.; Francis George Penrose, M.D. Lond.; Robert Michael Simon, M.D. Camb. (Birmingham); Frederick John Smith, M.D. Oxon.; Frank Joseph Wethered, M.D. Lond.; Dawson Williams, M.D. Lond.

The quarterly report of the Finance Committee was received and adopted.

The report from the Committee of Management dealing with the subject of the examinations for the Diploma of Public Health and referred back to the committee at the last meeting was presented in an amended form and adopted.

In accordance with the recommendations of this report the Syllabus for Part I. of this examination will now be as follows, every candidate being required to undergo this practical examination in bacteriology:—

1. Physics in their application to health; with reference to—
 - (a) Warming and Ventilation; (b) Water Supply, Sewerage, and Drainage; (c) Sanitary Construction.
 2. Meteorology in Relation to Health.
 3. Chemistry, with special reference to Food, Air, Soil, and Water.
 4. Microscopical Examination, as applied to Air, Food, and Water.
 5. Bacteriology, including the cultivation and recognition of Micro-organisms.
 6. Geology and Soil in Relation to Drainage and Water Supply.
- The course of lectures on Pharmacology and Therapeutics delivered by Dr. J. B. Bradbury, Downing Professor of Medicine at the University of Cambridge, was recognised as fulfilling the requirements of the Board. On the application of the Dean of the Faculty of Medicine of University College the course of Clinical Demonstrations in Lunacy, given by Dr. W. J. Mickle at the Grove Hall Asylum, Bow, was recognised so long as he shall hold the Lectureship on Mental Diseases in that College. The Dundee Royal Infirmary was added to the list of hospitals recognised by the Board.

A further report was received from the Committee of

Management, (a) indicating the range of the Third and Fourth Examinations under the new regulations; (b) recommending that every candidate be admitted to a separate examination in Ophthalmology at the Final Examination; (c) explaining the procedure adopted by the committee in dealing with applications for the recognition of institutions as places of instruction in chemistry, physics, practical chemistry, and biology; (d) recommending the recognition for such purpose of the Higher Grade Board School, Victoria-road North, Southsea; Wellington College, Wellington; the Grammar School, Bristol; and the Birkbeck Literary and Scientific Institution; (e) recommending the recognition of the course of instruction for the Diploma of Public Health at the Westminster Hospital; and (f) recommending that the City of London Hospital for Diseases of the Chest be recognised as a place of study during the fifth year of the curriculum.—The report was adopted by the College.

A report from the Laboratories Committee, detailing the work being carried on in the laboratories, was received and adopted.

The quarterly report of the Examiners for the Licence was received and adopted.

CHOLERA.

THE revitalisation of cholera at the present season, after the epidemic has been apparently dormant and hibernating, as it were, for some months, is an interesting and, as subsequent events may prove, a significant fact. As we have frequently said, cholera often makes its earliest manifestation towards the end of March and the middle of April, and so it has proved in the present year. We learn from St. Petersburg that 22 cases occurred, 13 of them fatal, in the province of Podolia, in Russia, between March 24th and April 13th, while in the province of Volhynia there were 112 cases and 36 deaths between March 17th and April 6th.

The outbreak of epidemic cholera among the Mecca pilgrims at the quarantine lazaretto of Camaran on the Red Sea is naturally giving rise to a good deal of anxiety in Egypt. The first cases were reported at the end of March, and the number of attacks had risen to thirty at the end of a week. As many as 11,000 pilgrims had passed through on their way to Djeddah, and the lazaretto was at the date of the last report occupied by some 2000 pilgrims. Within the next few weeks the bulk of the pilgrims will be returning, and it has been officially declared that the disease has broken out at Mecca. The chief of the Camaran lazaretto has proposed to the Supreme Sanitary Council in Constantinople to stop the pilgrimage from India and the Dutch Colonies, but the Sultan is, on religious grounds, opposed to this. It is worth remarking that the Indian authorities allege that the disease was not conveyed from that country, for the pilgrims were free from all disease when they embarked and no cholera appeared among them until after they had been quartered in the quarantine lazaretto at Camaran. There can be no doubt, if all that is said of it be true, that Camaran is a hotbed for developing the disease, and the present outbreak is attributed to the bad condition of the lazaretto, the overcrowding, and the impurity of the water supplied to the pilgrims there and en route to Mecca. A radical change is required at Camaran and throughout the province and at Mecca itself. It is understood that the present governor-general is instituting a number of sanitary reforms. We should like to hear that the Sultan had sent some sanitary expert from Europe or this country to advise as to the necessary measures to be undertaken. Cholera does not, as a rule, spread from Arabia and Egypt to this country, notwithstanding that it is the shortest route, and we are not apprehensive on that ground. As regards Egypt, if the disease spreads to and appears at Cairo we trust that no time will be lost in moving the British troops up to Mokattam, which was done with some of them on a previous occasion, with the result that those quartered there escaped the epidemic altogether. The difficulty about encamping troops there is the want of water.

Some vessels have arrived in the Thames with a history of having had cases of cholera or choleraic diarrhoea on board.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Fever in the Mold Urban District, by Dr. WHEATON.—Mold was evidently the subject of an official inspection because typhus fever was suspected at Whitehall to be prevailing there; but the disease was enteric fever, and it was found to exist under circumstances of filth and sanitary neglect which we hope, and feel sure, are very exceptional. The houses affected were often squalid and "extremely filthy" both within and without; in fact, the main burden of the descriptive portion of the report is as to filth in various forms and degrees, the whole making the reader wonder whether there could in such a place be anything corresponding to a sanitary authority, sanitary administration, and sanitary officers. The only relief to this part of the story is the statement that the medical officer of health, with the aid of the Poor-law authority, turned some of the affected dwellings into hospital, nurses' home, and mortuary respectively, and that this action taken in the emergency is credited with having had much to do in staying the further diffusion of the infection of this "filth disease." Mold has for several years past suffered from enteric fever. It cannot be attributed to its water-supply, neither was it found to be due to milk. Indeed, Dr. Wheaton comes to the conclusion that emanations from defective sewers, and midden-prives infected by reason of having received the discharges of some of the sick, together with the generally careless habits of the people, such as is almost everywhere found where the surroundings of people are filthy, were the real cause of the spread of the disease. Since a previous official visit in February, 1894, the authority have applied for a loan for the purposes of a system of sewerage, and it is to be hoped that when this is carried out a water-carriage-system which will ensure the immediate removal of excreta from the neighbourhood of dwellings will lead to the initiation of some substantial improvements. But even before then gross nuisances, dwellings unfit for human habitation, and the like should be dealt with by the authority.

On a Prevalence of Enteric Fever at Desborough, by Dr. W. W. E. FLETCHER.—Desborough is a small urban district of some 2900 inhabitants near Kettering, and it has suffered severely from enteric fever. During 1890 and up to March, 1891, there were no less than 188 attacks, of which 23 terminated fatally, and from that time forward until late in 1894, when the medical officer of health reported a fresh prevalence, the disease has been all but epidemic. All the ordinary and all the possible causes of enteric fever were evidently looked into with care; but it is to the water-supply that Dr. Fletcher attributes the unhealthy and unfavourable state of Desborough. The wells are sunk in open and porous soil which rests on clay; they are filled in the main by surface water and by means of privy-middens and other sources of filth which admit of soakage into the same surface soil; the water-bearing stratum is constantly subject to fouling. The natural flow of the water has also conducted to the result, for in passing to the main body of the village it would wash along with it the soakage of filth from another part, and this latter part is that in which the first case of enteric fever occurred. In dealing generally with the sanitary administration of Desborough, Dr. Fletcher is able to point out that there are able but underpaid sanitary officers, whilst the authority is principally noted for negligence and indifference to the advice of their officers, and this notably in the matter of the need for providing a wholesome water-supply. They have no system of notification, they do not register cowhouses or slaughter-houses, and they avoid taking powers which it is optional with them to do without. Dr. Fletcher's report is well compiled, is clear and lucid, free from any approach to verbosity or undue length, and being a plain, simple story of the facts as elicited it ought to be appreciated by every member of the district council and to move them to act without delay, especially in regard to the question of water-supply.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Leeds Urban Sanitary District.—Dr. Spottiswoode Cameron's annual report for 1893 contains much interesting matter. He deals in a very detailed manner with the subjects of which he treats, and anything like a full review of the report our space will not permit. The position which Leeds occupies among the nine great towns of the United Kingdom, each with a population of 250,000, is, in the matter of general death-rate, a satisfactory one, coming as it does fourth on the list. The death-rate for 1893 was 22·3 per 1000, a rate in excess of that for the three preceding years, but which excess was more than accounted for by the increased number of deaths from measles and diarrhoea. When the Leeds death-rate is compared with English towns alone having at the last census populations of 250,000 and over, it is found that Birmingham is the only town which in 1893 had a rate less than Leeds; and in pointing out this fact Dr. Cameron pays a just tribute to the praiseworthy efforts of Birmingham to deal with her unhealthy areas. In the report before us the vital statistics of Leeds are discussed in considerable detail, and Dr. Cameron has endeavoured to arrive at a trade correction factor for the district. Part II. of the report deals with special diseases, and under each disease the time, age, and sex incidence are considered, as well as the sanitary condition of the invaded houses. Dr. Cameron gives a very interesting account of the progress of small-pox in Leeds during 1893 and of the isolation accommodation provided for the cases. The old small-pox hospital was, on the erection of a new temporary hospital, intentionally burned down; there was, it appears, some suspicion that the hospital was acting as a focus for the spread of the disease. Persons exposed to the infection of small-pox were isolated in a cottage shelter belonging to the corporation, and out of 1458 persons so housed 83 developed small-pox within a fortnight. The following figures, showing the attack-rate amongst those isolated at the shelter, are instructive. Of 129 cases in which there was no evidence of either vaccination or primary small-pox 18 per cent. developed the disease, while of 1196 who showed some signs of vaccination only 5 per cent. did so. Of 40 who had previously had small-pox none were attacked, while of 93 persons concerning whom no information was forthcoming 3 developed the disease. In discussing the influence of vaccination upon recovery among the 586 cases passing through the hospital in 1893, Dr. Cameron states that the mortality among 42 said to have been vaccinated, but showing no marks, was 9·5 per cent., among the "unvaccinated" 28·2 per cent., among the imperfectly vaccinated 5·3 per cent., and among 257 cases who showed signs of having been properly vaccinated nil. The influence of the number of cicatrices is shown below in a table drawn up by Mr. A. E. Pearson, resident medical officer to the City Infectious Hospital:—

Showing the Number of Visible Vaccination Cicatrices in each Case, the Number of Deaths, and the Mortality per cent.

	Cases.	Deaths.	Mortality per cent.
Six cicatrices	3	—	Nil.
Five cicatrices	2	—	Nil.
Four cicatrices	89	—	Nil.
Three cicatrices	144	3	2·0
Two cicatrices	184	4	2·1
One cicatrix	76	6	7·8
No cicatrices	88	17	19·3
Total	586	30	5·1

Dr. Cameron has made a most exhaustive analysis of the deaths from diarrhoea in Leeds during 1893, and we strongly recommend this part of the report to the notice of our readers. The conditions of the houses in which fatal attacks occurred have been thoroughly gone into, and it appears that 79·8 per cent. of the fatal cases were attacked in houses without a through draught. It is shown, too, that "fatal diarrhoea occurred disproportionately in the smaller dwellings, and that amongst them it selected as a rule those most crowded." We are unable to touch upon all the interesting points raised by Dr. Cameron, but we reproduce a table with regard to the feeding of infants and diarrhoeal mortality, which we feel sure will be of interest.

Showing in percentages, as to Deaths specially inquired into, the Mode of Feeding of 153 Infants under one year of age, whose Deaths were registered as due to Diarrhoea in the Six Weeks ended Sept. 30th, 1893.

Ages.	Cases inquired into.	Per cent. of the 153.	Percentages of those dying at different ages fed—				
			On mother's milk only.	Partly at breast.	Not at breast at all.	By bottle.	Both at breast and bottle.
0 to 3 months ...	41	27	24	20	56	71	17
3 to 6 months ...	55	36	16	13	71	76	11
6 to 9 months ...	34	22	3	9	88	91	9
9 to 12 months ...	23	15	30	17	52	61	8
Whole	153	100	18	14	68	76	12

Dr. Cameron has for several years past amassed a vast number of details in regard to the sanitary condition of houses invaded by infectious disease, and the results must one day be of the greatest value in attempts to arrive at legitimate deductions.

Coventry Urban Sanitary District.—The infantile mortality of Coventry continues, Dr. Mark Fenton reports, to be a high one, and there has been no improvement in the rate during the last twenty years. Sanitary science has not yet, he observes, seriously applied itself to the reduction of infantile mortality. In discussing the value of school closure in measles epidemics, Dr. Fenton states that the closing of schools in Coventry has been invariably followed by a marked and significant reduction in the number of cases notified. As instancing this statement the following table for 1894 is given:—

Weeks ending March		Weeks ending April				Weeks ending May		
24th*	31st*	7th*	14th*	21st†	28th†	5th†	12th†	19th†
162	213	275	492	306	260	134	88	42

* Open.

† Closed.

The school in this instance was closed late in the week ending April 14th. As further corroboration of the value of school closure Dr. Fenton supplies figures for 1886 and 1889.

Cases of Measles recorded in 1886.

January to August	81	} Schools opened.
September	361	
October (first fortnight)	186	
October (second fortnight)	111	} Schools closed.
November	10	

Cases of Measles recorded in 1889.

January to June	186	} Schools opened.
July 1st to 25th	629	
July 25th to Aug. 10th	218	
Aug. 10th to Sept. 1st	74	} Schools closed.
September	17	

In Coventry measles is notifiable, but it appears that the sanitary committee have recently been considering the desirability of discontinuing the notification of this disease, owing to the fact that school closure alone has been found effectual in staying the spread of the disease. Dr. Fenton, however, has well advised the committee that until they are in a position to test the effect of isolating the first notified cases in hospital, it can hardly be concluded that notification is of no value.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6734 births and 3829 deaths were registered during the week ending April 27th. The annual rate of mortality in these towns, which had declined in the seven preceding weeks from 35·0 to 20·3 per 1000, further fell last week to 18·9. In London the rate was equal to 17·9 per 1000, while it averaged 19·5 in the thirty-two provincial towns. The lowest rates in these towns were 10·4 in Croydon, 11·3 in Swansea, 12·7 in Cardiff, 13·0 in Derby, and 13·5 in Bristol; the highest

rates were 27.4 in Wolverhampton, 27.6 in Manchester, 28.7 in Norwich, 29.2 in Preston, and 29.3 in Bolton. The 3829 deaths included 327 which were referred to the principal symtotic diseases, against 330 and 336 in the two preceding weeks; of these, 111 resulted from whooping-cough, 85 from measles, 50 from diphtheria, 39 from diarrhoea, 24 from "fever" (principally enteric), 18 from scarlet fever, and not one from small-pox. No fatal case of any of these diseases occurred last week in Swansea or in Birkenhead; in the other towns they caused the lowest death-rates in Bristol, Portsmouth, Huddersfield, and Bradford, and the highest rates in Liverpool, Burnley, Manchester, Plymouth, and Bolton. The greatest mortality from measles occurred in Sheffield, Manchester, Plymouth, and Bolton; and from whooping-cough in Plymouth, Wolverhampton, Liverpool, Bolton, Blackburn, Preston, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria included 27 in London, 5 in Manchester, and 4 in West Ham. No fatal case of small-pox was registered either in London or in any of the thirty-two large provincial towns. There were 37 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, April 27th, against 53, 47, and 35 at the end of the three preceding weeks; 12 new cases were admitted during the week, against 7, 9, and 4 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1469 against 1519, 1463, and 1514 on the three preceding Saturdays; 132 new cases were admitted during the week, against 143, 117, and 162 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 398 and 389 in the two preceding weeks, further declined to 341 last week, and were 24 below the corrected average. The causes of 46, or 1.2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Bradford, Newcastle-upon-Tyne, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Bristol, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24.7 and 21.7 per 1000 in the two preceding weeks, further declined to 20.6 during the week ending April 27th, but was 1.7 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15.1 in Greenock and 17.1 in Edinburgh to 24.9 in Aberdeen and 25.6 in Leith. The 594 deaths in these towns included 26 which were referred to measles, 24 to whooping-cough, 13 to diarrhoea, 3 to scarlet fever, 3 to diphtheria, 3 to "fever," and 1 to small-pox. In all, 73 deaths resulted from these principal symtotic diseases, against 88 and 78 in the two preceding weeks. These 73 deaths were equal to an annual rate of 2.5 per 1000, which was 0.9 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 22 to 32 in the three preceding weeks, declined again to 28 last week, of which 8 occurred in Edinburgh, 6 in Glasgow, and 4 in Leith. The deaths referred to whooping-cough, which had been 30 and 17 in the two preceding weeks, rose again to 24 last week, and included 17 in Glasgow and 3 in Greenock. The 3 fatal cases of scarlet fever were within one of the number in the preceding week, and included 2 in Glasgow. The deaths from diphtheria, which had increased from 2 to 7 in the three preceding weeks, declined to 3 last week, of which 2 occurred in Glasgow, where the fatal case of small-pox was also recorded. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 162 and 132 in the two preceding weeks, rose again to 145 last week, and exceeded by 38 the number in the corresponding week of last year. The causes of 32, or 5.4 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29.2 and 29.7 per 1000 in the two preceding weeks, declined to 27.0

during the week ending April 27th. During the past four weeks of the current quarter the death-rate in the city has averaged 32.3 per 1000, the rate during the same period being 18.8 in London and 19.4 in Edinburgh. The 181 deaths registered in Dublin during the week under notice showed a decline of 18 from the number in the previous week, and included 4 which were referred to the principal symtotic diseases, against numbers declining from 12 to 3 in the four preceding weeks; of these, 1 was referred to small-pox, 1 to diphtheria, 1 to whooping-cough, 1 to "fever," and 1 to diarrhoea, but not one either to measles or scarlet fever. These 5 deaths were equal to an annual rate of 0.7 per 1000, the symtotic death-rate during the same period being 1.5 in London and 2.1 in Edinburgh. The mortality from small-pox and from "fever" corresponded with that recorded in the preceding week. The fatal case of diphtheria was the first registered within the city during the current quarter. The 181 deaths in Dublin last week included 18 of infants under one year of age and 58 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in recent weeks. Eleven inquest cases and 6 deaths from violence were registered; and 61, or rather more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR GRIEB has been appointed Instructor at the Depot, Medical Staff Corps, Aldershot, in succession to Surgeon-Major Tyrrell, whose time has expired. Surgeon-Major Reckitt has arrived at Jamaica and Surgeon-Captain McCormack has embarked for Sierra Leone. Surgeon-Captain Thacker has been posted to the Curragh, and Surgeon-Captain Green has been transferred from Birmingham to Dublin. Surgeon-Captain Corcoran has been appointed to the Eastern District on arrival from Malta.

ARMY MEDICAL STAFF.

Surgeon-Major-General James Davis is placed on retired pay; Surgeon-Colonel Francis Henry Welch, F.R.C.S. Eng., retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant Kilkelly to officiate in Medical Charge of the 4th Bombay Cavalry. Surgeon-Colonel Mannsell is posted to the Mhow District. Brigade-Surgeon-Lieutenant-Colonel Gallwey, on being relieved by Surgeon-Colonel Mannsell, returns to Bombay. Surgeon-Colonel T. Mannsell, A.M.S., to be Principal Medical Officer, Chitral Relief Force, vice Surgeon-Colonel W. T. Martin, A.M.S. Surgeon-Colonel W. D. Wilson, A.M.S., to be Principal Medical Officer, Secunderabad and Belgaum Districts. Brigade-Surgeon-Lieutenant-Colonel W. F. Burnett, A.M.S., to be Officiating Principal Medical Officer, Mandalay District and Chim Hills Command. Surgeon-Colonel S. B. Hunt to be Principal Medical Officer, Bangalore and Southern Districts. Surgeon-Colonel D. F. Bateman to be Principal Medical Officer, Madras District. Surgeon-Colonel F. H. Blenkinsop to be Principal Medical Officer, Rangoon District. Surgeon-Lieutenant G. S. McLaughlin, A.M.S., is appointed Staff-Surgeon, Lucknow.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet-Surgeon: E. H. Saunders to the *Edinburgh*. Staff-Surgeons: A. P. Johnston to Chatham Hospital, George S. Smith to the *Blenheim*; R. F. Yeo to the *Nile*; J. Porter to the *Britannia*; H. S. R. Sparrow to the *Calypso*. Surgeons: J. Chambers to the *Minotaur*; R. F. Bowie to the *Britannia*; Alexander Maclean to the *Pembroke* additional; John D. Menzies to the *Halcyon*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Hugh Ransom Bramwell, M.B., the Tynemouth Volunteer Artillery (Western Division, Royal Artillery), to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Surgeon-Lieutenant J. B. Mann to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion, the Gordon Highlanders: Surgeon-Lieutenant-Colonel W. R. Duguid resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the battalion on his retirement. 3rd Volunteer Battalion, the Royal Fusiliers (City of London Regiment): Surgeon-Captain E. G. Younger, M.D., resigns his commission. 2nd Volunteer Battalion, the Lincolnshire Regiment: Surgeon-Captain G. F. England to be Surgeon-Major. 1st Volunteer Battalion, the Cheshire Regiment: Ernest Richard Woody Spratly, Gent., to be Surgeon-Lieutenant. 2nd Volunteer Battalion, the Gloucestershire Regiment: Percy Trenavin Lunn, Gent., to be Surgeon-Lieutenant.

THE ARMY MEDICAL STAFF.

In the second of the series of articles which are appearing in the *Times*, under the heading of "War Office Administration," allusion is made to the changes that have taken place in the medical service in connexion with those which were introduced—mainly in the late Mr. Stanhope's time—in various other departments of the army. Many of these changes in respect of the ordnance factories, artillery and stores, the late commissariat, Army Service Corps, &c. are passed in review and subjected to criticism of an adverse kind. The writer seems to think that the principal feature of the minor military changes of recent years is the destruction of professional *esprit de corps* and the allotment of duties inconsistent with proper training. As regards the Army Medical Staff, with which we are only concerned, it is stated that all have combatant titles, which are socially and officially misleading. It cannot be denied that the indictment is drawn up in sufficiently strong terms. "They [medical officers] may occasionally be seen drilling hospital attendants as if they were infantry soldiers, and their plea to sit on courts-martial will probably soon be admitted. Surgeons-major-general require medical officers attached in a staff capacity to act as the medium of communication between themselves and other departments; and when a heedless young regimental officer is liable to be officially reported for applying to his medical attendant the honoured title of 'doctor' it is clear that all proper professional pride is in danger of being lost. Even the essential requirement of a distinctive uniform has dropped out of sight, and an expert is needed to differentiate the Medical from the Army Staff. In striving to be what he is not the army doctor will inevitably fail in the exercise of his rightful, honourable, and indispensable functions. To fighting rather than to saving life his ambitions will tend. Meanwhile, the necessity for converting naval doctors into admirals, post-captains, and commanders does not appear to have yet arisen. Medical science in the navy does not seem to be a source of shame to its professors, who, moreover, wear distinguishing marks well understood by the navies of all foreign Powers." This represents, we may presume, the Horse Guards or military view; but the medical officers regard the matter from another and totally different standpoint. They allege that the only thing which confers any authority, power, or standing in the army is military rank, and that so long as they form part of the army and are not civilians it is necessary that they should possess it if they are to discharge their duties efficiently; that they were quite contented with "relative rank" until they were deprived of it and assured that its possession was merely nominal and valueless; while at the time when they were being dispossessed of all army rank purely military titles were being, or had already been, conferred upon all other departments and branches of the service whose functions were of a much less military nature and brought them less in contact with soldiers and army duties generally than was the case with medical officers. As regards the alleged or suggested incompatibility of military rank and title with professional zeal and merit, they regard this as a ridiculous assumption, and point to the organisation of the medical services of other nations—America and the Continent—in which medical officers possess such titles and fulfil all their professional duties with entire efficiency and satisfaction; and they add that, while it is easy to indulge in abstract notions of this sort, it is quite another thing to support them by facts. If there is a residuum of medical officers who yearn to be thought military and nothing more, and strive to conceal their medical titles, their conduct in this respect has no sympathy or support from right-minded men. The foregoing, as far as we can gather, is shortly the view entertained by the majority of

medical officers, and it is but right that it should also be represented and considered when statements like those under review are being put forward.

THE ARMY MEDICAL STAFF AND INDIAN MEDICAL SERVICE: THE ENTRANCE EXAMINATION.

It is announced that in future candidates for the Army Medical Staff and Indian Medical Service will be required to make one-half of the total obtainable marks of the examination to qualify for admission into the Army Medical School, Netley, as well as one-third of the marks in the compulsory subjects of the examination. We understand that this new rule has been introduced in consequence of a falling-off in the quality of the candidates competing, and that on representations which have been made to them the Secretaries of State for War and for India have been pleased to introduce it. This regulation has, doubtless, been decided upon in the hope of obtaining better professional men for the services, but we cannot help feeling that it will not have the desired effect, and that the responsible authorities would have done better had they sought to attract better men to the services by rectifying some of the terms of service which now press heavily on the medical officer, foremost among which are the, in some ways, unsatisfactory conditions under which the officers of the Medical Staff are serving both at home and in India. We refer especially to the question of the unsatisfactory rates of pay which the junior ranks of both services are now drawing while serving in our Eastern Empire. We understand that the total obtainable marks at the London examination are 4600. Four thousand of these are awarded for the compulsory and 600 for the voluntary subjects of the examination. Referring to our past issues we find that since the appointment of the new board of examiners in 1893 five examinations have been held. At these examinations 60 men have qualified for admission as surgeons-on-probation for the Army Medical Staff, and 73 as surgeons-on-probation for the Indian Medical Service. Had these candidates been examined under the regulation now announced only 70 per cent. of the candidates for the Army Medical Staff would have qualified and 83 per cent. of the candidates for the Indian Service. We notice that since the appointment of the new board of examiners the marking has been on a lower scale than it was in old days, and we feel that this new rule may have far-reaching effects unless it be modified. Either the number of candidates who are considered to have qualified at the next examination will be a very limited one or the examiners will be obliged to be more liberal in the view they take of the candidates' answers, which will, of course, stultify the hoped-for result. The quality of the candidates competing is, of course, regulated by the advantages and the inducements which the services offer, and cannot in our estimation be altered by any rule passed by the authorities to raise the average number of marks to be gained by the candidates at the examinations.

THE COMMANDER-IN-CHIEF.

The subject of the appointment of Commander-in-Chief in connexion with the recommendations of the Hartington Commission has attracted much attention of late, and Mr. Campbell-Bannerman's reply to a question in the House of Commons on the subject last week received different interpretations. By many it was thought that when the present Commander-in-Chief retires his successor will be appointed for five years only and not permanently, whereas others were of opinion that the post itself will be altogether abolished. Mr. A. Morton returned to the subject this week, and in reply the War Minister said that it was not usual to decide such questions until the occasion for the decision arose. When it did he had no doubt that the Government of the day would consider the recommendations of the Hartington Commission. As regarded his own views they were embodied in a separate memorandum appended to the report of the Commission, and he had since seen no reason to alter them. Mr. Campbell-Bannerman did not concur, it will be remembered, in the proposal of the Commission to abolish the appointment of Commander-in-Chief, and was opposed to the creation of a Chief of the Staff as unnecessary and likely to prove disadvantageous rather than otherwise to the service. The Medical Department, like all the other branches of the service, is more or less interested in this question, for the head of the army shapes more or less its policy. That the Duke of Cambridge has attained a good age, and that he has retained the highest position in

the army much beyond the age at which officers of high rank with plenty of physical and mental vigour have been compulsorily retired, cannot be denied. One thing seems pretty clear, however—viz., that the present Commander-in-Chief has no intention of retiring.

ENTERIC FEVER IN THE ARMY.

We have so frequently referred to the prevalence and mortality of typhoid fever in the army, especially in that portion of it serving in India, in connexion with water-supply and filters, that we fear our readers must be weary of the subject; but it is one of extreme importance, and nothing should be neglected which seems likely to prevent or lessen the prevalence of this disease. There does not seem to be any doubt that the introduction of the Pasteur-Chamberland filter in the French army has been followed by a remarkable diminution in the amount of typhoid fever. The last report of the French Minister of War furnishes some very interesting and instructive information in this respect, which is altogether corroborative of the previous reports of M. de Freycinet on the same subject. It shows that there has been a progressive decrease in the amount of typhoid fever of late years owing to the extended use of these filters. The barrack filters in ordinary use in India are, as we have often said, worse than useless as regards the prevention of water-borne diseases, and no time should be lost, we think, in giving some trial on a large scale to the kind of filter that is used at present in the French army.

THE CASE OF SURGEON-MAJOR GARDNER.

With reference to the case of Surgeon-Major Gardner M.B., Army Medical Staff, who joined the service in 1894 and resigned his commission under exceptionally pressing circumstances in October, 1890, we understand that the War Office have decided to offer no opposition to his claim for reinstatement in Her Majesty's army, and that the motion for a reconsideration of the circumstances attending his resignation, which will be brought forward by Mr. Brynmor Jones when the Army Estimates are reached, will be supported by a number of members on both sides of the House.

INDIAN MEDICAL SERVICE EXAMINATION.

An examination for not less than twelve appointments to Her Majesty's Indian Medical Service will be held in London during the month of August next. It is notified that at this and future examinations no candidate will be considered eligible unless, in addition to obtaining at least one-third of the marks obtainable in each compulsory subject, he shall obtain one-half the aggregate marks for all the compulsory subjects. The exact date of the examination will be announced subsequently.

SMALL-POX IN CALCUTTA.

It would seem that the epidemic of small-pox which has been raging at Calcutta shows some signs of abatement. According to the Indian mails the number of patients at the Campbell Hospital has fallen to 148, forty-five of whom are Europeans.

The annual dinner of the Volunteer Medical Staff of Liverpool and district was held at the Exchange Station Hotel on Wednesday evening, the 24th ult., Brigade-Surgeon-Lieutenant-Colonel Wills, V.D., being in the chair. Amongst those present were Colonel Stache, R.E., Captain Crofton, R.N., Brigade-Surgeon-Colonel Nicholson, A.M.D., Fleet-Surgeon White, C.B., Lieutenant-Colonel Hart, R.E., Major Thompson, R.E., and the President, Medical Institution.

The *Times of India* states: "Until further orders the Government of India have ruled that no Military Medical Officer will be allowed to proceed on leave unless on medical certificate. This ruling will take effect after May 15th."

Nine invalids left Ceylon in the *Jumna* for Netley on April 1st, and twenty-five invalids were notified as leaving South Africa for Netley on April 6th.

H.M. troopship *Malabar*, which left Bombay on April 4th, is expected to arrive at Portsmouth on May 3rd with eighty-three patients for Netley.

It has been decided by the Government of India to allow officers embarking direct from Rangoon for Europe Rs. 575 as passage money.

Correspondence.

"Audi alteram partem."

"MEDICAL EVIDENCE AT INQUESTS."

To the Editors of THE LANCET.

SIRS,—My attention has been called to an article in THE LANCET of Feb. 2nd referring to an inquest held by me on one James Powell, who shot himself through the head on Jan. 11th. The article is erroneous and I think you should not have inserted it in a valuable and important paper like yours without ascertaining whether it was true. It proves the folly of accepting as correct the statements of interested informants. In this case the medical man who had attended the deceased for many years was called in and arrived shortly after death, when he examined the wound, and his evidence as to its description and other matters was given at the inquest, and was satisfactory to the jury, myself, and the solicitor who represented the family. There was no need to cause unnecessary expense to the ratepayers by calling the other medical man at the inquest, who could only corroborate the description of the wound, whereas the one who gave evidence knew the deceased so well, and assisted the court in deciding as to the state of his mind, which was important in a case of this sort.

I am, Sirs, yours faithfully,

H. MILLIGAN,
Deputy Coroner.

Victoria-buildings, King-street, Wigan, Feb. 22nd, 1895.

*** We willingly insert the above and regret the delay which has occurred in its publication owing to Mr. Milligan's letter having been mislaid. We still think, however, that it would have been advisable to take the evidence of the medical man who first saw the wound.—ED. L.

ISOLATION AFTER DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—Would you allow me to express a word of warning as to the risk of accepting the absence of specific bacilli (even after expert bacteriological examination) as conclusive evidence that a suspicious case of throat affection is not diphtheria? A case of undoubted diphtheria was recently notified to me. There had been no previous case in the house or vicinity, and careful inquiry failed to obtain evidence of any probable source of infection, and the patient, having recently suffered from whooping-cough, had not been out of the house for a period far exceeding the outside period of the incubation of diphtheria, but had developed the first symptoms of that disease three days after coming in contact with her brother, who had just returned from London. His recent history was as follows. He is employed in a house of business in London, and whilst there developed a throat affection and was seen by a medical man on behalf of his employers. This gentleman considered the case suspicious and called in a second opinion, and the result of the consultation was that the patient was notified as suffering from diphtheria and forthwith removed in the ambulance to one of the metropolitan isolation hospitals, where he was injected with antitoxin. This was on March 28th, and on April 11th the patient was discharged and sent home by rail. As this was the day preceding Good Friday the train was crowded with holiday-seekers. I have communicated with the hospital authorities, and learn that this step was taken after a bacteriological examination had given negative results as regards the specific bacilli of diphtheria. In conclusion, may I be allowed to state that, on the results of etiological investigation of a very large number of outbreaks of diphtheria extending over a number of years, I have arrived at a decided opinion that in none of our ordinary severe infectious diseases are we so likely to meet with cases of prolonged infection and in none is it so important to advise the longest period of isolation practicable and reasonable? I am, Sirs, yours truly,

Shropshire, April 29th, 1895.

W. N. THURFIELD, M.D.,
County Health Officer.

"PROVISION FOR YOUNG IMBECILES."

To the Editors of THE LANCET.

SIRS,—I should like to add my support to the opinions expressed on this subject by Dr. Shuttleworth and Miss Twining. During the time that I was at the Darenth Schools for Imbecile Children I repeatedly had to refuse admission to imbecile children in various parts of England because the parents did not live in London, residence in the metropolis being necessary to secure reception of their children. Since leaving the schools, and more especially since my connexion with a London hospital for nervous diseases, I have come into contact with a large number of cases whose parents or medical attendants wished them to be admitted into an institution in order that the children might be suitably educated and trained, but I have been obliged in too many cases to say that no accommodation could be found. There is no doubt that there are very many imbecile children scattered throughout the country for whom training schools should be provided, and my opinion on this point is strengthened on reading the return recently made by order of Sir Walter Foster as to the number of imbecile and epileptic children under sixteen years of age in each workhouse, separate infirmary, school, or other similar establishment belonging to the guardians of unions in England and Wales (excluding the metropolis). It is a lamentable fact that England—which is foremost in charitable and philanthropic enterprise—lags so far behind other countries in its provision for these unfortunate children. Our American cousins are usually wide awake and not disposed to throw away their money, and yet in America there are fifteen or sixteen institutions for providing education and training, while we in England are content with six. Plenty of money is spent year by year in building asylums for the insane or adding to the accommodation already existing, and yet hardly anything is done for the training of these children. To allow the educable cases to remain in unions, where no provision for teaching is made, is a bad and expensive policy. This fact requires to be brought home to the minds of guardians and others whose business it is to look after these children, and it should be demonstrated to them that it is quite as necessary and important to make provision for juvenile imbeciles as for the insane.

I am, Sirs, yours faithfully,

FLETCHER BEACH,

Formerly Medical Superintendent of the Darenth Schools for Imbecile Children.

Kingston-hill, S.W., April 29th, 1895.

"THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON."

To the Editors of THE LANCET.

SIRS,—The letter in THE LANCET of to-day from the Medical Society requires a few words of reply, and for many reasons it is fitting they should come from me. It must first of all be noticed by everyone who has carefully read the letters of this society that the charges they have formulated against the hospital and its officers have undergone frequent changes, the most notable of which occurs in Paragraph I, in which the words used up to the present, "appalling frequency," degenerate into "unusual frequency." This is most satisfactory, and I am glad the society has seen fit to alter its verbiage. I do not know even now that the words "unusual frequency" are entirely fitting when the facts are considered. When I began first to know Southampton intimately from residence in its neighbourhood I was asked to see a number of patients in consultation and to do a number of operations. I was not surprised to find a large proportion of cases of bad pyosalpinx, for Southampton is just the kind of place where I should have expected to find them. But I was surprised to find that no effort whatever had been made effectually to treat these cases as they must be treated, and I could not discover that any ever had been so treated at the Royal South Hants Infirmary. I urged the establishment of a special hospital first on Mr. J. F. Bullar, who had been one of my post-graduate pupils, and then upon Mr. Elliot. The former gentleman elected to follow another special line of practice by opening an ophthalmic hospital. Mr. Elliot followed my advice, and I took no small pains to do all I could to help him towards success, and I am glad to feel that I have succeeded. I operated on a large number of cases, some in

Southampton, many more in Birmingham. If all these had been included in Mr. Elliot's list their number in *ratio* might have, indeed, seemed to be "appalling," but they were merely the accumulation of the neglect of years. I attended meetings of the Southampton Medical Society, I showed specimens of Fallopian bags of pus fresh from Southampton patients, I did my best to instruct my audience in the diagnosis and treatment of such cases—some if not the whole of the surgical staff of the infirmary were present—but up to the present day it would seem as if gonorrhoea and its products were unknown in Southampton so far as the infirmary is concerned, for not a case of damaged appendages is yet recorded as having been dealt with there. There may be, yet I know that in spite of all my warnings and preaching against what has most erroneously been termed "Tait's operation" there has been a removal of uterine appendages far too widely extended. Hardly a month of my life passes in which I have not at least once to interfere and prevent an operation being performed, and it is very likely that I have given my vote against proposals of the kind at Southampton. This has happened in a number of cases at Southampton, and this fact goes to prove not only that I exercised the repressive influence which all consultants similarly placed must occasionally be called upon to exercise, but that Mr. Elliot loyally abided by my advice. Some of these cases the members of the Southampton Society have hunted up, and they pervert, or wish to pervert, the legitimate inference to be drawn from them. That early experience will conclude for the necessity of operation and that maturer experience will decide against it is the fact of most striking importance in the whole history of such operations as strabismus, excision of joints, &c. If it were not so, what would be the good of extending experience? There may be yet, as there have been, errors of commission; but are those who deliberately and persistently sin by omission to have no word raised against them? I assert that the greatest possible care has been used in the practice of the Women's Hospital at Southampton to avoid errors of commission, and the fact that the Medical Society of Southampton decline to hear the details of all the cases performed there read before them and be themselves the judges shows that they know this to be true. However, such a paper will be read before the British Gynecological Society, and then I challenge the members of the Southampton Medical Society to produce any evidence they may have to the contrary.

One word as to the resignation of "four non-resident members of the society" arising directly from this issue. From the lightsome way in which this resignation is spoken of your readers might be led to regard it as of no consequence. They are "non-resident" members in the sense that they do not dwell within the borough of Southampton, but they were the four most distinguished members of the society, four members of the staff of the neighbouring Government Medical School at Netley, quite closely enough resident to know all the facts—men of position and knowledge to be able to judge correctly, so completely free from local prejudice as to give an unbiased judgment and to satisfy themselves of the real basis of all the complaints.

I am, Sirs, yours truly,

Birmingham, April 27th, 1895.

LAWSON TAIT.

To the Editors of THE LANCET.

SIRS,—The committee of the Women's Hospital are at one with the Medical Society in the determination, as expressed in their last letter, to avoid a newspaper correspondence, and this communication is the last they will make on the subject at issue.

They emphatically decline, as in the beginning, to recognise the claim of the Medical Society to interfere in the affairs of the hospital, holding as they do the opinion that its action has arisen only from a "mean and despicable jealousy," utterly apart from any true regard for the interests of the profession or for the welfare of the sick—a fact now thoroughly appreciated in Southampton. If complaints had reached them in any legitimate manner, such as from patients (or their friends) who had been treated in the hospital, or from subscribers to the charity, or from leading members of the profession, unbiased by local influences, they would have at once removed any defects brought to notice; but not a single complaint from any one of these sources has been made. The committee, therefore, resting their case on the integrity of their actions and on the weight

of evidence that has accumulated since this correspondence commenced as to the value of the work done at the hospital, may justly ignore the attempts to injure it so persistently and unworthily made by the Medical Society.

We are, Sirs, yours faithfully,
A. F. FORBES, M.A., Chairman.
H. C. PHILLIPS, Hon. Sec.

Southampton, April 30th, 1895.

To the Editors of THE LANCET.

SIRS.—The committee of the Women's Hospital regret that Dr. Playfair should have made any mistake as to the correspondence they referred to. The committee referred to the following correspondence which took place in November, 1894:—

[COPY.]

"SOUTHAMPTON MEDICAL SOCIETY.

"Hamilton House, Southampton.
"Nov. 21st, 1894.

"DEAR SIR,—I am instructed by the committee of the above society to forward you the enclosed copy of a letter from Dr. Playfair, consulting physician to the Women's Free Hospital, Southampton, which has been sent to Dr. Gwillim, joint hon. sec., Southampton Medical Society. Will you kindly lay it before your committee? I am instructed also to request the favour of an answer to the circular which was sent last week to your committee.

"The committee of the Southampton Medical Society think that they may reasonably expect an answer within a fortnight, and if none is received within that time they will feel justified, considering the gravity of the matter involved, in taking such further action in the matter as they may deem expedient.

"I remain, yours faithfully,

(Signed) "NORMAN ALDRIDGE,

"Joint hon. sec. Southampton Medical Society.

"H. C. PHILLIPS, Esq.,

"Hon. Sec. Southampton Free Hospital for Women."

[COPY.]

"31, George-street, Hanover-square, W.,
"Nov. 18th, 1894.

"DEAR SIR,—I have been asked by Dr. Bullar whether in my opinion the questions put to the committee of the Women's Free Hospital in Southampton, in your circular of Nov. 8th, are such as are reasonable, and should receive a full and explicit answer. To this I have no hesitation in replying fully in the affirmative. In my opinion when any question arises as regards the working and results of such an institution in its own interests the more fully details are given the better. Personally I know nothing of the Southampton Free Hospital for Women. When I was asked to become consulting physician I consented under the full belief that it was all that such a hospital should be.

"Now that this has been called in question I am distinctly of opinion that its committee should afford every facility for a full and ample investigation of its working and results.—I am, faithfully yours,
(Signed) "W. S. PLAYFAIR."

As Dr. Playfair corresponded with the Medical Society some weeks before he wrote to his committee the committee naturally treated his latter communication in the only manner which was open to me. The committee do not think they need repeat their views on this subject, but would like to point out that they never attached the word "dis-courteous" to Dr. Playfair's correspondence, but to the manner in which he has treated them.

We are, Sirs, yours faithfully,
A. F. FORBES, M.A., Chairman.
H. C. PHILLIPS, Hon. Sec.

Southampton, April 30th, 1895.

REGISTRATION OF MIDWIVES.

To the Editors of THE LANCET.

DEAR SIRS,—Kindly oblige the guardians by publishing the enclosed.—Your obedient servant,

JNO. H. RUTHERGLEN, Clerk.

[COPY.]

"ST. MARY ABBOT'S, KENSINGTON.

"Guardians' Offices, Marlborough-road, Kensington, W.,
"April 30th, 1895.

"SIR,—The guardians of this parish, who for some years past have trained in the special lying-in wards attached to their infirmary a large number of trained nurses to pass the examination of the London Obstetrical Society, have heard with much regret of the resolution passed by the General Medical Council on Dec. 3rd last with respect to the issue of midwifery diplomas or certificates in general, and of the certificates of the Obstetrical Society of London in particular. The guardians are the more surprised at this action as they have always understood that the General Medical Council have regarded the absence of public provision for the education and supervision of midwives as being productive of a large amount of suffering and disease among the poorer classes, and that the Council had been recommended by a Select Committee of the House of Commons to frame rules for the conduct of examinations for the admission of women to act as trained and certificated midwives. It was to a great extent to meet these expressions of opinion that the guardians of this parish undertook, in conjunction with the Workhouse Infirmary Nursing Association, the yearly training

of a number of previously qualified nurses in their midwifery wards, but they have every reason to fear that if the resolution of the Council stands, and the London Obstetrical Society therefore ceases to issue in its present form its diploma or certificate of competency, the good work which they have been doing for so many years will cease, as women will be unwilling to enter for a course of training for which they will be unable to obtain a certificate of efficiency, qualifying them to act as midwives. Having regard, therefore, to the value and importance which is attached to special training in midwifery, and to the examinations conducted by the London Obstetrical Society and other bodies, the guardians have directed me to ask that the General Medical Council will reconsider and withdraw their resolution of December last, so that the training and sending out of competent midwives may be continued unimpeded.

"I am, Sir, your obedient servant,

"JNO. H. RUTHERGLEN, Clerk.

"The Registrar, General Medical Council,
"239, Oxford-street, W."

"DEGREES OF KNEE-JERK."

To the Editors of THE LANCET.

SIRS,—Will you kindly give me a few lines of your space to make a slight addition to an article under the above title in THE LANCET of March 30th, 1895? In the last sentence but one, on p. 802, I expressed a hope that someone would invent an instrument which should enable us to measure the degree of any given jerk. My attention has been drawn to an article by Dr. Ewen Maclean in the *Bristol Medical-Chirurgical Journal* for March, 1892, in which he describes and figures such an instrument; he calls it a "jactometer," and it was made for him by Messrs. Down Bros., of London. His instrument fulfils so completely the three requirements I mentioned in my article that I think I must have heard or read of his invention before I wrote the article. If so, I had quite forgotten all about it, and I know I had not read his paper when my article appeared. I have not yet had an opportunity of seeing it in working, but I hope that all who are interested in the knee-jerk will read his paper and if possible try his instrument. It appears to me to be very ingeniously constructed.

I am, Sirs, yours faithfully,

London, April 30th, 1895.

LEONARD J. KIDD.

"A CASE OF EQUINIA (GLANDERS); RECOVERY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 16th Mr. T. W. H. Garstang records, under the above heading, a supposed case of glanders in a veterinary surgeon. The patient was thought to have contracted the disease while treating a horse affected with "nasal catarrh of a suspicious type," but, strange to say, both man and horse ultimately recovered. It appears to me that this fact throws grave doubts on the accuracy of the diagnosis in both cases. It is admitted that recovery from glanders is exceedingly rare in man, and in the horse it is essentially a fatal disease. I am not aware that there is any recorded case of recovery from glanders. Owing to the difficulties of making an accurate diagnosis in certain cases in the horse, cases of "nasal gleet" have in times past been mistaken for the specific disease, and on their recovery it has been claimed that they were genuine cases of glanders, but I do not think any authentic case of glanders has ever been known to recover. It is not for me to question the accuracy of Mr. Garstang's diagnosis in his case, but I should like to make a few observations on the opinions expressed by his patient on the subject of glanders in the horse. I have no means of knowing who the veterinary surgeon is, or whether he is a member of the Royal College of Veterinary Surgeons, or only a registered practitioner without any qualification, but it seems evident, from the statement attributed to him in Mr. Garstang's article, that he has not kept himself acquainted with the latest knowledge on the important question of glanders. He is reported to have said "that glanders always commences with nasal gleet, from which the animal may recover; but that when the gleet runs on to glanders or farcy recovery is impossible." In this statement appears the confusion I have referred to above. Chronic nasal catarrh or nasal gleet cannot run on to glanders. It is a non-specific disease affecting the mucous membrane lining the nasal passages and sinuses. It is often very difficult to treat, and usually proved most obstinate, but recovery may and frequently does take place. There can be no connexion between the local affection known as nasal gleet and the fatal specific disease glanders. Glanders begins with a discharge from the nasal passages, followed by other symptoms specially characteristic of the disease—ulceration

of the Schneiderian membrane, enlargement of the lymphatic glands &c.—but it is a specific disease from its commencement and runs a regular course invariably ending in death. Unfortunately the nasal discharge in glanders may for a long time be unaccompanied by any other visible sign of the disease, and it is in these cases that we find the greatest difficulty in deciding whether we have to deal with a simple nasal catarrh or with the dangerous malady glanders.

A few years ago, the only means of deciding whether such a discharge was specific or not was by inoculating a donkey with the discharge and waiting the result. If the case was glanders, then the donkey became affected, and all doubts were ended. To-day we have another aid to diagnosis in mallein, which is used as an inoculation in a suspicious case, and which produces certain definite results whenever glanders exists. It is reliable, and by its use we can detect latent cases of glanders, even where no discharge or other symptom has been noted. Then the veterinary surgeon goes on to say "that a horse suffering from nasal gleet may infect healthy horses with glanders or farcy, and yet may not show any symptom beyond the gleet, and may eventually recover, while the horses infected by him will die of the disease." Here is another fallacy. If the horse with the nasal discharge has glanders of course he may communicate the disease to other horses in close contact with himself and they may die while he may *apparently* recover for a time; but the improvement is only temporary and sooner or later acute glanders will supervene, rapidly ending in death. If, on the other hand, the horse is merely suffering from chronic nasal catarrh he cannot infect other horses with glanders, and if the other horses do become affected with glanders we should have to look for another source of infection. If the horse which was thought to have communicated glanders to the veterinary surgeon was only suffering from nasal gleet, he probably would recover as stated, but he could not produce glanders in the man. If he *was* suffering from glanders and appeared to recover, then sooner or later the disease will become acute and will cause his death.

I cannot believe in a case of simple nasal gleet running on to glanders or farcy, nor in true glanders ending in complete recovery. It is much to be regretted that the case in the horse was not tested by an inoculation of mallein, which would have set all doubts at rest. I do not know whether the mallein test has ever been tried in the human subject, but it seems worthy of trial, and might have been useful in the case recorded by Mr. Garstang. It would be most interesting to hear something of the later history of the horse in question, whether his recovery has been permanent, or whether any relapse has occurred. If the horse has *completely* recovered, as stated, I should say positively that he has never suffered from glanders, and that if Mr. Garstang's diagnosis was correct he must look for another source of infection. If the horse is still alive it would be most interesting to learn whether an inoculation of mallein would produce any effect. It would decide positively whether he has glanders or not, for it is possible for a horse to suffer from chronic glanders for many months before the malady becomes acute, the disease being confined to the lungs and producing no visible sign of ill-health. At any rate it is impossible for a veterinary surgeon to accept the statement that the horse has had glanders, has conveyed the disease to a man, and has completely recovered. With many apologies for taking up so much space,—I am, Sirs, yours faithfully,

T. W. CAVE, M.R.C.V.S., F.R.M.S.

University College, Nottingham, April 22nd, 1895.

THE DISCOVERY OF ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—It seems to me that Dr. Preston's letter in THE LANCET of April 20th, claiming the discovery of anæsthesia for Dr. Long, ought not to go unanswered. Some ten years ago I investigated this most interesting, but highly complicated and little known subject, and the conclusions at which I arrived were as follows. Priestley¹ discovered nitrous oxide gas in 1772. In 1800 Sir Humphrey Davy² discovered its anæsthetic properties and successfully inhaled it himself to relieve the pain of cutting a wisdom

tooth. In his account of these experiments there occurred this memorable sentence: "As nitrous oxide in its extensive operation appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place." Strange to relate, nothing came of these remarkable observations. Their real import was not understood until nearly half a century later. One winter's night in December, 1844, a number of the inhabitants of Hartford, U.S., assembled to hear a lecture on nitrous oxide and other gases from Dr. Colton, a well-known popular lecturer, who tried the effect of the first-named gas on several of the audience. Among those present was Dr. Horace Wells, a dentist of that city. He noticed that a person under its influence sustained a severe injury of his leg without feeling any pain. Wells was so impressed with this fact that the next day he got the lecturer to give him the gas, and while under its influence he had a molar tooth extracted without feeling the least pain. As he recovered from the effects of the gas his first words were: "A new era in tooth-pulling."³ The modern practice of anæsthesia dates from this operation. He soon afterwards gave the gas to more than a dozen of his patients, and with complete success. There can be no doubt that Wells, as indicated by the title of his pamphlet, "The History of the Discovery of the Application of Nitrous Oxide Gas, Ether, and other Vapours in Surgical Operations," had thoroughly grasped the anæsthetic idea, which in its subsequent developments so completely revolutionised surgery. He alone, in my opinion, is entitled to be regarded as the discoverer of modern anæsthesia. After his tragic death in 1848 his discovery was again in danger of being lost. Colton's praiseworthy endeavours to reintroduce it were in vain until 1863, when he succeeded in getting a few practitioners to try it. Subsequently its use spread rapidly. Among those present at Wells' ill-fated trial of gas at the Boston Hospital was his former pupil, Dr. Morton, and Dr. Jackson, lecturer on chemistry. Desiring in 1846 to use the gas in dentistry Morton applied to Wells for instructions how to make it. Wells referred him to Jackson, as the latter was a scientific man and a chemist. Jackson advised Morton to use ether instead, as it possessed the same properties and was as safe and easier to get.⁴ Acting on Jackson's suggestion, on Sept. 30th, 1846, Morton painlessly extracted a bicuspid tooth from a man named Eben Frost. Thus the anæsthetic properties of ether were first practically demonstrated. In the following October several important operations under its influence were performed at the Boston Hospital, Morton being the administrator. In a wonderfully short time ether was in use nearly all over the civilised world. Probably no great improvement in the practice of medicine, once started, ever became so rapidly established. This was no doubt in a measure due to the fact that prior to Morton's discovery the properties of ether were not altogether unknown. It had often been inhaled both in America and elsewhere as an excitant. In 1818 Faraday had pointed out that the effects of inhaling its vapour were similar to those produced by nitrous oxide gas, and it was subsequently customary in the college courses both in Europe and America to illustrate this fact by various experiments. The resemblance between the action of nitrous oxide and ether vapour was therefore well known. A French dentist, Parmentier of Paris, had occasionally anæsthetised his patients with ether prior to 1840. Dr. Wilhite, of Anderson, U.S., accidentally anæsthetised a patient with ether in 1841. We next come to Dr. Long, an English physician practising in Jefferson, U.S., who in 1842 performed a surgical operation on a patient thus anæsthetised. As, however, none of these persons published any account of their experience, the far-reaching importance of which they failed to discover, it is impossible to accord to any of them the honour of the discovery, for in a matter of this sort publicity is the touchstone of invention. Such are the isolated antecedent facts subsequently brought to light after the practice of ether inhalation had been established by Morton, to whom, in my opinion, the chief credit is due, for the history of all great discoveries shows them to have cast similar shadows before.

I am, Sirs, yours truly,

Preston, April 25th, 1895.

W. ROGER WILLIAMS.

¹ Experiments and Observations on Different Kinds of Air, vol. i., p. 215. London, 1774.

² Researches, Chemical and Philosophical, chiefly relating to Nitrous Oxide, pp. 464-65. 1800.

³ Wells' Pamphlet: Discovery of Nitrous Oxide &c., p. 14.

⁴ Official Documents &c., Jackson's Statement, p. 472, also Morton volume, p. 47.

"MEDICAL SOCIETIES AND HOMŒOPATHS."

To the Editors of THE LANCET.

SIRS,—I read your leading article on the above subject in THE LANCET for April 13th, but did not know that you expected or would admit a reply to your "arguments" until I saw in to-day's issue that you apparently expected such a reply. As I happen to be a member of the Pathological Society of London of more than forty years' standing, I suppose I may consider your article includes a reference to my membership in this society. I may say that I joined this society in order to keep myself *au courant* with the progress of pathological knowledge, and not with any view of enlightening its members on any peculiar pathological theories or doctrines held by the school of homœopathy, for I may add that our school has no peculiar pathological theories or doctrines, and that the pathology we profess is precisely that taught in the ordinary medical schools. Such being the case, I do not see how my peculiar therapeutic views should disqualify me from being a member of a pathological society which is of no therapeutical faith. I do not happen to be a member of any society of general medicine which has to do with therapeutics, the homœopath societies proper being quite sufficient for my wants. But as according to the confessions of your most eminent men the therapeutics of the non-homœopaths are in a most imperfect and unsatisfactory state, I do not think it would do the general profession any harm, but probably much good, if they had in their societies members who are conversant with the reformed therapeutics of homœopathy. As we observe with amusement the frequent recommendations in THE LANCET and other medical periodicals, as newly-discovered remedies, of medicines that have long been used in our school, and for precisely the same affections as they are employed in homœopathy, it might on the whole be better that you should obtain a knowledge of these medicines and their therapeutic uses at first hand, from those who have long employed them, than have them introduced into your practice in the indirect and roundabout manner they are at present. To object to us as "irregular practitioners" seems to me to be very absurd, as we are the only medical men who really practise according to a *regula* or rule, and eminent authorities in your school have declared that medicine as they practise it has no principles, and that their treatment is not guided by any rule. I can assure you that those whom you call "homœopaths" are not, as a rule, desirous of joining your therapeutic societies, as they know they would meet with but scant courtesy from the members; nor are we at all desirous of having consultations on medical treatment with adherents of the old school, as we think that our own therapeutic method is infinitely superior to yours, as we are always ready to prove by reasoning and by results.

I am, Sirs, your obedient servant,

R. E. DUDGEON, M.D.,

Member of the Pathological Society, and Consulting Physician to the London Homœopathic Hospital.
Montagu-square, April 27th, 1895.

To the Editors of THE LANCET.

SIRS,—On page 1094 of the current number of THE LANCET you say: "If this is the only answer homœopaths can give to our arguments, further remarks on the subject would seem not to be called for." The inference is that if homœopaths have anything further to say you are willing to place it before your readers. I will therefore avail myself of your courtesy and offer a few brief remarks on the subject of your leading article in THE LANCET of April 13th on "Medical Societies and Homœopaths." Allowing for the moment that homœopathy is a delusion, and agreeing fully with your own view that this delusion, however unfortunate it may be, refers only to "the limited department of drug treatment," it is not obvious to those who view the matter from a standpoint other than your own that there is left no common ground between the "homœopath and the general body of the profession." Consequently to refuse to meet "homœopaths" either in "consultation upon an individual case" or at a medical society "in a conference upon any question of scientific interest" appears irrational and illiberal. In these days superstitions die an easy death when once the light of science is allowed fully to shine in upon them. No scientific society has ever investigated the pretensions of homœopathy except such societies as were composed of

medical men already ostracised for having investigated them. To permit its claims to be thoroughly sifted in the light of day would result, if they are fallacious, in their final repudiation in a far shorter time than by any other method. The ever-changing measures and methods of modern therapeutics suggest that some enduring guide to the administration of drugs is at least a *desideratum*. It is claimed by thousands of educated practitioners and teachers of medicine that homœopathy affords such a guide. That it is "partially true" is acknowledged by authorities so high as Lauder Brunton and Sidney Ringer. This being so, the leaders of the general body of the profession are incurring a serious responsibility in declining to investigate a method so promising. That "homœopathy in the strict sense" is extensively practised in this and other countries is a fact of which you appear to be ignorant. That it is in some instances a safe and useful guide to treatment is easy to prove from writings the soundness of which even you yourselves would not question. Just how far it may be trusted is a point which demands a patient and vigorous investigation at the hands of those competent, by education and open-mindedness, to decide. The resources of the learned societies are required for this noble and pressing purpose. A few years devoted to the subject by those possessed of brains and money would suffice to settle the question, to advance therapeutics from a changing art to a stable if juvenile science, and to remove the disgrace of medical schism.

I am, Sirs, yours truly,

London, April 29th, 1895.

EDWIN A. NEATBY, M.D.

"HOSPITAL PATIENTS AND IMMORALITY."

To the Editors of THE LANCET.

SIRS,—In reference to the annotation "Hospital Patients and Immorality" in your last issue, with the tenour of which I most fully and heartily concur, permit me to point out that your annotator has been led into error as to the statements attributed to me through trusting to a Sunday contemporary which contained an altogether insufficient and totally unauthorised account of my remarks. The meeting at which I presided was addressed by the Rev. the Marquis of Normanby on the subject of "Temptation and Self-control," with especial reference to impurity. In my chairman's address, after alluding to the importance of the subject and illustrating the need of self-control in the ordinary affairs of physical and social life, one turned to the many forms of want of control which young men were especially prone to develop, prominent among them being impurity, intemperance, gambling, and other such vices, which left their marks not only on the moral but also on the physical nature of those who indulged in them, adding by way of emphasis the statement to which umbrage has been taken, but which referred not only to the results of impurity but also to the other excesses to which I had already alluded. To such a statement surely no one can take exception. Moreover, as to statistics, I was most definite in pointing out that none were to hand, and hence my estimate was to be taken with a certain amount of reserve, rather as an impression received from many years of hospital work than as an accurate statement of facts. Under these circumstances I think you will agree with me that the want of accuracy lies not with the most carefully guarded remarks made by myself, but in the incorrect interpretations which have been placed upon them by others and in the want of care evidenced by those who copied such a statement without verifying it.

I am, Sirs, yours obediently,

Welbeck-street, W., April 30th, 1895.

ALBERT CARLESS.

"THE NECESSITY FOR A CENTRAL MEDICAL ORGANISATION."

To the Editors of THE LANCET.

SIRS,—When reading my paper on "The Necessity for a Central Medical Organisation" before the Hunterian Society on Wednesday last the time at my disposal did not allow of more than a very brief sketch of the organisation I proposed. It was, I think, generally agreed that an organisation is necessary and that there is no organisation at present which meets the necessities of the profession. As there was a slight misunderstanding about the scheme I suggested

will you allow me to give it a little more in detail? I suggested a coöperative association which embodied the following idea. It consisted, in the first place, of a union of medical societies, whose members supplied the funds—either as shares or as subscriptions guaranteed for a number of years, preferably the former, which are essential, in my opinion, to the success of any undertaking of this nature or with this object. The local organisation of the profession would be carried out by boards in each district, and from these boards delegates would be sent to form the board of directors of the association. This board would therefore be composed of medical men in direct touch with every part of the kingdom. Through it local as well as general unity of action might very well be arrived at. The medical societies of the United Kingdom represent, on the average of the three kingdoms, about 50 per cent. of the medical profession, and might therefore be utilised for the purpose suggested. Such a coöperative association, with money at its command, would be capable of successfully meeting the many lay as well as the so-called charitable competitors we have to contend with. It could cope with the prescribing druggist, with medical aid associations, with the abuses of hospitals and public dispensaries, and with provident dispensaries and their sweating system. I will refer to the method by which it might deal with lay medical aid societies, as this point was especially animadverted upon in the discussion which followed the paper. By the transference from the lay companies to the medical coöperative association of the business of the former, the medical officers now attached by bond or by necessity to them would be freed from lay restraint and from "sweating." This could, I have every reason to believe, be accomplished by the process of underselling them or by buying them out, or by both methods combined, and without much difficulty. I cannot see that this would bring the association into conflict with the tenets of medical etiquette. Obviously, it need not affect the medical officers. One important result of such action would be that insurance societies would be very chary of embarking capital in a business when they knew that they would be systematically undersold to an extent which would cause them to fail to earn a dividend. Such an association as I have suggested would have far more power over its members than any body supported by voluntary contributions. It could unite the existing protection, insurance medical societies &c., and could afford its members exceptional facilities, as in supplying them with drugs, instruments, &c. at manufacturing or greatly reduced rates, 35 per cent. being commonly added to the cost of production. In conclusion, I shall be happy to hear from any medical men who agree with me as to the necessity for a central medical organisation, and if together we can produce a workable scheme and can start it the amount of time expended on such an object will be well repaid in feeling we have benefited our profession.

I am, Sirs, yours truly,

Fellows-road, N.W., April 27th, 1895.

F. R. HUMPHREYS.

"THE THERAPEUTICS OF PAPAIN."

To the Editors of THE LANCET.

SIRS,—Dr. Younger's article in THE LANCET of April 27th is a most interesting contribution to the therapeutic value of papain. All the cases he relates refer to a functional disturbance of the digestion, and most of them are accompanied by a condition of anæmia. It seems probable that both atonic dyspepsia and gastric ulcer, to which it stands in close relationship, are always connected, either etiologically or consequentially, with an impoverished state of the blood; there is, therefore, in both disorders an urgent demand for such blood tonics as arsenic and iron. In most cases, moreover, pain is a more or less urgent symptom, and for its relief an anodyne is often essential. Dr. Younger recognises all this because in many of his cases he administered iron, though in comparatively small quantities, while in others he resorted to the use of morphia. The papain seems on each occasion to have been ordered in an acid menstruum, and the iron administered separately. If there is great irritability of the stomach any medicinal mixture, from its disagreeable taste, is apt to produce nausea if not actual sickness, while the mineral acids are not always indicated and are sometimes very badly tolerated. In my own experience these difficulties have been overcome by the administration of the required drugs in pill form; and while each case demands a combination suited to its particular

needs it may be of general interest to state that the following formula, when combined with a suitable regimen, has again and again yielded most excellent results:—R Ferri sulph., papain (Finkler), aa gr. ij.; ext. cannab. ind., ext. nuc. vomic., aa gr. ½; ext. rhei, gr. ½; ft. pill. Sometimes reduced iron suits better than the sulphate, at others arsenic meets the requirements of the case better than nux vomica, and occasionally morphia is more efficacious than cannab. indica; but I am convinced that, apart from these necessary differences in detail, the full value can only be got from papain when it is administered in association with such other medicinal agents as the crying symptoms of each case declare to be essential, and that in a large proportion of deranged stomachs it is best tolerated in the form of a pill. I have repeatedly found the drug disappointing when given alone, but cases such as those reported by Dr. Younger, or those mentioned by myself in your issue of Feb. 9th, strongly proclaim its signal effect when administered under suitable conditions.

I am, Sirs, yours faithfully.

Warwick, April 29th, 1895.

GUTHRIE RANKIN.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—I was very much surprised at the letter of "One Interested" in THE LANCET of April 20th, as his experience of the London and Manchester Industrial Assurance Company has been so very different from that of others who have written to you concerning it; but I am confident he would have had a different tale to tell had he kept an accurate record of the medicines supplied to his patients during the year. As it is he only "estimates" the medicines supplied; consequently neither he nor anyone else can definitely say what number of bottles was actually dispensed, and his statements in favour of the above company are in consequence open to doubt. On the other hand, I can give an accurate account of visits and medicines supplied from Sept. 29th, 1894, to March 25th last. I can also give an account from Feb. 7th, 1894, when I became referee, to Sept. 29th, 1894; but during that time I did not take note of all "repeats," consequently the numbers are much under what they would have been had I kept an accurate record. However, I prefer to let them stand as they are rather than estimate the additional numbers. They are as follows:—

	Bottles.	Visits.	Paid.
March 25th to June 24th, 1894	117*	51	£ s. d. 3 17 0
June 24th to Sept. 29th, 1894	346*	59	9 13 7
Sept. 29th to Dec. 25th, 1894	250	59	9 14 6
Dec. 25th, 1894, to March 25th, 1895 ...	222	66	9 5 0
Totals for year	935*	235*	32 10 1

* These are below the correct numbers.

That, worked out, gives only 8½d. for each bottle of medicine and leaves nothing for visits. If that is not sweating a medical man I should like to know what is. Even a "sixpenny" dispensary would pay better. These figures would have been still less favourable had I not refused during the last two quarters to treat as club patients those able to pay an ordinary fee and chronic cases, of whom there were not a few on my lists for the previous quarters. Mr. Woodward says in a letter in your issue of March 30th that the medical officers "are as well remunerated by us as by their private practice amongst the same class of people." To what class of practice does he refer? I am not aware that there is any cheaper class of practice than that carried on in "sixpenny" dispensaries, yet I have shown that his company does not pay as much.

The facts I have just stated constitute, if I may so term it, the "primary sweating" that everyone who carries out his agreement with the company has to suffer. Now let me expose the "secondary sweating," which as yet none of your correspondents has mentioned, and which seems an integral part of the system. Shortly after I had agreed to act as referee the district superintendent called upon me and told me that in order to obtain a large list it would be necessary

for me to attend patients immediately on their joining the society, and he also tried to persuade me to make a low uniform charge for each accouchement. I told him that, as far as accouchements were concerned, I should do nothing of the kind. He then remarked to a collector who was with him to the effect that they could not place on my list many *enccinte* women who might join the society and wish to be attended by one of their medical officers. As regards immediate attendance, unfortunately for a short time I agreed to it, and the result was that a number of people joined the society for a few weeks in order to get medical attendance and then left it. For those patients, of course, I got no payment whatever, as their names did not appear on the quarterly list. This, Sirs, is what I term "secondary sweating," as it is produced not by fulfilling the terms of agreement with the company, but by its agents. I should like to ask Mr. Woodward if the company approves of such actions on the part of its subordinates; and, if so, what right has the company to ask a medical referee to do more than he has agreed in writing to do? If the superintendents and agents act on their own account, the sooner they are placed under proper control the better, as I know that those who do not agree to the "secondary sweating" have very little chance of ever getting a large list from the company, which, even under the most favourable circumstances, would scarcely pay expenses. I must express my regret that I ever, through ignorance, had any connexion with such a company.

I am, Sirs, yours faithfully,

St. Peter's-park, W., April 29th, 1895.

C. W. J. DUNLOP.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—Mr. Cotton's argument is just the converse of mine. Every doctor of medicine is a physician, but every physician is *not* a doctor, is my contention. A doctorate is a university degree; the possession of a licence in medicine or surgery only makes a man a "Licentiate." The Licentiate of a College of Surgeons is undoubtedly a surgeon, and the Licentiate of a College of Physicians is undoubtedly a physician; but neither the one nor the other is a graduate in medicine or surgery, not a doctor of medicine or surgery, and not a "doctor" at all in the just and strict professional sense. Mr. Sewell remarks that I suggest "no likely remedy" for the present state of matters. The remedy is surely obvious enough; let men call themselves what they professionally are. The practice of medicine or surgery for gain is not illegal unless a title implying legal qualification is assumed—then punishment can be inflicted. On the other hand, no matter what legal qualification a man may possess he may call himself "Dr." with impunity. This I hold to be unsatisfactory, to be false representation, and misleading to the public.

I am, Sirs, yours faithfully,

Glasgow, April 27th, 1895.

D. CAMPBELL BLACK.

"MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS."

To the Editors of THE LANCET.

SIRS,—My attention has been called to an annotation in THE LANCET of April 20th under the above heading, upon which I shall be obliged if you will kindly allow me to make a few observations. In the first place I may be permitted to state that nothing can be more foreign to the intention of the Board than to put any slight upon the medical profession. With regard to the subject of your annotation it is desirable clearly to define the object of the Board in the proposed appointments, and to set forth the considerations which have influenced the Board in the matter. In February, 1893, the Board, upon the recommendation of the members of the Tower Hamlets division, decided to authorise the appointment of three medical gentlemen in that division to examine cases in which a medical certificate produced by a parent as a reason for the non-attendance at school of his child was considered to be doubtful or unsatisfactory. It had been found that parents who, for one reason or another, desired to keep their children from school frequently presented certificates which were unsatisfactory, either on

account of the vagueness of the terms employed or of a doubt as to the seriousness of the malady from which the child was alleged to be suffering. In other cases it was found advisable, for the sake of the child and of the school, to have a definite medical opinion; but delay and embarrassment arose from the absence of means available for the purpose.

I have before me a report of the Tower Hamlets divisional members upon the result of the experiment up to June, 1894. In this report, covering a period of fifteen months, the divisional members state that they consider the results, on the whole, satisfactory, and that they find that the opportunity of obtaining an independent medical examination has had a very beneficial effect in preventing idle excuses of illness and in securing the attendance of children who otherwise would probably have remained out of school. Indeed, the result of the experiment in the Tower Hamlets division has been such that members for other divisions of the metropolis are desirous of adopting a similar plan. I may here remark that the appointments in the Tower Hamlets division were made with the concurrence of the magistrates having jurisdiction in that division, and that appointments which the Board have recently decided to make in the East Lambeth division will similarly be submitted to the magistrates having jurisdiction in that division. I would beg to be allowed to point out that the medical certificates which are submitted by parents with regard to the attendance of their children at school are not, as your remarks would seem to imply, given by medical practitioners as a matter of courtesy to the Board. On the contrary, they are procured by the parent for production as evidence of the child's inability to attend school. In conclusion I would venture to remark that, so far from the question of the school attendance of a child being, as you suggest, a "trivial matter," it is, in my opinion, and I think nowadays in the opinion of most people, a matter of vital importance, not only to the future welfare of the individual child, but also indirectly to the community generally.

I am, Sirs, yours faithfully,

JAMES W. SHARP,

Chairman of the School Accommodation and Attendance Committee.

School Board for London, Victoria-embankment, W.C.,
April 30th, 1895.

COVENTRY PROVIDENT DISPENSARY.

To the Editors of THE LANCET.

SIRS,—We are glad to be able to inform you that at the annual meeting of the above institution held on Tuesday last the resolution passed in May, 1893—viz., "that the institution being now self-supporting the pecuniary position of an applicant shall be no bar to his admission"—was rescinded. The proposition that it be rescinded was made by the chairman of the committee, seconded by the vice-chairman, and carried by the meeting unanimously. This was the result of the strong representations which we, the staff of the institution, had made to the members at a meeting specially called on account of the position in which the resolution placed us. The result of this is that the institution reverts to the lines on which it has been conducted for over sixty years—viz., that it is an institution for the working classes, and that the names of all applicants for admission are submitted to the monthly meeting of the committee, who exercise their discretion in refusing or accepting them. We send you this information in order that you may be able to let your readers know that we are anxious that our institution should be conducted on principles which are recognised by authorities in our profession.

We are, Sirs, yours faithfully,

D. McVEAGH,

M. FENTON,

CHARLES DAVIDSON, M.D.,

W. J. PICKUP, M.D.,

T. A. HIRD, M.B.

April 29th, 1895.

"A PROLONGED CASE OF HICCOUGH."

To the Editors of THE LANCET.

SIRS,—In reading the report of "A Prolonged Case of Hicough," by Mr. D. Ferguson, I was very much surprised to find no mention made of ol. terebinth. being tried, the more so as he had the advantage of consulting three or four

medical friends. It is mentioned in “Fagge’s Practice of Medicine.”¹ I used it a few years ago in a case which had lasted nearly two days, and it yielded at once to a twenty-drop dose. While on the subject of therapeutics, I would like to ask whether it is desirable to administer medicines to women during menstruation. I do not, of course, allude to acute cases, but to such remedies as tonics or alteratives when continued for some time. Should they be discontinued during menstruation, and if so, why?

I am, Sirs, your obedient servant.

J. WIDMER ROLPH

Medical Officer, Pahang Corporation, Ltd.
Kuantan, Pahang, March 27th, 1895.

REVACCINATION.

To the Editors of THE LANCET.

SIRS,—Does the fee for revaccination depend upon a successful result? Small-pox has broken out in my locality, and owing to the local opposition to the Vaccination Act the neighbourhood is in a very unprotected state. The rush for revaccination is beginning, and, of course, many of the cases will prove to be already sufficiently protected, and no result will show. These, however, will require as much care, and it is not fair that I should try them free.

I am, Sirs, yours truly,

April 29th, 1895.

KATIBUTION.

“PUBLIC AND PRIVATE VACCINATION.”

To the Editors of THE LANCET.

SIRS,—I can confirm the statement of “Public Vaccinator” that there is a vast amount of inefficient vaccination done by private practitioners. A few years ago I had a child of my own vaccinated in four places notwithstanding the protests of several female relatives, and have since then been supplied with numerous instances where vaccination has been done in two or three places only by practitioners of good reputation, while no instances were to be found of vaccination in four or five places by a private practitioner. This statement concerns a town not forty miles from London with a good sanitary record. For obvious reasons I do not wish to name it, but shall be pleased to give you the name privately if you wish. I enclose my card and beg to remain,

Yours faithfully,

April 26th, 1895.

PHYSICIAN.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sanitary Association.

THE annual meeting was held on April 24th, the chair being taken by the Lord Mayor. In moving the adoption of the report the Lord Mayor said that the association had done, and was doing, good work. The Bishop of Manchester, who seconded the resolution, said the question of sanitary improvement had become one of great urgency in consequence of the numerous changes which had taken place in the population during the last century. More and more the people were massing themselves in the great towns, and the degree to which this had occurred might be judged by the fact that Yorkshire and Lancashire with the counties north of them contained more people than the whole of England and Wales did at the beginning of the present century. Sanitary improvement was a national question, for if the people were dwarfed and stunted and the health deteriorated “they would be less able than heretofore to bear the burden of national labour and defence.” But they need not be dwarfed and stunted unless they neglected sanitary precautions. He enforced the duty of each one as being his brother’s keeper, and said that “if we refused to do our duty by our brother we should justly and most certainly suffer for it.” Sir Henry Roscoe, M.P., moved a resolution approving of the work of the association and of its deserving more adequate support. Dr. Simpson moved that a Smoke Abatement League be formed, and that the nucleus of the league consist of the organisations at present existing in Manchester, Rochdale, Middleton, Oldham, and Bolton, and that the committee of the Manchester and Salford Noxious Vapours

Abatement Association (a branch of the Sanitary Association) be requested to take immediate steps for the formation of a committee of management. This was seconded by Mr. Charles Roberts of London and carried unanimously.

Sanitation in Prehistoric Times.

A numerous attended conversazione was held at Owens College on the 23rd ult. in connexion with the sanitary conference to open the day following. During the evening Professor Boyd Dawkins gave an interesting and amusing address on the Indications of Sanitary Progress in Prehistoric Days. The very earliest man of the pliocene age was only distinguished from the wild animals about him by being clever enough to fashion implements and use fire, and it could not be said that he was sanitary or insanitary. His successor, palæolithic man, was the user of the polished stone axe, the introducer of the domestic animals, he had a fixed habitation, and he invariably chose dry areas for habitation. In the neolithic man we have the first evidences of his living in a community, but the refuse was left in his habitation and he was ignorant of water-supply. He always selected, however, those spots where there was natural drainage, and he was the first tiller of the ground. The most important developments of sanitary appliances are found at the close of the bronze and in the iron age. There was a most elaborate system of refuse heaps, particularly shown in certain camps that had been explored by General Pitt Rivers, and especially in one near Lewes. But there was no evidence of any artificial water-supply. “But neither in the neolithic, the bronze, nor the prehistoric iron age were there any interments allowed within the area of habitation.” In the bronze age evidence that cremation was the rule was to be found in the limestone ranges of Derbyshire and the chalk downs of Wiltshire.

Conference on Sanitary Progress and Reform.

This took place in the town hall by the kind permission of the Lord Mayor, and the first meeting was held at the close of the annual meeting of the Sanitary Association on Wednesday last. It was opened by the delivery of an inaugural address by Dr. Simpson, chairman of the association, in which he sketched the gradual improvement of the health of Manchester and the possibilities of still further progress. The subject of smoke abatement was next considered. Sir Henry Roscoe, who had taken the chair, said that while the smoke from manufacturing operations had been chiefly considered there was the larger question of that from household fires, which was a most difficult one. Mr. A. E. Fletcher, chief inspector of alkali works, gave an address on Air Pollution, in which he urged that the compulsory powers given under the Alkali Acts to inspectors in regard to vapours from chemical manufactories should be given in relation to coal smoke. He gave numerous instances to show that the emission of smoke from such chimneys was not necessary. In one case, where there were eleven boilers, there was only smoke for two and a half minutes in ten hours of continuous observation. Nor was the consumption of smoke effected at a loss. In one case the owner said he had effected a saving of 10 per cent., as cheaper coal could be used satisfactorily. The question of domestic smoke was far more difficult. We like open fire-places and the blaze of the smoky coal. In his own house he had a stove in the basement by means of which he introduced a stream of warmed air into the rooms, and was able in consequence almost to dispense with fires. Mr. Herbert Fletcher of Bolton presented the report of a Committee of the Noxious Vapours Abatement Association on the testing of smoke preventive appliances. It would have been issued earlier but for lack of funds, as the steam users in whose interests the work was undertaken had not given the support that was anticipated. The committee organised a series of observations of all the principal chimneys of two representative Lancashire towns—Bolton and Oldham—where great attention had been paid to the subject through public and private prosecutions, and where a greater variety of appliances were in use than in any other towns. The condition of 179 chimneys was noted once every minute. The whole-day observations had enabled the emission of smoke from two representative towns on a summer’s day to be expressed for the first time numerically, and had thus afforded a correct basis of comparison by which to estimate the relative importance of the various degrees of smoke abatement claimed by the appliances

¹ Dr. Simpson’s address is published in another part of our present issue.—ED. L.

¹ Second edition, vol. ii., p. 339.

or methods of firing. The general average of 179 chimneys was 102 minutes each in ten hours, varying from 423 in the worst to 4 in the best. The report, which is of an exhaustive character, has not yet been printed. The Chairman (Sir H. Roscoe) said it had now been proved that manufactories could be carried on without the emission of black smoke. "That was an important result to have arrived at." In the afternoon Mr. Herbert Phillips spoke as to the objects of the Smoke Abatement League, the formation of which was decided on at the previous meeting. It was expected that besides those already named other towns would join shortly. The work of the league was simple. It was shown that the nuisance was unnecessary and the law must be put into force. He believed that people only required to be convinced that the nuisance was preventable and that they would support those who took action. Mr. Cohen of the Yorkshire College spoke of the work done in Leeds and urged the appointment of Government instead of local smoke inspectors—men of scientific attainments who would not condemn unless they had adequate cause for doing so and who would give advice when required. Other gentlemen continued the discussion, and Mr. Horsfall said that in Ancoats the enforcement of the law was a farce. His own house was practically smokeless, and he used an old method for which there was no patent—the grate of the late Dr. Neil Arnott. Dr. G. H. Bailey of Owens College read a paper on the Air of Schools, in which he described the results of examinations of the air of certain elementary Board schools in Manchester and Salford, for which facilities had been given by the School Boards. They were made in summer and he hoped to repeat them in the winter. Even though the windows were kept open the whole of the school-time the air in the largest and best rooms had a very distinct odour, while in the class-rooms it was very oppressive, giving rise to headache where it had to be endured for half an hour together. In some of the schools matters were much worse; three were named where the excess of CO₂ was, as a rule, 12 to 15 in 10,000, and the odour, in the class-rooms especially, simply unbearable. It was clear that, even under favourable conditions, the fresh air supply was too limited. Mr. E. Hewitt read a careful paper on the Warming and Ventilation of Schools. Out of six in Manchester and Salford he only found one in which there was any adequate attempt at a scheme of ventilation. He advocated a mechanical as distinguished from the "natural" system. Mr. W. Spinks of the Yorkshire College followed with a paper on the Drainage and General Sanitary Arrangements of Schools which was of a very practical character. Dr. Emrys Jones gave an admirable paper on the Lighting of Schools, and on the evils produced by imperfect light—myopia, asthenopia, and spinal curvature. The best aspects for windows were east and west, and the light should come from the left of the pupil. Extra-good light should be provided for the girls' sewing classes, and a room lighted from a glass roof would be the best. He urged the use of the electric light in all schools. He said that not 5 per cent. of the schools in Manchester and Salford would stand a most moderate test of efficiency as regarded lighting. The Dean of Manchester, who is Chairman of the School Board, said he could not sufficiently express his thanks for Dr. Emrys Jones's paper, notwithstanding the severity of his lash, and would bear in mind what he had been told. On Thursday, the 25th ult., papers were read for Cardinal Vaughan and Lord Meath, both of whom were unavoidably absent. Lord Meath's paper was on Open Spaces for Recreation. In London there was an acre of open space for 768 inhabitants, but there was still a crying need for more breathing spaces. Though Manchester has done a good deal no one could pass through the streets of the city without seeing there was need for more being done if she were to have a low death-rate and a high average of physical health, strength, and happiness. He advocated large parks, but more especially small playgrounds divided into two portions—one for boys and the other for girls and small children. Cardinal Vaughan's paper dwelt on the need for winter recreation halls for the poorest localities capable of accommodating 500 or 1000 people, well heated and lighted, and where music and entertainments, with refreshments at cost price, should be provided on certain evenings in the week. In the discussion which followed the general opinion seemed to be that the cost of providing music &c. for places so small would be prohibitory. Mr. Charles Roberts gave an exceedingly interesting and comprehensive address on Recreation generally. It was illustrated with

diagrams showing how till about the age of ten boys and girls advanced in growth *pari passu*, and then that for two or three years the girls shot ahead, but after that were passed by the boys, who then kept the lead. In strength, however, the boys always stood first, and their recreations and games should be duly proportionate. He placed running at the head of out-door exercises, and spoke favourably of fencing, military exercises, boxing, wrestling, billiards, and dumb-bells for in-door recreations. He thought there was a danger lest the children should forget how to play, and mentioned games, such as rounders, which had become almost forgotten. In the afternoon of the 25th ult. a large audience, chiefly of ladies, met to discuss the subject of Women's Work in Sanitary Reform. The first paper was read for Mrs. Hardie, president of the committee of the Manchester Ladies' Health Society, in which the great advance in sanitary matters was acknowledged. "It was doubtful, however, when they contemplated the densely populated districts of Manchester and Salford and compared them with the condition of things when fish could be caught in the Irwell near the Cathedral, and when Greenhey and Kersal Moor were really rural spots, whether improved knowledge and laws had made up for what we had lost." She then gave details of the work the society had carried on, and appealed to the ladies of the district for personal help. Mrs. Charles Hughes addressed the conference on the teaching of home nursing, as distinguished from nursing as practised in hospitals and by the trained nurse. The great difficulty was the ignorance of the people, "who had no idea of the most ordinary cleanliness, and whose notions of comfort consisted of the very barest remove from poverty and destitution." Mrs. Clay said the ignorance of the people in sanitary matters was simply appalling. She moved, and it was seconded and resolved, "That the necessity of cottage bath-houses fitted with warm baths in the densely populated parts of Manchester having been forced upon the attention of the Ladies' Health Society, this conference is of opinion that the corporation would confer a great benefit upon the people by providing such bath-houses"; and a deputation was appointed to wait upon the Baths Committee of the corporation, with a view to obtain the carrying out of the resolution. The proceedings of Friday consisted chiefly of an address from Sir B. W. Richardson on Sanitation: a Review of the Past, and an Ideal for the Future. Dr. Simpson presided. The address was too important to allow of any attempt to sketch even its outlines, but no doubt it will before long be published in an accessible form. Dr. A. W. Ward, Principal of Owens College, proposed a vote of thanks to Sir B. W. Richardson for his able and impressive address. He said they desired to thank him, not only for the admirable address he had delivered, but for the life's work which that address embodied. It was seconded by Mr. T. C. Abbott, a member of the corporation, who drew attention to the fact that Manchester might be credited with having been the birthplace of one of the founders of modern sanitary science, the late Sir E. Chadwick. The resolution was carried by acclamation. In a brief reply Sir B. W. Richardson pointed out that nothing he had advanced as to the ideal future was so remarkable as many things which had occurred in the past hundred years. With the customary votes of thanks the conference concluded.

May 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Muirhead Trust.

THOSE trusting University reformers who believed that the operation of the Universities Act would rapidly be followed by the application of numerous colleges to the various Universities have recently had a series of disappointing experiences. The agreement between University College, Dundee, and the University of St. Andrews has been pronounced illegal by the House of Lords. Queen Margaret College, which at one time appeared to be on the eve of affiliation with the University of Glasgow, suddenly changed its policy, gave up all independent existence, and allowed itself to be absorbed by the University; and now negotiations between the same University and the proposed Muirhead College have come to a deadlock. It may be remembered that the late Dr. Muirhead of Cambuslang left a sum of money, amounting to £30,000 or thereabout, in the hands of trustees for the

purpose of founding an institution for the education of women in medicine and in the physical and biological sciences. In a codicil it was suggested that this "Muirhead" College should be built near to the Victoria Infirmary. As Queen Margaret College was already in existence for the purposes proposed in Dr. Muirhead's will, the trustees approached the University Court with a view to devise, if possible, some joint scheme by which opposition between the University and the Muirhead College should be avoided. After several conferences the trustees offered certain proposals in which they suggested that the first two years of medical education should be provided by the University at Queen Margaret College, whilst the remaining three years should be undertaken by the Muirhead College, to be erected in the vicinity of the Victoria Infirmary, where the necessary clinical instruction could be obtained. This scheme would prevent the institution of two colleges competing with one another in a comparatively limited field, and would secure to women students—free from the intrusion of the opposite sex—the necessary lectures and laboratory instruction in the immediate neighbourhood of a well-equipped hospital. The University Court, however, acting on the report of a committee concerned in the negotiations, has rejected the proposals of the Muirhead trustees and has refused to put forward any counter-propositions. Whatever view may be taken of the refusal of the court to submit a scheme of its own, it can scarcely be questioned that there are valid reasons for its action in rejecting the proposals of the trustees. Apart from the difficulty incident to a system of dual control, and of making in practice a cleavage between the first two and the last three years of the medical curriculum, the proposal made by the trustees involves the renunciation on the part of the University of its right and duty to give to certain of its students instruction during the last three years of the medical curriculum, and to this the University could not be expected to assent. On the other hand, the responsibility for the non-success of the negotiations must not be placed entirely on the shoulders of the Muirhead trustees. They, of course, are bound by the terms of the will, and these seem to compel them to establish an independent institution in the neighbourhood of the Victoria Infirmary, so that the basis for their action is limited. There are also other clauses which may possibly cause difficulty in any scheme for coördinate work between the College and any other institution. Thus Dr. Muirhead does not wish any clergyman to have anything to do with the management of the College, on the ground that "creeds are the firmest fetters to intellectual progress," and medical men, we understand, are also forbidden, for a reason equally complimentary and suggestive. In any case it is a matter for regret that influences which might in combination have placed Glasgow in an altogether exceptional position as a centre for the University training of women students in science and medicine are likely to drift into mutually disadvantageous opposition.

Glasgow University.

Dr. Thos. Barr and Dr. Walker Downie, the recently appointed Lecturers on Diseases of the Ear and Throat respectively, were on April 26th introduced to their classes by Professor Gairdner, the Dean of the Medical Faculty. Each lecturer delivered an introductory address. In consequence of indisposition Professor Simpson has been granted a prolonged leave of absence, and the duties of the chair of Forensic Medicine are being discharged by Dr. T. K. Dalziel, who is assisted by Dr. Gavin McCallum. Dr. A. Maitland Ramsay has been appointed by the University Court to lecture on Diseases of the Eye to the students at Queen Margaret College.

The John Reid Prize.

The trustees of this prize have awarded the sum of £10 to Dr. Alex. Maclellan, Glasgow Western Infirmary, in recognition of the merits of his thesis on "Some New Methods for the Purification of Artificial Salicylic Acid."

Glasgow District Lunacy Board.

The position of consulting physician to the new asylum at Gartloch has been accepted by Dr. Alex. Robertson, and that of superintendent by Dr. L. R. Oswald. The latter has for several years been senior assistant to Dr. Yellowlees at the Royal Asylum, Gartnavel.

Small-pox in Glasgow.

Small-pox has been a recognised quantity in Glasgow since

the beginning of the year, but has been kept within limited bounds by the energy of the sanitary authorities. Recently, however, the number of cases has shown a disagreeable tendency to increase, and there are now sixty-three cases in the hospital. Most of these come from the western district, and in one street is a tenement, usually occupied by thirteen families, now completely deserted, the inhabitants having been removed either to the hospital or to the reception house.

Police Appointments.

Dr. Jno. A. Boyd has been elected a casualty surgeon to the Glasgow western district. The salary is £50 per annum. The Health Committee of the Police Commission has recommended that the salary of Dr. A. K. Chalmers, the junior medical officer of health, be increased from £400 to £500 per annum.

April 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Queen's College, Belfast: the New Laboratories.

THE erection of a large new block of buildings to be devoted to physiology and pathology is just being commenced at Queen's College, Belfast. An excellent site has been selected for it adjoining the existing medical buildings and the lately erected chemical laboratories, with both of which it will ultimately communicate. The ground floor will be devoted to physiology, which will have a large practical class-room, lecture theatre, physiological chemistry room, and professor's private work-room &c., all supplied with fittings and apparatus of the most approved type. The first floor will be given up to pathology, which will be provided with practical class-room, lecture theatre, private laboratory, general work and research room, culture room, &c. The building is to be heated with hot water. It is being built by the Board of Works, according to plans prepared by Mr. Robert Cockrane, F.S.A., in which the ideas of Dr. W. H. Thompson and Dr. J. Lorrain Smith, who are respectively at the head of the departments of physiology and pathology in Belfast, have largely been embodied. The new buildings will undoubtedly prove a most valuable acquisition to the medical school and the entire college. It is expected that they will be ready for occupation next year.

The Belfast Hospital for Sick Children.

The out-patient work having increased very much of late, the staff have recommended the board of management to appoint two additional members—an assistant physician and an assistant surgeon.

Oil-lamp Accidents in Belfast.

Accidents of this nature have become very frequent in Belfast of late. On Monday, April 29th, one of the ambulance waggons brought to hospital a woman who just before midnight was in the act of extinguishing a paraffin oil-lamp when it exploded, the result being that her clothes became ignited, and in a few minutes she was enveloped in flames. Two policemen after a time succeeded in putting out the flames, but not before the poor woman had been very badly burned. On the same evening an inquest was held in the Belfast Royal Hospital in reference to the death of a woman from the effects of burns received at her residence on the previous Wednesday by the explosion of an oil-lamp. Her son had also died from the same cause. The jury in their finding added a rider requesting the coroner to communicate with the Members of Parliament for Belfast and the counties of Down and Antrim with the object of calling the attention of the Government to the many cases of accidents which occurred in the city of Belfast and elsewhere from oil-lamp explosions, and requesting the Government to carry out the recommendations of the Select Committee upon Petroleum which reported last session.

Epileptics in the Belfast Workhouse.

This vexed question has cropped up again. It seems that a man aged forty-four was admitted to the workhouse on April 22nd and died there on the 25th. There is no reception-room for patients at the workhouse, but they are examined in a hall which is a public place, and when examined they are classified and sent to various departments of the house. This man was seen by two of the resident staff in consultation and they came to the conclusion that he was

an epileptic (from the history given them by his wife and from their personal observation), and that he was insane or of weak mind. Accordingly they sent him (as they stated, they had no other option) to the epileptic ward, where he died. An outside dispensary officer said he treated him before admission for epilepsy. He had never seen him in a fit, but his wife told him he had them. When he saw the man he was suffering from congestion of the brain. He did not observe any signs of insanity about him, but thought the best place he could be sent to was the workhouse. At the conclusion of the evidence the coroner dwelt very fully on the various aspects of the case; the jury found that the man came to his death from congestion of the lungs in the lunatic department of the Belfast workhouse. They requested the coroner to forward copies of the evidence to the Local Government Board and Belfast board of guardians, and to request them to hold an inquiry into the whole circumstances of the case. They further said that, in their opinion, such an inquiry is necessary. "They also strongly recommend that a proper room be provided for the reception of patients while being examined, as it is cruel to do so in the public part of the infirmary."

Typhus Fever in Belfast.

The outbreak of typhus fever has not yet been stamped out. Within the last fortnight about six cases have been reported to the medical superintendent officer of health, most of them coming still from the Falls district, where the disease was first noticed. A case admitted from another part of the city to the Fever Hospital has been traced to infection from the original *locule* of the outbreak in the Falls part of the city.

The Battle of the Clubs at Cork.

All sorts of subterfuges are had recourse to for the purpose of getting the ordinary practitioners into consultation with the new club officers, but so far without result. Last week a medical gentleman was requested to see a patient, but on questioning the messenger he ascertained that no less than three of the newcomers were actually in attendance, and he promptly declined to see the patient unless the services of the three were dispensed with. It may be well to explain that with a view of saving the poorer club patients from their own folly it has been arranged that when an ordinary practitioner is in attendance he is to be at liberty to call in the assistance of a consultant gratuitously if the patient should be unable to pay for a second opinion. This sounds very like returning good for evil. A club patient in receipt of about £500 a year died recently. His poorly-paid club officer had visited him for a considerable time, and as his condition became serious the club officer withdrew and two other medical men took charge of the case. I cannot help thinking that had I been in his place I should have preferred the services of a practitioner who could have continued in attendance and who would be in a position to give the consultant a full history of the progress of the disease. Another apple of discord is about to be thrown amongst us. The Victoria Friendly Legal Association, hailing from one of the large English centres, has announced its intention of endeavouring to form a provident dispensary in Cork. The proposal of the association is simplicity itself. Anyone, no matter what his income may be, is to be at liberty to become a member of the dispensary, and on paying one penny per week is to be entitled to the services of the medical officers of the dispensary. Even that small remuneration is not to be given to the medical men, but is to be distributed between them and the association. Should the general profession in Cork decline to avail themselves of this beneficent commercial project the imported medical men are to be requested to affiliate themselves with the association, and should they refuse the terms other medical men are to be introduced into the city. I have no doubt the reply of the general profession in Cork will be given in no uncertain tones. Can there be any stronger argument in favour of the combination existing in Cork? In all humility I suggest that the Cork men have given a lead which, in the interests of humanity, ought to be followed by other large cities, for it is clear to me that if the remuneration of the profession should continue to diminish to a vanishing point young men of talent and industry will not enter the profession, and the great bulk of those already in it will have neither the time nor the energy to advance medical science. So the "penny wise and pound foolish" policy must necessarily recoil on its authors—the general public. Surely the General Medical Council is not a wholly impotent body. Can it do

nothing to maintain the dignity of the medical profession and to safeguard the highest interests of the State?

Cork Societies' Medical Officers' Indemnity Fund.

The following additional subscriptions have been received by the treasurer, Mr. D. D. Donovan:—Surgeon-Major Thornhill, Indian Medical Service, £1 1s.; "Nec Opprimere nec Opprimi," £1 1s.; Dr. Dundas Grant, London, £2 2s.; Dr. Justin F. Donovan, Spanish Town, Jamaica, £1 1s.

May 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Abdominal Hysterectomy—a New Method.

M. RICHELOT¹ has devised an original and improved method of performing this operation. He claims for his procedure great advantages over the current methods, which are long and laborious, and the quicker methods sometimes employed, which are frequently attended with danger. The principal advantage of M. Richelot's manner of operating lies in the complete absence of ligatures and sutures, forcipressure only being used. A scalpel, a dissecting forceps, a long and a short hæmæstatic forceps, and finally two long Richelot's forceps provided with a long "bite"—this is the only armamentarium necessary. The patient is placed on her back and the operator takes his station between the separated limbs. The vagina is first thoroughly disinfected, for in the course of the operation the surgeon's hand passes alternately into that canal and the abdomen. The usual abdominal incision being made, the uterus is enucleated and laid on the abdomen, covering the lower angle of the operation wound. [When fibromata occupy the lower segment of the organ the usual fragmentation is at once practised; when, however, they are interstitial they are left untouched, and the operation is proceeded with as follows.] An anterior peritoneal flap is fashioned by means of an incision across the anterior surface of the uterus, extending from one broad ligament to the other. The broad ligaments are thus liberated and thrown downwards over the bladder. The left index finger is introduced into the vagina, and the anterior cul-de-sac is incised with a large pair of scissors, the dissection of the vagina being pushed nearly as far as the sides of the os. Then, leaving the uterus *in situ*, the broad ligament on one side is seized by the hand quite close to the uterus, an opening in the posterior cul-de-sac is made with the point of the scissors, and through this orifice is passed, *per vaginam*, the posterior limb of Richelot's forceps, the anterior limb being thrust through the corresponding hole in the anterior cul-de-sac. The forceps is then thrust from the vagina from below upwards and, guided by the hand holding the broad ligament, is placed on that ligament. The same manœuvre is practised the other side by means of the second pair of Richelot's forceps. Both ligaments being seized by the forceps, they are liberated from their extreme attachments. The uterus now hangs only to the posterior cul-de-sac, which is in its turn divided with a few snips of the scissors. But as this section gives rise to hæmorrhage three hæmæstatic forceps are here placed. A plug of iodoform gauze is inserted into the upper part of the vagina, none being placed in the abdomen. The abdominal incision is sutured and the operation is over. Of five hysterectomies thus practised by M. Richelot, four being for fibromata and one for cancer, the four first mentioned were successful. The duration of the operation varies from thirty to thirty-five minutes, and no complications need be feared during the healing process. M. Richelot gives to his method of operating the somewhat cumbersome name, "hysterectomie par pinces vaginales d'emblée sans ligature ni suture."

A New Process of Water Purification.

I have from time to time communicated to your readers methods stated to be efficacious for rendering safe the drinking of spring water. If we may believe M.M. Girard and Bordas the most efficient sterilising process has been discovered by them. The water is first treated with permanganate of calcium, and then filtered through peroxide of manganese. It appears that the calcium permanganate—a salt easily manufactured—is, in the presence of organic matter and micro-organisms, decomposed into oxygen,

¹ Société de Chirurgie, April 24th.

manganese oxide and lime, and the organic matter and the bacteria are thus destroyed. But in order to further increase this oxidising power, and at the same time destroy the excess of calcium permanganate added to the water, this latter is filtered through a layer of manganese peroxide. The filtered water is perfectly limpid and is entirely free from pathogenic and other micro-organisms and from organic matter. The simplicity of the process tells greatly in its favour.

"Anglisch Pharmacy as She is Exercised."

I had recently occasion to prescribe for a leading member of the English colony a purgative dose thus formulated (*Pharmacopœia Britannica*): Pil. hydrarg., 2gr.; ext. coloc. co., 6gr.; euonymin, 1gr.; ext. hyoscyami, 1gr.; divide in pil. 3 (silvered). The three pills to be taken to-night at bedtime. Three hours after the pills had been taken violent griping and purgation set in, the colic continuing at intervals for several hours. I learned that the druggist who had prepared the pills was one of those enterprising French tradesmen who, on the strength of possessing a copy of "Squire's Companion," and of retaining the occasional services of an English assistant, dub themselves "English chemist." On asking to be shown the compound extract of colocynth employed I was handed a pot of powder labelled "Pulv. pro. pil. col. co.," and hailing from a French wholesale establishment. I had the same prescription made up at a respectable English druggist's, and swallowed the pills myself last night without any suspicion of griping during the night. The frequent occurrence of such grave mistakes induces me to repeat the warning I have so often given to my compatriots not to have English prescriptions prepared at an establishment where the principal is a foreigner. In the shop above mentioned there was no English assistant, nor could anyone in the establishment speak a word of our language. When the Englishman comes abroad let him forget for the nonce the stores tariff and avoid risking his life by having prescriptions prepared at an establishment where the principal and his assistant are of the same nationality as himself.

April 30th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The late Professor Ludwig.

PROFESSOR KARL LUDWIG, one of the greatest physiologists of Germany, died in Leipzig on April 25th. He was born in 1816 at Wittenhausen, and took the degree of Doctor in 1839, afterwards becoming *privat-docent* in 1842 at the University of Marburg. To his town he left in 1849 for Zürich, where he stayed for six years as Extraordinary Professor. In 1856 he was appointed Ordinary Professor at the abolished Academy for Army Surgeons in Vienna. For the last thirty years he was Professor of Physiology in the University of Leipzig, which owes to him no small part of its renown. At a very early period of his academical career he opposed all the transcendental theories in physiology which were then in vogue, and his first published work entitled "The Mechanism of the Secretion of Urine," explained the formation of urine in the kidney on merely mechanical principles. He improved physiological methods by the introduction of apparatus for the graphic recording of results, the most notable being probably the kymograph. He was the author of important researches on the circulation of the blood, on the influence of respiration on the circulation, and on the action of the medulla oblongata on the circulation. He also made very valuable researches on the part played by the nervous system in glandular secretion. Not only physiology but also pathology and clinical medicine are greatly indebted to him. Among his pupils need only be mentioned the late Professor Cohnheim, formerly one of the leading pathologists of Germany. The Physiological Institute of Leipzig, of which Professor Ludwig was the director, was a centre of attraction not only for students but also for graduates, who came there from all parts of the world to study under his direction. Professor Ludwig's name will ever hold an honoured place in the history of medicine.

The Appointment of Privat-docents.

Publicity has been given to a rumour that the Government intends to change the regulations affecting the appointment

of *privat-docents*. Hitherto a scientific man who desired to hold this position had to apply to the board of his faculty, giving an account of his past studies and presenting a new work for the approval of the board. If the faculty thought him competent to be a university teacher he was admitted, and the so-called "habilitation" was conferred on him at a formal sitting, with the Dean in the chair and all his friends present. The Government took no part in the matter, but was informed afterwards by the Dean that Dr. X— had been "habilitated" as *privat-docent*. It is now reported that the Government desires to have a voice in the admission of *privat-docents*, and wishes the faculties to obtain its permission before the "habilitation." Political reasons have induced the Government to take this step. Many *privat-docents* belong to the Social-democratic party, and the Government considers this to be dangerous for the progress of science and the tranquillity of academic life. One of the *privat-docents* at the philosophical faculty of the University of Berlin is a well-known leader of the above-named party, and the Government has already once expressed its disapproval, but the faculty declined to take any measures for removing the lecturer from his appointment. It is incomprehensible that a Socialist should not be an accomplished teacher of physics, of Greek, or of surgery, but the Government seems to hold other views on this question. The rumour is contradicted by the official newspapers, but many persons believe it nevertheless.

An Antitoxin for Carcinoma.

In the last number of the *Deutsche Medicinische Wochenschrift* Professor Emmerich and Dr. Scholl of Munich publish the results of experiments on the treatment of carcinoma by a new antitoxin. Through the researches of Neisser, Fehleisen, and others it has become known that carcinoma is influenced for the better by erysipelas. Professor Emmerich now states that this influence depends on changes in the blood produced by the cocci of erysipelas, and he accordingly makes use of the blood serum of animals who have been previously affected with that disease. His mode of proceeding is to inoculate sheep with cultures of the cocci of erysipelas, and to abstract blood when they are in the stage of convalescence. The blood is then passed through Chamberland filters in order to remove the cocci, and finally put up in little tubes of ten cubic centimetres each. With this blood daily injections are to be made into the tumours—from 1 to 4 c.c. for small growths, and from 10 to 25 c.c. for larger ones. The patients treated in this way did not complain of any pain, the temperature did not rise above 38.5° C., and no other complications were observed. In nearly all the cases the general state of the patients became better and the tumours diminished. Professor Emmerich and Dr. Scholl say that they do not yet claim that their method is to take the place of operative procedures, but as very often an operator leaves small pieces of the tumour the injections would in those cases be capable of dispersing those pieces. They also say that they do not yet know whether their antitoxin is a general specific or whether it acts only against certain forms of cancer. Tubes with antitoxin can be procured from their laboratory, so that other medical men may try their method. As up to the present all specific cures for carcinoma have failed, the profession should be very guarded in forming an opinion as to the new remedy.

"Scholastic Reform in Germany."

The annotation under the above heading in the last issue of THE LANCET is, I am truly sorry to say, founded on a real French *canard*. It is a pity that no "differentiation between the youthful Teutons" is to be made either by their teachers or by the medical profession. As there are about 100 000 school children in Berlin, nearly a hundred physicians would have been occupied all the year round in conducting the mental examination. The emoluments of the medical profession being only moderate, no doubt the school managers would have found practitioners enough to undertake this rather tiresome work. In this way an improvement in the circumstances of many of our professional brethren would have resulted from the alleged reform described by the French authority.

April 30th.

PRINCESS MARY ADELAIDE has consented to open the new Paddington-green Children's Hospital on Monday, July 1st, at 4 P.M.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italian Medicine at Montevideo.

ITALY is largely represented in South America, and in no direction more successfully than in medical science. Thanks to her influence, material and moral, Uruguay takes rank among the most civilised and prosperous of the republics and Montevideo among the most enlightened of cities on that continent. In Montevideo, by a law recently carried through Parliament, an institute modelled on that of Pasteur in Paris has been erected for the treatment not only of rabies and anthrax, but of diphtheria and tetanus by *sero-therapeutics*. Besides these special objects, the institute offers to the student of medicine the amplest means for scientific and clinical research in every branch of the healing art, and is already being resorted to by undergraduates and post-graduates from neighbouring republics for the facilities it presents for the higher professional qualifications. As director of the institute, on the unanimous recommendations of the local faculty of medicine, Parliament has invoked the services of Dr. Giuseppe Sanarelli of Siena, in which seat of learning he has held with much acceptance the chair of Hygiene. After a thorough training in the Parisian institute, in which he greatly distinguished himself, Professor Sanarelli worked hard at the etiology and course of infective diseases, turning his attention more particularly to prophylaxis and precautionary legislation. In recognition of his services in this field the Montevidean Government has given him, besides the direction of the local Pasteur Institute, the honourable post of Professor of Hygiene in the University, and, to compass this appointment, has even strained the consuetudinary law which discountenances the election of foreigners to such chairs. The salary in connexion with it is 20,000 francs, considerably in excess of the standard of remuneration customary in Italian seats of learning.

The Health of Florence.

An official return just to hand gives opportune evidence of the satisfactory hygienic conditions of Florence. The "Bollettino Sanitario del Comune" states that in the first *trimestre* of 1894 the deaths were 1535, and in the corresponding period of 1895 they were 1451, making a diminution of 84. In this period in 1894 there died from measles 12, from typhoid fever 9, from diphtheria 26, and from pulmonary tuberculosis 158, making a total of 205 deaths. In 1895, on the other hand, there died from scarlet fever 5, from typhoid fever 7, from diphtheria 14, and from pulmonary tuberculosis 144, the total mortality amounting to 170. It will be seen in the diminution of the mortality in general over that period from the first *trimestre* of the preceding year that the infective maladies have shown a reduction of 35.

The "Cosmic Microbe."

The series of lectures in progress at the "Circolo dei Naturalisti" (Naturalists' Club) was continued on the 25th ult. by Professor Sanarelli. His theme was "Il Lavoro Utile dei Microbi nella Società" ("the Useful Work of Microbes in the Social Economy," or, to put it shortly, the "Cosmic Microbe"), and he dwelt, in a thoroughly Darwinian spirit, on the benificent activity of microbes in the soil, the air, the water, in human alimentation, in human habits, in the propagation and evolution of the human species, and even in infective maladies themselves, in all which spheres they exercise a function which, as being natural, is at once benificent and indispensable, the arrest of which would imply the rapid disappearance of animated creation from the terraqueous globe. Professor Sanarelli, from the researches begun at the Pasteur Institute, followed up at Siena, and soon to see the light in Montevideo, drew many striking illustrations of the part played by microbic life in biology and claimed, as one of the future achievements of science, the organisation and control of the inexhaustible, hitherto unutilised microbic forces, and the turning of these to practical account for the evolution of humanity in all its interests, individual and social. We are, according to Professor Sanarelli, on the threshold of discoveries which will revolutionise our dealings with the human organism in health and disease, widen our social horizon, and elevate and refine our common civilisation. The lecture, an attractive specimen of biological culture and speculation, was listened to with

rapt attention by a numerous and distinguished audience, in which the Roman school, its teaching staff, and its practitioners, consultant and general, was largely represented.

The Cavaliere Rosati.

A great loss has befallen Italian surgery in the death of the Cavaliere Tebaldo Rosati, for many years a clinician and consultant of the highest authority in the Tuscan school. In Florence, at 10 o'clock this morning, he succumbed to what in Italian classification is given as "paralisi cardiaca" (paralysis of the heart) just a few minutes before his colleagues, Drs. Marcacci and Paoli, hastily summoned, arrived at his bedside. The Cavaliere Rosati was in his sixty-fourth year, and was "Chirurgo Primario" (Senior surgeon) of the two Florentine hospitals, the Santa Maria Nuova and the San Giovanni di Dio. He was a brilliant operator and sound teacher, and his presence at the various medico-chirurgical congresses, provincial, national, and international, was often made memorable by original communications of his own and by able and suggestive criticisms of those of others. Courteous, scholarly, and refined, very popular with his students, and always pleasant to meet in consultation, his departure is deeply regretted by the many who knew him as a professional brother or adviser as a citizen, or as a friend.

April 29th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Sweating System.

A LEGISLATIVE investigation into the effects of what is known as the "sweating system" is in progress. By the "sweating system" is understood the custom of occupying living-rooms in tenement houses for the manufacture of clothing, cigars, &c. Large numbers of operatives are crowded into living-rooms where they make clothing for the wholesale houses. The effects of this crowding upon the health of the persons employed have proved most disastrous; when cigars and cigarettes are manufactured the air of the whole house becomes very impure. The manufacture of clothing in these crowded living-apartments has resulted in the spreading of contagious diseases. Many instances have been narrated of the spread of scarlet fever, diphtheria, measles, and small-pox by means of the clothing made in rooms where children were suffering from these diseases. Inspectors have found the manufactured clothing used as the bed-covering of children suffering from contagious diseases. Outbreaks of small-pox and scarlet fever traceable to the clothing made in tenement houses are not infrequent. In some instances these occurrences are reported in other and remote States. The result of these investigations will no doubt be the enactment of stringent laws against the practice of opening workshops in tenement houses.

Permanent Establishment for the Cure and Prevention of Hydrophobia.

The Legislature of the State of New York has before it a Bill to make permanent provision for the treatment of poor persons duly certified by regular physicians to have been bitten by rabid animals or otherwise put in danger of infection with rabies. The measure provides for the transportation at the public expense of such persons with necessary attendants to the Pasteur Institute in the city of New York to enable it to provide for these patients during the time of their treatment.

Emigrant Inspection on the Russo-German Frontier.

The establishment of control stations for emigrant inspection on the frontier between Germany and Russia is to be participated in by the American line of both the New York—Southampton and Philadelphia—Liverpool services. These lines have now made arrangements to have all their passengers coming from Russia admitted to the stations at Ilowo, Ottlotschin, Prostken, Eydtkuhnen, and Bajohnen in order that they may pass the same rigorous examination and at the same time have their baggage properly disinfected. The American line has agreed to participate in the maintenance of the establishments at a considerable annual expense, with a view of fully insuring itself against the importation of any infectious disease, inasmuch as only those passengers from

Russia will be allowed to pass through Germany to Southampton and Liverpool, on their way to the United States, who are provided with a passport entitling them to proceed on their journey through Germany, issued to them only after having gone through the requisite quarantine at those stations.

Discussion on Antitoxin.

At a recent meeting of the New York Academy of Medicine antitoxin was the subject of discussion. The bacteriologist of the Board of Health read a paper commending the use of antitoxin, and reporting favourably on the results obtained in the Contagious Disease Hospital of the Board. The physician of the hospital reported at length on the use of the remedy, and gave a summary of the recoveries from its use. A third paper was devoted to the methods of cultivating the antitoxin, and interesting instructions were given as to the selection of the horses best adapted to give an active and reliable agent. This paper was the more important as the Board is now authorised to place the remedy on the market. The last paper was read by the resident physician of the Infant Asylum, who gave an interesting account of the arrest of an epidemic of diphtheria in that institution by the general treatment of the patients with antitoxin. In the discussion which followed one of the visiting physicians of the Contagious Disease Hospital of the Board of Health stated that he had witnessed the use of antitoxin and carefully observed its effects. He asserted very positively that its value was greatly overrated. In the severe cases he saw no improvements that could not be properly and justly attributable to the other remedies employed, and the milder cases recovered in the usual manner. This declaration created a marked sensation in the large medical audience, and it was apparent that the question of the actual value of antitoxin was again relegated to the domain of uncertainty.

To Prevent Blindness.

Laws to prevent ophthalmia neonatorum are being adopted in many of the United States. The first impulse in that direction was given by Switzerland as early as 1865. It was enforced by Professor Horner, and as a result no child has entered the large blind asylum of Zürich who had become blind since 1865 from this cause. The necessity of such laws in this country is apparent when I state that it is estimated that there are upwards of 10,000 persons blind from the infection of the eyes at birth. At the Sloane Maternity in New York, where asepsis is rigidly enforced, no case of disease of the eyes of the new-born of any severity has occurred in 4000 births in the last six years. But outside of well-managed maternities the cases of ophthalmia neonatorum continue to occur with far too great frequency in spite of the laws made to prevent the disease. New York has had a law on this subject in force since 1890, but owing to the difficulty of enforcing it ophthalmic surgeons report that there is little diminution of the disease. The only hope of securing better results must be found in the rigid enforcement of laws regulating the practice of midwifery. This was done in Switzerland with the results above given.

Obituary.

SIDNEY ROBERTS WEBB, M.D. EDIN.,
OF THE CONGO BAPTIST MISSION.

WE regret to learn of the death, on his voyage home, of Dr. Sidney Roberts Webb, of the Baptist Congo Mission. A young medical man of great promise and geniality, who had profited by the advantages of a public school education and the subsequent medical course at Edinburgh University, his prospects at home were of the highest. But he was moved by the noble compassion which seeks to carry the best gifts of religion and of science to those who need them most, and accordingly took an appointment under the Baptist Mission, but without salary. He had just completed two years of successful work (in one day he saw 120 patients) and was returning for his first furlough, which by the rules of the society is taken at this early period to prevent the breakdown which is so apt to follow the first exhausting influence of the climate. So far as is known, he and his equally brave young wife left in excellent health, the brief telegram only announcing the fact

of his death on the 12th ult. while on his way home. He had endeared himself to his colleagues and his patients on the field, who, with all who knew him, have the comfort of knowing that his sacrifices were attended with delight to his own heart, and of believing that goodness and power like his will find alike reward and scope in some other sphere.

CARL T. THIERSCH,

PROFESSOR OF SURGERY AT THE UNIVERSITY OF LEIPZIG.

IN the death of Professor Thiersch another of the prominent leaders of German surgery, whose reputations were won in the campaigns of thirty and forty years ago, has passed away. Professor Thiersch was born at Munich in 1822 and had just completed his seventy-fourth year when he died on the 28th ult. After studying at Berlin, Vienna, and Paris he obtained his doctorate at Munich, his graduation thesis being on the Action of Drugs. He engaged as surgeon in 1850 in the 2nd Schleswig-Holstein campaign, when he served under Stromeyer, whose teaching and example had much influence on him. From 1848 to 1854 he was prosecutor in the Munich Pathological Institute; in 1854 he was appointed Professor of Surgery at the University of Erlangen, and was transferred thence to Leipzig in 1867, where he occupied the chair of Surgery for twenty-eight years. In the war of 1870 he was consulting surgeon-general to the 12th Army Corps (Saxon). His writings have not been numerous. Perhaps the most important was the monograph on Epithelial Cancer published in 1865, which was marked by great originality and advanced considerably the histology of epithelioma. His work upon Skin Grafting is also well known. He contributed an article to the first volume of the Pitha-Billroth Handbook of Surgery upon the "Minute Anatomical Changes following Wounds of Soft Parts," another histological study which opened up new conceptions of the healing of wounds. He was an earnest follower of the Listerian methods and will be remembered as a sound surgeon and one who was as scientific as he was practical.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Karl Ludwig, the well known Leipzig Professor of Physiology.—Dr. Fano, formerly Professor *agrégé* in the Paris Medical School.—Dr. T. Druhen, Honorary Professor in the Besançon Medical School.—Dr. Adolf Weil, Teacher of Odontology in the University of Munich.—Dr. J. R. Taylor, formerly Lecturer in Surgery in the Bellevue Hospital Medical College, New York.—Dr. Rydel, Professor of Ophthalmology in the University of Cracow.

Medical News.

CAMBRIDGE UNIVERSITY.—The following is the amended notice of the plan for the examinations for medical and surgical degrees, Easter term, 1895:—

FIRST EXAMINATION.

Part I. (Chemistry and Physics).—Friday, June 7th, 9 A.M. to 12 M.: Heat, Electricity and Optics; 2 to 5 P.M.: Mechanics and Hydrostatics. Saturday, June 8th, 9 A.M.: Practical Chemistry, and Oral Examination in Chemistry and Physics (in the University Laboratory). Monday, June 10th, 9 A.M. to 12 M.: Chemistry; 2 to 5 P.M.: Oral Examination in Physics (for those who do not take Biology). Tuesday, June 11th, 9 A.M.: Oral Examination in Chemistry and Physics continued. Wednesday, June 12th, 9 A.M.: Oral Examination in Chemistry and Physics continued.

Part II. (Elementary Biology).—Monday, June 10th, 2 to 5 P.M.: Elementary Biology. Friday, June 14th, 9 A.M.: Oral and Practical Examination in Elementary Biology (in the Biological Laboratory).

SECOND EXAMINATION.

Part I. (Pharmaceutical Chemistry).—Thursday, June 13th, 1.30 to 5.30 P.M.: Practical Examination in Pharmaceutical Chemistry (in the Chemical Laboratory). Friday, June 14th, 1.30 P.M.: Oral Examination in Pharmaceutical Chemistry (in the Chemical Laboratory). Saturday, June 15th, 9 A.M.: Oral Examination in Pharmaceutical Chemistry, continued.

Part II. (Human Anatomy and Physiology).—Thursday, June 6th, 9 A.M. to 12 M.: Human Anatomy, 2 to 5 P.M.: Physiology. Saturday, June 8th, 9 A.M.: Practical and Oral Examination in Anatomy (in the Anatomical School). Monday, June 10th, 9 A.M.: Practical and Oral Examination in Physiology (in the Physiological Laboratory). Tuesday, June 11th, 9 A.M.: Practical and Oral Examination in Physiology (in the Physiological Laboratory). Friday, June 14th, 9 A.M.: Oral Examination in Anatomy (in the Anatomical School).

The names of candidates for these examinations must be sent to the registry (through the prælectors of their respective

colleges) on or before Monday, May 27th. Forms on which it is requested that the names may be written will be sent to the prolectors. The certificates of candidates, accompanied by their postal addresses, must be sent to the registry on or before Saturday, June 1st. The fees for each examination must be paid to the registry when the certificates are sent in. The fee is £2 2s. for each part of the first and second examinations. Any candidate whose name and certificates have not been sent in and fee paid at the proper time is liable to pay an additional fee of £1 if he be nevertheless admitted to the examination.

The following gentlemen have passed the Third Examination for Medical and Surgical Degrees, Easter term.

Part I.—N. G. Bennett, B.A., John's; Biss, B.A., King's; Evans, B.A., Trinity; G. H. Field, B.A., Clare; Fletcher, B.A., Gonville and Caius; Hadow, M.A., Gonville and Caius; R. J. E. Hanson, Trinity; Hobday, B.A., Christ's; L. T. R. Hutchinson, B.A., Trinity; Key, B.A., Emmanuel; Lance, B.A., King's; Lawrence, B.A., King's; McCarthy, B.A., Gonville and Caius; H. J. May, B.A., Gonville and Caius; Muir, B.A., King's; P. K. Nix, B.A., Pembroke; Ormerod, B.A., Trinity; Parker, B.A., Gonville and Caius; Pentreath, B.A., Queen's; E. Ransome, B.A., Clare; Ransome, B.A., Gonville and Caius; J. A. K. Renshaw, B.A., Trinity; A. Rotherham, Trinity; Sing, B.A., Christ's; Sladen, M.A., Gonville and Caius; K. S. Storrs, B.A., Emmanuel; Sturrock, B.A., Gonville and Caius; Swarder, B.A., King's; C. A. H. Thomson, B.A., Christ's; Verdon, B.A., Jesus; Watson, B.A., Trinity; Woodhouse, B.A., King's.

At a congregation last week the following degrees were conferred:—

M.D.—Robert B. Ferguson, Gonville and Caius.

M.B. and B.Ch.—John Nachbar, Clare; Howard Marshall, Gonville and Caius; Joshua J. Taylor, Emmanuel; Charles S. Boud, non-collegiate.

The next congregation at which degrees will be conferred will be held on Thursday, May 9th, at 2 P.M.

DURHAM UNIVERSITY.—The following degrees were conferred at a Convocation held on April 27th:—

M.D. (practitioners).—William Percy Ashe, Edward Ferrand, Stanford Harris, Benjamin Jones, Henry Arthur Latimer, William Moxon, John Taylor, Ebenezer Stanley Smith, and Thomas Frederic Young.
M.D. (examination).—George Henry Vane Appleby, Francis William Fullerton, Reginald Green, Walter William Hodgins, William Harvey Mallow, Francis Herbert Marson, and Bernard Bealy Thorne-Thorne.

D.Hyg.—William Henry Turnbull.

M.Sc.—William Martin.

M.B.—Charles Allen Brough, James Atkin Heaton White, John Ralph Prior, Edward Turner, Sidney Herbert Hanley, Harold Dickinson Senior, Norman Bennett, Robert Montagu Le Haute Cooper, William L'Anson Charlton, Percival Davidson, Edward Fielden, Frank Chubb Ford, Ernest Rowland Fothergill, Ernest Edward Frazer, John Reginald Fuller, Richard Withers Gilmour, Gilbert Gocher, Charles Hanks, Ernest Robert Kendall, Wilfrid Robert Kingdom, George Edwyn Middlemist, Marcus Sinclair Paterson, William Harland Peake, Tom Sanderson, Ernest Percy Satchell, and Ernest William Scott.

B.Sc.—Norman Bennett, William L'Anson Charlton, Robert Montagu Le Haute Cooper, Percival Davidson, Edward Fielden, Ernest Rowland Fothergill, Ernest Edward Frazer, John Reginald Fuller, Richard Withers Gilmour, Gilbert Gocher, Charles Hanks, Marcus Sinclair Paterson, William Harland Peake, John Ralph Prior, Tom Sanderson, Ernest Percy Satchell, George William Scott, Edward Turner, and James Atkin Heaton White.

B.Hyg.—George John Auburn, George Henry Vane Appleby, Edward Turner, and Edward Cecil Willcox.

B.Sc.—Robert Beattie.

Dip. P.H.—William Henry Symons.

UNIVERSITY OF ABERDEEN.—The following gentlemen have been admitted to the degrees of M.B. and C.M.:—

B. A. Anderson, J. F. Christie, W. Cockburn, R. L. Collings, H. W. A. Cowan, J. Cran, J. M. P. Crombie, H. W. Cruikshank, T. D. Cumming, C. H. Dyer, A. Fenton, G. W. R. Fernando, J. Fletcher, H. R. Gardner, K. Gillies, W. G. Grant, H. M. W. Gray, D. V. Haig, P. Harper, L. J. Helmrich, G. Hunt, G. H. Johnston, V. V. Langenberg, W. Lethbridge, R. Lindsay, A. H. Lister, M. MacBean, J. R. Macmahon, W. R. Matthews, J. Moncur, A. Mowat, W. Murray, J. W. Myers, E. M. Payne, W. M. Philip, P. Prebble, A. Robb, A. Rose, J. E. Skinner, H. B. Smith, F. J. Troughton, W. S. O. Waring, J. S. Warrack, and A. Wood.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the April sittings of the examiners the following candidates passed the respective examinations:—

First Examination (Five Years' Course).—James Moffat Invernarity, Dundee; Alexander J. Wilson, Newnains; William Carey, Haywood; William McFarlane, Cambusnethan; Ewen Mackenzie, Ross-shire; William Denness, Bothwell; T. R. W. Atkins, Cork (with distinction); Owen Felix McCarthy, Cork; Benjamin Bird, Woodford; James Roche, Cork; Henry Fowler, London; William Hutton, Belfast; Harry G. Ogilvie, Jamaica; John Dick, Greenock; and Jeannette Elizabeth Hackett, Westmeath.

First Examination (Four Years' Course).—Lloyd Thomas Lavan, Jersey; Hugh Owen Jones, Llangollen (with distinction); Charles

Frederick Spinkes, Cheshire; Griffiths L. Jones, Carnarvonshire; John Coulter Warwick, Belfast; Robert Henry Munro, Coatbridge; Samuel H. Smith, Alderley; John J. Donagher, Limerick; Reginald C. M. Hoare, Birmingham; John J. Porter, Belfast; Alexander B. Hood, Glasgow; John Wm. Duncan, Newcastle; Robert Cooper, Newcastle; Bryan Jos. Nolan, Tralee; Michael Sheehy, Skibbereen; Andrew S. Omond, Edinburgh; and Andrew H. Jones, Newport (Mon.).

Second Examination (Four Years' Course).—William Haslam Brooks, Farnworth; John E. Harburn, Whitby; John Dunlop, Neilston; Christopher Wm. Davidson, London (with distinction); Edmund Joseph Cummins, Tipperary; William Scott, India; Joseph Sanderson, Yorkshire; Charles Delacherois, Antrim; John Roche, Cork; James Wilson M'Bearty, New Zealand; Richard Fox, Nottinghamshire.

Second Examination (Five Years' Course).—Richard N. Woodley, county Cork; William Mason, Belper; Basil Stanley Sanders, Basaleg, Mon.; Arthur Frederic Seacombe, Cheshire.

Final Examination (and admitted Licentiate).—Francis Thomas Rhodes, Glossop; Lilian May Blake, London; William Austin Mushe, Glasgow; Charles Albert Bois, Glasgow; Patrick Joseph Murphy, Carnbach, Aberdare; William Gordon, Salisbury; James Taylor Hancock, Grimsby; John Livingstone, Glasgow; David Lauder Lindsay, Derby; Alexander Smith, Leeds; Frank John Whitehead, Leicester; Alfred Bernard Steward, Manchester; Duncan Fletcher, Glasgow; John Atkinson, Crewe; Thomas Boulton, Bolton; James W. Astley Cooper, Norfolk; John A. E. A. Lavery, Coventry; Jeanie G. R. Duggan, Edinburgh; Arthur Thompson Hill, Llanrwst; Henry C. Lambart, M.A., Gwynfyll, North Wales; James Cook Neale, Moseley, Birmingham; Bernard H. Woodyatt, Over, Cheshire.

A CONVERSAZIONE will be given by the Medical Society of London on Monday, May 20th, at the rooms of the Society, 11, Chandos-street, Cavendish-square. Mr. A. Pearce Gould will deliver the oration, taking for his subject "The Recent Evolution of Surgery." Subsequently there will be a reception by the President and music by the "Bijou" orchestra.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—

A meeting of this society was held on April 17th, Dr. J. S. Tew, President, being in the chair.—Dr. W. B. Ransom read a paper on Pernicious Anæmia. He based his remarks on a series of twelve cases, six of which ended fatally, and in which microscopical examination of the tissues was carried out. He found in some an increased deposit of iron in the livers and kidneys, but in others there was no increase of iron found in the livers. In some the primary change appeared to be in the blood-forming organs, so that it is an open question whether increased hæmolytic will account for the symptoms or explain the pathology in all cases.—Dr. Cattle detailed a case of pernicious anæmia which had ended fatally, and in this an increase of iron was found in the liver. Drs. Tew, Hunter, and Watson also spoke on the subject.—Mr. Belcher showed the body of a child which had lived for four days whose Abdominal Viscera were Misplaced, being extruded from the abdominal cavity through a small aperture at the umbilicus.

SAMARITAN HOSPITAL FOR WOMEN, MONTREAL.—

A Canadian correspondent writes: "A new hospital for women, with the above name, was opened by Her Excellency the Countess of Aberdeen, wife of the Governor General of Canada, on Jan. 17th, 1895. It is non-sectarian, and is supported entirely by voluntary contributions, of which latter enough were handed in during the first month to carry on the work during a whole year. It is the only special hospital for diseases of women in Montreal, and will be moulded on the pattern of the New York State Women's Hospital in New York city. It is managed by a board of thirty of the principal ladies of the city, assisted by an advisory board of three laymen and three physicians. The staff consists of Sir James Grant, M.D., K.C.M.G., consulting physician; W. H. Hingston, M.D., L.L.D., consulting surgeon; A. Laphorn Smith, B.A., M.D., M.R.C.S. Eng., surgeon-in-chief; H. Lionel Reddy, C.M., M.D., surgeon; S. F. Wilson, C.M., M.D., assistant surgeon and registrar; Dr. Sylvester, assistant surgeon; and Dr. Letellier de St. Just, assistant surgeon. An anæsthetist and a pathologist will be appointed shortly. The out-door service is attended to by the assistant surgeons from 4 to 5 P.M. every day, at which hour the surgeon-in-chief makes his daily visit, and the most urgent cases are admitted. The hospital is absolutely free to women who are poor and sick, and who are residents of the city. Patients from outside the city will be admitted on payment of a nominal charge. The operation days are Thursdays and Fridays at 10.30 A.M., when physicians who have not been attending infectious diseases receive a hearty welcome. The hospital is situated in the choicest and healthiest part of the city, 1000 Dorchester-street, near Mackay-street."

ST. JOHN AMBULANCE ASSOCIATION.—Lord Knutsford, G.C.M.G., has been appointed by His Royal Highness the Prince of Wales director and chairman of the St. John Ambulance Association in succession to Lord Sandhurst, G.C.B., G.C.S.I., the new governor of Bombay.

MEDICAL MAYORS.—Mr. Wm. F. Prichard Bassett, M.D. Edin., M.R.C.S. Eng., has been elected Mayor of Bathurst New South Wales. Mr. John B. Meredith, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-elected Mayor of Raymond Terrace, New South Wales.

The following members of the medical profession have been selected for admission to the Order of St. John of Jerusalem in England or for enrolment as Honorary Associates of the Order:—*Knight of Grace*: William Bevil Thorne M.D. *Honorary Associates*: Professor William R. Smith, M.D.; Walter Edward Hacon, L.R.C.P. Lond. (New Zealand); James E. Neild, M.D. (Melbourne); Charles Cotton, M.R.C.P. Edin.; Andrew Clark, F.R.C.S.; Arthur T. Norton, F.R.C.S.; and Charles Fox Goode, M.R.C.S.

RENEWED RISKS OF CHOLERA IMPORTATION INTO ENGLAND.—In several instances vessels have recently arrived in English ports having some cholera history. They have sailed from South American ports, where cholera is now prevalent, and one case at least has proved fatal during the voyage. But in no instance has the ship been deemed to be infected on arrival, and precautionary measures, such as cleansing and disinfection, have alone been necessary. A death from alleged cholera occurred last week at Carlisle, the attack occurring in a man recently arrived from the neighbourhood of the Tyne. The disease is stated to have been clinically cholera; but in the absence of a post-mortem examination such material as was forwarded to the Local Government Board for bacteriological investigation did not suffice to determine the actual nature of the attack.

NORTH-WEST LONDON CLINICAL SOCIETY.—A meeting of this society was held on April 17th, Mr. F. Durham being in the chair.—Mr. Jackson Clarke showed a case of Talipes Equino-varus on which he had operated with success. He detailed the steps of the operation. Mr. Battle advocated manipulation succeeded by fixation in plaster of Paris instead of operation when the children were seen early. Dr. Harry Campbell and Dr. Cagney discussed the possible causes of the deformity to be found in germinal defect.—Mr. Battle read the notes of three cases in which he had operated for Thrombosis of the Lateral Sinus secondary to Middle-ear Disease, and dwelt on the necessity of an early diagnosis. Mr. Jackson Clarke concurred.—Dr. Cagney showed a case of Nephritis with Dropsy, but without Albuminuria, in a child two years old, and described it as a rare condition. Dr. Leatham and Dr. Harry Campbell commented on the case.—Mr. Durham showed a case of Spina Bifida in the Lumbar Region, with Sphincter Paralysis from implication of the Sacral Nerves. Mr. Jackson Clarke and Mr. Battle commented on the case.—Dr. Harry Campbell showed a case of greatly Dilated Heart with Præcordial Bulging and Dyspnoea. He commented on the absence of ascites.

THE FRENCH HOSPITAL AND DISPENSARY.—On Saturday evening last the twenty-seventh annual dinner in aid of the funds of this institution took place at the Whitehall Rooms of the Hotel Metropole, the French Ambassador (Baron de Courcel) in the chair, supported by Sir Stuart Knill as representing the Lord Mayor, and the Italian Ambassador (General Ferrero) and other members of the *corps diplomatique*. After the usual toasts to the Queen and the President of the French Republic the Chairman proposed the customary toast to "The Founders and Benefactors of the Hospital," alluding in pathetic terms to the loss they had sustained in the person of M. Waddington, his predecessor, and coupling therewith the name of Dr. Vintras, who, with the late M. Rimmel, was largely instrumental in founding the hospital and in bringing it to its present state of efficiency. Later in the evening it was announced that subscriptions and donations had been promised to the amount of £2600, including a donation of £25 from the French Ambassador. During the evening vocal and instrumental music was dispensed under the direction of Cavaliere Tito Mattei who, as in years past, kindly gave his services on this occasion in association with Miss Rose Cavendish, Miss Rose Green, and Signor Maggi.

A LEGACY of £50 has been bequeathed to the Metropolitan Hospital Sunday Fund by the late Mr. Crosby Lockwood of Highbury New Park.

We are pleased to hear that the Emperor of Japan has conferred the third-class decoration of the Order of the Rising Sun on Mr. W. Anderson, surgeon to St. Thomas's Hospital. It is well known that Mr. Anderson was for some years resident in Japan, where he collected material for his work on the pictorial arts of that country, which has done much to bring the Japanese favourably under the notice of European art circles.

PRESENTATIONS.—Mr. Frederic E. Peake, L.R.C.P. Lond., M.R.C.S., of Bristol, has been presented by the Emmanuel Ambulance Class with a silver-mounted ebony walking-stick, suitably engraved, in appreciation of his instructive lectures on first aid.—Dr. A. W. Hinsley Walker of Harrogate has been the recipient from the ambulance class in connexion with the Wesleyan Mutual Improvement Society of a handsome electro-plated tea service of fluted pattern and gold-lined, for his professional services as instructor on ambulance aid. This was the third presentation to him for his successful conduct of the class.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Forest-gate Schools.

In anticipation of the Civil Service Estimates Sir John Gorst has given notice of his intention "to call attention to the removal of certain subordinate officers of the Forest-gate schools for having made statements as to the unwholesome food supplied to the children, and to the action of the Local Government Board in relation thereto, and to move a resolution."

Factories and Workshops Bill.

A large number of amendments to this Bill have been prepared in view of the proceedings before the Grand Committee on Trade. Mr. William Allen proposes that the places where work given out by factories and workshops is done should be licensed and subjected to inspection to see that they are not injurious or dangerous to the health of the people employed. Several members have amendments with reference to the temperature of factories and workshops. Sir John Gorst proposes that the age limit for the employment of children should be raised from eleven to twelve years; Mr. John Burns proposes thirteen years, and Mr. MacGregor, L.R.C.P. & S. Edin. &c., fourteen years. Several amendments have also been prepared with regard to the employment of women before and after childbirth. The amendment of Mr. John Burns is to the effect that the occupier of a factory or workshop shall not allow a woman to be employed within eight weeks of childbirth and within six months after she has given birth to a child. Mr. MacGregor suggests an amendment to this making the period prior to the birth of the child three months and the period subsequent also three months.

The Opium Commission Report.

Several members of the House of Commons have given notice of their purpose to call attention to the report of the Opium Commission.

HOUSE OF LORDS.

TUESDAY, APRIL 30TH.

Registration of Midwives.

Lord Balfour brought in a Bill for the Registration of Midwives. The Bill was read a first time.

HOUSE OF COMMONS.

THURSDAY, APRIL 25TH.

Surgeon-Major-General Giraud.

Mr. Campbell-Bannerman, replying to a question put by Sir Albert Rolit, said that the services of Surgeon-Major-General Giraud, Principal Medical Officer at Netley, had not been extended beyond the maximum age laid down by regulation for retirement. The age laid down by the Royal Warrant for retirement of a Surgeon-Major-General was sixty-two, when the interests of the public service would be materially advanced by his retention to that age, and it was deemed advisable to retain Surgeon-Major-General Giraud's services at Netley till he reached that age. He was verbally informed of this at the time it was so decided.

Provision for Old Age.

Mr. Shaw-Lefevre, President of the Local Government Board, answering a question put by Mr. Chamberlain, said that the reports of the Royal Commission on the Provision for Old Age showed very great difference of opinion among its members. It appeared, however, that a majority of them, in their separate reports or memoranda, were of opinion that further examination should be made of the various schemes for old age pensions, with the object of ascertaining whether the difficulties and objections which had been raised to them could be

removed. In view of this the Government would take measures for a further examination of the matter, but they were not at present able to come to any final decision on the subject.

County Government in Scotland.

Sir George Trevelyan, Secretary for Scotland, introduced to the House and explained in outline a Bill to make future provision for local government in the counties of Scotland. Among other public health clauses, he said, there was one which gave to the county council the power to make by-laws with regard to the sanitary arrangements of new buildings. The execution, he explained, would be committed to the district committee, who was the health authority on the spot and in practical exercise of health administration. In another part of his speech he said the medical officers had done good service by their reports to the county councils; but there was great difficulty in getting statistics with regard to births and deaths and the cause of death, such information being the very ABC of a real statistical system. The information had hitherto been got by a voluntary arrangement, but in the Bill it was proposed to give the medical authorities of the counties a legal title to obtain it. Later in his speech Sir George Trevelyan said that attention had been called to the difficulty of providing against the communication of disease by milk cans owing to their being washed with affected water. In the county he knew very well there were no less than 100 persons attacked with typhoid fever, and twenty died through the washing of the cans of a single dairy, which had a large *clintib* with affected water. The Government proposed to give the very strongest power to prohibit, under very severe and rapidly recovered penalties, the sale of milk from any dairy where infectious disease existed. They went further than the English Act of 1890. In that Act it was stated that the powers could only be put in force when infectious disease was caused by the consumption of milk. In this Bill they had added the words "or is likely to arise from the consumption of milk."

FRIDAY, APRIL 26TH.

The Local Government Board and Influenza.

Sir Walter Foster, in reply to Mr. Aird, said that the Local Government Board had instituted more than one inquiry as to the cause of influenza, and the results of these inquiries were contained in reports which had been presented to Parliament. In dealing with this matter, the Board had availed themselves of aid outside their own medical staff. The subject continued to receive the attention of the Board, and at the present time they were employing outside aid in the study of the pathological and bacteriological relations of feverish cold (the so-called "influenza cold") with influenza proper. Information was from time to time received from other countries respecting influenza, and an opportunity was thus afforded for a comparison, in reference to this disease, of administrative measures of various kinds.

MONDAY, APRIL 29TH.

Small-pox Hospital for Bradford.

Mr. Shaw-Lefevre, replying to Mr. Byles, said that the Local Government Board had lately sanctioned a loan to enable the corporation of Bradford to purchase the Bierley Hall estate and some adjoining land as a site for a small-pox hospital. He was aware that the site was outside the borough and that the proposal of the corporation was opposed by persons in the neighbourhood and by the North Bierley Urban District Council. After the local inquiry which was held by one of the Board's medical inspectors as to the purchase of the Bierley Hall estate, the Board pointed out to the corporation certain objections to the erection of a small-pox hospital on this site. The corporation thereupon undertook to purchase additional land adjoining the estate and to change the position of the building. The objections of the Board were thus removed. The Board's medical officer had recommended that no small-pox hospital should be established within a quarter of a mile of a population of 150 or 200 persons. Evidence had been laid before the Board showing that this condition would not be infringed here, and the loan had been sanctioned on the understanding that there would be no such infringement. The reports of the Board's inspectors in cases of this kind were intended for the information of the Board only and were treated as confidential documents.

Poor-law Schools in West London.

Mr. Shaw-Lefevre, in answer to Mr. Fisher, said that the guardians of the Fulham Union had represented to the Local Government Board the inconvenience to which they were put owing to the insufficiency of the school accommodation in the West London school district; but the Board had not felt able to press the managers of the school district to provide further accommodation pending the report of the Departmental Committee which was now considering the subject of Poor-law schools. The Board had, however, instructed the inspector of the district to visit the Fulham Workhouse and ascertain the existing state of things as regards the children there, and afterwards to confer with the guardians with a view of steps being taken to meet the present difficulty.

TUESDAY, APRIL 30TH.

Disease in American Sheep.

Mr. Herbert Gardner replied at some length to a question on this subject put to him by Sir Herbert Maxwell. He said that after examination of the specimens sent to the Board of Agriculture, the veterinary officers of the Board had come to the conclusion that the disease was one of a parasitic nature well known to American pathologists, and fully described by them under the title of Nodular Disease of the Intestines. The subject, he went on to say, would continue to engage the attention of the Board, but it was not one which he thought need cause much anxiety to stockowners in this country. Large numbers of sheep had been imported from the United States, but so far as the veterinary officers were aware the particular parasite in question had never been detected in home animals, although the disease had been well known to exist in the South-eastern States for many years past.

Cholera and Filters.

Mr. Brookfield asked the Secretary of State for War whether an outbreak of cholera affecting several companies of the East Lancashire Regiment at Lucknow had been traced to the barrack-room filter; whether his attention had been called to the examination by Dr. Sims Woodhead and Dr. Cartwright Wood, at the Research Laboratory of the College of Physicians and Surgeons, of filters used in the Home Army,

and to their conclusion that such filters were not only useless against disease, but probably materially increased the risk; whether he was aware that, as the consequence of applying to over 200,000 quarters a special system of filtration, the French War Office found that wherever the system was introduced typhoid fever disappeared, and that as its introduction extended the number of cases continuously decreased, showing according to the last report less than one-half of the average before the introduction of the system in 1888; whether he could say what special kind of filter was used in the system adopted by the French War Office; and whether he was aware that the number of cases of typhoid fever per thousand was 60 per cent. higher in the British Army in 1893 than in the French Army.

Mr. Woodall replied: Yes, sir; there was an outbreak of cholera at Lucknow last year. The Government of India appointed a special committee to inquire into the cause, and the report has not yet been issued. It appears, however, that it was due to a contaminated filter and filter bed in the barracks. The report by Dr. Woodhead and Dr. Wood, which the hon. member refers to, was one made last year to the British Medical Association on the relative efficiency of filters in general, and though very interesting and instructive it presents no new facts, but confirms the already existing opinion that the ordinary filters so largely used in the barracks in India are not effectual for the perfect purification of water unless it is previously boiled. Two hundred thousand of the "Chamberland-Pasteur" filter have been supplied to French barracks, hospitals, and laboratories, and it has been estimated that the deaths from enteric fever are 60 per cent. lower in 1892 than in 1886-7 and the cases 60 per cent. fewer.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the subject of Food Products Adulteration, of which Sir Walter Foster is chairman, resumed its inquiry on Tuesday, April 30th.

The first witness examined was Mr. T. P. Ling, who appeared as a representative of the Trade Section of the London Chamber of Commerce. He had considerable experience in the retail trade in butter and margarine, and he was emphatically of opinion that margarine should not be packed in baskets or other packages with detachable labels. He would not stop the sale of margarine mixtures, because it would be unfair to the public, who were very fond of them; but he would insist on them being sold as mixtures. As to prosecutions, he thought that in every case the assistant who actually sold the article should be summoned as well as the principal. If that were done the assistants would refuse to sell fraudulent articles. As to imprisonment being imposed, all he as a large employer could say was that he would soon cease selling margarine if he were liable to imprisonment. His suggestion was that there should, in addition to the vestries, be a central authority, such as Scotland Yard, to which any member of the public might go and demand as a right that samples should be taken in a particular shop. He would require of a person who made this demand that he place a deposit of £5 in order to prevent frivolous proceedings. The present system of inspection lent itself to bribery, and in his opinion bribery prevailed to a considerable extent, although he was not prepared to offer proof of it.

Mr. J. R. Webb, a representative of the Provision Trade Section of the London Chamber of Commerce and the Cheese Sub-committee of the Home and Foreign Produce Exchange, said he had given special attention to the evils arising from the importation of adulterated cheese. A few years ago it was the boast of the trade that cheese was one of the few articles of food not adulterated, but that boast could no longer be made, because a large trade in what was called imitation or filled cheese had sprung up within the last few years. Large quantities of this imitation cheese came from America, from Hamburg, and from Holland. It was made from skimmed milk, and in order to disguise the poverty of the article there was an addition in some of it of lard and in some of oleo. The result was not a cheese, not even an inferior cheese, although it was sold as a genuine full-cream cheese. If this article were kept a little time it went bad, and the mere process of rubbing it between the finger and thumb was sufficient to separate the foreign fat from the curd. Asked why, if the adulteration were so easily detected, the large trade in this article continued, witness said that the profits were so enormous that traders were prepared to run the risk. In Canada and many of the States of America laws had been passed prohibiting the manufacture of filled cheese. As to the remedy for this state of things, he recommended greater activity on the part of the Customs authorities and a law prohibiting both the importation and the manufacture of the article. He would give the Customs authorities power to stop consignments at the port of entry, and have analyses made, and he would also give powers to seize the article when found in warehouses. In his opinion this imitation cheese was an unwholesome article of food. If young it was very indigestible, and if kept till old it was rancid and offensive.

Mr. Cecil Rowson, representing the Liverpool Provision Trade Association, gave evidence as to the large quantity of filled cheese imported into Liverpool from America, and the prosecutions which have taken place in connexion with its sale. He said that only an expert could distinguish it from genuine cheese, although it had scarcely any of the nutritive properties of that article. He contended that both its manufacture and its importation should be prohibited by law.

The Committee then adjourned.

The Committee met again on the following day, with Sir Walter Foster in the chair.

Mr. William George Watson, a member of the firm trading under the style of the Maypole Dairy Company, examined by the Chairman, said that they had about sixty retail shops in Scotland, the north of England, the Midlands, and Ireland, and were perhaps the largest retailers of margarine in Great Britain. They had eight creameries in Ireland and one in England, and butter-buying offices in Denmark and Holland. When they engaged their assistants they got them to sign an undertaking to observe the requirements and provisions of the Margarine Act of 1887 and to indemnify the firm against damages, fines, &c., occasioned by any neglect or irregularity on their part in connexion with the sale or exposure for sale of margarine. On the back of the undertaking there were printed the provisions of the Margarine Act. In spite of these precautions the firm had been prosecuted. In purchasing margarine 90 per cent. of their customers asked for fivepenny, sixpenny, or sevenpenny, as the price might be

8 per cent. asked for butter, and only 2 per cent. actually asked for margarine. They all knew perfectly well that it was margarine they wanted and were getting, but they avoided naming it. He wished to see all margarine wrapped in paper with nothing else marked upon it save the word "Margarine," and to meet the objection on the part of customers to going about with it thus exposed he would allow an outer cover. Then he would have the assistant who sold the article prosecuted as well as the principal, and he would also like to see a central department to which complaints as to adulterations might be made. Otherwise he thought the present Margarine Act, properly enforced, was a sufficient protection to the public. He saw no objection to margarine being coloured to suit the taste of the consumer, or to its being kept in special receptacles. As to water in butter, his firm found during the excessive heat in 1893 that the butter from one of their creameries in Ireland contained 22 per cent. of water. They expressed surprise at this, and ordered another analysis, but with practically the same result. Thereupon they sank artesian wells and got refrigerators, and in this way reduced the percentage. In salting the butter they used dry salt and not brine. He accounted for the higher percentage in Irish butter compared with butter made in Denmark by the fact that in the latter country they had an ample supply of ice, which enabled them to get the water out of the butter.

By Mr. Colman: He was against imprisonment for offenders under the Margarine Act, because a principal might be sent to prison for an act of his assistant done in defiance of his instructions. The opinion he held about margarine was that pure margarine was far superior to poor butter.

By Mr. Frye: The false reports circulated about the constituent parts of margarine did great harm to the trade, and had led many people to believe that all manner of rubbish went to the making of the article.

By Mr. Kilbride: There were towns in Lancashire where the people insisted on having butter almost as white as lard. He denied that the effect of colouring margarine was to make it resemble butter as much as possible. In Denmark the customer bought his margarine uncoloured, but he took home with him capsules for the purpose of colouring it according to his taste.

The Committee then adjourned for a week.

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THE NEW SYDENHAM SOCIETY, London.

Lectures on Diseases of the Spinal Cord. By Dr. Pierre Marie. Illustrated. Translated by M. Lubbock, M.D., L.R.C.P. Lond. 1895. pp. 511.

THOM, ALEX., & Co., Dublin; and LONGMANS, GREEN, & Co., Paternoster-row, London.

Royal University of Ireland: the Calendar for the Year 1895. pp. 422.

UNWIN, T. FISHER, London.

The Female Offender. By Professor Cesar Lombroso and William Ferrero. With an Introduction by W. Douglas Morrison. Illustrated. 1895. pp. 313. Price 6s.

The Pathology of Insanity: the Means and Methods of its Study; by W. J. Collins, M.D., J.P., L.C.C.; reprint (Adlard & Son, Bartholomew-close, London, E.C.).—Le Musée Social: Inauguration, 25 Mars, 1895 (C. Levy, Rue Auber, Paris).—The Journal of the Sanitary Institute: April, 1895 (E. Stanford, Cockspur-street, London, S.W.); price 2s. 6d.—The Journal of Pathology and Bacteriology: April, 1895 (Young J. Pentland, Edinburgh and London).—Illustrated Modern Art and Literature; Vol. I., No. 6 (Published at 68, Fleet-street, London, E.C.); price 1s.—The Royal Natural History: Vol. III., Part 18 (Frederick Warne & Co., Bedford-street, Strand, London); price 1s. net.—Enteric Fever in India and the French System of Conservancy; by W. H. Climo, M.D. (Pioneer Press, Allahabad, 1889).—Concepto y Tratamiento Modernos de las Diarreas Infantiles; Discurso del Dr. D. A. M. Vargas; 24 Febrero de 1894 (Casasajo y Compañía, Barcelona).—The Hygienic Conditions of Indian Cantonments and the Necessity for Sanitary Legislation; by Wm. H. Climo, M.D. (Civil and Military Gazette Office, Lahore, 1891).—The Government of the Workhouse, with an Appendix containing the Report of the Royal Commission on the Aged Poor; by the Editor of the Poor-law Officers' Journal (Poor-law Officers' Journal, Market-street, Manchester); 1895; price 1s.—A Priced Catalogue of Medical Aid and Pharmaceutical Specialities, issued by Wyley's, Limited, Coventry (Moor-street, Birmingham).—Alcoholic Drinks, or Notes on the Medical, Social, Political, and Religious Aspects of the Liquor Question; by P. M. L. Pinto, F.R.A., L.M.S. (Times of Ceylon Press, Colombo, 1895).—On Ocular Affections in Syphilis of the Brain, with Report of Five Cases; by Chas. Zimmermann, M.D., Milwaukee, Wis.; reprint, 1895. (The Knickerbocker Press; G. P. Putnam's Sons, New York).—The Countess of Dufferin's Fund: Tenth Annual Report of the National Association for Supplying Female Medical Aid to the Women of India for the year 1894. (Office of the Superintendent of Government Printing, India; Calcutta, 1895).—Annales de l'Institut de Pathologie et de Bactériologie de Bucarest: troisième année, vol. IV., 1891 (Imprimeria Statului, Bucuresci, 1894).—Magazines for May: The Pall Mall Magazine, London Home, Strand Magazine, Picture Magazine, Sunday at Home, Leisure Hour, Boy's Own Paper, Girls' Own Paper, English Illustrated Magazine, Friendly Greetings.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- BIRD, R. K., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator for Natimuk, Victoria, Australia, vice Weber, resigned.
- BRYDEN, F. W. A., M.R.C.S., has been appointed Honorary Medical Officer to the Royal Surrey County Hospital, Guildford.
- COOPER, C. E., M.B., B.C. Cantab., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.
- DANIEL, W. P. TAYLOR, L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer of Health for the Farnley Tyas Urban Sanitary District, vice Shaw, resigned.
- EDWARDS, E. C., M.B., C.M. Edin., has been appointed Senior House Surgeon to the East Suffolk Hospital, Ipswich.
- FYFE, E. H., M.B., Ch.M. Glasg., has been appointed a Public Vaccinator for Fitzroy, Victoria, Australia.
- GEMMELL, JOHN E., M.B., C.M. Edin., has been appointed Hon. Hospital Medical Officer to the Ladies' Charity and Lying-in Hospital, Liverpool.
- GRINDSALK, T. B., M.B., M.R.C.S., has been appointed Hon. Hospital Medical Officer to the Ladies' Charity and Lying-in Hospital, Liverpool.
- HAIN-BROWN, C. WM., M.B., M.S. Alder., M.R.C.S., has been appointed Honorary Medical Officer to the Royal Surrey County Hospital, Guildford.
- HARRISON, J. W., M.B., Ch.M. Melb., has been appointed a Public Vaccinator for Shepparton, Victoria, Australia, vice Hughton, resigned.
- HINES, G. J., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the No. 4 Sanitary District of the Hollingbourn Union.
- HOGG, G. H., M.B., Ch.B. Edin., has been appointed Government Medical Officer and Vaccinator for the District of Cooma, New South Wales, vice Clifford, resigned.

JACOB, E. L., M.R.C.S., has been appointed Medical Officer of Health for the Leatherhead Urban Sanitary District.

JACOBIEN, G. O., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Pembroke Sanitary District of the Kingston Union.

KIERNSMEIER, H. B., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Narrandera Hospital, New South Wales.

MACGREGOR, J. J., M.D. Lond., F.R.C.S., M., L.R.C.P., has been appointed Assistant Surgeon to the Essex and Colchester General Hospital.

MACKENZIE, THOMAS, M.A., M.D. Edin., has been appointed Physician to Noble's Isle of Man General Hospital and Dispensary.

NEWMAN, F. JAS., M.B., Ch.B. Melb., has been appointed Health Officer for the Shire of Barrabool, Victoria, Australia.

NICHOLSON, B. H., M.B., M.S. Edin., has been appointed Assistant Surgeon to the Essex and Colchester Hospital.

O'DONNELL, J., M.B., B.Ch. Irel., has been appointed Medical Officer to the Dublin Metropolitan Police Medical Aid Association.

PAYNE, HENRY, M.D., M.R.C.S., L.S.A., has been appointed one of the Honorary Medical Officers to the Ashton-under-Lyne District Infirmary.

POLAND, J., F.R.C.S., M., L.R.C.P. Lond., has been appointed Surgeon to the City Orthopaedic Hospital, vice Chance.

BENNIE, G. E., M.D. Lond., M.R.C.S., has been appointed Government Pathologist for the Metropolitan District of Sydney, New South Wales.

RICHARDS, J. B. O., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Milton Abbot Sanitary District of the Tavistock Union.

ROBINSON, T. H., M.D., Ch.M. Edin., has been appointed Surgeon-Captain to the Western Australian Defence Forces.

RUSSELL, F. R., M.D. Edin., M.S., has been appointed Honorary Medical Officer to the Royal Surrey County Hospital, Guildford.

SCOTT, J. M., M.B. Melb., has been appointed a Public Vaccinator for Steiglitz, Victoria, Australia, vice Spred.

SHEWIN, ALFRED, M.D. Lond., M.R.C.S., has been appointed Honorary Consulting Physician to the Prince Alfred Hospital, New South Wales.

SHUTTER, R. E., M.B., Ch.B. Melb., has been appointed, *pro tem*, a Public Vaccinator for Bendigo, Victoria, Australia.

SMITH, J., L.R.C.P., L.R.C.S. Edin., has been appointed Health Officer, and Medical Officer to the Police and Gaols at West Devonport, Tasmania, vice Richardson, resigned.

STANTON, THOMAS, M.B. Dubl., L.R.C.S., L.M. Irel., has been appointed a Public Vaccinator for Kororo, Victoria, Australia, vice Jernyn, resigned.

THOMAS, J. LYNN, F.R.C.S., has been appointed Assistant Surgeon to the Cardiff Infirmary.

THORNE, J. M., L.R.C.P. Lond., M.R.C.S., has been appointed Consulting Surgeon to the Retford Cottage Hospital.

WILLOUGHBY, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sunbury Sanitary District of the Staines Union.

YEATES, EDWARD, L.R.C.P. Irel., L.M., L.R.C.S., has been appointed a Public Vaccinator for Learmouth, Victoria, Australia, vice Salter, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £25 per annum, with board, lodging, and washing in the hospital.

ASYLUM FOR IDIOTS, Earlswood, Redhill, Surrey.—Assistant Medical Officer. Salary £150 a year, with board and residence. Applications to the Secretary, 36, King William-street, London-bridge, E.C.

BOROUGH OF STOCKTON-ON-TES.—Medical Officer of Health and Medical Superintendent of the Fever Hospital. Salary £500 per annum. Applications to the Town Clerk.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's-inn-road.—Clinical Assistants.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £100 per annum, with board and lodging.

EAST LONDON HOSPITAL FOR CHILDREN, Glams-road, Shadwell, E.—House Surgeon. Board, lodging, &c., provided.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glams-road, Shadwell, E.—Assistant Physician for Out-patients.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon, for six months. Board, lodging, and washing in the hospital provided. Also Assistant House Physician, for six months. Board, lodging, and washing in the hospital provided.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho-square, London, W.—Resident Medical Officer, for six months. Board, residence, and washing provided, and a honorarium of £10 10s. given.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician to Out-patients. Applications to the Secretary, Offices, 27, Clement's-lane, E.C.

PARISH OF ST. MATTHEW, BETHNAL-GREEN.—Junior Assistant Medical Officer for the Workhouse, Waterloo-road, E., for six months. Honorarium of £20 will be given, with rations, furnished apartments, and washing. Applications to the Clerk, Guardians' Offices, Bishop's-road, E.

RUTHURHAM HOSPITAL AND DISPENSARY.—Resident House Surgeon for three years. Salary £100 per annum, with rooms, washing, and commons (exclusive of alcoholic drinks).

SCHOOL BOARD FOR LONDON.—Medical Officer for the Board's Truant School, Upton House, Homerton. Salary £100 per annum. Applications to the Clerk of the Managers, School Board Offices, Victoria Embankment, W.C.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—Junior Physician. Honorarium of £40 for first six months, and afterwards at the rate of £120 per annum, with board, lodging, &c.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, Albert Embankment, London, S.E.—Lecturer on Physiology.

THE DENTAL HOSPITAL OF LONDON, Leicester-square, W.C.—Two Dental Surgeons.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician, for six months. Salary at the rate of £70 per annum, with board and lodging.

WESTMINSTER GENERAL DISPENSARY, 9, Gerard-street, Soho, London, W.—Honorary Surgeon.

WEST RIDING ASYLUM, Wadley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board &c.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser, for two years; unmarried. Salary £70 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

COLLETT.—On April 26th, at Ivy House, Marske-by-the-Sea, Yorkshire, the wife of H. G. Outram Collett, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

ENSOR.—On April 17th, at Windsor-place, Cardiff, the wife of Mr. Henry Colleen Ensor, surgeon, of a son.

JONES.—On April 26th, at Claybury, Woodford, Essex, the wife of Robert Jones, M.D., of a daughter.

MOORE.—On April 23rd, at Clarence House, Staines, the wife of S. J. Moore, M.D., of a daughter.

WATT.—On April 30th, at Millbrook, Plymouth, the wife of J. Leslie Watt, M.B., of a son.

MARRIAGES.

CARR—GRIFFITH.—On April 24th, at the Brixton-hill Wesleyan Church, by Rev. J. H. Rigg, D.D., and Rev. Richard Roberts, John Walter Carr, M.D., M.R.C.P., of 13, Cavendish-place, W., only son of the late John Carr, J.P., and of Mrs. John Carr, of 40, Bloomsbury-square, to Jessie, daughter of Walter Griffith, of Palace-road, Streatham-hill.

DODD—DODD.—On April 25th, at Holy Trinity Church, Tulse-hill, by Rev. S. O. Dodfield, M.A., M.B., Medical Officer of Health, Paddington, of Blomfield-road, Maids-valle, to Elsie, fourth daughter of Arthur Dodd, of Kimberley, Tulse-hill, S.W.

LORD—WILLIAMS.—On April 23rd, at St. James's, Manchester, by the Rev. W. J. Sims, M.A., Robert Ellis Lord, M.D., B.Sc. Lond., of Colwyn Bay, to Elizabeth Margaret, daughter of William Williams, Esq., of Brecon.

MITCHELL—BLACKWELL.—On April 22nd, at St. James's Church, Paddington, by the Rev. R. Mitchell, late vicar of Wild, and the Rev. W. J. Sowter, vicar of Eltham, Ernest J. D. Mitchell, B.A., M.B., B.C., of the Grange, Eltham, to Kate Beatrice, widow of Edmund Alfred Blackwell, and daughter of the late C. F. Clements, of 3, Portchester-square, Hyde-park.

MUMFORD—READ.—On April 25th, at the Free Church, Kentish Town, Alfred Alexander Mumford, M.D., of Chorlton-cum-Hardy, to Edith Emily, second daughter of Charles Read, M.D., of Regent's-park, London.

ORD—PARTRIDGE.—On April 25th, at the Parish Church, Bromley, Kent, Reginald Whistler Ord, M.A., M.R.C.S., L.R.C.P., of Dover, to Mary Coralie, eldest daughter of Henry Partridge, J.P., of Barnfield, Bromley, Kent.

PRINCE—PETTINGER.—On April 23rd, at the Parish Church, Chorlton-cum-Hardy, John Woolnough George Prince, M.R.C.S., L.R.C.P., of Hartfield, Sussex, to Sarah Rose, younger daughter of the late Geo. W. Pettinger, M.R.C.S., Alexandra-park, Manchester.

ROWLAND—HADEN.—On April 24th, at St. George's, Ramsgate, Frank Mortimer Rowland, M.B. Camb., of Lichfield, to Ellen Josephine, second daughter of the late W. H. Haden, of Cardigan.

TELFORD-SMITH—STERRY.—On April 27th, at St. Stephen's Church, South Kensington, by the Rev. A. W. Gros, rector of Milton, Northampton (cousin of the bridegroom), Telford Telford Smith, M.A., M.D., B.Ch., Medical Superintendent, Royal Albert Asylum, Lancaster, eldest son of Thomas Smith, Esq., Eglinton-road, Donnybrook, Dublin, to Ada, only daughter of W. Jex Sterry, of Norwood.

DEATHS.

DENNISTON.—On April 10th, on board R.M.S. *Tongarivo*, James Denniston, M.D., of Bowdon, Cheshire, fifth son of the late Archibald Denniston, W.S., Greenock, N.B., in his 41st year.

GREENHILL.—On April 30th, from an accident whilst riding, Arthur Francis Greenhill, L.R.C.P., M.R.C.S., of The Lawn, Barnes, Surrey, aged 55.

HARRIS.—On April 26th, suddenly, at Denmark-hill, Camberwell, Henry Harris, M.R.C.S., aged 57.

INNES.—On April 23th, at Cairo, Edward Innes, M.B., C.M. Edin., youngest son of the late Sir James M. Innes, of Edingight and Balveny, Bart., aged 30.

JOHNSON.—On April 23th, suddenly, at Aigle, Vaud, John Johnson, M.D., late of Elmstead, Tunbridge Wells.

OSBURN.—On April 29th, at Santa Fe, New Mexico, Henry Walter Osburn, M.D., eldest son of Henry Osburn, Cedars-road, Clapham, late of St. Andrew's, New Brunswick.

TOMKIN.—On April 26th, at Witham, Essex, Thomas Marchant Tomkin, Surgeon, aged 76.

WILKINS.—On April 25th, at Ealing, Henry Wilkins, M.R.C.S. Eng., L.S.A., in his 24th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynaecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M. and 8 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M. and 8 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Mr. F. J. Bennett: The Subject of Dental Caries (with illustrative specimens). Exhibits by Mr. Storor Bennett. Casual Communication by Mr. Oswald Fergus.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Mr. H. T. Butlin: (1) Tumour of Neck, with Paralysis of Sympathetic Nerve; (2) Case showing Paralysis of Right Vocal Cord.—Dr. James Donelan: Case of Perforation of the Hard Palate occurring after Influenza in a previously healthy Boy aged twelve; also "sequestrum" from same case.—Mr. Charles A. Parker: Case of Tubercle of the Nose and Pharynx.—Dr. L. H. Pegler: Microscopic Sections illustrating the Histology of Anterior Hypertrophies of the Interior Turbinate body.—Mr. W. R. H. Stewart: Case of Fistula in the Neck.—Mr. Charters Symonds: (1) Polyp from the Antrum, Unusually large Nasal Polypus, Post-nasal Sarcoma (specimens); (2) The case of Pachydermia previously shown.—Dr. Herbert Tilley: Case of Laryngeal Ulceration (?syphilitic or tubercular). Also by Mr. A. A. Bowdly and Dr. Dundas Grant.

THURSDAY.—BRITISH GYNÆCOLOGICAL SOCIETY.—Nomination of Fellows; Ballot. Dr. H. Michie: Pregnancy complicated by Suppuration within the Pelvis (with cases). Specimens by Mr. O'Callaghan, Mr. Bowman Jessett, and Dr. John Shaw.

SOUTH WEST LONDON MEDICAL SOCIETY (Vestry Room, Town Hall, Wandsworth).—8.30 P.M. Dr. Hale White: On the Increase in the Frequency of Eupneuma as a Complication of Pneumonia during the Influenza Epidemic.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Mr. R. W. Parker: A case of an Infant in whom some of the Abdominal Muscles were absent.—Mr. Arbuthnot Lane: A case of Extensive Degenerating Nævus of the Bladder.—Mr. L. A. Dunn: Two cases of Gastric Ulcer treated by Laparotomy.—Mr. Silcock: Two cases of Perforating Gastric Ulcer—in one Excision of Edges, Suture, Death; in the other Formation of Reparative Adhesions, Laparotomy, Drainage, Recovery.—Dr. F. Lucas Benham: Thickened and Contracted Mesentery simulating Tumour in a case of Cirrhosis of the Liver.—Dr. Sidney Phillips: A case of Splenic Abscess; Secondary Suppuration in the Liver, and Death from Pyæmia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. R. M. Gunn: Clinical Examination of the Eye.—London Throat Hospital, Gt. Portland-street, W., 8 P.M., Mr. W. R. H. Stewart: Examination of the Ear.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Hysterical and Delirious Mania.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Choroidal Affections, with illustrative cases.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Psoriasis.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. Edmund Owen: Cases from the Surgical Ward.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Beccov: Locomotor Ataxia.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 4 P.M., Prof. Crookshank: The Microscope and Methods of Cultivation.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Acute Mania.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 2nd, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
April 26	29.40	S.W.	50	49	93	55	49	0.57	Raining
" 27	29.54	W.	49	47	81	53	47	0.32	Raining
" 28	29.99	N.E.	50	48	81	56	47	0.35	Cloudy
" 29	30.17	S.W.	48	46	104	67	46	...	Hazy
" 30	30.23	W.	53	50	104	64	46	...	Cloudy
May 1	30.15	S.W.	56	52	106	64	48	...	Fine
" 2	30.59	N.	51	45	106	59	40	0.04	Fine

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

TO ADVERTISERS.

THE pressure on our advertisement space this week has necessitated the omission of some few of our clients' announcements.

AN UNORTHODOX REMEDY.

THE scientific mind is often exercised to account for the reason of certain ceremonial remedies of savage and primitive peoples which, while absurd by reason of the manner of their administration, have in them, nevertheless, a substratum of truth. Accident will account for the discovery of the remedy in a great many instances, and the desire for power would induce the "doctor" or medicine man to surround the remedy with an elaborate ritual in order that he might act on the credulity of human nature and minister to its love of mystery. In the *Sunday Magazine* the Rev. S. Baring Gould relates the following story, and, apart from its humour, it is interesting to speculate on the probable outcome of a similar incident in more superstitious times:—

"A poor woman came to the parson of a parish with the request, 'Please, pass'n, my old sow be took cruel bad. I wish now you'd be so good as to come and say a prayer over her.' The parson protested that it would degrade his sacred office, but, the woman being very importunate and beginning to sob, to pacify her he went to the cottage to see the sow. Raising his right hand in a solemn manner, he said, 'If thou livest, O pig! then thou livest; if thou diest, O pig! then thou diest.' Singularly enough the pig recovered. Some time after, the parson falling ill with a quinsy that nearly choked him, the woman went to see him when he was almost in *extremis*, and, raising her hand, she pointed to him with her finger, saying, 'If thou livest, O pass'n, then thou livest; if thou diest, O pass'n! then thou diest.' An explosion of laughter burst the quinsy, and the 'pass'n' recovered."

The story is told in the writer's well-known happy style, but space compels us to condense it, and this necessarily somewhat spoils the humour.

F. W. E.—Yes.

MEDICAL MEN AS PROPRIETORS OF ADVERTISED FOODS IN LIMITED COMPANIES.

A RESPECTED CORRESPONDENT asks our opinion of the propriety of medical men accepting shares or debentures offered primarily to the profession by a leading member of a firm dealing in articles of food or in beverages more or less alcoholic and alleged to have special virtues for invalids. These virtues are advertised on a large scale. In the circular offering the debentures to the profession it is stated as a reason for such offer that the success of one of the principal articles is mainly due to the kind recommendations of the medical faculty. We can have no hesitation as to our reply. Medical men should have no pecuniary interest in foods which it may be their duty to have to prescribe. Not very long ago a number of medical men narrowly escaped the censure of the General Medical Council for accepting foundation shares in such a company on condition of advertising the wares of it. It is true that in the case now under consideration the purchasers of debentures are not required to furnish testimonials of the articles; but they would be in a position in which it would be to their interest more or less, and as members of the company they would be responsible for methods of advertising wares which they might not always approve.

ADVERTISEMENT OF MEDICAL NAMES AT SOUTHPORT.

MEDICAL PRACTITIONERS connected with hospitals and sanatoria at Southport and elsewhere would do a great service by refusing permission for their names to appear in the advertisement of such institutions. We see in the *Southport Visitor* a long list of such advertisements, including the names and qualifications of their medical officers. We recognise that these advertisements are drawn not by them, but by the enterprising secretary or lay officers. But the names are there nevertheless, and give an excuse to those who practise by direct advertisement for saying that those who stand high in the profession do not need to do so, seeing they have advertisement done for them.

MINERAL WATERS AS A BASIS OF MEDICAL ADVERTISING.

A LIST of names and addresses of medical practitioners supports an advertisement of mineral waters, and, we are informed, appears frequently in a Croydon newspaper. We are sure that the gentlemen in question will take steps to prevent the Association in fault from thus using their names to promote a commercial speculation in a manner contrary to the ethics and derogatory to the dignity of the profession.

"PULEX IRRITANS."

To the Editors of THE LANCET.

SIRS,—May I never find myself in a similar plight to Dr. Neale, for I am very susceptible to flea influence. Of late years I have avoided protracted acquaintance with these pests, for I have during the summer months carried a bottle of chloroform, and when bitten have poured a little of the CHCl_3 on my clothes immediately over the spot, which at once soaks through and permanently quiets P.I. and allays the irritation of its bite.

I am, Sirs, yours faithfully,

Canterbury, May 1st, 1895.

W. PUGIN THORNTON.

LLANDRIDOD WELLS COTTAGE HOSPITAL.

MR. J. Morgan Evans.—Rule 11 certainly needs to be made plainer. There is little use in giving medical men the right to "visit" their cases if they are not to be allowed to attend them or to prescribe for them. That this is the natural construction of the word is confirmed by the requirement of legal qualifications in the medical man to whom the privilege is accorded. It may be argued, indeed, that Rule 10 gives full power to the medical director; but this is not so clear. By this rule the medical director is to have entire control over the medical management of the hospital; but this must be construed with reference to Rule 11, which gives power to any medical practitioner to visit his patient—that is, of course, to visit him in a professional sense. Such should be the reading of the rule in an institution of this kind.

LOW FEES FOR EXAMINATION IN LIFE ASSURANCE.

A CORRESPONDENT informs us that he had declined the office of examiner for life assurance for the Order of Foresters on low terms, and was surprised at its acceptance by members of the profession whom he names. We think he was right. We admit that in the case of life assurance in friendly societies for really small sums medical officers should charge lower fees than for ordinary assurance work; but the fees here are too small—5s. for policy of £100; 7s. 6d. for £200; 10s. for £400; 12s. 6d. for £600.

A DOMESTIC CONVENIENCE.

THE Safety Letter Box Co., 14, Sherborne-lane, King William-street, E.C., send us an ingenious circular rim, in mahogany, to be placed on chamber utensils in the nursery. It is called "The 'Relief' Seat for Children."

DANS CETTE GALÈRE.

A CORRESPONDENT sends us a card which was found by the ladies of his household nestling in the price-list of a London tradesman. It is charitable to presume that it got there by accident; but the words in brackets are somewhat suggestive, and certainly unnecessary in the case of those to whom alone the change of address should be indicated—viz., the practitioner's own patients and his private friends. We append a copy of the card, omitting the name and the addresses.

CHANGE OF ADDRESS.

MR. _____,

(Medical Practitioner.)

HAS REMOVED TO

_____ ROAD.

[FIRST HOUSE OUT OF _____ ROAD.]

FROM _____ ROAD.

A M.O.H.—The answer must mainly depend on the source of the instructions received by the medical officer of health to attend the inquiry. As a rule, attendance at such an inquiry at the request of the local sanitary authority for whom the officer acts does not carry a fee with it; but in the case of an officer only giving part-time services we see no reason why he should not claim a fee for such exceptional services. If the county council requested the officer's attendance, then he should claim a fee from them; for the local medical officer of health has no duties towards a county council, except as regards the transmission to them under the Local Government Act, 1888, of certain reports.

Mr. C. Stanley Kirtton.—No.

VACCINATION IN GERMANY AND FRANCE.

To the Editors of THE LANCET.

SIRS,—I shall feel deeply grateful if any of your correspondents can furnish me with information about the vaccination laws in Germany and France. The points which I am most anxious to obtain some knowledge of are—(1) whether there is a public system of vaccination in these countries, and (2) whether the law states anything definite with respect to the number of "marks" to be made.

I am, Sirs, yours faithfully,

Cardiff, April 29th, 1895.

T. GARRET HORDER.

MEDICAL ADVERTISING IN JOHANNESBURG.

'DR. SPEER,' Johannesburg, has a very large advertisement in the *Star* of that place in the true newspaper style: "All skin diseases from whatever cause absolutely cured within a stated time," &c. The Medical Corporations of Great Britain are not responsible for "Dr. Speer's" methods. He boasts of being a graduate of the Medical Department of Harvard University, Class 74. It is for the authorities of that University to consider whether they should take any steps in regard to "Dr. Speer."

MEDICAL ADVERTISING.

WE append a further illustration of this disastrous and discreditable innovation in methods of practice. We omit the name and residence of the practitioner, which, however, appear on the bill.

"The Surgery, 434, Whitehorse-road, Thornton-heath. Hours: Morning, 10.30 to 12; Evening, 7.30 to 9; Sunday, 7 to 8.30 P.M. Fees: Medicine and Advice at Surgery, 1s.; Home Visit, with Medicine, from 1s. 6d.; Midwifery from 15s.; Vaccination, 1s."

THE HACK TUKE MEMORIAL.

AN influential committee is being formed to raise a fund to perpetuate the memory of the late Dr. Hack Tuke by a prize, medal, or other means for the encouragement of the study of psychological medicine. The acting honorary secretary is Dr. Fletcher Beach, 64, Welbeck-street, W.

Just Qualified.—Manual of Practical Morbid Anatomy (Cambridge Natural Science Manuals), by A. A. Kanthack and H. D. Rolleston, Cambridge University Press. H. K. Lewis, 136, Gower-street, W.C. Price 4s. 6d.

During the week marked copies of the following newspapers have been received:—*Sussex Daily News*, *Whitehall Review*, *Bedford Advertiser*, *Liverpool Courier*, *Birmingham Gazette*, *North Eastern Daily Gazette*, *Hastings and St. Leonards News*, *North Wales Chronicle*, *Bridge of Allan Reporter*, *Stirling Saturday Observer*, *Ayr Observer*, *Oldham Standard*, *Ashdon Standard*, *Gloucester Chronicle*, *Courier de la Presse*, *Surrey Advertiser*, *Sutton Coldfield and Erdington Times*, *South London Press*, *Deansbury Reporter*, *Guy's Hospital Gazette*, *Australian Medical Journal*, *Local Government Journal*, *Kerry Sentinel*, *Australasian Medical Gazette*, *Spalding Free Press*, *West Middlesex Advertiser*, *Ilfracombe Gazette*, *Covey Times*, *Buckingham Observer*, *Banffshire Journal*, *Guernsey Star*, *Preston Herald*, *Leamington Spa Courier*, *St. Mary's Hospital Gazette*, *Rochdale Observer*, *North British Daily Mail*, *Irish News Home News*, *Todmorden Advertiser*, *Builder*, *Times of India*, *Architect*, *Citizen*, *Pioneer Mail*, *Manchester Evening Mail*, &c., &c.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

A Clinical Lecture

ON

TWO CASES IN WHICH A DOUBLED SECOND SOUND WAS AUDIBLE ONLY NEAR THE APEX OF THE HEART.

*Delivered at the London Hospital, Nov. 29th, 1894,*By A. ERNEST SANSOM, M.D. LOND.,
F.R.C.P. LOND.,PHYSICIAN TO THE LONDON HOSPITAL AND LECTURER ON CLINICAL
MEDICINE AT THE LONDON HOSPITAL MEDICAL COLLEGE.

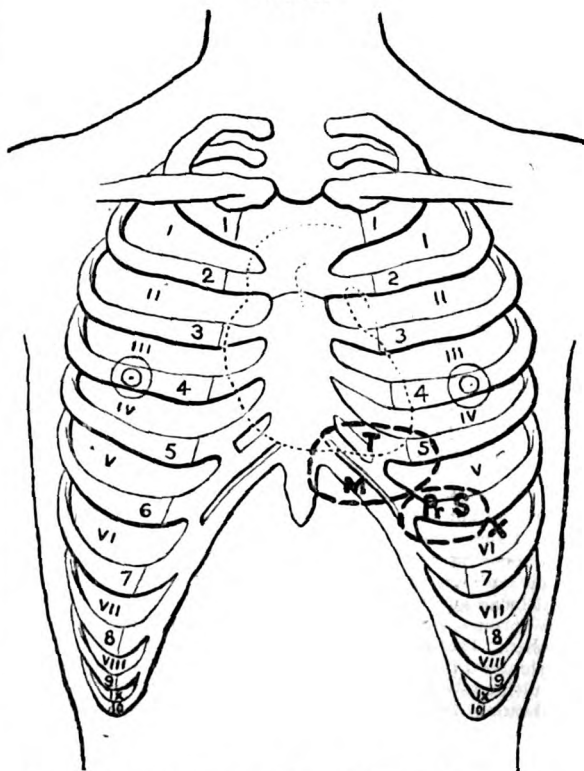
GENTLEMEN,—The title of this lecture may cause you to think that I have chosen a subject which is not in the highest degree of practical utility; but I have selected the two cases which are to serve as the groundwork of my observations to-day: first, because they cannot fail, apart from all abstruse questions and undetermined problems, to inculcate some useful lessons; next, because they can tell us much in corroboration of extant teaching; and lastly, because they illustrate some doctrines lately discussed which are not accepted by a majority of observers. We are not the judges of the ultimate practical significance of observed phenomena; let us read the lines which these patients unconsciously write for us carefully and faithfully, and then let us invoke with due judgment the scientific uses of the imagination. I shall give you an outline of the cases with a running commentary.

CASE 1.—A woman aged twenty-one years was admitted on Sept. 6th, 1894, for acute rheumatism. In regard to her family history, her father, aged fifty-three years, is healthy; her mother, aged fifty-two years, is healthy; and her five brothers are healthy. She has three sisters; one, aged thirty-two years, suffers from heart trouble, and one, aged twenty-seven years, died from heart disease and dropsy. Note the evidence of hereditary tendency. One sister died from "heart disease and dropsy" at the age of twenty-seven years; another sister aged thirty-two years is now suffering from some disease of the heart. Considering that these are young persons, the period of advent of diseases of degeneration not having arrived, there is the highest probability that the heart diseases were and are of a rheumatic kind. The patient takes little alcoholic stimulants. She has had three attacks of rheumatic fever besides the present one, the first attack occurring when five years old, the second when twelve years old, and the third when nineteen years old. The rheumatic proclivity, therefore, is undoubted. Her present illness began about a fortnight before admission, when she had an attack of shivering followed by flushings of heat and by nausea. Pains began in the knees, spreading all over her body, accompanied by headache. After her admission into the hospital, when in bed, she was quiet and comfortable; she slept well, though the left knee was hot and painful, and there was some effusion into the joint. There was no sour smell to be detected. Her tongue was coated, the appetite bad, and the bowels costive; her pulse was soft and compressible. The heart's apex seemed to be in the fifth interspace in the nipple line. The cardiac dulness did not notably deviate from the normal. On auscultation a soft systolic bruit was heard at the apex and was conducted towards the nipple; there was a slight bruit, systolic in time, to be heard at the left of the sternum in the second interspace. The second (pulmonic) sound was only slightly accentuated. Let us pause for a few moments to consider the significance of these signs. In view of the repeated attacks of rheumatism it is in the highest degree probable that there should have been endocarditis; this would most probably affect the mitral valve, and the systolic murmur at the apex showed that some incompetency had been produced. Inasmuch, however, as there were no signs of dilatation of the heart, and as the second pulmonic sound was not markedly loud, the lesion was not considerable. If there had been much regurgitation the backflow would have caused a greater pressure in the pulmonary artery and the second sound caused by the sudden tension of the semilunar valves of the pulmonary artery would have been louder. The

No. 3741.

physical signs in regard to the lungs showed no notable morbid condition. The nervous system was only slightly affected. The patient was intelligent; the speech clear. Except headache and slight vertigo occasionally there was nothing that she complained of, but there was pain on movement of most of the larger joints. Menstruation had been irregular and rather painful. The temperature varied between 103° and 104° F. The urine had a specific gravity of 1015, was acid, of amber colour, and contained no albumen and no sugar. On Sept. 10th great pain about the cardiac region was complained of, and this was increased by deep inspiration. The hands and arms were painful. On Sept. 21st the patient complained of pains all over her body, accompanied by a sore throat. She vomited a good deal of dark, greenish fluid. The temperature, which had been between 97° and 100° for a week, rose for the last two days to between 100° and 102°. The bruit at the apex was still systolic in time, but seemed much longer and harsher. On Oct. 1st the second pulmonary sound was noted to be louder, and there was a presystolic murmur as well as systolic, but no visible pulsation. On Oct. 8th a double second sound was heard at the apex, but not at the base; the presystolic murmur was not so well marked. This double sound had the characters presently to be described; the position and area of audibility are noted on the chart (Fig. 1). On Oct. 15th the second sound at the

FIG. 1.



Positions of the auscultatory signs. Pr S, area of presystolic murmur. The dotted oval above this indicates the area of audibility of the doubled sound in diastole. At M the repeated element had the sound of murmur; at T the sound of tension.

base was well marked, but not loud. Over the pulmonary valves the second sound was heard less acutely than over the aortic area and it was loudest at the ensiform cartilage. On nearing the apex a systolic, blowing murmur was heard and there was a dull sound after the second sound in diastole. The heart sounds were not heard at the back. On Oct. 22nd the double sound in diastole was heard internal to the apex following a blowing, systolic murmur. The patient was discharged on Oct. 29th; there were then no cardiac discomforts or arthritic symptoms.

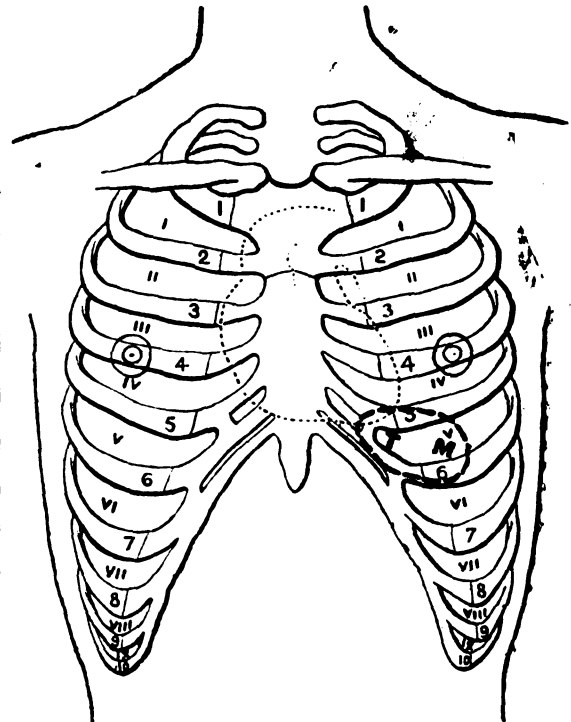
Let us now consider the progress of the case, which was placed under our usual treatment by salicylate of sodium. The temperature, of remittent type, went down in a very satisfactory way for seven days, and on the eighth was slightly below the normal, that being on Sept. 13th. During this period, however, though the joint symptoms receded, there

was much pain in the heart region increased by deep inspiration. Then, after some slight subfebrile manifestations, the temperature began to rise again, so that on the evening of the 21st it was 102.5° , and this in spite of treatment by the salicylates. The signs in regard to the heart altered; the systolic bruit at the apex at first became more prolonged and harsher, the second sound over the pulmonic valves louder, and on Oct. 1st a presystolic murmur was heard. This soon became less audible, but another phenomenon took its place. Three sounds at, or slightly internal to, the apex were heard. (1) A blowing systolic murmur; (2) the second sound having the characters previously noted; and (3) a dull sound, as of tension, in diastole. This is the phenomenon which has been described as reduplication of the second sound, and occurs in more than half the cases—probably nearly all—of mitral stenosis at some period of their history. Let us endeavour to trace the evolution of the endocardial lesion in this case in the light of the physical signs observed. As I have said, there was probably in this patient before the acute illness began some old rheumatic changes about the mitral orifice which had brought about a slight incompetence of the valve. With this attack there was a new outburst of rheumatic endocarditis, and the first indication of this was the increased prolongation and roughness of the systolic murmur at the apex. Then we became aware of a presystolic murmur, probably because a ring of vegetations obstructed the current of blood from auricle to ventricle. For some reason, however, this presystolic murmur disappeared; it might be that the surface over which the blood had to pass became less rough. But we had at one spot near the apex a triple sound just like that known as a reduplicated second sound, and at another spot still nearer to the apex (yet both within an area which you could cover with a half-crown piece) a triple sound, divisible thus: (1) the systolic murmur, (2) the second sound, and (3) a short murmur in the early portion of diastole. Now if in your observation of a case of rheumatic fever—during or long after the febrile period—you find such a triple sound at or near the apex, you may be almost sure that your patient will ultimately manifest signs of obstructive disease at the mitral orifice—mitral stenosis. Dr. Cheadle, in his Harvelian lectures on the Rheumatic State in Childhood, has confirmed my views as to the significance of this sign, and so have other observers. Dr. Cheadle has limited the significance of the phenomenon as prophetic of mitral stenosis to the cases in which it is audible only at or near the apex—that is to say, in the mitral area. A long series of observations has taught me that, whilst in the early periods of the cardiac disease the triple sound is heard only at the apex, as years go on it becomes more marked at the base of the heart and less at the apex, the presystolic murmur occupying the area of the formerly heard triple sound, the latter becoming more and more pronounced at the base. In the case we have just observed the obstruction at the mitral orifice was evidently brought about by an acute attack of rheumatic endocarditis. Granulations formed about the ring to which the mitral flaps are attached. Probably the borders of the valve near the auriculo-ventricular orifice have become thickened and fused together, and ultimately the mitral curtains will be converted into a membranous funnel. In a large number of cases of mitral stenosis an acute rheumatic origin is not to be traced. The affection arises very gradually without rheumatic symptoms, though a great majority of the subjects thereof show hereditary predisposition to rheumatism. In a minority of cases I think it most probable that the affection arises without any intervention of rheumatism, the form of endocarditis being quite distinct from the rheumatic. On this point we shall obtain some evidence in our consideration of the next case.

CASE 2.—A man aged forty-two years was admitted on Oct. 11th, 1894, for nephritis. His father lived to the age of seventy-five years, and suffered from gout; his mother died at seventy-seven years of age, the cause of death not being known. One brother and three sisters are alive and healthy. There were eight other children, but the patient thinks they all died in childhood. He has lived for many years in London, though born in Devonshire. He says he drinks about one pint of ale a day. There is no history of rheumatism nor of syphilis. He seemed quite well in July, when he had an attack of inflammation of the kidneys, for which he was treated as an in-patient at this hospital and after fourteen days was discharged. He was slightly œdematous and had considerable œdema of the lower extremities; he lay quietly and comfortably in bed, and suffered no pain except

occasional headache. The tongue was dry and slightly coated; the bowels regular. There were some dyspeptic symptoms—viz., distension and pain after food. The liver and spleen seemed normal. The apex of the heart was in the fifth interspace; the cardiac dulness was not more than normal, perhaps less. On auscultation a systolic murmur was heard at the apex. Examination of the respiratory system showed no abnormal signs, except a few rhonchi over both lungs. The patient occasionally suffered from incontinence of urine. Examination of the eyes showed high myopia (about -18) a large amount of choroidal atrophy with a little pigmentation. The specific gravity of the urine was 1016, about one-eighth albumen, and no sugar. On Oct. 18th the albumen had increased to one-half. There was no murmur at the apex, but a double second sound was heard—i.e., after the normal second sound and a considerable pause a dull shock-sound was heard in about mid-diastole. This doubling of the second sound was confined to the neighbourhood of the apex. The area of audibility and the characters of the sounds are indicated on the chart (Fig. 2). The radial artery was cylindrical, its coats

FIG. 2.



Dotted outline shows the area of audibility of the doubled sound in diastole. T, sound of tension; M, of murmur.

moderately thickened; the pulse was slow, 52, tension rather above normal but quite regular. On Oct. 25th the aortic and pulmonic second sounds were well marked, but not loud. The pulmonic was not quite so loud as the aortic. The double sound was still heard in the interspace below the nipple, but not so well-marked. The doubling was rendered more decided by the patient sitting up and extending his arms above his head. On Oct. 27th the patient felt quite strong; his appetite had much improved. The pulse was 54. There was still one-third of albumen in the urine. On Nov. 8th the patient felt much better. The pulse was 60. A double second sound was still heard at the apex, inaudible except within the area marked upon the chart.

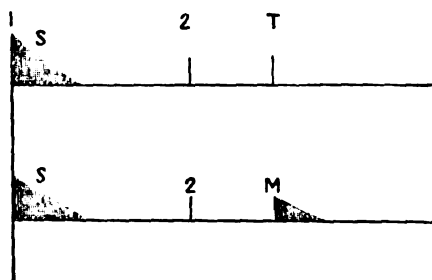
You will notice how closely the auscultatory phenomena in this case resemble those in the former with the exception that there never had been as yet a presystolic murmur. The murmur was in mid diastole. This patient had manifested no trace of rheumatism; there was no tendency to rheumatism in members of his family. The phenomena seem to be in sequence to renal disease. Will this patient also manifest the condition of mitral stenosis? Very probably, for we have evidence that gout and renal disease are associated in a

very marked degree with mitral stenosis in persons of later adult life. It seems probable that the obstruction at the mitral orifice may be due to fibroid and degenerative changes involving the curtains of the valve, the chordæ tendineæ, and the muscular columns without the occurrence of an initial endocarditis. Let us now consider more minutely the phenomena we have observed and endeavour to obtain an explanation of them. First, as to the *mode of observation*. In the process of auscultation in the usual way you become aware as you get nearer to the apex that three sounds are audible. I placed my stethoscope at a point internal to that of the apex beat, and I asked my clinical clerk how many sounds he heard. His answer was "Three." Now, you know well that in the majority of cases, whether in health or in disease, you hear two sounds, the dull and more prolonged first sound followed by the shorter, sharper, or less dull second sound. In some cases you hear only one sound and that the first; the second sound is inaudible at the apex. In the cases under observation we marked with a dermatographic pencil the area over which we heard the three sounds, or the triple sound if you like so to term it. Having done that we listened again over the area in order to distinguish the characters of the sounds. We found no difficulty in determining which was the first sound—i.e., that which was coincident with the apex beat. We then observed that over a spot near the apex the second element of the doubled sound which followed this had the character of a brief roughness or blow, whilst a little nearer to the sternum it was a sudden but dull sound giving the idea of tension. We marked these positions on the chest wall: M for murmur, T for tension. Then we passed over the marked areas a pencil dipped in oil, outlining also the positions of the adjoining intercostal spaces and the ensiform cartilage. Over the surface we pressed a sheet of copying paper and obtained a print of the relative positions of the signs we had observed. I gave these outlines to Mr. Daniellson, who has reduced them to a convenient size and cut the woodblocks, Figs. 1 and 2, which indicate as exactly as can be the areas of audibility of the sounds. I must ask you to note that at some periods the murmur sound was inaudible, the tension sound being evident after its first appearance for all the periods during which the patients were in the hospital. We have had evidence, however, that the doubled sound may in some cases altogether disappear for a time. Now I must ask you to pass from the consideration of these two cases to that of a large number of others of mitral stenosis which I have observed, and let me tell you what I deem to be the changes in the auscultatory phenomena as the months and years go on. The isolated murmur sound disappears and a typical presystolic murmur takes its place; the repeated sound of tension becomes more pronounced and its area of audibility changes; it mounts to the fourth, third, and second left intercostal spaces, and in some cases we hear it on the right of the sternum as well as at the left. It becomes a sharper, louder sound, closely resembling an accentuated second sound. It vividly recalls the postman's knock. In one case I have heard this in a most marked manner at the back just internal to the angle of the left scapula. Still later the doubled sound wholly disappears, and when a case of mitral stenosis nearly approaches heart failure the presystolic murmur itself may no longer be heard. To return to our method of recording the signs observed we will attempt to indicate the positions these occupy in the cardiac cycle. We draw a straight horizontal line, which is supposed to represent the duration of one cardiac revolution. We intersect it by a vertical line, which indicates the commencement of ventricular systole, and divide it into two unequal portions by another short vertical line, which designates the commencement of ventricular diastole. Say, for argument, that the pulse is 60 and that the period of systole occupies four-tenths of the whole length, and that of diastole (the long pause) six-tenths. The distance between the first and second vertical lines, indicating the commencement of ventricular systole and of ventricular diastole respectively, will comprise four time divisions, and that between the second vertical line and the commencement of the succeeding systole—i.e., the long pause—six divisions. Of course the indications are approximate only, but they are convenient aids to precision. In our first case we listen at the base of the heart, and fix in our minds the time position of the second sound, and then on nearing the apex we find that the next tension sound takes place very quickly after it; the doubled sound is heard in the early part of diastole. In the second case there is a

considerably longer interval between these sounds. In fact, the doubled sound of tension seems to be nearly in the middle of diastole, and the sound of murmur heard a little nearer the apex appears in a similar position (Fig. 3).

We will now consider the question of the cause of the double sound of tension that we hear in cases of mitral stenosis. There are two theories as to its mode of production. According to the first theory, which has been generally accepted, there is a real doubling of the second sound of the heart—the valves of the aorta and of the pulmonary artery do not close as in normal conditions, giving rise to one sound, but those of the one vessel close before those of the other, the interval of time being sufficient for the ear to appreciate two sounds. So the second sound of the heart is said to be reduplicated. According to the other theory the doubling of the second sound is not real but simulated. The second sound is heard in the normal way, but it is followed by another shock-sound (or sound of tension), which is produced not at the valves of the great arteries but in the left ventricle.

FIG. 3.



Showing the estimated positions of the sounds in the second case. S, systolic murmur; 2, second sound; T, interpolated sound of tension; M, interpolated sound of murmur.

It is this last view of the mechanism of the phenomenon which to me seems correct. Before proceeding further let us ask ourselves what is the cause of the normal second sound of the heart. The answer usually given to this question is this: the semilunar valves of the aorta and pulmonary artery respectively, after the forcible injection of blood into the aorta by the ventricular systole, come together suddenly, and the sound is produced by their concussion. Look at the delicate membrane of these valves. Is it probable, do you think, that the edges of these structures should strike together with sufficient force to produce the snap of the second sound more than 90,000 times a day through the years of a long life without injury from the mere violence done to them? Now the most careful and most recent investigations show that in the systole of the ventricles there is not an abrupt and sudden injection of blood into the great vessels (the aorta and pulmonary artery), but, though all occurs in a brief period of time, a graduated series of successive movements and coördinated actions. First, the muscles of the ventricular wall commence their contraction; shortly afterwards, but yet appreciably later, the muscoli papillares begin and continue to tug down the curtains of the valves by their tendinous cords; then these relax while yet the muscles of the wall are contracted; lastly, the ventricular muscle relaxes also and then active dilatation (suction) in diastole begins. It is a natural consequence that the impulsion of the blood into the great vessels is not abrupt, but gradual, and the closure of the semilunar valves must be not abrupt, but gradual. At first the force must be insufficient to overcome the inertia of the blood in the vessels weighing down the cusps; then by the combined forces of the contractions of the ventricles and the papillary muscles these semilunes are gradually opened out; but towards the end of systole the force of impulsion is diminished—there is more pressure above the valves on account of the increased volume and distension there, but decreased pressure below as the ventricle becomes emptied and the papillary muscles no longer reinforce the muscular walls of the ventricle. This reasoning shows us (as Mr. Mayo Collier pointed out in his Lectures on the Physiology of the Vascular System at the Royal College of Surgeons of England in 1889) that the semilunar valves do not come together suddenly and abruptly, but gradually. The volume and tension of the blood above them tend more and more to weigh them down, while less and

less blood passes through them from the ventricle. What, then, is the cause of the second sound? The answer is: the sudden tension of the membranes of the already closed valves caused by the relaxation of the ventricles, whereby they are no longer supported on their under surface, and the active suction action of the ventricles in the earliest part of the diastolic period. You can imitate this sound of tension by abruptly stretching an inch of your pocket-handkerchief between your fingers. Now supposing this explanation of the phenomena to be correct, as I believe it is, if we accepted the view that the reduplicated second sound is due to non-synchronous tension of the two sets of valves we should have to concede that the two ventricles expanded in diastole at different times—that there was a sort of see-saw action between them—of which we have no evidence, but much to the contrary.

But let us turn to a practical question. How shall we investigate the second sound of the heart? Place the end of your stethoscope over the second right intercostal space close to the sternum and listen attentively to catch the character and pronunciation of the second sound. Then carry your stethoscope up nearer to the right clavicle, to the episternal notch and over each carotid. Note the degree of audibility and the character of the sound in all these situations. You can have no doubt that the sound you hear in these areas is that produced by the tension of the aortic semilunar valves. Now carry your stethoscope to the left of the sternum; listen to the sound over the second and third left intercostal spaces, comparing it with that you have already heard. If you find the second sound to be louder in these situations than in the former you may conclude that it is the tension of the semilunar valves of the pulmonary artery which is the chief cause. The pulmonic second sound is accentuated. Recent observations have tended to show that the sound of tension of the pulmonary semilunar valves is heard over a very limited area. Dr. Sydney Ringer and Dr. Phear, in an interesting and valuable communication,¹ conclude that the pulmonary element usually forms no part of the second sound as heard to the right of the sternum. "The second sound heard to the right of the sternum is produced, as a rule, exclusively by vibrations generated at the aortic orifice." Dr. William Ewart² has further insisted that the pulmonary second sound has a singularly limited area of loudness. He gives elaborate anatomical and other reasons for concluding that the audible vibrations in the case of this sound are conducted only to the anterior chest wall immediately covering the valve as well as to a limited adjacent district. When you place your stethoscope to the left of the sternum below the level of the third interspace you get out of the range of the pulmonic second sound. You should observe the characters of the sound, however, as far as the heart's apex and note where it becomes inaudible. Sir William Broadbent³ stated that the second sound as heard at the apex is that due to the aortic valve alone. The aortic second sound is conducted by the wall of the left ventricle and is often heard as distinctly at the apex as in the aortic area itself. Dr. Ewart has enforced this teaching; he concludes that the right side of the heart does not conduct the pulmonic second sound. "The aortic second sound commands these cavities (the pulmonary artery through its right branch influencing only the left auricle) in addition to holding the high road for vibrations along the septum, and so practically excluding the pulmonary sound from propagation into the right ventricle." You will, therefore, form your conclusion as to the characters of the aortic second sound from auscultating not only over the second right interspace, the episternal notch, and the carotids, but also over the interspaces below the third interspace on the left side and as far as (and even beyond) the apex of the heart, whilst the characters of the pulmonic second sound will only be found when you listen over the second and third left intercostal spaces near the sternum.

Now as to the relative pronunciations and characters of these two components of the heart's second sound respectively. With regard to the aortic second sound there are two conditions in which we find it especially loud. It may have a sudden, sharp character, or be almost metallic, or like a tap upon a small drum. The two conditions to be especially mentioned are: (a) sacular aneurysm of the thoracic aorta arising well above the valves, and

(b) hypertrophy of the left ventricle, especially with arteriosclerosis (as in chronic renal disease). In the first of these conditions the loud sound is readily explained by the exaggerated strain upon the valves directly on ventricular relaxation (diastole) caused by the abnormal mass of blood pressing downwards from the aorta and its saccular dilatation. In the second, after the forcible injection there is a forcible recoil, the firm-walled contracted arteries increasing the back pressure. Dr. Ringer and Dr. Phear have given experimental evidence emphasising the conclusion that high arterial tension is a cause of a loud aortic second sound. I agree, however, with Dr. Ringer and Dr. Phear, and with Dr. Harry Campbell,⁴ when they say that the aortic second sound may be accentuated when the radial (arterial) tension is low. I think with Dr. Campbell that this accentuation is due to an abnormally sudden and rapid diastole of the left ventricle. With regard to abnormal loudness of the pulmonic second sound the cause is over-tension of the blood in the pulmonary artery and its branches. This occurs in its most pronounced degree in mitral regurgitation—and is then, if the ventricular forces are adequate, proportionate to the amount of blood thrown back by the left ventricle into the left auricle and pulmonary veins—and in mitral stenosis when a direct impediment occurs to the work of the right ventricle because the left auricle cannot, as under normal conditions, sufficiently transmit its contents through the obstructed orifice into the left ventricle. There are, however, many other causes for undue loudness—in its limited area—of the pulmonic second sound. We find a loud second sound over the pulmonary artery in chlorosis and anæmia, in states of general feebleness especially after acute and debilitating illnesses, in many diseases of the lungs, and in cases of retraction of the lung and uncovering of the heart, so that the pulmonary artery comes closely in apposition to the wall of the chest. Any cause which weakens the left ventricle and so diminishes the amount of blood which it should transmit to the aorta tends to accumulation of blood in the pulmonary artery and its branches and to an abnormal tension within the vessel evidenced by an exaggerated second sound heard just over its valves. In many of the conditions we have just discussed there must be very disproportionate pressures in the two great vessels, the aorta and the pulmonary artery. We get accentuation of the second sound in one or other area, or in both areas; but very rarely we observe doubling—so-called reduplication. In very free mitral regurgitation the disproportion must be extreme. We observe constantly, unless the right ventricle is too weak, the loud pulmonic second sound, but a doubled second sound, I think I may say, never. In mitral stenosis, on the other hand, when the disproportion of pressure is probably less marked, the so-called reduplicated second sound is very common indeed. Now, if the phenomenon of the repeated sounds were really due to the sound of tension of the semilunar valves of the one vessel being followed at an interval by the sound of tension of those of the other, you ought to be able to hear the double sound best to the aortic side of the second left interspace or, at any rate, at a point not lower than the third interspace, where the pulmonary second sound becomes inaudible; but in our cases, and in many others, the double sound is not heard except in an area in which most of us agree that the pulmonic second sound is inaudible. You will notice that in our two cases the doubled sound is heard only in the neighbourhood of the apex. Do not misunderstand the point for which we are contending. Observers are, I think, for the most part agreed that what they call "reduplication of the second sound" is very common in mitral stenosis. I have shown that in the early stages of the development of mitral stenosis this so-called reduplication of the second sound is audible, not at the base, but near the apex of the heart. This has been confirmed by many observers. Dr. Ringer and Dr. Phear, in their criticism of my opinion,⁵ object that such reduplication at the apex is very uncommon. We have had, however, many opportunities lately, and at previous periods, of observing the phenomenon, and, as I have said, many clinical observers have noted it also. If the instances were still more rare, from the admitted data as to the range of audibility of the two components of the second sound, it must be agreed that non-synchronous tension of the valves of the pulmonary artery and the aortic respectively could not explain them. The second element of the sound is in the

¹ THE LANCET, Sept. 29th, 1894.

² THE LANCET, Oct. 6th, 1894.

³ The Pulse, p. 55. Cassell and Co., Limited. 1890.

⁴ THE LANCET, Oct. 13th, 1894.

⁵ Loc. cit., p. 730.

mitral area, and I have given many reasons for the conclusion that it is produced within the left ventricle.⁶ No doubt the so-called reduplication is more frequently observed near the base of the heart than at the apex in cases of mitral stenosis because these are less frequently met with at the earlier periods of their history. It would be strange, however, if we should have to invoke a totally different cause for the production of the phenomenon in the same case at different periods. When in a case of mitral stenosis the doubled sound is heard at the base of the heart its maximum is, as Sir William Broadbent pointed out, over the third left intercostal space close to the sternum. It may be heard, however, over a very wide area to the right and down the sternum far beyond the area given as the limitation of audibility of the pulmonary second sound. I have heard the double sound loudly, having its typical characters, in the left axilla and at the angle of the left scapula.⁷ The pulmonary second sound could take no part in this. The explanation that I have given of the so-called reduplication of the second sound in cases of mitral stenosis is this: the first element is the normal second sound, probably accentuated as to its pulmonary component; the second element is a sound of shock or tension within the left ventricle produced by a sudden entry of blood into the ventricle in early diastole, such shock being communicated to the walls of the ventricle or to the anterior curtain of the diseased mitral valve, and so communicated through the septum to the left border of the sternum. Dr. Ringer and Dr. Phear say that they "are unable to understand how, even after the relaxation of the ventricle, the blood can enter through the contracted mitral orifice with any degree of force, or how the diseased and thickened valves can be thrown into such a condition of tension as to produce a valvular sound simulating the second sound." The answer to this is that the constriction at the mitral aperture is a matter of degree; the funnel orifice in many cases could surely permit in diastole a sudden entry of blood into the ventricle with considerable force. On this point the evidence of the cardiograph comes to enlighten us. In some cases of undoubted mitral stenosis there are signs which I think all would agree to be explicable by no other hypothesis than that the entry of blood into the ventricle is forcible and sudden than under conditions of health. Remember that the pen of the cardiograph is guided by the left ventricle. The record of the diastolic period is written by the apex of the ventricle because of impulses or movements which it receives from the auricle. The consensus of many observations shows that in mitral stenosis (evidenced by a rolling or bubbling presystolic murmur) the apex of the ventricle writes a series of up-and-down lines and curves which can only be due to the impulses of the interrupted, gurgling flow from the auricle. In a case of typical doubling (as it were of the second sound) I have seen the eminence due to the contraction of the auricle more broad and pronounced than I have observed it under any other circumstances whatever. It must be that the mitral orifice, though narrower than the normal, allows the forcible contraction of a hypertrophied and dilated auricle to communicate a strong upheaval to the apex of the left ventricle. I cannot doubt that under the circumstances of over-tension in systole in the left auricle, as in mitral stenosis, there can be sudden and forcible entry of blood into the ventricle in the early part of diastole sufficient to communicate a shock to the structures within the cavity and (from the considerations I have already placed before you) to give rise to an audible sound of tension. I quite concede that there are other cases of extreme stenosis (button-hole mitral, for example, with greatly thickened borders) where it would be illogical to conclude that the passage of blood from auricle to ventricle could be sudden and forcible; but these are, so far as I have observed, precisely the cases in which the so-called reduplication of the second sound is not heard.

I have, I think, given sufficient reasons for the conclusion that the double sound simulating a repetition of the second sound in mitral stenosis is not due to non-synchronous closure of the valves of the pulmonary artery and the aorta respectively. I believe that the second element of the double sound has its origin in the left ventricle, but I do not pretend that the precise explanation of the phenomenon is placed

beyond all doubt. Be it remembered that I have contended all along for an explanation of the phenomenon as observed in cases of mitral stenosis. In these I have said that the doubling of the second sound is simulated, not real. I will not go so far as to deny the possibility that under conditions other than those of mitral stenosis the second sound of the heart at the base may be heard as a double sound.

TWO CASES OF ULCER OF THE DUODENUM IN WHICH LAPAROTOMY WAS PERFORMED, WITH REMARKS ON ULCERS OF THE DUODENUM.¹

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WRITERS on general medicine who refer to ulcer of the duodenum treat of the subject in general terms. The affection is classed with gastric ulcer, which in all respects it closely simulates, and little or no attempt is made to distinguish between the pathology or symptoms of these two kinds of cases. There is a general opinion that gastric ulcer is rare in men, and, therefore, when duodenal perforation occurs in the male sex the symptoms are peculiarly liable to be overlooked or entirely misunderstood, since they are identical with those of perforation of the stomach, which is so exceptional in the male sex. What is held by physicians of the present day regarding duodenal ulcer may be well summed up by quoting from the article on it in the "American Text-book of Medicine," edited by Pepper:² "Duodenal ulcer is usually single, but is occasionally multiple. In some cases it occupies partly the duodenum and partly the pylorus. In other instances distinct ulcers may be found in the stomach and duodenum. The disease may attend septicæmia, probably as the result of embolism. Severe burns are also at times productive of it, and freezing is said to act in the same way; while erysipelas, pemphigus, and amyloid degeneration of the bloodvessels of the intestines have also been claimed to be associated with it. The symptoms are in a great majority of cases identical with those of gastric ulcer, and it is then impossible to distinguish between the two lesions. An ulcer of the duodenum is probably present if the pain does not develop until some hours after eating food; if the position of this pain, together with tenderness on pressure, is situated decidedly to the right of the middle line; and if there are profuse bloody stools without vomiting or hæmatemesis. In other cases blood may be vomited and passed by stool. In still others the course of the disease may be entirely latent." It will serve to make more clear the class of cases I especially wish to illustrate if I quote a typical instance, selected from several which are scattered about in medical literature. The case I will first draw attention to is related by the late Surgeon-Major Robinscn of the Scots Guards.³ A healthy and muscular guardsman aged thirty-eight years, who was a "bandsman" and well able to perform his duties, played a game of racquets one afternoon and afterwards proceeded to a music-hall where he ordinarily performed. He was suddenly seized with violent abdominal pain. The abdomen became tympanitic, but there was no urgent vomiting. He was conveyed back to bed, collapse supervened, and he died in about eighteen hours. At the necropsy the whole of the intestines were matted together and there was some greenish fluid in the abdomen. The bubbling of gas drew the attention of the pathologist to the duodenum, and an ulcer large enough to admit a crowquill was found about the centre of that viscus on its anterior aspect. This was not in the least suspected during life, but it is stated that the man had been known to complain of epigastric pain and to press his hand there after laughing loudly. The above abstract well exemplifies what usually happens in these most distressing and mysterious maladies, and the theory of death by poison may readily be started when the surroundings and concomitant circumstances are of a suspicious nature. Murchison relates

⁶ Proceedings of the Medical Society of London, vol. v., p. 191; Diagnosis of Diseases of the Heart and Thoracic Aorta, pp. 213-219, 362-368, and 504-506.

⁷ Diagnosis of Diseases of the Heart and Thoracic Aorta, loc. cit., p. 351.

¹ A paper read before the Medical Society of London.

² Text-book of Medicine, by American Teachers, edited by Dr. Pepper, vol. ii.

³ Transactions of the Pathological Society of London, vol. ix., p. 220.

such a case where a man died almost instantly from collapse; and a similar case is referred to by Perry and Shaw in their excellent article on Ulcers of the Duodenum in Guy's Hospital Reports for 1894.

I was induced to bring the following two cases, which occurred in my own practice, before the Medical Society of London because they so well illustrate the extreme difficulty that is met with in the diagnosis of duodenal ulcer, and because it is only by a relation of cases, and a collection and consideration of the experiences afforded by them, that we can hope to arrive at anything like proficiency in the management of a class of maladies so protean in their clinical manifestations and so generally unsatisfactory in their treatment. Moreover, the subject has been already dealt with, and it is hoped that this communication may extend and amplify information already acquired. The first case which forcibly drew my attention to the surgical difficulties and uncertainties which surround the subject of duodenal ulcer was as follows. (I am indebted to Mr. Harold, the medical registrar of Charing-cross Hospital, for the abstract notes of it.)

CASE 1.—A healthy-looking young man aged twenty years was admitted under the care of Dr. Green on Nov. 30th, 1892. His previous history was of little importance. There was a vague account of some epigastric pains and flatulence, but while sitting at the theatre he was seized with severe pains in the abdomen "which doubled him up," and he was brought to the hospital on the above date. It was then noted that he was in a condition of collapse. The skin was pale and covered with clammy sweat, the temperature 96° F., and the pulse 100, small and compressible. Severe abdominal pain was complained of, and the abdomen was distended. There was marked tenderness in the epigastric region. There was no vomiting as yet, and flatus was passed per anum. He was treated with morphia and bismuth. Towards the evening his symptoms got worse. The abdominal pain and distension were greater, and he vomited several times greenish, and subsequently stercoraceous, fluid, but no blood was noticed in the vomited matter. On Dec. 1st, after a hypodermic injection, the patient had slept fairly well, but he had vomited several times, and the abdomen was very much distended. I saw him on Dec. 2nd, the third day of his attack. He then had the appearance, and showed the usual symptoms, of one suffering from a serious abdominal malady, and his condition was obviously very precarious. The abdomen was enormously distended, and the main seat of tenderness seemed to me to be below, near the cæcal region. The diagnosis of perforative peritonitis was made, and the opinion expressed that the lesion was situated in the vermiform appendix. Not having seen the case from the commencement my mind was hardly enough impressed with the situation of the pain in the epigastric region in the early part of the case, and hence an error was made in the estimate of the position of the perforation. The abdomen was explored by the usual incision. To my disappointment the cæcum and appendix were found to be normal. The intestines were congested, covered with lymph, enormously distended, and the abdominal cavity full of purulent fluid and some gas without fecal odour. The incision was made nearly up to the ensiform cartilage, but nothing was made out, for the intestinal distension made examination very difficult, and the desperate condition of the patient forbade delay. The abdominal cavity was therefore washed out and closed. The patient, as is usual in such cases, died about twenty-four hours later, pulseless and collapsed. One could hardly say that the operation did him harm—it certainly failed in doing him any material good. At the post-mortem examination a perforating ulcer was found on the anterior aspect of the first part of the duodenum. The opening was circular in form, about the size of a threepenny-piece, and had thickened, callous edges. This was obviously the cause of the general peritonitis. All the other organs and viscera were healthy.

CASE 2.—This occurred in the person of a strong young man aged twenty-three years who was under the care of Dr. Whipple at St. George's Hospital on June 11th. He had been quite well until five days before admission, when he was seized with violent abdominal pains, vaguely referred to the right side. He had vomited several times, but the bowels had opened twice. Three years ago he had a similar attack and had got well. The significance of this latter statement will be seen further on. I saw him, with Dr. Whipple, soon after midnight. He looked fairly comfortable, but the pulse was very quick and the abdomen greatly distended. The hernial apertures were empty and the rectum was devoid of feculent contents, but a sensation of fluid in the pelvis

could be felt through it. No very marked tenderness could anywhere be elicited. When the patient was asked where his worst pain was situated he pointed to the right iliac region. Here also there was tenderness on pressure. Previously on the same night I had operated upon a case of a very similar nature and had found a perforation of the vermiform appendix, and I could not divest my mind of the belief that the present case was due to a similar cause, and thus again fell into error. I may, however, mention that the possibility of duodenal ulcer was actually present to our minds, and we discussed it. The abdomen was opened in the right linea semilunaris, and immediately enormously distended coils of bowel showed themselves, deeply congested and covered with lymph. There was purulent fluid in the pelvis and bubbling of gas, but this was quite devoid of fecal odour; its reaction to litmus paper was not ascertained. The cæcum and vermiform appendix were with some trouble examined and were found to be normal. So great was the intestinal distension that I opened a prominent coil of jejunum by a small incision and drained away many basinsful of feculent fluid. The incision was closed with a Lembert suture and the collapsed bowel permitted free exploration of the intestine. Nothing could be found, and in reflecting upon the time that would be consumed by prolonging the incision with the view of finding an ulcer of the stomach or duodenum and repairing it I reluctantly closed the abdomen and left in a glass drainage-tube, having well flushed out the abdominal cavity with warm water. This patient seemed at first much relieved, but on the evening of the day following the operation he had a recurrence of severe abdominal pain and soon died. At the post-mortem examination it was revealed that there was a small ulcer which would admit a quill on the anterior wall of the duodenum, about half an inch from the pylorus. The hole was rounded, with thick discoloured edges. At the same level with the ulcer which had perforated there was a depression about one-third of an inch in diameter, smooth, and the walls not undermined. This was evidently an ulcer which had healed. It was situated on the posterior wall of the duodenum. There was general peritonitis, and a large cavity containing about two pints of brownish fluid was situated above the stomach and below the liver and diaphragm. The abdominal wound had united, and it is especially important to observe that the small incision made to drain the intestine had soundly healed in less than twenty-four hours, demonstrating the safety of the procedure of draining distended intestine.

Before proceeding to the discussion of the general question of duodenal ulcer I will shortly quote abstracts of two cases strikingly similar to those first related, which demonstrate the fact that I do not stand alone in the diagnostic difficulties which surround perforating ulcer of the duodenum. Perry and Shaw in their recent article state that laparotomy was thrice performed at Guy's Hospital for perforative ulcer of the duodenum, but the lesion was never found. Lockwood⁴ relates the following cases of great interest in the Medical Society's Transactions. The first case was that of a young man aged twenty-eight years who was suddenly seized with acute pain on the left side while drinking a cup of tea. This was thought to be an attack of colic, and treated accordingly. Vomiting and tympanites with complete obstruction supervened, but there was no hæmatæmia. On the third day an exploratory abdominal section was performed, and a quantity of foul-smelling gas escaped, while general purulent peritonitis was present. The whole intestine was examined, but no perforation was found. The distended gut was opened and drained, and the opening closed by a Lembert suture. The abdomen was flushed out. The patient died in seven hours. The chief focus of septic peritonitis was found below the liver, and upon the front part of the duodenum was a small oblong aperture, which gave exit to the duodenal contents. The second case was that of a man aged forty-one years who while at his work was suddenly seized with violent pain in the abdomen followed by complete constipation and sickness. The vomited matter was at first the contents of the stomach, and afterwards of a stercoraceous nature. When first seen the abdomen was tympanitic and no vermicular movements were detected. The countenance was anxious and the man complained of severe abdominal pain. The pulse was 120 and the temperature 99° F. The abdomen was explored through the usual incision. Diffuse

⁴ Post-mortem and Case Book, St. George's Hospital, 1894.

⁵ Transactions of the Medical Society of London, vol. xv., p. 91.

septic peritonitis was found, but although every region was searched nothing could be found to account for its occurrence. The man died in ten hours, and Dr. Galloway, who made the post-mortem examination, found the most intense focus of inflammation beneath the liver. The first part of the duodenum was perforated by an ulcer, which had sloping edges, situated about an inch from the pylorus.

The abstracts of these two cases clearly show that the diagnostic difficulty felt by myself and illustrated in the instances I have narrated is shared by other surgeons; and now that it is recognised that the prompt treatment of perforating gastric ulcers by abdominal section saves life the present time seems peculiarly opportune for drawing the attention of the profession to perforating ulcers of the duodenum, which so closely resemble them. It has seemed to me that the compilation of statistical tables as to the comparative frequency of duodenal ulcer or of certain of its more marked clinical features would be open to many sources of inaccuracy and would serve little useful purpose. The undoubted fact that the scars of duodenal ulcers are sometimes accidentally met with post mortem shows that this condition may not infrequently be recovered from when perforation does not occur, and is a proof that many cases are accidentally overlooked. Perforating ulcer of the duodenum is no doubt a rare affection, and a proof of this statement is found in the observations of Norman Moore,⁶ who finds that only three cases are recorded in the St. Bartholomew's Hospital post-mortem books between 1867 and 1882, a period of sixteen years. Two of these occurred in men, and showed the usual features of sudden and unsuspected onset. In one of them the ulcer was not even suspected during life. It seems clear from the elaborate researches of Dr. Perry and Dr. Shaw, as well as from the perusal of these cases, that the ulcer is almost invariably found on the anterior surface of the first part of the duodenum. Out of 57 cases of rapidly perforating ulcer collected by them the lesion was situated here in 48. I am greatly indebted to valuable assistance from Mr. Arthur Latham in looking up the question of the frequency of duodenal ulcers in the post-mortem books of St. George's Hospital. He finds that in 8192 post-mortem examinations in the thirty-one years from 1863-1893 there were 116 cases of death from perforation of the intestine (from all causes save rupture); that is, 1·4 per cent. of total deaths. These 116 include 12 cases of perforating duodenal ulcer—that is, 0·14 per cent. of total deaths and 10·34 per cent. of all perforations.

Cases of Perforating Duodenal Ucer.

—	Year.	No.	Sex.	Age.
1	1892	157	Male	34
2	1891	306	Female	27
3	1890	404	Male	21
4	1889	206	Male	37
5	1887	165	Male	42
6	1883	225	Male	49
7	1882	235	Female	22
8	1878	190	Male	59
9	1875	172	Male	50
10	1875	175	Male	52
11	1871	34	Male	56
12	1871	42	Male	56

Out of these 12 cases ten occurred in males and only 2 in females. The average age is forty-two years. Out of the 116 cases of intestinal perforation, of non-perforating ulcers of the duodenum, or congestions threatening to perforate, there were found 23 instances which may be thus arranged: burn with slight ulceration or congestion and early erosion, 7 cases; associated with renal disease, 6 cases; phthisis and tuberculosis, 2 cases; malignant ulceration, 1 case; associated with scirrhus of pancreas and liver, 2 cases; and associated with pleurisy, 1 case. The remaining four cases had no obvious causes. In 9 of the 12 perforating cases the ulcer was situated anteriorly; in 3 the situation was not mentioned. I propose (1) to briefly consider the views taken by pathologists as to the formation of these ulcers and to illustrate their pathological terminations; (2) to pass in review their various clinical symptoms, illustrating my

remarks when possible by abstracts of cases; (3) to discuss the appropriate treatment; and (4) to draw conclusions which may seem warranted by the present state of our knowledge.

It is well known that the formation of ulcers in the stomach and duodenum has long engaged the attention of eminent pathologists. Rokitsansky⁷ regards tuberculous ulceration of the duodenum as very rare. He refers his readers for the pathology of perforating duodenal ulcer to his account of a like process occurring in the stomach.⁸ He states his belief that these ulcers commence as an acute, circumscribed, red softening, or with a circumscribed sloughing of the mucous membrane. He speaks of the now well-known usual terminations by cicatrization, perforation, hæmorrhage, permanent contraction, matting, and condensation of tissues round. It will clear the way at the outset to exclude all causes of ulceration of the duodenum from without, as by gall-stones, the pressure of malignant growths, the slow erosion of an aneurysm, or a renal abscess or suppurative connexion with spinal caries.⁹ Instances of all these conditions will be found scattered through pathological literature, but are hardly germane to the subject under consideration. Ziegler,¹⁰ while looking upon the duodenal ulcer as essentially similar in its pathology to ulcer of the stomach, well points out that the latter ulcers, and therefore the duodenal ulcers also, may be caused by any kind of local injury of the mucous membrane which exposes it to the unchecked action of the gastric juice, not yet neutralised in the first part of the duodenum, where these ulcers usually commence. Probably the commonest causes of obstructed blood-supply, leading to necrosis of the mucous membrane, are venous engorgements, hæmorrhages, arterial anæmia from embolism, spasmodic contraction, or arterial sclerosis. What share such morbid conditions as cardiac and renal changes, alcoholism, syphilis, and Bright's disease may have in bringing about these conditions would be too wide an inquiry for the scope of this paper. A word, however, must be said as to the undoubted occasional association of ulceration of the duodenum with albuminuria and renal degeneration, as so ably pointed out by Dr. Dickinson. In the post-mortem and case book of St. George's Hospital for 1890 will be found four such cases where ulcers were found in the duodenum, and in one instance in the cæcum also, in association with the large white kidney and interstitial nephritis. The symptoms during life were vague, and the sickness and diarrhoea might well be attributed to other causes. Perry and Shaw found no less than twelve cases of ulcer of duodenum out of seventy associated with Bright's disease. There seems no distinct proof that albuminuria is associated with the rapidly fatal perforating ulcer which we are principally considering, though of course it may be a predisposing cause.

The association of ulcer of the duodenum with burns and scalds has long occupied the attention of pathologists. It is very remarkable that modern investigators have cast doubts upon this association, and there can be no question that this phenomenon is much rarer now than was formerly the case. Curling's well-known paper in the Transactions of the Royal Medical and Chirurgical Society¹¹ relates ten cases of this lesion associated with burn, while Hewitt, still earlier¹² found three instances of ulceration of the duodenum in seventeen fatal cases of burn examined at St. George's Hospital between the years 1844 and 1846. So Holmes,¹³ writing in his System of Surgery, relates sixteen lesions of the duodenum in 125 cases of burn. The age of the patient and the period of death varied extremely. The appearance, says the latter writer, is that of a perfectly indolent ulcer. It is usually situated just below the pylorus; often there are two or three close together. . . . They look as though a portion of the mucous membrane had been cut out. This writer also refers to the frequent absence or vagueness of symptoms, and where severe manifestations, as mælena, hæmatemesis, and signs of perforation, occur he seems to think the prognosis highly unfavourable. Curiously enough, from an early period doubts commenced to be thrown upon the association of duodenal ulcer in association with burns.

⁷ Pathologische Anatomie, vol. ii., p. 103.

⁸ Ibid., p. 30.

⁹ Davies-Colley: Transactions of the Pathological Society of London, vol. xxxvii., p. 581.

¹⁰ Ziegler's Pathologische Anatomie, pp. 471 and 459.

¹¹ Vol. xxv., p. 261 et seq.

¹² Transactions of the Royal Medical and Chirurgical Society, v. i. t. p. 259.

¹³ Holmes' System of Surgery, vol. i., p. 394.

⁶ Ibid., vol. xxxiv., p. 98.

Thus WILKS,¹⁴ writing soon after Curling, made a careful examination of twelve fatal cases of burn and found no lesion in the duodenum. He contrasts his experiences with those of Curling, but gives no explanation of the discrepancy. McCarthy,¹⁵ relating a fatal case of duodenal ulcer from vomiting and hæmatemesis in a girl aged seven years, states that this complication is rare at the London Hospital, only one case besides the one he mentions having occurred for eight years. Lockwood has recently been investigating this subject, and I have his authority for stating that out of 138 fatal cases of burn occurring in the last nine years at St. Bartholomew's Hospital only one had ulcer of the duodenum, although the pathologist had obviously been on the alert to detect duodenal lesions. Perry and Shaw, in the Guy's Hospital Reports for 1894, found 5 cases of duodenal ulcer in 149 cases of burn. In reviewing all the cases of burn ulcer, they find it more frequent in females than in males; this they ingeniously attribute to the burnt surfaces being usually, from the arrangement of the clothes, more extensive. Quite recently also some of the more advanced of the younger school of pathologists have stated disbelief in the relationship between burns and duodenal ulcers. The conclusion is irresistible that some surgeons, especially in former times, had experience of a condition which now seldom exists. The explanation is probably in the direction of sepsis, and the improved methods of cleanliness at present in vogue regarding the treatment of burns. The profuse diarrhoea which accompanies extensive and dirty burns is very suggestive in this respect, and so are the patches of hemorrhagic congestion and inflammation so often found in these conditions through the small intestine. It is easy to understand that if one of these patches occurred in the first part of the duodenum the unrestrained action of the powerful gastric juice not yet neutralised by the bile might readily cause rapid ulceration and perforation. It is striking that ulceration of the duodenum should also have been found in cases of frostbite.¹⁶ Thus Samuel Adams, an assistant surgeon in the United States Army, relates the case of a private aged thirty-six years, who was confined in the guardhouse awaiting his trial by court-martial when both his feet became frostbitten, and when first seen gangrene had already set in. After being in the hospital for a week diarrhoea ensued, with rapid exhaustion. The line of demarcation formed, but the patient died exhausted in about three weeks. At the necropsy the duodenum was found covered with small irregular ulcers with rough serrated edges extending in different directions. It will be observed in connexion with this case that the conditions found in bad burns of sloughing and septic tissues were present, and the explanation is probably the same—namely, an infarction of the vessels of the mucous membrane due to septic emboli, and the consequent unrestrained action of the gastric juice. Post-mortem examinations upon cases of septic ulceration after frostbite have not been very frequent, or possibly duodenal ulcer may have more commonly been found. That ulcers of the duodenum in such septic conditions as burns are due to septic embolism of some small vessels in the intestinal walls seems a more rational explanation than the old theory of hyperexcitation and inflammation of Brunner's glands. Looking upon such embolic processes as almost accidental, it is easy to understand how several cases may occur in the experience of one surgeon and none in the experience of others, and hence very erroneous estimates may be adduced as to the comparative frequency of duodenal ulcer after burns. There is one point which it seems to me is not sufficiently thought upon regarding the formation of duodenal ulcers, and that is the probability of their origin in actual traumatism of the intestinal coat by some hard or irritating substance, such as a piece of bone which escapes stomach digestion. In this way, it seems to me, are best explained those mysterious cases where the first symptoms are those of perforation, and which occur in healthy young adults. Professor Axe of the Veterinary College states, however, in a letter to me upon the subject, that though he has made hundreds of post-mortem examinations upon the carnivora generally he has never observed a death from perforation of the duodenum. While rectal ulcers are not uncommon, all writers on ulceration of the stomach and duodenum agree on the comparative frequency of duodenal ulcers in young males. I can hazard no explanation of this very curious fact, unless it be the

greater frequency of haste in eating and "bolting" indigestible food, but its clinical significance is of the first import. Trier of Copenhagen, who wrote a very comprehensive paper on this subject,¹⁷ collected twenty-six cases of perforating ulcer of the duodenum from the records of the Frederik's Hospital. He also collected a number of cases from other sources numbering altogether 281. He found that the ulcer was situated in the duodenum in 10·7 per cent. of cases, and he concludes that the ulcer most generally occurs about the age of manhood, the average being about forty-two and a third years. A striking similarity has been observed in the Guy's Hospital and the St. George's Hospital estimates. Brinton,¹⁸ in discussing the large number of 654 cases of ulcer of the stomach and duodenum, makes the proportion of stomach ulcer in females over males as 2 to 1. Trier finds that the ulcer of the duodenum is found five times more frequently in males than in females.¹⁹ Perry and Shaw conclude that, excluding burns, duodenal ulcer is three times as common in males as in females. Moore's cases²⁰ show a contrast to those of Brinton, for out of thirteen cases of gastric ulcer reported by him, occurring in a period of twelve years, ten occurred in males and three in females. There was only one case of ulcer of the duodenum, and this was, as usual, in a male, a young man at Lewes about twenty years of age, who for several weeks had severe pains about two hours after taking food. After a meal of pickled salmon very violent abdominal agony came on, and he died collapsed in fourteen hours. The association of ulceration of the duodenum with malignant disease would appear to be very exceptional. Bristowe, in describing the pathological appearance found in a case of general cancer, found a perforating ulcer of the anterior surface of the duodenum, close to a cancerous mass the size of a pigeon's egg. The ulcer seemed to have no direct connexion with the growth, but the latter probably acted by lowering the nutrition of the part. In the list of affections of the duodenum collected by Latham there are three in relation with malignant disease.²¹ Typhoid ulcers in the duodenum and the ulcers associated with anthrax or pemphigus are among the rarities of pathology and need not here be further discussed.

I will now consider the pathological terminations of duodenal ulcers. The ulcer which I am especially considering, and which may well be termed "latent," goes on to rapid perforation and death. Ulcers which are more chronic in their course may exhibit a large number of different terminations and conditions. In a considerable number of cases the ulcer erodes into the pancreas and some large vessel, the patient dying from hæmatemesis. This is a peculiarly common termination of the duodenal ulcer after burns, and most of our museums contain specimens to illustrate it. Duodenal ulcers may cicatrise and the gut recover its normal functions. On the other hand, the calibre of the bowel may be seriously lessened and contracted. Thus Lange²² relates the case of a woman who, after suffering from great mental troubles in digestion disturbances, passed blood in the stools and exhibited symptoms of gastric ulcer, for which she was treated. Eight years after she was operated upon for stricture of the pylorus, as she vomited constantly and had a dilated stomach. The pylorus was normal, but the duodenum was so narrowed about an inch from the pylorus as barely to admit a lead pencil. The stricture was divided and stretched and the patient made a good recovery. When a chronic ulcer of the duodenum threatens to perforate such matting and condensation of the tissues may surround it that the appearance and symptoms of cancer are closely simulated. Billroth is said to have excised the pylorus for cancer when simple ulcer was really present. A specimen of ulcer of the duodenum, where the symptoms closely resembled cancer, occurring in a man aged thirty-six years, is related and described by Gairdner.²³ Stricture of the bile-duct with persistent jaundice caused by the cicatrization of chronic duodenal ulcer is sufficiently well known not to need further mention here. An exceptional association of stricture of the duodenum after cicatrised ulcers is the formation of hernial-like pouches in the immediate vicinity. Specimens of this pouched condition of the bowel have

¹⁴ Guy's Hospital Reports, 1856.
¹⁵ Transactions of the London Pathological Society, vol. xxv., p. 120.
¹⁶ American Medical Times, Feb. 28th, 1895.

¹⁷ British and Foreign Medico-Chirurgical Review, p. 157, 1864.
¹⁸ Diseases of the Stomach. ¹⁹ Loc. cit., p. 160, 1864.
²⁰ Transactions of the London Pathological Society, vol. xxxi., p. 110.
²¹ Ibid., vol. xxi., p. 356.
²² Annals of Surgery, p. 588, 1893.
²³ Transactions of the Glasgow Pathological and Chirurgical Society, v. i. iii.

been exhibited and related by Charlewood Turner.²⁴ He attributed the conditions found to spasmodic contractions of the bowel in the vicinity of the stricture. I have already referred to the fact that tuberculous ulcer of the duodenum is considered rare. A case is, however, related by Murchison,²⁵ where a simple ulceration of the duodenum was followed by tuberculous mischief in the lungs. Two of the cases from the St. George's Hospital post-mortem books are noted to be in association with tuberculous ulceration into the portal vein with profuse hæmatemesis and death is an exceptional termination, noted by the late Dr. Habershon.²⁶ Perhaps the rarest termination of duodenal ulcer is a communication with the colon. Murchison²⁷ speaks of this very exceptional condition, and a case of it is related by Sanderson²⁸ in the person of a man aged thirty years, who was admitted into the Middlesex Hospital complaining of excessive pain in the epigastrium and vomiting a brown pultaceous liquid. He had had four similar attacks with severe pain after meals. The ulcer in the first part of the duodenum was found to communicate with the colon.

This brief consideration of the pathological terminations of duodenal ulcer will serve to illustrate how various must be the clinical symptoms they present, according to whether adjacent vessels, nerves, or viscera are implicated. A conjectural diagnosis is usually only warranted, and clinically it is probably impossible to distinguish them from pyloric ulcers unless such symptoms as obstructive jaundice or the pain coming on some two or three hours after food should point to the duodenum. Ulceration of the duodenum may be exceedingly chronic. Thus Arnold in the Boston Medical and Surgical Journal²⁹ reports the case of a man who for six or eight years had suffered from such symptoms as epigastric pains, cramps, nausea, and vomiting. His meals were retained without pain, but about four hours later he used to have pain and vomit. If nothing was eaten he would occasionally vomit a quantity of whitish sour liquid. Hæmatemesis with blood in the stools preceded his death, and an ulcer was found in the first part of the duodenum, eroding the pancreaticoduodenal artery. The hæmorrhage in the stools and in the vomit may readily give rise to an erroneous diagnosis. Mr. Leopold Hudson of the Middlesex Hospital informs me that he performed a necropsy on a man aged forty-two years in the year 1889. This patient had suffered during life from repeated intestinal hæmorrhage, which was believed by some eminent physicians to be due to cirrhosis of the liver. At the post-mortem examination the liver was found to be normal, as was also the stomach; but on the anterior wall of the duodenum just beyond the pylorus a large solitary ulcer was found. The floor was formed of very little more than the peritoneal coat, the edges were clean cut, and the open mouth of a small artery was apparent. There was no appreciable thickening of the surrounding tissues, and there were no adhesions. As regards the treatment of these more chronic cases of ulcer of the duodenum, when medical measures fail it becomes a question whether an exploratory abdominal section should not be performed. Thus a communication may be made between the dilated gall-bladder and the small intestine when the duct is obstructed by a cicatrised ulcer. The following case, related by Codivilla,³⁰ shows that chronic duodenal ulcer accompanied by distressing symptoms is amenable to surgical treatment. A man aged forty years had for fifteen years suffered with pain in the epigastrium coming on five or six hours after dinner and attaining its maximum during the night. There was also daily vomiting, the vomited matter containing acid and bile and blood. Blood was also passed per anum. Every variety of medical treatment had been tried without avail. At the urgent request of the patient an operation was performed. No lesion was found in the stomach, but two fingers' breadth below the pylorus the duodenum was transformed into a hard mass five centimetres long with numerous adhesions. A coil of the jejunum was picked up and sutured to the stomach. The patient recovered well and increased in weight. Five months afterwards he was able to resume work. He still notices a dragging sensation at the situation of the scar and only then has vomiting, but he has vomited

no more blood. Codivilla claims pri-ri-y or treating duodenal ulcer in this way, and points out that gastro-jejunostomy gives the portion of diseased bowel rest and lessens the dangers of perforation or hæmorrhage. But few cases exhibiting chronic symptoms will probably be treated by the surgeon, though the excision of a chronic ulcer and suture of the bowel are obviously well within the range of modern operators.

The symptoms and diagnosis of the acute perforating ulcer must next engage our attention. In a considerable number of cases the ulcer is absolutely latent, resembling gastric ulcer in this respect. A patient is suddenly seized with agonising abdominal pain, rapid tympanites ensues, and he dies in eighteen or twenty-four hours in profound collapse. There may or may not be vomiting. In other cases there is a tendency towards encysting of the extravasated material and the formation of a subdiaphragmatic abscess. In the majority the symptoms are primarily epigastric or in the right hypochondrium, and this, if it can be clearly elicited, is a diagnostic point of the first importance. In a certain proportion of cases the patient will tell us that he has had similar attacks before, or has had pain and vomiting some hours after meals, again drawing attention to the epigastric region. There is one source of error here. When the intestine is perforated the patient often refers his pain to the patch of peritoneum first inflamed by the contact of the septic fluid. Thus it happens that in a perforation of the cæcum the pain may be attributed to the centre of the abdomen, and in perforation of the duodenum the extravasated contents, flowing towards the pelvis, may first inflame the peritoneum in that locality. A case is related by the late Dr. Barclay³¹ in which it is expressly stated that intense pains occurred on pressure, and were referred to the lower part of the abdomen, and the same point is observed in one of the cases I have related. The violent colicky pains attendant upon perforation of these ulcers render the case very likely to be mistaken for lead colic, especially when they occur in the person of a painter. Thus a case is related by Hadham³² where a painter aged fifty-six years was admitted into St. George's Hospital suffering from violent abdominal pain. He was writhing about, but pressure gave him slight relief; and he had a well-marked blue line on the gums. He was treated for lead colic, but vomited several times, and died fourteen hours after admission. At the post-mortem examination a small clean-cut ulcer was found on the anterior surface of the first part of the duodenum. In these cases the progressive abdominal distensions and vomiting, and the usual signs of grave abdominal mischief should warn the practitioner, but the mistake is one that may readily be made. In like manner confusion may arise between perforation and intestinal obstruction. The distinctions between these conditions are discussed by numerous writers, and I would now content myself with only pointing out the primary importance of getting a sense of fluctuation per rectum, as indicating free fluid in the pelvic cavity. In perforative peritonitis occurring suddenly in either sex with a clear history of epigastric or right hypochondriac symptoms, as previous pain and vomiting, or primary occurrence of the pain about the epigastrium, with tenderness on pressure, the perforation is likely to be in the duodenum in males or near the pyloric end of the stomach in females; and in such cases it seems to me best to make an incision over the affected area. The character of the fluid that escapes may give most important aid. In perforations of the cæcum the pus is intensely foul and the puffs of gas which escape distinctly feculent. In ulcers of the duodenum this would probably not be the case, and though one can hardly argue from two instances the cases I have related show the absence of any feculent smell or odour in the abdominal contents. This may prove to be a valuable diagnostic sign in the future, and I would here draw prominent attention to it. The reaction of the fluid in the peritoneal cavity should of course be acid in cases of perforation of the first part of the duodenum, but the peritoneal exudation must be excessive and would soon neutralise any acidity, so that this test will not stand universal adoption. Nevertheless, acid fluid was found in one of the Guy's Hospital cases related by Perry and Shaw. A word must here be said concerning the researches into the diagnosis of intestinal perforation by Senn of Milwaukee.³³ This authority points out that if the stomach be distended with hydrogen gas and a perforation exists, the gas passes

²⁴ Transactions of the London Pathological Society, vol. xxxv., p. 201.

²⁵ Ibid., vol. xx., p. 174.

²⁶ Ibid., vol. xxvii., p. 156.

²⁷ Edinburgh Medical Gazette, pp. 4 and 127, 1857.

²⁸ Transactions of the London Pathological Society, vol. xiv., p. 174.

²⁹ Vol. xxviii., xcix., p. 407.

³⁰ Colonial Quarterly Journal of Medicine and Surgery.

³¹ THE LANCET, March 18th, 1871.

³² THE LANCET, Feb. 18th, 1871.

³³ Senn's Abdominal Surgery, p. 240.

into the peritoneal cavity, distends it, and the liver dullness disappears, which he considers diagnostic. I would point out that disappearance of liver dullness is not unknown in excessive tympanites, and that therefore I can hardly assign the same weight to this test as expressed by the distinguished American surgeon. The escape of bubbles of gas on pressure when the abdomen is opened may lead one directly to the source of perforation. This symptom was of marked aid in the case related to the Medical Society of London last year by Mr. Percy Dean, and in which that surgeon demonstrated the feasibility of resection of a duodenal ulcer and suture of the bowel, his patient recovering. Similarly Mr. Pearce Gould related a case at last year's meeting of the British Medical Association where a young woman aged twenty years, after a meal of fruit, was seized with severe pain in the right hypochondrium, with subsequent collapse and vomiting. Twenty-six hours after the onset of acute symptoms he operated, and as there was nothing to indicate the seat of the perforation he opened the abdomen below the umbilicus. Gas and acid fluid escaped. So, having rapidly explored the generative organs and vermiform appendix, Mr. Gould cut down on to the stomach above the umbilicus and immediately exposed a small perforation in the duodenum. This he excised, carefully sutured the wound so made, and having flushed out the peritoneal cavity closed the laparotomy wounds, leaving a glass drain in the lower incision. At the close of this operation the patient was in a state of profound collapse, being very nearly pulseless at the wrist. Thirty-two ounces of saline solution were injected into one of her veins, and he had the satisfaction of seeing this collapse pass off to a considerable extent. Nevertheless, nine hours later she died; and at the post-mortem examination he found that the duodenal suture was firm, that no water escaped from the bowel even under considerable pressure, but that there was general peritonitis. "It was no satisfaction to me," Mr. Gould remarks, "no benefit to my patient, that the suture was firm, while her peritoneum had been left foul. It was only a surgical illustration of the vulgar proverb which cautions us against closing the stable-door when the steed was stolen." I have made in the post-mortem room of St. George's Hospital a series of observations on the best position for placing the incision in the abdominal parietes in supposed mischief about the duodenum. The incision in the median line does not give free access to the right hypochondriac region, and one can easily conceive that it might be difficult to detect and to suture a duodenal ulcer through it. In like manner an incision in the right linea semilunaris appears to be too far external to give access to the pylorus and first part of the duodenum. A vertical incision four to five inches long, according to the thickness of the parietes, from the right eighth cartilage downwards, two inches to the right of the median line, is in the majority of instances over the duodenum. Such an incision enables one to explore the pylorus, duodenum, gall-bladder, and under surface of the liver, and through it an ulcer on the anterior surface of the duodenum could be easily reached. I would draw attention to the immense advantage of holding asunder the margins of the abdominal wound in this and similar proceedings by means of stout silk loops passed through the parietes. By this means exploration can be most thoroughly managed, and the manœuvre greatly facilitates the return of distended bowel, I would also venture to express my opinion that the secret of success in these cases is the complete after-cleansing of the peritoneal cavity. Mr. Gould strongly expresses himself regarding this point, but I cannot now enter into this subject beyond expressing the belief that our present methods are not sufficiently complete and elaborate.

In conclusion I would draw attention to the following points, which seem clear from a perusal of the published cases of this affection. 1. That in perforative peritonitis there is nothing to point to the duodenum as the site of lesion unless it is clearly made out that the onset of pain was in the epigastrium or right hypochondrium; or that previous epigastric symptoms, as pain and vomiting, had occurred. Great care should be taken over the investigation of this part of the history, which is most vital and important. 2. That, considering the frequency of duodenal ulcer in males, the possibility of this affection should always enter the minds of surgeons who are called to a case of perforative peritonitis occurring in a man. 3. That the non-feculent and sometimes acid nature of the

extravasated fluids and gas may serve as a most important diagnostic aid, and the incision may be made small as an exploratory effort only until this vital point is made clear. When once the surgeon has made up his mind that the exudation is non-feculent, and especially if it be acid, the region of the stomach and duodenum should be explored without loss of time. The nature of the fluid is a matter for future observation. 4. In severe shock it is perhaps well to wait for a few hours. The peritoneum must be most energetically washed with warm water, and a drainage-tube placed in the pouch of Douglas would probably be of utility.

Cavendish-place, W.

TOBACCO AMBLYOPIA.¹

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THOUGH it has long been known that the excessive use of tobacco is injurious to the eyesight, it is only within comparatively recent years that the visual disturbances arising from the toxic effects of nicotine have been carefully studied and their clinical features accurately recorded. Many of the older ophthalmic surgeons² used to ascribe to tobacco poisoning a large number of obscure forms of disordered or suspended visual function, in which the etiology of the disease should have been assigned to some entirely different cause. The somewhat wholesale condemnation of the use of tobacco to which this idea gave rise has still a widespread currency, and by those who have the slightest thought that they smoke in excess no question is more commonly put to their medical attendant than, "Is it tobacco that is doing me harm?" or "Must I give up smoking?" Though the existence of amblyopia from this cause can no longer be doubted the disease must, considering the large number of people who habitually use tobacco, be admitted to be of comparatively rare occurrence, nearly all the cases that come under observation being more or less complicated by free indulgence in alcohol. As to the frequency of nicotine amblyopia it is, therefore, difficult to arrive at very accurate conclusions; it probably, indeed, varies in different countries, and is in large part regulated by the habits and customs of different nations. Just as there are people so constituted that even excessive indulgence in tobacco and strong drink has on them no appreciable effect, there are others in whom, owing to some peculiar idiosyncrasy, even the most moderate use of either produces marked toxic disturbances. Of all the cases observed by Horner³ during a period of two years 0.7 per cent. were due to abuse of tobacco and alcohol; while Galezowski⁴ found 1 per cent. in a total of 36,000 patients. Though the introduction of the ophthalmoscope shed new light upon the site and the anatomical cause of many cases formerly grouped under the general names of amblyopia and amaurosis, yet amblyopia arising from the abuse of tobacco and alcohol presents in its earlier stages no ophthalmoscopic picture that can be regarded as pathognomonic. In such cases, indeed, the contrast between the gravity of the symptoms and the absence of any marked lesion that ophthalmoscopic examination can detect is one of the most striking characteristics; and our knowledge has been derived rather from careful examination of symptoms, more especially of the limitations of the visual field and of defects in the colour sense, than from any changes that can be detected in the optic nerve and retina.

In the following case, first seen in December, 1888, we have a good example of amblyopia due clearly to the toxic influence of tobacco. A man aged fifty-nine years complained of dimness of vision in both eyes. Though the defect had only attracted serious attention somewhat suddenly about eight weeks before, I was able to elicit the fact that for twelve months he had had difficulty in recognising the features of friends unless they were quite close to him. He had become less and less able to read small print, and found that no spectacles he could get brought about any

¹ A paper read at a meeting of the Glasgow Medico-Chirurgical Society, Nov. 9th, 1894, and illustrated by charts and diagrams.

² Mackenzie: Diseases of the Eye, p. 1065, 1854.

³ Ueber Intoxications-Amblyopie: Schweizer Correspondenzblatt, 1878, viii., 13, p. 396.

⁴ Des Amblyopies et des Amauroses toxiques. Paris, 1879.

improvement. When he was walking along the street at night the flame in a gas lamp would seem suddenly to go out, but would again become visible as he approached nearer, while another then seemed to disappear. The flame of the lamps always appeared to him to be of a blue colour. The defect in vision was as pronounced in one eye as in the other, and when I saw him he could barely read the letters in No. 19 Jaeger, and his vision for distance was not equal to $\frac{1}{8}$ by Snellen's test types. He had never suffered from any pain in his eyeballs, and there was no tenderness when the ball was pressed backwards into its socket. The intraocular tension was normal, the movements of the eyeballs were perfect, and the pupils were of equal size and responded normally both to the stimulus of light and in the act of convergence. By careful examination it was demonstrated that the dimness of sight was wholly confined to the central area of the field of vision, and that when the confines of this dull area were reached the vision of the other parts of the field was normal quite up to the periphery. In the affected central area colour sensation was also entirely absent. Ophthalmoscopic examination revealed no lesion to account for the intensity of the symptoms, and beyond the fact that the left optic nerve was rather paler than the right there was nothing to be noted. The patient (a foreman in a large printing establishment and most regular in his attendance in the workshop) was a strong, healthy-looking man, who had never suffered from any other illness than some slight digestive disturbances. He had, however, in consequence of domestic difficulties been subjected for many months to much mental anxiety, and he himself attributed the onset of his defective vision to "indigestion and worry." Though he had begun to use tobacco when only nine years old, and had smoked regularly thereafter, he was not conscious of having ever suffered in any way from this cause, even the sickness usually attendant on the first experiences of nicotine having been in his case remarkably slight. For more than forty years he had smoked on an average about four ounces of black twist every week; but of late, though for no particular reason, the quantity had been less—probably about three ounces. He invariably smoked before breakfast, but as he was always regular with his meals that was the only time when he smoked with his stomach empty. He had always been very abstemious, and for the last fifteen or sixteen years had never tasted alcohol. The patient was advised to abstain from the use of tobacco; but finding that impossible he substituted a very light quality for the black twist, and limited the quantity to two ounces a week. A dose of one-sixteenth of a grain of bichloride of mercury with five grains of iodide of potassium, to be taken after meals, was prescribed for him, and when he was seen again after four weeks' treatment he reported that for more than a fortnight there had been a progressive improvement in his eyesight. Tested by Snellen's types, it was found that the visual acuity was now $\frac{1}{2}$ of the normal instead of $\frac{1}{8}$, as at first. Aided by glasses he could read moderately large print; and although he could now distinguish blue and yellow, yet in the central area of the field of vision sensation for red and green was still absent. The former appeared to him "like silver," while the latter "glittered like gold." When, however, he was shown a gold and a silver coin he was unable to distinguish the one from the other until he had felt the difference in weight. He had by this time no difficulty in counting all the street lamps. There was no change in the ophthalmoscopic appearances. Caution in the use of tobacco was again enjoined, and for the biniodide of mercury a Plummer's pill at bedtime was substituted, with a quinine and strychnine tonic before food. After a two months' holiday in Ireland—during which he smoked regularly, but also took his medicine steadily and kept out of doors as much as possible—his vision was found to have improved to $\frac{3}{4}$ of the normal. He continued to take a tonic mixture containing nux vomica, and six months after the date when I first saw him he resumed his duties and was able, although with a little difficulty, to read proof sheets as formerly. At the first glance red and green spots still appeared to him to have a metallic lustre, but after he had looked at them for a few seconds the colours became quite distinct. He had now not the slightest difficulty in at once distinguishing between a sovereign and a shilling. His own comment was that he could now see the colour in a person's face and in the skin of his own hands, whereas three months before he could distinguish no ruddy tint, the appearance presented to him being "just like that of a dead person," and as he walked along the streets the faces of the passers-by wore a

"deathly pallor," and he was "unable to distinguish their eyes." The patient continued regularly at work till May, 1893. While he still abstained from alcohol, he had begun to use tobacco almost as freely as he had been doing before his illness, although the quality was not so strong. As his sight was again beginning to fail he gave up his situation. He found that his vision varied greatly and was uncertain—"some days he could not see well, at other times he was able to read well enough." He came under treatment again in September, 1894, when it was found that his visual acuity varied between $\frac{1}{4}$ and $\frac{1}{2}$ of the normal; there were slight central amblyopia and partial colour defect—at one time he could tell all the colours, while at others he hesitated with red and green, and when the dyschromatopsia was most pronounced his vision was least acute. It was now noticed, however, that there was a slight peripheral contraction of the visual field, the optic discs were pale, more especially in their outer two-thirds, and very well defined in outline, the retinal arteries were somewhat reduced in calibre, but the veins were of normal size. Strict injunctions were again given as to the use of tobacco, and a mixture containing nux vomica and iodide of potassium was prescribed. After a fortnight's treatment the power of vision became steadier, but it has not yet (November, 1894) improved up to the point it had reached after his first attack.

I have recorded this case in full because from many points of view it is typical and illustrative, and because I have had an opportunity of observing it regularly from the beginning. First of all, it is a pure tobacco case, as for nearly twenty years the patient has almost entirely abstained from alcohol, and it proves that recovery up to a certain limit can take place even although the patient continue all through to use tobacco of light quality and in reduced quantity; but it also proves that when the use of tobacco is unduly increased a relapse will follow, while the addition of a concentric contraction of the visual field to the group of symptoms originally noted suggests that, as a result of the prolonged irritation of the tobacco, what was at first a mere functional disturbance has become changed into an organic disease of the optic nerve. In cases of nicotine amblyopia the patients are usually men of from forty to sixty years of age who have used the stronger forms of tobacco for a number of years.⁵ The onset of the symptoms, though sometimes sudden, is usually so slow and gradual that patients have difficulty in determining the exact date of commencement. Those affected, unless suffering from debility arising from some other cause, usually present a strong healthy appearance; but the perception of the peculiar odour mentioned by Mr. Doyne⁶ may sometimes direct attention to the true nature of the case. They rarely admit ill-health; but questioning brings out that for some time before the dimness of vision was first observed they had been worried and sleepless, and had suffered from loss of appetite and digestive disturbances. In most cases the patients say that they have recently been smoking less; and Förster⁷ believes that tobacco is not so well tolerated during the second half of life as during the period of full vigour. All experience, too, goes to prove that those who are well nourished, sleep well, and in general take life easily are able to use much larger quantities of tobacco than those who are not so favourably circumstanced, and that there are some who as a result of congenital predisposition are unable to use even small quantities without suffering from symptoms of nicotine poisoning. Workers in tobacco factories who neither smoke nor chew seldom suffer from amblyopia, and van Millingen⁸ of Constantinople affirms that he has never met with a case among the Turks. He thinks this is accounted for rather by their smoking cigarettes than by their using mild tobacco, and comes to the conclusion "that tobacco poisoning is only possible when nicotine in solution is brought into contact with the mucous membrane of the mouth and swallowed." The poisonous effects may, however, as suggested by Dr. Lauder Brunton,⁹ rather be produced by the volatile alkaloids formed during the combustion of tobacco. As much stronger tobacco can be smoked in the form of a cigar than in a pipe, cigar and cigarette smokers are probably more exposed to

⁵ There are exceptional cases where visual defect showed itself very shortly after smoking or chewing was begun. Some few cases in women are also reported. (See Transactions of the Ophthalmological Society, vol. vii., 1887.) The youngest of my own patients was a man twenty-eight years of age, who had for several years smoked eight ounces of strong black twist every week.

⁶ Moorfields Hospital Reports, 1889.

⁷ Jahreshesicht pro 1888, p. 183; and Graefe und Saemisch, Handbuch, vol. vii., p. 201.

⁸ Transactions of the Ophthalmological Society, vol. viii., 1888.

⁹ Book of Health, p. 254, 1884.

the risk of nicotine poisoning than others, and possibly their comparative immunity arises from the fact that, "according to Vohl and Eulenberg, the tobacco which is smoked in a pipe yields a very much larger proportion of volatile bases, and especially a larger quantity of the very volatile and stupefying pyridine, while in a cigar little pyridine and much collidine is formed, the latter being less volatile and active than pyridine." In support of this theory I may add that I have never seen a case of tobacco amblyopia in a patient who chewed but did not smoke. In my own experience the patients who suffered most were those who had been in the habit of smoking on an empty stomach the first thing in the morning, in fits of sleeplessness during the night, or during the day in place of a meal. Persons are then in the best condition for absorbing the nicotine or combustion products into their blood, and in the worst condition for resisting their injurious influence. Patients complain that in bright light they are easily dazzled, and that a whitish or yellowish mist rises like a cloud in front of their eyes and prevents them from seeing clearly. In the after part of the day, when the sun is not so strong, this sense of dazzling disappears and vision improves, or at least seems to do so.¹⁰ By-and-bye small print can be read only with difficulty, and stronger spectacles are procured but with no good result, while at last even the inability to read ordinary-sized type becomes quite decided. The dimness of vision is as pronounced in the one eye as in the other, and this symmetry, being a strikingly characteristic symptom, is of great value in distinguishing amblyopia due to tobacco or other toxic cause from diseases of the choroid, the retina, or the optic nerve, in which both eyes are also frequently affected, but where the diseased condition of the one is, as a rule, much in advance of that of the other. In the Moorfields Hospital Reports for 1886 Mr. J. Hutchinson, jun., describes a case where one eye was attacked six months before the other; and in the same Reports for 1889 Mr. Doyne gives a case of monocular tobacco amblyopia which he had observed in a man aged thirty-eight years. Such instances are, however, very exceptional. The diminution in the visual acuity varies according to the stage of the disease. At first there is simply a general dimness—a diminution of the light sense—but afterwards vision is reduced to $\frac{1}{10}$ or even $\frac{1}{20}$ of the normal. This failure is due to defect in the centre of the field, but of this the patient is not conscious, as he would be if the disease were due to a lesion in the outer layers of the retina. The scotoma then is "negative" or "relative." That the defect is confined to the central, without any contraction of the peripheral, field of vision is in marked contrast to what occurs in atrophy of the optic nerve—for example, in *tabes dorsalis*, where there is progressive contraction of the field from without inwards. In the former the defect may involve only a very small area, and in the latter the greater portion of the field, so that only the central parts round the fixation point remain useful. Yet in the following two cases the interference with vision is very different. The first, a man with the central defect, could hardly see sufficiently to guide himself about, while another patient I had—a sufferer from *tabes dorsalis*—was able, though completely blind in the right eye and with only a small central area of the left remaining, to drive a horse and van through crowded streets. The scotoma is transversely oval and usually extends from the point of fixation to the blind spot, and although remarkably constant in size and shape may occasionally be of larger dimensions and surround the fixation point—the paracentric and the pericentric scotoma of authors. Grenauw¹¹ and others have tried to form a differential diagnosis according to the shape of the scotoma, and claim by this means to be able to distinguish tobacco cases from other forms of toxic amblyopia. It would seem, however, that those variations in size and shape depend more upon the dose and effect of the toxic agent than upon the particular kind of poison. The more profound the amblyopia the larger the scotoma.¹²

¹⁰ One of my patients told me he could always play best at bowls in the evening, because when he played in the sunlight he could not see the "jack" on account of the dazzling in front of his eyes; and another patient, a calman, has assured me that he has less difficulty in distinguishing numbers on doors in the evening than during the day.

¹¹ Graefes Archiv für Ophthalmologie, vol. xxxviii., 1892; see also Hirschberg, Deutsche Zeitschrift für Praktische Medizin, 1878.

¹² In the case of the first patient just mentioned the scotoma extended beyond both the fixation point and the blind spot, and for a considerable but indefinite distance beyond the absolute scotoma a red test object appeared to be brown.

A true pathognomonic sign, however, is that even when a white object can still be recognised in the centre of the field there exists a scotoma for colour—green appears grey or white, pink blue, and red brown, &c. As the disease progresses the colours assume a metallic lustre, and red and green look like silver and gold. Gold and silver coins, however, appear alike. At length, with the disappearance of the power in the region of the scotoma to recognise a white object, all colour sensation disappears, and in the most extreme cases even a candle flame cannot be recognised. The scotoma is now absolute. As, however, the eccentric parts of the visual field are quite normal patients are often unaware of their colour blindness; they see a large surface of red or green with perfect distinctness, but when a small square of colour is employed as a test object the defect becomes at once apparent. It is most marked for red and green, least so for yellow and blue, the latter being in many instances recognised perfectly when the former cannot be distinguished. A patient, a gardener, told me that the first indication he had of failing eyesight was inability to distinguish the red colour of a strawberry. Before the fruit was ripe he could distinguish the berries fairly well, but whenever these became red he failed to see them unless he were looking closely at the plants. For the purpose of roughly estimating the extent of the peripheral field and detecting the presence of any central defect I am in the habit of using a series of small white and coloured metal discs, all of which can be fitted into one handle. Of course, where accurate observations have to be recorded a perimeter must also be employed. In the less severe cases, when the central scotoma is not very pronounced and the visual acuity not greatly reduced, I am in the habit of employing coloured papers (3 in. by 2 in.) pasted upon a sheet of black cardboard. The colours selected are as nearly as possible complementary. On red paper are fixed green dots and *vice versa*. The patient has no difficulty in recognising the mass of colour, but he is quite unconscious of the dots.

In striking contrast to those changes in the visual field just described are the results of ophthalmoscopic examination. In the earlier stages the optic disc may be hyperæmic and less transparent than natural, but in a large majority of instances the ophthalmoscopic appearances are quite normal. As the disease progresses, however, the natural colour of the nasal third of the papilla contrasts with the greyish whiteness of the temporal two-thirds. In extreme cases the whole papilla may assume the appearance of white atrophy; but here, in addition to the central scotoma, there is usually some contraction of the periphery of the visual field. Mr. Lawford¹³ has recorded nine examples in which atrophy of the optic nerves with contraction of the visual field came on in patients who at first exhibited all the symptoms of tobacco amblyopia. Complete atrophy of the optic nerves is exceptional and is only met with in those cases in which the central scotoma is large and absolute and in the late periods of the disease. Although nervous complications—e.g., paralysis of the oculo-motor nerves¹⁴ &c.—are of rare occurrence, it sometimes happens that in complete atrophy symptoms of *tabes dorsalis* become superadded; but it must always remain doubtful how far the tobacco is to be blamed for the onset of such complications. De Wecker¹⁵ has grouped all cases of toxic amblyopia under the heading of retro-bulbar neuritis, but, as Berry¹⁶ suggests, there are good reasons for doubting the existence of actual inflammation of the optic nerve in many instances of tobacco amblyopia. A well-marked case of retro-bulbar neuritis presents points of difference from, and exhibits symptoms which are altogether absent in, an ordinary case of tobacco amblyopia—e.g., pain in movement of the eyes and tenderness when the eyeballs are pressed backwards into their sockets; the central scotoma is not so constant in size and shape; the ophthalmoscopic picture is more often characterised by inflammatory change in the optic disc; the amblyopia is usually more pronounced in one eye than in the other, or the disease may be wholly confined to one eye; and there are often intolerance of light and complaint of aching pain in the circum-orbital region. The presence of the central scotoma is the one common characteristic in all the cases which de Wecker groups together. In position this scotoma corresponds to the area of the retina which is supplied by the papillo-macular fibres.

¹³ Transactions of the Ophthalmological Society, 1890, vol. x., p. 166.

¹⁴ *Ian*: Recueil d'Ophthalmologie, 1885.

¹⁵ *Traité Complet d'Ophthalmologie*, vol. iv., p. 421, 1889.

¹⁶ Moorfields Hospital Reports, 1889.

These, according to the researches of Samelsohn,¹⁷ Vossius,¹⁸ and Bunge,¹⁹ lie at first in the axis of the nerve stem as a cylindrical bundle, but change their shape and position as they pass towards the eyeball, into which they enter as a wedge-shaped bundle on the temporal side of the optic disc. The apex of the wedge is directed to the central vessels. In 1882 Samelsohn demonstrated the existence of an interstitial neuritis which was limited to the fibres of the papillo-macular bundle in their course through the nerve stem from the optic foramen downwards towards the optic disc, and this observation has been confirmed by Nettleship,²⁰ Unthoff,²¹ and others. The inflammatory process leads to proliferation of the connective tissue surrounding the nerve fibres, these suffering compression and ultimately becoming atrophied when the new-formed tissue begins to undergo cicatricial contraction—a pathological process analogous to that which is seen in the liver and kidney in consequence of prolonged irritation from alcohol &c. But in typical cases of tobacco amblyopia the complete recovery which usually takes place, and the fact that on the one hand a single good night with quiet sleep can considerably improve visual power, while on the other hand the colour scotoma can be increased by fatigue,²² is not at all consistent with the theory that the papillo-macular bundle has been actually inflamed. Moreover, the fairly constant shape of the scotoma, its symmetry, and the similarity in the degree of amblyopia in both eyes point rather to the existence of some lesion of a vascular kind than to an interstitial neuritis. From their anatomical position the papillo-macular fibres at the optic foramen, where they enter the nerve stem, are those which are most abundantly supplied with blood on account of the very fine capillary meshwork which surrounds them, and are consequently those that will be most liable to nutritional derangement when any toxic agent exercises an irritating action in their neighbourhood. It is probable, therefore, that in the simpler forms of tobacco amblyopia the directly hurtful action of the nicotine, or of the products of its combustion, produces such a functional derangement of the macular fibres.²³ In severe cases, and more especially in those complicated by alcoholism, anatomical changes in the nerve probably become superadded, and a true retro-bulbar neuritis results. In all such cases, however, in addition to a well-marked and often absolute central scotoma, there is a peripheral contraction of the visual field, and the latter symptom should always be interpreted as indicating the existence of organic disease of the optic nerve, which will sooner or later reveal itself by pallor of the optic disc. Whenever, indeed, in a case of supposed tobacco amblyopia there is found limitation of the peripheral parts of the field of vision, the patient ought to be examined most carefully for any symptoms which would indicate the commencement of disease of the spinal cord—e.g., tabes dorsalis, disseminated sclerosis, &c. As far as my own observations go, all cases of tobacco amblyopia where recovery is not complete will sooner or later exhibit peripheral contraction of the visual field; and if in such cases the alcoholic element be strong, and the patient's environment such as to debilitate and lessen nerve tone, the atrophic changes in the optic disc are prone to become progressive and vision to be correspondingly impaired.

The prognosis is undoubtedly favourable in all uncomplicated cases of tobacco amblyopia provided the patient will give up the use of tobacco. In most instances the promise is readily given, but the intention is not always carried out, and after a short period of abstinence smoking is again begun. The resumption of the old habit may bring on a relapse and prolong the convalescence, and when, as in the first case described, smoking in a modified form is persisted in all through the course of the illness, the recovery of visual acuity is never so complete as it would have been if tobacco had been faithfully abstained from. In every instance the progress is slow, and except in very mild cases, where medium-sized print can still be read, six or nine months or even longer are required before the patient is able to use his eyes for near work. When the central defect is absolute it

is always wiser, before giving a definite prognosis, to test carefully to ascertain the existence of any concentric limitation of the visual field, and, when that is present, to give a guarded opinion until sufficient time has elapsed to permit the efficacy of the treatment employed to be tested.

In the treatment itself the first step should always be the prohibition of the use of tobacco and alcohol. Complete abstinence is to be desired in all cases, because it must ever be borne in mind that the result is determined not so much by the actual quantity of tobacco smoked or of alcohol consumed, as by the capability of the patient for resisting their injurious influence. Some patients affirm that they see better when they are using alcohol than when they abstain, but the wish is mostly father to the thought, and the fact remains that true inflammatory changes in the optic nerve are much more likely to supervene upon already existing functional disturbances in those addicted to over-indulgence in alcohol than in those who rigidly abstain from its use. It ought to be remembered, however, that with many tobacco acts as a laxative, and that when its use is suddenly discontinued constipation and digestive disturbances are apt to follow. This difficulty, however, can easily be overcome by the use of some aperient medicine. In the early stages, when, although it may not be visible by the ophthalmoscope, hyperæmia of the optic nerve probably exists, the eyes ought not to be used for near work, and the dazzling of which so much complaint is made can be greatly lessened by the use of dark glasses, while the administration of mercury and iodide of potassium gives good results. After six or eight weeks the mercury may be replaced by full doses of nuxvomica. Some recommend the hypodermic injection of strychnine, but no special advantage is to be gained by the subcutaneous method of administration, because the good effects that follow the use of nuxvomica and strychnine depend more upon their general tonic effects than upon any special action which they may exercise upon the optic nerve itself. After recovery is fairly complete a quinine and strychnine tonic may be taken with advantage for many weeks, and if the patient be anæmic some ferruginous preparation and cod-liver oil, malt extract, &c. ought to be taken after meals. In addition, everything ought to be done by means of nourishing food in full amount, and of restful holiday with freedom from worry, to promote the patient's comfort and improve his general condition.

Glasgow.

ON THE EVOLUTION OF THE SYPHILITIC POISON IN MAN AS AT PRESENT OBSERVED IN ENGLAND.

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CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

As a rule the symptoms of secondary syphilis are confined in the first instance to the skin and mucous membranes. If the surface be in good condition and its secretion be not checked it is probable that the disease will eliminate itself through the skin without affecting any other parts. If, however, the secretion from the skin gets checked, according to my experience internal parts may become involved. The bones appear to be the structures most frequently affected, but it is not always clear whether it is the disease or the remedy which is most to blame in these cases. Disease of bone is, as a rule, a late symptom, and it will generally be found that the patients suffering from it have taken quantities of mercurial pills during the time they were exposed to cold air. In a case admitted into King's College Hospital, however, if the history can be relied upon, a node on the frontal bone was the first symptom of constitutional disease. The influence upon internal parts is sometimes developed very suddenly and disappears with appropriate treatment. A patient under the influence of mercury for syphilis rode through a brook whilst hunting. He became paralytic and was completely restored under a regulated course of calomel baths. In rarer instances the early symptoms of bone disease accompanied by nervous affections may be permanent. A wonderfully strong and well-developed man, who from his occupation was necessarily exposed to the weather, was seized while under the influence of mercury with hemiplegia of the left side. A portion of bone was removed from the right

¹⁷ Graef's Archiv für Ophthalmologie, vol. xxviii., 1882.

¹⁸ Ibid., vol. xxx., 1884.

¹⁹ Ueber Gesichtsfeld und Fasernverlauf im optischen Leitungssystem. Halle, 1881.

²⁰ Transactions of the Ophthalmological Society, vol. ii., 1882.

²¹ Graef's Archiv, 1886 and 1887.

²² Horner speaks of a fatigue scotoma, "Ermüdungskotom."

²³ In its earlier stages tobacco amblyopia seems to bear a very close analogy to a form of tinnitus which is said to follow over-indulgence in tobacco. Dr. Woakes has advanced the hypothesis that the noises in the head are due to a "hyperæmic state of the circulation of the middle ear."—Deafness, Giddiness, and Noises in the Head; p. 97, 1879.

temple by means of a trephine. The patient died from inflammation of the brain: A piece of dead bone an inch in length and confined to the internal table was found within a couple of lines of the opening made by the trephine. The preparation is in the museum of St. George's Hospital. Another patient had necrosis of the whole thickness of the frontal bone extending some two inches in each direction. A portion in the centre was removed by a trephine. This was deeply honeycombed on its internal surface. A thick layer of plastic lymph covered the surface of the dura mater. A drawing of the case is preserved. In two other cases the patients lost a large portion of the outer table of the frontal bone without any corresponding nervous symptoms. In later cases patients who had lost portions of bone from the nose retained their nervous symptoms until death. One of these had epileptic fits; the other, who had been under the care of Ricord in Paris, never lost the sensation of having wool in his mouth. One patient came from India with undoubted secondary syphilis and with necrosis of portions of the upper maxillary bones. With the exception of the two first cases these all came under my observation at a late period, having presumably been under the usual treatment by mercury internally whilst exposed to the weather. These are typical cases, and there can, I think, be no doubt that the diseased action, which naturally would have its evolution on the skin, was transferred to the deeper structures.

In contrast to these it has never occurred to me to see the bones affected where the calomel bath has been carefully used from the commencement. The remedy meets the disease where it is naturally developed, and the excretion from the skin is increased and favours the elimination of the disease. It is through the skin that the natural cure takes place, and it has very seldom indeed happened to me to witness any recurrence of syphilitic symptoms after a persistent and careful use of the calomel bath for two or three months.

What has been said with regard to disease of the bones is equally true with regard to other internal organs. I am acquainted with the cases of six patients who from professional engagements or other causes preferred to be treated by mercury internally while going about exposed to the weather as usual. In all of these very grave internal complication arose, from which none of them ever really recovered. In one case the patient, himself connected with a bath establishment, took the calomel baths for a week or two, and then elected to try other treatment. In the course of a very few months I was grieved to hear of his death. In a second case the patient, who advocated the internal use of mercury, and told his patients that during its use "the more they were in the open air the better," himself died from secondary syphilitic deposit in the liver. In a third case there was hemiplegia, and in a fourth paraplegia. In a fifth case the patient contracted syphilis in attending a midwifery case, and from this he died. Again, in contrast with such cases and a large number which have recently been recorded, I may with truth say that I know of no instance where the calomel bath has been properly used during the early stage of the disease in which any serious internal complication has arisen.

In close connexion with this subject is the question of the lapse of time that ought to intervene between a syphilitic infection and marriage. I have always held that no period can be specified. If the disease has become ingrained in a patient's constitution, and he has become, as often happens, proof against any further mercurial action, no length of time will render him perfectly safe. If, on the other hand, he has gone early through a proper course of mercury, he may, in my opinion, marry at any time. In a number of cases I have given my sanction to a patient marrying under these circumstances, and have as yet had no reason to regret my opinion. In one case a rash appeared after marriage, which was undoubtedly syphilitic; this, however, disappeared with some additional treatment, and no harm happened.

Savile-row, W.

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on Monday afternoon (the 5th inst.). Sir James Crichton-Browne presiding. The following were elected members:—Mr. Henry Irving, Mr. Henry Perigal, Mrs. Slingby Tanner, Mr. Ernest H. Fry, Mr. Thomas Muir, Mr. Harold Smith, and Mr. W. S. Smith. The special thanks of the members were returned to Mr. George Matthey for his donation of £50 to the fund for the promotion of experimental research at low temperatures.

INFLUENZA TOXÆMIA OF 1895 (FEBRUARY TO MARCH), WITH SPECIAL REFERENCE TO ITS CARDIAC MANIFESTATIONS AND PULMONARY COMPLICATIONS.

By ARTHUR W. B. WARDE, M.D. DURH.

THAT "each outbreak differs from another" has become a popular saying, and a true one. It is a saying specially true of the present epidemic, which has been answerable for a large number of peculiar heart and lung affections. It is remarkable that pure lobar pneumonia has been practically absent in my practice, whereas about thirty cases of bronchopneumonia, many of hypostatic type, have come under observation—some mild, some severe. The short duration of a high temperature, the limited number of sudden acute attacks, and the lengthened duration of a slight rise of temperature are very characteristic of this year's influenza. I think no one can doubt the presence of a distinct toxæmia—acute, subacute and abortive, brief or tedious in duration. I believe in all varieties the symptoms are those of septic intoxication. Although not conversant with bacterial life and growth, I venture to state my belief that the train of symptoms comprising influenza and its complications is produced by the absorption of a poison—be it simply chemical or alkaloidal (ptomaines)—into the circulation—a poison manufactured by bacilli multiplying on the mucous membranes of the respiratory and alimentary tracts. It will be apparent to many that I have in mind the present day teaching with reference to the absorption of toxins in diphtheria. The poison in its circulation would seem to act directly on the blood, causing corpuscular destruction; directly or indirectly on the vessels, tending to produce endocarditis, endarteritis, and stasis; and indirectly on the whole nervous system, or selecting one part of this, such as the vagus nucleus and nerve, or that combined with the sympathetic ganglia. The oft-occurring slow pulse, the subnormal temperature (following), the vomiting, and possibly the hypostatic type of pulmonary disease seem to point towards a special preference for the vagus and sympathetic systems.

Difficulty is met with in diagnosing influenza when the attack has aborted, or at least when the acute stage is over—an important question, in that it concerns the signing of certificates for illness. The bright, suffused, and watery eye; the cold, clammy, perspiring hands and sometimes feet; the tremulous condition (occasionally present) of arms, tongue, and body—are all useful as a guide. In a very large number of cases, if uncomplicated, the temperature will be found markedly subnormal. Very frequently an intense redness in the fauces will be found, and thereby hangs a tale, for when, in addition to this redness, the smell of alcohol is strong, it is quite impossible to tell absolutely whether a patient is suffering from the effects of acute alcoholism or from the after-symptoms of influenza. A very slow pulse is to me almost pathognomonic of influenza when it exists, but one cannot be certain, as a rule, of its absence before the attack. This year I found very few marked cases in children. Among very young children two of them appeared to be at death's door—in a word, literally poisoned nearly to death—and yet they proved to be convalescent within twenty-four hours. As in former epidemics, again this year there was an apparently simultaneous outbreak in many parts of the country. The fact is, however, that in December a very severe type of catarrh—in reality, probably influenza in a mild form—was prevalent in this town with cases of true influenza occurring every now and again during that month and the following months of 1895. I believe it to be a fact that this new epidemic was simply deferred in its development by the rigour of our winter. With the thaw medical men and plumbers had ample employment.

I was able to trace the very gradual growth of a town epidemic in Newcastle-on-Tyne during the winter of 1889-90. When our first great outbreak in modern times occurred early in January, 1890, I was able by means of my official visiting list and case-book to trace back, right into the first or second week of November, 1889, a fair number of what I recognised to be cases of true influenza—cases by which at the time I was greatly puzzled. In passing I may add that I firmly believe that influenza was epidemic in North Devon during

the winter 1887-88, and especially during February, 1888. Possibly catarrh may precede influenza, as cholera is said to be fore-heralded by epidemic diarrhoea.

I should be glad to know the opinion of the profession on a few points of interest. Is not influenza really endemic, accounting for the obscure "febriculas" of the past? What is its relationship to ordinary or common catarrh? Are the two of one birth? Are they not one and the same thing? In catarrhal subjects does not influenza take the place of their usual seasonal catarrh? In fact, are the two not mutually interchangeable? Are not common catarrh and influenza, each varying in type and sequelæ, responsible for the symptoms of what is called "rheumatism"? That "rheumatism" may be the result of other causes, such as cold and wet, scarlet fever, septicæmia, pyæmia, and gonorrhœa, I do not deny, but take it that in all some kind of blood poisoning occurs to produce the symptoms called rheumatic. Dr. Newsholme's *Milroy Lectures on the Natural History and Affinities of Rheumatism* prove its occurrence in epidemic form in certain years and suggest its dependence on some definite disease, which may, in fact, be catarrh or influenza. Although this year has shown me only one joint affection following influenza, I have met with others during former epidemics—*post hoc vel propter hoc*—and the frequency of the cardiac complications to my mind suggests more than a casual connexion between influenza and rheumatism.

Influenza affecting the heart.—Judging from my own experience, the sum total of hearts damaged by this epidemic must be enormous—a truly alarming state of affairs, unless the damaged valves recover so as to show no trace of the mischief. Altogether I came across about twelve cases, all those of women excepting three. In the notes given below I have omitted three cases as being only suspicious, although conclusive enough to myself. Women are especially liable, as also are young adults of both sexes. In some of the cases—possibly in most—a previous catarrh (or influenza) had existed before the occurrence of the actual symptoms for which I was summoned, but was not of such importance as to necessitate lying up. Probably the catarrh was influenza, the actual need for medical advice depending on the complications which followed in the lungs or heart, or in both. In a few possibly the affection was developed at once. In two cases the heart was dilated when first seen, the murmur developing later. The cases are singular for their close resemblance. In all the aortic valves were at fault—in one, possibly, the mitral as well. A slow pulse was sometimes present as soon as the temperature was lower, varying in frequency from 50 to 64, being large, sudden, and bounding, but a full pulse rather than an empty one. A thrill was present on two occasions. The heart was dilated in all cases, the apex beat being felt in the normal interspace in the nipple line or just outside, with cardiac dullness extending often to the mid-sternum and even to the right border of the sternum. The dilatation several times disappeared or lessened at once, but remained in some. A double aortic murmur was present in one case; in the others there was a systolic aortic murmur, usually heard well over the fourth and fifth cartilages near the sternum on the left side, but heard quite as well usually up the chest as far as the aortic area, and even into the right side of the neck, and the left, too, to a less extent. My note is deficient as to the apical murmur, but it was usually absent or at least much subdued. Over the pulmonary area a murmur was usually present, but less marked. Here, again, my notes are defective. In one case only so far has the murmur gone with the lessening dilatation. Time hinders me from discussing the medical aspect of the subject; my knowledge, too, is very limited. My opinion, however, is that the changes are due to endarteritis and endocarditis. Many may suggest that the murmurs are purely hæmic. The prognosis so far is unfavourable for complete recovery, but the future may prove this view to be incorrect.

I will now give extracts from my brief and deficient notes:—

CASE 1.—The patient, a young man aged eighteen years, was ill on Feb. 25th, 1895, and became gradually worse. When seen on March 3rd there was pneumonia in the right lung, the left lung being subsequently affected. No note was made as to the heart. On the 8th a murmur replaced the aortic first sound. His pulse kept at 50 per minute. The temperature was normal or subnormal in ten days from the first rigor.

CASE 2.—The patient, a man aged twenty-eight years, was

seen on March 1st, 1895, but not examined because he was dressed. The temperature was subnormal and the skin cold and clammy. About a week later, before allowing him to return to work, I felt his pulse, and it intermitted twice in a minute. The heart was found to be enlarged, and a systolic aortic murmur was present. He had been a vigorous bicyclist, so that the mischief may be old, but I believe it to be of recent origin.

CASE 3.—The patient, a young man aged eighteen years, had been ailing with a cough for three weeks, and had become worse. On March 7th, 1895, there were shivering, vomiting, pains, cough, headache, and vomiting of blood, according to the mother's statement. When seen on the 8th there were pneumonia of the right lung and dullness of the left apex. The heart was enlarged, the sounds being only suspicious. The apex beat was in the nipple line, cardiac dullness extending to the mid-sternum. The pulse-rate was 50. On the 23rd he was recovering from otitis media. The heart dullness was lessening, the apex beat was within the nipple line, an aortic systolic murmur was now present, and the aortic second sound was roughened.

CASE 4.—The patient, a woman aged thirty-four years, had a gradual illness following a cold or influenza three weeks before, aggravated by cold weather and fog. There was increasing weakness, with difficulty in breathing, diarrhoea, and pains over the body just before she was laid up. She had been anæmic before the present attack. She suffered from intense chlorosis, dyspnoea, and a full, throbbing pulse. There was slight dullness of the right apex, front and back. The apex beat of the heart was in the nipple line and accompanied with a well-marked thrill (which was gone in a day or two). The heart was also enlarged to the right. An aortic systolic murmur was present, very loud, and heard all over the chest. The temperature was 100° F., and the pulse 100. For weeks there was a slightly raised temperature. She was rheumatic. The right lung and then the left became congested from the apex downwards. The pulse kept at from 60 to 64. On March 20th, 1895, when last seen, the apex was well within the nipple line; the dilatation, in fact, diminished at once. Murmur was present, but not so loud.

CASE 5.—The patient, a woman aged twenty-two, living two miles away, walked into Folkestone one evening, walked home, and was then taken with something choking her in the throat. She returned to Folkestone with a friend and consulted me early in March of this year. She had symptoms of influenza. I could make out nothing, but suspected angina pectoris. The usual cardiac signs were present. Her temperature was 100° F. She was not seen again.

CASE 6.—The patient, a woman aged twenty-three years, had been ill fourteen days previously with diarrhoea, vomiting, and headache. Her present illness began on March 19th, 1895, with headache, retching, vomiting, and pain in the left side. She was seen on the 20th. The temperature was subnormal. She was very short of breath, and had nervous prostration. The left lung was more or less dull all over the back and the right apex. The heart was dilated (left ventricle), the apex beat being in the nipple line. The action was very tumultuous, and there was a systolic aortic murmur. On the 25th the apex beat was in a normal situation. The murmur had practically gone, the right lung was dull, and the breathing was feeble.

CASE 7.—The patient, a woman aged twenty-seven years, came to me with the heart dilated and an aortic systolic murmur, which is still present (March 26th, 1895).

CASE 8.—The patient, a young woman aged eighteen, came to me complaining of indigestion and pain in the chest since March 24th, 1895. There had been pain in the head a week previously, and also when her sister had influenza at the end of February. She was manifestly anæmic and short of breath. On the 29th the pulse-rate was 76 and the temperature 98.8° F. The impulse of the heart was heaving and forcible. The apex beat was felt mostly just within the nipple line, but also outside. There was a distinct thrill. Dullness extended nearly to the mid-sternum. A systolic murmur at the apex going to the axilla also extended upwards to the aortic area, where it took the place of the first sound. There was a loud, *bruit de diable*. There was pulsation in the neck, arterial and probably venous. The lungs exhibited a slightly impaired resonance and respiration in the right apex (back). On April 1st there was dullness in the right apex and down the lung (back).

CASE 9.—The patient, a woman aged thirty-eight years, was ill at Christmas—from influenza, she believed, and as I do now. When seen at Christmas there was great dyspnoea.

The heart was enlarged; a double aortic murmur was present and remains. There were general bronchitis and broncho-pneumonia of the hypostatic type. The left lung was more or less solid, and very little air entered. The left apex at the back remained dull. Her condition has not changed much.²

Remarks on the nature of the pulmonary complications of this epidemic.—The absence of pleurisy and true pneumonia is remarkable. Whether the heart was affected or not, the signs were much the same. An oedematous or hypostatic congestion seemed to occur in almost all the cases. Bronchial breathing was rarely observed—I suppose because so little air entered the smaller air passages. Taking the number of all those who had lung signs with or without cardiac mischief, mild and severe together, the cases amounted to thirty—i.e., males thirteen, females seventeen. Except in the case of two or three children, and of those who had one or both lungs entirely affected on my first visit, the rule seemed invariable that the mischief should begin at one or other apex (posteriorly), the congestion spreading downwards from above. In many cases, one lung being much affected, a similar process, though of less degree, would start from the other apex. The right apex was the commonest to begin. If the left apex was the first to be affected, almost invariably the right followed suit, whereas, if starting in the right, the trouble generally did not pass to the left. Of the total cases the right lung was affected rather more than the left. Besides the dullness, there was very feeble breathing over the affected lung. Moist sounds generally were absent, except in two or three cases of the acute bronchitic type, which, by the way, were the worst cases, and accounted for the two deaths of the series. If crepitant râles occurred at all, they were very few and appeared late. If taken early and treated heroically, the condition might have passed away within from twenty-four to forty-eight hours, but neglected cases were most tedious and alarming. The cases were generally favourable. There were two deaths—one in a man aged eighty, from hemiplegia, and the other in a woman aged seventy-four, who was dying when first seen. As might be expected, those who suffered severely were the aged, the bronchitic, and the neglected cases, including those who had heart complications. Amongst children I had only three lung cases. The temperature might be sub-normal, normal, or only slightly raised while the mischief was spreading. In conclusion, for those who might suggest that drugs were the cause of this condition I may add that as a rule, with few exceptions, the condition had started, or was well advanced, before treatment commenced, and that my drugs were limited, save in a few instances, to liquor ammoniac acetatis and tincture of squills, both in efficient doses and frequently repeated. The occasional use of salicylate of soda was invaluable. During this epidemic I used very little of the last-mentioned drug, because there was not often any indication for its use, except for "rheumatic" cases; but during the former epidemic I used it largely, with the happiest result, in acute influenza and at the beginning of the true lobar pneumonias which I met with so frequently during its prevalence. With due deference to Dr. Burney Yeo, I must state that I think quinine is not "a specific" for influenza, but that salicylate of soda is such undoubtedly; and that if the drug is used rationally in medium or even small doses, often repeated during the first twelve hours, not only our own but our patients' feelings will be much relieved, and they are often saved from much suffering by the timely suppression of an incipient pneumonia.

Folkestone.

CASE OF DILATATION OF THE COMMON BILE-DUCT SIMULATING DISTENSION OF THE GALL-BLADDER.

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ASSISTANT PHYSICIAN TO THE BRISTOL ROYAL INFIRMARY; LATE
PHYSICIAN TO THE BRISTOL CHILDREN'S HOSPITAL.

IN the course of remarks¹ on a case of Cholecyst-enterostomy Mr. Paul Swain of Plymouth recently referred to an abstract² of a paper I read at the Bristol Medico-Chirurgical Society with the above title in February, 1894. I delayed reading the paper, and subsequently the publication

of any detailed account, in the hope of coming across cases which might throw some light on one which, as far as I knew, was unique. The publication of Mr. Paul Swain's paper induces me to offer it for discussion.

The patient, a little girl, was admitted to the Bristol Children's Hospital in November, 1892, having been sent to me by Mr. Hadwen of Highbridge. The mother said that she and her husband had always been healthy and that they had three children aged respectively six years, four years and a half, and two years and a half, the middle one being the patient. There had been one miscarriage subsequent to the birth of the youngest. She could not remember that any one of the children had suffered from jaundice immediately after birth. The patient was quite well until the age of six months, when whilst still breast-fed she had an attack of jaundice which lasted two or three weeks. Since then she had had slight recurrent attacks every six months or so. Otherwise she had been strong and well, grew as fast as the other children did, and began to walk and talk when about fifteen months old. About a year before admission, however, when three years and a half old, the "child's stomach began to grow big," and this enlargement slowly increased, though none the less the girl appeared to be in good health until about four weeks before, when she became thinner in the body and face. On examination it was found that the patient was well-grown for her age and moderately nourished. There was a slight lemon-yellow tint of the conjunctivæ and skin. The head, heart, and lungs were normal. The urine contained a small amount of bile pigments and no albumen. The motions were bile-stained. The liver was enlarged, the upper limit of dullness on percussion over it extending to the upper border of the fourth rib in the nipple line, and its lower edge in the epigastric notch being lower than normal. The surface of the liver in the latter situation felt smooth and firm. Immediately beneath the abdominal wall, in portions of the epigastric, umbilical, right hypochondriac and lumbar regions, an intra-abdominal tumour was found, measuring about three inches in transverse and three and a half inches in longitudinal diameter, with a lower edge one inch below the level of the umbilicus. The tumour was slightly movable laterally, of a rounded shape and smooth surface, with an elastic feel like a tightly distended bladder. Fluctuation was doubtful. The tumour was dull on percussion, and this dullness was continuous with that of the liver above. The spleen was enlarged, with a lower edge two inches below the costal margin. There was no ascites.

The diagnosis was somewhat doubtful. The tumour was considered to be a distended gall-bladder. The presence of jaundice showed that the obstruction must be in the common bile-duct. As to the nature of the obstruction, aneurysm, malignant growth, and gall-stones could be excluded by the age of the patient and the history, and a tuberculous gland pressing on the duct seemed most improbable. It was concluded that the obstruction was probably due to repeated attacks of catarrh of the bile-ducts. The difficulty was that the slight amount of jaundice indicated that the obstruction was not complete, and yet this did not agree very well with the great distension of the gall-bladder.

As it was obvious that no medicinal treatment could do any good I asked Mr. Ewens to see the patient with a view to operation. A cholecystotomy was performed in two stages; 29 oz. of normal bile were evacuated and a drainage-tube was inserted. The cause of the obstruction was not discovered. In a few days the jaundice disappeared, and the child appeared to be getting on fairly well, when a week after the operation she died suddenly from cardiac failure. The cause of this was not known, nor was it explained by the post-mortem examination on the following day. The brain, thoracic organs, stomach, intestines, and kidneys were normal. The spleen was enlarged. The wall of the supposed gall-bladder was firmly adherent to the abdominal wall round the opening made. There was no general peritonitis. On dissecting the bile passages I found that the sac was not, as had been thought, a distended gall-bladder, but the result of dilatation of the common bile-duct. The gall-bladder was very small and contained a little inspissated bile. The cystic duct was obliterated, a fibrous cord only marking its presence. The lower end of the common bile-duct was stenosed; its lumen admitted a hairpin. The middle portion of the common duct was distended into the (now shrunken) sac, which had a thick wall consisting of layers of fibrous tissue. The common duct

¹ Since writing this article I have seen improvement and even disappearance of the heart signs in several of the cases given above.

² THE LANCET, March 23rd, 1895.

³ Bristol Medico-Chirurgical Journal, June, 1894.

above this and the hepatic duct were somewhat dilated, as were also the biliary ducts. The liver was enlarged and in a state of biliary cirrhosis.

The etiology of the condition found is not very clear; it seems probable that, as was at first supposed, there were repeated attacks of catarrh of the ducts, a catarrh which was not confined to the common duct, but which spread to the cystic duct, resulting in the former situation in stenosis and in the latter in total obliteration of its lumen. The enlargement of the spleen was to be expected, for it is a constant feature in biliary cirrhosis and occurs in those cases of alcoholic cirrhosis in which there is jaundice. Possibly, however, this is not a complete solution of the case. Dr. John Thomson of Edinburgh has in a valuable paper² collected all the cases and discussed the etiology of the condition known as "congenital obliteration of the bile-ducts," a disease the characteristic features of which are a permanent jaundice which is apparent at birth or appears a few days afterwards, and a liability to hæmorrhages from the skin, umbilicus, and gastro-intestinal tract. The child lives but a short time, though in some cases as long as several months, but sooner or later dies either from convulsions or gradual failure. The condition found after death is an obliteration of one or other portion of the common or hepatic duct. Dr. Thomson comes to the conclusion that there is some congenital affection of the duct, probably a stenosis, and that at a variable period in intra-uterine life a consecutive and consequent catarrh leads to total blocking and obliteration. This suggests that in the case here described there might have been a stenosis, which, though not sufficient to cause a permanent jaundice at birth, yet favoured the development of repeated attacks of catarrh a little later in life. In favour of this may be mentioned that it is unusual to find repeated attacks of catarrhal jaundice in a patient at the early age—six months—at which the first attack came on. Children do not as a rule become liable to catarrhal jaundice until they begin to take solid food. It seems possible, then, that there is a class of cases in which the fundamental defect is a slight stenosis of the bile-ducts. Such cases are characterised by the occurrence of repeated attacks of jaundice in early life. The liver in the course of time passes into a state of biliary cirrhosis. If the stenosis be most marked in the hepatic duct these will be the main phenomena; if it be lower down the common bile-duct may become distended into a retention cyst. It may, perhaps, be suggested that some cases of unexplained cirrhosis of the liver may be in reality due to this cause. The following may be an instance. A girl two years of age was brought as an out-patient to the Bristol Royal Infirmary on Jan. 14th, 1894. Her mother said that she had three other children, all older than the patient, and that she had had no miscarriages. The patient had icterus neonatorum lasting a month. She had jaundice when a year old lasting two weeks, and the present attack had begun two weeks before admission. Her mother said the child had never had any alcohol, and had not suffered from any specific fever or from any other illnesses. On examination it was seen that the skin and conjunctivæ were of a lemon-yellow colour. The liver was enlarged, reaching half an inch below the costal margin, its surface felt rather firm, and its edge was corrugated. It was five weeks before the jaundice disappeared, and at the end of that time the liver was in the same state as when the child was first seen.

If dilatation of the common bile-duct occurs it will not be possible to differentiate it from a distended gall-bladder until operation, when it will be seen that the supposed gall-bladder has no mesentery attaching it to the under surface of the liver. It is somewhat doubtful whether Mr. Paul Swain's case can be placed in this category, for the patient had no jaundice until the age of sixteen years. The case above related certainly shows, however, that a block in the common duct may lead to distension of the duct above into a large sac, and supports his suggestion that the case he operated on may have been such a one. One point further may perhaps be noted—viz., that so little jaundice was produced by a stenosis sufficient to produce so great a distension of the common bile-duct. Possibly a partial explanation may be found in two facts: the bile secreted is largely merely a re-excretion; and blood destruction—the primary source of bile pigments—is much slighter in children than in adults. Similarly in cases of catarrhal jaundice in children, even when the obstruction as shown by the motions is complete, the jaundice is rarely more than slight.

Clifton, Bristol.

² Edinburgh Medical Journal, 1891.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A COMPLICATED MIDWIFERY PRESENTATION.

By R. HILL SHAW, B.A., M.B., B.Ch. UNIV. DUBL.

I WAS recently called to a case of midwifery and found on vaginal examination a hand, a foot, the funis, and the vertex presenting. The hand, which I made out to be the right, and which seemed to be larger than normal, was situated to the right of the symphysis pubis. Behind and at the upper part of the right side of the hollow of the sacrum was the foot, though on a higher level than the hand. Entwined around these was the funis, which had no pulsations, and a little further up than the foot, in the left occipito-anterior position, was the vertex, partially engaged in the pelvis. The possibility of twin pregnancy presented itself, but of this, however, I could not find any confirmation. This was the woman's fourth confinement, all her previous ones having taken place wit out any hitch. Her age was twenty-six years. I could not get any exact history of how long the membranes had been ruptured. The pelvis was roomy. The pains were so strong and frequent that I could not get an opportunity of passing my hand past the presenting vertex. Failing this, and as labour was not progressing, I tried by pushing up the leg and the arm with the funis to engage the head in the brim, but without success. Traction on the foot and version were tried with similar want of success, owing to the whole presentation being tightly jammed into the opening of the pelvis. These attempts occupied about an hour. I then went for my principal, Mr. Anderton, and in a very short time returned with him, when we found that labour had made rapid progress, notwithstanding that the presentation was still as described above. The hand by this time was outside the vulva, and the head was well engaged in the pelvis. The forceps was applied and delivery was completed in a couple of minutes. The child, which was dead, lay in the following position: the right arm was extended at full length above the head, and the right leg was flexed up along the body, reaching over the right shoulder; entangled around these was the funis. The child was of full time and fully developed, and the mother stated that she had felt it move a couple of hours previously to sending for me. The largeness of the hand was due to oedema, the result, no doubt, of pressure, which also acting on the cord produced asphyxia. New Mills, Derbyshire.

A CASE OF EXTRA-UTERINE FETATION OF THREE YEARS' STANDING.

By ANNA LYDIA CHURCH, M.B. R.U. IREL.

A HINDU woman aged twenty-five years, married, was admitted into the Free Church of Scotland Mission Hospital, Madras, on Nov. 1st, 1894, in an evidently wretched state of health. On examination the abdominal wall, a little below and to the right of the umbilicus, was found to be destroyed by ulceration, leaving a space of four or five inches long and about three broad, through which protruded an evil-looking, exceedingly offensive tumour. A strap of integument crossed the centre of the space and covered a small portion of the tumour. At first sight the mass suggested an intra-abdominal malignant growth that was undergoing necrosis and had ulcerated through the abdominal wall. Closer inspection, however, revealed a white, hard plate with serrated edges projecting from the surface. This proved to be bone, and when the end of a tiny long bone was afterwards found the diagnosis of extra-uterine foetation was clear. The first bone belonged to the cranium. The history elicited from the patient and her friends was somewhat meagre and was as follows. Three years previously she consulted a medical man and was told that she was pregnant. Two years elapsed, but no child was born. Amenorrhœa prevailed during this period. A lump was noticed in the abdomen and eleven months before admission the skin over it began to give way and pus escaped, but it was not till

about eleven days before admission that fetor was noticed. The patient's condition on entering the hospital was deplorable. She was so feeble that she had to be carried upstairs to the ward; her pulse was small and rapid, and her temperature 101° F. An attempt was made to cleanse the mass and diminish the fetor by repeated antiseptic washings and dressings until arrangements could be made for operation, during which treatment numerous live maggots made their appearance from the crevices of the tumour and were removed. A day or two after admission the patient was put under chloroform and the foetal remains removed. I had arranged to cut the strap of integument with Paquelin's thermo cauterium so as to avoid producing bleeding surfaces, which might favour septic absorption; but on removing the dressing it was found that the strap had given way and that no cutting was necessary to enlarge the opening, and the only instrument used during the operation was a pair of dissecting forceps. First there came away a shapeless mass containing the ribs and some other bones of the foetus, and then the remainder of the bones were removed piecemeal, some of which were lying loose and others partially embedded in the walls of the sac. The extraction of these last caused slight bleeding at one or two points. From a tunnel in the wall of the sac several live maggots emerged. The fetor was sickening. The bones appeared to belong to a foetus of about four months old. The sac was thoroughly flushed with boiled water and was then filled to the brim with sublimate solution (1 in 1000), which was allowed to remain for several minutes and then poured off. It was lined with a layer of foul necrotic tissue, but I refrained from scraping it, fearing that the production of a large raw surface might be the cause of fatal sepsis, and judging that with careful use of antiseptics the necrotic tissue would come away harmlessly on the dressings. The sac was accordingly filled with iodoform gauze soaked in iodoform and glycerine, and carbolic tow placed over it.

The result of the operation was most gratifying. The temperature fell to normal at once, and the horrible fetor which had rendered the patient's life miserable disappeared. The pulse-rate fell gradually. The sac was washed out and dressed twice daily, ichthyol and glycerine being substituted for the iodoform emulsion, as the stock of iodoform happened to run short at the time. The walls were merely painted with the ichthyol. The sac rapidly cleaned and contracted, and began to fill up from the bottom. Small fragments of bone were found on several occasions on "sounding" the walls with the point of the forceps and were removed. The patient was given a fair amount of brandy at first and abundant nourishment, and was able to be up about a fortnight after the operation. She was discharged on Dec. 1st and attended as an out-patient till the wound completely closed. One small granulating surface refused to heal for some time, and on probing it bone was felt. A fine-pointed pair of forceps was introduced and five small fragments of bone extracted. On a subsequent occasion two more fragments were removed. The wound then promptly closed. Bimanual examination made lately shows the uterus to be high up near the abdominal wall, somewhat retroverted and fairly movable, although numerous adhesions can be felt. There is much ill-defined thickening to the right of the uterus. The patient has had two normal periods since leaving hospital.

Madras.

PRESENTATIONS.—Dr. Francis R. Russell of Guildford has been presented by the Surrey County and Guildford Borough Police Force, in connexion with the St. John Ambulance class, with a riding watch bearing the following inscription:—"Presented to Dr. F. R. Russell by the Surrey County and Guildford Borough Police Force as a slight recognition of his valuable and honorary tuition throughout a course of lectures of first aid to the injured to the St. John Ambulance Association. April, 1895."—Dr. A. W. Anderson, Dalbeattie, Kirkcudbrightshire, was presented with a valuable travelling bag and dressing case on the completion of his course of ambulance lectures by the members of his class in connexion with the St. Andrews Ambulance Association.—Mr. G. N. Coombes, late assistant to Dr. L. Williams, on his leaving Wrexham to take up an appointment in India as surgeon to his Highness the Rajah of Cochin, was presented by his friends with a handsome smoker's cabinet, which bore a suitable inscription upon it, and he was also entertained to dinner by his colleagues of the medical profession.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

NOTES OF THREE CASES OF HERNIA OF AN EXCEPTIONAL NATURE.

(Under the care of Mr. W. G. SPENCER.)

THESE cases, although the treatment was unsuccessful in saving life, are of interest from a clinical standpoint and are fully commented on by Mr. de Santl in his remarks. Opinions must always differ as to the treatment of gangrenous intestine when it is met with while operating for hernia; the condition of the patient is usually bad from every point of view, and as we may take it for granted that those which have been submitted to resection are the most favourable cases it is hardly possible to compare on equal terms statistics of the two methods. Each surgeon must judge for himself and not trust to strict rules to guide him. For the account of these cases we are indebted to Mr. Philip R. W. de Santl, surgical registrar, from notes by Messrs. Penny, Ambrose, and A. J. Smith.

CASE 1. *Strangulated femoral hernia (Littre's), the sac containing a gangrenous diverticulum; spread of gangrene to gut internal to stricture; peritonitis; resection of gangrenous gut.*—A woman aged seventy-seven years was admitted on Dec. 4th, 1894, with a strangulated femoral hernia. The patient had had a reducible right femoral hernia for eleven years; she had never worn a truss and had never suffered any inconvenience from the rupture. On Dec. 2nd between 1 and 2 P.M. the hernia came down suddenly (no exertion), and was of a larger size than on previous occasions. She had acute local pain, which soon extended to the whole of the abdomen. Retching, but no vomiting, commenced a few hours later; she passed flatus by the mouth, but not by the rectum. The bowels had been open each day before, but had now become constipated. On admission an ovoid swelling hard in parts, soft in others, and emphysematous was found in the right femoral region external to the spine of the pubes. The skin over it was red and inflamed but movable. There was no impulse on coughing. There had been constant nausea but no vomiting, and absolute constipation since Dec. 2nd. The patient was very collapsed and was suffering from bronchitis and emphysema. The pulse was 120 and the temperature normal. Mr. Spencer decided to operate at once. Nitrous oxide gas and then ether were administered and the ordinary incision made over the tumour. A mass of gangrenous subperitoneal tissue was exposed and removed. The hernial sac was then seen and opened, and found to contain a piece of gut of the size of a walnut, very tense, ashy black, and covered with beads of gas. As much as possible of the sac was cut away and the exposed gut incised. A quantity of sanious fluid escaped, and the bowel was then snipped off flush with the femoral canal; in the centre of the remaining part a depression was felt, but no force was used to pass the finger into the femoral canal. The wound was then swabbed out with glacial carbolio acid, a drainage-tube inserted, and the wound closed with deep silk sutures. The patient stood the operation well. She slept well till about 4 A.M. on Dec. 5th, when she began to vomit coffee-coloured faecal matter, about one pint in quantity; she also complained of severe abdominal pain. The pulse was 96, regular. The temperature was normal. At 8 A.M. the vomiting ceased. An enema was given on the night of Dec. 5th, but with no result. Vomiting started again at 2.35 A.M. on Dec. 6th and lasted till 9 A.M. The patient was weaker, but did not complain of pain. She had yzimid suppositories, one every three hours. As the vomited material was faecal a second operation was decided on by Mr. Spencer, who was assisted by Mr. de Santl. The original incision was continued upwards for about two inches through the abdominal walls and Poupart's ligament divided. No gut was found in the femoral canal, but a piece of small intestine

gangrenous for about two inches of its length was found just above Poupart's ligament and was connected with a diverticulum the stump of which was in the femoral canal. The gangrene had thus extended for two inches on either side of the diverticulum well inside of any constriction. The gangrenous gut was torn a little as it was lifted and there was extravasation of faecal material which was caught on a sponge. The gangrenous piece of intestine was excised and the two healthy ends united by a Murphy's button and the wound irrigated with a 1 in 40 carbolic lotion and closed. The patient gradually sank and died at midnight on Dec. 6th.

Necropsy.—The soft tissues about the wound were in a condition of diffuse suppuration. On opening the abdominal cavity the peritoneum was found to be of a dark-red hue and covered with yellow lymph, which was thickest and most abundant in the right iliac region and in the pelvis. In these regions several coils of intestine were matted together and to the internal aspect of the wound. Among them was found the resection wound, and inside this portion of gut (eight feet from the end of the duodenum) a Murphy's button. Immediately around the resection wound the gut was of a darker colour than elsewhere. After cutting out this portion water was found to percolate slowly between the stitches on the free aspect of the gut. The rest of the gastro-intestinal tract and the other organs were normal.

CASE 2. Intestinal obstruction; kinking (?) of gut in region of caecum from a subperitoneal lipoma: subsequent gangrene of the greater part of the small intestine in a pregnant woman the subject of tertiary syphilis and nephritis.—The patient, aged thirty-eight years, was admitted into the Queen Anne Ward on Feb. 6th, 1895, with symptoms of strangulated femoral hernia. The patient had had a right reducible femoral hernia for twelve years and had worn a truss for the last eight years. Four months ago, having taken off her truss prior to going to bed, the hernia suddenly came down; at the time she was lifting one of her children into a chair. A medical man tried taxis, but unsuccessfully. There was acute pain in the right groin and abdomen, but no vomiting. During the early morning the hernia went back of itself. On Feb. 4th, 1895, at 3 P.M. the patient was stooping down in the act of dressing her child when the hernia again descended suddenly though she was wearing her truss at the time. A medical man tried taxis, but ineffectually; vomiting soon set in, the matter vomited being a greenish, very offensive liquid. The sickness continued during the night of Feb. 4th and also constantly on Feb. 5th and 6th. The bowels were open freely on Feb. 5th. On admission the patient was collapsed, with a temperature of 96.4° F. The house surgeon distinctly felt the hernia, but did not attempt taxis, as it had been repeatedly tried outside. He gave the woman twenty minims of tincture of opium and ordered a hot bath, and sent for the surgeon of the week. The patient shortly after admission vomited three times; the vomited matter was green and very offensive. When seen by Mr. Macnamara no hernia was discoverable. The bowels acted three times, the motions being loose. On Feb. 7th the temperature was 96.4°. The pulse was small and feeble. The tongue was dry and brown. She slept badly, vomiting about every hour. The bowels were open six times. At 9 P.M. the patient was examined by Mr. Spencer, who found a movable, soft swelling in Scarpa's triangle about one inch in diameter and rather external to the saphenous opening. Under either the right femoral canal was explored; no hernia or hernial sac was discoverable. The soft swelling proved to be a mass of subperitoneal fat the pedicle of which was followed into the right inguinal canal and found to be closely connected with the round ligament. It was separated, ligatured, and cut off within the abdominal ring. The femoral and obturator rings were then examined from within the abdominal wall, but outside the peritoneum; they were quite free. On Feb. 8th there was marked general improvement. The patient had not vomited since the operation and was being fed on nutrient enemata. On Feb. 9th improvement was still maintained. She was fed by the mouth with milk, beef-tea, and brandy. The bowels were freely open after enema (Feb. 8th). On Feb. 11th she complained of abdominal pain; the abdomen was not distended. The bowels had not been open since Feb. 8th. The temperature was subnormal. On Feb. 12th she vomited for the first time since the operation. The vomited material consisted of beef-tea and milk. She had great abdominal pain, but no signs of peritonitis. The bowels were open on Feb. 11th and 12th after an enema. The wound healed by first intention. On Feb. 13th the patient had a restless night and died at 11 A.M. from assthenia.

Necropsy (twenty-eight hours after death).—The body was much emaciated. In the peritoneal sac were five or six ounces of dark reddish-brown clear fluid; the peritoneum everywhere was smooth and shiny; the mesentery was not thickened; the intestines were not distended; the small intestine, with the exception of the first and last two feet, was of a dark-purple colour, was somewhat swollen, and as far as the central moiety was concerned was in a condition of gangrene. There was, however, no obvious swelling of the veins and arteries, certainly none in the mesenteric vessels. The surface of the gut had a slightly worm-eaten appearance, but there was no definite ulceration. The small intestine contained a thickish bloody fluid. There were no constriction marks. The lymphatic glands were not enlarged. The large intestine, except the caecum coli, which was hyperæmic, contained semi-fluid yellow faeces and was quite normal. The stomach, liver, spleen, and pancreas were normal; as to the kidneys the capsule was thick and adherent, the surface granular, the cortex diminished and of flabby consistence, and the colour drab. The bladder was contracted. The heart weighed 8 oz.; there was slight hypertrophy in the left ventricle. The valves were competent, the mitral flaps being thick. The foramen ovale was patent, but valved. The arteries and lungs were normal. The uterus was 4½ in. long and 3 in. across the fundus. It contained a foetus of about two and a half months. There was a corpus luteum in the left ovary.

CASE 3. Strangulated inguinal hernia; reduction "en masse"; abdominal section; intestinal paralysis; death.—A man aged fifty-one years was admitted on March 5th, 1895, suffering from symptoms of strangulated hernia. The patient had had a right reducible inguinal hernia for thirty years. His medical man, Mr. Munyard, has kindly supplied the following notes. The patient had a fall seven weeks previously, and was left on the pavement for some little time. He apparently got a chill, and had a cough with raised temperature for a week, and influenza was diagnosed. On Sunday, March 3rd, the patient was very sick, and the effort of vomiting, according to the patient's statement, brought the hernia down. The man tried to reduce it, but failed, though he had always succeeded before; later in the evening he, however, apparently returned it. On March 4th Mr. Munyard was visiting a patient who lived in the same house as the one in question, and his attention was called for the first time to the rupture. The man was then suffering from stercoraceous vomiting, and there was a distinct inguinal hernia of the size of two walnuts. Mr. Munyard easily reduced it, but noticed that the hernia did not go back with a slip or gurgle, but as a whole. On March 5th on again visiting the patient he found that severe vomiting had continued all night, that the vomited matter was faecal, and that the patient was very collapsed. The inguinal canal was quite free, but did not feel preternaturally open. The bowels had not acted since March 2nd. He was sent at once to the Westminster Hospital and admitted. A diagnosis of reduction *en masse* was made and median laparotomy was performed by Mr. Spencer. On opening the peritoneal cavity a well-marked reduction *en masse* was seen, the hernial sac and its contents having been pushed back into the abdomen and the peritoneum doubled up before it. The gut was tightly nipped at the neck of the sac; about six inches of the gut were considerably congested and of a dark colour, and at the actual site of constriction the gut was ulcerated for about three-quarters of an inch of its circumference. The neck of the sac was divided and left *in situ*. The ulcerated part of the gut was closed with Lembert's sutures and then left in a furrow so that adhesions might form around it. The pillars of the canal were then sutured together from the outside and the abdominal wound closed in the usual way. The patient progressed very favourably up to March 9th, the vomiting having ceased and the bowels acting of their own accord daily. On the 9th, however, the abdomen became distended and there was much pain. On the 10th the patient died, the abdomen having gradually become more distended and the patient weaker. A post-mortem examination was refused.

Remarks by Mr. DE SANTI.—Case 1.: The prognosis in this case was particularly unfavourable; the patient's advanced age—namely, seventy-seven—the duration of the symptoms of strangulation (over forty-eight hours), and the gangrenous condition of the contents of the sac together presented such a formidable condition of affairs that recovery could hardly be expected; added to which, owing to the continuance of the symptoms of strangulation after the herniotomy, it was deemed advisable to undertake a second operation, whereby a piece of gut, gangrenous for about two

inches of its length, and lying just above Poupart's ligament, was discovered. The question then arose as to whether, in the patient's collapsed and desperate condition, it would be judicious to perform immediate resection and suture of the gut or establish an artificial anus. As it was recognised that the gut that was gangrenous was high up, probably the upper part of the jejunum, Mr. Spencer considered that the establishment of an artificial anus was out of the question. Resection of the gut and union of the healthy ends by means of a Murphy's button were therefore decided on and performed, as holding out the only chance of recovery and as being the most rapid method practicable. It is not my intention in these short remarks to go fully into the treatment of gangrene of the intestine due to strangulation in hernia, a subject upon which there is a considerable diversity of opinion. It will suffice for me to say that gangrenous hernia may be treated on one of two principles: either (1) by resection of the affected portion and immediate suture, or (2) by the formation of an artificial anus. According to Macready,¹ the rule of treatment among surgeons in London at the present day is to form an artificial anus, and he states that of twenty-one London surgeons who have expressed their views upon this subject in public of late years seventeen are in favour of forming an artificial anus and four of doing primary suture. I personally, though my experience is necessarily small, am in favour of establishing an artificial anus in the great majority of cases, for it seems to me that primary suture has to be carried out under the most unfavourable circumstances, the tissues being in a most septic state, the exact limits of the gangrene uncertain, and the risks of subsequent extravasation, sloughing, or giving way of some of the sutures great. The operation also is a difficult one to perform, and though its difficulty is no objection it takes from one to four hours (M'Cosh) to carry out, and as the patient is usually in a state of considerable collapse his condition is hardly such as to stand the additional shock caused by so long and severe an operation as resection and suture. Of those, however, who advocate resection and primary suture I may mention Mikulicz, Lockwood, and Kendal Franks. Mikulicz collected recently (1891) 173 cases of gangrenous hernia, of which 94 had been treated by the formation of an artificial anus and 67 by primary suture; the mortality in the former was 76 per cent. and among the latter 47 per cent. Lockwood collected 35 cases from the clinical records of St. Bartholomew's Hospital, all of which had been treated by the formation of an artificial anus, with a death-rate of 88.5 per cent. He compared these with the mortality of cases treated by primary suture from tables of Makins and M'Cosh, and obtained a difference so greatly in favour of primary suture that he strongly advocates its general employment in gangrenous hernia. Again, Kendal Franks of Dublin² collected from various sources 202 cases of gangrenous hernia treated by the formation of an artificial anus and giving a mortality of 80.7 per cent., and 222 cases treated by primary suture and giving a mortality of 47 per cent. He is strongly against the establishment of an artificial anus as the routine practice. Notwithstanding, however, these favourable statistics I would be inclined to perform resection and immediate suture under the following conditions only: (1) in young patients, and where the state of the patient is such that he will be able to stand the prolonged anaesthesia required by the operation—in other words, where there is no profound collapse; (2) in the absence of a generalised peritonitis; (3) in the absence of great distension of the afferent piece of intestine, which is often filled with quantities of faeces and gases; (4) when it is possible to draw out the whole of the gangrenous portions of the intestine and mesentery, and resect in healthy tissue; (5) when there is no great difference between the calibre of the two ends, and they can therefore be thoroughly and efficaciously united; and (6) in the presence of good assistants and the necessary surgical appliances for anastomosis or suture. The presence of a distinct diverticulum about an inch and a half in length in the hernial sac is a point of some interest in this case; whether it was a true congenital diverticulum of the intestine, consisting of all the coats of the gut, or a false variety (pouched partial enterocoele) formed by the protrusion of the mucous membrane between the fibres of the muscular coat and projecting from the bowel, is a point of some doubt owing to the condition of gangrene in which the tissues and diverticulum were found. In Mr. Spencer's opinion the diverticulum was of congenital origin.

Case 2 presents many features of great interest. For twelve years the patient had apparently had a swelling in the region of the right femoral canal and had worn a femoral truss to keep it up; four months before admission, the truss being temporarily off, the swelling appeared, causing great pain but no vomiting, and went back, according to the women's statement, of itself. Two days before her admission to Westminster Hospital a similar condition of affairs occurred, and the patient on admission had a swelling in the femoral region which was distinctly felt by the house surgeon, but which had apparently disappeared when Mr. Macnamara examined the patient a little later. Between Feb. 4th and Feb. 7th the patient suffered from pretty constant vomiting, but her bowels acted freely and there was no pain in or swelling of the abdomen. On Feb. 7th Mr. Spencer on examining the woman found a soft, movable mass in the neighbourhood of the femoral canal, and as vomiting persisted he explored the femoral canal but found no trace of sac or hernia, but a sub-peritoneal lipoma running up into the right inguinal canal; this was ligatured and removed, and the operation considerably benefited the patient, the vomiting having ceased. For a few days she seemed to be going to recover, when gradually a change for the worse was noticed and the patient died from asthenia on Feb. 13th, nine days after the first symptoms. The necropsy revealed a very curious condition of the intestine—namely, intense congestion of the whole of the small intestine, the central moiety being in a state of actual gangrene; there were no constriction marks discoverable and the mesentery and mesenteric vessels were quite healthy. The peritoneum also was quite normal. I am at a loss to account for the condition of the small intestines. The symptoms of strangulation were due possibly: (1) to the subperitoneal lipoma drawing on the peritoneum and kinking the intestines in the region of the ileocaecal valve; and (2) incomplete reduction, completed whilst the patient was going under an anaesthetic, death taking place from failure of peristalsis in a pregnant woman who had suffered from syphilis and chronic nephritis.

Case 3.—In this patient, who had had a right inguinal hernia for some thirty years, which he had been in the habit of reducing with ease himself, symptoms of strangulation suddenly came on, followed apparently by the appearance of the hernia (patient's statement only). At first the man was unable to reduce the hernia, but later appears to have done so. The following day he was seen by his medical attendant, who found a distinct inguinal hernia which he was able to easily reduce, but he particularly noticed that it went back without any gurgle or slip, and that the inguinal canal was particularly free. He diagnosed reduction *en masse*, and from the wrinkled condition of the peritoneum found at the operation, permitting of the easy withdrawal of the peritoneum from the laparotomy wound, it is probable that for some long time past the man had been in the habit of reducing his hernia *en masse*, and that when it became strangulated he returned it *en masse* and in a condition of strangulation. The right inguinal canal and other hernial sites being quite free, there being no tumour or impulse to be felt in the right inguinal canal on coughing and no fulness on palpation over Poupart's ligament, and bearing in mind the fact that in reduction *en masse* the neck of the sac may leave the internal abdominal ring and rise in the abdominal cavity for from one to four inches, Mr. Spencer decided to perform median laparotomy in preference to exploration of the inguinal canal by the usual incision.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Microscopic Structure of Oxalate of Lime Calculi.—Results following the Experimental Removal of Portions of the Kidney.—Elongation of Radius from Osteitis Deformans.

AN ordinary meeting of this society was held on May 7th, Dr. PAVY, the President, being in the chair.

Dr. ORD and Mr. SHATTOCK made a communication on the Microscopic Structure of Calculi of Oxalate of Lime. They began this communication by noticing first the chief microscopic forms of such calculi, the smooth, tuberculated, spiny, and crystalline. The chief forms in which oxalate of lime was met with in the urine were then referred to: octahedron, flattened octahedron, "maclé," in which the bases of the two

¹ Treatise on Ruptures, p. 397.
² Transactions of the Royal Medical and Chirurgical Society, vol. lxxv., p. 215.

pyramids of an octahedron were rotated so that the angles of one projected across the sides of the base of the other, the spherular form, including dumb bells, and the tabular form. The key to the interpretation of these varieties was supplied by the experiments of Mr. George Rainey, made more than thirty years ago, which showed that crystalline substance if deposited in colloidal or viscous media underwent modifications in form which in the most pronounced degree took the figure of perfect spheres. Dr. Ord subsequently studied the question in oxalate of lime &c., causing the salts to deposit in the substance of gelatine by allowing double decomposition to occur in solutions on either side of a diaphragm of the colloid; the solutions met in the jelly, and on cutting sections of this all forms were traceable, from typical crystals to perfect spheres. Some such spheres were compound in structure. The colloid that exercised most influence was albumen. Sugar appeared to have no influence on oxalate of lime, though it had on uric acid. They next proceeded by means of a lantern demonstration to exhibit the microscopic structure of the different forms of calculi. The specimens were prepared by grinding the calculus half through, cementing by means of melted Canada balsam to a slide, and then grinding it from the opposite aspect; this transparent section was then covered, after placing balsam solution on it to render it transparent. The summary as to the construction of the nucleus of such calculi was as follows:—It might be (1) large transparent crystals of oxalate of lime; (2) similar crystals rendered more or less opaque by secondary cleavage; (3) minute crystals not of octahedral form; (4) rosettes of striated conoidal or fan-shaped elements, like those which form by their regular juxtaposition the body of the calculus; (5) spherules in process of coalescence. Such forms might occur in various combinations. In rare cases large octahedra were met with in the urine as "gravel," and by a chance aggregation of such the nucleus usually arose. Very soon, however, the deposit took a different form and constructed the "body" of the stone; this change might be explained by the presence of such a nucleus leading to the admixture of colloid with the urine by reason of the inflammation in the urinary passages which it excited, and this would be mucus or exudation from the vessels of the inflamed mucosa. The secondary cleavage of the large elements of the crystalline nucleus probably indicated the action of colloid in a slight degree. In regard to No. 3, the small crystals were really tablets, and could be produced in gelatine, as could also rosettes of such. The presence of proper spherules was rare. Next, as to the body of the calculus. In all cases the body arose in cones of crystalline substances, sharply pointed at their inner ends and diverging from the outer surface of the nucleus. In transverse section these cones had a very irregular outline, deeply sinuous or jagged, so as to be sutured to one another; they were doubly striated—i.e., in the longitudinal and transverse directions, or radially and concentrically as to the centre of the entire calculus. Both forms of striation might be represented in the spheres artificially produced, but Dr. Ord and Mr. Shattock could offer no real explanation of them. Often there occurred in the body of the calculus zones of a different kind. These were formed by a non-crystalline molecular basis in which lay, concentrically arranged, lines of distinct granules; the latter they held to be urate, the former oxalate, of lime; there was, in fact, no sharp line of distinction between this form of oxalate and the striated. One of the most interesting of the results was the likeness that subsisted between the calculi, as a whole, and the microscopic spheres and crystalline aggregations which might be artificially produced; there were parallel forms in both. In regard to the colouration of oxalate calculi, certain of the sections displayed brilliant crystals of hæmatoidin. That the diffuse colouration was due to urinary pigment they thought disproved by the similar colouration of intestinal calculi of oxalate of lime in herbivora. They thought it most probably due to hæmoglobin. Some of the calculi gave abundant evidence of iron on analysis, probably indicating blood, though as normal urine contained small quantities of iron in as yet an unknown state of combination this did not exhaust the question. Ebsstein had figured a small portion of the body of a calculus of oxalate of lime, but beyond that the minute structure by means of sections had not been investigated. Vandyke Carter's method had been simply to pick out minute pieces from different parts of calculi to examine them.—The

PRESIDENT remarked that some persons would for years pass urinary sand and have no trouble from calculus, while in others who suffered from urinary calculus there was an absence of history of gravel. In many patients again there was a history of one-sided pain, and it appeared in them that one kidney only was at fault. Hence, in these patients there seemed to be a general tendency to the deposition of solid matters from the urine, and a local tendency leading to deposit from one kidney only.

Dr. J. R. BRADFORD then gave an account of the results following the Experimental Removal of Portions of the Kidney. The object of these experiments was to investigate the changes in the urine and in the general nutrition that occurred when an animal had but a fraction of one kidney available for the discharge of the renal functions. The experiments were carried out on dogs, the ingesta and excreta being determined before and after the operation. The nitrogen was determined by Kjeldtal's method. A wedge-shaped portion was excised from the middle zone of one kidney and the cut surfaces approximated by sutures. After an interval of some weeks the entire opposite kidney was excised. The results may be summarised as follows. Removal of a portion of one kidney is followed by a variable amount of general atrophy of that kidney and by hypertrophy of the opposite kidney provided the operation be performed in adult animals. Removal of a portion of one kidney only is followed by a slight increase in the amount of urine excreted, this increase is sometimes only temporary, and there are no other ill effects. If after having excised a portion of one kidney the entire kidney of the opposite side be removed, the following results are seen. If only some two-thirds of the total kidney weight has been removed altogether at the two operations, the animal remains in fair health and does not emaciate. The quantity of urine excreted, however, is greatly increased—i.e., doubled or trebled in amount. There is no increased excretion of urea. On the other hand, if as much as three-quarters of the total kidney weight has been removed then there is a still greater increase in the amount of urine excreted and in addition there is a considerable increase in the daily urea excretion, the animal emaciates rapidly and dies within a few weeks of the second operation. Excision of a wedge from each kidney is followed by the excretion of a large amount of urine, but there is no increased excretion of urea and the animal remains in good health. Hence when the renal tissue is reduced to but one-fourth of its original weight there is not only no diminution in the amount of urine and urea excreted, but, on the contrary, a great increase, the increase in them being dependent upon rapid emaciation, which is not checked by a liberal diet.—Dr. HERRINGHAM said that the experiments which had been related had a bearing on hydruria in renal disease. He asked if increased blood pressure or cardiac hypertrophy had been produced. The other phenomena which had been described were so different from what was seen in chronic nephritis that they could hardly be connected with that affection.—Mr. STANLEY BOYD asked how the hæmorrhage from the kidney had been checked when the wedge-shaped pieces were removed.—Dr. SHERINGTON asked what was the alteration in ratio of the nitrogenous extractives to the urea, and if there was found any body other than urea disproportionately increased either in the tissues or in the urine itself. He asked if the total nitrogen in the tissues had been estimated.—Dr. WASHBOURNE asked if the toxic property of the blood of the animals operated on had been tested.—Dr. BRADFORD, in reply, said that he had detected no cardiac hypertrophy. The blood pressure remained high and abnormally so; but it was very difficult to estimate in a dog under chloroform. In dogs in whom three-fourths of the renal substance had been removed, and who were too weak to stand, the blood was found to contain twenty to thirty times the normal amount of urea, while the blood pressure remained normal. In those dogs in whom double nephrectomy had been performed the blood also contained thirty times the normal amount of urea, but in these there was practically no blood pressure. Patients with extremely granular kidneys might pass a very large quantity of urea. In removing the wedges from the kidney blood was found to come from three sources—viz., vessels in the loose connective tissue of the hilum, general oozing from the cut surface, and bleeding (principally venous) at the junction of the medulla with the cortex. He ligatured the vessels in the hilum and, if necessary, passed a suture under those at the junction of the cortex with the medulla, and controlled the oozing by pressure with cotton wool. He did not close the wound until bleeding ceased. Both the

urea and the nitrogen had been estimated in the food, urine, and faeces. In the urine no nitrogenous body, except urea, had been found, and the same was true of the blood; but in the muscles, liver, and brain, especially the former, a large amount of nitrogenous substance was found which was not urea. He had not yet determined the toxic properties of the blood.

Mr. SHATTOCK showed for Mr. Clutton the bones of an arm from a case of Osteitis Deformans. The radius was markedly elongated, being twisted into an S-shaped curve because the ulna was unaffected. The specimen was very interesting because it showed that interstitial production of tissue in a bone itself as a result of inflammation could actually lengthen the bone after the epiphyses had united and the bone had ceased to grow.

OBSTETRICAL SOCIETY OF LONDON.

The Common Form of "White Leg" occurring after Child-birth.—Exhibition of Specimen.

A MEETING of this society was held on May 1st, Dr. F. H. CHAMPNEYS, President, being in the chair.

Dr. C. HUBERT ROBERTS read a paper giving details of sixteen cases of so-called "White Leg," most commonly met with after child-birth. Having rapidly reviewed the literature of the subject up to the present date, he pointed out the difference of his cases from those described in most text-books of the present day, and argued briefly that white leg described in such books is not the common variety met with after delivery. He described concisely the form he believes to be the common one, mentioning its symptoms, duration, complications, and treatment. He said that the term "white leg" includes several morbid conditions which differ in many particulars, and proposed the following classification of the disease: (1) cases which are due to pressure; (2) cases associated with general disease; (3) cases of a true septic nature; (4) cases of thrombosis apart from sepsis; and (5) cases of thrombosis and sepsis combined. He came to the following conclusions: (a) the form which he calls thrombotic is the common variety after delivery, and not the brawny white leg, which is rare; (b) in such thrombotic legs there are not necessarily signs pointing to sepsis, and such thrombosis is rather a blood change associated with or due to severe loss of blood at the time of delivery; (c) the thrombosis in most cases starts primarily in the uterine and pelvic veins; (d) such thrombotic legs are not brawny and white, but dusky in colour and oedematous, invariably painful, with definite "tender spots," and the femoral or saphenous veins are constantly felt to be thrombosed; (e) both legs may be affected, but always one after the other; (f) the onset of the disease is from about the tenth to the twentieth day; (g) pyrexia is the rule for a variable period, but does not necessarily indicate sepsis; (h) such cases run a definite course lasting from about six to eight weeks; (i) complications are uncommon—pulmonary embolism is the greatest danger; (j) the prognosis as regards life is good; and (k) the prognosis as regards the leg itself is not good; frequently it regains its normal condition, but in many cases it remains permanently damaged.

Dr. P. HORROCKS did not think that there was any evidence that some cases of thrombosis occurred apart from sepsis, and that others were cases of thrombosis and sepsis combined. If the increased coagulability of the blood due to excessive hæmorrhage were the cause the thrombosis ought to occur at the time of the labour, when the bleeding took place, and when the coagulability was at its highest point; it also ought to occur on both sides and perhaps in other parts of the body, whereas it was well known to affect one side only as a rule. To say that there was no evidence of sepsis, in the sense that there was no perimetritis or parametritis, was limiting the word sepsis to a very narrow meaning. In the most fatal form of puerperal fever there was, as a rule, no clinical evidence of either para- or perimetritis, and yet it was undoubtedly a septic disease. He believed that both of these classes (Nos. 4 and 5) were septic in origin, and he was not convinced that the microbe was different in the two sets. He believed that they were septic on the following grounds: (1) the left side of the cervix was more frequently torn than the right, and this would lead to septic infection on the torn side; (2) there was a more or

less definite period of two or three weeks before the onset of the disease, which might be due to incubation; and (3) there was always more or less pyrexia, which could not be explained away on the hypothesis of mere clotting. Possibly ere long the microbe might be detected, and the differences might prove to be due to the relative amounts of vein or of lymphatics involved.

Dr. HERMAN suggested that the classification really had reference to "swelled leg," for some of the conditions included in it were not "white leg" and had never had this name applied to them. He agreed with Dr. Roberts in thinking that the disease commonly called white leg was not septic; if septicæmia was present as well it was a complication. He knew of no evidence that white leg had anything to do with septicæmia; but in the absence of information as to the comparative frequency of white leg before and after the introduction of antiseptics, or as to its bacteriology, it was not possible to be certain. He did not see in the table of cases any statement of the duration of the disease before the patient's admission into hospital. Possibly in some of them the non-pitting stage had been passed through before admission. He did not think that oedema from thrombosis was the same thing as the phlegmasia alba dolens the classical description of which was given by White of Warrington, afterwards of Manchester. He (Dr. Herman) was accustomed to teach that the solidity of the oedema in that disease was due to plugging of the lymphatics. No anatomical evidence of this existed; but there were good clinical reasons for that opinion. In lymphangitis extending up a limb from a poisoned wound the strip of inflamed lymphatics had the same brawny feeling as the whole limb had in phlegmasia dolens. In elephantiasis the lymphatics were known to be plugged, and the result was solid oedema like that of phlegmasia dolens, but persistent, and therefore leading to further changes in the limb. He had not understood Dr. Roberts to say that hæmorrhage caused phlegmasia dolens, but that it favoured it, which was, as he thought, undeniable.

Dr. AMAND ROUTH said that perhaps if Dr. Roberts had seen the cases in an earlier stage he would have found them more typical of "white leg." He had seen two cases where the initial symptoms were very severe but very transient—one quite recently in a patient who had nearly lost her life from post-partum hæmorrhage. On the third day she suddenly had acute pain in the left calf, and when seen three hours later had a temperature of 101.6° F., and the calf was swollen, with a circumference of two inches more than the right leg. The calf was quite white, extremely tense, glistening, and did not pit, and it had, in short, all the recognised signs of true phlegmasia dolens. Next morning the calf was less swollen, less white, and pitted, but the pyrexia remained, and on the tenth day the right leg became similarly affected. When the swelling and pain begin in the calf, and the femoral vein is free from tenderness and induration, it is obvious that any thrombosis which may exist in the popliteal vein has not occurred by extension of thrombosis. There can be no doubt that hæmorrhage is one of the elements in the causation of these cases, but why thrombosis should occur after the lapse of some days and not at once was difficult to explain. It was not easy to explain the presence of pyrexia, with perhaps an initial rigor, unless there was some sort of "sepsis" as another element in the cause of the lymphangitis, or, at all events, the blocking of the lymphatics, which so often was the first sign in these cases.

Dr. MACNAUGHTON JONES believed that the symptoms of phlegmasia dolens depended on the relative primary and secondary invasion of the veins or lymphatics and on the degree of cellulitis present. He thought that pressure did account for the disease in certain cases. He denied that sepsis alone was a cause, and attached no importance to the fact that the injury of the cervix was more commonly on the left side, but thought that there were anatomical reasons for the left leg being the one more commonly affected. "Painful spots" were not peculiar to any form of phlegmasia. High temperature was not to be taken as evidence of sepsis, as it occurred in various other post-partum conditions.

Dr. GRIFFITH said that Dr. Roberts's paper emphasised the distinction between true phlegmasia dolens and simple thrombosis. Hæmorrhage complicating labour was undoubtedly a very important factor in the causation of white leg, but the objection urged by Dr. Horrocks against its being the essential cause—namely, the considerable interval which elapsed between it and the appearance of the characteristic symptoms—applied with equal force to the theory of septic infection which he advocated. Thrombosis in both forms

of the disease, as a rule, started from the uterine veins and extended gradually to the common iliac, and it was not surprising that acute symptoms should arise when this great channel was blocked, nor was it necessary to suppose a further cause for them.

Dr. ROBINSON drew attention to the researches of Widal into the microbic origin of certain cases of phlegmasia dolens. This observer had found the clots in the thrombosed veins to be infiltrated with chains of cocci, probably streptococcus pyogenes. The walls of the veins had also been invaded by these organisms. Other observers considered that the bacillus coli communis played an important part in the causation of this morbid condition.

The PRESIDENT thought that Dr. Roberts's proposed classification was open to criticism; for instance, "cases due to pressure" (Class 1) might also be cases of "thrombosis apart from sepsis" (Class 4). Again, "cases associated with general disease" (Class 2) might also be "cases of thrombosis and sepsis combined." It would make it clearer if an instance of each type were given. A curious fact in the group of cases here recorded had not been referred to—viz., that three out of the four cases of double white leg (Cases 5, 8, and 10) began in the right leg. This was probably a coincidence, and might not appear in a more extended series of cases.

Dr. GILES noticed that in only one case—No. 14—was there undoubted sepsis, and it was the only one in which delivery was not at term; he thought that this was evidence that the ordinary white leg was not due to septicæmia. The reason assigned by previous speakers to account for the greater frequency of attacks in the left leg was not valid, inasmuch as injuries to the cervix would involve the connective tissue of the pelvis rather than structures so far off as the veins of the leg, whereas in nearly all Dr. Roberts's cases the pelvis was unaffected.

Dr. ROBERTS, in reply, said that he could not regard all cases of thrombosis as septic, pyrexia not necessarily indicating sepsis, and the onset of septicæmia being much earlier than it was in the kind of cases he had described. He thought that thrombi might be present in the veins of the broad ligaments without giving rise to physical signs in the pelvis. Probably extension of the clot either across the vena cava or the broad ligaments explained the implication of the other leg at a later date. In answer to Dr. Amand Routh, he had to explain that five out of the sixteen cases in the paper had been seen from outset to finish. He was sorry he could not specify the presentation in each of his cases, as this was not mentioned in the records from which they were taken.

The following specimen was exhibited:—

Dr. AMAND ROUTH: A Fetus the subject of Anencephalic Diprosopia.

OPHTHALMOLOGICAL SOCIETY.

A New Operation for Ptosis.—Blood-staining of the Cornea.—Sudden Severe Hemorrhage from the Conjunctival Surface of the Lid.—Exhibition of Specimens.

AN ordinary meeting of this society was held on May 2nd, Dr. D. ARGYLL ROBERTSON, President, being in the chair.

Dr. MILES brought before the society a New Operation for Ptosis. It was first described by him at the last International Congress of Ophthalmology at Edinburgh in August, 1894. He now gave the results of his further experience of its effect. The principle of the operation was to substitute the frontalis muscle for the levator palpebræ by extending the former muscle to the margin of the lid by a permanent wire suture. Two needles with eyes near their points were passed deeply through the frontalis tendon over the eyebrow, and their points brought out at the margin of the lid behind the lashes, taking up a substantial part of the tarsal cartilage on their way. A piece of silver wire was threaded through each needle, which was then withdrawn, leaving the loop of wire passing from the brow to the edge of the lid and back to the brow again. This was then tightened until the lid was sufficiently raised, the edge of the lid being slightly grooved by an incision to allow the wire to sink into the substance of the lid. One end of the wire was then passed under the skin and made to emerge by the side of the other end of the wire. The two ends of the wire were then twisted on each other until the lid was raised permanently, the ends were cut off, and the wire allowed to sink below the level of the skin. The skin at this point and at the lid margin healed over the wire, which remained permanently fixed in the substance of the

lid. From further experience it was found that the wire remained in position without causing irritation; the lids could be closed, and remained closed during sleep. All kinds of wire had been tried, but it had been found that silver wire was the most satisfactory. It was necessary to note at the time of the operation the situation of the twisted end of the wire in case it became necessary to remove the suture afterwards.—The PRESIDENT drew attention to the correct principle of the operation in forming so direct a connexion between the frontalis muscle and the lid. He apprehended some trouble from irritation if the wire was left in for any length of time; it might also, he conjectured, cut its way through the tarsal cartilage or the muscle above, and so lose its effect. Former methods of remedying this defect were, he thought, unsatisfactory. The operation introduced by Snellen was too complicated; Eversbusch's did not answer in severe cases, though it served well in slight ones; and that advocated by Panas was disfiguring and involved too extensive interference; the methods of operating with thread were, he thought, inefficient.—Dr. BRAILEY thought that in performing this operation it would be easier to introduce the needles from the lid margin, though he himself was content to use thread.—Mr. DONALD GUNN suggested that by passing both needles through an aperture over the brow the angle in the course of the wire would be avoided.—Mr. Spencer Watson, Mr. Lawford, Mr. Cartwright, and Dr. Ernest Clarke also discussed the relative merit of the operation.

Mr. TREACHER COLLINS read a paper on Blood-staining of the Cornea. He found that this staining of the cornea, which was of a greenish or reddish brown colour, was due to the presence of a number of highly refracting granules scattered throughout its substance. These granules were not located with any definite relation to the spaces between the lamellæ of fibrous tissue; they agreed in their spectroscopical appearances and chemical reactions with hæmatoidin. He found that in some of the cases associated with granules of hæmatoidin there was a substance which gave iron reaction with ammonium sulphide, and which was probably hæmosiderin. In eyes in which this discolouration occurred the tension was generally increased, the exit of fluid through the angle of the anterior chamber being obstructed by the accumulation of blood clots. He was of opinion that at first hæmoglobin passed into the cornea from the anterior chamber through Descemet's membrane, and that the hæmatoidin, which is insoluble in the fluids of the cornea, was then precipitated there. The whole of the cornea was at first affected, and when this was the case the condition could not be distinguished from that in which blood clots completely filled the anterior chamber. The absorption of the hæmatoidin granules commenced at the periphery equally in all directions, so that by degrees a narrow ring of clear cornea appeared around the stained area. The appearances then presented were strikingly similar to those of a lens dislocated into the anterior chamber. The absorption of the granules becomes slower and slower the further they are removed from the sclero-corneal margin. He had seen one case in which the discolouration had completely disappeared in the course of about two years.—Mr. JESSOP described a case recently under his observation in which, after an injury to the eye, the anterior chamber was half filled with blood, which also occupied the interstices of the cornea and which disappeared in three days.—Mr. COLLINS, in reply, distinguished between the cases he described and that mentioned by Mr. Jessop, which was an instance of only temporary transudation into the cornea.

Mr. W. H. JESSOP read notes of Sudden Severe Hemorrhage from the Conjunctival Surface of the Lid. A woman aged twenty-seven was taken to St. Bartholomew's Hospital in a state of collapse from repeated attacks of bleeding from the left eye. When seen the pulse was 130, small, irregular, and difficult to count; the extremities were cold and the right pupil dilated. On evertng the lid there was found a small, jagged-edged ulcer about 1½ mm. in diameter in the middle of the palpebral conjunctiva, from which bright arterial blood was flowing. The ulcer was burned by the actual cautery and treated with cold compresses. With one slight exception it gave no further trouble. Fourteen years before the patient had had erysipelas of the eye and nose on the left side, since which time the lid had been slightly swollen. There was no history of severe hemorrhage or of hæmophilia, and there had been no accident. The patient had been married twelve months and had been pregnant seven months. The case was probably of nævoid origin, but it differed from the cases previously described by there being no marked sign of vascular

tumour. There had been only three cases described, but none of them had been quite like this one.—Mr. SYDNEY STEPHENSON described a case recently under his care of a girl aged eleven upon whom the operation of expression had been performed for trachoma. This was followed by spontaneous attacks of bleeding from the lid, which occurred off and on for more than five months. Though repeated examinations had been made directly the hæmorrhage was observed, he had not been able to detect the point from which it came; there were general redness and turgidity of the conjunctiva, and the closeness of the observation precluded the possibility of malingering. There was no anaemia, purpura, or scurvy, and the removal of a premolar tooth had not led to any unusual hæmorrhage, so that hæmophilia did not seem probable, though there was a history of swelling occurring three times, and lasting some days, in the knee-joints.

The following living and card specimens were shown:—

Mr. DONALDSON: Microscopic Specimens of Alveolar Sarcoma of the Cornea.

Mr. MARCUS GUNN: Symmetrical Spontaneous Dislocation of both Lenses.

Mr. MORTON: (1) Tumour of the Right Malar Region, probably Sebaceous; and (2) Persistent Hyaloid Artery.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Antipyretics, their Use and Abuse.—The Recognition and Treatment of Peripheral Neuritis.

A MEETING of this society was held on May 3rd, Dr. BANNING, the President, being in the chair.

Dr. WILLIAM HUNTER read a paper on Antipyretics, their Use and Abuse. He pointed out that the extent to which antipyretic agents were used and their manner of employment were greatly influenced by our views of fever. In its simplest aspects, as it presented itself in the lower animals, fever might be looked upon as a reparative process, but in man, owing to the higher organisation of his nervous system, it greatly lost this character, and the febrile process invariably tended to be much in excess of any possible requirement and to become a source of danger. After considering the analgesic properties of the more recently introduced antipyretics derived from coal-tar products, such as antipyrin, phenacetin, and antifebrin, he remarked that the control of the nervous system was one of the principal desiderata in the treatment of fever. The proper object of such drugs was, however, not to abolish fever by a summary process, as was at first expected and attempted, but rather to bring the febrile process within reasonable limits. More particularly in severe sthenic cases, where the temperature rose above 104°F. and was likely to rise higher, it was desirable to reduce the temperature 1° or 2°. The administration of these remedies should always be cautious, more particularly in the case of antifebrin, the dose of which, as given in books (3 to 10 grains) is much too high; it ought rather to be from 1 to 3 grains. Their best effect is obtained when cold sponging is employed as an adjunct.—The PRESIDENT had found that no antipyretic equalled, either in efficiency or in safety, the use of cold sponging and wet packs.—Dr. SYMONS ECCLES believed that the direct action of antipyrin, though commonly considered to be stimulant to the heat centres, could also be attributed to its reducing qualities, removing oxygen from the protoplasm of the nerve cells, and thus diminishing activity and producing analgesia. He could not altogether agree with Dr. Hunter that the high temperature of man is of nervous origin and peculiar to him; he believed that animals suffered also from nervous manifestations, which might be due to excessive oxidation produced by nature in order to get rid of leucocaines or other toxins. In neurasthenia the rise and fall of the tide of leucocaines in the blood coincided with the periodical attacks of depression, malaise, and all the vague but real discomforts felt by neurasthenics. He thought that toxæmia would in the future be regarded as a probable, if not a constant, factor in functional nervous disorders.—Dr. ATKINSON had not found any benefit to follow the use of antipyretics, and thought that, as the temperature always fell before death, high temperature by itself would not kill a patient.—Mr. MACADAM ECCLES referred to surgical cases

where high temperature was due to nerve influence, alluding specially to cases of head injury followed by high fever without sepsis, and to so-called catheter fever. He pointed out that after injuries of the head the temperature was often different on the two sides.—Dr. HUNTER replied.

Dr. CAGNEY read a paper on the Recognition and Treatment of Peripheral Neuritis. He quoted cases to show that in many instances of alcoholic neuritis there was a danger of administering alcohol for the relief of symptoms which were in reality due to that poison. He discussed some points in the causation of neuritis and cited cases showing a remarkable individual susceptibility, both inherited and acquired. He maintained that a combination of toxic states was most often the probable cause of neuritis, and quoted illustrative cases. He urged that in view of the great importance of the early recognition of peripheral neuritis, and the certainty of detecting it in all cases where the motor system was involved, every medical man ought to make himself familiar with the very simple methods of electro-diagnosis.

LIVERPOOL MEDICAL INSTITUTION.

Enterostomy for Foreign Bodies.—Two Cases of Compound Depressed Fracture of the Skull.—Trephining for Subdural Hæmorrhage.—Eye Cases.—Painful Digestion in Chlorotic and Hysterical Persons.

A MEETING of this society was held on May 2nd, the President, Mr. CHAUNCEY PUZZEY, being in the chair.

Dr. ALEXANDER related a case where he had performed Enterostomy and had removed a very large number of plum and other fruit stones from the lower part of the ileum, close to the cæcum.

Mr. ARTHUR WILSON read notes of Two Cases of Compound Depressed Fracture of the Skull.

Mr. DAMER HARRISON related a case where he had successfully Trephined for Subdural Hæmorrhage. For many months the patient was unable to talk or to express himself by writing, but he ultimately made a good recovery.

Mr. BICKERTON showed a man on whom he had performed Mules' Evisceration Operation, and another patient from whose eye he had removed a piece of glass three-quarters of an inch long.

Mr. GEORGE WALKER showed several patients illustrative of the treatment of Posterior Adhesions of the Iris, the synechiæ having been separated from the anterior capsule of the lens by means of an ordinary cataract needle.

Dr. GLYNN read a paper on the Painful Digestion common in the Hysterical, and its Diagnosis from Gastric Ulcer. He pointed out that the symptoms (pain, especially after food, perhaps relieved by vomiting, and occasionally hæmatemesis) were met with in merely functional disorder as well as in ulcer of the stomach. Many of the cases of either disease were relieved by a course of milk and lime-water, so that the test of treatment failed to be of any assistance. He pointed out that nervous dyspepsia of the hysterical was very frequently met with in the chloro-anæmic, and stated that he had found that the chlorotic were almost invariably hysterical, and that they presented the stigmata of hysteria, including restriction of the visual fields. He considered the various pains and hyperæsthesia the chlorotic suffered from were due to the hysterical condition. The most convenient indication of hysteria to be sought for in the preliminary investigation of a suspected case was tremor of the eyelids. The few chlorotic girls who betrayed no symptoms of hysteria did not, as a rule, suffer from neuralgias and painful digestion. He discussed certain symptoms of nervous dyspepsia—the character of the pain and its relation to the ingestion of solids and liquids, and compared them with those of gastric ulcer. The diagnosis of the dyspepsia of the chlorotic and hysterical from the dyspepsia associated with gastric ulcer was rendered especially difficult as the latter affection was also so frequently accompanied by hysteria and chlorosis. He considered it likely that the pain which often attended gastric ulcer was due to the fact that this lesion often co-existed with hysteria and hysterical neuralgias, more especially when the patient was exhausted and anxious. In the case of latent ulcer, where the earliest symptoms were hæmatemesis or the signs of perforation, the patients were usually in good health. He considered that the nervous dyspepsia he

described was a hyperæsthesia of the stomach, best treated by general measures and not by drugging.—Dr. A. C. E. HARRIS agreed with Dr. Glynn in distinguishing anemia from chlorosis. It was in the latter class that painful digestion was met with, but only in about a third of the cases, and that among those who did hard manual labour. He considered the gastric pain to be due to hyper-acidity and benefited by alkalies; in fact, the success of Bland's pills and capsules at first is probably due to the potash they contain. If the gastralgia does not yield to Bland's treatment, larger doses of alkali remove the pain and then iron completes the cure.—Dr. HENRY HEAD accepted Dr. Glynn's classification of painful digestion, and pointed out that it included all those cases where food caused pain, mostly associated with tenderness in the superficial structures of the thorax, abdomen, and back over the areas of the sixth, seventh, eighth, and ninth dorsal segments; but disturbance in any other organ also supplied from these segments will cause the ingestion of food to be painful. Thus rapid implication of one base of the lung (as in tuberculous phthisis) or rise of pressure in the left auricle (as in mitral stenosis) will cause pain and tenderness of one or more of these areas, increased by the ingestion of food. Excluding these reflex gastralgias, we find a great group with gastric ulcer at one pole and anorexia nervosa at the other, with the gastralgia of chloro-anæmia as an intermediate link.—Mr. YOUNG and Dr. GILL also took part in the discussion on Dr. Glynn's paper.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Infantile Convulsions.—Toxic Affections of Vision.—Apparatus for the Administration of Anæsthetics.—Exhibition of Case.

A MEETING of this society was held on May 1st, Dr. TEW, President, being in the chair.

Dr. FENNELL read a paper entitled "Some Observations on Fifty-nine Cases of Infantile Convulsions." He remarked on three points which did not tally with the opinions laid down by acknowledged authorities—viz., that two of the above cases appeared undoubtedly to be caused by roundworms; that in four the pupils were extremely contracted; and that only two presented any symptoms of rickets.—Remarks were made by the President, Dr. Ransom, Dr. Hunter, and Dr. Watson.

Dr. LAWS read a paper on Toxic Affections of Vision. The clinical features of a case of toxic amblyopia were first described, together with the methods of testing for the central scotoma; and it was remarked that the progress of the disease followed the course of development of the visual functions, the more specialised being the earlier attacked. After a short historical sketch of the researches that had been made on the subject since the publication of Mackenzie's work in 1830, the pathology of the affection was discussed, with especial reference to the question of whether the lesion in the optic nerves was of the nature of an interstitial inflammation or a primary degeneration of nerve fibres with secondary overgrowth of connective tissue. Adopting the latter view, Dr. Laws pointed out the analogies of the process with the system diseases of the spinal cord, and particularly with tabes; in both an afferent tract of fibres, marked out by its function and development from those among which it lay, was affected by degeneration, and in both a certain tissue liability was indicated by the existence of a hereditary form of the disease; the cause in the one case being a chemical poison circulating in the blood, while in the other there was no inherent improbability in the view that it might be a toxæmia. After some remarks on the differential diagnosis of toxic amblyopia Dr. Laws concluded by urging that in cases of pallor of the discs and suspected chronic disease of the nervous system the very simple test for a central colour scotoma should be included among the methods of investigation.—The President, Dr. Ransom, Dr. Kingdon, Mr. Macmillan, and Dr. Tresidder discussed the subject.

Dr. BELL TAYLOR exhibited a new Apparatus for the Simultaneous Administration of Ether and Nitrous Oxide Gas.

Dr. BELL TAYLOR also showed a man upon whom he had previously operated for Cataract before the society.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Palliative Treatment of Jaundice caused by Malignant Obstruction.—Probable Lesions in Incipient Caseous Pulmonary Phthisis.—Exhibition of Cases and Specimens.

THE ninth meeting of this society was held on May 1st, Dr. CLOUSTON, President, being in the chair.

Dr. WILLIAM RUSSELL read a paper on the Palliative Treatment of Jaundice from Malignant Obstruction. He narrated the case of a patient eighty-five years of age (but looking considerably younger), who in the early part of 1894 began to suffer from slight dyspeptic symptoms, accompanied with a suspicion of jaundice. The jaundice was at first ascribed to obstruction from duodenal catarrh, but did not yield to treatment. After a time palpation of the abdomen revealed an elongated structure, somewhat firm, tough, and resistant, which lay over the aorta, and was believed to be the pancreas. There seemed to be no implication of the pylorus in the disease. The liver was slightly enlarged, but otherwise normal. The distended gall-bladder was felt as a pyriform elastic body in the axillary line immediately under the tenth rib. The patient complained of a general sense of malaise, aversion to food, and continuous nausea. Operation was suggested in the hope of relieving the symptoms, but the patient declined. Having remained much in this condition for three months, with her strength gradually failing and the discomfort continuing, she became anxious to submit to any operation which might alleviate her symptoms, and was accordingly removed to Mr. Cotterill's ward in the Edinburgh Royal Infirmary. The case was believed to be malignant disease of the head of the pancreas without any implication of the stomach or liver; it was considered that there was no occlusion of the cystic duct, and so to tap the gall-bladder would effectually drain the retained bile. Mr. Cotterill accordingly operated. The patient lived for thirty hours. It was doubtful if she would have lived longer had she not been operated upon. At the necropsy the diagnosis was confirmed in every detail. The case raised the important question whether the operation might be regarded as legitimate, being merely a palliative measure. To operate for the removal of calculi was legitimate and necessary. Dr. Russell thought that it was justifiable to operate in the hope of relieving the misery and discomfort of a deepening cholemia, and that the present operation was as humane a proceeding as tracheotomy in malignant laryngeal disease. Had the operation been performed when first suggested the patient might have been alive still. If the stomach were involved and gave rise to prominent symptoms he did not think the operation would afford sufficient relief to warrant its performance. Even obvious implication of the liver would not necessarily be a contra-indication so long as distension of the gall-bladder showed that the hepatic duct was not blocked.—Mr. JOSEPH BELL remarked that Dr. Russell's paper was short, accurate, and descriptive, and supplied food for thought. He agreed that an endeavour should be made to relieve such cases.—Dr. GIBSON had watched a similar case on which a colleague had operated. The relief after operation was very great indeed. It had been stated that drainage of the entire bile from a patient for his natural life did no harm in a case which had been operated on for non-malignant stricture of the biliary canal.—Mr. HODSDON raised the question whether in cases of malignant jaundice it was not safer simply to drain the gall-bladder than to perform cholecystenterostomy.—Dr. LEITH gave an account of the post-mortem examination and made some remarks.—Dr. RUSSELL replied.

Dr. R. F. C. LEITH read a paper on the Probable Lesions in a case of Incipient Caseous Pulmonary Phthisis of over four years' duration, with no physical signs, but with abundant bacilli in the sputum, together with some remarks on their diagnostic and prognostic value. The patient, a man forty-three years of age, sought advice on account of a hydrocele. He had a slight cough, especially in winter, but his general condition seemed very good, his height being five feet ten inches and his chest measurement thirty-three inches and a half during expiration, expanding three inches during inspiration. His chest showed no physical signs of disease, but on staining some of his sputum, which seemed to consist entirely of transparent sticky mucus and was small in quantity,

numerous tubercle bacilli were found, presenting almost the appearance of a pure culture. As no physical signs could be discovered in the chest and as there was slight huskiness of the voice, primary laryngeal tuberculosis was suspected, but the laryngoscope showed the parts to be normal. After a month's holiday in the country the sputum almost entirely disappeared, and there was only slight occasional morning cough. He remained much in this condition for the next two years. In February, 1893, the patient passed through an attack of acute appendicitis, and while convalescing from this the chest condition made considerable progress. The sputum increased in amount, became purulent, and prolonged expiration with numerous moist sounds were observed in the second interspace on the right side close to the sternum. The patient was sent to Torquay for three months, where he made very rapid improvement and increased in weight, the sputum diminished, the signs in the lungs disappeared, and he is now in good health, being able to walk from twenty to thirty miles, and enjoying amusements in moderation. The sputum still contains bacilli. To all intents and purposes he is as well now as he was four years ago. Dr. LEITH discussed the case at considerable length and dwelt on the frequency with which cicatrised tuberculous lesions were found in the lungs after death. In about 1400 post-mortem examinations in the Edinburgh Royal Infirmary he had noted such lesions in about 12 per cent. of the whole. In the present case he considered, from the large number of bacilli present in the sputum, that there was probably cavity formation in the lung. He discussed the importance of the tubercle bacillus from a diagnostic and prognostic point of view.—Dr. PHILIP thought the paper contained three main points of interest—viz., the abundance of the tubercle bacillus, the relative duration of the case, and the comparative absence of physical signs. He thought they could enumerate a large number of cases lasting, not four years and a half, but ten or twelve years, when the course was very chronic. In many cases there were few physical signs for the first five, six, or seven years.—Dr. RITCHIE and Dr. CLOUSTON having spoken, Dr. LEITH replied.

Dr. LEITH showed a case of Caseating Pulmonary Phthisis of four years' standing. The patient formed the subject of the paper which had just been read.

Mr. A. G. MILLER showed a man whose Arm had been amputated through the Elbow for Cancer of the Hand and Forearm.

Dr. LUNDIE and Mr. ALEXANDER MILES showed cases of Skin Grafting from the lower animals.

Dr. W. ALLAN JAMIESON showed a case of Impetigo Varioliformis; a case of Erythema Perstans; a case of Exfoliative Dermatitis limited to the Hands and affecting to a slight degree the sides of the Feet in a man with general but mild Ichthyosis and Hyperidrosis Pedum; and a case of Scorbatus.

Dr. LEITH exhibited the Temporal Bone of a girl fifteen years of age who died from Cerebral Abscess. The middle ear was caseous, and the tympanic membrane, which showed a perforation, was ossified.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Defective Infantile Life Unrecognised by State Medicine.—Private Hospitals or Home Hospitals.

A MEETING of this section was held on April 19th, Dr. T. W. GRIMSHAW being in the chair.

Mr. WALTER BERNARD of Londonderry read a paper on the subject of Defective Infantile Life Unrecognised by State Medicine. He argued that it is the duty of the State to foster every movement and encourage every effort to disseminate knowledge in diagnosing those conditions of society which are unfavourable to true national progress. General medical practitioners having done more successful work in the prevention of insanity and abnormalities than any other medical or social organisations, they are the earliest and most efficient observers of the abnormal in infantile life. Each stage of mental growth ought to be carefully investigated, not by far-reaching researches, but by domestic clinical work and family and personal histories, through which only can a practical psychology of infant and

child life be attained. The primary object to be attained is to teach the importance of order, thrift, and cleanliness in the management of feeble children. Contractures and arrests of development are generally associated with an enfeebled and easily disturbed nervous system. In such cases the enfeebled senses obtain much unconscious guidance and perfection by the exercise of the muscles of the deficient or rigid limb, the latter more especially by posture, as in the Gower methods. Consequently, in a minor degree, a kindergarten and gymnasium are indispensable in the household. Hygiene in the home is essential, opening up the way to clearer ideas on the subjects of infant sanitation and infant life. The principles which suggest early promptitude in detecting, arresting, and dealing with mental imperfections in infantile life are not sufficiently recognised by State measures. If the family medical attendant's hands were strengthened by a system of jurisprudence framed, confirmed, and recommended by State medicine, it would tend to improvement in the formation of character in the initial stages of existence.—Dr. J. W. MOORE said that the Academy owed a debt of gratitude to Mr. Bernard for bringing forward this subject. Within the last decade or two there had been a wonderful change regarding the value put on the life of children, and the death-rate among young children had been steadily falling. In the great cities there were many philanthropic associations whose sole object was the improvement of childhood, such as Mr. Barnardo's in London.—Sir W. STOKES referred to the importance of educating people, and this more particularly in Ireland, to a better knowledge of how to cook their food. He believed that one of the main causes amongst the poorer class of having recourse to the public-house was the want of properly cooked food in their homes. A great many physical and mental troubles were due to intemperance.—Dr. NINIAN FALKNER said there were two defects possible in infantile life, one physical, and the other mental. Referring to the mental impressions received during childhood, he considered that a great many of the unfortunate careers of men and women were due to immoral suggestions made to them in their infancy by nurses.—Dr. RAINSFORD said he had had three years' experience in a very large lunatic asylum, and thought that the early training received in childhood had a great effect on the after-life of the individual. Considering the manner in which children are brought up in large cities, it is a marvel that criminals are not more numerous.—The CHAIRMAN regretted that medical men were not taught to advise as to the bringing up of children. If children are not looked after much harm is done both to them and to their children, if they ever have any. There was no doubt that infants could be educated from the cradle. With regard to the question of nurses, referred to by Dr. Falkner, he thought great damage, both physical and mental, was done by them. The practice of lying was learnt in the nursery. These evils were produced by the mothers paying others to do what they should do themselves. In almost every instance in which the Society for the Prevention of Cruelty to Children, of which Dr. Rainsford was the medical officer, proposed to start a branch in any town, they were met with the reply that they knew how to take care of their children. The clergy were especially strong in this opinion. The introduction of the School Board system into England has had the effect of catching a great number of street arabs. There were two institutions in Dublin—one Protestant and the other Roman Catholic. The reports of these institutions were of the most encouraging kind. With reference to cookery, he had heard the following anecdote. A parish priest went to a house about dinner hour and asked when the man would be in, and was told "Presently." He asked the wife where the man's dinner was. She replied, "In the press," where there were cold meat and potatoes. On further questioning, she said that it had been cooked for two or three days. This was the way in which the husband was treated when he came home. The number of uncertified deaths in Dublin was appalling. It meant either that a medical man was not called in at all or that he was called in so late that he was not able to give a certificate of the cause of death.—Mr. BERNARD, replying, said the Jubilee nurses had been the means of enabling ladies to visit the poor people and teach them cooking, thrift, and cleanliness. If rules were formulated by the State insanity would be diminished. The lower classes carry out the rules as well as the upper classes.

Dr. J. W. MOORE read a paper entitled "Private Hospitals or Home Hospitals." He said that the institution and administration of a private hospital call for the exercise of

exceptional mental and bodily powers, and are quite incompatible with the practice of the medical profession. Such establishments should be subject to inspection by the sanitary or some other responsible authority and should be conducted on sound financial principles. The term "home hospital" is better than private hospital, the object being to provide for the sick a home where they will be cared for by skilled hands under the direction of their attendant physicians or surgeons and amid the best possible surroundings from a health point of view. A "home hospital" should be a detached building, heated, ventilated, and lighted on the most approved lines, and specially constructed for the purpose on an eligible site. The sanitary arrangements should be above suspicion. It should be licensed and freely open to periodical and systematic inspection by the sanitary authorities of the district in which it stands. It should be managed by a committee the members of which would inspire confidence and command respect, and to which the officials would owe allegiance. Its finances should be controlled by this committee, and a report and statement of accounts should be published at least once a year. If all this were done private hospitals would be worthy of the name, and in them persons of refinement and culture might, when suffering from sickness or injury, enjoy the advantages of medical or surgical care and good nursing together with that privacy and quiet which in such cases so largely conduce to comfort and even to recovery.—Sir W. STOKES regretted that he could not agree with much of what Dr. Moore had said. He had had experience of no less than five of these hospitals, and while admitting the importance of having the best hygienic surroundings possible he did not think that these institutions deserved the very severe strictures made upon them. If they were so bad they would long since have ceased to exist. He had treated many important surgical cases in them and had never heard any complaints. Many of the largest institutions in London, as St. Bartholomew's and University College Hospitals, were situated in densely populated localities. Inspection did not do any good, and it would take away the privacy of the hospitals.—Dr. PARSONS said they had to make the best of what they had. The patients had far more quietness in these hospitals than in their own homes. He did not think that they should be inspected. If they were not properly kept medical men would not send their patients to them. These hospitals were very useful for treating patients who were too well off to be treated in an ordinary hospital.—Mr. SAVAGE had had some medical cases in a private hospital and was very much displeased with the treatment they received. There was nothing to be gained by sending medical patients to these "home" hospitals. He thought Dr. Moore would have spoken more of "home" hospitals for infectious diseases. During epidemics (as of scarlet fever or small-pox) they should charge a reasonable fee for these rooms and have whatever practitioner the patient wished to attend him.—Mr. THOMPSON said it would be difficult and expensive to get detached buildings. In some of these hospitals the attendance and nursing were very good, and everything was ready on the spot.—Dr. J. W. MOORE replying, said he granted that these hospitals were a necessity. He wanted them put on a sound financial and sanitary basis. Not long ago a partner in one of them told him that it did not pay. The sanitary authorities would very soon have to take the matter in their own hands. He could produce positive evidence that these hospitals are a growing scandal.—Mr. BERNARD said that there was a strong feeling in the north-west of Ireland that there were too many private hospitals in Dublin. Some of his own patients complained of the noise and insufficient nursing in them.

BRITISH MEDICAL BENEVOLENT FUND.—At the monthly meeting held on Tuesday, April 30th, the committee had to postpone the consideration of two-thirds of the cases before them owing to lack of funds. To applicants this means terrible disappointment and privation, as £30 per annum is considered a bar to assistance. The committee urgently press this deplorable position upon the attention of the more fortunate members of the profession, and ask for subscriptions or donations to enable them to meet this deficiency. Contributions may be sent to the Treasurer, 84, Brook-street, W.; to any of the officers; and especially to Dr. Samuel West, 15, Wimpole-street, hon. financial secretary.

Reviews and Notices of Books.

Descriptive Catalogue of the Pathological Specimens contained in the Museum of Guy's Hospital. Third Edition. Vol. I.: Morbid Conditions of the Respiratory Organs and Alimentary Tract. By LAURISTON E. SHAW, M.D. Lond., F.R.C.P., Assistant Physician and Curator of the Museum; and E. COOPER PERRY, M.A., M.D. Cantab., F.R.C.P., Assistant Physician and Demonstrator of Morbid Anatomy. London: J. & A. Churchill. 1894.

THIS catalogue, which must almost be looked upon as a third edition of a classic work, will be welcomed, not only by students, present and past, of Guy's Hospital, but by every active worker in pathology. The first edition, edited by Hodgkin, was published in 1829, whilst the second, edited by Dr. Samuel Wilks and the late Dr. Habershon, appeared in seven parts between the years 1857 and 1863. The editors of the present volume have somewhat altered the plan of the work, and have apparently given a large amount of time and care to the verification and correction of the specimens catalogued. They say "that the greater number of preparations described in this volume have been submitted to further examination and dissection before being remounted, and the descriptions given of them have almost in every case been rewritten upon a uniform plan. All references to post-mortem inspections have been verified, and, in the belief that the study of a pathological specimen is made at once more interesting and of more practical utility when combined with a study of the history during life of the case from which the preparation has been derived, clinical accounts have, wherever possible, been appended to the descriptions of the specimens, and where they were already given in the old catalogue they have in many cases been amplified." They have also examined microscopically many of the specimens which they considered were probably open to reclassification. Taking it altogether, the work is exceedingly well done. Each section includes a special part of the respiratory organs or alimentary tract; for example, in Section I. are given the Injuries and Diseases of the Larynx; in Section II., Diseases of the Thyroid Gland; in Section III., Diseases of the Thymus Gland; and in Section IV., Injuries and Diseases of the Bronchial Tubes; and so on through twenty-four sections, the last of which is devoted to Injuries and Diseases of the Peritoneum. At the head of each section is given a list of the groups of specimens—thus, congenital malformation, 1; eversion of sacculus, 2; injuries, 3 to 10; foreign bodies, 11 to 14—and so on through various groups, as examples of which may be mentioned tubercle, variola, typhoid fever, hypertrophy of muscles, polypus, carcinoma, &c. It will thus be seen that a regular plan has been adhered to throughout the work, and this methodical arrangement renders the catalogue exceedingly useful for reference, though it may interfere somewhat with its value for purposes of teaching. This, however, is very much a matter of opinion and depends frequently upon the method of teaching adopted. The work of description is most carefully and accurately done; the descriptions are not too long, and the detail is not too great, so that the attention is not distracted by insignificant details from the main features of the specimen under review. From the method of arrangement most of the references to the specimens are readily found, but we anticipate that to make them still more accessible the editors, on the completion of the catalogue, will find it well to give an index with full cross references. By doing this they would add greatly to the value both of the catalogue and of the collection. We congratulate the editors on the admirable scheme they have drawn up, and also on the way in which they have carried it out.

The Spirit of Cookery. By J. L. W. THUDICHUM, M.D., F.R.C.P. Lond. London: Baillière, Tindall, and Cox. 1895. Price 6s.

WE had read a great part of this book with much enjoyment, and had made up our minds from all we read, and also from the fact that both title-page and cover declare it to be "A Popular Treatise on the History, Science, Practice, and Ethical and Medical Import of Culinary Art," that it was not intended for the powers that be in our kitchens, but for their masters and mistresses, when a perusal of the preface showed us our mistake, for Dr. Thudichum says: "In the present treatise it has been attempted to produce such a system of general rules as will enable those who thoroughly master them to perform the principal culinary operations without reference to the frequently unintelligible records of the details of mere empiricism." As very few mistresses in these days can "perform culinary operations" without promptly receiving "notice" that the cook wishes to leave, the book must be designed for that functionary herself. We fear, however, that no cook, let her be ever so efficient, will understand Dr. Thudichum's English. There is no need for her to understand that she is a professor of the "magiric" art or science, but she is certainly very unlikely to do so, and what will she make of "soups characterised by molluscs and articulates," of "tritulating," or "volatilisng" an ingredient, or of the statement that "cooking destroys the toxicity of mussels," and will she know what is demanded of her when she is told to "communute" something in a mortar, or to do something "concurrently" with another? She may have some perception of what is meant by "overtoneing the weakness of a broth," but is she likely to have any idea as to what "the production of artefacts" may be, and will she not resent it when she finds that when making a boiled apple pudding she puts her apples into a paste made of flour and suet she is placing them in a capsule? As for Dr. Thudichum's definition of a pudding she would unhesitatingly laugh it to scorn. "A pudding is mostly, if we may be allowed to use an expression from petrology, a *breccia*—a compound formed of fragments of a material which had a previous independent existence, and bound together by a soft mortar or cement which was able to penetrate and fill the pores of, and intervals between, the lumps, and then become set by the culinary thermic process. It is by this that pudding becomes a unity and receives a kind of gustatory homogeneity, however numerous and diversified may be the substances introduced into its constitution." Alas for human cooks who have to master these hard sayings "concurrently with the preparation of the dishes" to which they refer—that is, if the book is meant for cooks. Alas for most mistresses if the burden is laid on them! Cooks and mistresses are but mortal, and, besides that, may have as much dislike to cumbrous, latinised, and gallicised English as we ourselves have. To "gratinate" is not a household word, and to find out what an "ensouped entrée" or an "inspissated broth" is, or how to add "a collateral consommé," or grasp the difference between "bottom heat, radiated heat, and conducted diffused heat" might cost more time and temper than either mistress or maid had at her command. If Dr. Thudichum had but written good, honest, straightforward English we should have had nothing left to desire. "The Spirit of Cookery" is full of information of every kind; men as well as women will delight in it, and no one can open it without finding something which he (or she) has always been longing to know. To a housekeeper in the true sense it will be simply invaluable.

Dr. Thudichum is severe on the delusion that bones and scraps can by good cooking produce excellent and nutritious soups; he maintains that this can only be done when due care has been taken to "*faire sourire le pot-au-feu*." He gives a good sketch of the historic

literature of cookery, enunciates excellent culinary axioms, and explains French culinary names. "*A la Gérard*," it seems, is a name sarcastically applied to a dish that is a failure, because a cook long ago prepared one which was to be set before Madame de Maintenon and called by her name, but prepared it so badly that he did not think it good enough to bear her name, and gave it his own. We are told a great deal about spices and condiments of all kinds. This part of cookery is to our mind of the most sad and sorrowful description; for so many dishes depend on a delicate adjustment of flavour, and cooks trust to rule of thumb and mother wit. A cook's thumb is clumsy, her palate blunted by frequent tastings, and she makes up a fierce and fiery compound and thinks she has done the whole duty of woman. What cook, too, would afford "*beef à la mode*" the indulgence prescribed by the "*Tabella Cibiaria*?" "It must be allowed to muse gently for several hours, inaccessible to the ambient air, and on the even and persevering heat of charcoal in furnace or stove. After having lulled itself in its own exultations and the dissolution of its auxiliaries it may appear at table with a powerful claim to approbation." Dr. Thudichum's sympathies are very properly all-embracing. "Frogs' thighs," he says, "yield a bland broth and are improved by the addition of snails"—vineyard snails, be it well understood—and he gives recipes for the *olla puchera*, and national dishes of all kinds. There is as much incongruity and variety in the composition of Joan Cromwell's "Grand Salad" as in the "various peoples, nations, and languages" over whom our Queen rules. "It is composed of equal parts of almonds, raisins, capers, pickled cucumber, shrimps, and boiled turnips. It may be made with cream, oiled butter some good jelly of meat, Florence oil, and flavoured with salad mixture, vinegar, lemon, and herbs." We are puzzled by a "Dunelm of mutton." It seems to be a more elegant haggis, but, though familiar with the ere-while Palatinate, we never heard of the dish. Nor is Dr. Thudichum quite accurate in his account of the making of the "griddle or girdle cake." Griddle, by-the-bye, is only the local pronunciation of girdle. Those who say griddle would also say girm for grin. A griddle cake is not "baked on the free fire," but suspended by the bow of the girdle to a hook above the fire. He is also wrong in saying "an inhabitant of an English town of the present time has probably little inducement to bake a griddle cake, but if he were to be transplanted to Central Africa, or the Brazils, or the Yellowstone regions he might perhaps draw some consolation and nutriment out of so simple a preparation of the gifts of Ceres." At this present time no well-to-do house in the north is without girdle cakes at tea—it would be a bitter disappointment were it otherwise, and they are made as delicacies in every cottage. The pitmen call them "singing hinnies" (hinny is honey, a term of endearment), the over-prudent call them "sudden death," but eaten in moderation they will, to use one of Dr. Thudichum's expressions, "molest no delicate stomach."

LIBRARY TABLE.

Schemata zum Einzeichnen von Gehirnbefunden. (*Diagrams for Cerebral Jottings.*) By Professor KALISKO and Dr. REDLICH. Leipzig and Wien: Franz Deuticke. 1895.—This is a small packet of diagrams of different aspects of the brain, so designed that the site and extent of a lesion can be readily and distinctly indicated. It contains an introduction illustrating the method of using it. From the appearance of the plates and the eminence and experience of the authors we have little doubt that pathologists and others will find them useful.

Manuel de Percussion et d'Auscultation. By Dr. P. SIMON. Paris: Félix Alcan, Éditeur.—This manual is an elementary introduction to the arts of percussion and auscultation.

dealing with them from their practical and their theoretical sides. Besides an account of auscultation of the cardiovascular and pulmonary system there is a chapter on Auscultation of the Digestive Tract, and also a full explanation of the uses of this art in obstetrical practice. The book should prove a useful aid to those working practically at these subjects.

Origen Polédrico de las Especies (Polyhedral Origin of Species). By ARTURO SORIA Y MATA. Madrid. 1894.—The author seems to have amused himself by making a number of four- and five-sided pyramidal figures in cardboard and crossing them in various ways so as to form what he calls betatetrahedra and pentatetrahedra of various forms, which he persuades himself have certain relationships with the sexes, with chemical bodies such as acids and bases, and also with musical notes and intervals and even with colours. The, to him, obvious connexion between the origin of the human species and the starfish is shown by drawing a child with its arms and legs stretched out so that the limbs with the head point to each of the five angles of a "dodecahedro-icosahedral closed chain," the axes passing through the child's umbilicus. After this we learn in a chapter headed "Genius and Madness" that the former is but a variation in the disposition and grouping of regular or healthy polyhedra, the latter being a grouping of polyhedra which are not perfectly regular, and at the end it is suggested that the change from venous blood to arterial and *vice versa* is probably merely a change of shape of the molecule from a dodecahedron to an icosahedron or the contrary.

MAGAZINES.

The Practitioner.—The current number of this publication is as interesting as usual. Its opening article is a carefully written account of the Schott method of treatment by Dr. John Broadbent, with remarks on the mode of action of the treatment by Sir William Broadbent. Following this is an eminently interesting article on the House in its Relation to the Prevention and Treatment of Disease. Unfortunately, though, as Dr. G. V. Poore, the author of the paper, remarks, his recommendations are mostly only possible when the house is surrounded by a certain amount of ground, and this in London is very difficult to obtain. Dr. Braithwaite writes interestingly about the relation between a lack of animal food and diseases of the female generative organs. The Medico-Literary Causerie deals with Medical Poets. Reviews, Notes of the Month, Pharmaceutical News, and abstracts from foreign journals complete the number.

Chapman's Magazine.—The latest addition to the number of monthly periodicals is a very notable one. Issued by the great publishing house of Chapman and Hall, under the able editorship of Mr. Oswald Crawford, *Chapman's Magazine* marks the beginning of a new era in periodicals. The contents are entirely fiction—dramatic fiction,—all eminently readable, and there are no illustrations. Mr. Bret Harte opens with the first instalment of a Californian story worthy of the creator of "M'liss," and Mr. Anthony Hope follows with four brilliant little social dialogues. Mr. Stanley Weyman contributes a little episode dealing with Henry of Navarre, and Mr. Brett a detective story which is exciting; but the deductions which the "country surgeon who made the post-mortem" draws are so comically warranted by what he is said to have found. Mr. James Payn has a good story of a ghostly "sell," and Mr. Frankfort Moore an amusing social sketch. The solitary lady contributor, Miss Violet Hunt, in the opening chapters of her serial, "A Hard Woman," fully bears out the good opinions she gained by her first novel, "The Maiden's Progress." Her light hand and delicate literary rhapsody-play are as conspicuous as ever.

The number ends with a poem by Mr. John Davidson. The get-up of the magazine is excellent in every way, and the cover artistic; only, if Mr. Crawford would induce his printer to fold the pages in a less exasperating way, it would be a relief to the reviewer who has to cut them; but the magazine is certainly a wonderful sixpennyworth.

The Contemporary Review.—The two most readable numbers in the *Contemporary* for this month are "Virgil in the Country," by the Countess Martinengo Cesaresco, an article redolent of the spirit of the Eclogues and Georgics, and Mrs. Fawcett's onslaught on Mr. Grant Allen and his "Woman Who Did." It is remorseless and extremely funny. There are, however, some grounds for Herminia being able to wait for her friend and compose her limbs after taking the poison. Death has been delayed after taking hydrocyanic acid for an hour and a quarter.¹ But Mr. Grant Allen's science is always a fine, free, careless rapture. He makes, in one of his earlier works, rattle-snakes come from India, and bacilli cultivations flourish best in the sunlight; but, then, a novelist, we suppose, may soar superior to natural law.

The New Science Review. April, 1895. London: Messrs. Gay and Bird.—This is the fourth number of the first volume of this new "miscellany of modern thought and discovery." It contains an excellent choice of philosophic subjects contributed by well-known writers and authorities. To give an idea of the range, we may allude to the admirably lucid article of Professor Crookes on the Elements, in which he summarises the present position of knowledge as to the nature of an element. What is an element, he asks, and how and where are we to draw the line? To which the only reply at present is: There are different grades in the elemental hierarchy, and different groups of the rarer elements are cited as shading off so imperceptibly into each other that no definite boundary can be found. This is followed by a very interesting posthumous paper—Autobiographical Notes—by the late Professor Richard Procter; while the remaining pages are devoted to such varied subjects as Genius, by W. G. Jordan; Where the Steamboat was Born, by Maggie Symington; The Ether and its Functions, by G. Fraser Fitzgerald, F.R.S., of Trinity College, Dublin; Changes in Spoken English, by A. B. Kingsbury; Electric Power Transmission, by Lieutenant F. Jarvis Patten; Hands as Indicative of Character, by "Cheiro"; Railroad Facts and Figures, by Melville Phillips; Operation of the Vibratory Circuit, by John W. Keely; The Veil Withdrawn, compiled by Mrs. Bloomfield Moore; Are Physical and Spiritual Energy Identical? by Mrs. Mary Parmelee; The Continuity of Life, by "Ormond." The contribution by Evelyn J. Hardy on Scientific Irritability is worthy of notice at the present moment, since it deals in a very fair spirit with the Muir-Dewar-Olszewski controversy on the question of priority in regard to the liquefaction of gases. Evidently Professor Dewar has a strong champion in this authoress. The unsigned article on the Unity of Life which follows is based on the work of Mr. Strindberg, "a man of literature," who "resinous product of oxygen, hydrogen, and carbon." We are by no means convinced that this is so by the arguments claims to have discovered that sulphur is a compound and a set forth; and for some time we were puzzled to know what the writer meant by alluding to the "destiny" of sulphur being 1.97. Of course it should be "density," but it is a bad slip for a scientific journal. It is clear that the review teems with subjects of the liveliest interest to the general scientific reader, and the matters dealt with are clothed in language which should be easily "understood of the people," not to say the "dabbler."

¹ Guy's Hospital Reports, 1868, p. 259.

THE LANCET.

LONDON: SATURDAY, MAY 11, 1895.

THE paper from the pen of Professor JOHN B. MURPHY which appeared in THE LANCET of April 27th has no doubt been very widely read. It is certainly a most important contribution to the discussion of a subject which deservedly excites a widespread interest. The tables of cases therein recorded afford striking evidence of the enormous strides that the surgery of the alimentary canal has made within the past few years. We believe we are well within the fact in saying that never before has such a list of cases been recorded—cases in which the gravest difficulties have been surmounted, partly by the exhibition of care and manipulative dexterity on the part of the operators, partly by the careful observance of the necessary precautions of aseptic or antiseptic surgery, but largely by the employment of the suture button which bears Professor MURPHY'S name. Intestinal anastomosis is an entirely modern procedure, but it so perfectly fulfills the indications in so many morbid conditions that it has naturally excited much interest, and many attempts have been made to perfect its technique. For, admittedly, the operation is one beset with special difficulties. The cases demanding it are often in a desperate state when coming under the surgeon's care, and a prolonged operation has often been the final drop in such patients' cups of ill. It has also been shown that the shock caused by manipulation of the intestine is altogether more severe than that induced by similar manipulation of the parietal peritoneum. The surgeon is therefore called upon to operate upon a part which is not well disposed towards operative interference, and upon patients who are themselves the worst of subjects for any operation at all. But, on the other hand, surgeons have proved by painful experience that intestinal anastomosis can only be successful when executed with the utmost nicety and precision. Many a case has been lost by the yielding of a single stitch, or by failure to secure the most exact and perfect apposition of the parts. The intestine, too, is the home of a virulent infective pyogenic organism, the bacillus coli communis, and failure to secure a perfect result only too often means certain death from infective peritonitis. This by no means covers all the practical difficulties in intestinal anastomosis: there are difficulties in diagnosis, difficulties caused by adhesions or other pathological conditions, and difficulties due to the great depth at which the manipulations have sometimes to be carried out; but those we have placed first are the two striking and essential difficulties that are met with in nearly every case alike.

The great aim of the surgeon has been to shorten the operation and at the same time to obtain perfect accuracy of apposition of the parts to be united. SMYTH'S name will always be honourably connected with this department of surgery, for he was among the first to grasp the essential features of the problem and to introduce a mechanical

appliance to meet them. He was followed by many others, who devised various modifications of his well-known decalcified bone plates—rings of catgut, bands of rubber, decalcified bone bobbins, and so forth. Then came a certain reaction against all such mechanical aids, and improved methods of direct suture—particularly MAUNSELL'S—promised to yield more satisfactory results. Following this we had from America a yet more complicated mechanical contrivance—the Murphy button, and to-day it holds the field. As Professor MURPHY'S paper indicates, it has now been largely tried by a great number of surgeons, especially in America and Great Britain, but also on the Continent of Europe. The consensus of opinion seems to be that it admirably fulfils the two primary requirements: it greatly shortens the operation, and by its use intestinal anastomosis can be made with great precision, and as a result the mortality of these operations has been greatly reduced. Against this most satisfactory result two facts may be mentioned as a set off. In the first place, the button is a rather complicated and very delicate piece of mechanism; it requires to be made very well, and to be used with gentleness and care. Again, the button, when set free by the separation of the rings of bowel compressed between the two portions of it, may linger for a very long time in the alimentary canal; but, so far, experience has shown that this retention of the button is not attended with danger. Too much weight must not be given to these objections to the use of the button. Simplicity of construction is to be diligently sought in all our appliances, and we doubt not that Professor MURPHY himself, or some other surgeon with a mechanical genius, will be able to devise some simple method of attaining the same mechanical result. Delicacy of mechanism is not a fatal objection, at most it is a remediable defect; and Professor MURPHY'S tables show that it is compatible with brilliant operative results. He has certainly succeeded in lifting this whole department of operative surgery—not one isolated operation merely—on to a different and better plane, and has given intestinal anastomosis a position in surgical therapeutics it has never held before. The paper by Mr. ERNEST LANE published in our columns last week, in which he recorded three cases in which he had used the Murphy button, fully supports our good opinion of this device, and he is able to add still more cases to those recorded by Professor MURPHY himself. No doubt the lists are by no means complete, and probably, as in most similar instances of a new operation or procedure, an undue proportion of successful cases have found their way into print. But this applies equally to all other methods of intestinal anastomosis, and in no way invalidates the comparison of the results of using the Murphy button with other modes of performing the operation.

One of Professor MURPHY'S "conclusions" is a very striking one, and if permanently borne out will be a most satisfactory one—namely, that the opening effected by his button does not become narrowed by the contraction of the cicatrix. This result has often followed upon the employment of other methods, and a satisfactory explanation of the different result when the button is used is

not forthcoming. In the meantime every care must be taken to test this statement, and if further experience fully bears it out it will afford another justification for the wider use of these admirable buttons.

It may seem to some that the Budget speech of the Chancellor of the Exchequer has no interest for medical practitioners. But this is a narrow view. Any such statement has direct interest for one of those professions whose quiet and modest incomes Mr. GOSCHEN was candid enough to confess were the object of his peculiar complacency and attention when he was in the office now held by Sir WILLIAM VERNON-HARCOURT. Even Sir W. VERNON-HARCOURT, who has been so anxious to extend the system of exemption to classes which can ill afford to be directly taxed, has not framed his exemptions to give any very practical relief to the large class of medical practitioners who are hardly worked and badly paid. But apart from the point that for another year at least we are doomed to pay the heavy demand of an income tax of eight pence, the Budget statement bristles with features and facts which are full of interest to all thoughtful citizens and to the members of the medical profession. Not the least interesting part of Sir W. VERNON-HARCOURT's performance on the Budget night was his solemn warning to all parties and to the public that the limits of taxation had been well-nigh reached. It is common enough for Chancellors of the Exchequer to preach economy, but there was an air of solemnity about the way in which the present occupant of that office used the occasion. Whatever may be the exact meaning of his mysterious remark that that was probably the last time he would be able to speak with his present responsibility on the subject, it will be remembered as a call on his successors and on politicians generally to cultivate the excellent quality of economy. The facts that the public revenue is now about double what it was fifty years ago and that in the last two years something like six millions have been added to the expenditure may well make Chancellors of the Exchequer pause and payers of the taxes tremble. We cheerfully admit that we get value received in many ways for the money in better local government, in education, in sanitation, and in a more effective protection of our empire by land and sea; but Sir W. VERNON-HARCOURT's remark is true: "The limit of tolerable taxation has been nearly reached." We say this with only too much right. We pay taxes heavily out of incomes that are hardly earned and that are generally inadequate to support the dignity of a learned and laborious profession—and one, be it added, which takes but little from the public purse. Out of the prodigious expenditure of a hundred millions no member of our profession connected with the service of the State receives a salary that would reward a third-rate lawyer who serves his party as if it were his country. If we may not hope for the recognition and reward of labour that adds immensely to the welfare and happiness of the State, we may at any rate claim to keep statesmen to the memory of Sir W. VERNON-HARCOURT's words, that the limits of tolerable taxation have been reached.

The essential features of the Budget are simple and not unsatisfactory. The calculations of the permanent officials of the Inland Revenue Department for the past year have reached the perfection almost of astronomical ones, and reflect high credit on that body of officials. Here it is not unfitting to say that if our public servants multiply on every hand, and in some departments receive salaries that appear large when compared with the more precarious incomes of private individuals, we are well rewarded in the character and capability of the men that guide successive generations of statesmen. The requirements of the Governments have been more than met, and a surplus of £766,000 realised and appropriated to a sinking fund. Every evidence of the substantial comfort and competence of the great body of the people was given by the Chancellor of the Exchequer, notably in the increased consumption of tea, of tobacco, and of cocoa; and in the increase of deposits in savings banks and in other ways, so that the accumulated savings of the humbler classes now amount to the enormous sum of £240,000,000. Mr. GIFFEN's great authority was quoted by the Chancellor to show that the year 1894, when all comfortable people were more or less forced to practise economy, was the most prosperous year the working classes have ever had. A striking proof of this was given in the fact that, whereas in the prosperous year 1890 the increase in the deposits of the savings banks was less than £1,000,000, in 1894 it was £7,000,000. Another proof scarcely less striking of the well-doing of the people is found in the increased consumption of meat, which has grown from 101.4 lb. in 1887-89 to 121.8 lb. per head in 1891-93. Of course, the real improvement of the people is not determined merely by the amount of tea they consume or even of meat; but there are indications, together with the accumulating savings, of real progress, of comfort, and of thrift, which cannot but be regarded with pleasure and which mere pessimists should lay to heart. The receipts of the Treasury having been so satisfactory it would have been unnecessary to impose any new taxation but for the fact that the extra spirit and beer duties lapse in July next and if not renewed would leave for the coming year a deficit of £319,000. To meet this the Chancellor had to choose between renewing the extra duty on spirits or the extra duty on beer. He entered into no disquisition on the relative merits of these drinks or their relative dangers, as might have been expected in one so keenly alive to the evils of the drink trade, but he decided to renew the tax on beer and not to renew the spirit duties. The choice has been criticised from various points of view and was associated with some possibilities of political and party advantage to which cynical politicians did not fail to ascribe a determining influence. However this may be, the choice was a questionable one from a medical and a moral standpoint. Both liquors are sure to be drunk in sufficiently large quantities, but the favour shown to spirits by one who boasts that he is a temperance reformer is curious. The new death duties have satisfied their author's expectations, though 75,000 persons who should have contributed to them have been unkind enough to live on. Evidently, rich men will have a greater

interest than ever in consulting their medical advisers, if for no other reason than the pleasure of disappointing the Chancellor of the Exchequer.

ALTHOUGH hospitals were not unknown before the Christian era—for we read of great monastic institutions during the spread of Buddhism in India 400 years before that era and of great public hospitals and schools of medicine, science, and law established in connexion with them by merciful Buddhist emperors—there can be no doubt that the development of hospitals and the succour of the sick and injured received an enormous impetus from the introduction of Christianity and the religious and moral principles it inculcated. During the plague in France there was a great addition to hospitals, and to isolation hospitals in particular, which were placed outside the towns; but institutions for the isolation of infectious diseases—fever hospitals—are a comparatively modern creation designed to meet the needs and requirements of our most modern systems of civilisation. They have now become quite a feature in the land, and many of them have been developed with an elaboration of care and comfort that leaves little to be desired. To indicate the extent to which this system has grown and developed of late years we may point to a voluminous Blue-book of 555 pages that has just been published and laid before the House of Commons regarding the accommodation for infectious diseases provided in sanitary districts of England and Wales. This volume gives a large amount of detailed information grouped together and tabulated in the form of a huge return, showing the area and population according to the last census of every urban and rural sanitary district, and also showing, as regards every such district and every port sanitary district in England and Wales, whether the sanitary authority had made special provision for the accommodation of cases of infectious disease, together with a large number of particulars as to the size of the population; the cost of the site and hospital buildings; the number of beds; the number of cases admitted and treated during each of the five years from 1888 to 1892 inclusive; and the annual cost of maintenance, as well as the arrangements for medical attendance, ambulance systems, and methods of disinfection in use. Before long this country will be covered with a network, as it were, of these institutions, varying in size and character according to the extent and nature of the different populations to be provided for. It becomes, therefore, a matter of vast importance to the community, on the grounds of efficiency and economy, that not only public health officers but the public generally should at any rate be acquainted with the objects in view of such hospitals and the general principles of their construction and working in view of their attainment. We all want to see efficiency, but it strikes us that with a rapid increase of expenditure every year, and the diminished incomes of the classes upon whom rates and taxes already press heavily and disproportionately, the question of finance is of increasing importance, and that architectural effect must altogether give way to what is really essential and necessary. Several excellent books and articles

have been published on the subject of hospitals for infectious disease, in addition to the Sanitary Act and the memoranda issued by the Local Government Board and the Metropolitan Asylums Board. But we desire now to call special attention to an article on Fever Hospitals by Mr. T. W. ALDWINCKLE and the discussion thereon published in the *Journal of British Architects* for February, 1895, in which our readers will find the question thoroughly debated and considered. Hospitals for infectious disease are divided into three kinds—viz., small isolation hospitals for villages or groups of villages, hospitals not exceeding 100 beds, and those for much larger numbers. The size, construction, cost per bed, and special features connected with numerous hospitals of this kind in this country and abroad are passed in review and illustrated by plans, and some points connected with the experience and practical results of various methods of administration and working are adverted to in their bearing upon the construction of ward blocks, ward offices, furniture and appliances, drainage, administration buildings, laundries, and numerous other matters more or less essential, or highly desirable, in institutions of this kind. The printed plans include some of the latest hospital constructions in the metropolitan area. The latest design is given of the large fever hospital projected by the Metropolitan Asylums Board, now in the course of erection—viz., the Brook Fever Hospital, Shooter's Hill—of which Mr. T. W. ALDWINCKLE is the architect. The plan seems to us very good and complete, and may be usefully consulted by those who are projecting or building hospitals of this character.

We had intended to go into the subject more fully than we have done in relation to several points of a more or less disputed or contentious character, such as the proper hygienic limits as to the size of a fever hospital, its site and distance from town, ground area, the provision or not of outside connecting corridors or covered ways, the width of wards in relation to their height, and other matters of the kind; but we find it impossible to discuss these within the limits of our present article. Our readers will, however, we feel sure, be grateful to us for directing their attention in the meantime to the paper on this subject in the above-mentioned journal.

Annotations.

"Ne quid nimis."

THE ROYAL SOCIETY.

AMONG the fifteen names selected by the Council of the Royal Society for election into the Society are those of three members of the medical profession: Dr. William Macewen, Regius Professor of Surgery of the University of Glasgow; Dr. Sidney Martin, Assistant Physician to University College Hospital; and Mr. W. H. Power of the Medical Department of the Local Government Board. We feel sure that this selection will meet with general approval, each of these gentlemen being fully worthy of the blue riband by achievements in different departments of medical science. Professor Macewen's fame as an exponent of cerebral surgery and a pioneer in that and other branches of surgical science and art is too well known to need

recapitulation. Dr. Sidney Martin holds a foremost position as an experimental pathologist and physiologist; his researches upon anthrax, diphtheria, and tuberculosis, which have considerably extended our knowledge of some of the deepest problems, have given him a position in the foremost rank of investigators. It is work of this class, strictly original and scientific, which the Royal Society does well to honour. Mr. W. H. Power has also fully earned the distinction of being admitted into the ranks of the Society. His contributions to epidemiology, undertaken during his long period of service at the Local Government Board, have been throughout marked by the scientific spirit. They are too numerous to mention in detail, but it is certain that no discussion of the etiology of such diseases as diphtheria, enteric fever, scarlet fever, or small-pox can be complete without reference to his important and exhaustive studies of epidemics of these diseases.

"HYPNOTISM" EXPOSED?

A CERTAIN well-known *prestidigitateur* whilst performing a particular piece of sleight of hand used to tell his audience that he would take them into his confidence and explain to them the *modus operandi*. "There are several ways of doing it," he would say; "some do it one way and some another, but I have no objection to telling you—strictly in confidence, mind—that I do it the other way." This in effect was exactly what Mr. Dale told a private audience who assembled in the South London Music-hall on Saturday last to witness "a complete exposure of the supposed hypnotic trances." At the outset Mr. Dale said he was going to prove that he could do to his subjects in the waking state exactly what so-called hypnotists could do to their subjects while entranced. In response to a request that some medical men should closely watch the proceedings two gentlemen took up a position on the platform. Two subjects (male and female) were then introduced, who placed themselves upon improvised beds consisting of boards resting upon trestles and covered with some kind of drapery. A "professional hypnotist" then entranced the subjects, and their insensibility to pain was tested by thrusting a large darning-needle through the arm. They were then awakened, and Mr. Dale proceeded to thrust a needle through one of their arms, while one of the medical gentlemen did the same in the case of the other. Neither subject showed any evidence of feeling pain, and in the case of the lady there was no blood drawn, but in the case of the male subject a little blood showed itself. The "Professor" now came forward and triumphantly stated that he had proved his case—namely, that hypnotism was a sham. To this there were cries of, "You have proved nothing," and a running fire of questions and answers between the *dramatis personæ* and the audience was kept up for some time. The replies of the former were, however, very incoherent, and no direct answer could be got from either of the subjects as to whether in the first instance they were only shamming sleep or whether they were really hypnotised. The "hypnotic professor" stated that up till now he believed that the subjects were under his control, and even now to a certain extent he believed that to be the case. He expressed his surprise, however, at what he had seen. The lady stated that she was hypnotised "to a certain extent," and "to a certain extent" she knew what was passing around her, and that her hearing "was intensified." Many questions were put, but the now stereotyped answer "to an extent" or "to a certain extent" was all that could be elicited. A Mr. Marshall was now brought forward, and stated that he was one of the subjects entranced at a recent exhibition of this kind. The trance was only a sham, however. The medical men were here invited to run a needle through Marshall's lip, but they very

wisely declined to have anything to do with it. Mr. Dale then thrust a needle through the lower lip of the subject, others through either ear, and six needles were hammered into the top of the skull, the subject afterwards coming among the audience and conversing with them with the needles *in situ*. We can only express our strong disapproval of the exhibition, not only because we hear it is to be continued, but because it proved absolutely nothing and the cause of science was not in any way advanced. Granting the existence of the hypnotic state, about which there can be little doubt, no proof was adduced to show that the subjects on Saturday were not still under control, although apparently possessing their own consciousness. This is, however, a theory we are not inclined to accept, although some colour is lent to it by the fact that a gentleman in the audience who wished to apply some tests in this connexion was rudely told that no one but a medical man would be allowed to touch the subjects. The most probable explanation of the phenomena is one that did not seem to suggest itself to the audience, and even if it had we do not see how it could have been proved under the existing conditions. We refer to local anaesthesia, however induced. The explanation of the subjects themselves is that they are trained to bear pain. This, however, we doubt. Had the needle been applied to other parts of the body the subjects might have told a different tale. Those who are acquainted with sleight of hand well know how easy it is in many cases to make a person do exactly what you want him to do while he is under the belief that he is doing exactly the opposite, and this struck us particularly while the arm was being offered and the needle presented for insertion. Exhibitions of insensibility to pain in the waking state are by no means new, for we remember that a year or so ago there was a performer in London who belonged or claimed to belong to the sect of the *Aissoua*. This man, after going through sundry incantations, stuck needles through his arms, a skewer through his tongue, and another under the skin of the abdomen without showing any signs of pain. Such exhibitions are as degrading as they are senseless, and the only possible object they can serve is to make prominent the morbid taste of the public who witness them.

ALLEGED SUICIDE BY STRYCHNIA POISONING.

IF we are correctly informed of the facts we do not hesitate to say that the proceedings at an inquest recently held in Yorkshire were very unusual. It is alleged that the wife of an innkeeper took the greater part of a "mouse powder" containing two and a half grains of strychnia. From the report furnished to us the only direct evidence on the point consisted of an admission of the deceased woman to her servant, emphasised as it was by a request that the maid should procure some linen wherewith "to lay her out, as she had taken poison." The powder is said to have been taken at 11.30 A.M. An injection of apomorphia given at 1 P.M. acted freely. At 2.30 P.M. there were no symptoms of poisoning, but shortly afterwards "characteristic spasms" were observed. The spasms gave way to morphia and chloroform inhalation at 8 P.M. The deceased was comfortable at 11 P.M. and also at 8 A.M. on the following day. Death occurred suddenly three hours and a half later. The deceased is said to have had frequent fits of heavy spirit drinking, and to have suffered at times from alarming cardiac failure. There seems little reason to doubt that strychnia was ingested, and that in a not inconsiderable measure it was accountable for the fatal issue, although the proximate cause of death was an attack of syncope, a not unlikely result of exhausting spasm in a person with the aforesaid antecedents. No medical evidence was called, although it was suggested by the jury.

Eventually a verdict was returned that deceased died from poison taken by herself while in full possession of her senses, and in consequence her body had not the customary rites of Christian burial. Although there was a high degree of probability that poison was taken, there seems to us to have been wanting that corroborative testimony which should be forthcoming to warrant a verdict of *felo de se*, and notably in the case of one addicted to alcoholic intemperance. Moreover, the deceased is said to have had some words with her husband because he remonstrated with her on the ground of her "besetting sin." If such was the fact, what is more likely than that she took the poison in an outburst of passion, her mind taking no cognisance of "right and wrong," and thus leaving her unanswerable for the act and irresponsible for the crime of wilful suicide? Although three medical men saw her during her last illness not one was called to testify (1) that poison had been taken, (2) that death resulted from poison, and (3) as to the mental condition of deceased. Fortunately, nowadays coroners' juries are lenient in their findings as regards the responsibility of suicides, holding the charitable view in the absence of strong proof to the contrary that the very act of self-effacement is in itself sufficient testimony of "temporary insanity." Such a procedure not only leaves the memory of the deceased free from the stain of an offence forbidden by God and man, but inflicts the least painful consequences on surviving relatives and friends.

THE CHITRAL EXPEDITION.

We do not think that people in this country and India were altogether prepared for the exhibition of promptitude in mobilisation and the skill, daring, and gallantry with which the Chitral expedition has been designed and executed by our European and native forces. We are so accustomed to decry our own military systems, and to dwell upon our unpreparedness and defects and draw an unfavourable contrast between ourselves and Continental Powers in these respects, that the spirit and boldness with which the Chitral affair has been conducted have compelled our admiration, and have not been altogether unmixed with pleasurable surprise. The material composing our British and Indian armies is splendid, and the fine qualities of our soldiers have never been better exhibited than on the present occasion. The physical and topographical difficulties were immense, and the enterprising work of the sappers in constructing bridges and works of a similar kind has been very hard. The marches undertaken by the troops have been long and very arduous. The special correspondent of the *Standard* tells us that a company of the Gordon Highlanders undertook a double march of twenty-six miles over a very bad road, and did it in ten hours, arriving in excellent form and spirits, ready to fight, if necessary, at the end of it. The force that left Nowshera have been bivouacking during the whole of the campaign with 16 lb. of kit for the men and 40 lb. for the officers. "How little," the correspondent adds, "this is you only find out when you come to try to get on with it." The men, he goes on to say, have nothing but two blankets, a waterproof sheet, a pair of socks, and a shirt. They form little parties of three; with two sheets supported by sticks they make a *tent d'abri*, placing the third upon the ground to sleep upon. Officers have commonly furnished themselves with small waterproof tents, weighing about 12 lb., and with some bedding, a change of clothes, and possibly a book they find that the allowed 40 lb. of baggage are soon reached. The weather is fine and the force is wonderfully cheerful and healthy. Considering the climate at this season, the rivers, valleys, and passes that have to be crossed, the extreme diurnal variations of temperature and those of different altitudes, the fortitude and endurance of the troops with their small amount of field kit are remarkable. But the

Indian forces are more or less accustomed and inured to this sort of thing, and hardships which in expeditions nearer home would be made much of are there taken as a matter of course and as incidental to campaigning in a mountainous country. The progress which has been made by the Indian Government in its military department since the last Afghan war in army reorganisation and field service is marked. It is gratifying to hear that the good work performed by the medical services has been generally recognised, and still more so that the great merits of Surgeon-Major Robertson and the conspicuous gallantry and devotion of Surgeon-Captain Whitchurch are thoroughly appreciated by all those who had the best opportunities of knowing what they have been.

A TRIBUTE TO SANITARY SCIENCE.

It is not often that ratepayers or their representatives are willing to admit that any benefits accrue from the expenditure of money on sanitary matters. When such testimony does occur, it is well to place it on record, so that others may follow the example. At the annual meeting of the ratepayers to transact business in reference to the Wigan Burial Board it was shown by the return of the clerk to the Board that the interments for 1894-95 had decreased by 236, and Mr. Councillor Ashton, in moving that the accounts be passed, is reported to have said: "He was gratified at the reduction in the number of interments, and he was sure the Sanitary Committee would feel that the money spent on sanitary matters had not been expended in vain. People grumbled at the money spent on sanitary improvements, but it spoke well for those improvements when, considering that the population was going up and they had passed through such a severe winter, there was a decrease in the number of burials."

THE COOKERY AND FOOD EXHIBITION.

THE eighth Universal Cookery and Food Exhibition, which was opened at the Portman Rooms, Baker-street, London, on Tuesday, May 7th, by Prince Edward of Saxe-Weimar, K.C.B., shows a marked improvement both in extent and quality on the previous exhibitions held under the auspices of the Universal Cookery and Food Association. As his Highness pointed out, the art of cookery is one upon which the health and comfort of the people depend, but we fear the attention which its importance merits is not accorded to the art in England. Indeed, as the Chairman, Mr. J. B. Buckmaster, said, if there is one art which has been neglected in the education of the people, especially among women, it is the proper management of the house, and this, of course, includes the proper preparation of food. He also gives it as his opinion that there is no place in the world where good food can be obtained so cheaply as in London, but this advantage is often lost for want of knowledge. In every household, whether rich or poor, the preparation of food is a necessity, and in proportion as this is done on hygienic principles will the health of the people be benefited. The object of the present exhibition, like that of its predecessors, is to spread a knowledge of the various substances used as food and to teach the best and most economical methods of preparing them for the table. Every kind of cooking, from that suited to the elementary school-girl of ten years of age to the most refined and artistic productions demanded by the epicure, is to be found among the exhibits; and practical object lessons and theoretical lectures are given each day of the week during which the exhibition remains open. Cookery for invalids and artisans is well represented, and the illustration of the new and improved system of cookery as introduced into the army should prove useful to all interested in the preparation of food on the most economical scale. In this

system prominence is given to the proper use of the stock-pot and the dripping-pan, two important processes in the preparation of cheap dishes, but the former is almost unknown amongst the poor, at any rate in England, and the latter, although represented by the frying-pan, is not at all understood. The economy of the system is easily demonstrated by the fact that three good meals per diem can be supplied for less than ninepence. To-day (Friday) the exhibition will close, and from one to three o'clock there will be a demonstration of army cooking and high-class cooking competitions, besides other attractions of a similar kind. Apart from its benevolent object in attempting to improve the domestic life of the people, the exhibition is well worthy of support, as the proceeds will be devoted to providing free dinners for poor children. On previous occasions various hospitals and benevolent institutions have benefited.

MEDICAL TESTIMONY BY A MIDWIFE.

IN another part of our present issue we draw attention to an inquest in which, in our opinion, medical evidence should have been called. On April 30th the county coroner held an inquiry at the Alexandra Hotel, Moss Side, into the cause of death of a male infant whose body was found in an ash-pit. A contemporary reports that the body was examined by a midwife, who was of opinion that the infant had not breathed after it was born; and it seems that upon this evidence the jury returned a verdict of "stillbirth," since there is no mention in the report that a medical man was consulted. We can imagine no other case where it is more necessary that the most competent opinion should be taken as to the cause of death, not only to establish the fact, but in view of a possible criminal charge, whether it be of concealment of birth or the graver offence of murder. The verdict of the coroner's jury in this case practically amounts to a bar against further inquiry, since it embodied the statement that the infant had not breathed after it was born. We trust that our information is incorrect or at least partial, for otherwise we cannot avoid the conclusion that a miscarriage of justice may have obtained.

A NOTIFICATION PROSECUTION.

ALTHOUGH dual notification is by no means a dead letter it is not at the present time carried out in the spirit contemplated by the Act. From time to time, however, instances arise which forcibly illustrate the importance of insisting on notification by the head of the family or nearest relative in cases where there is no medical man in attendance; and proceedings which have just been brought by the Aston Urban District Council against a householder for failure to notify is a good case in point. In this instance it seems doubtful if the defendant would ever have been brought to justice had not a notification been received at Aston from the medical officer of health of Brighton to the effect that a man, formerly a lodger in the defendant's house, had developed small-pox at Brighton. The defendant's wife, upon being interviewed by the deputy medical officer of health of Aston, stated that she let apartments and carried on a confectionery and milk-selling business. This woman further admitted that she had had a rash on her own body and that her daughter, aged seventeen, had had small-pox. The disease, she said, had not been notified owing to the damage which it was anticipated might thereby accrue to the business; her daughter, it appears, had been housed in an attic during her attack. This certainly seems a very gross case, and no plea of ignorance of the nature of the disease or responsibilities under the Notification Act was urged. It is indeed a matter of congratulation that in spite of the sale of confectionery and milk being continued no extension of the disease took place, and a fine of £1 and

costs seems a very lenient penalty for the negligence of the defendant in failing to notify. There also appears to have been in this case serious neglect on the part of the defendant in not calling in medical assistance. The report which has reached us does not enter into all the details, but doubtless Mr. H. May, the medical officer of health of Aston will furnish a full account of it in his next annual report.

UNIVERSITY OF LONDON.

A MEETING of Convocation will be held at the University Building in Burlington-gardens, on Tuesday next, at 5 P.M., when Mr. Bompas will move that the resolutions of Jan. 22nd, which affirmed the principle of one university for London and the reconstruction of the existing University, be rescinded. The decisions of the graduates will no doubt be largely influenced by the Bill which was introduced by Lord Playfair on behalf of the Government into the House of Lords on Thursday last.

SIR JOHN SIMON AND THE GENERAL MEDICAL COUNCIL.

WE regret to have to confirm the rumours that Sir John Simon has felt bound to resign his seat as one of the Crown members of the General Medical Council. Such a step has been only too likely for some time past. For one or two sessions Sir John Simon has been able to attend only with difficulty and with considerable effort and inconvenience. No member will be more missed than he, his judgment and authority in the class of questions which come before the Council being recognised on all sides. Sir John Simon may comfort himself with the reflection that he leaves his mark on such subjects, whether affecting the education or the discipline of the profession.

AN APPEAL FOR A MEDICAL MISSIONARY.

THE Archbishop of Canterbury's mission to the Assyrian Christians is in sore need of a medical missionary. The headquarters of the mission are at Urmi in Persia, but there is also a station at Qadshania, in the Kurdistan Mountains in Turkey. Any medical man willing to accept the post should be unmarried, for the life is somewhat rough. He will have expenses for his journey's outfit paid and will receive £25 a year. Board and lodging are provided free. In addition to this the Guild of St. Luke offers £100 a year. The practice would comprise ordinary medicine and surgery, a good deal of eye work, and sundry local fevers, together with occasional military surgery from chance encounters with Kurds. The climate is pleasant and healthy, horses are cheap, and food is good.

THE REGISTRATION OF MILKMEN.

THE control of the milk traffic is a subject which is daily receiving more and more attention at the hands of the public, and the recent report of the Royal Commission on Tuberculosis, more especially that part of it referring to circumstances determining danger from milk, will, we imagine, tend materially to the more rigid inspection of milch cows, to consideration of the conditions under which these animals are housed, and to the withdrawal from dairies of any cows with diseased udders. It will too, we trust, lead to a better observance of the Dairies, Cowsheds, and Milkshops Order, and to a more general adoption of the Infectious Disease Prevention Act in the provinces. As far as the metropolis itself is concerned, we note in the above connexion that the Metropolitan Dairymen's Society has submitted a proposal for the consideration of the London County Council that "it be provided that every person who vends milk in the streets or delivers the same at any house shall be required to wear a

metal badge denoting the licensed dairy from which the milk is supplied, and that all cans and receptacles used for the purpose of the trade for the conveyance or sale of skim or separated milk shall be clearly labeled to this effect with inch letters in brass on the can or receptacle, or on a canvas label attached thereto." It would certainly seem that some such identification as is here indicated would have the effect of enabling milk purchased in the street to be traced with greater facility than at present—that is to say, if the milk purchasers would take the trouble to observe the badge; and it might also afford to the public a better means of obtaining that for which they ask and pay.

THE OPIUM COMMISSION.

SIR JOSEPH PEASE is evidently not satisfied with the results which have been arrived at by the Royal Commission and which are published in their report regarding the opium traffic, for he is about to move a resolution in the House of Commons on the subject on the 24th inst. He regards the system—and hopes, of course, to carry the House with him—by which the Indian opium revenue is raised as morally indefensible, and urges that the Indian Government should cease to grant licences for the cultivation of the poppy and sale of opium except for strictly medical purposes, and that the Government should prevent the transit of Malwa opium through British territory. Our readers will find in the *Times* of the 7th inst. an article on Indian Affairs which is mainly devoted to the subject of opium and the results of the late investigation by the Royal Commission. Reference is made to the able communications which appeared in that journal in 1881–82 from Sir George Birdwood on the physiological aspect of the question and the ascertained effects of opium as used in India on the brain, the body generally, on moral character, and also on crime returns. The results were based upon the intelligent observation and experience of an impartially-minded authority; and the Royal Commission, after examining 700 witnesses and thoroughly considering the matter, has confirmed Sir George Birdwood's observations. The weight of evidence—that of medical men, missionaries, natives of India, and officials—was such as to have carried conviction to the minds of the Commissioners, as it has probably to those of most unbiased people. We shall, nevertheless, await the course and result of the discussion of Sir Joseph Pease's resolution with some interest and curiosity, if only to see what fresh evidence the anti-opium party can adduce.

THE ABERNETHIAN SOCIETY.

THE centenary of this society was celebrated by a conversation in the Great Hall and Medical School of St. Bartholomew's Hospital on the evening of May 1st, and was attended by a large number of members of the staff, lecturers, and past and present students. There were also present some well-known members of the staffs of other hospitals. The Presidents, Dr. Maddow and Mr. E. W. Cross, received the visitors in the Great Hall, in which there was an exhibition of letters, instruments, and other objects of interest in connexion with Mr. Abernethy lent for the occasion by Mr. Alfred Willett, Dr. A. Davis, Mr. Jeaffreson, and others. In this hall there was also an exhibition of New Zealand weapons &c. lent by Mr. James Berry and Mr. J. S. Mackintosh. At 9 P.M. Dr. Norman Moore gave a lecture on the History of the Abernethian Society, and at 10 P.M. Dr. Kanthack gave a lantern demonstration of Photo-micrographs of Bacteria. Drs. Ekins, Bowman, Klein, Fletcher, and Jones, and others exhibited microscopical sections and other objects of interest in the lecture theatres and laboratories, and there were surgical instruments by various makers on view in the anatomical demonstration room, where microscopes and ambulance appliances were also shown. Dr. Lewis Jones

showed a series of vacuum tube experiments to illustrate the phosphorescence of many bodies under the action of the electric spark, and also an apparatus giving high-frequency discharges at high potentials to show the striking effects first brought forward by Tesla and by d'Arsonval, such as the illumination of vacuum tubes without electrodes, and the glowing of bulbs held in the experimenter's hand or in proximity to the apparatus. Visitors also had the opportunity of testing for themselves the small physiological effect of the discharges of the high-frequency coil by closing the circuit through their arms, and of seeing the remarkable experiment of an incandescent lamp glowing brightly between the hands of two persons whose bodies conveyed the current supplying the lamp without feeling any painful effects. The members of the St. Bartholomew's Hospital Musical Society sang glees in the Library, and were followed by the members of the Dramatic Club of the hospital, who played the farce "A Regular Fix." The committee are to be congratulated on the results of their efforts to make this centenary a success.

THE USE OF ALCOHOL IN HOSPITALS.

DR. GAIRDNER'S influence in the abatement of indiscreet alcoholic stimulation in disease is well known, dating from his classical paper published in THE LANCET of March 12th, 1864, to which—as we remember with pleasure—we endeavoured to do sympathetic justice in THE LANCET of March 26th of the same year. Dr. Gairdner's article referred chiefly to the use of alcohol in typhus fever, of which he had quite an exceptional experience in the Glasgow Fever Hospital. Dr. Gairdner is evidently still interested in this great question. The *Glasgow Herald* of May 7th contains a letter from him commenting on a leading article in that journal of the preceding day on the consumption of alcohol in workhouses, which was based on a recent report to the Home Office. The interest of Dr. Gairdner's letter lies in its reference to the medical use of alcohol in a general infirmary of the first class—the Western Infirmary of Glasgow, of which Dr. Gairdner is one of the physicians. Doubt and disappointment are sometimes expressed by those who have the means of seeing much of the drunkenness of Scotland. But whatever the case as to the social and personal use of alcohol the following figures show that in the treatment of grave general disease, as seen in the Western Infirmary, its use is very limited indeed. The infirmary contains 400 beds. The following facts as to last year's bill for alcohol have been supplied to Dr. Gairdner by the superintendent: Port wine, £12; claret, 18s. 6d.; champagne, £8 9s. 0d.; brandy, £38 12s. 0d.; whisky, £61 4s. 0d.; gin, £1 14s. 0d.; malt liquors, £14 16s. 0d.: total, £137 13s. 6d. We need scarcely say that there is no interference—as these facts show—with the full discretion of the medical staff in the use of this medicine, any more than in the use of others. There can be little doubt that in all hospitals great care in the use of alcohol is shown. Dr. Gairdner's letter and facts will tend to confirm this.

IS AN ARMY SURGEON A MILITARY OFFICER?

MOST people probably would say that such a question was superfluous—that a gentleman holding Her Majesty's commission in the army must necessarily be a military officer; but apparently His Royal Highness the Commander-in-Chief is of another mind in the matter. When returning thanks for the Army at the Royal Academy banquet the Duke of Cambridge is reported to have said: "Your President has told us the men of the army are made of the same stuff as their predecessors. In proof of this I have only to refer to the gallant conduct of those distinguished officers Sir Robert Low and Colonel Kelly, and of that brave civilian Dr. Robertson.

(Cheers.)" Had this invidious distinction proceeded from almost any other quarter we should willingly have passed it by unnoticed; but coming from the source it does we can only enter a protest as warm as our respect for the well-nigh life-long services of the Commander-in-Chief will admit. Surgeon-Major Robertson is no more a civilian than are General Low and Colonel Kelly, or for that matter the Commander-in-Chief himself. We should have thought that the occasion afforded a singularly fitting opportunity for the utterance of a few well-chosen encomiums by the chief officer in the British army; but such well-deserved encouragement is too often conspicuous by its absence from any speech of His Royal Highness when the good services of military surgeons are in question. We are perfectly well aware that Surgeon-Major Robertson was employed at Chitral in a so-called civil capacity—we have yet to learn that his position deprived him of his rank as a military officer.

DIPHTHERIA IN LONDON.

FATAL diphtheria in London still maintains itself at what seems likely to be a normal height, the deaths registered in the last two weeks being respectively 27 (2 below the corrected average for the preceding ten similar weeks) and 29 (corresponding to that average). During the four weeks of three successive months the deaths have been: in February, 121; in March, 116; and in April, 107; a continuous improvement it is true, but not of any striking character. The notifications in the four weeks ended April 27th were 562 in the whole metropolis, only reaching and exceeding 10 in two sanitary areas, the case mortality being just a fraction under 20 per cent.; while in the succeeding fortnight the 300 notifications and 56 deaths yield a per case mortality of just below 19 per cent. Thus, diphtheria would not appear to be decreasing in actual amount, even if it be not quite so fatal. Of the 300 notified attacks mentioned, only 149 were removed to hospital; and the numbers of patients remaining under isolation have in the last four weeks been respectively 435, 441, 432, and last Saturday 457. Of the 56 deaths in the last fortnight, 41 were in children aged between one and five years. In this same period there were 23 deaths registered in Greater London, including 9 in West Ham and 4 in Edmonton districts.

THE TREATMENT OF PUBLIC DRUNKENNESS.

THE drunk and incapable are at all times more or less indebted to the attentions of the police, but for whose timely help fate would sometimes deal hardly with the semiconscious toper. In the modes of its expression, however, this care is liable to somewhat striking variations. Among ourselves there is apt to be too little regard for ceremony or even for necessary precaution. Elsewhere the error in judgment pursues an opposite course. A contemporary reminds us of the Danish method. This appears to be regulated by the principle of like to like, and accordingly treats the drunken in an almost indulgent manner and the sober with some rigour. The inebriate journeys in a cab to the police station, is there detained, and again driven home when free from the effects of drink. Cabman, constable, and surgeon have all in the meantime to exert themselves for the poor sot, and the bill of their united charges is presented to the publican whom he last visited. It is easy to see that errors and fallacies may readily arise out of this system, in which method surely is overdone, and the penalties of indulgence are exceeded by the labours of commiseration. A simpler plan should serve all useful purposes. The necessary points of procedure in such cases, we consider, should consist of a preliminary examination on the spot by the constable on duty, who must have some know-

ledge of ambulance work, this primary survey to be supplemented in cases of doubt or difficulty by a regular examination by the police-surgeon. Particular care should be taken to prevent avoidable exposure in the police cell, and in this direction there is still room for improvement. The charge made upon the publican, though no doubt liable more or less to misapplication, is not necessarily an unjust one. Two persons must concur in the offence of drunkenness; one who commits it and suffers by it and yet makes no amends, and another who aids and abets and is enriched by him. Both parties in our opinion owe some compensation to social decency.

NATIONAL SCHOOL CLOAK-ROOMS AS INCUBATION CHAMBERS.

A NEW YORK medical man has, it appears, been expressing his opinion that the outer clothing of public school children is one of the most active sources of the spread of infectious disease, and although his remarks apply in the first instance to America they are not without application to our own country. It is pointed out that the hanging up of wet and dry clothing, some of which may have come from infected houses, in juxtaposition in ill-ventilated and crowded cloak-rooms is a proceeding which lends itself to the growth and multiplication of micro-organisms. We are told that in America the clothing is sometimes hung in the school-room itself, and that the "wardrobe-room," where the outer clothing is usually deposited, is at times utilised as an extra recitation-room. The suggestion is made that the cloak-room should be thoroughly ventilated—and, we would add, well lighted—and that arrangements should be made for drying the children's clothes in wet weather. Without entirely subscribing to the sentiments above expressed, it must be admitted that considerable improvement might be made in our own country in the matter of cloak-room accommodation, and that, as far as possible, the clothing of each child should be free from immediate contact with that of others. The amount of outer clothing which the children of the poorer classes wear is frequently somewhat astonishing to persons differently brought up, and although the lengthy exposure, often in very inclement weather, which school attendance necessitates renders the careful clothing of children a subject of paramount importance, nevertheless it would seem to us that this object might often be attained with equal economy by fewer and better selected garments.

THE BELPER GUARDIANS AND ISOLATION.

AN interesting instance of the want of method and accommodation for dealing with infectious disease which still obtains in some districts has lately been witnessed in the Belper Union of Derbyshire. A case of small-pox occurred in the Alfreton urban sanitary district, which is situated in the union in question, and the patient, being attended by the district medical officer, was sent by him to the workhouse infirmary and conveyed there in an open cart by the sanitary inspector to the Alfreton Urban Council. On arrival the patient was isolated in the tramp wards, which were, it appears, converted into a temporary small-pox hospital. The Belper guardians are in a state of real indignation at a patient being brought from "one sanitary district to another," and they have passed a resolution that "the master have most imperative orders not to admit into the workhouse any person suffering from any dangerous or infectious disease and that notice be sent to the clerk of each urban district council in the union." The clerk to the guardians refused to express an opinion as to the legal aspect of the position when asked whether they had a right to refuse admission to those people whom one of their officers sent in as destitute; nor was he able to enlighten the

guardians when a proposal was made to prosecute the persons responsible for moving the small-pox patient to the infirmary—he was unable to state against whom proceedings should be taken or whether such proceedings devolved upon the guardians or the rural district council. If this case is really going into the law courts we shall watch it with the keenest interest; but in the meantime it would be well, it seems to us, if both the Balper guardians and the rural district council were to take steps to provide themselves with proper isolation and ambulance accommodation, and to a large extent the same remarks are applicable, as far as we can judge, to the Alfreton Urban District Council and to other urban district councils in the same union. These exhibitions of unpreparedness are far from edifying, and the sooner the authorities concerned appreciate and act up to their responsibilities the better. We imagine that the Local Government Board will have something to say to the conversion of the tramp wards into a small-pox hospital.

THE REGISTRATION OF MIDWIVES.

A LETTER advocating this measure, and signed "Honour Morton," appears in the *Daily News*, protesting that the Bill is in no sense intended to create a new class of practitioners. Whatever is done in this matter should be done conformably with the principle that a lying-in woman is peculiarly a subject for medical care, and that any midwife attending her does so in a limited and subordinate sense.

THE DIFFUSION OF SMALL-POX.

SMALL-POX has not been quite so quiescent in London in the past two weeks as in recent weeks prior thereto, the notifications last week being 11 in number, with 14 in the previous week, these totalling to 25, against only 35 in the whole metropolis in the four preceding weeks. In no district of London in the period last named did the cases exceed 6, and reaching this number only in Holborn and Lambeth. St. Marylebone had but two notified attacks. Of the 25 notifications in the last fortnight, 20 have resulted in removal to hospital, where on Saturday last there remained 34 patients under treatment, as compared with 53 a month earlier. Only one death from small-pox has been registered in London during the last seven weeks, this occurring last week in a vaccinated person aged under twenty years and belonging to the Rotherhithe sanitary area. Near at hand Bedford has had renewed experience of small-pox in the past month, but only to the extent of three or four attacks. Birmingham happily has been entirely free for some weeks. A few cases are reported to have occurred in Nottingham, and ten attacks have been chronicled in Liverpool during April. Other towns of Lancashire from which reports have come of the appearance of small-pox are Manchester (with four cases in the last three weeks after the total disappearance of the disease for more than a quarter of a year), Bolton, and St. Helens. In Yorkshire there has been some anxiety caused at Mexborough owing to a small outbreak of the disease, four or five cases being under isolation in the hospital, such as it is, belonging to the urban district, the first to be attacked being a tramp who, with his wife and family, was found in a common lodging-house, and removed to the isolation ward. His wife and children have also been removed, and steps have been taken with a view to watching the inmates of the lodging-house who were in close association with the sufferer prior to the diagnosis of his malady. Another case is said to have come into the town from a lodging-house at Wath-upon-Dearne. In Dublin the small-pox epidemic still continues, though to a much slighter degree than in past months. Thus in the last three weeks of April the admissions

to hospital were only 42 in all, the discharges nearly as many, namely 40, and the patients remaining under treatment, including acute cases and convalescents, respectively 107, 106, and 95. Of the 4 deaths registered in the period 3 were those of vaccinated adults over twenty years of age, and 1 that of an unvaccinated individual aged over forty years.

THE HEALTH OF PROFESSOR HUXLEY.

WE have great pleasure in stating that Professor Huxley has made steady progress during the past week. His temperature has remained normal, and he is taking nourishment well. He is able to be out of bed for a short time every day now, and altogether the outlook is much more hopeful.

MEDICAL MISSIONS.

AS we have elsewhere pointed out hospitals were not unknown before the Christian era, and our present hospital system owes its origin to monastic ideas; but religion and medicine have not always gone hand-in-hand, although for the better development of both it is well that such should be the case. Within quite recent years the religious bodies have taken fresh interest in medicine as an aid to the propagation of the Gospel, and the cry for more medical missionaries was the keynote struck at the annual meeting of the Medical Missionary Association held last week at Exeter Hall. The society was founded in 1878 to extend information, to deepen interest, and to give a more continuous impetus in England to the medical mission movement. Its methods are quite undenominational, and it does not confine its work to foreign countries alone, but seeks to establish medical missions among the poorer population at home. During the past year a net gain of seventeen has been made to the number of medical missionaries, raising the number of those holding British qualifications to 202. We fully sympathise with the objects of the association, and as long as nothing is done to lower the dignity of the profession we wish it every success. But such an incident as that related by one of the speakers at the meeting—in which two coolies and a cook, after watching the methods of the missionary for a few weeks, set up a rival establishment for the cure of opium cases—is only too likely to bring the profession into ridicule; and although circumstances soon dissolved the partnership and broke up the establishment a little care might perhaps have prevented such a thing from happening.

THE LATE PROFESSOR CARL VOGT.

THE death of Carl Vogt (to whom further reference is made in our obituary column) has deprived Switzerland of one of her most illustrious children and science of one of her most devoted and laborious followers. Vogt was a naturalist in the same sense as Linnæus, a geologist as much as a zoologist, an intelligent traveller as much as a physiologist. He was a teacher not only of professorial classes, but of a wide circle of intelligent lovers of nature. In losing him we lose almost the last of the giants whose labours have resulted in the present condition of zoological knowledge. Vogt's first work of importance was his account of the Embryology of the Salmon, which he contributed to Louis Agassiz's "History of the Freshwater Fishes of Central Europe"; this was rapidly followed by his account of the midwife toad (*Alytes obstetricans*). Like Kölliker and van Beneden the elder, Vogt fell into the error of supposing that developmental history might by itself form the basis of a systematic arrangement of the animal kingdom; but, on the other hand, his division of "worms" into flat, round, and ringed worms is still in its essence accepted. Vogt was one of the first to recognise the annulate affinities of the leeches. He was one of the

pioneers in our knowledge of that curious modification of one of the arms of the male cuttlefishes and squids (*Cephalopoda*) which is known as hectocotylisation, while his contributions to vertebrate morphology were considerable. But although Vogt wrote in conjunction with E. Yung a widely used text-book of Zoology, he never lost his interest in the geology of the Alps or the early history of mankind; the modern science of microscopical petrography was another subject in which he took a deep practical interest. Of Vogt, as of Casanbon, we may say:

"O doctorum quicquid est
Assurgite hinc tam colendo nomini."

MR. F. HAYDON, L.R.C.P. Lond., assistant surgeon to the West London Ophthalmic Hospital and honorary secretary, has been elected Secretary to the Court of Examiners of the Society of Apothecaries, in the place of Dr. C. E. A. Semple, deceased.

We are asked to state that the festival dinner of the Royal Medical Benevolent College will be held on May 15th in the East Foyer Dining-room of the Imperial Institute, instead of at the Queen's Hall.

THE LANCET

Special Sanitary Commission

ON

THE VENTILATION OF HOSPITALS AND THE TREATMENT OF INFECTED AIR.

IN no other buildings is it more essential or vital that ventilation should be efficient and conducive to comfort and to health than in those set apart for the tending and nursing of the sick. Most of our large hospitals were founded at a time when methods of ventilation and sanitation were crude, but even in hospitals of comparatively modern construction, in which the sanitary arrangements may be perfect so far as regards the removal of effete liquid and solid products, there will generally be found much that can be done to improve the satisfactory displacement of vitiated air and the means of providing a fresh and pure supply. The importance of such a provision is doubly emphasised when we consider, as experience has shown, how beneficially the free and open atmosphere ministers to the healing of wounds and to the elimination of morbid conditions. No apology is needed, therefore, if we lay before our readers the details of so important a departure in regard to the construction of one of our large provincial hospitals as the installation of a new method of ventilation which, we venture to think, is far in advance of any scheme which has hitherto come under our observation, and more particularly because not only does it provide for the efficient and salutary ventilation of hospitals, but also for the treatment, if need be (by means of antiseptics), or purification of the vitiated air of the wards before it passes into the outer atmosphere. For the present, however, we will confine ourselves to the method from the point of view of ventilation only, and in a succeeding section we will describe how this system may, by the simplest, and, we think, most effective, manner be employed for the treatment of vitiated air with the important view of preventing the spread of infection from such buildings as small-pox and scarlet fever hospitals. For this purpose we cannot do better than take as an illustration the New General Hospital now in course of erection in Birmingham, which, by the courtesy of the architect, Mr. Wm. Henman, we have recently had an opportunity of inspecting. Let it be understood that in doing so we are not dealing with a system

that has merely been projected, but with one that has already been carried into practice in several infirmaries and other buildings, schools, police courts, and the like, and which, as we have just said, has actually been provided for in the plans of one of our great hospitals. The building operations, indeed, at the New General Hospital, Birmingham, are so far advanced as to afford a clear idea and plan of the installation which is to effect the ventilation of the hospital.

It will be well first to review briefly the systems of ventilation which are at our disposal. These are: (1) ventilation by aided means—so-called artificial ventilation, (*a*) extraction, (*b*) propulsion, (*c*) agitation; and (2) ventilation without these means—so-called natural ventilation. It should be observed that the expressions "artificial" and "natural" when applied to ventilation must only be regarded as convenient merely in distinguishing between induced and unaided ventilation. If we define ventilation as consisting in the supply of fresh pure air suitably tempered and humidified, and continuously introduced so as to prevent stagnation in any given space which has become vitiated or is liable to vitiation, in such a manner as to give the greatest comfort to those individuals who may be present, then obviously it is absurd to qualify it by either term. Ventilation is ventilation whatever may be the means employed. The means of attaining the end may, however, be correctly described as artificial or natural as the case may be. "Natural ventilation," which simply means the opening of windows and letting the air move about at will (it may be by propulsion or extraction, or the air may be quite stagnant, in which case little or no ventilation is effected), is obviously unsuited for a hospital, since it cannot be placed under control in regard to temperature and purity, especially in such a variable climate as ours, and in our towns where we have often to contend with a smoke-laden and otherwise impure atmosphere. We may pass, then, to the various means of inducing ventilation. Of these we may dismiss the agitation or punkah principle, which at its best simply stirs and mixes the air, but does absolutely nothing beyond making it of uniform impurity. This reduces us to the question as to which of the two systems—extraction or propulsion, based respectively on the vacuum and plenum principle—is the better adapted, more particularly for the ventilation of hospitals and similar buildings. After a very careful consideration of both systems we are led to the conclusion that the propulsion system offers very distinct and important advantages over the extraction system, which we shall shortly point out, and which in kind are of especial importance where the ventilation of places in which the treatment of the sick and diseased is concerned. This conclusion is forced upon us because, as we shall presently show, complete control may be had over the propulsion system, while the extraction process introduces some objectionable features which cannot apply to the former, and which would be difficult if not impossible to avoid. In the extraction process, for example, it is true that air is constantly being extracted and replaced by other air, but the source of this incoming air is unknown, since it may be drawn in from any possible crevice. Special inlets, however, may of course be provided, but then comes the difficulty of regulating the temperature and the purity of this incoming air—a matter of the utmost importance where the atmosphere is liable to the pollutions of a town and the effects of ever-varying climatic conditions. On the other hand the propulsion system is under complete control, the site from which the air is taken may be selected, the impurities of environment may therefore be prevented, the air can be purified, humidified, and warmed, while extraneous and it may be dangerous sources of ingress are completely avoided, the supplied air tending to leak outwards through any unseen or accidental crevice through which otherwise impure air may gain an entrance. Having thus pointed out broadly the advantages of the propulsion system, we may next describe it in detail, selecting as one illustrative method of its application the installation at the New General Hospital, Birmingham, while incidentally we may mention one or two examples of its application elsewhere.

At the outset it should be stated that the method of ventilation about to be described is primarily due to Mr. William Key, an engineer of Glasgow. In applying the Key scheme to a hospital, a selection is first made of a position, uncontaminated by surroundings (or of more than one such position if the buildings are extensive), where air can be drawn in towards an extended screen, kept moistened with water

and periodically flushed to free it from the large amount of dirt which it intercepts. The screen is formed of a series of cocoanut fibre cords stretched vertically and interlaced with copper wire to keep them in position. On the outer side a coil of steam or hot-water pipes is placed to prevent freezing in the winter, and on the inside are other heating coils, arranged so that by means of doors or louvres the air passing through or under them may be regulated. It is then forced onward by means of a rotary fan or air-propellor, set in motion by steam, water, gas, or other power—preferably an electric motor—and finds its way to the several rooms, wards, or corridors by means of a wide and lofty horizontal duct and up flues, all calculated to the required areas, at the base of which are more heating coils, together with a simple contrivance by which both the volume and temperature of the air supply to any separate part of the buildings can be adjusted to a nicety.

The air enters where required by means of trumpet-mouthed openings, at about two-thirds the height of the storey, so as to disperse evenly throughout the apartment; and at the same time it expels an equal amount of air, principally through openings provided on the same side of the room as the inlets, up flues of the proper sectional area, into ducts in the roof and thence to the open, through valved and louvred turrets or flaps, four-sided, so that outer movement of the atmosphere shall exert no adverse influence upon the outflow.

These outlet air valves are so constructed as to place the air within the building under a slight pressure of about four ounces per square foot in excess of the outside atmospheric pressure at the time. In the New General Hospital at Birmingham an installation has been provided for heating and ventilating the buildings, the cubical capacity of which equals about two million feet; so that, as the air may be changed ten times per hour without opening any windows, twenty million feet of air every hour has to be propelled, cleansed, and warmed; for which purpose there will be eight "fans," from 6 to 8 feet diameter, to be turned by electric motors, 2000 superficial feet of cleansing screen, and about 35,000 feet of steam tubing.

A word in regard to the screens, which form a very important feature in Mr. Key's method. As has already been partly indicated, this apparatus, which is designed for the filtration and washing of the air, consists of several thousand cords of suitable material, stretched from a beam near the ceiling to another near the floor of the air chamber. When finished, the screen has the appearance of coarse cloth stretched across the apartment. The cords are placed so closely that they touch each other, copper wires are laced through the vertical cords in horizontal rows, and, being drawn tight, give the screen a flat surface; the rough fibrous nature of the material breaks up the entering air into very minute streams, which pass through equally all over its surface. These screens may be formed double, in order to give an extra cleansing or scrubbing surface when so desired. The screen is kept moist by water trickling down each cord, and at regular intervals of more or less frequency an automatic flushing tank discharges a considerable volume of water down the screen, to remove loose matter which may have collected, and to thoroughly wet the whole surface. Its purifying effect upon the air is remarkable. It prevents, for instance, the entrance of fog into the wards, the clearness of the atmosphere within, in spite of a dense fog without, making it almost difficult to believe that the incoming air is not derived from any other source than that prevailing under the objectionable conditions outside. There is no doubt, in view of this result, that the greater part, if not all, of the dust particles of the air are also removed. The attraction which moistened surfaces possess for suspended particles is well known, and it is just this principle, in fact, which underlies the successful working of a Pasteur filter in removing micro-organisms from water. When fog is being dealt with it is curious that the air within appears brighter and clearer even than when there is no fog outside, so that doubtless the condensed particles of fog effect the deposition of much suspended matter usually present in the air. When the fog is very dense drops of water from the screen are in colour like drops of black ink, so that the removal of objectionable suspended impurities, which, if left to ventilation by natural means or to many methods of ventilation by extraction would pass into the wards untrapped, is not the least important function of the screen. In the same way it is exceedingly probable that micro-organisms would be arrested mainly by deposition upon

dust or moist particles, and a large reduction of their number effected.

It was the important purifying property of the screen just alluded to which led Mr. Wm. Henman to suggest that the outgoing air, after being vitiated or infected by patients, might again be purified, so far as regards infection by the use of similar screens at the outlets. This project is so important in connexion with the construction and site of infectious diseases hospitals as to merit very serious consideration and attention at the hands of the profession and others who are interested in the subject. Mr. Henman considers that in fever hospitals each block of buildings should be separately supplied with an air intake, screen, heating coils, and fan, which in a building of only one storey may be arranged in the roof space.

Mr. Henman takes no credit for the method by which a suitable supply of air is cleansed, tempered, humidified, and propelled into the buildings, but acknowledges his indebtedness to Mr. Key for the assistance he has rendered in working out his ideas in connexion with the methods he adopts. It is simply proposed that air, so cleansed, tempered, and humidified, should be propelled through narrow, wedge-shaped openings in the ceilings, and, by means of a simple form of spreader, evenly distributed throughout the wards and corridors.

The feature which Mr. Henman claims to be a novelty is the placing of a screen (somewhat similar to those employed by Mr. Key at the air intake) at the head of every bed, and keeping the same charged with a disinfecting fluid. An outlet flue will be provided at the back of each screen, so that as fresh air is constantly being propelled into the ward an equal quantity will be forced through the screens, all other outlets being stopped, consequently almost immediately the air becomes contaminated it will again be purified *even before it actually leaves the apartment*, and thus purified will pass up the flues and into the open air. A very simple contrivance is employed for keeping the screens constantly charged with disinfecting fluid, so as to obviate disturbance to the patients in the wards, and reduce personal attention to the least possible limits. The disinfecting fluid found to be perfectly effective in destroying disease germs is a weak solution of carbolic acid. Above and below each screen a shallow trough is placed, the upper and lower ones respectively being united by lead piping, carried to any convenient position outside the wards, each connected to a cistern of moderate dimensions to which a small pump is attached, so that as the fluid flows along the upper pipe and trickles down the screens the surplus is caught in the lower troughs and returns through the other pipe to the lower cistern, whence it is pumped to the upper one. This may be made practically automatic by applying to the pump the same motive power used for turning the fan which propels fresh air into the building, and by having a third cistern or reservoir with regulated supply to make up for loss of fluid by evaporation from the screens. There can be little doubt of the efficacy of the screens in removing micro-organisms in view of the indications afforded by a series of very searching and exhaustive experiments carried out under the direction of Dr. Sims Woodhead and Dr. Cartwright. The results of this investigation may be summoned up as follows:—

1. Micro-organisms are entrapped by passing air through moistened screens.
2. The apparatus employed in the experiments in which dust loaded with organisms was forced through an experimental screen into a wooden chamber from which samples of the air were taken from time to time for bacteriological analysis gave in all probability less perfect results than would occur in practice, because in these experiments the air, highly charged with micro-organisms, was both forced directly through the screens and also by force drawn through them, whereas in buildings the air would be propelled gently through the screens simply by the slight pressure of the incoming air, no suctional force whatever being employed.
3. The very marked diminution in the number of micro-organisms which passed through the screens when supported by means of perforated zinc, and the smaller number still which pass through a thin layer of cotton wool, indicate varying powers of filtration and point to the possibility of devising a screen which will practically free the air from germs and yet not unduly retard the expulsion of the air from the building.
4. In proportion to the closeness of texture of the screen material, the size of the screens must be increased so that the

air may pass through them with the least possible force being required to expel it.

5. The moistened screens are all that is required to *arrest* the germs, but carbolic acid should be added for *destroying* them.

6. Disease germs or fungi likely to be conveyed by the atmosphere are usually found attached to comparatively large floating particles, as the scales of the epidermis, or fluffy shreds of material which would be entrapped by the screens in greater proportion than the germs experimented with.

In accordance with the suggestion contained in paragraph 3 that better results might be expected by the use of finer screens yet of ample size to permit of the passage of air, a building has been erected in which these suggestions can be adopted, and tests will shortly be made exactly on the same lines as when the screens are employed for the purification of air emitted from hospitals. It is probable, again, that the passage of large volumes of warm air through the screens would volatilise a considerable quantity of the disinfecting fluid with which the screens will be constantly charged, and that any germs which might not be entrapped by the screens would thereby be quickly deprived of vitality, and, moreover, that the mere reduction of the number of germs would be a considerable safeguard, because the attenuation of germs, as is well known, lessens the severity of their effects.

As regards the cost of the method proposed, the necessary apparatus is stated to be quite inexpensive and easily applied, and Mr. Henman is prepared to show that buildings can be erected and equipped at considerably less cost than is now expended upon hospitals relying only upon the ordinary means for ventilation, without any appliance for purifying the air emitted. More space for the patients has been the demand for some time, which, beyond a given area known to be necessary for nursing purposes, in reality means more *air*. It is very naturally asked, where, with such a constant change of air, is the necessity for more space within the hospital than is required for tending the patients? It is contended that with suitable appliances by which the air can be constantly and quickly changed, as in Mr. Key's method of ventilation, buildings might be less in cubical capacity by at least one-third; and not only would this reduction in size more than compensate for the cost of apparatus and its working, but the daily labour and charges for heating, lighting, cleaning, administration, and maintenance would be proportionately less. Another point of importance is that those who tend the patients would be constantly in a pure atmosphere, for no sooner is the air vitiated by contact with the patients than it is at once purified and expelled.

To conclude and to recapitulate, the system of propulsion as just described seems to us to offer very distinct advantages which cannot possibly be claimed for other systems. In the first place, the source of the air-supply is known; then the air is not only cleansed of ordinary dust and dirt, but also freed from flies,¹ moths, and other insect life, in addition to which carefully conducted scientific experiments have proved that micro-organisms are entrapped by the moistened screens. Again, another important function of the screens is to maintain the air-supply in a proper state of humidity, for, odd as it may seem, they moisten the air when too dry, and dry it when it is over-saturated with moisture. Further, any suitable temperature can be maintained for an indefinite time in any apartment, and for each it can be regulated, and that without any open fires, with their attendant dirt, labour, and noise, in keeping up and in conveying coal about the buildings, and without a single steam or hot-water pipe in any habitable part of the same. Complete change of the air throughout the buildings up to ten, twelve, or even more times an hour without draughts, can be effected, and general cleanliness about the buildings be ensured, all incoming air being relieved of its impurities, and all repairs to apparatus

executed without the necessity of even entering any habitable parts. The absence of draughts is perhaps the most pleasing, as it is one of the most satisfactory features of Mr. Key's method. This is all the more remarkable when we consider how rapidly the air is being changed. Lastly, by carefully regulating the positions and areas of the incoming and outgoing flues respectively, each department has its air changed without reference to any other part of the building. We have seen the system in working order at the Aston Police-courts. The stuffy, stale, and unpleasant character of the air of such places during the hearing of cases is only too familiar, but since this method has been in operation the air of the courts has been entirely free from any reproach on each and all of these heads. As to cost, that is a question, of course, which the committee of the New General Hospital were bound to consider, but they were satisfied that the method would effect a great saving of labour. Thus, for example, there being no fireplaces, coal need not be carried about, dirt is avoided, and as there are neither steam nor hot-water heating pipes in any habitable part, there are no inaccessible places behind which dirt could accumulate. The air-supply is clean and the influx of dirt and dust by means of open windows is avoided. As to the ducts and flues, they are of large size, readily accessible, and provided with means for periodic cleansing.

Lastly, the proposal to deal with the infected air of hospitals with the view of ensuring an innocuous effluent of air into the outer atmosphere is perhaps the most interesting, if not important, aspect of the propulsion system. It has been shown that the mere interposition of moist screens eliminates the greater part of bacteria and fungi from the air, but the use of a liquid disinfectant for this purpose would probably not only effect the arrest of the germs, but also their extinction. The latter object has been attempted with variable success by means of heat. In this connexion Dr. Barry's report to the Medical Department of the Local Government Board on "Certain Methods in use for the Sterilisation of the Exit Air from the Wards of Small-pox Hospitals" is of interest. The following is a comment upon this report which appeared in these columns² under the heading of "The Cremation of Infected Air": "Attempts have been made of late to carry into practice the suggestion made some twelve years ago by Professor Burdon Sanderson that the risk of aerial convection of disease might be met by disinfecting the air passing from infectious wards by drawing the air along definite channels and sterilising it by exposure to heat. In the hospitals recently erected by the Nottingham, Barnsley, and Bradford corporations the architect in each case had sought by means of furnaces in the course of the outlet shaft to secure the double object of ventilation by extraction and the 'cremation' of the outgoing air. At Barnsley and Nottingham gas-furnaces were employed for the purpose, and air was admitted to the wards by windows and ordinary inlet-ventilators, while at Bradford extraction was effected by a powerful furnace to which the outlet flues were conducted, and special inlet flues were provided through which alone air was permitted to enter. In the two former places the results were in no sense satisfactory. The extraction was insufficient to prevent occasional outflow of air from the ward through openings meant to serve as inlets only, and the air, after passing the furnaces, was found to be by no means sterile, but, on the contrary, to contain microbes capable of cultivation on agar-gelatine. The draught, too, tended to extinguish the gas jets, and at the Nottingham Hospital bits of cotton-wool and tissue paper were carried through intact. At Bradford, again, the sterilisation proved to be incomplete, and, although the arrangement of inlets was such as to prevent any reversal of the current in them and leakage of infected air, Dr. Barry very properly takes exception to the precarious character of a system of ventilation which is dependent solely and absolutely upon uninterrupted efficiency of stoking. It is possible that better results may be obtained by the aid of propulsion, or mechanically forcing fresh air into the wards, an excellent example of which—at the Victoria Infirmary, Glasgow—is described in the appendix to the Memorandum; but it seems clear that up to the present time the attempts based upon extraction alone have been attended with such a very modified degree of success as to count as failures in practice."

¹ The necessity of a precautionary device of this kind in infectious diseases hospitals has recently been strikingly emphasised in a series of experiments made by Mr. W. T. Burgess. In these experiments flies were placed in momentary contact with a cultivation of *bacillus prodigiosus* (or other suitable chromogenic organism) and allowed to escape into a large room. After some time they were recaptured and caused to walk for a few seconds over slices of sterile potatoes, which were then incubated for a few days. The experiments showed that the flies' tracks on the potatoes were marked by vigorous growths of the chromogenic organism, even when the flies spent several hours in constant activity before they were recaptured. The use of pathogenic organisms in these experiments would of course be attended with obvious dangers, but the result obtained with harmless microbes indicate the constant risks to which flies may expose human beings. Vide THE LANCET, May 4th, 1895.

² THE LANCET, Sept. 8th, 1894.

The Key method of ventilation has met with very distinct success where it has already been installed, as, for instance, at the Victoria Infirmary, just mentioned, in several schools, and in other public buildings,³ and the results of its adaptation to a large general hospital such as that in course of erection in Birmingham will be watched with very great interest, the completion of this admirably designed building being expected in about two years' time. The practicability of the method, however, is obvious. The important proposal of the architect, Mr. Henman to disinfect the outgoing air of infected wards where the Key method of ventilation is in force has of course not yet been put to practical test, but there is good ground for believing, as we have already shown, that this important adjunct to Mr. Key's methods of applying the propulsion system of ventilation may offer a really satisfactory solution of that difficult question of how to make infectious diseases hospitals safe to the surrounding neighbourhood. At any rate, the method, with its proposed augmentation, is of sufficient importance and scientific merit to demand the careful and serious consideration of all those interested in the vital questions of the ventilation and the purification of the air emitted from infected buildings.

We congratulate the authorities at Birmingham on the trouble and care they are taking to provide and equip a hospital fully in accordance with the requirements of modern scientific research, and we trust that other communities which may be brought face to face with a similar problem will evince an equal share of anxiety to attain so admirable and worthy an end.

SANITARY INSPECTORS' ASSOCIATION.

ON May 3rd Sir Walter Foster received a deputation from the Sanitary Inspectors' Association, who laid before him their views as to the form in which the proposed Examination Board for granting certificates to sanitary inspectors should be constituted. There were present Sir Benjamin W. Richardson, Lord Chelmsford, Mr. Percy Thornton, M.P., Messrs. W. H. Alexander and W. W. West (Vice-Chairmen of the Sanitary Inspectors' Association), C. W. Raymond (treasurer), J. Young, R. Chamberlain, A. Grant, A. Chadde-ton, T. G. Dee, F. W. Strutt, C. T. Wilson, A. Taylor, T. Ashdown, W. H. Grigg, and Edward Tranmer (honorary secretary).

Sir B. W. RICHARDSON: This deputation is the outcome of a conversation that took place at the last meeting of our Association. We, as an association, are very anxious to get a good examining board; it is very essential to the inspectors themselves, as it would be a spur to action on their part in carrying on the sanitary improvement which has been so very marked of late years. The sanitary inspectors are very anxious concerning the status and respectability of their calling. They would like to follow the medical profession in respect of recognising no one who is not duly qualified. You are aware that some years ago when the Sanitary Institute was first established we started an examining board, of which I was a member, and this examining board has continued to hold examinations and grant certificates to sanitary inspectors up to the present time. I think in many respects the Sanitary Institute has done its duty in this matter very well. But it does not seem to us at all a satisfactory state of things that an outside body like the Sanitary Institute should have the monopoly of the power to grant such certificates; nor does its certificate seem to us a sufficient guarantee of qualification. Lastly, there has been a proposal that a sort of limited company should be formed, which company should be incorporated under the Companies Acts and have a hall of its own, something like the Apothecaries' Hall, and that this company should elect a body of examiners. But the Sanitary Inspectors' Association has come to the conclusion that the Local Government Board itself should elect an examining board. The Sanitary Institute would like men like yourself, who are acquainted with those best fitted to be examiners in such subjects, to select the most competent individuals to form

such a board. A board of examiners appointed by you would be perfectly independent of all interests: they would not be looking for fees, or be influenced by any society feelings or considerations, but would be thoroughgoing examiners. Then, again, they would not only be independent, but they would occupy a secure position. You will bear presently that the Board of Trade is doing precisely what could be done by the Local Government Board. This is the suggestion which we want to submit to you before anything is done. I think if it were acted upon it would not only be the most beneficial plan, but the action would be politically sound.

Mr. ALEXANDER: We ventured a short time ago to address you on the subject of the tenure of office of sanitary inspectors and the inadequacy of the salaries appertaining to those offices, matters in which we were deeply interested and which greatly affected the public welfare. But we now come to you on a matter of even greater importance, and one in which we believe the public to be even more concerned. No doubt, in the first instance, the examinations conducted by the Sanitary Institute were carried on with very great advantage to all concerned; but our attention was some time ago drawn to the fact that the examinations were not all we could desire, and we made repeated efforts to come to an understanding with the Sanitary Institute. We made certain advances to them with a view to rectifying what we considered was lacking in the examinations and what we considered might be done to make the examinations more useful. These advances were not met in the spirit we had hoped they would be, and, therefore, our position remains unchanged up to the present. We think sanitary inspectors are often appointed who are not qualified in the way we have a right to expect, and we are anxious to improve their status. We feel that we are justified in bringing under the notice of the Government the fact that a sound examination is absolutely necessary in the interests of public health. Since the Sanitary Institute started holding these examinations other large bodies have been formed and have become interested in this matter—e.g., our own association, the British Institute of Public Health, and the Institute of Medical Officers of Health. A sort of limited company, comprising representatives from all these, has been suggested to form an examination board. We are very strongly of opinion that no private enterprise will meet public requirements in this direction and that it is only by a sound examination undertaken by the Government that satisfactory results can be secured.

Mr. GRIGG (Fulham): We thought in bringing this matter before you that you were not very likely to be satisfied with our taking certain generalities for granted, and that we ought to be prepared with some detailed scheme. With that object I have made very careful inquiries into the methods of examination for candidates for various professional appointments—e.g., factory inspectors and Board of Trade inspectors of weights and measures. I have more especially studied the method of granting certificates by the Board of Trade to marine engineers. These marine engineers occupy positions of great responsibility as regards human life, and I think I need not say much to convince you, Sir, that we as sanitary inspectors also hold positions of equally great responsibility. I will ask you to allow me to point out the sections of the Merchant Shipping Act under which these examinations are carried out. Well, sir, we think that that is the sort of thing that is required for us. We think an examining board appointed by the Government on these principles, composed of persons who had no gain to make out of the candidates, would be a much more satisfactory state of things than any which has obtained up to the present. One of the main points which we wish to urge upon you in connexion with our scheme is the absolute necessity for a man to have actual practical experience before he presents himself as a candidate. The present certificate is in its way very good, but if so purely theoretical an examination is adhered to it will only result in a great number of weak inspectors, unqualified for the positions they have to fill, being appointed. We do not wish to claim an undue share of representation for the Sanitary Inspectors' Association, but we do think that we are entitled to be represented on any board of examiners that may be established. It is of great importance that these posts should be held by men who have had actual practical experience of the work of the men they are called upon to examine.

Sir WALTER FOSTER: I think it will be my duty to say a word or two with reference to the actual position of the Board in this matter. I did not exactly understand that the object

³ Mr. Key's method has been applied already to four hospitals or infirmaries, to some twenty-four large schools, and to several other large buildings, as cloth factories, police-courts, public libraries, and so on, while further installations are being provided for in fifteen similar buildings at the present time.

of your visit to-day was in reference to the form in which the proposed examining body should be constituted. I think, therefore, I had better point out the exact position in which we stand. The fact is that we are placed by statute in the position of having to recognise some body which shall examine and grant certificates to sanitary inspectors. The clause in the statute is as follows: "A sanitary inspector appointed after Jan. 1st, 1895, shall be holder of a certificate, of such body as the Local Government Board may from time to time approve, that he has by examination shown himself competent for such office." Well, now, hitherto the Local Government Board has been in the habit of accepting, as a temporary provision purely, the certificates of the Sanitary Institute, who have constituted themselves an examining body and elaborated a scheme of examination. Up to the present time they have continued to hold examinations and grant certificates to gentlemen desirous of following your calling. But it must be evident that this temporary expedient is not one which in the very nature of things could become permanent, because other bodies have come into existence, have obtained powers and Articles of Incorporation, and are desirous of holding examinations and granting certificates. They naturally wish that they should have a chance alongside of others. One of the first experiences I had on coming to this office was to have applications made to me from such bodies to be allowed to enter the field. The probability is that when the law is altered these certificates will be required not only in London, but in every part of Great Britain, so that in course of time there will be a great number of persons holding these certificates. It is therefore of the first importance that the certificates should be of the highest possible order. It must be obvious to you that the position of the Local Government Board is such that we have to take a certain line of action. In the first place it would be impossible for any Minister here to guarantee to the body at present having the monopoly of holding examinations that such body should retain the monopoly in the future, because a succeeding Minister might come in and say, "Such and such a body is as capable of granting certificates as you are, and I shall give them power to do so." And so in course of time you would have the most deplorable state of things possible—viz., competition between two or more examining bodies. Competition in examination is always injurious in its effects, because the tendency inevitably is for each competing body to lower the standard of examination in order to attract candidates. It is the general experience of all teachers that, whilst competition in teaching in the very nature of things tends to elevate the character of the teaching, all examining competition tends to deteriorate the character of such examining. These principles are not theoretical—I have seen them in actual practice in the medical profession; and I have been very anxious that the sanitary inspectors, as a branch of the great health army of this country, should not be placed in the same position and be overtaken by the same difficulties as gentlemen in my own profession have been through a competition of examinations. For these reasons the Board felt that it would be fatal to give to a number of bodies the power to grant these certificates. The question then arose: Is the Sanitary Institute to go on having the monopoly of conducting these examinations? Well, in the face of other applications and other claims to public consideration, I could not see my way to allowing the Sanitary Institute to continue indefinitely in the exercise of these examining functions. I therefore suggested that all the societies should meet together and form a Joint Board which should be established on such a basis as to be permanent and not likely to be disturbed in the future. One essential characteristic of such a body was that it should represent all the other bodies which were themselves competent to grant certificates. Another is that it should be able in the future to receive into itself any body which might become competent to grant them. In this way a Joint Board would be formed which would represent all other societies and associations so completely that no Minister in the future would feel justified in putting a new body into the field to compete with it, because such new body could join with and be represented on the Joint Board. We have had a good many difficulties to contend with in forming this Joint Board. It seemed to me that the remarks of Sir Benjamin Richardson as to the limited company idea were somewhat misleading. It was suggested that the body to be formed might be incorporated under articles and so get a corporate existence which it would not get otherwise. Of

course, it would not be for trade purposes. That particular form is not necessarily unalterable, and if any great objections to it should arise hereafter I do not think there would be any insuperable difficulty in altering it. It would bind the Joint Board down to certain definite purposes, and to these purposes only, in conducting their work as long as they remain incorporated. It seems to me that if such a board be constituted: 1. It must be an examining body and in no sense a teaching body. 2. It must give certificates for the purpose of qualifying gentlemen as they have been qualified hitherto, and those who possess certificates already will in no wise be injured, as their certificates will be held to be equal in value to the new ones. 3. The several bodies at present existing in connexion with the training of sanitary inspectors and the teaching of sanitary science must as far as possible be recognised by this Joint Board. In constituting this body we must try to deal equitably with the various societies concerned. 4. This Joint Board must have the power of adding to itself from time to time new bodies; just as in the case of the General Medical Council Parliament has recognised that gentlemen already possessing qualifications as medical men should have the power of electing representatives to sit on that Council, so in future sanitary inspectors might be represented. You suggest to me that the Joint Board ought to contain some men who have practical experience in the work. I certainly agree with you in that. I may point out to you that we have no statutory powers to do what the Board of Trade does, and even if we were to do as you suggest a body so formed would not, in my opinion, be in any way so satisfactory as a body formed by the mutual combination of outside societies.

A SANITARY INSPECTOR: I think the Sanitary Inspectors' Association feel that they have been left out in the cold in this matter. They have never been in any way consulted.

SIR WALTER FOSTER: The difficulty, you see, is this—that you are not as a body of sanitary inspectors registered, and are, therefore, incompetent for the moment to be represented on the Joint Board. But I have considered, and I will again consider, whether there is any means by which a body like yourselves could properly be represented on the Joint Board. If there is you may be assured that no effort will be spared on my part to find it.

LORD CHELMSFORD then moved a vote of thanks to Sir Walter Foster for having received the deputation.

MR. PERCY THORNTON, M.P., seconded it, and the deputation withdrew.

KING'S COLLEGE HOSPITAL FESTIVAL DINNER.

THE AMERICAN AMBASSADOR ON "A SOCIAL DUTY."

THE festival dinner of King's College Hospital was held at the Whitehall Rooms of the Hotel Métropole on Wednesday, May 1st. His Excellency the Hon. Thomas F. Bayard, Ambassador of the United States, who presided, said that a hundred and fifty years ago a learned judge, Sir Michael Foster, defined a dangerous criminal as one whose heart was totally devoid of social duty, who was fatally bent on mischief. He said that King's College Hospital presented a complete antithesis; it was a safeguard—a fortress. The feeling which originated it, the feeling which maintained and continued it, was not mere sentiment, but was a force of social safety. It had been questioned whether the State should officially look to the rectification of the inequalities of fortune, whether the State should take these things in charge officially, or whether another and broader spirit should assist to equalise the fate of humanity. He said that the hospital sprang from King's College, and from the Medical School of King's College. Patients wanted the Medical School, and then came the hospital: the demand created the supply. On the other hand, he held that officialism begets a certain stiffness of joints far short of the needs of the case. Hospitals, he maintained, should rely upon the voluntary principle of benevolence, they should be guided by the human principle of the relationship and brotherhood of mankind. Admission to a hospital should be untrammelled by any law but the brotherhood of humanity; no question should be asked but "Do you need our aid." With this rule nothing more democratic or humane could be imagined. For the State to levy taxes for

the support of hospitals, arithmetically and by mere officialism, would not meet the case. Something higher was needed—viz., the generation of personal impulse. Humanity was needed to supplement the harsh spirit of the law. Financial assistance was needful, but it only supplied the machinery, not the motive force. Money was wanted in every hospital, but what was of greater value was the force of personal benevolence, of individual kindness, which constituted the true strength of any system of government. The potency of this helped the patient after he had left the hospital; the sense of the benevolent attention he had received lingered in the mind of the recipient and made him a safe member of society. After visiting King's College Hospital he came away penetrated by the atmosphere of thought and feeling which pervaded it. It was impossible to conceive that officialism or State aid could help in producing this result, which he believed could only have developed under a voluntary system. In this it must be remembered that there was advantage to the helpers as well as to those helped. In one year the beds of the hospital ministered to the needs of 25,000 cases—a number equal to the regular army of the United States. Oliver Wendell Holmes had drawn a picture of two armies, one having the motto, "Our duty is to save," and this one represented the true force and value of those engaged in hospital work. Later in the evening, in responding to the toast of "The Chairman," he said that his part in life was to consider human government, and that he believed the strongest force in mankind was sympathy. He held that the affections of mankind are stronger than their passions. Passions flash and burn out, but the greater part of the world's forces are the human sympathies, which possess a permanence and endurance lacking in passion. He extolled the steady, serene, unscorching influence of human relationship to suffering, as compared with the passionate demands for power and domination, which were opposed to sympathy. He thought that in national affairs liberty might constitute a source of danger. If liberty made for human advancement it was well, but otherwise dangerous results might follow. What was the future of a nation of men set free unless there was an instinct to set free liberty to the advantage of all by human sympathy and human dependence? The object to be looked for should be the cultivation of a feeling in the weakest and humblest that all hearts were enlisted for their welfare.

MIDWIVES REGISTRATION BILL.

THE following is the text of the Bill intituled an Act for the Compulsory Registration of Midwives introduced in the House of Lords by Lord Balfour of Burleigh on April 30th:—

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. This Act may for all purposes be cited as the Midwives Act, 1895.

2. In this Act—

The term "midwife" means a woman who undertakes to attend cases of natural labour without the direct supervision of a medical practitioner.

"Midwives Register" means a register of midwives kept in pursuance of this Act.

"Midwives Board" means the board constituted under this Act for the purpose of carrying out the provisions of the Act, subject to the approval of the General Medical Council.

3.—(1.) From and after Jan. 1st, 1896, no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is registered under this Act, or is specially qualified to act as a midwife, unless she be registered under this Act.

(2.) Any person who after Jan. 1st, 1896, not being registered under this Act, shall take or use the name of midwife, or any such other name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding five pounds, provided that nothing in this section shall apply to legally qualified medical practitioners.

(3.) No woman shall be placed on the Midwives Register until she shall have complied with the rules and regulations

for admission to registration to be laid down in pursuance of the terms of this Act by the Midwives Board, acting under the supervision of the General Medical Council.

4. A woman registered under this Act shall be entitled to act as a midwife in England and Wales. From and after the first day of January, one thousand eight hundred and ninety-six, no woman shall be entitled to recover any fee or charge in any court for attendance or service rendered as a midwife unless such woman be registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as a midwife in cases of natural labour only, in accordance with the prescribed regulations made in pursuance of the terms of this Act. A certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Act, 1858, or the Acts amending the same, in respect of such certificate, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant a certificate of death or of still-birth.

5. Any woman who at the passing of this Act is in *bona-fide* practice as a midwife, or has obtained a certificate in midwifery from some hospital or workhouse infirmary, or from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be approved by the General Medical Council, and claims to be registered before the expiration of two years from the passing of this Act, and produces the prescribed evidence of her title to be so registered (such title to be determined by the General Medical Council), shall be entered on the Midwives Register at such reduced fee as the Midwives Board shall prescribe.

6. Within six months from the passing of this Act a Midwives Board shall be formed, which shall consist of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, and three by the Incorporated Midwives Institute. One-fourth of the members of the board shall annually retire, but shall be eligible for re-election after the lapse of one year. The duties of the Midwives Board shall be as follow:—

(a) To make rules for conducting and superintending the examinations.

(b) To conduct the examinations and appoint, if necessary, assistant examiners.

(c) To decide upon the places where and the times when examinations shall be held.

(d) To frame for approval by the General Medical Council rules regulating the admission to the register of women already in *bona-fide* practice as midwives at the passing of this Act.

(e) To prepare annually a general register of midwives.

(f) To frame for approval by the General Medical Council rules for regulating the practice of midwives.

(g) To decide upon the removal from the register of the name of any midwife for cause shown, and upon the restoration to the register of the name of any such midwife so removed.

(h) To fill up any casual vacancies in the Midwives Board that may occur.

(i) And generally to do any such duty as may be necessary for the due and proper carrying out of the provisions of the Act.

7. For the purpose of the examination of women desiring to act as midwives the Midwives Board shall, as soon as may be after the passing of this Act, frame, subject to the approval of the General Medical Council, rules regulating the conditions of admission to examinations, the course of study to be pursued previous to examination, the method, the periods, and the subjects of such examination, and the general standard to be attained by women passing the examination.

The General Medical Council shall submit the rules approved by them to the Privy Council for confirmation, and the rules when so confirmed shall be forthwith officially published under the superintendence of Her Majesty's Stationery Office. In the event of the General Medical Council failing to perform the duties entrusted to it under this Act, the Privy Council shall invite some other suitable body to undertake these duties, or shall itself forthwith proceed to do so.

8. There shall be payable by every woman presenting herself for examination a fee of two guineas. Should a candidate fail to pass, then for her second or any subsequent

examination the fee shall be half a guinea. In respect of registration, the fee shall be five shillings. All fees paid by midwives or by candidates for examination shall be paid to the Midwives Board. Such board shall devote such fees firstly to the payments connected with the examination and registration, secondly to the general expenses of the board.

9. The Midwives Board shall provide by their regulations for the keeping, and the publication from time to time, of a General Register of Midwives.

10. The Midwives Board shall every year cause a new edition of the register kept by them under this Act to be printed and published, and a copy of such register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act. Provided always, that in the case of any woman whose name does not appear in such copy, a certified copy under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

11. The Midwives Board shall appoint the registrar, who may also act as secretary to the board. He shall be charged with the custody of the register.

12. Each medical officer of health throughout England and Wales shall be supplied with a copy of the register from year to year, and he shall keep this register accessible at all reasonable times for public inspection. Such medical officer of health, or other registered medical practitioner as the local authority may appoint, shall be the local supervising authority over midwives in his district. It shall be his duty to report to the Midwives Board any case of malpraxis, negligence, or misconduct on the part of a midwife in his district which has come to his knowledge. For his services he shall receive such fees as the Midwives Board shall determine. No mid-

wife shall commence practice in any district until she has first produced her certificates to the medical officer of health for the district in which she purposes to practice.

13. The registrar of deaths for the district shall at once report to the Midwives Board the death of any midwife in his district, so that her name may be immediately erased by the registrar from the register.

14. Any woman who wilfully procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding £10, or to be imprisoned with or without hard labour for any term not exceeding three months.

15. Any registrar who wilfully makes or causes to be made any falsification in any matter relating to the register of midwives shall be deemed guilty of a misdemeanour and shall be liable to a fine not exceeding £20, or to be imprisoned with or without hard labour for any term not exceeding six months.

16. Any offences under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts.

A prosecution for an offence under this Act shall not be instituted by a private person except with the consent of the Attorney-General, but may be instituted by a county council or the council of a municipal borough. The expenses of any prosecution shall be defrayed out of the county fund of the district where the prosecution takes place.

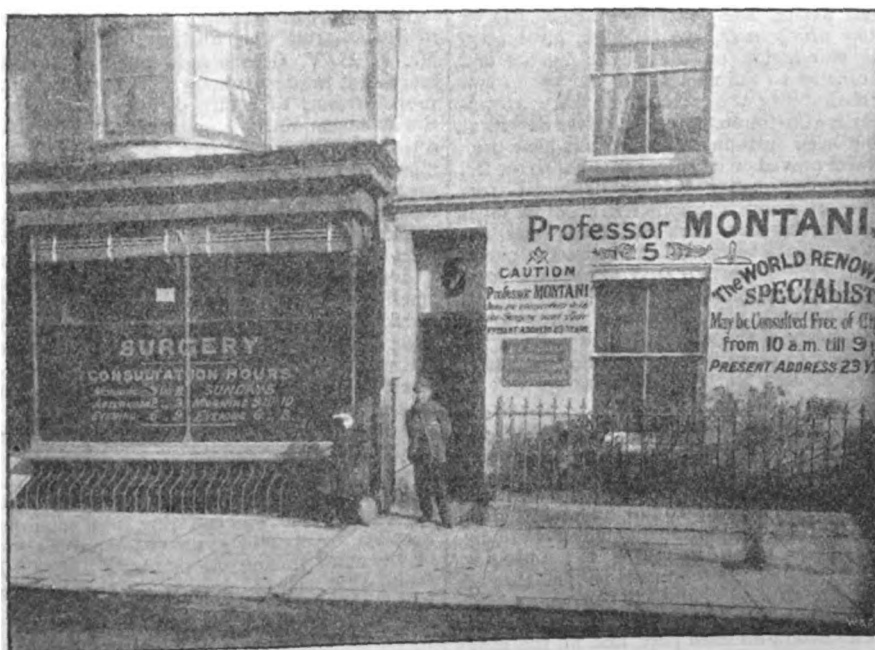
17. Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of, or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

18. This Act shall not extend to Scotland or Ireland.

"SO NEAR AND YET SO FAR!"

A CORRESPONDENT sends us a photograph which we reproduce. Professor Montani is evidently a philanthropist of the highest order. He may be, as per advertisement, consulted free of charge from 10 A.M. to 9 P.M., we sup-

On the right-hand side of the picture the reader may see a shadowy pair of legs walking on the pavement. The camera, as is well known, now occupies the place hitherto taken by the second-sighted people who existed among the ancient Greeks and are still found among the Highlanders—that is to say, it sees things which are invisible to the ordinary eye. If the seer saw only the legs of a



pose, but the photograph does not go quite far enough. For a man of this marked kindness of heart, however, he exhibits a *hauteur* and exclusiveness which are even painful. "Professor Montani has no connexion with the Surgery next door." This notice is thoughtful in one way; for it saves the owner of the "surgery next door" from putting up a like statement.

person, the upper parts of the body being shrouded in a mist, it was a presage of his early death. So Theoclymenus, the second-sighted man, says in the *Odyssey* before the slaying of the suitors: "Ah! wretched man, what woe is this ye suffer; for in night are shrouded your heads, and faces, and knees!" Whether the presentiment is about to be fulfilled for the owner of these legs we are unable to say.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

River Tyne Port Sanitary Authority.—Mr. Henry Armstrong reports that no cases of cholera were brought into the waters of his district during 1894, although in two ships arriving indirectly from Jeddah there had been during the voyage 100 and 111 cases of cholera respectively. The time and energy of the port sanitary officials were both greatly taxed by night and day, there being no less than 330 arrivals from cholera-infected ports during the months of August and September. The new disinfecting hulk is now in use. It contains tanks for perchloride of mercury solution, a steam disinfecting apparatus, and a store of liquefied sulphurous acid. There was a marked falling off in the number of emigrants passing through the Tyne Port during 1894 as compared with the previous year, the numbers being 193 and 1015 respectively. The emigrant vessels are visited by the inspectors on arrival and kept under supervision whilst in port. During the year under review there were 6970 coasters and 5073 foreign vessels inspected, and among the coasters we note with pleasure that many were fishing craft. The importance of controlling the sanitary condition of the fishing vessels is seen from the fact that there arrived in the waters of the port during 1894, 5765 trawlers and 9802 herring boats. Large consignments of herring and other fish come, Mr. Armstrong reports, from Denmark, Norway, and Sweden. Twenty-four cattle ships arrived in the Tyne in a filthy condition after having landed cattle elsewhere, and all these vessels were cleansed under the inspector's supervision.

Cheltenham Urban Sanitary District.—The general death-rate of this district was for last year 14·93 per 1000, as against an average for the ten previous years of 17·40. The infantile mortality was 128 per 1000 births, and the zymotic death-rate 0·53 per 1000 living. Cheltenham has provided a public abattoir, but apparently it does not find favour in the eyes of the butchers, and there is no power to close the private slaughter-houses. Dr. J. H. Garrett observes that some of the twenty-six registered slaughter-houses are mere hovels, quite unfit for the purposes for which they are used. We notice that Dr. Garrett publishes in his report a list of those butchers who during the year have made use of the abattoir—a step which may, we imagine, have good results. From the standpoint of the public health and the prevention of cruelty to animals there can be no two opinions as to the desirability of a public abattoir. An additional water-supply for Cheltenham from the river Severn at Tewkesbury has now been introduced, new filters have been provided, and the water proved on chemical analysis to be, Dr. Garrett states, superior in quality to that delivered from Dowdeswell. The Severn water is supplied in separate pipes and has been used for the most part for street watering, baths, &c. Steps are now to be taken to increase the purity of the Dowdeswell supply. There are still, it appears, some 3000 houses in Cheltenham supplied with water from shallow wells sunk in sand and with old sewers and house drains running near. The quality of the water in these wells is, Dr. Garrett observes, subject to peculiar and dangerous variation. We can well believe it, and we trust Dr. Garrett will be successful in his attempt to get them all closed.

Hull and Goole Port Sanitary District.—In relating the detailed work of his department during 1894 Dr. Wright Mason reports that in eighteen vessels the bow lockers were used for storing paints, leads, &c., but that these breaches of the regulations were remedied before the vessels left Hull. In several lighters lying in the docks foul bilges were discovered, and steps were taken to abate the nuisance. During 1894 there were but 19,309 emigrants passing through the port *en route* for America, as against 46,553 during 1893. As regards water-supply eighty-three vessels were found to have taken it in at a cholera-infected port, and all the tanks thus supplied were at once emptied and cleansed. In the case of some other vessels samples of water were submitted to chemical analysis and pronounced unfit for consumption. It would have been very instructive could some of these samples have been submitted to bacteriological examination. Dr. Mason makes a suggestion, in which we cordially concur,

that in the construction of ships attention should be directed to the more modern requirements of sanitation.

Tainmouth Urban Sanitary District.—Dr. F. Cecil Piggott, while referring in his current annual report to the subject of enteric fever, furnishes some evidence which tends to incriminate certain mussels or cockles as having been the cause of four, if not seven, of the cases. The four patients in question had each partaken of the shellfish within fourteen days of attack, and the other three were intimately connected with the fish trade. All these cases were inexplicable on a thesis of water- or milk-borne infection. The shellfish under suspicion were, it appears, obtained from the river Teign, near the outfall of a drain leading from the fever hospital, in which was a patient suffering from enteric fever. It is impossible, Dr. Piggott remarks, to be certain that the excrement had been properly disinfected. The circumstances are interesting and well worth recording, more especially if the shellfish were eaten raw and not cooked.

Sunderland Port Sanitary District.—Some idea of the very salutary effect which the recent cholera prevalence in Europe had in awakening port sanitary authorities to greater efforts may be obtained from Mr. John C. Wood's annual report for 1894. He states that during the year in question, although 2688 vessels were inspected by the sanitary inspector, it was only on two occasions that written notices had to be served for the abatement of nuisances. Defects were, no doubt, detected in many more instances, but it speaks well for the energy of the sanitary authority, and more especially for the tact of its officers, that the machinery works with so little friction. The vessels which were in the best sanitary condition were the Dutch and Danish; of the Spanish, Greek, and Belgian vessels a large percentage were insanitary.

Uxbridge Rural Sanitary District.—The Uxbridge Joint Hospital is the hospital provision used by this district, and in regard to it Mr. Charles Roberts observes that it would be better could the different diseases be more widely separated and nurses appointed for each; also, he remarks, it would be beneficial if patients when convalescent could be isolated for a time before returning to their own homes, as it sometimes happens that infection is carried to their relatives in spite of all precautions taken by the staff. By this we infer that Mr. Roberts advocates the passing of patients through a convalescent home—a course which to some degree is practised by the Metropolitan Asylums Board. As to the value of such a course from the point of view of complete recovery there can be little doubt, but we fear that even with these precautions return cases will from time to time occur.

Torrey Urban Sanitary District.—The infantile mortality in this district was, during 1894, 164 per 1000 births, and Mr. F. H. V. Grosholz, in referring to the causes of such mortality, impresses upon mothers the importance of paying proper regard to health during pregnancy. He also draws the attention of the council to the desirability of employing a trained nurse to instruct the poor in the matter of feeding, clothing, and general care. This, of course, means that the sanitary authority should aid in educating the poor in the intelligent care of their children, and certainly it is only by some such means as this that a lasting diminution can be made in the infantile mortality of the country.

Aberdeen Urban Sanitary District.—Among the cases of small-pox which occurred in the district during the latter part of 1893 and the earlier months of 1894 Mr. Arnall Jones reports that one patient probably contracted the disease by acting as bearer in the funeral of a person dead from small-pox, while two other cases occurred among those employed in destroying infected clothing and bedding.

King's Norton Rural Sanitary District.—Dr. Francis Hollingshead, in discussing the protective value of vaccination, records the instance of a vaccinated infant which remained unattacked by small-pox although at the breast of its mother, who was suffering from small-pox at a small-pox hospital. Apparently no one could be found to take care of the child during its mother's illness. Dr. Hollingshead found that school closure for measles was attended with beneficial results.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6893 births and 3551 deaths were registered during the week ending May 4th. The annual rate of mortality in these towns,

which had declined in the eight preceding weeks from 35.0 to 17.9 per 1000, further fell last week to 17.5. In London the rate was equal to 16.6 per 1000, while it averaged 18.1 in the thirty-two provincial towns. The lowest rates in these towns were 10.6 in Nottingham, 11.9 in Portsmouth, 12.4 in Leicester, 12.6 in Huddersfield, and 12.7 in West Ham; the highest rates were 22.9 in Blackburn, 23.2 in Liverpool, 23.3 in Oldham, 23.9 in Manchester, and 26.7 in Burnley. The 3551 deaths included 305 which were referred to the principal zymotic diseases, against 336 and 327 in the two preceding weeks; of these, 90 resulted from whooping-cough, 80 from measles, 49 from diphtheria, 39 from diarrhoea, 24 from "fever" (principally enteric), 22 from scarlet fever, and 1 from small-pox. No fatal case of any of these diseases occurred last week in Halifax; in the other towns they caused the lowest death-rates in Bristol, Bradford, Brighton, Leeds, and Sunderland, and the highest rates in Bolton, Burnley, Plymouth, Salford, and Preston. The greatest mortality from measles occurred in Plymouth, Manchester, and Bolton; and from whooping-cough in Plymouth, Birkenhead, Burnley, Preston, Salford, and Wolverhampton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 49 deaths from diphtheria included 29 in London, 5 in Birmingham, 3 in Leeds, 2 in Birkenhead, and 2 in Sheffield. One fatal case of small-pox was registered in London, but not one in any of the thirty-two large provincial towns. There were 34 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 4th inst., against 47, 35, and 37 at the end of the three preceding weeks; 8 new cases were admitted during the week, against 9, 4, and 12 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1413, against 1463, 1514, and 1469 on the three preceding Saturdays; 107 new cases were admitted during the week, against 117, 162, and 132 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 389 and 341 in the two preceding weeks, further declined to 290 last week, and were 55 below the corrected average. The causes of 58, or 1.6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Burnley, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 24.7 to 20.6 per 1000, rose again to 20.9 during the week ending May 4th, and was 3.4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15.6 in Dundee and 17.4 in Paisley to 25.1 in Greenock and 25.7 in Perth. The 602 deaths in these towns included 27 which were referred to measles, 17 to whooping-cough, 13 to diarrhoea, 7 to scarlet fever, 4 to diphtheria, 3 to "fever," and not one to small-pox. In all, 71 deaths resulted from these principal zymotic diseases, against 78 and 73 in the two preceding weeks. These 71 deaths were equal to an annual rate of 2.5 per 1000, which was 1.0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 30, 32, and 26 in the three preceding weeks, were 27 last week, of which 8 occurred in Edinburgh, 6 in Glasgow, 6 in Leith, and 4 in Aberdeen. The deaths referred to whooping-cough, which had been 17 and 24 in the two preceding weeks, declined again to 17 last week, and included 14 in Glasgow. The 7 fatal cases of scarlet fever exceeded the number recorded in any recent week, and included 4 in Glasgow and 2 in Edinburgh. The deaths from diphtheria, which had been 7 and 3 in the two preceding weeks, were 4 last week, of which 2 occurred in Glasgow. The 3 fatal cases of "fever" corresponded with the number in the preceding week, and included 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 132 and 145 in the two preceding weeks, declined to 124 last week, but were 29 above

the number in the corresponding period of last year. The causes of 48, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29.7 and 27.0 per 1000 in the two preceding weeks, rose again to 27.3 during the week ending May 4th. During the past five weeks of the current quarter the death-rate in the city has averaged 31.1 per 1000, the rate during the same period being 18.3 in London and 19.5 in Edinburgh. The 183 deaths registered in Dublin during the week under notice showed a slight increase upon the number in the previous week, and included 7 which were referred to the principal zymotic diseases, against 3 and 5 in the two preceding weeks; of these, 4 resulted from whooping-cough, 2 from small-pox, 1 from diphtheria, and not one either from measles, scarlet fever, "fever," or diarrhoea. These 7 deaths were equal to an annual rate of 1.0 per 1000, the zymotic death-rate during the same period being 1.7 in London and 2.7 in Edinburgh. The 4 fatal cases of whooping-cough exceeded the number recorded in any recent week. The deaths referred to small-pox, which had been 1 in each of the two preceding weeks, were 2 last week. The 183 deaths registered in Dublin last week included 29 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths of infants considerably exceeded the number in the preceding week, while the deaths of elderly persons showed a decline. Five inquest cases and 3 deaths from violence were registered; and 51, or more than a fourth, of the deaths occurred in public institutions. The causes of 21, or more than 11 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during April in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 5.7 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 7.0, 5.9, and 5.8 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, Stoke Newington, St. Martin-in-the-Fields, City of London, St. Saviour Southwark, and St. Olave Southwark; while they showed the largest excess in Chelsea, Holborn, Limehouse, Poplar, Rotherhithe, Greenwich, and Plumstead. The prevalence of small-pox in London showed a slight further decline in April, 37 cases being notified during the month, including 9 in Holborn, 8 in Rotherhithe, 6 in Lambeth, and 3 in Islington sanitary areas. The Metropolitan Asylum Hospitals contained 34 small-pox patients at the end of April, against 51, 66, and 54 at the end of the three preceding months; the weekly admissions averaged 7, against 10, 15, and 11 in the three preceding months. The prevalence of scarlet fever in London showed a slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in Chelsea, Limehouse, Poplar, Rotherhithe, Greenwich, Lee, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1413 scarlet fever patients at the end of April, against 1633, 1569, and 1485 at the end of the three preceding months; the weekly admissions averaged 132, against 148, 141, and 145 in the three preceding months. The prevalence of diphtheria in London showed a further increase during April; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Chelsea, Strand, Whitechapel, Poplar, Rotherhithe, and Camberwell. There were 430 cases of diphtheria under treatment in the Metropolitan Asylum hospitals at the end of April, against 515, 461, and 435 at the end of the three preceding months; the weekly admissions averaged 69, against 71, 50, and 62 in the three preceding months. The prevalence of enteric fever in London showed a slight decline during the month under notice; among the various sanitary areas this disease showed the highest proportional prevalence in Paddington, Marylebone, St. George-in-the-East, and Greenwich. Erysipelas was proportionally most

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—APRIL, 1895.
(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1896.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths of infants under one year to 1000 births.				
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhoea.		Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.
LONDON...	4,292,346	37	837	581	2	108	8	13	361	—	1837	6.7	—	107	44	105	188	—	19	—	53	5.6	1.5	6170	13.3	182
West Districts.																										
Paddington ...	122,756	2	20	14	—	6	—	1	8	—	51	5.4	—	—	—	—	—	—	—	—	—	—	—	—	—	
Kensington ...	167,671	—	21	25	—	4	—	—	20	—	39	5.4	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hammer-smith ...	103,429	—	13	13	—	3	—	—	3	—	47	4.6	—	—	—	—	—	—	—	—	—	—	—	—	—	
Fulham ...	117,745	—	18	23	—	3	—	—	8	—	57	5.2	—	—	—	—	—	—	—	—	—	—	—	—	—	
Chelsea ...	99,930	—	26	21	—	1	—	—	9	—	47	7.4	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. George Hanover-square ...	74,037	—	7	7	—	—	—	—	2	—	18	3.2	—	—	—	—	—	—	—	—	—	—	—	—	—	
Westminster ...	54,003	—	6	6	—	—	—	—	2	—	15	3.6	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. James Westminster ...	23,149	—	2	2	—	—	—	—	—	—	6	3.4	—	—	—	—	—	—	—	—	—	—	—	—	—	
North Districts.																										
Marylebone ...	137,392	2	26	15	—	7	—	—	12	—	62	5.9	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hampstead ...	77,592	—	16	7	—	2	—	—	45	—	24	4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. Pancras ...	233,543	2	47	25	—	4	—	3	22	—	121	6.9	—	—	—	—	—	—	—	—	—	—	—	—	—	
Islington ...	335,928	3	79	26	—	3	—	—	13	—	138	5.4	—	—	—	—	—	—	—	—	—	—	—	—	—	
Stoke Newington ...	35,214	—	41	20	—	8	—	—	—	—	83	5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hackney ...	215,423	—	—	—	—	—	—	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Central Districts.																										
St. Giles ...	37,654	—	1	5	—	—	—	—	4	—	10	3.5	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. Martin-in-the-Fields ...	13,326	1	2	6	—	—	—	—	—	—	2	1.9	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. Andrew ...	22,586	9	7	2	—	—	—	—	—	—	8	4.6	—	—	—	—	—	—	—	—	—	—	—	—	—	
Clerkenwell ...	65,036	—	8	8	—	1	—	—	5	—	19	7.7	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. Luke ...	40,763	—	6	8	—	2	—	—	6	—	23	4.6	—	—	—	—	—	—	—	—	—	—	—	—	—	
City of London ...	53,824	—	2	2	—	2	—	—	1	—	7	2.7	—	—	—	—	—	—	—	—	—	—	—	—	—	
East Districts.																										
Shoreditch ...	122,932	—	21	16	—	—	—	—	9	—	46	4.9	—	—	—	—	—	—	—	—	—	—	—	—	—	
Bethnal Green ...	130,611	—	13	14	—	5	—	—	17	—	49	4.9	—	—	—	—	—	—	—	—	—	—	—	—	—	
Whitechapel ...	75,610	1	10	21	—	—	—	—	7	—	39	6.7	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. George-in-the-East ...	46,227	—	12	4	—	3	—	—	3	—	22	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lincoln ...	56,895	1	16	11	—	—	—	—	5	—	34	7.8	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mile End Old Town ...	108,443	—	16	19	—	1	—	—	6	—	42	5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
Poplar ...	171,230	—	61	40	—	6	—	—	13	—	121	9.2	—	—	—	—	—	—	—	—	—	—	—	—	—	
South Districts.																										
St. Saviour Southwark ...	28,570	—	5	6	—	—	—	—	2	—	15	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. George Southwark ...	60,188	—	11	14	—	4	—	—	3	—	35	3.8	—	—	—	—	—	—	—	—	—	—	—	—	—	
Newington ...	119,358	—	—	—	—	—	—	—	6	—	1	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. Olave Southwark ...	13,065	—	17	8	—	—	—	—	—	—	32	5.1	—	—	—	—	—	—	—	—	—	—	—	—	—	
Bromley ...	83,861	—	17	10	—	—	—	—	3	—	39	12.5	—	—	—	—	—	—	—	—	—	—	—	—	—	
Kennington ...	40,713	8	45	30	—	—	—	—	5	—	184	6.1	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lambeth ...	284,933	6	56	34	—	—	—	—	13	—	188	7.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
Battersea ...	108,566	—	34	35	—	—	—	—	15	—	73	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—	
Wandsworth ...	168,546	—	31	18	—	—	—	—	20	—	124	7.6	—	—	—	—	—	—	—	—	—	—	—	—	—	
Chamberwell ...	252,737	—	37	20	—	—	—	—	22	—	128	6.4	—	—	—	—	—	—	—	—	—	—	—	—	—	
Greenwich ...	175,123	2	48	29	—	11	—	—	27	—	128	7.6	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lewisham (excluding Penze) ...	82,010	—	14	5	—	—	—	—	7	—	26	4.1	—	—	—	—	—	—	—	—	—	—	—	—	—	
Woolwich ...	42,768	—	10	5	—	—	—	—	4	—	19	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	
Plumstead ...	38,532	—	14	5	—	—	—	—	3	—	18	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
Port of London ...	51,494	—	34	15	—	—	—	—	5	—	44	9.3	—	—	—	—	—	—	—	—	—	—	—	—	—	

* Including 23 cases of membranous group.

† Including deaths from membranous group.

prevalent in Kensington, St. Pancras, St. Luke, Bethnal-green, and Lambeth sanitary areas. The 13 cases of puerperal fever notified during April included 3 in St. Pancras, and 2 each in Wandsworth, Greenwich, and Lewisham sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, April 27th, the deaths of 6,170 persons belonging to London were registered, equal to an annual rate of 18.3 per 1000 of the population, against 18.3, 30.3, and 30.0 in the three preceding months. The lowest death-rates during April in the various sanitary areas were 11.1 in Hampstead, 12.2 in Stoke Newington, 13.0 in Lewisham (excluding Penze), 13.8 in Hammersmith, 14.4 in Lee, and 15.2 in Paddington and in Wandsworth; the highest rates were 25.3 in Newington, 25.5 in Holborn, 26.0 in St. Saviour Southwark, 26.7 in St. Giles, 26.9 in St. Luke, 27.1 in St. George-in-the-East, and 29.4 in Strand. During the four weeks of April 516 deaths were referred to the principal zymotic diseases in London; of these, 188 resulted from whooping-cough, 107 from measles, 105 from diphtheria, 53 from diarrhoea, 44 from scarlet fever, and 19 from enteric fever. These 516 deaths were equal to an annual rate of 1.5 per 1000, which corresponded with the rate in each of the two preceding months. The lowest death-rates from these diseases during last month were recorded in Paddington, St. James Westminster, Stoke Newington, Bermondsey, Lee, and Plumstead; and the highest rates in St. Martin-in-the-Fields, Clerkenwell, Shoreditch, Limehouse, Mile End Old Town, Poplar, Rotherhithe, and Battersea sanitary areas. No fatal case of small-pox was registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 20. The 107 deaths referred to measles were but little more than a third of the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Shoreditch, Limehouse, Mile End Old Town, and Poplar. The 44 fatal cases of scarlet fever were 18 below the corrected average number; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 105 deaths from diphtheria were slightly below the corrected average number; this disease showed the highest proportional fatality in Kensington, St. Giles, Strand, Shoreditch, Poplar, Battersea, and Camberwell sanitary areas. The 188 fatal cases of whooping-cough were 90 below the corrected average number; among the various sanitary districts this disease showed the highest proportional fatality in Westminster, St. Martin-in-the-Fields, Clerkenwell, Shoreditch, Newington, and Lambeth. The 19 deaths referred to enteric fever were 17 below the corrected average number; there was no marked excess of "fever" mortality last month in any of the sanitary areas. The 53 fatal cases of diarrhoea were within 5 of the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was as much as 39 per cent. below the average.

Infant mortality in London during April, measured by the proportion of deaths under one year of age to registered births, was equal to 152 per 1000, and exceeded the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hammersmith, Marylebone, Hackney, Holborn, City of London, and Bethnal Green; and the highest rates in Chelsea, St. George Hanover-square, St. Martin-in-the-Fields, Poplar, St. Saviour Southwark, Newington, and St. Olave Southwark.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR MACLEAN and Surgeon-Captains Keatly and Weir have arrived from India in the *Malabar* on completion of a tour of service. Surgeon-Captain Watson has arrived from Egypt, and Surgeon-Major Michael and Surgeon-Captain Gray have left Egypt on completion of their tour. Surgeon-Major Hughes has been posted to Chatham, and Surgeon-Captain Young to Dublin.

INDIA AND THE INDIAN MEDICAL SERVICES.

Deputy Surgeon-General Sir Joseph Fayrer, M.D., F.R.C.S. Edin., K.O.S.I., Retired List Indian Medical Service, Honorary Physician to the Queen, late President of the Medical Board, India Office, is granted the honorary rank of Surgeon-General.

The following appointments are announced:—Surgeon-Captain J. W. Bullen, M.D., A.M.S., to the Civil Medical Charge of Ranikhet, in addition to his military duties; Surgeon-Captain J. M. Cadell, officiating Civil Surgeon, Sultanpur, to the Medical Charge of the Camp of the Lieutenant-Governor and Chief Commissioner, North-West Provinces and Oudh; Brigade-Surgeon-Lieutenant-Colonels G. Hutcheson, G. McB. Davis, H. T. Brown, and C. F. Pollock to officiate as Principal Medical Officers of the Lahore District, Punjab Frontier Force, Peshawar and Rawalpindi Districts respectively; Surgeon-Major F. C. Chatterji, Civil Surgeon, Philibhit, on being recalled from privilege leave to the Mainpuri District. The following officers of the Army Medical Staff have come out to India in succession to "tour expired" officers:—Surgeon-Lieutenants W. D. Erskine, H. A. Hinge, H. A. Bray, H. S. Thurston, J. G. McNaught, C. T. Samman, J. H. Farmer; Surgeon-Captains J. J. C. Donnet, C. S. Sparkes, R. L. R. McLeod, J. B. Wilson, W. J. Trotter, M. J. Sexton, J. M. Nicholls; Surgeon-Majors R. F. O'Brien, P. J. Dempsey, O. Todd; and Surgeon-Lieutenant-Colonels J. Ring and W. E. Saunders. Surgeon-Major E. S. Brander, Civil Surgeon, is transferred from Mainpuri to Muttra.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeon J. T. W. S. Kellard to the *Malabar*; Surgeon J. C. Wood to the *Hood*.

VOLUNTEER CORPS.

Artillery: 1st Kent (Eastern Division, Royal Artillery): Surgeon-Lieutenant J. I. Boswell, M.D., resigns his commission. 1st Argyll and Bute: The under-mentioned gentlemen to be Surgeon-Lieutenants: John William Watkin Penney, M.B.; David Johnston Penney, M.B. 1st Cumberland: Surgeon-Lieutenant W. J. Fairlie, M.B., resigns his commission. 1st Durham (Western Division, Royal Artillery): Surgeon-Lieutenant D. F. Todd to be Surgeon-Captain. 5th Lancashire: Surgeon-Captain C. W. Dean resigns his commission. *Royal Engineers*: 1st Aberdeenshire: Surgeon-Lieutenant W. Sinclair, M.B., to be Surgeon-Captain. *Rifle*: 1st Volunteer Battalion the Royal Warwickshire Regiment: Surgeon-Lieutenant W. P. Whitcombe to be Surgeon-Captain. 1st Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant W. E. R. Wood, M.D., to be Surgeon-Captain. 3rd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant T. R. Bailey, M.D., resigns his commission. 1st Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Edward Hawkesworth Hackett, Gent., to be Surgeon-Lieutenant. 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders): Charles William Howatson, M.B., to be Surgeon-Lieutenant. 1st (Ross Highland) Volunteer Battalion Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Colin Mackenzie, Gent., formerly Surgeon-Lieutenant, to be Lieutenant. 6th Volunteer Battalion the Gordon Highlanders: Surgeon-Captain R. S. Turner to be Surgeon-Major; William Robert Duguid, jun., M.B., to be Surgeon-Lieutenant.

DEATH IN THE SERVICES.

Surgeon-Major George Laffan, M.D., Q.U.I., A.M.S., at Belgum, Madras, on the 27th ult. Born in 1845, he graduated in 1876 at Queen's College, Cork, and was appointed a surgeon in the army in the following year. He attained the rank of surgeon-major in 1889. He served in the Soudan Expedition of 1884-85 (medal with clasp and the bronze star), and the expedition to Manipur, 1891 (medal and clasp).

"THE SCOURGE OF INDIA."

Surgeon-Major Perry Marsh, Army Medical Service, has published in the *United Service Magazine* of this month a rejoinder to the article which appeared from Brigade-Surgeon-Lieutenant-Colonel Climo in the preceding number of that journal. The scourge referred to is, as our readers are probably aware, enteric fever, about which we have also had a good deal to say in THE LANCET from time to time. Surgeon-Major Perry Marsh analyses the statements contained in Brigade-Surgeon-Lieutenant-Colonel Climo's

paper and deals with them *seriatim*. He challenges the correctness of the allegation that "the increasing prevalence and mortality from enteric fever in India is the direct consequence of regiments no longer having medical officers serving with them," and makes many strong points by using for the purpose of his argument a number of facts with which our readers and medical officers generally are no doubt acquainted. Surgeon-Major Perry Marsh adverts to the alteration that has taken place in the diagnosis of fever in India of late years as compared with a time when enteric fever was not sufficiently differentiated from other forms of Indian fever, and not recognised as it is now. He dwells upon the influence of youth and recent arrival as very important factors in increasing the susceptibility to this form of fever, and points to the fact that with a short service system the European force in India contains a far greater proportion of this susceptible material—*young and recently arrived men*—than it did formerly. He proves this by statistical evidence which has been sufficiently repeated year after year to leave no doubt; and he also contests the correctness of Brigade-Surgeon-Lieutenant-Colonel Climo's statements as to the influence of the selection of recruits and the invaliding rates of the army of India (which have declined from 40 per 1000 for the ten years ending 1870 to 25.3 per 1000 for 1893). The sanitation and cleanliness of Indian cantonments, from all we can gather, are well attended to—many of them, indeed, are models of cleanliness and neatness. It is outside cantonments, in the native bazaars, that insanitary conditions prevail so extensively. As we have frequently said, however, we are not satisfied with the present system of barrack-room water filtration, and were glad to see that a question was recently asked in the House of Commons about the remarkable improvement that had been effected in diminishing the amount of enteric fever in the French army by the use of their new form of filter. It is surely time that something was done in this respect for our army in India.

THE HOSPITALS FOR FIELD SERVICE IN INDIA.

The late Afghan War gave rise to a reorganisation of the medical service in India and to a complete remodelling of the field service equipment. A field hospital is equipped for 100 beds and it is capable of being divided into four sections, each a complete unit in itself in respect of *matériel* and *personnel*. Each field hospital has a distinguishing number, and the four sections are designated by letters above the field hospital number. Great care has been bestowed upon the provision, arrangement, and packing of stores, medical comforts and medical and surgical appliances, in order to adapt them practically to the requirements of field service. The entire *personnel* of a British field hospital, from the surgeon-major in charge to the junior tent-lascar, consists, inclusively of muleteers, of 294 persons. The latest Medical Department Code for field service in India is generally supposed to be very good and complete. The *Pioneer Mail* of April 18th has a communication descriptive of some of these hospitals, which are termed "model field hospitals," as they left Meerut for service with the Chitral relief force.

VOLUNTEER MEDICAL ASSOCIATION.

The annual mess dinner of this association was held at Limmer's Hotel on Wednesday, April 24th, and a large party of members and guests sat down under the chairmanship of Surgeon-General Don, who presided in the absence of Sir Guyer Hunter. In the various speeches reference was made to the work which had been done by the association, and of the necessity for its support by all volunteer medical officers. It was pointed out that this was the only organisation through which representations could be made to the authorities regarding the objects in which its members were interested. The arrangements for the dinner were admirably carried out by the mess committee and the hon. secretaries, Surgeon-Captain Dundas Grant and Surgeon-Lieutenant A. Eddowes.

THE SMALL-POX OUTBREAK AT CALCUTTA.

According to the latest intelligence from India small-pox is still very prevalent at Calcutta. The epidemic appears to be of a severe character and to have given rise to a good deal of mortality. An enormous number of natives and others have been vaccinated or revaccinated since the disease made its appearance in Calcutta, and the able and energetic public health officer of that city, Dr. Simpson, has been very actively employed in devising and carrying out arrangements in this and other respects for checking the

spread of the disease. There has also been a good deal of cholera of late in Calcutta.

THE DEFENCE OF CHITRAL.

Our readers, in common with the rest of the public, will be glad to learn that the Secretary of State for India in Council has sanctioned the recommendation of the Government of India to grant six months' pay to all ranks of the garrison in recognition of their splendid defence of Chitral Fort. We congratulate all concerned, and especially Surgeon-Major Robertson and Surgeon-Captain Whitchurch on the distinguished part which they played throughout the siege, and have no doubt that both these officers will receive some further recognition of the conspicuous services they have rendered.

Correspondence.

"Audi alteram partem."

"MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS."

To the Editors of THE LANCET.

SIRS.—Mr. Sharp, in his letter in THE LANCET of May 4th, has courteously disclaimed any intention on the part of the School Board to put a slight upon the medical profession by the appointment of scrutineers of medical certificates which are considered doubtful or unsatisfactory by the Board. Yet the results of the Board's action cannot but belie its intentions. The majority of such certificates are filled up *gratuitously* by medical men who act in perfect good faith and with every consideration for the welfare of children, parents, and schools, for they can have no motive for acting otherwise. Mr. Sharp denies that certificates are given as an act of courtesy to the Board. "On the contrary," he says, "they are procured by the parents as evidence of the child's inability to attend school." How procured, he does not apparently inquire. As a matter of fact, the burden of filling them up in large quantities falls chiefly on hospital medical officers, for the same class of children attend Board schools and hospitals alike. The certificates are sent by the Board's officers through the parents to the medical attendant, with a direct request that he will fill them up, or the parents will be summoned and fined. It is, of course, open to the medical man to refuse to do so, and to offer to give evidence on the parents' behalf should a summons be issued. But the poor parent at once objects that even if he escape a fine he will lose a day's work by having to attend the Police-court, and the medical man shares the latter objection. So he endeavours to save the child from possible injury from enforced schooling, the parents from unjust prosecution, and himself from further trouble by giving a certificate. In doing so he also supplies the Board with gratuitous information which it has no legal right to demand. He thus saves the Board from undertaking actions which, were he to give evidence in court, it would entirely lose. Hence, giving a certificate instead of attending to give evidence in court is distinctly an act of courtesy to the Board. It seems therefore a little ungracious of the Board to first exert indirect pressure on medical men to do unpaid work for it, and then to question the value of the work done. The main reasons alleged for these new appointments are that "medical certificates are frequently presented which are unsatisfactory either on account of the vagueness of the terms used, or of a doubt as to the seriousness of the malady from which the child was alleged to be suffering." Whatever opinion the School Board may form on these points, it seems only right that the opinion of a medical man that a child is unfit for school should be respected; at all events, reference should be made to him if the Board is in doubt. The Board, however, thinks otherwise, for quite recently the parents of a boy, who has been under my care for many weeks as an out-patient and for whom I gave a certificate of unfitness to attend school, have been summoned and fined at the Clerkenwell Police-court for not sending him to school. My certificate was rejected by Board and magistrate. I was not called upon to give evidence. The result of such high-handed proceedings by the Board can only be that medical men will absolutely refuse to give

certificates, finding their labour thrown away. The new appointments by the Board will, therefore, become sinecures. It will, however, cause constant chagrin and vexation to medical men to find that their efforts to serve children, parents, and schools are so ill appreciated by the Board. After all, the Board should know that medical men are its best friends. All will agree with Mr. Sharp that the school attendance of a child is by no means a "trivial matter," but one of "vital importance, not merely to the future welfare of the child, but also indirectly to the community generally," especially, I would add, when the child is medically unfit to attend. And of this who are to be the judges?

I am, Sirs, yours faithfully,

LEONARD G. GUTHRIE.

Upper Berkeley-street, W., May 6th, 1895.

"MEDICAL EVIDENCE AT INQUESTS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 4th I notice a communication on the above subject. In an editorial note to Mr. Milligan's explanation you state your opinion "that it would have been advisable to take the evidence of the medical man who first saw the wound." This seems so obvious that one wonders that it is not the universal practice. I can give a case in point. Some time ago I was called to see a man who had been shot. He lived close to my house, so that I was able to attend within a few minutes of the accident. I found the man lying on the floor, with blood spurting from a wound in the neck. As the patient was rapidly bleeding to death, I placed my finger on the wound, and so stopped the flow of blood. Having sent for the ambulance, the man was conveyed to hospital, when the hæmorrhage was found to have ceased, owing no doubt to the fact that I had kept my finger firmly applied to the wound during the whole time since I first saw him. I may state that the patient made an incriminating statement to me against a youth who had fired the shot, saying that it was done intentionally. The youth was afterwards tried for murder and acquitted, there being no evidence to prove that the occurrence was not purely accidental. After making the statement to me the patient never spoke again. He died a few hours afterwards in hospital. The police whom I sent for carefully took my name and address, and that was the last I heard of the matter. The divisional surgeon, who had never seen the man at all until he saw him in the mortuary, was called at the trial, though what value his evidence could have it would be difficult to say. Had I waited until the police sent for me to attend the man would have been dead, but I should have had a fee. As I attended first and sent for the police myself I saved the patient's life for the moment, but received no fee. Although I am satisfied that in this case the wounding was accidental, it is not difficult to imagine that there might have been a grave miscarriage of justice.

I am, Sirs, yours faithfully,

Holloway-road, N., May 6th, 1895.

W. A. MALCOLM.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—In reference to Mr. Dunlop's letter in THE LANCET of May 4th, it would be as well, perhaps, to remove the impression made by it—viz., that medical men are likely to receive even the utterly inadequate rate of 8d. for each bottle of medicine supplied by them to club patients—by stating at once that, far from receiving 8d., the most they can expect to receive is 3d. a bottle. I have been myself for many years connected with a club whose rate of pay to their medical officers is practically the same as that of the London and Manchester Industrial Assurance Company, and the average amount per bottle received by me over a period of ten years, compiled from accurate statistics kept by my assistant, came to something less than 3d. a bottle. It is true that last year—the year on which Mr. Dunlop's estimate is based—I too received about 9d. a bottle on an average from my club patients, but that was because (owing to the unusual character of the season) I had, in common with so many medical men in all parts of London, only one-third of the usual number of patients requiring attendance—a condition of things not likely to be permanent, and

on which, therefore, it would be dangerous on any matter of moment to base calculations for the future.

I am, Sirs, yours truly,

JOHN BEATTIE CROZIER, M.B., L.R.C.P.

Elgin-avenue, W., May 8th, 1895.

"IRRIGATION AND CLIMATE."

To the Editors of THE LANCET.

SIRS,—In this week's issue of THE LANCET there are some remarks on the effect of irrigation upon the climate of Egypt which raise a question of real interest. Has the climate of Lower Egypt become much damper than it used to be? The answer must be undoubtedly in the affirmative. I was in Cairo for the first time in the winter of 1850, and have been there three times since during the last five or six years. At the former period rain was so rare an occurrence that people gazed at it as at a remarkable phenomenon. During the latter period boats have been actually used at times in the streets of Cairo at periods of heavy rains. These are the facts, and it is probably not difficult to suggest the cause.

I am, Sirs, yours faithfully,

W. H. HALLIDAY.

Oxford and Cambridge Club, Pall Mall, S.W., May 4th, 1895.

"STERILISATION OF MILK."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 20th Dr. Carter, in an able article, calls attention to the vital importance, especially during the summer months, of preparing milk for home consumption which shall agree perfectly with infants and with dyspeptic adults, and which yet shall be neither raw nor boiled. Though he does not say so in so many words, the chief practical advantage of sterilised milk over boiled milk is that it does not cause the constipation usually complained of when mothers are compelled to boil the children's food. I may mention that in some Oriental countries milk is regarded as a mild aperient merely because it is the custom of the natives to drink it when no longer fresh. Dr. Carter commends the adoption of a sterilising machine which sounds desirable in many ways. It is apparently a modification of Professor Soxhlet's sterilising apparatus for milk, which is too little known to English practitioners. This apparatus was brought out in Munich in 1886, and has since then been in constant use in Germany. It has been employed in Egypt for more than three years, and after using it for my own children and for patients I can confidently recommend it as being simple, portable, certain, and inexpensive. (The London agent is Mr. Pearl, 4, Bury-court, St. Mary-axe.) Dr. Carter proposes that the milk-bottles shall be closed with cotton-wool, but the Soxhlet system of providing indiarubber corks, which are sucked into the neck of the bottle during the heating process, is perhaps better. The milk will then keep sweet for several weeks in the corked bottles. The best kind of cork has been invented by Professor Stutzer, and can be obtained from Messrs. Ollendorff-Wilden of Bonn. In order to preserve milk in larger quantities, as in dairies or hospitals, nothing will be found to act much better than an apparatus originally made for breweries, and introduced some three years ago into the Kasr el Aini Hospital by the medical superintendent, Mr. Milton. Formerly it was impossible to keep milk during the summer nights, but now there are no further complaints, and it is even found that the milk will keep for three days in vessels covered by muslin only, provided that the vessels also are previously sterilised. By this machine, made by Messrs. Lawrence and Co. of London, every morning more than 100 pints of hospital milk are rendered innocuous for future consumption in less than fifteen minutes by heating the milk by steam and then rapidly cooling it again.

I am, Sirs, yours faithfully,

Cairo, May 1st, 1895.

F. M. SANDWICH, M.D.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—Mr. Sewill has hit the nail on the head. The medical profession require two things most urgently: first, that the Medical Acts shall be so amended as to make it a penal offence for persons to practise any branch of medicine.

or surgery, the penalties to be increased substantially for second and third breaches of the Act; and, secondly, a public body or a public officer whose duty it shall be to enforce the provisions of the Act. It is mere waste of time to attempt to draw up a penal clause and endeavour to embrace in it all the titles at present assumed by unqualified men. As soon as the list of titles was drawn up men would invent fresh titles and would continue to practise with impunity. A movement is on foot to ask the British Medical Association to spend a portion of its surplus income in the suppression of quackery; and in the opinion of many thoughtful men such a movement would be likely to prove successful. It is also worth much consideration as to whether the mature experience (as Mr. Victor Horsley suggested in his annual address) of the Medical Defence Union could not be utilised for such an important work. At the present moment what is most required is the focussing of the opinion of the profession on these vital points; and I sincerely hope that ere long an opportunity will be given to those who have taken an interest in them to confer together and if possible draw up a scheme for presentation to the members of the profession.

I am, Sirs, faithfully yours,

T. GARRETT HORDER.

Cardiff, April 29th, 1895.

To the Editors of THE LANCET.

SIRS,—There is a fact which seems to have been overlooked which I venture to think cuts the ground entirely from under Dr. Campbell Black's feet. It is that the Society of Apothecaries successfully claims for its Licentiates the legal right to style themselves Doctor. This being so, Dr. Campbell Black's contention that the coveted title belongs only to men who have taken the University degree of Doctor falls to the ground, and with it, it seems to me, ought to fall his protests. For it is manifestly absurd to deny to (e.g.) the M.R.C.S., L.R.C.P. a title which is accorded to the certainly not superior L.S.A. For my part I should be in perfect sympathy with Dr. Campbell Black's desire to limit the title to the *bonâ fide* M.D., were the opportunity of acquiring that degree given, as it should be, to every duly qualified man. But under existing conditions, while I intend never to assume the title, I shall yet always expect to receive it, at least from my patients, and shall certainly feel no resentment towards those who, perhaps more logical and more courageous, do assume it. Sauce for the goose should be sauce for the gander; and while the L.S.A. takes the title as his right, and the M.B. of every recognised University, however mediocre, receives it, even in the pages of THE LANCET, "by courtesy," it is ridiculous to expect the diplomate of a College of Physicians to abstain from endeavouring to minimise so glaring an injustice. He uses the title, therefore, and establishes an impregnable defence by appealing to immemorial custom and the universally received interpretation of the word physician.

I am, Sirs, yours faithfully,

PALMAM QUI MERUIT.

May 3rd, 1895.

To the Editors of THE LANCET.

SIRS,—Dr. Campbell Black evidently has to encounter some rather subtle logicians upon what, after all, should appear a most simple question, and it is one which threatens to drift into a question rather of etymological than of practical importance. If, however, Dr. Black sticks to his big gun—that is, as he states, that "a doctorate is a University degree"—no collateral issues, such, for instance, as the distinction between a doctor and a physician, can touch the point, as we have nothing whatever to do with these considerations. Nothing can alter the fact that a University degree confers the title of "doctor," whereas a Licentiate or otherwise does not. It has been attempted in some quarters to point out that a large number of the medical corporations address their diplomates as "doctor," and that medical men address one another as such, and, further, that the public use the term in a general sense. None of these considerations, moreover, touch the point. The real question is, Has a non-graduate any right to *dub himself* "doctor"? He is clearly not responsible for what others do. The writer remembers many years ago a commoner who, upon being driven to a dinner party in a cab, was addressed by the cabman as "My Lord," the cabman presumably thinking his fare, who happened to be a person of aristocratic appearance and demeanour, must be a nobleman. Surely nobody could contend on this ground that the fare would be entitled to announce himself thus.

By parity of reasoning non-graduates have no claim to dub themselves "doctor" on brass or otherwise, whatever others may do for them. If it is otherwise, University degrees, so far as the title is concerned, are absolutely null and void—in other words, they are useless, which is obviously unfair to those who have gone to the expense and trouble of obtaining them, and probably more with the object of obtaining a title than anything else. I am, Sirs, yours, &c.,

London, May 4th, 1895.

L.R.C.P. EDIN.

* * This correspondence must now cease.—ED. L.

"PUBLIC AND PRIVATE VACCINATION."

To the Editors of THE LANCET.

SIRS,—I fully endorse the complaint of several of your contributors who are public vaccinators, that much vaccination is done insufficiently, according to the wishes of mothers, rather than, as it should be, with the sole view of safeguarding the patients from small-pox. Indeed, until the number of successful vesicles appears on the certificate, which could readily be the case, such insufficiency is sure to continue. It is a very easy remedy, and could almost at once be put into force. I tried to get this information from the registrar of my district, but he tells me that, on asking, the reply he got was the question, "What business it was of his?"

I am, Sirs, yours truly,

ANOTHER PUBLIC VACCINATOR.

May 3rd, 1895.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Street Noises.

REFERRING to the annotation in last week's LANCET on Street Noises, it may be stated that in Liverpool we have for some years past possessed under a local Act very summary powers of dealing with the noises made by street musicians or singers. A householder may personally, or by a servant or police constable require a street musician to depart beyond the hearing of such householder, which would mean a very considerable distance. Refusal to comply with this very reasonable request subjects the musician to a fine not exceeding 40s. and costs, and it has been found necessary to summon some few of these pests for persisting to play in or near a street largely inhabited by members of the medical profession. In addition to the reasons suggested in the annotation why a licence should be required of these gentry, another might be added—the large earnings acquired by them. Whether it be honestly earned, or be more correctly black-mail, it is no secret that the amount earned by the owner of a piano-organ is very large. A large number of medical practitioners reside within short distances of various churches whose monotonous bells tolling for nearly half an hour are a terrible infliction. But the most cruel of all pests is the ringing of changes on a peal of bells at a late hour in the evening, the clashing and clanging being incessant for, it may be, two hours. It is no consolation to the physician or surgeon, who has been trying to listen to patients, to read, or to write during this period, to learn that it was "a true peal of grandsire caters which came round in two hours and thirty-seven minutes." If change-ringing and practice be desirable, might it not be done, say, on Saturday afternoon, when the annoyance would be less?

The Assizes.

Mr. Justice Hawkins is presiding in the Crown Court at the present assizes. The calendar contains the names of forty-four prisoners. Among these, one is charged with murder, one with manslaughter, and one with shooting with intent. Several women are charged with a serious assault on a boy twelve years of age because he gave evidence at the last assize against a prisoner for maliciously wounding a woman. He was so seriously hurt that he had to be taken to the Royal Infirmary. Quite apart from the nature of the injury, assaulting or even intimidating a witness is a very grave offence.

Gift of a New Park.

Another fine breathing-place has been presented to this city by an anonymous donor. It takes the form of a park, situated at Wavertree, an eastern suburb of Liverpool, noted as the residence of the poetess, Felicia Hemans. The value

of the gift, which is of considerable extent, is stated to be over £80,000. Such gifts are, however, invaluable.

May 8th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary Site, Newcastle-upon-Tyne.

By a large majority—33 to 10—Mr. Alderman Henry Newton's motion that the corporation should grant the infirmary governor's request to build a new hospital on a portion of the town moor, on the condition that an equal area should be added to the moor, has been negatived. It is believed that the action of the town council fairly represents the feeling of the citizens, and the objections against building upon any part of the moor is undoubtedly a strong one. It will occur to many, however, that if by placing the Leazes site at the disposal of the infirmary committee the area of the moor would not have been curtailed, the strongest reason for not granting the request of the infirmary committee was satisfactorily met. The Royal Infirmary is undoubtedly in a strait; its present accommodation is inadequate and it would be exceedingly difficult to build upon the present site such a hospital as is required. The staff would be content to remain where they are, in the very centre of the town, if additional land could be procured, but hitherto this has been found impossible. It is doubtful whether the corporation would be willing to curtail the scope of the cattle market for the benefit of the infirmary even if they had the power to do so, and in no other direction can the present site be added to.

New Charter for the University of Durham.

It is understood that the petition of the University to the Queen in Council has been granted and that a new Charter is about to be given. If this should be true the University will then be able to grant degrees to women in all the faculties with the exception of theology. Why women should not be encouraged to study theology is a little difficult to understand. It cannot be because the fair sex are not interested in the subject, for the majority of almost every Church of England congregation consists of women—perhaps the reason is a fear that if they studied the subject more closely they might become lip devout—that would be a pity. No man would be worse because a woman was a D.D., neither would any woman suffer because a deaconess, for example, was certified to be a person learned in Divinity.

The Dean of Durham, the Very Reverend Dr. Kitchin, is better, and everyone with whom he has been brought in contact since he arrived in the North is delighted to hear it.

Small-pox at South Shields.

The Tyne port sanitary authority has ordered proceedings to be taken against the master of the ss. *Burham* for allowing a man to leave the vessel on its arrival in the Tyne last Thursday without reporting that he was ill. The occurrence came to the knowledge of an inspector, who traced the man, found that he was suffering from small-pox, and had him promptly sent into hospital. The Tyne port sanitary authority has also determined to ask for a Government inquiry into the alleged introduction of small-pox into South Shields and the neighbouring borough of Jarrow from an admittedly infected ship, the *Regulus*. If this inquiry should be granted, as in all probability it will be, several questions of interest will arise, and among them not the least important will be the powers possessed by the medical officers to deprive sailors of their clothes for the purpose of disinfection, as to which there seems at present to be some difference of opinion.

Newcastle-upon-Tyne, May 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the Summer Session in Edinburgh.

THE summer session of the medical classes opened on Wednesday, May 1st. There was no opening address or ceremony of any kind at any of the various lecturing places in the school, with the exception of that over which Miss Jex Blake presides. She usually has a little opening and

closing ceremony. There has been an unusual number of fresh entrants at the College for Women in Chambers-street, over which the Scottish Association for the Medical Education of Women presides. At the classes generally, it is too soon to say how they are to be attended.

The Edinburgh Medico-Chirurgical Society.

This society met on Wednesday of last week; but it was evident that the holiday spirit which has pervaded the profession for the past month had not passed away. At all events the meeting was very poorly attended; in fact, the society does not appear to have recovered from the exhaustion following upon the effort it made at the time of the discussion on cardiac therapeutics. In addition to a number of interesting cases which were shown, Dr. Russell read a short paper in which he advocated draining the gall-bladder for the relief of jaundice, even when due to obstruction from malignant disease.—Dr. Leith read a long paper on an interesting case of Pulmonary Tuberculosis in which bacilli were present in quite unusual numbers, with no other signs.

Aberdeen University.

An important stage in the extension of Aberdeen University will be reached in October next, when the Mitchell Graduation Hall and Students' Union will be formally inaugurated. The event will be celebrated by interesting ceremonials and festivities prolonged over five days. On Oct. 22nd Dr. Charles Mitchell, the donor of the Graduation Hall and Students' Union, will be presented with the freedom of the city in recognition of his munificent contribution in aid of the University extension scheme. On the following day he will hand over the Students' Union Buildings, and will receive an illuminated address from the students. On Oct. 24th the Marquis of Huntly will deliver his rectorial address. On Oct. 25th Dr. Mitchell will be presented by the Senatus with an address and a gold medal, and the day being the anniversary of the death of Bishop Elphinstone, founder of the University, that prelate's memory will be honoured by a commemorative service held in Oldmachar Cathedral.

May 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons.

PURSUANT to the provisions of the Supplemental Charter, the election for examiners under the new regulations took place on the 7th inst., when the following Fellows of the College were elected to examine for Fellowship and on the various Courts:—In Anatomy, Dr. Burton and Dr. Myles; in Surgery, Sir Wm. Stokes and Mr. Chance; in Physiology, Dr. Coppinger and Dr. Scott; in Biology, Dr. Patteson and Dr. Scott; in Pathology, Mr. Burgess and Dr. Patteson.

Queen's College, Belfast.

In introducing Dr. Lorrain Smith, the President of Queen's College pointed out that, so far, they had only a lectureship on pathology, and having drawn attention to what had been done at Cambridge, Aberdeen, and Liverpool, he hoped that some public-spirited man would do for Belfast and the North of Ireland in the matter of pathology what Mr. R. G. Dunville and the Sorolla Trustees did for physiology, when they founded a year or two ago the Dunville Professorship in that subject. The President stated that next session, when the class in pathology would assemble, he expected it would be in the new buildings which were about to be started. The Government erect the building, but the president has been obliged to undertake to raise the funds (which, in the first instance, will mean an expenditure of £1000) for providing the requisite fittings and apparatus. It is to be hoped that Dr. Hamilton, the president of the college, who since his appointment has done so much for this institution, will have little trouble in raising the money.

The Address on Pathology at Queen's College, Belfast.

On May 1st the summer session began, and Dr. J. Lorrain Smith, who has recently been appointed lecturer, gave his introductory address on Pathology. He spoke of the increasing number of studies which students have now to undertake. The place of pathology was midway between the biological sciences and the student's strictly medical work. It thus had the function of bringing medicine into connexion with the best work in any of the biological sciences.

Dr. Lorrain Smith then dealt with the three departments of pathology—that is, morbid anatomy, experimental pathology, and bacteriology. To morbid anatomy has been given a distinctly biological form by Virchow, the founder of cellular pathology. It still is one of the most vital parts of the whole science, and is the one which could be at present taught with most profit to the student. The lecturer then referred to one or two lines of investigation in which pathology was at the present time actually profiting by the application to its problems of the most recent discoveries in regard to cell structure and cell division. Reference was made at some length to the position which experimental pathology should occupy in the science as a whole. It was, he thought, unreasonable to restrict the examination of a case of disease to the investigation of the tissues by the microscope, and especially so when those tissues had been obtained post mortem. It was the duty of the science to take up the problem from the commencement of the disease. This, by the aid of physiological methods, experimental pathology was now doing. This department of the science, however, was the most trying, and the one which required on the part of students an extensive acquaintance with physiology before they could make use of it. Dr. Lorrain Smith concluded with a short reference to bacteriology as follows: "It hardly seems necessary for me to speak of bacteriology to you, because you must all be acquainted with many of the results which have been obtained by this department of the science. The praises of it are in the mouths of everyone. It has wrought changes in medicine and surgery, in other branches of pathology, in public health, and in the management of many trades and industries. It is impossible in these days to be a good citizen without some knowledge of bacteriology. The brewing of ale is not to be trusted to anyone who is not an expert in making pure cultivations of the mixed organisms which cause fermentation. It may be that we are becoming too scientific, for it has been whispered that medicine is advancing so rapidly that it is lowering the average physical ability of the race by preserving many of those who in the barbaric ages of the past would have succumbed to all-pervading bacteria. Perhaps a more subtle criticism even than this of our too much science is that which comes from the countries of scientific ale-brewing. The men there who over their tankards remember the days before the organisms of fermentation had been isolated in pure cultivations are fain to admit that now the ale is never brewed with the wrong micro-organism; but, alas, their symposia are dulled by the monotonous uniformity of this pure cultivation product. They never reach the height of the great ales which were occasionally produced for them in the pre-scientific days, and which lent a lustre to their lives which is never to be forgotten. The popularity of the science is due, however, not only to the somewhat steady operation of its results, but also to the fact that it has enormously extended the utility of other branches of medical science. It has put in our hands the cause of many acute diseases, and enabled us to deal with them in a preventive manner. It has radically changed many methods of treatment in both surgery and medicine, and if many of its upholders are not mistaken we are about to have in serum therapeutics a method not only for the prevention of disease but also for the cure of it after the attack has begun. Every year introduces us to large and important developments of the science. For example, how much has the study and treatment of diphtheria been quickened by the recent work of Behring and Roux? Here, even if the therapeutics fail to do all that has been promised, the mere aid to diagnosis which bacteriological methods afford is certain to be of the greatest value in the work of the profession. The direct gain to the practice of medicine will yearly and yearly become greater. Even at the present day bacteriology has, by its contributions to professional knowledge, taken such a place that it is really impossible for anyone who wishes to train himself fully for his life's work to allow the opportunities for learning it to escape him. In the earlier part of this address I alluded to the feeling of oppression which the student sometimes experiences, and perhaps what I have been saying has tended in your case to increase rather than to remove it; if so, it is because what one has to say at the beginning of a course in pathology is really what would probably be much more appropriately said at the end of it. To speak of general principles without a background of detail is a habit which in science we are taught to avoid. What I have attempted to do, however, is to give you some

idea of what you ought to-day to learn from pathology if it is your wish to give it your attention. You will find that the mass of detail simplifies itself. The acquaintance with the prevailing conception of the science takes a sort of personal character, and becomes in the end an acquaintance with schools and the men who founded them."

Inspection of Rural Slaughter-houses, Belfast.

The city council at their last meeting very wisely decided to allow one or more of their officers to be appointed by the board of guardians, with a small addition to be made to their salaries, to inspect the carcasses of animals slaughtered outside the city boundary and sold for the food of man. Those slaughtered within the city are inspected by the council's officers.

Oil-lamp Accidents in Belfast.

The woman to whose case I referred in the last issue of THE LANCET has since died, this being the fifth death in connexion with lamp accidents in Belfast within seven days, four being due to explosions and one to a lamp being overturned and setting fire to the deceased's clothes. It seems that three kinds of oil are used in lamps—Scotch, Russian, and American. It is mostly through the use of American oil that explosions occur, the reason being that it has a very low flash or explosive point. In Scotch oil the flash point is 100°, in Russian oil 86°, while in American oil it is only 76°, which makes a very material difference. In America the oil could not be sold under a flash point of 100°, while in this country it can be sold at 73°. It is evident that the Select Committee appointed by the House of Commons, and which partially reported in 1894, should be reappointed to take further evidence and to report on this important question. At the inquest held on the last victim of oil-lamp explosions on May 1st, the jury added the following rider to their verdict: "That the coroner be requested to call the attention of the Parliamentary members of Belfast, Antrim, and Down to the number of fatal accidents which have taken place in this city (Belfast) and elsewhere from explosions of oil-lamps, and to request them to urge upon the Government the reappointment of the Select Committee on Petroleum, as desired by that committee, and reported to the House on the 29th April, 1894, and that legislative steps be taken at the earliest possible moment to prevent the sale of unsafe lamps and low-standard oil."

Statistics of Public Health.

I regret to say that in the table showing the births and deaths registered during the week ending April 27th there is a very high rate of mortality in Irish towns. Thus in Lurgan it was 50·2 per 1000, in Galway 52·9, while in Sligo it reached the abnormal height of 55·8. In Drogheda it was 39·5, while in Belfast, Newry, and Waterford it exceeded 32 per 1000. In the sixteen Irish towns recorded the average death-rate was 30·3 per 1000, while, on the other hand, in England and Wales the returns for the week over the thirty-three great towns in the Registrar-General's record showed that the average mortality per 1000 was only 18·9, as compared with the Irish 30·3. It is certainly a subject for consideration and reflection why the death-rate in the sixteen most considerable Irish towns should exceed that in the thirty-three English towns by something like a proportion (speaking roughly) of 11 to 7, and why in three Irish towns the death-rate per 1000 should come up to or exceed 50 per 1000—a terrible mortality.

Ulster Medical Society.

At a meeting of the Ulster Medical Society held on May 3rd, Dr. McCaw gave details of a case of Premature Labour presenting some unusual features. Mr. Kerin read notes of a series of cases of Pelvic Abscess. Dr. R. Thomson gave an account of a case of Auto-abdominal Section attended by himself and Mr. James McCullough. It seems that a woman over seventy years of age had been for some time troubled with a swelling on the left side of the abdomen, which she wished to have removed, but which was not believed to be the cause of her complaints. She was so convinced that it should be removed that she decided to do so herself. Standing over a basin she, with a pair of scissors, cut down on and removed the tumour, and, in doing so, opened the abdominal cavity and wounded part of the mesentery. When Mr. McCullough and Dr. Thomson were summoned a portion of the intestine was protruding. This they returned and carefully united the abdominal wound, and the patient made a good recovery. The tumour, which was about the size of the closed fist, was a fatty one.

and was probably in the abdominal wall, but in removing it she had opened the peritoneum. Specimens were shown at the meeting by Dr. Campbell, Dr. Thomson, and Dr. Lyness.

Dispensary Appointment.

At a meeting of the Belfast Dispensary Committee held on May 6th Dr. Robb was elected dispensary medical officer for the Springfield District (No. 9) in place of the late Dr. Jamison, whose death from typhus fever, contracted while in the discharge of his duties, I chronicled in THE LANCET of April 6th. The monthly report submitted by the medical officers showed that, owing doubtless to the improvement in the weather, the health of the inhabitants had greatly improved since the previous month.

The Cork North Infirmary.

The trustees of the North Infirmary have issued their annual report. They state that the new Gibbons Wing is nearly completed and will soon be formally opened. The late Lady Combermere was a near relative of a Dr. Gibbons, who was formerly on the staff of the hospital, and her ladyship recently bequeathed the munificent sum of £25 000 for the building of an addition to the infirmary to be called the Gibbons Wing. The trustees point out that though they have been obliged to maintain an increased number of patients during the year their subscription list is not as large as it might be. On the other hand, they were fortunate in receiving in legacies a much larger sum than usual. They are about to make an important departure with regard to the nursing of the hospital. Heretofore the hospital has been nursed by the sisters of charity, but in future the services of the sisters are to be supplemented by those of lay trained nurses and probationers. A nursing home will be established in connexion with the infirmary and nurses supplied to the general public. The medical and surgical staffs are thanked by the trustees in most graceful terms for the manner in which they discharged their duties during the year.

Poisoned by eating Mushrooms (?).

A very sad fatality has occurred in Cork. Two little boys, Denis Sheehan aged eight and John Mahony aged nine, went into the country last Wednesday with some other children for a day's amusement. About half-past four o'clock in the afternoon some fungi called "sheep's puffs" were found, and the little fellows had a general scramble for them, believing them to be mushrooms. One of the elder boys present warned his companions of the poisonous nature of the fungi and recommended them strongly not to eat them. Unfortunately his advice was not taken, and the two lads named became very ill about three hours later. Diarrhoea and vomiting set in and the two poor children died, the elder on Saturday night and the younger the following day, Sunday. An inquest was held, and a post-mortem examination revealed indications of irritant poisoning. An intelligent boy seven years old was questioned by the coroner, and in reply stated that he saw the other children eating the supposed mushrooms. He also mentioned that he himself ate "a good couple," and was unwell for the evening. All present in court were glad to see that the little chap was "alive to tell the tale."

Appointment of Professor of Modern Languages in Queen's College, Cork.

Mr. William F. T. Butler, B.A., has been appointed to the chair of Modern Languages in Queen's College, Cork. Mr. Butler is a son of Captain Butler, R.M., Cork. He was educated at the Catholic University College, Stephen's Green, Dublin, and had a most distinguished career. He graduated at the Royal University in 1891, and last year won the Travelling Studentship in Modern Literature. It is believed that his appointment to the chair in Queen's College will meet with general approbation in educational circles.

Another Boating Accident in the North.

Following closely on the disaster by which eight lives were lost by the capsizing of a boat near Mountstewart, another accident is reported to-day (the 7th inst.) by which two ladies and a gentleman were drowned. Mr. Woodhouse, of Preston, Lancashire, with his wife, son, daughter, and niece, went out yesterday from Portrush, accompanied by two boatmen. Their boat was overturned off the White Rocks, with the lamentable result which has been reported.

Payment of Medical Officers.

The Local Government Board has been forced to reconsider its decision in the case of Mr. Cahalan of Nenagh, as will be seen from the following extract from the Parliamentary

Reports for the 25th ult.: "Payment of Medical Officers.—Mr. John Morley informed Mr. William Redmond that in the case of Mr. M. J. Cahalan, medical officer to the Nenagh Board of Guardians, who had been called on to attend four urgent cases in the absence of any other medical officer, and whose fees had been stopped by the Local Government Board on the plea that over seventeen years ago he was dismissed for refusal to prosecute poor patients under the Vaccination Acts, the board had reconsidered the matter and had authorised payment for the temporary services rendered."

Limerick City Dispensary.

The recent contest for the vacant dispensary in Limerick caused considerable excitement, not only among the numerous candidates for it, but also among the applicants for the house-surgeoncy to Barrington's Hospital, which would have been rendered vacant if Mr. Mulcahy's election to the dispensary had been ratified. An objection was lodged, however, against it by the Rev. Dr. Hallanan, who stated that his name had been illegally removed from the list of the Dispensary Committee. The Local Government Board has upheld the objection and directed that a new election must take place "for a medical officer to the No. 2 Dispensary District, vacant by the resignation of Dr. Gelston." At the last election Mr. Mulcahy was victorious by 2 votes.

May 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Alleged Cure of two cases of Cancer by Sero-therapy.

THOSE pioneers in serum therapeutics, MM. Richet and Héricourt, brought before the notice of the Académie des Sciences on the 29th ult. the encouraging results said to have been yielded by the application of this method in the treatment of malignant disease. On Feb. 9th, 1895, M. Reclus removed an osteo-sarcoma of the leg. This tumour was crushed and mixed with a little water, and the resulting liquid, after having been filtered through linen, was employed to inoculate a dorky and two dogs. The inoculation produced no reactionary symptoms; five, seven, and fourteen days respectively later the animals were bled and the serum utilised in the treatment of the two following cases. The first was a woman for whom Professor Terrier had in October, 1894, removed a growth presenting the appearance of a fibro-sarcoma, which, having attained the size of an orange since it was first noticed (eight months earlier), was adherent to the sixth, seventh, and eighth ribs, the integuments not being involved. In February, 1895, the growth had reappeared and was as large as a hazel-nut; a month later, March 7th, it had reached the volume of a small orange. Daily doses of 3 c.c. of the serum were injected during forty days into the areolar tissue surrounding the growth. The tumour began to shrink on March 25th, and the shrinkage became more and more marked as time went on. At present all that remains of the neoplasm is an indurated plaque whose contour is difficult to delimit and whose volume is less than a third of the original growth. The woman's general health has, moreover, greatly improved, and she has put on flesh to an appreciable extent. The second patient was a man aged forty-four years, admitted on March 27th, under M. Reclus, into the Pitié Hospital for a tumour of the epigastric region as large as a big orange and diagnosed as cancer of the stomach. The ideas of surgical intervention having been rejected sero-therapeutic treatment was commenced on April 6th by the injection of 4 c.c. Between that date and April 24th he had received 64 c.c. An early improvement in the general condition was noticed, the body weight having increased from 57 kilos. on April 10th to 58 kilos. on the 16th and 60 kilos. on the 23rd. From April 10th the volume of the growth had diminished, and this atrophic process continued, so that ten days later the tumour could no longer, as hitherto, be felt as a projecting isolated mass. Palpation gave only the sensation of a resisting surface—a vague thickening deeply situated and difficult to circumscribe. The extraordinary success attending the treatment in this second case leads MM. Richet and Héricourt to ask, *par un excès de prudence*, if there was not an error of diagnosis. But in Professor Terrier's case there would seem to be no reasonable doubt that a sarcoma which had recurred in the same spot was, thanks to

the injections, reduced to one-third of its original size, with manifest advantage to the general health of the patient. But I imagine most clinicians would thus early hesitate to echo the jubilant note of the discoverers who proclaim that the patient is *cured*. The growth is still present, although apparently dormant. This cautious reserve does not, however, lessen our indebtedness to those two patient workers who have done so much for sero-therapy.

Latent Tuberculosis of the Tonsils.

Professor Dieulafoy calls attention¹ to a torpid variety of pharyngeal tuberculosis the favourite seat of which is the adenoid tissue of the naso-pharynx. This tuberculosis manifests its presence by an exuberant growth of the lymphoid organs of that region—in other words, by hypertrophy of one or more of the palatine and pharyngeal tonsils. This view of Professor Dieulafoy would, if confirmed, lead us to regard hypertrophy of the tonsils and adenoid growths as, in many instances, cases of tuberculous overgrowth of adenoid tissue. He bases this belief on the results of inoculations practised on guinea-pigs of fragments of enlarged tonsils and adenoid vegetations. Of sixty animals thus inoculated with tonsil tissue, eight, or 13 per cent., succumbed to generalised tuberculosis, while of thirty-five inoculated with adenoid tissue, seven, or 20 per cent., became tuberculous. In all the persons who furnished the material for inoculation (enlarged tonsils and adenoid growths) the pharyngeal tuberculosis was primary and not consecutive to the pulmonary variety. It is to be supposed that the young subjects who have enlarged tonsils &c. provide a favourable soil for the growth of the bacillus of Koch, which finds access to the adenoid culture medium either with the food, milk especially, or with the air respired (sojourn in a bacillary atmosphere). Professor Straus of Paris has, indeed, demonstrated the presence of virulent tubercle bacilli in the nasal cavities of individuals habitually breathing the same air as phthisical patients. An open wound is not necessary for penetration, since the bacilli can find an entrance through the epithelium. In some instances the bacilli present in the adenoid tissue are, after a sojourn of months or years, destroyed by phagocytosis, which determines an indurating, fibrous process in the tonsil. In other cases, however, the bacillus finds its way into the lymphatic vessels, and enlarged submaxillary and cervical glands are the result. This lymphatic infection is often started by the occurrence of measles, scarlet fever, whooping cough, &c. This glandular tuberculosis may, in its turn, remain local, and finally end in recovery; but in other instances rapid generalisation may result. The third stage of tonsillitic tuberculosis is the spread of the process to the lungs, the bacillus reaching those organs from the cervical glands via the lymphatics, thoracic duct, and the right heart. In the course of the discussion raised by this most interesting communication M. Chauveau stated that in animals fed on tuberculous matter infection may take place by inoculation of the adenoid tissue of the base of the tongue and the isthmus of the pharynx, this inoculation being proved by the swelling of the cervical and submaxillary glands. Sometimes a minute erosion explains their inoculation, but often the surface was found intact.

May 7th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Seaside Hospitals.

THE benevolent movement by which in Switzerland and Germany school-children of the less favoured classes are sent to salubrious resorts in the mountains during the holidays, so as to give them a chance of improving their condition before term begins again, has not yet its proper counterpart in Italy. If practised at all, the system has none of that all-embracing thoroughness with which (thanks in chief measure to the Empress Frederick) it has now for years been in operation north of the Alps. This much, however, Italy can justly claim, to have made an admirable beginning for the rehabilitation of rickety and scrofulous childhood by her "Ospizi Marini" (seaside hospitals). Tuscany, I believe, has the honour of initiating this movement, but nowhere in the Peninsula is it more effectively carried out than in Rome, where it has an

energetic promoter in the Minister of Public Instruction, Dr. Baccelli, whose efforts for the salvation of his country's "infanti perduti" are not the least of his many titles to honour. The office of the "Pia Opera degli Ospizi Marini" is now open for the inscription of all children duly certified as labouring under rachitis or tuberculosis, from the age (for boys) of three to twelve years, and (for girls) of three to fourteen years, whose parents are too poor to provide them *motu proprio* with the indicated seaside villeggiatura; and so all through the summer these little unfortunates of the city and province will have the benefit of the physical and moral rehabilitation wrought by continuous residence at that delightful spot on the Latin shore, Porto d'Anzio—the seat of a spacious, well-appointed, and well-administered "Ospizio Marino." If Italy, having made herself "one and independent," is anxious (in D'Azeoglio's memorable phrase) "to make Italians," she could not begin better than with her children, particularly those from whom the conditions of normal upbringing have been withheld. In this she has the sympathy and coöperation of all classes and professions, and of these latter the medical *par excellence*.

The Sanitary Services.

In my obituary notice of the lamented Professor Rinaldo Roseo¹ I omitted to mention that he had been for some time engaged in compiling a series of regulations for the better organisation and working of the hygienic and sanitary services of Rome, the basis of the said compilation being the special studies he had for some time been making on the subject. His unfinished labours were confided to his assessor, Signor Panizza, who, besides possessing great knowledge as an expert, was the deputy appointed by Parliament as "Relatore della Legge Sanitaria" (Reporter on the Sanitary Law). Signor Panizza has just completed the work delegated to him, and it has been sent up to the Giunta for consideration. It embraces all branches of public health, proceeding from the hygiene of foods and drinks, of dwelling-houses, streets, and thoroughfares, up to the "Assistenza Sanitaria," and concluding with a plan to bring the new regulations into complete harmony with the reconstituted sanitary offices and personnel. The growing needs of the Roman commune have rendered this work of hygienic reconstruction indispensable, and by the advent of next season the tourist world (that part of it which contemplates a winter's residence in the city or province) will find a new system in working order, greatly superior to what has hitherto been available either for the resident or the migratory population.

May 4th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Medical Chamber.

THE exertions of some impostors and the credulity of mankind have brought about a lowering of the dignity of the profession of medicine in Austria. The advertisements of some specialists in venereal diseases, to whom journals of repute and authority lend their space without comment, are such as to cause indignation in every self-respecting medical man. In the hope of producing some improvement the Medical Chamber at a recent meeting passed a resolution that conduct unworthy of the medical profession will be committed by whoever—(1) advertises himself in newspapers, placards, guide-books, calendars, circulars, or pamphlets, excepting advertisements in the case of commencing practice, change of address, or return after a long absence; (2) orders the publication of thanksgiving addresses by his patients; (3) recommends methods of treatment and medicines in popular publications or reports; (4) displays his address ostentatiously; and (5) pays midwives, agents, or other persons for introduction to patients.

The Medical Society.

The Medical Society has presented a petition against Paragraph 484 of the new Penal Bill, which proposes a fine of £8 in the event of failure to notify any infectious disease within the legal term. The society observes that in these cases every exertion has been made on its part to prevent the spread of infectious disease. A protest has also been published against that famous order of the Vienna magistracy, according to which medical men were obliged to

¹ Académie de Médecine, April 30th.

² THE LANCET, April 6th, 1895.

make a report on all persons treated by them for venereal or loathsome diseases—an order which has excited derision in foreign countries.

Sanitation in Austria.

Dr. Kusy, President of the Council of Hygiene, notes the progress of sanitation in Austria during 1883-93. The number of hospitals at the end of 1893 was 190, with 25 379 beds, against 162 hospitals with 19 731 beds in 1880. The number of lunatic asylums has also increased from 25 in 1883 to 29 in 1893. The number of medical men amounted to 8197 in 1893, against 7357 in 1883; and that of midwives to 17,819 in 1893, against 16,439 in 1883. The deaths referred to infectious diseases, which were 21 per cent. of all diseases in 1883, were 15 per cent. in 1893. Professor Stricker, in a critique of this report, commends the endeavours of the Council of Hygiene, but remarks that Austria has not yet obtained the complete organisation possessed by Great Britain, where even in 1873 such attention was directed to health statistics that annual reports were presented to Parliament. He referred in complimentary terms to Sir John Simon, the pioneer of English sanitary organisation.

Poisoning by Lysol.

Some two months ago a child aged three weeks, whose father had given it lysol instead of a laxative, was admitted to the Foundling Hospital suffering from paroxysms of cough and dyspnoea. The child died next day, and the post-mortem examination, made by Professor Hofmann, gave the following results. The mucous membrane of the lips was greyish and could be stripped off; the epithelium of the tongue as well as the mucous membranes of the larynx and trachea was swollen; the left lung was consolidated, violet-blue in colour, and injected with blood; the mucous membrane of the anterior part of the stomach was pale rose-coloured, whereas on the posterior part hyperæmia and intumescence were observed. Dr. Haberda, assistant to Professor Hofmann, has shown¹ that the poisonous action of lysol is due to its containing kresols. It cauterises the skin and mucous membrane, and when absorbed it affects the brain and spinal cord, producing unconsciousness, general spasms, reduction of temperature, and bleeding into the uriniferous tubules. He therefore recommends that it should be prescribed only in dilute solution.

Death of Dr. Faulhaber.

The Austrian Army Medical Staff has just sustained a heavy loss in the death of Dr. Eustach Faulhaber, Surgeon-Major and Prosecutor of the first Vienna Garrison Hospital. The deceased had been suffering for some two years from sarcomatosis, a disease which he had himself diagnosed at an early period. In spite of his terrible malady he took great interest in science, and remained until his death a true student. His principal works were: "On the Occurrence of Bacteria in the Kidney in Acute Infectious Diseases" and "The Variability of Coccus Pneumoniæ." In conjunction with Professor Weichselbaum he made important researches on the subject of Influenza.

A Monument to the late Professor Billroth.

A statue of the illustrious Billroth was unveiled in the Hospital Rudolfinerhaus on April 25th. Addresses were delivered by Count Wilozek and Dr. Gersuny, director of the Hospital, the latter observing in the course of his remarks that the profession of medicine will never forget the eminent operator, whose name is associated with every advance in surgery.

May 5th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Preventive Medicine.

At the last meeting of the Imperial Society of Medicine Professor di Giovanni of the Royal University of Padoue delivered a most interesting lecture on Preventive Medicine. His Excellency Dr. Zambaco Pasha, President of the society, introduced the distinguished visitor, who expressed his thanks for the invitation to lecture before the society. After a few introductory remarks Professor di Giovanni at once entered on his subject and spoke for three-quarters

of an hour, holding his audience in rapt attention. The following are some of the main points of the lecture: The physician has to treat the patients and not the diseases. It is therefore necessary for him to be well acquainted with each individual case, with the constitutions of each person, and with the morbid conditions which differ from each other. The lungs, the stomach, the livers of men and children, who may have the same age and apparently the same constitution, being of the same family, may differ one from the other. The tubercle bacillus is not dangerous if the subject that has absorbed it be of a robust constitution and if he passes a regular and good life. He can overcome it by his vigorous organism. Infection only occurs in those who are predisposed to it. The same is also true of certain diseases of the liver, for which this or that cause is attributed, which, however, already exists in the patient in his normal state under the form of a small hypertrophy, which has only continued to degenerate aided by the imprudence of the patient. Therefore, instead of consulting the physician when their disease has far advanced, if patients have recourse to him when the first symptoms manifest themselves, then it might be possible to mitigate predisposition, and consequently to stop the development of the disease, with a special régime, hydrotherapy, exercise, &c. At the conclusion of his highly instructive and practical lecture the Italian professor made an honourable mention of the sovereign under whose reign Turkey has seen great advancements in science.

Cholera.

The cholera has almost disappeared from Constantinople and the provinces. Not more than two or three cases are recorded weekly. The epidemic has, however, made a fresh appearance in Mecca. It will be remembered that about this time last year, when cholera appeared at Constantinople, many thought the disease was imported by the pilgrims returning from Mecca. It is gratifying to know that the Turkish Government has now very wisely sent three experts charged with the duty of disinfecting the pilgrim boats &c.

May 4th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Melbourne.

REFERENCE was made in a previous communication¹ to the fact that the steamer *Cloncurry* arrived at Melbourne from Calcutta with small-pox on board. The patients and crew were placed in quarantine, and the ship after thorough disinfection allowed to proceed with fresh officers and crew. After being vaccinated and their effects fumigated and disinfected the officers were released. The second officer took up his residence in a boarding house in West Melbourne and on Feb. 14th gave some linen to his landlady to send to be washed. Exactly twelve days afterwards the landlady developed small-pox. She was admitted to the Melbourne Hospital before the rash developed or the nature of the disease was recognised. As soon as the diagnosis was made the patient was sent to the sanatorium at Cut-paw-paw together with the two nurses and the resident medical officer who had been in attendance. All who had come in contact with the patient—to the number of twenty-five—were vaccinated, and the health authorities were very vigorous in taking every possible precaution against the further spread of the disease, and so far with most satisfactory results. As in some of the cases the vaccination did not appear to be successful, several persons were sent to the sanatorium—fourteen in all—but subsequently to their removal the results proved to be satisfactory.

Charge against a Medical Practitioner.

Dr. Henry Marshall Fenwick of Carlton, Victoria, was charged before the Criminal Court, first with manslaughter, and secondly with performing an illegal operation. The details of the case were given in a previous communication,² when the accused was committed for trial. The jury returned a verdict of "not guilty" in each case.

Action for Damages against a Medical Practitioner.

In the Supreme Court, Sydney, Mr. Austin N. Cooper, F.R.C.S. Irel., of Tamworth, New South Wales, had an

¹ Wiener Klinische Wochenschrift.

¹ THE LANCET, March 16th, 1895.

² THE LANCET, April 20th, 1895.

action brought against him for £2000 damages for negligent and unskilful treatment of a fractured elbow-joint. The alleged want of skill consisted in the arm having been kept in rigid splints for twelve days before passive motion was commenced. The defendant stated that he kept the splints on because the joint was too inflamed to be moved and the boy could now move his arm through an angle of 45°. Drs. MacCormack, Sydney Jones, Jamieson, and S. T. Knaggs gave evidence for Mr. Cooper and stated that there was no evidence of any malpractice or negligence. Dr. Jones had examined the arm and found good union, and that the joint could be moved over 45°. Nevertheless the jury found for the plaintiff with £200 damages.

Medical Bill for New South Wales.

For many years past efforts have been made in both the Legislative Council and the Legislative Assembly of New South Wales to pass an Act for the protection of the public and the profession against medical impostors and quacks. On March 22nd the second reading of the Medical Bill was carried in the Legislative Assembly by 52 votes to 14. During the debate on the measure Sir George Dibbs made the extraordinary statement that an irregular practitioner, who had formerly been a boatswain, boasted to him that he had made a fortune of £150,000, and that it cost him from £1700 to £2000 a year to fight the Medical Bill and prevent its being passed.

Sane or Insane: a Question of Privilege.

A law case that is almost unique has just been concluded in Melbourne after lasting several weeks, and it presents several features of medical interest. The plaintiff was Mrs. Lange, who brought an action for libel against her son-in-law, Dr. Charles Bage of South Yarra, Victoria. The alleged libels were contained in two letters which Dr. Bage wrote to the plaintiff's sister and to one of her married daughters, and in which he stated his belief that the plaintiff was not in her right mind. The defendant pleaded in addition to non-publication and privilege that he was trustee for the plaintiff under her husband's will, and that upon noticing her unusual demeanour towards her friends, her strange manner and eccentricities, and peculiar statements, he conveyed the facts, as it was his duty to do, to her sister and daughter, as they were interested in and entitled to be informed and consulted about the plaintiff's mental condition. Dr. Bage in the witness-box detailed the circumstances which led him to doubt Mrs. Lange's sanity, and read extracts from her letters, in which she said that there were machinations of the tutors and masters at Balliol College, Oxford, to prevent her son's success there, but "he is clad in armour and ready to meet all their devices to injure him." Dr. Fishbourne, a lunacy expert, gave evidence that in his opinion Mrs. Lange was suffering from "persecution mania." Several witnesses corroborated Dr. Bage's statement as to Mrs. Lange's behaviour. Then Mrs. Lange appeared in the box and point-blank denied everything said about her and explained that her written statements were not intended to be taken literally. Her son, daughter, and sister corroborated her evidence. The judge in summing up pointed out that Dr. Bage had nothing to gain by his action, that there was a point-blank contradiction in the evidence, but that Dr. Bage's statements were corroborated by written statements in many cases. Nevertheless the jury brought in a verdict for the plaintiff with damages of £750. Much sympathy is felt for Dr. Bage by the profession in Melbourne.

Annual Meeting of the Prince Alfred Hospital, Sydney.

From the reports presented to the annual meeting of the governors and subscribers to the Prince Alfred Hospital it appeared that the income for the past year amounted to £15,092, and the expenditure to £15,213. There had been a falling off in the subscriptions and donations of £392 and in the contributions from patients of £434. The statistics of the hospital showed that 2927 patients had been under treatment; 787 were cases of accident and urgency, 1043 were received under Government vouchers, and 901 contributed more or less to the cost of their maintenance. The average daily number of in-patients was 194, the rate of mortality was 9.74 per 1000, and the cost per bed was £69 13s. 3d. Attention was called to the marked increase in the number of cases of typhoid fever admitted, being 161 as against 82 the previous year.

Abdominal Surgery.

At the last meeting of the Victorian Branch of the British Medical Association Dr. M. A. O'Sullivan read some notes

on Fifty Cases of Abdominal Section. He insists on the importance in cases of salpingitis of treating the uterus as well as removing the tubes, and that it is owing to neglect of curettage and other measures before or after abdominal section, according to circumstances, that so many women remain invalided after their tubes and ovaries have been removed. He also advises that the pedicle in such cases should be freely cauterized with Paquelin's thermo-cautery to prevent infection of the peritoneum, and approves of sero-fibrous union of the incision, as advocated by Greig Smith. Eight of his cases were for fibro-myoma of the uterus, for which condition he very strongly advocates the intra-peritoneal operation, his results with which have been very satisfactory. He endorsed Lawson Tait's dictum against "tinkering" with soft cedematous myoma, and narrated a case in which he removed the ovaries for this condition, and the tumour sloughed, with a nearly fatal result.—At the same meeting Mr. R. A. Stirling read notes of a successful case of Enterectomy. The patient had a strangulated inguinal hernia for three days, and travelled 120 miles on a goods train from the country before being seen by a surgeon. The small intestine was found to be gangrenous, and four and a half inches were resected. No button or bobbin was used, but a double row of forty Lembert's sutures was inserted. The bowel was returned, but the wound was not sutured, but plugged with iodoform gauze. The patient recovered.

Hospital Appointments.

The following honorary medical officers were elected at a meeting of the board of directors of the Sydney Hospital, held on March 6th:—Physician, Dr. L. R. Huxtable (re-elected unopposed); surgeon, Dr. W. Goode (re-elected unopposed); gynaecologist, Dr. Thomas Chambers (re-elected unopposed); assistant gynaecologist, Dr. Ralph Worrall (re-elected unopposed); aural surgeon, senior, Mr. A. J. Brady (re-elected unopposed); junior, Dr. W. C. Wilkinson (re-elected); dermatologist, Dr. F. A. Bennet.—At a recent meeting of the committee of the Women's Hospital, Melbourne, Dr. A. G. Salter was elected assistant resident medical officer. There were five candidates, including a woman graduate, who was second on the poll.

Medical Defence Association of Victoria.

A Medical Defence Association has just been formed in Victoria, on the lines of the English Association, and registered as a limited liability company. Over fifty members have joined, and the following officers have been elected:—President, Dr. G. Rothwell Adam; vice-president, Mr. G. A. Syme; hon. treasurer, Dr. F. I. Owen; hon. secretary, Dr. C. E. Goodall; council, Dr. E. W. Anderson, Mr. Brett, Dr. Hamilton, Dr. Howard, Dr. Jamieson, Dr. McAdam, and Dr. Mullen.

HER ROYAL HIGHNESS THE PRINCESS OF WALES has graciously consented to open a grand bazaar in aid of St. Mary's Hospital, Paddington, at the Portman Rooms, on Thursday, June 27th next.

TRAINING OF PROBATIONERS.—The London Hospital has purchased the lease of a house in Bow-road for the preliminary training of nurses during their periods of probation before entering upon hospital work. These pupil probationers, besides being taught the practical duties of a nurse, will receive instruction in elementary physiology, anatomy, hygiene, cookery for the sick, &c., and preference will be given to applicants who are between the ages of twenty-five and thirty-five years, and who have received a good education.

ROYAL HOSPITAL FOR WOMEN AND CHILDREN.—The festival dinner in aid of the funds of this hospital was held at the Hôtel Metropole on May 4th, the Hon. W. F. D. Smith, M.P., presiding. The origin of the institution was a dispensary in Doctor's-commons, founded by Dr. Davis in 1816. In 1824 it was transferred to the Waterloo-road, and in 1875, its position in that thoroughfare being retained, the accommodation was increased to six wards containing fifty beds. Last year there were 591 in-patients and 7817 out-patients, who made upwards of 32,000 attendances. Mr. H. M. Stanley, replying to the toast of "The Visitors," emphatically expressed his admiration of the beneficent work carried out by the hospital. Donations to the amount of £1350 were announced in the course of the evening.

Obituary.

PROFESSOR CARL LUDWIG.

THE death of Professor Carl Ludwig has deprived the world not only of its greatest teacher of physiology, but of one whose labours in this department of science have been of the utmost service to practical medicine. Numerous and important as the discoveries which Ludwig and his scholars have made, the most important work of his life will nevertheless be his introduction of self-recording instruments into the domain of physiology. With characteristic generosity he was always careful to bring prominently forward the works of his predecessors, and he venerated Stephen Hales, the English country clergyman who first measured the pressure of the blood in a glass tube, as the pioneer who first estimated physiological processes quantitatively.

Ludwig's invention of recording the oscillations of blood pressure in animals by a pen swimming on the surface of a manometer was followed in a few years by the sphygmograph of Vierordt and the elaborate apparatus of Helmholtz for estimating the rate at which a stimulus travels along nerves. All the recording instruments—and they are now very numerous—by which the various movements of living beings write their own record automatically are directly descended from the kymograph of Ludwig. The great object of his life was to withdraw the phenomena of physiology from the haze of fancy and incertitude in which they were up to his time more or less enveloped, and to bring them into a line with the well-known phenomena of physics and chemistry. To this end his three friends, to whom he dedicated his Text-book of Physiology—Professor Brücke, Professor Helmholtz,

and Professor Du Bois Reymond—also worked, and the effect of the labours of this band upon physiological science it would be impossible to over-estimate. To this object Ludwig devoted the whole of a long life of tireless industry, working almost to the last with wonderful vigour. A Hessian by birth, Carl Friedrich Wilhelm Ludwig studied at Marburg and Erlangen. He graduated at Marburg in 1839 at the age of twenty-two, and after holding minor posts in that quiet university town he was appointed Professor of Comparative Anatomy in 1846. In the following year he invented the kymograph, and not only occupied himself in original researches, but initiated in the work several pupils, amongst whom may be mentioned Adolf Fick and Conrad Eckhard, now Professors of Physiology in Würzburg and Giessen respectively. The reputation he acquired caused his stay in the small town of Marburg as Professor to be short, for in 1849 he was called to the much more important position of Professor in Zürich. Hither his scholar Fick followed him, and here also he trained, amongst other distinguished pupils, Lathar Meyer (the distinguished chemist), Westphal (the neurologist), and Cloetta (Professor of Materia Medica). In 1855 he was called to a still wider sphere, and went to

Vienna as Professor in the Josephinum. Amongst his pupils here were Professors Czermak, von Becklinghausen, W. Kühne, Politzer, Leber, Stephan, Kupffer, Schwanda, Jendrassik, Setschenow, Einbrodt, Holmgren, Kowalewsky, MacGillivray, Preyer, and others, through whom his teaching was spread and his influence extended throughout Austria, Hungary, Germany, Russia, Sweden, and Holland. After ten years' work in Vienna he was called to Leipzig, where, under his direction, the Physiological Institution soon became a centre of attraction to which physiologists flocked from all parts of the world. Hither he came in April, 1865, and here in April, 1895, he died.

These thirty years were a time of steady work, hardly broken even by autumn holidays, for the annual vacation was the time chosen by professors in other universities to come to enjoy Ludwig's genial society, to see what new work he was doing, to learn from him new methods, and sometimes to make a short research under his direction. The list of those who worked with him at Leipzig is too long to quote. Amongst his English and American pupils may be mentioned in the order of time, Lauder Brunton, Coats, Bowditch, Rutherford, Moseley, Ray Lankester, Stirling, Minot,

Gaskell, Ward, Cash, Sewall, Meade Smith, Wooldridge, Walton, Buckmaster, Carslaw, F. S. Lee, F. Mall, W. H. Thompson, and Vaughan Harley. The number of his pupils altogether was considerably over two hundred, and by pupils we understand not those who had simply listened to his lectures, but men who had worked with him and been trained by him to plan out original researches for themselves as well as to perform the experiments necessary to carry them out. The patience, the kindness, the self-sacrifice he showed in the training of his pupils can hardly be imagined. Though much of the work was done by his own hand, he published it under the name of his pupils, and there is consequently a tendency to under-estimate its vast amount. It would be as impossible to enumerate his researches as to name all his pupils; all that can be done here is to indicate the general

lines of work. These were a systematic investigation of the circulation of the blood and lymph, the alterations in the composition of these fluids as they flowed through the organs and tissues of the body, the secretion of glands and excretion by the kidneys. To him and his pupils we owe most of our knowledge regarding the conditions which affect the force and frequency of the heart, the contractility of the vessels, the position of the vaso-motor centre, the distribution of blood throughout the body, and the flow of lymph. The secretion of the saliva was shown by him to occur in the several head of an animal provided the lymphatics around the glands were full so as to supply material for secretion. To his researches on the secretion of urine we owe our comprehension of why the urine is abundant in the high tension of gout, why it is scanty in mitral disease, and why the secretion becomes less copious when the gouty heart begins to fail and the arterial tension to fall. In order to study accurately the changes in the blood and lymph he devised the plan of keeping up an artificial circulation in individual organs, such as the lungs, kidneys, and liver. By this method new knowledge was also gained regarding the contractile power of the bloodvessels apart from



PROFESSOR CARL LUDWIG.

any nervous centre. The methods introduced by Ludwig into the study of physiology have also proved fruitful in pharmacology, and it is through their employment that any exact knowledge of the action of medicines on the heart and circulation which we now possess has chiefly been obtained. When we compare our present knowledge of the conditions which affect the circulation and of the means by which we can influence it with what it was when Ludwig began his work, we can guess, though we can hardly estimate exactly, how much practical medicine owes to him. His personal character was such as is very rare in any country and at any time, for to extraordinary insight and mental power he united a charm of manner, kindness, and courtesy which made all those who worked with him his life-long friends; while the example he showed of devotion to the search after truth, of self-sacrifice, and of generosity was such that they could hardly do otherwise than try to follow in his footsteps. His death will be deeply mourned all the world over, and the only consolation is that he died, as he would have wished, before his eye was so dim or his natural strength so abated that he could no longer engage in the work which was to him at once a duty and a delight.

ARTHUR EDWARD DURHAM, F.R.C.S.

THE *annus medicus* has so far been sadly remarkable for the number of deaths among leaders in medicine and surgery. Already the profession has had to lament the loss of a reigning and a past president of the Royal College of Surgeons of England, a leader in the field of State medicine has laid down his arms; and the whole scientific world is the poorer for the death of that master in physiology, Carl Ludwig. Following these comes the news of the death of one who, if not so prominently before the world as those already mentioned, was ever ready, by his skill, his sympathy, and his purse, to help the afflicted or the needy.

Arthur Edward Durham was born in 1833 at Northampton. He was not originally intended for the medical profession, and was at first employed in a bank. This occupation, however, proving distasteful to him, he entered at Guy's Hospital as a medical student when about the age of twenty—a late age in those days at which to commence. He also studied at the University of London, being a prizeman in 1854 and passing his first M.B. examination in 1857. For Mr. Hilton, whose favourite pupil he was, he did many excellent and elaborate dissections to show the nerve supply of joints. These were undertaken to illustrate the now well-known lectures on "Rest and Pain," in which Mr. Hilton alludes to his colleague's painstaking work as follows: "The first edition, in which I had the kindly and liberal help of my personal friends, Dr. Daldy and Mr. Durham, was soon out of print." Among Mr. Durham's earliest work were researches on the physiology of sleep. He trephined the skulls of dogs and inserted glass into the opening so as to reproduce, as far as possible, the physical conditions during life. Observations made after this procedure convinced him that the cortex of the brain was anemic during sleep, not congested, as had been generally supposed. The results of these researches were embodied in a paper published in the *Guy's Hospital Reports* for 1860, as was also an excellent paper on Movable Kidneys, which may still be consulted with profit. With regard to his handiwork as a surgeon he was bold, prudent, and skilful; he particularly excelled in operations for recto-vaginal fistula, harelip, lithotomy, and abdominal surgery. His remarkably long fingers, that seemed to have eyes in their tips, his flexible wrist and sinuous movements of the hand made him powerful, searching, and graceful in all his manipulations, while his invention of the lobster-tail tracheotomy-tube has proved of great value. Throughout his hospital career, whether as student, dresser, or teacher, his kindness of heart and willingness to assist others endeared him to many, while as a teacher of anatomy he was unrivalled. To his patients, whether rich or poor, he was always the same, ever unsparing of himself and his skill. Neither did he only look after his patients simply as a surgeon, but always endeavoured to give them mental comfort as well as physical by supplying them with interesting books or by helping with his purse those who their breadwinners being laid aside, would otherwise have felt the pinch of poverty. Dr. Hilton Fagge, who

was long associated with him as editor of the *Guy's Hospital Reports*, shortly before his death said to a colleague, "Durham has just been to see me. I think he is the kindest man I ever knew," and this judgment was amply justified after his premature decease. Mr. Durham was never a strong man, and for many years suffered from attacks of vomiting, the cause of which was never discovered. He was also exceedingly deaf, an affliction which was a great trouble to him, but which, so far as his private practice went, was greatly mitigated by the unselfish and never-failing labours of his brother Frederic. For several years he was subject to frequent attacks of bronchitis, which ended in considerable pulmonary emphysema. During the last winter he had more than one attack, but with his indomitable spirit was ready for work again and again. On the Saturday before his death he enjoyed a long drive with his wife and on Sunday afternoon took a walk with an old friend. That evening, however, he was very ill, and after a restless night, with much coughing and distress, was found by a colleague, who was then sent for, to have pneumonia of the right lung. During the whole of Monday his condition became more and more hopeless, and he died early on Tuesday morning (May 7th). The funeral service will be held to-day (Friday) at St. George's, Hanover-square, at 1 P.M., and a special train will leave Waterloo at 2.45 P.M. to convey the remains to Woking, when they will be cremated. Mr. Durham leaves a widow and one son, who has already made his mark in his father's profession.

Mr. Durham held the following appointments and offices:—At the Royal College of Surgeons of England he was elected as a member of the Council in 1884, and held that office at the time of his death; he was vice-president in 1892-3, but was never an examiner. At Guy's Hospital he was demonstrator of anatomy; assistant surgeon in 1861; full surgeon in 1872; and consulting surgeon in 1894. He was president of the Students' Club and used to attend nearly every meeting. He was interested in every movement connected with the welfare of students, and was always ready to take the chair at any of their meetings or to put himself to any inconvenience to be of use to them. He was president of the Clubs' Union until last year, when he retired. Guy's Hospital was the first to start a union to amalgamate the various social institutions connected with the hospital. The Students' Club is the largest constituent institution of the Union, and Mr. Durham as its president was brought into contact with every student. He was also president of the cricket club. Almost the last meeting he attended was the ordinary general meeting of the Students' Club, held on March 28th, when three hearty cheers at the end of the meeting testified to his popularity.

In addition to the literary work alluded to above he contributed articles on Intestinal Obstruction to "Quain's Dictionary of Medicine"; articles on Diseases of the Nose and the Larynx to "Holmes' System of Surgery," second edition; and, amongst others, a valuable paper in the *Transactions of the Royal Medical and Chirurgical Society* on "Section of Laryngeal Cartilages for Removal of Morbid Growths."

SIR G. BUCHANAN, M.D. LOND., LL.D. EDIN, F.R.S.

THE somewhat sudden and unexpected death of Sir George Buchanan, late medical officer to the Local Government Board, has removed from our midst one of the most distinguished leaders in that branch of medicine which has to do with the prevention of disease and the promotion of public health. Conscious of failing health, he resigned his official post early in 1892, and recently under the advice of Dr. Ringer and Mr. Pollard he underwent an operation performed by the latter. The operation was quite successful, and convalescence seemed all but established, when on Sunday morning last, the 5th inst., he suddenly expired from heart failure at the age of sixty-four. Sir George Buchanan was a student of University College, where he greatly distinguished himself, and of which body he became a Fellow in 1864. At the London University he graduated B.A. in 1864 and M.D. in 1865, having at his M.B. taken three gold medals and two scholarships. He became physician to the London Fever Hospital and to the Hospital for Sick Children, Great Ormond-street, and for many years he held the post of medical officer of health to St. Giles. It was with credentials such as these that he first commenced work in the Medical Department of the Privy Council under Sir John Simon—a chief whom he

always held in highest veneration. For eight years this work was technically occasional only, but it took up most of his time. One of his earliest inquiries was into the working of the Vaccination Laws, and he then acquired that profound belief in the protective power of that operation which he maintained to the end of his career. He also reported on typhus fever and other questions arising out of the Cotton Famine, and it was at this period of his life that, whilst studying the influence upon mortality of large works of public health that he wrote his classical reports to show how the death-rate from phthisis had been reduced in proportion to the lowering of the subsoil water by means of works of sewerage. In 1869 Sir George Buchanan permanently joined the public health service of the State, and in December, 1879, he succeeded to the post of principal medical officer formerly held by Sir John Simon and Dr. Seaton. From that date his work was mainly administrative, and it included the organisation of a Cholera Survey of the country during the European epidemic of 1884-85, which was renewed with such success in 1892-94. But the annual reports which he issued as medical officer show that he was ever at work at the scientific aspects of preventive medicine, and they abound in introductory papers from his pen which placed him in the rank of the foremost sanitarians of the world. When he resigned his official position he was still glad to work to the utmost of his ability. He had duties as a Member of the Senate of the University of London; he took an active interest in the work and welfare of the Court of Assisants of the Society of Apothecaries; he advised the Grocers' Company as to their Research Scholarships; and he served on the Royal Commission on Tuberculosis. When Lord Basing, the chairman of that Commission, died, Sir George Buchanan was asked to take his place; and at this juncture he had to decide between at once submitting to an operation to relieve the serious progress of his malady and his desire, as he himself put it, to serve the Queen as long as he could. The latter motive overcame all other considerations, and only the other day he submitted to Her Majesty the report of the Commission. This little incident is, indeed, the key to his life's history. He loved work for work's sake, and this, above all, when it tended to the welfare of others. He was never self-seeking, but he always aimed to promote the advancement and welfare of those who worked with and under him. Though the State did but little to recognise his merits, others sought to honour him as best they could. The University of Edinburgh conferred on him the honorary LL.D.; and his numerous friends established the "George Buchanan" Gold Medal of the Royal Society. It was on his retirement only that he received the honour of knighthood.

The first part of the service connected with his burial was conducted by the Rev. Llewellyn Davies at St. Martin's-in-the-Fields on Thursday, and the second part at the Brookwood Cemetery in Surrey. At one or other of these services many of his friends were present. Most of his colleagues at Whitehall, including Dr. Thorne Thorne, C.B., F.R.S., and Mr. W. H. Power, F.R.S., were present. The President of the Local Government Board was represented by his private secretary, Mr. H. C. Monro; the secretarial department and the general staff were represented; and amongst others present were Sir Anthony Home, V.C., K.C.B., and Professor Michael Foster, Secretary to the Royal Society.

CARL VOGT.

THIS distinguished German biologist died at Geneva on May 6th at the advanced age of seventy-eight. He was born at Giessen on July 5th, 1817, and was the son of Philipp Friedrich William Vogt of Bern, a well-known Swiss pharmacologist. He studied under Valentin, and early devoted himself to physiology. In 1839 he went to Neuchâtel and assisted Agassiz in various zoological researches, in particular contributing the whole of the first part of Agassiz and Desor's great work on "Freshwater Fishes of Central Europe." In addition, he wrote at this period his work "On Mountain and Glacier" (1843), "Text-book of Geology and Palaeontology" (1846), the last edition of which was published in 1879, and "Physiological Letters" (1845). In 1844 he went to Paris, where he remained for two years, then visited Italy, living at Rome and Nice, and returned to Germany in the summer of 1847. He was appointed private docent at Giessen, but the revolution of 1848 arrested his

professional career. He threw himself with ardour into the movement as a democrat, was elected Colonel of the Civic Guard of Giessen, and became a Deputy to the German National Assembly, where he distinguished himself as a brilliant orator and an untiring advocate of democratic progress. He followed Parliament on its transfer to Stuttgart, and was one of the ablest as well as one of the last supporters of the National party. He was compelled, however, to fly from Germany, and returned to Bern and Nice, where he resumed his zoological studies, the fruits of which were contained in his "Ocean and Mediterranean Sea." In 1852 he was nominated Professor of Geology at Geneva, and was subsequently appointed to the chair of Zoology in that city. He from this time identified himself with the civic life of Switzerland, becoming a member both of the Federal and National Councils. He was a voluminous writer, as, in addition to the works quoted above, he wrote "Pictures of Animal Life," "Researches upon Animal Communities," which contained much covert satire on political life; "Superstition and Science," a book advocating strong materialistic ideas and directed against the views of Wagner, "Zoological Letters," "Artificial Fish Culture," "Lectures on Useful and Noxious Animals," and many others. In 1881 he conducted a scientific expedition to the North Cape. He was one of the earliest men of standing and science in Germany to accept the views of Darwin, and was a consistent and zealous supporter of them.

GEORGE LAFFAN, M.D., M.Ch. R.U.I.,

SURGEON-MAJOR, ARMY MEDICAL STAFF.

WE regret to announce the death of Surgeon-Major Laffan, which took place on April 27th in the Presidency of Madras. He was born in county Cork in 1845, and studied medicine in Queen's College, Cork, graduating as M.D. in 1876. In the following year he entered the Army Medical Service, and became surgeon-major in 1889. Surgeon-Major Laffan took part in the Sudan Expedition of 1884-85, and in the Manipur Expedition of 1891, his services in each of these operations gaining him the award of a medal with clasp.

SAMUEL DAVIDSON, M.D. ABERD., M.R.C.S. ENG.

BY the death of Dr. Samuel Davidson of Meikle Wartle, Aberdeenshire, which took place on April 30th, our profession loses a venerable and highly respected member. The deceased gentleman, who had attained his eighty-third year and was the oldest medical practitioner in the county, having outlived most of his early contemporaries, became a Member of the Royal College of Surgeons of England as far back as 1834, and graduated as M.D. at Aberdeen in 1857. For the greater part of his life he resided at Meikle Wartle and enjoyed a considerable practice carried on throughout an extensive rural district, where he was regarded by all classes as a sound adviser and a trusty friend.

Medical News.

UNIVERSITY OF OXFORD: EXAMINATIONS IN MEDICINE AND SURGERY, TRINITY TERM, 1895.—The Regius Professor of Medicine gives notice that the following examinations will take place in Trinity Term on each day at 10 A.M.:

Final Examination for the Degree of Bachelor of Medicine.—To commence on Monday, June 10th, in the examination schools.

Examination for the Degree of Master in Surgery.—To commence on Wednesday, June 19th.

First Examination for the Degree of Bachelor of Medicine.—To commence on Friday, June 28th.

The secretary to the Board of Faculties gives notice that he will receive the names of candidates—either by letter, at any time not later than the under-mentioned days respectively, or from the candidates in person—at his office in the Clarendon-building as follows:—

1. Final Examination for the Degree of Bachelor of Medicine.—Fee £1 11s. 6d. On Saturday, May 25th, from 9.30 A.M. till 10.30 A.M.

2. Examination for the Degree of Master in Surgery.—Fee 25s. On Wednesday, June 5th, from 9.30 A.M. till 10.30 A.M.

3. *First Examination for the Degree of Bachelor of Medicine.*—On Friday, June 14th, from 9.30 a.m. till 10.30 a.m.
Fee for Organic Chemistry and Materia Medica 15s. each, and for the remaining subjects 21 11s. 6d.

Names must be transmitted or given in on one of the forms issued for that purpose. These forms can be had on application at the secretary's office. Candidates whose names have not been received at the above-mentioned times can still be admitted to examination on payment of an additional fee of two guineas, provided that their forms and fees reach the secretary at his office before noon on Thursday, June 6th, for (1); on Saturday, June 15th, for (2); and on Monday, June 24th, for (3). Candidates for the final examination must have passed the several subjects of the first examination—viz., (1) Organic Chemistry, (2) Materia Medica and Pharmacy, (3) Human Anatomy, and (4) Human Physiology; but any candidate who has obtained a first or second class in Animal Physiology in the Honour School of Natural Science is exempt from Human Physiology, and any candidate who has obtained a first or second class in Chemistry in the Honour School of Natural Science is exempt from Organic Chemistry. Candidates who passed all the examinations for the degree of B.A. before the end of Trinity Term, 1886, and who were registered as medical students on or before March 16th, 1886, are exempt from Organic Chemistry. Candidates for the examination for the degree of Master in Surgery, if they be not already members of the surgical staff of a recognised hospital, must produce a certificate countersigned by the Regius Professor of Medicine of having acted in such a hospital as dresser or house surgeon for six months. Candidates for the first examination must have passed in all the subjects of the Preliminary Examination—viz., (1) Mechanics and Physics, (2) Chemistry; (3) Animal Morphology; and (4) Botany; but any candidate who passed all the examinations for the degree of B.A. before the end of Trinity Term, 1886, or any candidate who obtained a class in Animal Morphology, or Animal Physiology, or Botany in the Honour School of Natural Science in or before Trinity Term, 1888, is exempt from Animal Morphology and Botany.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—The following candidates satisfied the examiners at the First Examination for the Degree of Bachelor in Medicine at the College of Medicine, Newcastle-upon-Tyne, in April, 1895:—

- 1.—*Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany.*—John Robert McKinlay, Westminster Hospital; and Bertram Crossfield Stevens, St. Thomas's Hospital.
- 2.—*Anatomy and Physiology.*—Thomas Harold Gibbs, College of Medicine, Newcastle-upon-Tyne.
- 3.—*Chemistry with Chemical Physics, and Botany with Medical Botany.*—Vincent Burrow, St. Mary's Hospital; Francis Ward Crossman and Henry Reginald Ellis, St. Bartholomew's Hospital; Thomas Haylock Hulme, London Hospital; and Stanley Southam, Owens College, Manchester.
- 4.—*Botany with Medical Botany.*—Charles Henry Dickens, M.R.C.S., L.R.C.P., St. Thomas's Hospital.

The following passed under the New Regulations:—

- 1.—**ELEMENTARY ANATOMY AND BIOLOGY, CHEMISTRY, AND PHYSICS.**
Second-class Honours.—Robert Lewis Routledge and Carl Wahlgren von Bergen, College of Medicine, Newcastle-upon-Tyne.

Pass List.—Arthur Samuel Arthur, Thomas Pousford Cann, Henry Edward Davison, College of Medicine, Newcastle-upon-Tyne; Thomas Stoke Elliot, Cooke's School of Anatomy; Henry Eggleston, James Andrew Hartigan, James McConnell, College of Medicine, Newcastle-upon-Tyne; and Edgar Sheldon Wilkinson, St. Bartholomew's Hospital.

2.—ELEMENTARY ANATOMY AND BIOLOGY.

William Cowan Brown, Henry Adamson Fielden, Lawrence Fielder Heumans, Ernest Inman, Hugh Robert Kendall, Guy Brougham Picton, all of the College of Medicine, Newcastle-upon-Tyne.

3.—CHEMISTRY AND PHYSICS.

Thomas Blandford Watson, College of Medicine, Newcastle-upon-Tyne.

4.—BIOLOGY AND PHYSICS.

William Henry Isaacs Bathurst, King's College.

- 5.—**ELEMENTARY ANATOMY, CHEMISTRY, AND PHYSICS.**
Francis Gerrard Hamilton Cooke, Cooke's School of Anatomy.

The following passed the Second Examination for the degree of Bachelor in Medicine:—

ANATOMY, PHYSIOLOGY, AND MATERIA MEDICA.

Second-class Honours.—John Robert McKinlay, Francis William Rix, Westminster Hospital; and John Aston Swindle, Mason College, Birmingham.

Pass List.—Thomas George Drabble Adams, Walter Osborne Arnold, College of Medicine, Newcastle-upon-Tyne; Charles Henry Dickens, St. Thomas's Hospital; Frank Chubb Ford, St. Bartholomew's Hospital; Thomas Haylock Hulme, London Hospital; Henry

Herbert Markham, Daniel Wells Patterson, Walter Augustine Feverley, Theodore John Phillips, College of Medicine, Newcastle-upon-Tyne; Charles Seaver Smith, Mason College, Birmingham; and Robert Alfred Wilson and Thomas Woodman, College of Medicine, Newcastle-upon-Tyne.

At the Convocation held on Saturday, April 27th, the following gentlemen were recommended for the Degree of Doctor in Medicine for practitioners of fifteen years' standing, viz.:—

William Percy Ashe, L.R.C.P., M.R.C.S.; Edward Ferrand, L.R.C.P., M.R.C.S.; Stanford Harris, M.R.C.S., L.S.A.; Benjamin Jones, L.R.C.P., M.R.C.S.; Henry Arthur Latimer, M.R.C.S., L.S.A.; William Moxon, L.R.C.S. Edin., M.R.C.S.; John Taylor, L.R.C.P. Edin., L.F.P.S. Glasg.; Ebenezer Stanley Smith, M.R.C.S., L.R.C.P.; and Thomas Frederic Young, M.R.C.S., L.S.A.

The following gentlemen were recommended for the Degree of Doctor in Medicine, viz.:—

George Henry Vane Appleby, M.B., B.S. Durh.; Francis Williams Fullerton, M.B., B.S. Durh., M.R.C.S., L.R.C.P.; Reginald Green, M.B., B.S. Durh.; Walter William Hodgins, M.B., B.S. Durh., M.R.C.S., L.R.C.P.; William Harvey Mallow, M.B., B.S. Durh., F.R.C.S.; and Francis Herbert Marson, M.B., B.S. Durh., M.R.C.S., L.R.C.P.

The following gentleman was recommended for the Degree of Doctor in Hygiene, viz.:—

William Henry Turnbull, M.B., B.S., B.Hy. Durh.

The following gentleman was recommended for the Degree of Master in Surgery, viz.:—

William Martin, M.A., M.B., B.S., College of Medicine, Newcastle-upon-Tyne.

The following gentlemen were recommended for the degree of Bachelor in Medicine (M.B.), viz.:—

First-class Honours.—Charles Allan Brough, L.R.C.P. & S. Edin., College of Medicine, Newcastle-upon-Tyne.

Second-class Honours.—James Atkin Henton White, Mason College, Birmingham; John Ralph Prior, King's College; Edward Turner, St. Bartholomew's Hospital; Sidney Herbert Hawley, Mason College, Birmingham; and Harold Dickinson Senior, Charing-cross Hospital.

Pass List.—Norman Bennett, College of Medicine, Newcastle-upon-Tyne; Robert Montagu Le Hunter Couper, St. Mary's Hospital; William T'Anson Charlton; Percival Davidson, College of Medicine, Newcastle-upon-Tyne; Ernest Edward Frazer, Ernest Rowland Fothergill, Guy's Hospital; Frank Chubb Ford, M.R.C.S., St. Bartholomew's Hospital; John Reginald Fuller, St. Mary's Hospital; Edward Fielden, College of Medicine, Newcastle-upon-Tyne; Richard Withers Gilmour, St. Bartholomew's Hospital; Gilbert Gocher, Guy's Hospital; Charles Hanks, Ernest Robert Kendall, Wilfred Robert Kingdon, College of Medicine, Newcastle-upon-Tyne; George Edwyn Middlemist, London Hospital; William Harland Peake, Guy's Hospital; Marcus Sinclair Paterson, St. Mary's Hospital; Ernest Percy Satchell, Mason College, Birmingham; and George William Scott and Tom Sanderson, College of Medicine, Newcastle-upon-Tyne.

The following gentlemen were recommended for the Degree of Bachelor in Surgery (B.S.):—

Norman Bennett, William T'Anson Charlton, College of Medicine, Newcastle-upon-Tyne; Robert Montagu Le Hunter Cooper, St. Mary's Hospital; Percival Davidson, College of Medicine, Newcastle-upon-Tyne; Ernest Edward Frazer, Guy's Hospital; John Reginald Fuller, St. Mary's Hospital; Ernest Rowland Fothergill, Guy's Hospital; Edward Fielden, College of Medicine, Newcastle-upon-Tyne; Richard Withers Gilmour, St. Bartholomew's Hospital; Gilbert Gocher, Guy's Hospital; Charles Hanks, College of Medicine, Newcastle-upon-Tyne; William Harland Peake, Guy's Hospital; Marcus Sinclair Paterson, St. Mary's Hospital; John Ralph Prior, King's College; Ernest Percy Satchell, Mason College, Birmingham; George William Scott, Tom Sanderson, College of Medicine, Newcastle-upon-Tyne; Edward Turner, St. Bartholomew's Hospital; and James Atkin Henton White, Mason College, Birmingham.

The following gentlemen were recommended for the Degree of Bachelor in Hygiene:—

George John Atburn, M.B., M.S. Edin.; George Henry Vane Appleby, M.B., B.S. Durh.; Edward Turner, M.R.C.S., L.R.C.P.; and Edward Cecil Willcox, M.B., B.S. Durh.

And the following gentleman was recommended for the Diploma in Public Health (D.P.H.):—

William Henry Symons, L.S.A.

FOREIGN UNIVERSITY INTELLIGENCE.—*Cracow:* Dr. Alexander Rosner has been recognised as *privat-docent* in Obstetrics.—*Gratz:* Dr. Adolf Tarisch has been promoted to an Ordinary Professorship of Dermatology.—*Prague:* Dr. Eduard Nessel, dental surgeon, has been promoted to an Extraordinary Professorship in the University of Bohemia.—*Vienna:* Dr. Norbert Ortner has been recognised as *privat-docent* in Medical Pathology. Dr. Leopold Réti has been recognised as *privat-docent* in Laryngology.

ABERDEEN UNIVERSITY CLUB, LONDON.—The May dinner of this club will be held at the Holborn Restaurant on Wednesday, the 15th inst., at 7.30 P.M., when the Rev. Donald MacLeod, D.D., will occupy the chair.

THE Local Government Board has confirmed the appointment of Mr. F. J. Brown of Newark as medical officer and public vaccinator for the Caunton and Elston districts of the Southwell Union, at a salary of £32 a year. As Mr. Brown does not reside within these districts the appointment is sanctioned for one year only, and must be annually confirmed.

OXFORD MEDICAL SOCIETY.—A special meeting will be held in the anatomical lecture theatre on Friday, May 17th, at 8.30 P.M. Dr. Sidney Martin will read a paper on the Pathological Results of the Royal Commission on Tuberculosis. The President of the society, Professor Bardon Sanderson, one of the Commissioners, will take part in the discussion. Visitors will be welcomed.

ROYAL VISIT TO THE CHELSEA HOSPITAL FOR WOMEN.—Her Royal Highness the Princess Mary Adelaide, Duchess of Teck, has graciously consented to visit the Chelsea Hospital for Women on Wednesday, May 22nd, at 4 P.M., when her Royal Highness will open and name the "Mary Adelaide" Ward, and also receive purses of money from ladies who are willing to aid this institution. Purses may be obtained from the Secretary, at the hospital.

THE Charity Record announces the following complete list of Baron de Hirsch's benefactions to hospitals &c., for 1895:—

Queen Charlotte Lying-in ...	£200	British Home for Incurables ...	£300
Bethnal Green ...	200	Brompton Consumption ...	500
Charing Cross ...	500	St. Mary's ...	300
Evelina ...	200	North-Eastern ...	300
North-West London ...	500	Cancer (Free) ...	200
Westminster ...	300	Jewish Convalescent ...	200
St. Andrew's Convalescent ...	200	King's College Hospital ...	300
Home ...	200	Middlesex ...	300
Poplar ...	200	Great Ormond-street ...	100
Princess Mary Village Homes ...	100		
Metropolitan Convalescent Institution ...	100		£5000

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Opium Commission.

SIR JOSEPH PEASE has given notice that on Friday, May 24th, he will call attention to the Report of the Royal Commission on Opium, and move: "that this House, having had before it its resolution of June 30th, 1893, pressing on the Government of India to continue their policy of greatly diminishing the cultivation of the poppy and the production and sale of opium, and having had presented to it the Report of the Royal Commission, appointed Sept. 2nd, 1893, to inquire into various matters connected with the cultivation of the poppy in India, is of opinion that the system by which the Indian Opium revenue is raised is morally indefensible, and would urge upon the Indian Government that they should cease to grant licenses for the cultivation of the poppy and sale of opium in British India, except to supply the legitimate demand for medical purposes, and that they should at the same time take measures to arrest the transit of Malwa opium through British territory."

Factories and Workshops Bill.

The Factories and Workshops Bill is now being considered by the Grand Committee of the House of Commons on Trade, but so far very few amendments have been made in the measure. On Tuesday, May 7th, there was an important debate in connexion with the clause which provides a penalty for the employment of persons in places injurious to health. Mr. William Allen proposed an amendment making it obligatory on the occupiers of factories and workshops to obtain a license every year from the inspector of the district. Mr. Buxton, on behalf of the Government, expressed sympathy with the object of the amendment, but said the apathy of many local sanitary authorities was notorious, and they could not leave this important matter in their hands. He added, however, that with regard to new premises the Government are going to propose some form of licence or certificate. Mr. Asquith spoke in the same line. What, he asked, would be the use of inspecting these places at the beginning of the year unless their sanitary condition were afterwards kept under constant observation? Several members took the view that the amendment would interfere with cottage industries in rural districts and drive trade into the hands of the large factory owners in towns. In the end the amendment was defeated by a large majority.

The Midwives Registration Bill.

This Bill, which has been introduced into the House of Lords, con-

sists of eighteen clauses. The text of the Bill is printed in full in another column.

HOUSE OF COMMONS.

THURSDAY, MAY 2ND.

The Operation of the Merchandise Marks Act.

Mr. Bryce, President of the Local Government Board, answering a question on this subject put by Mr. Brookfield for Colonel Howard Vincent, said that ten summonses in all have been issued under the Act since Jan. 1st, 1894, and in all of these convictions had been obtained. Other cases were also submitted to the Solicitor for his opinion as to proceedings, but as to some he advised that they did not come within the Act, and in other cases there was not evidence to secure a conviction.

The Veterinary College for Ireland.

Mr. John Morley, in reply to Mr. Johnston, said it is the intention of the Government to bring in a Bill to make certain provision in connexion with the proposed Veterinary College for Ireland, an institution which, in the opinion of the Government, will be of considerable educational advantage. The provision will not be for the endowment of the college, but merely a grant of a lump sum in aid towards the acquisition of buildings and fittings. The grant will not reduce the annual sum paid to the Intermediate Education Board as their share of the local taxation duties, but will be withdrawn from an accumulation in their hands in respect of their share in these duties not expended by them in former years.

Weather Forecasts for Agriculturists.

Mr. Herbert Gardner, President of the Board of Agriculture, said, in answer to Mr. Strachey, that so far as he could gather from the information which had reached him the experimental exhibition of the weather forecasts at the telegraph offices in rural districts has not been so beneficial as he had hoped, and he was doubtful whether the assistance rendered to agriculturists is sufficient to justify him in making a further application to the Treasury on the subject. He should be glad, however, to further consider the matter, and if it should appear that the arrangement is of real service to agriculturists during harvest time he would do his best to secure its continuance in localities where it is appreciated.

The Budget.

The Chancellor of the Exchequer at this sitting of the House made his annual statement as to the finances of the country. The only changes in taxation he proposed were the withdrawal of the extra 6d. per gallon duty on spirits and the reimposition for another year of the extra 6d. per barrel on beer. In the course of his statement Sir William Harcourt made some interesting references to the food and drink of the year. With regard to tea, he said that the duty had yielded £3,587,000, or £34,000 more than in the year 1893-94. This increase represented in quantity 5,650,000 lb., and in ratio 2.6 per cent., this percentage being a good deal more than twice as great as the increase of the population. The teas of India and Ceylon now constitute 86 per cent. of the whole, whilst in 1894 they constituted only 3 per cent. of the consumption. The yield of tobacco in the past year had been £10,416,000, or £96,000 more than in 1893-94. This increase, Sir William Harcourt said, was probably not to be taken as a normal figure, as the consumption in the latter year was no doubt depressed by the long-continued coal strike and other circumstances of depression, which made the tobacco revenue practically stagnant; but it would be found that the average annual increase over seven years had been nearly 3 per cent. per annum, which was about three times as great as the increase of population. The consumption of coffee had been steadily decreasing. In 1885-86 the revenue from it was £205,000; last year it was only £170,000. Cocoa, on the other hand, was steadily growing in consumption. In the last year there had been an increase of 3,383,000 lb., as compared with 1893-94, and an improvement of £14,000 in the revenue. Dried fruits showed an increase of £20,000 beyond the figure of the preceding year. Turning to another class of commodities, Sir William Harcourt said that, as he had indicated on several former occasions, the consumption of wine was constantly on the decrease. The receipt in 1894-95 was £1,144,000, as against £1,210,000 in 1893-94. Since 1875 the quantity had fallen from 17,200,000 gallons to 13,830,000, and in the last year the fall was 250,000 gallons. The quantity of sparkling wine, which stood at 825,000 dozens in 1890, had fallen to 650,000 dozens in the last year. The produce of the duty on spirits had been £4,197,000, or £67,000 in excess of 1893-94. For the first three quarters up to Dec. 31st there had been no increase on the previous year, and it would seem that if things had gone on in their ordinary course, in spite of the extra sixpence, there would have been little or no increase of revenue, but owing to the extraordinary severity of the weather in February the receipts from rum rose suddenly to an excess of £100,000. Brandy fell £91,000 below the yield of 1893-94. The taste for this drink was evidently on the decline, for in fifteen years the quantity had diminished by 1,000,000 gallons, or 31 per cent., while the population had increased 13 per cent. An examination of the increased and increasing consumption of non-dutiable articles—such as meat, eggs, sugar, butter, and cheese; fruit, such as apples, oranges, and lemons; fuel, as coal; light, as petroleum—showed from year to year, and markedly last year, an increase in the average consumption of these articles. There was one article which was perhaps a greater test than any other, and that was meat. In the three years 1882 to 1884 the consumption of meat was 108 lb. per head; and in the three years 1891 to 1893 the consumption was 119 lb. per head, or an increase of 10 per cent. The consumption of foreign and home-grown meat in these latter three years was the largest that ever took place, and the increase in the consumption of an article like meat was a significant indication of the well-being of the people. To sum up, Sir William Harcourt said that the figures went to show that the mass of the people had in the past year, and in many years past, been able to obtain, and had enjoyed, still larger quantities of the necessaries and comforts of life at lower prices.

MONDAY, MAY 6TH.

Quarantine in South America.

Sir Edward Grey, in the course of a reply, said that the South American Republics had been approached on the subject of their quarantine

regulations, but none of them had as yet expressed themselves willing to adopt the principles of the Dresden Sanitary Convention. Mr. Phipps, Her Majesty's Minister at Rio de Janeiro, was specially instructed on proceeding to his post to make earnest efforts for improvement in the quarantine arrangements in Brazil, and a conference was now sitting at Rio de Janeiro to consider the question. It was understood that the Brazilian Government had promised to provide three fresh quarantine stations, besides some other reforms in their regulations.

Treatment of Fever Patients in London.

Mr. Bartley asked the President of the Local Government Board whether his attention had been drawn to a report, dated April 8th last, from the medical officer of health of Islington concerning the premature discharge of fever patients from the Metropolitan Asylums Board's hospitals; and whether he would allay public anxiety on the subject by appointing a committee to inquire into the question?—Mr. Shaw-Lefevre replied: I have communicated with the Metropolitan Asylums managers with respect to the report mentioned in the question, and I am informed that they have referred to their General Purposes Committee for consideration and report, not only concerning this particular report, but also the whole question raised in the annual report for 1894 of the medical superintendent of the North-Eastern Hospital as to the outbreak of illness in households after the return from hospital of recovered patients. Allegations have been made as to similar outbreaks where patients have been discharged from the hospitals of other bodies, and the subject has recently received the attention of the Medical Department of the Local Government Board, who hope shortly to issue a report with respect to it.

The Water-supply at Aldershot.

Mr. Campbell-Bannerman, in answer to a question, said that the water-supply to the new barracks at Aldershot had been recently investigated and the water had been analysed by the Professor of Military Hygiene at Netley. The steps to be taken on that report were now under consideration. It was not usual to publish such a report.

Accidents in Coal Mines.

Mr. Asquith, replying to Sir James Fergusson, said that the total number of persons injured in coal mines during 1894, as reported under Section 35 of the Coal Mines' Regulation Act of 1887, was 4081. In future this information would be published in the summary of statistics of mines and minerals.

TUESDAY, MAY 7TH.

London University Bill.

Mr. Acland intimated that this Bill would be introduced in the House of Lords on Thursday, May 9th.

The Meat-supply for the Army.

A number of questions on this subject were addressed to the Financial Secretary to the War Office, and in the course of his replies Mr. Woodall said that the contractor was required to deliver at least 40 per cent. of the meat from home-killed supplies. Foreign supplies of beef were only available between October and the end of May, and during the rest of the year the beef supplied must be home grown. As to mutton, it was only allowed on one day in the week, and it might either be refrigerated or home grown. The quality of the meat was found every year to be more satisfactory.

WEDNESDAY, MAY 8TH.

Cremation.

Sir Thomas Roe introduced a Bill to empower burial boards and local authorities to provide for cremation.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the Adulteration of Food Products resumed the examination of witnesses on Tuesday, May 7th, Sir Walter Foster occupying the chair.

Mr. Trengrouse, a member of the Produce Exchange and the London Chamber of Commerce, gave evidence with regard to tilled or imitation cheese. He would not say that it was absolutely without nutritive properties, but he certainly would not care to eat it himself. He had been offered a liberal commission to sell it but had refused, being of opinion that it was an article of commerce by which the public were defrauded. Its manufacture and importation should, in his opinion, be suppressed, and he would go so far as to inflict imprisonment on the occasion of a third conviction. Lard was imported in large quantities from America. Generally speaking, it was pure, but adulteration was practised by the introduction of cotton-seed oil, stearine, and beef fat.

Mr. Henry Lane, another member of the London Chamber of Commerce, went at length into the lard question. He expressed the opinion that adulteration does not go on now to anything like the extent it used to do, and he advocated strict scrutiny and the imposition of substantial fines.

Mr. J. M. Harris, from Calne, said it was possible to get from English, Scotch, and Irish pigs a lard which was as solid as butter; but in the case of American pigs, which were fed chiefly on Indian corn, the lard was not so solid, and foreign fat was introduced into it on the plea of stiffening. He believed that a great quantity of raw material brought from America was treated in this country and sold as home-grown. In this connexion he cited lard and bacon.

The Committee then adjourned.

The Committee met again on the following day, with Sir Walter Foster in the chair.

Mr. Alexander Osborne, of Messrs. Osborne and Sons, wholesale provision merchants, Glasgow, gave evidence with regard to butter and cheese. His chief recommendation was that foreign Governments should be invited to give a guarantee with the butter and cheese coming from their respective countries and put a brand upon them, and that if they declined to do this in this country should not allow the articles to be imported. He detested the practice which prevails in some parts of Scotland of making cheese from skim milk and oleo, saying that a perfectly good and wholesome article was produced. He gave the results of analysis of samples of Dunlop cheese, which is the kind mainly made in Scotland—this oleo cheese, and Gorgonzola. In the matter of

butter fat the Dunlop cheese contained 31.68 per cent., the oleo 11.32, and the Gorgonzola 26.99 per cent.; other fat Dunlop nothing, oleo 16.98, and Gorgonzola 6.75 per cent.; casein Dunlop 32.30 per cent., oleo 32.64, and Gorgonzola 26.18 per cent.

Mr. Fry was examined as to the trade in cocoa. He claimed that the introduction of sugar and arrowroot to increase the solubility of the article could not be regarded as adulteration in any sense. He did not see any great objection to the proportions being stated on the label, although he thought it hardly fair to the manufacturer that he should be called upon to make the disclosure. As to the arrowroot, it would not be right to describe it as starch, because it would prejudice the article in the mind of the public. It would be as fair to call arrowroot in cocoa starch as it would be to call gelatine used in blanc mange glue. As to the term "cocoa," it ought to be borne in mind that the present mixtures were on the market many years before pure cocoa was heard of.

Mr. Hahnemann Epps, director of James Epps and Co., Limited, and chairman of the Cocoa Subsection of the London Chamber of Commerce, was next examined. He explained at some length the processes for the preparation of cocoa. The nibs, he said, were ground to a paste, and then one of three methods was employed to subdivide and incorporate or to regulate the constituents of the cocoa, particularly the fat, of which there was usually 50 per cent. present in the nibs. The oldest method was that of adding sugar and arrowroot; another method was to remove a large proportion of the fat; and the third was in addition to treat the cocoa chemically with potash, soda, or ammonia. For different classes of people, varying as they did in their wants and tastes, the first two methods were suitable and were appreciated. The third method by chemical treatment seemed to him to be objectionable. The native character of the cocoa with the aroma and colour was destroyed, and it was stated by Dr. Sidney Ringer of Oxford University and the German chemist Moeller that the added alkalis directly hindered digestion and impaired the nutrition of the body. His firm had considered the matter on many occasions and had deliberately refused to employ either of the alkali processes. It would, in his opinion, be unwise to place restrictions on the supply of good preparations of cocoa which retained the constituents of cocoa intact, which were economical in use, and to which the people were accustomed. It was well known that in the Royal Navy since 1822 the sailors and marines, numbering now 70,000, had been daily supplied with Government-made prepared cocoa, composed of about 50 per cent. cocoa and 50 per cent. of sugar and arrowroot, and Admiral Field had lately given his opinion that such a diet for hard-working men could not be improved upon. As cocoa was very rich with fat, which, if left free, would float in great drops on the surface, the manufacturer had to consider what was the actual quantity of sugar and arrowroot required to incorporate with the cocoa and furnish readily a smooth and agreeable drink. His firm declared on their labels the ingredients used in the preparation of cocoa.

The Committee adjourned for a week.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- ADCOCK, G. R., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer for the Home Union.
- BAKEWELL, R. TURIK, M.B., M.R.C.S., has been appointed Anaesthetist to the Hospital for Sick Children, Great Ormond-street.
- BLAKISTON, A. A., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Glastonbury.
- BODEN, J. S., M.R.C.S., L.R.C.P., has been appointed House Accoucheur to King's College Hospital.
- BOND, N. TROUGHTON, M.B., C.M. Edin., has been appointed Medical Officer for the No. 5 District of the Liskeard Union.
- BUNSFIELD, A., B.A. Cantab., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to King's College Hospital.
- BURRIDGE, H. A., M.R.C.S., L.R.C.P., has been appointed Assistant House Accoucheur to King's College Hospital.
- BURY, EDWARD C., M.D. St. And., M.R.C.S., has been appointed Medical Officer of Health to the Wisbech District Council.
- CLAY, J., M.D. Durh., B.S., has been appointed House Surgeon to the Radcliffe Infirmary, Oxford.
- COUNSELLER, W. P., M.D. Durh., L.R.C.P., L.M. Irel., M.R.C.S., has been appointed Medical Officer of Health to the Clitheroe Rural District Council.
- COX, WM., M.R.C.S., has been appointed Medical Officer of Health for the Winchcombe Rural District Council.
- CRAWFORD, RAYMOND, M.A., M.B., B.Ch. Oxon., M.R.C.P. Lond., has been appointed House Physician to King's College Hospital.
- DATK, WM. H., M.R.C.S., has been appointed Medical Officer of Health to the Wellington Rural District Council.
- DAVIES, J., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer to the Holborn Union Schools at Mitcham.
- EDMONDS, F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Chesterfield Sanitary District and the Workhouse of the Chesterfield Union.
- ELLIOT, J., M.R.C.S., has been appointed Medical Officer of Health to the Erith District Council.
- ESSOR, HY. C., M.R.C.S., has been appointed Honorary Ophthalmic Surgeon to the Newport and Monmouthshire Infirmary.
- EVERS, CHAS. J., M.D. Durh., M.R.C.S. Eng., has been reappointed Medical Officer of Health for the Faversham Borough and Port Sanitary Authority.
- FLOWER, FRED., M.R.C.S., has been appointed Medical Officer of Health to the Warminster District Council.

GOODFELLOW, JAS. A., M.B., C.M. Glas., has been appointed Medical Officer of Health to the Brampton Rural District Council.

JONES, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Aberavon.

KEMPTHORNE, A. E., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Parish of St. Matthew, Bethnal-green.

LEAF, CREIL HUNTINGTON, M.A., M.B., B.C. Camb., M.R.C.S., has been appointed Assistant Demonstrator in Anatomy at the London Hospital.

MACKINTOSH, A., M.D., L.F.P.S., L.M. Glas. has been appointed Medical Officer of Health to the Chesterfield Rural District Council, and also to the Urban District Councils of Clay Cross and Dronfield.

MOSSMAN, R. A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Milton Sanitary District of the Sculcoates Union, vice Jackson, resigned.

MOSSOP, A. GEOR., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer of Health to the Newhaven Urban District Council.

NETTLE, WM., M.R.C.S., has been reappointed Medical Officer of Health to the Liskeard Town Council.

OLIVER, GEORGE H., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Assistant Surgeon to the Bradford Eye and Ear Hospital, vice G. H. Dodd, resigned.

OLVER, R. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

PALMER, A. M., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Whittington Urban District Council.

PENNY, F. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

PERCIVAL, THOMAS, M.R.C.S., L.M., has been appointed Medical Officer of Health to the Pontefract Rural District Council.

REES, DAVID V., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Brecon Urban Sanitary District.

RICE, T. E., L.S.A. Lond., has been appointed House Surgeon to King's College Hospital.

ROBB, A. GARDNER, M.B., B.Ch. Irel., has been appointed Government Medical Officer, Public Vaccinator, and Medical Officer of Health for the Springfield District of Belfast.

ROBERTS, G. A. E., M.R.C.S., has been appointed Medical Officer of Health to the Winchester District Council.

SHIPPARD, AMY, M.B. Lond., has been appointed Assistant Ophthalmic Surgeon to the New Hospital for Women, Euston-road.

SMITH, G. A., M.R.C.S., L.R.C.P., has been appointed Ophthalmic Clinical Assistant to King's College Hospital.

SOUTHEY, A. J., M.R.C.S., has been appointed a District Medical Officer to the Eton Urban District Council.

THOMSON, D. G. P., M.B., M.S. Edin., has been appointed Medical Officer of Health to the Penrith District Council.

WATSON, WM., M.R.C.S., has been reappointed Medical Officer of Health to the Rochester Urban and Port Sanitary Authorities.

WEBB, WM. H., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Kingsbridge Rural District Council.

WILLS, THOMAS MUNN, F.R.C.S. Irel., J.P., Senior Honorary Surgeon, has been appointed Consulting Surgeon to the Bootle Borough Hospital, Liverpool.

YOUNG, T. BART, M.D. Brux., M.R.C.S. Eng., L.R.C.P. and S. Edin., has been appointed Medical Officer of Health to the Halesowen Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASYLUM FOR IDIOTS, Earlswood, Redhill, Surrey.—Assistant Medical Officer. Salary £150 a year, with board and residence. Applications to the Secretary, 36, King William-street, London-bridge, E.C.

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Junior House Surgeon. Salary £50 per annum, with board, washing, lodging, &c.

BOROUGH OF STOCKTON-ON-TEES.—Medical Officer of Health and Medical Superintendent of the Fever Hospital. Salary £300 per annum. Applications to the Town Clerk.

CARDIFF INFIRMARY.—Senior Resident Medical Officer for one year. Salary £100 a year, with washing and furnished apartments.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer to act as Locum Tenens for about three months during the summer. Salary £22s. per month, with board, lodging, &c.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £100 per annum, with board and lodging.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, unmarried. Salary £70. To reside and board in the Hospital.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glais-road, E.—Assistant Physician for Out-patients.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Pathologist and Registrar for one year. Honorarium 50 guineas per annum.

GUARDIANS OF KENSINGTON.—Second Assistant Resident Medical Officer for the Workhouse and Infirmary. Salary £30 per annum, with apartments, board, and washing. Applications to the Clerk to the Guardians, Marlborough-road, Kensington, W.

HALLIFAX INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £30 per annum, advancing £10 per annum up to £100, with residence, board, and washing.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House Surgeon. Honorarium at the rate of £50 per annum and board.

NEW HOSPITAL FOR WOMEN, Euston-road, London.—Medical Women as House Surgeons.

ROTHERHAM HOSPITAL AND DISPENSARY.—Resident House Surgeon for three years. Salary £100 per annum, with rooms, washing, and commons (exclusive of alcoholic drinks).

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician, for six months. Salary at the rate of £70 per annum, with board and lodging.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—Clinical Assistants for six months.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Assistant House Surgeon for six months. Board, washing, and lodging in the Institution provided.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board &c.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Junior House Surgeon, unmarried. Salary £50 per annum, with rooms and board.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser for two years, unmarried. Salary £70 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

COWLEY.—On May 2nd, at Willow Bank, Upton-on-Severn, the wife of J. Selwyn Cowley, M.R.C.S. Eng., &c., of a son.

CUTHFIELD.—On May 3rd, at Merton House, Ross, Herefordshire, the wife of Arthur Cuthfield, B.A., B.Sc., M.R.C.S., of a son.

GODFREY.—On May 4th, at Inglenook, Stockton-on-Tees, the wife of T. H. Godfrey, Esq., M.B., of a daughter.

HURRY.—On May 5th, at Abbotsbrook, Reading, the wife of Dr. Jamieson B. Hurry, M.A. Cantab., of a daughter.

MACGILLIVRAY.—On May 5th, at Rutland-street, Edinburgh, the wife of Charles Watson Macgillivray, M.D., F.R.C.S. Edin., of a son.

MINTER.—On May 6th, at Nelson-street, Rotherham, Yorks, the wife of J. L. Minter, M.D., M.R.C.S., of a daughter.

SLAUGHTER.—On May 5th, at Darwen Bank, Darwen, the wife of Ernest A. Slaughter, B.A., M.D., of Brondesbury-road, Kilburn, N.W., of a son.

WALLER.—On May 3rd, at Thorneybrook, Chelmsford, the wife of T. H. Waller, M.R.C.S., L.R.C.P. Lond., of a daughter.

MARRIAGES.

JOHNSTON—GAINSFORD.—On May 2nd, at St. Saviour's, Hitchin, Alexander J. J. Johnston, Staff-Surgeon Royal Navy, H.M.S. Blenheim, son of the late J. Wingate Johnston, M.D., R.N., to Hilba Margaret, daughter of the Rev. George Gainsford.

MCCARTHY—LEGGATT.—On April 30th, at St. John Baptist Church, Holland-road, W., James Desmond McCarthy, C.M.G., M.D., late Surgeon R.N., and P.M.O. in H.M. Colonial Service, retired, to Clara Augusta, eldest daughter of the late Horatio Bethune Leggatt, Brownhich, Hants.

SUTTON—WOLFE.—On April 30th, at Christ Church, Woburn-square, by the Rev. Henry Carter, M.A., of Forty-hill, Enfield, assisted by the Rev. J. J. Glendinning Nash, M.A., incumbent, Charles Robert Arnold Sutton, M.A., M.D. Cantab., of Sidcup, younger son of R. C. Sutton of Carisbrooke House, Forest-grove, Nottingham, to Charlotte Amelia, eldest daughter of James W. Wolfe, of 20, Russell-square, W.C., and Oakfield, Herts.

TODD—DECKERS.—On April 27th, at Bromley, Kent, Frederick Todd, M.R.C.S., L.D.S., of Finsbury-circus, to Alphonsine, elder daughter of the late Alphonse Deckers, of Amhurst-road, N.E.

YEOMAN—FERGUSON.—On April 30th, at St. Peter's, Heston, Cheshire, Dr. Christopher William Yeoman, eldest son of A. R. Yeoman, Esq., M.A., Inspector's Department, Somerset House, London, to Ida Isabel (Idabelle), youngest daughter of the late James Fergusson, Esq., of Liverpool.

DEATHS.

BUCHANAN.—On May 5th, Sir George Buchanan, LL.D., M.D., F.R.S., of Woburn-square, W.C., formerly Medical Officer of H.M.'s Local Government Board, aged 64.

BUTTERFIELD.—On May 1st, at his residence, Greystone, Sevenoaks, Harris Butterfield, M.R.C.S., L.S.A., Medical Officer of Health for West Kent.

CARTER.—On May 4th, at Budleigh Salterton, Henry John Carter, F.R.S., retired Surgeon-Major Bombay Army, aged 82.

DURHAM.—On May 7th, at 82, Brook street, Grosvenor-square, Arthur Edward Durham, F.R.C.S., Consulting Surgeon to Guy's Hospital, member of the Council of the Royal College of Surgeons, in his 62nd year. No flowers by request. The funeral service will be held at St. George's Church, Hanover-square, at one o'clock p.m. on Friday, May 10th. Funeral at the Crematorium, Woking; train leaving Necropolis-station, L. and S.W.R., Westminster-bridge-road, at half-past two.

HARPER.—On May 3rd, at Abingdon-road, Kensington, W., Henry Harper, Deputy-Surgeon-General Madras Medical Service (Retired).

MOORHEAD.—On May 6th, at Margate, Edward Moorhead, M.D., Deputy-Inspector-General (Retired) Army Medical Department, aged 75 years.

SPACKMAN.—On May 5th, at Faringdon, Berks., Frederick Charles Spackman, M.R.C.S., L.S.A., aged 69 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting for the Election of Officers and Council. 8.30 P.M. Ordinary Meeting. Mr. C. B. Lockwood: The Diagnosis of Retro-peritoneal Sarcoma, with cases.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Adjourned Discussion on Dr. Felix Semon's paper on "The Probable Pathological Identity of the Various Forms of Acute Septic Inflammations of the Throat and Neck, hitherto described as Acute (Edema of the Larynx, Cleftomatous Laryngitis, Erysipelas of the Pharynx and Larynx, Phlegmon of the Pharynx and Larynx, and Angina Ludovici."

LONDON VEGETARIAN SOCIETY.—8 P.M. Public Meeting on Slaughtering, to be held in the Board Room, Memorial Hall, Farringdon-street, E.C. Sir B. W. Richardson will take the chair and the speakers will be Colonel Coulson, Mr. E. Maitland, Mr. Herbert Burrows, Mr. Bernard Shaw, Mr. Josiah Oldfield, Mr. A. C. Field, and Mr. Dorrington Boyle.

WEDNESDAY.—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.). 8 P.M. Mr. W. C. Bosanquet: On the Anatomy of Nectotherus Ovis.—Dr. A. Bruce: A New Microtome for Cutting.—Miss Ethel Sargent: Some Details of the First Nuclear Division in the Pollen-Mother-Cells of Liliun Martagon, &c.

FRIDAY.—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-sq.).—8 P.M. Professor Lane Noller: Soil as a Factor in the Production of Disease.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Lacrymal Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Law: Examination of the Throat and Nose.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Hypochondriasis.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Retinal Affections.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: The Diseases called Lichen.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. W. S. Colman: Stammering and other Speech Defects.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Ormerod: Paraplegia.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Reginald Harrison: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Examination of Air, Soil, and Water.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Melancholia.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, May 9th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
May 3	30.55	N.W.	53	48	114	63	44	...	Bright
" 4	30.50	E.	52	48	106	65	46	...	Cloudy
" 5	30.50	N.E.	53	47	116	62	42	...	Cloudy
" 6	30.30	N.E.	57	52	116	73	46	...	Bright
" 7	30.22	E.	60	52	117	70	52	...	Bright
" 8	30.05	E.	59	53	114	70	50	...	Bright
" 9	30.00	S.E.	59	52	114	73	50	...	Bright

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

NEWSPAPER THERAPEUTICS AND PERSONAL ADVERTISEMENT.

THE following is one among many answers to medical questions in the Echo of May 4th. The conduct of advising patients through the medium of a newspaper is at best not a very high proceeding, but when the writer practically divulges his personality and his address, as in the following advertisement (if, indeed, he be a medical man), he violates all the principles of professional method and modesty. The mere fact that the name is withheld does not affect the question. That may possibly be soon ascertained.

"(27,051) CATARRH.—Simply pass down the nose at night carbolated vaseline, and gargle with: acid salicylic, $\frac{1}{2}$ drm., acid boric, 2 drms.; mix; a saltspoon to a wineglass of warm water twice daily. She (*sic*) how you are in ten days."—Lennox (14, Connaught-mansions, Coldharbour-lane, S.W.)."

Lennox.—From the facts before us this case appears to be an extremely difficult one to advise upon; but we should think our correspondent has his remedy by proceeding against the authority for his fees, and procuring skilled medical evidence in his support.

THE CASE OF MR. C. B. TOWNSHEND.

The following additional subscriptions have been received and are hereby gratefully acknowledged:—

Dr. D. P. S. Cahill (Berwick-on-Tweed) ...	£1	1	0
Dr. B. Addy (Pendleton) ...	1	1	0
Dr. Jas. Weaver (Southport) ...	0	10	6
Dr. H. J. MacEvoy (Brendesbury) ...	0	10	6
Dr. Alfred Sangster ...	0	10	0
Dr. Jas. Braithwaite ...	1	1	0
Mr. J. Alcock (Burslem) ...	1	0	0
Mr. C. J. Williams (Lincoln) ...	2	2	0
Dr. F. N. Williams (Brentford) ...	0	7	6
Dr. R. Douglas Powell ...	£5	0	0
Mr. H. F. L. White (Caxton, Cambs) ...	0	10	0
Mr. Hy. Cayley (Southampton) ...	0	10	6
Mrs. Williams (Birkenhead) ...	0	2	6
Mr. John Hall (Sheffield) ...	1	1	0
Dr. G. Evan H. Norton (London) ...	1	1	0
Dr. Langdon Down ...	2	2	0
T. O. (Leeds) ...	0	5	0
Dr. T. Carr ...	0	2	6

Further subscriptions will be thankfully acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

A CASE FOR DIAGNOSIS.

To the Editors of THE LANCET.

SIR,—A lady who was confined of her first child in a normal manner was suddenly seized with a rigor at about 11 A.M. on the ninth day. The patient was seen half an hour later and complained of feeling cold. The pulse was rapid, the surface of the body cold, the temperature in the mouth registered 102° F., and the breathing was hurried; vomiting occurred, first of the contents of the stomach, and later of bile. The shaking and shivering continued for an hour from the commencement, and then profuse perspiration set in; the cheeks and edges of the lips and mucous surfaces became livid, the inner surface of the lips was blanched, and the patient suffered from great dyspnoea and anxiety, with restlessness. She complained that sounds seemed at a distance and of ringing in her ears; also that vision was obscured, and that she saw things as through a yellow fog. About three hours from the commencement of the attack rather profuse menorrhagia set in, which lasted about three hours; vomiting continued; the heart's action was rapid, the first sound all but obliterated; and the pulse irregular and too rapid to be counted. The temperature was 96° F. All these alarming symptoms continued till about midnight, when improvement very gradually set in. The patient herself, although only semi-conscious, several times complained that she was dying, and when better said that she felt that she must give up the struggle for breath during the worst part of the attack. Recovery, after once setting in, continued without interruption. The treatment included stimulants by mouth and per rectum. Inhalations of oxygen also afforded great relief.

I am, Sirs, yours truly,

M.D. EDIN.

May 6th, 1895.

THE BOARD OF AGRICULTURE AND ANTHRAX.

The Times of May 5th states: "Some extraordinary statements as to the ravages of anthrax and the attitude of the Board of Agriculture in relation thereto were made at a meeting of the Leicestershire County Council yesterday. The disease broke out on the farm of a Mr. Warren at Arnesby, and not only the cattle but human beings and all kinds of animals were attacked. The farmer and sixteen men were all ill at one time, one man dying at the Leicester Infirmary. A woman in passing the plague-stricken spot was stung by a fly and died from anthrax. Cats, dogs, and birds in the neighbourhood also died. Sir Archdale Palmer stated that, in view of the seriousness and importance of the matter, the County Council had written asking the Board of Agriculture to send down an inspector to make an inquiry and report, but the Board had replied that they had not a professional officer to send down. A resolution was passed expressing regret that the Board of Agriculture had not seen fit to comply with the request of the Council."

Mr. A. E. Molloyes.—We never prescribe. Our correspondent should consult his own medical attendant.

Drayton.—It is not satisfactory to act as an anesthetist to a dentist who is not registered.

"MINERAL WATERS AS A BASIS OF MEDICAL ADVERTISING."

To the Editors of THE LANCET.

SIR,—I am one of the medical practitioners referred to in your correspondence columns whose names are used in connexion with certain mineral water advertisements appearing in the Croydon papers. Kindly allow me to say that my letter was intended merely as a polite acknowledgment of a case of the Association's mineral waters sent to me, and I had no idea that it would be used as an advertisement. I have written to the secretary, asking a discontinuance of the use of my name.

I am, Sirs, yours truly,

HENRY LOVE.

Mitcham, Surrey, May 6th, 1895.

* We have great pleasure in inserting the above letter. Our correspondent's experience shows the danger of writing letters to the proprietors of articles of commerce.—ED. L.

MEDICAL ADVERTISING.

Patient.—The first advertisement is not in good taste. The second is surprising in a Fellow of the Royal College of Surgeons of Ireland—a college which prides itself on its sense of dignity. The other advertisements sent us of testimonials of carriage from medical men are of a different order, and may be left to the taste of individual medical men.

Dubulator.—1. A university degree is certainly a desirable qualification and has some advantage over a mere licence.—2. We are not aware of any exceptional value of Irish licences as compared with corresponding qualifications in Great Britain.—3. There is no solid foundation for saying that Scotch degrees are not on a level with Irish ones, or even with Irish licences, though it is intelligible that "such an opinion may occasionally be heard in Ireland."—4. The degree of Aberdeen is a poor estimation.—5. The Dublin licences do not give a legal right to the title of "Dr."

Perpetrator.—A strictly proper form of plate and card for one with the quality named should indicate the name of the practitioner followed by the initial letters of the qualification.

FREE HOMES FOR EPILEPTICS.

To the Editors of THE LANCET.

SIR,—I observe in THE LANCET of the 27th ult. that, in answer to the inquiry of "R. W. (Newcastle-on-Tyne)," you remark that the National Society for the Employment of Epileptics is not at present able to receive non-paying patients at the Chalfont colony. Will you permit me to say that this is no longer the case, a special fund having been raised by means of which the committee are enabled to admit patients at either a reduced rate or entirely free in those cases where, after full consideration of all the circumstances, it appears to them right so to do. Unfortunately the accommodation at the colony is so limited, compared with the number of the applicants, that many candidates, whether able to pay or not, must necessarily be disappointed owing to want of room, and we most earnestly appeal to the generosity of the public to enable us to increase our buildings and provide accommodation less inadequate to the demand.

I am, Sirs, your obedient servant,

G. PENN GASKELL.

Secretary, National Society for the Employment of Epileptics, 12, Buckingham-street, W.C., May 7th, 1895.

Patient.—The question is a personal one between the druggist and his customer. We do not see any reason why a charge should not be made for a copy of a prescription, since the druggist had the trouble of recording the original, and is put to the further inconvenience of supplying a copy. But in any case a patient would do better to consult his medical adviser and not trust to "old prescriptions."

Subscriber.—We should say Yes, undoubtedly, but if the salary exceeds the amount which requires a return our correspondent must give the name of the assistant as an employee.

Mr. L. A. Wille.—See THE LANCET of April 27th, 1895, p. 1095, answer to "R. W."

ERRATUM.—In the notice of the case of Surgeon-Major Gardner in THE LANCET of last week ("The Services," page 1143, 1st col.) the date of his joining the service was accidentally printed as "1894." It should have been 1874.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—Leicester Post, Sussex Daily News, Western Daily Mercury, North Cheshire Herald, Bristol Times, Newcastle Chronicle, Birmingham Mail, Walsall Advertiser, Kidderminster Shuttle, Liverpool Mercury, Sheffield Independent, Carlisle Express, Macclesfield Chronicle, Oldham Standard, Kingston Express, Yorkshire Herald, Builder, Pioneer Mail, Scotsman, Courier de la Presse, Architect, Times of India, Elgin Courier, Sunday Times, Beverley Guardian, Ulverston Advertiser, Manchester City News, Brighton Gazette, The Charity Record, Rhyt Journal, Sheerness Guardian, Weekly Free Press and Aberdeen Herald, Reading Mercury, Sanitary Record, Hertfordshire Mercury, Yorkshire Post, City Press, Leeds Mercury, Bristol Mercury, Isle of Wight County Press, Liverpool Daily Post, Surrey Advertiser, Citizen, Mining Journal, Local Government Chronicle, Blackpool Herald, Galignani Messenger, Local Government Journal, Woodbridge Reporter, Penrith Observer, Sevenoaks Chronicle, Hastings Chronicle, West Sussex Gazette, Perthshire Advertiser, Falkirk Herald, Evening Telegraph (Dunder), Public Health, Newcastle Daily Leader, The Rock, Bedford Advertiser, British Weekly, Empire, Halifax Guardian, Clapham Observer, Pearson's Weekly, Clitheroe Times, Gloucester Standard, South Bucks Standard, &c., &c.

Communications, Letters &c. have been received from—

- A.—Dr. R. H. Anderson, New York; Dr. R. J. Anderson, Galway; Mr. Ackrill, Harrogate; Messrs. Armour and Co., Lond.; Arema Manfg. Co., Lond.; A. M. K., Lond.
- B.—Lord Balfour of Burleigh, Lond.; Dr. P. H. Boyden, Devonport; Mr. T. Bryant, Lond.; Mr. W. Berry, Wigan; Mr. L. A. Brooks, Grays; Mr. F. J. Brown, Newark; Mr. C. Birchall, Liverpool; Mr. F. Bolian, Lond.; Mr. W. J. Beale, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Burgoyne, Burdidge, and Co., Lond.; British Castor Co., Lond.; Blackburn Infy., Sec. of; Bury Disp. Hosp., Sec. of.
- C.—Dr. R. W. Carter, Weymouth; Professor J. McK. Cattell, Garrison-on-Hudson, U.S.A.; Brig.-Surg. A. Clarke, Camberley; Mr. H. W. Christman, Lond.; Mr. W. F. Clay, Edinburgh; Mr. H. Chadwick, Manchester; Mr. C. H. Coles, Lond.; Mr. C. C. Cox, Bodalla, N.S.W.; Miss Candy, Lond.; Messrs. E. Cook and Co., Lond.; Messrs. Cassell and Co., Lond.; Messrs. Condy and Mitchell, Lond.; Cardiff Infirmary, Sec. of; Conservative; Clavicle, Lond.
- D.—Dr. M. Dockrell, Lond.; Mr. J. J. Davey, Lond.; Mr. H. Davis, Lond.; Miss D'Orsey, Lond.; Messrs. Dakin Bros., Lond.; Dorset County Hosp., Dorchester, Clerk of; Damon, Lond.; Dubitator.
- E.—*Electrical Review*, Lond., Proprietors of; Easy Terms, Lond.
- F.—Mr. Forsaith, Lond.; Messrs. Farrer and Sons, Reading.
- G.—Dr. W. R. Gowers, Lond.; Dr. G. C. Garrett, Lond.; Dr. P. R. Griffiths, Cardiff; Mr. H. R. Greene, Woking; Messrs. H. C. and R. Gowers, Maldon; Messrs. R. W. Greff and Co., Lond.; Messrs. A. Goodman and Son, Taunton; Messrs. Gautier Fils and Neveux, France; Globe Advertising Co., Lond.
- H.—Dr. F. Hawkins, Reading; Mr. F. J. Hawthorn, Stafford; Mr. W. H. Halliday, Lond.; Mr. J. Heywood, Manchester; Halifax Infy., Sec. of; H. A. B., Lond.
- J.—Mr. H. Jepson, Durham; Mr. J. H. Jenkins, Lytham.
- K.—Kroechly Co., Lond., Sec. of; Kansas State, U.S.A., Librarian of.
- L.—Dr. H. Le Prade, Lyon; Dr. J. F. Little, Lond.; Mr. J. B. Lamb, Lond.; Mr. G. H. Lane, Lond.; Mr. E. Lancaster, Lond.; Messrs.
- Luker and Co., Faringdon; Liberator Relief Fund, Lond.; Hon. Sec. of; Lytham Urban Dist. Council, Chairman of; Ladies' Hygienic Assoc., Lond., Manager of.
- M.—Dr. M. Macintosh, Lond.; Dr. C. D. Musgrove, Penarth; Dr. J. McCaw, Belfast; Dr. Minter, Rotherham; Dr. G. Morgan, Brynllon, Mon.; Dr. T. J. Mays, Philadelphia; Mr. F. Marshall, Lond.; Mr. W. G. Meade, Kin-sale, co. Cork; Mr. G. Mot-lohes, Birmingham; Dr. F. Meadows, Hastings; Dr. W. Morton, Bristol; Mr. W. Marston, Bern; Mr. J. Newhaven; Mr. J. J. final; Mr. H. Milligan; Messrs. Mather and Co., Lond.; Messrs. Marten and Co., Lond.; Med. Soc. of Victoria, Melbourne; Hon. Sec. of; Med. Soc. of Lond.; Hon. Secs. of; J. Marston Ltd., Wolverhampton; Manchester Southern Hosp., Hon. Sec. of; M. D., Lond.; Marcus, Lond.
- N.—National Hosp. for Diseases of the Heart and Paralysis, Lond., Sec. of.
- O.—Messrs. Oliver and Boyd, Edinburgh; Ophthalmological Soc. of the United Kingdom, Lond., Hon. Sec. of.
- P.—Mr. Bernard Pitts, Lond.; Mr. W. P. Price, Brecon; Perplexed, Weymouth.
- R.—Sir W. Roberts, Lond.; Dr. T. C. Raitton, Manchester; Mr. Mayo Robson, Leeds; Mr. W. C. Rainsbury, Mansfield; Mr. Redpath, Newcastle-on-Tyne; Mr. G. K. Richards, Florence; Messrs. Reynolds and Branson, Leeds; Rainhill County Asylum, Clerk of; E. B., Liverpool.
- S.—Dr. F. Smith, Lond.; Dr. R. H. Shaw, New Mills; Dr. C. Smart, Washington, U.S.A.; Mr. H. Swan, Lond.; Messrs. G. Street and Co., Lond.; Messrs. Sewell and Crowther, Lond.; Messrs. Smith, Elder, and Co., Lond.; Saarbach's News Exchange, Mainz; Standard Malt Extract Co., Lond.; Socius, Lond.; Subscriber, Lond.
- T.—Dr. H. Thompson, Bolton; Dr. G. B. Todd, Glasgow; Dr. G. Thin, Lond.; Mr. J. Thin, Edinburgh; Mr. W. Thirlby, Leicester; Mr. J. K. Thornton, Lond.; Miss L. Trewby, Berar; Taunton Hosp., Sec. of.
- U.—Universal Cookery and Food Assoc., Lond.
- V.—Dr. E. J. Vanberburgh, Hainan;

Viavi Co., San Francisco; VI Cocoa Co., Lond.

W.—Dr. Wilks, Lond.; Mr. L. A. White, Lond.; Mr. C. Williams, Norwich; Mr. H. J. Walker,

Letters, each with enclosure, are also acknowledged from—

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A Clinical Lecture

ON A

CASE OF DISPLACED CARTILAGE.

Delivered at the London Hospital on Jan. 25th, 1895,

By C. MANSELL MOULLIN, M.D. OXON.,

F.R.C.S. ENG.,

SURGEON TO THE LONDON HOSPITAL.

GENTLEMEN,—The patient whom I bring before you is a young woman twenty-one years of age whose knee-joint you saw me open ten days ago for the purpose of removing the anterior half of the internal semilunar cartilage. The wound is healed, and although there is a little swelling around it and alight tenderness when it is pressed upon, the movement of the joint is perfect. In a few days it will be as strong and secure as the other one. Three years ago the patient met with an accident, slipping off the kerbstone and falling with her knee twisted under her. Whether the internal cartilage was torn at the time, or whether it was merely strained and then weakened by subsequent inflammation, it is not possible to say now, although the latter is the more probable. At any rate, ever since she has been liable, at intervals that were steadily growing shorter, to that peculiar form of injury known as internal derangement of the knee-joint. The knee, so she told us, was to all appearance as strong and secure as it ever had been. It could be flexed and extended through the normal range. She could walk on it and rest her weight upon it without discomfort. But if the foot was rotated outwards ever so little when the joint was partly flexed something slipped from its position, shot forwards so that it projected under the skin by the inner side of the patella, and locked the joint. Sitting upon a high chair with the foot off the ground the patient could swing the limb backwards and forwards as easily as she could the sound one; but when her weight rested upon it the joint was almost fixed in a position of partial flexion. This happened to her on several occasions, once whilst she was in hospital a few days before the operation, from sitting with her legs crossed, and each time it was followed by an attack of synovitis. There was no difficulty in reducing the displaced structure, although this does occasionally happen. Firm pressure over the projection while the knee-joint was alternately flexed and extended made the cartilage slip back into position at once; but as the displacement kept happening more and more frequently, and as each time it happened it caused severe pain and was followed by a smart attack of synovitis, the patient not unnaturally wished something to be done. This peculiar accident has been well known for many years. It was first described by Hey, who gave it the title by which it is known at present—viz., internal derangement of the knee-joint. Then Knott of Dublin published a further account of it from his own personal experience, and since then Allingham and others have continued to work at it and have thrown a good deal of fresh light upon it. It is caused either by the tearing or, as in the present instance, by the loosening of one of the semilunar cartilages from its attachment, so that it becomes displaced and is caught between the bones. The internal one, because its attachments are more rigid and less yielding, suffers more frequently than the external, and the anterior end more often than the posterior; but the posterior end may be torn, or the whole circumference may be separated and the cartilage curled up into the intercondyloid notch, or the cartilage may be split in two. The symptoms vary in character and severity, according to the nature of the injury. They are most marked when the displaced structure is caught and held between the bones. When it shoots forward, so that it lies quite out of the way or curls up in the notch, the pain and loss of power are not so great. Whatever the form, however, that the injury takes, it is always followed by an attack of synovitis, and this in course of time, if frequently repeated, becomes chronic.

The treatment of internal derangement of the knee is very simple in principle. The dislocation must be reduced as soon as possible, the limb kept at rest until the injury is repaired, only passive motion allowed, and cold and pressure

applied to check the effusion. Then—and this is the point to which I wish to direct your attention—steps must be taken to prevent recurrence. If the cartilage has only been slightly torn or strained it may in time recover and be as strong as it was before. But if the injury passes these very narrow limits, or if the accident happens a second time, breaking down the adhesions formed in the process of repair, such a result is not to be expected. The accident will occur again and again until either the cartilage is in some way made secure or the loosened part removed. For reasons that I will shortly give you I am myself strongly in favour of the latter course, the one that was adopted in the present instance. If the cartilage is to be retained it must be kept in position either by means of some mechanical appliance or by suturing it to the head of the tibia. Now the former of these is almost impossible unless the patient consents to give up all the pleasures of active life. The simplest contrivance is formed of a metal spring which passes horizontally across the limb behind the knee, and terminates at either end in a firm horseshoe-shaped pad. These pads rest upon the soft tissues in front of the knee and fit closely against the margin of the patella, one on each side. The idea is that the cartilage can be prevented from shooting forwards by the pressure in front. But this is only of use in a limited number of cases, for forward displacement is by no means the only kind that is met with; and even in these cases the degree of pressure that can be applied is entirely insufficient. Another appliance is formed of two lateral metal bars, hinged opposite the joint, and fastened by means of leather straps above and below the patella. This aims at keeping the disc in place by limiting the movement of the joint itself, especially in the direction of complete extension and rotation. But I need not tell you that all these appliances are cumbersome, very difficult of accurate adjustment, and only to be thought of in the case of patients who are well-to-do and are willing to lead a life of ease and quiet. For the young and active life-long restraint such as this implies is intolerable. If the cartilage is to be retained and fixation tried there can be no doubt that the plan of securing it by sutures to the head of the tibia as practised by Annandale is much to be preferred. I cannot, however, from my own experience entirely recommend this. Fixation by suture is seldom a permanent success except in those rare instances in which the circumference of the cartilage is detached from the tibia without the ends being torn. Where a previously sound cartilage has given way, or where one of the ends has been wrenched from off the bone, I am very sceptical as to whether it is possible to make it secure by means like this, and at the same time allow it to have its normal range of movement. Sutures and adhesions cannot make it stronger than it was before it was hurt unless they fix it so that it is completely rigid; and if it gave way before it will give way all the more easily a second time if exposed to a similar strain. I have tried suturing on two occasions, and in both patients the accident recurred. For this reason I am convinced that in all cases in which the cartilage is torn away from the bone, or in which although it may not be torn it is so stretched that it gets in the way of the bones and is caught between them, the knee-joint should be opened freely and the whole of the loosened part of the disc excised. The operation is one that at the present day, if proper precautions are taken and the patient is in a good state of health, can be performed with perfect safety. This is the fifth occasion on which I have done it for this purpose, and in none has the temperature risen to 100° F. It has the merit of being thorough; displacement cannot occur again. The risk is not greater than it is in fixing the cartilage by means of sutures. I myself am of opinion that it is less, as there is less manipulation of the joint, and the knee after the cartilage has been removed, and the wound is sound, is as strong and as free in its range of action as it was before the cartilage was displaced. This last statement, I know, has been disputed. The operation has been objected to, and is objected to, on the ground that it weakens the knee-joint by depriving it of a structure that is especially adapted to reduce the concussion caused by the sudden impact of the feet against the ground in jumping down from a height. Now I do not wish in any way to weaken your respect for authority. There are many statements in physiology as well as in other things incapable of proof, which you are expected to receive and accept on faith. But a little scepticism is often judicious, and if you quietly examine this objection I think you will agree with me that the respect which is due to tradition is almost the only foundation that it has. I do not believe that these cartilages are of any sensible use in

checking concussion even when they are sound and intact, and I am perfectly sure they are not if they are torn or displaced; in this state they are simply a source of danger. That they do serve some useful purpose is certain, or they would have disappeared. They are, as Bland Sutton has shown, the rudimentary representatives of the tendons of certain muscles found in some of the other vertebrata. In us the muscles have disappeared in the course of evolution; they were no longer of use and nature slowly but surely fails to develop useless structures. The tendons remain, and the fact of their remaining, however modified they may be in structure and appearance, is sufficient to prove that there is some work for them to do. But there is no evidence that this work is to act as cushions or buffers between the bones that form the knee-joint.

Consider for a moment the arrangement of these fibro-cartilaginous discs and I think you will agree with me that they are singularly ill adapted to such a purpose. Buffers are placed between the points of impact, but these are not, and, what is more, cannot be. The condyles of the femur do not rest upon them; they project through the central opening and rest upon the upper surface of the tibia. It is true that when the condyles roll forward upon the head of the tibia they press upon the thin margin of the cartilages in front; but in doing so they leave a large space that is free behind them, so that the discs slip forward at once (especially the external one) and escape. And it is also true that, when in jumping down from a height the femur is driven down upon the tibia, there is a certain flattening of the convex articular surfaces. The size of the area of contact must be increased a little under these conditions, but it is not increased sufficiently to bring the cartilages within the grip of the bones. As you can see in any series of instantaneous photographs, the shock in jumping is prevented so far as the knee is concerned, not by flattening of the bony surfaces of the tibia and femur, but by flexion of the joint. Flattening can be produced in the dissecting-room, but it takes place to a very small extent in real life. In short, instead of being formed to act as buffers, the shape and the slippery surfaces of the cartilages seem specially devised to enable them to escape from between the bones with the least amount of difficulty. The function that is left to them, and accounts for their continued existence, is entirely different from this. Their duty is to prevent the synovial capsule of the joint and the delicate peri-articular tissue from being driven in between the bones by the atmospheric pressure during rapid movements of the joint. You can easily imagine that with such an irregular mass as the lower end of the femur rolling backwards and forwards upon the upper end of the tibia, and with only a limited amount of synovial fluid in the joint, the intra-articular tension on different parts of the capsule must vary immensely and with the greatest rapidity in different movements. At one instant the front of the capsule is tense, the next it is relaxed and flaccid, and then, unless there is something to prevent it, there is imminent danger of its being sucked in and caught. This is the function of the discs to prevent, and they can prevent it so long as they are sound. When they are torn and displaced they are useless and worse than useless; they are positively harmful and are better removed. The tough cicatricial tissue that is left, tightening the capsule and drawing it outwards towards the skin, will take their place and prevent any trouble from this cause after they are gone.

REMARKS ON THE SURGERY OF THE RECTUM.¹

By BERNARD PITTS, F.R.C.S. ENG.,

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THE surgery of the rectum, especially as regards treatment, has undergone many changes during the last few years, and my object is to touch very briefly upon points which appear specially to invite discussion. Since the adoption of scrupulous cleanliness in all details of operative surgery rectal surgery has been stripped of its dangers. The great

majority of operations are free from risk to the patient and from anxiety to the surgeon. The natural tendency has therefore been to aim at shortening the period of convalescence, and at the same time to make the cure as radical as possible. Unfortunately students during their hospital career cannot have many opportunities either for the examination of rectal complaints or for the close observation of operative manipulations, since the part does not allow of numerous examinations. Consequently medical men are apt to begin practice with the idea that there is something about rectal surgery which is mysterious and requiring special study. The same amount of care and attention and experience is requisite as for the surgery of any other part of the body; the same laws hold good; the diagnosis is, perhaps, if anything, easier to make than it is in affections of most other regions of the body; and the results after treatment are more certainly successful. The three most common conditions are fissure, fistula, and hæmorrhoids. Instead of the partial operation formerly practised, the aim now is the complete removal of disease, and, so far as can be done with safety, the immediate healing of the wound—in other words, to deal with disease of the rectum in much the same manner as with a similar affection in most other parts of the body. Complete dilatation of the sphincter is quite sufficient to cure many cases of fissure of the anus, but when the disease is chronic and the ulcer has an indurated base its complete excision is more satisfactory than the linear incision formerly recommended. Suture the small wound left after excision, so as to obtain immediate union, is not often successful, and personally I have given it up, for the raw surface is so shallow and narrow that the union obtained is pretty certain to break down when the bowels are allowed to act. In simple cases of fistula a complete resection of all cicatricial and sinus tissue shortens the period of convalescence very greatly, and I have never seen any harm arise when the parts are kept clean and packed with iodoform gauze. When the external opening is at some distance from the anus, and after excision a large deep wound is left, deep sutures to bring the sides of the chasm into direct approximation may repay the trouble taken, and a cure be brought about in a quarter of the time otherwise required. The wound must of course be carefully watched and the sutures removed if the part becomes contaminated. With ordinary precautions there is no increased risk in such an attempt at direct union—in fact, to put the matter shortly, “there is everything to gain, and nothing to lose.” Sutures are not advisable when the incision extends far up the bowel. In complicated cases of fistula, when the sinus extends round the bowel, or many secondary sinuses extend into the surrounding structures, a complete removal of all involved tissue should not be attempted. After freely laying the sinuses open it is best to be content with a free scraping of the lining membrane and the local application of some strong disinfectant, such as chloride of zinc, forty grains to the ounce. When a fistula is of tuberculous origin and it is thought desirable to interfere, it is of special importance that the removal of all affected tissue should be completely carried out; unless this is done the wound cannot be expected to heal, and the patient's condition will in all probability be rendered worse. It is not my intention to enter into a discussion on the question of operation in chronic phthisis, but it is my belief that such interference often turns out badly because half-measures have been adopted and the whole of the infected tissue has not been removed.

The three chief operative methods at present in use for the cure of internal hæmorrhoids are the clamp and cautery, ligature, and excision. I have not mentioned the pressure clamp, for I believe it is now universally given up as unreliable. The clamp and cautery treatment still has some advocates, but with the improvement in the preparation of silk ligatures the cautery is now not often employed. Personally I have not used it for quite ten years. By means of the ligature many forms of hæmorrhoids can be safely and satisfactorily treated; but the profession is indebted to Whitehead of Manchester for introducing the more complete surgical procedure of excision of what he describes as the “pile-bearing area.” This method is not necessary in the majority of cases. When hæmorrhoids are polypoid in character, and have healthy mucous membrane intervening, they can be quickly and efficiently removed by the ligature. In some cases, however, the whole circumference of the mucous membrane just within the white line is involved, and the condition is associated before or after stretching of the sphincter with prolapse of

¹ A paper read before the Harveian Society of London on May 2nd, 1895.

the unaffected mucous membrane above. A thoroughly radical treatment cannot then be carried out by means of the ligature, and Whitehead's method gives the most admirable results. It has always appeared to me strange that excision has not been more generally adopted in this class of case by surgeons. Some, indeed, after a limited trial have written against excision as an unnecessarily severe operation, involving the expenditure of time and the loss of blood, and likely to lead to stricture if the union at the line of suture fails and the bowel retracts. This is all very reasonable against the indiscriminate adoption of the method, but it does not in the least apply when suitable cases are chosen. I have adopted Whitehead's method now in about thirty cases, and am quite convinced that when there is a complete ring of hemorrhoidal tissue attended with prolapse to deal with it is the most satisfactory operation to perform. Failure to get a good result depends either upon the selection of an unsuitable case or upon a careless and imperfectly performed operation. The separation with scissors must be carried sufficiently high to allow the out edge of mucous membrane to be sutured to the skin with absolutely no tension. There is no occasion to hurry over the operation, and a skilled assistant is most desirable. Personally I do not trust to the sutures to arrest hemorrhage, but prefer to ligature bleeding points with very fine silk. The wound must be thoroughly disinfected and made dry before the sutures are tightened up. By a little extra expenditure of time a comparatively bloodless operation may be performed, and the risks of after-hæmorrhage are certainly less than by any method of ligature *en masse*. The sutures may be left to find their own way out and should not be removed unless any particular one is causing irritation. In only one case have I failed to get immediate union, and the cause of failure was the too free removal of redundant skin. In several instances my patients have been medical men, and they have been surprised at the small amount of after-discomfort, the painless evacuation of the bowels on the third and fourth day, and convalescence on the tenth day, together with the rapid regain of proper control over the motions. If immediate union of healthy mucous membrane to skin can be assured it is obvious that the patient has less chance of stricture than if a considerable portion of mucous membrane be destroyed by cautery or sacrificed by wholesale ligation. Since the internal and external sphincters are left intact, control over the contents of the rectum is no more endangered than by any other method of treatment, and as the whole of the pile-bearing area is removed the chances of relapse must be practically eliminated. Owing to the unavoidable interference with the nerve-supply at the anal margin a partial anaesthesia is often present for a little time, and if the patient has diarrhoea he may not be fully conscious of the presence of a little moisture about the anus, and this is the only objection which, so far as my experience goes, has any practical reality. I do not propose to touch on all the affections of the rectum, and shall now pass on to the treatment of stricture.

Congenital stenosis of the anus or rectum when complete demands immediate attention and can often be remedied by perineal exploration and after persistent dilatation. I will confine my remarks to the following two conditions—viz., (1) when the rectum ends by an opening into the floor of the prostatic or membranous urethra, and (2) when the rectum opens into the vagina. In the first condition an inguinal colotomy may save the child for a time, but death is likely soon to ensue from cystitis and surgical kidneys. In three cases under my care I have successfully relieved the distended bowel in this way, death occurring in from two to eight weeks from marasmus and cystitis, and at the necropsy in each case multiple abscesses were present in the kidneys. The abscesses were numerous, but quite small, none of them being larger than a pea. The only way to avoid this complication would seem to be by dividing the sigmoid flexure and so preventing any fecal matter from gaining access to the bladder. Hitherto I have refrained from this radical measure, hoping to be able at a later stage, by passing a guide from the colotomy opening, to establish by dissection a perineal opening. When a colotomy has to be performed because a perineal exploration has failed, and there is no evidence of a communication with the urinary passages, such later attempt to establish the perineal route might be successful, but it is only inviting disaster to strive for continuity of the bowel when meconium is being discharged from the penis. When the rectum opens into the vagina it is not uncommon to leave the abnormality alone and to wait for a few years unless

actual obstruction of the bowels ensues. Great harm may thus result from imperfect evacuation, the rectum and colon are likely to become enormously dilated, and permanent damage to their propulsive power may result. Such a condition is well illustrated by the following case.

CASE 1.—A girl aged eight years was admitted to the Hospital for Sick Children, Great Ormond-street, under my charge on Dec. 15th, 1894, in a much emaciated condition and with a greatly distended abdomen. The temperature was 104° F., the pulse 160, and the respiration 25. The tongue was dry and brown, and there were scordes on the lips and teeth. Examination showed absence of the anus and that the rectum ended by a small opening in the lower part of the vagina. A large fecal accumulation could be felt in the abdomen, especially in the left iliac region. The acute symptoms of obstruction had been present for ten days. Under an anæsthetic the opening in the vagina was dilated, and the finger was thus introduced into an immense rectal cavity occupying the whole of the pelvis and filled with feces. It was only after much time and trouble, and the use of twelve pints of warm water, that we succeeded in overcoming this fecal accumulation and getting the whole of the large bowel washed out. The child's condition was so critical, and she was suffering so markedly from ptomaine poisoning, that it was thought best to persist until we had completely relieved the obstruction. The result was satisfactory, all the febrile symptoms disappeared, and the child began to improve in general condition. This treatment under an anæsthetic, however, had to be again and again repeated, in spite of laxatives and enemata administered by the nurse. On Jan. 17th, 1895, an incision was made in the perineum, and the rectum brought down and fastened there. At the present time nearly all feces are passed by the newly formed anus; it will, however, be a long time before the dilatation of the bowel is overcome, and I much fear it will be a trouble through life. It now remains to close by a plastic operation the communication between the rectum and vagina. The proper treatment in an infant where the rectum opens into the vagina is to establish at as early an age as possible a patent opening in the perineum, and not to attempt any plastic operation on the vaginal opening until the parts are sufficiently developed to warrant a chance of success.

Besides congenital stenosis there may be a non-malignant stricture of the rectum from a variety of causes, such as syphilitic ulceration, dysenteric or tuberculous ulceration, ulcerative colitis, traumatism, and inflammation in the tissues around the rectum.

CASES 2 and 3.—At present there are under my care at St. Thomas's Hospital two well-marked cases of syphilitic stricture which illustrate exceedingly well the alternative methods of treatment. The first is that of a young woman aged twenty-five who had syphilis about two years ago. For several months past she had had difficulty and much pain in passing her motions. On examination the anus was seen to be surrounded by large thickened folds of skin ulcerated on the surface in places. The labia also were greatly thickened and indurated. On introducing the finger into the rectum a tight stricture could be felt extending from the anus for a distance of two inches and three-quarters and terminating abruptly in a cicatricial ring which with difficulty admitted the tip of the forefinger. Under an anæsthetic an incision was made completely through the stricture backwards towards the sacrum, and a plug of iodoform gauze was introduced. Such a stricture as this is almost certain to recur in spite of all care and treatment; the cicatricial tissue is so dense that it is not likely to be influenced by specific treatment. I propose to keep her under the influence of medicine for several months, and try how far dilatation can be maintained. In all probability it will be best later to excise the stricture and bring down healthy bowel to the anus. The second case differs considerably in character, and the anus and external parts are quite sound; the long tubular stricture of the rectum is probably dependent on a gummatous infiltration of the bowel. The patient, a woman aged thirty-three, was admitted on April 27th, 1895, with a greatly distended abdomen caused by obstruction of the bowels. There was no direct history of syphilis, but there were typical circular scars on the legs due to ulcers after a confinement eight years ago. During the last few months she had noticed that her motions had been small and pipe-like, and occasionally blood was passed on straining. No spurious diarrhoea was observed until fourteen days before admission, when she

began to pass blood and alime, but no formed faeces. At the same time her abdomen began to swell. The abdomen at the time of her admission was very distended and tense, and tympanitic on percussion, except in the left and right flanks. She was at once placed under an anæsthetic, and a rectal examination showed that about two inches from the anus the mucous membrane was cicatricial in character, and a tubular stricture extended as far as the index-finger could reach, the tip of the finger being gripped very tightly by the upper ring-like limit of the stricture. By means of the finger and graduated bougies the stricture was slowly dilated, and a rectal tube was then easily passed into the sigmoid flexure, and copious injections of soap-and-water and oil were administered. A little fecal matter and some flatus came away, and the patient was sent back to bed. On the same evening she had a severe rigor, the temperature rising to 105° F. and in three hours coming down to normal—a rigor very similar to the rigors which sometimes occur after passing an instrument along the urethra. In the following morning a large evacuation of the bowels took place, the condition having since been satisfactory, and there has been no further febrile disturbance. The case was one not suitable for treatment by proctotomy, and the choice was between dilatation—with, if necessary, limited incision—and colotomy. The stricture will be difficult to keep dilated, and as the length of the stricture and the general state of the patient's health contra-indicate excision of the rectum it is possible that colotomy may ultimately become necessary.

Removal of a simple stricture of the rectum is comparatively easy when the stricture is low down, but may be difficult or impossible when the inflammatory condition has extended beyond the wall of the bowel to the perirectal tissue. In one such case I was compelled to desist, so dense were the adhesions around the bowel.

CASE 4.—Stricture of the rectum after dysentery or ulcerative colitis may extend along its whole length and far up into the colon. A few months ago I was consulted by a man who three years before had had left inguinal colotomy performed for an intractable ulceration of the rectum, with constant discharge of pus and blood. The colotomy was carried out as a temporary measure and with the idea of giving the rectum rest. The ulcerative condition continued for one year and a half after the operation, and the patient, after waiting for more than a year longer, was anxious to have the natural passage restored. He was in good general health, but I was surprised to hear that since the operation no faeces had passed by the rectum. On making an examination under an anæsthetic this was explained, for the lumen of the rectum was almost entirely obliterated and the mucous membrane replaced by granulation tissue, which was exceedingly vascular. On introducing the finger into the colotomy opening the same condition was found to extend, but to a less degree, for about three inches higher than the opening. Such a condition was, of course, hopeless so far as the restoration of the natural passage was concerned.

As regards treatment malignant disease of the rectum may be divided into the following classes: (1) cases suitable for partial or complete excision of the rectum; (2) cases best treated by colotomy; (3) cases best left alone, or in which a lumen is provided by scraping out the central part of the growth; and (4) cases in which colotomy may be necessary for recurrence after excision. A growth situated low down in the rectum, recognised at an early period and before the disease has extended to the outer muscular coat of the bowel, is specially suitable for removal, particularly if the growth is on the lateral or posterior aspect of the bowel and is not attached to the prostate or bladder, and more especially when occurring in the female. I have said nothing yet as to the upward extension of the growth, for I regard this as of comparatively minor importance, since experience has proved that the peritoneum may be opened and the bowel drawn down with very little increase of danger to the patient. The healing of the wound when the upper part of the rectum or the end of the sigmoid flexure can be attached to the anus without tension is rapid, and the after-progress of the case much more satisfactory than when a considerable raw surface is left between the external orifice and the bowel. However easily the finger might reach above the growth, excision should not be attempted if there is evidence of fixation of the bowel to surrounding structures. Just above the prostate gland the rectum is normally somewhat fixed to the bladder, but with care is easily separated. I have no experience of Kraske's operation, and for simple excision of the bowel have never found any necessity to

remove either the coccyx or part of the sacrum. If the growth has not implicated the perirectal structures there is no difficulty as regards the separation of the rectum, and in all cases where the disease has extended beyond the bowel I do not believe that the removal is justifiable, for recurrence must be certain to take place at an early period.

CASE 5.—The following case shows how easily and with what a satisfactory result a growth high up in the rectum may be removed in the female. A woman aged thirty-three was admitted to St. Thomas's Hospital under my care on Feb. 17th, 1893. Her father's mother had died from cancer. Since August, 1892, she had noticed blood in her motions. For several weeks before admission blood had been constant with the motions, but she had not suffered much pain beyond the discomfort of straining after the bowels had acted. On rectal examination an ulcer could be felt on the anterior wall, at a distance of three inches from the anus, and about on a level with the cervix uteri. The ulcer was excavated, being about the size of half-a-crown, but with a raised hard margin, extending laterally for some distance round the bowel and as high as the finger could reach. The growth was freely movable with the rest of the bowel. An operation was performed on the 24th. An incision was made backwards through the sphincters to the coccyx, and stout silk ligatures were passed through on either side to act as retractors. The bowel was then divided all round just above the position of the internal sphincter and dissected up till the peritoneum was reached. After opening the peritoneum and dividing the meso-rectum the sigmoid flexure was brought down and the separated rectum was removed about one inch and a quarter above the growth. The bowel was brought down quite easily and sutured accurately to the anal portion of the rectum, which had been preserved. The posterior incision was packed with iodoform gauze. Recovery was uninterrupted, and she left the hospital on April 12th. I saw her quite recently, when she was in good health and able to follow her occupation. She had obtained complete control over her motions, for, although the whole of the rectum from just above the external sphincter to its junction with the sigmoid had been removed, yet the preservation of the lower end of the bowel, with the sphincter intact, had entirely deprived the operation of any of the usual after-inconveniences. The growth was examined by Mr. Shattock, and was a typical specimen of columnar carcinoma. The present condition of the seat of operation is most satisfactory, and after an interval of two years there is no sign of anything like recurrence.

CASE 6.—Sometimes complete prolapse of a growth may allow of its removal under exceptionally favourable circumstances. In January, 1892, I saw a man, with Mr. Bailey of Blackheath, who for some months had been losing blood occasionally from the rectum. He was a thin, sallow man fifty years of age, and he stated that on several occasions whilst straining at stool a large mass had appeared outside the anus and then receded. Under an anæsthetic, after free division backwards of the sphincters, we were able to feel a soft growth high up in the bowel, but were quite unable to bring it down into view, or indeed to do more than just touch its lower margin. It was decided to wait for its next appearance and then to secure it from recession by passing a clove-itch formed from a skein of thick wool round it. About a week later I received a telegram from Mr. Bailey saying that he had the growth successfully "at anchor." On my arrival I found a prolapse of bowel with a papillomatous growth, the size of a small orange, just outside the anus. The growth was sessile, and its base occupied a portion of the wall of the bowel, covering the area of a five-shilling piece. As the growth seemed to be infiltrating the muscular wall it was resected, together with the part of the bowel from which it was growing. The peritoneal cavity was thus opened, and we could see several appendices epiploicæ, showing that we were dealing either with the sigmoid flexure or with the first part of the rectum. A large number of interrupted sutures of silk were employed to bring the edges of the opening in the bowel together. Several pairs of forceps were left on the ends of some of the sutures specially passed for the purpose of preventing immediate retraction. These forceps were removed on the fourth day, and the prolapsed bowel was allowed gradually to retire. The patient made a good recovery and has remained free from rectal trouble or prolapse since. [The specimen which was submitted to the society showed a vertical section of the papilloma and the excised part of the bowel wall.] The muscular wall of the gut, though

displaced by traction, is uninvaded by any extension of the growth, so that the papilloma may be regarded as innocent in character. The growth could not, however, have been satisfactorily dealt with without excising completely its base of attachment, and the base, if left, might have assumed later a malignant character.

The malignant growths of the rectum best treated by colotomy are those which are unsuitable for excision and which are so occluding the bowel as to occasion or directly threaten obstruction. In some cases, though no obstruction exists, colotomy is demanded by the hæmorrhage, pain, and suffering caused by ulceration, and by the irritation of faeces passing over the affected part. Occasionally complications, such as the formation of fistulae or the establishment of a communication with the bladder, will necessitate colotomy. When colotomy is required it is far the best to divide the bowel completely across and so ensure that nothing shall afterwards pass into the rectum. In some cases the disease runs its course until the very last stage without causing much suffering or great inconvenience, and colotomy is never required. It may be argued that the growth will proceed more slowly if the part be placed at rest and all irritation from passing faeces removed. The natural objection to an artificial anus is so great that it seems hardly fair to urge it on a patient unless some definite object is to be attained.

CASE 7.—A fine healthy-looking man aged fifty was quite recently under my care at St. Thomas's Hospital with very extensive malignant disease of the rectum, infiltrating all the surrounding parts and extending far beyond the reach of the finger. The lumen of the bowel was apparently almost obliterated, yet he suffered no pain and very little inconvenience. The bowels were easily acted on by small doses of *cascara sagrada*. I could only advise him to wait, and to return for treatment if any difficulty about the bowels arose, at the same time warning him not to delay until the demand for relief was urgent. At present the patient looks in robust health and is quite capable of following his occupation.

In a few cases where the occluding growth is soft and non-vascular, as occasionally happens in very old people, obstruction may be prevented by scraping the central part of the growth away. This procedure is, however, rarely advisable unless the patient has an insuperable objection to colotomy. Colotomy may be necessary for recurrence after excision of the rectum, as the following case will show.

CASE 8.—In April, 1893, I removed the rectum for extensive malignant disease in a young man aged twenty-six, and in January, 1895, inguinal colotomy became necessary owing to increasing difficulty with the evacuation of the bowels. The general health was, however, good, and the recurrence at the seat of operation was not assuming an active character.

CEREBELLAR HÆMORRHAGE IN A YOUNG WOMAN; GLYCOSURIA; DEATH THIRTEEN HOURS AFTERWARDS.

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LITTLE has been written on the subject of cerebellar hæmorrhage. The rarity of its occurrence to some extent accounts for this. When a large quantity of blood is effused into the cerebellum the symptoms are generally sudden and severe, and the accident is usually fatal. Hamilton, in his text-book on Pathology,¹ says that the individual seldom lives longer than six hours, "probably from the pressure exerted by the swollen hemisphere upon the fourth ventricle. It may occur in young people, particularly in young women, and is due to a simple fatty degeneration of the small arteries and their capillaries." According to Ross,² when hæmorrhage occurs in the lateral lobe of the cerebellum there may or may not be loss of consciousness. There are occipital headache and vomiting, and if hemiplegia is present it is crossed or direct and due to pressure upon the pons. In minor cases marked rigidity of the neck has been observed, with paralysis of the orbicular muscle of the eyelid on the same side as the lesion; the pupils have generally been contracted and occasionally insensitive to light. On the other hand, a large hæmorrhage into the middle lobe of the cerebellum may, by

pressing upon the pons and medulla, cause the sudden development of apoplectic symptoms that speedily terminate in death. In some cases, however, fairly large hæmorrhages have taken place in the cerebellum without giving rise to any symptoms recognisable during life. The case I am about to report is not wanting in several points of interest. The patient, a young woman nineteen years of age, had apparently been in good health when she was suddenly seized with her fatal illness, which lasted thirteen hours, during which consciousness was never quite regained. The presence of sugar in the urine, accompanied by coma, suggested the probability of the case being one of diabetes, and as after death a large cerebellar hæmorrhage was found our attention was naturally directed to the relationship of irritation of the floor of the fourth ventricle and glycosuria which Claude Bernard first demonstrated. We have no knowledge that in my case the glycosuria preceded the cerebellar hæmorrhage. The naked-eye examination of the cerebellum at the necropsy failed to detect evidence of previous disease of that organ—not that this absence is any proof that glycosuria had not previously existed. If the patient was perfectly healthy at the time she received her fatal stroke—and the history of the case rather leans that way—then the glycosuria was a consequence of the cerebellar hæmorrhage, a circumstance all the more interesting to us as supporting Claude Bernard's demonstration. Schiff attributed experimental glycosuria to paralysis of the vaso-motor centre. After Claude Bernard's operations on the fourth ventricle the liver was always found engorged with blood—exactly the condition found in my patient. Ziemssen³ regards cerebellar hæmorrhage as difficult to diagnose, for the attack may or may not be accompanied by symptoms. Remak maintains that the occurrence of cerebellar hæmorrhage is always attended by vomiting and irregularity of the pulse. Vomiting is such a general symptom of intracranial disease that we cannot assign to it special significance in the diagnosis of cerebellar hæmorrhage. It was absent in my case. The fact that the effects of cerebellar hæmorrhage may pass away giving rise to no well-defined symptoms, that patients may live for years afterwards, and that post mortem a hæmorrhagic cyst may be found in the cerebellum, clearly indicates the difficulties that surround the diagnosis.

The history of the case is briefly this. Dr. William Robertson, who kindly sent the patient to me, first saw her an hour and a half after her seizure. It was in the forenoon. The girl had gone upstairs to her room and was found lying on her bed in a state of unconsciousness. The pupils were contracted and equal. There was no paralysis. The pulse was 22 and the respirations 10 to the minute. There were no signs of vomiting anywhere in the room. The reflex of the eye was lost. It was stated that the patient had been in excellent health the day before the attack. She was admitted into the Newcastle Infirmary shortly after Dr. Robertson's visit. She was then comatose. No murmurs were detected over the cardiac area. There was no peculiar odour of the breath and no evidence of poison having been taken. In the urine, withdrawn by catheter, there was no albumen, but a very large quantity of sugar. The pupils were equal, contracted, and did not react to light; there was, however, slight corneal reflex. The pulse was 80, irregular and full; breathing was deep and sighing. She was given two minims of croton oil, and later, by means of a soap-and-water enema, the bowels were moved. Two hours afterwards she was transfused with saline solution, but she never regained the degree of consciousness which a diabetic does under these circumstances. She died five and a half hours after the transfusion.

At the necropsy, on the second day after death, the body was found to be plump and well nourished. Rigor mortis was well marked. There was slight pleuritic adhesion of the right lung; the lungs were healthy, although engorged and oedematous. The heart was healthy. The liver was enlarged, weighed forty-eight ounces, and was red, soft, and friable. The spleen was normal. The pancreas presented nothing abnormal. The kidneys were engorged, their capsule stripping off readily. The uterus was parous; the ovaries normal. The cerebrum presented nothing abnormal; its vessels and tissue were healthy. In the middle lobe of the cerebellum a large recent clot was found. The superior surface and the posterior border adjoining the inferior surface of the middle lobe were lacerated, exposing the clot of blood. The tissue of the cerebellum was soft. On laying open the

¹ Vol. ii., part 2, p. 602.

² Diseases of the Nervous System, vol. ii., p. 597.

³ Vol. xii., p. 154.

cerebellum the clot was found to extend right across the centre of the organ, approaching quite close to the surface on either side and splitting up the cerebellum into an upper and a lower layer. There was no evidence of new growth. A portion of the clot was lying outside the posterior surface of the cerebellum, having lacerated its substance. The membranes of the brain and cerebellum were healthy.

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A SERIES OF CASES OF OPERATIONS UPON THE STOMACH.¹

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IN going through my case-books I find that I have on thirteen occasions operated upon the stomach. Although I regret there is nothing new to report, yet the experience I have gained from these operations tempts me to narrate them and to point out some of the lessons that I have learnt. I have performed gastrostomy seven times, gastro-enterostomy four times, Loreta's operation once, and pyloroplasty once. I will now briefly relate the cases as they came under my charge.

CASE 1. *Gastrostomy* (1).—A man fifty-two years of age had had for a year great difficulty in swallowing, and for the last month had been unable to pass into the stomach even liquids. He had lost much flesh, and appeared to be in the last stages of starvation. On examination an oesophageal bougie stopped on a level with the central part of the sternum. There had been constant vomiting of blood and mucus. On Aug. 14th, 1886, gastrostomy was performed. An incision three inches long was made parallel to and half an inch from the margin of the ribs. The abdominal cavity was opened; the stomach was found and was secured by many interrupted stitches passing through the muscular and serous coats, and was thus fixed to the skin wound. The patient was fed per rectum and progressed favourably till Aug. 21st; as he was weak and failing in general strength the stomach was opened, and food was given every four hours until the 23rd, when he died. A post-mortem examination showed that there were no signs of peritonitis; the stomach was firmly glued to the abdominal wall. The cause of death was asthenia.

CASE 2. *Loreta's operation*.—A patient fifty-four years of age was admitted into the Great Northern Central Hospital with pyloric obstruction. There was no tumour to be felt. The patient was much emaciated and constantly vomited soon after taking food. After a consultation with my colleague, Dr. Burnet, it was decided to explore the pylorus, and if the obstruction was not malignant to perform Loreta's operation. On May 13th, 1888, the abdomen was opened by a vertical incision in the median line just above the umbilicus. The pylorus was found to be freely movable but rather thickened, and appeared to be in no way affected by malignant disease. The liver, as far as it could be examined, was normal. The thickened condition of the pylorus showed a fibrous state. The stomach was opened on its anterior surface, the incision being large enough to admit three fingers. When the finger was inserted into the stomach the pyloric opening was found to be greatly contracted. Only with great difficulty could one finger be inserted, but by gradual dilation it was possible, after a time, to pass two fingers through the contracted portion. No ulceration was to be felt. The stomach wound was sewn up with Lembert's sutures. The patient was rather collapsed after the operation and died the next day. On post-mortem examination the body was found to be much emaciated; the stomach walls were well glued together, there was no leakage into the peritoneum, and there was no evidence of peritonitis. At the back of the liver there was a small cancerous nodule. The pylorus was freely dilated and showed on section a scirrhus condition. There was no ulceration of the mucous membrane.

CASE 3. *Gastrostomy* (2).—A man forty-eight years of age was admitted into the Great Northern Central Hospital. For four months he had had difficulty in swallowing, and had experienced pain in the epigastrium and the lower sternal regions. For two months he had been unable to eat solid

food, and liquids returned at once even when slowly taken. He had lost 2 st. in weight in three months, and while in the hospital a week lost 1 st. more, so that at the time of the operation he weighed only 7 st. On July 9th, 1890, gastrostomy was performed. A vertical incision was made in the left linea semilunaris, the abdominal cavity was opened, and the parietal peritoneum was stitched to the skin. The anterior part of the stomach was sought for near the cardiac end, and was placed in position by the method of "quilled suture" advocated by Mr. Greig Smith. The patient did well and was fed for the first week with nutrient enemata. The stomach was then opened by an incision large enough to admit a No. 8 catheter; through this the patient was fed and he rapidly gained in weight. After this he went to the cancer wards of the Middlesex Hospital, where he lived for eleven months. The authorities of that hospital kindly informed me that his death was caused by the cancerous growth extending into the lungs.

CASE 4. *Gastrostomy* (3).—A woman fifty years of age was admitted into the Great Northern Central Hospital. For six months she had had difficulty in swallowing solids and for two months had been restricted to fluid nourishment. She was wasting rapidly. On the right side of the neck a swelling was noticed. No bougie could be passed beyond the level of the upper border of the sternum, and in this situation there was a cancerous mass. On Dec. 30th, 1891, gastrostomy was performed. A vertical incision was made in the left linea semilunaris, the parietal peritoneum was stitched to the skin, and the stomach was kept up to the abdomen by Greig Smith's "quilled suture" method. The patient was fed by nutrient enemata. On Jan. 3rd, 1892, the stomach was opened by a small incision, and into this was passed a No. 8 catheter, by which food was given. On Jan. 6th all the stitches were removed; on the 17th, at the request of her friends, she left the hospital. She lived four months longer.

CASE 5. *Gastro-enterostomy* (1).—A woman forty-seven years of age was admitted into the Great Northern Central Hospital on Feb. 24th, 1892. From October, 1891, she had had occasional attacks of sickness and pain in the epigastric region, which usually occurred in the evening. A burning sensation in the epigastrium preceded the sickness, the vomited matter consisting of the meals taken during the day. A few months before admission a swelling was noticed in the epigastric region. The patient had lost a good deal of flesh. The abdomen was not distended. About the epigastric region could be felt a hard nodular growth, about the size of a Tangerine orange, which was quite movable, but was painful on examination. The bowels were obstinately confined. On March 2nd the abdomen was opened above the umbilicus in the middle line by an incision four inches long. The stomach was explored and a hard growth was found involving the pyloric end. The anterior wall of the stomach was then drawn into the wound, and an incision one inch and a half long was made in the stomach; a coil of jejunum was similarly drawn out and incised to the same extent. Two Senn's bone-plates were inserted, one into the stomach and the other into the jejunum; the bone-plates were then apposed, thus bringing together the aperture in the stomach and in the bowel. The plates were next tied together, and the stomach and bowel were united by twelve superficial Lembert's sutures. The abdomen was sponged out, and the abdominal wound was united by silk-worm-gut sutures. After the operation the patient vomited some blood-stained fluid, and continued to vomit intermittently for twenty-four hours. For four days she was fed per rectum, and after that food was given by the mouth. On March 14th a purge was given, which acted well. The patient progressed favourably, with occasional vomiting after meals, especially when the food was of a very bulky nature. On May 30th she left the hospital, having gained in weight, and went to the north of England. Four months later she died from some lung trouble, probably of a malignant nature; her friends declined to allow a post-mortem examination to be made.

CASE 6. *Gastrostomy* (4).—In June, 1892, a man sixty-seven years of age came to the Great Northern Central Hospital. For twelve months he had had difficulty in swallowing; for the last five or six months his diet had been confined to fluids, and even these sometimes returned. The obstruction was on a level with the upper part of the sternum. For two months he had lost flesh rapidly, his normal weight of 11 st. being reduced to 8 st. at the time of admission. No bougie could be inserted more than twelve inches from

¹ A paper read before the Medical Society of London on May 13th, 1896.

the teeth. On June 22nd a vertical incision two inches and a half long was made along the left linea semilunaris, the abdomen was opened, and the parietal peritoneum was stitched to the skin. The anterior wall of the stomach was pulled out into the wound, and was then drawn through the hole in a Senn's bone-plate, which was placed transversely to the wound in the abdominal wall. A piece of the stomach was then drawn through the hole in the bone-plate and was held in position by two harelip pins passed through the muscular and serous coats. This operation (Bowman Jessett's) took ten minutes to perform. The patient was fed by enemata till June 27th, when the stomach was opened by a tenotomy knife in the interval between the harelip pins. A No. 8 catheter was introduced into the aperture and the patient was fed through it. On June 30th the pins and bone-plate were removed. On July 19th the patient left the hospital, being much improved in health and having gained considerably in weight. He was heard of eight months after the operation, but no information was received as to his further length of life.

CASE 7. *Gastrostomy* (5).—A man fifty-one years of age began to experience trouble in swallowing at Christmas, 1891, and this difficulty so increased that five weeks before his admission to the Great Northern Central Hospital in August, 1892, he was unable to swallow any food. He was greatly emaciated and a bougie would not go beyond ten inches from the teeth. On Aug. 31st a vertical incision two inches and a half long was made in the left linea semilunaris, the abdomen was opened, and the parietal peritoneum was stitched to the skin. The transverse colon was discovered, and thence, by tracing up the great omentum, the stomach was easily found. Part of the anterior wall near the cardiac end was then drawn through the hole in a Senn's bone-plate (Bowman Jessett's operation). The patient was fed by enemata till Sept. 5th, when the stomach was opened in the interval between the harelip pins by a tenotomy knife; through the opening in the stomach thus made food was given every four hours. On Sept. 7th the pins were removed. The patient, who was greatly improved, left the hospital on Sept. 20th. There was no information given as to the time he lived after the operation.

CASE 8. *Œsophagostomy followed by gastrostomy* (C).—A woman fifty-three years of age was admitted into the Great Northern Central Hospital at the end of September, 1892. For many months she had had much difficulty in swallowing solid food, and of late had had great trouble in swallowing fluids. At times she vomited blood and mucus; she had lost flesh and was much emaciated. After examination with bougie and finger, she was believed to have a malignant stricture on a level with the cricoid cartilage. This was thought to be a fit condition for the performance of Œsophagostomy. Therefore, on Sept. 29th an incision was made down upon the left side of the neck; the Œsophagus was found, brought to the surface, stitched to the skin wound, and then opened. The next day, as the patient was feeble, a catheter was passed into the Œsophageal opening, and through this catheter food was administered. But to my amazement, as fast as the milk was poured into the Œsophagus it ran out again; moreover, when the catheter was passed down towards the cardiac end, by no persuasion could it be made to find its way into the stomach. This being the case, gastrostomy was performed by Bowman Jessett's method. Then the stitches connecting the Œsophagus with the skin were cut loose, so that the Œsophagus fell back into its normal position. On Oct. 1st the stomach was opened and feeding was at once commenced. The patient made an uninterrupted recovery, the Œsophageal opening completely closed, food was given daily by the opening in the stomach, and the patient gained rapidly in weight, leaving the hospital at the end of October; about two months later, as she failed to pass the catheter into the stomach some friends assisted her to do so, but unfortunately they passed it instead into the peritoneal cavity, into which fluid was poured; needless to say, within twenty-four hours she died from acute peritonitis.

CASE 9. *Pyloroplasty*.—In June, 1894, a man thirty-one years of age entered the Great Northern Central Hospital. Seven years before, his illness began with an attack of what was supposed to be acute dyspepsia, and since then he had been treated for that ailment. Two years before admission he had attacks of acute pain in the pit of the stomach, which occurred at no particular time of the day, but very frequently. A year later he began to be sick, usually at

night, vomiting the meals eaten during the day, but never blood. Just before admission this vomiting took place nightly, on one occasion amounting to three quarts of partially digested food. The bowels were very constipated, acting only once a week and the motions being scanty. He had attended at another hospital, where he had had the stomach washed out frequently, and all kinds of drugs had been tried for his relief. The patient was a spare man. The stomach was much dilated, but no tumour was to be felt in the abdomen, and the other organs were quite normal. On June 20th the abdomen was opened in the middle line by an incision extending from the ensiform cartilage to the umbilicus. The pylorus was sought for and found to be thickened and contracted. There were no signs of malignant disease; thereupon it was decided to perform pyloroplasty. A longitudinal incision was made running transversely to the stricture. The pylorus, when so opened, was found to be much contracted and fibrous. The centres of the edges of the longitudinal cut were then pulled apart, so that the incision was converted into a transverse one. This incision was then sewn together by a deep suture, which united the mucous membrane on one side of the wound to that on the other side, and the muscular and serous coats were united by many of Lembert's sutures. The patient made an uninterrupted recovery. The stitches in the abdominal wound were removed on June 28th; for some days previously the patient had been fed by the mouth with milk and essence of meat, and from that date solid food was given. He continued to take by the mouth diet of various kinds without sickness or pain. He left the hospital on July 10th, having gained much in weight. He was seen again in February, 1895, when he was in perfect health and able to eat everything without experiencing sickness or discomfort. At that time he was shown before the Medical Society of London.

CASE 10. *Gastro-enterostomy* (2).—In July, 1894, a woman forty-four years of age was admitted into the Great Northern Central Hospital. For eighteen months she had complained of great pain in the stomach after meals, followed some hours later by severe vomiting. This had grown much worse of late. She had rapidly lost flesh, and for the last three months had noticed a swelling about the epigastric region, which had increased in size and was very painful when handled. The patient was much emaciated, and about the epigastric region could be felt a large, hard, irregular mass. All food taken was returned, and the vomited material was sometimes blood-stained. As it appeared from the symptoms to be a case of tumour of the pylorus, it was determined to perform gastro-enterostomy if it was possible. On July 12th the abdomen was opened in the middle line by an incision extending from the ensiform cartilage to the umbilicus. On exposing the stomach there was found what appeared to be a large, hard, sarcomatous mass which involved the pylorus and a considerable portion of the stomach. There were also secondary deposits in and about the great omentum. This condition caused me considerable doubt as to whether it was possible to perform gastro-enterostomy on account of the extent of the growth and the amount of stomach involved. However, after much consideration it was decided to be justifiable to attempt the operation, in the hope that it might afford some relief. An incision was made into the anterior surface of the stomach, and a piece of jejunum about twelve inches from the duodenum was brought to the surface and similarly incised. Mayo Robson's bobbin was inserted into the holes in the gut and stomach and fixed, and these apertures were brought together over the bobbin in the manner described by Mr. Mayo Robson. It should be noted that the jejunum was fixed up to the stomach, so that when the contents of the stomach passed along the jejunum they might proceed in the direction in which food usually goes along that gut. The abdomen was then closed in the customary manner. The patient made a rapid and uninterrupted recovery, and was soon fed by the mouth with all varieties of food. She left the hospital in about a month's time, and was shown by me before the Medical Society of London in February, 1895, together with Case 9. She was perfectly well, and had gained 3st. in weight. It was curious to note that the growth about the epigastrium was still present, but it had not increased in size, and perhaps had even diminished.

CASE 11. *Gastrostomy* (?).—A man forty-eight years of age was admitted into the Great Northern Central Hospital on Nov. 12th, 1894. For sixteen months he had had some difficulty in swallowing, which had rapidly increased of late.

He was scarcely able to take liquid food and had lost much flesh. No bougie could be passed beyond the middle level of the sternum. There was no history of syphilis. On Nov. 14th gastrostomy was performed by a vertical incision two inches and a half long; a small knuckle of stomach was fixed through Senn's bone-plate by Bowreman Jessett's method. On Nov. 20th the stomach was opened, a No. 8 catheter was tied in, and the patient was fed every four hours. In this case the opening in the stomach must have been made rather too large, for at times through the fistula there was a discharge of gastric juice (and some food) which greatly irritated the parts around the aperture. The patient left the hospital on Dec. 2nd, and was still alive in May, 1895.

CASE 12. *Gastro-enterostomy* (3).—On Nov. 28th, 1894, a woman twenty-six years of age was admitted into the Great Northern Central Hospital under the care of Dr. Beevor, my colleague. For two months she had complained of pain in the epigastrium with some distension and heaviness after meals. In November she began to vomit all food, but this relieved her great pain; the vomited material was sometimes blood-stained. On admission there was observed in the umbilical and right lumbar regions a distinct, rounded tumour, which was nodular and hard. There was no jaundice or ascites. On Dec. 10th the growth was rapidly increasing, and the patient was losing flesh and becoming worn out by the pain. Two days later (Dec. 12th) an incision was made in the middle line from the ensiform cartilage as far as the umbilicus. The tumour was found to be irregular in shape and involving the pylorus and neighbouring parts; moreover, the right lobe of the liver was adherent to the tumour. Remembering the success of a similar case (Case 10) I determined to perform gastro-enterostomy. An incision was made into the anterior surface of the stomach and a similar one into the jejunum; the openings were brought into contact over a Mayo Robson's bobbin and were fixed together in the manner advocated by that surgeon. For a few days there was considerable vomiting, evidently of fluid coming from the small intestine. This was remedied by causing the patient to sit up in bed instead of lying down. On Dec. 20th all the stitches in the abdominal wall were removed, and the abdominal wound was soundly healed. On this date the patient asked for food, and her general condition greatly improved. She continued for some time to make progress, put on flesh, and was quite relieved of abdominal pain. However, on Jan. 12th, 1895, she was suddenly seized with great pain in the abdomen, vomiting began, and she died from peritonitis on the 13th, thirty-three days after the operation. A post-mortem examination showed that the gastro-enterostomy wound was soundly healed and that the communication between the stomach and jejunum was quite perfect, admitting the middle finger. The cause of death was ulceration of the growth on the anterior wall of the stomach spreading into the general peritoneal cavity and thus setting up purulent peritonitis.²

CASE 13. *Gastro-enterostomy* (4).—On Jan. 28th, 1895, a man forty-five years of age was admitted into the Great Northern Central Hospital. Twelve months previously he had begun to have attacks of vomiting at intervals of fourteen days; these did not occur after meals, but generally took place at night. The quantity vomited varied, sometimes amounting to two or three quarts, and consisted of all the food which had been taken during the day. In November, 1894, his condition became much worse, and he rapidly lost flesh. Five years before he had weighed 15 st.; on admission his weight was only 9 st. 4 lb. The abdomen was very full, the muscles were rigid, and some peristalsis could be plainly seen through the abdominal walls. The stomach appeared to be enormously dilated, and extended as far down as the right Poupart's ligament. Considerable splashing could be elicited. On Jan. 30th the abdomen was opened above the umbilicus; the stomach was found to be enormously dilated, and about the pyloric end, which was brought up from the neighbourhood of the right Poupart's ligament, a hard carcinomatous mass was seen and felt. The anterior surface of the stomach was opened by a small incision, and the same was done to the jejunum. Into these openings a Murphy's button was inserted and the operation was completed as advised and carried out by Professor Murphy. Two anchor stitches were employed to fix the jejunum to the stomach. The patient was not at all collapsed and passed a good night. The temperature was normal and there was no vomiting

On Feb. 1st there was slight vomiting and the patient complained of thirst. There was no distension of the abdomen or tenderness. On the 3rd there was still slight vomiting. As the stomach continued to be greatly dilated it was washed out, and three pints of very offensive fluid were removed. The patient was much collapsed after this "washing out," and died early the next morning. A post-mortem examination showed that there was enormous dilatation of the stomach; the Murphy's button was in no way blocked, the gastro-enterostomy wound was quite sealed, there was no leaking into the general peritoneal cavity, and there was no trace of peritonitis and no distension of the intestines.

Remarks.—It will be seen that I lost one of the gastrostomy cases, one of the gastro-enterostomy cases, and the one in which Loreta's operation was performed. I may at once remark that if operations upon the stomach are to be of any use—that is to say, brought to a successful issue—the operation must be done fairly early—i.e., before all chance of recuperative power is gone. It may be observed that my first case of gastrostomy died nine days after the operation simply from asthenia. The gastro-enterostomy case died from what I can only describe as the result of an enormously over-distended and probably septic stomach—in other words, a stomach that had become so dilated that it had passed the point at which it was possible for it to recover its contractile power. Now, with regard to the best incision in the abdominal wall for exploring the stomach, if the operation is for gastrostomy, I conclude, after trying various incisions, that the vertical one about the left linea semilunaris is the best. On the other hand, when the pylorus is to be dealt with, or when a gastro-enterostomy is required, I am of opinion that a vertical incision in the middle line above the umbilicus is the most desirable. It is well known that in many of these cases, especially when the disease is an œsophageal stricture, the stomach is contracted and drawn up well under the ribs. There is sometimes difficulty in finding this organ, and again, even when it is found, there is occasionally trouble in making sure that it is the stomach. This may be overcome as follows. First of all, upon opening the abdomen a search should be made for the transverse colon (which is immediately recognised by the longitudinal bands); and then the great omentum (the gastro-colic portion) should be traced up to the lower edge of the stomach. By these means the stomach can always be quickly found, and, moreover, there will not be the slightest doubt that it is the stomach. The next point to consider is the choice of the operation to use in gastrostomy. I have tried several methods, and have no hesitation in saying that the method advocated by Mr. Bowreman Jessett is by far the best. This is done by drawing a piece of the stomach through the hole in a Senn's bone-plate, which is placed on the skin in a transverse direction to the abdominal wound. The stomach is held in position through the bone-plate by two harelip pins. This prominent part marks the stomach, which can be opened by a tenotomy knife passed into it between the harelip pins. By this method there is not the slightest difficulty in finding the stomach, and in opening it when feeding is commenced that way. Again, very few stitches are required; in fact, none are needed to fix the stomach to the abdominal parietes. The operation is rapidly done, a quarter of an hour being ample time. Another point is of great importance. When one is opening the stomach the orifice should be only large enough to admit a No. 8 catheter. If the orifice is made any larger there is great likelihood of the food regurgitating through the fistula and causing much irritation of the skin around the opening. Too large an opening was made in Case 11, and this, I think, was the cause of the regurgitation, which gave the patient great annoyance. While discussing the points I have noticed in gastrostomy cases, I must not forget to note the curious fact that often—i.e., in five of my cases—as soon as the stomach was opened, and the patient was fed in that way, the stricture of the œsophagus was evidently relieved of spasm, and at times the patients were able to take fluids fairly comfortably by the mouth. This happy state, however, was of course intermittent. There are only a few remarks to make about the operation of gastro-enterostomy. I do not like Senn's plates. I do not think they keep the lips of the wound in the stomach or intestines sufficiently apart, and, therefore, later, the opening between these viscera is often not large enough. I feel certain that the opening was not large enough in Case 5, for it will be remembered that after the operation

² The specimen was shown.

the patient often vomited bulky foods. Now, by the use of Mayo Robson's bobbin, or Murphy's button, the lips of the incisions in the stomach and intestines are kept well apart, certainly for some days, and thus there is little or no fear of the openings between these organs being too small. The loss of Case 13 (gastro-enterostomy) was in no way due to any fault of Murphy's button. In fact, the union between the stomach and the intestine around the button was quite good. Pyloroplasty, which I employed in Case 9, I regard as the best operation for the relief of non-malignant stricture of the pylorus. By it a healthy piece of stomach is let into the anterior surface of the pylorus; moreover, the stricture is divided and relieved, and no doubt in time becomes absorbed. I have doubt as to the lasting benefits of Loreta's operation, and I can readily understand that in dilating a rigid stricture it might easily be torn through, with a consequent leaking into the peritoneal cavity. Again, dilating a fibrous stricture does not always cure it, as may be instanced in many cases of urethral stricture. In the case in which I performed this operation, death, I think, resulted from shock and asthenia, the patient being very ill when the operation was attempted.

Grosvenor-street, W.

THE ROLE OF ALCOHOL IN THE TREATMENT OF HEART DISEASE.¹

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AN observer of many cases of heart disease cannot fail to be struck by the well-nigh universal recourse to alcoholic stimulants by these patients as an indispensable part of treatment. After making a fair allowance for cases in which the taking of alcohol in immoderate quantities is attributed to medical prescription, but which are really independent of it, there remains a not insignificant proportion of patients who habitually consume a large quantity of spirit, apparently under professional advice. Whatever the true reason may be the fact remains that many sufferers from various forms of heart disease take alcohol under the conviction, not only that it is a good thing for them, but that it is essential to their very existence. That alcohol is valuable in some cases and on particular occasions there can, I think, be no question, but I am thoroughly convinced that it is a grievous error to order this stimulant in all cases. If it be true, as I believe it to be, that alcohol should never be prescribed except after full consideration, with a definite object in view, in measured doses and, as a rule, in stated doses, emphatically is it so in the treatment of heart disease. A glance at the more common forms of cardiac disease will be a help in the discussion of this question. The degenerations affecting the myocardium, whether coming on in the course of an acute illness or caused by the diminution of blood-supply consequent upon atheromatous changes in the coronary arteries, lead to dilatation of the chambers of the heart. This is evidenced by a tendency in the patient to faintness or actual syncope. The physical signs are increased, cardiac dulness (unless pulmonary emphysema is also present), indefiniteness of the apex beat, and muffling or even loss of the first sound. Such a patient, liable as he is to cardiac failure, should have a stimulant of some kind always at hand. It is against the injudicious use of alcohol that I am anxious to protest. Alcohol, when not really needed, does mischief by unduly exciting the already weakened heart, and indirectly by interfering with the general nutrition through the disgust for food which generally accompanies gastric catarrh of alcoholic origin. It must be remembered that an already congested mucous membrane is easily irritated. Patients of the above class are not uncommon in the out-patient room. They generally complain of having a weak heart. They have an alcoholic appearance, the true cause of which is confirmed by their own statement that "they take whisky every now and then to keep themselves up." On further inquiry it will be found that these patients have

frequently an intolerable sinking sensation at the epigastrium. This sensation is often erroneously called fainting and is considered to be an indication for the use of alcohol; whereas the symptom frequently owes its existence to excess in spirit drinking. The histories of these patients show excess of some form of alcoholic liquor, extending, it may be, over many years—in fact, ever since they have, rightly or wrongly, got it into their heads that they have "a weak heart." The beer-drinker is generally bloated in appearance, with a liver enlarged out of proportion to his cardiac difficulty, and he has much subcutaneous fat. The spirit drinker, though sometimes fat, may be thin, and his liver may be even contracted. The symptoms in both classes when there is degeneration of the myocardium are practically the same, though the treatment may not be identical. The beer-drinker is perhaps more liable to pulmonary emphysema, which masks the percussion evidence of cardiac enlargement. It would appear that excessive beer-drinking is directly responsible for some cases of heart disease. In a quotation from the *Blätter für Klinische Hydrotherapie*² in THE LANCET the following occurs: "It is said that disease of the heart is very prevalent in Munich, where the consumption of beer amounts to 565 litres per head annually; and in the same place the duration of life in the brewing trade is shorter than that of the general population." The tremulous, flabby, or over-red tongue of the drinker is unfortunately too common to need description. When, in addition to the ordinary signs of intemperance, we have dyspnoea which the condition of the lungs will not fully explain, degenerative changes in the heart and bloodvessels should be suspected and renal changes sought for. The physician who thoughtlessly prescribes alcohol in these cases or fails to define the dose and clearly state under what circumstances it may be taken incurs great responsibility. If food is better taken with a stimulant and light wine is unsuitable, then half an ounce of brandy or whisky in three ounces of water may be taken at meal times. The frequent doses of alcohol should be stopped and a mixture containing ether and ammonia be used as an occasional stimulant, while medicinal treatment should be directed towards the relief of the congested portal system. By these means the appetite returns and assimilation is improved, judiciously selected cardiac tonics completing the cure as far as possible. Sir Thomas Watson in his classical lectures³ remarks: "For that fatty ruin much may be done even by drugs, and more by counsel and warning, for his safety; when syncope is threatened diffusible stimuli may be freely used. Above all, you must inculcate temperate habits and a life of constant quiet. These cautions are, indeed, more or less applicable to all cardiac disorders, but they are especially requisite whenever there is reason to suspect that the texture of the heart is infirm and incapable of bearing the stretching of a hurried or an impeded stream of blood."

CASE 1.—A man aged sixty years, engaged in shipping, consulted me on Jan. 26th, 1894. He complained of weakness of his heart, palpitation, and giddiness on ascending stairs. The giddiness sometimes came on in the early morning. He had been generally strong and had had no serious illness. The symptoms commenced eleven months previously. Examination of the lungs gave no evidence of disease. Cardiac dulness was generally increased; the apex could not be clearly defined. In the recumbent position the action of the heart was visible as gentle undulations; the sounds were feeble; there was no bruit. The radial arteries were thickened and tortuous. There was no albumen in the urine; the liver was a little enlarged, and the tongue was furred. The patient, who had lived freely for years, had increased his allowance lately on account of his symptoms. The amount of spirit was reduced to two ounces daily in divided doses with lunch and dinner. Strychnine and muratic acid were given. On March 1st the giddiness had ceased and he felt better. The heart's action was stronger. Subsequent notes showed progressive improvement.

Another class of patients who complain of weakness of the heart belong to what may be called the neurotic variety. These complain of præcordial pain, or of pain under the left breast, and palpitation and irregular action of the heart. So convinced are these patients of the serious nature of their complaint, and of the consequent necessity for alcohol, that they look quite disappointed when informed that they have no heart disease, and are astonished when told that the very

¹ Read (without the cases) before the West London Medico-Chirurgical Society, Jan. 4th, 1895.

² THE LANCET, Aug. 29th, 1891.

³ Principles and Practice of Physic, vol. ii., p. 273.

thing which they supposed had kept their heart going was responsible for many of its difficulties. These patients are for the most part females, prone to feel their pulse every now and then. They are anæmic, have been working too much, or—what is more exhausting to the nervous system—have been pleasuring in excess. The former are generally large tea-drinkers; the latter, in addition to over-much tea, have perhaps been beguiled into taking so-called medicated wines, and from these insidious and dangerous compounds have gone on to brandy, or even actual narcotics. Such patients, when in the absence of organic disease they complain of palpitation and irregularity of the heart's action, require neither stimulants nor cardiac tonics. Abstinence from the cause or causes of the disturbed innervation of the heart, with the kind of rest requisite in each case and proper diet and medical treatment, will most tend to recovery of health. In chlorosis, with cardiac dilatation especially of the right side, where, as Dr. Foxwell has shown,⁴ the apex beat is abnormally high in consequence of the dilatation, and, moreover, where there are signs of regurgitation through the mitral valve, the failing and weak heart does not simply require to be fillipled with stimulant, but rather needs a minimum of work until its tone is sufficiently restored to enable it to take on full duty. Rest, even in bed, fresh air and sunlight if possible, together with light nutritious food, are the first essentials. Then, if the tongue is clean and the bowels are open, ferruginous, with possibly cardiac, tonics will in most cases lead to a satisfactory result. The heart shares in the general improvement, and, the valves now being competent, regurgitation ceases. In men palpitation and irregularity of the heart are in certain cases caused by business anxieties, indigestion from hurried and irregular meals, and excess of alcohol and of tobacco. To give these patients stimulants is only to add fuel to the fire. In doubtful cases it would be wiser to withhold stimulants or give them very cautiously.

CASE 2.—A woman aged thirty-two years, who had had four children, consulted me for palpitation and giddiness under exertion or excitement. These symptoms were of four months' duration. There was no history of any severe illness. The patient went a great deal into society; latterly she had acquired the habit of taking brandy in the early morning as well as during the day to enable her to keep her engagements, and on her own responsibility had taken sulphonal at night to induce sleep. Of course, there was little or no appetite. There being no evidence of organic disease in the chest or elsewhere, I suggested that she should give up to a large extent her dinner parties and balls and devote herself to the more wholesome home duties, that she should take no spirits, but have beef-tea with cayenne pepper when the desire for stimulant came on, and substitute bromide of ammonium for the sulphonal. In three weeks the improvement was most marked, the cardiac symptoms had entirely disappeared, and she was much less nervous. As for brandy and sulphonal tabloids, she had "none of them."

CASE 3.—A girl aged sixteen years consulted me on June 14th, 1894. She complained of breathlessness on the slightest exertion, and of fainting attacks; her pallor was extreme; the legs were greatly swollen up to the knees. Menstruation had commenced three years previously; she had been regular and well until seven months before, when she was first noticed to be getting pale and weak. She had had no serious illness; the lungs were good, but the heart was enlarged, there being a soft systolic bruit at the mitral and pulmonary valves; the liver was not down; the urine contained a faint cloud of albumen, probably from admixture of vaginal discharge, and there were no casts. There was slight lateral spinal curvature. She had taken iron, but with no benefit. The mother was anxious to know whether stimulants were necessary. The treatment consisted of increased rest in bed, and it was suggested that she should lie on her back in the open air for two hours daily. Light nourishing diet was given, but no stimulants, with medicine to improve the colour of the blood. In six weeks she was of a healthy colour and in good health; the heart sounds were normal, and the menses had returned. Ferruginous tonics with rest succeeded when the former alone had failed.

Aortic stenosis.—A patient having an aortic systolic bruit, but free from regurgitation at either cardiac orifice, and,

moreover, if he has no syncopal or epileptic attacks, is not in a very sorry plight. His life may even be insurable, with some "loading" of the premium. The heart will probably have undergone salutary hypertrophy, and provided that extra strain be avoided his heart need not trouble him. Would it not be absurd to prescribe measures having the avoidance of undue strain for their object, and at the same time to allow the heart to be goaded on with stimulants? These remarks apply with double force if adequate compensation has not been established and there is reason to fear that the left ventricle is still yielding. Rest in a recumbent position, fresh air, and such tonics as strychnine and iron, with or without digitalis, constitute a line of treatment much more likely to lead to satisfactory results than stimulation.

Mitral stenosis.—In this condition, although there is from the beginning great strain on the left auricle, the right ventricle is soon stimulated to increased effort, and hypertrophy of both chambers results. When the right ventricle is doing its utmost to urge the blood through the pulmonary circuit (the tension even leading at times to hæmoptysis) on to the already distended left auricle, and finally to the narrowed mitral orifice, it would be worse than useless to further excite the heart. Yet one comes across patients having this lesion, whose vital functions are being carried on fairly well, taking alcohol simply because they have been told they have "weak hearts." Smallness and feebleness of the pulse may in some cardiac affections be indications for the use of some stimulant, but in the condition under consideration the left ventricle would not be found wanting if only it could get an adequate amount of blood to pump on.

Aortic regurgitation.—Patients having aortic incompetency are specially liable to fatal syncope. Regurgitation through the mitral valve, indicating as it often does dilatation of the left ventricle, enhances this liability considerably. Alcohol is certainly a valuable item in the treatment of these cases. Careful discrimination, however, as to when this remedy is called for and when it would be injurious is as necessary in patients of this class as in others of a less serious nature. I have seen cases benefited and others injured by stimulants, and I think it is a good rule to reserve their use for emergencies. My experience leads me to the conviction that, in the earlier stages at any rate, little or no alcohol is required. If, associated with the valve lesion, there exists an atheromatous state of the arteries undue excitement of the heart would tend to precipitate a fatal rupture of a weakened vessel.

CASE 4.—A married woman aged fifty-five years came under my care on Nov. 18th, 1892, complaining of dyspnoea on slight exertion, rheumatic pains in various parts of the body, and attacks of palpitation. She had had rheumatic fever (after scarlet fever) at fifteen years and again at thirty-six years of age. She had taken small doses of spirit frequently during the last ten years, had been gradually getting worse, and now the least exertion brought on breathlessness and pain. The patient was stout, with a dusky, yellowish complexion. The heart was considerably enlarged downwards and to the left, the action somewhat feeble and intermittent, and there was a double aortic bruit; the liver was enlarged, the urine free from albumen, and the pulse characteristic. The amount of whisky was materially reduced and measures taken to improve the circulation and to relieve the congested viscera. In a short time, with the exception of a very small quantity at meals, no stimulant was taken. Without pursuing in detail the progress of the case, suffice it to say that undoubted benefit followed the treatment, and that both her heart and general condition are much better now than they were two years ago.

Mitral regurgitation.—A patient with this form of heart disease pre-eminently requires his treatment to be varied according to the exact condition he is in at the time of consultation. Alcohol should no more form a necessary item in treatment than that valuable but much misused drug digitalis. Dr. Byrom Bramwell⁵ remarks on the treatment of progressive mitral regurgitation: "Excesses of all kinds, more especially over-indulgence in alcohol should be strictly forbidden." Later he states: "Alcohol is not necessary in this [early] stage of the disease. Persons who have been accustomed to the use of wine or other alcoholic stimulants may be allowed a small quantity of alcohol, but the quantity should be strictly moderate; a larger amount is not only hurtful in itself, but by producing a tolerance on the part of the system robs us in the later stages of the

⁴ THE LANCET, Nov. 14th, 1891.

⁵ Diseases of the Heart, p. 468.

disease of one of our most effective therapeutic means of arousing the falling heart to greater energy."

CASE 5.—A man aged fifty-eight years consulted me in March, 1892, for severe shingles affecting the distribution of the right supra-orbital nerve. On examination of the chest I discovered a loud mitral regurgitant bruit. The patient, observing I was examining his heart, remarked that he had had a murmur ever since an attack of rheumatic fever twenty-eight years ago, but as it had never troubled him in any way he had taken no notice of it. He was a very active business man and lived abstemiously. In this case there was doubtless perfect compensation, the loudness of the murmur being evidence of power in the heart muscle. He subsequently developed Bright's disease, with arterial rigidity, and in a year died from cerebral hæmorrhage. Had this patient taken immoderately of alcohol, or heightened his blood pressure with digitalis, it is very probable that he would have succumbed earlier.

CASE 6 *Mitral regurgitation with heart failure.*—A young woman aged twenty-two years was seen by me on Dec. 21st, 1893, in consultation with Mr. Dickinson of Southfields. Twelve years previously, when consulting Mr. Dickinson for some trifling ailment, a mitral systolic bruit was discovered. In the absence of cardiac symptoms, and of any history pointing to a cause for organic heart disease, the condition was presumed to be "functional." Early in 1893, on arriving home after a hurried walk, she had an alarming fainting attack, which initiated other symptoms of cardiac failure. I saw her eleven months afterwards. On examination the heart was found to be much enlarged downwards and to the left, both lungs were deficient in resonance, especially at their bases posteriorly, with coarse crepitation. The heart was so tumbling about that the mitral bruit which had previously been noted could not be made out. The liver was much enlarged and the urine high-coloured but free from albumen. The patient was propped up and was breathing with much difficulty. Treatment which had been successful up to a recent period seemed to fail, and recourse to more stimulant appeared to be necessary, especially as nourishment caused nausea and vomiting. Calomel in fractional doses was ordered, and measures for further treatment and nourishment agreed upon. It was arranged that the effect of abstinence from stimulants, except when absolutely necessary, should be tried. The patient remained in the same critical state for four days, after which time improvement slowly and steadily set in. Mr. Dickinson's last report, on Sept. 24th, 1894, states that "with the exception of her inability to go out of doors the patient is very well. As regards the stimulants, I found she did very well without them; hardly any were given after you saw her, as no emergencies arose."

CASE 7. *Dilated heart from strain after influenza.*—A man aged thirty-two years, of a nervous temperament, consulted me on Sept. 15th, 1894, complaining of pain in the cardiac region, with aching down the left arm and dyspnoea on exertion. He had influenza twice in 1892, and in February, 1893, he had a third attack. While the temperature was still high he fulfilled an engagement to play in an amateur theatrical performance. His strength did not return; accordingly, after two weeks he went on a visit to the Channel Islands. One day, while riding on the sands, the horse bolted for the distance of four miles. Although an experienced rider, the exertion and excitement were too much for him at that time. On dismounting he had pain in the chest and faintness, but during the following day, feeling much better, he went for a walk, when, on ascending a hill, the pain and oppression in the chest were so intense that he had to stop where he was until a carriage was sent for him. The medical man who saw him said he had strained his heart. On examination the heart's apex was found to be at the fifth space in the nipple line; the impulse was feeble and diffused. A soft systolic bruit was present at the apex and heard nearly as far as the left scapular angle; the other organs were healthy. Though not prone to the use of much stimulant, he had taken more than usual since the heart symptoms declared themselves; he always carried a small flask of brandy in his pocket. The first point in treatment was to assure the patient that he need not specially fear sudden death; further, that there was a fair prospect of his making a good recovery. In conjunction with other measures a "loafing" holiday was recommended with exercise short of fatigue, and abstinence from stimulants excepting a small quantity with his meals. Improvement

was gradual, and by Jan. 16th last (four months after the first consultation) it was noted that he could go upstairs without inconvenience, and that the bruit could scarcely be heard. Now it is not claimed that the reduction of the consumption of alcohol was the sole cause of the successful issue in this case, but it can scarcely be denied that it was an important item in the treatment.

As a rule in the history of cases of valvular and other serious forms of heart disease, symptoms of cardiac failure appear sooner or later. The action of the heart becomes weak and faltering, the contractions being frequent and ineffectual; dyspnoea is provoked by the least possible exertion, or is even a constant condition; the liver is enlarged, there is increasing œdema of the lower extremities, and probably albuminuria is present. In such a desperate case, hanging, as it were, between life and death, the most natural thing is to give stimulants freely, and sometimes this is all that can be done. If, however, the right side of the heart can be relieved by bleeding or by a calomel purge, and stimulants only given when actually necessary, stagnation in the circulation is diminished, and an improvement in the symptoms may perhaps follow. The calomel may be given in doses of two or three grains, or the same amount in frequently repeated fractional doses.

The late Dr. Mahomed, the value of whose observations on the circulation is generally acknowledged, makes the following remarks: "It is not infrequent to find over-full vessels associated with a weak and failing heart; the pulse is then often small and feeble; it is very easily compressed and is described as a small weak pulse, which is thought usually to require stimulants. The reverse, however, is the case; bleeding or purging will be well borne by such patients and the result will be most satisfactory." The question as to how far stimulation may be advisable in an individual case or not must be answered by the medical man in attendance. The existence of extreme cyanosis shows that the immediate difficulty is with the right side of the heart, and consequently this must at any rate be relieved. This having been accomplished, every effort must be made by appropriate treatment and diet to improve the muscular power of the heart. Alcoholic stimulants may be required, but it should be remembered that they are not always necessary and may even be harmful. It will be seen that though alcohol has its place in the treatment of some phases of heart disease, the necessity for it in all cases has been questioned and unbridled licence to the patient has been condemned. The lay mind is as convinced of the need for stimulants in all heart cases as of the call for whisky whenever a symptom can be in any way attributed to gout or rheumatism; in the latter case it is not over-difficult to successfully oppose the patient's belief, but where the heart is concerned it is at times well-nigh impossible to do so. Indeed, no small amount of courage may be required to enable the medical attendant to carry his point. No rules for the guidance of the practitioner can be laid down; each case has its own individuality. Moreover, the symptoms in heart disease vary often day by day, or even from hour to hour, so that it would be the height of folly to attempt to dogmatise on so important a question. Routine is a snare to be guarded against in treatment generally; in cases of heart disease its consequences may easily be fatal.

Weymouth-street, W.

ON SO-CALLED TROPHIC INTESTINAL AFFECTIONS IN THE INSANE.

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ANOTHER morbid process has been added to the already long list of "trophic lesions" in an interesting article by Dr. T. P. Cowen of Prestwich Asylum, published in THE LANCET of March 16th under the heading "Trophic Intestinal Affections in the Insane." The old conceptions of trophic action and its immoderate use in explaining obscure lesions, once so strongly combated by Cohnheim and others, seem again to be in the ascendant, although recent advances in the knowledge of the ground-plan upon which the nervous system is built up and of the physiology connected therewith tend somewhat to modify views regarding "trophic action" and caution us against its indiscriminate application. A vague term, it does not appear to be a physiological entity. Hence the use of it should be a guarded one; and only

after a most careful use of the method of exclusion, and after close microscopic examination of the nervous apparatus implicated in cases apparently similar in nature, should such lesions as may be under consideration be attributed to "trophic action." Do Dr. Cowen's "trophic intestinal affections" meet these requirements? Has the nervous system been microscopically examined, and has every other possibility been excluded? It may be assumed that the former has in all probability been omitted—the results would else have been briefly noted in his paper. The other point invites closer examination. All cases suspicious of tubercle, typhoid fever, Bright's disease, syphilis, or dysentery have, it is remarked, been excluded. Of these diseases four will not have offered many diagnostic difficulties, but the fifth is an exception. The clinical features described in the first part of the paper, and the illustrative cases reported in the second, raise the not unnatural question, How have some of these cases been differentiated from dysentery? And this interest is continued into the account of the pathological appearances. Of course, reference is not made to tropical amoebic dysentery, but to that form of "dysentery" or dysenteric diarrhoea which is more or less common in many asylums. As a case in point I would instance No. 8 in the accompanying table. Diarrhoea with tenesmus; blood, slime, shreds of tissue and sloughs in the stools; and moderate pyrexia and constitutional disturbance are common to dysentery and to Dr. Cowen's "intestinal lesions." The same classes of patients are affected by each; the pathological appearances seem to be identical. Wherein lies the distinction? That asylum dysentery should be a trophic lesion is out of the question; and it remains to be seen whether these other ulcerative processes can justify the appellation of "trophic," assuming them to be a pathological entity. The examination of this subject should be divided into three parts: (1) an inspection of Dr. Cowen's arguments; (2) a brief summary from the clinical and post-mortem records of the asylum for the past three years; and (3) various objections that remain to be stated.

Five arguments are brought forward to support the theory of trophic origin: (1) the rarity of such lesions in the sane, (2) the comparative frequency in the degenerate insane, (3) negative evidence as to causation, (4) their association with other trophic lesions, and (5) the association of such lesions with disease of the central nervous system. Passing these reasons in review, I will leave the first and second for a time and turn to the third. This needs but little consideration, for general negative evidence does not warrant the adoption of a theory unless supported by other and stronger facts with which it stands or falls. Two of these facts are contained in Arguments 4 and 5. It is a pity that Dr. Cowen has omitted to mention what other trophic changes were found (if any) in his illustrative cases. Only in one (transverse myelitis) has a small bed sore been deemed worthy of note. This omission greatly weakens his theory; but if there has in reality been nothing to omit his arguments of necessity fall to the ground. Till the association of these intestinal affections with trophic lesions elsewhere is demonstrated their association with disease of the central nervous system is valueless and can only be looked upon as a complication unless other reasons are forthcoming. Gangrene of the lung, vastly commoner in the degenerate insane than among the mentally sound, might with no less plausibility be classed among the trophic lesions. Lastly, the rarity of these intestinal lesions in the sane and their relative frequency in the degenerate insane claim our consideration. In this comparison lies a fallacy. The comparison is an unfair one, for the terms are unequal. The nervous system, in virtue of its wide and intimate relations with all parts of the human frame, cannot be extensively diseased without in some way lowering the vitality of other organs. A special trophic action need not be called to account for this; the heart is no less trophic to the lungs, or the blood to the central nervous system. It is simply the law of the inter-relation of parts. The insane patient, then, is, when attacked, in a degenerate condition; his whole vitality lies low—a necessary consequence of the disease with which his central nervous system is afflicted. If the intestinal affections are not trophic—and let it be assumed that this is so for the present—they must be due to agencies which find in these cachectic conditions, *sit venia verbis*, a favourable opportunity to display their full activity. Such a wretchedly low vitality or cachexia as we see in these poor lunatics is to be found in but a few bodily disorders of the mentally sound; of these the commonest besides malignant

disease are tubercle, syphilis, and Bright's disease, the very three that have been excluded from consideration. Insanity leading to frailty of constitution must be looked upon as a predisposing cause, must stand side by side with Bright's disease or syphilis, and with these only is comparison permissible. The following explanation, then, would appear to be as rational as the theory of trophic origin. The active agent comes from without—e.g., hygienic conditions, the nature of the ingesta, &c.; lowered vitality is the preliminary postulate, while the cause of such deficient vitality may vary—in one case it is Bright's disease, in another syphilis, and in a third some form of insanity.

Two hundred necropsies have on the average been performed every twelve months for the past three years at the County Asylum, Whittingham. Out of this number fifteen only remain for consideration after all cases suspicious of tubercle, syphilis, Bright's disease, typhoid fever, or dysentery have been excluded. It may not be unimportant to state here that *not one* of our dysenteric patients was a general paralytic. The clinical features of these fifteen cases require but a few words. The stools have shown great variety as regards their frequency, quantity, consistence, and colour. Slime was often found, but never sloughs or shreds of tissue, and in one case only were the dejecta streaked with blood. In five cases death was due to the intestinal affection. Seven patients were eaters of filth and otherwise depraved. Ulceration, never extensive, was found in the intestines, most frequently in the colon, of six patients, four of whom were eaters of filth &c. A feature of interest is the swelling of the mesenteric glands, in some cases without ulceration; this condition would be difficult to explain on the lines of a trophic theory. As for other trophic lesions, none were found save malformation of the nails in some half-dozen cases.

Table of Cases.

No.	Case.	Sex.	Age.	Condition of intestines.	Remarks.
1	Epileptic dementia.	M.	38	Catarrhal enteritis; ulceration; perforation.	Eater of filth: twigs, leaves, and bits of newspaper found in small intestine.
2	Acute melancholia.	F.	57	Two duodenal ulcers (healing).	Artificial feeding: death from septic pneumonia.
	General paralysis.	M.	33	Ill-defined congestion of small intestine.	Death from general paralysis and lobar pneumonia.
4	Acute mania of general paralysis.	F.	42	Catarrh of ileum; no ulceration.	Death due to exhaustion from mania.
5	General paralysis.	M.	43	Slight catarrh of ileum; swollen glands.	Diarrhoea (stools streaked with blood) three days before death; great feebleness and emaciation.
6	Epileptic dementia.	M.	40	Follicular ulceration of colon; septic absorption.	Filth-eater.
7	Primary dementia.	F.	41	Slight catarrh of lower end of ileum; no ulcers.	Filthy habits; death from pneumonia.
8	Chronic mania.	F.	38	Atrophy of muscular coats.	Death from pneumonia and gangrene.
9	Epileptic dementia.	M.	60	Catarrhal colitis.	Eater of filth &c.
10	General paralysis.	M.	53	Ileum congested; swollen mesenteric glands.	Death from lobar pneumonia.
11	Epileptic dementia.	F.	45	Patchy congestion of ileum; swollen mesenteric glands.	Diarrhoea for three months; death from pneumonia.
12	Epileptic dementia.	F.	41	Catarrh of ileum and colon; no ulceration.	Great rachitic deformity.
13	Primary dementia.	M.	37	Follicular ulceration of colon.	Filth-eater; gangrene of lung.
14	Idiocy.	M.	38	Catarrhal enteritis and colitis; follicular ulceration.	Filth-eater; occasional diarrhoea for years.
15	Secondary dementia.	M.	58	Follicular ulceration of descending colon.	Death from gangrene of lung.

It now remains to be seen whether there are other reasons why the trophic theory should be guardedly, if at all, advanced. One or two occur to me, and they are mainly anatomical. The ulcers are described as bearing resemblance in some instances to the round, gastric ulcer *par excellence* dystrophic. Now, the trophic origin of this ulcer is not by any means indisputable; but, granted it were, there has never yet been seen post mortem a gastric ulcer combined with similar processes in the lower alimentary tract. Not only has such an instance not been found in the pathological records of the asylum, but it is doubtful whether there exists a case in point from literature. Such cases must be very rare, and almost valueless because of their rarity. To return to the intestinal ulcers themselves, why should the solitary follicles be so frequently singled out by inflammatory and necrotic processes? Their affection does not appear to be a secondary one, and they are perhaps the last structures of the intestinal mucosa to be expected to succumb to dystrophic nerve influence. Only the assumption of some organismal or toxic agency seems to offer a fair explanation. The part of the gut affected is also peculiar. Trophic influence is no respecter of regions. If the stomach can become the seat of a dystrophic lesion there would appear to be no reason why the next sixteen or seventeen feet of intestine should escape as they do, especially if the medulla oblongata, in which so many centres are crowded into so small a space, be considered the seat of the central trophic mechanism. A possible explanation, however, might be that the gastric and intestinal secretions are more or less interfered with by the nervous disorder. Faulty digestion results, and the lower reaches of the gut come in contact with food, unprepared, and different from what they have been used to cope with. The functions of the liver are also perverted—small, flabby, atrophic livers have frequently been found in the degenerate insane—and the bile expends all its properties, especially its disinfectant power sooner than normal in its downward passage. All these factors tell upon the ileum and large intestine; abnormal excretion gives rise to disturbed function which in time ends in lowered vitality. There is no need to go on with the argument; it dovetails with what has gone before.

This then is the position: the theory of trophic origin cannot be accepted as a satisfactory explanation of all intestinal affections met with in the degenerate insane—and tubercle, syphilis, &c. have been excluded. Neither can it be said that trophic intestinal affections never occur; but they must be very rare, much rarer than Dr. Cowen believes them to be. Only the careful sifting of cases and minute examination of the nervous system hand in hand with experiment will assist in the differentiation of truly trophic lesions from other obscure ulcerative processes in the lower alimentary tract.

Whittingham, Preston.

A CASE OF MULTIPLE ADENOMATOUS POLYPI OF THE LARGE INTESTINE ASSOCIATED WITH CARCINOMA BOTH IN THE SIGMOID FLEXURE AND LOWER END OF THE RECTUM.¹

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THE association of innocent and malignant growths is always interesting, because it raises the question of the possible transformation of the one into the other. It is thought by some that this may occur in cases of long standing, fibro-adenoma of the breast, or papillomatous growths on the tongue and elsewhere, while few would, I imagine, deny the liability of moles to become the seat of melanotic sarcoma. But great caution is necessary before we conclude that because innocent and malignant growths are found in contact one is necessarily a transformation from the other. We ought to trace microscopically the change from the innocent into the malignant form. For instance, fibro-adenoma of the breast is a very common disease, and so is scirrhus; and because we find a

scirrhus growing in contact with a fibro-adenoma we have no right to conclude that one is a transformation of the other unless we can microscopically trace the change in the fibro-adenoma, which might be reasonably considered an early stage of the cancerous growth. When we have a wart on the tongue or elsewhere, which has existed as such a long time, and then can be seen microscopically to invade the deeper structures at some parts as well as to take on clinical features of malignancy, the transformation becomes almost certain. The adenoid cancer in my case might start either in the polypi or in the mucous membrane between them; in either case it would destroy the polypi by ulceration, and that it has done so is almost certain, for the areas around the cancerous growths are covered with them. Proof that the cancer started in the polypi is impossible unless we can trace the gland tissue of the polypus actually growing downwards into the submucous tissue; but, at any rate, there seems little doubt that the tendency to the production of adenoid polypi is in this case associated with a predisposition to the development of malignant adenoma also. Disseminated polypi of the large intestine is a rare disease. Mr. Cripps² says he can only find three specimens of multiple polypi in a search through the London hospital museums, and that he had only seen two cases during life. Yet in several cases³ it has been associated with cancer, and in two instances⁴ with cancer both in the rectum and elsewhere in the large intestine. This seems to me to suggest a causal relationship. Adenoma of the breast is very common; carcinoma also is very common—and what is more likely than that they should be occasionally associated in the same breast without any causal relationship?—but multiple adenomata of the large intestine are rare, and their frequent association with cancer is highly suggestive of a transformation from the innocent to the malignant form of growth.

The patient whose case I am about to describe was a woman aged forty-five years, who was under the care of Mr. Dacre in the Hospital for Sick Children and Women last year, to whom I am indebted for kind permission to publish the report. The case came under my observation during the time I was pathologist to the hospital. The whole of the large intestine was studded with growths. There must have been several hundred. Some were minute sessile elevations of the mucous membrane the size of a pin's head, others were larger and distinctly pedunculated, and one or two had pedicles a quarter of an inch in length. These larger growths were soft, like velvet. To a certain extent they resembled mucous membrane, but were rather suggestive of a papillomatous nature. Both the minute sessile and the larger pedunculated growths were least numerous in the cæcum, and did not extend into the ilium. They became exceedingly numerous in the lower part of the colon, the sigmoid flexure, and the rectum. They seemed only attached to the mucous membrane, and the intestinal wall was not thickened. At the lower end of the sigmoid flexure some of the growths, though pedunculated, became much flattened, and attained the size of a shilling, or even of a florin, resembling a mushroom, except that instead of being attached to the intestinal wall by a round pedicle, the pedicle consisted of a linear attachment of the centre of the flattened outgrowth. Then an inch or two lower down the bowel the outgrowths infiltrated the wall and the surface was ulcerated, forming a typical adenoid cancer which occupied two inches of the bowel and contracted its lumen, so that the little finger could only just be passed through the stricture. In this cancerous growth the ulcerative process had perforated at one spot, but no faecal extravasation had occurred. The lower two or three inches of the rectum had been removed for cancer a fortnight before death. This portion was involved in a typical adenoid carcinoma, which in some parts fungated and in others was excavated by ulceration. The growth penetrated into the muscular wall of the bowel, and with much fibroid tissue filled up the space between the rectum and coccyx. Between this cancerous growth and the one in the sigmoid flexure the bowel was thickly studded with polypi which did not infiltrate the wall. On microscopical examination the polypi were found to be adenomatous. The gland tubes were very large and there was very little intertubular connective tissue. The columnar type of the cells was well marked.

² Diseases of the Rectum and Anus, 1890.

³ T. Smith: St. Bartholomew's Hospital Reports, 1887; Cripps: Transactions of the Pathological Society of London, 1882, p. 185; Handford: Transactions of the Pathological Society of London, 1890, p. 133; and THE LANCET, Jan. 21st, 1893 (two cases).

Handford, loc. cit., and my own case.

¹ The specimen was shown at the meeting of the Bristol Medical-Chirurgical Society, May 8th, 1895.

The glandular tissue growth was directly continuous with the mucous membrane of the colon, the submucous connective tissue passing into the growth as a short stalk. Some of the gland tubes where there was hardly any lumen looked rather like branches of a papilloma cut transversely, the centre of the gland tube being filled with granular material; but that they were not of this nature was shown by the fact that the periphery of the epithelial cells (the portion free from the nucleus) looked towards the centre, where the lumen was so marked in most of the tubes; and, moreover, there were no branching papillomatous processes to be seen in any of the sections (which were vertical ones through the whole polypus



Section of one of the polypi, showing its adenoid structure.
Half-inch objective.

and its attachment to the intestinal wall), so that the gland tubes could not be the depressions between such processes. The carcinoma of the lower end of the rectum was typically that of an adenoid cancer. Masses of columnar epithelium were seen invading the muscular coat of the bowel in addition to glandular outgrowths. In these epithelial masses the columnar type of epithelium could in most places be made out and the glandular character recognised.

Cases of disseminated polypi published elsewhere—An exceedingly interesting case of multiple polypi, in which carcinoma ultimately developed, is recorded by Mr. Thomas Smith.⁵ The patient was a man twenty-seven years of age in whom bleeding from the bowel began at the age of ten years, and he had had polypi repeatedly removed from the rectum. He came into the hospital at last with intestinal obstruction. Adenoid cancer of the lower part of the sigmoid flexure was found post mortem, and the rectum below contained a large number of polypoid growths similar to those removed during the patient's life. Above the seat of the cancer there were but few to be found, and only three or four in the ascending and transverse colon. The polypi are described as well-marked examples of the adenoid variety. Out of the family of six one brother and one sister were under Mr. Smith's care with a similar condition. Mr. Cripps records the case in his book as proving that after many years of innocent life one of the multiple polypi may take on malignant action and assume all the characters of adenoid cancer. Dr. Handford⁶ reports a case of disseminated polypi of the large intestine becoming malignant. There were 170 polypi of the structure of the normal mucous membrane of the part with proliferation of the gland tissue. At the middle of the transverse colon there was a "sessile polypus" about the size of a small walnut. The base of it was infiltrating the intestinal wall, and had given rise to a puckering stricture which would just admit one finger. There was also a stricture of the rectum due to adenoid cancer. The microscopic structure of both the "sessile polypus" of the transverse colon and the malignant growth in the rectum was identical; there were numerous spaces lined with columnar epithelium, with invagination of the wall into them. Mr. Dunn also reports⁷ a case of multiple adenomatous polypi removed from the rectum of a boy aged ten years. Dr. Norman Dalton records⁸ a case of multiple polypi of the whole of the large intestine. They occurred in a woman aged twenty-eight years.

Their structure was that of mucous membrane, with proliferation of gland tissue in some. Each polypus consisted of a stalk, which varied in length from two inches and a half downwards, and was rounded in some cases and flat in others. Nearly all the stalks expanded at their free ends, some being bulbous and others like a fringe. These extremities were mostly soft and bleeding. At the same meeting of the Pathological Society⁹ Mr. J. Hutchinson, jun., referred to a case which exhibited at the necropsy multiple polypi and numerous epitheliomatous ulcers side by side. Mr. Makins also referred to a case of a girl aged eighteen years who two years after the removal of several polypi from the rectum returned with intestinal obstruction which proved fatal, and post mortem well-marked columnar epithelioma was found. Thus the case which I now record makes the fifth in which disseminated polypi of the colon have been associated with malignant disease. Mr. Bowlby¹⁰ records a post-mortem examination on a man aged sixty-four years, whose colon was the seat of numerous polypi which on microscopic section were found to be composed of loose connective tissue; and Mr. Shattock¹¹ describes multiple polypi from the rectum of a child which were composed exclusively of lymphatic tissue. Van Buren in his book on the Diseases of the Rectum refers to a case recorded by Richet¹² of a man aged twenty-one years, from whose rectum 60 to 100 polypoid growths were removed. They consisted of hypertrophied rectal follicles and caused exhausting hæmorrhages.

It will thus be seen that the structure of these multiple polypi is generally adenomatous. Mr. Cripps describes the polypi in Mr. Thomas Smith's case¹³ as adenomatous, but his drawing seems to me to suggest rather the structure of papilloma. The difficulty in distinguishing between them is, of course, often great, as the spaces lined by columnar epithelium may be either gland tubes or only the depression between the papillæ in papilloma. In Mr. Cripps's picture we see the edge of the growth well, and although the processes to the left are very regular, those to the right are very like the processes of a papilloma. Dr. Handford¹⁴ remarks that Mr. Cripps's growth is quite different in structure from the adenomatous character of his own, and more resembles the type of intestinal villi than the Lieberkühn follicle. The distinction between adenoma and papilloma is very clearly described by Mr. Shattock in discussing the pathology of these growths in connexion with his own case already referred to.

Bristol.

ENTERIC FEVER AMONG EUROPEAN TROOPS SERVING IN INDIA.

By W. HILL CLIMO, M.D. Q.U. IREL.,

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THE report of the Sanitary Commissioner with the Government of India for 1893 deserves the close attention of all who are directly interested in the welfare of our army in that country. It has twice formed the subject of articles in THE LANCET,¹ and deals with questions which I have for several years made a special study. The salient points on which I now propose to offer some remarks are—(a) the increasing admission-rate and death-rate from enteric fever of British troops during the year 1893 in comparison with those of the previous decade, being per 1000 of strength respectively 20 and 5.29 in the former, and 14.7 and 4.13 in the latter period; (b) the relative freedom of native troops from the disease; (c) its greater prevalence in Goorkha regiments as contrasted with other native corps; (d) the immunity of women and children in some outbreaks; and (e) the high death-rate of officers of the British service as compared with that of the native, the proportion being 11 to 1. Before entering on this discussion, however, I should like to make a few observations on the etiology of enteric fever in India. Up to 1889 various opinions were held. One was that the disease was associated with malaria; while another was that it was a developmental disease,

⁹ THE LANCET, Jan. 21st, 1893.

¹⁰ Transactions of the Pathological Society of London, 1885.

¹¹ Ibid., 1890, p. 137.

¹² Traité Pratique d'Anatomie Médico-Chirurgicale, Paris, 1873.

¹³ Transactions of the Pathological Society of London, 1882, p. 165.

¹⁴ Loc. cit.

¹ THE LANCET, March 30th and April 13th, 1895.

⁵ St. Bartholomew's Hospital Reports, 1887.

⁶ Transactions of the Pathological Society of London, 1890, p. 133.

⁷ Ibid., p. 139.

⁸ Ibid., 1893.

climatic conditions acting on the constitutions of young persons, and that the large increase of the admission-rate and death-rate was best accounted for by the larger supply of susceptible material (young soldiers) since the introduction of short service. This was the official view. Very comforting and very optimistic it was so far as the responsibility for cantonment sanitary conditions was concerned. In that year Colonel G. F. Young (now Deputy-Adjutant-General of the Bengal Army) wrote a pamphlet on Cantonment Sanitation, in which he clearly indicated the causes that were at work; while earlier in the year I had written a series of letters to the *Pioneer* under the *nom de plume* of "Medicus," pointing out how grievous was this sanitary failure. This I followed up by articles in the *Pioneer*, the *Times of India*, the *Indian Medical Gazette*, &c., and by pamphlets which were submitted through the Principal Medical Officer of Her Majesty's Forces in India to his Excellency the Commander-in-Chief and to the Government of India. I urged that enteric fever in India, as in temperate climates, was specific in origin and was caused by sanitary faults which poisoned the air, food, and water-supplies, &c., more especially the water. These views were received at first with hesitation, or were even opposed; but link by link the chain of evidence was completed, and now they obtain such a general acceptance that only by referring to the annual reports of the Army Medical Department can it be realised how different were the opinions which prevailed a few years ago. The Indian Medical Congress, which assembled at Calcutta during the last cold season, sanctioned the theory of the specific nature of enteric fever; while Professor Hankin's bacteriological investigations in reference to recent local outbreaks of the disease no longer permit the shadow of a doubt. In the article entitled "The Scourge of India: its Cause," which appeared in the April number of the *United Service Magazine*, I have endeavoured to impress these results on the public and on responsible officials. I have referred to the increasing admission-rate and death-rate of enteric fever among British troops in 1893 as compared with the average of the previous ten years, and I have stated that the death-rate of officers of the British and Indian services is in the proportion of 11 to 1. These facts are pregnant with meaning. In the articles above quoted I have pointed out that this can only occur through new factors coming into existence, and these, too, of our own making, resulting primarily from the removal of medical officers from regiments, whereby is caused both sanitary and medical failure—sanitary failure because the proper unit of sanitation is the regiment, and medical failure because in the present relations of the medical service to the army medical treatment (not the least important of which is the early recognition of disease) does not reach the sick until too late.

The explanation of the comparative immunity of native troops is that in childhood natives "have passed through conditions arising from exposure to the enteric poison which in after-life render them exempt from the disease." This opinion is shared by many civil surgeons in large practice, by native practitioners, and by hakims. The nature of their diet also protects native soldiers from the ravages of the disease as it attacks Europeans, and may even abort the disease, as most certainly it modifies and masks the symptoms. Goorkha soldiers suffer more from the disease than other native soldiers, because being keen sportsmen, and being quartered in the lower ranges of the hills, a meat diet is not infrequent with them. It is curious to remark that the higher classes of Mahomedans, who are always flesh-eaters, suffer more frequently from enteric fever than the Hindoos. Some few years ago I had the opportunity of investigating an outbreak of continued fever in a large Indian gaol, and of scrutinising the necropsies. In every instance there was inflammation of the ileum in patches, though the specific ulceration was wanting. No doubt the determining cause of local lesions is the nature of the food.

The comparative immunity of women and children is undoubted, and is another proof of the correctness of the views herein advocated. The habits and functions of women are for the most part favourable to the exercise of recuperative power, while those of the young soldier are absolutely antagonistic. In children diagnosis is difficult and the specific ulceration is always wanting; consequently much of the mortality of children in India from enteric fever is put down to other causes, such as diarrhoea, convulsions, or some other intercurrent complication. A child suffering from enteric fever and exposed to an Indian climate dies so

rapidly that there is no time to differentiate the disease, and death is ascribed to the most prominent symptom. This immunity of women and children is not limited to enteric fever, but exists also as regards cholera. What is the inference? There is domestic prudence as regards food-supplies and greater attention to cleanliness in the family as compared with the bachelor soldier in his barrack room, with his love of adventure and his frequent visits to the regimental "bazar," &c.

Almost every week the Indian mail brings the news of the death of some young officer from enteric fever. This death-rate is appalling; it demands careful discussion and inquiry. I believe that the difference in the death-rates of the officers of the two services is due to the fact that the British regiments no longer have medical officers serving with them, while native regiments always have. No doubt the introduction of the station hospital system has been most beneficial and tends to a higher professional standard; but I am convinced that the army will never derive the full benefit of this change until it is so worked that every corps has a medical officer of its own to investigate the origin of disease at the very outset, to superintend the hygienic conditions of the soldier, and to afford him medical treatment before it is too late.

Colchester.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF PERSISTENT BRANCHIAL CLEFT OF UNUSUAL LENGTH; SUCCESSFUL REMOVAL.

By C. T. B. MAISEY, M.R.C.S. ENG., L.R.C.P. LOND.

A YOUNG woman aged seventeen years came to me on July 25th, 1894, complaining of a bad neck which had troubled her very much for the last three years. The previous history was as follows: A small hole had been noticed in the right side of her neck just above the collar-bone since birth, which had discharged a little sticky fluid without pain. Three years ago the hole closed up and a large abscess formed the size of an orange, which discharged itself, and it continued to fill up and discharge till the date of the visit. There was no history of any abnormality in the other members of the family. On examination a small scab was seen situated half an inch above the sternal end of the right clavicle and surrounded by old cicatricial tissue. On removing the scab I exposed a small ulcerated surface with a central opening about one-eighth of an inch in diameter. Running almost vertically upwards, backwards, and inwards from this central opening a large, hard, freely movable cord could be felt, about the size of a No. 12 catheter below, but gradually diminishing in size above and terminating about the level of the hyoid bone. I passed a probe three inches and a half and felt the end of it through the tissues in the floor of the mouth, but there was no internal opening. I advised her to have the cord removed, and the operation was performed on July 27th, my partner, Mr. J. Westmorland, kindly giving the anæsthetic. Having passed a director along the fistula, I made a longitudinal incision over it and dissected the tube out in its entirety with scissors. The upper part of the wound healed by first intention, the lower (in the situation of old cicatricial tissue) by granulation; the wound was soundly united at the end of the tenth day, and has remained so since. The tube was, complete, three inches and three-quarters in length, about the size of a No. 12 catheter below, and tapering above to a blind pointed extremity. On microscopical examination the lumen was found to be covered by a modified transitional-celled mucous membrane four cells thick; it was ulcerated in places. Below this was a submucous layer showing active cell formation and some inflammation. Mucoid glands were present in this layer. Extending into the submucoid layer were muscle fibres arranged longitudinally with the length of the fistulous cleft. The muscle fibres were mostly in bundles, but there were a few isolated fibres close to the mucous membrane. The fibres were striated. No cysts were seen in the wall. The points of special interest in

the case are, in my opinion: (1) its rarity; (2) its unusual length and somewhat unusual course; and (3) the complete success which has attended its extirpation.

Manchester.

AN UNUSUAL CASE OF THYROID DISEASE.

By J. HILTON THOMPSON, M.D. VICT.,

LATE SENIOR RESIDENT MEDICAL OFFICER TO THE CHILDREN'S HOSPITAL, PENDBURY.

RECENT observations concerning the functions of the thyroid gland make the following case of considerable interest. A young man aged nineteen years came to me some time ago with the following family history. The father was neurotic and criminal; the mother also was neurotic. His friends stated that his manner had been peculiar of late, but could not say in what respect. The patient complained of a feeling of fulness in the head and what he termed "funny feelings," followed by depression of spirits. I noticed that the neck-band of his shirt was unbuttoned; on drawing his attention to it he said that it was too small for his neck. I then examined his throat and found the thyroid gland considerably and uniformly enlarged. His face was slightly flushed and the pupils somewhat dilated. The patient was perfectly rational in his conversation. Bromide of potash in combination with liquor arsenicalis was prescribed. In a week the patient was in his usual health and the thyroid gland had returned to its ordinary size. Three months after I was called to see this patient again. I found him in bed in a state of intense excitement. Several of his friends were in attendance and had considerable difficulty in keeping him from hurting himself. When spoken to he answered rationally, but apparently with great effort. Every now and then he would have exacerbations of excitement, throwing himself about on the bed and punching his own head or trying to dash his head against the bedpost. When he recovered from one of these attacks he usually appeared to be very hungry, generally demanding hot buttered toast. The thyroid gland was much larger than during the first attack; the shirt-band would not button by one inch and a half. The face was usually flushed, but after the exacerbations was pale. There was no exophthalmos. There was no trouble with the excretions. Drugs had no effect. At the end of ten days I had him removed to the workhouse hospital. Whilst there he had two attacks. When he returned home he appeared to be in his ordinary health. The thyroid gland had shrunk to its normal proportions. During the following six months this patient had two slight attacks similar to the first described, and in each the thyroid gland was distinctly enlarged. I have never previously seen nor have I read of a case of this description. The temporary enlargement of the thyroid gland is the most peculiar feature. To me it appears probable that the increased size of the gland was the result of increased physiological action, the nervous symptoms that were such a prominent feature of the case being the result of poisoning by the large and unusual quantities of thyroid secretion thrown into the circulation.

Bolton, Lancashire.

THE DENTAL HOSPITAL OF LONDON.—We have received a copy of the thirty-seventh report of the Governors of this institution, from which it appears that the financial position of the proposed new hospital stands thus: probable cost of site and building £40,000, against which there may be set the estimated value of the site of the existing hospital, say, £15,000 to £20,000 (which, however, cannot be realised until the new building is completed); contributions paid or promised, £11,000; amount required, £14,000. To enable the committee to purchase certain freeholds the bankers of the hospital, Messrs. Barclay Ransom and Co., have considerably made further advances of money, and to them there is now owing £19,650. Having regard to the growing demands on the limited resources of the hospital and the absolute need for increased accommodation for patients, the managing committee consider that they are justified in making a very earnest appeal to the benevolent public and friends of the hospital to assist them to specially reduce this debt, so that the new building may be commenced with the least possible delay.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

TWO CASES OF EXOPHTHALMIC GOITRE IN SISTERS, WITH MORBUS CORDIS AND A HISTORY OF RHEUMATIC FEVER IN BOTH; REMARKS.

(Under the care of Dr. SAMUEL WEST.)

THESE two cases well serve to bring the point to which it is desired to draw attention before the profession. Dr. Hector Mackenzie in his clinical lectures on Graves' Disease, which we published in *THE LANCET*,¹ writes: "Quincy and rheumatism are antecedent or coincident in a significant number of cases. Out of some forty cases I have noted quincy in nine and acute rheumatism in five. This agrees with the evidence of other observers." He refers to a previous paper by Dr. West on this subject.

CASE 1.—A young woman aged twenty-six was under treatment at St. Bartholomew's Hospital for severe palpitation, which had commenced at the age of eighteen. It came on somewhat suddenly, and was attended at the same time with protrusion of the eyes and enlargement of the thyroid gland. It was diagnosed then as "Graves' disease," and treated for some time. Great improvement followed, and for some years the patient had regarded herself as practically well. When seen she still presented all the signs of Graves' disease, having some exophthalmos, though to no very great degree. There was obvious, but not very marked, enlargement of the whole thyroid gland, with palpitation at times, fine tremors of the hands, and a general nervousness of manner and speaking. The heart's apex was one inch outside the nipple in the fifth space; the cardiac dullness was increased upwards and also to the right somewhat. A loud systolic apex murmur was audible at the apex and behind, so that the patient obviously had mitral regurgitation. She had had an attack of rheumatism five years ago, and though she repudiated the idea of "the fever" she was one week in bed, almost unable to move for pain, and was invalided for seven weeks.

CASE 2.—The patient, the sister of the former, aged twenty-eight, came under treatment for Graves' disease, from which she stated that she had suffered for eighteen months, palpitation being the first distressing symptom, but the protrusion of the eyes and the thyroid swelling were observed about the same time. She volunteered the statement that she had the same disease as her sister, and it was in consequence of the statement that her sister was sent for. The most conspicuous symptoms about her besides her exophthalmos were the nervousness of manner and the tremors. The thyroid gland was uniformly enlarged, and the heart-like her sister's, with the apex one inch outside the nipple line, and with a loud systolic apex murmur audible in the axilla and behind. She, too, had had rheumatic fever.

Remarks by Dr. WEST.—These cases present two features of interest—viz., first, the occurrence of two cases in sisters, and, secondly, the heart lesion and the history of rheumatic fever in each. In a paper communicated to the Medical Society of London some years ago I drew attention to the frequency with which rheumatic fever occurred in Graves' disease. In the fifty-six cases I then analysed its frequency was 11 per cent. This fact is of some theoretical importance, for when the question is discussed whether palpitation of the heart can ever produce organic lesion appeal is usually made to exophthalmic goitre, but if in 11 per cent. of the cases a history of rheumatic fever is obtained it is pretty certain that five or six of them at least will have morbus cordis. When this number is deducted from the cases of Graves'

¹ THE LANCET, Sept. 13th, 1890.

disease that develop morbus cordis an insignificant residue is left which is quite insufficient to prove the conclusion required.

ROYAL SOUTH HANTS INFIRMARY.

A CASE OF CEREBELLAR ABSCESS FOLLOWING SUPPURATION IN THE MIDDLE EAR, WITH A POLYPUS IN THE EXTERNAL MEATUS; REMARKS.

(Under the care of Dr. J. L. THOMAS.)

THE symptoms which are caused by the presence of an abscess in the lateral lobe of the cerebellum are subject to considerable variation, and this case shows how very slight may be the evidence of the condition even when the abscess is of considerable size; in fact, rigidity of the muscles of the neck appears to have been the only sign present which is usually recognised as of any importance, and it may be met with in meningitis. The combination of small cerebellar abscess with meningitis is not uncommon. The usual history of chronic ear discharge was obtained, and we would urge on the profession the necessity of impressing upon parents the importance of having discharges from the ear in children treated as soon as possible. The complications of otitis media are both numerous and of grave moment. For the notes of this case we are indebted to the house surgeon, Dr. W. Frier Purvis.

The patient was a girl aged fifteen, who was admitted to the Royal South Hants Infirmary on Nov. 29th, 1894. Her history was that she had had a purulent discharge from the right ear for several years. Her friends had not noticed that she was deaf. On Nov. 23rd she was suddenly seized with headache and vomiting, and was thought to be suffering from a "bilious attack." Since that day she had complained of pain in the frontal region, and had been very noisy and delirious, shrieking out and behaving in an extremely hysterical manner. At first the otorrhoea had ceased, but had come on again during the 27th and 28th. At the time of her admission, on the 29th, she was a very healthy-looking and well-nourished girl. She lay on her back with her knees drawn up and eyes half closed, and said that she could not see. She complained of intense pain at the back of her head, but shrieked out on being touched on almost any part of her body, complaining also of great pain even on moving her arms. There was no retraction of the head, but the muscles at the back of the neck were extremely rigid. There were no enlarged glands in the neck, and there was no hardness in the course of either internal jugular vein. There was a fetid purulent discharge from the right ear, in which could be seen a large polypus. The knee-jerks were normal. There was no optic neuritis. The pupils were equal and reacted to light. There was no strabismus or nystagmus, and no facial or other paralysis, but urine was passed into the bed. Her temperature was 104° F., the respiration 42, and the pulse 104. No physical signs of disease were discovered in the thorax or abdomen. She continued in a noisy, delirious condition all that day and night. On the 30th her condition remained unchanged, but oedema was noticed over the right mastoid process. It was decided to remove the polypus and to explore the mastoid cells. This Dr. Thomas requested Dr. Purvis to do. Ether having been administered the polypus was snared and the granulations were scraped out of the meatus. A semicircular incision was made behind the ear and the pinna turned forward. There was a well-marked posterior auricular spine, and the bone was gouged away at a spot whose centre was a quarter of an inch above and behind this. A little pus soon welled up, and the mastoid antrum was found to be full of offensive cheesy matter. This was all cleared out with a sharp spoon until fluid could be syringed through from the meatus, and *vice versa*. Bare bone could be felt at the bottom of the meatus, and the malleus came away. A fine drainage-tube was drawn through from the meatus to the wound by means of a thread tied on to a probe. The wound was then closed and dressed antiseptically. Later in the day the patient still continued to be very noisy and restless, and was only partially quieted by morphine. The temperature at 8 P.M. was 104.4°. On Dec. 1st the part was dressed and the wound syringed out. There was absolute paralysis of the muscles on the right side of the face. This had not been noticed on the preceding night. The patient

passed her urine in bed, was very noisy, and was only quieted by morphine. Her face was flushed and her breathing shallow. She remained all day in the same dorsal position, with the knees drawn up. The temperature varied between 101° and 103°. Some difficulty in swallowing was noticed. On the 2nd the wound was dressed; the patient's general condition remained about the same. On the 3rd the discharge on the dressing was very offensive. The general condition improved somewhat. She seemed to be more conscious during the evening, and heard better after a quantity of cerumen had been dislodged from the left ear. On the 5th she still remained noisy and was only kept quiet by morphine. She continued to pass all her urine into the bed, her bowels being kept open by enemata. The dressing was changed to boracic fomentations. The bromide mixture, which she had been taking without appreciable effect, was discontinued, as a profuse papular eruption made its appearance all over the body. Her voice was noticed to be getting weaker and her cry to be more moaning. The pulse was 100 to 130, the respiration 36 to 40, and the temperature varied between 99.6° and 102.4°. On the 8th the patient was definitely worse; the temperature varied from 100° to 102.8°, the pulse being 130, and the respiration 45 to 52. She swallowed with great difficulty. She was still restless, but much quieter. She gradually sank and died on the 10th. At the necropsy the body was found to be well formed and nourished. The operation wound was quite healthy. On removing the skull-cap the dura mater was found to be healthy, and there was no clot in the superior longitudinal sinus. Near the centre of the vertex the dura mater was slightly adherent to the brain by a small patch of thick, opaque, yellowish-green lymph. Elsewhere the surface of the hemisphere was smooth and shiny. The cerebellum was adherent to the posterior surface of the petrous portion of the temporal bone on the right side, and on freeing it a large abscess cavity was ruptured. This proved to be in the right lobe of the cerebellum, very near the surface. Its antero-posterior diameter was two inches, and it contained two or three drachms of extremely offensive greenish pus. The walls of the abscess were formed of pulpy, sloughy brain matter. This abscess did not appear to have exerted any pressure on the pons or middle lobe of the cerebellum. There was a little thick yellow lymph in the inter-peduncular space. The sinuses were all healthy. The posterior surface of the petrous bone was bare and rough. The mastoid antrum and other air cells, when opened up, seemed to be well drained from the operation wound, and the aperture in the bone was in a good position.

Remarks by Dr. PURVIS.—In looking back over the symptoms of this case there are several points presenting peculiarities. I think I cannot do better than take them one by one, following Dr. E. Deanesly in his remarks in THE LANCET of Dec. 8th, 1894. It must be remembered that slight meningitis was present. The abscess was distinctly an acute one, both in symptoms and morbid anatomy. The otorrhoea had been present many years. Deafness was certainly present, though to what extent it was difficult to say. Optic neuritis was definitely absent. Headache was very severe. Vomiting only occurred at the commencement of the illness. The temperature was raised throughout; there was no shivering. The pulse and respiration were markedly accelerated. The mental condition was very peculiar; the word "hysterical" best describes it, perhaps. There were great irritability and constant screaming and shouting. The patient was conscious at first, but not afterwards. There was no motor or sensory paralysis excepting that of the facial nerve, doubtless damaged at the operation. There was certainly hyperaesthesia at first. Rigidity of the neck was a marked feature all through, but the head was not drawn back. The reflexes were normal. The question of exploring the brain for an abscess was discussed, but the patient's condition was not sufficiently encouraging.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.—A meeting of the Council of this society was held on Thursday, May 9th, at their offices, 12, New-court, Lincoln's-inn. A satisfactory report of the financial state of the society was laid before the Council, and ninety-two new members were elected, including Sir John Russell Reynolds, Bart., President of the Royal College of Physicians of London, and several other leading members of the medical profession in London and elsewhere.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Debate upon Dr. Semon's Paper.

AN ordinary meeting of this society took place on May 14th, Mr. HUTCHINSON, President, being in the chair.

The adjourned debate upon Dr. SEMON'S paper was reopened by Dr. STEPHEN MACKENZIE, who said that he endorsed the remarks of previous speakers as to the value and completeness of the paper. It had often been said that specialism tended to narrow the views of an observer, but the subject before them had been dealt with in a manner that was not indicative of cramped judgment. If Dr. Semon had confined himself to clinical relationship everyone would have been with him. Mr. Butlin had dealt with the subject with great lucidity, and had shown that if the narrower title had been adopted and a clinical and pathological relationship had been advocated there would have been a general concurrence with such a view. When one spoke of pathological identity it was difficult to know what was meant. Etiology was of paramount importance; for instance, peripheral neuritis might be due to diphtheria, or syphilis, or beri-beri, and these affections, while closely related clinically, were pathologically distinct and specific; there was a clinical relationship, but not a pathological identity. Etiology was the fundamental point in the classification of disease, and this was again well illustrated in the various manifestations of lead poisoning, such as dropped wrist, lead colic, and cephalopathy. If we came to consider microbes, the same thing would be found to hold good. *Staphylococcus pyogenes aureus* would be found to produce in the skin impetigo, boils and carbuncles, and that all were due to the same virus could be proved by cultivation. He repeated that while Dr. Semon had lucidly and usefully shown that the relationship was a close alliance he had not established a complete identity. Without bacteriological evidence one could not prove more than a relationship between these different examples of disease. Cases of acute inflammation of the larynx or pharynx, accompanied by oedema, swelling of the uvula, epiglottitis, tongue, or floor of the mouth, might be due to a condition excited by herpes. He had seen several such cases diagnosed as acute laryngitis or acute pharyngitis which were due to herpes, which view was proved by the concurrent or subsequent development of herpes on the face or elsewhere. In 1876 a patient was admitted into the London Hospital with cellulitis of the neck. There was a brawny, tender, and diffuse swelling in the floor of the mouth, which tilted up the tongue. A diagnosis of angina Ludovici was made. Deep incisions were made into the cellular tissue of the neck, but only a little serum was let out. The patient died three days later, and the laryngeal muscles were found to be studded with *trichina spiralis*, which were encapsuled and were present in other muscles. In 1884 a case was admitted into the London Hospital under Mr. Couper in which there was inflammation of the cellular tissue of the neck. Dyspnoea was marked and tracheotomy was performed, but a fatal result ensued. At the post-mortem examination acute laryngitis was found, with acute miliary tubercles in the lungs. He thought that the bacteriological evidence which had been brought forward weakened Dr. Semon's position, for it had been shown that almost any microbe might produce a suppurative inflammation, and that any inflammation from its character need not reveal the particular kind of microbe which produced it. In the presence of ignorance concerning such important matters as this it was futile to attempt to establish a pathological doctrine, and until complete bacteriological evidence was forthcoming we could not accept the view that these diseases were pathologically identical.

Dr. DUNDAS GRANT was prepared on clinical grounds to give a general support to the views put forward, but he would not be inclined to include angina Ludovici with the other diseases as pathologically identical, for cases of angina Ludovici were not identical amongst themselves. He had been much impressed with the great danger to life in these diseases, and they often proved fatal in spite of relief to any impediment to respiration which might exist. He gave the details of a case to illustrate this. In another case, which he admitted to hospital as a peripharyngitis, the patient

suffered from a succession of septic phenomena, there being first a phlegmon in the pharynx, then facial erysipelas, then a second attack of inflammation in the throat, followed by swelling in the right knee-joint and wandering patches of pneumonia.

Dr. LOVELL DRAGE said that he believed in the pathological identity of the various forms of septic inflammation of the throat. He related the case of a schoolboy aged ten years, who was suffering from an acute inflammation of the fauces and oedema of the larynx accompanied by high fever. Tracheotomy was performed, with immediate relief. Later the disease again advanced and the boy died from double pneumonia twenty-four hours after the operation. There was a catarrhal affection of the larynx prevalent in the district at the time, and other cases occurred in the same school, but these were checked in the early stage by antiseptic measures. He had in a previous communication tried to establish a certain direct continuity between different forms of puerperal sepsis, and he believed that these again were of the same class as the throat affection. In connexion with the influenza epidemic he had frequently noticed the occurrence of throat trouble, there being ulcerations of the lips, gums, fauces, and larynx. In his experience success in preventing the progress of the disease depended upon the opportunities that occurred of accomplishing early disinfection of the mouth and accessory cavities. For this purpose he had at first used strong solutions of boric acid, but later he had more success with a biniodide solution. In connexion with the subject under discussion he remarked that he had had a number of cases which went to establish a definite relation between autumnal diarrhoea and typhoid fever; he had noticed a progressive intensity of the diarrhoeal disease.

Dr. HILL maintained that in the cases grouped together there was merely a clinical resemblance and not a pathological identity; in fact, Dr. Semon had proved that the diseases were pathogenically non-identical.

Dr. KANTHACK said that Dr. Semon had opened up a most difficult subject, but he thought that the paper was true in almost its entirety. Dr. Semon had claimed that these diseases were different stages of one pathological process, which he proposed to call septic inflammation. He himself had investigated four of these cases bacteriologically. The first was one of angina Ludovici, which arose after a severe tonsillitis which was probably diphtheritic in nature; in this he found streptococci. The second case, also one of angina Ludovici, followed gingivitis from carious teeth. In this case *staphylococcus pyogenes albus* and *aureus* were found. The third case was one of pneumonia complicated by inflammatory oedema of the larynx; in this a pneumococcus was found. The fourth case occurred in a woman who was admitted into St. Bartholomew's Hospital, and she aborted and died. At the time of death there was found a phlegmonous inflammation of the pharynx and larynx and a condition of general septicæmia. In the spleen, neck, and larynx streptococci were found. It should be remembered that there was a great difference between bacteriological identity and pathological identity. For instance, in ulcerative endocarditis there was great diversity bacteriologically. In different cases at least twelve different organisms had been found. The organisms in these affections of the neck belonged to the so-called pyogenic group, and there was a difference between pathologists and clinicians which to a great extent was due to the endeavour to fit modern ideas into old frames. The old text-book ideas about septicæmia and sapræmia were not founded upon good bacteriological ground; it was taught that sapræmia was septic intoxication and that septicæmia was septic infection, whereas in both cases infection was present, in the one case saprophytic and in the other parasitic. His own opinion was that in all cases of septicæmia which recovered no micro-organisms would be found in the blood. He had examined erysipelas bacteriologically and he confirmed Jordan's observations. He did not always find the streptococcus of erysipelas in these cases; this showed that the disease might be due to different organisms which were pathologically and clinically identical. The term "specific" was avoided by bacteriologists, for some diseases appeared to be only produced by a combination of different kinds of bacteria, such as streptococcus with staphylococcus in erysipelas. Until we found out the importance of such symbiosis it was necessary to be careful in applying the word "specific" to an organism. Everyone now agreed that the *staphylococcus pyogenes* and the *staphylococcus* of erysipelas were identical and could not be distinguished from each other. Some of these

organisms would produce on inoculation a local erysipelas, and others a general infection; some would have no effect on mice, while others would prove virulent towards mice. When once a streptococcus had become attenuated it was difficult to bring it back to virulence. The pneumonia streptococcus usually produced septicæmia, rarely erysipelas, and more rarely nothing at all on inoculation into the ear of a rabbit; though all three varieties would produce pneumonia, yet they differed in their action on the tissues, and this might depend partly on the local tissue reaction and partly on constitutional disturbance. Organisms could not be classed as different because they produced suppuration, for suppuration was not essentially different from inflammation. He thought that as far as present pathological evidence went Dr. Semon was right in his main contentions.

Mr. R. W. PARKER said that there were two chief points and one subsidiary point in this paper—the non-specificity of the microbe, the identity of all forms of inflammation, and the abolition of the present nomenclature with the substitution of a common term. He joined issue on each of these points. Reason led him to think that these microbes gave rise to special forms of disease, and if two organisms coexisted then a mixed form of disease resulted. In bacteriology the doctrine of this year became the heterodoxy of the year following, and this, he thought, applied to much of the evidence now produced. Bacteriology was studied under altogether artificial conditions, and the results obtained by cultivation in artificial media could not be analogous to those produced in the human body. He believed that these inflammatory processes differed essentially amongst themselves. If a case of erysipelas were left in a surgical ward it would be certain to spread to the other cases; but, on the contrary, a case of œdema of the glottis behaved quite differently. The difference lay really in the nature of the inflammation and not only in its degree of severity. The names in common use clinically were as useful as those of the children of a family; they served to distinguish the individuals of a group, they were different names for different kinds of inflammation.

Dr. SEMON, in reply, said that he was neither surprised nor discouraged at the opposing opinions which had been expressed, nor did he believe that the immediate verdict would be the ultimate one. The difficulties, he thought, were artificial, and he claimed only for his idea that it was a working hypothesis. When he spoke of pathological identity he meant that one and the same process took place in a group of diseases which differed *inter se* clinically. An inflammation might be serous, or purulent, or fibrinous, or gangrenous, and the two extremes appeared to differ entirely from one another, but clinically they could be shown to be mere transitions. In all the cases he had grouped together there was a violent exudation into the tissues, accompanied by rigors, fever, malaise, sweat, &c., and they were not different processes because they owned a different avenue of infection. The different bacteria produced the same pathological processes, and the several organisms were practically interchangeable with one another when they got into the tissues. He was aware that views identical with his own were being promulgated by other observers abroad. He could not support Mr. Lockwood in his demand that identity should mean identity of tissue, for if that definition were accepted we should be landed in a difficulty in the cases of gumma and tubercle of different organs. He hoped to live to see the day when the text-books of surgery would give in one great chapter all the septic inflammations classed together.

MEDICAL SOCIETY OF LONDON.

Annual General Meeting.—The Diagnosis of Retro peritoneal Sarcoma.—Series of Operations on the Stomach.

THE annual general meeting of this society was held on May 13th, the President, Sir WILLIAM DALBY, being in the chair.

The report of the Council was read and adopted. Allusion was made to the losses the society had sustained in the deaths of its treasurer, Mr. Arthur Durham, and of Sir George Buchanan, a former Lettsomian Lecturer. In point of numbers and finance the progress was most satisfactory, and the completion of the new buildings was announced.

Mr. C. B. LOCKWOOD read a paper on the Diagnosis of Retro-peritoneal Sarcoma. He said that, although this disease was rare, everyone who performed many laparotomies

was sure to meet with examples. He had met with this embarrassing condition in two cases, in neither of which would an operation have been performed if the nature of the disease had been diagnosed. In the first case the signs pointed apparently to a solid ovarian tumour. The abdomen was greatly distended, and when it was opened a tumour like a thick-walled cyst appeared, but nothing escaped by the trocar, and a quantity of semi-gelatinous fluid was removed by the hand. The relations of the tumour could then be ascertained. It grew behind the peritoneum into the folds of the mesentery, and had lifted up the left colon which lay in front of it. The mesenteric vessels traversed its substance, and its removal was impossible. It was a myxo-sarcoma, and extended behind the peritoneum from the brim of the pelvis to the diaphragm. It did not seem to spring from any of the great organs, and probably originated in the retro-peritoneal connective tissue. The second case had also many of the characters of an ovarian tumour, but its diagnosis seemed very doubtful. The abdomen was not quite so distended as in the first case. The tumour grew behind the peritoneum, lifted up the intestines, and had distended and nearly obliterated the mesentery. The patient recovered from the operation after a severe illness. In the early stages of these growths diagnosis might not be difficult, but their onset was insidious, and the patients were not seen by the surgeon until the abdomen had become distended. The anomalous character of the tumours ought, however, to have aroused suspicion, and in each of these cases the abdominal resonance must have been altered owing to the distribution of the intestines over the growth. In the last case the tumour was sometimes dull and sometimes resonant, presumably according as the intestinal coils were distended or collapsed; but unfortunately the significance of this sign was not appreciated.—Sir HUGH BEEVOR referred to a case which had come under his observation while Registrar at King's College Hospital. The patient was a man aged thirty-two years, who twelve weeks before admission had his left testis removed. He had noticed a swelling of the abdomen five weeks later, and emaciation had commenced. On examination a swelling was found in the upper part of the abdomen extending two inches below the umbilicus and most prominent on the left side. There was resonance over a small area in the epigastrium, which was only noticed on one occasion. The patient died suddenly. A movable nodule was found in the left iliac region, which proved to be a secondary sarcomatous growth in the great omentum. A mass as large as a cranium was found posteriorly, the transverse colon crossing the front of the growth. The stomach was pushed high up towards the left. The growth was noted to be red and friable, and there was a small nodule in the liver. Though this case was repeatedly examined in the ward, with a view to discovering the position of the transverse colon, that tube could never be mapped out by resonant percussion.—Dr. SNOW said that the condition described by Mr. Lockwood would exist in other retro-peritoneal tumours—renal, pancreatic, or lymphatic. These growths probably arose from congenital rudiments of the Wolffian body, from which sprang the rhabdo-myomata. On palpating over deep-seated malignant abdominal growths he had noticed a peculiar emphysematous crackling.—Mr. LOCKWOOD, in reply, said that these cases could not be extremely rare, as he had met with two in four years. His remarks applied only to cases of advanced growth, with much distension of the abdomen. In the case in which a necropsy was performed there was nothing to indicate the locality of the origin of the growth.

Mr. ALLINGHAM read a paper on a Series of Operations on the Stomach, which is published in full in another part of our present issue.—The PRESIDENT hoped that more details would be given with regard to the object accomplished by these operations. Was there not only a prolongation of life but a lessening of suffering whilst these poor patients with malignant disease were obliged to live? Was it worth while, under such conditions of life, to make the attempt to prolong that life by weeks or months?—Mr. LOCKWOOD discussed the condition of the patient as regarded his comfort after a successful operation; he had a general impression that in some cases of gastrostomy the after-condition was one of greater comfort, while in others the patients did not like the artificial opening. Of three cases of gastrostomy which he had seen, two died in a short time, and the other—a young woman with a tight stricture of the œsophagus from swallowing corrosive poison—found the opening so

unpleasant that she allowed it to close. Operation should not be delayed until the patients were moribund, but should be undertaken when they ceased to take soft solid food. In some cases of cancer of the œsophagus the patients reached their end with reasonable comfort by the wearing of a soft œsophageal tube.—Dr. SNOW inquired if Mr. Allingham had performed Alberti's operation, a valvular opening being made through the skin and the stomach drawn through this so that the artificial opening lay over the seventh rib. Many malignant strictures of the œsophagus might at first be mistaken for simple fibrous growths, as the neoplasm might be of the atrophic variety. He asked if medical treatment had been tried in the advanced cases, rectal feeding being combined with the administration of opium and the local use of cocaine.—Mr. ALLINGHAM, in reply, said the majority of his patients had expressed a sense of great relief after the operation, and especially the cases of gastro-enterostomy. Regurgitation might be prevented by making a small opening into the stomach. He believed that there were more cases of fibrous stricture than had hitherto been suspected.

CLINICAL SOCIETY OF LONDON.

Absence of Abdominal Muscles in an Infant.—Extensive Degenerating Nævus of Bladder.—Gastric Ulcer treated by Laparotomy.

AN ordinary meeting of this society was held on May 10th, Mr. LANGTON, Acting President, being in the chair.

Mr. R. W. PARKER described the case of an infant in whom some of the Abdominal Muscles were absent. The abdominal wall was as thin as parchment. Except along the middle line, where the upper and lower extremities of the rectus could be distinctly felt, the anterior abdominal wall contained no muscle; it was extremely flaccid, and permitted manual examination of each one of the viscera. The muscles of the back appeared to be normal. The infant died from collapse and emphysema of the lungs. A detailed account of the necropsy, made by Mr. Theodore Rake, was appended.—Mr. LANGTON said that a child was admitted into St. Bartholomew's Hospital with an area of gangrene of the anterior abdominal wall, the removal of which led to exposure of the intestines. On examination of the removed parts the whole thickness of the abdominal wall was found to consist of skin, subcutaneous tissue, and fat, there being no muscle present.

Mr. ARBUTHNOT LANE related a case of Extensive Degenerating Nævus of the Bladder in a child aged three and a half years, who was admitted into St. John's Hospital, Lewisham, on Oct. 10th, 1894. Two years previously the child commenced to pass bloody urine, and at times large flat clots; this condition varied in degree, the blood being at times so abundant as to cause the urine to resemble fluid blood. On this occasion the hæmorrhage had been so profuse and so prolonged that the child appeared to be in great danger. There were scattered about the anus and buttocks a few small patches of degenerated nœvoid tissue, and their presence had led Mr. Leopold Burroughs and Mr. Stokes, whose patient the child was, to diagnose the condition of the bladder as being also nœvoid. The bladder was distinctly large as felt above the pubes and by the rectum. Mr. Lane opened the bladder above the symphysis, when large nœvoid masses, some as large as grapes, protruded through the incision. They were mostly soft and bled very readily, while others were hard and apparently cystic. Almost the whole of the mucous surface was affected, one or two narrow strips alone remaining normal. The arrangement was such that it seemed unwise to attempt to include masses of the growth in ligatures. Not seeing any way of treating the condition without much risk Mr. Lane closed the incisions into the bladder and skin, intending to interfere subsequently should styptics applied locally not have the desired effect. Strychnine was used for this purpose. For some unexplained reason the child's condition changed after the operation, the hæmorrhage practically ceased, and her colour and weight improved very rapidly. Occasionally she passed a little coloured urine at long intervals. Mr. Lane considered the case of sufficient rarity to bring before the society, as he expected to find an adenomatous or papillomatous tumour or tumours.—Mr. PARKER said that he had never seen a nœvus which had spontaneously bled, though many nœvi underwent spontaneous ulceration.—

Mr. PEARCE GOULD said that a case of nœvus of the rectum and another of nœvus of the œsophagus were on record, both of which had bled.—Mr. GORDON BRODIE said that a case of nœvus of the male breast had been published by Mr. Bland Sutton which had been the seat of spontaneous hæmorrhage.—Mr. HURRY FENWICK said that nœvus of the bladder was very rare, the only specimen with which he was acquainted being in St. George's Hospital Museum. No case of villus of a child's bladder was on record, the tumours being mostly myxo-sarcomata. Indeed, all the cases described in literature and all the specimens preserved were so classed, with the exception of two specimens, one of which was in University College Museum and the other in St. Thomas's Hospital Museum.—Mr. LANE very briefly replied.

Mr. L. A. DUNN read notes of two cases of Gastric Ulcer treated by Laparotomy. One, a girl fifteen years of age, was admitted into Guy's Hospital on May 19th, 1894. She had suffered from gastric disturbance for some four months previously. The day before admission she was suddenly seized with intense pain in the abdomen and vomiting. On admission the pulse was 150 per minute, the respiration 33, and the temperature 101° F. The abdomen was resonant, not very rigid, and a hyper-resonant area was discovered on the left side of the epigastrium, reaching half-way up the sternum. Dr. Pitt diagnosed perforating gastric ulcer and ordered nutrient enemata and other medical treatment, but as the case did not improve he asked the surgeon to explore the abdomen. This was done at two o'clock on the morning of May 21st. The abdomen was opened in the middle line by a long incision reaching from a little below the umbilicus nearly to the ensiform cartilage. Upon separating some adhesions binding the liver to the abdominal wall some opalescent fluid escaped, and when the liver was pulled upwards and the stomach repressed some coffee-coloured fluid with gas and a clot of coagulated milk escaped. The perforation, which measured one-third by one-quarter of an inch, was found on the anterior wall of the stomach, near the small curvature. It was with great difficulty brought into the wound and closed by a double row of Lembert's sutures. The abdomen was flushed and closed in the usual way. The patient progressed favourably for thirteen days, when at 1 P.M. on June 3rd she vomited and cried out with intense pain. The pulse, which before was 88 per minute, rose to 160. Her face was pinched, and there was great restlessness. As no improvement took place it was decided at 9 P.M. to again open the abdomen as it seemed probable that a fresh perforation had occurred. This was accordingly done along the left costal margin, where nothing was found save a distended stomach attached to the abdominal parietes by a few recent adhesions. These were separated, and the wound was closed. After this recovery was rapid and uninterrupted. The second case was that of a woman aged twenty-eight, under the care of Dr. Hale White, admitted on June 4th, 1894, with well-marked symptoms of gastric ulcer, who had been treated in the usual way till June 29th, when at 6 P.M. she suddenly screamed out with pain in the epigastrium, vomited half a porringerful of greenish fluid, and became intensely collapsed. As it seemed almost certain that perforation had occurred, laparotomy was performed at midnight. The anterior surface of the stomach was exposed by a median incision. Nothing unusual was found as regarded adhesions, gas, or free fluid. The stomach was fairly distended, and no gas escaped on moderate pressure, so the wound was closed in the usual way. Vomiting continued after the operation and the patient succumbed in four days. The necropsy revealed neither peritonitis nor extravasation of gastric contents. A large gastric ulcer was found, through the floor of which, since post-mortem digestion had taken place, the gastric contents could be made to pass on squeezing the sides. The wound was quite healthy and healing.

Mr. SILOOCK also described two cases of Perforating Gastric Ulcer. In one the edges were sutured, and the case ended fatally. In the other, formation of reparative adhesions took place, and laparotomy with drainage was followed by recovery. In Case 1 a woman was admitted to St. Mary's Hospital under the care of Dr. Lees on April 10th, 1894. The history of her illness and her condition on admission led Dr. Lees to the conclusion that she was suffering from a gastric ulcer which had "perforated." Mr. Silcock opened the abdomen, and on examination of the stomach found a small perforation admitting the end of a large probe amidst the remains of recent adhesions of lymph which glued the anterior wall of the viscus to the anterior abdominal wall.

A few bubbles of gas and a little clear fluid neutral in reaction escaped on opening the peritoneum. There had been no further extravasation of stomach contents. The necrotic edges of the ulcer were excised and, thus freshened, were enfolded by Lembert's sutures. A drainage-tube was so disposed as to carry away any discharge from the neighbourhood of the perforation, the stomach and parts involved in the operation being sponged over with corrosive sublimate solution and the wound dressed antiseptically. The patient was fed by nutrient enemata. Despite every care, she died on April 25th (fifteen days after the operation) from septicæmia due to the accumulation of pus between the left lobe of the liver and the diaphragm, behind the stomach, and above the spleen (subphrenic abscess). All efforts to drain this abscess failed. Post-mortem examination showed that the perforation had soundly healed. Mr. Silcock contrasted this case of fatal issue with the following (Case 2), pointing out that the woman was comparatively healthy, the perforation recent and easily got at, the surgeon requisitioned at the earliest possible moment, and the closure of the perforation a success surgically. In Case 2 a woman aged twenty-four was admitted into St. Mary's Hospital under the care of Dr. Cheadle on April 7th, 1895. She was evidently suffering from acute gastric ulcer, and was treated, therefore, in the usual way. Seven days after admission she became suddenly worse, and symptoms of perforation were present. At Dr. Cheadle's request the abdomen was opened by Mr. Silcock, a small quantity of turbid serum of neutral reaction together with a few bubbles of gas escaping on incision of the peritoneum. A wide band of fibrinous adhesions bound the anterior surface of the stomach to the under surface of the left lobe of the liver. The perforation being evidently in the midst of these well-developed reparative adhesions, and the ulcer being of unknown extent, they were left alone, a drainage-tube being placed in position and the wound closed. The operation was followed by immediate relief, and the patient made an uninterrupted recovery. Mr. Silcock thought that the issue in this case showed the inadvisability of interfering with adhesions when these shut off the perforation from the general peritoneal cavity, and mentioned the possibility of infecting the general cavity of the peritoneum had this been done, and of opening up a perforating ulcer so large that it would have been difficult or impossible to have dealt with it adequately by suture.

Dr. LEES related four cases of this kind. The first was one of subphrenic abscess coming on after not very acute gastric pain. The diagnosis was not easy from localised empyema. Mr. Pepper with some difficulty managed to reach the collection with a trocar, giving exit to some pus, but he failed in an attempt to reach the abscess by following up the line of puncture. On making an incision he found that the left pleura was opened, and he therefore allowed some time to elapse for adhesions to form. Though there was marked pneumothorax, within thirty-six hours all the air was absorbed. Two or three days later there was a sudden attack of hæmorrhage which proved fatal. Only a very limited examination was permitted, but they made out a large, old, firm-edged, whitish ulcer on the posterior wall of the stomach. The second case was very acute. The operation was done within forty hours of the rupture by Mr. Page. The case had been published, but he remarked on the fact that the perforating ulcer was high up on the anterior wall and was discovered without much difficulty. It was sutured, and post mortem the union was quite firm. The third case was also acute and was operated upon by Mr. Pepper within a few hours of the patient's admission. He had no difficulty in finding the ulcer or in sewing it up, but the patient died. Post mortem they found a very large ulcer situated on the superior border of the stomach and extending on to both the anterior and posterior walls. The ulcer on the anterior wall had perforated and was sutured, the suture being perfect after death, but they also found a perforation behind, which had caused death. The fourth case was one of those related by Mr. Silcock. Although the ulcers in the first three cases were easily found, it was almost always necessary to break down some adhesions to get at them, and the inflammatory fluid had a tendency, whatever the situation of the ulcer, to make its way upwards above the left lobe of the liver beneath the diaphragm, and to collect there in a cavity of its own. This suggested whether it might not be possible to drain such collections from behind without going through the pleura. If this were possible he thought it would be good practice either in addition to the suture of the ulcer or possibly even in

preference to suture. He pointed out that the adhesions were often fairly strong and the ruptured ulcer high up, and under these circumstances an intervention on these lines might prove satisfactory. He recalled another case in which a patient with a history of gastric ulcer complained of marked epigastric pain and tenderness, and where very great relief was derived from the application of ice to the epigastrium, which at once controlled the vomiting.—Dr. TURNER said he had long entertained the idea of reaching these abscesses through the ribs posteriorly. He had examined one or two cases of subphrenic abscess post mortem and had found that excision of the eighth rib would certainly open the pleura, but it would be below the margin of the lung and would tap the abscess quite well. With free drainage one might possibly adopt this course without much fear. It was sometimes practically impossible to distinguish between subphrenic abscess and localised empyema, but the treatment suggested would cover both conditions. In one case of his own, that of a girl aged twenty-one years, the symptoms came on gradually with an attack of pain forty-eight hours before. She was sick once or twice, but the symptoms were not very urgent; there was, however, the absence of liver dullness. She developed a slight amount of dullness at the left base, but she ultimately recovered after a long illness. Another case was that of a woman thirty years of age, who walked to the hospital, with the history of having twenty-four hours previously had pain in the epigastrium extending to the left shoulder. There was slight rigidity in the upper part of the abdomen, and she presented the same absence of liver dullness, the pulse and temperature being normal. She was kept in hospital three months, and finally she developed an area of dullness continuous with the spleen, extending two inches upwards. Then there appeared an inflammatory lump on the right side of the chest, which was opened, giving exit to bile-stained pus. The patient died, and post mortem the liver was found to contain numerous abscesses, as also did the spleen in its upper part. There was pus in the base of the pleura, but not below the diaphragm. There was a cicatrised ulcer in the anterior wall of the stomach and the splenic vein was filled with pus. He pointed out that the case which was admitted with the more acute signs recovered, while the other, apparently of a less severe type, succumbed.—Mr. WATSON CHEYNE mentioned a case under his care about a fortnight since, the patient being a girl aged seventeen with distinct symptoms of perforating ulcer having occurred forty-eight hours before. He opened the abdomen and at once came down upon fluid and upon the ulcer. The aperture was limited by firm adhesions all round, so he left the wound open, closing it a week later, but two days after that she sank and died. Post mortem he found a large abscess above and behind the stomach in the neighbourhood of the spleen. In another case, in which there was a swelling in the left hypogastric region, distinctly fluctuating, it was opened and the patient recovered.—Dr. HALE WHITE pointed out that the prognosis in these cases stood in no discoverable relationship to the gravity or otherwise of the symptoms. In his case the rupture occurred while the patient was in bed and was operated on within six hours, yet she died. Moreover, no trace could be found of the ulcer and very little evidence of peritonitis. It occurred to him that it might be practicable to distend the stomach with gas in these doubtful cases in order to decide the existence of a perforation. He had since had another case which showed the great difficulty of diagnosis. A woman was suddenly attacked while in bed with pain in the stomach, and on admission she showed symptoms of general peritonitis. There was nothing in the previous history to lead one to suspect gastric ulcer, but there was persistent vomiting, which was immediately relieved on washing out the stomach. She died quite suddenly, and post mortem he found a perforated ulcer firmly adherent to the under surface of the liver, so much so that the adhesions had not yielded notwithstanding the washing out of the stomach. He did not think a surgeon could have got at that ulcer. He also recalled the case of a man with an appendix which measured seven inches in length and passed under the third portion of the duodenum. It suppurated, and laparotomy was performed, but the abscesses burst and the patient died. That would have been an excellent case for an operation from behind.—Dr. ROSE BRADFORD said he had seen two cases of the kind at University College Hospital illustrating some points suggested by Mr. Silcock. The first was that of a girl seen within eight hours of the accident, who was operated on

within an hour. She recovered perfectly, the only complication being thrombosis of the femoral vein. The other case was that of a young girl seen within twenty-four hours of the perforation. The usual incision gave escape to a large quantity of fluid. She did well for a fortnight, but the temperature never returned to normal and she succumbed to an abscess at the base of the left lung. Both patients displayed the absence of liver dulness. He asked whether this symptom persisted, or whether, in consequence of the absorption of the air, the liver dulness reappeared after a while. He remembered a case of abscess at the upper surface of the right lobe of the liver on the under surface of the diaphragm. The patient presented the characteristic pain in the shoulder. Mr. Treves opened the abscess by an incision below the last rib, followed by the insertion of a long drainage-tube, and the patient recovered.—Dr. HALE WHITE added that in his case the accident happened on a Wednesday, and the patient was brought to the hospital on the following Sunday. The liver dulness was then normal, so presumably the gas had been absorbed.—Mr. DUNN, in reply, pointed out that in the patient on whom he had operated twice absence of liver dulness was well marked on both occasions. If he had tried an opening from behind in either of these patients, so exhausted were they that he believed the result would have been disastrous.—Mr. SILCOCK, in reply, said it was impossible to open from behind without going through the diaphragm and opening the chest, and he would certainly not like to do that. Moreover, in such cases there was usually nothing to guide one. In respect of the tympanitic area, he did not know in virtue of what law the gas accumulated over the liver. If it were because, being lighter, it came to the surface, one would expect the tympanitic area to change its place on shifting the patient. This, however, was not the case in his patient, although there were no adhesions to keep the gas in place.

HARVEIAN SOCIETY OF LONDON.

The Surgery of the Rectum.

A MEETING of this society was held on May 2nd, the President, Sir JOHN WILLIAMS, Bart., being in the chair.

Mr. BERNARD PITTS read a paper entitled "Remarks on the Surgery of the Rectum," which we publish in full in another column.

Mr. EDMUND OWEN thought that Mr. Pitts' simple and practical paper would tend to correct the erroneous idea that the lower portion of the alimentary canal had a special and peculiar histology and pathology. He regretted, however, that it had not dealt more fully with the surgery of developmental errors of the rectum and anus, a subject on which Mr. Pitts could give much information. Mr. Owen alluded to the case of an infant whose hypoblastic and epiblastic portions of the rectum were perfectly formed; but as no meconium had been passed the monthly nurse had persistently and ineffectually administered castor oil. The introduction of the little finger into the anal aperture showed that nature had omitted to break down the horizontal septum between the anal and the pelvic portions of the bowel, and as soon as this septum was perforated a copious motion was passed. Persistence of the fibrous circumference of such a partition was likely to give rise to lifelong trouble by causing recurrent attacks of constipation. In such cases inguinal colotomy might be the only alternative to ineffectual attempts at dilatation. He was glad that Mr. Pitts was opposed to the wholesale adoption of colotomy in cases of cancer of the rectum. The subjects of this disease might, under careful dietetic restrictions, enjoy years of life before colotomy was really necessary. When, however, they began to suffer from obstruction of the bowel colotomy should promptly be resorted to.

Mr. HERBERT ALLINGHAM said that he quite agreed with Mr. Pitts that excision of fissure with suture was unnecessary. Whitehead's operation for hæmorrhoids he considered quite unnecessary, as it required much time. The bleeding was severe, and if the mucous membrane tore away from the stitches great constriction resulted; in fact, some of the worst forms of anal stricture he had seen were preceded by Whitehead's operation. He much preferred Salmon's operation by ligature with incision. The rapid dilatation of stricture of the rectum he considered to be a very

dangerous mode of treatment, as the stricture constantly ruptured into the peritoneum. The best mode of treatment consisted in very gradual dilatation or division of the stricture by many small incisions. It was most unnecessary to perform colotomy on all patients with cancer of the rectum. That operation should only be employed when the symptoms were very severe and when palliative treatment failed to give relief. He had seen many patients who had declined to submit to colotomy when it was recommended, and who had by palliative measures been able to go on for three or four years before colotomy at last had to be performed.

PATHOLOGICAL SOCIETY OF MANCHESTER.

The Relations between the Structure of the Liver and Certain Pathological Lesions.—Curious Cutaneous Products.—Fractured Cervical Spine.

A MEETING of this society was held on May 8th, Professor SHERIDAN DELÉPINE, the President, being in the chair.

Professor DELÉPINE gave an account of his views on the Structure of the Human Liver. He demonstrated by means of preparations and micro-photographs that in the classical or vascular lobule of Kiernan there are evidences of an arrangement of the columns of liver cells which are incompatible with the notion that the arrangement of the epithelial elements is entirely subordinated to that of the veins. He proved that by taking certain precautions it is possible even in the normal liver to see that the columns of liver cells are tubes with very narrow lumina branching from terminal bile-ducts. This branching is evidenced by a divergence of the columns from lines extending between adjacent portal vessels (portal lines of divergence). This arrangement proves clearly that Sabourin's views regarding the biliary lobule are wrong. Professor Delépine exhibited a number of microscopical preparations of lesions which showed clearly the grouping of columns of liver cells round terminal bile-ducts and not round the so-called intralobular veins—e.g., (1) starving liver, showing clearly portal and hepatic lines of divergence, and the branching of columns of liver cells from portal spaces towards hepatic veins; (2) fatty liver with typical grouping of infiltrated cells in the form of alternate nodes on the sides of portal vessels and surrounding Glisson's capsule; (3) parenchymatous hepatitis, followed by almost universal atrophy of epithelium and the almost total transformation of the columns of liver cells into tubes containing cylindrical casts of bile pigment; (4) epithelioma of bile-ducts, causing accumulation of bile pigment within the intralobular and intracellular bile canaliculi; (5) livers in various stages of digestion, showing the grouping of iron and glycogen in various parts of the lobules, and other preparations.

Dr. WAHLTUCH showed some curious Coloured Cutaneous Products obtained by friction of any part of the body of an unmarried woman aged fifty-five years. She had suffered for six years, since her menopause, from periodical attacks of irritation of the skin, which were relieved by warm baths, and were attended by the separation, by rubbing with towel or hand, of coloured, fluffy, and curly masses. There is no skin affection otherwise to be noticed. The microscopic examination shows each small roll to be composed of: (1) a thick covering of epithelial cells; (2) thin, tangled hairs, some long and colourless, and a few broken up and red, blue, green, or brown; (3) irregular, pigmented masses, red, blue, brown, or black; (4) a few starch corpuscles; and (5) hardly any trace of fat.

Mr. J. W. SMITH and Mr. J. G. CLEGG showed the Cervical Spine from a case of Fracture of the Atlas and Axis, with pulping of the spinal cord, in which life was prolonged for several hours by artificial respiration.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on May 7th, Dr. S. JOHNSTON, President, being in the chair.

Dr. CHAPMAN showed a specimen of Fractured Spine in a child aged two years. The child was dead when admitted into the Bradford Infirmary. On post-mortem examination

a fracture of the fourth dorsal vertebra was found. There was blood effused outside the membranes of the cord. The spinal cord was torn across, but the membranes were not injured.

Dr. KERR showed a patient who had been trephined for Tuberculous Meningitis. The patient was a boy with a tuberculous family history, whose health began to fail in January, 1895. Until March he attended school. He then began to be sickly, a squint which he previously had become more marked, and his temperature was 99.5° F. Dr. Kerr saw him at this time and diagnosed tuberculous meningitis, the symptoms being headache, constipation, talking in sleep, and the meningitic cry. There was, in addition, great restlessness, stiffness of the muscles of the neck, cerebral vomiting, and optic neuritis in the left eye. Dr. Wood trephined the middle fossa, the dura mater was incised, and a small quantity of fluid escaped. The brain did not pulsate. On passing a trochar into the lateral ventricle no fluid was obtained. A drain of silkworm gut was passed towards the base of the brain and the wound was dressed. The patient made a good recovery, having no pain after the operation and being less irritable. The drain was removed on the seventeenth day, after which the wound healed soundly, and within a month the patient was able to play cricket.

Mr. HORROCKS showed a patient with Double Hydrocele.

Dr. MAJOR gave a demonstration on the Management of Primary Batteries for Medical Purposes, pointing out the importance of the practitioner being able to recharge the cells himself, and that frequent use was the best way of keeping the batteries in order.

EDINBURGH OBSTETRICAL SOCIETY.

The Influence of the Removal of the Ovaries on Metabolism.—Vesico-Vaginal Fistula.—The Biddenden Maids.—Exhibition of Specimens.

A MEETING of this society was held on May 8th, Dr. A. H. FREELAND BARBOUR, President, being in the chair.

A paper on the Influence of the Removal of the Ovaries on Metabolism, by Professor E. CURATULO and Dr. LUIGI FARRULLI of Rome, was communicated by Dr. J. C. WEBSTER. These researches were intended to elucidate the cause of the benefit received in osteo-malacia by the removal of the ovaries. Different theories have been advanced, but these have not been supported by indisputable facts scientifically proven. Febling's hypothesis is that a stimulus is removed which acts on the vaso-dilator nerves of the bones, causing passive hyperæmia, with an accumulation of carbonic acid, and consequently reabsorption of earthy salts. Petrone's studies tend to demonstrate that the good effects upon the disease are only due to the anaesthesia—supposing it to destroy the fermentum nitricum—rather than to the removal of the ovaries. It seems probable that the changes which take place in the metabolism after castration in healthy animals would throw light upon this subject. It is well known that castrated animals grow fat, but there has been no scientific investigation into the cause of this accumulation or into the changes in the metabolic activity of respiration, or into the composition of the urine after the operation. This last item was taken up as a preliminary research. The experiments were made on bitches which were kept on a constant diet before the castration, so as to have an almost constant average of nitrogen and phosphates in the urine. After castration it was observed that the quantity of phosphoric anhydride discharged through the urine is considerably and for a long time diminished. Thus in a bitch before castration there was a daily average excretion of 9.93 gm. of nitrogen and 1.50 gm. of phosphoric anhydride; after the operation the average amount of nitrogen remained the same, while the phosphoric anhydride had diminished to 0.75 gm. This statement was based upon daily researches for eighty-five days after castration. This decrease took place with considerable rapidity after the operation. In another bitch when the wound had healed in three days, and the daily examination of the urine continued after six days, a decrease in the discharge of the phosphoric anhydride was immediately noticed. This fact has an important bearing on the subject of osteo-malacia. Its pathogenesis is still unsettled, but there is no doubt that there is a considerable decrease of the earthy salts composing the bones, so that these lose their natural solidity

with consequent bending where there is the greater strain. The phosphates in the urine are partly derived from the food and partly from the waste products of tissues containing phosphoric organic substances, and mostly from the discharge of the earthy phosphates contained in the bones. These animals were kept on a similar diet before and after castration, so that the decrease in the excretion of phosphoric anhydride must depend on a diminished oxidation of organic phosphorus in the tissues. This storage of organic phosphorus in the system would allow of its combining with calcium and magnesium, and its accumulation in the bones as phosphate of calcium and magnesium. We admit that the ovaries have, like the other glands of the animal economy, according to the general doctrine of Brown-Séguard, a kind of internal secretion and that they continually secrete a product into the blood, the chemical constitution of which is unknown, capable of facilitating the oxidation of the phosphoric organic substances which supply the material for forming the salts of the bones. By the removal of these glands there must be a greater retention of organic phosphorus and consequently of earthy salts in the form of phosphates until the skeleton resumes its normal solidity. This theory may be extended to what concerns the waste or combustion of the fat, and this may also explain the well-known phenomenon of fat accumulation after castration, and perhaps also the similar condition very often noticed at the menopause and in sterile women.

Dr. J. A. C. KYNOCH read notes on a case of Vesico-vaginal Fistula resulting from an Unusual Cause. The patient had suffered from prolapse of the vagina with some cystocoele for several years, and had not received any treatment. While descending a stair covered with ice she slipped and slid down several steps. Previous to this she had been working in a standing posture for several hours, and had not passed urine for the same time, and she felt the prolapse protruding from the vulva. She experienced a good deal of pain about the vulva, and there was some hæmorrhage, which continued for three days. Pain occurred with micturition. She was confined to bed for a few days, and on rising noticed some dribbling of the urine. The incontinence was only slight at first, afterwards constant. On examination a marked prolapse of the vagina was found, with a fistula of the size of a sixpence about an inch from the vaginal orifice. This was cured by two operations. It was evident that the prolapsed portion had been injured by the fall, with consequent ulceration and formation of a fistula.

Dr. J. W. BALLANTYNE gave notes on the Biddenden Maids. These were twins born joined together in the year 1100 at Biddenden, in Kent. There was union at the hips and at the shoulders. From the existing data it is difficult to determine whether their shoulders were joined or whether the arms were joined at the elbows, as one illustration depicts. Dr. Ballantyne remarked on its being a unique case from a teratological point of view. They lived to the age of thirty-four, and when one died the other was advised to be separated from her sister by dissection, but she refused, saying: "As we came together, we will also go together," and in six hours afterwards she also became ill and died. By their will they bequeathed some land to the churchwardens for the benefit of the poor, and on Easter Sunday many small cakes are given away, each with their effigy stamped thereon. Professor Simpson suggested that their apparent union at the shoulders may have been due to their walking about with their arms round each other's neck.

Dr. FELKIN showed an Antiseptic Sponge Holder. Dr. FORDYCE exhibited a Fœtus which had evidently been retained for about three months after death. Two specimens of Fœtus Compressus were shown by Dr. J. W. BALLANTYNE and Dr. BUIST, Dundee.

PRESENTATIONS.—Mr. George Daunt, L.R.C.P., L.R.C.S. Edin., of Ilchester, on the occasion of his leaving the district has been the recipient of a splendid field-glass from his friends as a token of their esteem and regard.—Dr. Wm. D'Ojly Grange of Moffat, Dumfriesshire, on his leaving that town after a residence of nineteen years has been presented by his friends, in testimony of their friendship and regard, with a costly chronograph gold watch, bearing the following inscription: "Presented to William D'Ojly Grange, Esq., M.D., as a mark of esteem from numerous friends on the occasion of his leaving Moffat. April 30th, 1895." Mrs. Grange has been the recipient of an elegant évergéne, on which is inscribed: "Presented to Mrs. D'Ojly Grange from her friends in Moffat. April 30th, 1895."

Reviews and Notices of Books.

The Dyspepsia of Phthisis: its Varieties and Treatment. By W. SOLTAN FENWICK, M.D., B.S. Lond., M.R.C.P. London: H. K. Lewis. 1894.

MORE than once in the pages of this lucidly written monograph the author reminds us that comparatively little is heard nowadays of the alliance between pulmonary phthisis and gastric derangement, which was dwelt upon with considerable emphasis by writers on both sides of the subject a generation or more ago. It is not that their observations were faulty. There is ample proof in this book to the contrary, showing, as it does, how frequent are dyspeptic troubles in the phthisical, both antecedent to and concomitant with the manifestation of tuberculous disease. But we presume that the explanation of the comparative silence on the matter may be found in the fact that according to our present conceptions of the origin of tuberculosis the existence of such disorders has been relegated to a less significant place in the etiology of phthisis. And it seems to us that Dr. Soltan Fenwick, who has ventured to break this silence, is himself convinced that the rôle of dyspepsia as an antecedent to tuberculous phthisis is nothing more than one factor in the production of enfeebled nutrition that tends to lessen the resistance of the subject to the inroads of the bacillus tuberculosis. It is indeed striking that so many victims of the pulmonary disease should, prior to its onset, have suffered from dyspepsia, but that there is nothing specific in the type of the gastric intestinal disorder itself is manifest from the descriptions that are given of its symptomatology. Moreover, the consideration that, after all, phthisis attacks only a minute portion of the great army of dyspeptics proves that the connexion is not one which merits much consideration in etiology. It must not be supposed, however, that a monograph on the subject is not needed, or that it will fail to be serviceable in practice. On the contrary, we believe that the author has done good service by his very careful study of the subject, and especially by the prominence given to the importance of treating disordered digestion as a serious element in the history of those whose life-history or environment disposes them to tuberculous disease. Moreover, he has made a distinct contribution to our knowledge of the nature of the lesions that are met with in the stomach in advanced phthisis, which throws light upon the association between the pulmonary and gastric affections.

The opening chapters of the book are devoted to these questions of pathology and morbid anatomy. The frequency of the occurrence of dilatation of the stomach in the phthisical is first alluded to. The mammillation of the mucous membrane so characteristic of chronic catarrh, and long since described, is attributed to contraction of the intertubular connective tissue; but a similar appearance is produced by enlargement of the solitary glands, which, as the author subsequently states, may form follicular ulcers. Amongst the forms of ulceration he has met with, it may be especially noted that he has found some due to lardaceous disease of the vessels, mainly in the pyloric region. The great rarity of tuberculous ulceration of this viscus, as contrasted with that of the intestine, is attributed to the inhibitory action of the gastric juice upon the bacilli and also to the scantiness of lymphoid tissue in the stomach. The condition characteristic of phthisis, which is described from a careful examination of fifty cases, is one of interstitial inflammation, leading to destruction of the gastric tubules and more or less diffuse cirrhosis. In a certain proportion of cases there is also lardaceous degeneration. The chronic gastritis is found to be most marked in the more advanced cases of phthisis with excavation, and

the conclusion arrived at is that it is excited by the absorption of toxic substances formed within the pulmonary cavities. As regards chronic ulcer, it is shown that although present in a certain proportion of cases of phthisis the gastric affection has no special relationship with the latter—no more than cancer has. Having disposed of these pathological questions, the author next takes up the clinical side, treating in turn of the dyspepsia of strumous children, the dyspepsia which is apt to precede the development of pulmonary tuberculosis, the dyspepsia of the early stages of phthisis, and the dyspepsia of advanced phthisis. The characters and course of each variety are described in a satisfactory manner, and the measures of treatment detailed. Although, naturally, the subject can hardly be said to be novel—for dyspepsia in its atonic as well as in its "irritable" forms is only too familiar to practitioners—he has succeeded in imparting much useful information, both on the general topic and on that specially defined, which cannot fail to be of service.

The Pathology of Insanity: the Means and Methods of its Study. By W. J. COLLINS, M.D. Lond., J.P., L.C.C. Reprinted from *St. Bartholomew's Hospital Journal* February, 1895.

THE above is the title of a paper read before the Abernethian Society on Nov. 29th, 1894, and reprinted in pamphlet form from the *St. Bartholomew's Hospital Journal* for February, 1895. Agreement will be felt at the outset with Dr. Collins's statement: "The pathology of insanity is a realm in itself, at once vast, obscure, and in part untraversed"; and he disarms criticism by unreservedly disclaiming his qualifications for the task of treating the subject. His position, however, on the London County Council brings him into contact with asylum work, and it is not to be expected that so energetic a member of the medical profession will be contented to ignore the need of making constant inroads into this vast and obscure realm. He discusses the reasons for the "relatively backward state of the pathology of insanity compared with the well-cultivated fields of other areas of disease," laying due stress on the difficulty of investigation and the proportionate littleness of lesion with the magnitude of the malady.

The paper is mainly an inquiry into "what is being done by way of pathological investigation at the County asylums of London with their 11,000 lunatics; how this compares with work done elsewhere; and what proposals have been or are being made, with a view to stimulate further advance." As a result of a series of questions put to the Medical Superintendents of the London county asylums by a subcommittee of the late London County Council, of which Dr. Collins was chairman, the conclusions were arrived at (among others which are fully set out in the paper) that the post-mortem examinations as conducted at present are not exhaustive in a pathological sense, though adequate for ascertaining the causes of death, that research beyond routine post-mortem examination would be likely to lead to some improvement in the treatment of the insane, and that one pathologist should be appointed for all the London county asylums and should be provided with adequate laboratory accommodation for physiological and physical examination and for microscopical and chemical investigations.

Dr. Collins ends his paper with a statement of the points in his opinion to be "borne in mind by those who shall in the future seek to explain and illumine this dark continent of mental disease." Some of the points he enunciates seem distinctly to encroach on what was laid down by the subcommittee in its recommendation to the Council—viz., that the pathologist "should not have charge of, nor interfere with, the clinical treatment of the patients, and his work

must in no way conflict with that of the medical superintendent." How, if this is carried out, he can "duly and wisely" observe mesmerism and electro-biology, ascertain the effects of lead, mercury, arsenic, silver, coal gas, &c., on the mind, and the temporary and abiding effects of heat and electricity, is not stated. Of the pathological work already done in asylums little notice is taken, though the Yorkshire and Lancashire asylums are kindly taken by the hand in one line. If English asylums were referred to at all, at the very least the pathological section of Bevan Lewis's "Text-book of Mental Diseases," embodying the results of the labour of years, should have been mentioned. That more work needs to be done in the County of London, however, will be denied by no one, and it is to be hoped that the Council will very soon appoint their pathologist.

Die Thierischen Parasiten des Menschen: ein Handbuch für Studierende und Aerzte. Von Dr. MAX BRAUN, O.O. Professor für Zoologie und Vergleichende Anatomie, und Director des Zoologischen Museums der Universität Königsberg. Zweite völlig umgearbeitete Auflage. Würzburg: Adalbert Studer's Verlagsbuchhandlung. 1895. (*The Animal Parasites of Man: a Manual for Students and Practitioners.* By Dr. MAX BRAUN, Professor of Zoology and Comparative Anatomy, and Director of the Zoological Museum of the University of Königsberg. Second edition, fully revised. Würzburg: Adalbert Studer. 1895.)

ONE of the most striking facts of modern science is assuredly the great change that has been effected in the conception of the rôle of the parasite as a causal factor in disease. This conception now dominates the whole range of infective diseases, and is giving rise to entirely new and fruitful lines of research, of which as yet we can but dimly perceive the issue. But setting aside this large class it is remarkable how much our knowledge of the part played by animal parasitism has widened within the past few years. No one can peruse the pages of the compendious handbook before us without being astonished at this fact. In many directions there is opened up quite a new field of inquiry, a field by no means yet exhausted. No longer have we to confine our attention to the few species of intestinal worms and of cutaneous parasites which have been so long familiar. The parasite is to be found in the blood and the tissues, and in the constituent cells of the latter. It exerts an influence which is often of the greatest importance to the functions of the body as a whole, although in the animal scale the organism itself may be of the lowest rank. Indeed, almost in proportion as the parasite is low in the scale so accordingly does its action seem to be fraught with more danger to the life of its host. This, of course, is not strictly true, since many of the protozoal organisms that have been discovered of late years are as harmless as such higher animals as trichinæ, filariæ, and echinococci are harmful. Human parasites have now been found among the protozoa, platyhelminthes, nematelmintes, acanthocephali, hirudines, and arthropoda. In the first-named group there are several amœbæ, of which the most important is the amœba coli, whilst isolated instances are given of amœbæ in the buccal cavity, in the urinary organs, and in necrosed bone (Kartulis). Among the sporozoa there are the gregarinidæ, of which the coccidia form the chief, several species being found in the tissues and organs of the body. The malarial parasites are described as forming the order of hæmosporidia. Several infusoria have been found in man, many discovered more than fifty years ago, such as trichomonas, lumbilia, and the balantidium coli. After a full description of each of these classes the book deals in turn with the more familiar parasites, each section being introduced with a general description of the morphology and life-history of the class. There is not so much detail or historical matter as in Leuckart's classical work, but it is evident that the author has spared no

pains to make his treatise complete and useful. The references to the literature of the subject are abundant, and we do not think that any material point has escaped mention.

Petit Manuel d'Antiseptie et d'Asepsie Chirurgicales. Par FÉLIX TERRIER, Professeur à la Faculté de Médecine de Paris, Chirurgien des Hôpitaux, Membre de l'Académie de Médecine; et M. PÉBAIRE, Ancien Interne des Hôpitaux de Paris. Félix Alcan, Editeur. Avec 70 Figures dans le Texte. Paris: Ancienne Librairie, Germer, Baillière et Cie. 1893.

IF there is one thing more than another in which our French confrères excel it is that power of concise and accurate diction which characterises such a large proportion of their medical and surgical descriptive work. The little book before us is marked by all the good features which are inseparable from the work of writers in whom these characteristics are marked, whilst it exhibits comparatively few of the weak points which are sometimes associated with such conciseness; the descriptions are sufficiently full to bring out most of the points on which the authors wish to lay stress, and in many instances little of importance has been omitted. The writers give what they have to say under four headings: (1) the Antiseptic Method; (2) the Aseptic Method; (3) what they call a Mixed Method; and (4) Application of Antiseptic and Aseptic Principles to Special Regions and Organs.

We should like to point out that under the first two headings there is drawn an artificial distinction which certainly does not exist, and which Lister himself would strongly decry. It is perhaps somewhat unfortunate that, owing to the fact that Lister's method received its name when the method of working was slightly different from the present mode, the term "antiseptic" should have been used; but now that we have the name it is somewhat to be regretted that issues should be confused by the introduction of the term "asepsis," for, after all, whatever methods are employed the battle of the surgeon is just as much *against* septic infection as ever it was, and it is only because the methods of carrying on this war have been somewhat improved that the new term has crept in. Lister's whole teaching goes to show that his object was to obtain an aseptic condition with as little injury to the tissues as possible, and therefore with the exclusion as far as possible of the agents that he used from the action on the tissues; and, whether the instruments are sterilised by heat or by the use of chemical reagents, and whether the water used for washing out the wounds is sterilised by means of heat, filtration, or carbolic acid, the end aimed at is the same in all cases. It therefore leads to misconception as to the principles at the root of Lister's method when this artificial distinction between antiseptics and asepsis is made. With this criticism we may pass on to indicate the contents of the work by saying that it is a small book of 180 pages, in which are described the various methods in vogue for the treatment of wounds, and for the preparation of apparatus and material for carrying on antiseptic surgery under the best possible conditions. The whole question of the sterilisation of instruments and of dressings, the preparation and sterilisation of drainage tubes, and the disinfection of the skin, of the hands of the surgeon and of the water used for the washing out of the wounds, are all clearly and succinctly given; whilst in the chapter on Regional Disinfection we have descriptions of the methods and apparatus used to obtain asepsis of the skin, of the eye, nose, ear, and mouth, of the pharynx, stomach, intestinal and urinary canals, and of the genital organs in obstetrical cases. Altogether the work is very complete and is very fully illustrated, and we strongly recommend it to anyone who wishes to have in small space and for ready reference the main points to be attended to in the antiseptic treatment of surgical cases.

THE LANCET.

LONDON: SATURDAY, MAY 18, 1895.

It still seems improbable that the Midwives Registration Bill will pass through Parliament in the present state of parties and of public business; but it is obvious that the second reading of it in the House of Lords and the very calm and judicious speech of Lord BALFOUR OF BURLEIGH bring the whole question more clearly into public view than has ever been the case before. Our readers will judge for themselves from the report of the discussion in the House of Lords. Lord BALFOUR, who has charge of the Bill, described the evils of the existing system, under which any woman, however dirty, intemperate, or ignorant, may call herself midwife without check on her practice and without responsibility to any authority. Illustrations of such a system are of weekly occurrence, and have led all responsible people to ask for a remedy. The Home Office, the General Medical Council, juries and coroners, and the medical and the lay press have been all agreed on the subject. Lord BALFOUR did not enter into any elaborate comparison of the prevalence of preventable puerperal death and disease in Great Britain, where there is no legislation to regulate the practice of midwives, and in foreign countries, where such legislation is the rule. He contented himself with the statement that a large proportion of the humbler classes are attended by midwives who have practically no training, and that the results are disastrous and often tragical. He made much of the unanimous demand for a remedy for this state of matters, and he maintained that the Bill provided such a remedy. He protested his own interest in the question and declared that it was created by looking into the facts and being convinced of their urgency. He said he had consulted all persons likely to be informed on the subject, including the President of the General Medical Council. He noticed three objections to the Bill—first, that it would introduce a new class of medical practitioners; secondly, that natural labour could not be defined; and thirdly (and he touched delicately on this last objection, scarcely spoken, but obviously held by some), that the Bill would take away "business" from the medical profession. The profession will thank him for the mere justice which he did to it in saying that their lordships would not believe for a moment that if the Bill would really diminish death and suffering the medical profession would oppose it. In concluding a speech which must make a great impression from its very moderation he said there were only three courses open—to leave things alone, to prohibit midwives altogether, or to pass some such Bill as the one he proposed. Lord THRING accepted the arguments of Lord BALFOUR, but objected to certain details. Lord PLAYFAIR, speaking for himself and for the Government, expressed sympathy with the objects of the Bill, but thought there

were difficulties which would require consideration. He asked for time in order that the Government might suggest amendments that would enable them to support the Bill.

We shall best make a present contribution to the discussion of this question by impressing on each party in the contest the strength of the opponent's case. The medical profession is deeply interested in this question. It in the long run is responsible for the lives of lying-in women, and no legislation can alter this fact. The midwives contemplated by this Bill or any such Bill are mere subordinate helpers to work under it. It has a right to insist on a clear line of demarcation between itself and its subordinates, and on a definite limitation of the distinction between medical qualifications and others. It is justified in emphasising the fact that the Act of 1886 brought midwifery into line with medicine and surgery, and that by that legislation the pretence to exercise midwifery has a semblance to the pretence to exercise medicine and surgery, which it had not before. On the other hand, those who offer such an unyielding opposition to this legislation must remember that its advocates have made out a strong case for it, that the General Medical Council is committed to it, that it has been recommended by a Select Committee of the House of Commons, and that no language has ever overstated the misery and the mischief which arise from the continued existence of a class of midwives which has no analogue in any other branch of nursing, medical or surgical. If any surgeon dealing with an open wound were approached by a nurse of the GAMP order he would refuse to operate till she left the room. Similarly it is indispensable that such persons should be ejected from the lying-in rooms of the poor. The time has come when there must be a reconciliation of conflicting views. If the midwife is to be registered it must be made clear that she is in no sense a medical practitioner. The opponents of the Bill have a right to make terms with its advocates; but they will scarcely be well advised or consult the dignity of the profession if they offer an uncompromising opposition and refuse to rescue poor women from the perils of their present obstetric arrangements. We have always maintained, and shall continue to do so, that theoretically every lying-in woman should have the means of procuring, if necessary at the public expense and by an emergency provision, the aid and advice of a medical man; but ours is a practical profession, and we have to adapt our theories to the fact that a large number of women are too poor to be attended by medical men, and that the risks arising from attendance by midwives may be much reduced. We trust that the interval which will now elapse owing to Lord BALFOUR'S compliance with the request of the Government for time will be utilised by each party for the purpose of considering this question from the other's point of view, and in well weighing the opinions of those to whom they may be opposed. We are not only a practical profession, but a humane one, and some means must be devised for abating this misery in the lives of the poor.

On Thursday, the 9th inst., Lord PLAYFAIR, on behalf of the Government, brought in a Bill for the reconstitution of the present University of London, and it was

read for the first time. The details of the Bill will be discussed at the second reading, which will probably take place next week. Lord PLAYFAIR said that the Bill only consisted of four clauses, and that it was drawn on the general lines laid down in the recommendations of the Royal Commission. A statutory commission would be appointed to frame statutes and ordinances in accordance with the general principles of the scheme, but with powers to modify details after hearing evidence from the existing University or any of the other bodies or persons affected. It would, therefore, appear that practically another prolonged inquiry will be held, as objections to many parts of the scheme have already been expressed by some of the institutions which will form constituent Colleges in the University. In particular, it is urged that the Academic Council, which is the keystone of the scheme, is much too small and that the number of its members must be increased. If this be done, its relations to the Senate and to the Faculties will require reconsideration and modification. A special clause has been introduced into the Bill to safeguard the interests of non-collegiate students—whom Professor SILVANUS THOMPSON so unwisely designated as "the country blacksmiths and cobblers." But the difficulties are much greater than the supporters of a reconstruction of the existing University appear to think. The Commissioners themselves foresaw these difficulties, and could recommend nothing more definite than the following regulation: "That the final examinations for the first degree, for internal and external students respectively, will, if not the same, represent the same standard of knowledge, and will be identical so far as identity is consistent with the educational interests of both classes of students." In practice it will be found that the non-collegiate student will be placed at a disadvantage as compared with the collegiate student, and the degrees will represent different values.

At the meeting of Convocation on Tuesday last this point was emphasised by many speakers, and especially by Mr. BOMPAS as the chief reason for rescinding the resolutions in favour of the reconstruction of the University which were passed in January last, but his motion was defeated by 238 votes against 117. It is obvious that the majority of those who attend Convocation are in favour of the recommendations of the Royal Commissioners. This is probably due to the fact that London graduates and teachers largely attend the meeting and vote, but that they do not really express the views of the whole body of graduates was most conclusively shown by the result of the voting for the election of a Fellow of the University. This does not require a personal attendance, and the poll was a very heavy one, there being 1231 votes for Dr. NAPIER and 733 for Mr. COZENS-HARDY. This is a clear proof that a large number of the country graduates are opposed to the change, for Mr. COZENS-HARDY is one of the most influential advocates of reconstruction, while Dr. NAPIER is in favour of there being two Universities in London—viz., a Teaching University separate and distinct from the present examining institution and the existing University on its old lines. The results of the voting on Tuesday do not presage the passing of the Bill.

At the presentation on Wednesday, Lord HERSCHELL endeavoured to prove that those who held that the changes suggested would lower the degrees, or that they would injuriously affect non-collegiate students, were making unwarrantable assumptions; but he adduced no new arguments except that the present standard had been created by the examiners, who were largely London teachers. But this influence has hitherto been carefully safeguarded by combining with them, especially in the Faculty of Arts, provincial teachers, and in many cases non-teachers, or teachers from schools and colleges in no way connected with the University. This is an entirely different proceeding from teachers examining their own pupils in their own courses of instruction. We regret that Lord HERSCHELL unfortunately forgot, in his anxiety to defend his position towards the scheme, to refer to the medical aspect of the question.

No one can read the Factories and Workshops Bill and watch the proceedings of a Committee of the House of Commons in reference to it without wondering what are the proper functions of a department of the State and what of a local authority. The welfare of the workman in his occupation is now regarded as the concern of the former, and in his home of the latter. There can be no logical justification of this division; it must, and no doubt does, depend upon the fact that for the purposes of employment the workpeople are combined—for their home lives they have no combination. It is true that distinction is made between their employment in factories and in workshops—if in the former they are under the care of the Secretary of State, and if in the latter of the local authority; but this arrangement is the outcome of necessity, due entirely to the inability of a central department to supervise innumerable workshops and workplaces and not to any desire of the Secretary of State to leave to local authorities a duty which he would undertake if he could. Mr. ASQUITH has, in fact, indicated sufficiently clearly his own view of the situation, and there is no doubt, were he able, he would follow the workman to his dwelling-place if this be used for his work. Throughout the Bill we find the employment of the central rather than the local authority which characterises all factory and workshop legislation. In regard to ill health caused by lead or arsenic poisoning, or anthrax, if due to occupation there is to be notification to the factory inspector and not to the medical officer of health, who receives notice if the workman contracts a dangerous infectious disease in his own home. The medical officer serves an authority not always credited with independent action, and the inspector an authority less likely to be subject to local influence. Whether this governing principle of the Bill is sound, whether if abandoned to the local authority the workman would not eventually make his influence felt on that body, can be only matter for speculation. Everyone wishes the workman to be protected in his occupation, and we accept therefore the principle and may discuss the provisions of the Bill on their own merits.

We note in the first instance that it is proposed to incorporate in an Act of Parliament a requirement of a specified amount of cubic space for each person employed in a factory

or workshop. The amount which is thus demanded is 250 cubic feet, with addition under special circumstances, and for this amount we must at once admit there is no physiological justification. It is, no doubt, a compromise between the physiologist and the employer, who, to carry on his business, cannot pay more than a limited rental. Hitherto the cubic space to be provided, whether in common lodging-houses or in houses let in lodgings, has been left to be defined by by-law, and we doubt the expediency of giving a statutory sanction to an amount so small as that stated. It can only be justified if 250 cubic feet is a distinct advance upon the amount generally provided. The proposal as to lead and arsenic poisoning and as to anthrax we have already referred to in one sense, but it must also be considered in another. It suggests that the medical officer of health is not concerned with disease wherever caused, but only when it is not caused, by an occupation. This raises a very large question and demands the serious consideration of the Secretary of State and of the Local Government Board. It is the suggestion of a principle that must in the end be detrimental to the workpeople, and, inasmuch as it puts a limitation to the scope and usefulness of the medical officer of health, tends to prejudice the future of this office.

We observe that the Bill only concerns itself with these diseases when caused by an occupation, and the scope of the Bill, we presume, necessitates the adoption of this course; but we wish it were otherwise. Their notification is the proper forerunner of measures for their prevention, and we doubt if any more salutary lesson could be given to a sanitary authority than to require the notification of all cases of lead poisoning which might result from the supply by that authority of lead-poisoned water. The difficulty which underlies the proposal of notification of lead poisoning is that it is a chronic malady, and hitherto notification has been limited to certain infectious diseases running an acute course and lasting but a few days or weeks. How this difficulty is to be overcome we do not profess to say. The Bill now before Parliament will give opportunity for experience to be gained of any difficulty attending the notification of a chronic malady.

The proposals of the Bill as to bakehouses are admitted by Mr. ASQUITH to be inefficient. It was evidently not considered in the first instance to be the occasion for a radical change in the law dealing with these places. This Mr. ASQUITH proposes to amend, and his proposals will be awaited with interest. Some of the amendments of which notice has been given are impracticable, but they indicate a praiseworthy desire to deal with a subject which has been of late years much before the public. Among other useful provisions is that which prohibits an employer from knowingly putting out wearing apparel to be made in a building in which there is a case of scarlet fever or small-pox, and which Dr. FARQUHARSON properly proposes should be extended to include other dangerous infectious diseases, a proposal which does not appear to commend itself to the Government; another is that which will give facilities to local authorities to know of places occupied by out-workers; and again another which requires lavatory accommodation to be provided in every factory or workshop in which lead, arsenic, or other deleterious substances are used.

Interest will undoubtedly centre in the proposals of Sir JOHN GORST to prohibit the employment of children under the age of twelve years in any factory or workshop, and in a similar proposal of Mr. JOHN BURNS which would extend the prohibition to thirteen years. There is, of course, much to be said in favour of this principle, and the whole question will, we presume, turn upon the practicability of its application. The discussion on this point will excite great attention.

Annotations.

"Ne quid nimis."

THE HEALTH OF LORD ROSEBERY.

THE simple matter of a speaker stopping for some thirty seconds in the middle of a speech has been made the text for a host of unfounded rumours. We have authority for stating the following facts. The Prime Minister had had a very fatiguing day; after the usual morning's work he attended the Drawing Room and had a succession of important interviews until a late hour in the afternoon; he then entertained twenty people at dinner, being in excellent health and spirits. Not having originally intended to take any part in the proceedings at the National Liberal Club he had prepared no set speech, and therefore (as will happen to the most practised orator when speaking extempore), being very tired, he lost for a moment the thread of his argument. Receiving a clue from Mr. Campbell-Bannerman he went on with his speech as if nothing had happened. His lordship is now cruising with Lord Spencer on the south coast in the yacht *Enchantress*.

THE ATTEMPTED ASSASSINATION OF HIS EXCELLENCY LI HUNG CHANG.

DR. DEPASSE of Peking sends us the following accurate description of the wound of his Excellency Li Hung Chang:—"On April 23rd, at 4.20 in the afternoon, the Viceroy was wounded. He was in his green chair, and it was his habit to hold his head slightly bent and to look over the top of his spectacles. This detail will aid me in explaining the direction of the wound. The assassin stood on the right of the Viceroy, who was struck beneath the left eye. As soon as possible after the injury I was summoned and arrived. He was stretched upon the sofa, tranquilly smoking his water-pipe as if nothing extraordinary had happened. Presently the medical man, Lin, arrived, and we proceeded together to make a first examination. The weapon used was a revolver of six or seven millimetres calibre, and of American make. The wound of entrance was situated at a point half a centimetre below the inferior border of the orbit on the left side, and about one centimetre outside a vertical line passing through the centre of the pupil. The left lens of the spectacle of the Viceroy was broken by the bullet, the fragments, however, leaving the eye essentially intact. The wound only bled slightly. The left nostril contained clot, and the sputa were blood-stained. Seeing that the assassin crossed over to the right of the Viceroy, and that the latter had been wounded on the left side, one would have expected to find the path of the bullet in an oblique direction; and although the probe which we introduced into the wound penetrated directly from in front backwards to a depth of five centimetres it is possible that at the moment of the accident the Viceroy had his head turned to the right. It is also possible that the projectile had ricocheted on the malar bone, which is very hard. It is possible, too, that the bony fragments concealed the real path of the bullet, and that our probe simply

passed into the maxillary sinus, of which the anterior wall was indubitably fractured. An injection passed in by the wound came out by trickling down the nose. Two suppositions are open to us: either the projectile wounded the anterior wall of the maxillary sinus, crossed this cavity, and buried itself in the posterior wall, or it crossed the maxillary sinus and lodged behind the malar bone in the zygomatic fossa. Of these two alternatives the first was by much the most grave, as it would have given rise to the fear that the presence of a projectile in the cavity of the sinus would put an obstacle in the way of the complete restitution of the elements which go to make up its formation—namely, bone, periosteum, and mucous membrane,—and would bring about a chronic suppurative condition which would be extremely trying for the patient and would lead to an operation such as cutting through the anterior wall of the maxillary sinus to extract the bullet. If we take the second alternative the conditions are very much simplified. There is nothing to stop the perfect and rapid healing of the wound and tissues, and the bullet could stay in the soft parts where it had gone without giving rise to any accident. A little inflammation would be produced, and it would be an easy matter to extract the bullet by a simple incision. It certainly would have been preferable to extract it then and there, but it would be necessary for that to have certain knowledge of the precise point at which it lay, knowledge which we could not acquire without a long investigation. It is obvious, therefore, that this wound, already grave in itself, could take a character still more grave, especially as it was complicated by the presence of a foreign body in its depths. It is easy to preserve perfect asepticity at the point of entrance of the bullet, but the natural opening of the sinus into the nasal fossa holds the door wide open for infection, so it is evident that we must not forget that the healing is not yet completed."

THE DIAGNOSIS OF SMALL-POX: IMPORTANT JUDGMENT.

A CASE is reported from the Dublin Court of Exchequer which may come to have serious consequences for medical practitioners notifying cases of infectious disease under the Infectious Disease (Notification) Act, 1889. A draper of Rathmines brought an action against Dr. John E. Hadden of the same town for damages alleged to have been sustained in consequence of his "having negligently, improperly, and unskillfully diagnosed as small-pox" a disease from which a shop-girl in his employ was suffering. The case was notified as such, was reported to the municipal authorities, and the girl was removed to the hospital. At the hospital the case was diagnosed by Dr. Day, the resident medical officer, as erythema nodosum, the disease being associated with complications. But Dr. Day said the mistake was a very natural one to fall into, and Dr. Hadden, in his evidence, explained that he had given half an hour to the diagnosis, and that there were symptoms which he could only explain as being due to small-pox. In the meantime rumour of small-pox had got about, the plaintiff alleged loss of business as the result of the error, and the jury, after Mr. Justice Murphy's summing up, found a verdict for him, and awarded him £100 damages. On behalf of Dr. Hadden the highest medical witnesses appeared—such as Dr. Little, ex-president of the Royal College of Physicians of Ireland; Dr. Thornley Stoker, President of the Royal College of Surgeons in Ireland; and Dr. J. W. Moore, who had himself been concerned with no less than 3000 cases of small-pox. These all gave evidence to show that the case exhibited symptoms of incipient small-pox, and that Dr. Hadden was justified in the action he took. The Infectious Disease (Notification) Act, 1889, makes it

compulsory on the part of every medical practitioner to notify a case of infectious disease "forthwith on becoming aware that the patient is suffering from" such disease. Dr. Hadden, utilising his best abilities and his utmost care in the matter, did "become aware" of the existence of infectious disease, and experts of eminence say he was at the time right in forming the opinion which he did. There was, therefore, no negligence in the medical sense of the term, and quite apart from the legal question whether such a document as a notification certificate is not privileged where all due care is exercised by a legally qualified practitioner, it becomes a question how far a medical practitioner can be held responsible for action taken under a compulsory clause when no negligence can be proved against him. Vaccination has so modified certain incipient phases of small-pox as to make it difficult in the extreme to speak without risk of error as to every case submitted for our opinion. The report of the Statistical Committee of the Metropolitan Asylums Board for 1893 states that out of 2441 cases sent to their hospitals certified to be small-pox, 81, or 3·3 per cent., turned out not to be suffering from that disease. This shows the enormous difficulty to be contended with, and it indicates how far this legal decision will enable aggrieved persons to proceed against medical practitioners when they have performed their statutory duty to the best of their ability and without a vestige of any negligence. For these reasons we trust that the Dublin case will not be allowed to rest where it is. It is a matter that affects the medical profession as a whole, and it is deserving of serious consideration whether it should not be taken up on their behalf and sent to a court of appeal.

TELEPHONES AND THUNDERSTORMS.

Do overhead telephone wires exercise a controlling influence on the electricity of the atmosphere? That the converse occurs is evidenced only too plainly by the disturbances in telephonic communication which result from the presence or proximity of a thunderstorm. More than one instance may be recalled of a telephone wire being struck by lightning, to the detriment of the instrument and to the discomfiture of the listener. Such a case was commented upon in THE LANCET of May 5th, 1894. But do overhead wires ward off lightning? We are indebted to the *Decorators' Gazette and Plumber and Gasfitters' Review* for the "fact" that the risk to buildings of being struck by lightning in places unprotected by overhead telephone wires is nearly five times greater than in places provided with a telephone system. An immunity of this kind cannot be considered improbable. It is to be remembered that an overhead telephone wire becomes in point of fact a lightning conductor, and in this capacity may act in two ways: (1) by equalising differences of potential it may prevent the occurrence of the disruptive discharge; or (2) receiving a lightning charge it may carry the current to earth. With reference to the first point there can be little doubt that overhead conductors if connected to earth do play an important part in the distribution of atmospheric electricity. Lord Kelvin in a recent paper (read before the Philosophical Society of Glasgow) states that the difference of potential he obtained between the earth and an insulated burning match placed nine feet above the ground was 200 to 4,000 volts. What, then, is the result of permanently connecting by a good conductor the earth and the atmosphere directly above it, a condition which exists in the case of single-wire telephone circuits? Such an arrangement must tend to equalise potential and prevent the accumulation of those charged masses which no doubt form the nucleus of the storm cloud. This equalisation will continue to take place in all conditions of weather. But when a storm does occur it is obvious that if struck by lightning the wire

carries the current to the point of greatest danger—viz, to the instrument and to anyone in its vicinity. Therefore, unless the strictest structural precautions be taken such a wire becomes a source of danger rather than of safety. To obviate this danger every post or support for overhead wires ought to be fitted with a lightning guard, and every instrument, whether using the earth as a return or not, should be fitted with an efficient form of lightning arrester. Where the overhead wires are not connected to earth, as is the case with overhead "lighting mains" and "twin" telephone circuits, any equalising effect upon potential difference is practically lost, and any circuit connected with overhead wires of this kind must be dangerous, inasmuch as such wires become lightning conductors in all but the saving device of an earth connexion. For "lighting mains" it can scarcely be doubted that the underground system is in most respects the better: (1) for obvious reasons connected with the size of the cables; (2) for the electrical reason that if carried overhead no earth connexion is allowable by the rules of the Board of Trade. For telephones the adoption of the "twin wire" system seems to bring with it the advisability of placing the wires below the surface of the ground, inasmuch as this system does away with the earth return as part of the circuit. It therefore appears that from an electrical point of view there may be in overhead wires an element both of safety and of danger. The latter will certainly predominate unless supports be protected with lightning guards and every instrument provided with an efficient "protector"—that is, with an unfailing means of carrying a strong current to earth without passing through the instrument. Is this secured in practice? Can it be secured with any certainty by even the best lightning arrester or earthing device of any description? So long as the coarse expedient of a connecting wire is necessary for the guidance of electrical energy, so long must this question of "wiring," with its safeties and its dangers, be one of great and growing interest. But it may be pointed out that if every house were fitted with an efficient form of lightning guard a greater immunity from lightning discharges would be secured than that which at present exists with the closest network of overhead telephone wires.

LAUNDRIES AND FACTORY ACTS.

It was hardly to be expected that a proposal to bring laundries under the Factory Acts would be carried into effect without some opposition from the industry immediately concerned, more especially so when regard is had to the efforts which were made to include laundries under the Factory Act of 1878, and to the opposition which the proposal encountered. Section 19 of Mr. Asquith's Factory and Workshops Bill enacts that the Factory Acts shall apply to any laundry which is carried on by way of trade or for purposes of gain, and that where steam, water, or other mechanical power is used the laundry is to be regarded as a non-textile factory; in any other case as a workshop. It is, however, enacted that Section 19 shall not apply to any laundry in which the persons employed are members of the same family dwelling there. Section 6 of the Bill provides that if any occupier of a factory or workshop knowingly causes or allows wearing apparel to be made, cleaned, or repaired in any building, any inmate of which is suffering from scarlet fever or small-pox, he shall be liable to a penalty of 20s. The Northern Counties Laundry Association have objected to this section on the grounds that "inmates suffering from scarlet fever or small pox" would only be found where the operatives live on the premises, but that places such as these will be for the most part exempt owing to the saving clause in Section 19. It would certainly seem to us, as we suggested in our leading

article of March 9th last, that there is some ambiguity in the provisions of the Bill in regard to laundries which should be cleared up. Mr. Asquith stated, as we pointed out, that "the Act should apply only to laundries carried on by way of trade, and not the laundries where the persons employed were members of the same family." It is difficult to see how the provisions of the Bill as at present framed will prevent what might be called family laundries from taking in other people's washing, and the Bill should, it seems to us, be amended so as to include all places where washing is taken in for gain. In Section 6 there should too, we think, be an amendment making the prohibition applicable to all dangerous infectious diseases, and not only to scarlet fever and small-pox, as at present; selections of this kind are dangerous precedents. The Laundry Association above referred to also object to Section 13, which proposes to reduce the amount of overtime allowed by the principal Act—i.e., the Factory and Workshops Act, 1878. The association point out that the laundry business is liable to sudden pressure of work, that there is little work at the beginning of the week, and that the work must be done in the week in which it comes in. The association consider that the number of days allowed for overtime by the principal Act should be retained.

AN EPIDEMIC OF PARALYSIS IN CHILDREN.

In the *Medical News* a few months ago Dr. Andrew Macphail of Montreal gave an interesting and exhaustive account of his observations on the cases affected in what was apparently an epidemic of paralysis in children occurring in the State of Vermont. This epidemic commenced late in June, increased during July, and culminated in August, although occasional cases continued to occur during the following few months; by the end of the year the formidable malady had practically disappeared. Dr. Macphail was successful in obtaining notes of 91 cases out of 120 that were affected. In the mode of onset and in the nature of the symptoms the cases varied a little, so that nothing absolutely distinctive can be said as to these points except that there were loss of power, muscular wasting, and the reaction of degeneration in the affected muscles. Occurring as it did in epidemic form it was at first naturally suspected of being epidemic cerebro-spinal meningitis; but in no case were the symptoms typical of this disease present. There was general absence of marked head retraction and of opisthotonos, sensory symptoms were not prominent, the headache was chiefly frontal, and psychical symptoms were neither frequent nor severe. Although indefinite rashes were common, in no case was there any petechial eruption, and the serous membranes were not affected. In only two of the cases were joint symptoms present. Roughly speaking, the clinical condition was characterised by an onset with febrile and digestive symptoms and general malaise, and this was followed by paralysis of one or more limbs which usually persisted, but in some cases passed off, at least to a great degree. In some of the cases there was severe pain in the limbs, in two, as we have already remarked, there was effusion into the joints, while some were unassociated with pain or severe symptoms of any kind. Dr. Macphail also gives notes of six cases occurring in adults, apparently cases of similar character and presumably part of the same epidemic. Unfortunately post-mortem examination was not obtained in any of the fatal cases. Thirteen per cent. of the patients died, but Dr. Macphail, in discussing the probable nature of the affection, comes to the conclusion that it was of the nature of poliomyelitis, with, in certain cases, some inflammation of the peripheral nerves, probably not secondary, but either as an independent affection or as the result of the same cause as in a case described some years ago by Dr. Gowers. In regard to the etiology of the

epidemic Dr. Macphail is inclined to attach much importance to the geological character of the small area in which the epidemic occurred. The Great St. Lawrence and Champlain geological fault culminates in the district, and this fault, with the large number of accompanying smaller ones, must, he thinks, form numerous gaps and reservoirs into which contaminated waters may fall and again burst forth in unexpected quarters. The incidence of the epidemic also in the hot months of the year—a character of ordinary infantile paralysis now recognised for some time—is also noteworthy, and seems to us, taken with the other peculiarities of the epidemic, to confirm Dr. Macphail's opinion that the disease was essentially a poliomyelitis. It has not yet been definitely established that this is a microbic disease, but the occurrence of such an epidemic as this would appear to greatly strengthen such a hypothesis.

THE DEMORALISING TENDENCY OF MEDICAL ADVERTISING.

WE have appealed to the medical practitioners of Southport who are associated with hospitals or sanatoria to assist the profession in the repression of advertising methods by objecting to their name appearing in the newspaper advertisements of their various institutions, and we have every confidence that that appeal will be respected. But we notice in the *Southport Visiter* a writer who is disposed to become the apologist for announcements with regard to local medical men in the local papers. He is not a very violent objector to the ancient methods of the profession which are dictated by modesty and good taste. But he just hints that they are a little out of date and need either explanation or abolition. We hope he will reflect further on the matter and see how one act of advertisement leads to another, and how the attitude of the medical profession with respect to advertisement has served always to maintain clearly the distinction between pretenders and real healers and helpers of mankind.

BACTERIOLOGY IN BUCHAREST.

IN a series of annals published in 1893, but received by us last year, Professor Victor Babes gives an account of the investigations in pathology and bacteriology carried out in the Institute at Bucharest between the years 1889 and 1893. Some of the most interesting papers are those connected with the experiments on glanders, which seems to be a common disease in Roumania. Professor Babes claims to have been the first to describe the glanders bacillus in a paper published at Budapest in the *Orvosi Hetilap*, in which he narrates how he found the organism in the ulcerations and abscesses and in the softening tissues of a man affected with glanders. He gives a series of measurements of the bacillus and also gives the method of culture used; but, most important of all, he points out that the virulence varies considerably in different cases; that certain forms will grow rapidly on agar, blood serum, and even gelatine, whilst others do not grow at all except when the gelatine is kept at a comparatively high temperature. He does not, however, lay sufficient stress upon the fact that the question of variability extends also to the virulence and toxine-forming power of the organism when it is grown outside the body. One of the most important facts demonstrated in recent years is that the mallein-forming power of the glanders bacillus diminishes very rapidly after the organism has been cultivated as a saprophyte even through a few generations. Prof. Babes points out, however, how important it is for cultural purposes first to make cultures on potatoes, as the glanders bacillus grows rapidly enough on this in the first instance; and, secondly, to pass suspected material through a guinea-pig, from which almost pure cultures of the glanders bacillus may be obtained. As regards the method of infection Prof.

Babes is convinced that the glanders bacillus often finds its entrance through the skin, as he has found dilated hair follicles filled with bacilli and surrounded by a zone of embryonic cells, from which zone extends some slight infiltration along the lines of the vessels; whilst in certain patients he has also observed small, reddish, hard papillæ, but without any interruption of the continuity of the skin in the first instance, which gradually develop into ulcers. He has been able to prove this same method of infection by rubbing the glanders bacillus, mixed with lanoline, into the skin of guinea-pigs; and Dr. Nocard has obtained similar results. This, of course, does not take the place of infection by the mucous membranes, which he found to be a frequent point of attack. It is also pointed out that a modified form of glanders is sometimes met with in horses; he speaks of it as pseudo-glanders, and finds that it runs a chronic course, the horse recovering. In Roumania glanders is comparatively common in the human subject, and Prof. Babes describes four cases of this disease in man. The most important point he notes is that as other bacteria are so frequently met with along with the glanders bacillus the real disease is probably very frequently not diagnosed. The conclusions as to the use of mallein (to which Prof. Babes gave the name from its analogy to tuberculin) differ somewhat from those now usually accepted, especially as he maintains that the active product does not ordinarily give rise to any pronounced action at the seat of inoculation in glandered animals, and he appears to rely entirely on the temperature indications in determining whether the reaction obtained was the "glanders reaction" or not. In support of his thesis that glanders is often contracted through the skin, a couple of cases of chronic glanders of cutaneous origin are fully described; one of these cases was fatal, and the other left hospital uncured. The latter patient had never had anything to do with horses; the disease began by cutaneous eruptions without loss of substance; although the eruptions became ulcerated, and around them there was marked phlegmonous infiltration, the processes never became generalised. Associated with the glanders bacillus in this case were many saprophytic organisms, and in cultures it was often some time before the glanders bacillus could be distinguished amongst them. This bacillus did not appear to be specially virulent, as guinea-pigs inoculated with it seemed to recover from the glanders, but to succumb to a saprophytic poisoning at a later stage. In the second fatal case the same general features were observed, and in addition it was noticed that with the glanders bacilli were associated enormous masses of streptococci and saprogenic bacilli—in fact, these far outnumbered the glanders bacilli.

OUR FACIAL TRAITS.

WE are all of us physiognomists. We insensibly read each other's faces and receive favourable or unfavourable impressions which in the main, perhaps, are not bad guides in the conduct of life. We are all, at any rate, influenced by such impressions. Some men there are, no doubt, who, like Talleyrand, "can make their faces wizards to their minds, disguising what they really are"; but Shakespeare makes King Duncan speak too peremptorily when he says—

"There's no art
To find the mind's construction in the face."

Among the papers that have recently appeared which may be read with interest is a suggestive article by Dr. Louis Robinson in *Blackwood* for the present month, under the title of "Trades and Faces." It is in continuation of one by the same author, "On Acquired Facial Expression," that appeared a year ago in the same journal. There have been many attempts from the time of Lavater, and before him, to the present day to place physiognomy on a sound basis,

but it cannot be said that these have been altogether successful or that the observations which have been made have been reduced to any useful or generally recognised system. The nervous mechanism of the face-making forces, by which the repetition of stimuli, acting in constant succession and over considerable periods of time, tend to bring about changes of expression, has been explained on physiological grounds; the influence of environment acting from without through the avenues of the senses, the moral and emotional impulses and "the pale cast of thought" acting from within, have been analysed and studied. We are enabled to trace the causes of facial expression back to muscular action in response to some dominating influence, or to nutritive changes which are induced by disturbances in the sympathetic nervous system, the effects of which become slowly appreciable. We can lay bare, as it were, the physical basis—the plastic organic medium—in which our reason and our passions play their parts on the world's stage of social and intellectual life, giving to each the stamp of his individual identity as well as the certificate, to some extent, of his calling in life. There are streaks of light here and there in the crude mass of facts, and some faint but valuable indications of the why and wherefore of the various aspects we wear. These may one day afford us a clue to the disentanglement of phenomena so apparently complex and enable us to arrange and systematise our knowledge into groups of distinctive casts and expressions of countenances and to construct a scientific system of physiognomy, but at present it is seemingly a far-off science. Dr. Louis Robinson alludes to the influence of the sympathetic nervous system, which is practically independent of the will, on the nutrition and growth of the body, and traces through the aid of its complex functions an explanation of certain curious points of facial resemblances among people whose pursuits and mental habits at first sight appear to put them as far as the poles asunder. He takes the common facial traits seen in certain classes in illustration. Professional musicians, priests, and sensualists, all, as a rule, bear, he says, distinct certificates on their countenances that they belong to the category of those who come under the preponderating influence of the sympathetic system. His paper is provocative of thought and speculation, but the subject forms an interesting rather than a profitable study, for it involves many nice distinctions, and much subtle reasoning about the physics and metaphysics of life.

PROFESSOR TARCHANOFF ON MUSIC AS A THERAPEUTIC AGENT.

PROFESSOR TARCHANOFF of St. Petersburg has been investigating the influence of music upon man and other animals. The subject is by no means a new one. Music was used in treatment by the physicians of Greece and Rome, and the case of David and Saul will naturally suggest itself. In recent times Dagié and Féré have investigated the effect of music upon the respirations, the pulse, and the muscular system in man. Professor Tarchanoff made use of the ergograph of Mosso, and found that if the fingers were completely fatigued, either by voluntary efforts or by electric excitation, to the point of being incapable of making any mark except a straight line on the registering cylinder, music had the power of making the fatigue disappear, and the finger placed in the ergograph again commenced to mark lines of different heights according to the amount of excitation. It was also found that music of a sad and lugubrious character had the opposite effect and could check or entirely inhibit the contractions. Professor Tarchanoff does not profess to give any positive explanation of these facts, but he inclines to the view that "the voluntary muscles, being furnished with excito-motor and depressent fibres, act in rela-

tion to the music similarly to the heart—that is to say, that joyful music resounds along the excito-motor fibres and sad music along the depressent or inhibitory fibres." Experiments on dogs showed that music was capable of increasing the elimination of carbonic acid by 16·7 per cent., and of increasing the consumption of oxygen by 20·1 per cent. It was also found that music increased the functional activity of the skin. Professor Tarchanoff claims as the result of these experiments that music may fairly be regarded as a serious therapeutic agent, and that it exercises a genuine and considerable influence over the functions of the body. Facts of this kind are in no way surprising, and are chiefly of interest as presenting some physiological basis for phenomena that are sufficiently obvious. The influence of the war chant upon the warrior is known to even savage tribes. We are accustomed to regard this influence simply as an ordinary case of psychical stimuli producing physiological effects. Professor Tarchanoff evidently prefers to regard the phenomena as being all upon the same plane—viz., that of physiology,—and until we know the difference between mind and body and the principles of their interaction it is obviously impossible to controvert this view successfully. From the immediately practical point of view we should not ignore the possible value of music in some states of disease. In melancholia and hysteria it is probably capable of being used with benefit, and it is worth bearing in mind in dealing with insomnia. Classical scholars will not forget that the singing of birds was tried as a remedy to overcome the insomnia of Mæcenas. Music is certainly a good antidote to the pernicious habit of introspection and self-analysis, which is often a curse both of the hysterical and of the highly cultured. It would seem obvious to have recourse by preference to music of a lively and cheerful character.

THE DIFFUSION OF SMALL-POX.

IN England and Wales the prevalence of small-pox fortunately happens to be slight, but things are otherwise in both Scotland and Ireland. In London last week there were only half-a-dozen notified cases with a like number of admissions to hospital, against 4, 12, and 8 admissions in the three preceding weeks respectively. The patients in hospital on any Saturday since the first week of April have not numbered 50. During the present month we hear of Lichfield and Derby in the Midlands, and Liverpool in the north-west, having had experience of small-pox, but only to a minor extent. The home counties have been remarkably free during the past month, some small amount being recorded in the vicinity of Romford, though not in that town. In Scotland during the first three months of the present year there were 22 deaths registered from small-pox in the eight great towns, the numbers in the three several months being 8, 6, and 8 respectively, 8 occurring in Glasgow, 13 in Edinburgh, and 1 in Leith; 2 were in vaccinated persons, 3 in unvaccinated individuals, and in as many as 17 no statement is forthcoming with respect to the condition of the deceased as regards vaccination. In April there were 12 other deaths registered in the eight towns, 10 in Glasgow and 2 in Edinburgh; of the deceased, 3 were children under the age of five years, 1 vaccinated and 2 unvaccinated; while 8 others were over the age-period, beginning at twenty years, of whom 4 were vaccinated and the same number unvaccinated. Glasgow is even now suffering from an outbreak, in which the leading feature has been the spread of the infection mainly by the agency of cases concealed or not diagnosed for considerable intervals of time, thus allowing the seeds of the disease to be disseminated far and wide. The wonder is that the prevalence has been kept down to its present dimensions, the total of cases up to the middle of last week being something over 70, with

5 fresh attacks on each of two successive days. The initial case appears to have occurred so far back as early February, in the person of a rag worker, whose attack was directly responsible for 30 cases; another was in a person the nature of whose illness remained undiscovered from the middle of February until the middle of March, giving rise to many attacks; whilst yet another sufferer was taken ill on March 3rd, and the symptoms of small-pox were only recognised on April 10th, persons to the number of 18 having meanwhile caught the infection from him. In still another instance a child was taken by its parents to a dispensary in ignorance of the fact that it was suffering under malignant small-pox, and 6 persons were infected from it. These are but some of the difficulties with which the sanitary officials have had to cope in their endeavours to stay the spread of the disease. Many persons remain under observation in the reception-house. In Dublin the small-pox epidemic wanes very slowly, the number of patients remaining under treatment at the close of the first week of May being, so far as acute cases go, above that of three weeks earlier—namely, 58, with other 30 convalescent patients at Kilmainham South Dublin Small-pox Hospital. The admissions in the same week were 17, or 3 in excess of the previous week, the deaths being 2, each in a person aged between five and twenty years, vaccinated and unvaccinated respectively. There is now reason to fear an extension of the infection to other parts of Ireland. Occurrence of the disease in Enniscorthy, where an outbreak of small-pox has quite recently been notified, is attributed to importation of infection from the capital, and instances in county Wexford are recorded. Wexford town has recently had several cases to isolate, and two cases in Clonmines were removed to hospital at the close of April, the patients being itinerant basket-makers, who had many opportunities for spreading the disease, and on becoming very ill took refuge in a barn, where they were found. The assistance of the Local Government Board inspectors was sought, and Mr. Stafford was on the scene not many hours later. The outlook at present is not altogether satisfactory.

SPURIOUS ANTITOXIC SERUM.

It is a common saying that there are men in this world who would do anything to gain money, but the *miserables* alluded to by the French Minister of the Interior on the 6th of last month in the Chamber of Deputies at Paris must be demons bearing the outward form and semblance of man, and not in reality human beings. In a speech denouncing the infamous traffic which is carried on under the guise of serum therapy, the official who corresponds to our Home Secretary is reported to have spoken to the following effect: "To unhappy mothers whose children have been attacked by croup they sell tubes filled with putrid blood taken in some knacker's yard or elsewhere." Emanating from so authoritative a source this accusation did not, of course, require any confirmation, but had such been necessary it was forthcoming from Dr. Lannelongue, who mentioned several instances in which serious, and even mortal, consequences had attended on the employment of badly prepared serums. Deeply moved by these shocking disclosures, the Chamber forthwith accepted by 516 voices against 2 the first draft of a short law, containing four articles only, which was submitted by the Minister with a view to the extinction of this peculiarly villainous crime. According to the first article, "attenuated viruses, therapeutic serums, modified toxins, and analogous products susceptible of being used in the prophylaxis or the treatment of contagious diseases, as well as substances of organic origin, non-definable chemically, but destined for employment in acute or chronic affec-

tions, by means of subcutaneous injection, shall only be issued, whether gratuitously or on payment, on the express condition that both as regards manufacture and source of origin they have been the object of an authorisation granted by Government after taking the advice of the Consultative Committee of Hygiene and also of the Academy of Medicine." The authorisation is to be temporary and revocable, and a special commission of inspection will be appointed to ensure its efficaciousness. It is much to be hoped that this opportune ordinance will have the effect of nipping the nefarious traffic in the bud. The preparation of therapeutic serums is an operation demanding the utmost delicacy and care. Analysis so far is powerless to determine the purity and curative value of a serum. It is, therefore, manifestly of the utmost importance that everything connected with the production and distribution of so potent a factor for both good and evil should be under the closest control. It must be added, in conclusion, that the serum-protecting *projet de loi* contains a clause to the effect that its prescriptions are not applicable to Jennerian vaccine, human or animal.

"OUR EYES."

A CORRESPONDENT has sent us a circular received by him from the author of a book entitled "Our Eyes," requesting that it may lie on the table of his consulting room, asking that patients may be recommended to him for the glasses they require, and graciously promising, as a reward for such favours, the remission of 15 per cent. of any amount they may pay the optician. We should be blind, indeed, if we did not notice such a circular as one entirely inadmissible. It is marked "private and confidential," and on this occasion we shall treat the question impersonally; but we shall not bind ourselves to do so on future occasions. The very fact that the tradesman who is the author of the circular marks it "private and confidential" is a proof that he is making a proposition to a member of our profession which will not bear publicity, and which is, indeed, uncomplimentary to his sense of honour. The acceptance of such a remission, or rather commission, from tradesmen by medical men has been in principle condemned by judges and by the General Medical Council, and we are amazed that any respectable tradesman's own sense of what is fit should allow him to issue such proposals to the profession.

LEUCOCYTOSIS IN DIPHTHERIA.

A CLINICAL and experimental study of the leucocytosis of diphtheria has been made by Dr. J. L. Morse, who publishes his results in the *Boston Medical and Surgical Journal* for March 7th. He remarks that a great deal of work has been done during the last few years on the subject of leucocytosis, especially in acute diseases. Diphtheria, however, has been rather neglected. As it is an acute disease, with marked constitutional symptoms due to the absorption of the toxic products of bacterial growth, a leucocytosis is to be expected. The observations hitherto reported have shown this to a marked degree. In all the cases that Dr. Morse examined the presence of the Klebs-Löffler bacillus had been previously demonstrated, and none of them were complicated by other diseases, acute or chronic. The blood was in every case taken from the lobe of the ear and examined with a Thoma-Zeiss apparatus. It was diluted (1 to 200) with a 3 per cent. salt solution coloured with methylene blue and the corpuscles in one cubic millimetre were counted. A differential count of from 300 to 500 white corpuscles was then made, the classification recommended by Ehrlich being used; other cover-slips for this purpose were hardened by heat or benzene and stained with Ehrlich's "triple stain." As far as possible the blood was taken at the

same time of the day and between three and four hours after a meal. The condensed results of Dr. Morse's investigations are appended to his paper in the form of a table, arranged according to the day of the disease. It is evident from this table that diphtheria is accompanied by a very marked hyper-leucocytosis, larger even than that found in pneumonia. This has become well marked by the third day, and is probably present earlier. In a general way it increases as the disease progresses, is greatest at the height of the disease, diminishes during convalescence, and disappears with or soon after the membrane. It also roughly corresponds with the amount of membrane, varying with it directly. There are notable exceptions to this rule, however, to be found in the table. In one case where the throat was full of membrane only 8000 white corpuscles were found, whilst in another where the amount of membrane was moderate there were 42,000 white corpuscles. There seems to be no evident connexion between the glandular enlargement and the increase of leucocytes. It is noticeable, however, that the fatal "septic" cases with greatly enlarged glands all showed a very marked hyper-leucocytosis. Some of the mild cases, nevertheless, with little or no enlargement of the glands, showed just as much. The condition of the lungs and kidneys apparently had no influence in determining the number of white cells. It thus becomes evident that the hyper-leucocytosis is not due to any symptom or combination of symptoms, but is the result of some general influence which is present in every case. This influence, Dr. Morse considers, can be no other than that of the toxins absorbed. Whether the individual variation is due to the amount of absorption, to some difference in the virulence of the toxin absorbed, or to some difference in the resistant powers of the persons attacked must, in the present state of our knowledge, be left unanswered.

THE UNCONTROLLABLE VOMITING OF PREGNANCY.

THE last volume of the Transactions of the American Gynaecological Society contains an interesting paper by Dr. Edward P. Davis of Philadelphia on this subject, with a report of three fatal cases. The paper itself and the discussion upon it show clearly the difficulty that often arises in coming to a conclusion whether it is necessary or not to induce abortion. Two of the patients whose cases are recorded by Dr. Davis apparently died undelivered; in the third the uterus was emptied artificially, but the patient died shortly afterwards. There are various local therapeutic measures short of interfering with the pregnancy that appear to have been attended with success. Among these may be mentioned elevating and supporting the uterus, either by means of a pessary or by means of tampons, the application of caustics such as chromic acid to the vaginal portion of the cervix or cervical canal, and scarification of the cervix, though having regard to the weak state of the patient in bad cases the loss of even a small quantity of blood is not a matter of indifference. A measure that must be regarded as more severe, inasmuch as it involves a risk of terminating the pregnancy when such a step has not been deliberately intended, is a moderate dilatation of the cervix. In addition to local treatment, Dr. Palmer Dudley of New York speaks highly of half-grain doses of cocaine and three-grain doses of monobromate of camphor internally. It must be remembered that even the induction of abortion will not necessarily save the patient if interference is too long deferred. Among symptoms that should suggest the necessity of emptying the uterus are especially the presence of coffee-ground material in the vomit, substernal pain and distress, with marked anæmia and emaciation. Yet every obstetrician of experience knows how unaccountably, even when the patient seems in a bad way, sudden improvement may set in, the vomiting ceasing

and normal delivery taking place at term. When the symptoms that have been mentioned are well marked it is better, however, to occasionally interfere unnecessarily rather than take the risk of deferring interference till too late. A therapeutic measure of some clinical value is to impress on the patient that the induction of abortion will be necessary if the vomiting does not cease or diminish by a certain time—three days, for instance. In some such cases, and especially if the patient objects to the operation, an immediate improvement may be observed.

LIBELLING A PROFESSION.

IN a paragraph signed "Dodo," taken from *Reynolds's Newspaper* of May 5th, the author says he never thought the medical profession too scrupulous in its methods. He goes on to say with the air of an irresponsible but infallible critic: "The experimental operations conducted by medical students and their teachers in the public hospitals put their misbehaviour beyond doubt. It is astonishing the cynical frankness with which they avow their malpractices. Thus, on the question of the putting to death of patients who are incurable sufferers, as to which something may be said in its favour, we sometimes find doctors conspiring with the relatives to accomplish this end, without asking the consent of the patient. When a doctor does this we think the medical murderer is going a little too far." Such critics take refuge in generalities. Perhaps the dignified course for the profession is to take no notice of such cheap abuse of men who do more to relieve suffering in a day than such scribblers do in a year. The putting to death of incurable sufferers is not the sin of our hospitals. Their responsibility is just the other way, and no candid and generous observer of their work can fail to see the enormous scale on which they prolong and brighten lives otherwise condemned to hopeless and depressing suffering. We challenge our contemporary to dare to insert the libel directed so glibly against a whole profession against any one of its members in particular.

THE INDIAN CANTONMENTS ACT.

ACCORDING to the intelligence from India published in the *Times* of the 10th inst., it is satisfactory to find that the new army reorganisation scheme is reported to be working so far very satisfactorily considering the many details which had to be settled and the numerous changes which it involved; but it is very far from satisfactory to find that the only contagious or infectious diseases mentioned in the new rules under the Indian Cantonments Act are cholera, small-pox, diphtheria, and typhoid fever. Persons suffering from any of these, and refusing to go to or remain in hospital, are liable to removal from the cantonment, but those suffering from that contagious disease which works such havoc among soldiers are not interfered with; they are, it seems, to be allowed every facility for spreading a special form of contagion among our troops with perfect impunity. Can anything be more monstrously absurd and opposed to common sense? A woman may be notoriously suffering from disease and either does not seek treatment or refuses to be treated in any of the institutions specially provided for the purpose; she is to be permitted to pursue a calling which, in that condition, is a highly dangerous one, and there is to be no power vested in anyone to stop her. It is permissible, under the present ruling, to warn the subjects of such infectious diseases as are of relatively rare occurrence that they must either go to hospital and be treated there, or quit the cantonment; but such power is altogether withheld from the cantonment authorities in the case of those who are alleged to be the source and origin of another particularly common and highly contagious disease. Surely there is no unwarrantable interference with the liberty of the subject here unless it is an unwarrantable

interference to prohibit such persons from doing grave injury to other people. It seems to us to be quite as justifiable and logical to require that, under the circumstances, they should place themselves under treatment, and peremptorily be ordered to leave the cantonment if they refuse to do so, as to prohibit people from smoking or using lucifer matches in the vicinity of powder magazines. They are in both cases alike sources of danger to the community against whom it is necessary in the public interest to take such precautions and safeguards as are obviously indicated.

THE LATE MR. DURHAM.

A LARGE congregation attended at St. George's Church, Hanover-square, on Friday, May 10th, upon the occasion of the funeral of Mr. Durham. Among those present were Sir Richard Quain (President of the General Medical Council), Mr. Christopher Heath (President of the Royal College of Surgeons of England), Mr. Reginald Harrison and Mr. Willett (Vice-Presidents), Sir William Broadbent, Sir William MacCormac, Mr. Lushington (treasurer of Gay's Hospital), Mr. Howse (senior surgeon to Gay's Hospital), Dr. Braxton Hicks, Dr. Pye-Smith, Sir William Dalby (President of the Medical Society of London), Dr. Wilks, Mr. Trimmer (secretary of the Royal College of Surgeons of England), Dr. Holman, Mr. Joseph White, Dr. Pavy, Dr. Goodhart, and Dr. Langdon-Down. The theatrical profession was represented by Mr. Henry Irving, Mr. S. B. Bancroft, and Mr. Cooper Key who attended on behalf of Mr. J. L. Toole. The mourners were Mr. Herbert Durham and Mr. Frank Durham, the two surviving sons, and Mr. Frederic Durham and Mr. Francis Durham, the brothers of the deceased. The Rev. David Anderson officiated, and at the conclusion of the service the body was removed to the London Necropolis Company's station, Westminster Bridge-road, and conveyed to Woking, where it was cremated, the ashes being placed in an urn and deposited in a niche at the crematorium.

FRIEDREICH'S ATAXY AND IDIOCY.

In the last number of the *Dublin Medical Journal* Dr. Nolan gives an account of three cases of Friedreich's ataxy, all occurring in the same family, and associated with well-marked mental deficiency. The father of the patients (now aged forty-nine) has been a habitual drunkard from an early age, but with the exception of gastric and hepatic ailments, the results of his drinking habits, has enjoyed good health and has never suffered from syphilis. Nor is there any neurotic history in his father or mother. The mother of the patients is a hardy and healthy woman and has borne eight children. Of these, two died from scarlet fever and three—the third, the fifth, and the eighth—are the subjects of Friedreich's ataxy with mental deficiency; the others are described as healthy and intelligent. The eldest patient is a girl aged twenty-two, 4 ft. 7 in. in height, and weighing 7 st. She is stunted and has a lateral curvature; her features are said to be of the Malayan idiotic type, and in animation are expressive of good humour. There are slight strabismus and distinct nystagmus, but the pupillary reflexes are normal. The patient has marked lack of control over tongue and lip movements, and her articulation is indistinct and slovenly. She has evident uniform enlargement of the thyroid gland; the breasts and external genitalia are immature. There is ataxy in the hands and also great unsteadiness in walking, and the knee-jerks are absent. The sphincters are unaffected. The second patient is a lad aged fifteen, whose appearance and expression are similar to those of his sister. His motor symptoms and his articulation also are similar, and his thyroid gland is enlarged. The knee-jerk, however, is present and exaggerated. Both these patients are inmates of an asylum, having been admitted as "dangerous idiots" on account of assaults which they were said to have

committed. The third patient, a boy aged ten, is still at home. His expression is identical with those of his brother and sister, and his symptoms are similar. The thyroid gland, however, seems to be of normal appearance and size. The ataxy is advanced and speech is very rudimentary. The knee-jerks are absent and his psychical condition is much impaired. These cases form a very interesting group, and seem to show that the presence of the knee-jerk in a case otherwise identical with Friedreich's disease must not be regarded as of undue importance. In two of these cases it was absent; in one it was present, although in other respects the cases were almost identical. The absence of deformity of the feet in all the cases is also interesting, but, as Dr. Nolan points out, it is quite a mistake to regard this deformity of "humped foot" or pes cavus as pathognomonic of Friedreich's ataxy. The association of imbecility is also of great importance, and when we remember that, according to current views, Friedreich's ataxy is a developmental neurosis, it is really strange that psychical symptoms are not present oftener than they seem to be.

A MEDICAL MAN'S SERVICES TO A DYING FELLOW-PASSENGER.

A PARAGRAPH is going the round of the papers reporting an action by Mr. Fox of Clapham-road for services rendered to Mr. Lewis, a passenger seized with hæmatemesis on board the steamship *Nyptune*, in a summer trip to Norway, with no official surgeon to look after the passengers, which numbered 100. Mr. Fox's claim was twenty-five guineas for an attendance of thirty-six hours. The patient was landed at Newcastle, and died in the infirmary there. The judge said the plaintiff was entitled to his ordinary charges, and gave him £9 3s. and costs, including £5 paid into court. We are informed—and it is obvious from the published facts—that the case was one of great anxiety, requiring the frequent attention of Mr. Fox. The exact sum he charged may be a matter for difference of opinion, and can scarcely be judged by those who are not acquainted with all the facts. But it would be monstrous to maintain that he was not entitled to be paid for his professional services. We have his authority for saying that he would have settled the claim for £10 before it came into court. Obviously such steamers should carry a medical man as part of their equipment. It is hard, indeed, that a medical practitioner on his summer holiday should be expected to attend grave cases of disease without remuneration. *En passant*, we believe that a ship carrying passengers numbering 100 and upwards must carry a surgeon.

THE CONDITION OF THE NEWTON ABBOT WORKHOUSE.

THE Newton Abbot guardians were apparently in need of a stimulus in the matter of their very defective workhouse, and we are glad to see they have received one at the hands of their medical officer. Dr. Culross, in presenting his last quarterly report, reminded the guardians that as long as the present condition of affairs continued he was only able to recapitulate existing defects, all of which were dependent on structural cause. These defects, Dr. Culross observed, entailed not simply inconvenience, but actual suffering and possible danger. The officers were unable to perform their duties and were exposed to blame for shortcomings which were beyond their control. Among the defects specified by Dr. Culross we note the absence of isolation wards, receiving wards unfit for their purpose, unsuitable sick wards, vagrant wards "utterly bad," insufficient hot water and bathing accommodation, an inadequate laundry, and no suitable recreation ground for women. As regards the existing receiving wards, Dr. Culross reported that the men's was occupied by a case of erysipelas, and the women's by a man

suffering from scabies; a third case of contagious disease was isolated in the sewing-room. Considerable discussion and some confusion followed, we are told, the reading out of this somewhat appalling category, and Mr. Ley, one of the guardians, remarked that Dr. Culross would have failed in his duty had he not presented the report; week after week these matters had been talked of, but nothing had been done. Although it appears that some attempts were made at the meeting to still further postpone matters we are glad to see that the guardians decided to forward forthwith to the Local Government Board the amended plans of the buildings, which will, we trust, put an end to the necessity of such reports as Dr. Culross has considered it his duty to make.

THE COLONIAL MEDICAL COUNCIL.

THE report of this Council for the year 1894 tends to show that the Council is alive to the growing importance of preserving the standard of professional qualifications in South Africa. It has been resolved to maintain the regulations admitting as registrable only those degrees covering a minimum curriculum of, respectively, four and three degrees for medical men and dentists. Five prosecutions have taken place, on the initiative of the Council, against unlicensed persons reported to be practising as medical men or dentists. Four have resulted in conviction, and in the fifth the accused person is committed for trial. Testimony is borne by the Council to the readiness with which magistrates and other officials assist in investigating charges of this sort. It is very gratifying to be assured of this. In a colony so open to adventurers of all kinds it is serious to think what might happen if care were not exercised in guarding the portals of the profession. Charges of disgraceful conduct have been dealt with in two cases. In one case a name was restored to the Register. In the other charges were made by the manager of an insurance office against a medical man for certifying for an insurance in the case of an applicant who shortly afterwards died; the facts were anxiously investigated, with the result of finding the accused guilty of disgraceful conduct. Thereupon His Excellency the Governor, in the exercise of his discretion, withdrew the licence of the practitioner.

It was a matter of comment by many of those who were present at the University of London on Wednesday that, by an oversight on the part of the Lord Chancellor, no mention was made of the loss the University had sustained by the death of two such distinguished graduates and eminent Fellows as the late Sir William Savory and the late Sir George Buchanan.

At a Council held at Windsor on Saturday, May 11th, Dr. Richard Thorne Thorne, C.B., F.R.S., medical officer to the Local Government Board, was nominated by Her Majesty a member (for England) of the General Council of Medical Education and Registration for a period of five years, in succession to Sir John Simon, K.C.B., F.R.C.S., resigned.

THE annual dinner of the old students of King's College, London, will be held at the Holborn Restaurant on Monday, June 24th, when the Right Rev. the Lord Bishop of London, D.D., will occupy the chair.

THE Society of Obstetrics and Gynecology of Bordeaux, in organising a Congress for Aug. 8th on the occasion of the Exposition, has elected Dr. Robert Barnes "Président d'Honneur."

WE have great pleasure in stating that the condition of Professor Huxley's health is much improved; the cough and

expectoration have almost ceased, the temperature is normal, and the appetite returning. He sleeps well, and the weakness is less marked.

THE ROYAL MEDICAL BENEVOLENT COLLEGE DINNER.

SOME 240 guests assembled in the prettily-decorated East Foyer dining-room of the Imperial Institute on Wednesday last to take part in the twenty-seventh festival of the Royal Medical Benevolent College. The Right Hon. A. J. Balfour, M.P., presided, and there were present, amongst others, Sir Richard Webster, Q.C., M.P., Mr. Christopher Heath (President of the Royal College of Surgeons), Sir John Williams, Sir Dyce Duckworth, Sir W. H. Broadbent, Sir W. Roberts, Dr. E. Long Fox, Dr. Michael Foster, Dr. Constantine Holman, and Mr. Wakley.

After the loyal toasts had been duly honoured Sir RICHARD WEBSTER, in an amusing and witty speech, proposed "The Medical Corporations," which was responded to by Mr. Christopher Heath, Sir Dyce Duckworth, and Dr. E. Long Fox.

The CHAIRMAN, 'in rising to propose "Success to the Royal Medical Benevolent College," said: "It is not necessary probably that I should describe to an assembly like this the characteristics of the great charitable institution in whose cause and in whose behalf we have met here to-night. It will suffice if I briefly remind you that it is intended to carry out the double function of giving pensions to those members of the profession or their widows who most deserve them and of supplying the best possible education to their children. That such an institution is useful—nay, that it is necessary—I imagine few will be disposed to deny, and that the great medical body of the United Kingdom, numbering not less than 32,000 persons, should have an institution like this to serve the needs of their less fortunate members is what we should have all expected. Gentlemen, I am speaking not as a member of the medical profession, but as a member of the general public; and appealing to that general public to assist in this work the question arises, naturally and necessarily, why this great body of 32,000 persons should look outside their own limits in order to obtain assistance for a charitable institution whose beneficent efforts are necessarily confined to their own number. I think the answer to this question is an easy one, and is to be found in the obligations which the outside public, in whose name I venture to speak to-night, are under, and the benefits which they have derived from that great profession to whom the majority of you belong. Is it not true, am I not justified in saying, even in your presence, that there is no body of men, select them how you will or where you will, who have given to that public to which we now appeal a larger measure of gratuitous service? In every district, in every parish, almost in every street, you will find that the medical profession have ever been ready to go—with or without remuneration—to the succour of the unfortunate, and that they have lavished the treasures of their time and skill on those who from worldly circumstances were but very ill able to repay them. And this should call to our mind the fact that the great charity on whose behalf I speak is not called into existence merely to subserve the interests of the incompetent or unsuccessful members of your profession, but, on the contrary, there is many and many a case of a medical man who, from no want of skill, certainly from no want of energy, zeal or public spirit, has carried out his great work in districts and under circumstances which made him indeed not less—but it may be more—useful to mankind, but made it almost impossible for him to leave an adequate provision for his wife or for his children. I think that these members of the profession, not the waifs and strays, not the wastage which must necessarily occur, but men constituting very often eminent members of the body in point of zeal and devotion—these are the people that this charity subserve. The general public are bound to feel that among the great charities calling for support this does not rank among the least. I cannot forget that the great debt which humanity owes in the past to the healing art is increasing, and seems likely to increase in a greater and greater ratio. The application of science to all the arts, the successful application of scientific method and knowledge to all

the arts, is one of the most remarkable characteristics of this and the last generation, but I do not know that this shows itself more prominently than in the province of medicine where science and art are every day joining hands more and more closely. Every day it is becoming more and more the work of the scientific expert. I do not know if we are over-sanguine in anticipating a period when we shall not only have an incomparable insight into the nature and cause of disease, but shall be able to command in greater measure the remedies which may be successfully applied. A friend of mine with whom I was discussing these happy prospects told me that he did not see any valid or sufficient reason why, when medicine was sufficiently understood, and those temperate habits which medicine may counsel, but which it cannot enforce, obtain a deeper hold on the public, as undoubtedly they will, the span of human life may be extended to the patriarchal term of 120 years. I do not know whether that forecast is over-sanguine, but it suggested to my mind a reflection which has frequently occurred to me before, which is that death is not the enemy the medical profession have to fight against; it is rather pain, and that disease which renders us ineffectual for practical work. I often hear of cases in which I am told that by the extraordinary skill of some great practitioner and by the appliance of all the most recent medical discoveries, it has been found possible to prolong for some few days or weeks longer a doomed life. Those are among the performances of your science; they are not, I think, among its triumphs; and for my own part, I think if medicine can ease us of our pain, if it can render that span of life allotted to us more available for practical work, more efficient for doing the duty cast upon us, more useful for developing the activities with which we have been endowed, we may relieve it of the duty of prolonging a painful and useless life—a life, it may be, painful to the possessor, a life which may be useless and worse than useless to those who wait around the sick bed. After all, if death be our enemy, death is sure to conquer; but it may be—indeed, it has been—within the resources of your art to relieve from suffering, in itself an evil which only those who have gone through it can properly estimate, and restore to active life many who would otherwise linger year after year, a burden to themselves, and, what must even weigh more upon them, a burden to all those whom they love best. In conclusion, I would not merely appeal to the members of the profession, but to the outside public to support the greatest medical charity which now exists in England, and to make an appeal to them not to allow this charity to lose any of the great usefulness which it now exercises by the lack of public support. I couple with the toast the names of the treasurer and headmaster, Dr. Holman and the Rev. Hart Smith, and everyone knows how much the success of an institution like this depends upon the men who carry out the work.

Dr. HOLMAN, in responding, referred to the great and useful work of the College. He alluded to the medical Press, who had greatly helped him to extend the charity to the pensioners. He also mentioned the names of Mr. Burdett, Dr. Dawson Williams, and Mr. Wakley; the last-named gentleman had not only supported him, but on behalf of the Proprietors of THE LANCET in 1892 handed him a cheque for £1000 for the purpose of extending the charity. It was his strong desire to leave to the younger generation who would succeed in the management of the College a legacy founded upon a firm financial basis of absolute security.

The Rev. T. N. HART SMITH also responded.

Dr. JOHN LUMSDEN PROBERT proposed the toast of "The Chairman," which was acknowledged by Mr. Balfour; and the "Hon. Local Secretaries" being proposed by Mr. Henry Morris, and responded to by Mr. Edmund H. Galton, the festivities came to a close.

Subscriptions amounting to nearly £1700 were announced, including 100 guineas from the Messrs. Wakley, 25 guineas from the Right Hon. A. J. Balfour, 21 guineas from Sir Richard Webster, 10 guineas from Sir J. Russell Reynolds, and 10 guineas from Mr. Christopher Heath.

NEUROLOGICAL SOCIETY OF LONDON.—A clinical meeting of the society will be held at 20, Hanover-square, on Thursday, June 6th, at 8.30 P.M. Members wishing to show cases are requested to communicate with the secretaries not later than May 25th. This meeting will be a special one for the election of a vice-president in the place of the late Dr. Hack Tuke. (The council nominate Dr. Geo. H. Savage.)

REPORT OF THE COMMITTEE ON PRISONS.

II.¹

COMING next to the "Treatment of Prisoners" the committee deal first with the question of accommodation, as to which they say that serious charges of overcrowding in the London prisons have been made. The Prisons Act of 1865 provides (Section 17) that "in every prison separate cells shall be provided equal in number to the average of the greatest number of prisoners, not being convicts under sentence of penal servitude, who have been confined in such prisons at the same time during each preceding five years." Further, the same Act, Schedule I., Regulation 26, provides that: "Every male prisoner shall sleep in a cell by himself, or under special circumstances in a separate bed placed in a cell containing not fewer than two other male prisoners, and sufficient bedclothes shall be provided for every prisoner. A convicted criminal prisoner may be required to sleep on a plank bed without a mattress during such time as may be determined by the rules of the prison. Epileptic prisoners or prisoners labouring under diseases requiring assistance or supervision in the night may at any time, notwithstanding this regulation, be placed by order of the surgeon with not fewer than two other male prisoners." The committee find that the law, as laid down in Section 17 (1), has been observed, and the required number of separate cells has been provided. But, owing partly to the growing practice of sending convicts to local prisons and partly to the occasional arrival of unusually large drafts of prisoners, Regulation 26 of Schedule 1 has not been adhered to. Ordinary prisoners have been placed in association, and although this may have been only for a single night the committee are clearly of opinion that the margin of accommodation ought to be sufficiently ample to make these occurrences impossible. Prison officials without exception agreed that such association is most objectionable morally and physically, and the committee think that, with a view to its avoidance, the Prison Commissioners ought to have larger powers than they possess in the way of sanctioning or refusing transfers on their own responsibility. The committee hold that for the purposes of Section 17 (1) of the Prison Act, 1865, all classes of prisoners should be included in calculating the average of the greatest number of prisoners in each of the preceding five years. In this we quite agree, and, indeed, the wording of the section appears to be cumbersome and to have opened a door to evasion of the spirit and intention of the Act itself. With regard to association under Regulation 26 there is, the committee say, some difference of opinion; but all witnesses agree that where association is ordered on medical grounds it is essential that adequate supervision should be secured. The committee think that association in sleeping cells should not be allowed under any circumstances, except for medical reasons, and upon the express recommendation of the medical officer.

On the subject of "Visits and Communications" some experienced officials state that the present rules are quite adequate and need no alteration, while many witnesses were in favour of extending existing privileges. The general impression appears to coincide with Sir Edmund Du Cane's view that it might be advisable to allow more frequent letters and visits after three months on the condition that the increase of privileges should be in accordance with the mark or stage system. If it should be in any sense an invidious task to give discretionary powers to the Governor, it is suggested that the Visiting Committee should have power to consider each individual case on its merits. For ourselves we question the advisability of relieving the Governor of this responsibility or privilege, whichever light it may be taken in; for if he is the proper man for the post he ought to be the best able to decide as to the value of relaxing the rules in particular instances. The multiplication of opportunities for appealing by prisoners past the authority of the Governor has a tendency to weaken his authority, and the Visiting Committee must be guided by what the Governor says in the matter. To our thinking the judicious relaxation of rule so as to promote wholesome communication with desirable relatives and friends on the part of a prisoner is greatly to be commended so long as care is taken to avoid any

¹ Part I. was published in THE LANCET of May 4th, 1895.

"weakening of the penal machinery" thereby. As the committee in their summing up on this point say: "No hard-and-fast rules at any period should be allowed to keep from a prisoner any good influence which might help to reclaim him or save him from becoming a permanent member of the criminal classes." No doubt this is rather a utopian statement of the case and not likely to be carried out in practice for many a long day; but in principle it is both sound and sensible.

On the subject of "Prison Offences" the committee are of opinion that, speaking generally, the present regulations governing punishments for prison offences have worked as well as could have been expected. Whatever may be said or proved against the nature or amount of the punishment, the broad fact remains that the great majority of prisoners serve their time without any punishment at all. The following figures given in the report are interesting; they are for the year ending March 31st, 1894:—

	Numbers punished.	Not punished.	Total number.
Convict Prisons	2,068	3,389	5,487
Local Prisons	23,071	134,831	207,702

Of the 306 convicts discharged from Portland Prison as many as 135 earned their full remission, and 125 were released within three months after the minimum period of their sentence had expired. It is a pity that the committee, having gone so far, did not go one step further and give us an analysis of the kind of offences for which this number of punishments was meted out. As an indication of vicious disposition there is all the difference in the world between talking in chapel and at other forbidden times or non-completion of task on the one hand, and insubordination, destructiveness, or personal violence on the other. The committee say that some competent witnesses attribute a number of offences to the nature of prison life, a statement as to which we think there can be no sort of doubt; for where discipline or even disciplinary routine is supposed to prevail there is at once created a possible class of offence which does not rise into prominence in ordinary social conditions. "It is impossible to conceive any system of prison discipline adequately coercive which should reduce or lead to absolute submissiveness a class of men whose previous lives have conclusively shown that when not under restraint they are unable to observe the laws and regulations of social life. Bearing this in mind, and given the fact that prison life necessarily means continuous and severe discipline, it is evident that the number of prisoners who receive no punishment during their service is a remarkable tribute both to the character of the discipline maintained and to the tact and forbearance of the prison staff." The evidence has led the committee to the belief that during recent years there has been a distinct move forward in the direction of mitigating the severity of prison punishments. The use of the entirely dark cell has been discontinued since the publication of the Report of the Royal Commission on Irish Prisons in 1884. Corporal punishment has decreased in a striking degree in local prisons, but the percentage in convict prisons remains about stationary. Standing Order No. 94 of the Commissioners states that, as the result of experience, "discipline is not better maintained by resorting commonly to severe punishment, which should be reserved for use when milder means have been tried unsuccessfully and when it is necessary to apply them on particular occasions." The committee say that this opinion (of the Commissioners) carries much weight, and it strengthens their belief that the main fault of our prison system is that it treats prisoners too much as irreclaimable criminals instead of as reclaimable men and women. Under the present rules, while a Governor cannot inflict more than three days' bread and water diet in succession, after which must come an interval of twenty-four hours, the Visiting Committee can for a single offence sentence a prisoner to fourteen days in a punishment cell, with No. 1 bread and water diet, alternating every three days with No. 2 and No. 3 diets. The committee think that according to the intention of the Act of 1877 a prisoner should only be committed to a punishment cell on penal diet for fourteen days; and an interval of at least three days should elapse before any additional period is imposed in respect of a fresh offence, or an offence distinct from that for which the punishment was inflicted, and this second period should only be inflicted with

the sanction of the medical officer. The committee have made special inquiries as to whether offences are committed in consequence of the petty tyranny or harshness of warders. It is only in human nature, they say, that there should be instances of unfair and unwise treatment of prisoners by warders in their constant daily personal relations with them; but, they add, it is only a matter of justice to them to say that, so far as the committee have been able to find out, as a body they discharge their most difficult and responsible duties with forbearance and kindness.

With reference to "Prison Labour" the committee have felt it to be necessary to go at length into this branch of the subject, both because of its great intrinsic importance and because in previous inquiries it has been passed over with but little notice. It resolves itself into two main parts—(1) unproductive labour, cellular or associated, and (2) productive labour, cellular or associated. As regards convict prisons in the first instance, the committee have no recommendations to make. Convicts for the first nine months of their sentence are kept in isolated confinement. For the first month they are kept at first-class hard labour, and are subsequently engaged at oakum-picking, mat-making, tailoring, or any suitable work which it is found possible to give them. After nine months all convict prisoners, unless physically disabled or found specially qualified for other work, are put to associated labour in public works, quarrying, farming, land reclaiming, and so forth.

Coming next to local prisons and dealing with unproductive labour, the committee in consideration of this question "start from the principle that prison treatment should have as its primary and concurrent objects, deterrence and reformation." It follows, therefore, that it is desirable to provide labour which, in conjunction with the general prison discipline, does not impair the one and which does "include the other. Applying this general conclusion it necessarily follows that unproductive labour, including all purely mechanical work on cranks or treadwheels, and in the case of women oakum-picking, except as a punishment, should be entirely abolished wherever possible."

First-class hard labour involves a mechanical and unvarying exertion for six hours a day for a month. All classes of witnesses agreed that as an occupation labour which is unproductive, or apparently so, is most undesirable. Sir Edmund Du Cane speaks in strong terms of the "punishment of hard, dull, useless, uninteresting, monotonous labour. It is necessary to resort to this for its penal effect. There is, nevertheless, a limit to the time during which a prisoner can be advantageously subjected to it, for it is decidedly brutalising in its effect. To men of any intelligence it is irritating, depressing, and debasing to the mental faculties; to those already of a low type of intelligence it is too conformable to the state of mind out of which it is most desirable that they should be raised." The strongest argument against this kind of labour is, in the opinion of the committee, the fact that it keeps the prisoners in a state of mental vacuity. The class of labour being on all hands unhesitatingly condemned as undesirable and mischievous in its results, the question always comes to be, What can be substituted for it? To this no satisfactory answer has yet been forthcoming, one chief difficulty lying in the fact that the large local prisons are mostly situated in the heart of large towns and the labour has to be found within the prison walls. The committee suggest the possibility of making arrangements for sending the hard-labour men to prisons specially chosen in the country, where they could be set to work on the land or at reclamation. This would be a costly plan, but in our opinion it is well worth full and serious consideration. If it could be shown to be likely to result in a clear gain in the matter of strengthening and adjusting personal character in those who have a bias for vicious and criminal ways, the question of cost ought not to outweigh considerations pointing to an ultimate and great social reform of the truest type.

"Productive Labour" is necessarily dealt with under the two heads of cellular and associated, with regard to the respective merits of which there appears to be much difference of opinion. On the one side it is maintained that better discipline and a better moral tone are secured by keeping prisoners in isolation; and on the other that associated work is a more natural state, that it is more interesting, and helps to keep the prisoners from morbid depression. The committee do not agree with the view that separate confinement is desirable on the ground that it enables the prisoner to meditate on his misdeeds; but they are disposed to agree

that the separate system as a general principle is the right policy, resting as it does on two considerations—viz., that it is deterrent and that it is a necessary safeguard against contamination; but the committee are not of opinion that association for industrial labour under proper conditions is productive of harm—on the contrary, they believe the advantages largely outweigh the disadvantages. They point out that this limited form of association is desirable for many reasons, having reference especially to the relief from dull monotony of life, privilege afforded for good behaviour, possibility of teaching trades, and to greater healthfulness. To our mind it possesses also the advantage of tending to encourage the development of a more natural and more stable frame of mind; while at the same time there is afforded a test or criterion of the individual's trustworthiness or his improved capacity for behaving himself amongst others when he is restored in due course to normal social surroundings. In conclusion, the committee state that "they have no hesitation in recommending that the practice of association for industrial work should with due caution be extended gradually throughout the prisons. Satisfactory results must largely depend on the discretion of the prison authorities in making selections of prisoners for associated work; and in any case they would be materially assisted by a careful classification," such as the committee later proceed to recommend.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 4th inst., the President, Mr. Christopher Heath, being in the chair.

Mr. H. J. Waring, F.R.C.S., was introduced, and the President handed him a cheque for the amount of one year's dividends from the Jacksonian Fund, as Jacksonian Prize for the past year, together with the instrument declaratory of the award thereof.

The Committee of Management of the Examining Board in England presented a report, dated April 22nd, in which they had revised their report dated March 4th. The committee had been requested by the Royal College of Physicians of London to further consider their report in order that they might instruct the Colleges in fuller detail than they had already done as to what should be said in reply to the criticisms of the inspector of examinations touching the examination for the diploma in Public Health granted by the Colleges. The further report is as follows:—

"The committee have held a conference with the Examiners in Public Health, and find that at the last examination, which was subsequent to that visited by the inspector, all the candidates in Part I. were efficiently tested in Practical Bacteriology, the examiners understanding that such examination came within their province under the existing schedule.

"As a result of the conference, and having had the valuable advice of Dr. Thorne Thorne, Dr. Stevenson, and Professor Notter, the committee recommended that the syllabus of the examination for Part I. be printed as follows, and that every candidate be required to undergo this practical examination:—

"1. Physics in their application to health, with reference to (a) warming and ventilation; (b) water-supply, sewerage, and drainage; (c) sanitary construction. 2. Meteorology in relation to health. 3. Chemistry, with special reference to food, air, soil, and water. 4. Microscopical examinations, as applied to air, food, and water. 5. Bacteriology, including the cultivation and recognition of micro-organisms. 6. Geology and soil in relation to drainage and water-supply.

"With respect to the examination in infectious diseases, the committee, having discussed the question with the examiners, adhere to their report on that subject."

The report was approved, and a further report from the same committee was also approved. It was as follows:—

"The Committee of Management beg to make the following recommendations. 1. That on the application of the Dean of the Westminster Hospital Medical School the course of Clinical Demonstrations in Lunacy given by Dr. Mercier at the London County Asylum, Cane-hill, be recognised so long as he shall hold the lectureship on Mental Diseases in that

medical school. 2. That the following institutions be added to the list of recognised places of instruction in chemistry, physics, and practical chemistry: (a) the Grammar School, Bromyard; (b) the Nonconformist Grammar School, Blahops Stortford. 3. That the Hospital for Sick Children, Great Ormond-street, be recognised as a place of study during the fifth year of the curriculum."

The President reported that, in pursuance of the provisions of the Bradshaw Bequest he had chosen Mr. N. C. Macnamara as the Bradshaw Lecturer for the ensuing collegiate year.

The President, the Vice-Presidents, Mr. Bryant, and Sir William MacCormac were appointed the members of a committee to superintend the arrangements for the conversations to be held on Aug. 2nd on the occasion of the meeting in London of the British Medical Association.

It was resolved that the annual meeting of Fellows of the College for the election of members of the Council shall be held at the College on Thursday, July 4th next, at 1.30 P.M.

It was resolved that, in pursuance of Section XXIII. of the Regulations of the Council, a meeting of Fellows of the College shall be held at the College on Thursday, July 4th next, at 5 P.M. The Council will determine what subjects, if any, shall be referred to the consideration of the meeting.

A letter dated April 7th was read from Mr. E. Almack, Secretary of the National Dental Hospital, communicating the following resolution—viz.: "That the Medical Committee of the National Dental Hospital and College request the licensing bodies to arrange for an examination in mechanical dentistry for dental students previous to their commencing their surgical training." The matter was referred to the Board of Examiners in Dental Surgery to consider and report.

A committee consisting of the President, the Vice-Presidents, Mr. Hutchinson, and Mr. Bryant was appointed to consider and report to the Council on the Midwives Registration Bill.

THE UNIVERSITY OF LONDON.

LONDON UNIVERSITY COMMISSION BILL.

THE following is the text of the Bill intituled an Act to make further provision with respect to the University of London, introduced by Lord Playfair in the House of Lords on May 9th:—

Whereas the Commissioners appointed to consider the draft charter for the proposed Gresham University in London have by their report made recommendations with respect to the reconstitution of the University of London, and to the appointment of a statutory Commission for that purpose.

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled, and by the authority of the same, as follows:—

1.—(1) There shall be a body of Commissioners styled the University of London Commissioners, and consisting, in the first instance, of the following persons, namely:—¹

(2) If and whenever any vacancy occurs among the Commissioners it shall be lawful for Her Majesty the Queen to appoint a person to fill the vacancy; but the name of every person so appointed shall be laid as soon as may be before both Houses of Parliament.

2.—(1) The powers of the Commissioners shall continue until the end of the year 1896, and no longer; but it shall be lawful for Her Majesty the Queen, from time to time, with the advice of Her Privy Council, on the application of the Commissioners, to continue the powers of the Commissioners for such time as Her Majesty thinks fit, but not beyond the end of the year 1897.

(2) The Commissioner first named in this Act shall be the Chairman of the Commissioners, and in case of his ceasing from any cause to be a Commissioner, or of his absence from any meeting, the Commissioners present at each meeting shall choose a chairman.

(3) The powers of the Commissioners may be exercised at a meeting at which three or more Commissioners are present.

(4) In case of an equality of votes on a question at a

¹ Here follows a blank space for the names of the Commissioners.

meeting, the chairman of the meeting shall have a second or casting vote in respect of that question.

(5) The Commissioners shall have a common seal which shall be judicially noticed.

(6) Any act of the Commissioners shall not be invalid by reason only of any vacancy in their body; but if at any time, and as long as, the number of persons acting as Commissioners is less than four, the Commissioners shall discontinue the exercise of their powers.

3.—(1) The Commissioners shall make statutes and ordinances for the University of London in general accordance with the scheme of the report hereinbefore referred to, but subject to any modifications which may appear to them expedient after considering any representations made to them by the Senate or Convocation of the University of London or by any other body or persons affected.

(2) In framing such statutes and ordinances the Commissioners shall see that provision is made for securing adequately the interests of non-collegiate students.

(3) All such statutes and ordinances shall be laid forth with before both Houses of Parliament, and shall come into operation on the expiration of forty days after they have been so laid, and shall have effect as if enacted by this Act, but shall be subject to alteration in manner provided by such statutes and ordinances.

4. This Act may be cited as the University of London Act, 1895.

CHOLERA.

It will be remembered that there were reports of a somewhat severe outbreak of cholera among the Japanese troops engaged in the Chino-Japanese war. The official returns show that the total cholera mortality of the outbreak in question among the Japanese at the Pescadores Islands, between March 26th and April 24th amounted to 1300. There are still a few sporadic cases reported daily, but the epidemic—which at one time gave the Japanese authorities some anxiety—is believed to be at an end. There is no doubt that cholera has broken out and is very prevalent at the present time at Mecca and among the villages and pilgrim caravans. The outbreak in Mecca has given rise to an average daily mortality of twenty-five; and the Sanitary Board at Constantinople is busy devising precautionary measures against the spread of the disease by the returning pilgrims. The number of Egyptian pilgrims this year is said to be much smaller than usual. There would appear to have been a revitalisation of cholera at a number of places this spring, for the Official Gazette of Madrid has imposed quarantine on arrivals from Hong-Kong, Haiphong, San Nicholas, San Pedro, and Jeddah, all of which are notified as being affected with cholera.

There have been occasional reports of the arrival of vessels alleged to be cholera-infected at Gravesend from abroad. One such vessel arrived the other day from the River Plate, on board of which a fatal case of cholera is stated to have occurred on March 16th last, followed by four other cases of a slight but suspicious character, all of which however recovered.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6494 births and 3585 deaths were registered during the week ending May 11th. The annual rate of mortality in these towns, which had declined in the nine preceding weeks from 35.0 to 17.5 per 1000, was last week 17.7. In London the rate was equal to 16.6 per 1000, while it averaged 18.4 in the thirty-two provincial towns. The lowest rates in these towns were 12.9 in Swansea, 13.5 in Brighton and in Hull, 13.6 in Sunderland, and 14.1 in Gateshead; the highest rates were 23.0 in Liverpool, 23.6 in Burnley, 23.9 in Halifax, 24.5 in Preston, and 25.8 in Plymouth. The 3585 deaths included 351 which were referred to the principal zymotic diseases, against 327 and 305 in the two preceding weeks; of these, 83 resulted from measles, 81 from whooping-cough, 65 from diphtheria, 60 from diarrhoea, 31 from scarlet fever, 31 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases

occurred last week in Croydon or in Swansea; in the other towns they caused the lowest death-rates in Oldham, Gateshead, and Derby, and the highest rates in Cardiff, West Ham, Bolton, and Plymouth. The greatest mortality from measles occurred in Cardiff, Manchester, West Ham, Bolton, Newcastle-upon-Tyne, and Plymouth; and from whooping-cough in Salford and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 65 deaths from diphtheria included 38 in London, 6 in West Ham, 4 in Birmingham, 3 in Wolverhampton, and 3 in Liverpool. No fatal case of small-pox was registered either in London or in any of the thirty-two large provincial towns. There were 33 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, May 11th, against 35, 37 and 34 at the end of the three preceding weeks; 6 new cases were admitted during the week, against 4, 12, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1438, against 1514, 1469, and 1413 on the three preceding Saturdays; 179 new cases were admitted during the week, against 162, 132, and 107 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 341 and 290 in the two preceding weeks, further declined to 247 last week, and were 86 below the corrected average. The causes of 52, or 1.5 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Bradford, Hull, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Bolton, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20.6 and 20.9 per 1000 in the two preceding weeks, declined again to 18.7 during the week ending May 11th, but was 1.0 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16.2 in Dundee and 16.5 in Edinburgh to 24.0 in Perth and 27.8 in Leith. The 540 deaths in these towns included 30 which were referred to measles, 17 to whooping-cough, 5 to diarrhoea, 3 to "fever," 2 to small-pox, 2 to scarlet fever, and not one to diphtheria. In all, 59 deaths resulted from these principal zymotic diseases, against 73 and 71 in the two preceding weeks. These 59 deaths were equal to an annual rate of 2.0 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 32, 26, and 27 in the three preceding weeks, rose again to 30 last week, of which 9 occurred in Leith, 8 in Edinburgh, 5 in Aberdeen, and 4 in Paisley. The deaths referred to whooping-cough, which had been 24 and 17 in the two preceding weeks, were again 17 last week, and included 12 in Glasgow, 2 in Leith, and 2 in Greenock. The 3 fatal cases of "fever" also corresponded with the number in the preceding week. The deaths from scarlet fever, which had been 4, 3, and 7 in the three preceding weeks, declined to 2 last week, both of which occurred in Glasgow. Of the 2 fatal cases of small-pox 1 was registered in Edinburgh and 1 in Glasgow. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 145 and 124 in the two preceding weeks, further declined to 98 last week, and were 15 below the number in the corresponding week of last year. The causes of 33, or more than 6 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27.0 and 27.3 per 1000 in the two preceding weeks, further increased to 27.4 during the week ending May 11th. During the past six weeks of the current quarter the death-rate in the city has averaged 30.7 per 1000, the rate during the same period being 18.0 in London and 19.0 in Edinburgh. The 184 deaths registered in Dublin during the week under notice showed a very slight increase upon the number in the preceding week, and included 7 which were referred to the principal zymotic diseases, against 5 and 7 in the

two preceding weeks; of these, 3 resulted from whooping-cough, 2 from diarrhoea, 1 from small-pox, 1 from "fever," and not one either from measles, scarlet fever, or diphtheria. These 7 deaths were equal to an annual rate of 1.0 per 1000, the symtotic death-rate during the same period being 1.7 in London and 2.1 in Edinburgh. The fatal cases of whooping-cough, which had been 1 and 4 in the two preceding weeks, were 3 last week. The 2 deaths from diarrhoea exceeded the number in any recent week. One fatal case of small-pox was recorded during last week, making 10 deaths from this disease within the city during the current quarter. The 184 deaths registered in Dublin last week included 21 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons corresponded with the number in the preceding week. Six inquest cases and 5 deaths from violence were registered; and 85, or nearly one half, of the deaths occurred in public institutions. The causes of 11, or nearly 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-COLONEL O'DWYER has embarked for Halifax to relieve Surgeon-Colonel Archer as Principal Medical Officer of the Command. Brigade-Surgeon-Lieutenant-Colonel Grose has been transferred from Belfast to Edinburgh. Surgeon-Major Michael and Surgeon-Captain Gray have arrived from Egypt on completion of a tour of service. Surgeon-Captain Hall has embarked for Sierra Leone. Surgeon-Captain Keatly has been posted to Ireland; Surgeon-Captain Corcoran to Colchester; and Surgeon-Captain Macdonald to Portsmouth.

ARMY MEDICAL STAFF.

Surgeon-Colonel Edward C. Markey, C.B., to be Surgeon-Major-General, vice J. Davis, retired. Brigade-Surgeon-Lieutenant-Colonel William E. Riordan to be Surgeon-Colonel, vice E. C. Markey, C.B. Brigade-Surgeon-Lieutenant-Colonel Philip Le Feuvre Kilroy retires on retired pay. Surgeon-Lieutenant-Colonel John G. Williamson to be Brigade-Surgeon-Lieutenant-Colonel, vice W. E. Riordan.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—26th Bombay Infantry: Surgeon-Captain Sprague to officiate in Medical Charge, vice Surgeon-Captain Heath; Surgeon-Colonel Geoffrey Hall to take up the duties of the Inspector-Generalship of Gaols in the North-West Provinces; Surgeon-Captain E. Jennings, doing duty under the orders of the Civil Surgeon, Nagpore, to be Civil Surgeon of Betul, and to the Executive and Medical Charge of the Betul Gaol; Surgeon-Major J. L. Poynder, Civil Surgeon, Sambalpur, to officiate as Civil Surgeon, Raipur; Surgeon-Captain W. D. Sutherland, Civil Surgeon, Damoh, to officiate as Civil Surgeon, Sambalpur, and to the Executive and Medical Charge of the Sambalpur Gaol.

MILITIA.

3rd and 4th Battalion the South Staffordshire Regiment: Lieutenant A. G. Mossop to be Captain.

YEOMANRY CAVALRY.

Hampshire (Carabiniers): Surgeon-Captain G. F. A. England, M.B., resigns his commission; John Frederick Gordon Dill, M.D., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Aberdeenshire: John Marnoch, M.B., to be Surgeon-Lieutenant. 3rd Durham (Western Division, Royal Artillery): Surgeon-Lieutenant J. Macdonald, M.B., resigns his commission. Rifle: 20th Middlesex (Artists'): Surgeon-Lieutenant H. D. Brook to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Woolwich Company: Surgeon-Lieutenant P. O. Haynes to be Surgeon-Captain.

CHITRAL.

The Anglo-Indian papers contain, of course, a large amount of intelligence about the garrison of Chitral and the expeditionary field forces, but the various telegraphic sum-

maries forwarded to this country have anticipated their news and tended to render the descriptive accounts furnished by correspondents with the columns in the field stale reading. The chief points which strike us in connexion with the expedition are the highly commendable promptitude with which the forces were mobilised and took the field; the very arduous nature of the undertaking in the way of the natural obstacles and topographical difficulties that had to be overcome; the self-reliance and fine military qualities of the troops composing the native army; the brilliant marches under the leadership of such men as Colonel Kelly and Captains Borrodalle and Stewart—men who were but yesterday unknown, as it were, and but a sample, we hope and believe, of that ability and pluck to be calculated upon as always to be found among British officers; the heroism of the Chitral garrison, and, we may add, the exhibition of gallantry and devotion on the part of medical officers. Taking it altogether, we may fairly say that this Chitral affair has been a good business; it has raised our prestige in India and on the Continent and shown the strength of our position in the East, and it has impressed people generally with the admirable behaviour of our troops, European and native, of all ranks, and of the good feeling and faithful services of those of our allies who, like the Khan of Dir, gave their aid to the cause in which we were engaged.

THE CHITRAL EXPEDITION: MEDICAL ARRANGEMENTS.

Up to the present time, as far as we have seen, no mention has been made as to the manner in which the duties of the medical department have been carried out during the little war which is just now coming to a close on the northern frontier of India. Individual acts of heroism have been mentioned, such, for instance, as that of Surgeon-Captain H. F. Whitchurch of the Indian Medical Service, and the gallantry and fortitude, under very trying circumstances, of the political agent, Surgeon-Major G. S. Robertson, C.S.I., also of the Indian Medical Service. These officers will no doubt have such honours and rewards bestowed upon them as may seem fitting to Her Majesty and her advisers for such distinguished conduct. The daily and weekly press have, however, been silent as to the excellences or imperfections of the general arrangements made for the carriage and treatment of the sick and wounded of the expedition. We have reason to believe that the mule transport for the field hospitals (which in India includes the bearer companies) was taken from the medical department at Nowshera, and that bullock-carts were supplied instead. This, we understand, was done by order of the general officer commanding in consequence of the paucity of transport animals, and of the imperative necessity of forwarding supplies of food and ammunition. We should like to know how the field hospitals fared under these circumstances, as bullock-carts are absolutely useless in such a country as the army had to traverse. The regulations lay down that the medical transport shall not be taken away or used for any other purpose unless under the authority of the general officer commanding. We look forward with interest to an account of how the field hospitals fared on the road to Chitral under these circumstances. It is quite right, no doubt, that the general officer commanding should possess and exercise this authority in cases of imperative necessity, but we think that nothing short of this should justify the commander of a field force in using medical transport for other purposes, seeing that it enormously increases the difficulties of the medical service, and might indeed, as it has done before now, bring the medical arrangements to a complete standstill.

A CONGRESS OF MILITARY HYGIENE.

A correspondent of the *Morning Post* lately called attention to the desirability of holding a congress in this country devoted solely to questions relating to military hygiene, and sketched a programme—in bare outline, of course—of the subjects that might be taken up for consideration and discussion at such a meeting. He advocates that a congress of this sort, organised under favourable patronage, should be held at some large military centre in this country, and thinks that members of military medical services of different nations and others interested in the subject would be led to take part in it, with much practical advantage to all concerned. The general feeling is, perhaps, that medical and other congresses have been rather overdone of late, that subjects cannot be thoroughly or always advantageously considered at them, that too much is attempted, which is

creative of a "rush," that too many subjects are taken up, and that it is difficult to exclude faddists. Be this as it may, there is no doubt that the institution of a military section at such congresses is not altogether satisfactory. There are, no doubt, a sufficient number and variety of important matters to be considered in connexion with modern warfare to occupy the attention of a congress devoted exclusively to questions of military hygiene and medicine.

VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned officers:—*North-Eastern District: Rifle: 2nd Volunteer Battalion the East Yorkshire Regiment: Surgeon-Captain Alexander Theodore Brand, M.D. Scottish District: Rifle: 1st Volunteer Battalion the Royal Scots Fusiliers: Surgeon-Major William Wilson; Surgeon-Major William Frew, M.D. 3rd (The Buchan) Volunteer Battalion the Gordon Highlanders: Surgeon-Captain James Stephen, M.D.*

SOUTHAMPTON AND THE TROOP TRANSPORT SERVICE.

According to a Reuter telegram, the whole of the transport service will in future be carried out at Southampton instead of at Portsmouth. The facilities afforded at Southampton, its nearness to Netley Hospital, and the efficient manner in which the embarkation of troops has been carried out at the port have led the authorities to decide that next season the transports will embark troops in the Empress Dock and disembark there all invalids, time-expired men, and others returning home.

THE HEALTH OF CALCUTTA.

Scarcely has the news reached us that small-pox is epidemic in Calcutta than advices come to hand stating that typhoid fever has broken out among the Europeans of that city. The fever, it is feared, will take an epidemic form, and a scare may possibly be created as cholera is said to be on the increase. The absence of heavy rains and consequent dearth of water is probably in a great measure responsible for this state of things.

EXTENDED TENURE OF APPOINTMENTS.

Surgeon-Major-General J. Warren has, it is stated, been granted an extension of the tenure of his appointment of Principal Medical Officer, Bombay, until July 6th, 1896. The frequency with which these extensions of service occur in the senior administrative rank of the medical department must, we imagine, seriously affect the prospects of many medical officers by impeding the flow of promotion.

THE WAZIRISTAN CAMPAIGN.

Among the names of political and military officers that have been mentioned in General Sir William Lockhart's despatches concerning the recent campaign in Waziristan are the following medical officers:—Surgeon-Colonels Spencer and Bockey and Surgeon-Major Shearer.

Correspondence.

"Audi alteram partem."

MEDICAL QUESTIONS AND THE "ECHO."

To the Editors of THE LANCET.

SIRS,—You having alluded to the correspondence on medical questions conducted in the columns of the *Echo*, I shall be exceedingly obliged if you will give me the opportunity of disclaiming identity with the person who, under the name of "Lennox," is responsible for the answers. This is not a case of *qui s'accuse s'accuse*, for it has been a subject of constant inquiry from my medical friends for many years, and I am still frequently receiving letters from patients introducing themselves to me in the belief that I am the individual whose aid they have sought through the columns of this paper. I frequently applied in vain to the editor to publish my disclaimer of identity, and only on the threat of legal proceedings succeeded at last in obtaining the following, under date of Dec. 16th, 1892: "Dr. Lennox Browne wishes us to say that he is not the 'Lennox' who answers queries in this column. We willingly comply with his request for two reasons—first, because it pleases him, and, secondly, because it is rather advantageous than otherwise that our readers should know that the correspondent

'Lennox' is not Dr. Lennox Browne." The annoyance, however, still continues, and I may add that the real name of the person bears no resemblance to the pseudonym, nor is he, according to the name given in a published book on deafness by "Lennox," to be found in the Medical Directory.

I am, Sirs, yours faithfully,

LENNOX BROWNE.

Mansfield-street, Portland-place, W., May 13th, 1895.

A PREVENTIVE OF HYDROPHOBIA.

To the Editors of THE LANCET.

SIRS,—In the course of a conversation which I had with an intelligent Hausa native a few days ago I was informed that the following method is adopted here with the view of preventing hydrophobia following the bite of a rabid dog or other animal. When a person is bitten by a dog supposed to be suffering from rabies the animal is instantly caught, killed, and cut open, the liver is taken out and slightly browned by being held to the fire, after which the whole of the organ is eaten by the patient. I have made further inquiries, and I find that it is generally believed here that this treatment in many instances prevents the onset of the disease. If it is so, it is interesting to notice the similarity which exists between it and that of M. Pasteur.

I am, Sirs, yours faithfully,

THOMAS J. TONKIN, L.R.C.P. & S. Edin.,

Medical Officer, Hausa Association, Soudan Expedition, Kano, Hausa State, Western Soudan, Feb. 6th, 1895.

"THE POSSIBLE ANTAGONISM BETWEEN MALARIA AND PHTHISIS."

To the Editors of THE LANCET.

SIRS,—At the Indian Medical Congress Mr. Ardaseer Dossabhooy Cooper read a paper on the Possible Antagonism between Malaria and Phtisis.¹ He asserts that in 1811 it was put forth by Wells that malaria and phtisis were opposed to each other, and that M. Bedouine formulated the views that where malarial endemic fevers are prevalent phtisis is rare, and that phtisis is more curable in malarious regions than in others. The last Medical Report of the Surgeon-General of Trinidad completely disproves these formulated views. For the year there were 1452 cases of intermittent fever and 315 cases of remittent fever treated in the public hospitals of Trinidad. When we look under the heading of phtisis pulmonalis in the same report we find 430 cases recorded, with a mortality of 48 per cent. The following return of deaths during the year is instructive: dysentery and diarrhoea, 242; phtisis pulmonalis, 207; malarial fevers, 57. There were 13,092 patients under treatment. It is curious to note that there was only one case of rheumatic fever.

I am, Sirs, yours truly,

HENRY ALSTON,
Trinidad Medical Service.

April 20th, 1895.

ARE APOTHECARIES, OLD OR NEW, ENTITLED TO ADVERTISE?

To the Editors of THE LANCET.

SIRS,—I am prompted, along with many others whose professional interest will soon be vitally affected, to ask this difficult but very important question. We know that graduates and diplomates of the universities and colleges, whether they be also apothecaries or not, cannot advertise with impunity. Can more particularly the new L.S.A. only advertise his skill? I will briefly, with your permission, discuss the medico-legal arguments of this latter case.

An apothecary is licensed by a society which, by Act of Parliament dated 1815, can keep open shop for the retailing of drugs or other wares and for affording medical advice and treatment. He may argue from this that he can legally advertise the sale of his wares and also the sale of his services. It does not appear that the legal powers to retail and advertise have been repealed by subsequent Acts, although new privileges have been conferred. An L.S.A. only may contend that, not being a graduate or diplomate of other corporations, he need not concern himself with their ideas of conduct and etiquette, as they have no power to penalise

¹ THE LANCET, Jan. 19th, 1895.

him. Further, that the Apothecaries' Society itself, even if it felt so disposed—which is most improbable—cannot legally prevent its licentiates from advertising in whatever manner they think proper. It cannot withdraw without sufficient cause the power which it has once legally conferred. He may also assert that he can advertise in defiance of the General Medical Council, while admitting that he is under their control on other matters of infamous conduct, for no court of equity would allow the Council to declare under one Act of Parliament as "infamous conduct" what is especially authorised by an unrepealed Act. Again, although the General Medical Council can erase the name of an apothecary possessing another qualification who advertises, it is not for the act itself, but for the violation of his agreement with the body who granted the other diploma. It seems as if these contentions are valid, otherwise how can we account for the painful facts already only too evident. The magnates of the Council and other distinguished upholders of professional ethics have only to turn their heads slightly to one side to observe the establishments of the new L.S.A.'s as they roll down the thoroughfares of towns in their carriages. These gentlemen can read on the shop and dispensary windows of their apothecary *confreires* such announcements as "Ears syringed, 6d." They can see degraded scales of fees unblushingly exhibited, and, worse than all, in close juxtaposition, the words, "Dr. —, Physician and Surgeon." We are thus forced to the conclusion that the powers that be cannot legally interfere to prevent this. When the claims of the Apothecaries' Society to full professional recognition were under discussion much opposition was raised that was founded on the shadows of professional jealousy, instead of the solid objection of being an advertising corporation; the medical press generally advocated these claims, ignoring the advertising feature. Now it was not on account of jealousy or any supposed educational superiority that some prescient ones looked askance on this unholy alliance between advertisements, trade, and profession. The triple qualification of the Apothecaries' Society certainly equals, if it does not excel, the conjoint qualification of the Colleges; and the apothecary is equally as much entitled to the titles Physician, Surgeon, and Doctor as the licentiates of the Colleges. Formerly the single apothecary acted as a druggist who also prescribes and visits, and was consequently regarded by the public as an inferior mongrel practitioner. The advertisement of his wares and services did not, as it now will, degrade the profession as a whole. Later in the century, with the establishment of the Pharmaceutical Society, the apothecaries gradually withdrew from the advertising branch until, in 1886, perhaps not 3 per cent. of L.S.A.'s adopted that style of practice. At this date Apothecary and Licentiate Physician were practically synonymous titles, either or both being held by surgeons indifferently. As long as the Apothecaries' Society could only grant a single qualification its licentiates were almost compelled to become surgeons, and consequently submit to the dicta of the Colleges and Council in matters of conduct and etiquette. The old order of things is changing, and that steadily for the worse. Owing to the hostility of the Royal College of Physicians of London to the modest claim of the Apothecaries' Society for admission to the fold the latter played for a higher prize and, as some of us minors foresaw, gained it. We saw that Parliament would in spite of opposition grant the Society power to confer a triple qualification and thus make it more powerful than, and independent of, either or both Colleges combined. If with the acquisition of independence and new privileges the old privileges of advertising and trading had simultaneously been withdrawn all would have been serene. One of the results is already becoming manifest. Many students are now taking the Apothecaries' Society's diploma, and that only, so as to be enabled to become advertising doctors, physicians, and surgeons. The extra privilege is very alluring to a large class, so that shortly we may expect the Apothecaries' Society to absorb the lion's share of examination fees for its diploma. Are the new L.S.A.'s going to drag down with them the science and art of medicine to the trade level of quackery? If so, then the "infamous conduct" clause is almost a dead letter. Now is the time (before many more new L.S.A.'s are admitted) for the General Medical Council, if it can, to declare advertising infamous conduct when practised by apothecaries. The Council devotes the major portion of its time in

punishing a few paltry cases of covering, which are of no moment to the profession, whilst wholesale degradation of it seems scarcely worth their notice. Three advertising L.S.A.'s will damage the prestige of the profession more than a few thousand coverers. It will be interesting to see if any of the three gentlemen who were returned as direct representatives will really represent the opinions of the vast majority of their constituents (at the forthcoming meeting of the Council) on this subject—viz., exhibition of scales of fees &c. on dispensary shop windows by apothecaries.

I am, Sirs, yours obediently,

May 6th, 1895.

ETHICS.

* * Our correspondent complains that the holders of the new L.S.A. give less consideration to the ethical standards of the profession than other licentiates or graduates, and that the Apothecaries' Society is either unable or unwilling to administer discipline in the case of such unworthy licentiates. We think he is a little hasty in bringing this accusation against the new licentiates. As far as our experience goes—and it is considerable—the new apothecaries are not so much in fault here as licentiates of certain colleges with royal titles, and even graduates of famous universities, who are, in the great majority of cases, allowed to transgress all professional standards of taste without serious remonstrance from their authorities. The fact is that the colleges and the universities have winked at these evils and errors in their members till they have become almost established. They show a cowardice in using their disciplinary powers and a disposition to save themselves trouble and expense by referring complainants to the General Medical Council. The Council is not meant to be the first court of judgment in such matters and it is not likely to relieve the medical bodies of the responsibility of exercising their powers. After the latter bodies have done their duty and failed to remedy the evils in question it will become the duty of the General Medical Council to consider what else can be done to avert the degradation of the profession.—ED. L.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Ingleby Lectures.

THE first of a series of three lectures under the conditions of the Ingleby Trust was given by Mr. Gilbert Barling at Mason College on the 9th inst. The subject chosen was Appendicitis and Perforating Ulcer of the Stomach and Duodenum. The audience was select and appreciative. From the attention drawn so largely to this subject of late years in the literature of the profession, and from Mr. Barling's practical knowledge of these conditions, an interesting account is expected, the fulfilment of which, no doubt, will be amply realised.

Aggravated Assaults.

Cases of assault and aggravated cruelties are rife in our midst at the present time. They show no signs of abatement, in spite of the educational influences of the period. For pouring carbolic acid upon his wife, and for spending the greater part of his time in debauchery, drinking, and horse-racing, a man was sentenced recently to three months' imprisonment and the wife was granted a separation order. This combination of cause and effect does not appear to have much deterrent influence upon the many who spend their lives in similar degrading conditions and who in the midst of populous towns, with numerous counteracting advantages, forget the main principles which should bind society in mutual obligations of improvement and progress.

A Novel Invitation.

The Health Committee have thrown open the small-pox hospital for inspection, and intimated their willingness for persons to go over the premises. At first sight the acceptance of the invitation would seem to be a questionable act of courtesy, but fears are removed from timid minds by the knowledge that there are no patients at present in the building. The committee, no doubt, seek to justify their prudence by the display of the means within their power for combating any emergencies which may arise in this direction.

Black Country Pursuits.

The depression in trade gives rise to much idleness and indifference. "That Satan finds some mischief still" is exemplified in the manner in which the unemployed find occupation for their leisure. It has been the custom for some of the residents in a particular locality of this district to assemble on the first Sunday in the month of May with dogs, and to make a grand parade of the respective qualities of these canine pets. That much consideration is expended upon the training and cultivation of the various attributes of these animals was known to the readers of *Punch* many years ago, when a father, being seized on the leg by a dog, was exhorted by his son to hold on, as it would be the making of the pup. Of course, these displays lead to fighting, betting, and demoralisation of human as well as canine instincts. On this particular occasion several of the principals were fined 20s. and costs as the outcome of their cruel propensities.

May 14th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Plumbers' Work and Public Health.

CONCURRENTLY with the proceedings of the Sanitary Congress, sketched in my last communication, the district councils for the registration of plumbers in the northern and midland counties held a conference in the town hall. Mr. John Holden, architect, presided, and said the plumber was much abused, sometimes with good reason, but often unjustly, the general contractor or "speculative owner"—a euphemism for the jerry-builder—arranging the contracts so low that the work could only be done in "a certain manner." After twenty years' constant pressure exercised by the Sanitary Association and by the Manchester Society of Architects, jerry-building had, however, received a severe check from the operations of the Building By-laws. Moreover, technical education had already produced a great improvement in plumbers' work. One of the greatest difficulties was the demand for cheap or low-rented houses. For the last forty years rents had been going down, or what was the same thing, the requirements of the public had been going up, and a £30 house now was very different from a £30 house of forty years ago, and practically small property had passed out of the hands of first-class builders, who could not make it pay, into the hands of speculators. "Depend upon it," he said, "the demand of the public would be met by a corresponding class of workmanship." This is no doubt true, but the sins of the plumbers have been by no means confined to cheap property.

Cold Air Stores.

On the 23rd ult. an important step in the hygienics of Manchester was marked by the opening of the Corporation Cold Air Stores, which have been built close to the abattoirs. They are believed to be second to none in the country, and, as the chairman said, are a great credit to the engineer, Mr. Bannister, who had designed and carried out the works to the entire satisfaction of the Markets Committee, at a cost of a little over £75,000. The building covers an area of about 2000 square yards, and comprises a basement, ground floor, and three upper floors, with provision and strength for a fourth floor when required. It is fitted with hydraulic lifts and with the best appliances for dealing with freshly killed meat, which can be quickly cooled, chilled, and set during the summer months, whereby its market value is greatly increased. There are no pipes and no machinery in the storage chambers. Air is drawn from the rooms and returned after passing through the refrigerator, where it is "washed, cleansed, purified, cooled, and dried." No snow, fog, or damp is therefore produced, and any temperature can be maintained between 40° and 15° F. They will be used also for the preservation of game, fish, cheese, butter, fruit, and vegetables. There is sufficient space for the storage of 120,000 sheep. These stores will prevent enormous losses of perishable food and will be a great benefit both to the traders and the public.

Presentation to the Rev. J. Henn.

The Manchester and Salford Hospital Saturday and Sunday Fund has been in existence for twenty-five years. Its establishment in 1870 was due in great measure to the exertions of

the Rev. John Henn, who has been up to the present its indefatigable secretary. Some friends of the movement thought that such an opportunity of recognising the long-continued and disinterested labours of Mr. Henn should not be lost, and on the 23rd ult. he was presented with a large piece of silver plate and a cheque. In acknowledging the gift Mr. Henn gave some interesting information as to the remarkable spread of the movement, not only here, but among English-speaking people abroad.

Owens College: Opening of the Schorlemmer Laboratory.

An interesting gathering took place on the 3rd inst. at the opening, by Dr. Ludwig Mond, of the Schorlemmer Laboratory for Organic Chemistry, together with a large laboratory for medical students. After Professor Schorlemmer's death it was felt that such a laboratory would be his best memorial, and a subscription list was opened, which was well responded to both in this country and in Germany. For many years there had been a rapid growth of the chemical department of the College, and the laboratories, originally designed for 100 students, had long been overcrowded. In the session 1890-91 there were 120 students, in the present month they numbered 205, and the council some time ago became convinced of the need for extension. They, therefore, accepted the Schorlemmer Fund of £2500, and instructed Mr. Waterhouse to prepare plans for the special laboratory and for one for elementary students. These are arranged in one building, the upper part of which is the Schorlemmer laboratory, designed to accommodate a professor, two demonstrators, and thirty-six students. It is fitted up in the most complete manner, with every requisite for the important work to which it is dedicated. The lower laboratory will accommodate forty-five students, and the fittings are similar to those designed many years since by Sir H. Roscoe. The total cost of the building has been £4800. At a meeting in the chemical theatre, at which Sir H. Roscoe presided, Professor Dixon said he had received many messages and letters from home and abroad regretting absence and wishing prosperity to the new laboratory. He desired, on behalf of his colleagues and himself, to express their admiration for the noble simplicity of Schorlemmer's life and character. No one could more truly be said to have lived for the sake of his work, which included research of the highest order. Sir H. Roscoe stated that Schorlemmer came to him in 1859 and remained his faithful and intimate friend for thirty-four years. His investigations into the constitution of the hydrocarbons marked an era in modern organic chemistry, and, while his work had a purely scientific value, it enabled others to build up an industrial structure the value of which was measured by millions of pounds and employed thousands of men. He lived and died a poor man, though he might have amassed a large fortune. Dr. Ludwig Mond, in the course of an interesting address, adverted to the fact of this being the first laboratory in England devoted to organic chemistry, and of Owens as the only college in the country having a professor of that science. (The chair is now filled by Professor Perkin.) They must all regret that Schorlemmer had not such a laboratory at his disposal. His work had been singularly fruitful in clearing up and putting on a sound basis the theory of modern organic chemistry, called by him "the chemistry of the carbon compounds." If asked why a special laboratory and special professors were required for the study of that one element, one reason was the vast domain and immensely rapid increase of the science of chemistry as a whole. A stronger reason was that the methods of investigation and our way of mentally analysing those compounds differed considerably from those applied to inorganic chemistry. In organic compounds the percentage composition and physical properties told little of their chemical individuality and behaviour. They had to find out "how they were built up," and to do so had to break them down by degrees—to take them gradually to pieces. To make sure of the actual arrangement they had to put them together again and rebuild them from their proximate constituents. The methods employed in that work were entirely different from those of ordinary analysis. He said that for carrying on successfully the manufacture of artificial colours the chemist should be able to carry out independent original research. It was not the workman, it was not the foreman, it was the leading mind who directed the manufactory upon whom the success of an industrial enterprise depended—upon his thorough grasp of scientific principles and his trained habit of scientific thought. Dr. Mond looked forward in the near future to the making of morphine, quinine, and similar

bodies artificially, and to the synthesis of the ingredients of our daily food, such as sugar, starch, and gum. "But it was quite different with those important parts of our food which had been called the albuminous bodies. All we knew of them was their percentage composition, and that they contained the carbon atoms linked together, partly as in the fatty compounds and partly as in the aromatic bodies. The enigma of life could only be solved by the synthesis of an albuminous compound. Surely with such a prospect before them as the ultimate result of the pursuit of organic chemistry, no amount of work, no amount of thought, no amount of time and trouble devoted to that study would be too much if it was well employed in leading successfully to the great end in view, although the goal might not be reached for generations to come." Notwithstanding the anticipations of Kekulé and Professor Fischer of Berlin many of us are no doubt sceptical as to the organic chemists producing living protoplasm and solving the "problem of the origin of life."

Deterioration of Race in Lancashire.

The *City News* calls attention to the effect of mill life in lowering the physique of the workers, the men becoming "stunted and prematurely enfeebled." The heated and moist air of the mills where the working hours are passed and the too early employment of the children as half-timers are important factors in producing this result. Then, too, very early marriages, want of thrift, ignorance of domestic management and of the simplest cooking, in many cases alternate extravagance and privation, together with other causes, combine to bring about this disastrous effect. Football is immensely popular in Lancashire, but the teams are chiefly composed of imported Scotchmen who play the game while the natives look on and shout. The police force illustrates the same thing. Three policemen in Oldham had to be sworn in the other day, and none of them were townsmen. The chief constable said that few Oldham men came up to the standard of physique required, the country districts, Scotland, and Ireland furnishing most of the district police forces. In the well-to-do families of the manufacturing districts the girls are very often—one may almost say generally—taller and more finely developed than the young men. The latter go early to the office or the mill, while their sisters remain longer at school and when at home have a much better time than their brothers as to out-door amusement and exercise and as to their daily surroundings. On the other hand, the women and girls of the working classes do not show this superiority. They are as stunted, weakly, and even more anæmic than their feeble and ill set-up brothers. In our manufacturing towns the prospect for the race is undoubtedly bad, but something may be done in preventing too early employment of the children. With this question a provision of the Government Factories and Workshops Act Amendment Bill proposes to deal.

May 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Glasgow University.

THE following appointments have been made by the University Court: Mr. Thomas Savill, M.D., to be Examiner in Clinical Medicine; Mr. H. E. Clark, M.R.C.S., surgeon to the Glasgow Royal Infirmary, to be Examiner in Clinical Surgery. Glasgow graduates will hear with regret of the retirement of Dr. Dickson from the chair of Divinity. Dr. Dickson has been a professor in the University for the long period of thirty-two years, and, in addition to his professional eminence, has been well known in all the faculties for the valuable service he has rendered as curator of the University Library. In this latter capacity he has compiled both a complete alphabetical catalogue and also a catalogue of subjects, thus much facilitating the work of students and others engaged in research. The nomination of Professor Wm. Macewen for the Fellowship of the Royal Society, whilst welcomed by the profession generally, is naturally the subject of special congratulation in the University of which he is a graduate and in which he occupies with so much distinction the chair of Surgery. Dr. Alfred Young, Demonstrator of Anatomy in the University, has been appointed Assistant to the Professor of Surgery in Anderson's College. At the annual dinner of

the University Conservative Club on the 2nd inst. the chair was taken by Dr. J. Yule Mackay, until recently Senior Demonstrator of Anatomy in Glasgow, and now Professor of Anatomy in University College, Dundee. Quite a gleom has been cast over the commencement of the summer session by the sad suicide of a young medical student. He had lately been very peculiar in his manner, and cut his throat whilst in a state of temporary insanity.

Glasgow Police Convalescent Home.

A house, to be used as a convalescent home for members of the force, has recently been taken at North Queensferry. It is to be under the direction of an association which has been formed amongst the police for purposes of mutual assistance, each member paying a small annual subscription and being entitled to the benefits of the home when these are needed. The institution of the home is mainly due to the initiative of Sheriff Gillespie of Dunfermline, who has generously undertaken to meet all expenses during the first two years.

Natural History Society of Glasgow.

At a meeting of this society on the 2nd inst. a paper was read by Dr. R. Broom on the Anatomy of a Four-winged Chick. Professor McKendrick, F.R.S., has been elected an honorary member of the society.

City Parochial Board, Glasgow.

Dr. William A. Mackay has been elected assistant medical officer. The board has granted an increase of £10 to the salary of each of the out-door medical officers.

Ambulance Work.

The Ambulance Company of the 3rd Volunteer Battalion Highland Light Infantry (the Blythswood) has passed a first-class examination after inspection by Surgeon-Major Jerome, A.M.S. The inspection was made the opportunity of bidding farewell to Surgeon-Lieutenant-Colonel Brodie, who has for twenty-six years been connected with the battalion and who has been appointed Brigade-Surgeon-Lieutenant-Colonel of the Clyde Brigade.—The Lord Provost of Glasgow presided at the recent distribution of certificates to the members of the ambulance class at Braco, Perthshire, and delivered an address on the value of ambulance training. Dr. McArthur, who has conducted the class, was on the same occasion presented with a handsome Gladstone bag by the members.

Glasgow Police Commission.

The commission has unanimously adopted the recommendation of the Health Committee to increase the salary of Dr. A. K. Chalmers, the junior medical officer of health, from £400 to £500 and that of Mr. Fyfe, the sanitary inspector, from £450 to £500. In his report to the Health Committee Dr. Ruesell gives an account of the spread of small-pox in the city, and instances one case in which the patient was not discovered until a month after he had sickened with the disease, during which time he had infected no less than nineteen other persons. Neglect in obtaining medical attendance in other cases also has led to limited outbreaks of the disease. Thus, four cases were recently removed from a house in the East-end where a girl had been ill with the disease for some weeks, but had never been seen by a medical man; and last month a child with malignant small-pox actually died in the waiting-room of one of the dispensaries, and in spite of all precautions six cases followed this one source of infection. Last week there were 72 cases in the hospital at Belvidere, but to-day the number has fallen to 64.

West of Scotland Convalescent Home.

The seaside home at Dunoon has been recently enlarged by the addition of a new wing which will add fifty beds to the 200 the home previously possessed. The cost of the new building, with furnishing &c., has been nearly £5000. At the inaugural ceremony Dr. Robert Perry, who has been examining medical officer since the home was started twenty-five years ago, stated that nearly 60,000 convalescents had been admitted during that period. The formal opening of the new wing was performed by Lady King, to whom, as well as to Sir James King, the home is much indebted for valuable assistance.

Glasgow Hospital for Skin Diseases.

At the thirty-fourth annual general meeting of the subscribers to this institution Professor McCall Anderson in submitting the medical report stated that during the past year 1348 new cases had been admitted to the hospital, and

102 had been sent to the wards for skin diseases in the Western Infirmary, making totals since the establishment of the hospital of 42,316 and 1836 respectively. The treasurer's report showed a balance of £8 10s. 5d. on the right side of the account. The hospital continues to be a much-appreciated clinical school for instruction in the diagnosis and treatment of diseases of the skin. Professor McCall Anderson is the senior physician, and is assisted by Dr. W. R. Jack and Dr. Forbes.

May 14th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

A Case of Leprosy.

ABOUT three years ago a sensation was created in the neighbourhood of Lisburn when it was announced that there was a leper living with his family at Culcavey. The man had lived for seven years in India, where he probably acquired the malady. As the people near Lisburn, where he lived, objected to his presence, after considerable discussion apartments were provided for him in the rear of the workhouse in Lisburn, where the man was located and where he died on May 7th. His mother and brother reside in Belfast. No person was infected with leprosy through contact with him.

Queen's College, Belfast.

At the general class examination, held at the close of the winter session, prizes were awarded as follows:—*Zoology*: Senior Division—W. A. Rice. Junior Division—John Adams, M. L. Rowans, B. A., and W. D. Hamill. *Systematic Anatomy*: Senior—David Fleck. Second Year—A. B. M'Master. First Year—R. A. L. Graham and G. H. Grills. *Practical Anatomy*: Senior—A. L. M'Cully and David Fleck. Second Year—A. B. M'Master and G. C. R. Harbinson. First Year—R. A. L. Graham. *Physiology and Histology*: Senior Class—A. L. M'Cully and R. W. G. Stewart. Junior Class—J. W. D. Megaw and J. W. Brown. *Practical Physiology and Histology*: G. A. Hicks, A. L. M'Cully, R. W. G. Stewart, and Henry Hanna, B.A. *Medicine*: R. W. G. Stewart. *Surgery*: Second Year—W. J. MacKeown, B.A., and W. A. Osborne. First Year—R. J. Johnstone, B.A., and W. M. Spiller, equal, and S. T. Beggs. *Materia Medica and Therapeutics*: C. E. M'Dade, B.A., and J. A. C. Doonan (non-matriculated). *Midwifery, Gynaecology, and Diseases of Children*: Senior Division—S. T. Beggs. Junior Division—W. A. Osborne and F. T. Heron. *Practical Chemistry*: R. A. L. Graham; A. V. Johnston and Arthur Martin, equal, and David Brown.

Boating Accident at Fair Head.

Another sad boating accident has occurred on the treacherous northern Irish coast. It seems that a boat belonging to Mr. Moore, cashier at the Northern Bank, Ballycastle, broke adrift from her moorings in Ballycastle Bay, and was picked up in Cushendall. On Saturday evening, May 11th, Mr. Moore, Mr. Sparrow (also of the Northern Bank), and Mr. T. Hay (son of the late Sir Arthur Graham Hay, Bart.) left Ballycastle for Cushendall, to bring back the boat. They had got as far as Fair Head on their return home, when at 10 p.m. the boat, struck by a heavy squall, foundered, leaving all three occupants to struggle home. Mr. Moore alone managed to reach a rock, where for a time he lay unconscious; but, recovering, was able to swim ashore, and reached Ballycastle at 3 o'clock on Sunday morning. Search parties went out in quest of the two missing men, who have not yet been found. The boat was picked up off Torr Head on Sunday afternoon by the ss. *Gannet*; she was found keel uppermost, with masts and sails floating alongside. The sails were all made fast and so they could not part from the boat. She was a good deal damaged.

The Belfast Asylum.

At a meeting of the board of governors held on May 13th the visiting committee reported that the dormitory accommodation was overcrowded. Not only were the sleeping-rooms overcrowded, but actually bedsteads were set up in several of the corridors. They thought that some effort should be made without delay to remedy this unsatisfactory arrangement. Dr. Merrick, medical superintendent, reported that there were 768 cases resident, while the normal accommodation was only for 400 cases—a very overcrowded condition. The admission-rate continues to increase. Since the opening of the year 95 cases were admitted, as compared with 64

cases up to the same date last year; while even last year there was a material increase in the number of admissions.

The Sewerage System for Purdysburn.

The subcommittee appointed to consider the system of sewerage proposed to be adopted at the new Purdysburn Asylum report that there are immense difficulties in the way of connecting the sewers with the Belfast City system, as also in making a sewage farm, and advise that the system recommended by their architect, Mr. Jackson—viz., precipitation and filtration—should be carried out and the clarified effluent be discharged over the grounds, by which the possibility of any interference with the water of the burn is avoided. They further advise that Mr. Jackson should be instructed to keep the main drain from Purdysburn House at as high a level as possible in order that all land available may be used for the sewage effluent. This report was adopted at the meeting of governors.

The Care and Maintenance of Harmless Lunatics.

For some time past a contest has been waged between the governors of the Cork Lunatic Asylum and the Poor-law guardians as to which board is responsible for the care and maintenance of harmless lunatics. A large number of the latter, amounting at present to as many as 150, have for years past been provided for in the Cork Workhouse. As a sort of compromise it was some time ago arranged that the authorities of the asylum should take over from the guardians any of those poor patients whose mental condition was not so hopeless as to preclude the possibility of cure. Some so sent to the asylum were promptly returned to the guardians, as the medical superintendent of the asylum reported that they did not come within the terms of the agreement. Apparently there was a conflict of opinion between some of the medical gentlemen attached to the two institutions, and as they and everyone else realised that a game of shuttlecock could not be played with some of the most helpless members of the human race matters have necessarily come to a climax. Accordingly, the guardians have forwarded to the Lord Lieutenant a carefully prepared memorial, in which they submit that it is the duty of the governors to take into the asylum all classes of the lunatic poor, whether curable or not, provided sufficient accommodation exists in the asylum. If it should be found that the asylum is not large enough for the purpose, the memorialists urge his Excellency to put in force certain statutes which they say empower him to compel the governors to provide the requisite accommodation either by additions to the existing establishment or by the erection of a separate one. The Under Secretary to the Lord Lieutenant forwarded the memorial to the governors for their observations, and in an accompanying letter stated: "His Excellency further desires me to inform you that he is advised that the District Lunatic Asylum is the institution primarily responsible for the maintenance of the lunatic poor of the district if vacancies can be found therein for their reception, and that the law does not draw a distinction between the different classes of lunatics in fixing the means for their maintenance." Whilst the memorial was under the consideration of the asylum board the medical superintendent, in reply to one of the governors, stated that according to the rules of the Board of Control they have accommodation for 1191, and that as a matter of fact they have sixty over and above that number in the asylum at present. He further added that he had procured returns from the seventeen workhouses in the county of Cork, showing that in these institutions there are 490 inmates mentally afflicted, including idiots, imbeciles, and chronic lunatics. Finally, it was decided that the memorial should be printed for circulation amongst the governors and a special meeting held to consider the whole question.

The Battle of the Clubs at Cork.

I mentioned in a previous letter that Cork is threatened with the formation of a commercial provident dispensary. Since then the local agent has obtained an interview with the committee of the profession, and had an opportunity of explaining the manner in which it is proposed to work the dispensary. He produced a copy of the printed rules, from which it was evident that there is no wage limit and that a member might live at any distance he thought fit from the residences of the medical officers. Except in comparatively few cases there is no medical examination of members on admission, and as the three farthings a week received by the medical officer from each adult member would pay not only for medical attendance but also for medicines, it is clear that

phthical patients might gain admission in such numbers that supplying them with cod-liver oil and expensive drugs might rapidly absorb the sundry farthings that had found a temporary resting-place in the medical men's pockets. These are brilliant prospects for the future of the medical profession. On those difficulties being pointed out to the agent, he said that he personally would obviate the whole of them. He would not accept any members except those having small incomes, he would limit distances according to the wishes of the medical officers, and if any chronic cases chanced to find their way into the society he would pay them back their money and get rid of them. What if his successor did not prove equally complaisant? Oh! he himself intended settling down for the remainder of his life in Cork; though he had previously mentioned that he had "opened up" Kent, Sussex, and the Channel Islands. Could he not have inserted in the rules of his society the promises he had referred to? No. Why? Because printing new rules would cost too much! He has already engaged the services of eighteen canvassers, and he will be surprised if the Cork medical men will not avail themselves of such a favourable opportunity. But the latter had their own views of the whole project, and at a specially convened meeting of the profession, apart from all other considerations, they denounced the touting and canvassing so inseparable from the system as calculated to prostitute the practice of medicine and bedaub the escutcheon of an honourable profession.

Curious Action against a Medical Practitioner.

A case, which has created considerable interest, has just terminated, after a hearing of three days, in a verdict for the plaintiff, with damages £100. The decision is of great importance to the medical profession, for it clearly demonstrates the reality of the dangers which medical men are so frequently obliged to face in carrying out their duty to the public, more especially in connexion with the notification of infectious disease. The action was brought by Mr. Andrew Mason, a draper carrying on business in Rathmines, against Dr. John E. Hadden, of the same suburb, to recover damages for having "negligently, improperly, and unskillfully diagnosed as small-pox" a disease which was not small-pox, but erythema nodosum; for having the patient, a young girl named Maria Hawkins, in the plaintiff's employment, removed to Cork-street Hospital; and for having, under the Infectious Diseases (Notification) Act, reported the case to the municipal authorities of Rathmines as a case of small-pox, to the injury of the plaintiff's business. The facts, as reported in the daily journals, are briefly as follows. On the evening of Dec. 10th the defendant was summoned to see the girl Maria Hawkins, whom he found in a room in Mr. Mason's establishment, said to be occupied at night by her and seven other employés. The patient's temperature was 103° F., and she complained of pains in the back, &c., while numerous raised spots of erythema were visible on her forehead as well as on her limbs. Dr. Hadden, who had revaccinated this girl some weeks before, made a diagnosis of modified small-pox, a disease then very prevalent in Rathmines, and directed that she should be removed to hospital. He, moreover, notified the municipal authorities of the existence of a case of small-pox at Mr. Mason's establishment. Next morning the patient was brought to Cork-street Hospital and admitted by the resident medical officer, who stated, however, that she was suffering from erythema nodosum, and not from small-pox. Mr. Mason, hearing this, accused Dr. Hadden of having made a mistake in his diagnosis in his notification under the Infectious Diseases Act, &c., as stated above. The defendant denied the negligence; denied that he had improperly or unskillfully diagnosed the disease; denied that the plaintiff had suffered any of the loss or damage alleged; denied the writing of the letter to the town commissioners; that the words in the letter were not written or published in the defamatory sense imputed, nor in any defamatory sense. There was a special defence to the effect that the words "were written and published by the defendant honestly believing that the said Maria Hawkins was then suffering from small-pox, for the purpose of complying with the terms of the Infectious Diseases (Notification) Acts, 1889 and 1890, whereby the defendant was bound under penalty, on becoming aware that any patient of his was suffering from an infectious disease, to notify the same to the medical officer of health for the district, and not otherwise, and the persons to whom the said words were published had a legitimate interest in being informed thereof for the purposes of the said Acts, and the

said words were published by the defendant on a privileged occasion for the purpose aforesaid *bonâ fide* and without malice, and in the belief that they were true." There was really no suggestion that Dr. Hadden's action in the whole matter had been anything but *bonâ fide* and dictated by the highest sense of public duty. Mr. Wright, Q.C., his counsel, admitted, however, that he had been "guilty of an error in judgment," but the subsequent evidence of experts threw considerable doubt on the propriety of even this admission. Dr. Thornley Stoker, the President of the Royal College of Surgeons in Ireland, stated that, placed in Dr. Hadden's position, "he would have done exactly as he did"; and in cross-examination said that he "was of opinion that the case really was one of small-pox." In this view Dr. J. W. Moore, an acknowledged authority on the subject of fevers, concurred. Dr. James Little, a physician of the highest position and of very large experience, stated in his evidence that "the symptoms described in court would certainly lead to the belief that the case was one of small-pox." The patient was detained in hospital for more than a month, but she has long since perfectly recovered. If the disease was small-pox, it has never reappeared at Mr. Mason's establishment, a fact owing perhaps to the unselfish public spirit of Dr. Hadden, for the exhibition of which he is now about to pay £100. Dr. Hadden, who is a Bachelor of Medicine and Surgery of Dublin University, is well known, and much sympathy is felt for him.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Sulphonal and Urine Analysis.

M. LAFON¹ had under treatment a patient who, in 1891, passed 183 grammes of sugar daily in his urine. In a few months all trace of glucose disappeared. For the last two months an average daily dose of 75 centigrammes to 1 gramme of sulphonal has been taken. A somewhat prolonged boiling of the urine with Fehling's solution invariably determines a characteristic reduction, although the polarisaccharometer reveals, not a deviation to the right, but slightly to the left. That the reducing properties conferred on the urine by the ingestion of sulphonal are not caused by any transformation of that drug in the system is proved by the fact that the addition of a medicinal dose (1 gramme per litre) to urine quite free from sugar confers the same reducing power. The practitioner would thus do well to think of the sulphonal habit before he comes to the conclusion that the success of the copper test in any given case is indicative of the presence of glucose.

Anosmia cured by Douches of Carbonic Acid Gas.

Dr. Joal of Mont-Dore² had recently under his care two cases of this obstinate disease. In both instances all sense of smell and taste had disappeared for several months past and had been unsuccessfully treated by irrigation, the galvano-cautery, electricity, and insufflations with a powder containing strychnine. The two lost senses were completely restored by the employment of douches of CO₂ gas. The *modus operandi* is most simple. An ordinary seltzer syphon is turned upside down, the excess of liquid is allowed to escape through the tap, and the orifice is then held close to the nostrils. Dr. Joal recommends the same remedy at the commencement and during the course of common colds.

Formyl Aldehyde as a Disinfecting Agent.

In the February number of the *Revue d'Hygiène* I find a suggestive paper by MM. Gambier and Brochet on the utility of the above product in the disinfection of rooms. It is stated that formyl aldehyde is capable of radically sterilising all dust germs as also the anthrax bacillus and its spores, and this even when employed in minute doses, provided always that the room be hermetically sealed and that the duration of the process be sufficiently prolonged. Moulds possess more resisting power than bacteria; amongst these latter those which favour putrefaction are the soonest destroyed. The most resisting micro-organism is the inoffensive bacillus subtilis. Experiments conducted in a room of 75 cubic metres were less conclusive than those made in the laboratory. It must not be forgotten, however, that the temperature was low and that a good deal of

¹ Académie des Sciences, April 29th.

² Société Française de Laryngologie et d'Otologie, May 4th.

leakage of the gas was inevitable through numerous apertures impossible to close. Nevertheless, even under these unfavourable conditions, a relatively small quantity of aldehyde gas brought about the destruction of nearly all the dust germs deposited in the room. An increase in the volume of the gas used did not appear to produce appreciably better results. As above stated, the resisting germ was invariably the bacillus subtilis of hay. The penetrating properties of the gas are shown by the fact that dust placed to the depth of one centimetre in beakers, themselves placed on shelves in a cupboard, was found, after an exposure of twenty hours to the aldehyde vapour, to be completely sterilised. It would then appear that the employment of this valuable disinfecting agent is specially indicated in the case of breakable or precious objects, and also in the case of rooms which are not too large. Its great advantage over the sublimate spray is that the objects to be purified need not be displaced, unless it be bedding, carpets, and curtains, which are better disinfected in an oven. It has been noticed that any germs that have escaped destruction at a first operation are destroyed at a second. Formal-aldehyde lamps are employed for the generation of the gas.

The New Military Medical School of Lyons.

This establishment was, with much pomp and ceremony, formally opened on the 12th inst. by General Zurlinden, Minister of War, who was accompanied by Dr. Dujardin-Beaumetz, *médecin inspecteur général*, Dr. Gaillon, the Mayor of Lyons, and a brilliant staff. Quite a large force of troops of nearly all arms marched past the Minister when he had taken his station on the steps in front of the school buildings. The actual ceremony of inauguration took place in the vast courtyard of the school, where all the students, headed by their professors, were massed. Speeches were delivered by Dr. Gaillon and the Minister, feeling allusions being made to such past ornaments of the army medical service as Percy, Larrey, Desgenettes, Sédillot, Villemin, and others. This ceremony should have taken place in July last, but the sad tragedy involving the death of President Carnot necessitated its postponement. Dr. Gaillon has, by the way, been created Grand Officer of the Legion of Honour.

May 14th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Prophylactic Measures against Tuberculosis.

At a recent meeting of the Berlin Medical Society Professor Cornet read a paper on the above subject. He had already suggested that the tubercle bacillus is not ubiquitous, as some observers suppose, and is present only where phthisical patients have expectorated and where the dried sputum has afterwards become dispersed. This result he had arrived at by very extensive examinations of the wards in hospitals, and the rooms in barracks, prisons, and monasteries, where crowds of people live together in a limited space; the dust and mud of the streets were also carefully examined by him. In rooms where spittoons containing some water were in use he very seldom found the bacillus even if phthisical patients lived there. According to him the prophylactic measures are very simple: a large number of spittoons partially filled with water should be provided in order to prevent people from spitting on the floors, and handkerchiefs should not be used for receiving expectoration; moreover, the floors of houses and the streets ought to be sprinkled with water as often as possible. Heredity had less influence on the origin of tuberculosis than was generally believed. In a great many cases where the children of phthisical parents were attacked with the disease, the communication might be due, not to heredity, but to mere contagion. The number of those suffering from phthisis is, in Professor Cornet's opinion, estimated to be higher than the results of necropsies warrant. It is an error to suppose that the atmosphere is filled with tubercle bacilli; they are dangerous only where the necessary precautions are neglected. In proof of the efficacy of hygiene in reducing the dangers of tuberculosis Professor Cornet mentioned that on his advice the Government had taken the above-described measures to prevent the general dispersion of sputum in prisons and lunatic asylums, and that since this time the mortality

from phthisis in these institutions had obviously decreased. The new regulations came into force in 1889. In the prisons the deaths from phthisis per 10,000 inmates were 146.7 during the period 1884-86, 144.5 in 1886-88, 101 in 1888-90, 89.4 in 1890-92, and only 81.2 in 1892-94. In the lunatic asylums the corresponding phthisis death-rate was 198 in 1886, 180 in 1887, 184 in 1888, 155 in 1889, 152 in 1890, and 156 in 1891. The mortality had also decreased in those convents whose superiors had followed Professor Cornet's recommendations. These statistics show that cleanliness and intelligent care are the best means of preventing the propagation of tuberculosis. In the course of the ensuing discussion Professor Virchow said that it would be a great advantage if persons would refrain from expectorating in public places, but according to his experience there was little inclination to follow hygienic prescriptions. In the university he had often seen students who had received a hygienic education neglecting the spittoons and expectorating anywhere. Dried sputum was often to be seen in railway carriages, a circumstance which would of course be extremely conducive to the propagation of tuberculosis among travellers. Railway authorities ought to give especial attention to those carriages which convey invalids to health resorts. Commenting on the statistics quoted by Professor Cornet, he said that he was not yet entirely persuaded that the decreased mortality in prisons and asylums was really an effect of the hygienic measures taken by the Government. Dr. Baer, medical officer to the great penitentiary of Plötzensee, near Berlin, said that simultaneously with the prophylactic regulations of the Government the dietary of the prisoners was improved and the overcrowding of the buildings was discontinued. These circumstances, he thought, were of no small importance in the prevention of tuberculosis.

The Etiology of Blackwater Fever.

Dr. Plehn, medical officer to the colonial Government of Cameroon (West Coast of Africa), has made valuable researches on the above disease, which is scientifically known as paroxysmal hæmoglobinuria. In a communication to the Berlin Medical Society he states that Europeans and Chinese are particularly subject to this complaint, negroes, some cases excepted, being exempt. Robust persons, both men and women, are especially liable to be attacked. The duration of the incubation is very uncertain. Blackwater fever nearly always follows typical malaria; Dr. Plehn has seen only three cases of the disease without antecedent malaria. The disease is apt to break out after hard work or mental excitement. Microscopically he had observed a diminution of the red blood-corpuscles; the leucocytes often assume the form of macrocytes, but seldom that of poikilocytes. By means of staining methods he had recognised in the blood plasmodia similar to those of malaria, but with a less affinity for aniline colours. He believes that both the plasmodia of malaria and blackwater fever are varieties of the same species. Drugs are unnecessary, the disease having a tendency to spontaneous recovery.

Death of Professor Nüggerath.

Professor Nüggerath, the well-known gynaecologist, died in Wiesbaden on May 5th. Although a German by birth, he spent the greater part of his life in America. Born in Bonn in 1807 he became assistant at the Hospital for Women in his native town, and in 1856 he was called to New York, where he became Professor of Gynaecology in the Medical College. He made valuable researches on the Etiology of Endometritis, Leucorrhœa, and the Inflammatory Diseases of the Sexual Organs. In 1889 he left New York for Wiesbaden, where he resided till his death. His last work, entitled "Contributions to the Structure and Origin of Carcinoma," appeared in 1892.

May 14th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Balnæary Hygiene.

THE modern Roman laments, and not without reason, the absence of those means of personal ablution which were open to all, from the patrician to the mechanic, under the Empire, and even the Republic before it. In the baths of Caracalla, for example, and, later still, in those of Diocletian, the humblest no less than the highest citizen could cleanse and

reinvigorate his body by an admirably organised series of balneary arrangements, to some extent perpetuated in the so-called "Turkish" (which is really the Roman) bath of the present day. During the summer heat, now imminent, Rome is absolutely without such a resource on a popular scale, and, as usual, has the mortification of seeing the more enterprising cities of the Alta Italia exelling her in this desirable direction. At Turin there were opened on the 4th inst. for public use a splendid array of baths, each in a separate chamber, the price charged being not more than 15 centimes (1½d.) apiece, service and linen included. The water is maintained at a constant temperature of 30° to 32° C., which, if specially required, can be lowered or heightened without loss of time. The establishment has a female wing as well as a male, and the service is scrupulously regulated to suit the convenience of both sexes. The baths are open every day from 5 A.M. to 8 P.M., and on holidays from 5 A.M. to 6 P.M. Rome, I am sure, would consult her own interests by a return to the bathing system of which her ruined aqueducts are the still magnificent monuments. For one thing, she would have a much better chance of attracting the tourist in the summer months if he could count on keeping himself cool and comfortable by such a resource as that now open to him in Turin.

The Italian Red Cross.

There may or may not be "gunpowder in the air," and nearer home than the Tropics, but one thing is certain, that throughout Europe there is an extraordinary activity in all the Red Cross organisations. Italy, as becomes the nationality which justly claims priority in the humanitarian conception which had its culmination in the Geneva Convention under General Dufour in 1869, is very much *en évidence* in this direction. Not only has she equipped and sent out to the Tigré a first relay of what promises to be a singularly complete Red Cross service, but she is making energetic preparations for the autumn manoeuvres, which are to come off this year in the central provinces. As in those of 1894 she broke fresh ground, particularly in the railway and mountain transport service, so in 1895 she has in store some "surprises" equally interesting, and perhaps worthy of imitation in other departments. On the 4th inst. there was held here a general meeting of the "Croce Rossa Italiana" to consider certain important questions of uniform, of promotion, of the reciprocity of salutation with the combatant force, and other details affecting the more efficient organisation of the service. These, after due discussion, were put in the concrete form of resolutions to be submitted at the proper time to headquarters.

May 6th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Athletics and Casualties.

THE Committee on Hygiene and Athletics of the Board of Visitors to the Military Academy at West Point have compiled the following statement of the casualties from the hospital records for two periods of three months each—viz.: football injuries, 91; injuries in riding-hall, 45; injuries in gymnasium, 19. But this is by no means a fair comparison, for there were but 61 football players, while those under instruction in the riding-hall numbered 382, and those in the gymnasium 207. Furthermore, football was played but once a week, while the riding exercises took place three times a week, and those in the gymnasium six times. Finally, the football injuries were, as a rule, more severe than those sustained in the riding-hall or gymnasium. This is the first contribution of accurate comparative data with regard to these three forms of athletics in the same institution under identical surroundings and by the same class of men. If the frequency of gymnastics (six times a week), of riding (three times a week), and of football (once a week) are taken into account, it shows that per man playing there were respectively from about 20 to 100 times as many accidents in football as in the riding-hall and gymnasium, and that the gravity of the accidents, as measured by the number of days lost per man playing, or per man injured, or by the number of men off duty per diem, is vastly greater in the case of football than of either of the other two forms of athletics.

The Bicycle for Medical Men.

An animated discussion occurred in a medical society of New York on the question as to the effects of bicycle riding

on persons suffering from various diseases. Though there was some difference of opinion the general sentiment was very favourable to the use of the bicycle. Perhaps the most interesting feature of the discussion was the admission of many physicians that riding the bicycle was their favourite method of exercise. A physician of Louisville who has abandoned his carriage and adopted the bicycle in his visits to his patients, after describing the improvement of his own health by the change, states that he recommends it for phthisical patients well progressed in the disease, as by its gentle and prudent use their appetites were increased, their digestive and assimilative powers enhanced, and their sleep prolonged and made more refreshing. He deprecates too rapid riding, approves the upright position, and enjoins frequent intervals of rest. He has been consulted by many who think they have been injured by the bicycle, but he has always found their troubles due to a faulty adjustment of the saddle or to the riding having been too long and wearisome.

Condemnation of Insanitary Buildings.

No new provision of a recent Act of the Legislature of New York is more valuable than that providing for the condemnation of insanitary buildings, especially those which injure the sanitary condition of a neighbourhood. The initiative must be taken by the Board of Health and the proceedings carried on through the courts, with compensation so moderate that the law will not be a premium upon neglect on the part of landlords. It is mathematically proved in the report to the Legislature of the Tenement House Committee that there are houses in New York which breed and disseminate the germs of disease, and are a menace not only to their inhabitants but to the whole community. The introduction of small parks should do away with some of these, and well considered condemnation proceedings can destroy others. There is no doubt that the legislation which will most favourably affect the death-rate of New York is such as will do away with the rear tenements, and root out every old, ramshackle, disease-breeding tenement house in this city.

Antiseptic Operating Theatres.

There is a gratifying interest now taken by wealthy citizens in securing to hospitals a separate building for operations where needful antiseptic appliances may be made. The most notable instance is the Syms' Operating Theatre of Roosevelt Hospital in this city, built at an expense of 40,000 dollars. Every arrangement possible for successful antiseptics is here provided. At Worcester and Pittsfield, Mass., at Chicago, and in many other localities similar buildings are being erected on endowments by citizens. The results are that these hospitals are attracting surgical patients from distant places, and even from hospitals which have no such provision.

Destruction of Tenement Houses by Fire.

During the past few years the number of tenement houses destroyed by fire in New York, and the consequent loss of life as well as property, has excited public alarm. The Committee on Tenement Houses, to which allusion has been made, state that it is a startling fact that, whereas the tenements of New York are only 31 per cent. of all the buildings, 53 per cent. of the fires occur in tenement houses. The greatest activity of the fire department is in the tenement house districts. Whatever the sociological reason of the frequency of these fires, it is a fact that the danger from fire is an ever-present menace to the tenement house population. The loss and misery from these perils cannot well be exaggerated. It is not merely a death danger, but a mental terror, and a threatened loss of property falling upon those who can so easily lose all they possess. The cost of fire protection by means of the fire department is twice that of the large city of London, and in proportion to population four times that of London. The whole city is taxed to meet the expense of fire precautions in our tenement houses. The committee thought that its duty would not be performed without providing additional safeguards as to fire in connexion with dangerous occupations or uses in existing tenements. In response to the request of the committee laws have recently been passed requiring that tenement buildings shall be made fireproof.

April 27th.

THE CASE OF DR. CORNELIUS HERZ.—We have received from Mr. Malcolm McHardy a series of important certificates and a letter to the Home Secretary concerning Dr. Cornelius Herz. Unfortunately they were received too late for publication this week.

Obituary.

HARRIS BUTTERFIELD, M.R.C.S. ENG., L.S.A.

THE announcement made in THE LANCET of May 4th that Mr. Harris Butterfield had expired at his residence in the Granville-road, Sevenoaks, Kent, was received with universal expressions of regret throughout the district. It is some twelve years since Mr. Butterfield was appointed medical officer of health for West Kent in succession to Dr. O. Bayliss, and he won and maintained the respect and esteem of all with whom his important and responsible duties brought him in contact. He was an honorary member (late President) of the Bradford Medico-Chirurgical Society, Fellow of the Society of Medical Officers of Health, Member of the Epidemiological Society, and formerly surgeon to the Southampton Dispensary and Beaufort Ironworks. The deceased gentleman had been ailing for a considerable time. Some few months ago he underwent a painful operation for cancer, it was then hoped successfully, but the insidious disease speedily reasserted itself, and although his medical attendant, Mr. Blomfield, was unremitting in his attendance his skill was unavailing. Mr. Butterfield was fifty-nine years of age, and leaves a widow, two sons, and a married daughter to mourn their loss. The funeral took place at the Sevenoaks Cemetery. The body of the deceased was placed in a plain oak coffin with brass mountings, the name-plate bearing the inscription: "Harris Butterfield, born June 7th, 1835, died May 1st, 1895." A large number of friends of the deceased followed the coffin to the grave. The first portion of the service was conducted by the Rev. R. A. Mitchell, curate of St. Mary-at-the-Walls, Colchester, and the concluding sentences at the graveside were read by the Rev. Thomas Stevens, chaplain to the Sevenoaks Union.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following gentlemen passed the First Professional Examination for the Diploma of Fellow at a meeting of Examiners on Monday, the 13th inst. :—

Bennett, William Edward, L.R.C.P. Lond., M.R.C.S. Eng., Mason College, Birmingham, and St. Bartholomew's Hospital.
Burgess, Arthur Henry, Owens College, Manchester.
Campbell, Robert, M.B., R.U. Ire., L.R.C.P. Lond., M.R.C.S. Eng., Queen's College, Belfast.
Dick, John Lawson, M.B. Edin., L.R.C.P. Lond., M.R.C.S. Eng., Edinburgh University and St. Bartholomew's Hospital.
Wood, William Bird Heraparth, Mason College, Birmingham.

Fifteen gentlemen were referred back to their professional studies for six months.

Passed on Tuesday, the 14th inst. :—

Atkinson, Arthur Edward, L.R.C.P. Lond., M.R.C.S. Eng., Mid-
dlesex and St. Thomas's Hospitals.
Buttye, Walter Rodney, University Colleges Bristol and London.
Davies, David Lawford Francis, Middlesex Hospital.
Molesworth, Theodore Henderson, Cambridge University and St.
Bartholomew's Hospital.

Fifteen gentlemen were referred back to their professional studies for six months.

The following are the arrangements for the Final Examination for the Fellowship, for which forty-seven candidates have entered their names:—At the Examination Hall: Monday, 20th, Written Examination, 1.30 to 5.30 P.M.; Tuesday, 21st, Clinical Examination, 2.30 to about 6.30 P.M.; Wednesday, 22nd, Operations, 1.30 to about 6 P.M.; Thursday, 23rd, Surgical Anatomy, 2 to about 4.15 P.M. At the Royal College of Surgeons: Friday, 24th, and Saturday, 25th, Pathology, 5 to about 8 P.M. Candidates will be required to attend on each of the first four days and on the Friday or the Saturday.

ST. GEORGE'S HOSPITAL GRAPHIC SOCIETY.—

The general meeting of the St. George's Hospital Graphic Society will be held on Tuesday, May 28th, at 2.30 P.M. By permission of the Board of Governors the annual exhibition, which is strictly limited to the work of the members, will be held in the museum of the Hospital. The exhibition will be opened immediately after the meeting, and will remain open until the end of the week. Visitors will be admitted on presentation of their visiting cards.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a meeting of the College on the 9th inst., Sir J. Russell Reynolds, President, in the chair, the newly elected Fellows were admitted. An application from the Pathological Museum Committee of the British Medical Association for the loan of specimens from the College Museum was granted. A lengthy and elaborate report from the Pharmacopœia Committee recommending numerous omissions from the present Pharmacopœia, as well as additions to the forthcoming volume, and suggestions on other details, was presented by Sir A. Garrod, chairman of the committee. A discussion followed, shared in by Dr. Farquharson, Dr. Burney Yeo, Dr. Squire, Dr. C. T. Williams, Dr. Hare, Sir Dyce Duckworth, Dr. D. Leech, and Dr. Norman Moore; and eventually, on the motion of Sir R. Quain, seconded by the Senior Censor, it was resolved to transmit the report to the General Medical Council. A proposal by the treasurer that the Harveian dinner be not held this year was agreed to. Reports were received from the University Committee and the Committee of Management.

UNIVERSITY OF LONDON: MEETING OF CONVOCATION.—

At the ordinary meeting of Convocation on the 14th inst. Mr. E. H. Busk, M.A., LL.B., was re-elected to the office of chairman and Mr. H. E. Allen, LL.B., B.A., to that of clerk. The report of the annual committee was presented by Professor Silvanus Thompson, and adopted. Mr. H. M. Bompas, Q.C., moved: "That the three resolutions contained in Paragraphs 7, 10, and 12 of the minutes of Convocation held on Jan. 22nd, 1895, are hereby rescinded, this house being of opinion that if a local teaching university for London be desirable it ought to be constituted apart from the existing University of London." He said that the particular question which he desired to raise had not been put to the University fairly and straightly before. It was proposed that there should be only one university, and that that university should preserve an equality between the colleges of London and the country. It seemed to him that that was equivalent to saying that it was desirable to have twice two, if twice two were five. He thought it was an absolute physical and intellectual impossibility to carry the proposal into effect. He was of opinion that if there was to be a teaching university it should be separate from the existing University. If there was to be a teaching university—a university of which the examinations were mainly controlled by the professors and teachers, and where the attendance at lectures should count instead of mere examinations as a means of getting a degree—such university should be separate from the present University. It was because every man, whether he came from the colleges or whether he taught himself, whether he was examined in London or in Calcutta, felt that there was a fair standard to which he was subjected, that they had been able to draw men from all the other universities and all the other colleges, because they could get from them something which they could get nowhere else in the world. That was the great work which the London University had done, and the great value of its degrees. The Gresham scheme proposed to entirely alter that, and if it were carried out the effect would be to establish an examination of such a character that those trained in the London colleges would have an advantage over those trained elsewhere. He was agreed that there should be a teaching university for London, but it should stand on its own merits and be separate from the present University. Mr. Cozens-Hardy opposed the resolution. He said that if he thought the scheme would put an end to non-collegiate students he would have nothing to do with it. It was because he thought it was vital to the interests of non-collegiate students that they should be in association with a university of the highest reputation that he opposed Mr. Bompas's proposal. Dr. Heber Hart supported the resolution, and a long debate followed. In which Dr. Fitch, Mr. J. E. H. Cotton, Mr. T. C. Lowe, Mr. Thomas, Mr. Hanford, Dr. Snow, and Principal Cave took part. Eventually the motion was put to the meeting, and on a show of hands being taken the chairman declared it to be lost. On a division it was found that 117 voted in favour of the motion and 238 against it. The chairman then announced that out of the list of three persons nominated to be submitted to Her Majesty for the selection therefrom of a Fellow of the University Mr. Thomas Bateman Napier, LL.D., had received 1231 votes, and Mr. Cozens-Hardy 733 votes.

ST. MARY'S HOSPITAL, LONDON, W.—At the opening by Her Royal Highness the Princess of Wales of the grand bazaar in aid of St. Mary's Hospital at Portman Rooms on June 27th next, the Princess of Wales will be received on her arrival at the bazaar by their Royal Highnesses the Duke and Duchess of York.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Tuberculosis Commission.

NOTICE has been given by Mr. Knowles of the following motion in connexion with the report of the Royal Commission on Tuberculosis, viz.: "That the Commission be reappointed and the scope of its inquiry extended, so that it may further inquire and report on administrative procedures available for reducing the amount of tuberculous material in the food supplied by animals to man."

Factories and Workshops Bill.

Steady and substantial progress is being made with this Bill by the Grand Committee on Trade. On Tuesday of this week there was a good deal of discussion with reference to Clause 6, which imposes a penalty not exceeding £20 for knowingly allowing wearing apparel to be made in a place where any inmate is suffering from scarlet fever or small-pox. Sir Charles Dilke moved an amendment to strike out the word "knowingly," and insert words placing on the occupier the onus of proving that he was not aware of the existence of the illness in the building, and could not reasonably have been expected to become aware of it. Several members thought the amendment impracticable, but eventually it was agreed to. A long discussion took place on an amendment freeing from liability persons who gave out work to places where the illness broke out after the work had been received. Mr. Asquith met it by promising to see whether a subsection could be drawn up requiring anyone who received work back from an infected place to have the work disinfected before letting it go to the purchaser. Later Dr. Farquharson moved to leave out "scarlet fever and small-pox," and substitute "any of the diseases specified in Section 6 of the Infectious Diseases (Notification) Act, 1893." He had, he said, consulted some of the best medical authorities, and they agreed that the limitation to two diseases was too narrow. Mr. Asquith, however, objected to the amendment on the ground that it would widen the scope of the clause beyond anything that was reasonable. Sir John Gorst put forward a claim to have diphtheria included. Without pledging himself to alter the clause Mr. Asquith undertook to consult the medical officers of the Local Government Board on the point.

HOUSE OF LORDS.

THURSDAY, MAY 9TH.

London University Bill.

Lord Playfair presented a Bill for the purpose of reconstituting the London University. He explained that in 1892 the late Government appointed a Royal Commission to consider whether the London University might be converted into a teaching university, or whether it was necessary to form a new university for London. The Commission, having regard to the position and experience of the London University, came to the conclusion that it would be better to reconstitute it than establish a new university, and accordingly they issued a scheme which was very favourably received by all the interests concerned. The Commission pointed out that it would be exceedingly difficult to carry out the scheme by a charter, and recommended legislative authority—that was to say, the appointment of a Statutory Commission. The plan of giving such powers to a Statutory Commission was a very old one, having been applied to Oxford and Cambridge and the Scottish universities when there were fundamental changes to be made. There was no intention by this Bill to interfere with the present imperial character of London University, which, indeed, was specially preserved by a clause.—The Bill was read a first time.

TUESDAY, MAY 14TH.

Midwives Registration Bill.

SECOND READING DEBATE.

The second reading stage of the Midwives Registration Bill, the text of which we published last week, was taken in the House of Lords on Tuesday, May 14th.

Lord Balfour of Burleigh, in making the motion for the second reading, said he had had two interviews with the present President of the General Medical Council, and he had also had the advantage of the advice and counsel of many personal friends well entitled to form an opinion on the subject of midwifery. All the information he had been able to get led him to the conclusion that a case for this measure, or something like it, could be presented which, so far as its outlines were concerned, must carry conviction to every unbiased mind. Any one who studied the returns of the Registrar-General would see there were every year in this country between 800,000 and 900,000 births. More than half of those births were attended by midwives only; and it was, he thought, universally acknowledged that the great majority of the midwives were almost wholly, if not wholly, untrained and in many cases lamentably ignorant of the important duties they undertook to discharge. In this country alone amongst European countries was no care or supervision exercised over the calling of the midwife. It was

actually the fact that in England at the present time, no conduct, however improper or disgraceful, would prevent any woman from undertaking and continuing the calling of a midwife; the fact that a woman who had undertaken it had actually been convicted upon a criminal charge would not justify any authority in intervening and preventing her continuing to practise. The state of matters consequent upon this was by competent medical authorities proclaimed to be that the mortality amongst mothers of those classes who chiefly employed these women was much greater than it ought to be and much greater than it might be brought to be. Disease, too, in both mothers and children was also found to result from incompetent attendance during childbirth. The General Medical Council urged upon the Government the importance of passing into law some measure for the education and registration of midwives, and THE LANCET and the *British Medical Journal* had written of the ill-effects resulting from the ignorance and incompetence displayed by many midwives. In spite of the report of the Select Committee of the House of Commons which sat in 1892-93 nothing had been done. That report made it clear that midwives, without the supervision of qualified medical men, did attend women of the humbler classes in great numbers; that a great number of them were untrained, and, therefore, unfitted for their important duties; and that the mortality and injuries resulting from want of skill in the midwife were greater than they ought to be. He had received the following letter on the subject from Sir John Williams, whose opinions would be received with the respect due to so high an authority:—

"DEAR LORD BALFOUR.—In common with a very large number of medical men, I am grateful to you for introducing into the House of Lords a Bill for the Registration of Midwives. The large number of births attended by midwives alone, and the frequency of serious and even fatal results arising from ignorance on the part of midwives of the process of natural labour, make it most desirable that the poorer women of the country who are unable to obtain the services of a medical man should be able to secure the help of a midwife who has an elementary knowledge of midwifery. The mortality after childbirth is considerably greater than is generally supposed. This mortality is due to two classes of cases, one being preventable and the other not preventable. That due to preventable causes forms the larger section, and amounts to two-thirds or three-fourths of the whole. The preventable causes consist of infection and some forms of abnormal development and departure from the natural mechanism, and upon a knowledge of the means for preventing infection and an ability to distinguish abnormality at an early period depends success in preventing or reducing mortality. It cannot be doubted that the mortality of children among the poorer classes would be greatly reduced if the women attending them possessed the elementary knowledge to which I have referred.—I am, my lord, yours truly,"

"JOHN WILLIAMS."

On a high authority there was all this preventable loss which might fall most tragically on the homes of the poor. The proposals of the Bill, which formed a well-considered measure of reform, were short and simple. The Bill provided for the registration of midwives, and prohibited those who were not registered from using the title; but it did not do what was impossible, and prohibit them from practising. Common humanity permitted anyone to go to the assistance of a fellow-creature in pain or misery. The proposal of the Bill followed the precedent of former legislation in regard to doctors, dentists, veterinary surgeons, and chemists and druggists. Then the Bill formed a board which would keep the register and admit midwives to registration after proper examination, framing rules for their guidance and control. In all these matters the board was to be subject to the regulation and control of the General Medical Council, and the original draft of the Bill had been altered in accordance with the wishes of the President of the General Medical Council. Then certain privileges were given to registered midwives, such as the right to use the title of midwife and the right to recover fees by law. The specialists on the diseases of women, who had been consulted, approved of the form of the Bill, but some objections had been urged by others—notably, that the Bill set up a new class of medical practitioners. This was not the case. It simply provided that practising midwives should be so far educated as to be able to recognise the limits of what they might attempt, and to know when a medical man ought to be called in. These women could not be prevented from practising, and it was better that the people whom they attended should have the power to discriminate between those with qualifications and those without. The work of supervision and education could only be properly done by the sanction of law. He could fortify himself by an authority which he thought their lordships would accept. Two years ago, after the report of the Select Committee was issued, THE LANCET had a leading article on the subject. It cast a great deal of ridicule on those who took this objection. THE LANCET said: "We have not much sympathy with the remark that it is impossible to define 'natural labour.' We live in a practical world, and it is not impossible to lay down rules of conduct intelligible to women of any training that will enable them to know when to send for medical assistance and enable those who supervise them to know when they have been culpable in not so sending." There was one objection which had not been raised and to which he referred for fear of misconception. It had not been actually suggested, but it was impossible to remain blind to the fact that it had been hinted that one effect of the Bill would be to take away business from medical men. He did not believe that any large section of the medical profession would raise such an objection, but if it were raised he did not think that Parliament would listen to it for a moment. So far, however, from the Bill having this effect, he believed that the effect of such legislation would be to teach women when to send for medical advice. This was no question of party conflict; it was one of domestic reform of the greatest importance to a large class little able to help themselves. Some measure of this kind, moreover, was one of clamant necessity in the interests of public health as well as in the interests of common humanity.

Lord Thring, while agreeing with the necessity for educating midwives, asked that justice should be done to the 8000 or 10,000 women at present engaged in the profession. Under the Bill women would not be able to obtain any education at all, because it almost placed education out of their reach, while there were no lady doctors or laymen on the council. It was a strictly professional council who had to make regulations for the midwives. The recommendation of the Select Committee that there should be local examinations and that the local infirmary or hospital should be utilised for educating midwives was not

followed in the Bill. Neither was the recommendation that the county councils should have a controlling power over these women. The question was a local one, whereas this Bill embodied a centralised system of education in London of the most extensive character quite unattainable by poor women. He hoped the Bill would be referred to a Select Committee and due care taken to see that midwives were properly represented on the council.

Lord Playfair, speaking on behalf of the Government, said that they had no objection to the general principle involved in the Bill, though they considered that several important amendments might be necessary. There was certainly an immense amount of ignorance among midwives, and there was a great deal of preventable illness which would not occur if more competent midwives were engaged. One point of weakness in the Bill was the attempt to define "natural labour" which midwives, qualified or not, might attend. It was an extremely difficult point to define; but out of 15,000 cases analysed 983 in 1000 were cases of natural labour, and only the balance were obliged to send for medical men. The Bill provided that no one should call herself midwife alone or with an adjective unless she had been examined, certified, and registered under this Bill. But "midwife" was one of the oldest Saxon words in the English language, and it would be very difficult in a Bill to acquire a monopoly of it for a special purpose or a special class of persons. He drew attention to Clauses 3 to 12, because he feared that they enjoined so much and were so elaborate that in practice they would defeat the Bill and prevent its success. The fee of two guineas for examination and registration was already very high for persons of this class. More money would be obtained if the fee was lower and if the examinations were local as well as central. He assured the noble lord that personally, as well as officially representing the Privy Council, he had much sympathy with the Bill; but he would ask the noble lord to postpone its further consideration for a little while so as to enable the Government to consider what amendments they should put down before the committee stage.—Lord Balfour of Burleigh undertook to confer with the Privy Council and also with representatives of the Government and other members of their lordship's House before putting down the Bill for the committee stage.—The Bill was then read a second time.

HOUSE OF COMMONS.

THURSDAY, MAY 9TH.

The Question of the Unemployed.

Mr. Campbell Bannerman, Chairman of the Select Committee on Distress arising from Want of Employment, said, in reply to a question, that the Committee were engaged upon a large and difficult task, and in his opinion they would not be doing their duty if they offered advice to the House without adequate information as to the facts and as to the principal remedies that had been proposed. They were, therefore, busily engaged in obtaining such information from the most promising sources; but he trusted that this necessary process would not occupy more than a few weeks longer, and that the Committee would be able then to submit a report. They are most anxious on every ground to avoid unnecessary delay.

Imported Milk.

Mr. Shaw-Lefevre said, in reply to a question, that he was not aware that there was any evidence that disease had been spread in this country by imported milk. With insignificant exceptions, imported milk was in a condensed form, and the processes of heat to which it was subjected, he was advised, destroyed its powers to convey infection, whether of foot and mouth disease or tuberculosis. The Local Government Board had no power to prohibit the importation of foreign milk.

FRIDAY, MAY 10TH.

The Army Meat-supply.

Mr. Field asked the Secretary of State for War whether it was a fact that in Ireland, a meat-exporting country, the troops were mainly rationed upon foreign meat; whether he could state the percentage of native and foreign supply; whether the conditions of contract in Dublin had been recently changed so as to further enable this importation; whether the live stock hitherto supplied had given satisfaction to officers and men; and whether it was upon economical grounds that frozen and refrigerated meat was brought into a meat-producing country.

Mr. Campbell Bannerman said that the troops at the Curragh had only meat killed in the camp. Up to the end of this month the same system was applied to the Dublin garrison. In the rest of Ireland the troops might, under the contracts, the conditions of which were fixed in 1890, have 60 per cent. of foreign meat, but the actual quantity supplied could not be stated. He explained very fully on March 25th, in answer to the hon. gentleman, the changes about to be made as regards the Dublin garrison, and the reasons for those changes. It was not known that the live stock hitherto supplied for Dublin failed to give satisfaction, and the change of system was due entirely to the fact that the abattoir question was no longer necessary. A number of supplementary questions on this subject were addressed to the right hon. gentleman, and in the course of his answers to these he said that so long as those receiving the meat were aware that the amount of British meat was greater than might be tendered they did not keep any check. The percentage of 60 was no doubt fixed for a very good reason, although he did not know on what principle it was fixed. He should be afraid to assert that foreign meat was better than home meat; he understood that the cheapness of the former was the main element in the case.

The Manufacture of Beer.

The House at this sitting considered in Committee of Ways and Means the Budget resolution for the reimposition for another year of the extra sixpence per barrel duty upon beer, and Mr. Quilter proposed that the reimposition should not extend beyond beer brewed from substitutes for barley, malt, or hops. His object, he said, was to lighten the pressure of competition which affected the agriculture of this country and to do something in the direction of obtaining pure beer. The quantity of sugar used in brewing had risen at an enormous rate in recent years. In 1856 it was only 1,700,000 lb.; in 1866 the quantity had risen to 10,340,000 lb.; while in 1894 it had reached the gigantic figure of 245,731,432 lb. Taking two firms in the United Kingdom who brewed over 800,000 gallons, he found that while in 1822 they used 576 bushels of malt to each cwt. of sugar, in 1894 they only used 358 bushels. Another point the hon. member emphasised was the steady and considerable diminution of the specific gravity of

the beer made. The Chancellor of the Exchequer, speaking in reply to Mr. Quilter, said he could not consent to the proposal, because, in the first instance, four-fifths of the beer was made from malt and hops, and consequently the extra 6d. would not yield the money he required for the national expenditure. Worse than that, the proposal would involve an enormously expensive system of supervision in every brewery in the country. As to the question of specific gravity, there was no doubt that in these days the growing demand had been for lighter and brighter beer, and that demand had led to a great alteration in manufacture and to the increased employment of the chemist. It was really that and not any question of taxation which was the cause of the change that had taken place in the gravity of a large quantity of the beer now consumed. He understood that in most cases sugar was the material used for priming. It was this introduction of a certain amount of sugar which made the beer brighter and more palatable just before delivery, a process which seemed to suit the customer as well as the manufacturer. As to the other substitutes, he was told they were rarely used. He was informed that in addition to sugar a certain quantity of maize was used, but there was nothing unwholesome in that grain. It was feared in some quarters when the extra sixpence was proposed that it would lead to an addition of water. For a certain time that, he believed, was tried, but the experiment was not found to answer, and the result had been that, notwithstanding the imposition of the extra duty, brewers brewed quite as good beer as they did before the tax was imposed. After a time the proposal of Mr. Quilter was withdrawn and the resolution adopted.

MONDAY, MAY 13TH.

Anthrax in Leicestershire.

Mr. Herbert Gardner, answering two questions on this subject, said it was the case that an outbreak of anthrax, which led to the loss of two cows and a ewe, recently occurred on a farm at Arnesby, but the statements made as to loss and injury to human life appeared to have had reference to an outbreak which occurred nine years ago, and he did not gather that any such loss and injury had taken place on the present occasion. He was always very anxious to afford local authorities any assistance in his power, and the information the Board of Agriculture had issued on the subject of anthrax had been more than usually elaborate.

The Army Meat-supply.

Replying to a question on this subject Mr. Campbell Bannerman said that up to December, 1888, the trade in frozen or refrigerated meat had not been largely developed, and no restrictions had been found necessary on its supply. It was ascertained, however, that the contractors were issuing some of this meat mixed with home-killed meat, and as it was unquestionably a cheaper article—though not, as a rule, inferior in quality—it was decided that the State should have the benefit of the lower price by calling for tenders from contractors who were to be permitted to supply frozen or refrigerated meat not more than four days a week. In 1880 it was found more convenient to substitute a maximum quantity for a maximum number of days, and 60 per cent. was adopted as a rough substitute for four days out of seven. The percentage applied to each station at which foreign meat was supplied, and it included frozen mutton as well as refrigerated meat, but mutton must never exceed one-seventh of the total issue of meat. Mutton could be issued all the year round; refrigerated beef only from October to July inclusive. This period was extended last year, May having previously been the limit.

New Bills.

Among the new Bills introduced at the close of this sitting was one to extend the Merchandise Marks Acts to foreign and colonial cheese, and another to amend the law relating to the insurance of funeral expenses of children.

TUESDAY, MAY 14TH.

Accidents from Oil Lamps.

Mr. Bryce said, in answer to a question, that he had consulted with Mr. Mundella, the Chairman of the Select Committee on the Petroleum Acts which sat last session, and although he was unable to give a definite assurance at present, he hoped it might be found possible to reappoint the committee after Whitsuntide with a view mainly to considering the question of dangers arising from explosions of oil lamps.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the Adulteration of Food Products held only one meeting this week, that is to say, on Wednesday, May 15th, when Sir Walter Foster presided.

Mr. Hudson, a provision merchant in London, was examined again with reference to the statement he made before the committee some time ago, that the inspectors of local authorities were open to bribery and did accept bribes. He explained that the witnesses he had in his mind when he made this statement were not prepared to come forward and have their names made public. Most of them were engaged in the wholesale trade and were supplying retailers with margarine, and they were willing to support the statement he had made if they could be heard *in camera*. He admitted that the statement was made on hearsay evidence, and that in the circumstances he was not in a position to substantiate it with absolute proof, although his opinion on the matter remained unchanged.

Mr. Nicholas Kilvert, managing director of Nicholas Kilvert and Sons, Limited, lard refiners, Manchester, gave evidence as representing the Manchester Chamber of Commerce and the Lard Refiners' Association, which, he said, comprised every refiner of American lard in Great Britain and Ireland. He supported a resolution which had been passed by the Manchester Chamber of Commerce, declaring that it ought to be lawful to use five per cent. of beef suet stearine in lard for stiffening purposes during six months of the year, say from April to September. The experience of the trade showed that it was impossible to dispense with this stearine during the cold season, and he regretted the action of the authorities in using the Food and Drugs Act to prevent the sale of lard so stiffened as strongly prejudicial to the public in whose interest the Act was passed. This addition could not in any sense be described as an adulteration. It hardened the lard, which for six months of the year, owing probably to the nature of the food on which the hogs were reared, was of an especially oily and liquid nature. The article required to be hardened before it was fit for carriage and consumption. At certain seasons of the year lard was of the consistency of cream, and

In no prosecution had a witness been brought forward who said that lard hardened by this stearine was in any way injuriously affected or depreciated. It met the requirements of the public, and was a perfectly pure article of food. To add lard stearine to raw lard, as had been suggested by some analysts, was practically the same as abstracting the oil of the lard, which was the best portion for the purposes of the public. It might fairly be compared with taking the cream from milk. Lard stearine, moreover, simply toughened without materially hardening lard, and when exposed to the air the oil continued to exude and waste. Beef suet stearine, on the other hand, absorbed the oil in which American corn-fed lard abounded. He denied altogether the right of the public analysts to adjudicate upon the question by deciding which method should be used.

Mr. John Irwin, member of a Liverpool firm of lard refiners, gave evidence of a corroborative character.

Mr. Alexander Leckie of St. George's House, Eastcheap, London, said he had been connected with the firm manufacturing Van Houten's cocoa for a number of years, and had been deputed by the London Chamber of Commerce to give evidence with regard to cocoa. The process of manufacture adopted by Van Houten's was of course a secret, but its object was to remove the excess of fat, and to further improve the cocoa in the matter of solubility and digestibility, natural cocoa being open to objection as an article of food. He did not think that the public were apt to be deceived if, as required by the Act, the mixture was labeled as being a mixture of cocoa, arrowroot, and sugar. The Act provided that the article should be of the substance and quality demanded. Altogether he thought the present state of the law was sufficient for the protection of the public.

The committee then adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BARKER, A. H., L.R.C.P. Lond., M.R.C.S., has been reappointed a District Medical Officer by the Wantage District Council.

BARKES, R. S. FANCOURT, M.D., C.M. Aberd., M.R.C.P. Lond., has been appointed Consulting Physician to the British Lying-in Hospital, London.

BURY, E. C., M.D. St. And., M.R.C.S., has been reappointed Honorary Medical Officer to the North Cambridgeshire Cottage Hospital.

CALNE, DOROTHEA, M.B. Lond., has been appointed House Surgeon to the Children's Hospital, Hull.

CHRISTIE, J. F., M.B., C.M. Aberd., has been appointed Resident Medical Officer to the Aberdeen Royal Infirmary.

CLARK, A. W., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Medical Officer to the North Cambridgeshire Cottage Hospital.

COCKBURN, W., M.B., C.M. Aberd., has been appointed Resident Medical Officer to the Aberdeen Royal Infirmary.

CUXON, S. A., L.D.S.R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the North Cambridgeshire Cottage Hospital.

DALTON, A. J., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Hendred Sanitary District of the Wantage Union.

GARLAND, E. C., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Yeovil.

GRAY, H. M. W., M.B., C.M. Aberd., has been appointed Resident Medical Officer to the Aberdeen Royal Infirmary.

HARDING, L. N., B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Brighton, Hove, and Sussex Throat and Ear Hospital.

HUNTER, WILLIAM, M.D. Edin., M.R.C.P. Lond., M.R.C.S., has been appointed Pathologist and Curator of Museums to the Charing-cross Hospital.

HUSKARD, C., M.R.C.S., has been reappointed Medical Officer of Health for the City of Ripon.

MCCLELLAND, W., M.B., Ch.B. Vict., has been reappointed Non-Resident Medical Officer to the Gynaecological Department of the Liverpool Royal Infirmary.

ROPER, LEONARD, M.A., M.B., B.C. Cantab., has been reappointed Clinical Assistant and Demonstrator in the Throat Department at Guy's Hospital.

SHEN, A. W., M.D. Lond., B.S., F.R.C.S. M., L.R.C.P., has been appointed Assistant Surgeon to the Cardiff Infirmary.

STANTON, W. E., L.S.A. Lond., has been appointed Medical Officer for the Deeping St. Nicholas Sanitary District of the Spalding Union.

TAYLOR, J. C., M.D. Edin., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Westbury and Whorwellsdown District.

TAYLOR, LEO, F.I.C., F.C.S., has been appointed Public Analyst for Hackney, in succession to the late Dr. Tripe.

TREASURYWALA, E. J., M.D., L.R.C.P. and S., has been appointed Assistant Electrician at St. Bartholomew's Hospital.

VALLANCE, H., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer by the Chelsea Board of Guardians.

WARRACK, J. S., M.B., C.M. Aberd., has been appointed Resident Medical Officer to the Aberdeen Royal Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ACCRINGTON MEDICAL DISPENSARY.—Qualified Medical Man.

ASYLUM FOR IDIOTS, Earlswood, Redhill, Surrey.—Assistant Medical Officer. Salary £150 a year, with board and residence. Applications to the Secretary, 36, King William-street, London-bridge, E.C.

BIRKENHEAD UNION.—Medical Officer and Assistant Medical Officer of Workhouse and Schools. Salary of the Medical Officer £30 per annum for the Workhouse and £10 for the Schools, with extra medical fees as prescribed by the Local Government Board. The Medical Officer will also be appointed Public Vaccinator of the Workhouse and Schools at a fee of 1s. 6d. per case of successful primary vaccination. Salary of the Assistant Medical Officer will be £65 per annum for the Workhouse and £20 for the Schools, with rations, attendance, washing, and residence in the Workhouse. Applications to the Clerk to the Guardians, 45, Hamilton-square, Birkenhead.

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Junior House Surgeon. Salary £50 per annum, with board, washing, lodging, &c.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried. Salary £100 a year, with board (no beer or wine), lodging, washing, and attendance.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Pathologist and Registrar for one year. Honorarium, 50 guineas per annum.

HALIFAX INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £80 per annum, advancing £10 per annum up to £100, with residence, board, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Senior Clinical Assistants.

LIVERPOOL STANLEY HOSPITAL.—Junior House Surgeon. Salary £70, with board, &c.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £20 per annum.

PARISH OF BIRMINGHAM.—Resident Medical Officer at the Workhouse. Salary £150 for the first year, rising £10 yearly to £200 per annum, with rations, apartments, washing, and attendance. No alcoholic liquors are allowed in the rations. Applications to the Clerk to the Guardians, Parish Offices, Edmund-street, Birmingham.

PARISH OF ST. LEONARD, Shoreditch.—Second Assistant Medical Officer for the Infirmary, Hoxton-street, N. Salary £40 per annum, with rations, furnished apartments, and washing in the Infirmary. Applications to the Medical Officer, 204, Hoxton-street, London, N.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Professors and Lecturers.

ROYAL FREE HOSPITAL, Gray's-Inn-road, W.C.—Two Resident Medical Officers for six months. Board, residence, and washing provided.

SOCIETY OF APOTHECARIES.—Examiners. Applications to the Clerk to the Society, Apothecaries' Hall, Blackfriars, E.C.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Lecturer on Mental Diseases.

THE BOARD OF WORKS FOR THE HOLBORN DISTRICT (IN THE COUNTY OF LONDON).—Medical Officer of Health for the Holborn District. Salary £350 per annum. Applications to the Clerk to the Board, Holborn Town Hall, London, W.C.

THE HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, London, S.E.—Clinical Assistant and Anesthetist for six months. Salary at the rate of £30 per annum.

UNIVERSITY COLLEGE, London.—Professorship of Materia Medica and Therapeutics.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Junior House Surgeon, unmarried. Salary £50 per annum, with rooms and board.

Births, Marriages, and Deaths.

BIRTHS.

SHACKEL.—On May 6th, at Ludlow, the wife of G. A. Shackel, L.R.O.P., M.R.C.S., of a son, stillborn.

SNODGRASS.—On May 11th, at Victoria-crescent, Down-hill, Glasgow, the wife of William Snodgrass, M.A., M.B., of a son.

WILLS.—On May 14th, at Lower Seymour-street, Portman-square, W., the wife of W. A. Wills, M.D., of a son, stillborn.

MARRIAGES.

BETTS-BAYLIS.—On May 8th, at St. Mary's Church, Farnham Royal, Bucks, Robert Sidney Betts, L.R.C.P., M.R.C.S., of 157, Junction-road, N., to Florence Jane Baylis, daughter of the late Captain Henry Ingle Baylis, 3rd Goorkha Bengal Infantry.

HILL-GREEN.—On May 15th, at the King's Weigh House Chapel, Duke-street, Grosvenor-square, William Byron Hill, M.R.C.S. Eng., to Emma Hunsdon, eldest daughter of the late Thomas Moses Green.

ROBINSON-HARRISON.—On May 1st, at St. Joseph's Church, Cairo, Oliver Long Robinson, Surgeon-Captain A.M.S., son of the late H. O. Robinson, Esq., of Dublin, to Rose Adela Harrison, daughter of the late Sir Henry Harrison, B.C.S., West-hill, Sydenham.

DEATHS.

DAVISON.—On May 10th, at 1, Berkeley-square, W., May, wife of W. Marshall Davison, M.B., daughter of the late Rev. Kylie Ernie Aubrey Money.

FOSTER.—On May 10th, at Oxford House, St. John's-park, Blackheath, the residence of his sister, Dr. N. S. Foster, of Sussex-place, Onslow-square, London, W.

LOYD.—On May 10th, at his residence, Robert Hodgkins Lloyd, M.D., M.R.C.S., L.S.A., Medical Superintendent Lambeth Infirmary, aged 47 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 16th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
May 10	30.12	W.	55	50	114	70	48	...	Bright
" 11	30.20	W.	57	52	114	75	48	...	Bright
" 12	30.26	S.W.	70	60	116	80	56	...	Bright
" 13	30.28	S.	66	60	117	79	60	0.07	Cloudy
" 14	30.28	N.E.	63	58	113	78	58	...	Hazy
" 15	30.03	N.	60	53	100	65	58	...	Cloudy
" 16	29.84	N.	49	41	96	51	46	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—Annual Conversation. Oration at 8.30 P.M. by Mr. A. Pearce Gould on "The Recent Evolution of Surgery."

TUESDAY.—PATHOLOGICAL SOCIETY.—8.30 P.M. Dr. Vaughan Harley: Absorption and Metabolism in a case of Pancreatic Obstruction.—Mr. Edmunds: Observations and Experiments on the Pathology of Graves' Disease.—Mr. A. T. Collum (introduced by Dr. Pitt): Imperforate Duodenum.—Mr. S. G. Shattock: Diphtheria and Pseudo-diphtheria Bacilli from Two Sisters Simultaneously Affected.—Mr. H. J. Waring: Actinomycosis of the Cheek.—Mr. Herbert Snow: Malignant Reversion of Cystic Fibromata.—Mr. Shattock: Cultural Variations of Streptococcus Pyogenes. Recent Specimens.—Mr. L. Hudson: A Series of Specimens of Ulcerative Colitis from cases of Swine Fever. Card Specimens by Messrs. Fletcher, Paget, Battle, and Mackenzie.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Annual General Meeting. Report of Council; Election of Officers. Papers:—Dr. Lucas Benham: Thickened and Contracted Mesentery simulating Tumour in a case of Cirrhosis of the Liver.—Dr. Sidney Phillips: A case of Splenic Abscess; Secondary Suppuration in the Liver; Death from Pyæmia.—Dr. S. West: A case of Recovery from Tuberculous Meningitis.—Mr. Battle: Calculus of Kidney associated with Simple Growth of the Renal Pelvis; Nephrectomy; Nephrectomy.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. A. S. Morton: Affections of Eyelids.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Wilkin: Aural Polyp.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Hyslop: Stupor, Catalepsy, Kataplexia, Dementia.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Quarry Silcock: Progressive Myopia, with illustrative cases.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Herpes, its Varieties.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. B. Pitts: Abdominal Surgery in Children.—National Hospital for the Paralyzed, Bloomsbury, 8 P.M., Dr. Buzzard: Multiple Neuritis.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. S. Mackenzie: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Oedema.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: Delusional Insanity, Paranoia.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular in question.

HUMORAL PATHOLOGY I.

A CORRESPONDENT sends us the following "cure for jaundice":—"Bury the first water after 12 o'clock with one ounce of blue stone vitriol. Get one quart of tenpenny ale, one lemon, and a pennyworth of cake saffron. Stew down to three gills. When cold get twopennyworth of sweet nitre, put in, and take a wineglassful three times a day. On the third day take a dose of castor oil."

Mr. Harvey B. Bashore.—Messrs. Byre and Spottiswoode, 32, Abingdon-street, Westminster, London, S.W.

Mr. J. E. Hall.—We do not prescribe or recommend practitioners.

ALLEGED TOUTING BY A PUBLIC VACCINATOR.

To the Editors of THE LANCET.

SIRS,—Will you kindly advise me, first, as to whether the following is not a gross breach of medical ethics; secondly, as to what, if anything I should do in this case?

In my village is residing the assistant of a medical man who lives in the neighbouring town (two miles distant). This assistant is the public vaccinator, and in this capacity is continually calling on my patients and asking them if they will permit him to vaccinate their babies—babies I have brought into the world, and whose parents in the majority of cases call me in to vaccinate. I would altogether ignore this if this person had not caused great annoyance by calling on some of my best patients, who have complained to me of this annoyance.

I am, Sirs, yours faithfully,

May 14th, 1895.

C. H. E.

*. It is quite indefensible, and, as far as we know, unprecedented, for a public vaccinator to tout for the patients of another medical man. The aggrieved practitioner should remonstrate very emphatically, and if this is not heeded should complain to the Local Government Board.—ED. L.

"THE LATEST MEDICAL GUIDE TO HARROGATE."

OUR attention has been drawn to an advertisement under the above title in the Harrogate Advertiser of May 11th of a book by "Dr. Myrtle and Dr. J. A. Myrtle, J.P.," "with cases." The experience of these gentlemen with regard to the use of the Harrogate water is well known, and it is natural that they should seek to publish it; but we are of opinion that publication in the above form is not so unobjectionable as in the form of a medical treatise or through the medical journals. The authors are doubtless unaware of the manner in which the book is advertised.

THE CASE OF MR. C. B. TOWNSHEND.

The following additional subscriptions have been received or promised and are hereby gratefully acknowledged:—

Thames Valley Branch of		Dr. Martindale Ward		£0 5 0	
Brit. Med. Assoc.:		Dr. C. C. Scott		0 5 0	
Dr. J. E. Viney	... £1 0 0	Dr. R. Creasy	...	0 5 0	
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Dr. Graham	... 1 0 0	Dr. Brooks (Oxford)	...	0 10 0	
Dr. Newton Pitt	... 1 0 0	M.A., M.D.	...	0 10 0	
Dr. R. N. Goodman	... 1 0 0	Dr. W. Lloyd Williams	...	0 5 0	
Mr. O. Richards	... 0 10 0	(Llanberis)	...	0 5 0	
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Dr. Daldy	... 0 7 6	pool)	...	0 5 6	
Mr. H. B. Collins	... 0 5 0	Dr. N. Whitelaw Bourns	...	0 10 6	
Mr. Wallace	... 0 5 0				

Further subscriptions are earnestly requested, and will be received and acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

Dr. J. H. Gramshaw.—The returns of the Registrar-General are quite correct respecting the great number of deaths from small-pox in Calcutta—namely, 872—within the eight weeks ending with March last. In fact, the Registrar-General's figures really understate the gravity of the case; for the reported deaths are those only that occurred in the city of Calcutta, the population of which at the 1891 census was 466,460, and are exclusive of the deaths taking place in the suburbs, which contain an additional population of 215,100. Small-pox has certainly been epidemic in Calcutta for some weeks past at any rate, the number of deaths taking place in the months of February and March last having risen almost steadily from 58 in the week ending Feb. 9th to 171 in the week ending March 25th. In the last week of which we have as yet any record—namely, that ending March 30th—the number of deaths from small-pox was 153. Of this total of 872 deaths not fewer than 671 occurred within the more recent five weeks of the above specified period, so that the epidemic may not even yet have reached its height. The vast majority of the deaths from small-pox were amongst Asiatics, principally either Hindoos or Mahomedans, only a few comparatively speaking having been reported amongst non-Asiatics.

Dr. Lyander Maybury.—We prefer the name at the bottom of the paper, but we scarcely think it can be made a question of ethics; it is a matter of taste.

B. O. N.—There is no rigid rule in such matters. A medical man is quite at liberty to charge a druggist as he would any other patient.

"A CASE FOR DIAGNOSIS."

To the Editors of THE LANCET.

SIRS,—I would suggest to "M.D. Edin.," who sends you a case for diagnosis, the possibility of his patient having taken a preparation containing coca or cocaine. Wines and elixirs of coca, voice lozenges, &c. containing cocaine are often taken by patients on the advice of friends without any reference to the medical advisers, and in case of intolerance the fact might be concealed in perfect good faith through a conviction, founded on past experience in others, of the absolute harmlessness of the preparation. Although the importance of idiosyncrasy in connexion with coca is well known, I do not think the extreme extent to which susceptibility is pushed in some cases is generally realised. I have seen very alarming symptoms result from fractional doses of a grain of the alkaloid, and I passed the better part of the night on one occasion with a young lady who had taken two or three teaspoonfuls of a liquid extract of coca that a friend with whom she was living took to the same extent several times a day. The feeling of impending death, the rapidity of the pulse, and a suspiciousness of the respiration would exist in such a case, as well as pallor, perspiration, and a condition of moral as well as physical shakiness. The temperature may be decreased or heightened. Several times I have heard patients in this condition speak of seeing the light as through a fog, one describing the candle flame as appearing surrounded by a lunar rainbow. Finally, the metrorrhagia is in harmony with the theory. In the early days of cocaine I was told as a warning of a case where the application of a solution to the os uteri for the relief of pain was at once followed by abortion.

I am, Sirs, yours truly,

Paris, May 13th, 1895.

OSCAR JENNINGS.

To the Editors of THE LANCET.

SIRS,—I had a very similar case to the one mentioned by "M.D. Edin." in THE LANCET of the 11th inst. The symptoms came on two days after confinement, lasted six hours, and gradually disappeared. My patient had lived in India for years, and suffered from ague. I put her on large doses of quinine with the desired effect. I may mention that she had only arrived from India two months previously. In my opinion it was an ordinary attack of ague, which in her then condition occasioned the other symptoms.

I am, Sirs, yours truly,

May 13th, 1895.

M.B. EDIN.

RUPTURE OF THE PERINEUM.

To the Editors of THE LANCET.

SIRS,—Can you tell me if there has been any case in which an action for damages caused by rupture of the perineum during labour has been successful?

I am, Sirs, your obedient servant,

May 13th, 1895.

PERINEUM.

THE ADVERTISING EPIDEMIC—A NEW SPECIMEN.

We give the following instances, in their setting and relation, from the *Sutton Coldfield and Erdington Times* of April 27th, 1895. The middle advertisement seems to have no connexion with the others, but it shows into what strange company medical men get when they find themselves in the advertising columns of newspapers:—

"At the recent Examining Board in England by THE ROYAL COLLEGE OF PHYSICIANS OF LOND., and the ROYAL COLLEGE OF SURGEONS OF ENGL., MR. FRANK COOPER (son of Dr. Cooper, Erdington) PASSED the Examination in Chemistry, having previously passed in Materia Medica, Therapeutics, Pharmacy, Anatomy, and Physiology."

"THE CEMETERY, SUTTON COLDFIELD.—WANTED, a young Man to assist the Sexton generally. Must have some knowledge of gardening. Local person preferred. Wages 16s. per week.—Apply in writing to Clerk, Burial Board, Sutton Coldfield."

"DR. COOPER, Surgeon, Six Ways (opposite Baptist Chapel), Erdington. Scale of charges: Advice and medicine, 1s. 6d.; for children, advice and medicine, 1s.; visits within one mile from the surgery, 1s.; vaccination, 1s.; midwifery fee, 15s.; medical notes issued which entitle the patient to attendance and medicine for one week, 6s.; ditto for children, 3s. 6d. Surgery hours: Morning from 9 till 11; evening from 6 till 9."

Mr. W. Mason.—There have been numerous experiments made with regard to the production of immunity against swine erysipelas, hog cholera, and swine fever, some of which have been recently published in America by Theobald Smith, whilst others have been published by Metschnikoff, Seelander, and others. The Pasteur Institute sends out a protective material to be used against rouget, so that there has already been considerable work done in this direction.

AN OPHTHALMOLOGICAL HINT.

To the Editors of THE LANCET.

SIRS,—I have found the following manoeuvre of use in applying solutions to the conjunctive of nervous patients. The patient is seated, the head extended at right angles to the trunk and the eyelids closed. Several drops of solution now form a little pool over the inner canthus, and on opening the eyelids the solution flows gently over the conjunctiva, stays there as long as required, and the difficulty of spasmodic closure of the eyelids is avoided.

I am, Sirs, yours faithfully,

May 10th, 1895.

F. HYDE MANKLEY, M.D. Dub.

MEDICAL AID ASSOCIATIONS.

We do not consider it satisfactory for a medical man to have his name associated with purely commercial undertakings, supplying medical attendance practically to all comers for 1d. per week to adults and a halfpenny per week to children. It does not promote the interest of the working classes, and certainly does not promote the dignity of the profession, that the medical attendance of the working classes should be arranged in such a wholesale way and on such low terms by companies which are even less defensible than the ordinary medical aid associations, which have had a local evolution out of pre-existing friendly societies.

H. A. B.—Inquiry must be made at the offices of the companies mentioned and at the colonial agencies for the respective countries.

INTRA-LARYNGEAL INJECTIONS.

To the Editors of THE LANCET.

SIRS,—I shall be glad of any information as to the intra-laryngeal injection of menthol and guaiacol for tuberculous disease of cows—strength of solution, dosage, &c.—I am, Sirs, yours obediently,

May 13th, 1895.

TRACHEA.

"INJUDICIOUS FRIENDS AND NEWSPAPER PUFFS."

Mr. C. S. Pantin.—We gladly and readily accept the assurance of our correspondent, and of the paper on whose paragraph we commented, that he was no party to it. At the same time we sympathise with him as the subject of it.

Indignant.—We have sent the pamphlet to the police authorities.

During the week marked copies of the following newspapers have been received:—*Portsmouth Times, Lytham Times, Toronto Mail, Hampshire Herald, Doncaster Gazette, West Lothian Courier, Manchester Courier, Gloucester Chronicle, Bolton Chronicle, Lowestoft Standard, East Anglian Daily Times, Manchester Guardian, Sheffield Telegraph, Birmingham Gazette, Torquay Times, Western Morning Gazette, Walsall Observer, Bristol Times, Brighton Gazette, Southport Guardian, Bedfordshire Express, Chorley Guardian, Sleaford Journal, Ashbourne News, Globe, Echo, Literary World, Harrogate Advertiser, Reading Mercury, Weekly Free Press and Aberdeen Herald, Times of India, Builder, West Middlesex Standard, Science, Pioneer Mail, Architect, City Press, Local Government Chronicle, Yorkshire Post, Hertfordshire Mercury, Le Courrier de la Presse, Liverpool Daily Post, Guy's Hospital Gazette, Bristol Mercury, Surrey Advertiser, Leeds Mercury, Local Government Journal, Mining Journal, Isle of Wight County Press, Peterborough and Hunst Standard, Kent Times, Scotsman, Kelso Mail, Moffat News, The World, Grimsby News, Banffshire Advertiser, Goolie Times, Brighton Society, Invergoron Times, Royal Cornwall Gazette, Staffordshire Post, Kenilworth Advertiser, &c., &c.*

Communications, Letters &c. have been received from—

- A**—Dr. H. A. Adamson, Utah, U.S.A.; Mr. E. V. Allen, Lond.; Mr. J. W. Applegate, Dewsbury; Messrs. Allen and Hanburys, Lond.; Apollinaris Co., Lond., Sec. of.; A., Lond.
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- K**—Dr. W. Knott, Middlesbrough; Mr. A. E. Kennedy, Plaistow; Herr Ludwig Kohn, Karlsbad; Messrs. G. Kelly and Co., Lond.
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- M**—Dr. G. Macdonald, Lond.; Dr. J. A. M. Moulin, Lond.; Mr. R. W. Marston, Berne; Mr. P. Möller, Lond.; Mr. T. W. Madge, Wolverhampton; Messrs. H. Marshall and Son, Lond.; Messrs. Maynard Rowden, Lond.; Medical Defence Union, Lond., Hon. Sec. of; Macclesfield Infy., Sec. of; M. D., Lond.; Medicus, Halifax.
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- O**—Messrs. Oliver and Boyd, Edinburgh.
- P**—Mr. Y. J. Pentland, Edinburgh; Perineum.
- R**—Dr. G. Rankin, Warwick; Mr. H. S. Reynolds, Lond.; Mr. C. H. Robinson, Kingstown, Co. Dublin; Mr. M. R. Rockliff, Liverpool; Messrs. Reckitt and Sons, Hull; Messrs. Reynolds and Branson, Leeds; Royal Meteorological Society, Lond., Sec. of; Royal Aquarium, Lond., Manager of.
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- T**—Dr. G. Thin, Lond.; Mr. Lawson Tait, Birmingham; Mr. T. J. Tomkin, Arundel; Mr. P. Thornton, Canterbury.
- U**—United Kingdom Press Assoc., Lond.
- W**—Dr. J. J. Welply, Bandon, Co. Cork; Mr. J. R. Walsh, Lond.; Mr. F. Walker, Leeds; Mr. C. Williams, Norwich; Rev. C. Wright, Lond.; Messrs. H. Wilcox and Co., Lond.; Messrs. Woodridge and Co., Lond.
- Z**—Surg.-Lieut.-Col. J. M. Zorab, Kath, India.

Letters, each with enclosure, are also acknowledged from—

- A**—Dr. G. N. Adams, Lond.; Dr. G. A. Abrath, Sunderland; Mr. R. C. Appleton, Beverley; Ashwood House, Kingswinford, Sec. of; Accrington Dispy., Sec. of.
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Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed. THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

In Address

ON THE

RECENT EVOLUTION OF SURGERY.

Being the Annual Oration, delivered before the Medical Society of London, May 20th, 1895,

By A. PEARCE GOULD, M.S. LOND.,
F.R.C.S. ENG.,

SENIOR ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL AND SURGEON
TO THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

MR. PRESIDENT AND GENTLEMEN,—I am using no empty form of words when I say that our gathering this evening has lost much of its wonted pleasure from the absence from among us of one so long and so prominently identified with this society as Mr. Durham was. In a remarkable degree Mr. Durham was the very personification of the great characteristics of the Medical Society of London, for he combined intellectual keenness and ardour in his profession with intense warmth of heart and kindly feeling. Everyone knew him as the skilful surgeon and the very soul of honour; but we here knew him also as the wise administrator and the genial friend. When our President eleven years ago Mr. Durham gave us of his very best in time, in thought, and in effort, and made us ever his debtor; but he has placed the society under a still greater debt of obligation by his ten years of service as its treasurer. We owe it largely to his genius, which combined enterprise with caution, that we are now more handsomely accommodated and more financially prosperous than at any former time in our history. Many of us remember the striking and valuable oration which Mr. Durham gave fourteen years ago. His subject was the Surgery of the Future, and in his address he sketched out the lines along which the art he loved so well—and which he himself adorned—would progress in the immediate future. It is a striking testimony to his accurate appreciation of the new forces at work that he then foretold much of what has since been realised.

The subject that I have ventured to choose as my theme is the Recent Evolution of Surgery. I have selected it because, however unworthily I may deal with it, the subject, at any rate, is well worthy of attentive study. This has been true at every stage in the long history of our art, but never so true as to-day, and for those who, like myself, have had the opportunity of witnessing during the last twenty-five years such a development in surgery as has never occurred before in a generation—nay, not even in a century or a millennium. The origin of the surgical art is lost in the obscurity of prehistoric times, but for two thousand years at least we are able to trace more or less clearly and fully its onward march. Its progress has been slow and at times intermittent. The light of science has shone more brightly now here, now there, and great local schools have risen to fame, and then, alas, sunk into oblivion. Although the progress has been slow it has been assured, and at almost any time in the history of the art we can imagine an orator addressing his fellows and asserting with truth that the present was better than the past. This reflection may well give us confidence in the future, and temper our boasting of the present with the expectation of the greater things still to be realised.

It is possible to measure the progress of our art either by the growth in the ideas to which it gives expression or by the improved expression it gives to old ideas. Of method we find an almost infinite variety, and few surgeons are so devoid of all originality as not to add something to the constant advance of surgery as an applied art. The great principles and thoughts of surgery are few, and it is given only to nature's giants to develop or to correct them. By whichever standard we judge the progress of surgery within the last twenty-five years we shall be bound to admit that never before was the advance so general, so rapid, so beneficent. Inasmuch as mind is more than matter, and in the degree in which a truth is greater than any expression of it, the highest and truest standard by which we can estimate the progress of an art will always be the moral rather than the merely material. I believe the chief glory of this period

No. 3743.

lies in the almost entire transformation of surgical ideals that has occurred rather than in the improved methods of expressing them. In this sense it may with justice be called the "golden age of surgery," and to apply to it the poor term "progress," which we also use for the slow march onward of the last 2000 years, is altogether inadequate and therefore to some extent misleading. I have therefore ventured to use the word "evolution" to express this wonderful unfolding, enlarging, ennobling of the thought, spirit, aim, and ideal of surgery, in distinction to improvements in its methods only, which may well enough be connoted by the poorer word "progress." I propose, then, to show to what extent and in what direction the very life of surgery has undergone a striking evolution within the last twenty-five years. I shall ask you to test the position of surgery to-day, as compared with what it was when most of us first began its study, by its new estimate of the bearing of anatomical facts; by its higher regard for the integrity of the organism; and by its altered conception of its place and value as a healing art.

1. One great change that has come over surgery is the removal of the formerly admitted anatomical restrictions upon surgical operations. This is sometimes spoken of as the extension of surgery into new regions, and it is pointed out that organ after organ has been, as it were, captured by surgeons and shown to be a more or less fruitful field for their enterprise. That, I think, is but a very imperfect expression of the facts, and one that conceals their true significance. For what are the facts? We are all familiar with them. The operation of trephining probably dates from prehistoric times, and from that remote period up to a very recent day surgeons have confined their cranial operations to removal of more or less of the skull, and have most carefully abstained from interference with the brain within. Quite recently trephining has sunk in importance, and is now, as a rule, only an incident in an operation directed entirely to active treatment of the membranes and brain. Similarly, while our immediate predecessors operated timidly, if at all, upon the posterior part of the spinal column, we operate upon the spinal membranes and cord, and also occasionally upon the anterior part of the vertebral column. Of the surgery of the thorax the same holds true. Operations upon its walls were sanctioned long ago, and timid efforts were made occasionally to open and even drain the pleura, but the thoracic wall only was regarded as the legitimate field of surgical interference. Now, not only is the pleura a common field of successful surgical interference, but the lung itself is freely operated upon, and the chief bar to a much greater development of pulmonary surgery is the difficulty attending the minutely precise diagnosis and localisation of the diseases of this organ. The pericardium is aspirated or drained without hesitation, and the suggestion has been made not only to tap the heart itself, but to treat wounds of its muscular substance by careful suture in just the same way as similar injuries of other muscles. The mediastinum, too, has been brought within the pale of legitimate surgery. No single organ in the great cavity of the abdomen is now held to be beyond the reach of the surgeon's knife. The successful removal of huge abdominal tumours, which at first excited angry opposition and then admiring wonder, is now a commonplace event in every operating theatre in the world. This has been followed by the extension of surgical methods to one and another of the solid and hollow abdominal viscera, until now liver, spleen, kidney, stomach, and intestines, uterus and its appendages, gall-bladder and bile-ducts, ureters and urinary bladder, and even that most inaccessible of organs the pancreas—one and all have their own surgical history and triumphs. In other words, the field of direct surgical interference was formerly limited to the limbs and to the common coverings of the great cavities of the trunk, to the exclusion of the great serous membranes and the organs contained within them. Surgeons were content to recognise that many organs and parts of the body lay beyond the limits of legitimate surgical interference, and they admitted it to be no reproach to their art to refuse to interfere with the peritoneum, the kidney, the lung, or the brain. I submit that it is essential to a correct appreciation of the change that has occurred to notice that the advance has not been gradually or slowly made, but occurred practically simultaneously all along the line. Its explanation lies not nearly so much in increased momentum in surgical art as in a sudden removal of a restriction to its advance. Surgeons are not bolder now than in the past, and although their anatomical knowledge has in

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many directions been made more precise, and they are possessed of operative aids unknown to a former generation, it is not chiefly in these influences that we must seek an explanation of the fact we are considering, but in the removal of a barrier raised and supported by ignorance and misconception. It arose partly from a belief that a surgical operation is in its very nature lethal, what we now call pathogenic, but largely from the view that certain tissues and organs of the body are of such anatomical delicacy, and so little endowed with either power of repair or ability to resist injurious influences, albeit that they are of prime importance in the animal economy, that to submit them to operation was to court certain disaster. He who saw the removal of a subcutaneous fatty tumour entail suppuration and the risk of blood poisoning could not contemplate with approval the removal of a kidney. When the surgical wound of a healthy joint was seen to be attended with the gravest risk to limb and even life, how could a surgeon dare to lay open and operate freely upon a huge serous sac like the peritoneum? When every surgical procedure entailed grievous risk and no means were known of certainly avoiding it, all surgeons felt the necessity of limiting operations to the irreducible minimum, and when it was forced upon them that the deeper their incisions the greater the peril, what else could they think than that the mere depth of an organ and the means taken by nature to protect it from external violence were a clear intimation of its being beyond the scope of surgery? Thirty years ago the body was mapped out into an operable area and an inoperable area, the distinction being based upon anatomical position and differences; but when surgeons understood the process of healing of uninfected wounds such an anatomical classification of parts became meaningless, and a great barrier to the progress of surgery was at one moment removed. To-day we know that simple, well-executed surgical procedures are not in themselves the cause of disease (pathogenic), and that every tissue and organ of the body is the seat of a power of repair more than equal to the demand surgery makes. With this knowledge the whole anatomical barrier to the progress of surgery has vanished, and the problem has assumed an entirely different aspect. From an anatomical standpoint the only bar to the feasibility of an operation is its mechanical impossibility. But I must guard myself from being understood to maintain that to-day a surgeon is free to incise anywhere or to excise anything. That can never be. The very removal of the anatomical restrictions upon the activity of surgeons has brought into relief the physiological restraints upon their art. Thus while the depth and important relations and the anatomical structure are no bar to the excision of either kidney, the physiological importance of the organs is an absolute bar to double nephrectomy or to the removal of a single kidney when its fellow is *hors de combat* from disease. A wandering spleen has been successfully excised, and such an operation is distinctly indicated where the organ gives rise to serious trouble from torsion of its pedicle; its place in the organism can be adequately filled by the bone-marrow, aided possibly by the lymphatic glands and sometimes by small masses of spleen tissues left behind in the gastro-splenic omentum. But, so far as we know, a wandering liver can never be treated in the same way; anatomically the operation is almost equally feasible, but physiologically it is barred. Similarly, cerebral surgery is at present limited to the relief of pressure upon its substance, the excision of morbid growths at or close to the surface, and the evacuation of abscesses in its substance. With our present knowledge we have to admit that the medulla oblongata and the central portions of the brain are outside the field of surgery, not because they cannot be reached or on account of any peculiarity of structure, but because of their physiological importance. The only limit in the anatomical range of its activities that a surgeon now recognises is the physiological one. He no longer asks himself whether this, that, or the other structure is too delicate to be the field of his interference, but only whether he can operate upon it without injury to structures necessary to life or without inflicting upon the patient greater disabilities than those caused by the disease or injury he seeks to combat. Thus the surgeon views the human body as a field for operations from an entirely different standpoint from that occupied less than a generation ago; we of to-day cannot put ourselves, even in imagination, quite into the mental attitude of those who immediately preceded us. In this new thought, then, we see one great sign of the evolution of surgery.

2 Closely connected with this change in surgical thought, and yet to some extent standing in contrast with it, is the higher regard in which the physiological integrity of the organism is now held. While no one tissue or organ is now held by surgeons to be beyond the scope of their activities, all tissues and organs have assumed an altogether new and higher sacredness in their eyes. To use a time-honoured but much abused phrase, surgery has become more entirely conservative in its aims than was ever the case before. It is true that diseased structures are removed with greater freedom than ever and almost regardless of their situation; but never before have we seen such efforts as are now made to limit operations to the removal of diseased parts and to save all healthy structure. I will mention four examples of the influence of this new spirit in surgery.

(a) My first example is found in the diminished frequency with which amputation is resorted to for injuries and diseases than at any former period. I will not attempt to prove this by statistics, for they are in great measure useless for the purpose. Indeed, I think it quite possible that if we appealed to statistics only we might meet such an awkward fact as this—that more thighs were amputated at a given hospital last year, let us say, than was the case twenty years ago. For while amputation for some affections has been replaced by happier methods of treatment, we must not forget that with greater safety attending all surgical operations there are other series of cases which were before deemed hopeless, even at the cost of an amputation, which are now so treated. Statistics may be good servants, but they are always bad masters. They are capable at the best of expressing only the grosser facts of human experience, and, as a rule, with much error bound up with their mathematical accuracy. The best of life cannot be measured and weighed, and were the statistical method the only one, or the chief, which showed the recent progress of the surgical art, the title of my address would be a misnomer, for of evolution mere numbers can tell us nothing. When a statistician has said his last word on a man's height, bulk, weight, age, and fortune, we are still in total ignorance of the man himself, his true personality and value. And so with surgery. The aims of surgery cannot be weighed and measured; the soul of surgery is as impalpable as the ether. Not for proof, then, but to gratify curiosity, and also that you may not think that these remarks are inspired by a suspicion that the so-called "facts" are against me, I have taken out the amputation statistics as given in the Surgical Registrar's Reports for Middlesex Hospital of the last two years, and compared them with those given in the similar reports for 1873 and 1874. I find that in this institution in the two years 1873 and 1874, 2382 patients passed under the surgeon's hands, upon whom 590 operations were performed, including 39 major amputations—by a major amputation I mean all amputations except those of the digits of either limb; twenty years later, 1893 and 1894, when the number of patients had risen to 2957 and the operations were 1554, the major amputations had fallen to 34. In other words, while 16 per 1000 of the patients treated by the surgeons in this institution twenty years ago suffered amputation, to-day the proportion so maimed has fallen to 11 per 1000. Twenty years ago 6.6 per cent. of the operations in this hospital were amputations; to-day only 2.1 per cent. are of this nature. These figures are small and not specially selected, and I do not quote them as anything more than a rough mathematical expression of a fact familiar to us all—that amputation has become much less frequent in surgical practice within the very recent period we are now considering. What a fact that is. A great and wholly undeserved glamour has been thrown around the operation of amputation. The interest attaching to its design and execution, and to the construction of a sound and useful stump, has done much to obscure the fact that amputation at best is a confession of failure, a refuge of the destitute. We have to admit that at times it is an inevitable step and may be a great boon to the patient, saving his life or health, or freeing him from the encumbrance of a painful and useless member; but all the same, it is a therapeutic tragedy, an irreparable disaster. Now, not so long ago surgeons took a special interest, even a pride, in their cases of amputation. To-day, I venture to say, there are no operations in surgery that excite less enthusiasm than amputations, none which are felt to be more opposed to the whole spirit of surgical art; and a surgeon rarely approaches one without not only a certain misgiving, but a painful sense of disappointment, if not of failure. The

readiness with which he resorts to amputation is recognised to be a rough working test of a surgeon's unfitness to practise his art. This is not only a great fact. It is the outward and visible expression of a great change which has passed over the whole mind and spirit of surgeons. There is more to interest an intelligent surgeon in the progress of a case of amputation to-day than there was twenty years ago; but to him this interest is dwarfed into littleness by the violation of one of his most cherished instincts in the sacrifice of healthy living parts in an effort to save or benefit the individual. What is true of amputation of limbs is equally true of the removal of organs, although in some cases the advance here has not been so great. But I can at least point to excision of the thyroid gland replaced by enucleation of tumours of that organ; and to the removal of tuberculous deposits from the testicle and even from the kidney in place of excision of these organs.

(b) My second example I find in the *higher standard of excellence we strive to attain in the repair of injuries and operation wounds*. Where twenty years ago we only aimed at our patient's recovery, and the final closure of a wound, we now look for perfect restoration both of structure and function. An incident that occurred in this room nearly twelve years ago is indelibly impressed upon my memory. The greatest of living surgeons had read a paper in which he described and advocated his then novel treatment of the direct suture of the fragments of a transverse fracture of the patella. Of the discussion that followed only one speech has lived in my recollection: it was that of a distinguished surgeon and leading teacher, nearly twenty years Sir Joseph Lister's junior, who told him, in his terse phraseology, that the operation was magnificent but it was not surgery. Not surgery! The idea of obtaining perfect structural repair of an injured part was so foreign to the thoughts of even our foremost surgeons that this successful effort to grapple with an injury that often permanently crippled its victims was condemned as unsurgical, the object aimed at was considered outside the pale of legitimate enterprise and comparable only with the heroic but mistaken Balaklava charge. The ideal then falteringly held up before us by Sir Joseph Lister, and which at first was entertained by so few, is now cherished by all and firmly possesses the mind of every true surgeon. All do not strive to attain it by the same road; that matters not; the idea of obtaining perfect repair of injuries has been grasped, and this has raised at a bound our standard of surgical excellence. See what it has led to. Other fractures than that of the patella are now submitted to direct suture if perfect repair cannot be obtained by our older—shall I say antiquated?—methods of treatment. Dislocations which could not be replaced by external manipulation used to be left; the surgeons had exhausted their resources when ropes and pulleys failed to drag back the errant bone, and they were content to leave the case to unaided nature. Now no one would consent to utter such a *non possumus*, but would at once replace the bone by operation. In obedience to the same impulse, the so-called "internal derangements of joints" are submitted to operation. This ideal finds another expression in the care now taken in the suture of wounds where many structures are divided. Where formerly surgeons spoke and thought merely of bringing the edges of a wound together, they now speak and think of the careful union of divided structures so as to obtain the most perfect repair. In the surgery of the abdominal wall the beneficial result of this suture of its different layers is very marked, and even such a detail as the splitting of the aponeurosis of the external oblique muscle in place of division of its fibres is not only attended to, but is found to be worth attending to. Another recent improvement of the same kind is the exact and sutured suture of the divided tissues in cases of external urethrotomy, to secure perfect primary healing of the wound in place of the older and very disagreeable method of allowing the wound to slowly fill up. Surgeons have ceased to view with approval the slow healing up of their wounds by the laborious process of granulation, and this not only because that process is slow, but because it fails to restore the parts in the same perfect way that "primary union" does. I might adduce other evidence of this, but I hope it is needless to weary you with proof that our regard for the perfect repair of injuries and operation wounds is to-day altogether greater than it was twenty-five years ago, and that a new ideal of excellence possesses the minds of surgeons.

(c) My third example of the influence of this improved surgical spirit is seen in the successful efforts now made for the

radical cure of hernia. Most of us remember the time when the general opinion of surgeons was that a well-fitting truss adequately met the indications of a case of hernia. The desire to obtain a radical cure was entertained by only a few, who were held to be Quixotic and unreasonable. To-day the men who regard a truss as the proper and satisfactory treatment for hernia are the marked men, and the aim of surgeons generally is to obtain by direct operation, if need be, but anyhow to obtain, a radical cure of the deformity. This illustration of my point is so striking that by itself it would have substantiated my claim that the aim and whole ideal of surgeons are now far higher than they were twenty years ago.

(d) My fourth example of the same spirit I find in the application of surgery for the relief of many of the smaller ills and deformities to which flesh is heir. Look, for example, at the operations now performed for the relief of the various forms of talipes. I do not refer, of course, to tenotomy, which was introduced long before the period of which alone I am speaking to-night, but to the operations of tarsectomy and the like. Look, again, at the excision of varicose veins, the direct treatment of thrombosis, the excision of small moles, warts, lipomata, suspicious growths, unsightly scars, and the like. While in some of these cases graver surgical principles are also at stake, such operations are mainly undertaken in obedience to a conviction, which we all now admit to be well founded, that surgery is rightly employed in remedying the slight as well as the graver defects of structure and function. These operations are the outcome of a new spirit among us, of what I have called the higher regard for the physiological and structural integrity of the organism. They are the expression of a new idea, and if the examples I have cited appear in any case to be trivial remember that an idea is always greater than any expression it ever receives.

3. The third idea that has found expression in the recent practice of surgery is a *new conception of the real nature of a surgical operation and of the personal responsibility of the operator*. As I have already incidentally mentioned, an operation used to be regarded as in itself a potent cause of disease, and along with this was that other great misconception, that suppuration was sometimes a physiological and not always a pathological process. Surgeons used to speak of "laudable pus," "healthy pus," "healing by suppuration," and so on. These phrases are gone—gone with the false ideas connected with them. We now draw a clear and sharp distinction between the physiological process of repair and the pathological processes of inflammation and blood poisoning. When surgeons saw nearly every wound suppurate, and erysipelas, septicæmia, pyæmia, gangrene, and secondary hæmorrhage were frequent complications, and when they found that neither the surgeon's skill nor the patient's sound health, nor the use of any known dressing for the wound or of none at all, was sufficient to guard against these appalling evils, what could they think but that an operation in itself was a cause of disease? Surgeons had only too great reason for knowing that, if by an operation they might rid their patient of one diseased condition, it was, as a rule, only at the expense of setting up another and possibly a far worse malady. Those who have entered upon the study of surgery only within the last fifteen or twenty years can form no adequate conception of the paralysing effect of these facts. The surgeon's confidence in his art was sapped at its very foundation, and, what was worse, his confidence in his own power of determining the issue of his cases was destroyed. As a result surgeons were with grim irony called "brilliant" if only they could execute with despatch and dexterity the feats of the operating theatre. If a large proportion of recoveries was obtained the man was apt to be called "lucky"; if failures predominated, again it was his "luck," shoulders were shrugged, the Deity was blamed, and the surgeon took comfort in his "brilliantcy." To-day this is all a dead language to us; the very slang of the hospital theatre is gone. Instead of brilliantcy in execution only, we demand success; instead of speaking of "luck," we talk of surgical responsibility. Operations still fail, but instead of blaming the Deity we now blame ourselves for the result. For how do failures arise? (1) We may attempt what we are unable to effect, but such attempts should be made so as not to add to our patients' ills; we ought, at least, not to introduce any new elements of danger where we cannot effect relief. (2) An operation may be fatal from shock, its direct paralysing influence being more than the patient's powers can withstand. (3) Or, again, an operation may be fatal by the infliction of some injury to a really vital part, or by what is called

an accident, such as uncontrollable hæmorrhage. (4) Or an operation may be the means of infecting the patient's healthy tissues with virus introduced from without, or from within, from the patient's own tissues. So long as human nature continues what it is, with its tendency to error in observation and judgment surgeons will meet with these failures in their operations; but we cannot escape from the load of responsibility that our increased knowledge brings us, and we are bound to recognise that no one of us can any longer shield himself in cases of failure under the plea of ill-luck. As vain is it for a man to try to sever himself from his own shadow as for a surgeon to try to share in the increase of knowledge and escape from the heavier burden of responsibility it brings. And, look at the causes of failure of operations as we may, we cannot get rid of the conviction that these causes are under the control of the operator in a sense and to an extent that was never the case before. It takes but a few words to describe this great, this fundamental change that we have of late witnessed in the surgeon's estimate of the nature of his operations and of his share of responsibility in their success or failure; but no words of which I have command can adequately express the importance of the change thus indicated. The language of poetry alone is sufficient for that. Whether we regard the relief of human misery resulting from it, or the patient labours of those who have established our new position, or the marvellous world of hitherto unknown life which it has revealed, or the entire revolution of nearly all of our most firmly held pathological doctrines it has effected, the story of the germ theory of disease must long remain without any parallel in biological science.

4. Closely connected with this and arising from the same happy addition to our knowledge, surgeons have apprehended that their highest ideal is to treat directly the causes of disease. Up to the last few years surgical methods as applied to disease were crude in the extreme; they may be summarised as consisting of the removal of pathological products, as by amputation, the relief of tension, and the application of physiological rest. Knowing nothing of the ultimate causes of disease, nothing could be done to combat them. Of the many beneficent results of this change I cannot now speak; my aim is rather to fasten attention upon the change of thought itself than upon its practical outcome. I will take merely one example, and that shall be the case of tuberculous disease. For tuberculous disease of lymphatic glands the old practice never attained to anything better than the opening of abscesses, and in this it only slightly anticipated nature and in no way added to or supplemented her powers of dealing with the disease. To-day such a procedure is almost never adopted, except as a merely temporising expedient or a preliminary to a more radical operation. But, the existence of the disease being once established, the surgeon directs all his efforts to one single end—the removal, not only of the effete products of the disease, but of the active cause of the disease itself, the tubercle bacilli. As a result we have our patients well in a few days instead of their lingering on with slow suppuration for months and years, exposed all the time to a real peril of more widespread tuberculous infection. In tuberculous disease of bone we witness the same change in the treatment. It was a step in advance when excision of a tuberculous joint replaced the older plan of incision of abscesses, followed, if the case did badly, by amputation. It was a further step in advance when excision was practised at an early stage of the disease rather than late, because, the disease being more limited, the operator was the more likely to remove all the infective material. It was, however, a far more important step onward when excision was superseded by arthrectomy, the very essence of which is the early complete removal of all the diseased and infective tissue, with the preservation of all the healthy parts. From a pathological point of view, amputation and excision differ from one another only in degree; they are both of them empirical sacrifices of structures. Arthrectomy stands on a different plane altogether; it is the expression of a pathological conception—the removal of the cause of disease, and not merely its products—as well as of the physiological conception of the preservation of healthy parts. An equally striking change is seen in the treatment of chronic tuberculous abscesses—pneumæ abscesses, and the like. The old method of incision and drainage, with more or less of empirical washing out of the abscess cavity, was a grim failure. It often led to rapid death from septicæmia or pyæmia, and when it did not the suppuration continued and the abscess was said to degenerate

into a sinus. So bad were the results that many of the most experienced surgeons refused to operate at all and left the abscesses to burst, for they recognised that where they could not interfere with advantage it was their duty at least not to hasten their patient's end by an operation. It was, therefore, a great advance when Lister showed us how to open these abscesses without introducing a new element of danger by external infection of the abscess. But that, after all, only led us half the way along the path. We reached the goal only when we further learned where and what is the active cause of such abscesses and how that cause may be destroyed or removed. And so to-day we regard these cases, formerly so disastrous, as most hopeful, and yielding some of the best instances of the successful attainment of the new therapeutical ideal of surgeons—the removal of the cause of disease.

I will not weary you with further illustrations. Your own experiences will supply them in abundance. My point is that such a change in surgical treatment as this is not comparable with the replacement of one empirical method by another or of one mode of dealing with the results by another. The dealing with the actual causes of disease is a new fact in surgery, the expression of a new idea, and the conception has at one step lifted the art to a higher level, and has made it worthy of the name "scientific." Could I point to nothing else, this alone would justify my assertion that we have witnessed within the last twenty-five years such a development of the spirit of surgery, such an increased adaptation to the requirements of mankind, that "progress" is far too tame a word to apply to it; let us call it evolution.

Two collateral modes of expressing this new surgical thought are, I think, of interest to us. The first is the ardour and also the success with which the surgeon now applies himself to the arrest of morbid processes in their early stages. So long as the whole aim of the surgeon was to remove the results of disease, not to deal with its cause, he was content to wait, for mere convenience, until these products bulked large, until the case was "ripe" for treatment. But now that his object is to deal with the causes of disease he at once comes to realise that the earlier his interference the better. He is justified in this, not only by the saving it involves to the patient—a saving whether of time or of comfort, of health or of tissue—but also by its enabling him to deal more directly and more effectively with the causes of disease, because he is unfettered by the amount or the kind of the morbid results of their action. This thought has now become a firm hold upon the surgeon's mind that it has become a part of his instinct, and in any case of a failure the explanation which more readily springs to his lips than any other is that his interference was made too late. Indeed, in cases where we know nothing of the ultimate causes of the disease, as in cancer, the same principle inspires us to operate as early as the existence of the disease is recognised, and even before that, to remove "suspicious" nodules of disease, and so, if we can, to anticipate the origin of malignant growth. We do not know as an indisputable fact that the first small nodule of a malignant growth is, or contains, the cause of the disease, but we argue from analogy that it is, or does. We know quite certainly that the cause of cancer, whatever it is, does not lose its power over the individual by effluxion of time; and influenced by this, but still more by our experience in cases where the cause of disease is known to us, we endeavour to combat the evil by the free removal of the disease at the earliest possible moment. My contention is that we have no absolute scientific warrant for so doing—we soon may have it; but yet the practice is universally commended and largely followed as a result of the fact that the highest ambition of surgeons now is to remove the cause of disease, to deal with it at its fountain-head or in the germ. But we see this same tendency exerting itself in another direction—in the stimulus it gives to efforts to anticipate the graver terminations of morbid conditions. The older surgeons would quote a proverb and decline to meet evil half way, and would wait until disaster had come before they endeavoured to combat it. Such an idea is wholly foreign to surgical feeling to-day; we remove an extra-uterine gestation as soon as it is clearly diagnosed, lest it should rupture and cause a fatal hæmorrhage. If we can help it we do not wait till our patients are moribund. We excise a diseased vermiform appendix lest it should cause a suppurative local peritonitis or a fatal general peritonitis. In thus dealing with diseased conditions, not because of what they are in themselves, but to anticipate more grave accidental sequels to them that may arise, we

give expression to a new surgical thought, and the practice therefore is to be placed on a different plane in our estimation from any mere improvement in surgical therapeutics along an old line.

5. The last indication of the recent evolution of surgery that I will mention is seen in the introduction of what I will call *physiological operations* into surgery. By a "physiological operation" I mean an operation performed on a part not itself the seat of disease or known to be the cause of existing disease, but by influencing which we can affect beneficially a gross morbid change in another part. It is a kind of substitutionary surgery. There are two very closely allied instances of this class of surgical operation—the removal of the healthy ovaries in the treatment of uterine fibroma and of the healthy testicles in cases of advanced prostatic fibroma. I am not now concerned with the results of these operations or with an exact appreciation of their true value; I only want to point out that operations of this kind stand in a category by themselves, that they are the expression of a new thought, and their introduction marks a new epoch in surgery. This appeal of surgeons to some of the highest and most recondite of the laws of physiology in the pursuit of their art is a striking evidence of the new spirit by which they are influenced.

I venture to hope that I have made good my point that within the memory of all surgeons of middle age their art has been enriched by the introduction of new ideas, new aims, and a new spirit, and to such an extent has the whole thought of surgery been revolutionised that to-day the art is entitled to a totally different position in our regard from that held by it even thirty years ago. Neither the time allotted to me nor a proper sense of the demand I have already made upon your indulgence will allow of my entering at all fully upon a consideration of the causes that have led to this happy result. The gain has come to us by no lucky accident; the new light has burst upon us by no sudden inspiration; but the truth has been unfolded as we have trodden the golden pathway of knowledge. To some extent the advance, even in thought, has been gained by improvement of method, as by the introduction of anaesthesia and of better modes of hæmostasis and of new mechanical appliances. But in the main it has been as we have increased in knowledge of anatomy, of physiology, and particularly of pathology, that the change in surgical thought and purpose has been effected. Good surgery is the outcome of a sound knowledge of these three sciences. As the strength of a chain is that of its weakest link, so the most minute knowledge of anatomy, combined even with a tolerably good appreciation of physiology, failed to evolve good surgery until a knowledge of the causes of disease supplied the lacking constituent. Anatomy aids in diagnosis and guides the surgeon as to what he is to remove and how best to do it, but its only therapeutic indication is *excise*. Physiology affords indispensable aid in diagnosis, points with unerring finger to the fell results of injury and disease, but bids the surgeon hold in high regard every part and power of the living organism, and calls on him in no uncertain voice to *save* and to *preserve*. Pathology, by telling him how disease arises, lives and thrives, brings harmony out of the discord by uttering its note: *arrest, prevent*. These words may mark for us the great stages through which our art has passed. Concerning itself at first with excisions, amputations, and such coarse modes, it rose to higher things by seeing that a nobler function was preservation, not destruction. From that of late it has advanced still farther, as it has owned its chief ambition to lie in anticipating and preventing pain, disease, and death.

While in Nature evolution is seen to be the outcome of the silent working of unintelligent forces, and many refuse to accord any part to the influence of a presiding mind, in the evolution of an art all admit the predominant influence of mind and of individual genius. Were I to close this poor attempt to indicate the main course of the recent evolution of surgery and the chief forces that have led to it without any reference to that master mind to which we owe the greatest impulse that surgery has ever felt, I should be doing violence to my own feelings and to yours also. Although science knows nothing of nationality, and we here to-night rejoice in addition to our knowledge and to our powers of combating disease and death, whether it comes to us from a French Pasteur, from a Teuton Koch, from our Western cousins on the other side of the broad Atlantic, or from a son of that Eastern Empire now just rising above the horizon,

we cannot help feeling a special pride in the fact that the name that shines with an unrivalled splendour on the page of surgical history is that of the Englishman, Joseph Lister. This society is rich in traditions; the picture which hangs on our walls is a precious treasure, not alone as a work of art and the work of a great artist, but as reminding us of the very personalities of the men that were its founders and the leaders in our profession a century ago. Anticipating the future, we may be sure that it will for ever remain one of the proudest traditions of this society, that it was here, to us, that Joseph Lister made more frequent and more important communications than to any other kindred society in London. This country has been the birthplace of many of the worthiest of men in every department of life, and in the profession of medicine, to which all civilised lands have contributed so richly, we take a foremost place. But Nature is not lavish of her choicest gifts; they often come to us at what we call long intervals, as if to enable us to judge of them with a true perspective. In the seventeenth century she gave us the immortal William Harvey to lay the foundation of our physiological knowledge; in the eighteenth century she gave us John Hunter, that great biologist and profound anatomist, the founder of scientific surgery; and in the nineteenth century she enriched the race with Joseph Lister, a man worthy to rank with Harvey and Hunter, not only for his genius, his powers of observation and reflection, his patience in research, and his scientific method, but even more for the magnitude and beneficence of the results that have followed from his efforts. It is a great thing to have and to hold in reverence our mighty dead; it is a better and a greater thing still to have and to honour our mighty living. Long may this ancient society flourish! Long may she retain in her fellowship this greatest of her sons! May she ever take a leading part in the working out of those great ideas which can alone ennoble our art! And may she never lack worthy followers of him who has taken the foremost place in the Recent Evolution of Surgery!

A Lecture

ON

THE RELATION BETWEEN THE MOVEMENTS OF THE EYES AND THE MOVEMENTS OF THE HEAD.¹

Delivered before the Oxford University Junior Scientific Club at the University Museum, Oxford, on May 15th, 1895.

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WE all know that it was a long time before mankind found out that the earth moves. For ages the apparent motion of the heavenly bodies was supposed to be their real motion, the earth being fixed. We, who know something of the truth in this matter, do not, however, any more than our ancestors did, see or feel the earth move. We believe that it does so, either because we have been told by someone who, we think, knows about such things, or because we have reasoned the matter out from data observed by ourselves or reported by credible observers. But in habitual thought and speech we go back to the old assumption, which, for our practical, terrestrial purposes, answers well enough and is perfectly in accordance with our sensations. When we turn from the great cosmos to the microcosm, when we compare the motion of our own body among the various fixed (terrestrially fixed) and moving bodies around us with the motion of the earth among the stars we find quite a different state of matters. It never occurs to us that our own body is at rest and that the trees, houses, &c. move. When we really move we not only know but feel and see that we are moving, and everyone, learned or ignorant, old or young—if only he is sober—feels and sees that the solid earth is fixed, except on the rare occasion of an earthquake and in the case of some illusions which we shall have to consider. I wish to discuss the cause of this sensation of the fixedness of the earth, and

¹ Being the fourth "Robert Boyle" Lecture.

also incidentally of the exception implied in the words I have just used, "if only he is sober." If we keep our head fixed and look at any really fixed scene—say, a room in which there is nothing moving, or a landscape, if we can find one, without railway trains, ships, moving beasts, or flying birds—we can allow our eyes to run over it in as uniform or as irregular a way as we please, and see that the scene remains fixed. We might have supposed that as we move our eyes from right to left the whole scene, like a moving panorama, would seem to move from left to right, but it does not do so. It remains visibly at rest, and we know, without any reasoning about it, that the changes of view were produced by the motion of our eyes. We fancy that we can move our eyes uniformly, that by a continuous motion like that of a telescope we can move our eyes along the sky-line in the landscape or the cornice of the room, but we are wrong in this. However determinedly we try to do so, what actually happens is that our eyes move like the seconds hand of a watch—a jerk and a little pause, another jerk, and so on, only our eyes are not so regular—the jerks are sometimes of greater, sometimes of less, angular amount, and the pauses vary in duration, although, unless we make an effort, they are always short. During the jerks we practically do not see at all, so that we have before us, not a moving panorama, but a series of fixed pictures of the same fixed things, which succeed one another rapidly. It is not difficult to understand how this gives rise to a sensation of the fixedness of the external scene. If, in the otherwise fixed scene, there is a really moving object we see it move, because during the pauses, short as they are, the moving object has visibly changed its place, and in each of our fixed pictures the moving object is seen to move. If it moves too slowly for this, then we do not see it move, but only infer its motion from comparison of its position at different times. If we keep our eyes fixed on the moving object—and this is possible if it does not move too fast or too irregularly—then we see it fixed and the really fixed things moving, an illusion we have all observed when the pier seems to move and the steamer remain at rest. That the eyes jerk in the way now stated can be made plain by means of a simple experiment. If we have in the field of view a bright object, such as an incandescent electric lamp, and, after running our eyes over the scene before us shut our eyes, we see secondary images of the bright object.² Now if the eyes move continuously from one position to another, we should see between the two secondary images of the bright object corresponding to these two positions a bright band composed of an infinite number of images each infinitely near its two neighbours. But we see no such band, but a finite number of sharp individual images, each of which corresponds to the position of the eyes during a pause between jerks; unless the bright object is very bright there is nothing in the secondary image to represent the positions of the eyes during the jerk. If for a bright object we take the sun, then we do see bands joining the sharp secondary images. These bands are fainter than the sharp images and die away sooner. They are the impressions made on the retina by the image of the sun passing rapidly across it during the jerk; but if with the fixed bright object in the field we follow with our eyes a really moving thing, then on shutting the eyes we see a band of light, because the image of the bright object passed not very rapidly across the retina. This habit of jerking the eyes from one position of vision to another as fast as the light, well-poised globes can be swung round by the quick-working, straight-fibred muscles which move them may be an innate habit or it may have been acquired by our looking at things and turning quickly from one object of interest to another; at all events, it is now the way in which alone we can move them unless we fix them on a moving object.

So far I have supposed the head fixed and the eyes alone moving. Let us now attend to what happens when we move our heads.³ The movement of the head, unless it is very rapid, makes no difference at all in the phenomena just described. If we call the line along which we look during the pause between two jerks a glance-line, we may describe the whole phenomenon by saying that the glance-lines are fixed relatively to fixed external objects whether the head is rotated or not. This, of course, means that during a pause the eyes are rotated

relatively to the head about the axis on which the head is really rotated, in the opposite sense and through the same angle as the head. It might be supposed, for all that has yet been said, that this fixedness of the glance-lines when the head is rotated depends on the habit of looking at things, but that this is not the cause, or, at all events, not the only cause, is plain from the fact that the same relative movements of the eyes take place when we look at an objectless field of view, such as the clear, cloudless sky, or, as was, I believe, first noticed by Dr. Breuer, when the eyes are shut. By placing the fingers lightly over the closed eyelids we can feel the motion of the prominent cornea. If, with eyes shut and fingers so placed on the eyelids, we turn the head or turn the head and body round, we feel the eyes twitch. As the head turns round, the eyes retain for a little a fixed orientation in respect to external fixed things and then jerk so as to make up for lost time, again pause, and again jerk, and so on; so that, while the head turns uniformly, the eyes, which must of course, on the whole, make one full turn while the head makes one full turn, do their rotation intermittently, being, so to speak, left behind by the head and then making up by a rapid jerk. Another proof that these compensatory movements, as they may be called, of the eyeballs are not, or at least not wholly, caused by the effort of looking at things, is afforded by observing what happens when the head is rotated about a fore and aft axis, about an axis coinciding with a glance-line. If we keep our eyes fixed on a particular point and rotate the head about the line along which we look, we still see things fixed, the world does not seem to revolve about our fore and aft axis. Here, also, we can show by means of secondary images that we see a series of fixed pictures. If, with a bright object in the field of vision, we fix our eyes and keep them fixed on a point about 15° distant from the bright object (if we keep both eyes open, about as far from our eyes as the bright object is, so as to avoid double vision), and then rotate the head about a fore and aft axis through, say, 30° by inclining the head towards one shoulder, and shut the eyes after this performance, we see a number of sharp secondary images of the bright object arranged upon an arc of a circle the radius of which is the angular distance of the bright object from the point fixed. If I have rotated my head through about 30° I see about five secondary images, so that what I call the angle of rotatory nystagmus is, in my case, about 6°. Here we have been looking all the time at the same point, and it is not easy to suppose that the very slight attention we pay to objects seen indirectly, or, as we sometimes say, "with the tail of the eye," could lead to a habit, so fixed that we cannot escape it, of moving the eyeballs in the way described.

I have said that the movement of the head, unless it is very rapid, does not affect the fixedness of the glance-lines. Translatory motion of our body may be so rapid, as in a railway train, that the eyes cannot twitch so fast as to keep the glance-lines fixed relatively to near fixed objects. The eyes do their best; they twitch, but not enough, unless the train is moving slowly, and near objects seem to fly backwards. We succeed with fixed objects at a greater distance from us; we can see them fixed, and all objects between us and such visibly fixed objects are seen to move backwards, and fixed things beyond them seem to move forwards with us. Of course, if by keeping our attention on our carriage and its contents our glance-lines become fixed in reference to these really moving things they seem fixed, and the whole world outside of the carriage is seen to move in the direction opposite to that of our real motion. It is also obvious that rotation of the head, if it is more rapid than the quickest possible rotation of the eyeball in the head, must affect the position of a glance-line, for, in order that the glance-line may remain fixed, the eyeball must rotate in reference to the head as fast in one sense as the head rotates in reference to external things in the other sense; but in the case supposed the eyeball cannot do so. We can try this experiment without having recourse to mechanical means of rotating our body and head, which of course we can do as fast as we please, and a great deal faster than is either pleasant or safe. The most rapid rotation of our head which we are able to produce by the direct action of our muscles is what is known as "wagging"—that is, a rotation about a vertical axis upon the joint between the first two vertebrae. In this way it is possible to give the head an

² The secondary images are better seen if we look at a white surface and wink rapidly.

³ By "moving the head" I mean moving the head either alone or along with the body or any part of it.

⁴ If we take a sufficiently distant object as the thing to be looked at we may neglect the want of coincidence of the two glance-lines belonging to the two eyes, and, moreover, all that is here described is seen as well, though not so conveniently, with one eye shut.

angular velocity considerably greater than the maximum angular velocity of the eyeball. When we do this as fast as we can we see that external things do not appear steady. When we wag our head to the right we see the world wag to the left, and *vice versa*. But the external really fixed things do not appear to us to describe nearly so large an angle as the head really does; the eyes make an effort to compensate the rotation of the head—an effort only partially successful, the angle through which external things seem to move being the difference between the actual angular rate of movement of the head and the maximum possible angular rate of movement of the eyeball in its socket. This difference can best be observed—and, indeed, can be approximately measured—by observing a distant light on a dark night while we wag the head. The point of light seems drawn out into a horizontal line of light, the apparent length of which is the angular difference in question. As we can wag our head much faster than we can nod it, the apparent length of the vertical line of light into which a bright point is drawn out when we look at it and nod as rapidly as we can is much less than that of the horizontal line of light just spoken of; but I find that I can, by nodding, rotate my head about a right and left axis a little faster than I can rotate my eyes about the same axis, so that the luminous point does appear to be drawn out into a short vertical line. Such violent movements of the head occur sometimes in our ordinary (not experimental) use of our eyes, but they are rare and isolated, so that the disturbance of the fixedness of the glance-lines which they cause does not really affect our sense of the fixedness of the world. The illusion of the moving pier and fixed steamer (which we have all also observed when there is a train alongside that in which we happen to be, and we see the moving train fixed and the fixed train moving) is corrected by looking at the shore or the railway station. For a moment these also seem to move, but our glance-lines almost instantly become fixed in reference to those things which we know are fixed, and it is then difficult to recall the illusion. Another similar case is that of the moon and the clouds. We sometimes see the moon moving and the clouds fixed, sometimes the clouds moving and the moon fixed, as our glance-lines are fixed relatively to the clouds or to the moon, and a little practice enables us to change from the one sensation to the other at will.

What has been said seems to show that our immediate sense that the earth and what we call fixed objects on it are fixed is a consequence of the way in which we move our eyes, and, in particular, of the way in which, by a suitable movement of the eyeballs, we involuntarily and unconsciously compensate movements of the head, voluntary or involuntary, conscious or unconscious.⁵ That such an immediate sense of the fixedness of external fixed things is of great use to us in moving about among them is plainly shown when we observe the trouble which a drunken man, who has lost this sense, has in guiding himself.

I now turn to the question, What is the cause of this prompt and wonderfully accurate compensatory movement of the eyeballs? There are three sources from which we can obtain information leading to an answer—viz., (1) from experiments on ourselves, (2) from anatomical observations and measurements, and (3) from observations of the effects of injuries to the labyrinth of the internal ear. I shall consider these in their order.

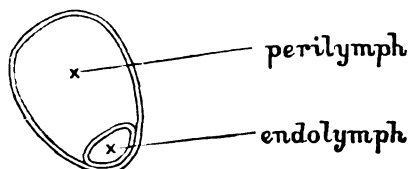
By experiments on ourselves I mean the study of the effect on the motion of the eyes and on our sense of the fixedness of external things, of movements of our head (in this case always along with the rest of our body), which we do not make, as a rule, for any other purpose. I have already stated that if we shut our eyes, place our fingers on the eyeballs, and turn round about a vertical axis, we feel with our fingers the jerking motion of the eyeballs. If, instead of turning round once, we turn round several times—still better, if we seat ourselves on a turning-table and get someone else to turn it and us round at a uniform rate—we find that the jerks become less and less frequent, and after two or three turns cease altogether. Another thing which we observe is that, although the turn-table is being turned round at a perfectly uniform rate, we feel the rotation becoming slower and slower, and when the jerks of the eyeballs have quite ceased we feel ourselves at rest and have no sensation of rotation. Let us for convenience call the sense

in which the rotation is still going on positive. This uniform positive rotation has become to us imperceptible (as long as we keep our head in the same position in respect to the vertical) and is what we may call a "new zero of rotation." If the rate of rotation is now increased we feel this increase as a positive rotation; if it is diminished we feel the diminution as a negative rotation—a rotation the other way about. What we really perceive then is *acceleration* of rotation, using the word "acceleration" in its technical sense. If the turn-table is stopped this is a negative acceleration, and what we feel is that we are being turned round in the negative sense, and at the same time we feel our eyeballs jerk. The sense of rotation and the jerking die away in this as in the former case. If, while we are being turned round with uniform angular velocity, but after all sense of rotation and all jerking of the eyeballs have ceased, we open our eyes, we still feel ourselves quite at rest, but we see all external objects turning round us; as has been well said by Professor Mach, the external world seems to turn round inside an outer, unseen, fixed world. It is in reference to this imaginary fixed world that our glance-lines are now fixed. If the rate of rotation is changed while the eyes are open the sensation of rotation is exactly the same as if they were shut; we feel the acceleration—positive or negative—as a rotation in the one or in the other sense, and the jerks of the eyeballs take place as if the real external world were not there and we were looking beyond it at the unseen fixed world outside of it—that imaginary world in reference to which our glance-lines are now fixed. If, while the experiment I have described is going on, we move so as to change the direction in our head of the axis of rotation—for instance, if after uniform rotation about a vertical axis has gone on, with the head in its usual upright position, until the sense of rotation has ceased, we bow our head forwards so that the axis of rotation is now parallel to a line from the occiput to the chin—a very striking and somewhat alarming, but most instructive, sensation is experienced. What we feel is that we are being turned round with a rotation which is the resultant of two rotations of equal angular velocity—one the real rotation about what is now the vertical, the other the imaginary (but equally perceived) rotation in the opposite sense, about the line in the head which was vertical. If the angular movement of the head is small, so that the angle between what is the vertical and what was the vertical is small, then the two component rotations nearly neutralise one another and the strange and alarming resultant is slight; but if the head is bent so that the old and new verticals are at right angles to one another the real and imaginary components are both felt in full, and the effect is very startling. If the rate of rotation is changed simultaneously with the change of position of the head we have a resultant of two rotations of different angular velocity. The most easily observed case of this kind is when the rotation is stopped altogether at the moment of change of position of the head. Here the real component is zero and we have only the imaginary one. This is the case of the well-known practical joke. A man is asked to plant the poker before him on the floor, place his forehead on the end of it, walk round it three times, and then rise and walk to the door. The preliminary part of this experiment presents no difficulty; the victim plants the poker, puts his forehead on it, and walks round it with the greatest ease and with no sense of anything unusual; but when he rises the line in his head which was vertical is now horizontal, and he feels himself turned round about that horizontal line. The external world he also sees turning round this line, objects on the one side rising up and objects on the other side sinking down. In this visibly swaying world he has to guide his sensibly rotating body, and if his friends do not catch hold of him he is pretty sure to fall. All these experiments are most conveniently made on a smoothly working turn-table of such a size that one can comfortably lie down upon it. By the kindness of Messrs. Dove, lighthouse engineers, I had the use of a large turn-table made for the revolving lantern of a lighthouse. It could be turned round smoothly and uniformly at the moderate speed that is most suitable for experiments of the kind in question. A few experiments with such an apparatus will convince anyone that we have here to do with a perfectly definite sense and not with any vague sensations caused by the inertia of the soft parts of the body. This is one of the ways in which the phenomena have been explained by those who hesitate to believe that there can be a definite special sense only discovered within the last few

⁵ I need hardly repeat that by movements of the head I mean movements of the head whether accompanied or not by movements of the body.

years. That the origin of the sensation is not in the soft parts of the body generally, but in the head, is made perfectly plain by the fact that the position of the head and the changes of that position alone determine the sensations. We must therefore look in the head for the organ of this sense.

In close proximity to the cochlea, which is universally regarded as the organ of hearing, there is an organ of very striking and, I might say, mysterious form. It is found in all vertebrates, and occurs in them fully developed except in the lowest forms of fish. It is contained in a bony—in cartilaginous fishes in a cartilaginous—cavity which communicates in birds and mammals with the cochlea or lagena. This cavity may be divided into the vestibule and the three semicircular canals. The canals open at both ends into the vestibule, and each has at one end an enlargement called the ampulla.⁶ Within this bony case is contained a membranous structure consisting of the utricle, situated in the vestibule, and three membranous canals, each in one of the bony canals, each with an ampulla in the bony ampulla, and each opening at both ends into the utricle. The vestibule contains, besides the utricle, the saccule, a membranous bag continuous with the cochlear duct, and has in the side next the tympanic cavity a hole in the bony wall filled in by a membrane and known as the fenestra ovalis. The saccule and the utricle have each a spot on the lower wall supplied with nerves which end in air cells known as the macula acustica. The maculae acusticae are probably, as suggested by Professor Mach and Dr. Breuer, organs fitted to perceive acceleration of translatory motion, and are not connected directly with the function of the semicircular canals. The fenestra ovalis belongs to the organ of hearing, which may thus be said to have a right of way through the vestibule. We need not therefore here consider these organs any further, but confine ourselves to the semicircular canals and the utricle in its relation to them. As already stated, each bony canal contains a membranous canal. The membranous canal is, except at the ampulla, much smaller in bore than the bony canal, so that the space outside the membranous canal filled with perilymph is much greater than the space inside filled with endolymph. The membranous ampulla much more nearly fills the bony ampulla, so that here the perilymph space is comparatively small. The membranous canal is pretty firmly attached (in some animals, at all events) to the periosteum of the bony canal. (See diagram.) Each



canal is, in all animals I have examined, approximately in a plane, and it is important to consider the relations of these planes to one another and to the mesial plane of the head. As I have brought part of the apparatus with me, I may shortly describe the method I used to measure the angles which these planes make with one another, and also an improved method of which I have not yet had time to make any very full trial.⁷ It consists in attaching the preparation—either a cast of the canals, or, in the case of a bird, the dissected and cleaned bony canals—to one arm of a branched rod, and a lump of wax to the other. The rod is then fixed to the large apparatus already referred to. The canals are successively made horizontal, and a small plate of glass is fixed horizontally in each case—parallel, therefore, to each canal—to the lump of wax. We can also attach a glass plate parallel to the mesial plane. We can thus have, on a comparatively small piece of wax, glass plates parallel to all the planes the relations of which to one another are to be measured. The lump of wax is then removed from the rod, and the angles between the planes of the glass plates are measured by means of an ordinary reflexion goniometer. The general results are: 1. The canals do not lie rigorously

in planes, but sufficiently nearly so to give closely accordant results. 2. The external canals are very nearly at right angles to the mesial plane, and, therefore, from the bilateral symmetry the two external canals are very nearly in one plane. 3. The superior and posterior canals of the same side make approximately equal angles with the mesial plane. In all cases which I have examined the angle between the posterior canal and the mesial plane is somewhat larger than that between the superior canal and the mesial plane. From the bilateral symmetry, therefore, the superior canal of the one side is nearly, but not quite, parallel to the posterior canal of the other side. In the discussion of the way in which the system of canals may be supposed to act I shall for convenience assume that these canals are parallel, as the deviation from exact parallelism only complicates, but does not at all vitiate, the argument. 4. In man, and in a large number of other animals, the three canals are very nearly at right angles to one another; but in a good many of the animals I have looked at the superior and posterior canals make with one another an angle considerably greater than a right angle. Looking at the six canals as forming one system, we see that we have three axes and that at right angles to each axis there are two canals, one internal, the other external—these two canals having their ampullae at opposite ends, so that if rotation takes place about the axis, the ampulla in the one case precedes the canal and in the other follows it. The vertical axis, as we may call that at right angles to the two external (or horizontal) canals, is pretty nearly vertical in most animals in the usual position of the head when the animal looks to the horizon; in man it is not exactly so—we must bow our head a little to make this axis vertical. If we suppose that we are looking north, the other two axes are N.E. and S.W. and N.W. and S.E. respectively. In man they pass from the eye of one side to the mastoid process of the other side, and are nearly at right angles to one another. As already stated, in some animals they are inclined and are nearer the right and left than the fore and aft line in the head.

In order to see how such a system can work as a hydrodynamical instrument let us first consider one canal. Here we have two watery liquids: the endolymph within the membranous canal, its ampulla and the utricle; and the perilymph between these and the bony case. How will these behave when rotation takes place about an axis normal to the plane of the canal? The inertia of the liquids will tend to produce a flow through the canal in the sense opposite to that of the rotation. Let the rotation take place so that the ampulla precedes the canal. Here the endolymph will tend to flow from the utricle into the ampulla, and thence through the canal to the utricle again. But, as Professor Mach has pointed out, the canal has too small a bore to allow of any sensible flow through it, so that the effect of this rotation will be to increase the pressure within the membranous ampulla. But—and this is a point to which, as far as I know, no one has hitherto called attention—as there will also be a tendency of the perilymph to circulate, so in its circle there is also a narrow place—namely, at the ampulla; for as the membranous ampulla nearly fills its bony case there is not much room there for the perilymph to pass from the vestibule into the space surrounding the membranous canal. There will, therefore, be a diminution of pressure of perilymph at the ampullary end of the canal, so that the ampullary walls will be stretched by the increase of pressure within and the diminution of pressure without. Of course, when the rotation is kept up uniformly for some time the pressure inside and outside of the membranous ampulla is soon equalised and the stretching or relaxation ceases. With the cessation of the stretching the sensation must also cease. If now the rotation is stopped, the perilymph and endolymph will tend to move on, and pressure will be produced inside the membranous ampulla of that canal which during the rotation moved with the ampulla following the canal. All this will, of course, be reversed when the rotation takes place with the ampulla following the canal; the pressure inside the membranous ampulla will be diminished, that without will be increased, and the walls will become flaccid. In each membranous ampulla there is a so-called "crista acustica" where nerves terminate in hair cells, and it is not difficult to suppose that stretching of the ampullary walls will irritate these nerve endings while a relaxation of the ampullary walls will produce no irritation. If this be so, then we have three axes, each with an organ sensitive to rotation about it in either sense and capable of discriminating between the two; and as every rotation of the head can

⁶ In all animals the non-ampullary ends of the superior and the posterior canal have a common opening into the vestibule.

⁷ The method illustrated by the human skull shown is fully described, with woodcuts from photographs, in Professor McKendrick's Text-book of Physiology, vol. II., pp. 697-699, and therefore need not be reprinted here. The other method will, I hope, give more accurate measurements.

be resolved into component rotations about these three axes we have the means of perceiving the axis and what we may call the "intensity" of the rotation, or perhaps more correctly the "rotational acceleration."

This hydro-kinetic theory of the function of the semicircular canals was propounded at very nearly the same time by Professor Mach of Prague, Dr. Breuer of Vienna, and myself. I give the names in the order of publication. The views expressed by us were not exactly the same, and the statement of the theory I have just given is any one of them with additions and corrections from the other two. I have not thought it necessary to refer to the hydrostatic theory of Goltz, or, indeed, to give any details of the literature of the subject. A very full and accurate digest of almost everything that has been written on the functions of the several parts of the labyrinth of the ear has been published in Russian by Dr. Stanislaus von Stein and translated into German by Dr. C. von Krzywicki. The theory as I have just described it might perhaps have been developed, as I have here developed it, from a consideration of the structure and position of the canals; but, as a matter of fact, this was not the historical order. It was the experiments of M. Flourens that first directed attention to these organs as having something to do with the equilibrium of the body. In reference to these experiments and those made since by many able physiologists and skilled operators, I shall only say that the results seem to me to be consistent with the hydro-kinetic theory. Certain of M. de Cyon's experiments, in which he increased the pressure in the canals by inserting in them small tangle plugs without producing any nystagmus or rotatory movements of the head, appear to contradict the theory; but increase of pressure in the bony canal can have no tendency to stretch the walls of the membranous ampulla, and therefore could not be expected—if the theory as I have stated it is correct—to produce a sensation of rotation; what is required is that the pressure inside the membranous ampulla should be greater than that outside of it. The symptoms observed in cases of disease of that internal ear also appear to support this hydro-kinetic theory. But the position of the canals in close anatomical relation to the organ of hearing had impressed on the minds of physiologists so obstinate an opinion that they must be connected with the perception of sound in some way or other that even now many will not admit that they are the peripheral organs of a sense of rotation.

A favourite theory was (and there are still some who hold it) that the semicircular canals give us information as to the direction in which sound comes to us. There are two ways in which we can show that this view is erroneous: 1. By considering the physical conditions. The shortest sound wave which we can hear is so long compared with the dimension of the ear that every part of the ear must be at any instant in the same phase of the wave. We must assume that, as far as the effect of such sound waves is concerned, the liquid contents of the internal ear are incompressible. It is as absurd to speak of sound waves travelling round one of the canals as to say that it is high water at one end of a dock and low water at the other at the same time. 2. By experiments on the way in which we really do perceive the direction of sound. I shall describe two such experiments: (a) Let the observer close his eyes—for security it is best to bandage them,—seat himself in a chair, and keep his head steady. Now let an assistant produce a sharp, short sound. In showing this experiment to the Biological Section of the British Association at its meeting at Belfast in 1874 I used three coins in the way I show you now. The observer can tell with really astonishing accuracy whether the sound comes from the right or from the left, because he hears it louder in the nearer ear, but he is without any knowledge at all as to whether it comes from above or below, from the front or the back. He forms a judgment, indeed, on this point, but his judgment is usually wrong, often very ludicrously so. The experiment is most striking when the click is produced in the mesial plane of his head, in which case he has not the binaural effect to help him. In this connexion I may say that I know no experiment which illustrates so well the marvellous delicacy of our sense of relative loudness of sound, a very small deviation from the mesial plane being quite certainly recognised. We have, then, with one ear no means of ascertaining the direction of sound if we keep the head fixed. How, then, do we ascertain the direction of sound, for we all know that we can do so with very considerable accuracy? This leads me to the second experiment. (b) Let the observer,

still with eyes closed and bandaged, stand up and be at liberty to move his head. Let the assistant produce the clicking sound—not once only, but again and again at short intervals, always in the same place. The observer turns round until he faces the source of the sound. He knows that he is facing it when he hears it equally loud in both ears, and hears it to the right when he turns a little to the left, and to the left when he turns a little to the right—that is the criterion of whether the source is behind or before him. Having now got the azimuth, he seeks the altitude. Moving his head about a right and left axis he seeks the position in which he hears the sound best. He is now looking towards the source of the sound.

The concha of the external ear acts as a screen, and it is remarkable how much difference there is in the quality as well as in the loudness of most sounds with different altitudes. Stand in front of a pipe from which water is rushing and move the head round a right and left axis—bow, in fact, to the pipe—and a striking difference in the quality and loudness of the sound will be observed in the different positions of the head. It may be said that birds have no concha, and yet they perceive as well as we do the direction of sound. But there is a method by which, without any use of the action of the concha and by purely binaural observations, we can ascertain the direction of sound. By one observation, as already described, we can find a plane containing the line along which the sound reaches us. That plane is at right angles to the line joining our two ears. By moving the head we can shift the line joining our two ears, and then by another similar observation obtain the plane at right angles to the new position of the line joining the two ears and containing the direction of sound. The direction of sound is the intersection of these two planes. I do not think we use this method (although I have tried it and found it work), but we often see birds when listening incline their heads in such a way as to suggest that they use it.

There is another objection which is often brought against the theory I have been explaining. It is said, "Is it conceivable that there should be a special sense, common to man and all vertebrate animals, which has remained unknown till about twenty-two years ago? This is a sense invented, not discovered, by scientific men, otherwise we should all have known about its existence at least." This objection is not one to be met by contempt, it has a real basis; and as I believe this sense to be a real one I feel bound to look for the cause of the incredulity. A special sense is popularly understood to be a gateway of knowledge. Information as to external things comes to us in various ways, and each of these ways has from ancient time been recognised and named as a special sense; but this is not exactly the physiological way of looking at things. I may illustrate the difference by a sort of analogy. In a large business establishment the manager sits in his room upstairs. He has various ways of getting information. The post brings him letters; he looks at them—some he carefully considers and answers, others he looks at and puts into the waste-paper basket, but he has looked at them all. So we see things. Many of the things we consider, take note of; others we pay no attention to, do not an hour later remember anything about them. But there are many messages which come to the business establishment and never reach the manager's room at all; they are attended to by clerks in the office. They are not futile, they are real messages and serve their purpose, a purpose essential to the carrying on of the business. If these were not attended to downstairs the manager would very soon hear of it. So with us. There are what we may call sensory impressions which do not make their way to the conscious *ego*, but are all the same properly attended to by what in us corresponds to the clerks. If our clerks neglect their work the conscious *ego* very soon becomes aware that there is something wrong. In the case of the sense of rotation ordinarily we pay no attention to its messages; the clerks at the sensory centres of the ampullary nerves and at the motor centres of the muscles of the eyeballs do all that is necessary. We perceive the result of their work in our visual sense of the fixedness of the outside world, and we do not trouble ourselves as to how the office work has been done; but—and here I come to a matter I referred to early in this lecture—the office work is sometimes not well done, and the visual sense of the fixedness of the outside world is lost. If this is due to disease, we send for a medical man and ask him to find out what is wrong in the office and, if he can, put it right. But there is a far more common cause of the loss of the visual sense of the

fixedness of the outside world—one which it has not been left for two or three scientific men to discover in the last quarter of the nineteenth century. The most characteristic effect of alcohol is to make all reflex actions sluggish. Under the influence of a moderate dose of alcohol, what I have called the "office work" goes on all right, but not quite so fast as with no alcohol. The message arrives and the answer is sent, but not quite so promptly. The conscious *ego* may not note anything wrong, but a quantity of alcohol (far short of a dangerously poisonous dose) may delay the transmission of the signal to the muscles of the eyeball so much as to affect quite perceptibly the compensation of the movements of the head. A perfectly sober man sees the world wag a little when he wags his head very vigorously—a point of light is perceptibly drawn out into a horizontal line of light; the office work fails a little under such extreme pressure. But a little alcohol makes the office work fall more readily, and as the dose is increased it fails altogether and the sense of the fixedness of the world is wholly lost. Even in such an extreme case of intoxication, short of paralysis, the drunken man may see the world steady if only he can keep himself steady. I daresay we have all seen very drunken men walking quite straight, but with a preternatural fixedness of the head. If anything makes them move their head they totter and reel. They move the head a little; that happens to them in consequence of a small and slow rotation of the head which happens to us when we wag our head violently, and they reel and stagger just as we should reel and stagger if we tried to walk, violently wagging our heads all the time.

Just as there are blind men and deaf men, so there are men who have lost, or never had, the sense of rotation. Such persons are almost always deaf-mutes. The close anatomical relation of the organ of hearing and the organ of the sense of rotation has this effect, that imperfect development or pathological injury of the one is usually associated with similar defect in the other; and experiments on deaf-mutes have shown that a large proportion of them are defective in the sense of rotation. This is shown by the absence of the normal jerking of the eyeballs when they are rotated and by a perceptible insecurity in their gait. They do not reel as drunken men do, just as blind men find their way about much better than we could do if our eyes were bandaged; they have learned to get on fairly well with the help of experience and their other senses.

I am not sure whether, in this account of the sense of rotation, of its organ, and of the use of it, I have carried all my hearers with me and convinced you of the real existence and real practical use of this sense. I hope, however, I have made it clear that the subject is worthy of attention and that we have here matter for the careful consideration of physicists, physiologists, and psychologists.

ADENOID GROWTHS IN CHILDREN.

By EUSTACE SMITH, M.D., F.R.C.P. LOND.,

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THE subject of adenoid growths in children is one which at the present time is exciting a great deal of attention. The subject has been often discussed, but always from the point of view of the throat specialist. It may, therefore, be not without interest to regard it from the standpoint of the general physician, and to consider the large number of derangements which may be set up by the presence in the naso-pharynx of these vegetations. The frequency with which adenoid growths are met with in children three and four years old and upwards is a matter of everyday observation, but it seems not to be so well known that they are equally common in infancy, and, indeed, that even at birth the mucous membrane in the post-nasal region may be thickened and granular from hypertrophy of adenoid tissue. At this early age the patient is rarely seen by a throat expert, and unless the child's pharynx be explored with the finger the growths will often be overlooked by the general physician, for it is perhaps exceptional for them to give rise to the ordinary symptoms of nasal obstruction. Often, even when present in quantity, there is no snoring, and the child may sleep with his lips closed, for, as Dr. Greville MacDonald has pointed out, during sleep the instinct of nasal breathing

almost always asserts itself, and even if the mouth be open at this time the tongue is drawn backwards against the palate so as to shut off this channel to the passage of air. In an infant the growths should always be suspected if the child's nose be broad at the bridge and faintly dimpled on each side at the upper border of the inferior lateral cartilages, and especially if when the chest is uncovered any retraction be noticed in the inferior region of the thorax. In childhood symmetrical retraction of the infra-mammary regions and depression of the ensiform appendix owe their origin with few exceptions to naso-pharyngeal obstruction. In marked cases, where little air enters by the nose, the nares are small and the alæ flattened, probably from disuse of the organ as an air passage. In such children other symptoms may be met with: the hard palate is exceptionally high, the tonsils are overgrown, and examination of the auditory meatus shows a deep depression of the tympanic membrane; but the symptoms first enumerated—viz., the altered shape of the nose and the retraction of the inferior regions of the thorax—are by themselves amply sufficient for diagnosis; and if any uncertainty be felt a touch with the finger will put an end to it at once. In infants who suffer from this form of nasal obstruction one of the commonest consequences is snuffling in the nose with much mucous secretion. Non-syphilitic infants who snuffle are almost always the subjects of adenoid granulations. They seem never to be free from coryza, and often sneeze violently and discharge quantities of thick mucus from the nose. With this they may be hoarse, and from the persistence of these symptoms are often suspected wrongly of inheriting a venereal taint. I have fallen into this error myself, but am now convinced that persistent snuffling in infants is no sign of syphilis in the absence of other symptoms, and even that the addition of a large spleen is not sufficient warrant for such a conclusion. It will be noticed that the appearance of the nostrils is different from that seen in a syphilitic infant. No doubt the bridge of the nose is broad, but the nares are not cracked or dry or caked with crusts; the edges are moist, and without the little linear ulcers which are so common in the inherited disease. The obstruction, too, at this age is not nearly complete, and, unlike the tainted infant, the child takes the breast with comparative ease.

A symptom sometimes present in new-born infants is a loud crowing or croaking sound which accompanies the breathing. Various names have been given to this phenomenon. It has been called "infantile respiratory spasm," "congenital stridor," &c.; but as it is not proved that spasm has any part in the mechanism of the sound a name which suggests such agency should be avoided. This congenital crowing is usually limited to inspiration, and is sometimes very loud, especially during sleep. It varies considerably in intensity at different times, and may sometimes cease temporarily, to return after a short interval. In one case which came under my notice the mother complained that often while sitting in the dining-room she could hear the noisy breathing of the child in the nursery on an upper floor of the house. This symptom, according to my later experience, is seldom unaccompanied by post-nasal obstruction. Formerly such cases used to puzzle me greatly, for, knowing nothing of adenoid growths, I did not examine for them; but since reading Dr. W. Robertson's paper¹ I have always done so, and have never failed to detect either actual vegetations or a thickened, granular state of the post-nasal mucous membrane. It is indispensable that an exploration should be made with the finger. Laryngoscopic examination is always a difficult process in young infants, and mere inspection of the larynx and its immediate neighbourhood gives little information even if successfully carried out. On the other hand, it is an easy matter to pass the finger upwards behind the soft palate, and if this be done granulations, when present, can hardly escape detection. It is only in exceptional cases, when collapse occurs in the lungs, that the stridor is associated with real dyspnoea. As a rule, in spite of the apparent labour of breathing, the child seems in no way depressed. His face is placid and shows no lividity of the lips and eyelids such as would result from imperfect aeration of the blood; nor is there hoarseness of the cry or cough, as in cases of papillomata of the larynx. The condition, however, is slow to pass away; indeed, as time goes on the croak, instead of diminishing, often grows more and more pronounced. Dr. W. Robertson attributes the stridor to bilateral paralysis of the posterior crico-arytenoid muscles

¹ Journal of Laryngology and Rhinology, October, 1891.

which expand the rima glottidis. He believes that the irritation set up by the adenoid overgrowth in the post-nasal region is transmitted to the medulla and there excites and exhausts the accessory nucleus so as to induce depraved innervation in the muscles referred to. The growing intensity of the symptoms, he thinks, can be explained by a secondary contraction of the adductors, which are no longer opposed by the paralysed muscles. However this may be, treatment should be directed to the pharynx, and if the unhealthy condition be remedied by scraping, followed by astringent and antiseptic applications, the breath sounds soon recover their normal quiet. Uncomplicated cases of this congenital crowing generally recover. The fatal cases are those in which collapse of lung has occurred. This accident is one which must always be kept in mind, for in a new-born infant it is very readily induced, and if at all extensive is most dangerous to the life of the patient.

The contraction of the chest wall in the infra-mammary region, which has already been referred to, is most commonly met with, in a child who is not the subject of rickets, after the period of actual infancy has passed. It is a consequence of collapse in the anterior part of the inferior pulmonary lobes, and if this collapse be extensive the lower part of the sternum becomes prominent from retraction of the cartilages of the ribs. But in addition to this visible shrinking of pulmonary tissue it is common to find in infants and young children who suffer from these vegetations signs of collapse at the upper parts of the lungs. There may be deficient resonance with weak, harsh breathing at the supra-spinous fossa of one side, reaching, perhaps, a short distance below the scapular spine; and this may be accompanied by a dusky tint of the lips, but without other sign of imperfect aeration of the blood. At this period of life, too, a high-pitched percussion note at the supra-spinous fossa on either side, without notable alteration of the breath sounds, is commonly due to a patch of pulmonary collapse, and is very suggestive of adenoid growths, especially if the child at the time be not troubled with cough. Often when the naso-pharynx is obstructed by a mass of this hypertrophied tissue very hollow breathing conducted from the pharynx is heard over the upper part of the chest on either side. If this be conjoined with altered percussion note from collapse of lung the combination may suggest serious disease; indeed, the mistake is common and excusable. The usual explanation of this imperfect expansion is that owing to the impediment to the passage of air through the nose, and the child's instinctive return to nasal breathing during sleep, air reaches the lungs in too small a quantity to supply all the pulmonary cells, so that some of them remain undilated. This explanation seems to me to be an inadequate one, for contraction of the chest wall must mean permanent collapse of portions of lung at the seat of retraction. But in a child with healthy lungs and normal power of expansion an intermittent reduction in the air-supply can hardly induce permanent pulmonary collapse, for the moment the want of air makes itself felt the deficiency can be made good by breathing through the mouth. Indeed, this is what actually happens. During sleep nasal breathing is carried on until discomfort is felt from imperfect aeration of the blood. The child then half wakes up, takes several deep breaths through the mouth, and immediately sleeps again. By this means all through the night any collapsed cells are being continually re-dilated; and in the daytime when respiration is almost entirely buccal the lungs will, of course, work normally. Permanent collapse of lung, when not directly induced by the blocking of a tube with a plug of mucus—and this is not now in question—must owe its origin to some agency which acts more continuously than the one referred to. This agency, it is not unreasonable to think, is nervous influence. We know that stimuli conveyed through the superior laryngeal nerve promote expiration, and that inspiration is inhibited by stimuli passing upwards through this nerve and the glossopharyngeal. Irritation continually applied to the periphery of these nerves must greatly restrict the admission of air and prevent complete dilatation of the lungs. If by this means air enters the lungs in insufficient quantity, the parts least likely to be expanded are those which lie in contact with the ribs in places where the chest wall is flexible and can yield easily to the pressure of the air outside. In infants otherwise healthy who are troubled with adenoids the recession in the infra-mammary regions and the supra-clavicular spaces may be noticed at each inspiration, and as the patients get older a permanent retraction of these parts becomes

established. But the evil effect of this incomplete expansion of lung is not limited to a change in the shape of the chest wall. Without a liberal supply of fresh air the lungs must perform their functions imperfectly; and any check to the free and active use of an organ tends to hinder its healthy development. If lungs work lazily they are apt to remain ill-developed and undersized, and small lungs are always vulnerable lungs. If, then, in such a case there be any tuberculous predisposition, the liability to the development of pulmonary phthisis is sensibly increased. The mere presence of the adenoid vegetations themselves, quite apart from their influence upon other organs, must increase this liability. A mass of lymphoid tissue of low vitality is greatly wanting in phagocytic power, and the weakened cells may not only fail to protect the system against the invasion of pathogenic micro-organisms, but, as Dr. Sims Woodhead has pointed out, may even serve as a means of carrying the bacilli from the surface to the interior of the body. The glands in connexion with the pharynx are often thus affected. In almost all cases of adenoid vegetations the cervical glands can be felt with unusual ease on each side of the neck, and it is not uncommon to find them enlarged and suppurating. In a great number—perhaps the majority—of cases of suppurating cervical glands, or of cases in which scars pointing to old abscesses are present in the neck, the cause of the secondary trouble has been adenoid growths in the naso-pharynx.

But of all the many consequences of post-nasal vegetations the influence they exert upon the nervous system is perhaps the most striking and important. There can be no question that in a neurotic child the worry set up by adenoid growths and the post-nasal catarrh they do so much to maintain is often great. One notable example of this nervous distress has already been referred to in the crowing breathing sometimes noticed in new-born infants; and, as has just been mentioned, insufficient expansion of lung may be ascribed with good reason to the same influence; but in neurotic children many other forms of nerve irritation may be traced to this source. Reflex spasm of the larynx is common with adenoid growths. Laryngismus stridulus I believe to be often dependent upon them, especially in those cases where the spasm occurs in children three or four years of age. In one such case, a child aged four years, the seizures, which had been frequent, ceased immediately the growths had been removed. In stridulous laryngitis, too, the nervous spasm is often, I think, due to this cause, and I have no doubt that the vegetations intensify the spasm of whooping-cough. Certainly children in whom the cough long retains its convulsive character, or returns after an interval of health, are almost invariably sufferers from adenoids.

The above are instances of local spasm, but the nervous distress may be distributed more widely. Attacks of general convulsions, such as come on sometimes in rickety children without apparent reason, I strongly suspect to be due to the presence of adenoids. But it is not only in young and rickety subjects that these cases are met with; growing children seven or eight years old and upwards may suffer in the same way. In these cases reflex agency may not be suspected on account of the comparatively advanced age of the patient, and the seizures may be looked upon as epileptic. But reflex convulsions are not limited to any particular age; they depend upon the sensitiveness of the nervous system, the readiness with which it responds to irritation, and the strength of the stimulus, so that convulsive seizures of a harmless nature may be seen in neurotic girls eleven or twelve years of age. In these cases the actual exciting cause is generally a post-nasal catarrh, for it is usually during a mild feverish attack, consequent upon exposure to chill, that the nervous symptoms have occurred. Other manifestations of nervous worry may also be met with. Attacks of asthma are sometimes put a stop to by removal of growths, and Dr. Greville MacDonald informs me that in at least one case he has known obstinate nocturnal incontinence of urine to cease quickly after the operation.

In children who suffer from these vegetations the hearing is often very sensibly impaired. In some cases, no doubt, this is the consequence of post-nasal catarrh and blocking of the Eustachian tube, but it is often the result of otitis, and Meyer has reported that out of 102 cases he found no less than seventy-two to be suffering from some trouble connected with the ear. It is partly on account of their deafness that so many of these children are

thought to be stupid, and there is no doubt that their faces often wear a vacant expression the silliness of which is not diminished by the mouth being held half open for purposes of respiration. But a really stupid child will often grow much more intelligent when the growths have been removed. These patients generally complain of headache, giddiness, and noises in the head. The tinnitus and perhaps the vertigo are probably dependent upon the ear mischief, but the headache, I think, is often a consequence of general weakness. It is an important fact that the majority of children who suffer from adenoids show very evident signs of defective nutrition. Sometimes they are ill-grown, and almost always their circulations are languid and their feet cold. Moreover, they are pale and thin or flabby, and although not, perhaps, physically indolent are easily tired. The common explanation of this unsatisfactory state is that, on account of the obstruction to the nose and the persistence of the patient in nasal breathing in spite of all difficulties, the lungs are ill-provided with air, so that the blood is insufficiently oxygenised and becomes loaded with carbonic acid and other impurities. But this explanation is far from conclusive. I have often been struck by the fact—of the truth of which I am convinced—that the degree of anæmia and malnutrition, and, indeed, the amount of general physical disturbance excited by the vegetations, is no just measure of the extent to which the nasal passages are obstructed; in other words, that the children whose nasopharynx is most completely blocked are by no means those whose nutritive deficiencies and nervous symptoms are the most pronounced. I believe their weakened state to be a natural consequence of the curious tendency to take cold shown by all the subjects of adenoids. They are like hot-house plants in their extreme susceptibility to trifling changes of temperature. A slight draught of air; a little too-prolonged exposure during the morning's bath; leaving the house on a raw day with cold feet, even although carefully clothed—all these are means by which chill may be incurred; and the consequent catarrh not only increases the worry in the post-nasal region and pharynx, but also invariably affects the digestive organs. These children may be said to live in a state of gastric derangement. Their stomachs are habitually out of order, and however much they eat—and often the appetite is little impaired—their food seems to do them curiously little good. The natural consequences of this chronic dyspepsia follow: the child gets thinner and paler, and suffers not only from insufficient nourishment, but also from all the discomforts and evils arising from the passage along the bowels of undigested and fermenting food. There are few children with adenoid growths who do not give evidence of some of the ill consequences which have been described. A certain amount of collapse of lung, with consequent retraction of the chest wall, may be said to be always present, and in most cases the nutrition of the child is unsatisfactory. But it is the neurotic children who suffer the most. They may not, indeed, give evidence of direct nervous irritation and spasm, but they are almost always anæmic and thin, and habitual sufferers from gastric derangement. In such children early removal of the growths is, of course, indispensable to improvement, and if nervous symptoms be present an operation is all the more urgently called for. So, also, in children of phthisical tendencies surgical measures should not be delayed, on account of the influence of the vegetations in checking nutrition and hindering the proper working of the lungs. In other cases, if the general health seems to be quite unaffected an immediate operation is not needed; but wherever adenoids are known to exist the child should, if possible, be kept under observation, so that they may be removed at any time when they seem to be doing harm. The danger of deafness alone is one which it is of the utmost importance to guard against.

Queen Anne-street, W.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual general meeting and congress of this society will take place at 20, Hanover-square, W., on Thursday, May 30th. The following arrangements have been made:—4 P.M., address by the President, Dr. Pye-Smith, F.R.S.; 4.30 P.M., annual general meeting, election of officers &c.; 5 P.M., paper by Dr. H. Radcliffe Crocker on the Internal Therapeutics of Psoriasis and some other Diseases of the Skin. An exhibition of living patients, drawings, microscopic specimens, &c. will take place afterwards.

THE DIAGNOSIS OF RETRO-PERITONEAL SARCOMA, WITH CASES.¹

By C. B. LOCKWOOD, F.R.C.S. ENG.,

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ANYONE who has performed many laparotomies must have met with retro-peritoneal tumours. I have twice found this embarrassing condition. In neither case was it diagnosed before the operation. Had a diagnosis been made there is no doubt but that a useless operation would have been avoided, and in one instance I should have been spared a fatality, which was a matter of much regret. I am, however, convinced that a diagnosis ought to be possible in this class of cases, and it is with special reference to this point that I propose to narrate my own experience. At the same time, others may be warned against a pitfall into which I fell and escape a similar disaster. The tumour to which I am about to refer—namely, retro-peritoneal sarcoma—is worthy of more attention than it has received. It is not mentioned in the various indices, or in the larger works upon abdominal and general surgery. So far as can be learnt no specimen of it has been shown at the Obstetrical or Pathological Societies. Hitherto the Medical Society of London has had no opportunity of discussing its peculiarities. By the expression "retro-peritoneal sarcoma" is implied a sarcomatous tumour growing behind the peritoneum and into its folds, and not connected with any of the great retro-peritoneal organs and unaccompanied with ascites. This definition excludes, therefore, sarcomata which grow from the kidney. They are retro-peritoneal, it is true, but owing to their origin they are always called sarcomata of the kidney. Similarly, one which grew from the adrenal body would be retro-peritoneal, but would be called a sarcoma of the adrenal body, and so forth. In the class of cases of which I am speaking such precision cannot be attained, because in both of the cases to which I am about to allude, and in others of the same kind, the origin of the growth was unknown. The narration of the first case will give an idea of some of the clinical and anatomical features of these retro-peritoneal growths.

CASE 1.—The patient was a robust, unmarried woman aged forty-seven years. She said she had been short of breath for nearly a year, and for three months had had a feeling of weight in the hypogastrium. Her abdomen was always big, but of late it had seemed unusually distended. Her left leg had recently become swollen. Beyond this there was nothing in her history to point to the nature of her disease. Examination showed that the abdomen was so tightly distended that the skin was shiny and the umbilicus almost obliterated. A hard tumour could be felt filling nearly the whole abdomen, but projecting most beneath the left linea semilunaris. It seemed to rise up out of the pelvis and to extend more into the left flank and upwards into the left hypochondrium than into the right side; but the rounded edge of the growth could be felt reaching beyond the umbilicus almost into the right hypochondrium and nearly into the right flank. It was said that the tumour was dull everywhere and that the area of dulness did not vary, but I doubt whether this observation was quite correct for reasons which will be given presently. There was no ascites, and no thrill could be felt or fluctuation, and nothing was heard with the stethoscope. My colleague, Dr. Remfry, said the tumour had no connexion with the uterus, and, although the signs were anomalous, thought that it might be a tumour of the left ovary. For myself, I thought that the tumour was solid and probably connected with the ovary. I opened the abdomen by the usual incision and came upon a tumour which looked and felt like a thick-walled cyst. The abdomen was so tight that the hand could not be properly introduced; but, so far as could be felt, a thick-walled cyst, with a good deal of solid growth, seemed to be in question. A trocar was thrust into the tumour, but nothing came out. I then incised what seemed to be the wall of a cyst, and scooped out a quantity of semi-solid contents. Soon some large vessels were met with, but were easily secured. By this time there was room to explore the abdomen properly, and then the left colon was found upon the surface of the tumour, lying almost beneath the left linea semilunaris. It

¹ A paper read before the Medical Society of London on May 13th, 1895.

It is probable that its attachments were a good deal injured. The suspicions which this aroused were confirmed by the discovery that the mesentery and transverse mesocolon were incorporated with the upper part of the tumour, and that the pelvic organs were free. Moreover, at the sides of the abdomen the hand could not be passed behind any part of the growth. These points were made out with much difficulty, and the growth was clearly beyond the possibility of removal. The abdomen was therefore closed in such a way as to shut off the wound in the growth from the peritoneal cavity. A drainage-tube was inserted and an antiseptic dressing applied. For the first two days the patient seemed to be progressing well; but her temperature rose, sickness and other signs of obstruction set in, and she died upon the fourth day. An examination was made, which showed that the retro-peritoneal tissue was occupied by an enormous new growth. This reached from the brim of the pelvis to the diaphragm, and had thrust its way into the root of the mesentery, into the transverse mesocolon, and towards the hilum of the spleen. It enveloped but did not infiltrate the pancreas, kidneys, and supra-renal bodies. The vena cava inferior was incorporated with its posterior surface, and the mesenteric vessels ran through its substance. The mesenteric lymphatic glands were not seen, but might have been involved in the tumour. Towards the sides of the abdomen it had reached beneath the right and left colons. From this examination it was clear that the tumour was beyond removal. The organ or tissue whence it grew was, however, left obscure, but I thought it probably originated in the retro-peritoneal tissue. Both Dr. Galloway, who made the post-mortem examination, and myself were of opinion that this growth was a myxo-sarcoma. I regret that the report of the histological examination has been mislaid, but I have a distinct remembrance that no epithelial structures were found in the sections. The physical characters of the growth were those of a sarcoma. It was yellowish-grey in colour, with a red mottling in places. It varied from a soft solid to a gelatinous consistence. It was not very vascular except where it had involved the great vessels. It did not possess any capsule, but in places its lobes had pushed the tissues before them without infiltration having occurred. No enlarged lymphatic glands could be discovered. There was no peritonitis or suppuration, but the broken-down interior of the tumour had probably become infected. Before commenting upon this case I will narrate another of the same kind which was met with last year.

CASE 2.—The patient was fifty-three years of age and had noticed a fulness and weight in her abdomen for two years. She had been married for twenty-eight years, but nothing in her history pointed to the nature of the abdominal swelling. This was considerable, for her abdomen was forty-eight inches in circumference at the umbilicus. The swelling was caused by a tumour which occupied chiefly the right side of the abdomen. It was a firm and rounded mass, dull on percussion, devoid of bruit, and projecting most beneath the right linea semilunaris. Both flanks and the right side of the abdomen were resonant, and there was no ascites. There was a zone of resonance betwixt the tumour and the liver, and its upper margin could be felt about midway betwixt the umbilicus and the right costal cartilages. Below it seemed to dip into the pelvis. My colleague, Dr. Champneys, found no obvious connexion between the tumour and any pelvic organ. He was inclined to think that it belonged to the upper part of the abdomen. He agreed that an exploratory operation was desirable. On the whole I myself thought an unusual ovarian tumour was in question. I did not understand the significance of an observation which was made a fortnight after the patient's admission. The note said on Sept. 17th that "the lump in the abdomen seems most defined both towards the mid-line and down into the flank"; and four days later the note said: "There is decided resonance now in front of the lump, extending six inches to the right of the middle line and eight inches below the sternum." When I opened the abdomen a few days afterwards such a condition was found that it is only to be wondered that the area of resonance was not more variable and irregular. There was a large solid growth behind the peritoneum, growing into the root of the mesentery and pushing the small intestines in front of it. In this process the mesentery had been partially obliterated, so that in places the intestines were distributed over the surface of the tumour, lying in grooves in its substance. The growth had lifted up the peritoneum of the iliac fossa, together with the cæcum. The tumour was probably lobulated in places; it was of the colour of fat, but rather firmer

to the touch. As the patient's condition was precarious nothing more was ascertained. The wound, which was extensive, was closed with buried silk sutures in the linea alba, and fishing gut sutures in the skin. The patient made a fair recovery, but her convalescence was retarded by an obstruction in the veins of the right leg. The iliac veins had probably been pressed upon by the tumour. I have lately endeavoured to communicate with this patient, but without success.

Remarks.—There can be no doubt whatever that had these cases been diagnosed an operation would not have been attempted. In the first the exploration forfeited the patient's life, and in the second it caused a grave and serious illness. When such a tumour as this cannot be removed at the operation the abdomen has to be closed in such a state of distension that the action of the heart and the respiration may be gravely embarrassed. In addition, every unnecessary and unsuccessful operation brings discredit upon surgery. Clearly it is of the greatest importance that we should learn to diagnose these retro-peritoneal sarcomata. In the early stages it is probable that this would not be a difficult task, especially if the abdomen was examined with the patient under the influence of an anæsthetic. The tumour would, I assume, be found to occupy some part of the centre of the abdomen near the root of the mesentery and to possess no obvious connexion with the kidneys or pelvic organs. But apparently the onset of retro-peritoneal sarcoma is so insidious that the patient is not seen during the early stages. In the cases above described the only symptoms at the beginning were breathlessness and a feeling of weight in the hypogastrium. The abdominal distension seems to have occurred so gradually that it attracted little notice. Therefore, we must reckon upon having to deal with these retro-peritoneal growths at a time when they have attained formidable dimensions and when the abdomen has become tightly distended. The difficulty of diagnosing abdominal swellings is notorious, but a solid growth which could not be attributed to any of the great organs ought, at least, to arouse suspicion. In both of the cases which I have narrated the uterus was at once excluded. The liver, too, was separated from the growth in each of them by a zone of resonance. The absence of urinary symptoms seemed to exclude the kidneys, although in one case the dulness extended into the loin. Nor could any reason be discovered for attributing the tumour to the spleen, pancreas, or supra-renal bodies. Its connexion with the ovaries was, however, in each case more difficult to decide upon and in each was strongly suspected. But not only did the tumour project into the true pelvis less than an ovarian tumour generally does, but its other characters were anomalous. Had I only suspected a retro-peritoneal growth in the first case the incision would have been prolonged and the nature of the growth revealed without putting the patient's life to an unwarrantable risk. Now, I cannot help thinking that we shall find the clue to the diagnosis of these retro-peritoneal growths in a correct appreciation of their anatomy. Let me recall what was found in the first case. In it the growth had spread behind the peritoneum and lifted up the intestines, so that the left colon ran down its front surface behind the left linea semilunaris. At the operation this part of the bowel was empty, but there must have been times when it was full of gas and capable of discovery by percussion. This information might not be obtained at one examination, but in a dubious case, such as this, no one would hesitate to defer an operation until several examinations had been made. In the second case this peculiar feature in the resonance of the tumour was actually observed, although its significance was not understood. The clinical notes said that after admission the tumour was dull on percussion; a fortnight later they said that there was a decided resonance in front of the lump, where none had been before. At the operation the appearance of this area of resonance in the front of the tumour was fully explained. The retro-peritoneal growth had extended into the mesentery, so that the small intestines were distributed over the surface of the tumour. Without question the variation in the areas of resonance was caused by one of these becoming distended. Doubtless retro-peritoneal sarcomata are rare, but others will be met with. It will be interesting to learn whether those who find them will be able to confirm my supposition that they will possess irregular areas of dulness and resonance, and, moreover, that their areas of resonance will vary from time to time.

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TWO CASES OF INTESTINAL OBSTRUCTION.

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THE truth of Jacobsen's statement that "the advances in operative surgery have outstripped those of diagnosis in intestinal obstruction" is perhaps as strikingly exemplified in the present day as it was five years ago. To the uninitiated this may savour somewhat of a reproach upon our professional progress. It is only when one is brought face to face with practical experiences that one realises fully the formidable obstacles in the way of accurate diagnosis. Of this I am quite convinced, that there is no task in medicine or surgery where the despair of utter impotence is more often felt than in unravelling the mysteries of a case of obstruction. Turning to operative measures we find ourselves beset on all sides with difficulties. It has been truly stated¹ that "abdominal section in the treatment of intestinal obstruction, both acute and chronic, is one of the most formidable operations in surgery." According to some of the latest statistics (Curtis) a mortality of 68.9 per cent. is given in published operations since 1873 in acute obstructions. For all operations the rate of mortality would, no doubt, be much higher. Without operation Greig Smith² says that "certainly 95 per cent. die"; "the indication is clear enough—as clear as the indication to tie a bleeding carotid—operation." Treves states: "With regard to the curative treatment [of acute obstruction] the only measure is laparotomy." Immediate operation is the teaching of the progressive school. On the other hand, we have the conservative school, with its small following, crying with equal vigour for delay in operation. Hutchinson, the leader of the conservative school, perhaps the keenest observer of the present day, maintains that "these forms of strangulation are often in early stages effectually relieved without operation; that, in fact, cases of recovery without operation after very acute symptoms are not uncommon." Hutchinson "fully recognises the propriety of exploratory laparotomy in cases in which the symptoms have persisted after one or more persevering attempts at taxis under anaesthetics." Upon one point there can be no question, I think—viz., that laparotomy is the indication in all cases after the stage of established peritonitis. Two or three attempts at taxis and manipulation carried out in a "bona-fide" and energetic manner for half an hour or three-quarters upon inflamed intestines seems to me both irrational and unscientific. Unfortunately the diagnosis of the stage of established peritonitis frequently presents insuperable difficulties. Not long since, in a case of ovariectomy under my care, death, before the post-mortem examination was made, was attributed to septic peritonitis of adynamic type. Not a trace, however, of peritonitis was discovered, the patient having died from cancer of the gall-bladder. Taxis and manipulation in the early stages of obstruction may in Hutchinson's hands often relieve strangulation, but we have no evidence that they produce better results than laparotomy in the same stage. In certain cases where the obstruction is due to the presence of a foreign body this method may be commended, but on the whole it seems to me to be a blind, unscientific method in which the patient is exposed to the veriest chance operations. By the method of laparotomy, on the other hand, we endeavour by an intelligent co-operation of brain and senses (1) to discover the lesion, and (2) to remedy it. When laparotomy fails it is generally due to one of the following causes: (1) delayed interference; (2) a pathological condition irremediable from the first; and (3) inability to discover the lesion, which, by the way, is by no means an uncommon occurrence. The two following cases will serve to illustrate some of the points to which I have referred. I am indebted to Dr. A. W. Sheen, our house surgeon, for help in the preparation of the notes and the general management of the cases.

CASE 1. *Acute obstruction*.—A man aged sixty-five years was admitted into the infirmary on Jan. 15th, 1895. He had

been quite well till 4 A.M. on the 12th. He was suddenly attacked with pains in the bowels. The bowels were last open on the morning of the 12th, and during the morning he was sick. On Jan. 14th the vomited matter commenced to have a faecal odour. He had had hiccough all night for the two nights before admission and had kept nothing on his stomach. A medical man had been seeing him and had given him pills, medicine, and rectal enemas. The injections were returned at once. The patient said that he had had a rupture on the right side since he was a child. This had not troubled him for years, but he had suffered vague pains in the bowels off and on for twelve months. The rupture was put back by his medical man on Jan. 12th. The patient was a thin, ill-nourished, old man, complaining of pain and tenderness at the top of the right inguinal canal. The finger met with no obstruction in the canal. The abdomen was somewhat distended. There was no dullness anywhere. There were no visible coils of intestine. The vomited matter was stercoraceous. The pulse was fine and the tongue moist; the pupils were contracted, and the patient was very dull, being fully under the influence of opium. This was evidently a case of strangulation after reduction, probably dependent upon one of two conditions: (1) damage to returned intestine, or (2) reduction *en bloc* or *en masse*. There was no second hernia, no marked distension, nothing in the ring, and no tangible swelling in the abdominal cavity; and, feeling certain that we had to deal with a damaged intestine, the patient was sent back into the ward. During the night the vomiting persisted, and as the patient seemed worse in the morning median laparotomy was performed. A loop of small intestine lying against the internal ring was pulled out. It was six inches long and of a purplish colour; the coats were thickened and it was evidently the portion of intestine which had been confined in the hernial sac. The intestinal contents could be pushed along it. The bowel was somewhat more distended above than below. It was returned into the abdominal cavity and the wound sewn up. In the after history of the case there is very little to note. The vomiting ceased after the operation, except on two occasions. Minute doses of morphia were given to control pain. The bowels acted naturally on Jan. 20th, five days after the operation. The motions were loose and frequent, and were passed into the bed. After Jan. 30th he had one motion per diem. He was taken home by his friends on Feb. 3rd, being bodily well, but mentally very defective.

CASE 2. *Chronic obstruction*.—A man aged forty-two years was admitted into the infirmary on July 31st, 1894. He gave a history of having been ill for twelve months with "wind in the bowels, vomiting, and costiveness." He gave up work at Whitsuntide, and took to his bed on July 22nd. His bowels had not been opened since then, but he had passed a little flatus up to the morning of the day of admission. On July 28th and 31st he had "injections" without result. There was no blood or discharge from the rectum at any time. He had been retching and vomiting constantly, sick seven, eight, or nine times a day, the vomited matter being brown and watery. Latterly he had suffered from hiccough. Pain had been very bad for the last week, chiefly paroxysmal. He had got much thinner. He passed very little urine, which was bloody. Many years ago he suffered from right hip disease, which had left the limb much shortened. On admission the abdomen was found to be uniformly distended and resonant. Intestinal coils were visible. The patient complained of a constant pain with paroxysmal exacerbations, referred chiefly to the right of the umbilicus. There were no herniae; the rectum was empty. There were constant retching and vomiting, the vomited matter being watery and containing bile, but not at all faecal. He hiccoughed occasionally. He had not passed urine since admission. The patient was pale, thin, with an anxious expression and evidently of a very emotional temperament. The diagnosis was chronic partial obstruction of the small intestine. We were unable to arrive at any definite conclusion as to the pathological condition. Soon after admission a soap enema was administered, and it produced a large motion of ordinary consistence. Small quantities of milk-and-water were ordered. On Aug. 1st the patient expressed himself as being much better. He had slept in the night fairly well. The urine was acid and contained no albumen. On Aug. 2nd another enema was injected with good result. He was ordered white mixture, one ounce thrice daily. On Aug. 3rd he was sick again. The white

¹ Senn and White: Text-book of Surgery, vol. ii., p. 708.

² Abdominal Surgery, pp. 439-440.

mixture was omitted and yolk of eggs and milk, pancreatised, ordered. On Aug. 4th the sickness was worse, the vomited matter being liquid and brown, but not faecal. An enema was given with but little result. He complained of abdominal pain, paroxysmal, which he referred to the umbilicus. He sat up in bed and rubbed his stomach vigorously at intervals. He was extremely emotional; at one time he thought he was going to die, and at another wanted to get up. On Aug. 5th the patient had been constantly vomiting. The vomited matter was brown, liquid, and offensive, like the contents of the small intestine, but not stercoraceous. He was put on nutrient enemata and was given ice to suck. On Aug. 6th, at the request of the patient and after consultation with Dr. Wallace, I performed median laparotomy. Finding nothing in the common situations of obstruction, the intestine was carefully examined from a point steadily fixed by Dr. Wallace. There was distinct evidence of peritonitis, but we were unable to determine the seat of obstruction. The wound was sewn up and the patient was ordered only to have ice to suck. A quarter of a grain of morphia was injected hypodermically at 7 P.M. On Aug. 7th the patient slept for six hours. He had not been sick, but had had some pain in the abdomen. He was put on nutrient enemata, every four hours. On Aug. 8th the patient was very restless during the night. He had slight hiccough. He would not keep still, and got out of bed and took a large quantity of ice. He slept about one hour. There was no vomiting. On Aug. 9th the patient remained in much the same condition, notwithstanding the administration of sedatives. On Aug. 10th he was much quieter during the night, and slept at intervals. He had occasional abdominal pain. There was no distension of the abdomen, and no rise of temperature above 100° F. since the operation. On Aug. 11th the patient was very restless during the night. The nurse could not possibly keep him quiet. He was not sick. He had taken all his food. His bowels had not been moved since the operation until now, when from 4 P.M. till 9 P.M. they were opened thirteen times. A starch and opium enema was given. On Aug. 12th the patient was quieter on the whole; he slept two and a half hours in the night. The bowels were open seven times. He insisted on sitting up when using the bed-pan. He tried to get out of bed several times, and succeeded once, when he drank a large quantity of water. At 9 A.M. the patient was found to have several coils of intestine protruding from under the lower border of his dressing, which had not been touched since the operation. Chloroform having been administered, it was found that a suture had given way. The intestine was carefully washed, returned, and the wound resutured. The patient was much collapsed afterwards. A brandy enema was given and strychnine was injected hypodermically. On Aug. 13th the patient died at 2.35 P.M. The post-mortem examination was limited to the abdomen by request of the friends. The wound was somewhat unhealthy. There was recent peritonitis over the coils of small intestine beneath the wound. On removing the intestine an abscess cavity was opened lying between the liver, the hepatic flexure of the colon, and the duodenum. There were old peritoneal adhesions across the concavity of the hepatic flexure. The exact relationship of the abscess cavity could not be ascertained, but it seemed to originate from the hepatic flexure of the colon, the calibre of which was much narrowed, but not completely obstructed at one point. There were some clay-coloured faeces in the descending colon. There was no general peritonitis.

Remarks.—The regional diagnosis was fairly accurate. The obstruction was too near the beginning of the large intestine to permit of stercoraceous vomiting. What was the cause of the kinking of intestine and the abscess cavity? With clear evidence of old tuberculous joint mischief, a justifiable diagnosis would be tuberculous mischief of a mesenteric gland with kinking of intestine by old inflammatory adhesions. In the course of conversation with the patient he told me that he was in the habit of walking with the aid of a stick, and that he always leant forward and pressed his abdomen against his hand and stick at the point where the pain was chiefly felt—that is, in the immediate neighbourhood of the hepatic flexure of the colon. Is it not possible that this long-continued pressure may have been the cause of his abdominal trouble? May not this constant irritation have been the determining factor in establishing the tuberculous gland mischief?

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THE PSYCHOLOGY OF ANÆSTHESIA.

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IN THE LANCET of March 23rd Dr. Wyld has suggested that from the collection of psychological experiences of persons when under anæsthetics "most important facts may be arrived at as to the construction of an experimental psychology." In the annotation on the subject in the same issue doubts are expressed as to the feasibility of the suggestion, whilst the interest in the study of such dreams is admitted. I not only share these doubts, but fear that actual harm may result from the promulgation of Dr. Wyld's views. The habit of auto-intoxication by means of inhalations is already practised. Patent inhalations containing chloroform and eau de Cologne are sold to the public as cures for headache and neuralgia. Should the idea gain ground that the secrets of mental science may be divulged to those under the influence of anæsthetics inquests may soon be heard on journalists hard up for "copy" who have sought inspiration by such means. It is even conceivable that etherisation may replace hypnotism at drawing-room *soirées*; that the burning social and moral questions of the age may be discussed under chloroform instead of Chian, as at the Socratic symposium, but possibly with more disastrous results than attended the feast at the house of Agatho the Athenian. It is doubtful whether any scientific result can be obtained from the record of the hallucinations, illusions, and delusions of those under the influence of drugs beyond that which the well-known phenomena of ordinary sleep supply. Natural sleep is probably dependent on the accumulation of ptomaines—the products of digestion and exercise—in the circulation, which dull the intellectual and motor centres of the brain. Anæsthetics and other soporific drugs only differ in action from the home-brewed articles in that they produce a state of mental and sometimes bodily exaltation which precedes sleep. Profound natural sleep is dreamless, so also is the sleep of one heavily drugged. Dreams are the result of impressions both internal and external in a half-awakened brain, which distorts and exaggerates them into a seemingly connected tale. A knock at the sleeper's door weaves itself into what seems to him a lengthy series of events, yet the knock both occasions the dream and wakes him up. It is common experience that the dreamer awakes at the most exciting incident in his dream. It is not the dream which wakes him, but the impression which gave rise to it. In a dream one may be tried, condemned, tortured, executed, and buried by Inquisitors or Red Indians, and wake to find an ache or pain the cause. The distressing paralytic nightmare, in which one is pursued but cannot stir, is perhaps due to some uncomfortable posture of the legs which has caused them to "go to sleep." The clergyman dreams that he is preaching in his night-dress because he is conscious in a half-awakened state of actually wearing nothing else. Dreams under anæsthetics resemble the ordinary kind in that they are produced by partially felt impressions at the moment of awakening. A lady was once anæsthetised in my presence in order to have two teeth extracted. She came round immediately after the removal of the second wailing, "What is the use of it all?" Afterwards she explained that she had dreamed she died in great agony (tooth No. 1), that she had also been born again in equal pain (tooth No. 2), and that her remark was a protest addressed to the Deity. The whole period of extraction lasted less than twenty seconds. My own experiences illustrate the fact that dreams under anæsthetics are instigated by partially felt internal and external impressions. Once I had some post-mortem warts scraped from my hands under chloroform. I thought I was myself giving the anæsthetic whilst someone kept anxiously inquiring through a telephone, "Is he all right?" until I was in an agony of fear lest he might not be so. I thought that my hand was restrained (it was doubtless the case) whenever I attempted to give more chloroform. I heard the sound of the sharp spoon on the warts, but felt no pain, and thought they belonged to my patient. Afterwards I learned that my breathing had become embarrassed, and that the words, "Is he all right?" referred to me. The telephone was doubtless suggested by the sound of a musical rhythmical hammering

which in my case always accompanies partial anaesthesia. On another occasion, whilst under ether, I became a noble lord seated in a magnificent chariot in the "Row" at the height of the season. I was hopelessly and deplorably intoxicated, and yet became aware that an attempt was being made to photograph me in this undignified condition. I shouted to the coachman to drive on, but instead of obeying he and the footmen pressed a mask over my face. I smelt ether, and struggled madly to prevent them taking the photograph, which I thought was being done for a wager and would be all over London next day. The words "Drive on" were addressed to the operator by the anaesthetist, and doubtless suggested the dream. Such is the probable explanation of dreams under anaesthetics. If so, they are not to be distinguished from ordinary dreams, and cannot shed fresh light upon the problem of the relationship between mind and matter, as the experiences of Davey and Symonds would appear to suggest. The subjective sensation that the mind is divorced from the body, common in ordinary as well as in dreams under anaesthetics, cannot be held as an argument that such may be the case. In deep sleep the mind is practically dead; when sufficiently awakened to receive impressions it shows its dependence upon matter by acting upon the impressions received. Dreams usually occur in the waking stage of anaesthesia, or at least these are best remembered, but they doubtless also accompany the stage of excitement. The latter varies in individuals. Some give vent to peals of laughter, others wall like lost souls, and some show signs of furious rage. I have reason to believe from my own experience that this condition may be beyond measure distressing. I had ether for the first time when a second year's medical student. Some teeth were to be extracted. I was rather anxious to show that I knew too much about the process to give any trouble, and remember feeling irritated that my remarks whilst taking the ether met with no response. I said my sensations were very pleasant, whereupon the anaesthetist laughed, or I thought he did. In a moment I conceived the idea that I was being "hocussed" for some nefarious object. I was out of the chair in an instant in spite of efforts to control me, and made for the door fighting wildly round the room, shrieking for help, and, I regret to add, swearing horribly. I knew perfectly well where I was, but had wholly forgotten the purpose for which I had come. I knew the operators well, and can see their faces yet: the anaesthetist highly amused, the dentist annoyed, for I struck furiously at his face and, I believe, hit him. I was convinced

that I was fighting for my life and that they would not let me leave the room alive lest I should expose their infamous designs. Then the fit of mania, for such it was, ceased as suddenly as it began, and I submitted to be tied in the chair for fear of another outburst, which, however, did not occur. I know now what it is to have been an acute maniac, to be conscious of one's surroundings, to have the use of one's limbs, and apparently of one's senses, and yet to act on false inferences drawn from the distorted impressions of a drugged mind.

It is only natural that the dreams of the majority whilst under anaesthetics should be more spiritual than mine, for the majority of patients look upon the anaesthetist as probably their executioner and on the operating table as a likely death-bed. Yet their experiences and mine are equally valueless for the furtherance of science. The impressions of a savage running "amok," of a De Quincey who feebly excuses his vice on the ground that it exalts his higher functions, are of equal clinical interest with the dazzling visions of a dying saint or the alcoholic's snakes and vermin. All are equally true to the subjects, equally false in reality. I have seen a child who had helped herself to belladonna and glycerine, mistaking it for jam. She threw herself about the bed, now shielding her face and shrieking, "Take the great bird away!" then screaming with laughter, clapping her hands, and calling, "There's uncle down in the field by the gate; come to me, uncle!" Another child in a like condition staggered about the room, smiling, whistling, and singing snatches of songs. Most of his babble was unintelligible, but I caught the words "Hampstead Heath" several times, and he evidently imagined himself there. He pointed to a corner of the room and said, "There's a bird! No; it's a fish." Such visions, together with those of apparitions and supernatural occurrences generally, which the Psychical Society are not able to explain, are alike dependent on the working of a disordered mind. The mind, its morals, reasonings, and special senses, are dependent on the integrity of the matter which holds it. If the matter is bound or stimulated, *μανδραγόρα ἢ μέθυ ἢ τιμι ἀλλας*, so also is the mind fettered, or, it may be, unchained. To base an experimental science of psychology on the evidence of dreams, whether of the sound or unsound mind, is to start on false premisses, to appeal from Philip sober to Philip drunk, and Philip himself reversed this order of things.

Upper Berkeley-street, Portman-square.

MALARIAL FEVER AMONG WHITE MEN IN WARRI, WEST AFRICA,

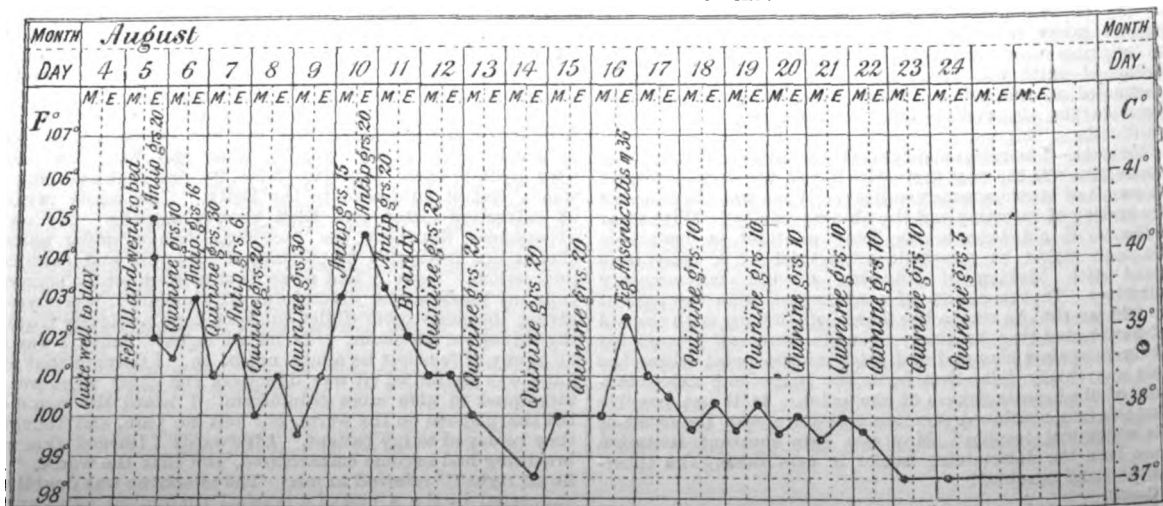
From Aug. 1st, 1893, to July 31st, 1894.

By FELIX N. ROTH, M.R.C.S. ENG., L.R.C.P. LOND.,
DISTRICT MEDICAL OFFICER AT WARRI, NIGER COAST PROTECTORATE;
LATE HOUSE SURGEON, ST. MARY'S HOSPITAL, PADDINGTON.

WARRI is situated on the delta of the Niger, about 5° N. by 5° E. It lies on the bank of a river 300 yards across, forty miles from the sea, and ten feet above the sea

level. There are two tides daily, which rise and fall from four to eight feet. The following meteorological chart has been taken from my own observations and when compared with the fever table may be found interesting, showing at what time of the year the malarial fever has been most prevalent. The highest temperature registered in the sun and noticed on many occasions was 175° F.; the highest temperature in the shade was 103°; and the lowest temperature registered at night was 68°. On several occasions during the tornado season the temperature has fallen from 40° to 60° in the course of half an hour.

TYPICAL MALARIAL FEVER CHART.



On an average not more than sixteen white men are ever there at the same time during the year. I have selected for this paper seventy-two of the most severe cases of fever, as the results of these will teach more than if all the mild ones had been mentioned. I have divided the fevers into two classes—viz., (1) fever and ague, and (2) African malarial fever, which includes the intermittent and remittent types. Only one case of the former came under my observation during the twelve months, and I shall therefore only mention and describe the latter in the subjoined tables. Each patient is numbered as he came under my charge, and his age is given as well as the time he has been in West Africa and the time he has been in Warri. The number of times each patient has had fever in each month is also shown. The cases entered in the column headed "Number of years each man has been in West Africa" have generally been away from the coast every two or three years for some months.

From the time a man arrives in Warri till he leaves again he is in a chronic state of perspiration, and as long as this is going on he may be certain he is not suffering from fever. During my short experience in Warri I have found that the only treatment is to force this healthy action of the skin, and in nearly all malarial cases, when this has been proceeding, the patient has been considered out of danger.

The fever observed in Warri is remittent and intermittent. The temperature rises generally many degrees, always once daily, but in a few cases I have noticed this to happen twice during the twenty-four hours. The rise mostly takes place between 12 noon and 6 P.M., but this is not a hard-and-fast rule. The following is a typical initial stage of the fever. The patient feels dull and heavy; there is great malaise, with neuralgic pain in the head, face, and eyes; sometimes there are headache and vomiting, great pain over the region of the kidneys, liver, and spleen, as well as

TABLE I.—Local Temperature Chart from Aug. 1st, 1893, to July 31st, 1894.
(Monthly Averages in Degrees Fahrenheit.)

Month.	Taken at 7 A.M.			Thermometer.			Taken at 6 P.M.			State of weather.	Rain in inches.
	Thermometer.		Wind.	Highest in sun.	Highest in shade.	Lowest at night.	Thermometer.		Wind.		
	Dry bulb.	Wet bulb.					Dry bulb.	Wet bulb.			
August	74.2	73.0	E.	141.0	85.0	71.7	76.5	74.5	W.	Wet	20.8
September	74.4	73.7	W.	140.0	84.6	71.0	76.7	74.6	W.	Wet	18.75
October	74.0	73.4	E.	150.0	89.3	70.4	77.4	75.0	W.	Wet	16.72
November	73.9	73.8	E.	158.3	93.3	72.2	80.0	76.6	W.	Fine	4.3
December	74.7	74.2	E.	150.9	93.2	72.3	80.0	77.1	W.	Wet	8.93
January	72.2	72.0	W.	149.7	93.0	70.5	81.1	77.2	W.	Fine	0.23
February	74.6	74.3	W.	153.8	95.9	73.0	82.5	78.6	W.	Fine	3.03
March	75.2	74.8	E.	155.1	94.2	72.8	80.4	77.0	W.	Fine	5.55
April	76.4	75.4	E.	158.3	94.1	72.6	80.3	77.2	W.	Wet	6.35
May... ..	74.8	73.9	S.W.	154.7	92.1	72.2	79.7	76.9	S.W.	Wet	22.86
June... ..	74.4	73.6	S.W.	145.8	82.1	71.9	78.3	75.2	S.W.	Wet	16.41
July	73.6	73.0	W.	153.7	88.4	71.6	78.0	74.2	W.	Wet	6.74
Average for the year ...	71.9	73.6	—	151.0	90.0	71.8	79.2	76.2	—	—	130.96

TABLE II.—Malarial Fever Table, with Monthly List of each Patient's Attack.

Patient.	Age.	Time in West Africa.		Time in Warri under my charge.		1893.					1894.							Total number of times.	
		Years.	Months.	Years.	Months.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.		
1	29	4	6	—	6	—	—	—	—	—	—	—	—	—	—	—	—	1	1
2	25	4	—	—	6	1	1	—	—	—	—	—	—	—	—	—	—	—	2
3	24	2	—	—	3	1	—	—	—	—	—	—	—	—	—	—	—	—	1
4	25	2	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1
5	27	—	—	1	—	1	2	2	2	—	3	—	—	—	—	—	—	—	10
6	24	—	—	—	8	—	1	—	1	—	1	—	1	—	—	—	—	—	4
7	36	16	—	1	—	—	—	1	1	1	—	—	—	—	—	—	—	—	3
8	21	2	—	—	4	—	2	1	—	—	—	—	—	—	—	—	—	—	3
9	38	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	2
10	23	5	—	—	6	—	—	1	1	—	—	—	—	—	—	—	—	—	2
11	30	9	—	1	—	—	—	2	1	—	2	1	—	—	—	—	—	—	6
12	25	1	—	—	6	—	—	1	2	2	1	—	—	—	—	—	—	—	6
13	24	3	—	—	8	—	1	—	2	1	—	1	—	—	—	—	—	—	5
14	21	—	—	—	6	—	—	—	1	1	—	—	1	—	1	—	—	—	4
15	26	5	—	1	—	—	—	—	1	1	1	—	—	—	—	—	—	—	3
16	24	—	—	—	4	—	—	—	1	1	—	—	—	—	—	—	—	—	2
17	24	2	—	—	6	—	—	—	—	2	2	—	—	—	—	—	—	—	4
18	30	9	—	1	—	—	—	—	—	1	3	1	—	—	—	—	—	—	5
19	29	5	—	—	6	—	—	—	—	—	2	—	—	—	—	—	—	—	2
20	27	2	—	—	2	—	—	—	—	—	1	—	—	—	—	—	—	—	1
21	25	2	—	—	2	—	—	—	—	—	1	—	—	—	—	—	—	—	1
22	24	5	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
23	21	—	—	—	3	—	—	—	—	—	—	—	—	1	—	—	—	—	1
24	21	—	—	—	3	—	—	—	—	—	—	—	—	—	1	1	—	—	2
Total ...		—	—	—	—	4	7	9	15	10	16	3	4	1	2	—	—	—	72

over the whole of the back and down the backs of the thighs and legs; and there is often pain in all the joints. The onset is always sudden. Some patients struggle against the malaise; many give in at once and go to bed. There is often great fear of death (especially in the case of new arrivals); others become frightened when they notice the urine discoloured or when the vomiting is severe, the latter causing severe spasms over the abdominal region. The skin is dry and harsh to the touch. There is nearly always constipation, but this generally precedes the fever. In nearly every seizure that has come under my notice I have used the treatment to be presently described, and have found it absolutely successful except in the case of the patient marked No. 14 in Table II., who had been about three weeks on the coast when first attacked by fever, and was a healthy, full-blooded man twenty-one years of age. On my arrival his temperature was about 102° F. All the drugs which were considered useful were tried, but none seemed to have any effect. He took slops well, but after a few days was inclined to be despondent. This condition lasted for fully fourteen days, his temperature varying from 100° to 103°—seldom lower, but never higher—and his skin remaining harsh and dry all the time. As his condition was now becoming worse more stimulants were given. He was sponged three and four times daily with the coolest water procurable (which is not very cold in Warri), and I cheered him up to the best of my ability. This stimulating treatment was continued for several days; his temperature fell, and he was at his work again in less than a week.

The treatment observed with all the other patients was as follows. If there was much vomiting or pain, from a quarter to half a grain of morphia was given either by the mouth or hypodermically, and when this had taken effect from two and a half to five grains of calomel with colocynth and a quarter of a grain of podophyllin, together or singly, were administered. The patient being in bed, a hot-water bottle or bag was applied to his feet and another over the spleen, and he was then well covered with blankets. As soon as the stomach had settled itself (generally within half an hour after taking the morphia) from ten to fifteen grains of antipyrin were taken, followed by a large cup of weak tea. Sometimes this dose was repeated, either in consequence of being vomited or if in twenty or thirty minutes the patient did not sweat. In every case the action of the skin took place after the first or second dose. Ten-grain doses of sulphate of quinine were administered three, four, or five times daily till the patient felt symptoms of cinchonism. In some cases the antipyrin treatment had to be repeated for a day or two when the temperature rose at all and the skin refused to act well, but this seldom happened. As the temperature fell the quinine was reduced. Stimulants, unsweetened condensed milk (the climate is too deadly for cows), and meat extracts were the diet. The patient was generally at work again under a week, unless it had been a very severe case and there was much weakness. The highest temperature I have registered was 106° 8', but this is an exception; in most of my patients it has seldom risen above 105°. In a few cases delirium appeared. I have noticed it on the first or second night, but it is doubtful whether this was due to a high temperature, as it has occurred when the temperature was only from 100° to 102° 5', and one patient had delirium when his temperature was slightly subnormal. The fever runs its course in from two to thirty days, during and after which time there may be kidney, liver, and spleen complications requiring treatment according to their respective symptoms. The drugs which to me seem to have given the best results are calomel, morphia, antipyrin, and quinine. The after-treatment consists in administering arsenic, strychnia, some dilute acid, iron in its different forms, and the hypophosphites. Cod-liver oil is a most useful tonic; patients seem to take it well, and good results are obtained. Farrish's "chemical food" made up as a pill is a useful drug and is easily taken in this form.

The hot, moist climate of Warri acts injuriously on the drugs, especially on the liquid ones, and I therefore order them as solids. I have tried them in tabloid, gelatine, and palatinoid form, and prefer the last because they are easily swallowed, because they leave no disagreeable taste in the mouth, because, not being compressed, they act quickly, because they are easily dispensed, and because, when sent out in glass-stoppered bottles, they keep better than any other form of drugs in the West African climate. One drug in particular which I have had to use in so many cases—morphia quarter-grain palatinoids—was in as perfect a

condition after sixteen months on the West Coast as it was on the day it arrived.

A typical malarial fever chart is appended.
Oxford and Cambridge-mansions, Hyde Park, W.

CEREBRAL TUMOUR; OPERATION; DEATH FOURTEEN HOURS LATER WITH SYMPTOMS OF IMPLICATION OF MEDULLA.

By E. N. NASON, M.B. CAMB., M.R.C.S. ENG.

A MAN aged forty-three years, while walking in the fields in July, 1894, thought he felt something in his left boot. While taking the boot off twitching began in the left heel and extended up the leg to the thigh. The twitching lasted about ten minutes. A month later he had a second similar attack, and afterwards attacks became more frequent, sometimes two occurring in one day. There was temporary paresis of the left leg after each attack, but no permanent trouble except some stiffness and a tendency to catch the toes when walking. He had no loss of consciousness and no headache, but suffered occasionally from what he called "biliousness." On one occasion, just before Christmas, the left arm became affected in a similar way, and in January, 1895, the muscles on the left side of the trunk also. The face was never affected until Feb. 2nd, on which day, while travelling by train, he had a very severe attack affecting the whole of the left side and accompanied by cyanosis and loss of consciousness lasting some minutes. It was after this attack that he first came under my care. The following conditions were then noted. On Feb. 10th there was paresis of the left leg, the extensors of the foot being most affected. There was no loss of power in the left arm or left side of the face or tongue. There was no affection of speech, no headache, and the mind was quite clear. The left knee-jerk was much exaggerated and the right perhaps more easily obtained than natural. Ankle-clonus was well marked on the left side, but was absent on the right. Plantar reflexes were present. The urine was free from albumen. There was no optic neuritis, but the retinal veins seemed fuller than natural. He denied the possibility of syphilis, but admitted a previous occasional alcoholic excess. He was put upon iodide of potassium, fifteen grains three times a day. By the end of the month there was further loss of power in the left leg; there had been several convulsive attacks, limited almost entirely to the left arm and left side of the trunk, and there was distinct paresis of the left shoulder muscles, with a feeling of clumsiness in the left hand. The grasp of the left hand, however, remained strong. Early in March he began to suffer from more or less constant headache, vertical in position, but slightly more marked on the right side. There was no area of superficial tenderness. Vision remained good, and there was no paresis of the ocular muscles, though much difficulty in fixing the eyes during examination. The pupils were equal and reacted to light. The head constantly rotated to the left while the eyes were being examined. There was slight facial paresis. On March 8th complete paralysis of the left arm was found, having come on almost suddenly. The paralysis of the left arm, now found for the first time, was absolute, while that of the leg, though of much longer duration, was not quite complete. Slight tenderness on pressure over the head on the right side of the vertex was noticed, otherwise the patient's condition remained unaltered until March 16th, when he complained of a little wheeziness and expectorated some frothy mucus. He thought he had "caught cold," but there was no other indication of catarrh. He was still taking iodide of potassium. On March 20th the patient showed signs of general cerebral compression, as indicated by mental hebetude (once), involuntary micturition, and deep, almost stertorous, breathing. The expectoration of frothy mucus still continued. There was no rise in temperature. On

¹ This may have been an indication of interference with the vagi through compression of the nuclei in the medulla.

March 21st the symptoms of general compression were much less marked. The patient discussed the question of operation rationally, and asked that something might be done at once. The right optic disc showed slight swelling not noticed before; the left remained unaltered. On March 22nd Mr. Gilbert Barling examined the patient with me, and agreed both as to the diagnosis of cerebral tumour and its locality and the advisability of operation. The patient, having been prepared the night before in the usual way, was anaesthetised with chloroform, and a horseshoe-shaped flap, including pericranium, was turned down, exposing the bone over the region of the right fissure of Rolando. After the hæmorrhage had been controlled and the flap wrapped in hot cyanide gauze, two discs of bone were removed with a 1 in. trephine. The discs were $\frac{1}{2}$ in. apart and situated on either side (horizontally) of what was judged to be a point immediately over the upper limit of the centre for the left arm. The two holes were united by Hoffmann's forceps and the opening in the bone increased by the same means till it measured 3 in. by 2 in. There was free oozing from the diploë at the anterior edge of the divided bone, but little elsewhere. This was checked by pressure with a pad of gauze. The dura mater, which looked unduly dark, bulged into the opening, felt very tense, and exhibited only a very faint pulsation. The dura mater was divided, and a flap turned up exposing the cortex, which bulged into the opening thus made and pulsed but feebly. Two large veins, much distended with dark blood, crossed the exposed cortex, and between these an incision was made which, a quarter of an inch beneath the surface, opened a large tense cyst without any definite wall. The cyst or cavity was situated immediately beneath the Rolandic area, and contained some three or more ounces of clear amber-coloured fluid, free from blood. The cavity passed deeply in the direction of the right lateral ventricle, but no solid growth or thickening could be felt. After the evacuation of the fluid the space appeared to close completely, and the pulsation of the brain became distinct. The cavity was kept free to drain itself by means of a strand of cyanide gauze; one stitch was placed in the dura mater, and the external flap replaced and fixed by silk-worm-gut sutures and the wound dressed with cyanide gauze and wood-wool wadding. The operation (at which Mr. Barling very kindly assisted) occupied one hour and six minutes, and was well borne. After being conveyed to bed the patient soon began to regain consciousness, and intimated that he wished to pass water, which he did naturally. Up to 6 P.M. he seemed to be going on very satisfactorily. The dressings had twice become saturated with cerebro-spinal fluid, and the outer portions were changed by the nurse. The pulse was steady and between 60 and 70 per minute. The respiration was 20 and natural, and the temperature 99.4° F. Quite suddenly, at 6 P.M., the character of the respirations changed, some cyanosis was noticed, and the temperature rose to 103.4° in the left and 102.2° in the right axilla. At half-past seven mucus began to collect, and the temperature rose to 105° in the left and 104° in the right axilla, and the respiration to 43 per minute. There was no vomiting or any sign of convulsion, but unconsciousness had returned. At 10 P.M. breathing became still further embarrassed, and the intercostal muscles, which had previously been inactive, suddenly began to act vigorously. The temperature had risen to just short of 106° and 105° on the left and right side respectively and the respirations to 54 per minute. There was but little change from this condition till 4.25 A.M., when the pulse, which was being taken at the time, gave a bound and stopped suddenly. The respiration continued one minute after cessation of the pulse. The temperature registered 106° and 105° after death on the left and right side respectively.

It seems probable that the course of events in this case was the following. First, the slow development of a simple cyst in the right cerebral hemisphere with increase of intracranial pressure; that this gave way into, or formed a connexion with, the right lateral ventricle on Feb 2nd, occasioning the very severe convulsive seizure accompanied by cyanosis and unconsciousness, &c.; that a communication with the ventricles subsequently existed, keeping up an increased intraventricular pressure, which was present until relieved by the operation; and that the sudden relief of pressure was followed by œdema of the centres located in the floor of the fourth ventricle, with a consequent interference with their action, leading to the fatal result recorded.

Nuneaton, Warwickshire.

Clinical Notes: MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF INSOMNIA.

By M. CHARTERIS, M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS IN THE
UNIVERSITY OF GLASGOW.

A MAN aged thirty years consulted me on Oct. 15th, 1893, suffering from insomnia. He told me that he had always been a light sleeper, but to this he paid no particular attention; but owing to an unhappy circumstance he began to suffer from sleeplessness, which grew upon him to such an extent that it had been common for him, during a period of eight months, to have no sleep for a week at a time. In the month of May, 1892, he was advised to take sulphonal, of which he took in all from thirty to forty capsules of five grains each. His condition did not improve, and, acting on medical advice, he tried, during June, July, and August, bromide of potassium every night in a dose of twenty grains, but obtained only from one to three hours' sleep. The effect of the bromide seemed to be wearing off. He discontinued its use and went to the country for ten days. During these ten days, although free from all business, he had only one night's sleep of four hours' duration, and on returning to business in the beginning of September his condition became very serious. "By this time," he stated, "my head had become strange and work was a matter of difficulty. At night my heart beat so loudly that no matter in what position I lay I could hear it. During the day I was dizzy and full of morbid fears. Something ticked in the left temple and the eyes felt hot and fiery. At the end of September I had sunk into a state of depression, and, dreading to go to bed, wandered about the streets, had lost hope and formed resolutions of which I do not like to think now, and for which I can offer no very satisfactory explanation, yet they were as real and natural as sober and sensible thoughts are to a person in good health." When I saw him he was certainly in a very depressed and morbid state of mind, but he promised to follow my injunctions. These were as follows: to take an alternative pill of mercury and podophyllum at 4 P.M. on one day and on the following night six drachms of chlorobrom at bedtime. He was requested to return at the end of a week and to bring with him notes of his case. This he did, and I found that a six-drachm dose had each night secured a sleep of five hours' duration. He continued to take this dose for five weeks, and each night had the same average amount of sleep. At the end of five weeks I considered it advisable to decrease the dose to four drachms nightly. He took this dose for four weeks, and the average amount of sleep remained the same. Then for four weeks the dose was reduced to one drachm, and with this small dose he had from five to six hours' sleep. On Jan. 19th, 1894, he saw me again, and gave me a tabulated statement of his doses for three months. This, though interesting and instructive, would be too lengthy for insertion, but it bore out completely his verbal statements. In the month of June last he called again. He was then able to secure refreshing sleep without the hypnotic and his physical and mental condition was perfect. Work was again a pleasure to him and life was worth living.

Note.—In a similar way I have treated successfully less pronounced cases of insomnia. The habit of taking the solution does not grow on the patient, and its exhibition is attended by no depression or derangements of digestion.

Glasgow.

POISONING BY EXALGINE.

By F. GRAHAM CROOKSHANK, M.R.C.S. ENG.,
L.R.C.P. LOND.

A SINGLE woman aged thirty, extremely thin, was under my care for severe asthma and consequent insomnia. On May 3rd of this year she was given by a friend, without my knowledge, five grains of exalgine. Within five minutes "she

screamed out, becoming perfectly stiff." Twenty minutes later, when I saw her, she was profoundly unconscious, her respiration being very shallow and infrequent and rapidly falling. The lips and finger-tips were markedly cyanosed and the extremities were cold; the pupils were widely dilated and fixed; the knee-jerks were absent; the pulse was 95, small and feeble. One-fifth of a grain of apomorphine was given at once, but failed to produce emesis. Free stimulation with brandy and coffee, vigorous flagellation, faradisation, and occasionally artificial respiration were employed for three hours, at the end of which time the cyanosis had nearly disappeared and respiration was fairly well established. The patient, when roused, was incoherent and failed to recognise her surroundings, rapidly relapsing into unconsciousness. About an hour afterwards there was an evident tendency to heart failure, the pulse dropping repeatedly below 50 and becoming irregular and feeble. Ether was given at regular intervals hypodermically. Nine hours after taking the drug the pulse and respiration were both good, the pupils reacted well, and the knee-jerks were present. No urine could be drawn off with a catheter. The next day the patient was perfectly well except for aphonia, which lasted for some hours. The points of interest in the case appear to be the rapidity of the onset of the toxic effects and the evident danger in giving even moderate doses of exalgin—*a respiratory poison—to asthmatics.*

Leysfield-road, W.

A Mirror OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

TUBERCULOUS ULCERATION OF THE BLADDER TREATED BY SUPRA-PUBIC CYSTOTOMY AND CAUTERISATION.

(Under the care of Mr. C. MANSELL MOULLIN.)

THE number of cases in which it is necessary to perform supra-pubic cystotomy for the treatment of tuberculous disease of the bladder is limited. Usually it is possible to deal satisfactorily with the condition without operation, especially by means of iodoform emulsion or perchloride of mercury and other injections, or in the female by the application of solutions of lactic acid applied through the urethra. The operation has been carried out for two conditions—(1) tuberculous disease of the mucous membrane of the bladder of unknown extent associated with signs of tubercle elsewhere; and (2) tuberculous disease occurring in the form of a single large ulcer or of several ulcers, the disease being apparently limited to the interior of the bladder, and there being no manifestations elsewhere. In the first of these groups the operation could not be expected to prove curative, yet the record of a case given by Reverdin is very encouraging; both testes and cords were affected, the prostate was diseased, and a perinephritic abscess subsequently developed. The supra-pubic fistula was difficult to close, yet at the end of two years the patient could retain urine for from one hour and a half to two hours, and passed urine which was quite clear without pain. The second group gives a better prospect of cure, but the rarity of the condition is proved by the fact that Mr. Moullin's case affords the second example only of this operation that has been published in this country since Mr. Battle's successful case in 1890. That cauterisation is not essential is evident, as the case under the care of the former surgeon, we learn, continues in good health, but it has been generally used after the cystotomy. Cases which may be added to the list of those given by Mr. Moullin are mentioned by Reverdin,¹ Ivesen (1), Schatz (1), Trendelenburg (3), Guyon (2), Poncet (1), and Roux (1). Dr. L. Bolton Bangs² has also written on the subject.

A woman twenty-two years of age was admitted into the London Hospital in January, 1894, suffering from cystitis. Her illness began three years before with an attack of hæmaturia which lasted upwards of six weeks. Apparently it was caused by lifting a heavy weight. At the same time micturition became more frequent. There was no pain, but she grew weak and ill and was unable to continue at work as a domestic servant. A few months later, after resting at home, she began to suffer from pain shooting down the right leg from the loin. Micturition became more and more frequent, until at last it took place nearly every hour. Each act was attended by intense smarting, felt chiefly at the neck of the bladder and continuing for some time after the bladder was emptied. Blood made its appearance again. The urine became foul and loaded with mucus; and for the six months previous to admission the suffering was so great that she was almost confined to bed, any attempt at walking causing intense dragging pain over the pubes. The patient was slightly built, but fairly well nourished. There was no history of previous illness of any importance. The lymphatic glands were not enlarged, the heart and lungs were normal, and there was no history of phthisis in the family. The hypogastric region was very sensitive to pressure, but there was no tenderness over the kidneys on either side. Micturition was exceedingly frequent, night and day, and was accompanied by the greatest suffering. The average amount of urine passed in twenty-four hours was only twenty-five ounces of 1015 specific gravity. It was alkaline in reaction, always contained a large amount of blood intimately mixed with it, and threw down a heavy precipitate of blood, mucus, pus, and phosphates. Microscopic examination showed the presence of tubercle bacilli upon one occasion. Benzoate of ammonia was given internally and the bladder was washed out at regular intervals with boracic acid and lactic acid, but without result. No improvement followed, and as the patient, who had been under treatment for many months, was beginning to lose weight, it was determined to explore the bladder under an anæsthetic. A number of ulcers coated over with an adherent, bloodstained, caseous deposit were found just inside the orifice. A week later supra-pubic cystotomy was performed. The sides of the bladder were held apart with sutures passed through the edges of the muscular coat; a Ferguson's speculum was introduced through the wound, and all the ulcers that were accessible were scraped and cauterised with Paquelin's canterly. Those that were situated on the anterior surface of the bladder, and which could not be reached in this way were scraped with a Volkmann's spoon, and then iodoform was thoroughly rubbed in. All the ulcers were situated near the orifice of the bladder; there were none to be seen or felt on the fundus. The lower angle of the wound was left open and a drainage-tube introduced into the bladder; the rest was sutured and dressings of sal alembroth gauze and wool applied. The tube was shortened on the third day and removed a few days later. Urine, acid in reaction, was passed naturally on the fifteenth day, and at the end of three weeks the wound was soundly healed and the patient was allowed to get up. At first there was considerable pain on micturition, but this soon wore off. Five weeks after the operation the patient passed urine four times during the day and twice at night. Six months later, when she was seen again, the frequency during the day remained the same, but she had to rise only occasionally at night. The urine was acid and contained only a little mucus, and the patient had gained flesh and strength.

Remarks by Mr. MANSELL MOULLIN.—The number of cases in which supra-pubic cystotomy and cauterisation have been performed for tuberculous disease of the bladder is not very large. Guyon³ has recorded two; Reverdin⁴ one; Battle⁵ one, in which owing to the size of the ulcer, chloride of zinc was used instead of the actual canterly; Pilcher⁶ four; and Bell⁷ three. In three cases Bardenheuer⁸ has dissected away the entire mucous membrane, practically abolishing the bladder, for very little of the lining was reproduced. In nearly every case of cauterisation the results as reported were good, and there can be little doubt that in many instances this operation might be resorted to with advantage at a much

¹ Sajous' Annual of the Universal Medical Sciences. 1893, vol. iii., p. 19.

² Journal of Cutaneous and Genito-urinary Surgery. May, 1892, New York.

³ Leçons Cliniques sur les Affections Chirurgicales de la Vessie.

⁴ Annales des Maladies des Organes Génito-urinaires, January, 1888.

⁵ Transactions of the Clinical Society of London, 1890.

⁶ New York Medical Journal, March, 1892.

⁷ Journal of Cutaneous and Genito-urinary Disease, August, 1892.

⁸ Centralblatt für Gynäkologie, No. 14, 1894.

earlier period than it usually is. Ulceration of the bladder attended by strangury and hæmaturia is of not uncommon occurrence in young adults of both sexes; and in a large proportion of cases yields readily to local and palliative treatment. In these the ulceration is not tuberculous, or, if it is, the ulceration is very recent and involves only the most superficial layers of the mucous membrane. When the disease has lasted some time, as in the present instance, and has affected the whole thickness of the mucous membrane, and perhaps the submucous tissue as well, leaving deep ulcers coated over with a dense adherent layer of caseous debris, pus, and phosphates, the momentary application of dilute solutions of lactic acid or other drugs can be of no avail. They can never penetrate unaided through the protecting layer. In such cases the prognosis is so unfavourable, the suffering as the disease advances so intense, and the risk of supra-pubic cystotomy as it is performed at the present day so slight, that it is difficult to understand why it is not more frequently resorted to. Tuberculosis of the bladder may not be common as a primary affection. It is usually regarded as secondary to disease of the kidneys or (in males) of the genital organs. But the fact that many of the cases in which it has occurred have been women, who do not suffer in the same way from genital tuberculosis and whose kidneys were healthy, makes it rather doubtful whether in the case of men there is not a tendency to exaggerate the secondary character of the disease. The neck of the bladder is involved more frequently than the fundus, not because of the proximity of the orifices of the ureters or of the vasa deferentia, but because its blood supply is so much larger and it is so liable to attacks of congestion, and because its functional activity is so much greater.

MANCHESTER ROYAL INFIRMARY.

SECONDARY HÆMORRHAGE IN A CASE OF ACUTE PERI-OSTITIS OF THE FEMUR; LIGATION OF THE COMMON FEMORAL ARTERY; RECOVERY; REMARKS.

(Under the care of Mr. F. A. SOUTHAM.)

ACUTE periostitis usually attacks the lower end of the femur and leads to extensive necrosis unless the patient is subjected to early operation. The upper end of the femur is not often the seat of this variety of disease, and when abscess does form there may be considerable difficulty in making certain that pus has collected, for, in consequence of the thickness of the muscular covering, fluctuation is not easily felt. This case is, so far as we know, the only one of the kind in which ligation of the common femoral artery has been resorted to with success for severe secondary hæmorrhage, and is therefore of very great interest. The circulation of the limb does not appear to have been embarrassed by inflammatory swelling round the wound, which seems to have kept free from septic changes throughout. Four causes of severe secondary hæmorrhage in such cases have come under our notice in the past—viz., (1) wound of a vessel of some importance, when making the incision or counter-opening; (2) ulceration, the result of pressure of a drainage-tube; (3) softening of the wall of an artery exposed to a septic wound; and (4) ulceration as a result of pressure of a sequestrum. For the notes of this case we are indebted to Dr. W. A. Wilkinson, late house surgeon.

The patient, a boy five years of age, was admitted to the Manchester Royal Infirmary on the evening of May 10th, 1894, suffering from acute periostitis of the shaft of the femur. On examination the upper third of the left thigh was found to be the seat of a circumscribed swelling which was slightly cedematous, intensely red, and accompanied by great heat. The boy held his thigh in the flexed position. No evidence of fluctuation could be detected. The constitutional disturbance was not considerable, though during the night he was very restless, repeatedly asking for liquid, and complained of pain in the affected thigh. Lead and spirit lotion was kept constantly applied. The next day, May 11th, the inflammatory redness had disappeared; the patient seemed much more comfortable, but the swelling was slightly larger. There was no distinct fluctuation. The temperature in the morning was 100° and in the evening 102.6° F. On May 12th it was decided to explore the swelling. An incision was accordingly made, under chloroform, on the outer side of the thigh down to the bone, and forty ounces of pus were evacuated. The shaft of the femur was found to be quite bare for a considerable extent. A counter-opening was made on the inner side, and a piece of drainage-tubing was

passed from the outer to the inner opening and the cavity well syringed out with perchloride solution. On May 13th the temperature in the morning was 98° and in the evening 100°. On syringing the cavity with perchloride solution there was a slight discharge of laudable pus. On May 14th the temperature in the morning was 98.8° and in the evening 102.6°. The cavity was syringed again. On May 15th, at 2.30 A.M., it was found that hæmorrhage had occurred, the whole of the dressings and the bed being saturated with blood. The bleeding was very profuse and came from both openings. An Esmarch's tourniquet was applied to the limb, and, the bleeding having been arrested, the tube was removed, and both wounds were freed from clots and packed tightly with iodoform gauze. Pressure with pads was applied, and the whole limb bandaged from the foot upwards and placed in a raised position. The tourniquet was then taken off. The patient was much collapsed, with a rapid, feeble, and fluttering pulse, shallow and sighing respiration, and great blanching of the skin and mucous surfaces. The usual treatment was adopted—viz., the head was kept low, hot bottles were applied, and fluid nourishment was given in small quantities. From May 15th to June 2nd all went well, and no further hæmorrhage took place. The wound had been dressed daily, the discharge gradually diminishing, and the sinuses appeared to be granulating up. The condition of the patient was also very much improved. However, on June 3rd he had another very severe attack of hæmorrhage, which recurred on the 5th and on the 7th. On each occasion pressure had to be applied to the femoral artery, and the sinuses freed from clots and packed with iodoform gauze. The boy's condition was now worse than before, and as consent for amputation was refused, and it appeared probable that any further recurrence of the hæmorrhage would rapidly prove fatal, it was resolved to enlarge the openings and if possible secure the bleeding vessel; and, failing this, to proceed at once to ligature the common femoral artery, this vessel being selected as it was difficult to determine whether the bleeding came from the superficial femoral or branches of the profunda arteries. On June 8th the sinuses were laid freely open and scraped with a Volkmann's spoon. An attempt to find the source of the hæmorrhage proving unsuccessful on account of the sloughy condition of the soft parts round the bone, the common femoral artery was forthwith ligatured, the sinuses being packed as before with iodoform gauze. After this date there was no further hæmorrhage, the circulation in the limb was perfect, the ligature wound healed by primary union, and on Aug. 6th the sinuses had completely closed. A rather troublesome complication was a contracture of the knee, but this was overcome by extension and the use of a splint, and when on Aug. 13th the limb was placed in a plaster-of-Paris bandage it was quite straight. On Aug. 22nd the boy was sent to the convalescent hospital, where he entirely recovered from the effects of the hæmorrhage and put on flesh rapidly.

Remarks by Dr. WILKINSON.—The interest in this case attaches itself not so much to the complete recovery of the bone after the periostitis, but to the success which followed the ligation of the common femoral artery after several severe attacks of secondary hæmorrhage. It will be seen that the patient had four separate attacks—the first on the third day after the initial operation, the second on the twenty-fourth, the third on the twenty-fifth, and the fourth on the twenty-eighth day after the operation, so that there was an interval of three weeks between the first two attacks, during which time the discharge was very slight and serous in character. The source of the bleeding could not be made out satisfactorily, though from its character, which was more a welling up in a continuous stream than a jetting and forcible stream, it resembled bleeding from the distal end of a cut artery. Whether this was so or not cannot be said, for when the femoral was tied the bleeding had stopped, and though the sinuses were explored the tissues were found in such a sloughy condition that nothing definite could be made out as regards its origin. With regard to the cause of the hæmorrhage, one cannot account for it in any other way than as the result of the spread of septic inflammation from the diseased bone to the walls of the bloodvessel, though the drainage was perfect. It certainly cannot have been due to any disease of the vessel wall, and none of the constitutional conditions that predispose to hæmorrhage were present. The case demonstrates the fact that ligation of the artery higher up has its place in the treatment of secondary hæmorrhage, though it is not successful in the majority of cases, as is shown by statistics. It must, however, be admitted that in cases like the above this treatment is worth a trial before

resorting to the more heroic measure of amputation. One other point of interest in the case is the fact that, considering the unhealthy condition of the tissues and the weakened state of the patient, the vitality of the limb was maintained after ligation of the common femoral artery, statistics showing that a common result of this operation is gangrene of the lower extremity, as the ligature is applied above the origin of both the great nutrient arteries of the limb.

GENERAL INFIRMARY, LEEDS.

A CASE OF NECROSIS OF THE TIBIA OF EIGHT YEARS' DURATION, WITH LENGTHENING OF THE AFFECTED BONE AND THE FIBULA OF THE SAME SIDE;
REMARKS.

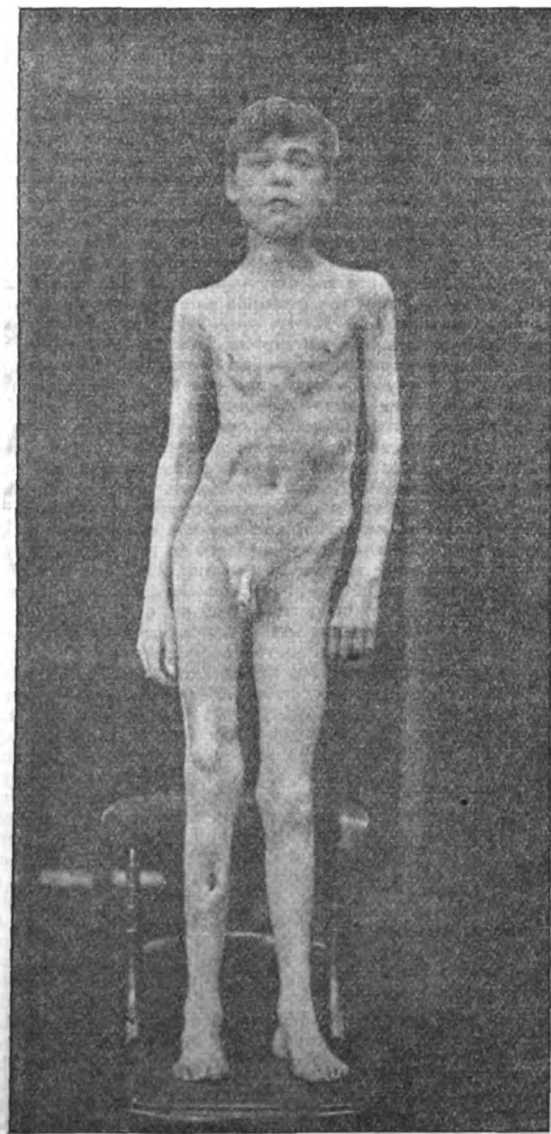
(Under the care of Mr. W. H. BROWN.)

THE condition of overgrowth of one of the long bones after necrosis of the shaft is not unusual; for instance, in the Leipzig Clinic, in 28 per cent. of the cases of

which acts as a kind of bow-string. The example of altered growth illustrated below is unusual, as the fibula does not appear to have been affected by the inflammatory process. The only explanation that appears quite adequate to account for it is that the vessels of the fibular side of the limb were increased in number, as were those on the tibial side, in consequence of the acute inflammation of the tibia, and that a state of chronic hyperæmia was produced, which resulted in hypertrophy of the bone; but why they became thus affected is not apparent. For the following notes we are indebted to Mr. Douglas Seston, house surgeon.

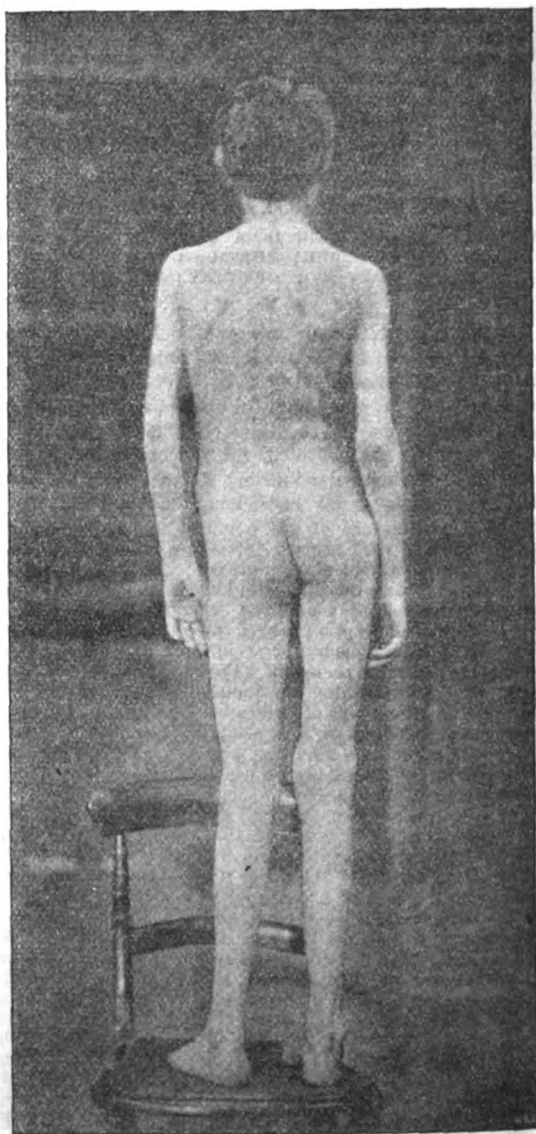
The patient, a boy aged fifteen, was admitted to the General Infirmary, Leeds, on Oct. 25th, 1894. Eight years previously he suddenly awoke one morning suffering from severe pain in his right leg; on attempting to walk he suffered very great pain; he was compelled to remain in bed for six weeks, during which time the leg became considerably swollen. At last the skin gave way, and there was a free discharge of pus. There was no history of any

FIG. 1.



View showing position of sinus in tibia and lengthening of right leg. necrosis of the femur elongation followed. We commonly see it also in the tibia, the bone assuming a bent shape from the want of corresponding growth of the fibula,

FIG. 2.



Back view showing lateral spinal curvature. previous illness or of traumatism. Since this time there had been a discharge from the sinus, and on few separate occasions small pieces of dead bone had been

removed. About four years ago the patient first noticed that the right leg was longer than the left; the difference between the length of the two legs at that time was said to be half an inch. This lengthening had become gradually more marked. He had never suffered from any pain or difficulty in walking since the first illness. At the time of his admission to the infirmary the patient was a healthy, intelligent boy fairly well nourished; he walked with a slight limp, but had no pain at all. The right tibia was thickened throughout the whole extent of the shaft. About the middle there was a sinus through which a sharp piece of necrosed bone half an inch in length protruded. On measuring the right tibia it was found to be two inches longer than the left; the right fibula was lengthened to the same extent. There was no distortion of the ankle-joint. There was a well-marked lateral curvature of the spine, the convexity being to the right above and to the left below. On Oct. 29th, under ether, sequestrotomy was performed, and a piece of necrosed bone two and a half inches long was removed from the interior of the shaft of the tibia. The wound gradually filled up, and the boy was sent home on Nov. 17th with a small superficial wound.

Remarks by Mr. BROWN—I have not hitherto observed any such condition as described in the foregoing notes. The text-books mention the abnormal growth of bones after long-standing inflammation, but fail to explain, why, as in the present case, a neighbouring healthy bone should undergo a similar increase in length. I have seen several cases where the overgrowth after necrosis has resulted in luxation of the joint of which the affected bone forms a part. If in the case under notice the fibula had not increased equally with the tibia a disabling distortion of the ankle-joint must have resulted. I have not come across any suggestion of treatment to obviate or modify this deformity, which of necessity will be well in progress before it is noticed. Any interference locally would probably aggravate the condition by setting up fresh inflammatory action and hence favouring further growth. The engravings (which are taken from photographs) show the patient's present condition.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Absorption and Metabolism in a Case of Pancreatic Obstruction.—Observations and Experiments on the Pathology of Graves' Disease.—The Relation of Swine Fever to General Ulcerative Colitis.—Imperforate Duodenum.—Actinomycosis of Cheek.—Malignant Reversion of Cystic Fibromata.—Diphtheria and Pseudo-diphtheria Bacilli from two sisters simultaneously affected.—Cultural Variations of Streptococcus Pyogenes.

THE last ordinary meeting of the present session was held on May 21st, the President, Dr. PAVY, being in the chair.

Dr. VAUGHAN HARLEY read a paper on Absorption and Metabolism in Obstruction to the Pancreatic Duct. After first relating the changes which occurred in the absorption of food in animals after partial or total extirpation of the pancreas, he proceeded to give the results of analysis in the case of a boy aged thirteen who apparently suffered from pancreatic obstruction due to gastritis following scarlet fever. Through the kindness of Dr. Auld of Wimborne he had the opportunity of making these analyses while the boy was on a fixed diet. In a series of analyses sugar never appeared in the urine, neither did acetone or aceto-acetic acid, so that it was evident that the obstruction of the pancreatic duct had led to no destruction of gland tissue. The bile passages had remained free, as there was neither jaundice nor bile in the urine, and bile products were found in the faeces. The boy was placed for four days on an exclusive diet of milk, all medicines having been stopped. A healthy individual when fed entirely on milk passed per diem with the stools about 1.5 grammes, or 7.7 per cent., of the nitrogen given. In the case of the boy fed on the same diet he passed in his stools 5.25 grammes, or 40 per cent., of the nitrogen given. It was found that drgs passed in their faeces very much the same percentage, so that in a boy with probable pancreatic

obstruction absorption of proteids from the intestines was very much hindered. As regarded the fats, while the normal man on milk diet passed about 6.7 grammes—that is to say, 5.6 per cent. of the quantity given—the boy with pancreatic obstruction passed no less than 143.80 grammes per diem—that is to say, 73.05 per cent. of the quantity given. It was thus very apparent that the absorption of both proteids and fat was influenced when the pancreatic juice was hindered from reaching the intestines. Carbohydrates were also somewhat interfered with, as pointed out by Abelmänn. As regarded body weight, the boy's weight on ordinary diet was 84 lb., during the second day on milk diet it was 83½ lb., and on the third and fourth days on milk diet it remained 83 lb. On returning to ordinary diet he regained his original weight. In the milk diet he was given no less than 2983.83 calories per diem—that is, 78.9 calories per kilo. When one subtracts from this the quantity of calories which were lost in the stools we find the boy absorbed 1336.8 calories—that is, no less than 36 calories per kilo. It would thus appear that in this case of probable obstruction to the pancreatic duct not only was the absorption of food from the intestines greatly interfered with, but even the food which had been absorbed from the intestines was not properly assimilated. Otherwise we could not explain the fact that a healthy individual when not doing excessive muscular exercise might retain his body weight on about 30 calories per kilo, while this boy, even when he absorbed 36 calories per kilo, was unable to retain his body weight. The diagnosis was confirmed by the fact that when the boy was given raw pancreas the fat in the stools was very greatly diminished. Another interesting point which Dr. Vaughan Harley's analysis brought out was the fact that, both in animals and man, when the pancreatic juice was prevented from reaching the intestines, the fats in their passage along the alimentary canal were nevertheless broken up, not only into free fatty acids and glycerine, but formed soaps—the only difference between the condition in health and that in obstruction to the pancreatic duct apparently being that a slightly increased quantity of soaps was eliminated with the faeces. It would appear from this analysis that although the pancreatic juice was more or less essential for the purpose of absorption of fat from the intestines, it did not owe this power to the "fat splitting-up ferment" of Claude Bernard, and therefore the non-absorption of fat in these cases was as yet unexplained. In conclusion, he gave as a summary the results of analysis in dogs and man. In cases of obstruction of the pancreatic flow the fat absorption in man was diminished to 26.95 per cent., while in the case of dogs with partial removal of the pancreas 4 to 37 per cent. of the fat given was absorbed. Still further, in the case of dogs in which the pancreas had been entirely removed no fats whatsoever were absorbed in the space of seven hours. As regards the proteids, 22 to 53 per cent. of the proteids given were absorbed in dogs; while when the animal had considerably lost flesh only 17 per cent. were absorbed. In the boy's case 60 per cent. of the proteids given were absorbed. Further, the body weight was unable to be kept constant when the individual absorbed the normal quantity of calories.—Dr. HERRINGHAM asked if there was evidence that the pancreatic duct was really obstructed.—Mr. RUSSELL WELLS asked what first directed attention to the fact that the boy was out of health.—Dr. VAUGHAN HARLEY, in reply, said that the symptoms were extreme weakness combined with the passage of most offensive stools, in which free fat floated.

Mr. W. EDMUNDS brought forward some Observations and Experiments on the Pathology of Graves' Disease. He came to the following conclusions. Accessory thyroids were extremely active functionally and were not merely embryonic. The symptoms of Graves' disease were due to some form of nerve disease rather than to a secretion from the diseased thyroid because (a) thyroid feeding or thyroid extract would not cause exophthalmos, (b) but the eye symptoms could be produced by stimulation of the cervical sympathetic and were therefore certainly of nervous origin. The enlargement of the thyroid could be explained by stimulation of the sympathetic. All the symptoms of Graves' disease could be produced by an artificial lesion of the brain, and all the symptoms, including the enlarged thyroid, could be produced temporarily by mental emotion. It was suggested that in cases in which ulceration of the cornea was threatened the sympathetic in the neck should be divided.

Mr. LEOPOLD HUDSON exhibited a series of Recent Specimens of the Large Intestine of Pigs which were affected with Swine Fever to illustrate the similarity of distribution between these lesions and the condition in the human being which had been described as simple or general ulcerative colitis. The specimens were obtained from the Board of Agriculture, whither they had been sent for the inspection of the Scientific Committee on Swine Fever at present sitting. This committee had been appointed to review the experience gained since the Swine Fever Act of 1893 came into force respecting the etiology, pathology, and morbid anatomy of the diseases classed as swine fever, and to supplement that experience by a series of experiments as to the bacteriology and life-history of these diseases, and as to their communication either directly or indirectly from animal to animal. In regard to this latter point Mr. Hudson raised the question whether this disease was communicable from swine to mankind. In the specimens shown the ulceration was confined to the caecal aspect of the ileo-caecal valve and to the large intestine, and every stage could be found, from the small simple ulcer to the large confluent areas of destroyed mucous membrane with adherent masses of necrotic tissue. In the human being the distribution of the ulceration was similar, though the naked-eye appearances were different owing to differences in gland structure in the human and pig's intestine respectively. With regard to clinical symptoms it was shown that in the pig the disease assumed either an acute or a chronic form, the acute disease being accompanied by fever and producing a rapidly fatal result, while in the chronic form the pig at first showed but little signs of illness, the temperature being often subnormal; then later diarrhoea and marasmus occurred. In the human being ulcerative colitis likewise presented either an acute or chronic form. Examples of the acute affection had been recorded in the Transactions of the Society by Dr. Allchin, Dr. Sharkey, and others, the disease being accompanied by fever of an irregular type and by the passage of blood and occasionally of sloughs by the bowel. In the chronic form, on the other hand, the temperature was often subnormal; the main symptoms were the progressive emaciation and diarrhoea. With regard to bacteriology there was already, in the case of the pig, an extensive literature; but in the case of ulcerative colitis in the human being but little had at present been accomplished. It was remarkable that in Dr. Allchin's case the patient herself attributed her illness to the eating of pork; the disease was also frequent in asylums, the patients of which institutions were frequently fed largely on pork. These facts, as well as the similarity between the disease in swine and in mankind both as to morbid anatomy and described clinical symptoms, certainly seemed to justify the prosecution of further inquiries as to their possible intercommunicability.—Dr. KANTHACK remarked that in cases of ulcerative colitis in the human being the lesions had been attributed to the action of the bacillus coli communis.—Dr. ROLLESTON said that the specimens shown did not seem to resemble the cases of ulcerative colitis he had seen in the human subject, in that in the latter large areas of necrosis did not occur, and he thought that in the swine there was not such a tendency to perforation.—Dr. HERRINGHAM said that in some cases in human beings necrosis occurred; for in one of Dr. Tooth's cases sloughs were passed, and the same occurred in one of the cases Dr. Hale White had related.—Dr. HALE WHITE said that the variations between individual cases were so great that it was very difficult to attempt to draw conclusions from the morbid anatomy alone.—Dr. VOELCKER said that in a case of ulcerative colitis which he had examined there were large patches of acute necrosis of the mucous membrane. The ulcers in the swine appeared to him to be more discrete than in the human subject.—Professor COPPE, Chief Veterinary Officer to the Board of Agriculture, gave a description of the onset and progress of the disease in swine. He said that in an early case all that would be found were small hyperaemic spots in the mucous membrane of the intestine; after that infiltration took place and a central area of necrosis formed. The ulcers might remain discrete and isolated, but very commonly they became confluent. The disease was extremely fatal to young animals, often before the ulceration had started. Two common pathological varieties of the disease were met with—the ulcerative and the diphtheritic form. Two good instances of the latter variety were shown.—Mr. HUDSON, in reply, remarked that the specimens shown were mostly of the chronic form of the disease; the acute form was now not so commonly met with

owing to the regulations in force for the destruction of affected animals and all pigs in contact with them. But the acute form, with its extensive confluent ulceration and with but little adherent slough, resembled very closely the disease as seen in the human subject. Experiments were about to be performed by inoculating and feeding pigs with ulcerative colitis from human beings, with a view to discover if intestinal lesions could be thereby produced. The colon of the pig contained a number of glands precisely like Brunner's glands in the human duodenum, and ulceration and infiltration of these produced the peculiar "button" ulcers of swine fever.

Mr. A. T. COLLUM exhibited a specimen of Imperforate Duodenum.

Mr. H. J. WABING showed a specimen of Actinomycosis of the Cheek. In the majority of cases this rare affection was consequent upon a disease of the upper or lower jaw, usually the latter. The patient was a young, healthy looking man aged twenty years, who came to hospital on account of a swelling of the left cheek. He first noticed the swelling in November, 1894, after which date it gradually increased in size, and in the middle of December it burst into the mouth, a certain amount of purulent fluid being discharged. After this the swelling for the most part disappeared, but in January, 1895, it reappeared, and till he came under observation it gradually increased in size. When seen the patient presented upon the left cheek a hard, irregularly shaped swelling about the size of a half-crown piece. This involved the whole thickness of the cheek, and upon the internal aspect there were several small fluctuating spots where the swelling had broken down. One of these was incised and a small quantity of purulent fluid evacuated. This was collected, and in it were found a number of small oval-shaped bodies which had a whitish colour. These were examined by Dr. Kanthack, who demonstrated the presence of the actinomycotic fungus. The patient was admitted to the hospital and the following operation performed. The reddened area of skin over the swelling was removed by an elliptical incision and the underlying tissues, which were infiltrated by the inflammatory process, were thoroughly scraped away with a Volkmann's spoon. The mucous membrane of the mouth was not divided as the swelling lay over the course of the parotid duct. After this had been done the wound was irrigated, and then packed with iodoform gauze upon which had been spread a layer of iodoform paste. This method of dressing was repeated daily, and at the expiration of three weeks the cheek was quite healed. There were several enlarged submaxillary and parotid lymphatic glands, but these were thought to be due to simple inflammation, and on this account they were not interfered with. The swelling of these glands soon cleared up after the operation. This case was of interest on account of its rarity and also on account of the result of the treatment. It could not be ascertained how the patient had contracted his disease; in all probability the inoculation must have taken place on the inner surface of the cheek; possibly the fungus may have been introduced along with some infected food. The presence of iodoform in the wound appeared to have a considerable influence in arresting the growth or destroying the life of the fungus.

Mr. HERBERT SNOW read a paper on the Malignant Reversion of Mammary Cystic Fibroma. Case 1 (*reversion into carcinoma*).—The patient, aged sixty-four years, had the left breast excised in February, 1887, for a tumour as large as an orange, of several years' duration; there was no gland enlargement. The mass consisted of firm, white fibrous tissue studded with minute acinous dilatations, lined by columnar epithelium; there was nowhere any trace of carcinoma. In March, 1888, there were extensive deposits in the scar, in the corresponding axilla, and in the viscera, which were found post mortem to be infiltrated with typical scirrhus carcinoma. Case 2 (*reversion into true sarcoma*).—In April, 1893, a patient aged forty-two years had her right breast excised for a bossy tumour as large as a child's head, of more than four years' duration. There had been rapid increase for two months; pain had been present only three weeks. There was no gland enlargement. The patient was in robust health. The great bulk of the mass consisted of solid, white fibrous tissue studded with microscopic cysts. Amid this, however, was a small region not larger than a hazel nut, of greyish colour and soft consistence, consisting of embryonic spindle cells in bands (spindle-sarcoma). The disease recurred under the scar

in the following September, this time showing sarcoma tissue only, and again in April, 1894, when the whole parietes in the vicinity were found extensively infiltrated. Text-books confounded the connective-tissue overgrowths appearing during the development of the mamma with those attendant on its devolution or permanent decay. The "fibroma of adolescence" appeared in young girls from fifteen to twenty-five, was hardly ever accompanied by cyst formation, was often multiple, attacking both breasts, was never associated with cancer, except casually, and commonly yielded to suitable local treatment or spontaneously disappeared. On the other hand, the "cystic fibroma" of women past thirty-four was always associated with cysts, formed a single, slowly growing, bulky mass, and eventually passed always into a malignant lesion, sarcoma or carcinoma. The redundant white fibrous tissue failed as age advanced to undergo organisation, and merged into spindle-celled sarcoma; or else the included islets of acinous epithelium developed scirrhous carcinoma of the ordinary type. The point had a significant bearing upon the general question of cancer etiology.

Mr. SHATTOCK gave two short communications, one on Diphtheria and Pseudo-Diphtheria Bacilli from two sisters simultaneously affected, and the other upon Cultural Variations of *Streptococcus Pyogenes*.

The following card specimens were exhibited:—

Dr. H. M. FLETCHER: Secondary Sarcoma of Lung.

Mr. S. PAGET: Unusual Form of Stricture of Oesophagus.

Mr. W. H. BATTLE: (1) Melanotic Sarcoma of Clitoris; (2) Unusual Effects of Bullet Wound of Vault of Skull; and (3) Diffuse Tuberculous Infiltration of Tibia.

Dr. H. MACKENZIE: (1) Liver with Abnormal Lobes and Multiple Gummata; and (2) Emphysema of Intestine.

Mr. RUSSELL WELLS: Replaced Trephine Circle of Bone.

Dr. CYRIL OGLE: Ulcerative Colitis.

The business of the annual meeting was then proceeded with. The report of the Council showed that the affairs of the society were in a satisfactory state. The introduction of experimental pathological work had stimulated the attendances at the meetings and had brought forth much valuable material. The usual votes of thanks to the retiring officers were carried.

The following is a list of officers for the ensuing year:—

President: Henry Trentham Butlin, D.C.L., F.R.C.S. Vice-Presidents: Thomas Barlow, M.D., William Selby Church, M.D., Norman Moore, M.D., Seymour Sharkey, M.D., Alban H. G. Doran, Frederick S. Eve, Cuthbert H. Golding-Bird, and Frederick Treves. Treasurer: Sidney Coupland, M.D. Honorary Secretaries: G. Newton Pitt, M.D., and J. H. Targett, M.S. Council: Wilmot Parker Herringham, M.B., A. A. Kanthack, M.B., Hector Mackenzie, M.D., Sidney Martin, M.D., William Pasteur, M.D., H. D. Rolleston, M.D., Charles Scott Sherrington, M.B., F. Charlewood Turner, M.D., A. F. Voelcker, M.D., Dawson Williams, M.D., Gilbert Barling, M.B., Jones Berry, M.B., Stanley Boyd, Anthony Bowly, E. Hurry Fenwick, C. B. Lockwood, Stephen Paget, Bilton Pollard, M.B., Samuel G. Shattock, and Charles Stonham.

HUNTERIAN SOCIETY.

The Necessity for a Central Organisation in the Medical Profession.

A MEETING of this society was held on April 24th at the London Institution, Mr. CHARTERS J. SYMONDS, President, being in the chair.

Mr. F. R. HUMPHREYS read a paper on the Necessity for a Central Organisation in the Medical Profession, illustrating his arguments by facts derived from the experience of himself and others, so as to show the necessity for speedily meeting the evils described. The lay medical aid associations were first attacked, and reference was made to the resolution of the General Medical Council, which had appointed a committee to consider the question and had come to the conclusion that these associations overworked their officers and underpaid them. It was unfortunately the case that some men would not allow any mere ethical questions to prevent their acquiring practices at the expense of their neighbours. Lay companies must be fought with capital if they were to be beaten. Provident dispensaries appeared to have been established early in the century, and not only now were the rates for members too

low, being at the highest 7½d. for a visit or consultation, but a great part of the money was expended on unnecessary premises and officers. Mr. Humphreys gave a few instances of payments at various provident dispensaries, including Tunbridge Wells, Reading, Leamington, and Salisbury, showing the latter to be the only one which attempted to pay the medical men properly. In the case of sick clubs, which were provident societies without wage limit, the club officer received usually from 3s. 6d. to 5s. per head per annum, but in the country these clubs rarely paid their medical men more than 4s. per head per annum, a sum which could not be remunerative, but which would be accepted in order to avoid competition. It was simply impossible for a dispensary practitioner to comply with the requirements of medical practice while charging such fees. He must be dishonest in some direction in order to make enough to live upon; and inferior and insufficient drugs, unqualified assistants, card advertising, &c. were a few of the common evils attached to "cheap dispensaries." The only way to avert these evils lay in a properly worked provident system, under which charges, fair alike to medical men and patients, were made. The present condition of things would not be long tolerated if thoroughly exposed through the medium of a representative committee under the Royal Colleges taking evidence like a House of Commons select committee, as already proposed by Mr. Bryant. It was estimated that in London one in every two persons received charitable medical relief at the out-patient departments of hospitals, and from figures given by Dr. Rentoul it would appear that 50 per cent. were unsuitable cases. Mr. Humphreys then read part of a letter from a medical man who had acted as locum tenens last July at a public dispensary, where he had to see 210 patients in three hours, a hundred more applicants being dismissed with "repeat" medicines. Many of the cases were utterly unsuitable, and some came from Gravesend and other equally distant places to be treated with medicine for a week for sixpence. Another evil connected with hospitals was the pay ward. If a medical man could send his patients to the pay wards of a hospital and attend them there it would not matter, but when once they were within the hospital walls they were practically lost to the outsider. A further danger threatened in the shape of nursing homes where patients were either attended by no medical man at all or by one specially appointed to the institution. No medical man should patronise these nursing homes unless the patients were under medical advice. Another important question was that of the relations between consultants and general practitioners. The junior consultants had very inadequate remuneration, but if the leading physicians would take fees corresponding to their position the difficulties would be less. Much might be done if those practitioners who were willing to act as pure consultants were to state this fact in some binding way. The term "infamous conduct" had been much objected to as meaning one thing to the profession and another to the outside public. Mr. Humphreys had written to Sir Richard Quain asking him if the General Medical Council would be likely to approve of an organisation to promote discipline in the profession. Sir Richard Quain replied that he was confident that the Council would keep within its statutory authority, which does not enable it to interfere in the internal discipline of the profession; and in another letter he said that it would be quite impossible for the Council to strain its powers in that direction. Under these circumstances what controlling influence could be devised? Mr. Humphreys himself proposed a union of medical associations, whose delegates should form local boards, and these in turn appoint directors.

The CHAIRMAN then asked for opinions on the best way of meeting the evils complained of, whether by means of purely moral and ethical influences or by the establishment of an ethical association to which every man would belong, non-membership marking him as not respectable. It had been suggested that the best remedy for the special evils attending provident societies was that all the medical men in a particular district should combine together to form a provident society of their own, the fees being used for the payment of the members.

Mr. BRYANT said that the diseases of the body corporate needed attending to just as much as the diseases of the body corporal. Most of the faults that existed in the profession arose through competition; but what power had the General Medical Council to influence those who undersell? It was not only in the lower grades of the profession

that this under-bidding went on, but in the higher grades as well. Five years ago the Government was asked by the Royal College of Surgeons of England for further powers, but it would not grant them. It had been again approached on the subject and a series of by-laws put before the Home Secretary. Since the question was put before the Home Secretary an association had arisen speaking in the name of the Members of the Royal College of Surgeons of England and asking the Home Secretary not to grant the desired powers. The only mode of punishment was by removing the names from the list of Members of the College, but that seemed to be too severe. It was easy to take a diploma away, but not so easy to restore it.

Dr. GLOVER said that he was disposed to agree with Mr. Bryant that the powers of the General Medical Council were too limited to permit of its doing anything. He did not think that any attempt to interfere with the practice of medical men would have the support of the Council. It had been already tried and the Council declined to pass any judgment upon the conduct of the men. The medical corporations might do more than they did, the power of the General Medical Council being reserved for extreme cases. The medical corporations would condemn what seemed to be a contempt for their authority. They would take the name of a medical man off their list and they would deprive him of his diploma, but the man from whom the diploma was withdrawn would use his title, and continue to do so, without the slightest sign from the corporation which had withdrawn the diploma. Could anything be more obvious than that it was the duty of the body whose rules had been defied to bring that man to court? In every locality there should be an association of medical men to bring pressure to bear upon those who did these things.

Dr. ALDERSON said that the out-patient departments of hospitals had done a grievous wrong to the general practitioner. He wished to support the proposition made by Colonel Montefiore as to the desirability of a Central Board. Such a board would prevent the starting of unnecessary special hospitals merely for the benefit of one medical man. As to the sick club system, the General Medical Council could not do much, but some improvement might be expected to result from higher education. He agreed with Dr. Glover that the profession must not be made into a trade, and approved of the suggestion that medical men should not be allowed to dispense their own medicines.

Mr. COTMAN said he was under the impression that the General Medical Council was competent to declare what was infamous in a professional respect. Without combination nothing could be done, and medical men should combine in the various districts in which they live.

Dr. CAMPBELL POPE thought that the General Medical Council would greatly help if they could define some degree of misconduct less strong than that which was termed "infamous." Being struck off the Register was a very serious thing, and if something less severe could be arranged it would have great effect. The Council should also notify to the registrars the names of those who had been struck off the Register. The practices which came before the society were canvassing patients for clubs and sending out advertisements, and such cases should be reported to the corporations from which the offenders received their diplomas. Many patients with good incomes were going daily to various hospitals, and the special hospitals were patronised by a better class than the general ones, as had, in fact, been pointed out by the managers of special hospitals themselves. There was a certain flavour of charity connected with the general hospitals, and people did not like to say they had been to Guy's or St. Bartholomew's or University College Hospital, but they did not object to say that they had obtained advice at the Hospital for Paralysis or for Diseases of the Eye or the Skin. Moreover, there was only one University which could remove a member for misconduct, and many men who had been deprived of their diploma still flourished their University degree in the face of the General Medical Council. As Mr. Bryant had remarked, the reform must come from the conscience of the man.

Mr. SMALLPEICE said that the corporations and colleges might influence erring members by censuring them without removing them. What was wanted was an ethical association in some form which should be regarded as authoritative.

Dr. CAGNEY said that he did not believe that any medical council would have the power to deal with this question. Medical men did not require looking after more than any other

body of men, and conscientious medical students would do all that was required to raise the condition of the profession.

Mr. HUMPHREYS, in reply, said that those men who charged unremunerative fees were degrading the whole profession, and some protection against them must be found. Medical etiquette had no weight at all with such men.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

The Relations between the Conditions of the Soil and the Prevalence of Epidemic and Endemic Diseases.

THE last meeting of the session of this society was held on May 17th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Brigade-Surgeon-Lieutenant-Colonel LANE NOTTER, M.D., Professor of Military Hygiene at Netley, read a paper on the Relations between the Conditions of the Soil and the Prevalence of Epidemic and Endemic Diseases. Some such influence had, he said, been recognised from the time of Hippocrates, but the scientific study of the geographical distribution and seasonal prevalence of diseases was of quite recent growth. Pettenkofer, von Fodor, Hirsch, Fleck, Schlössing and Müntz, Lewis and Cunningham, and others had taken up different aspects of the question; but while many of the phenomena of disease were clearly referable to telluric conditions, the fact that these conditions were for the most part processes in which numerous factors were involved, some coöperating and others mutually antagonistic, rendered their investigation difficult even for limited areas. We might consider the complex result and the effects of the several factors, but again our knowledge even of these was imperfect—e.g., as regards the organic acids and other bodies which, together with salts, water, air, and carbonic dioxide, went to make up the food of plants. Among the diseases which were evidently influenced by soil conditions were cholera, diphtheria, enteric fever, diarrhoea, malarial fevers, phthisis, rheumatism, yellow fever, dysentery, and a few others. *Cholera*.—Its importation was a necessary condition, save in regions where it was constantly present, but there were localities, as Pettenkofer had pointed out, where it always assumed a severe type, and others the sanitary conditions of which were no better where it never established itself. The bacillus was easily identified, though it was not certain whether the coöperation of others was not required for the production of the full effects. In this country drinking water was, at any rate for many years past, the chief or sole vehicle of infection, but in Germany the ground water was held to exert a powerful influence, Pettenkofer maintaining that cholera never prevailed where the level of the ground water was fixed and constant, or in absolutely impervious soils, where, in fact, there was none, since by the rise and fall of the ground water wells became infected, and, as Pfeiffer argued, the movements of the ground water were the index to the moisture, aeration, and temperature of the surface soil, the home of all bacteria. Aridity, or prolonged drought, and very heavy rainfall or submergence were alike unfavourable to the spread of cholera, severe epidemics occurring in India only during light, warm rains in arid regions, such as the Panjab, and in the comparatively dry intervals following the rains in humid Bengal, though other causes, as human intercourse and habits, were concerned in its diffusion. Its favourite haunts were sandy soils alongside large rivers or in the proximity of tanks, but the bacillus or vibrio, though often found in tanks or filters, had not yet been detected in the soil. Feeble as they were, they had been observed to multiply in moist, warm soil for forty days, and in a mixture of soil and sterilised faeces for twenty-eight, though in the presence of crude faeces they perished within a week. *Diphtheria*, though propagated mainly by personal intercourse, recurred year after year in the same places, as if connected with the soil, and it seemed to prefer clays, but probably the nature of the soil mattered little so long as it was cold and damp. In moist earth, at a temperature not over 14°C. and in the dark, cultures could be maintained for four months; but warmth, dryness and light were fatal to them in a short time. Adams had sought to show a relation between outbreaks of diphtheria and the movements of the ground water, but we knew too little of these in this country, and other factors were so powerful that

there was no evidence in support of this view. The influence of temperature and moisture fully explained its absence from the plains of India and its prevalence in the hill stations with their more European climate. *Enteric fever* was universally distributed, but outbreaks were always strictly local. Nowhere did elevation have any real influence, but it was more frequent on recent formations, these being the more permeable. Ranke at Munich and Cameron in Dublin observed its prevalence on pervious, sewage-sodden soils, the agency of drinking water being excluded, and the movements of the ground water and ground air, especially a rapid fall as Pettenkofer maintained, the only possible exciting cause. The presence of the bacillus in the soil had not been demonstrated, but experiments had shown that it lived longer in moist soil than in dry, and in garden earth than in pure sand, while it died out very soon in peat. The experimental evidence of dried enteric excreta being conveyed as dust had a direct bearing on a possible danger from the use of earth closets, especially in India. *Diarrhæa*, as occurring in summer and autumn, was evidently dependent on the presence of putrefying organic matter, not necessarily faecal, and on permeability of the soil, being rare on slates and granite, and not specially prevalent on clays. Ballard first called attention to the influence of high temperature of the soil, not of the air alone, the mortality rising when the temperature of the earth at a depth of four feet reached 66° F., and declining a week after it had sunk to 60° F. No specific bacillus had been shown, but the putrescence of foods, especially milk, was a most important factor in its causation. *Malarial fevers*, depending on the presence of organic matter under certain conditions in the soil, were greatly influenced by the movements of the ground water and ground air, which was aspirated by the reduced pressure of an atmosphere warm and laden with moisture, as in some tropical regions and in all warm and temperate climates in summer and autumn nights, or escaped when the soil was turned up. The poison was air-borne and not carried by dust, desiccation and submergence alike arresting its diffusion, though it would be taken in by drinking the water of malarial districts. The microbe was most probably protozoic, an amoeba, the plasmodium of Laveran, the "spores" of which stored in the spleen sent out successive broods of the organism. It had, however, not been observed or cultivated out of the body. *Phthisis*.—The observations of Middleton, Buchanan, and Bowditch on the relation between the prevalence of phthisis and dampness of soil and the decline in the mortality that followed the better drainage of certain towns were well known, but had been severely criticised. Kelly had shown that phthisis preferred cold, damp, bleak localities whatever the soil, and it was frequent enough among persons in ill-ventilated, overcrowded rooms. In fact, whatever conditions excited catarrhs of the respiratory organs predisposed to phthisis, catarrhs constituting the non-tuberculous forms and inducing susceptibility to tuberculous infection. Improved social conditions of the town populations should be considered. *Rheumatism*.—There was really little or nothing in common to the two diseases called acute and chronic rheumatism, names which were relics of obsolete doctrines. Chronic rheumatism was set up by exposure to cold and damp. Acute rheumatism seemed to prefer a warm, dry soil, and to assume an epidemic character in years of small rainfall and low ground water. The tendency of recent thought was to look on it as a soil-bred bacterial disease in some respects akin to erysipelas. *Yellow fever* was confined to the banks of rivers and seaports in the tropical zone of the Atlantic, where the polluted mud was alternately flooded and dried, and the foreshores had not been covered by shingle or docks and quays. Creighton's theory of its evolution from the filthy bilge-water of the slave ships, saturated with the excreta of dysentery and typhus-stricken negroes, had much in its favour. The microbe, undoubtedly propagated in the mud, had not been certainly isolated.

Dr. SALTET (medical officer of health of Amsterdam) said that agues, so prevalent in Holland forty years ago, had become rare since the substitution of steam pumping engines for windmills rendered it possible to keep the ground water at a constant level.

Dr. NEWSHOLME (medical officer of health of Brighton) regretted that owing to the neglect of Pettenkofer's teaching there were in this country no regularly recorded observations of the movements of the ground water, except in Brighton

and Croydon, such as were taken daily at sixteen stations around Berlin. Under present conditions it would seem that an impervious soil was likely to be more healthy than a pervious one. In comparing the frequency of epidemics on different soils the numbers of the population living on each should be taken into account. It was instructive to contrast phthisis and diphtheria, in which the same factors of soil &c. and personal intercourse were concerned, but inversely; so that while it was not easy to prove infection in phthisis, the influence of soil was totally obscured in diphtheria; and while the former had decreased under improved social conditions the latter had, at certain ages at any rate—viz., those of school life—increased.

BRITISH GYNÆCOLOGICAL SOCIETY.

Pregnancy complicated by Suppuration within the Pelvis—Exhibition of Specimens.—Intra-uterine Stems.

A MEETING of this society was held on May 9th, Dr. CLEMENT GODSON, the President, being in the chair.

Dr. H. MICHIE (Nottingham) read a paper on *Pregnancy complicated by Suppuration within the Pelvis*. He said that his attention had been called to this subject by a paper read before the society in February, 1891, by Dr. Grigg, on the influence of Pre-existing Inflammatory Disease on the Puerperium. He thought that the vague expression "puerperal fever" should be given up, just as the term "surgical fever" had been discarded; he believed that the two diseases were due to similar, if not identical, causes. He related six illustrative cases, which fell naturally into three groups—viz., (1) perforation of the vermiform appendix, giving rise to abscess within the pelvis; (2) suppurative peritonitis due probably to pre-existing disease of the uterine appendages and operated upon after delivery; and (3) suppuration of the appendages operated upon during pregnancy. Group 1 was represented by one case, a patient in the fourth month of pregnancy whose symptoms and physical signs pointed to disease of the appendix. Abdominal section was performed, when the ruptured appendix and an escaped concretion were removed. Recovery was uneventful and natural delivery occurred at term. Had the complication arisen at or near the time of delivery it might have been overlooked, and the practitioner might have been accused of neglecting the use of proper antiseptic precautions. Group 2 contained two cases. The first of these patients was seized five days before labour with acute abdominal pain, the symptoms subsiding with rest, but being aggravated by the delivery. She rallied slowly till the sixth day after labour and then became rapidly worse. She was operated upon without delay, and about three pints of thin offensive fluid were evacuated from the abdominal cavity. The Fallopian tubes, which contained pus, and the ovaries, which were gangrenous-looking and studded with small abscesses, were removed and drainage used. Recovery was slow but uninterrupted. The second case of this group was very similar. The patient miscarried in the sixth month of her first pregnancy after having had a profuse yellow vaginal discharge for six weeks. The appendages in this case did not seem so much diseased and were not removed. The patient's recovery was satisfactory and she was now seven months advanced in her second pregnancy. These two cases were, in fact, instances of puerperal peritonitis commencing before delivery. In the second case there was a definite history of gonorrhœa. Group 3 consisted of three cases. The first patient was seized with severe pain during the fourth month of pregnancy. The uterus was retroverted. Abdominal section was performed and both Fallopian tubes were removed. The left one contained pus; the right one was thickened and inflamed, but not otherwise diseased. The patient recovered rapidly; pregnancy proceeded to term and the labour was natural. The second case was a multipara aged forty years, from four to five months pregnant and suffering from gonorrhœa and peritonitis. Immediate operation was advised, but the patient delayed it for four days, at the end of which her pulse had risen from 98 to 128 and all the symptoms had become worse. The pelvis contained about half a pint of sero-purulent fluid and there was double pyosalpinx. The appendages on both sides were removed and a rubber drainage-tube was inserted. She went on well for two days and then miscarried; soon afterwards all the symptoms of

acute septic peritonitis set in and death ensued on the sixth day. The last case was a married woman aged twenty-two years, the mother of two children. She ceased to menstruate in May, 1892; in August she had at irregular intervals labour pains, with discharge of blood from the vagina. When seen in October the abdomen contained two tumours. One, on the right side, was fixed, smooth in outline, reaching to the umbilicus, and almost filling the pelvis; in the pelvic part fluctuation was felt. The other tumour, on the left side, was movable, uniform and smooth, and reached nearly to the costal cartilages. The os uteri was close behind the pubes and was dilated to the size of a florin; a foetal head was presenting, the membranes being unruptured. The next day labour pains came on strongly, blood-clots were passed, the patient suffered from rigors and vomiting, her pulse rose to 136, and her temperature to 103.6° F. On the following day, her condition being critical, the abdomen was opened and a cyst of the right ovary universally adherent and containing fetid pus was removed. The operation occupied fifteen minutes and labour was completed four hours afterwards. In the evening there was much distension and a glass drainage-tube was introduced. There was gradual improvement till the sixth day, when distension having returned the drainage-tube was reintroduced and a quantity of sero-purulent fluid was withdrawn. Three days later the tube was finally removed and recovery proceeded without interruption. Thirty-three days after the operation the patient was discharged recovered. In March, 1894, she returned and was found to have a small ovarian cyst on the left side. This was removed and it was observed that all the previous adhesions had disappeared. She went home fourteen days after the operation. Although in the great majority of instances puerperal peritonitis arises from septic material introduced during or soon after labour, these cases show that occasionally it might originate in pre-existing inflammatory conditions, and might be altogether independent of immediate infection from without. — The PRESIDENT regarded Dr. Michie's paper as one of special value. He had seen a case at St. Bartholomew's Hospital very like the first one related. The patient suffered from fever, pain, and vomiting, and peritonitis was diagnosed. In twenty-four hours labour came on and death ensued. At the necropsy a ruptured vermiform appendix was found. In another instance a patient died during pregnancy, probably from a ruptured pyosalpinx. Operation was advised, but was not allowed. Dr. Michie's paper would help to exonerate men who were in some cases unfairly accused of having conveyed infection to their patients.—Dr. LEITH NAPIER, Dr. ROUGH, and Dr. KEMPSTER joined in the discussion, and Dr. MICHIE briefly replied.

Mr. JESSETT showed two specimens: 1. A Large Fibroid of the Uterus, the whole organ having been removed by Abdominal Hysterectomy. The patient's mother had been operated on by Mr. Jessett eight years previously for uterine fibroid. Trendelenburg's position was used. A long, specially made speculum was passed high into the vagina. Peritoneal flaps were reflected from the tumour and the speculum was cut down upon. The uterine arteries were tied, the broad ligaments cut through, and the whole organ lifted out. Ligatures were passed through the peritoneal flaps, without tying, and their ends, left long, were drawn down through the vagina. The patient was making an uneventful convalescence. This was his fifth case treated by this method. 2. A Case of Hematosalpinx. Blood was found in both tubes; one of them ruptured during operation, allowing old dark blood-clots to pass into the pelvis. The patient made a good recovery.

Dr. HEYWOOD SMITH showed two specimens: 1. Migrating Ovarian Dermoid. The uterus in this case was retroflexed in such a way that when replaced in its normal position it fell back with a jerk. The tumour was to the right of the uterus, but was found to belong to the left side. The left Fallopian tube passed in front of the uterus, so as to hold it in a backward position. The ovary and tube of the right side were deep in the pelvis and atrophied. The patient made a good recovery. 2. Sarcoma of the Uterus removed by Vaginal Hysterectomy. Before operation a fragment of the growth was examined by a pathologist, who reported it to be sarcomatous. Owing to the difficulty of applying ligatures in this case the broad ligaments were secured with Braithwaite's clamp forceps. The patient was progressing satisfactorily.

Dr. MACNAUGHTON JONES showed for Dr. DUKE some

Intra-uterine Stems, as well as one of his own. He never himself used them except after division of the cervix for stenosis and dysmenorrhoea. Much of the harm caused by stems was due to their being too long.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Multiple Diabetic Neuritis.—Skin Grafting from the Lower Animals.—Exhibition of Cases, Specimens, and Drawings.

THE tenth meeting of this society was held on May 15th, Dr. CLOUSTON, President, being in the chair.

Professor T. R. FRASER read a paper on a case of Multiple Diabetic Neuritis. The patient, a man, thirty-two years of age, sought admission to the Glasgow Royal Infirmary on account of general weakness, and was found to be suffering from diabetes. He had previously undergone severe anxiety through the prolonged illness of his wife. He improved under treatment and was able to return to work, but after some time he relapsed and was taken into the Edinburgh Royal Infirmary. On admission, being on ordinary diet, the urine contained on an average 7178 grains of glucose in twenty-four hours, but with restricted diet the amount was 3622 grains in the same period. While he was taking pancreatin the average excretion of glucose fell to 1716 grains in twenty-four hours. From the time of admission there was pain in the calves and ankles, which had persisted for three months. He felt neither numbness nor abnormal sensations. The sensations to heat and cold in the limbs were normal. There was marked pain on pressure in the legs, pectoral muscles, and biceps. The knee-jerks were absent. The gait was normal. Vision was diminished; a central scotoma for red was present in both eyes. Notwithstanding the diminished excretion of sugar the patient's general condition deteriorated, and the chloroform-like odour, which had been present from the time of admission, became more marked. Dyspnoea, orthopnoea, and coma ensued, and were followed by death. Post mortem phthisis was discovered, but no other gross lesion. The disease was probably a toxic neuritis caused by a poison derived from the sugar.—Dr. ALEXANDER BRUCE gave an account of the post-mortem examination. The optic nerves, specimens of which were stained by the Weigert-Pal and Marchi methods, were much degenerated in the centre. The right posterior tibial nerve was undergoing parenchymatous neuritis, and the corresponding nerve on the left side showed a like degeneration, but in a less degree. The gastrocnemii muscles, stained by Marchi's method, showed between the muscle columns little rows of black dots in the binding substance resulting from fatty degeneration. The muscle striation seemed practically normal.—Dr. JAMES said that he had two recent cases of neuritis in his wards, one in a patient suffering from diabetes and the other in a case of advanced phthisis. The concurrence of neuritis with tuberculosis was incompatible with any toxic theory with regard to sugar.—Dr. G. A. GIBSON said that multiple neuritis occurring in diabetes seemed to be independent of the amount of sugar present. There is an analogy between alcoholic poisoning and the condition now under discussion, and there must be some form of toxæmia that causes the neuritis. He advanced the view that rigid diet was sometimes inadvisable, tending to increase the acidity of the blood, whereby fermentative processes were set up in which acetone was the last development.—The PRESIDENT said that these histological changes might be compared with certain cortical changes found in diabetic insanity. In one such case Dr. Clark had found decided changes in the nerve cells of the cortex. Diabetic coma and congestive effects, no doubt arising in the vaso-motor centres of the cortex, might be accounted for on the toxic theory. The boils which sometimes occur might be connected with toxic changes in the nerves of the skin.—Professor FRASER then replied.

Mr. ALEXANDER MILES read notes on Skin Grafting from the Lower Animals. Of the different methods of skin grafting Thiersch's gave the best results, but it had the disadvantage of necessitating the use of chloroform. There was also the difficulty of obtaining skin. The lower animals, however, were always available. In his cases dogs, rabbits, cats, and frogs had been employed, and dogs had been found the most satisfactory. Young animals were used, their skin

being preferable. The ulcer was prepared as for any grafting. Scraping was not necessary; in fact, it was to be deprecated. The animal having been killed, the abdomen and flanks were shaved and purified, and the skin was dissected up and floated out in warm boracic lotion. The size of the graft varied up to six inches by one inch. The graft was placed on the ulcer and pressed down; the ulcer was covered as completely as possible and a dressing applied. Success depended on the subsequent dressing. The first dressing should not be done until at least forty-eight hours had elapsed, and should be delayed longer if possible; the greatest care must be taken to avoid disturbing the grafts. Complications might arise, such as sloughing of the graft (possibly caused by too early dressing), hæmorrhage under the graft, &c. The situation of the ulcer might require modification of the treatment. On the thorax the bandage should be very loose so that the grafts might move with the chest wall. Ten cases were quoted, in four of which the results had been eminently satisfactory. In two of them amputation—which had been recommended and for which the patients were anxious—was avoided. Four cases were partially successful and two were failures. After grafting, the scars were stronger than ordinary cicatrices, and no hair, pigment, or sweat glands were present in them.—Mr. JOSEPH BELL said that he had a good deal of experience some years ago with Reverdin's method of skin grafting. He had almost exclusively used tame white rats, the young of which supplied an excellent plastic skin. It was of importance not to take the subcutaneous fat in removing the skin. The grafts were put on granulation tissue. He never scraped if he could help it, and agreed with the recommendation that there should be no dressing before forty-eight hours. In dressing, the difficulty was to make the grafts adhere in mobile parts such as the thorax. He used small pieces of protective a quarter of an inch square, applied in large numbers one above another like the scales of an armadillo, the idea being that in movement the pads of protective moved on each other, and so did not disturb the grafts. Long ago David Hamilton suggested sponge grafting. The results were most extraordinary, the sponge seeming to act as a matrix or support for the granulations. He mentioned a case where a large mass of sponge placed in the axilla became embedded in granulations.—Mr. A. G. MILLER said that whatever resulted from skin grafting was not true skin, but cicatrix. Some grafts did more good than others, skin being the best. Sponge grafting was mainly useful for the protection of granulations; it also helped cicatrization, but not so well as skin grafting.—Mr. CATHCART thought the advantage of Mr. Miles's method over Thiersch's was, as had been said, the absence of the necessity for giving chloroform. The results also were as good. Young pigs might be useful as a source of grafts, but they were expensive.—Mr. WALLACE said it was quite intelligible that no hair or sweat glands should be present, for in making the Thiersch graft they did not cut deep enough to take glands but only the tips of the papillæ, just enough to draw blood. Personally he leaned to Thiersch's method rather than to grafting from the lower animals. They could, as a rule, get the patient to consent to the administration of an anæsthetic, and could take large portions of skin from the front of the thigh.—Mr. MILES then replied.

The PRESIDENT showed a patient who had recovered from Insanity under treatment with Thyroid Extract, administered in large doses till what might be termed a septic thyroid fever was set up. After from three to six days the extract was discontinued and the patient was nursed in bed. The effect on nutrition in successful cases was well marked. The thyroid extract seemed to stimulate the trophic centres and the patient gained weight rapidly.

Mr. CATHCART showed two male patients with Venereal Warts. The cases exemplified the fact that venereal warts might be acquired without any irritation from gonorrhœal discharge, neither of the patients having had gonorrhœa.

Dr. ALEXANDER BRUCE showed specimens of the Embryo *Filaria Medinensis*. The embryos were exhibited free and also in the host, the minute freshwater cyclops.

Dr. G. A. GIBSON showed: (1) Drawings of a Brain from a case of Porencephaly, and from a case of Thrombosis of the Lateral Sinuses and Cerebral Veins in which there was red softening of the internal capsule; and (2) Photographs from a patient suffering from Double Facial Paralysis, and from a patient suffering from Alternate Paralysis from a Lesion of the Crus Cerebri.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Excision of the Rectum.

A MEETING of this Section was held on April 26th, the President, Mr. W. THORNLEY STOKER, being in the chair.

Mr. HEUSTON read a paper on Excision of the Rectum in Malignant Disease implicating the Middle Third of the Bowel, advocating a modification of the old perineal operation in such cases. He gave the history of two cases in which he had operated, the first being that of a man aged fifty-nine years who had an ulcerated growth implicating the anterior aspect of the bowel to the extent of three inches from immediately above the internal sphincter, and intimately attached to the prostate gland; this, on microscopic examination, was shown to be cylindrical epithelioma. The patient was sent home three weeks after operation with full and natural control over his bowel. Three and a half years have elapsed since the operation, and there has been no evidence of recurrence of the disease. The second case was that of a woman aged fifty-one years who had an ulcerated growth situated on the posterior wall of the bowel, the lower border of which was between two and three inches from the anus, from which it extended upwards for about two and a half inches, being attached to the anterior aspect of the sacrum. This patient was allowed to go home thirty-one days after operation, having perfect control over her bowel. Nearly three years have elapsed since the operation, and no further evidence of disease has appeared. The operation performed was as follows. An incision is made from the rectum to the coccyx, severing the attachment of the external sphincter and levator ani muscles from the ano-coccygeal ligament; the rectum is then separated from the tissues, and clip forceps are applied at the commencement of the ampulla, below which the bowel is divided in its entire circumference and then drawn down and the diseased portion removed. The upper portion of the bowel is fixed in its position by a row of sutures about an inch above its cut extremity to the pelvic fascia and levator ani muscle; these sutures should not penetrate the mucous coat of the bowel; the object of the first row of sutures is to prevent tension on a second row, uniting the cut extremity of the bowel to the portion of the intestine with the sphincters and levator ani originally left below the section of the bowel. Mr. Heuston claimed for the operation that it is a less serious one than any of those requiring removal or displacement of the coccyx and part of the sacrum, that the peritoneal cavity is not usually opened, the normal function of the bowel is preserved, subsequent stricture is not so liable as after the usual perineal operation, convalescence is rapid, the mortality low, and the disease is not more liable to recur than after the more extensive operations.

The PRESIDENT said that within the last few years the treatment of cancer of the rectum had attained a very satisfactory development. He entirely disagreed with Mr. Heuston regarding the removal of cancer of the rectum by the perineal as compared with the trans-sacral operation. He had at present two patients in the Richmond Hospital, both of whom he could not have ventured to touch by the perineal method. He did not dread the opening of the peritoneum. Cancer of the middle third of the rectum could not be removed by the perineal operation without opening the peritoneum—if, as Mr. Heuston stated, the peritoneum often came down to within one inch and a half to two inches of the sphincter. It was better to open the peritoneum by an operation which gives a perfect view, such as the trans-sacral method does. Personally he preferred the lateral semiprone position to having the patient placed on his back.

Mr. BALL said Mr. Heuston's paper had raised what the President had described as a test between the perineal and trans-sacral excision of the rectum. He did not think there was any doubt that both of these operations had their right place. The perineal excision of cancer must be kept for a very small minority of cases in which the disease is very close to the anus. The so-called trans-sacral operation need not necessarily be a trans-sacral one when the cancer was low down. Quite sufficient room could be obtained by dividing the coccyx from the sacrum without cutting the sacrum at all. The additional room gained by removing the sacrum is

very great indeed. Only a day ago he had seen a woman in whom he had divided the sacrum trans-sacally two years previously. At the time he was quite unable to estimate the extent of the disease. In this case he had to remove nearly the whole of the rectum and, perhaps, part of the sigmoid flexure—in all, six inches. He had then to divide the mesentery of the rectum or sigmoid flexure to some extent, so as to be able to bring down the intestine sufficiently to stitch it to the intestine and anus left in the floor of the pelvis. It was an ideal result, there being complete and absolute union between the upper and lower parts of the intestine. The floor was not disturbed. The operation had been conducted above the levatores ani. He did not quite follow Mr. Heuston's description of the operation he performed. Did the incision from the anus to the coccyx involve the anus or start outside it? If it did not involve the anus it was the operation selected by everybody in suitable cases. The coccyx could be excised, or the sacrum, up to the third sacral foramen. Above this foramen the bladder would be paralysed.

Mr. CROLY said that Mr. Heuston stated some of his patients suffered from intense pain. His experience of cancer of the rectum was that it was constantly overlooked till it had progressed too far. If he could not get his finger above the diseased part he either left the case alone or performed a colotomy. He thought whether the lymphatic glands were implicated or not was a very important point. He would like to know the condition of the patient in a few months.

The PRESIDENT said that in one of his cases he found considerable implication of the lymphatic glands, and that he readily removed them as high as the brim of the true pelvis. The trans-sacral operation gave great opportunity for examining the pelvis.

Mr. FRANKS said that in a case of cancer of the rectum high up he would prefer a trans-sacral operation. Of all situations in the body, with the exception of the lower lip, cancer of the rectum offers the best hopes of non-recurrence. The disease usually lasts a considerable time before it invades the glands. Mr. Heuston's case was one in point. In a woman whom he had operated on the disease involved the anus and extended up three inches. He removed the whole anus, and brought down the bowel and sutured it to the skin. He saw her nine years after the operation and there was no return of the disease. She had no trouble although she had had no sphincters during this time. In another case, in which the disease extended as high up as he could feel, he had considerable difficulty in removing the rectum and afterwards discovered that the disease had been treated elsewhere by caustics and the cautery. This patient lived for three years, after which he lost sight of the case. If the growth were irremovable the French method of proctotomy was better, in his opinion, than colotomy.

Mr. WHEELER said that with regard to the recurrence of cancer of the rectum, his experience was not so favourable as that of Mr. Franks. He did not agree with him that patients objected to colotomy; they might have disliked the lumbar form.

Sir W. STOKES said that up till now he had followed the teaching of Professor Syme, who laid down that all cases of cancer of the rectum that were beyond the reach of the finger were unfit for operation. Now, however, he had changed his opinion. He had only operated by the old perineal method on cases in which the disease was near the anus. His results were mostly very satisfactory.

Mr. THOMSON believed that prognosis of cancer of the rectum was more favourable than in most other parts of the body. When the cancer was close to the anus he agreed with Mr. Ball that the perineal operation was the proper one to adopt. When the disease was higher up he had no doubt that the trans-sacral method was the best. It gave most room, and enabled the parts around the seat of the disease to be thoroughly examined. There was very little hæmorrhage, and it was easily controlled.

Mr. HEUSTON, replying, said he did not recommend the perineal operation in a certain class of cases. He did not agree with the President that the peritoneum must be opened if the disease occurs in the middle portion of the rectum. On the anterior aspect the rectum could be removed as high as the prostate, on the lateral aspect $4\frac{1}{2}$ in. of the bowel could be removed, and 5 in. on an average behind, without opening the peritoneum. If the peritoneum was opened it could be effectively closed by the deep row of sutures. He agreed

that the trans-sacral operation is the best where the disease is high up in the bowel or where there is much implication of the glands of the pelvis. The glands cannot be cleared out in the perineal operation. In making his incision he went clean through from the anus, as he obtained more room. His experience of colotomy was such that he would never perform the operation unless driven to it, for it did not relieve the patient of pain.

The Section then adjourned.

Reviews and Notices of Books.

Practical Manual of Diseases of Women and Uterine Therapeutics, for Students and Practitioners. By H. MACNAUGHTON JONES, M.D., M.Ch., M.A.O. R.U.I. (*Hon. Caus.*), Fellow of the Royal Colleges of Surgeons of Ireland and Edinburgh. &c. Sixth edition, revised and enlarged. London: Baillière, Tindall, and Cox. 1894.

THE author tells us in the preface that in preparing the present edition he has endeavoured to construct a comparatively new book, that much of it has been re-written, re-arranged, and re-illustrated, and that much new matter has been added. To make room in part for such changes he has omitted those chapters on Diseases of the Mammary Gland which hitherto appeared, and has curtailed the space devoted to less important topics. We cannot quite understand from the following passage whether the author means that flexion causes congestion of the uterus, or whether it is the congestion that causes flexion:

"The uterus is thus balanced in the pelvis by the reflection of peritoneum and encircling cellular tissue. Thus is explained the tendency of the uterus to bend backwards and forwards at this situation, a bending still further increased by the consequent constriction of the bloodvessels at the junction of the cervix with the body, and an increase of weight posteriorly or anteriorly from congestion of the tissues in the posterior or anterior wall of the fundus above the seat of constriction. Constriction leads to congestion, congestion to hyperplastic effusion, and both to excessive tissue formation, which ultimately tends to contraction and resulting flexion."

We see that Dr. Macnaughton Jones is still of opinion that flexion of the uterus causes "narrowing or twisting of the uterine canal at this spot, and stenosis with all its consecutive ills."

We notice that the presence of a tenacious plug of mucus in the cervix is regarded by the author as a frequent cause of sterility; also that simple incision of the lower part of the cervix has frequently to be resorted to, and that in cases of sterility where dilatation has failed, in severe endometritis with dysmenorrhœa, and in spasmodic dysmenorrhœa, he advises division of the cervix uteri and internal os after Sims's method, followed by the introduction of an intra-uterine stem pessary. To our thinking much of the above treatment is unscientific. If it cannot be shown to be definitely beneficial there is at least one good reason for avoiding it—namely, that consequences of more or less gravity have not rarely followed the employment of the measures to which we have just referred. In speaking of cancer of the uterus the author says: "The views of Sir John Williams as to the usual limitation of carcinoma to the cervix uteri and the bearing of this pathological fact on the extent of the operative interference indicated in cancer of the uterus are well known; but they are not borne out either by clinical experience or the pathological researches of others, and his deductions bearing on the relative advantages of high amputation or supra-vaginal hysterectomy [we suppose the author means 'vaginal hysterectomy'], in the author's opinion, are unsustainable on statistical, clinical, or pathological grounds." This is a sweeping condemnation of the views of one who is

generally regarded as the highest English authority on the subject in question. We may, however, go further, and say that in our opinion the passage quoted is scientifically incorrect. We believe that in the very large majority of cases of carcinoma of the cervix, if not in all, in which any operation can cure the patient—using the word cure to mean at least three years without recurrence—the supra-vaginal amputation gives the patient as good a chance of cure as vaginal hysterectomy. After reading the passage just quoted it is surprising to find a few pages later that the author actually says that there can be no doubt that up to the present, so far as statistics can be relied on, recurrence has been postponed for a longer period after supra-vaginal amputation, and he refers to statistics which tell in favour of that view. As regards uterine displacements, it is certainly remarkable to find the author saying that he quite agrees with the opinion expressed by Matthews Duncan in his lecture on Minor Displacements, and deploring “the extent to which the charlatanism of pessary adjusters has degraded practice and opened the door for every form of inventive humbug,” while he himself figures, and presumably recommends and employs, a large number of pessaries, including even intra-uterine stem pessaries. In conclusion we feel bound to call attention to, and to strongly deprecate, the somewhat frequent recommendations of various commercial articles which are contained in the work as savouring too much of advertisement.

Lehrbuch der Physiologischen und Pathologischen Chemie In fünf- und zwanzig Vorlesungen, für Aerzte und Studierende. Von G. BUNGE, Professor in Basel. Dritte vermehrte und verbesserte Auflage. Leipzig: Verlag von F. C. W. Vogel. 1894. (*Manual of Physiological and Pathological Chemistry*. In Twenty-five Lectures, for Practitioners and Students. By G. BUNGE, Professor at Basel. Third enlarged and revised edition. Leipzig: F. C. W. Vogel. 1894.)

THOSE who have studied Professor Bunge's *Lehrbuch*, either in the original or in Wooldridge's excellent translation, will warmly welcome a third edition, which has been brought thoroughly up to date. The second edition was divided into twenty-one lectures, but in the book before us a somewhat different arrangement has been made, and separate chapters are devoted to the blood and to the lymph, whilst the chapter in the earlier edition on the nitrogenous products of metabolism has been divided into two. In both these subjects very considerable additions have been made, and as a result of more recent investigations considerable modifications are noticeable in several of the points taken up. Perhaps the most interesting additions of all are the chapters on infection and on fever, and, as one would naturally expect from a consideration of Bunge's earlier lectures, these contain a good *résumé* of these two subjects from the purely physiological, rather than from the pathological, point of view. At the same time we must confess to a feeling of disappointment on rising from the perusal of these chapters, as the numerous facts here recorded have filtered through the author's mind without receiving much of that imprint of originality which characterises so much of the other part of the work, and we cannot help feeling that these two additional chapters form the least instructive part of the work, except in so far as they give a short but admirable account of what has been done. The work in the other chapters has been thoroughly revised, some of the parts have been rewritten, and much new and original matter has been added. Altogether these lectures show that the author has not been content to rest satisfied with the laurels that he gained by the publication of the earlier editions of his book.

Report of the Department of Pathology of University College, London. Vol. IV. Edited by VICTOR HORSLEY, F.R.S., F.R.C.S. Edg., and VAUGHAN HARLEY, M.D. Edin., M.R.C.P. Lond.

THIS volume of reports of original research carried on by various investigators cannot but increase the reputation of the individual contributors for thorough and conscientious work. The papers have already been published in the *Philosophical Transactions of the Royal Society*, and are now issued bound up together for convenience. Most of the investigations were carried out with the assistance of grants from the Royal Society and the British Medical Association. There are five elaborate papers on Neurology. Of these, Dr. Risien Russell contributes two—"Experimental Researches into the Functions of the Cerebellum" and "An Experimental Investigation of the Nerve Roots which enter into the Formation of the Brachial Plexus of the Dog." Mr. Spencer publishes the results of his researches on the Effect Produced upon Respiration by Faradic Excitation of the Cerebrum in the Monkey, Cat, and Rabbit, in a paper which is very fully illustrated by tracings and photographs, and also collaborates with Mr. Horsley in an elaborate paper on the Changes Produced in the Circulation and Respiration by Increase of the Intra-cranial Pressure or Tension. Dr. Beever and Mr. Horsley have continued their minute analysis of the excitable region of the cerebral cortex in the monkey, and give the result of their stimulation of the so-called centres for the facial, lingual, and pharyngeal movements. In the department of pathology a beautifully illustrated paper on Madura Foot by Professor Robert Boyce, and one by Dr. Surveyor upon the Existence of more than one Fungus in Madura Disease (Mycetoma) are given. We congratulate Mr. Horsley and Dr. Vaughan Harley on the issue of this new volume, and on the activity and good management of which it is the outcome.

LIBRARY TABLE.

Organic Chemistry (the Fatty Compounds). By R. LLOYD WHITELEY, F.I.C., F.C.S. London: Longmans, Green, and Co. 1895.—The author of this little work states in his preface "that it is quite impossible to learn organic chemistry properly by reading only." So far we entirely agree with him, and we observe that the preparation of all the simpler organic bodies has been given, but we think that this alone is scarcely sufficient reason for adding another work to the already crowded library of text-books on organic chemistry. We need not remind the author that his work *per se* will not enable the student to obtain a real knowledge of organic chemistry, and that its use in the laboratory, in the face of such works as "Fisher's" and "Streatfield's" Organic Preparations, is considerably lessened, unless the idea is that very elementary students should study only one text-book. We think that such a valuable method as that of Kjeldahl for estimating nitrogen should have had more than ten lines devoted to it, since it has almost entirely superseded the other methods. Also in the section on Alcoholometry the specific gravity method after distilling might have been dwelt upon more fully. With regard to the theoretical portion of the work the author deserves praise for the extremely careful and concise way in which he has dealt with successive portions of the subject.

Therapie der Harnkrankheiten. Von Professor Dr. C. POSNER. Berlin: Verlag von August Hirschwald. 1895. (*Treatment of Urinary Diseases.* By Professor C. POSNER. Berlin: August Hirschwald. 1895.)—This small volume contains the subject matter of ten lectures by Professor Posner of Berlin, and is uniform in scope and character with a similar book which he published last year upon the "Diagnosis of

Urinary Diseases." The subjects are treated in the following order: 1. Acute Gonorrhœa. 2. Complications of Acute Gonorrhœa. 3. Chronic Urethritis. 4. Complications of Chronic Urethritis. 5. Sequelæ of Chronic Gonorrhœa. 6. New Growths in the Urinary Passages. 7. Chemical Changes in Urine. 8. Calculous Disease. 9. Nervous Functional Disorders. 10. Urinary Poisoning. It will be seen that the whole ground is thus fairly well covered, vesical and prostatic affections being treated under the heads of Complications of Urethritis and New Growths. The scope of the work does not admit of the discussion of great detail, but it is written by one well versed in the subject and thoroughly versed in modern practice. As affording a systematised review of the whole subject the lectures are of service, but they fail to display one really valuable character of a work of this class—so conspicuous in Sir Henry Thompson's lectures—namely, a close attention to those practical details which are of most service to the practitioner.

The *Veterinary Journal* for this month contains several papers of interest, among them being the continuation of Mr. Pech's essay on Diseases communicable from the Lower Animals to Man, Dr. Randolph's account of Two Successful Cataract Operations on a Dog, Veterinary-Captain Pease's description of Distomatosis in Cattle, with papers on Pathogenic Bacteria and Albuminuria in Cattle by Mr. Hoare, extracts from foreign journals, and other matter deserving the attention of members of the veterinary profession.

Archives de Neurologie for May. Paris: Bureaux du *Progrès Médical*.—The most interesting part of this number is the case of so-called Hysterical Hemianopsia, by Dr. Pierre Janet. The occurrence of hemianopsia as a hysterical symptom is doubtful, and we venture to think that this case does not furnish any definite or certain evidence on the point. There is a continuation of the article on Intoxication in Epilepsy by Dr. Voisin. Some records of clinical cases and the usual neurological reviews and accounts of meetings of learned societies make up what is on the whole a very interesting number.

Dublin Journal of Medical Science. May, 1895. Dublin: Fannin and Co. The first article in this number is an account of three cases of Friedreich's Ataxy Associated with Idiocy, to which we alluded in an annotation last week. The other articles are on Defective Infantile Life Unrecognised in State Medicine and on Private Hospitals. There are numerous reviews and bibliographical notices and the usual medical miscellany. The number is an unusually interesting and full one.

The Westminster Review.—The marriage question affords matter for the most prominent article in this magazine, and in "Some Modern Ideas about Marriage" E. M. S. pleads that divorce should be no longer synonymous with disgrace. Dr. G. Rayleigh Vicars advocates life-long imprisonment in lieu of capital punishment; and there is an interesting paper on the late Charles Bradlaugh.

The *Veterinarian* for May has also its quota of matter similar to that of the *Veterinary Journal*, though, perhaps, its most attractive paper to other than veterinary readers is the continuation of Professor Ewart's Telegony, in which he indicates the direction experiments should take in order to prove or disprove the influence of the first sire on the future progeny of female animals by subsequent sires. The experiments he proposes would certainly go a long way to demonstrate whether such influence does exist, though it is to be apprehended that some of them could not be easily carried out. Professor Stockman reports a well-marked instance of Tuberculous Lesions in the Muscles of a Pig; and Professors Mossleman and Hebrant of Brussels treat of Osseous Cachexia in Animals. There are also other papers of some value, with

"Abstracted Notes" from various journals, and reviews of books. We observe a startling statement made by the reviewer in his notice of Tegetmeier and Sutherland's work on Horses, Asses, Zebras, Mules, and Mule-breeding. He says: "Considering the many advantages offered by mule labour it is little less than astounding that the present should be the first work on the subject ever published in the English language." It is certainly little less than astounding that the writer of this announcement did not discover that a large portion of the section (for it is only a section) of the book devoted to mules and mule-breeding is made up of quotations from works published in English, while other writings on the subject in our language are not referred to in the book—notably the article in the *Encyclopædia Britannica*, and the chapter in Furze's handbook on Land Transport, where much information is given. At any rate, Riley's work on the Mule, published many years ago, should be known to everyone who attempts to deal with the subject.

Analytical Records FROM THE LANCET LABORATORY.

FERROPYRIN.

(KNOLL AND CO., LUDWIGSHAFEN-ON-RHINE. LONDON: B. KÜHN, 36, ST. MARY-AT-HILL, E.C.)

FERROPYRIN is a dry, bright, chrome-coloured powder, dissolving in water to form a blood-red solution. It is a compound of two molecules of perchloride of iron with three molecules of antipyrin, and is accordingly represented by the formula $(\text{FeCl}_2)_2(\text{C}_{11}\text{H}_{12}\text{N}_2\text{O})_3$. The solution is slightly astringent, but has no corrosive action, while it mixes perfectly with hydrochloric acid, pepsin, potassium bromide, and tannin-free tinctures. The solution yields the ordinary reactions of per-salts of iron, and the antipyrin can be readily detected by nitrous acid, with which it strikes a beautiful emerald-green colour. The object of this interesting and beautiful compound (it is a true chemical combination) is, of course, to be able to administer a palliative analgesic together with a hæmatinic, and the results of its trial in cases of chlorosis, anæmia, and in other conditions where there is blood impoverishment were most satisfactory.

BAKING POWDER.

(ERNEST ALLMAND, 9, HOPE-STREET, WREXHAM.)

It is satisfactory to observe that the list of alum-free baking powders is gradually extending. The above specimen may be justly assigned a place together with those which were pronounced pure and free from alum in the report of THE LANCET Commission on Baking Powders published in our columns on March 3rd, 1894. It yields a satisfactory volume of carbonic acid gas when moistened, and the ingredients are of a purity which is demanded of a preparation that is intended for mixing with food. We hope that the Food Products Adulteration Committee now sitting will be led to recommend shortly that baking powder be included in the Food and Drugs Act, so that proceedings may be successfully taken against those who would "alum" food by this indirect means.

CADBURY'S COCOA ESSENCE.

(CADBURY BROTHERS, BOURNVILLE, NEAR BIRMINGHAM.)

The great and important improvements that have been effected in recent years in the manufacture of cocoa have been largely due to the placing upon the market of standard preparations of the above type, Messrs. Cadbury Brothers being amongst the first to produce a cocoa of satisfactory purity, quality, and flavour, and of easily digestible character.

From the dietetic point of view the removal of the greater portion of the indigestible fat of cocoa is the most important step in the process, which is nevertheless carried to a successful issue without impairing the cocoa in any degree, and so satisfactorily is it done that recourse to objectionable diluents like starch and sugar is quite unnecessary. The quantity of fat eliminated in the course of manufacture is at least two-thirds. On incineration the cocoa yields 4.86 per cent. ash, of which 3.62 parts are insoluble and 1.24 soluble, the alkalinity of the latter being equivalent to 0.44 per cent. potash (K_2O). In connexion with the evidence afforded by a microscopic examination the results leave no doubt of the purity and excellence of this specimen, and the figures relating to the alkalinity of the soluble ash in particular show that there has been no treatment with fixed alkalis, or with ammonia according to other chemical tests. The preparation represents, therefore, the standard of highest purity at present attainable in regard to cocoa.

SACCHARIN.

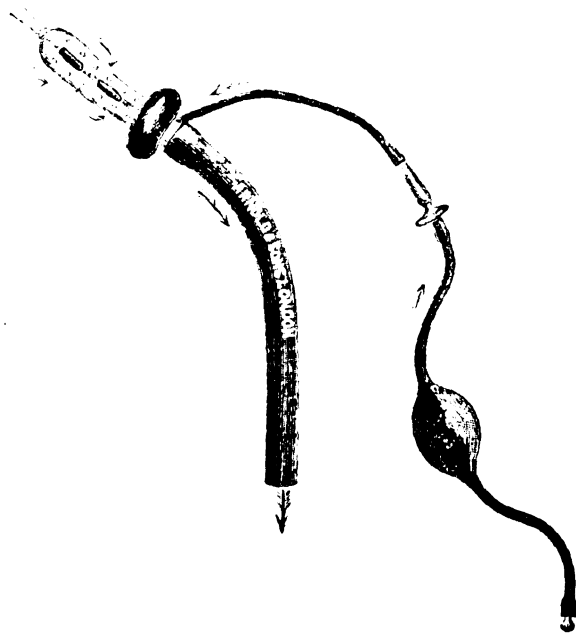
(GILLIARD, P. MORMET & CARTIER. LONDON AGENCY: R. W. GREEFF & Co., 3, EASTCHEAP, E.C.)

We have received from this new agency a sample of saccharin and a sample of the more soluble sodium salt. The former is marked 500 No. 1, and the latter 300 No. 4, which indicate their respective degrees of sweetening power when compared with cane sugar. The sample of saccharin, which burned completely away on platinum foil, is stated to be free from para-sulphamine-benzoic acid, while the other specimen left a fusible residue which contained sulphate, derived, of course, from the sulphur of the benzoyl-sulphonic-imide. Both are evidently fine and pure products.

New Inventions.

CELLULOID VAGINAL DOUCHE.

THE following relates to a special form of vaginal douche (illustrated below) for which certain important advantages are claimed—viz.: 1. Shape and curve of pipe facilitate



introduction (oval on section). 2. Transparency ensures cleanliness. 3. Unbreakable. 4. Self-retaining (owing to expanded extremity). 5. Inflated adjustable rubber cushion to occlude the vulval outlet. 6. Can be

used by patient herself and is very comfortable in use. 7. It entirely obviates use of drawsheet. No risk of wetting bed. 8. Readily takes into four parts when necessary to clean. 9. Cannot get out of order. 10. May be used with any ordinary india-rubber syringe. 11. Large waste pipe. 12. It may be used simply to irrigate the vagina or to flush out that passage. This latter is done by clamping the waste pipe with the finger and thumb whilst the bulb of the syringe is compressed two or three times. Upon setting free the waste pipe the muscular action of the vaginal walls is at once brought into use to expel the injected fluid (and with it any blood-clots or discharge) from the vaginal cavity through the numerous large apertures in the tube. If only used as a syringe it is superior to those in general use, as the comparatively large celluloid pipe will open out the folds of mucous membrane, and thus give a much better chance of thoroughly cleansing it by means of the injected fluid. 13. With special tube may be used to wash out the uterus. 14. The price compares very favourably with any other apparatus for the like purpose. Messrs. Arnold and Sons of West Smithfield are the agents.

Caledonian-road, London, N.

ROBT. H. RAINS, M.R.C.S.

THE CAMBRIDGE SCHOOL OF MEDICINE AND QUALIFIED PRACTITIONERS.—We are glad to learn that the proposal to hold a week of demonstrations and lectures at Cambridge for the advantage of qualified practitioners is likely to be a success. The time is from Monday, July 1st, to Saturday, July 6th. Mr. Joseph Griffiths of King's College is the hon. secretary. Cambridge shows a sense of the times and of her own duty in such adaptations of her facilities for teaching.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The final examination for the Fellowship of the Royal College of Surgeons has been held this week. It has extended over five days—viz., from Monday to Friday. On Tuesday, 21st inst., the examinations, both written and *visu voce*, on surgical cases took place, and, as usual, many Fellows of the College attended to see the cases which had been collected. A notice was posted in the examination rooms requesting visitors not to approach too closely to the candidates under examination, and asking them also to make as little noise as possible. Probably as a result of this notice the examination rooms were much quieter on Tuesday than on many previous occasions, when, as we mentioned in noticing the clinical examination last November, some of the visitors seemed to imagine that the cases were specially provided for themselves. Many of the cases shown were of very great interest, though we can only mention a few of the more striking. 1. A man aged twenty-eight showing numerous exostoses, especially on the bones of the limbs. They were unusually large. Several other members of his family were similarly affected. He was blind in both eyes; this was attributed by him to injury at the age of fourteen years, but was possibly due to congenital syphilis. 2. A young woman having a firm swelling at the upper end of the left popliteal space. Nine months ago she had had a tumour of one year's growth removed from the back of the left thigh, and three months later the present swelling appeared. It was evidently a sarcoma. 3. An elderly man with a small tumour of the umbilicus; no swelling could be felt in the abdomen, but the growth was probably malignant, and secondary to some abdominal tumour. 4. An elderly woman with an enlargement in the left parotid region of seventeen years' duration; the swelling was very obvious in the mouth, reaching nearly to the middle line, and interfering to a great extent with deglutition. It was probably fibrous in nature, and arose from the tonsil or from the deeper portion of the parotid. 5. A man with a chronic effusion in the left knee, and for three months having had a firm swelling over the right great trochanter; this was probably due to gummatous deposit in the wall of the bursa over the great trochanter; the joint affection was also probably syphilitic. 6. A young man having a swelling in the mesial plane of the neck; it projected below the jaw, but especially extended into the mouth, pushing up the tongue and greatly hindering swallowing. The contents were apparently quite liquid; it was, therefore, probably not a dermoid. The most likely diagnosis seemed to be that it was due to effusion into the bursa between the genio-hyo-glossi.

THE LANCET.

LONDON: SATURDAY, MAY 25, 1896.

THE authorities of the Royal Medical Benevolent College are to be thanked for securing Mr. BALFOUR's presidency at the twenty-seventh festival dinner. It is becoming evident that the public, apart from political proclivities, looks to Mr. BALFOUR as to one of its foremost guides in deep matters of thought and feeling. In his speech at the dinner we get a glimpse into his estimate of medicine, its claims on the public regard, and its most essential functions. Like Mr. GLADSTONE and Lord SALISBURY he has thought much on the subject and his conclusions are not uncomplimentary to the profession. In company with most speakers he recognises the amount, the lavishness, of its gratuitous or ill-paid work—the skill and the time given, often by its most meritorious members, to those who cannot recompense them. And on this fact he founds his claim for the greatest medical charity of our country, one that provides for the widow or the orphan—pension or foundation scholarship—of those who in the very nature of the sphere or the circumstances in which they worked, or of the time they had to work in, had not the opportunity to “provide for their own house.” The work of the profession is done very much in secret. What agonies undreamt of by the public does not the hospital surgeon or physician relieve? And the general practitioner in a poor district is not one whit less beneficent as he carries his help and his counsel to the houses of the poor in their extremities of suffering, and in doing so often lays the foundation of his own disease. It would not be unreasonable if the charities of such a profession were generously subsidised by the wealthy members of the public. We will venture to hope that the £1700 which were announced at the dinner do not represent the full response to Mr. BALFOUR's appeal.

Not less interesting to our readers than his argument for the generous consideration of the profession by the public is his estimate of our position from a critical point of view. He thinks the debt of humanity to medicine, though large in the past, is increasing and “likely to increase in the future in a rapidly extending ratio,” and this because it is becoming more sure in its methods and in the application of science to its art. “Science and practice are every day more and more joining hands. . . . Medicine is becoming more and more the work of the scientific expert and less the work of the empiric”; and he anticipates not only an “incomparable insight into the nature and cause of disease,” but “an ability to command in a far larger measure than we do now” “the remedies which may be successfully applied.” Such estimates by such a judge may well please the profession. But they have their serious side. They strike at all superficial and careless work, and should stimulate every practitioner to regard with interest as being one to be met with skill guided by science each case he is called to minister to. This is the true line of success—the real way of victory over all pretenders—to get the “incomparable insight” into the cause of each

disease we are called to treat, and in that light to deal with it.

Mr. BALFOUR seems rather afraid that with all its new lights the profession may come to aid longevity too much, especially if men are temperate. As he says, temperance is a virtue which medicine may counsel, but cannot enforce. Undoubtedly the clear message of medicine to men is one of temperance. The want of this virtue will in most cases destroy the best constitution and defy the best surgery and medicine alike. A friend of Mr. BALFOUR's thinks that by more perfect medicine the span of life may be extended to 120 years. It may be so. An old estimate (Ecclesiasticus) gave a man's days as possibly 100 years, and twenty more would seem a slight improvement for over twenty centuries to effect. Mr. BALFOUR in the end of his interesting address suggests that the mere prolongation of life is not one of the triumphs of medicine. He demands of medicine that it shall ease men of pain and that it shall render the allotted life we have more available for work and duty. Given this, he would relieve it of the duty of prolonging a painful and useless life. There is a doubtful ring about this suggestion. It is very difficult to dissociate the function of relieving pain from that of prolonging life. They are practically synonymous. But we cannot admit that even where we cannot relieve pain we are one whit the less bound to preserve and prolong life. “This long disease my life” has been true of many others than POPE who have made great contributions to the happiness of the world. A late physician who did more than most men of his order used to say that he never had a day's health in his life; yet few men enjoyed life more or used it better. There is a charm in life which we should expect Mr. BALFOUR to recognise apart from conditions of perfect ease—

“For who would lose,
Though full of pain, this intellectual being—
Those thoughts that wander through eternity?”

Man is a creature of such possibilities that the prolongation of his life for even a few weeks or months may have great importance, and although “the laws of the realm may punish Christian men with death for heinous and grievous offences” it is not yet recognised as part of a medical man's duty that he should take away that which he cannot give back.

THE oration by Mr. PEARCE GOULD on the Recent Evolution of Surgery was more than a mere domestic event in the history of the Medical Society of London. It was a statement of the nature and significance of the recent development of surgery such as could only be made by an orator who had made some mark both as a teacher and a surgeon. The crowded and representative audience, composed of men in every branch of practice, showed that the subject was one of absorbing interest, and the close and quiet attention with which the address was listened to was the best proof that the orator had succeeded in his object. Surgery is no longer a mere matter of handiwork. It is an object-lesson in which the great facts of physiology, biology, and pathology find recognition. Mr. GOULD's address will have historical interest not only as the exposition of this change, but as tending to give the change great confirmation. Within the memory of middle-aged men the surgeon was little more than a user with marvellous dexterity of knives and scissors

and needles. But the results were not equal to the manipulation. Not only so, the sphere of interference was very limited. Nearly everything beneath the surface of the body was considered out of reach and was relegated to the physician. Now the surgeon runs the physician very closely in respect of knowledge of the fundamental sciences which underlie all successful practice and has that exquisite regard for the peculiar properties of every organ and tissue which had hitherto been credited mainly to the physician.

In all recent expositions of surgery and its progress the introduction of antiseptics has overshadowed all other facts in prominence. Mr. GOULD last Monday night was very successful in avoiding the use of this hackneyed phrase, but, all the same, this fact was the foundation of all that he said, as will appear. His point was to show that something has happened in the development of surgery in the last twenty-five years more important than the ordinary progress of any similar period or of any previous century, "or even millennium." Some may think the proposition extreme; but the steady way in which Mr. GOULD built up stone after stone in its demonstration will leave no doubt that in the main he was right. Progress was not a strong enough word for his purpose. Evolution was preferred. The word in this sense and connexion is open to some criticism. It implies, to our thinking, something essentially progressive, continuous, and even. But it is a part of Mr. GOULD's contention that something has happened in surgery out of the common, expanding and elevating it in every branch and department, and that this has produced *rapidly* a change in the character of all the work done. This is not mere evolution. It is more like revolution. It is, in fact, discovery. Of course, there is a sense in which discovery is evolution; but we do not apply that word to NEWTON's discovery or even to DARWIN's. A grand conception, a pregnant idea, may be regarded as part of a great progress of mental evolution, but the word itself is rather applicable to great, continuous, equable processes in nature affecting organised beings. This, however, is a detail. The excellence of Mr. GOULD's address consisted in the wide view he took of the change that has come over surgery and over the spirit in which it is practised. His analysis of the elements of improvement was as admirable as it was original. The removal of the formerly admitted anatomical restrictions upon surgical operations; the higher anxiety to preserve the physiological integrity of the organism; the essentially conservative nature and tendency of the operations practised under the new system; a higher conception of the nature of surgical operations, of the way in which wounds are to be repaired, and of the personal responsibility of the surgeon for avoiding disasters from his own procedures more terrible than the original disease; the clear apprehension that the causes of disease have to be treated directly; the introduction of what are practically physiological operations into surgery—these are the elements of the great evolution or revolution which would make the practice of any living surgeon unintelligible to a surgeon who practised fifty years ago if he could be suddenly brought back to witness the change. They are ideal changes which raise the spirit in which work is

done, the methods by which it is done, and the results which follow.

Though Mr. GOULD said scarcely anything on Monday night of antisepticism, his tribute to Sir JOSEPH LISTER was the feature of his address. He referred powerfully to the incident of Sir JOSEPH LISTER's paper read before the same society twelve years ago on the direct suture of the fragments of a transverse fracture of the patella, and to the remark of a distinguished junior that such a procedure was magnificent, but was not surgery! And in his peroration he did not hesitate to place Sir JOSEPH LISTER's name in a line with HARVEY's and with JOHN HUNTER's as the one which now shines with an unrivalled splendour on the page of surgical history. This praise is just, and it is not premature. Mr. GOULD was right in emphasising the duty of doing honour to men to whom honour is due while they are alive. Nor is the praise less just because it comes from British lips. It will be echoed from every civilised country. But it was well spoken here. Foreigners will not think the less of us or of him for doing justice to Sir JOSEPH LISTER, to whom more than to any other man we owe the elevation and the advance of surgery, whose methods have introduced safety where formerly all was full of risk, and have had an effect on the comfort of patients after operation which is only less remarkable than the anaesthesia which deprives the operation itself of terror.

THE importance of the discovery of argon, a newly identified constituent of the atmosphere, by Lord RAYLEIGH and Professor RAMSAY is yet to be estimated. Already it has opened up ramifications which have bewildered many of our leading scientific men, some of whom have been led into quite new fields of study of which argon must be regarded as the gate. First came the observation of the eminent French chemist, M. BERTHELOT, that when argon was submitted to the action of benzene vapour under the influence of electrical discharge there was some indication of a combination having taken place, so that not a few began to think that argon—meaning inert—was not a well-chosen name. But the most interesting result of M. BERTHELOT's experiments was the fact that after some time the silent discharge through this mixture became gradually luminous, and the tube was lighted up in almost its entire extent at first with a violet tint with a reddish rain of fire, changing gradually to a splendid green shade visible even in full daylight and recalling in a most striking way the brilliant spectacle afforded in the aurora borealis. Professor RAMSAY followed soon after with the startling announcement that he had found that the gas evolved from a certain mineral (clèveite or uraninite) on treatment with acid was argon and not nitrogen, as had all along been supposed, and that, further, a spectroscopic examination of this gas revealed a bright and perfectly definite yellow line situated between the well-known sodium lines, which left not the slightest doubt that an element hitherto regarded to exist only in the sun (helium) had been set free from a terrestrial mineral. This has since been fully confirmed, and helium has been added to the list of simplicities—so far as we know them to be simplicities,—while

many of its properties have since been ascertained. Professor CLÈVE, however, from whom the mineral derives its name, was unable to confirm the presence of argon; although he expressed no doubt as to the presence of helium. "What makes me most curious," he wrote to Professor THORPE, "is that our helium gas was free from argon and that Mr. RAMSAY's did contain that most curious stuff. Is there any relation between argon and helium, and are we approaching a new epoch in chemistry?" At once there arose a mystery about "clèveite gas," which became still more obscure when Professor NORMAN LOCKYER declared that he had found no argon, but hydrogen. Thus apparently the same clèveite had been tortured (to use Professor DEWAR's happy expression) by three independent investigators into giving up to the first argon with helium, to the second helium with hydrogen, and to the third helium. Could clèveite be the mystic philosopher's stone which in its substance could transform one element into another, so that, according to the condition of experiment to which it was submitted, it gave up and presented to one argon, to another helium, and to another hydrogen? Or does it contain the primary stuff of which all elements must be composed in accordance with the celebrated hypothesis of PROUST, or, later, of Professor CROOKES, and that on extraction it assumed one of those forms known to us as hydrogen, helium, or argon? The idea, however, that we were nearing the transmutation or transformation of elements vanished rapidly into thin air when Professor RAMSAY announced a few days ago that the gas he originally obtained was contaminated with atmospheric argon, but that the gas accompanying helium was none other than hydrogen with traces of nitrogen, so that it transpires that what was originally regarded as nitrogen evolved from clèveite and then argon was after all helium with hydrogen and traces of nitrogen. That, at any rate, is the latest representation of the composition of clèveite gas. It is all the more remarkable that in searching for what Professor RAMSAY thought would most likely turn out to be argon he stumbled upon another element altogether—the long-missing helium. For the present this discovery must be regarded as the most important outcome of the splendid and laborious investigations which led Lord RAYLEIGH and Professor RAMSAY to announce last year for the first time the existence of this constituent in the atmosphere. The possibility of further discovery does not, however, stop here. Professor NORMAN LOCKYER, for instance, who obtained the gas from the mineral by heating it in vacuo—a method he uses for the extraction of gases from meteoric stones,—is led to suggest that the gas is one of complex origin, and spectroscopic analyses show distinctly that several lines in clèveite gas are closely related to the solar and stellar phenomena. "We appear to be in the presence of the *vera causa*," he writes, "not of two or of three but of many lines which so far have been classed as 'unknown' by students both of solar and stellar chemistry; and if this be confirmed we are evidently in the presence of a new order of gases of the highest importance to celestial chemistry, though perhaps they may be of small practical value to chemists, because their compounds and associated elements are, for the most part, hidden deep in the earth's interior."

It will be readily realised that the interest created by

these observations is intense, and we can imagine the scientific thinker drawing a deep breath in almost feverish expectancy that before very long a portion, at any rate, of the veil which keeps many of the cosmic mysteries from our view will be drawn aside. Then we shall indeed attach some importance to Lord RAYLEIGH's and Professor RAMSAY's joint discovery.

THERE was a time, not very remote from the present, when complaints were frequently made of the tardiness with which the national returns of birth and death were issued from the General Register Office—the more important of these returns, up to a recent date, having been rarely available to the public until nearly two years after the expiration of the period to which they severally related. Having regard to the vastly greater interest which nowadays attaches to the official mortality returns of Somerset House in consequence of their direct bearing on the question of local sanitary administration, we are glad to note that the publication of the Registrar-General's quarterly and annual reports and returns has of late been considerably expedited; and as this has been accomplished without, we believe, any addition to the official staff we regard the event as highly creditable to the Statistical Department. For it is obvious that so far from the work becoming lighter as time goes on the number of facts to be dealt with in successive reports increases year by year, almost *pari passu* with the growth of the population. The circumstance which has suggested the above remarks is the publication within the last few days of the Registrar-General's Annual Summary for 1894, which gives useful information respecting the mortality that prevailed amongst a considerable portion of the population of England during the fifty-two weeks of that year.

Originally the annual summaries had exclusive reference to London and a few of the larger provincial towns. The present summary, however, relates to 100 of the most important urban communities of England and Wales, including, of course, the metropolis; and with respect to many of these areas the information given is more extended, and for local sanitary purposes far more serviceable, than any that has hitherto been accessible. In addition to the thirty-three great towns included in Table I., full mortality statistics for which have been published in the periodical returns for the last few years, corresponding information is now for the first time given in Tables V. and VI. relating to sixty-seven other English and Welsh towns, which, although of less size than the thirty-three chief towns before referred to, are, nevertheless, of considerable importance and contain amongst them an aggregate population of more than three and a half millions. Many of these towns are either sea-side or inland health resorts, and consequently an authoritative statement concerning their death-rate, and especially their mortality from infectious disease, cannot be otherwise than interesting and serviceable to intending visitors.

Another new feature in the recently issued summary which is worthy of attention is the introduction into Tables H. and I. of a column giving the distribution of the corrected mortality from phthisis in each of the five groups of sanitary areas into

which the metropolis is divided for statistical purposes. In Table H. the deaths from phthisis are given in the several sanitary areas of London, but in view of the uncertainty attaching to estimates of population for areas of this kind we think that the Registrar-General has acted wisely in abstaining from the publication of rates of mortality for populations smaller than the five groups of sanitary areas which are comprised in Registration London. When the census of next year shall have been completed we shall hope to see a table published in due course similar to the one now given (Table I.), but dealing with individual sanitary areas, and giving, on the secure basis of the census figures, the rates of mortality not only for phthisis, but for the other diseases also which are at present included in the table referred to. Another table, which we notice for the first time in the present annual summary, is the one marked C. on page viii., which shows the deaths from influenza registered in each of the metropolitan sanitary areas in the five several years 1890 to 1894, practically the period covered by the epidemic, which has even now scarcely come to an end. Yet another new table (E.) will be found at the foot of page x., which gives the admissions and deaths at the Metropolitan Asylums Board Hospitals, the Highgate Small-pox Hospital, and the London Fever Hospital of persons suffering from small-pox, scarlet fever, diphtheria, and enteric fever respectively. The admissions and deaths are given for the ten years 1885 to 1894, and are extremely interesting as showing a rapidly increasing tendency on the part of the public to avail themselves of public hospitals for the treatment and isolation of the infectious sick. It is necessary, however, to utter a word of warning against the acceptance of the figures in this table as being in any degree an accurate measure of the amount of infectious sickness actually present at any given period in the metropolis. It is well known that whenever such a disease as, for instance, scarlet fever becomes seriously epidemic in London the hospitals speedily become filled with cases of that disease, and thus no available space remains for the accommodation of other and not less infectious forms of fever—diphtheria, for example, which disease, as is pointed out in another part of this interesting summary, has been steadily making headway in London for several years past. As far as may be judged by the mortality statistics of the 100 great towns, the health of England and Wales during the year 1894 was, on the whole, eminently satisfactory. For instance, the thirty-three principal towns, which contain an aggregate population of more than 10,000,000, showed a death-rate of 18.1 per 1000 only, against an average rate for the ten previous years of 21.3. London was subject to a mortality not exceeding 17.8 per 1000, or 2.6 per 1000 below the average; and many of the other great towns showed a decline even greater than these. Turning to the figures for the sixty-seven smaller towns, now published for the first time, we are struck by the extreme lowness of some of the rates. The 3,500,000 people inhabiting these towns died in 1894 at the average rate of 18.0 per 1000. Amongst these towns not one had a rate exceeding 22.1 per 1000, whilst the rates were as low as 9.5 per 1000 in Hornsey, 10.0 in Bourne-mouth, and 10.3 in Eastbourne.

Annotations.

"Ne quid nimis."

THE MEETING OF THE GENERAL MEDICAL COUNCIL.

THOUGH we are writing before the issue of the programme of business at the approaching meeting, we cannot be wrong in assuming that the subjects to be discussed will be of varied and considerable interest. One change in the *personnel* will be felt as well as seen. Sir John Simon will be conspicuous by his absence. It must, however, be admitted that his successor will be a real acquisition to the Council. Considering the importance of questions of State medicine and the multiplication of medical officers of health, it would have been unsatisfactory had any less authoritative exponent of the State interests in sanitation than Dr. Thorne Thorne himself been appointed to succeed Sir John Simon. Some other day when a Crown vacancy occurs the State may generously give it to a general practitioner, as it has done before in the case of Scotland, but all must allow that Sir John Simon's successor is well chosen, the more so as a chief feature of the business will be the discussion of reports on Diplomas in State Medicine. It is expected also that a general report on the recent inspections of examinations will be received from the Examination Committee. It would be sanguine to expect that sundry cases of alleged misconduct will not occupy a considerable part of the time of the Council. The subjects of the Midwives Registration Bill and of the issue of certificates to midwives by the Obstetrical Society and other bodies will necessarily come before the Council. At the last meeting, as the minutes of 1894 show, a report was expected from the Executive Committee on the proposed amendments of the Medical Act, but it was not forthcoming. Doubtless it will appear next week. The fate and future of the Apothecaries' Society of Dublin will have to be considered and determined by the Council. Perhaps the most important question of all is the fixing of final arrangements for the issue of a new edition of the Pharmacopœia, about which considerable difference of opinion exists. Our readers may like to know that the Council will commence its meeting on Tuesday next at two o'clock with an address by the President, Sir Richard Quain.

A CASE OF ALLEGED PREMATURE BURIAL.

UNDER the sensational heading "*Le Cauchemar*" we read in *Le Petit Journal* the most recent case of alleged premature burial. It is copied from Greek newspapers, and alleges that the Italian Consul at Mersina, in Turkey in Asia, the name being given, died the week before last, the word "*mort*" being in italics. The funeral took place with much pomp and ceremony, all the foreign consuls and local authorities being present; the burial took place at the Roman Catholic cemetery of the town. That same evening one of the keepers of the cemetery, so runs the story, heard cries coming from the vault just closed. Seized with terror, he ran to forewarn the family. They hastened to the cemetery, and the coffin was opened. Then follows a harrowing description of what was seen; which need not be repeated since the appearances were such as would naturally result from decomposition, and to the eyes of terrified laymen accepting implicitly the story of the alleged cries would present all the supposed phenomena of premature burial. No mention is made of the nature of the last illness or of the cause of death, nor are we told what followed upon the alleged frightful discovery. As the deceased was a Roman Catholic it may be assumed that he had the services of a priest up to the last, and it is impossible to believe

that he, with all the other attendants, relatives, friends, medical practitioner, undertaker, &c., should be deceived. Again, although the interment in foreign countries takes place within an interval which, to English ideas, seems very short, it is for the very reason which the writer of the article gives as the only reason which justifies interment—viz., putrefaction. This in many countries is so rapid as not only to justify, but to render imperative, burial within twelve hours, and in England most medical practitioners can call to mind cases where the closure of the coffin has been required within a similar or even shorter period. In some cases, by no means few, decomposition of some parts of the body may be said to precede death. But nothing that has been published has yet disproved the fact of death being perfectly ascertainable. Sir Francis Seymour Haden in urging burial within thirty-six hours of death dismissed the alleged difficulty of premature burial with the remark that the words of a witness "I knew that he was dead" were generally accepted without dispute. There was a case published in THE LANCET not long ago¹ in which an elderly woman was laid out before death had actually taken place. Then there was the alleged case at Newcastle of apparent recovery from death, which was contradicted, and other cases, which all go to prove the rule that death is not a matter requiring skilled evidence, but is in the large majority of cases a fact evident to the meanest capacity. Every day persons are taken to hospitals, arriving there at the last gasp or actually dead. It is necessary to give a decided answer, since the person, if living, must be conveyed to a ward or continue to receive attention where he or she is. If, on the other hand, death has taken place, the body must obviously be taken to the "dead-house." It may be confidently asserted that such a criminal mistake as sending a living person to the mortuary has never been made; it would, indeed, be unpardonable with medical men on the premises. But these are only a very small proportion of the total number of deaths, the large proportion of which occur in the homes of the rich, the poor, and the middle classes, in presence of laymen and laywomen. The fact of death can very rarely be a matter of doubt, and in such case it is inconceivable that burial would be permitted. It is high time that the editors of all papers which wish to be considered respectable should refrain from publishing stories which can serve no good purpose, and we trust before long to learn that this most recent one has been proved to be a fiction.

IMPROVEMENTS IN THE TECHNIQUE OF THE DIPHTHERIA CULTURE TEST.

A USEFUL modification in the mode of practising the culture test for diphtheria is described by Dr. Ohlmacher in the *Medical News* of Philadelphia of May 4th. He draws attention to the fact that when the culture test was used for sanitary purposes alone the amount of time consumed in the bacteriological examination was of no great moment, but with the advent of the antitoxin treatment of this disease an entirely new era of usefulness for this test was inaugurated. In the best of existing methods it is necessary to allow an interval of from twelve to eighteen hours of incubation to elapse before a tube culture inoculated with the material from a diphtheritic throat can be examined bacteriologically. This length of time is naturally a disadvantage. As is well known, it is customary for observers to wait until visible colonies of the bacteria appear upon the surface of the culture medium before a microscopic examination is made. Dr. Ohlmacher has adopted another method, which promises to be successful. A tube of Löffler's serum culture medium, prepared after the modified or American method of

rapid coagulation, with a smooth, moist, slanting surface, is inoculated with the exudate from the suspicious throat secured with the aid of the Prudden swab. It is of prime importance that the slanting surface of the culture medium should be both perfectly smooth and moist; and care should be taken not to injure the surface of the serum as the cotton swab is rubbed gently but thoroughly over it. As soon as the inoculated tube is received at the laboratory it is placed in the incubator, the temperature of which is 37.5° or 38° C., where it remains undisturbed for four hours. At the end of this time a thoroughly sterilised platinum loop is gently rubbed over the smooth surface of the culture medium, and then the loop is rubbed into a minute drop of distilled water placed in the centre of a clean and sterilised cover-glass. In this way the material obtained on the loop is washed into the drop of water, and while no visible accumulation will have been observed on the loop an examination of the drop of water with a proper illumination will reveal it to be distinctly cloudy. The drop of water is now evenly spread, by the use of the loop, over a limited area of the cover-glass. This spreading is also of importance, since an extensive application would separate the bacteria so widely as to render subsequent examination difficult. As soon as the film has dried, the cover-glass is passed three times through the flame and then stained. Dr. Ohlmacher prefers methyl-violet as a stain for the diphtheria bacillus. A specimen prepared in this way will, upon examination with the microscope, reveal the diphtheria bacilli, provided the case be one of true diphtheria, or it will show the micrococci of false diphtheria. The number of bacteria in one of these early preparations is, as a rule, not great; but no trouble will be experienced in finding plenty of organisms upon which to base a satisfactory diagnosis if the investigator is thoroughly familiar with the morphological characters of the various bacteria encountered in the culture test.

BOARDS OF GUARDIANS AND NURSING.

IT cannot be gainsaid that the circular issued at the beginning of the year from the Local Government Board upon workhouse administration has been the means of discovering numberless defects in the treatment of the sick poor in many of our workhouses. One somewhat notable instance has occurred in south-west Sussex, and reference has already been made to it in THE LANCET.¹ The absolute necessity of a supply of good nurses was the keynote of the circular, and the board of guardians at the workhouse in question, acting upon these instructions, appointed a head nurse and two assistant nurses from a nursing institution in Surrey. The result was deplorable to the guardians, inasmuch as the condition of things in the infirmary and the other part of the house as brought to light—and very properly, too—by the nurses astounded every member of the board. The visiting committee have since that time gone fully into the matter, and at the meeting of the board last week presented a most exhaustive report. The three nurses had already returned to their institution by the mutual consent of the guardians. "The committee," the report states, "were of opinion that although there was room for improvement, yet that matters had been exaggerated." The report is full of recommendations, and the principal, perhaps, is that the nursing arrangements should be placed under the entire management of the medical officer, it being thought that by so doing a better state of things will prevail in the future. The guardians were very fortunate in having amongst them on the day the report was submitted Mr. J. S. Davy, one of the inspectors of the Local Government Board. He gave the board some very valuable advice. He pointed out that the recommendation of the committee that the medical officer should appoint the nurses

¹ THE LANCET, Feb. 2nd, 1895.

¹ THE LANCET, April 13th, 1895.

was not in any way novel or in any way an ordinary practice at well-managed workhouses. As to the number of nurses, he warned the board against setting up a mere numerical proportion of so many nurses for so many sick; they must have a definition of what was meant by "sick," and of that the medical officer was the only judge. The medical officer's duty was so to place his views that he might discharge his responsibility adequately before the board of guardians, and it was the duty of the board of guardians, Mr. Davy added, not to accept those recommendations blindly, but to most carefully consider them with a very considerable bias in favour of adopting them. Other important points touched upon by Mr. Davy were the desirableness of the board becoming acquainted with the conditions that the nurses who will be appointed will be under to the home or institution from which they come, and the danger of making the workhouse nursing of the sick too attractive, whereby not only would patients come in who would never dream of entering the workhouse, but in time great injury would be done to the voluntary hospitals. Such advice can be taken as coming directly from the Local Government Board, and the many boards of guardians that at the present time are considering this question will do well to take heed of the advice given. The report of the visiting committee is to be placed in the hands of all the guardians for a month's consideration before they are called upon to adopt it in its entirety or with modifications. The latter course will no doubt be carried out.

THE ORIGIN OF CHOLERA IN MECCA.

IN 1893 the widespread prevalence of cholera in Mecca had its beginnings in the cases of certain Turkish soldiers who had arrived from the Yemen, where the disease had for some time past prevailed. This year it has had much the same beginning, Turkish soldiers being again the first victims, and this at a date which precludes all possibility of the disease having been imported by sea from India. The onset of cholera this year has occurred many weeks before the Haj, whereas it generally begins just before or during the period in question, and after the arrival of the caravans by land and by sea. The occurrence of cholera in English pilgrims amid the dirty and neglected conditions of the quarantine island of Camaran has had no connexion with the occurrence at Mecca, for the first cases in the latter city took place whilst the unfortunate pilgrims, who, though healthy, had been compelled to quit the pilgrim vessels *Mohammadi* and *Zobeida* for the hovels or huts of Camaran, were still in quarantine on the island. According to the *Times*, M. Henri Monod, at a recent meeting of the Comité Consultatif d'Hygiène of France, blamed England and her refusal to ratify the Paris Convention for this year's cholera at Mecca; but he should remember that if France would only give up her quarantine notions in the Red Sea, as she has begun to do in the Mediterranean, the way of England to do that which is right would be much clearer. It is quarantine in the Red Sea that endangers the lives of Indian pilgrims and constitutes the main, if not the sole, danger of cholera reaching Mecca by way of the sea. If our pilgrims were only allowed, when certified after a long voyage to be free from cholera, to sail on to Jeddah the danger of cholera travelling by the sea route would practically be at an end. Turkey objects to this; sanitary fees and dues are a matter of importance to her local and even central administration, and it is the proposals submitted by France and her delegates to maintain the quarantine system in this part of the world that largely prevents the adoption of sounder principles. We are not pretending here to endorse all the reserves of Great Britain as regards the Paris Conference, neither do we assume that the altered action of France as to quarantine in the Red Sea

could get rid of the major danger of the transport of cholera to Mecca by land routes, whether from the Yemen or elsewhere; but we are convinced that so long as France is guided by those who still cling to old remnants of the antiquated quarantine system under the new name of "observation," so long will the real remedies against cholera be delayed. What is the use of expecting Turkey to spend vast sums on the prevention of cholera in her towns and holy places so long as leading and intelligent nations are always advocating the alternative of quarantine, an alternative which has the immense advantage of helping to fill the somewhat empty coffers of the principal State concerned and those of its local chiefs and officials? M. Henri Monod is, we believe, one of the leading advocates of sanitary measures as such for the prevention of cholera. If he would convert his colleagues to his own views this country would have much less difficulty in uniting with France for the prevention of cholera.

THE IMMIGRATION OF FOREIGN LUNATICS.

IN a letter to the *Morning Post* of May 10th Mr. W. H. Wilkins remarks on the hardship inflicted upon those countries in which are situated ports at which foreign immigrants land in having to maintain those foreigners who are found to be destitute or insane, or both. The landing of foreign insane paupers, who almost immediately go to swell the numbers in our county asylums and have to be maintained at the county's expense, is a matter which should surely be inquired into by the Government, and probably the extent to which the hospitality of this country is abused in this direction could be easily ascertained by the combined action of the Commissioners in Lunacy and the various boards of guardians. Provision is made in the Lunacy Act of 1890 for the return to his own country of any foreigner who is detained in an asylum and whose family or friends desire that he should be removed thither, but there is no provision for the compulsory return of a foreign pauper lunatic. It seems hardly necessary to urge that some such plan should be adopted to meet the case of a foreign immigrant who is found to be insane on, or shortly after, his arrival, and the time of Parliament would be well occupied with the consideration of some such measure of social protection.

HOME OF PEACE FOR THE DYING.

WE have received an appeal on behalf of the Home of Peace for the Dying, to which we gladly give insertion. The history of the institution is briefly as follows. In 1885 a lady, being deeply impressed with the want of any special provision in London for dying men, founded, at her own cost, a small hospital of ten beds in the north of London, which she carried on until the applications so exceeded the accommodation that eight or nine were refused for every one admitted. She then, with the aid of the present council, removed to a large mansion in its own grounds opposite the Swiss Cottage, N.W., which was bought and thoroughly adapted for a large home hospital by a competent hospital engineer. The sum required was £10,000 in all, of which £8000 were raised, and at this very moderate cost *Friedenheim* was opened, with forty beds, by their Royal Highnesses the Duchess of Teck and the Duchess of York on Nov. 7th, 1892. It is the first and oldest charity in London which is solely set apart for men and women in the last stages of illness. Immediate admission is granted solely on the merits of the case, no letters or votes being required, and all diseases, including cancer, being admitted. The charity is administered with the utmost economy, the foundress and lady superintendent accepting neither board nor salary from the funds. Nevertheless, £2000 are urgently required before July 1st to place the finances on

a sound basis. The dying are surrounded with personal care and with every comfort, the nursing staff being full and efficient. This hospital does not advertise, employs no canvassers or collectors, and is entirely dependent upon the spontaneous support of the public in response to the important and almost unique work it carries on. Many distressing cases but for this charity would die unrelieved, the class it reaches being those not suited to infirmaries and yet too hopeless for admission to, or retention in, the ordinary hospitals. Donations and subscriptions may be sent to the bankers, Messrs. Barclay, Bevan, and Co., 54, Lombard-street, or to Miss Davidson, hon. sec., "Friedenheim," Upper Avenue-road, Swiss Cottage, N.W.

THE CASE OF DR. CORNELIUS HERZ.

THAT the course of justice should be tempered with humanity is generally admitted; yet it is apparent from the letter addressed to us by Mr. McHardy and published in another column that this first principle of social ethics may be overborne by political exigencies. It is not too much to say that the treatment of Dr. Cornelius Herz as an "extradited prisoner" is a reproach to the boasted civilisation of two foremost nations. The unfortunate object of this legal persecution has been for the past two years confined to his bed by a mortal illness, which has been gradually advancing towards its inevitable termination; and yet during the whole time he has been kept under police surveillance and has been practically condemned unheard. Surely no course could be better calculated to hasten the end of a sufferer from advanced cardiac disease complicated with diabetes. Mr. McHardy does not hesitate to affirm that this harsh dealing under legal authority is due to the influence of interested persons, whose reputations would suffer if Dr. Herz regained his liberty. He would hardly have ventured to make such a statement without being in a position to prove its truth; and, this being so, it is certainly surprising that the Government of a free country should have been content to be made the cat's paw of a clique, to whose interest it is that the sick man's mouth should be kept closed.

AN OUTBREAK OF MILK-BORNE ENTERIC FEVER IN LANCASHIRE.

MR. EDWARD SERGEANT, medical officer of health to the Lancashire County Council, has recently issued a interesting account of an outbreak of enteric fever which occurred at Great Harwood, and which was traced to the consumption of specifically polluted milk. There were altogether eighty persons, belonging to forty-nine families, attacked, the sanitary conditions of the houses invaded being neither better nor worse than those of other houses remaining free from attack. The water was exonerated from suspicion, since other districts supplied from the same source were not invaded; and there seems to have been no reason to suspect the local pollution of any one water main. So much for the negative evidence. From the positive standpoint it was ascertained that the disease was confined to houses consuming milk from a particular dairy, and that of the houses so supplied no less than one-third was invaded. It was further demonstrated that habitual drinkers of raw milk were attacked more virulently and with greater certainty than those persons who took the milk in tea or coffee. One patient is reported to have attributed his illness to a single glass of raw milk which he took two days prior to his attack. This is certainly a remarkably short incubative period for enteric fever. The question of bovine infection was naturally gone into, and a veterinary surgeon called in to inspect the cattle. The temperature of all the animals was found to be normal, and no eruption on the teats or mammary glands was observed. By carefully inquiring into the distribution of the milk

Mr. Sergeant concluded that it must have become polluted during the process of milking, and it eventually came to light that a young woman who assisted in milking the cows, and who looked after the cleansing of the cans, had since and for some time prior to the commencement of the outbreak felt unwell, but as she imagined herself to be suffering from a cold only she continued at work. On being examined by Mr. Sergeant, Mr. John Patchett, the medical officer of health, and the Chairman of the Sanitary Committee, Dr. Cran, the girl was found with a coated tongue, a pulse of 108, a temperature of 100° F., and a few days afterwards rose-spots appeared on her body. Mr. Sergeant is of opinion that the case was probably one of ambulatory enteric fever, and that for a month the girl has been unconsciously capable of imparting the disease. The conditions observed he regards as a relapse, and that it was not improbable that she was instrumental in imparting the specific properties to the milk; and the fact that the decline of the outbreak, allowance being made for incubation, coincided with her withdrawal from the dairy operations certainly lends considerable weight to this view. That the disease was spread by specifically contaminated milk seems to have been demonstrated, and the thesis that the girl in question had prior to her medical examination suffered from enteric fever is one which would explain the outbreak, more especially if diarrhoea was one of her symptoms.

THE CARE OF YOUNG IMBECILES.

ONE of the recognised defects of our highly organised social fabric is the want of due provision for feeble-minded or idiot children of the humbler classes. Parents sometimes have an exceptional partiality for such of their offspring as exhibit mental defects in a minor degree, and encourage themselves with the hope that the backward little one will improve and grow brighter as years advance. When, however, the condition is more pronounced and associated with bodily deformity and a total inability to acquire cleanly habits, a heavy burden is laid upon the parents, and serious injury may be done to other children by constant association with the afflicted one. In London ample and satisfactory means are provided for the treatment of these unfortunates through the operation of the Poor-law, and in some lunatic asylums idiots are admitted at a comparatively early age, but on the other hand there are extensive districts where such measures of relief are unattainable. The necessity for institutions accessible to the imbecile children of the poor has just been impressed on us by a communication from a correspondent in a Sussex village, describing a painful case and anxiously inquiring if there is no means of relieving a respectable labouring family of the task of rearing an idiot girl five years of age, who can neither walk nor talk, and requires more attention than the state of the mother's health enables her to bestow. Our correspondent, who sympathises with the parents, has made inquiries in various quarters on their behalf, but hitherto without result.

HOUSEHOLDERS AND SANITATION.

A QUESTION of equal interest to owners of house property and to their tenants was decided in court last week. The plaintiff, who, acting upon the assurance of an agent, had taken a furnished residence at Sandgate, attributed a sore-throat and other illness afterwards occurring in his family to damp and effluvia due to insanitary conditions. Evidence was adduced for and against this theory, and a verdict was finally given in favour of the defendant. The case, into the merits of which we do not enter, is, as we have said, doubly instructive. It ought to emphasise a necessity always incumbent upon tenants on making a change of residence—namely, that of providing for thorough inspection of all sanitary arrangements in a

new abode. Such forethought, unfortunately, is not too common, and this is the more to be regretted since the services of a qualified inspector can be readily obtained and at small cost, while the consequences of an oversight in regard to this matter may be serious in the highest degree. House-owners on their part will find that it is true wisdom and true economy in the end to test their property periodically, with a view to its timely repair.

THE MEDICAL SOCIETY OF LONDON.

THE annual conversazione of the Medical Society of London, held on Monday last in the society's house in Chandos-street, was exceedingly well attended, and passed off with much *éclat*. At the close of the eloquent and inspiring oration delivered by Mr. Pearce Gould, to which fuller reference is made in another column, a hearty vote of thanks to the orator was carried by acclamation on the motion of Mr. Clutton, seconded by Dr. Ord. The President, Sir W. Dalby, then received the guests and Fellows, and the rest of the evening was spent in the usual pleasant manner of these agreeable unions. A well-chosen selection of music was performed by the Bijou Orchestra during the conversazione.

THE PSYCHOLOGY OF ANÆSTHESIA.

IN our issue of March 23rd we published an interesting letter from Dr. George Wyld dealing with the psychology of anæsthesia. In another column we give the experience of a contributor when under the influence of both chloroform and ether, but we doubt, as we remarked when commenting on Dr. Wyld's letter, whether dreams during anæsthesia have any sound psychological bearing. The average dream is of no more value as a factor in experimental psychology than Dean Swift's famous dream: "'I have desired Apronia to be always careful, especially about the legs.'..... You must know I dreamed it just now, and waked with it in my mouth."¹ It would be difficult, we fancy, to draw any deduction as to mental processes from this, and we think it is perhaps well to think of all dreams, whether induced by drugs or occurring during natural sleep, as coming "through the ivory gate."

DIPHTHERIA IN LONDON.

DIPHTHERIA in London last week showed a fatality higher than in any like period for some months past. But not alone in last week was there increase in the fatal form of the disease, since the deaths have been rising in number from the week ended April 20th, in which they were 30; the totals in the succeeding weeks having been 27, 29, 38, and 41 respectively; and the corrected average for the similar weeks of the preceding decennial period was exceeded in the last two weeks by as many as 9 and 12 respectively. And whilst the deaths have thus increased in number, the per case mortality has shown a similar rise, for whereas in the two weeks ended May 4th the mortality was some 18.6 per cent. of attacks, it was over 26 per cent. in each of the weeks of the last fortnight. Admissions to hospital, which had been in the previous three weeks fluctuating somewhere between 47 and 50 per cent. of the cases, were last week somewhat over 55 per cent., and the actual admissions, which had been 69, 79, and 73 in successive weeks, were last week 84. The Registrar-General tells us that in the week ended May 11th, 4 cases belonged to opar, and 3 each to St. George Hanover-square, Bethnal Green, Whitechapel, and Camberwell sanitary areas; and that last week the last-named area had 8 deaths credited to it and Islington parish 4 deaths. In these respective weeks the numbers of deaths occurring at

the age-periods one to five and five to twenty, were 20 and 10 and 30 and 7, or at both periods together 79 and 90 per cent. of the whole respectively. In the first of the two weeks there were no fewer than 10 deaths registered from diphtheria in the West Ham district, where the disease seems to be becoming endemic, more particularly in the Plaistow subdistrict. In the London hospitals at the close of last week the number of patients remaining under treatment for diphtheria was in excess of any recorded since Saturday, Feb. 23rd, when the total was identical—namely, 486, the totals of the preceding weeks ended May 11th being 432, 457, and 464 respectively.

"A MATTER OF ETIQUETTE."

UNDER this heading we commented in our issue of April 20th upon the relations existing between Dr. F. J. Waldo and the vestry of St. George's, Southwark. In another column we print an account of the proceedings, up to the present date, from the pen of Dr. Waldo, in the form of a special report from him to the vestry. This report has, we understand, been submitted to the Local Government Board.

PREJUDICE AND EXAGGERATION.

ABOUT a month ago our New York correspondent related particulars of two cases of diphtheria, which terminated fatally after the use of antitoxin. Most of our readers must have felt that the cases, as given, were not conclusive in respect to the allegation that the injections were responsible for the result, in spite of the statement of the physician administering them, who is reported to have said that some mistake must have been made in the preparation or bottling of the remedy. Indeed, in one of these cases it is clear that the patient was obviously dying from diphtheria itself when resort was had to antitoxin. The record has, however, been seized upon by a Mr. Ernest Bell, who has disseminated it broadcast in a letter which has been inserted in a large number of provincial papers, and this writer has the effrontery to say that "similar fatalities" are being heard of "from all sides." We venture to affirm that there is no justification at all for such a sweeping assertion, but, on the contrary, that already there is abundant proof that the remedy has had a surprising influence in diminishing the mortality from diphtheria. The attempt to excite prejudice by such exaggerated statements cannot be too strongly reprobated, and we can only express astonishment that they should have been accepted without demur by those who are responsible for the guidance of public opinion.

A SAFEGUARD FOR INFANT INSURANCE.

POLITICAL rivalry finds no place where the object of legislation is a measure so needful, so impartial, and so purely humane as Sir Richard Webster's Bill relating to the insurance of children. The Bill, which was read second time in the House of Commons on Wednesday last, pursues a course very similar to that recommended by the Select Committee on Friendly Societies, whose report was issued in August, 1889. It accordingly provides for the maintenance and encouragement of the mutual benefit principle in effecting insurances, and it limits the sum insured to an average amount almost as low as that of the friendly societies (£2 up to ten years of age). It entails upon medical practitioners the duty of inquiring as to the fact of insurance before granting a certificate of death, and a like service is required of the registrar. It allows a child to remain under the protection of this Act until sixteen years old. The significance of these provisions may be

¹ Journal to Stella, Letter xv.

judged from what we already know of the terms and the methods allowed by various societies not organised by workmen for their mutual benefit. As regards the former we are aware of no limitation, except the inability to pay the required premium; an average of £4 and a maximum of more than twice this sum are not uncommon; while payment in some clubs is made partly in spirits. It is significant also that wilful neglect of infants, according to a recent return, has been shown to be much more common under the non-mutual system.

THE WOMEN'S LIBERAL FEDERATION AND THE MIDWIVES BILL.

THE members of the council of this association have been discussing the Midwives Bill. A resolution by Lady Carlisle was adopted to the following effect:—"That, as the absence of any State classification of midwives leads to the practice of midwifery by unqualified and incompetent women, and is therefore fraught with extreme danger to the lives and health of both mothers and their infants, this council heartily supports the principle of the Bill for the Registration of Midwives which has just passed its second reading in the House of Lords, and urges Her Majesty's Government to give its support to the same." Lady Carlisle argued in favour of raising the standard of midwives to that of sick nurses. To the objection that if the standard is raised the article will become too expensive, she replied that she looked forward to the time when sick nursing, including, we suppose, midwifery, would be paid for out of the rates, and, like education, be free. She crowned this opinion with the argument that child-bearing was a national service. We are getting on. If child-bearing is to be rewarded as conferring a national favour we shall have even more than plenty of it. Another lady, Mrs. Stanton Blatch, said that when medical men were sent for to attend women of the working classes they sent their unqualified assistants. If ladies wish to make the passing of a Midwives Bill impracticable they will do well to multiply such loose arguments and statements as the above.

On Friday, May 17th, that distinguished cricketer, Mr. W. G. Grace, who is a member of our profession, scored 288 runs for Gloucestershire against Somersetshire. This is in itself a remarkable feat of physical skill and endurance in a man well over forty, but when we consider that this innings was the hundredth occasion of his making a score of 100 runs and upwards the marvel is increased. "Vixere fortes ante Agamemnona." Many another hero has won fame in the cricket field, but we think that this feat of Mr. Grace puts him in a position very far above any of his predecessors or contemporaries, and as the organ of his profession we gladly add our quota to the praises which men of all classes are showering on his prowess.

WE note with pleasure that the University of Cambridge has conferred upon Mr. Francis Galton the honorary degree of Doctor of Science. Mr. Galton is well known as the author of "The Art of Travel," and as having introduced into this country the Bertillon system of identification of criminals.

THE Croonian Lectures of the Royal College of Physicians of London will be delivered at the college, Pall Mall East, on Tuesday, June 18th, Thursday, June 20th, Tuesday, June 25th, and Thursday, June 27th, at 5 P.M. by Dr. Marquet. The subject of the lectures will be a "Contribution to the History of the Respiration of Man."

FOOTBALL FATALITY.—On the 14th inst., while playing a game at East Clandon, a young man aged twenty-one years charged another player and was shortly afterwards seized with illness and died on his way home.

REPORT OF THE COMMITTEE ON PRISONS.

III.¹

AFTER urging the development of prison industries, and pointing out how strongly the evidence testifies to the benefits derivable by prisoners from being engaged in productive labour, the committee pass on to speak of "Prison Occupation generally"; and they think that there should be a larger supply of books and that reading should not be restricted to one book a week if the prisoner cares to read more, the only difficulty standing in the way being that of distribution, which should readily be overcome. With regard to the general occupation of prisoners other than that devoted to labour, meals, chapel, and other necessary prison duties, the committee hold that everything should be encouraged which tends to elevate the mind so far as it is consistent with regulations necessary for the general order and discipline, much depending in this respect upon the kind of population in a prison and upon the individuals who compose the prison staff. "The monotony of chaplains' work in prisons is apt to produce a mechanical performance of duty, and we think that it would be advisable more often to bring in selected preachers from the outside and we suggest that where it is possible the number of services which the prisoners have to attend should be reduced. This would enable the prisoners to be divided, each half going to chapel on alternate week days." These suggestions appear to us to be wholesome ones and well calculated to relieve the humdrum character of services and make chapel-going less of the nature of a punitive routine. The committee inquired carefully into the rules which regulate "talking" in prisons. Female convicts are allowed to talk for at least an hour a day under proper supervision, and so far as the committee can learn no harm has resulted from it. "We think the privilege of talking might be given after a certain period as a reward for good conduct on certain days for a limited time, and under reasonable supervision, to all long-sentence prisoners, local as well as convict, who have conducted themselves well and who are not deemed unsuitable for the privilege. The present practice of imposing silence, except for the purposes of labour and during the visits of officials and authorised persons, for a period it may be of fifteen or twenty years, seems to us unnatural." In the matter of "Education," the committee think that better results would be obtained by establishing a practice of teaching in classes and by extending tuition to the prisoners generally who, it might be considered, would be the better for it, and not limiting it to prisoners with a sentence of over four months, as at present.

The committee rightly attach great importance to the subject of Classification. It appears that in the prison service a "juvenile" is a boy under sixteen, for whom special treatment is provided by the Prison Act, 1865. Several witnesses were in favour of the total discontinuance of committing this class of offenders to prison; but the committee do not think this is either practicable or desirable. But although they think that in the case of grave offences for which reformatories are not available imprisonment is necessary, they hold that children should be subjected to special treatment and kept absolutely apart from other prisoners. The total number of this class on March 31st, 1894, was only 100, and it might be possible to set apart one of the London prisons for the reformatory treatment of this class. With regard to "young prisoners" the committee speak as follows: "Taking prisoners generally in local prisons, on March 31st, 1894, there were 2226 prisoners, all told, between the ages of sixteen and twenty, and there were 4880 between twenty-one and twenty-nine inclusive. After thirty a very distinct decrease in the number of prisoners proportionately to the population of the same age sets in. Doubtless this decrease is due to various causes, but the fact that it occurs suggests that this tendency towards the abandonment of criminal practices may be strengthened by developing the reformatory side of prison life." The following figures are interesting as showing the proportion of persons convicted for indictable offences per 100,000 of the population of the same age: under twelve, 24; twelve to sixteen, 261; sixteen to twenty-one, 321; twenty-one to thirty, 245; thirty to forty, 204; forty to fifty, 143; fifty to sixty, 92; and above sixty,

¹ Parts I. and II. were published in THE LANCET of May 4th and 18th respectively.

56. In this relation it is to be borne in mind that there is a strong tendency towards short sentences in the case of young offenders, so that the same individuals will appear oftener in the list at the earlier ages. The committee point out that the years seventeen, eighteen, and nineteen appear to be the most fatal in the formation of lasting criminal habits, and that this fact denotes a degree of plasticity which might be made use of in the right direction. They recommend that the age of admission to reformatories should be raised from sixteen to eighteen and of detention to twenty-one, and they urge the establishment of a penal reformatory under Government management on the ground that young offenders would thereby not be compelled to come in contact with the experience of prison life, and would, moreover, receive a good education and be trained in various kinds of industrial work and brought under the best and healthiest kind of moral influence. We are strongly of opinion that such a scheme, brought to bear upon youths at what is the most impressionable period of their lives, would, if properly carried out, be a great power for good in reclaiming many whose predisposition to enter the criminal ranks is largely fostered by the nature of their ordinary surroundings; but it will be useless if it is entered upon in a half-hearted way and upon a niggardly basis, for the machinery calculated to bring about the best results must be well appointed and equal to the work both as regards material appliances and personal capacity of staff.

Proceeding to treat of "Habitual Criminals," the committee recommend that this class of prisoners should be kept as a class apart from others, and they are strongly of the opinion that further corrective measures are desirable for these persons, who are a nuisance to the community, who when at large are responsible for the commission of the greater part of undetected crime, and who, when under sentence, complicate prison management. "We venture to offer the opinion formed during this inquiry that a new form of sentence should be placed at the disposal of judges by which these offenders might be segregated for long periods of detention, during which they would not be treated with the severity of first-class hard labour or penal servitude, but would be forced to work under less onerous conditions. As loss of liberty would to them prove eventually the chief deterrent, so, by their being removed from the opportunity of doing wrong, the community would gain." Under the head of "Habitual Drunkards," the committee say, should be included most prisoners sentenced primarily for drunkenness. They are not criminals in the ordinary sense and should stand by themselves in a special category. The committee go on to say that their inquiry entirely confirms the recommendation of the departmental committee on inebriates that magistrates should have power to commit for lengthened periods habitual drunkards coming before them. "Apart from any places of detention which may be constituted by legislation consequent on the report, we think that persons committed to prison for this offence should be collected in separate prisons, if possible, or otherwise in parts of prisons reserved for them. Special medical treatment should be applied to them, and they should be dealt with as patients rather than criminals."

Special consideration is needed in the treatment of female prisoners who are admitted into prison with infants or who are confined after entering prison. The infants should be in a *criche* in charge of a warder, the mothers being admitted at fixed time and otherwise employed like other prisoners. If ill-health makes it necessary for the mother to stay with the infant they should be in a hospital cell. Their presence in the ordinary prison destroys discipline, as they will talk; they cannot be punished and in every way they are exceptional cases. The present system of locking up the woman in a cell is unnatural and has bad effects, physical and moral. Wide discretion should be allowed to the matron and medical man as to the removal of the child at nine months of age. In cases where the mother is not satisfied that the child will be cared for it should be either retained in prison or the mother should be released with it. We are glad to have an opportunity of endorsing these comments of the committee on this subject, as they are clearly founded on common sense and natural instinct. To every rule, no doubt, where women of this class are concerned it is not unlikely that some cases of exceptional difficulty may arise, but the general principles formulated by the committee are excellent.

With regard to Unconvicted Prisoners, the committee concur generally with the views expressed by the Royal Commission of 1884 on Irish Prisons, whereby greater

freedom and more substantial modification of the severe restrictions were advised, on the ground that these prisoners are confined "for safe custody only." The committee do not think the provision made by the Prison Act of 1877, and insisted upon by the Royal Commission, with the view of their confinement being regulated in such manner as to make it as little as possible oppressive, has been duly carried out; and they think the diet of unconvicted prisoners should be improved. With regard to Debtors, they hold that there seems to be no sufficient reason why they should be more favourably treated than other prisoners. The question of classification is one by which the committee lay great store in their hopes, for "the special classes will be kept together, and it will be easier to apply to them the necessary special treatment. There will be less confusion, because in the case of the young offenders in the penal reformatories the habitual criminals and drunkards, those who undergo considerable periods of detention, will be grouped together, and greater facility afforded for teaching them a skilled trade." In this we entirely agree, and for that reason we have been anxious to set forth the views of the committee at some length. If any alteration in our prison system is to be the outcome of this committee, we feel sure it will have to take the form, not of altering the method of dealing with the inmates of our prisons as at present mixed up almost indiscriminately, but of rearranging and placing upon a more systematic basis of classification the various groups of criminals in relation to the nature and the intensity of their criminality. Such a process is that which the committee appear anxious to initiate, or rather to develop. A great deal has been done in the last thirty years to place the internal management of our prisons on a footing more consistent with modern ideas as to the efficacy of reformatory principles, as compared with mere efforts at repression. The subordinate staff, we are assured, carry out their "most difficult and responsible duties with forbearance and kindness," but from the nature of the circumstances those duties are of necessity very largely of a mechanical and routine description. It is to the higher officials and to the opportunities which may legitimately be entrusted to them that we must look for what we regard as the influential and abiding effects of the educational process, which should more especially characterise the operative activity of prison life, upon the minds of criminals. In this sense a careful and well-considered classification comes to be of vital importance, and the committee have done well in drawing public attention earnestly and forcibly to the necessity for it.

THE VESTRY OF ST. GEORGE, SOUTHWARK, AND THEIR MEDICAL OFFICER OF HEALTH.

(SPECIAL REPORT TO THE VESTRY.)

WHEN I had the honour of being appointed as medical officer of health to St. George's I agreed to obey the order under the Public Health (London) Act relating to the duties of medical officers of health. At the same time I consented to carry out a certain additional duty—namely, "to attend, if required, the sewermen, flushers, and employes during sickness." This agreement I signed under the impression that the particular duty had received the sanction of the Local Government Board, and would, therefore, come under Article 18 Subsection 18 of this order.

Subsection 18 reads as follows: "In matters not specifically provided for in this order the medical officer of health shall observe and execute any instructions issued by us, and the lawful orders and directions of the sanitary authority applicable to his office."

I mention these points because of their bearing on the following circumstances. At a meeting of the vestry on March 12th, 1895, a recommendation was "received" from your works committee to the effect "that in the event of the permanent hands of the vestry being absent from work for two or more days consecutively owing to alleged illness, the surveyor shall notify the medical officer of health, who shall attend the cases in accordance with Section 19 of the terms of his appointment, and afterwards report to this committee." Shortly after

this resolution I received a bundle of medical certificates, duly signed, referring to thirteen employés who lived in various and sometimes in distant parts of London. At the same time I had a verbal request from the surveyor to attend these thirteen cases. In such a proceeding I foresaw great difficulties, such as, for instance: (1) my unfitness for the work, as I have given up active practice for many years; (2) loss of time from regular duties; (3) friction with medical men of the district who were attending the patients in question. On these and other grounds I determined, after consultation with your vestry clerk, to refer the matter to the next meeting of the vestry. This I did on March 26th, 1895. The minutes of that date record that "the medical officer of health stated he was not quite clear as to the intention of the vestry with regard to the resolution passed at the last meeting instructing him to visit the vestry employés during illness." At that meeting I pointed out the serious difficulties that would arise from my visiting the patients of another medical man without his knowledge. The matter was referred back to the works committee for further consideration.

Quoting from the minutes of the latter committee for March 28th I find it written: "The question of the medical officer of health visiting employés during illness referred from the vestry was before the committee." "After some considerable discussion on the matter it was resolved that in any case where the surveyor is of opinion any suspicion is attached to any employé he shall notify the medical officer of health, who shall accordingly visit the men, the vestry undertaking to be responsible for any irregularity thereto." This resolution did not appear in the vestry's printed agenda, but was read on April 9th from the works committee minutes. On that occasion I made a statement to the effect that I begged respectfully to decline visiting the employés, unless I informed the medical man in attendance of my proposed visit. This statement does not appear either in the vestry's printed agenda or in the minutes of the 9th of April. It was, however, read on the 25th of April by the shorthand clerk at a meeting of the works committee, to which the matter had been again referred. At that meeting I asked the chairman kindly to explain to me the exact wishes of his committee. He answered that I was expected to see employés certified as sick without previous communication with the medical man in attendance. In other words, I was to make what are known as "surprise visits." I thereupon observed that both in my own interests and also in those of the parish I could not consent to such a proposal; but that I was willing, with the consent of the medical man in attendance, to see employés suspected of malingering, and that, moreover, I should prefer to meet him in consultation. I also made inquiry of the chairman as to what extent and in what manner it would be possible for the vestry to be responsible for the unprofessional conduct they asked me to be a party to. To this question I received no answer. The committee then resolved that their resolution of March 28th, which undertook a somewhat vague responsibility on behalf of the vestry, be reaffirmed. This resolution, which did not appear on the printed agenda, was duly "received" by the vestry after the reading of the committee's minutes on May 7th. There is no record, however, of the resolution having been "adopted" by the vestry.

On May 14th I received a note from your surveyor requesting me to visit a sick employé, and enclosing a certificate dated the same day, and signed by a doubly qualified medical man. I took the earliest opportunity available of seeing the surveyor personally, and was told that the vestry clerk had reported the case to him on information received from certain members of your vestry. With the surveyor's consent I repeated these words to Mr. Millar (the vestry clerk), who told me in emphatic terms that I had been misinformed. It is now my duty to state to the vestry that the patient in question has not been seen by me for reasons similar to those that have been already given. I take the present opportunity of respectfully asking for a final settlement of a matter that has already occupied a large amount of your valuable time.

Trades unions exist in almost every calling, and the profession is not free from a similar governing principle. It is a first understanding, equal in force to law, that every medical man should refrain from interfering with a patient already under the care of a brother professional unless by his consent, or, better still, in consultation. With no class of men is the observance of unwritten laws more necessary than among medical officers of health, whose duty

brings them in constant touch with local practitioners. Any friction between the sanitary authorities and the medical profession would, I feel sure, soon work disaster in a district like St. George's. Without in the least degree wishing to escape from any obligation entered into between your vestry and myself, I would respectfully ask that a final and speedy decision of the matter referred to in this report be requested from the Local Government Board.

(Signed) F. J. WALDO, M.D.,
Medical Officer of Health.

Vestry Hall, St. George's, Southwark, May 21st, 1895.

THE PRODUCTION OF DIASTASE AND OF AN ALCOHOLIC FERMENT FROM FUNGI.

IT is a relief to turn from the study of the micro-organisms which produce disease in man and to consider the important functions of other micro-organisms which we know are instrumental for his good. The training of useful microbes with a view of utilising their latent beneficent powers is, however, a branch of practical study which has hitherto resulted in small success; but there is little doubt that before long certain microbes will rank with other organisms in ministering to the needs of mankind if only the means of directing their movements and action are discovered. The present position of knowledge upon this subject undoubtedly points to the possibility of bacteria being schooled to perform a multiplicity of operations, useful and even industrial, which at present admit of being more satisfactorily and economically carried out. The vexed question of the disposal and utilisation of sewage matters, for example, promises soon to be solved most satisfactorily by bacterial methods, for the experience gained in the remarkable experiments at Massachusetts, as well as those in our own country by Mr. Scott-Moncrieff, teach that there are forces at our disposal in the army of bacteria above, beneath, and around us which when properly engineered will accomplish not only the disposal of a nuisance, as sewage is, but convert it into substances of an innocuous character to man and of a positively beneficial character to plants. Thus under suitable conditions it has been shown that the organic nitrogen, carbon, and hydrogen of sewage is converted by certain bacteria into the simple products ammonia, nitrate, carbonic acid, and water, the very constituents upon which plants thrive and feed, and which are, we might say, their very bread and butter. Illustrations of this kind of the important and useful functions played by microbes in serving the interests of man could be multiplied; suffice it to add that in the present article it is proposed to record but one other example which has recently come to our knowledge, and in which the importance of, and the profit that may accrue from, a study of the habits and requirements of organisms are well brought out. We refer to the recent researches of a Japanese chemist, which were instituted with a view of utilising the property possessed by certain fungi during their growth upon suitable media of exciting both diastatic and fermentative action. The results ultimately obtained promise to become of great commercial importance, while they have also a distinctly interesting bearing upon medicine, not only in bringing to light the eccentricities of organisms and expanding our knowledge of the nature of fermentation, but because one at least of the products—viz., an exceedingly active diastase and probably the purest form of this interesting enzyme ever produced on the large scale—has already its distinct uses in medicine and dietetics. A consideration of these points justifies us, therefore, we think, in devoting some space to an account of this new and important discovery; and at the same time we may append the results of a few experiments we have been able to make in the laboratory with the view of satisfying ourselves in some measure—and therefore, we venture to believe, our readers—as to the validity of the statements made in regard to it.

The discovery is due to a Japanese chemist named Jokichi Takamine, who, while studying with Professor Mills, F.R.S., at Glasgow University, conceived the idea of improving the methods of brewing and distilling—that is to say, he satisfied himself that better converting and fermenting agents were obtainable, and that the tedious, costly, and not over-healthy process of malting was a clumsy and

primitive mode of obtaining a converting agent in the form of the small production of diastase developed at so much sacrifice to the grain treated. On returning to Japan, Mr. Takamine, jointly with Professor Atkinson of Tokyo University, who published occasional contributions on the subject, undertook a long and exhaustive series of studies and experiments on many kinds of microscopic fungus or mould-growth, his object being to find a class of plant containing the two qualities of converting starch in cereals into sugars, and the sugars so obtained into alcoholic spirits. The various ferments and processes of the East, as well as of Europe, were one by one investigated only to be discarded by him; the ergots of rye and other plants whose qualities and powers are well known were not neglected; many kinds of bacteria were studied, when eventually this chemist discovered what he required in the fungus of the species *Eurotium Oryzae*, a mycelial of the *Aspergillus* family whose nature and characteristics were almost unknown. The qualities required and found in this fungus were threefold—that is, the plant having the two qualities he was seeking had to possess another quality, that of being capable of withstanding a high artificial cultivation or development of the two qualities. The best and most practical medium used for growing the seed of this microscopic fungus is common hydrolised wheat bran, on the flakes of which the plant grows with great rapidity, and whilst growing it, to reproduce its own seed, is fertilised with certain chemical salts, and when matured, a process of about five days' duration, he calls it "Taka Moyashi." When grown for commercial purposes it is not fertilised, neither is it allowed to ripen in the same high-class cultivation in this form, the commercial product being known as "Taka Koji."

On examining Taka Koji with a microscope the bran flakes show, after being thirty-six to forty hours in a moist temperature of 80° F., that the roots which spread all over the surface of the bran are literally covered with minute crystals of pure diastase. At the top of the mycelial a small head is formed in which the seeds and pollen are present, while the diastase at the roots is the ferment or agent which converts starch into sugars, the unripe seeds permeated with the pollen, and which may be designated in this condition spores, since they give rise to the ferment or agent which converts the sugars into alcohol and which now takes the place of yeast, as the diastase replaces malt. Strange to say, when both characteristics of the fungus are at their best in this inferior cultivation as described, their properties are at their highest stage of commercial utility; but should the higher temperature and fertilisation be resorted to it is found that the diastase is entirely absorbed from the roots by the seed in the head of the mycelial, which it serves to nourish and ripen, and when the two agents become one, capable of reproducing their genera, it is found to be of little use for either purposes, for converting or fermenting. Mr. Takamine obtains his diastase in an almost pure and concentrated form by the use of percolators, washing the diastase from the bran with water, in which it is soluble, but not so in alcohol, in which it is precipitated. When dried it is of a pure crystalline nature, capable of preservation for any length of time.

The purified diastase product consists of small, tenacious, gummy particles of a light brown colour and somewhat of the appearance of finely broken shellac; it is almost devoid of taste, but it communicates a peculiar sensation on the tongue, indicative of active digestive properties. An analysis which we made gave the following results:—

	Per cent.
Moisture	15.46
Albuminoids (N=3.65)	22.80
Mineral matters, consisting chiefly of soluble phosphate	16.22
Non-nitrogenised matter, probably carbohydrate... ..	45.52

On trying a weighed portion with a standard starch solution it was found that over 100 times of its weight of starch was completely converted in thirty minutes at blood heat. Doubtless at higher temperatures it would convert even a much larger quantity, it being stated that under favourable conditions it will digest as much as a thousand times its weight of starch. Hitherto the digestive properties of diastase have been appropriated chiefly by using active extracts of malt, which of course contain a large excess of malt sugar, which in certain cases it is desirable to exclude. The use of the "Takamine diastase" therefore offers

obvious advantages on this head. It can be employed, for example, for the malting of milk preparatory to drying, while it can be introduced almost imperceptibly to the taste into beer and other beverages without adding objectionably to the sugary constituents. It can also be compressed into tablets and in that form be obviously useful for a variety of medical and dietetic purposes. The expense of obtaining diastase by the new process is so small that it will be cheaply available for all purposes, including that of bread-making. It is this product of the new discovery, but in a less concentrated and in a less expensive form, which is expected to take the place of malt to a great extent in breweries and distilleries, while the ferment is calculated to replace the present yeasts of commerce in consequence of its greater power, quicker action, and superior keeping qualities.

As already stated, Taka Koji possesses two distinct properties—namely, diastatic property, or property of converting starch into sugar, and fermenting property. It is exceedingly important from an economical standpoint to separate these two properties, as well from the Taka Koji as from each other—a separation that has never before been successfully accomplished on an economical scale—so that when a conversion is desired the ferment property need not be wasted, and when fermentation is desired only the ferment property of the Taka Koji may be employed without waste of the diastatic property. The ferment portion may be directly separated from the dried Taka Koji, in the form of a fine powder, by sifting the Taka Koji. This powder comprises the bloom of the fungus and possesses fermenting properties in a remarkable degree. The residue left after sifting contains the diastatic property, and may be used as a diastatic agent. These two properties may be extracted together from the Taka Koji by soaking or steeping the same in water, thoroughly stirring and then pressing the mass, the diastatic property dissolving in the water, and the ferment part, insoluble in water, becoming detached by attrition and remaining suspended in the liquid. The soaking or steeping, separating and pressing operations may be repeated as often as may be desired, in order to effect a thorough separation. The ferment may be separated from this solution by decantation or filtration. It is, in the form of a fine dry powder, composed of young, immature spores of the mycelial fungus, the colour varying with the different fungi employed. It consists of microscopical spherical cells possessing the property of being transformed into alcoholic ferment cells when submerged in sugar solution under suitable conditions. Fermentation with this "Taka Moto," as it is called, proceeds with remarkable regularity and briskness, the liquid having all the appearance of a weak acidulated solution of sodium bicarbonate, so brisk is the effervescence. On microscopical examination the deposit was seen to consist of budding cells perfectly uniform and regular in shape and like the spores of *mucor* or some allied fungus, which have pululated instead of producing a mycelium. Mr. Takamine uses the microscopic fungus *eurotium oryzae* with the best results. But other mould fungi belonging to the genus *aspergillus* and to the genera *mucor* and *penicillium* may also be employed. The Moto may be dried and used for all the purposes for which common yeast is at present used. It is claimed that the *aspergillus* yeast for bread-making will work in half the time required by yeast, and will produce sweeter and more wholesome bread. It is, besides, less liable to become sour, as the Moto itself will keep for almost any length of time in ordinary climates and temperatures. It is further stated that the Moto has the power of mastering all injurious and parasitical ferments it may encounter, and of giving off its ferment cells of a perfectly regular and pure kind.

We may next record the results of a series of experiments which we tried with the view of ascertaining to what extent the *aspergillus* yeast would work—that is, as to the quantity of spirit it is capable of producing and the amount at which its growth is arrested. It is well known that with ordinary brewer's yeast (*saccharomyces cerevisiae*), when the proportion of alcohol produced amounts to 12 per cent. the further growth of the yeast is prevented, and with 14 per cent. fermentation ceases altogether. In this respect ordinary yeast hitherto appeared to excel other organisms in resisting the action of alcohol. It is stated, however, that Taka Moto, which is a *mucor* yeast, has the power of converting a sweet solution, such as wort, containing sugar sufficient to produce 20 per cent. alcohol, while the best yeasts of commerce will not convert more than about 7 per

cent. of the sugar in a similar solution into alcohol, thus reducing, it is claimed, to one-third the volume of the "wort" to be treated to obtain the same product. How far this is so may be judged from the following series of experiments in which a mash was prepared and converted into wort by Taka Koji, and the resulting sweet liquid fermented with Moto or aspergillus yeast prepared as already described.

In the first experiment, in which a sweet liquid of a gravity of 1075 was employed, the fermentation proceeded briskly, and at the end of the experiment (seven days), the gravity being reduced to 5° under water (1000), the percentage of proof spirit on distillation proved to be 19. On feeding with more sugar, however, the proof spirit rose to 23.86 per cent. In subsequent experiments carried out on similar lines the percentage of spirit rose to 22.71 and 22.88 respectively. On pushing the process further by continuing to feed the aspergillus yeast with ordinary cane sugar a liquid was eventually obtained indicating no less than 37 per cent. proof spirit. The aspergillus yeast cells are capable of continuing their work, therefore, in a liquid containing at least and probably more than 22 per cent. proof spirit. As the spirit increases the liquid becomes clear and the copious growth of yeast at the bottom may be removed, pressed and dried, when it will be found as active as before when placed in a fresh saccharine liquid. The dried aspergillus makes an excellent yeast for bread-making, while it affords an excellent basis also for the production of alcoholic liquors from sweet solutions, especially as, unlike ordinary yeast, it is free from impurities and from those bacteria which induce undesirable changes, giving rise frequently to the formation of acid products in both the brewing of beer and the "raising" of dough in bread-making.

It is obvious from the few experiments we have been able to make that there must be a big future for the ingenious process discovered by Mr. Takamine. The simultaneous production of both a starch-converting enzyme (diastase) and of a ferment which, as we have seen, is perfectly reliable and uniform in its action is a discovery which must have a marked influence upon the brewing and spirit-producing industries. Not only is the process economical, dispensing with the loss of time which is inevitable where the converting and saccharifying powers of malt are relied upon, but it is also stated that the rectified alcohol subsequently obtained is of remarkable purity, being free, it is said, from those higher products which render the ageing and further treatment of spirit obtained in the ordinary way a necessity. Apart, however, from this interesting aspect of the new process, which has been carried out on a practical scale in America, it possesses an interest also from the purely scientific point of view, since it is illustrative, as we stated at the outset, of what can be done by paying attention to the requirements and favourable conditions under which organisms will perform a work the results of which may be eminently useful for domestic, industrial, and even medicinal purposes. In the present instance it is probable that the production of pure enzyme by the simple means above described, which will convert an extraordinary weight of starch, is a fact alone of great interest to the profession, in that it may place in their hands an agent which, as they will readily perceive, may be made instrumental for good in a variety of ways. Again, the production of pure enzyme in large quantities is calculated to afford considerable assistance to those engaged in this branch of research and in the task of unravelling the mysteries surrounding the nature and composition of these remarkably active yet unorganised bodies. When the energy of steam was for the first time utilised it was held to be a remarkable fact, but the latent energy existing in the countless microbes at our disposal must be almost beyond conception. In the remarkable process just described, for example, organisms are so as it were coaxed that they readily produce first a mighty enzyme possessing extraordinary digestive powers, and then a ferment which grows on and on, producing volumes of gas and, *inter alia*, a highly combustible body having those powerful and peculiar properties which mark the members of the alcoholic series.

THE Newbridge Dispensary Committee (Naas Union) met on the 20th inst., and elected Mr. Fleming to the post of medical officer, vacant by the death of Mr. Richard Murphy.

Public Health and Poor Law. LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria in the Hinckley Urban and Rural Districts, by Dr. S. W. Wheaton.—This report has distinct interest for those who are studying the etiology of diphtheria and allied throat diseases, but as it only records the facts collected during a second and supplemental visit to the infected localities it requires to be read together with the earlier report on the same districts issued last year and dealing with a similar prevalence during 1893. But as far as can be gathered there seems no doubt that, taking the two inquiries together, two different sets of circumstances were met with, and this either consecutively or simultaneously. Thus, in one village or set of villages there was distinct diphtheria; in another set there were groups of cases which seemed to be mere nasal catarrh, and the question arose as to how far this condition of catarrh was related to true diphtheria, and especially how far it tended to be followed by diphtheria. And the result seems to be that villages which at one time exhibited nothing but the minor malady came later to suffer severely from diphtheria—indeed, Dr. Wheaton goes so far as to refer to the prevalence of this form of catarrh as a probable indication of a prevalence of diphtheria yet to come. In the former inquiry affections of the throat and mouth were associated with the nasal catarrh, and some of these seem to have been continuous until the onset of definite diphtheria. On the other hand, the minor throat ailments met with in some places on the occasion of the first inquiry had altogether disappeared, and in such places no diphtheria was found to prevail. These affections of the throat, nose, and mouth have preceded diphtheria, they have coexisted with diphtheria during the earlier stages of that disease, and they have ceased to prevail in districts where they have been replaced by unmistakable diphtheria. The precise significance of these circumstances necessarily involves considerations of distinct interest to the epidemiologist.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 8175 births and 3569 deaths were registered during the week ending May 18th. The annual rate of mortality in these towns, which had been 17.5 and 17.7 per 1000 in the two preceding weeks, declined last week to 17.6. In London the rate was 16.5 per 1000, while it averaged 18.3 in the thirty-two provincial towns. The lowest rates in these towns were 12.3 in Croydon, 12.7 in Norwich, 13.1 in Brighton, 13.6 in Gateshead, and 13.9 in Bristol; the highest rates were 22.7 in Bolton, 23.2 in Liverpool, 25.7 in Manchester, 26.5 in Salford, and 28.7 in Preston. The 3569 deaths included 303 which were referred to the principal zymotic diseases, against 305 and 351 in the two preceding weeks; of these, 85 resulted from whooping-cough, 69 from measles, 52 from diphtheria, 50 from diarrhoea, 27 from "fever" (principally enteric), 19 from scarlet fever, and 1 from small-pox. No fatal case of any of these diseases occurred last week in Brighton, Norwich, or Huddersfield; in the other towns they caused the lowest death-rates in Croydon, Bristol, and Bradford, and the highest rates in Salford, Bolton, Gateshead, Newcastle-upon-Tyne, and Preston. The greatest mortality from measles occurred in Bolton and Newcastle-upon-Tyne; and from whooping-cough in Leicester, Preston, Salford, and Gateshead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the thirty-three large towns. The 52 deaths from diphtheria included 41 in London, 3 in Leeds, 2 in West Ham, and 2 in Birmingham. One fatal case of small-pox was registered in Liverpool, but not one in London or in any other of the thirty-three towns. There were 27 cases of small-pox under treatment in the Metropolitan Asylum Hospitals

¹ Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. Price 4d.

and in the Highgate Small-pox Hospital on Saturday last, the 18th inst., against 37, 34, and 33 at the end of the three preceding weeks; 4 new cases were admitted during the week, against 12, 8, and 6 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1444, against 1469, 1413, and 1438 on the three preceding Saturdays; 185 new cases were admitted during the week, against 132, 107, and 179 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 290 and 247 in the two preceding weeks, further declined to 240 last week, and were 89 below the corrected average. The causes of 42, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Bradford, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Salford, and Burnley.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·9 and 18·7 per 1000 in the two preceding weeks, rose again to 21·1 during the week ending May 18th, and was 3·5 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·8 in Aberdeen and 16·0 in Paisley to 22·5 in Glasgow and 23·4 in Dundee. The 608 deaths in these towns included 24 which were referred to measles, 17 to diarrhoea, 14 to whooping-cough, 5 to "fever," 4 to diphtheria, 1 to small-pox, and 1 to scarlet fever. In all, 66 deaths resulted from these principal zymotic diseases, against 71 and 59 in the two preceding weeks. These 66 deaths were equal to an annual rate of 2·3 per 1000, which exceeded by 0·8 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 26 to 30 in the three preceding weeks, declined to 24 last week, of which 7 occurred in Glasgow, 6 in Edinburgh, and 6 in Leith. The deaths referred to whooping-cough, which had been 17 in each of the two preceding weeks, fell to 14 last week, and included 11 in Glasgow. The 5 fatal cases of "fever" exceeded those recorded in any recent week, and included 3 in Edinburgh. Of the 4 fatal cases of diphtheria 2 occurred in Glasgow, 1 in Edinburgh, and 1 in Dundee. The death from small-pox was recorded in Glasgow, where the single fatal case of scarlet fever also occurred. The deaths referred to diseases of the respiratory organs in these towns, which had been 124 and 98 in the two preceding weeks, rose again to 109 last week, and exceeded by 20 the number in the corresponding week of last year. The causes of 45, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 27·0 and 27·4 per 1000, further rose to 27·7 during the week ending May 18th. During the past seven weeks of the current quarter the death-rate in the city has averaged 30·2 per 1000, the rate during the same period being 17·8 in London and 19·3 in Edinburgh. The 186 deaths registered in Dublin during the week under notice showed a slight increase upon the number in the preceding week, and included 5 which were referred to the principal zymotic diseases, against 7 in each of the two preceding weeks; of these, 2 resulted from scarlet fever, 2 from "fever," 1 from whooping-cough, and not one either from small-pox, measles, diphtheria, or diarrhoea. These 5 deaths were equal to an annual rate of 0·7 per 1000, the zymotic death-rate during the same period being 1·8 in London and 3·0 in Edinburgh. The 2 fatal cases of scarlet fever were the first recorded during the present month, and exceeded the number in any week since January last. The 2 deaths referred to "fever" also exceeded the number in any recent week, while the mortality from whooping-cough showed a further decline. The 186 deaths registered in Dublin last week included 26 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths of infants showed an increase upon the number recorded in the preceding week, while those of elderly persons showed a slight decline. Eight inquest cases and 6 deaths

from violence were registered; and 71, or more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 5 per cent., of the deaths in the city last week were not certified.

HEALTH OF LONDON IN 1894.

The Registrar-General has just issued his annual summary of the mortality statistics for London and for other large English towns in 1894. The death-rate in England and Wales in 1894 was considerably lower than that recorded in any year since the enactment of civil registration in 1837; before that date no trustworthy records existed. The recorded death-rate in London in 1894 was equal to 17·8 per 1000, only 1·2 above the mean rate in England and Wales, and was lower than the London rate in any previous year for which trustworthy records exist. Corrected for difference of age and sex distribution of the population, the London death-rate last year is raised to 18·93, which may be compared with the rate in England and Wales, 16·59. Put in another way, there were in equal numbers living, with equal sex and age proportions, 1141 deaths in London last year to 1000 deaths in England and Wales—the excess of mortality in London being thus equal to 14·1 per cent., against an excess, calculated in the same manner, of 18·6 per cent. in 1893. Among the thirty-three large English towns specially dealt with in the Registrar-General's returns, ranged in the order of their rates of mortality from the lowest, London stands sixteenth in the list for 1894, whereas in 1893 it stood seventeenth. The annual summary contains an international table of mortality in large towns, in which statistics are given for six foreign cities with populations exceeding a million. The death-rates in these six towns in 1894 ranged from 18·2 per 1000 in Berlin to 22·8 in Vienna; whereas in London the recorded rate did not exceed 17·8. The death-rates in the five metropolitan groups of registration districts ranged from 16·2 in the west and north, to 20·6 and 20·9 respectively in the central and east. The summary gives no statistics of mortality at the different age periods except as regards infant mortality. The deaths of infants under the age of one year were equal to 143 per 1000 born alive, whereas the mean rate in the ten preceding years was 154 per 1000; infant mortality ranged in the groups of registration districts from 131 in the north to 158 in the east. Infant mortality, showed, however, a far wider range in the various metropolitan sanitary areas; it was only 86 per 1000 in Stoke Newington and 94 in Lee and Plumstead, while it ranged upwards to 185 in St. George-in-the-East, 186 in St. George Southwark, and 210 in St. Martin-in-the-Fields. After correction for increase of population the deaths in London last year were 11,660 below the mean annual number in the ten preceding years. If we except a marked excess from diphtheria (1146 deaths) and a smaller excess from measles, influenza, cancer, premature birth, and suicide, the mortality from all the principal causes of death in 1894 was below the corrected average. The deaths referred to diseases of the respiratory system were 5000 below the corrected average. Diphtheria was again last year one of the most fatal zymotic diseases in London, and caused a death-rate of 0·61 per 1000, which, although showing a decline from the still higher rate in 1893 (0·74), was nearly double the mean rate in the years 1885-93, which was 0·36. The deaths referred directly to influenza, which had been 2336, 2264, and 1526 in the three preceding years, further fell to 750 last year. One of the most noticeable features in the mortality statistics in the annual summary just issued is the abundant evidence it affords of the low sanitary condition of the group of registration districts representing East London. It has been seen that the death-rate from all causes in this part of the metropolis showed a marked excess. The recorded death-rate in East London, however, probably understates the true corrected mortality, as the birth-rate in this group of districts in 1894 was 36·4, while the highest rate in any of the other groups was 30·7 in South London. The death-rate from the principal zymotic diseases was 3·52 per 1000 in East London, whereas the highest rate from these diseases in the other groups was 2·64 in the South. Diphtheria and measles especially showed a marked excess in East London; and we have already called attention to the excess of infant mortality in this part of London. While there is the most conclusive evidence of continued general health progress in London, the statistics for the eastern and for some of the central districts point clearly to the necessity for more earnest and active sanitary action in those localities.

THE SERVICES.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Daniel C. Grose to be Surgeon-Colonel, vice F. H. Welch, retired. The under-mentioned Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels:—William J. Fawcett, M.B., vice G. Andrew, M.B., retired; William E. Saunders, vice D. C. Grose; William J. Charlton, vice J. D. Gunning, deceased.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen's approval of the following promotions among the following officers of the Indian Medical Services appears in the *London Gazette*, May 17th:—*Bengal Medical Establishment*: To be Surgeon-Major-General: Surgeon-Colonel James Cleghorn, M.D. To be Surgeon-Colonels: Brigade Surgeon-Lieutenant-Colonel John Henry Newman, M.D.; Brigade-Surgeon-Lieutenant-Colonel James Charles Gordon Carmichael, M.D. Her Majesty's approval of the retirement from the service of the undermentioned officers is also gazetted:—*Bengal Medical Establishment*: Surgeon-Major-General William Roche Rice, M.D., C.S.I.; Brigade Surgeon-Lieutenant-Colonel Archibald Cameron, M.D. *Madras Medical Establishment*: Brigade-Surgeon-Lieutenant-Colonel James Smith; Surgeon-Major Donald Elcum, M.D. The following appointments are announced:—Hyderabad Contingent: 2nd Infantry: Surgeon-Captain C. A. Johnston, Madras Establishment, officiating Medical Officer, 1st Lancers, to be Medical Officer. Surgeon-Major P. D. Pank (Bengal), Residency Surgeon in Meywar, to officiate as Civil Surgeon of Ajmere and to the Medical Officer of the Merwara Battalion until further orders. Surgeon-Major H. N. V. Harington (Madras), Medical Officer of the Deoli Irregular Force and of the Haraoti and Tonk Poll Agency, to officiate as Residency Surgeon in Meywar until further orders. Brigade-Surgeon-Lieutenant-Colonel C. F. Pollock, A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel. Brigade-Surgeon-Lieutenant-Colonel R. de la C. Corbett, D.S.O., A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel. Brigade-Surgeon-Lieutenant-Colonel H. T. Brown, A.M.S., to officiate on the Administrative Medical Staff of the Army. Surgeon-Major A. V. Anderson and Surgeon-Major A. W. F. Street, D.S.O., have respectively delivered over and received charge of the office of the Deputy Sanitary Commissioner, Central Registration District. The services of Surgeon-Major J. T. Lewtas, M.D. (Bengal), Officiating Statistical Officer to the Government of India, are replaced at the disposal of the Government of Bengal. The services of Surgeon-Captain G. H. Fink, Civil Surgeon, are placed at the disposal of the Government of India, Home Department. Surgeon-Captain J. C. Morgan, A.M.S., takes over the duties of Staff-Surgeon at Murree from Brigade-Surgeon-Lieutenant-Colonel G. Massey, Civil Surgeon.

NAVAL MEDICAL SERVICES.

The following appointments are announced:—Staff-Surgeons: Samuel Keays to the *Tamar*; James McCardle Martin to the *Colossus*; and Horace Ximenes Browne to the *Melampus*. Surgeons: Edward R. D. Fasken to Sheerness Dockyard; James C. F. Whicher to the *Wye*; Hamilton E. L. Carle to the *Victory*; Percy Lord to the *Tamar*; Percival M. May to the *Esik*; R. J. Mackeown, A. R. Bankart, P. H. M. Star, E. S. Miller, H. H. Pearse, O. Rees, H. A. Julius, C. H. Rock, S. T. Reid, F. W. MacVean, J. F. Hall, H. W. Hull, C. J. E. Cock, J. E. H. Phillips, T. Gibbons, and A. X. Lavertine to the *Victory*, for Haslar Hospital.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Harold Muir Evans, M.D., to be Surgeon-Lieutenant. *Rifle*: 2nd Volunteer Battalion, the Royal Warwickshire Regiment: Surgeon-Lieutenant W. G. Creswell, M.D., to be Surgeon-Captain. 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: Lieutenant John Quick to be appointed Surgeon-Lieutenant. 1st Volunteer Battalion the Lancashire Fusiliers: Surgeon-Captain A. Fletcher, M.D., resigns his commission. 1st Volunteer Battalion, the East Lancashire Regiment: Surgeon-Lieutenant J. M. H. Martin, M.D., to be Surgeon-Captain. 2nd Volunteer Battalion, the East Lancashire Regiment: Surgeon-Lieutenant A. M. Sinclair to be appointed Second Lieutenant. 1st Surrey (South

London): Surgeon-Captain T. A. Dagg resigns his commission. 21st Middlesex (the Finsbury): Evan Jones, gent., to be Surgeon-Lieutenant. *Volunteer Infantry Brigades*: North Midland Brigade: Brigade-Surgeon-Lieutenant-Colonel W. Milligan resigns his appointment.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General John Ashton Bostock, C.B. (retired), whose remains were interred at Brookwood on Tuesday last, and who had reached the ripe age of eighty years, was educated at the Charterhouse and at Cambridge. In 1838 he passed his examination for the Membership of the Royal College of Surgeons of England, and four years later was appointed assistant surgeon in the Army, reaching the rank of surgeon-major in 1857; he retired in 1876. He took part in the first Afghan War, which closed in 1842, and was also engaged in the Crimean War. For these latter services he received the medal with four clasps (Alma, Balaklava, Inkerman, and Sebastopol) and the Turkish medal. He was also made a Knight of the Legion of Honour. After his retirement in 1876 he took a special interest in the work of the Metropolitan Asylums Board and actively associated himself with many questions concerning the public weal. Among those who attended the first part of the funeral service, which was held in the Guards Chapel, Wellington Barracks, were Surgeon-Captain Bostock, Surgeon-General Gordon, Dr. Farquharson, M.P., Dr. Bridges, Surgeon-Major Duke, Professor Rucker, F.R.S., Dr. Rogers, Dr. Hare, Brigade-Surgeon Perry, Professor William Smith, Dr. Kingston Barton, Dr. D. Slater, Dr. Church, Sir Edwin Galworthy, Sir James Paget, and Mr. J. T. W. Macalister (Librarian of the Royal Medical and Chirurgical Society).

Deputy Inspector-General E. Moorhead, M.D., Retired List, Army Medical Department, died at Margate, on the 6th inst., aged seventy-five years. He joined the Army in 1842, became surgeon in 1855, surgeon-major in 1862, and retired with the hon. rank of deputy-surgeon-general in 1868. He served with the 32nd Regiment at the first and second siege operations before Mooltan, including the capture of the city and surrender of the fortress (medal with clasp).

Deputy-Surgeon-General H. Harper, Madras Medical Service (retired), died on the 3rd inst.

Brigade-Surgeon-Lieutenant-Colonel J. D. Gunnings' death at sea on the homeward passage of the *Malabar* is announced. He joined the Army in 1867, became surgeon in 1873, surgeon-major in 1879, surgeon-lieutenant-colonel in 1887, and brigade-surgeon-lieutenant-colonel in 1893.

THE HEALTH OF CALCUTTA AND BOMBAY.

We referred last week, in a paragraph under this heading, to the alleged prevalence of typhoid fever in addition to that of small-pox and cholera, which had been previously reported. It appears, according to the *Times of India* of the 4th inst., that a severe outbreak of typhoid fever has also recently occurred at the Sailors' Home in Bombay amongst the crew of H.M.S. *Cossack* whilst they were being temporarily quartered there in consequence of their ship undergoing repairs in the dry dock. The first case reported was on Feb. 19th, and between then and the 24th there were 11 cases. These were followed by other cases on the 28th of the same month, when the total number reached 22, exclusive of 8 cases of a doubtful or less pronounced character. The deaths numbered 8. From an inquiry that has been instituted and is still being prosecuted it would appear that no sufficient cause has been discovered in the building itself or in its sanitary appliances to account for the outbreak. The result of the investigation, so far as it has gone at present, is stated by our Indian contemporary to have established a strong probability in favour of the theory that milk pollution and the use of polluted watercress have been the causes of the disease in question. We hope that the condition of any filters that may have been in use in the institution will not escape attention. The water-supply is obtained from the municipal mains, and the water at its source is believed to be perfectly good.

TEMPERANCE IN THE ARMY.

The Duke of Connaught, who presided over the first public meeting of the Army Temperance Association, held last week at the Royal United Service Institution, in appealing for funds, made some interesting remarks with regard to temperance amongst the rank and file of our army. Of its immense moral power for good he said there could be no doubt, and when men left the army and returned to civil life, if they had good characters, they stood a better chance of

getting employment. To belong to the Army Temperance Association was a testimonial as to sobriety, and His Royal Highness expressed the opinion that a soldier who was temperate was a better man than a temperate civilian, because a man who had been in the ranks was accustomed to discipline and self-control, whereas civilians were not always in the habit of checking their desires. He agreed with the suggestion that there should be a temperance room in every barracks, and that various handicrafts that would be of use to the men when they left the service might be learnt there in the men's spare time. The report showed there were 128 branches of the association, with a total membership of 8641. Lord Roberts, in a letter, expressed the hope that the present membership would be increased to at least one-third of the total number of soldiers serving with the colours in the United Kingdom, which was about the proportion of men who belonged to the association in India.

THE FRENCH IN MADAGASCAR.

According to the latest mails from Madagascar the troops of the French Expeditionary Force are reported to be suffering to a serious extent from fever and climatic disease, and the sickness has been attended with much mortality. The amount of inefficiency attributable to these causes at this season among the troops on the coast has given rise to some anxiety. It is stated that in one case a company of 150 men is only able to muster 40 fit for service; but, as those acquainted with the effects of malarial disease at certain seasons among our own troops in India are aware, the sickness and inefficiency may be excessive for a comparatively short time only. Unfortunately, however, climatic disease is apt to be followed by a good deal of debility and anemia and by recurrences of febrile attacks entailing a heavy invaliding list later.

CHOLERA AND THE INDIAN PILGRIM TRADE.

The more the facts are known the more certain it seems to be that the insanitary state of Camaran and the extremely defective state of the arrangements there make it a breeding ground for cholera. Camaran is the quarantine station through which crowds of pilgrims from India and the Dutch colonies have to pass. Large numbers of them arrive there with a perfectly healthy record as far as the voyage is concerned. They are landed at Camaran to pass the customary period of quarantine, and the usual history that follows their arrival is that some cholera cases appear among them within a week afterwards, and the disease becomes epidemic in another week. We concur with the *Times of India* in thinking it a scandal that perfectly healthy pilgrims should apparently so frequently acquire the disease at this quarantine station.

THE NAVAL EXAMINATION.

The undermentioned gentlemen who competed on the 6th inst. and following days at Examination Hall, Victoria Embankment, for appointment as Surgeon in the Royal Navy have been granted commissions:—

	Marks.		Marks.
R. J. Mackeown, M.B. ...	2795	S. T. Reid ...	2277
A. R. Bankart, M.B. ...	2735	P. W. MacVean, M.B. ...	2238
P. H. M. Star ...	2611	J. F. Hall, M.B. ...	2235
H. S. Miller, M.B. ...	2539	H. W. Hull ...	2146
B. H. Pearce ...	2449	C. J. B. Cock ...	2134
O. Hers, M.D. ...	2377	J. E. H. Phillips ...	2116
H. A. Julius ...	2366	T. Gibbons, B.A., M.B. ...	2114
C. H. Rock ...	2307	A. X. Lavertine ...	2104

THE DEATH-RATE IN BOMBAY LUNATIC ASYLUMS.

According to Surgeon-General Turnbull's report on the lunatic asylums of the Bombay Presidency for 1894, the death-rate in these institutions is very high, especially in some of them. In the asylum at Poona it reached the enormous amount of 217.7 per 1000, and in another asylum at Hyderabad it was 125 per 1000. The amount of lunacy in the Bombay Presidency appears to be on the increase.

YELLOW FEVER AT ST. LUCIA.

An outbreak of yellow fever is reported to have occurred recently at St. Lucia. The disease is stated to have attacked twenty-three men of the Royal Artillery, including three non-commissioned officers, and to have caused many deaths.

Sir Alexander Mackenzie and Surgeon-Major-General Clegborn have joined the Central Committee of the Dufferin Fund in place of Sir Antony MacDonnell and Surgeon-General Rice, resigned.

The hired transport s.s. *Tabor* arrived at Portsmouth on the 10th inst. with sixty invalids for the Victoria Hospital, Netley.

Correspondence.

"Audi alteram partem."

THE CASE OF DR. CORNELIUS HERZ.

To the Editors of THE LANCET.

SIRS,—I think you may be glad to publish the enclosed certificates regarding the present condition of Dr. Cornelius Herz. The originals were forwarded for presentation to the Cour d'Appel in Paris yesterday, when the appeal came up against the recent condemnation, by default, of the accused, who has been an extradition prisoner here since Jan. 19th, 1893, without the possibility of having his case investigated, and precluded by law from giving evidence. The cruel hardship of the situation is self-evident. The unwarrantable assertions cast upon the medical testimony by the Official Advocate in the Paris court has been noticed in the *Times*, while the indecency and falseness of the comments in the lay press of France are as disgraceful as incredible. Authenticated copies of the enclosed certificates were sent to the Home Secretary here, with the covering letter of which copy is enclosed.

I am, Sirs, yours faithfully,

Saville-row, W., May 16th, 1895. MALCOLM M. MCHARDY.

[COPY.] "5, Saville-row, W., London.

"We, the undersigned, who have previously seen Dr. Cornelius Herz in consultation, have carefully read the report by Drs. Lauder Brunton and Frazer of his condition on April 27th. The increased degeneration of the heart and aorta and the increase of anginal pain is precisely what we should expect from the condition of the patient when we saw him, and from a comparison of the reports made on previous occasions with what we ourselves found. We strongly deprecate any excitement as being most prejudicial to the patient, and consider that it is advisable to spare him even the excitement and fatigue of another examination of his condition by ourselves. It is impossible for him to even leave his bed, much less to travel.

(Signed) "RICHARD QUAIN, M.D.
"WILL. BROADBENT, M.D.
"GEORGE JOHNSON, M.D.
"MALCOLM M. MCHARDY, F.R.C.S."

[COPY.] "Tankerville, Bournemouth.

"We, in consultation, saw Dr. Cornelius Herz at above address on Saturday, April 27th, 1895. He appeared even weaker than on former occasions, because whereas he had previously raised his head from the pillow to greet us he now lay perfectly quiet without even doing this. He had, however, recovered from the condition of collapse in which he had been some time before. The surface of both legs was cold, but that of the left was the colder of the two. His pulse was 86; respiration 23. The cardiac disease appeared to us to have made some progress since our last examination. The heart was feeble, so that the apex beat could not be felt, but from auscultation it was evident that the heart was dilated. The murmur at the apex indicating mitral regurgitation was louder than it had been on former occasions, and had assumed a twanging character. There was a loud systolic murmur over the aorta and a prolonged diastolic murmur over the sternum, indicating both stenosis of the aorta and incompetence of the aortic valves. How much the circulation is disturbed from this incompetence of the aortic valves is evidenced by the fact that not only was the radial artery seen to be strongly locomotive between the forefinger and thumb, but locomotive pulsation was seen even in the dorsal artery of the foot. There appeared to be also a slight thrill over the aorta which we had not noticed before and which led us to fear that the aorta itself was beginning to dilate. The pain over the heart is now nearly constant and undergoes exacerbations from time to time. The sickness continues also to be very distressing. A specimen of his urine had a specific gravity 1026, acid, slight trace of albumen and 3 per cent. of sugar.

(Signed) "T. LAUDER BRUNTON, M.D.
"W. FRAZER, M.D."

[COPY.] "May 14th, 1895.

"SIR,—I have the honour to respectfully, but most earnestly, recall your attention to my letter of Sept. 24th, 1893, regarding the exceedingly painful and cruel circumstances incidental to the prolonged custody of that mortally sick extradition prisoner Dr. Cornelius Herz, for whom it would now seem only too plain that it is deliberately intended to offer no relief otherwise than by death (mental or physical). Rather than accept any responsibility for the blood-guiltiness incidental to inaction in the matter, I herewith enclose to you authenticated copies of the medical certificates recently furnished by Dr. T. Lauder Brunton, Dr. Wm. Frazer, Sir Richard Quain, Sir W. Broadbent, and Sir George Johnson, for use in the Cour d'Appel to-morrow in Paris. There is nothing that I can add to my letter of Sept. 20th, 1893, in pleading the cause of humanity and justice as against policy routine and procrastination. I shall be glad to know authoritatively whether on the death of Dr. Cornelius Herz his family's cup of bitterness is to be further overfilled by an official inquest, as it appears too evident he is to be left to die in custody.

"I have the honour to be, Sir, your obedient servant.
(Signed) "MALCOLM M. MCHARDY, F.R.C.S.
"The Right Honourable the Home Secretary."

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—This Bill having passed its second reading in the House of Lords, it appears to me, from a perusal of the debate reported in the daily papers, that a question of some importance has been overlooked, and one which, in my humble opinion, has not received its adequate consideration. I trust, therefore, you will allow me to submit to obstetric authorities the point in question in order that it may not escape the attention of the Commons. The question is simply this. How does it come to pass—that is, if the evidence submitted to the Select Committee of the House of Commons and confirmed by that body be correct (*viz.*, that unskilled midwives have been guilty of so much mischief in the past)—I ask how it comes to pass that on the Continent, as in Germany, where the Legislature controls midwives, the mortality amongst lying-in women should exceed our own country, where legislation has not hitherto existed? Mr. Humphreys has attempted a solution of this question by informing us that the conditions of midwifery on the Continent are not the same as in the British Isles, and Mr. Humphreys further points out that narrow pelvises exist in Germany in the proportion of about 14 per cent. Now, Sirs, although personally I am no lawyer, I submit that a solemn inquiry of this kind (I mean the legislation of midwives), which for aught we know may some day shatter the whole system of obstetric practice in this country, should be subjected to the most rigid cross-examination, and it is upon this ground that I venture to offer a hypothesis to explain, at least to some extent, the curious fact of the high mortality where registered midwives exist. Now, it is perfectly evident that if the statement about these contracted pelvises be correct one of two things must take place—that is to say, violent operative measures, as craniotomy, would be more or less frequently resorted to, or the application of forceps must be a common necessity, and it is certain that in both these cases midwives would give nature the longest possible trial; and hence, the vital powers becoming exhausted, this delay may possibly account to a great degree for the high mortality in Germany, and this is exactly one of the risks—*i.e.*, delay—which we anticipate in the registration of midwives—I am, Sirs, yours truly,

Queen's-road, S.E., May 20th, 1895.

CLEMENT H. SERS.

To the Editors of THE LANCET.

SIRS,—I have obtained the following opinion on the Midwives Bill from a barrister who helped me on a former occasion. It shows the grave danger now threatening pregnant women and infants; while it will be seen that it threatens to repeal the educational sections of the Medical Acts. I can only repeat that if each practitioner will at once write to the Members of Parliament for his division, earnestly requesting them to oppose the Bill (if it come into the House of Commons), and for their Members to ask some Members of the House of Lords to oppose the Bill, it is not likely it will be permitted to pass. Each practitioner should also ask all the local influential political workers, such as the chairman and secretaries of the local political organisations, to write at once to their Members of Parliament. The Bill was read a second time by the Lords on May 14th, 1895. If some of the practitioners in each city would arrange to go as a deputation to meet their Members at the House of Commons, this would greatly assist our objections to the Bill. A list of Members of the House of Commons will be found at pages 135-147 of *Whitaker's Almanack* and the address—"House of Commons, Westminster, London"—will find them. I shall be glad to hear from any practitioner willing to help.

I am, Sirs, yours faithfully,

ROBERT R. RENTOUL.

78, Hartington-road, Liverpool, May 21st, 1895.

CASE FOR COUNSEL'S OPINION.

1. It is submitted that this Midwives Bill is, in some respects, a more dangerous proposal than either of the previous Bills. The title of the Bill is most misleading.

2. It recommends the repeal of the educational sections of the Medical Acts, as it proposes to empower a "midwife" to practise midwifery and to take entire control of the mother and infant, although she has received only a few months' training; while, according to the Medical Acts, if any person wish lawfully to practise midwifery such person must have studied for at least five years at a recognised medical school, passed the necessary medical examinations, and be registered in the Medical Register. It further recommends the repeal of the Medical Acts by enacting that a "midwife" may practise midwifery without

having studied either medicine or surgery: whereas, according to the Medical Acts, if a person wish lawfully to practise any branch or part of medicine, such as midwifery, such person must have studied medicine and surgery as well as midwifery for at least five years and passed the necessary medical examinations. It therefore proposes to revert to the effete and dangerous system of the partially educated and singly qualified practitioner.

3. It will, if adopted, prove dangerous to medical education and to the public, as it proposes to establish two separate and distinct orders of women midwifery practitioners—*viz.*, first, those trained, under this Bill, for a few months only; and second, those educated for at least five years, according to the Medical Acts.

4. It will, if adopted, prove dangerous to medical education, and to the public, as it proposes to establish a back-door entrance to the practice of midwifery; because those who fail to pass the examinations now held by the medical bodies under the Medical Acts will be able to pass the examinations held by the Midwives Board under the Midwives Bill.

5.—It will, if adopted, prove dangerous to medical education and to the public, because there is not a sufficient number of maternity hospital patients with which to train both medical students and pupil midwives in practical midwifery; and also, it would, by proposing to hand over all "normal" labours to the midwife, withdraw these from the newly qualified medical practitioner, and so prevent him from perfecting his knowledge in practical midwifery.

6.—The Bill is very one-sided, because it proposes to exclude men from the Register of Midwives, whereas women are, by the Medical Act, allowed to register on the Medical Register.

7.—The Bill is in no way whatever a protection to pregnant women and infants, because it proposes to allow every woman to continue to act as, and perform all the duties of, a midwife, so long as she does not only use the word "midwife."

8. The Bill is a threatened danger because it does not propose to make it an offence if a registered midwife employs one or several women who are not midwives to act as her unqualified assistants.

9. The Bill is a threatened danger because it does not make it an offence if a registered midwife continue to act as a midwife, even should her name be removed from the Midwives Register for infamous conduct.

10. The Bill is a threatened danger as it proposes to admit at once, and without any examination, all women who say they now act as midwives (some 15,000, the promoters of the Bill say), while it is proposed to continue this "system" of registration, without education or examination, for two years after the Bill passes (see Clause 5).

11. If the Bill became law the midwife could be employed as the legally qualified midwifery assistant of any medical practitioner, dentist, or chemist. It is difficult to see how this would protect the public.

12. The Bill does not make any provision for the supervision of midwives, even when attending natural labours, or any penalty should she neglect to call in medical assistance in abnormal labours.

13. No provision is made for the payment of the medical officers of health who "may" (not "shall") be appointed to supervise midwives (see Clause 12).

14. No provision is made in the Bill for the judging of any midwife accused of being guilty of infamous conduct and for removing her name from the Register.

15. The Bill prevents "any private person" from instituting legal proceedings against a midwife, although by the Medical Act, the Dentists Act, and the Pharmacy Act "any private person" is empowered to enter an action; while by the Veterinary Surgeons Act and its Charter "any private person" with the consent of the Registration Committee of their Council may institute proceedings.

16. The Bill neglects to give a definition to the words "natural labour," as used in Clause 2, and so would give rise to endless trouble and litigation.

17. The Bill does not define the words "without the direct supervision of a medical practitioner." Further, do the words in Clause 2 mean "registered medical practitioners only," or any unqualified practitioner?

18. The Bill does not make it an offence if the midwife conduct not only "natural" but also abnormal labours, abortions, and miscarriages. It further does not make it an offence if the midwife use instruments, or turns or performs any of the various obstetric operations. She will, therefore, be in all respects a midwifery practitioner. She will also be entitled to use the words "midwifery practitioner," accoucheur, &c. She can also ask for and accept fees for the performance of any midwifery operation (see Clause 4, line 10).

19. The Bill does not make it an offence if a midwife visits and supplies medicines to any sick, pregnant, or puerperal woman, or any woman who has aborted or miscarried, or who treats or performs any operation upon any infant. The midwife will therefore be not only a midwifery but also, if not *de jure*, *de facto*, a medical and surgical practitioner, and will be able to ask for and accept fees for so doing.

20. The Bill does not make it illegal for a midwife to vaccinate, and to take fees for so doing; or to include such in the confinement fee.

21. The Bill does not make it illegal if the midwife give a certificate of the cause of death of the mother or infant, or a certificate of stillbirth.

22. If the Bill pass a midwife will be entitled to give expert evidence in court of law as an accoucheur or midwifery practitioner.

23. The Bill does not make it an offence if the midwife compound, or supply, or dispense medicines or even "scheduled" poisons to women and infants.

24. The Bill is not fair to midwives certified and residing in Scotland and Ireland, as all such practising midwifery and using the title midwife in England may be fined £5 (see Clauses 3 (1) and 18).

25. The Bill is unfair, as it does not make any provision for the Royal Colleges of Physicians and Surgeons in Scotland, and Ireland, or for the Faculty of Physicians and Surgeons, Glasgow, or the Apothecaries' Society, Dublin, being enabled to elect each three representatives to the Midwives Board, while these medical representatives are given to the Midwives Institute.

26. The Bill fails to make provision for the election, by registered midwives, of district representatives to the Midwives Board.

27. The Bill fails to provide any penalty should any person or persons—other than those recognised by the Midwives Board—lecture, examine, and grant a certificate to women which will qualify them to act as midwives.

28. If the Bill become law a registered midwife will possess a "medical diploma," as defined by Section 27 of the Medical Act, 1886.

29. According to the definition of the term "medical corporation" in Section 27 of the Medical Act, 1886, the Midwives Board may claim to be recognised as a "medical corporation."

30. This being so, and as it is not provided against in this Bill, it follows that any medical corporation mentioned in the Medical Acts, and now granting certificates in medicine and surgery, would be entitled, by Section 3 of the Medical Act, 1886, to combine with the Midwives Board, and to recognise the Board's certificate in midwifery as one which empowered the holder to practise midwifery. Therefore the Board's certificate could, along with the medical and surgical certificates, be registered in the Medical Register.

31. To meet the necessities of the case, Clause 2 should be amended so as to define a midwife as "a woman who undertakes to act as a midwifery nurse only, and under the direct supervision of a registered medical practitioner." Clause 4 should be amended in the same way, and penalties should be provided for the punishment of any midwifery nurse who exceeds these duties.

*. We print Dr. Rentoul's letter and communication exactly as we received them, but it appears to us that a "case for counsel's opinion" is not the same thing as "counsel's opinion." We have already expressed our views with regard to this Bill, but, in accordance with the principle "audi alteram partem," we willingly insert Dr. Rentoul's letter and accompanying "case" or "opinion."—ED. L.

To the Editors of THE LANCET.

SIRS,—In your leading article of May 18th you described "the evils of the existing system, under which any woman, however dirty, intemperate, or ignorant, may call herself a midwife, without check on her practice and without responsibility to any authority"; and you further add, "It is indispensable that such persons should be ejected from the lying-in rooms of the poor," and you advocate the present Bill on these grounds. Allow me to point out that this Bill does not forbid any woman, however ignorant, practising midwifery, providing that she does not call herself a "midwife" or assume any title implying that she is registered under the Act or is "specially qualified" to act as a midwife, therefore any uneducated woman may call herself an obstetric nurse or accoucheuse and practise midwifery without infringing this Act. This is a serious matter, as this Bill is advocated on the ground that the new order of registered midwives will displace the old ignorant midwife, but it now seems that the old midwife will be retained under a new name, and there will be, in addition, a new order of registered midwives.

The result is easily foreseen; the care of the very poor will be left to the old order of midwife with her low fees, whilst the artisan's wife will fall to the lot of the new registered midwife with her higher fees. She will, therefore, come more directly into opposition with the qualified medical man, and attend many who would otherwise have been attended by him, whilst the old order of midwives will still be doing their work. How much better off will the poor be? I am, Sirs, yours truly,

May 22nd, 1895.

REGINALD PRATT, M.D.

THE RATIO BETWEEN FORCEPS DELIVERY AND RUPTURED PERINEUM.

To the Editors of THE LANCET.

SIRS,—In an interesting address by Dr. Glover, the Medical Profession, its Place and Progress,¹ after mentioning the early use of the forceps as one of the great achievements of recent midwifery practice, he (Dr. Glover) goes on to say: "True, we have heard much more of late years of accidents to the perineum." The question thus arises, "Is the more frequent use of the forceps responsible (in any way) for these cases of ruptured perineum?" It would be interesting to have the individual and collective wisdom of the profession on such a very important question. From my own midwifery statistics, extending now over more than a quarter of a century, I unhesitatingly say that, instead of the early and more frequent use of the forceps being responsible for a larger percentage of ruptured perineae, the very opposite fact is the case. I aver, moreover, that the scientific use of the forceps in applicable cases (whether early or late) is in many instances a preventive of such accidents to the perineum. On referring to my note-book I scarcely find a case of ruptured perineum occurring after the use of

the forceps, even when forcible delivery has had to be effected, whereas instances are much more numerous where delivery has been naturally accomplished. In fact, when one has the forceps on the head, one is "master of the situation," and very often by careful dallying and manipulation one can prevent such an untoward result. It must be remembered, too (which I do not recollect to have seen noted in any text-book on midwifery), that when a perineum is ruptured it is not so often from the passage of the head but from the shoulders.—I am, Sirs, yours faithfully,

Leicester, May 16th, 1895.

W. L'HEUREUX BLENKARNE.

CIVIL RIGHTS DEFENCE COMMITTEE.

To the Editors of THE LANCET.

SIRS,—On behalf of my committee I beg to express an earnest hope that you will in your widely read journal give insertion to Mr. Anderson's letter.

I am, Sirs, your obedient servant,

5, Mitre-Court, Temple, E.C., May 22nd, 1895.

STAMFORD.

TO THE RIGHT HON. THE PRESIDENT AND MEMBERS OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

MY LORD AND GENTLEMEN,—The leading article in the *National Observer* of May 11th, and editorial comments in that of May 18th, coming with so much authority, coming from a friend, and with every expression of sympathy, seems so likely to carry weight and even to cause doubt amongst those who have so staunchly and so generously supported me, that I ask permission to reply, and would request that with your approval my reply be published. The *National Observer* considers the question of the original judgments of the Trinidad Court "trumpery," and, by inference, appeal to the Privy Council unnecessary; that in *Anderson v. Gorrie* and others, the judgment more than counterbalances the verdict; that the dicta I rely upon are merely "obiter"; that the judgment of the Appeal Court that no action will lie against judges for acts wholly without jurisdiction, or for striking us in the face, is correct; that there is no chance of success in appeal to the House of Lords; that the committee are in error in assisting me in either appeal, and that the proper course is that for my false imprisonment I should be compensated by the State as a measurement of "fairness"—i.e., not as of right.

The "original judgments" involved not only the money value, but (1) my right to earn my living by my profession; (2) my right to recover and enjoy possession of my freehold land, the judgments effectually impugning my title to my whole estate (against these I desire to appeal to the Privy Council, but also against each of the following illegal orders); (3) admitting and inciting the plaintiffs, who were not not paupers, to sue me as paupers, and thus depriving me of my right to my peace; (4) refusing me my right to give evidence, deserting me in effect worse than a convicted perjurer; (5) compelling me to accept twenty-four hours' notice of trial and thus preventing me from applying for a jury; (6) arbitrary refusal of my right to appeal to the Privy Council in matters involving Civil Rights of far greater value than £500; (7) for examining me in Trinidad on a Tobago judgement; (8) committing me to prison in default of bail; (9) exacting "excessive bail" contrary to the Bill of Rights; (10) refusing me the writ of *habeas corpus*; (11) refusing to accept bail when tendered, and keeping me in prison as though under a conviction for some offence; (12) repeated adjournments, without cause, keeping me a prisoner at large under "excessive bail" for three months. Is there, I would ask the *National Observer*, one of these orders that does not trespass against a right without which liberty or property would be insecure? Is there one not replete with indignity or with danger, as well as with injury? Is there one for which thousands have not suffered? I, at least, have good reason not to think them trumpery. If I had been illegally ordered to be flogged or tortured, and had been flogged or tortured, could it, I would ask, be felt that any reparation would be complete, or ought to be a satisfaction to me, without the obliteration of the shameful order? I am sure all who sympathise with me will understand me when I say that I still hear the key turn in the lock, as I heard it when I entered each night my felon's cell and the key was turned on me; and that I can never be satisfied without the formal and legal obliteration of such a record, and of others not less infamous. I trust this is no false sentiment or improper feeling, but that to generous minds the injuries thus drily enumerated may seem as intolerable to a British subject from British judges as any mere physical torture.

Yet, in the hope to appeal successfully to more practical minds, the minds of any who would advise me to disregard such wrongs and such indignities, and to accept a money gratuity and an apology in lieu of the reestablishment of my rights, and the rights of all British subjects in colonies governed by the Crown, I would ask to be permitted to point out (1) that these judgments (and orders) remain not only on record, but in force; (2) that if I give up my resistance the illegally maintained plaintiffs may not only at once enforce their illegal judgments, but thereby force on prior creditors, and make me bankrupt—sacrificing, at forced disposal, all that I of right possess, completing my "destruction" (vide *Coke*, Inst. ii., 48), and adding a final humiliation, against which for six years I have successfully struggled. I do not think the *National Observer* was aware of the position, or it would not have thought the question of the judgments trumpery. If I accept a money indemnity, am I to pay out of it these illegal judgments, and thus to give my sanction to all that I have suffered? Or are the plaintiffs to be concurrently indemnified? Or are their judgments to be annulled by Act of Parliament concurrently with the vote of indemnity to me? Even this ought not to be done except on a reference to the Privy Council and a judicial decision that the judgments and orders are illegal. Is the compensation to include all the consequential damage done to me by these "State-aided" illegalities?

For myself, I desire only my right, which is to appeal to the Privy

¹ THE LANCET, April 20th, 1895.

Council and obtain the reversal of these judgments and orders—a part of the oppression of a British colony by British judges,—which ruined many as innocent as I; which corrupted, by encouragement in speculative litigation, whole sections of the people; which criminated great numbers in conspiracy, perjury, and fraud. Between me and this oppression—between a whole colony and this wholesale judicial tyranny and corruption—there intervened, as shown by the Committee in its Interim Report, and by "Juror" in the *Pall Mall Gazette*, nothing but my right of access to a Middlesex jury. Was that, I seek to know, a "right" I did and do possess, or was it a providential error of Cave and Charles JJ.? It is now admitted that the point is far from "elementary," but this decision (without hesitation) of the Divisional Court is overlooked, and it is said that the dicta I rely upon are "obiter." It is also overlooked that Lord Coleridge left it to the jury to decide, and the jury decided that the acts of the defendant Cook were not judicial acts. But the decisions in *Molyneux v. De Burgh* and *Houlden v. Smith* are not "obiter," but are the precedents directly in point. With deference to the *National Observer*, it is, I submit, the decisions against me which are ALL OBITER, no action having ever before been brought against a judge for direct violations of statutes; and I invite the citation and examination of a single case in which the decision in favour of the defendant judge does not rest on the act complained of being within his jurisdiction, or having a colour of jurisdiction.

In this judgment there is, as is known, a further element of doubt, and ground of appeal, in the question of Lord Esher's competency to hear the appeal, there being at the time an action in progress in which he was a defendant (*Yeatman v. Soden* and others) for alleged slander uttered on the Bench in matters *coram non iudice*. If this ground is, as I believe, good, illegality is heaped upon illegality, and I have surely most exceptional grounds to ask for help in obtaining justice. If the case is not elementary, there remains—on such grounds there may well remain—more than a chance—a hope of success in the House of Lords.

It is not unknown for the Divisional Court to be upheld—and for the Court of Appeal to be reversed—and not only I, but all who desire a right of remedy against a blow in the face from a judge, or against other crimes if committed by judges, may well hope that the present may be such an instance. To this right of action—the only thing that has served me so far—I naturally cling. If it is finally decided that I do not—that no British subject does—possess this safeguard, the sense of the nation will perceive that a safeguard must be provided. For this safeguard, for compensation and redress, I can with no derogation or sacrifice of right apply to Parliament, when, but not until, it is finally decided that I do not possess it at law; that I never had the right to maintain this action; that, according to a lame and imperfect constitution, not only I, but a whole colony, lay at the mercy of tyrant judges, of a cruel, indifferent, and irresponsible officialism. It will, I think, be clear that if I have this "RIGHT" I should betray myself and my cause were I to accept in lieu of it, even from Parliament, any mere voluntary concession not to be expected by others. In the like case, who could never be so fortunate as to have a verdict on which to base such an expectation.

In these explanations and in the views I have taken I have endeavoured to follow the views of the committee and to adhere to the lines on which it is proceeding; and I hope that I shall obtain its support in the publication of this reply to misconceptions that I cannot but fear will, if left unexplained, prove fatal to the hope of influential and widespread support.

I have the honour to be, my Lord and Gentlemen,

Your very obedient servant,

54, Bloomsbury-street, W.C., May, 1895.

R. B. ANDERSON.

"A PREVENTIVE OF HYDROPHOBIA."

To the Editors of THE LANCET.

SIRS,—Under the above heading in the current issue of THE LANCET Mr. T. J. Tonkin calls attention to a curious method of treatment prevalent in the Soudan. It may be of interest to mention that a somewhat similar case came under my notice in the province of Shantung, North China, about three years ago. An intelligent native of considerable literary ability called on me to provide him with a remedy, he having been bitten slightly in the hand about six weeks before by a rabid dog. The wound, which must have been very small, had completely healed. I asked what treatment he had already adopted, and he informed me that the dog had been killed, the heart—in this instance—taken out and boiled, and that he had eaten it. He was seen again twelve months later, and had been free from any symptoms of disease. In a country where the whole carcass of the dog is considered a delicacy, this method of therapeutics cannot, perhaps, be regarded as strange.—I am, Sirs, yours faithfully,

WM. W. SHEPESHALL, L.R.C.P., L.R.C.S.E., &c.

Fawcett-street, S.W., May 17th, 1895.

THE SEMILUNAR FIBRO-CARTILAGES OF THE KNEE-JOINT.

To the Editors of THE LANCET.

SIRS,—May I claim a portion of your valuable space to enter a protest on behalf of a pair of structures with which the human knee-joint is endowed, the function of which, mainly as a result of the intrusion of the irrepressible knife of the surgeon, and partly, and in my humble opinion wrongly, on behalf of their possible morphological history, is being minimised and downtrodden?

First, with regard to their history, Mr. Bland Sutton has produced evidence in favour of their origin in connexion with tendons surrounding the joint; but, as far as I am aware, he himself has never advanced this theory as an evidence of their uselessness, and with regard to this point he has much more forcibly demonstrated a similar origin for the internal and long external lateral ligaments, which are generally considered as effective and useful as the lateral ligaments of any other joint. Further, as has always been pointed out, the knee-joint as a whole owes its strength and solidity mainly to the tendons which surround it, bringing these into the closest functional association with the ligaments themselves. The expansion of the quadriceps anteriorly forms the largest and most striking example of the supplementary covering given by tendons to the extensor aspect of a joint capsule, while its connexion to the thin capsular ligament ensures against any dipping in of the synovial lining when the knee is suddenly extended, and its tendon, from its close association with the tibia of the front of the joint, is usually spoken of as the ligamentum patellæ. Posteriorly a similar striking illustration of the utilisation of a tendon as a ligament is offered by the oblique fasciculus of the posterior ligament derived from the semi-membranosus, which places the ligament to a certain degree under contractile power and control when the joint is suddenly extended, preventing the possibility of an instantaneous strain which, if the ligament were an entirely passive structure, would be a source of danger, and also prevents any infolding of the capsule when the position of extreme flexion is assumed.

Secondly, these fibro-cartilages are actually thickened infoldings of the synovial membrane, and with regard to their history a complete transitional series may be traced in different joints of the human body. First let us take the case of the acromio-clavicular joint; here we find the anatomical authors at slight variance as to the presence or not of a fibro-cartilage, the structure in question being a mere infolding of the synovial lining of the upper aspect of the capsule, which varies considerably in size and thickness. In the elbow-joint, as has been pointed out by Professor MacAlister, a miniature meniscus, consisting of an infolding of the synovial membrane, surrounds the margin of the head of the radius. In the shoulder-joint a well-marked meniscus surrounds the margin of the glenoid cavity, here undoubtedly in great part deriving its firm fibres from a tendon, that of the long head of the biceps. In the knee-joint the inter-articular fibro-cartilage as a meniscus reaches its highest development, since it is not a passive ring, but a circular movable cushion, giving elasticity and providing for proper adaptation of the bony surfaces in proportion to the varying areas of the latter which come into direct contact in the different positions of the joint. Here I would refer especially to an additional meniscus, obviously a synovial fold occasionally developed by thickening of the ligamenta alaria; in an instance of this preserved in the Museum of St. Thomas's Hospital the resemblance to a semilunar cartilage was so strong as to suggest to some observers the possibility that it was one of the latter displaced.

Lastly, as to the use of these structures. 1. They do act as buffers, coming into action when the pressure between the bony points in contact is as great as can safely be borne, protecting the central part from injurious pressure just as the tubera ischii are relieved from pressure in sitting on a circular air cushion, and as a single unit in the erect position are as important as an intervertebral disc. 2. They do not "slip forward" when the knee-joint is extended, but are pushed and expanded by the lower end of the femur and the superincumbent weight, and at the termination of extension form an important elastic wedge-check, helping to allow of rapid, complete extension without a sudden strain on the ligaments of the joint. 3. By their firm adaptation to the convex posterior segment of the articular surface of the femoral condyles they enlarge the area against which the head of the tibia plays in internal and external rotation of the flexed joint. 4. They deepen the articular cavity for the femoral condyles in the extended position of the joint, the outer part of the condyles resting on an elastic cushion which fills up the interval which would otherwise exist. Mr. Moullin suggests that the use of the cartilages is to prevent nipping of the anterior part of the capsule. I would only say with regard to this theory that the capsule is, as I have tried to show, provided with muscular attachments such as are seen in other joints to prevent this occurrence; that

the greater part of the anterior aspect is attached to the margin of the patella, which bone moves with the quadriceps, and also tends as a rigid area to prevent folding of the capsule. I may also advert to the fact that the cartilages themselves, which are certainly held between the bones, are invested on both aspects by the synovial membrane. These remarks have been called forth by those contained in a clinical lecture by Mr. Moullin, published in THE LANCET of May 18th, and in a less degree by the fact that during the past session a speaker at one of the London societies gravely suggested that since Mr. Sutton had shown these structures to be in some sense vestigial the knee-joint would be better without them. In writing the above I in no way dissent from the practice of removing broken cartilages, and should always resort to this treatment, but on the other hand I would maintain that the knee-joint without the semilunar cartilages has lost one of its most perfect means of fine adjustment.

I am, Sirs, yours faithfully,
Charles-street, W., May 20th, 1895. G. H. MAKINS.

"KINGSLERE DISTRICT COUNCIL AND MEDICAL REMUNERATION."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to an annotation in THE LANCET of May 4th under the above heading. The reporters were premature in their statement. The appointment (!) was offered to me on Tuesday, the 14th inst., and respectfully declined. I am, Sirs, yours truly,

Kingsclere, May 17th, 1895. REG. MAPLES.

SMALL-POX IN CALCUTTA.

To the Editors of THE LANCET.

SIRS,—Seeing that in Calcutta the deaths from small-pox for eight weeks only of the quarter do really exceed in the ratio of nearly three to one the number of deaths from the same disease in all the capitals of the world put together for a whole quarter, those in Calcutta proper being 872 and in the other capitals for thirteen weeks 333, I should like to ask someone well acquainted with the city the presumable reason. Is there no legal requirement of vaccination, and are there no public vaccinators? Is the Hindoo and Mahomedan feeling against the operation so strong that it cannot be put in force? It certainly does not say much for the operation or its performance if, in our principal colonial city, the disease exists unchecked to the terrible extent it appears to here. Who is to blame?

I am, Sirs, yours truly,
Gravesend, May 20th, 1895. J. H. GRAMSHAW, M.D.

"ARE APOTHECARIES, OLD OR NEW, ENTITLED TO ADVERTISE?"

To the Editors of THE LANCET.

SIRS,—I am also prompted, like your correspondent "Ethica," to reply to his letter. He accuses the holders of the L.S.A. diploma of being advertisers. I have been associated with general practice in London for the last twelve years, and I can honestly say that the majority of advertising cases that I have come across have not been from holders of that diploma. The new L.S.A. is now as fully qualified as anybody; why, therefore, should he wish to advertise any more than an M.D. Lond.? It appears to me that jealousy has a great deal to do with these attacks on the L.S.A.'s. I am in practice in a large London suburb, and three of the most professional men in that district are holders of the L.S.A. I am, Sirs, yours truly,

May 18th, 1895. JUSTICE.

MEDICAL AID ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—I have always been under the impression that THE LANCET would not support in any way any medical aid company or association. Judge of my surprise last week when I beheld an advertisement emanating from the Accrington Medical Dispensary. This is one of those

businesses that of late have been the subject of inquiry by the General Medical Council. For reasons best known to themselves the name of "Medical Aid Association" is gradually being dropped by the committeemen of these businesses, and other names substituted, as "Medical Institute," "Medical Dispensary," &c. For some reason, at present unknown to me, I perceive that in this year's list of medical aid associations the statistics relating to Accrington, showing the numbers, profit, and loss, total worth, &c., were not supplied by the secretary. In conclusion, I may mention that an advertisement for an assistant appeared in THE LANCET about three weeks ago from another association.

I am, Sirs, yours faithfully,
May 21st, 1895. DETECTOR.

* * We do not insert the advertisements of medical aid associations or of like bodies if we have any reason to suppose that they act on objectionable lines, but it is obviously impossible to absolutely ensure the rejection of such advertisements. Our clerks have strict rules to this effect which they carefully follow, but unfortunately they are not all "Detectors." The advertisement in THE LANCET of last week did not on its face appear to contain anything to which exception could be taken. If our correspondent will furnish us with the means which he apparently possesses of infallibly detecting the character of every "Dispensary" we shall be greatly obliged to him.—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Assizes.

MR. JUSTICE HAWKINS concluded the criminal business of the Assizes on the 15th inst. with the trial of William Miller for the wilful murder of Edward Moyse on Feb. 19th last. The trial ended in a verdict of "Guilty," such being, indeed, the foregone conclusion. This city has been too often the scene of a brutal murder, and this most recent one offers no extenuating circumstance, but several of great aggravation. The deceased was an aged man who on the fatal night offered the prisoner hospitality and a bed for the night. In the morning at an early hour John Needham, a boy aged fifteen, saw the prisoner rummaging the house, and was suddenly attacked by him and wounded. He defended himself as well as he could, and on the prisoner leaving the house he went and found his master (Moyse) wounded and apparently dead. Needham went for assistance, became faint from loss of blood, and was taken to the Northern Hospital, where he remained for some time. Moyse was found to have been dead some time, and from the state of the body it was evident that he had been stunned while asleep and then killed by heavy blows on his head and face with a hatchet. The prisoner was arrested a few days later and identified by Needham. In addition to this direct evidence there was a long chain of circumstantial evidence against which there was practically no defence, the prisoner being quite unable to account for his movements on the fatal night. Mr. Justice Hawkins passed severe sentences on six women who had inflicted grievous bodily harm on a boy who had been a witness against the husband of one of the prisoners. The prisoners were all respectable charwomen, against whom there was no previous charge, but in this their first offence they had been guilty of wanton violence against a boy who had simply done his duty as required by law. He had been left by them on the road in an unconscious state, and he was in the Royal Infirmary for some time after. The judge awarded severe sentences for other crimes of violence, and observed that drink was the exciting cause of many of them.

Fatal Effects of Tight-lacing.

The city coroner held an inquest on the 15th inst. upon the body of a domestic servant aged eighteen years who was attacked on the 11th inst. with pains in the stomach. She was seen by Dr. McCormick, who found her corset so tightly laced that it had to be broken off. She was taken home and treated, but died on the 12th. At the post-mortem examination an ulcer was found in the stomach, which the medical

man attributed to tight-lacing. It is remarkable how this, like other foolish fashions, dies very hard.

Electrical Communication with Lightships and Lighthouses.

The river Mersey has been the scene of many a wreck and many deaths from drowning. These are not due to any lack of courage on the part of the lifeboat men, who are only too ready to risk their own lives. The Royal Commissioners have recommended that the Formby Lightship shall be connected with the shore by means of an electric cable, which will enable the crew to communicate promptly by telephone the exact position of any vessel in distress and so save valuable lives. They will also be able to call for medical aid when this is required.

Hospital Saturday.

Saturday, the 18th inst., was observed as Hospital Saturday in the city. A new departure was made this year by a number of ladies, who paraded the streets from an early hour, collecting contributions from the large number of passers-by. The number of persons who enter the city from all points of the compass every week-day is marvellous, and it is to be feared that only a very small proportion contribute anything to the medical charities. This new arrangement has, therefore, at least something to be said in its favour. The amount accruing from the Hospital Saturday Fund has steadily increased since its commencement in 1870, and a large increase is looked for this year.

Deaths of two Liverpool Surgeons.

Within a very short period two members of the profession who formerly practised in Liverpool have passed away, each having passed the age of fourscore. The first, Mr. Richard Hutchinson, died at Heswall, Cheshire, where he had been living in retirement for some years past. Mr. Hutchinson became a Member of the Royal College of Surgeons of England in 1837, and had for many years a large practice, being also honorary surgeon to the South Dispensary. The other gentleman was Mr. John Nottingham, F.R.C.S., who was honorary surgeon to the Southern Hospital for many years and had a considerable reputation as a surgeon and general practitioner. For some years past he had lived in retirement at Whitchurch, Salop, where he died.

May 20th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle-upon-Tyne Eye Infirmary.

At the annual meeting of this valuable charity, recently held in Newcastle-upon-Tyne, Dr. C. S. Jeaffreson, the honorary house surgeon, called attention in his report to the number of patients treated in the out-door department whom he considered to be "not fitting recipients of charity," many of whom he said were "in receipt of large wages." If the complaint thus publicly made be correct, and it is not by any means the first time that Dr. Jeaffreson has made it, the charity is undoubtedly being grossly abused. The financial statement was not altogether satisfactory, and one would think nothing would tend more to alienate support than the repeated statements by a responsible officer that the charity is abused. The Eye Infirmary is a very perfectly arranged and equipped hospital doing a great deal of excellent work, and it is much to be regretted that it should be made use of by a class for whom it is not intended. Some means of checking abuse at this as well as at other similar institutions should be possible.

Society for the Prevention of Cruelty to Animals.

At the annual meeting of this admirable society, held recently at Newcastle-upon-Tyne, Colonel Coulson said that "a few days ago, while he was in the south of England, a man brought a very beautiful little dog to a friend of his for sale. Enraged because he could not sell it the man took his dog into a wood and there skinned it alive." It seems almost incredible that such a thing could have happened in England, but Colonel Coulson added—"the man was arrested and sent to prison for two months, with hard labour, by the magistrates." This was received with applause by his audience, though why it should have been it is difficult to explain. The punishment was about the same as is not infrequently awarded to some homeless wretch for sleeping out

or to a poacher for stealing a hare. Surely penal servitude would not have been too much for such an offence. Colonel Coulson suggested that a Bill should be brought in permitting judges and magistrates to flog men for acts of gross cruelty to women, children, and animals, and he added that he himself would be quite willing to flog such offenders free of expense to the Government. It is quite time such an Act was passed. The argument that the lash would degrade a man capable of skinning a live dog is absurd. How could such a man by any means be degraded? On the contrary, to flog him soundly would be the sole means of appealing to any feeling he possessed which was capable of responding.

Health Exhibition.

The sum of £105 has just been divided by the Mayor among the medical charities in Newcastle-upon-Tyne, the proceeds of the first day's receipts at the Health Exhibition now being held in Olympia. Mr. Engel, the manager of this very successful and interesting exhibition, deserves the thanks of the charities which his enterprise and kindness have benefited.

Newcastle-upon-Tyne, May 21st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A Hospital Caravan for Infectious Diseases.

A NOVEL departure in providing for the isolation and treatment of infectious cases has been adopted by the local authority in one of the districts of East Lothian. It consists in having a movable hospital in the form of a caravan. The caravan has four wheels and can be drawn by two horses; it has an air space of 1520 cubic feet, being 19 feet long, 10 feet high from floor to roof, and 8 feet wide. It has double walls, with an intervening space of one and a half inches. One end of the caravan can be dislodged to allow of the vehicle being placed corridor fashion against another. Each van has two beds, and is thoroughly equipped. It is proposed to provide a tent with each van for the nurse or for cooking. The cost of each vehicle is £100. The advantages claimed for this novel method are that the van can be taken to the patient, and that the vans in the several districts can be brought together wherever an outbreak of infectious disease occurs. The local medical man would have charge, and it is thought that the system will be an economical one. The originator of the idea was Mr. James Wyllie of Pathhead, the brother of the senior ordinary physician to the Royal Infirmary.

Edinburgh Royal Infirmary.

At the meeting of the managers of this institution on Monday a letter was read from the clergyman on the Island of Foula enclosing the sum of £1 5s. 6d. from the islanders as a contribution to the funds of the hospital. This humble recognition of the services rendered by the Royal Infirmary might be taken to heart by many who have more of this world's goods than these poor and isolated people have. If we mistake not the clergyman not only acts as the spiritual guide of the people but also as their medical guide, and takes charge of them at both ends of life.

Glasgow Samaritan Hospital for Women.

The foundation-stone of this hospital was laid on the 18th inst. by Lord Blythswood. The ceremony was performed with Masonic honours, and was witnessed by a large gathering of the profession and the general public. When completed the hospital will provide accommodation for twenty-eight patients. There will also be a lecture-room for students, and the necessary administrative buildings and nurses' home. The estimated cost of the building is £8000, in addition to which a further sum of £1500 will be spent on furnishing. The present hospital is small and unsatisfactory in many respects, so that the new hospital will be a useful addition to the charitable institutions of the city, and will still further increase the clinical resources of the Glasgow Medical School.

Glasgow University.

One of the earliest and most impressive experiences of the Glasgow undergraduate is the dignified and important bearing of the Bedellus and Janitor as he carries the University

made in front of the Senatus at some official academic ceremonial. And one of the latest, and certainly not the least pleasing, recollection of college life is the action of the same official as he, immediately after the ceremony of "capping" has been performed, throws the hood, indicating the possession of a degree, over the shoulders of the newly-fledged graduate. These experiences for the past forty-two years have been associated with the genial personality of Mr. Lauchlan Macpherson, and there will therefore be Glasgow graduates in all parts of the world who will be interested to hear that Mr. and Mrs. Macpherson have recently celebrated their golden wedding amidst general congratulations both from town and gown. On the occasion of the anniversary Principal Caird, in the name of the Senatus, presented the worthy pair with a purse of fifty sovereigns, an extra shilling being added "for luck." During the forty-two years of Mr. Macpherson's college experience the whole of the professoriate, with the single exception of Lord Kelvin, has been changed, several of the chairs, indeed, having been vacated two or three times. Queen Margaret Hall, the residence for women students, is to be enlarged by the erection of an additional storey.

Broomhill Home for Incurables.

In December, 1893, a very successful bazaar was held in Glasgow in aid of the funds of this institution, and a sum of £10,000 was raised. Part of this money has been spent in the erection of a new wing to the home, and this was formally opened on the 18th inst. by her Grace the Duchess of Montrose. The new wing provides accommodation for the nurses and servants, with the necessary rooms and offices for the matron. The remainder of the money is to be used partly to meet the annual deficit on the working of the institution and partly to aid the building fund of a new home for imbeciles which it is proposed to erect.

Glasgow Ear Hospital.

The annual report submitted by Dr. Barr at the meeting of subscribers on the 15th inst. showed that sixty-eight in-door patients had been admitted during the year, whilst 1121 out-door patients had been under treatment; the number of operations was fifty-two. As a result of the class examinations, prizes were awarded to Mr. Wm. Lawson and Mr. Archibald Young. The financial position of the hospital is an eminently satisfactory one.

The Sale of Ice-cream.

In the new Police Bill, promoted by the corporation of Glasgow and at present before a committee of the House of Commons, a clause giving power to control the sale of ice-cream and to inspect and regulate the shops in which it is made has been introduced. The necessity for this is manifest when it is considered that there are no less than 286 such shops in the city and that in a large proportion of these the ice-cream is really made in the sleeping apartment behind the shop. Moreover, those engaged in the trade are for the most part foreigners with somewhat primitive notions of cleanliness. In a neighbouring town a serious outbreak of enteric fever was traced to one of these ice-cream establishments.

Glasgow Medico-Chirurgical Society.

The following are the office-bearers for the session 1895-96 of the above society:—President, Dr. Wm. L. Reid. Section of Medicine: Vice-president, Dr. Finlayson; councillors, Dr. James W. Allan and Dr. R. B. Ness; secretary, Dr. Hinshelwood. Section of Surgery: Vice-president, Dr. A. E. Maylard; councillors, Dr. James A. Adams and Dr. J. Walker Downie; secretary, Dr. John Barlow. Section of Pathology: Vice-president, Dr. T. K. Monro; councillors, Dr. L. R. Sutherland and Dr. J. Lindsay Steven; secretary, Dr. R. M. Buchanan. Section of Obstetrics: Vice-president, Dr. Samuel Sloan; councillors, Dr. George Halket and Dr. J. Nigel Stark; secretary, Dr. E. H. Lawrence Oliphant. Treasurer, Mr. Henry E. Clark; general secretary, Dr. C. O. Hawthorne. The society has passed a special vote of thanks to Dr. Walker Downie for his services as general secretary during the past six years.

Hartwood Lunatic Asylum.

This asylum, which has been erected for the Lanark district lunacy board, was opened on the 14th inst. by Sir Windham C. Anstruther, the chairman of the board, in the presence of a number of medical and other gentlemen interested in the care and treatment of pauper lunatics. The buildings are

on a very extensive scale and have occupied five years in erection. The medical superintendent is Dr. Campbell Clark.

District Nursing in Sutherlandshire.

To promote the appointment of district nurses in the county of Sutherland a meeting was recently held at Dunrobin Castle under the presidency of the Duchess of Sutherland. A number of the medical men from various parts of the country were amongst the 400 ladies and gentlemen who attended, and the necessary steps were taken to secure nurses, some of whom, it is hoped, will commence work immediately. It was also decided to hold a bazaar to promote the success of the scheme.

May 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Telephonic Communication in Dublin.

DUBLIN is so circumstanced as regards the position of its chief hospitals and the dwelling-houses of the medical men, and more especially of the surgeons who constitute their visiting staff who live in many cases some miles away, that the telephone is largely made use of by them. Much dissatisfaction has been caused recently by the failures of the present system, managed as a branch of the National Telephone Company. The snowstorms of February caused an almost complete breakdown, which state of things prevailed for about six weeks, while ever since accidental contacts of wires and failures of communication have been both frequent and annoying. Many letters of complaint have appeared in the daily papers, in one of which, addressed to the editor of the *Irish Times*, a proposal is made by the writer, who signs himself "A Merchant," to establish an independent company. This, he says, has been done successfully by the merchants of Manchester, where a similar state of things prevailed. Such a strong measure will not, I trust, be required here; but it is certainly very annoying to surgeons to find their messages, which are usually few but of importance, lost or delayed in transmission.

The Small-pox Notification Case.

This case still causes much public interest in Dublin. The *Irish Times*, in a leading article on the 18th inst., alluding to a letter from Dr. Cruise, Vice-President of the Royal College of Physicians of Ireland, says: "The letter of Dr. Cruise, as coming from one of the most eminent and universally respected members of the profession, will receive general consideration. 'It is the interest of the public,' he says, 'to support Dr. Hadden, because the recent verdict is a death-blow to notification.'" Dr. Hadden's solicitors, in a letter to the same journal, announce to-day (the 21st inst.) that they have served notice of motion to have the verdict set aside and judgment entered for the defendant, or alternately for a new trial of this action. The action has also occasioned considerable discussion amongst medical men in the north of Ireland; and on all sides there is the utmost sympathy for Dr. Hadden. In Belfast, where the Notification of Infectious Diseases Act has not yet been adopted, those medical men who were in its favour feel that after such a verdict as has been given in the Dublin case they must use every effort to prevent the Act being put in force. The issue of the trial is felt by everyone to be a blow to preventive medicine. The following is a copy of a resolution passed by the council of the Irish Medical Association on May 20th:—

"That the council of the association, upon consideration of all the circumstances set forth in the evidence submitted to the court in the case of *Mason v. Hadden*, is of opinion that the course pursued by Dr. Hadden was such as was imperatively imposed upon him by the Infectious Diseases Act, and that his duty so imposed was discharged with due care and discretion. That the council, therefore, expresses its earnest sympathy with Dr. Hadden in the position in which he has been placed by a conscientious endeavour to perform his public duty; and, furthermore, regard the decision in this case of great importance and fraught with the most serious consequences to the public, as it must have the effect of causing the notification of these diseases to be delayed until they shall have so far developed as to be extremely dangerous to the health of the community."

Sir Patrick Dun's Hospital, Dublin.

The *Ierne fite* in aid of this old-established hospital was opened this afternoon (the 21st inst.) by his Excellency the Lord Lieutenant.

Respirators in Mills.

The attempt by the authorities to force the operatives in

the Belfast spinning mills who are eighteen years of age and under to wear respirators while at work has given rise to a great deal of writing in the public press and to a lively discussion in business circles, all the more as the linen industry is one of the great features of the commercial capital of Ireland. The workers object to these respirators because after being used for a time they become so clogged with dust that they impede respiration, and they get so filthy that they are practically unbearable. I have examined these respirators, which are made of cellular material lined with wool and are fastened round the head with elastic bands, and certainly after being used for a time they become very uncomfortable. When a question was asked in the House of Commons by Sir John Lang about these articles the Home Secretary said they could be washed; but anyone knows that the workers who object to them will not take this trouble, and so the onus is thrown on the mill proprietors, who naturally demur to spending money in this way when they see that their employes are so opposed to wearing the respirators. Then another reason against their use is that the order to wear them does not apply to all, the hacklers and roughers not being included, and practically it comes to this, that these "muzzles," as the workers call them, are simply worn round the necks ready to be slipped over the mouths should the inspectors enter the mills. The general opinion is that it would be much wiser to insist on thorough ventilation of the work-rooms, if necessary by forced draughts, and not to urge the constant wearing of these respirators, a plan which, in order to be carried out, would need all the police and detectives in Belfast to be stationed in the mills, and which those really conversant with the trades carried on in the mills and who are most anxious to do everything to prevent disease look upon as an utterly unworkable and impractical method.

The Dundalk Workhouse.

At a meeting of the Dundalk board of guardians, held on May 20th, a letter was read from the Local Government Board, in reply to a resolution of the guardians asking for a sworn inquiry into the causes of failure of the extensive sewerage system recently constructed by the board, to the effect that it was not a matter for them to hold an inquiry into. A letter was also read from a gentleman calling on the guardians to stop the passage of sewage into the defective sewer, to empty and disinfect the pipes, and to so dispose of the sewage of the workhouse as no longer to contaminate his grounds or the roadway alongside. The guardians directed that the steps asked by this gentleman should be taken and adopted a resolution, proposed by Dr. MacDonnell, to the effect that the interests of the ratepayers demand a searching inquiry by a competent authority into the failure of the sewer, recently constructed at a cost of £1100, to fulfil the functions for which it was contemplated; that the sanitary state of the house is at present in a deplorable condition owing to the failure of the drainage plan; and that the guardians, being unable to come to any decision without ascertaining where the faults of construction rest and who is responsible for the failure, request the Local Government Board to reconsider their decision not to hold a sworn inquiry.

Technical Education in Ireland.

At meetings of the Newry and Bangor Town Commissioners, held on May 20th, resolutions were passed in reference to technical (including agricultural) education in Ireland and approving of the need of its proper endowment by the Government.

The Royal University M.B. Examinations.

At the recent M.B. examinations of the Royal University of Ireland every candidate in the upper pass division was from the Belfast Medical School, and out of these two were recommended for the further examination for honours.

The Weather.

For the past week we have had very cold stormy weather in Belfast, and there has been a return to winter clothing. It is now milder and rain has set in with a cessation of the wind.

The Battle of the Clubs at Cork.

A meeting was held last Friday for the purpose of making presentations to two secretaries who, as paid officials of clubs, naturally enough offered strenuous opposition to the medical men's organisation. The meeting, though ostensibly convened to give publicity to the presentation, was in reality intended to stimulate the waning enthusiasm of the clubs. The chairman of the meeting is a buldier, who can point to the graceful spires of one of the city cathedrals as indications

of his prosperity, and it is hardly surprising that the Cork profession should object to his being in a position to procure for a paltry fifteen shillings medical attendance and medicines, not alone for himself, but for his whole family from year's end to year's end. To one of the secretaries he presented what he described as "a magnificent gold watch." To the other he handed a purse of sovereigns, but displayed a reticence in not mentioning the number of gold pieces contained in the purse. After the usual amount of harmless abuse had been indulged in a member took occasion to mention that it was not true that one of the imported medical men intended to leave the city. Be that as it may, it is quite certain that the fact of the Cork medical men objecting to meet the newcomers either professionally or socially is producing its effect.

The Irish Queen's Colleges and the "65" Rule.

The Treasury has with varying success endeavoured to apply the "65" Civil Service rule to the Queen's Colleges. When the late Government was in power communications were sent to the Cork, Belfast, and Galway Colleges to the effect that as far as the application of the rule was concerned those institutions would be regarded as departments of the Civil Service. The corporate body of each College determined to oppose such a startling innovation, and memorials were drawn up pointing out that the Colleges were entirely different from the ordinary public offices under Civil Service control. A clerk entering the Civil Service is generally a boy aged eighteen, whilst a professor at the time of his appointment has usually arrived at mature manhood, and as the pension is in proportion to the number of years served it is evident the professor and the clerk on arriving at the age of sixty-five would be in entirely different positions, the arithmetic being wholly in favour of the clerk. No doubt it could be urged that professors, once they arrive at sixty-five, ought to make room for younger men who possibly are more in touch with the progress of science, but a well-trained mind at that age is quite capable of grasping new ideas, and the matured experience of such men with regard to the internal administration of a college is often invaluable. Besides that, the statutes of the Colleges afford ample opportunities for getting rid of any men who, owing to declining years or from any other causes, are becoming "luggers on the way." Professors may be regarded as specialists in their subjects. Pension the professor of Greek or the professor of natural physiology at sixty-five, and, no matter how vigorous he may be in mind and body, what can he turn to? The pension calculated on comparatively few years' service must necessarily be small; fixity of tenure is gone, and after spending the best years of his life in the service of his college and his country he arrives at a green old age embittered by penury and by the reflection that scholarly acquirements cannot attain their legitimate price. Moreover, the Colleges rely on their Charters. The professors have been appointed by sign-manual of the Queen to hold office during Her Majesty's pleasure—that is to say, they assert, as long as they are capable, willing, and able to discharge the duties of the high offices with which Her Majesty has entrusted them. The Irish law officers of the late Government on being appealed to decided that the "65" rule could not apply to the Colleges. The English and Irish law officers of the present Government hold that it does. The Chief Secretary referred the "policy" of the application of the rule to the Colleges for the consideration of the Lord Chancellor of England, and that high functionary has recently decided against the contention of the Treasury. The most recent development has been that a Treasury committee, of which Lord Playfair is a member, has expressed a desire for a conference with the three Presidents and one or more professors of the Colleges for the purpose of discussing the whole subject. Meantime President Moffit of Galway College, who was dismissed under the application of the rule, has been reinstated, and Professor England of Cork has a very substantial claim against the Government, as his chair has been transferred to another.

May 21st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italian Hygiene and the Travelling Public.

THE tourist season now closing has in point of numbers been inferior to none of its predecessors. Nay, if the spring weeks only be considered, the influx of *forestieri* has been

larger than has for many years been known. This is a great fact for Italy. According to an estimate arrived at some three years ago by the English-speaking Consuls, the annual sum poured into the country by the British, colonial, and American visitors, migratory or resident, is not less than £20,000,000 sterling, almost a third of the public revenue. This money, moreover, is contributed in gold, for which Italy gives an equivalent in her depreciated paper currency. Any cause which lessens this contribution from without is looked upon by Italians as a public calamity, the incidence of which may be realised by a single concrete example. Some years ago there was, without adequate foundation, it is true, a fever scare in Tuscany, which acted as a deterrent on the foreign visitor. In Florence, at the great picture gallery of the Uffizi, the receipts for entrance money (1 fr. per head) were in the first three months of the year 16,000 fr. less than in the corresponding period of the year before. In other words, Florence had 16,000 fewer visitors. How disastrous this proved to the city and its inhabitants may be estimated by the anxiously sustained endeavours since made to raise its sanitary credit and to attract, not repel, the stranger within its gates. These endeavours have not been without their reward, and rarely indeed has Florence, or for that matter the great artistic or otherwise interesting centres, entertained a goodlier number of visitors than has been the case recently. It is only when the tourist leaves the well-worn track, where the demands of civilisation in food, drink, lodging, drainage, and other primary conditions of health are fairly well responded to, that he feels the essentially mediæval character of the Italian *modus vivendi*. In time, no doubt, the rural standard in these matters will be brought up to the urban; but meanwhile the foreign resident in the smaller provincial towns has to put up with a great deal in the daily life that is rough, not to say revolting. To go no further than the food, he must be constantly on his guard, and would do well to practise the safe rule of requiring as little as possible beyond what the natives themselves consume. Take them out of their limited round and the traveller will simply be courting disappointment, or worse. Let me give an artist's experience. This gentleman was on a sketching tour in the picturesque towns on the Roman-Neapolitan frontier, and he had provided himself with introductions to the syndics of three or four *paesi*. These functionaries found lodgings for him; but, in each case, he had to leave next day, having spent a sleepless night in paying an involuntary blood-tax to myriads of bed-fellows. At length he settled down in an unpretending *locanda* in the Sabine country where he could indulge "tired nature's sweet restorer" unmolested. But the daily food was the difficulty. Beyond eggs and poultry mine host could give him little or nothing, though he was persistent in his demands for the chop of British partiality. One day, however, he found before him at *colazione* a smoking dish of mutton cutlets, but to the surprise of the landlord he sent them hurriedly away. "How is this?" was the remonstrance, "you have been asking this week past for mutton, and when with great difficulty we procure it for you you won't look at it." "Yes," was the quiet rejoinder, "but I saw the sheep lying dead on the road this morning." Indeed, you are seldom sure of the origin or "previous history" of the viands set before you in such places, and to judge from the instances of ptomaine poisoning from meat of more than dubious quality even the greater cities are not above suspicion. We far too often read of horseflesh, and that of an unsound kind, being impounded by the sanitary officers at the butchers' shops or in the sausage manufactories, while the seizure and destruction of mushrooms unfit for consumption is constantly recorded in the police columns of the newspapers. Poisoning from the use of non-edible fungi is one of the most frequent causes of disease and death in the inland districts and even in the towns; in the former, indeed, the local *dispensari* kept up by Government for the pharmaceutical service of the countryside are constantly running short of the regulation antidotes. Here, again, we come upon another drawback to the safe residence of the foreigner in Italy. The native pharmacists are not so particular about the renewal of their stock as more civilised usage requires them to be; and, in point of fact, the Government inspectors, whose duty it is to see that the quality of the drugs sold to the public is in all respects "up to date," have been recently reminded even in the lay press (particularly of Southern Italy) that greater vigilance on their part is eminently required. Still, unsatisfactory as in many

cases the food and drink and drug supplies of Italy are apt to be, vast strides in the sound sanitary direction have been made, even in the few years since Bertani's hygienic code has become law. This, if rigidly enforced, as I am happy to say it generally is, coupled with a steadily growing conviction in the landlord class that "honesty is the best policy," and that the English-speaking *clientèle* after which it hankers is mainly to be conciliated and extended by attention to the decencies of civilisation, will gradually bring Italian life up to the higher European standard and find its reward in a larger and steadier proportion of that "foreign import" which (as already indicated) brings into the kingdom even now about a third of its annual revenue.

Organised Quackery.

One must have been a resident in rural Italy to appreciate the difficulties with which the profession has to struggle. Prominent among these are the "falsi sanitari" (unqualified practitioners), who are as prolific as unsound mushrooms, particularly in the southern provinces. The Questore of the "Ordine de' Sanitari" (the Order of Duly Qualified Practitioners), whose surveillance extends over Naples (city and province), has just had to issue the following: "The irregular physicians and surgeons in Naples, at a meeting assembled to devise measures for eluding the action of the authorities in suppressing their illegal 'industry,' have resolved 'no longer to sign prescriptions, or only to sign them illegibly; to affix a date much anterior to that at which the prescription is penned or not to date it at all.' Such tactics (proceeds the Questore) I make known to the public, so as to put it on its guard and to make it insist on exacting from every physician, little known or not known, his signing his prescription clearly, and his affixing to it the proper date. In case of doubt the public is requested to forward to the secretary of the 'Ordine de' Sanitari' the prescription in question, when the Questore will at once institute inquiries. The Questura (agency of the 'Ordine') has drawn up a list of the pharmacies resorted to by unqualified practitioners, where their prescriptions are compounded. These 'pharmacies' are now being watched and made known to all associates of the 'Ordine de' Sanitari' in order that they may assist in accumulating the evidence required by the authorities. Associates are further requested not to relax their vigilance over these 'pharmacies' and to continue to inform the Questura of whatever new establishments of the kind the unqualified practitioners avail themselves of. Their information may be anonymous. The officials of the 'Ordine' will make themselves responsible for the action taken." Ignorance on the part of the population where every one in three is "analfabeto" (unable to read or write) explains the success of these irregular practitioners, belief in witchcraft still prevailing in many of the southern provinces, and the miracle-monger exercising his *métier* too often with the connivance, or at least without the remonstrance, of the lower clergy. Moreover, a better system of medical instruction and graduation must be introduced before the duly qualified practitioner can always count on that respect which is due from the public to the profession. No man has seen more clearly, or more poignantly deplores, the defects and results of that system than Dr. Baccelli. In his capacity as Minister of Public Instruction he has much in his power in the way of reform or of wholesome innovation, and his promised Bill for the Amendment of the Italian Universities, to be laid before Parliament after its reassembling, is awaited with interest by every faculty—by none more keenly than the medical.

Typhoid Fever in the Romagna.

The return-wave of tourist travel which, proceeding from Naples and Rome, is apt to diffuse itself over the interesting towns on the Adriatic seaboard from Ancona to Venice should be warned against the insanitary condition of those centres of population, particularly in the matter of water-supply. I hear from Cesena that within the month now passing fevers of a distinctly typhoid character, often attended with hæmorrhage from the bowels, have been epidemic in the town and neighbourhood. The hospital is full of such cases, children being the most often affected. Sanitary investigation has at once traced the disease to the water, the pollution of which is scarcely more marked in Cesena than in other places in the Romagna. The authorities are enforcing the use of water previously boiled in all the schools, and they are supplying it gratuitously

to those and similar institutions, while an urgent appeal is made to the heads of households to observe this well-timed precaution. By order of the same authorities those certified as having succumbed to the disease are buried "*senza accompagnio funebre*" (without funeral accompaniment), a regulation which furnishes some notion of the alarm caused by the epidemic.

May 18th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Supernumerary Spleens.

DR. ALBRECHT, assistant to Professor Weichselbaum, exhibited at a recent meeting of the Vienna Medical Society an anatomical preparation which contained an enormous number of spleens. Cases of supernumerary spleens are not rare, but in this instance the number of them is extraordinary. In the usual situation there is a spleen the size of a walnut, with the splenic artery and vein in their normal position. The other spleens are dispersed not only on the mesogastrium, but also on the peritoneum, as, for example, on the hepatic ligament and on the convexity of the liver; the largest number were found on the mesentery and transverse mesocolon; there were more than thirty in Douglas's pouch. All these formations are characterised by red colour and pulp, and that they are composed of spleen tissue was proved by microscopical examination. Each spleen is enclosed in a separate capsule and covered by the peritoneum. Professor Toldt sought to explain this abnormality by a reference to comparative anatomy and embryology. Comparative anatomy, however, offers no analogy in the series of vertebrates, the spleen being generally developed in the mesogastrium. Appealing to embryology, Professor Toldt supposes the epithelium of the coelom to form the splenic tissue. The case may be explained on the theory that, besides the mesogastrium, other parts of the coelom may be capable of forming splenic tissue. Professor Weichselbaum suggested an investigation with a view to discover whether these dispersed spleens had performed the function of a normal spleen, and if they had not, then what organ had been the vicarious one. As it is in the spleen that formation of the white and destruction of the red blood-corpuscles normally take place, it is interesting to note that in this case the lymphatic glands of the retro-peritoneal space were increased and that the spleens contained a considerable aggregation of pigment, due to the imperfect removal of the pigment resulting from the destroyed red blood-corpuscles.

Multiple Thrombosis.

At the same meeting Dr. Gruss exhibited a case of Multiple Thrombosis following influenza, nothing similar to which has hitherto been recorded. The patient, aged forty-one years, fell ill some six months ago with symptoms of influenza. Pleurisy with effusion occurred on the left side. At the end of the first week of the illness a tense and painful tumour appeared under the left costal arch, suggesting by its characteristic furrows and other circumstances a tumour of the spleen. On Jan. 9th sudden thrombosis of the left cephalic vein occurred, together with swelling of the upper arm and neck, and after a few days there was thrombosis of the thyroid vein. Then thrombosis of the pharyngeal veins appeared, and at the present moment the veins of the mucous membrane of the mouth resemble an injected preparation. The urine contained red blood-corpuscles and 0.5 per cent. albumen. In the absence of any precise symptom of nephritis that appearance is to be explained by thrombosis of the kidney. The attack of influenza, in fact, caused universal thrombosis, and the tumour of the spleen was due to thrombosis of the splenic vein.

Antitoxin Treatment in Croatia and Slavonia.

From August, 1894, to January, 1895, antitoxin injections have been employed in 428 cases, of which 382 recovered and 46 died, the latter chiefly among the severe cases or those where injection had been made after the lapse of a week; the mortality therefore amounted to 10.8 per cent. Of 826 children treated with prophylactic injections, only 17 fell ill, and among those there was but 1 death, equivalent to a mortality of 0.2 per cent. The average mortality from diph-

theria since the use of antitoxin has therefore fallen from 65 per cent. to 10.8 per cent.

A New Anti-syphilitic Remedy.

Dr. Rille, assistant to Professor Neumann, has published his observations upon the new remedy, hæmolum hydrargyri-iodatum. This is one of Kobert's blood preparations, containing 13 per cent. of mercury and 28 per cent. of iodine. Hæmol, its basis, is obtained by mixing neutralised blood of warm-blooded animals with water and zinc powder. It is to be preferred to all other mercurial preparations, for it produces but trifling salivation without any of the fetid pus of mercurial stomatitis. A case of periostitis of the parietal bone and of the spinous processes of some dorsal vertebrae healed under its use within thirteen days; and a case of perforation of the hard and soft palate was decidedly benefited. As it contains iron it possesses also tonic properties, and may be regarded as a very valuable remedy against all cases of syphilis complicated with pallor or scrofula. The dose is 0.8 gramme (= 13 grains) daily.

Professor Dittel.

This Nestor of Austrian surgeons celebrated his eightieth birthday on May 15th. It is worthy of mention that during the last five years he has performed 500 lithotomies and has published some important works, such as "*Treatment of Recto-vaginal Fistula*," and "*Foreign Bodies in the Urinary Bladder*" (together with a new operative method). The octogenarian professor is an entirely self-made man, who has obtained his honourable position by energy and indefatigable pursuit of knowledge.

The Obstetrical Congress.

The Sixth Congress of the German Obstetrical Society will take place at Vienna on June 4th, 5th, and 6th. The two subjects to which special attention will be directed are Endometritis and Rupture of the Uterus.

May 19th.

Obituary.

JOHN CRERAR, M.R.C.P., L.R.C.S., I.M. EDIN.

By the death of Mr. Crerar the town of Maryport in Cumberland has lost its oldest practitioner. He was of Scottish origin, and his first introduction to the district was about thirty years ago. The industry of West Cumberland was then entering on its prosperous years, and he rapidly acquired an extensive practice, which was at one time among the largest in the north-west of England. Few men have lived a more busy life or have been more devoted to incessant work. He was, moreover, a man of very considerable linguistic attainments, being a good classical scholar and well read in Celtic literature. His was no mere superficial knowledge, but was that of the cultured philologist, kept up to date and in touch with modern scientific developments. He was an excellent speaker and took a prominent part in public matters both on religious and secular questions. He was a firm and unchanging friend, a fearless but just and honourable controversialist, and a man of purest life and noblest aims. His appearance denoted marked individuality. An ample forehead, bushy eyebrows, clear grey eyes, a bearded face, a spare, slightly stooping frame, and a quiet, thoughtful way of speaking all combined to denote a self-reliant and intellectual character. Mr. Crerar was an original member of the Border Counties Branch of the British Medical Association, and filled the offices of president and vice-president. The treatment of influenza interested him deeply and formed the subject of papers contributed by him to THE LANCET.¹ His last illness was the result of a cardiac breakdown, and the end came on May 11th, bringing to a close in its sixtieth year a life for which a considerably longer duration might have been anticipated.

ALFRED WILLIAM STURDEE, L.R.C.P. LOND.,

M.R.C.S. ENG.,

OF H.M.S. "HOOD."

It is very painful to have to record the death of this young naval surgeon from drowning while bathing at Gozo, near

¹ THE LANCET, Dec. 19th, 1891; Feb. 3rd and 10th, 1894.

Malta. His name will be familiar to the teachers of the London Hospital and to the *alumni* of that school who qualified three or four years ago. Mr. Sturdee's career was entirely pleasing and promising. Born at Sheerness on Nov. 27th, 1869, he was the son of the late Mr. Alfred Barrus Sturdee, Chief Constructor of H.M. Dockyard, Devonport, who lived at the time of his death in Highbury. Young Sturdee early began to distinguish himself. He took the first prize at Mannamede School at Plymouth in 1880. In 1884 at the Tonbridge School he took the prize for French. He studied medicine, as we have indicated, at the London Hospital, where he made his mark in the prize lists for dressing, for dissections, &c. He was also, we believe, assistant demonstrator in the physiological laboratory. After taking the double qualification in London, he proceeded to examination for an appointment in the Royal Navy, in the direction of which all his aspirations went. He came out in the first place. In 1891 he went to Haslar, and in 1893 he was appointed to H.M.S. *Hood*, in which to the time of his premature death he was known as a most useful and agreeable officer. His French stood him in good stead, and in the Greek villages and places which his ship visited he showed an unusual facility of learning their language. His kindness to everybody was felt. He had passed the first part of the examination for the Fellowship of the Royal College of Surgeons, and everything promised a brilliant career in the service which he so much loved when news of his being drowned while bathing reached his family from the Admiralty. Since then news has been received of his funeral. We are permitted to make the following extract from a letter from the chaplain of his ship, and with this quotation we close our notice of a life all too short, but which has made a deep impression on all who came within its influence, and the loss of which to his mother and brothers and sisters is inexpressible:—

"At the funeral, which I conducted, there was a larger attendance of officers and men than I ever recollect seeing. Beautiful wreaths were sent by his own ship officers and men, each sending one, and by other friends, but there was one wreath that would interest you more than the rest. It was placed on the grave by a little boy of eight, and was composed of lovely flowers wrought into the shape of an anchor. I found that he was the little boy whose leg—very badly fractured just before Christmas—was perfectly restored by the skill and devotion of your son, so that the little fellow could walk without lameness or any sign of an accident. We were away from Malta since Dec. 27th, but on our return your son's first visit was to his little patient to see if his recovery was complete. The gratitude of the boy and his parents knew no bounds, and their sorrow found expression in the gift of this beautiful wreath."

JAMES STEDMAN CRAIGIE, M.D., C.M. EDIN.

DR. CRAIGIE died on the 16th inst. He was an M.D. of the University of Edinburgh (1884) and also B.Sc. in Public Health (1888). He held the appointment of medical officer of health of Musselburgh and was one of the deputies of the county of Midlothian, the duties of which he fearlessly carried out under many difficulties on the adoption of the Public Health Act, clearing away many of the slums in the burgh. During his long illness he was the subject of much solicitude on the part of the community which he served so well. Apart from his high professional qualifications, he had great linguistic and literary faculties. He was the author of some of the principal medico-biographical articles in the last edition of "Chambers' Encyclopedia." He was also well known in musical circles in Edinburgh as an accomplished violinist. Those who knew him privately had learned to recognise in him, in addition to many other qualifications, a faculty for dealing with things generally in a broad and unconventional spirit.

HUGH FRANCIS CLARKE CLEGHORN, M.D., LL.D., F.R.S.E., J.P.

DR. CLEGHORN, who died at Stravithie, Fifeshire, on May 16th, had passed the most active years of his life in the Indian Medical Service, and was a distinguished authority on Indian botany and arboriculture. He was born in Madras in 1820, and received his education in Edinburgh and at St. Andrew's University. He was for some time a pupil of Professor Syme, and one of the house surgeons in

the Edinburgh Royal Infirmary. He graduated in 1841, and thereupon returned, at the age of twenty-two, to Madras, where he was appointed Professor of Botany about twelve years later. In 1855 he was requested by the Governor of Madras to organise a Forest Department having for its object the preservation of tree life, and in course of time he was appointed one of the Commissioners for the Conservancy of Forests. In 1869 he retired from the Indian service, his labours on behalf of the improved system of forest management being officially acknowledged in complimentary terms. Returning to Scotland, Dr. Cleghorn temporarily filled the chair of Botany in Glasgow University during the indisposition of Professor Walker Arnott, and continued for many years to devote himself at Stravithie to his favourite botanical pursuits. He was a member of the Edinburgh Botanical Society, a Fellow of the Linnean Society and for several years President of the Royal Scottish Arboricultural Society.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the Fellowship at a meeting of the Board of Examiners on Wednesday, the 15th inst. :—

Baldwin, Aslett, L.R.C.P. Lond., M.R.C.S. Eng., Middlesex Hospital.
Curtis, Henry Jones, L.R.C.P. Lond., M.R.C.S. Eng., University College, London.
Hall, Charles Beauchamp, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.
Hulke, Sydney Backhouse, L.R.C.P. Lond., M.R.C.S. Eng., Middlesex Hospital.
Keyser, Charles Ralph, St. George's Hospital.
Scrace, Frank Edward, L.R.C.P. Lond., M.R.C.S. Eng., University College, Bristol, and St. Bartholomew's Hospital.
Smith, Thomas Rudolph Hampden, L.R.C.P. Lond., M.R.C.S. Eng., Cambridge University and St. Bartholomew's Hospital.
Worth, Francis James, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.

Twelve gentlemen were referred back to their professional studies for six months.

Passed on Thursday, the 16th inst. :—

Collard, Frederick Stuartson, L.R.C.P. Lond., M.R.C.S. Eng., St. George's Hospital.
Dyson, Malcolm Goodworth, St. Bartholomew's Hospital.
Fox, George Raymond, L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's Hospital.
Going, Robert Marshal, Trinity College, Dublin, and London Hospital.
Jaffrey, Francis, L.R.C.P. Lond., M.R.C.S. Eng., St. George's Hospital.
Lynch, Stephen Frederick, King's College, London.
Mundy, Herbert, St. Bartholomew's Hospital.
Ridley, Nicholas Charles, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.
Spicer, Arthur Herbert, Guy's Hospital.
Sutcliffe, William Greenwood, L.R.C.P. Lond., M.R.C.S. Eng., St. Thomas's Hospital.
Wallace, Lewis Alexander Richard, L.R.C.P. Lond., M.R.C.S. Eng., Oxford University and St. Thomas's Hospital.
Walsh, John Henry Tull, Surgeon-Captain I.M.S., L.R.C.P. Lond., M.R.C.S. Eng., Westminster Hospital.

Eight gentlemen were referred back to their professional studies for six months.

Passed on Friday, the 17th inst. :—

Brown, Ralph Charles, M.B. Melb., Melbourne University and Westminster Hospital.
Caveragh-Mainwaring, Wentworth Rowland, M.B. Adelaide, Adelaide University and London Hospital.
Churchill, Joseph Henry, St. Bartholomew's Hospital.
Crowley, John Henry, M.B. Melb., M.R.C.S. Eng., Melbourne University.
Fromantle, Francis Edward, Oxford University and Guy's Hospital.
Novis, Thomas Shepherd, London Hospital.
O'Meara, Eugene John, Guy's Hospital.
Randall, Martin, M.R.C.S. Eng., L.R.C.P. Lond., University College, London.

Eight gentlemen were referred back to their professional studies for six months.

Passed on Monday, the 20th inst. :—

Evans, Evan, Guy's Hospital.
Wood, John Forrester, L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's Hospital.

Ten gentlemen were referred back to their professional studies for six months.

The following gentlemen having passed the necessary examination, and having conformed to the by-laws and regulations, have been admitted Members of the College :—

Adams, Percy Edward, L.R.C.P. Lond., St. Bartholomew's Hospital.
Bacon, Robert Alfred Edward, L.R.C.P. Lond., St. George's Hospital.

Barritt, John Thomas, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Basden, Harold Stevens, L.R.C.P. Lond., Cambridge University and London Hospital.
 Baxter, Stephen Edward, L.R.C.P. Lond., St. Thomas's Hospital.
 Bennett, Arthur George, L.R.C.P. Lond., St. Mary's Hospital.
 Birley, Hugh Kennedy, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Blackburn, Ernest Woodhead, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
 Blackett, Edward Joseph, L.R.C.P. Lond., St. George's Hospital.
 Blount, George Bertie Clavell, L.R.C.P. Lond., St. Thomas's Hospital.
 Burnett, Frank Marsden, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Burrage, Henry Alfred, L.R.C.P. Lond., King's College, London.
 Burton, Leonard Launing, L.R.C.P. Lond., London Hospital.
 Butler, Thomas Harrison, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
 Caldwell, Charles Holt, L.R.C.P. Lond., Mason College, Birmingham.
 Clark, William Gladstone, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
 Clemesha, William Wesley, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Conford, George James, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
 Cooper, Robert Montague le Hunte, L.R.C.P. Lond., St. Mary's Hospital.
 Creneen, Sydney, L.R.C.P. Lond., Guy's Hospital.
 Crouch, Herbert Dhallice, L.R.C.P. Lond., St. Thomas's Hospital.
 Dalal, Katanah Dinsah, L.R.C.P. Lond., University of Bombay.
 Devereux, Norman, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham, and Middlesex Hospital.
 Dickin, Edward Percival, L.R.C.P. Lond., University of Edinburgh, Middlesex and St. Mary's Hospitals.
 Dixon, Walter Ernest, L.R.C.P. Lond., St. Thomas's Hospital.
 Dobbin, Edward John, L.R.C.P. Lond., Middlesex Hospital.
 Dodd, Frederick Lawson, L.R.C.P. Lond., Middlesex Hospital.
 Dodgson, Robert William, L.R.C.P. Lond., St. Mary's Hospital.
 Down, Edgar, L.R.C.P. Lond., London Hospital.
 Dunn, William Edward Nickolls, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Edge, Bruce Edgar, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Fison, Edmund Towers, L.R.C.P. Lond., University of Cambridge and St. George's Hospital.
 Fuller, Alfred Leonard, L.R.C.P. Lond., St. Thomas's Hospital.
 Gardner, William, L.R.C.P. Lond., St. Mary's Hospital.
 Gibbons, Arthur Philip, L.R.C.P. Lond., London Hospital.
 Gillies, Sinclair, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Goddard, Gerald Hamilton, L.R.C.P. Lond., University College, London.
 Griffiths, John Crisp, L.R.C.P. Lond., Mason College, Birmingham.
 Groves, Ernest William Hey, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Hallwright, Matthew Leslie Guy, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham, and University College, London.
 Harrison, Herbert Meredith, L.R.C.P. Lond., St. Thomas's Hospital.
 Head, Ernest Edward, L.R.C.P. Lond., King's College Hospital.
 Heaton, Alan Baldwin, L.R.C.P. Lond., University of Cambridge, Yorkshire College, Leeds, and St. Thomas's Hospital.
 Higginson, George, L.R.C.P. Lond., University of Cambridge and London Hospital.
 Hopton, Ralph, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
 Horton, Walter Hartland, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Isaac, Matthew William Stuart, L.R.C.P. Lond., St. Bartholomew's Hospital.
 James, Charles Kemble, L.R.C.P. Lond., Middlesex Hospital.
 James, Frederick Charles, L.R.C.P. Lond., St. Thomas's Hospital.
 Jones, James Evan, L.R.C.P. Lond., St. Bartholomew's Hospital.
 King, Thomas Percy, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
 Iano, John George Ogilby Hugh, L.R.C.P. Lond., Guy's and St. Thomas's Hospitals.
 Laslett, Maurice Howard, L.R.C.P. Lond., St. Thomas's Hospital.
 Lawson, Richard, L.R.C.P. Lond., St. Thomas's Hospital.
 Legg, Thomas Percy, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Lister, William Tindall, L.R.C.P. Lond., Cambridge University and University College, London.
 Lockett, George Vernon, L.R.C.P. Lond., University of Edinburgh.
 McArthur, Arthur Norman, L.R.C.P. Lond., University of Melbourne, King's College and Charing-cross Hospitals.
 Maide, Hubert Abraham, L.R.C.P. Lond., Charing-cross Hospital.
 Marks, Herbert William James, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
 Marriott, Arthur, L.R.C.P. Lond., Firth College, Sheffield, and University College Hospital.
 Meacher, John Howard, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Mills, Henry William, L.R.C.P. Lond., University of Edinburgh and St. Thomas's Hospital.
 Moffat, Henry Alfred, L.R.C.P. Lond., Guy's Hospital.
 Montgomery-Smith, Edwin Charles, L.R.C.P. Lond., London Hospital.
 Moore, Percy Lyndon, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
 Mott, Clarence Harry, L.R.C.P. Lond., London Hospital.
 Mumford, Wilfred George, L.R.C.P. Lond., Guy's Hospital.
 Norbury, William, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
 Ogden, Ogden Watson, L.R.C.P. Lond., Durham University.
 Owen, Arthur Dudley, L.R.C.P. Lond., Royal Infirmary, Bristol.
 Owles, Oscar William, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Pakes, Walter Charles, L.R.C.P. Lond., Guy's Hospital.
 Palin, Edward Watson, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.

Pardoe, John George, L.R.C.P. Lond., Aberdeen University and Charing-cross Hospital.
 Peake, William Harland, L.R.C.P. Lond., Royal Infirmary, Newcastle, and Guy's Hospital.
 Pearson, Maurice Grey, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Perry, Edgar Courtney, L.R.C.P. Lond., St. Thomas's Hospital.
 Perry, Edmund Ludlow, L.R.C.P. Lond., St. Thomas's Hospital.
 Phillips, David, L.R.C.P. Lond., Middlesex Hospital.
 Pinchard, Michael Biddulph, L.R.C.P. Lond., Middlesex Hospital.
 Pitt, William Carey, L.R.C.P. Lond., Guy's Hospital.
 Playfair, Ernest, L.R.C.P. Lond., King's College Hospital.
 Price, George Basil, L.R.C.P. Lond., University College Hospital.
 Reynolds, Frank Ernest, L.R.C.P. Lond., London Hospital.
 Richards, John, L.R.C.P. Lond., University College Hospital.
 Rigg, Samuel Edward, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Sedgwick, Hubert Redmayne, L.R.C.P. Lond., Cambridge University, London, and St. Thomas's Hospital.
 Smith, Frank Loughton, L.R.C.P. Lond., Mason College, Queen's, and General Hospital, Birmingham.
 Smith, Lewis Albert, L.R.C.P. Lond., London Hospital.
 Smith, Percy Montague, L.R.C.P. Lond., St. Mary's Hospital.
 Sowry, George Herbert, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Stanley, Hubert, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
 Statham, Charles John Baron, L.R.C.P. Lond., Bombay University and Guy's Hospital.
 Stephenson, John Stuart, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Stewart, Charles Balfour, L.R.C.P. Lond., Cambridge University and Royal Infirmary, Liverpool.
 Stokes, John Wilfred, L.R.C.P. Lond., University College Hospital.
 Swainson, Edwin Arthur Cleveland, L.R.C.P. Lond., Cambridge University and Middlesex Hospital.
 Thomas, William Protheroe, L.R.C.P. Lond., London Hospital.
 Thompson, Henry Evans, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Townend, Richard Hamilton, L.R.C.P. Lond., London Hospital.
 Toye, Edwin Josiah, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Tresidder, Percy Edgar, L.R.C.P. Lond., Guy's Hospital.
 Tribe, Paul Cunningham Edward, L.R.C.P. Lond., King's College Hospital.
 Tucker, Ernest Frederick Gordon, L.R.C.P. Lond., London Hospital.
 Van Someren, Ernest Herbert, L.R.C.P. Lond., Guy's Hospital.
 Vivian, John Henry Percival, L.R.C.P. Lond., St. Thomas's Hospital.
 Walker, Henry Roe, L.R.C.P. Lond., King's College Hospital.
 Walls, Edward Geoffrey, L.R.C.P. Lond., Mason College, Queen's, and General Hospital, Birmingham.
 Wanhill, Charles Frederick, L.R.C.P. Lond., University College Hospital.
 Waring, Anthony Henry, L.R.C.P. Lond., University College Hospital.
 Warrington, Richard James, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
 Waters, Fred William, L.R.C.P. Lond., St. Thomas's Hospital.
 Webster, Thomas Leeming, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester, and St. Bartholomew's Hospital.
 Whitley, Henry Walter, L.R.C.P. Lond., Charing-cross Hospital.
 Wilkins, John Claude Verity, L.R.C.P. Lond., Guy's Hospital.
 Wilks, Morris, L.R.C.P. Lond., University College Hospital.
 Williams, David Franklin, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
 Williams, Kenway Thomas, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham.
 Williams, Leonard Addams, L.R.C.P. Lond., Middlesex Hospital.
 Willis, William Morley, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
 Winter, John Bradbury, L.R.C.P. Lond., Guy's Hospital.
 Wiseman, David William, L.R.C.P. Lond., Charing-cross Hospital.
 Woodward, Arthur, L.R.C.P. Lond., St. Bartholomew's Hospital.
 Worthington, George Vigers, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
 Wyborn, Walter Edward, L.R.C.P. Lond., Charing-cross Hospital.
 Young, Archibald, L.R.C.P. Lond., Firth College, Sheffield, and University College Hospital.
 Young, Charles Whitwick, L.R.C.P. Lond., Charing-cross Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects:

Surgery.—J. Ash, St. Thomas's Hospital; E. R. Bowen, Brooklyn and Bristol; E. B. Cornaby, Cambridge and London Hospital; A. H. P. Dawney, University College and St. Thomas's Hospital; R. A. Fegan, St. Bartholomew's Hospital; C. F. Le Sage, London Hospital; E. D. Macnamara, Westminster Hospital; A. P. Murtz, King's College; G. H. Smith, St. Bartholomew's Hospital; H. Williams, Middlesex Hospital.
Medicine, Forensic Medicine, and Midwifery.—S. B. Blomfield, Westminster Hospital; W. E. Kirby, University College; W. G. Noble, London Hospital.
Medicine and Midwifery.—A. J. Petyt, Cambridge and Leeds; M. White, St. Thomas's Hospital.
Medicine.—A. C. Fenn, St. Bartholomew's Hospital; W. A. Higgins, Cambridge and Birmingham; M. Umanaki, Kharcoff.
Forensic Medicine and Midwifery.—A. H. P. Dawney, University College and St. Thomas's Hospital; B. L. Dhingra, Lahore; P. G. Lodge, Leeds and St. Thomas's Hospital.
Forensic Medicine.—E. D. Macnamara, Westminster Hospital; G. H. Smith, St. Bartholomew's Hospital.
Midwifery.—W. B. Bremner, King's College; H. Clapham, Sheffield; J. H. R. Pigeon, Bristol; W. H. Reed, Bombay and King's College; A. Robinson, Leeds; E. H. Tipper, Guy's Hospital; L. G. W. Tyndall, St. Mary's Hospital.
 To Messrs. Bremner, Fenn, Higgins, Kirby, Le Sage, Macnamara, Noble, Petyt, and Umanaki was granted the diploma of the society.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin*: Dr. Kayserling has been appointed Assistant in the Pathological Institute and Dr. René du Bois-Reymond, a son of the eminent physiologist, Assistant in the Experimental Department of the Physiological Institute. Dr. Günther has been appointed to succeed Dr. Thierfelder as Custos of the Museum of Hygiene. *Bordeaux*: Dr. Boursier has been appointed to the Professorship of Clinical Gynaecology. *Chicago (Medical College)*: Dr. W. S. Hall has been appointed Professor of Physiology. *Cracow*: Dr. Alexander Rosner has been recognised as *privat-docent* in Midwifery and Gynaecology. *Prague (German University)*: Dr. Wunscheim has been recognised as *privat-docent* in Pathological Anatomy. *(Bohemian University)*: Dr. Karl Chodonusky has been promoted to the Extraordinary Professorship of Pharmacology. *Vienno*: The Minister of Education has appointed Dr. Norbert Ortner *privat-docent* in Internal Medicine and Dr. Leopold Réthi as *privat-docent* in Laryngology and Rhinology.

PRESENTATIONS.—Dr. Herbert Bramwell of Cullercoats, Northumberland, on the occasion of his leaving the district, has been presented with a handsome silver tea service and an album containing local views, with an address bearing the names of the subscribers, as a token of esteem and regard from friends in North Shields, Tynemouth, Cullercoats, Whitley, and Monkseaton. — Dr. Edmund Downes of Eastbourne has been the recipient of a testimonial, consisting of a handsome electro-plated tea kettle and stand and a hot-water jug, from the members of the Eastbourne Ambulance Class, in recognition of his generous services as honorary instructor of the class for some years. — On the 18th inst. Mr. W. Davies, M.R.C.S. Eng., of Peckham, was presented with a handsome timepiece, aneroid barometer, thermometer, and perpetual calendar, all combined in one piece. The presentation was made on behalf of the Ambulance Class for Women lately conducted by him at Messrs. Braby's Works, Deptford.

EDINBURGH ROYAL INFIRMARY RESIDENTS CLUB.—The inaugural dinner of this club was held in the Royal Hotel, Edinburgh, on May 3rd. No less than seventy-six members were present, many of them having travelled long distances. Dr. Alexander James occupied the chair, and proposed the toast of the evening, "The Residency," in a speech containing many interesting reminiscences of the old infirmary. Sir Thomas Grainger Stewart gave "The Chairman," and afterwards replied to the toast of the "Senior Old Resident Present," which was proposed by Dr. C. E. Douglas. The proceedings terminated with a symposium, which was no less successful than the dinner. At a business meeting of the club held before the dinner the following were elected office-bearers for the year:—President, Dr. Alexander James. Secretary: Dr. Claude B. Ker. Treasurer: Dr. R. J. A. Berry. Committee: Drs. F. M. Caird, G. A. Gibson, C. C. Easterbrook, Cattinach, Dowden, and Musgrove. The club now numbers more than 170 members and seems certain of a prosperous future.

LITERARY INTELLIGENCE.—We have received the first volume of "Dennis's System of Surgery," which promises to be a very full and authoritative representation of the state of surgery in the United States. It is edited by Frederick S. Dennis, M.D., Professor of Surgery in Bellevue Hospital Medical College, who is also a Member of the Royal College of Surgeons of England. He is assisted in the editorship by John S. Billings, M.D., LL.D. Edin., D.C.L. Oxon., and Deputy-Surgeon-General of the United States. The articles in this volume alone include one by Dr. Billings on the History and Literature of Surgery; one on General Bacteriology of Surgical Infections by Wm. H. Welch, M.D., Professor of Pathology of the Johns Hopkins University; one on Surgical Pathology, including Inflammation and the Repair of Wounds, by William T. Councilman, Professor of Pathology, Harvard Medical School, Boston; one on Fractures and Dislocations, by Professor Dennis; one on Anæsthesia by Horatio Wood, M.D., Professor of Materia Medica and Therapeutics, University of Pennsylvania; and several other articles of first-rate importance as expositions of the present state of American knowledge and doctrine. We must defer any detailed criticisms of this work, but we hasten to announce its appearance as a fact of credit to American medical literature and to congratulate Professor Dennis on such a body of colleagues.

The Glasgow University Club, London, will dine in the Holborn Restaurant on Monday next, May 27th, at 7.30 P.M. The Right Hon. Henry Campbell-Bannerman, M.P., Secretary of State for War, will preside, and the guests of the club will be General Sir Evelyn Wood, V.C., G.C.B., and Mr. J. Fletcher Moulton, Q.C., M.P. Graduates or former students of Glasgow University who have not yet joined the club and who may be desirous of doing so are requested to communicate with either of the hon. secretaries, Mr. Norman M. Maclehose, 13, Queen Anne-street, Cavendish-square, W., or Mr. James M. Dodds, Dover House, Whitehall, S.W.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—"The Experience of the Hospital in Abdominal Surgery (gynaecological operations apart) during the years 1888-1894 inclusive" will form the subject of three lectures which will be delivered by Mr. T. Holmes, F.R.C.S. (the Hunterian Lecturer in Surgery) on June 5th, 6th, and 12th, at 5 P.M. Dr. W. Howship Dickinson (the Baillie Lecturer in Physic), will also deliver the following lectures:—June 19th, at 5 P.M., on Some recent observations relating to the Cardio-vascular Change of Renal Disease; June 26th, at 5 P.M., on Some points touching Disease of the Heart; and July 3rd, at 5 P.M., on Dropsy. All the lectures will be delivered in the school. Members of the profession will be admitted on presenting their visiting cards.

DERMATOLOGICAL SOCIETY OF LONDON.—The annual meeting of this society, founded in 1882, was held on May 8th, and important changes in the constitution of the society were unanimously adopted. Previously the number of members was limited to thirty for the more convenient examination of patients, but it was resolved that henceforth there should not be any limit to the number. The following gentlemen were elected to form an Executive Council for the session 1895-96:—Mr. William Anderson, Dr. Cavafy, Dr. Radcliffe Crocker, Dr. James Galloway, Dr. Robert Living, Mr. Malcolm Morris, Dr. J. F. Payne, Dr. E. C. Perry, Mr. Marmaduke Sheld, Dr. Frederick Taylor; Dr. Stephen Mackenzie (Treasurer); Dr. T. Colcott Fox and Dr. J. J. Pringle (Hon. Secs.).

BEQUESTS AND DONATIONS.—The late Deputy Inspector of Hospitals, Dr. G. Willes, R.N., has bequeathed £500 each to the Royal Portsmouth Hospital and the Portsmouth Eye and Ear Infirmary. — Mrs. Anne Groom, widow of the late Mr. William Groom, of West Derby, has bequeathed £100 each to the Liverpool Hospital for Cancer and Skin Diseases, the Liverpool Infirmary for Children, and the Home for Female Incurables at Liverpool, and £400 to the Liverpool Medical Missionary Society. — Sir James Reckitts has given £1000 towards forming an endowment fund for the Withernsea Convalescent Home. — The London Clothworkers' Company has granted donations of £70 to the North-Eastern Hospital for Children, Hackney-road, Shoreditch, and of 80 guineas to Queen Charlotte's Lying-in Hospital, Marylebone-road. — Mr. Frederick Wilder of Hurley Hall, Berkshire, has contributed £100 towards the cost of the proposed new operating theatre at the Royal Berkshire Hospital, Reading. — The Treasurer of the Metropolitan Hospital, Kingsland-road, has received from the Shoreditch Concert Committee £104 3s. 1d., the proceeds of a concert held in the town-hall, Shoreditch. — Mrs. Emma Mackenzie, late of Kensington Park-gardens, has bequeathed £1000 to the Hospital for Incurables, West Hill, Putney. — The late Mr. Thomas W. Thompson of Amptill-square, Hampstead-road, has bequeathed £100 each to the University College Hospital, Gower-street, London, and the Hospital for Incurables, Putney. — Mrs. Sarah R. Smyth, late of Stevenage, Herts, has bequeathed £300 to the Herts Convalescent Home, St. Leonards. — The following contributions have been made by the London City Companies to the special fund now being raised for St. Thomas's Hospital: the Merchant Taylors' Company, 500 guineas; the Armourers' and Braziers' Company, 100 guineas; the Goldsmiths' Company, £500; the Vintners' Company, £52 10s.; the Dyers' Company, £25; the Ironmongers' Company, 100 guineas; and the Waxchandlers' Company, 25 guineas. To the same fund the London and South-Western Railway Company has contributed £105 and Lord Iveagh £1000. — The late Earl of Moray has bequeathed £50,000 to the Edinburgh Royal Infirmary. — Alderman Bindloss, late Mayor of Kendal, has bequeathed £1000 each to the Middlesex Hospital, the St. George's Hospital, and King's College Hospital, London.

At the opening of the St. Mary's Hospital bazaar at Portman Rooms on June 27th by the Princess of Wales she will be conducted through the bazaar by the Duke of York as President of the Hospital.

ROYAL MICROSCOPICAL SOCIETY.—May 15th, the President, Mr. A. D. Michael, in the chair. Mr. J. Swift exhibited an improved form of the Nelson Microscope Lamp fitted with mechanical movements, and also a "Wales" microscope which had been fitted with the new mechanical stage.—Mr. T. Comber read a paper on the "Development of the young valve of *Trachyneis Aspera*." The subject was illustrated with lantern photographs exhibited upon the screen.—Miss Ethel Sargent's paper on the "First Nuclear Division in the pollen mother cells of *Lilium Martagon* &c.," was communicated by Dr. D. H. Scott. A discussion ensued in which Professor J. B. Farmer, Mr. Spencer Moore, and Dr. Scott took part.

MEDICAL SOCIETY OF LONDON.—The following officers were elected to serve during the coming seasonal year:—President: Sir James Crichton Browne, M.D., F.R.S. Vice-presidents: Sidney Coupland, M.D., Henry H. Clutton, John C. Thorowgood, M.D., and Charles B. Lockwood. Librarian: William Henry Allchin, M.D. Honorary Secretaries: Amand Routh, M.D., and George R. Turner. Honorary Secretary for Foreign Correspondence: Heinrich Port, M.D. Council: Howard Barrett, J. Mitchell Bruce, M.D., John Cahill, Andrew Clark, Sir William B. Dalby, F. Swinford Edwards, David Ferrier, M.D., F.R.S., Archibald E. Garrod, M.D., F. de Havilland Hall, M.D., Norman Kerr, M.D., Edward D. Mapother, M.D., H. Montague Murray, M.D., Edward J. Nix, M.D., James W. J. Oswald, M.D., William Pasteur, M.D., Charles H. Ralfe, M.D., Frederick T. Roberts, M.D., Frederick Treves, John Tweedy, and Joseph White.

THE FIFTH INTERNATIONAL CONGRESS OF OTOTOLOGY.—The above meeting will be held in Florence, under the presidency of Professor Grazi, from Sept. 23rd to 26th next. The following are the subjects selected for discussion:—1. The Treatment of Intracranial Abscesses consequent on Purulent Diseases of the Ear, introduced by Dr. Thomas Barr of Glasgow. 2. General Treatment in Diseases of the Ear, introduced by Dr. Gallé of Paris. 3. General Treatment in Diseases of the Internal Ear, introduced by Professor Gradilugo of Turin. 4. The Present State of our Knowledge of the Pathology of the Labyrinth, introduced by Professor Politzer of Vienna. 5. On the Physiology of the Middle Ear, introduced by Dr. Charles Secchi of Bologna. All members of the profession who intend to contribute papers or to be present at the congress are requested to communicate with the secretary not later than June 15th. Early in July each intending *congressista* will receive a detailed programme of the meeting. The official languages are Italian, French, German, and English. The subscription, which includes a copy of the printed transactions of the congress, is twenty francs. The secretary-treasurer is Dr. T. Bobone, San Remo.

The annual general meeting of the Society for the Relief of Widows and Orphans of Medical Men was held on Thursday, May 16th, at 5.30 p.m. The president (Sir James Paget) presided. From the report read by the secretary it appeared that 13 new members had been elected during the year, 11 had died, and 4 resigned, leaving 306 on the books. Two widows had been admitted, 3 had died, the number on the books at the end of the year being 53. The number of orphans remained the same as in 1893—viz., 9. The grants during the year amounted to £2805, including a Christmas present of £303. The expenses were £241. The receipts available for the payment of grants and expenses had been £3262 and the expenditure £3046. A sum of £785 had been invested. Sir J. Russell Reynolds and Mr. Willett were elected vice-presidents, and Dr. Buzzard, Dr. Pollock, Mr. Manley Sims, Dr. Kempe, Mr. Underwood, Mr. Pearce Gould, and Dr. Lewers were elected directors to fill the vacancies caused by death and retirement. A grant of £26 was made under by-law 78. A vote of thanks, proposed by Mr. Christopher Heath, to the editors of the medical journals for their assistance in making known the work of the society, was passed unanimously. The proceedings terminated with a vote of thanks, proposed by Dr. Glover, to Sir James Paget, the president, for his kindness in taking the chair at the meeting.

NORTH-WEST LONDON CLINICAL SOCIETY.—A clinical meeting of this society was held on May 8th. Dr. R. H. Milson in the chair.—Dr. Harry Campbell showed a case of Post-hemiplegic Hemichorea in a woman. The condition dated from infancy, and Dr. Campbell thought in all such cases the cause was softening rather than hemorrhage. He had given bromides and opium with benefit.—Dr. Guthrie showed a case of Violent Post-hemiplegic Spasms in a man aged twenty-five. The symptoms pointed to implication of the cortical motor area, and Dr. Guthrie raised the question of operation by trephining.—Mr. Jackson Clarke showed a child with a Syphilitic Skin Lesion of the Buttock, and exhibited specimens of Gummata removed from the Viscera of other patients. He advocated treatment by mercurial inunction in infantile syphilis. Dr. Coode Adams regarded the lesion as tuberculous, and based this view on the family history.—Mr. Gordon Brodie showed a large Angioma of the Buttock. He proposed to remove it after preliminary electrolysis.—Mr. Brodie also showed a case of Dermatitis attributed to contact with bichromate of potash.—Dr. Herschell, Dr. Coode Adams, and Dr. Gill spoke.—Dr. Harry Campbell showed the heart and spleen from a case of Ulcerative Endocarditis.—Dr. Cameron, Mr. Clayton, and Dr. Guthrie joined in the discussion.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Inebriates.

THE Lord Chancellor has introduced into the House of Lords a Bill to amend the Inebriates Acts of 1879 and 1885 and the law respecting drunkenness.

Opium Commission.

There has been published, by way of supplement to the report of the Royal Commission on Opium, a note by the Maharaja Bahadur of Durbhanga. The Maharaja in this note states that the report of the Commission is, on the whole, drawn up in accordance with the spirit of the resolutions that were passed at the last sitting in Bombay, and as such he is prepared to accord a general support to it. He wishes, however, to lay before the British public the views entertained on the opium question by the majority of the Indian thinking public. This he does in the note.

Cock-fighting in Scotland.

There has been passed through the two Houses of Parliament to put county authorities in Scotland in a position to deal with cock-fighting, an ancient and brutal form of sport, which appears to have had a somewhat extensive revival in certain parts of Scotland.

Factories and Workshops Bill.

The Grand Committee continues to make substantial progress with the Factories and Workshops Bill. At its recent meetings it has been mainly engaged with the provisions as to the cleaning and protection of machinery and the precautions against fire. On Tuesday, May 21st, some time was spent with Clause 11, which provides for the representation of workmen on arbitrations as to special rules applicable to certain dangerous trades. These rules at present are drawn up by the Home Office, and the employer can demand an arbitration but not the workman, and the object of the clause is to bring in the latter. Mr. John Burns took up the position that there should be no arbitration at all and that the matter should be left in the hands of the Home Office. His idea was that the clause gives employers and workmen the power to contract out of healthy and sanitary conditions of work. Mr. Asquith thought that both employers and workmen would hesitate before handing over this great power to a Government department. The result of the debate was to leave the clause untouched in this respect.

HOUSE OF LORDS.

THURSDAY, MAY 16TH.

Richmond Lunatic Asylum, Dublin.

Lord Riddlesdale said, in reply to a question put by the Earl of Belmore, that the estimated cost of remodelling this asylum was £60,000. For that sum suitable buildings and accommodation would be provided for the residue of the lunatics of the district (about 300 in number) who could not be accommodated in the new buildings at Portrane. The new buildings were estimated to cost £240,000 and to accommodate 1200 lunatics. The Irish Government at first held the opinion that it would be better to abandon the existing asylum and erect new buildings on a better site, and they made representations to that effect to the Board of Control; but the answer was that whereas the old buildings were worth £100,000 while used for the accommodation of lunatics, they would not be worth more than £20,000 if sold in the open market. After that answer the Irish Government did not feel justified in further interference with the discretion of the Board of Control.

Lord Ashbourne, in the course of a short speech, expressed strong objection to this large sum of money being spent on a bad and condemned site, and said that the better plan would be to seek a new site with healthy surroundings, and there erect an asylum in accordance with the requirements and suggestions of modern science for the treatment of the insane.

HOUSE OF COMMONS.

THURSDAY, MAY 16TH.

The Tuberculosis Commission.

Mr. Shaw-Lefevre said, with regard to this subject, that the Commission made no recommendations. It had arrived at various conclusions of fact as to the existence of tuberculosis in animals and as to the possibility of its being communicated to consumers of meat and milk. These conclusions appeared to point to the expediency of an extension of the system of inspection of dairies, slaughter-houses, and butchers' shops, and possibly to the general establishment of public slaughter-houses. Until the evidence taken by the Commission was published and time had been given for the consideration of the very large and difficult questions involved he should be quite unable to state what the intentions of the Government were upon these matters, or whether it was desirable to have a further inquiry as had been suggested.

FRIDAY, MAY 17TH.

Insanitary Workshops in Glasgow.

Mr. Schwann asked the Home Secretary how many complaints had been made by the factory inspectors in Glasgow to the local sanitary authorities in that city with reference to defects and insanitary conditions in workshops during the month of April last, and how many of them could have been rectified immediately by the factory inspectors had they possessed the same power to deal with defective sanitation in workshops that they possess in factories.

Mr. Asquith replied that thirty-eight complaints were made to the sanitary authorities in Glasgow in April, including twenty-two workshops in an uncleanly state, five workshops overcrowded, six workshops requiring additional waterclosets or waterclosets requiring structural alteration. Of these, twenty-six could have received attention by Her Majesty's inspectors of factories had they the same power in workshops as they have in factories.

MONDAY, MAY 20TH.

Sanitary Inspectors in Scotland and Private Practice.

Sir George Trevelyan informed the House that sanitary inspectors are engaged in private business or hold other public appointments in the following Scottish counties—viz., Aberdeenshire, Fife, Nairn, Peebles, Selkirk, and Orkney and Zetland.

The Veterinary Department.

Mr. Herbert Gardner, President of the Board of Agriculture, replying to a question, said that on the rearrangement of business which took place on the retirement of Professor Brown in 1893, the term "Animals Department" was applied to the officers engaged on duties which were connected with the animal industry, and which did not require the possession of veterinary knowledge for their proper performance. The term "veterinary" would have been inappropriate to the division thus constituted, and a separate status was, moreover, assigned to the veterinary staff. The principal of the division was Major John Trencutt Tennant, who was not a veterinary surgeon, but who had had nearly twenty years' experience of the business upon which he was engaged, and to whose ability and work in the past agriculturists were very greatly indebted. He was aware that many members of the veterinary profession would have preferred that no changes in their organisation should have been made; but he was satisfied that those changes were necessary in the interest of the public service, and he did not propose—nor, indeed, was it in his power—to make any other arrangements.

TUESDAY, MAY 21ST.

Influenza.

Mr. Percy Thornton asked whether the promised inquiry into the different nature of ordinary cold and the malarial epidemic termed influenza, which had visited England each winter since 1889 and occasionally appeared in the summer also, would include all available data concerning the sequelæ or after-effects of the complaint in its later phases.—Sir Walter Foster replied that the object of the inquiry was to ascertain whether any relations existed between the ordinary influenza cold and the malarial epidemic influenza, and it had been found that the acute stages of the two diseases alone afforded an opportunity for the necessary bacteriological investigation. It was not considered that any further study of the sequelæ of the two diseases was necessary.—Mr. Thornton asked whether medical men would be encouraged to give their experience to the Medical Department of the Local Government Board.—Sir Walter Foster said he felt sure that medical men required no encouragement to submit anything for the benefit of the public in stamping out this serious disease.

The Dangers of Electric Lighting.

Mr. Bryce, President of the Board of Trade, replying to Mr. Weir, said that private electric lighting companies having statutory powers were under obligations similar to those imposed on local authorities, and were also prohibited from using overhead wires without the consent of the Board of Trade and the local authority. Private electric lighting companies not having statutory powers were subject to the regulations for the protection of the public safety prescribed under the provisions of the Electric Lighting Acts, 1882 and 1888, although the use of overhead conductors was not prohibited by those Acts. Moreover, urban authorities under the Public Health Act of 1890 were empowered to make regulations for the prevention of danger or obstruction to the public from wires stretched over, along, or across any street.

WEDNESDAY, MAY 22ND.

Insurance of Children.

On the motion of Sir Richard Webster, the Funeral Expenses of Children Insurance Bill was read a second time.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on Food Products Adulteration resumed the examination of witnesses on Tuesday, May 21st, Sir Walter Foster occupying the chair.

Mr. F. G. Ivey, of Messrs. Hansen, Son, and Barter, London, who attended the Committee on the suggestion of the London Chamber of Commerce, said in reply to the Chairman, that he was not in favour of any great alteration in the law with regard to coffee and chicory mixtures. He thought that where the proportion of coffee was in excess of that of chicory, the article should be called coffee and chicory, and where the proportion of chicory was in excess of coffee it should be called chicory and coffee. He would not put the proportions on the labels. So for analysts had not been able to arrive at the proportions of the two articles found in the mixtures, and while that was so he did not think it right to state proportions on the labels. In his view the public did not require to know the proportions, because they bought according to the price and were well aware when they offered a low figure that they were getting a large proportion of chicory.—If the only security the public has is the price then a great deal of what has been done under the Adulteration Acts is useless because the public can protect themselves?—Yes, but the public are alive to their own interests.—The argument against all this legislation was that the purchaser might take care of himself, but the State determined otherwise, and said we will try to take care of the purchaser. Do you wish to go back to the old platform?—I would stand upon the present platform and not depart from it. In 1882 it was proposed in Parliament that the proportions should be stated on the label, but the proposal was rejected. The view he took was that the difficulties of analysts were so great that any attempt to specify on the label the exact proportions of chicory and coffee would lead to unjust prosecutions. He would certainly modify this view if he found the difficulties of analysts were not so great as he believed them to be. The sale of coffee had not increased in recent years, and this he attributed to the very low price of tea and the fact that the English people were not a coffee-drinking people. He had not the slightest doubt that if Parliament interfered with the sale of mixtures the consumption of coffee would still further fall. In very many districts the sale of mixtures was far in excess of pure coffee; in the case of some districts it represented as much as 90 per cent. of the trade. Best coffee cost the grocer about 1s. 4d. per lb., and the chicory he would mix with it about 3d. per lb.

By Mr. Jeffreys: He would have no further restriction put upon the trade in mixtures, because the trade was honestly conducted and the public were satisfied. He could not admit for a moment that the public were deceived. If a customer asked for pure coffee and was supplied with a mixture then the vendor would be liable to prosecution under the present law.

By Mr. Kilbride: He did not think that grocers made undue profit by the sale of mixtures, because if the customer found he was supplied with an inferior article he would transfer his custom elsewhere.

Mr. J. C. Sanderson, honorary secretary of the Coffee Association of London, stated that in 1886 he had forty-three samples of mixtures taken in different parts of London analysed, with the result that they were found to contain on an average 50 per cent. of chicory, burnt sugar and other vegetable substances. Twenty-two of the samples were labeled French coffee, and contained from 62 to 93 per cent. of chicory, the average being 70 per cent. These mixtures were sold at prices which represented something like 100 per cent. profit to the vendors. He had no reason to believe that the state of things had improved since 1886. He thought that the proportions of chicory and coffee should in the interests of the public be stated on the label, and he felt confident that if makers were compelled to do this they would adopt better methods of manufacture to enable them to state the proportions. As things were at present, he had not heard analysts say much about difficulty experienced by them in determining the proportions. He considered the law insufficient. He considered that at the present moment makers had a licence to mix as much chicory as they liked with coffee, so long as they put on a notice saying that the article was sold as a mixture of chicory and coffee. This trading with the name of coffee should not be allowed. When there was a greater proportion of chicory than coffee present they should call the article "chicorino" or something of that sort, or they should make people sell coffee and chicory separately, and allow the purchaser to mix them.

Mr. Innes Rogers, of Messrs. Joseph Travers and Son, Limited, London, said he had been requested to give evidence as to the general grocery trade by the London Chamber of Commerce. He was strongly opposed to the unlimited use of chicory in the making of coffee mixtures. In his opinion, coffee was taken because of the vegetable alkaloids, which afforded a stimulus to the nerves, and if they substituted a roasted vegetable root like chicory, which had none of these alkaloids, they interfered with what the public desired. He considered that the present use of chicory was an abuse of the privilege given by Parliament, and therefore he thought the privilege should be modified or limited in some way. If people did not get the stimulus they expected from the coffee or coffee mixture they resorted to something else, probably tea, and in this way the consumption of coffee suffered. As a matter of fact, the present coffee trade was not a trade in coffee but a trade in chicory. He would have the proportions stated in the same way as the strength of spirits was stated, and if this were done the public would be protected and the trade would not suffer. He would enforce a limit beyond which chicory might not be used. Discussing the Act of 1875 generally, witness said it was well meant, but it was no deterrent to crime, not being sufficiently stringent and far-reaching. So far as the spice trade was concerned, there had been more adulteration since than before the Act. A good many years ago THE LANCET made an inquiry as to the state of the food-supply throughout London, and their commissioners found an extraordinary amount of adulteration. But in the old days, before THE LANCET inquiry, the people who did the adulteration worked upon a small scale and with little scientific knowledge; nowadays they worked on a great scale and called in the aid of science. It had become a case of setting science to catch science. Witness then explained to the Committee different methods by which pepper and ginger were adulterated. In this connexion he advocated that prosecutions should be directed against the manufacturer, the wholesale dealer, and the importer, as

well as against the retailer, who very often was in no way to blame for the nature of the article he sold.

The examination of Mr. Rogers was not concluded when the Committee adjourned.

The Committee met again on the following day, with Sir Walter Foster in the chair.

Mr. Innes Rogers was further examined by members of the Committee. He expressed the opinion that there was a considerable amount of direct adulteration in the grocery trade, affecting such articles as spices, arrowroot, seeds, and liquorice. The London Chamber of Commerce had passed a number of resolutions on the subject. They had declared, among other things, that the operation of the Adulteration Acts should be extended to wholesale dealers, that food should be held to include all articles used in the preparation of foods and drinks, that the Government should be called upon to establish a central and fully equipped analytical department, that the Government should have power to determine, fix, and vary, with reasonable notice, standards of purity, and that travelling inspectors should be appointed to see to the enforcement of the law. His opinion was that direct adulteration was not properly dealt with under the existing law. Very often there was no prosecution until a great deal of mischief had been done, and then the small retailer would be dealt with, although he had not committed the adulteration and probably knew nothing of it; while the wholesale manufacturer, who really committed the fraud and profited by it, was left unpunished. Even in cases where the wholesale manufacturer was reached the penalties were insufficient as deterrents. He would have the whole stock seized and imprisonment or heavy fines imposed. He did not wish to cast any reflection on the inspectors, but they went where they could most easily obtain a conviction, and he had no doubt that they purposely selected the green assistant. He was aware that in many places the inspectors did not make the purchases themselves, but employed other persons for the purpose. In the case of mixtures of coffee and chicory, the makers as a rule gave the retailers full warning that the article they supplied was not pure coffee. In his opinion the administration of the present adulteration laws was in the last degree capricious and unsatisfactory. In some districts there were no prosecutions at all, and in some he had reason to believe there was actual connivance between the petty officers of the law and the offenders. In some districts the local authorities found the expense of exposing adulteration too great for them to undertake it. The analysts as a body were entitled to the greatest respect. With the imperfect means at their disposal they had done wonders. But at the same time appointments had been made of totally unfit men. Medical men and pharmaceutical chemists had been appointed who had no knowledge of the subject, and, moreover, the salaries paid were quite insufficient. There was no general supervision of analysts, and analysts received no aid from the Government in pursuing their work. Although he himself had nothing to complain of in connexion with the Somerset House laboratory, it was frequently said that it was behind the times. He would bring all the Acts dealing with adulteration into one Act, which might be called the Adulteration Act, and he would have all places where food, drugs, or drink were sold open to inspection at all reasonable hours.

Mr. J. C. Foster, member of a firm of spice merchants in Great Tower-street, London, gave evidence as to adulteration carried on in liquorice, arrowroot, caraway, pepper, and ginger. Liquorice, he said, was adulterated to the extent of 50 per cent. of foreign substances. Flour and miller's sweepings were used, with the result that after a time the liquorice root decayed and became infested with weevils. The view he took was that nothing that contained less than 95 per cent. of liquorice should be allowed to be called liquorice. Arrowroot was adulterated with farino and potato starch, this adulteration being largely practised in England. Pepper was adulterated with ground rice, long pepper, olive stones, &c.

Mr. D. R. Harvest, of Thames-street, London, a gentleman who has been engaged in the spice and grocery trade for fifty years, expressed the opinion that the Food and Drugs Act had proved very beneficial in the case of ground pepper and ground ginger. The adulteration of these articles used to be largely carried on by wholesale firms, but the Act checked it, and he might say that it had received its death-blow from the vigorous application of the law in various parts of England. Not very long ago a consignment of white pepper was received from the Straits Settlement. Experts were led to believe that it was the pure article, but subsequently it was found to consist almost entirely of small clay pellets exactly resembling in shape and colour the genuine article. The fraud was said to have been practised on the importers by the Chinese before shipment. The greater part of the candied peel sold was pure, but some few makers had introduced a cheaper article, known to the initiated as candied skins—that was lemon and other kinds of peel from which the essences had been extracted. In his opinion the sale of baking powder mixed with alum should be treated as an offence against the Act.

Mr. C. Umney, of the firm of Wright, Layman, and Umney, wholesale chemists, Southwark-street, London, said that the Act of 1875 had done excellent service, and had raised the standard of purity, which at the present time was in a very good position. In his opinion the drugs in this country were not to be excelled in purity, and he attributed this largely to the working of the Act. He thought the provisions of the Act had been carried out with moderation on the part of local authorities and with very great efficiency on the part of public analysts. He admitted that very often public analysts had been called upon to undertake duties which they should not have been asked to do, and very often, owing to the absence of standards in books of reference, they had misled the public authorities. In this connexion he suggested that the standards of the British Pharmacopœia should be made statute law, and as such used by the public analysts.

The Committee then adjourned.

BOOKS ETC. RECEIVED.

ALIGHIERI, DANTE, Roma.

Trattato di Patologia e Terapie Chirurgica Generale e Speciale. Von Professor Francesco Durante. Vol. I. Lire 5. 1895.

BAILLIÈRE ET FILS, Paris.

Traité de Médecine et Thérapeutique. Tome premier: Maladies Microbiennes. 1895. pp. 818.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

The Deformities of the Human Foot, with their Treatment. By W. J. Walsham, M.B., C.M. Aberd., F.R.C.S. Eng., and W. K. Hughes, M.B. Lond., L.R.C.P., M.R.C.S. 1895. pp. 550. Price 18s.

CHURCHILL, J. & A., New Burlington-street, London.

Surgical Pathology and Morbid Anatomy. By A. A. Bowlby, F.R.C.S. Third edition. 1895. Price 10s. 6d.

CLAY, C. J. & SONS, Ave Maria-lane, London, E.C.

Cambridge Natural Science Manuals: The Elements of Botany. By Francis Darwin, M.A., M.B., F.R.S. Illustrated. 1895. pp. 235. Price 6s.

CLAY, WM. F., Teviot-place, Edinburgh.

Diseases of the Spinal Cord. By Byrom Bramwell, M.D., F.R.C.P., F.R.S. Edin. Third edition. Illustrated. 1895. pp. 659. Price 16s. net.

FISCHER, G., Jena.

Handbuch der speciellen Therapie innerer Krankheiten, in sechs Bänden. Von Drs. F. Penzoldt und R. Stintzing. 15, 16, 17, 18, und 19. Lieferung. 1895.

GALE & POLDEX, Amen-corner, Paternoster-row, London, E.C.

The Theory of Physical Education in Elementary Schools. By T. Chesterton. With a preface by Colonel G. M. Ouslow. 1895. Price 2s. 6d.

GRIFFIN, CHAS. & CO., Exeter-street, Strand, London.

Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Compiled from official sources. Twelfth annual issue. 1895. Price 7s. 6d.

Essays in Heart and Lung Disease. By A. Foxwell, M.A., M.D. Cantab. 1895. Price 12s. 6d.

OLIVER & BOYD, Tweeddale-court, Edinburgh.

The Diseases and Deformities of the Fetus: An Attempt towards a System of Ante-Natal Pathology. By J. W. Ballantyne, M.D., F.R.C.P., F.R.S. Edin. With plates. Vol. II. Congenital Diseases of the Subcutaneous Tissue and Skin. 1895. pp. 264. Price 10s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.

Medical Gynaecology: a Treatise on the Diseases of Women from the Standpoint of the Physician. By A. J. C. Skene, M.D. Illustrated. 1895. pp. 529.

RENNETAW, HENRY, Strand, London.

An Introduction to Pathology and Morbid Anatomy. By T. H. Green, M.D., F.R.C.P. Eighth edition. Revised by H. M. Murray, M.D., F.R.C.P. Illustrated. 1895. pp. 579.

ROTHSCHILD, J., Rue des Saints-Pères, Paris.

La Méthode Brown-Séquard: Traité d'Histothérapie. La Thérapeutique des Tissus. Par le Dr. M. Bra. 1895.

SHAW & SONS, Fetter-lane, London, E.C.

Archbold's Lunacy. By S. G. Lushington, M.A., B.C.L., Barrister-at-Law. Fourth edition. 1895. Price 2 guineas.

SMITH, ELDER, & CO., Waterloo-place, London.

St. Bartholomew's Hospital Reports. Edited by S. West, M.D., and W. J. Walsham, F.R.C.S. Vol. XXX. 1894. Indurative Mediastino-Pericarditis. By Thomas Harris, M.D. Lond., F.R.C.P. Reprint. 1895. pp. 67. Price 5s.

SWERT AND MAXWELL, 3, Chancery-lane, London.

The Law of Copyright in Designs, together with the Practice relating to Proceedings in the Courts and in the Patent Office, and a full Appendix. By L. Edmunds, D.Sc., LL.B., and others. 1895. pp. 291.

THE DENTAL MANUFACTURING COMPANY, Lexington-street, London.

Dental Microscopy. By A. H. Smith, L.R.C.P. Lond., M.R.C.S., L.D.S. Eng. Illustrated. 1895. Price 6s. net.

THE LEADENHALL PRESS, London.

Comfort in the Home. By M. J. Lottie. 1895. Price 1s.

VOSS, LEOPOLD, Hamburg und Leipzig.

Klinische Vorlesungen über Syphilis. Von Dr. E. Düring. 1895. pp. 320.

The Brewing of Non-excisable Beers; by J. Pocock; illustrated (Nixon and Jarvis, Bank-place, Bangor, 1895); price 2s. 6d.—Royal University of Ireland Examination Papers, 1894: a Supplement to the University Calendar for the year 1895 (printed for the University by Ponsonby and Weldon, Dublin).—Medical Missions in India: a Quarterly Journal; April, 1895; No. 1 (printed at the Mission Press, Ajmere).—Zeitschrift für Sociale Medizin; von Dr. A. Oldendorff, Berlin; Erster Band, Heft 1 (G. Thieme, Leipzig. 1895).—The Royal Natural History; Vol. IV.; Part 19 (Fred. Warne & Co., Bedford-street, Strand, London).—Le Monument d'Alfred Durand-Claye; inauguration le 27 avril, 1894 (F. Levé, rue Cassette, Paris).—Illustrated Modern Art and Literature; Vol. I., No. 7 (printed at 68, Fleet-street, London); price 1s.—A Comparative Study of the Treatment of Diphtheria, especially in regard to Antitoxin, being a Chapter in advance of "Diphtheria and its Associates"; by Lennox Browne, F.R.C.S. Edin., (reprint from the "Journal of Laryngology"; Vol. IX., May, 1895).—The Contract System and the Food-supply in Poor-law Unions: a Letter addressed to Boards of Guardians by a District Medical Officer (W. Matthews, Printer, Guildford).—De la Symphysectomie à l'Cluse Baudelocque pendant l'année 1894; par A. Pinard (G. Steinhell, Paris; 1895).—Fonctionnement de la Maison d'Accouchements, Baudelocque Clinique de la Faculté; par le Professeur Adolphe

Pinard; année 1894 (G. Steinheil, Paris, 1895).—Przegląd Chirurgiczny, tome II., zeszyt 3 (K. Kowalewskiego, Mazowiecka S., Warszawa, 1895).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

AGNEW, T. H., L.R.C.S. & P. Edin., has been appointed House Physician to the Royal Infirmary, Liverpool.

ARMSTRONG, HUBERT, M.B., Ch.B. Vict., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

BICKERTON, R. E., M.B., Ch.B. Vict., has been appointed House Physician and Ophthalmic Assistant to the Royal Infirmary, Liverpool.

BINNEY, E. H., M.B. & Ch.M. (Sydney), has been appointed Senior Resident Medical Officer to the Sydney Hospital, N.S.W.

BRICKWELL, H. T., M.R.C.S., L.S.A., has been appointed Medical Officer for the Chigwell Sanitary District of the Epping Union, vice Jameson, resigned.

BRADFORD, R. D., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer for the Aldro Sanitary District of the Skirlaugh Union, vice Readman, resigned.

BROWN, F. S., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Causton and Elston Sanitary Districts of the Southwell Union.

BUCHANAN, G. S., B.Sc. Lond., M.D. (State Med.), has been appointed Medical Inspector to the Local Government Board.

COLLINS, A. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.M., has been appointed Medical Officer for the Riseley Sanitary District of the Bedford Union, vice Banks, resigned.

DOHIE, WM., M.D. St. AND., L.R.C.P., L.R.C.S. Edin., has been appointed Honorary Medical Officer of the Keighley Mission to the Deaf and Dumb.

DREAPER, J. B., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Ashbourne Rural Sanitary District.

ELKINS, F. A., M.D. Edin., C.M., has been appointed Medical Superintendent of the Sunderland Borough Asylum for Lunatics at Ryhope.

FINNIE, J. E., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Lock Hospital, Liverpool.

GREER, THOS., M.D., M.Ch. Irel., has been appointed Medical Officer for the Second Sanitary District of the Cambridge Union, vice Rygate, resigned.

GRIFFITHS, G. B., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Surgeon in H.M.'s Prison Service.

HARTLEY, A. C., M.D., C.M., F.R.C.S. Edin., has been appointed Medical Officer for the Bedford and Kempston Sanitary District of the Bedford Union, vice Adams.

JESSOP, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon-Lieutenant to the G. (Horncastle) Company of Rifle Volunteers.

MORRISON, J., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Resident Medical Officer to the Queen Charlotte's Lying-in Hospital.

ODELL, ROBT., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Hertford Union, vice Wylie, resigned.

ROSS, S. J., M.B., Ch.B. Vict., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

RUNDLE, F. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Southwick Sanitary District of the Fareham Union, vice Matthews, resigned.

SCATTERY, W., M.B., C.M. Aberd., has been appointed Honorary Medical Officer of the Keighley Mission to the Deaf and Dumb.

SMALLWOOD, ED., L.S.A., has been appointed House Physician to the Royal Infirmary, Liverpool.

THORNE, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Stock Exchange, London.

TOMORY, J. KAY, M.B., C.M. Edin., has been appointed Public Vaccinator for the Parish of Halkirk.

WHITEHEAD, A. MEREDITH, M.B., C.M. Aberd., M.R.C.S. Eng., has been appointed Honorary Surgeon to the Wellington Hospital, New Zealand.

WILKINSON, J. HOWARD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed an Honorary Surgeon to the Dudley Dispensary.

WILSON, H. R., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASYLUMS COMMITTEE OF THE LONDON COUNTY COUNCIL.—Pathologist to the London County Asylums. Salary £700 per annum, with travelling expenses. Applications to the Clerk of the Committee, Office, 21, Whitehall-place, S.W.

BOARD OF WORKS FOR THE HOLBORN DISTRICT (IN THE COUNTY OF LONDON).—Medical Officer of Health for the Holborn District. Salary £350 per annum. Applications to the Clerk to the Board, Holborn Town Hall, London, W.C.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN.—House Surgeon, unmarried. Salary £80 per annum, with furnished quarters, board, gas, coals, and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board, residence, and allowance for washing provided. Applications to the Secretary, Office, 24, Finsbury-circus, E.C.

DURHAM COUNTY ASYLUM, Durham.—Pathologist and Junior Medical Officer. Salary £100 per annum, with board.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried. Salary £100 a year, with board (no beer or wine), lodging, washing, and attendance.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Senior Clinical Assistants.

HOSPITAL FOR SICK CHILDREN, Newcastle-upon-Tyne.—Resident Medical Officer. Salary £60, with board, lodging, and laundry.

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Surgeon.—Junior House Surgeon. Salary £70, with board, &c.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (ALBANY MEMORIAL), Queen-square, Bloomsbury.—Senior and Junior House Physician respectively. Salary of the former £100 per annum, and of the latter £50 per annum, with board and apartments, in each case, in the Hospital.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum.

ROYAL EAR HOSPITAL, Frith-street, Scho-square, London, W.—House Surgeon (non-resident) for six months. Honorarium £12 10s.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Two Examiners in Dental Surgery.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, London, S.E.—Clinical Assistant and Anaesthetist for six months. Salary at the rate of £30 per annum.

RURAL DISTRICT COUNCIL OF DROXFORD.—Medical Officer of Health for this rural district. Salary £125 per annum, to include travelling and all other expenses. Applications to the Clerk, Bishop's Waltham.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Lecturer on Mental Diseases.

SOMERSET AND BATH LUNATIC ASYLUM, Wells, Somerset.—Second Assistant Medical Officer, unmarried. Salary £100 a year, with board, lodging, and washing.

TRINITY COLLEGE, Dublin.—Lecturer in Pathology.

UNIVERSITY COLLEGE, London.—Professorship of Materia Medica and Therapeutics.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

COOK.—On May 13th, at "Byfield," Bromley, Kent, the wife of P. Inkerman Cook, M.D., of a son.

COWELL.—On May 14th, at Tanza-road, Hampstead, the wife of A. R. Cowell, M.A., M.B. Cantab., of a daughter.

FOOT.—On May 19th, at Church House, Pulborough, Sussex, the wife of Ernest Foot, M.R.C.S., L.S.A., of a son.

GARDENER.—On May 18th, at Darley House, Venner-road, Sydenham, the wife of William F. Gardener, M.R.C.S., of a son.

GODDARD.—On May 18th, the wife of Bertram Goddard, L.R.C.P. Lond., M.R.C.S. Eng., of Pentonville-road, of a son.

HAY.—On May 20th, at Lichfield, Stafford, the wife of Deputy-Inspector-General Robert Hay, R.N., of a son.

KENYON.—On May 15th, at Oakhurst, London-road, St. Leonards-on-Sea, the wife of G. Herbert Kenyon, M.D., late of Hooton Pagnell, of a daughter.

KINGSTON.—On May 20th, at Alsager, Stoke-on-Trent, the wife of Henry F. Kingston, B.A., M.B., B.Ch. Dub., of a daughter.

MACLEAN.—On May 20th, at Penrose Lodge, Tooting, the wife of J. N. Maclean, M.B., of a son.

POWELL.—On May 16th, at Ashwick Court, Oakhill, Bath, the wife of Lewis Powell, M.R.C.S., of a daughter.

TAYLOR.—On May 19th, at Kennington-park-road, S.E., the wife of Herbert Taylor, M.B., of a son.

WEBSTER.—On May 19th, at Duppas-hill, Croydon, the wife of George L. Webster, M.R.C.S. Eng., of a daughter.

MARRIAGE.

BLAIKIE—LEICESTER.—On May 21st, at St. Thomas's English Episcopal Church, Edinburgh, Robert Henry Blaikie, M.A., M.D., F.R.C.S. Edin., fourth son of the Rev. Professor W. Garden Blaikie, D.D., LL.D., New College, Edinburgh, to Edith, second daughter of the Rev. M. A. Leicester, M.A. Cantab., Dalhousieterrace, Edinburgh.

DEATHS.

BOSTOCK.—On May 18th, at Onslow-garlands, Deputy-Surgeon-General John Ashton Bostock, C.B., Hon. Surgeon to the Queen, late Scots Guards, in his 80th year.

CLEGHORN.—On May 16th, at Stravithie, Fifeshire, Hugh Francis Clarke Cleghorn, M.D., LL.D., in his 75th year.

CRAIGIE.—At Musselburgh, on the 16th inst., James Stedman Craigie, M.D. Edin., B.Sc. Pub. Health Edin., aged 40.

MARSTON.—On May 16th, drowned at sea off Shoeburyness from the sinking of a yacht during a squall, Lieutenant Frederick Muir Marston, Royal Artillery, son of Surgeon-General and Mrs. Jeffery A. Marston.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 23rd, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia- tion in Vacuo.	Maxi- mum Temp Shade.	Min. Temp.	Rain- fall.	Remarks at 8.30 a.m.
May 17	29.72	N.	45	39	64	49	41	...	Cloudy
" 18	29.57	N.E.	49	46	89	55	43	0.14	Cloudy
" 19	29.63	N.E.	50	48	70	52	47	...	Cloudy
" 20	29.74	N.E.	48	45	67	54	45	...	Cloudy
" 21	29.71	E.	54	49	101	61	47	...	Hazy
" 22	29.84	S.W.	50	49	111	70	45	...	Hazy
" 23	29.92	S.E.	60	55	110	69	50	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. St. Clair Thomson and Dr. R. T. Hewlett: Micro-organisms in the Healthy Nose.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Conjunctival Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Chronic Glandular Diseases of the Naso-pharynx.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Developmental Insanity, Circular Insanity.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Optic Neuritis.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Pemphigus and its Allies.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. B. Pitts: Abdominal Surgery in Children.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Baastian: Cases in the Wards.—Central London Sick Asylum, Cleveland-st., W., 6.30 P.M., Mr. Jonathan Hutchinson: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Tuberculosis and Leprosy.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Puerperal and Lactational Insanity.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular in question.

THE CARE OF YOUNG IMBECILES.

A CORRESPONDENT sends us the following, and would be glad to know where and to whom to apply in order to assist the subjoined case, on which we comment in another column:—

"There is in the village here a labouring man who is unfortunately the father of a girl aged five years, who from her birth has been, and continues to be, an idiot of the lowest type—cannot walk now talk, is incurable, and has not even sufficient intelligence to restrain the calls of nature. The parents are hardworking, honest people. They have several other children and a very old woman living with and dependent on them. The mother of the child has hitherto done her utmost for the idiot; but now, being in rather delicate health, she finds the strain almost more than she can bear. The painful sight is also distressing and most injurious to the other children. I am unable to discover an asylum or institution where the case can be admitted."

Mr. E. S. E. Hever (St. Bartholomew's Hospital).—The name was not received in the official list.

A PROTEST.

To the Editors of THE LANCET.

SIRS,—On looking over the column of vacancies in THE LANCET of May 11th I saw an advertisement for an assistant surgeon as locum tenens for three months at the Rainhill County Lunatic Asylum, near Liverpool, and the inducement held out is £2 2s., with board and lodging, per month. I had the honour of serving as alderman from the formation of the county council in 1888 till 1892, and only wish that I had remained a member of that body so as to have meted out punishment to the party who dared to offer 10s. 6d. per week to a registered member of what is supposed to be a learned profession.

I am, Sirs, yours faithfully,

A LATE ALDERMAN OF THE LANCASHIRE COUNTY COUNCIL.
May 13th, 1896.

TROOPS FOR INDIA *via* THE CAPE.

A CORRESPONDENT writes from Croydon advocating very strongly the Cape route, and urges the expediency of the establishment of a midway sanatorium there, and the disembarkation and re-embarkation of troops at the Cape of Good Hope. While we fully allow many of the advantages that can be urged in favour of the Cape climate and the importance of maintaining that route to India, we do not think that there is much prospect, on account of financial and other considerations, of our correspondent's views being entertained by the Governments of India and this country. The troopship service *via* the Suez Canal has been arranged, as far as practicable, so as to avoid invalids from India arriving at the commencement of winter in this climate. As a rule, soldiers—especially sick soldiers—are very anxious to get home on leaving India, and do not like to be detained anywhere *en route*, even for hygienic reasons. One great thing which should never be lost sight of is the importance of quartering troops arriving from abroad in the most suitable and least exposed stations that can be found for them in this country during the following winter and spring.

Ajaz.—We are of opinion that in such cases the duty of the neighbour summoned in an emergency to the patient of another medical man is to do what is necessary and hand the case over to the regular medical attendant.

"A CASE FOR DIAGNOSIS."

To the Editors of THE LANCET.

SIRS,—I beg to thank Dr. Oscar Jennings and "M.B. Edin." for their courtesy in replying to my letter. The case under discussion occurred in the person of an inmate of my house, so that I feel sure that we may put on one side the possibility of cocaine poisoning; and as the patient has never been abroad or had an attack of ague this cannot have been the cause. There are two rather important facts I have omitted to mention—viz., (1) the patient at the time of the attack was adjusting the vaginal tube preparatory to a douche of a solution of boro-glyceride, using a soft red rubber tube perforated only at the sides; and (2) forty-eight hours after the commencement of the attack a cough occurred and became quite troublesome. No expectoration was seen, or came up, but after a cough the patient complained of a very putrid taste at times. The cough lasted about ten days. Looking at the symptoms, I am now inclined to think that a small embolism must have become impacted in a branch of the pulmonary artery, and possibly a thrombus formed in connexion with it, the result being also a pulmonary infarct. I shall be glad if any reader of THE LANCET will give me his opinion as to the correctness of my surmise. I am, Sirs, yours truly,

May 19th, 1895.

M.D. EDIN.

THE CASE OF MR. C. B. TOWNSEND.

THE following additional subscriptions have been received or promised, and are hereby gratefully acknowledged:—

Dr. Jas. Chapman (Southampton) ...	£1 1 0	Mr. Arthur S. Wills (Stafford) ...	£0 10 0
Mr. Hammond Williams (Oswestry) ...	1 0 0	Mr. Arthur A. V. Wood (Corsham) ...	0 10 0
Dr. James Little (Dublin) ...	3 3 0	Dr. Clarke (Highampton) ...	0 5 0
Dr. H. R. Hadden (Dublin) ...	2 2 0	A Friend (Dublin) ...	0 7 6
Mr. Wright Wilson (Birmingham) ...	1 1 0	Mr. N. V. Wise (Trowbridge) ...	0 10 0
Mr. C. W. J. Brasher (Bristol) ...	0 10 0	Mr. Jas. F. Churchill (Chesham) ...	1 1 0

Further subscriptions are earnestly requested, and will be received and acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

PRACTICE IN BRITISH SOUTH AFRICA.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me any information concerning medical practice in South Africa? And also if the field there be already fully supplied.

May 18th, 1895.

I am, Sirs, yours truly,
M.B.

MEDICAL ADVERTISING AT HARROGATE.

THE Harrogate Advertiser of May 25th contains the advertisement of Dr. Roberts's book, price 6d., with quotations from our own review. This is an undesirable way of announcing his "discussion on the therapeutics of the Harrogate waters." Another practitioner in the same paper has the following paragraph, which, we are informed, has appeared repeatedly:—

"Dr. — requests us decisively to contradict the rumour which has reached him from several sources that, having taken a partner, he contemplates retiring from practice in Harrogate. Dr. — disclaims any such intention."

Mr. L. King.—We do not prescribe or recommend individual practitioners.

THE PATIENT'S LEISURE AND THE DOCTOR'S HASTE.

THE Leicester Post gives an account of a baby fed on biscuits and finally on bread-sop. Very naturally the baby died. When the child was dying a medical man, Mr. Dodd, was sent for in a hurry. A second message had to be sent before he arrived, to find the child in coma with convulsions. The foreman of the jury before which the case was investigated thought the medical man should have attended sooner. Mr. Dodd very reasonably remarked that a practitioner's time was not his own. Other cases claimed yet earlier attention. He thought in such cases parents should call the nearest medical man first and their own afterwards. The real moral of this case is that parents should have far more medical advice, and should seek it much sooner than they do. It is of no use to wait till death is imminent and then to blame the practitioner because he does his work in order. This child's life might have been saved if the mother had taken the advice of a medical man with regard to the elementary points in feeding a baby. The foreman of the jury should have given his censure a different direction.

Trachea.—Will this correspondent kindly send us his address, which has been mislaid?

A HINT TO THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—It would seem an opportune time to suggest through the medium of THE LANCET to the General Medical Council the glaring anomaly that though quacks are being extirminated, yet the vendors of patent remedies flourish broadcast throughout our land. Can the General Medical Council not interfere? Patent remedies are regarded by the medical profession as the productions of quacks. Why, then, cannot their sale be prohibited by law?

To me even a stranger anomaly exists. When medical classes are being announced in the local papers as about to begin the names of the professors or lecturers on their respective specialties are advertised side by side with the vaunted medicine mongers, advertising dentists, curers of piles, &c. Honourable and leading professional men must blush to read such advertisements of their calling in the daily papers, yet they wink at it, and abide by it.

I am, Sirs, yours faithfully,

May 19th, 1895.

MEDICUS.

THE LIBELLING OF A PROFESSION.

Reynolds's Newspaper declines to withdraw its suggestion that the medical profession arranges with friends without the patients' consent for the death of said patients with incurable disease—a suggestion couched in the most libellous terms, and itself a libel on a profession which prolongs such lives to the utmost limit. So much the worse for Reynolds's Newspaper. It will suffer more than the profession.

"SELF-PROPELLING" CHAIRS.

A CORRESPONDENT writes:—

"Can any of your readers advise as to a self-propelling chair for a patient suffering from paraplegia? He has good strength in the back and arms, but has lost a foot. One such as he might use out-of-doors as well as indoors is desirable. He already has a 'Merlin,' but the driving arrangement in this hurts his hands and tears his coat sleeves and gloves."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—

Glasgow Herald, Lincolnshire Echo, Brighton Gazette, Hobart Mercury, Newcastle Chronicle, Leicester Post, Oldham Standard, North Cheshire Herald, Kent County Examiner, Birmingham Gazette, Derbyshire Times, Manchester Courier, Bradford Observer, Liverpool Echo, Citizen, Builder, Cork Constitution, Derby Reporter, Leeds Mercury, Scotsman, Architect, Reicar and Saltburn-by-the-Sea Gazette, Bristol Mercury, Alnwick Gazette, Times of India, Pioneer Mail, Morning, Yorkshire Post, Werthing Intelligencer, Liverpool Daily Post, Boston Independent, Sanitary Record, West Midlands Standard, City Press, Weekly Free Press and Aberdeen Herald, Surrey Advertiser, Star, Reading Mercury, Lincoln Gazette, Stroud News, Hertfordshire Mercury, Reynolds's Newspaper, Mining Journal, Buchan Observer, Chester Courant, Darlington Echo, Crewe Guardian, St. Bartholomew's Hospital Journal, Manchester Guardian, Worcester Daily Times, Manchester Evening News, Southampton Observer, Lincolnshire Chronicle, Rochdale Observer, Grays Standard, Blackpool Gazette, Craven Herald, Cape Times, Buxton Herald, Gravesend Standard, Westmeath Examiner, Rangoon Gazette, North China Daily News, Apr Observer, Durham Mercury, Berwick Journal, Auckland Chronicle, Ulverston Advertiser, Montreal Daily Star, Melbourne Argus, Madras Times, Southport Visitor, Nurses' Journal, &c. &c.

Communications, Letters &c. have been received from—

- A.**—Army Medical Department, Lond., Director-General of; Aria Patent Lamp Dépôt, Lond.
- B.**—Mr. H. J. Buck, Lond.; Mr. J. S. Buck, Baton Socon; Mr. O. Birchall, Liverpool; Mr. D. M. Bekdoe, Lond.; Mr. B. N. Binney, Lond.; Mr. F. B. Budge, Truro; Mons. O. Berthier, Paris; Messrs. A. and C. Black, Lond.; Messrs. J. Bates and Sons, Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Bryce and Rumpf, Lond.; Messrs. B. and J. Bock, Lond.; Brighton and Hove Lying-in Institution, Sec. of; Bona fide, Lond.; Ben, Lond.
- C.**—Dr. H. Campbell, Lond.; Dr. W. R. H. Coombs, Bedford; Dr. P. J. Cook, Bromley; Mr. E. Cureton, Shrewsbury; Mr. Mayo Collier, Lond.; Mr. J. Carter, Lond.; Mr. W. F. Clay, Edinburgh; Mr. C. R. Cross, Lond.; Mr. C. D. Christmas, Bedford; Messrs. Crossley, Moir, and Co., Lond.; Cortland Wagon Co., Lond.; Culo, Lond.
- D.**—Dr. D. S. Deaderick, Mammoth Spring, Argansas; Mr. H. Davenport, Lond.; Mr. S. Dougall, Cannes; Droxford Union Rural District Council, Clerk of; Dorset County Asylum, Dorchester, Med. Supt. of; Durham County Asylum, Clerk of.
- E.**—Dr. F. W. Burich, Wiesbaden; Mr. W. O. Evans, Buckley; Messrs. Eason and Son, Dublin.
- F.**—F. A. H., Lond.; Dr. F., Lond.
- G.**—Mr. J. Gillies, Easdale; Gordon House, Highgate-road, N.
- H.**—Dr. E. Hay, Lond.; Dr. W. E. Horne, Durban; Dr. J. Holmes, Overdale; Mr. G. Hamilton, Glasgow; Messrs. Hirschfield Bros., Lond.; Hospital for Sick Children, Newcastle-on-Tyne, Sec. of.; H., Huddersfield.
- I.**—Inst. of Anatomy, Bucharest.
- K.**—Mr. B. Kühn, Lond.
- L.**—Dr. J. F. Little, Lond.; Mr. W. B. Langton, Lond.; Liverpool Stanley Hospital, Sec. of; Lace Web Spring Mattress Co., Sandiacre.
- M.**—Dr. A. J. Martin, Bloxwich; Dr. N. M. Maclehoose, Lond.; Mr. R. W. Marston, Berne; Mr. F. S. Miles, Shoreham; Mr. A. L. Mills, Lond.; Mr. C. A. Morton, Clifton; Mr. B. C. Mitchell, Trevandrum, Travancore; Messrs. Macmillan and Co., Lond.; Maltine Manufacturing Co., Lond.
- N.**—Mr. F. Newland-Pedley, Lond.; Messrs. F. Newbery and Sons, Lond.
- O.**—Messrs. Orridge and Co., Lond.
- P.**—Mr. C. A. Poole, Bristol; Mr. S. A. Parmer, Lond.; Mr. J. Poland, Lond.; Prompt, Lond.
- R.**—Dr. L. Roberts, Liverpool; Mr. Mayo Robson, Leeds; Mr. G. K. Richards, Venezia; Mr. J. J. Ridge, Enfield; Messrs. Reynolds and Branson, Leeds; Messrs. J. Richardson and Co., Leicester; Royal Isle of Wight Infirmary, House Surgeon of; Royal Bar Hospital, Soho-square, Sec. of; Royal Hospital for Diseases of the Chest, Lond., Sec. of.
- S.**—Dr. S. Sunderland, Lond.; Mr. P. Swain, Plymouth; Mr. A. Stenhouse, Glasgow; Mr. C. H. Sers, Lond.; Mr. D. F. Shearer, Lond.; Mrs. Stubbs, Lond.; Herr P. Spindler, Leipzig; Messrs. S. Smith and Co., Lond.; Messrs. G. Street and Co., Lond.; Messrs. J. S. Stubbs, Lond.; Sanitary Wood Wool Co., Lond.; Scalpel, Lond.; Spero, Lond.
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- V.**—Mr. J. W. Vickers, Lond.
- W.**—Mr. H. J. Wilson, Lond.; Mr. B. W. Winstanley, Haslemere.

Letters, each with enclosure, are also acknowledged from—

- A.**—Dr. R. H. Adam, Bolton; Dr. G. A. Abrath, Sunderland; Mr. R. Ackrill, Harrogate; Mr. R. E. Anderson, Carmarthen; Mr. H. G. Anderson, Burton-on-Trent; Mr. J. E. C. Allott, Crocombe.
- B.**—Dr. D. W. Buxton, Lond.; Dr. T. M. Buncle, Forres, N.B.; Dr. J. M. Bell, Lond.; Dr. J. M. Bright, Lond.; Dr. P. H. Boyden, Devonport; Mr. W. P. Barrett, Folkestone; Mr. F. Betts, Lond.; Mr. C. Beesley, Darton; Mr. S. H. Benson, Lond.; Messrs. Burgoyne, Burbidges and Co., Lond.; Messrs. Battley and Watts, Lond.; Ben, Lond.
- C.**—Dr. Cooper, Hyde; Mr. C. R. Cross, Lond.; Messrs. Curry and Paxton, Lond.; Messrs. Cassell and Co., Lond.; Coppice, The, Nottingham, Sec. of; Church-st., No. 199, Stoke Newington, N.; C. M. Q., Lond.
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- H.**—Dr. J. Henderson, Gloucester; Mr. W. A. Hardiker, Brymbo; Mr. F. Howse, Denaby Main; Hoxton House Asylum, Supt. of; House Surgeon, North Ormsby.
- I.**—Investor, Lond.
- J.**—Dr. W. L. Jones, Hinckley; Dr. F. F. Jay, Tenterden; Johnston, Woodford Green; J. H., Lond.
- K.**—Dr. H. F. Kingston, Stoke-on-Trent.
- L.**—Leeds Gen. Infirmary, Sec. of.
- M.**—Dr. W. H. Murray, Steyning; Mr. B. C. Mahany, Lond.; Mr. C. T. B. Maisey, Manchester; Messrs. May and Rowden, Lond.; Market Lavington Private Asylum, Med. Supt. of; M.B., Lond.; M. A. B., Lond.; Medicus, Crews; Medicus, Halifax; Medicus, Middlesbrough; Medicus, Lond.
- N.**—Northumberland, Durham, and Newcastle Infirmary for Diseases of the Eye, Sec. of; National Provident Inst., Lond., Sec. of.
- P.**—Dr. E. J. Parry, Pontycymmer; Mr. J. B. H. Phillips, Southsea; Mrs. Peachey, Hope; Prestwich County Asylum, Clerk of; Patella, Lond.
- R.**—Mr. H. A. Roeschling, Leicester; Rye Lane, No. 204, Peckham; R., Lond.
- S.**—Mr. J. D. Spence, Lond.; Mr. A. Stenhouse, Glasgow; Mrs. Stubbs, Lond.; Stafford Gen. Infirmary, Sec. of; Sanitas Co., Lond., Sec. of; Smedley's Hydro. Establishment, Matlock, Manager of; Surgeon, Boscombe; Spec, Lond.; Syntax, Lond.; Statim, Lond.; Surgeon, Burgess Hill, S. G. H., Lond.
- T.**—Mr. T. F. Tracey, Glasgow; Mr. Thrower, Lond.; Mr. J. Thin, Edinburgh; Tamar Indian Grillon, Lond.; T. H. W., Oswestry; Theta, Lond.
- U.**—Union Assurance Soc., Lond.
- V.**—Victoria Hospital for Children, Chelsea, Sec. of; Vendor, Lond.
- W.**—Mr. A. B. Wheeler, Manchester; Mr. R. J. Williams, Saltney; Mr. J. L. W. Ward, Merthyr Tydfil; Messrs. Wright, Layman and Umney, Lond.
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The Manager cannot hold himself responsible for the return of testimonials &c. sent to the Office in reply to advertisements; copies only should be forwarded.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Amiens, Paris.

An Address

ON

THE MEDICAL HISTORY OF MR. AND MRS. SAMUEL PEPYS.

Read before the Abernethian Society on March 6th, 1895.¹By D'ARCY POWER, M.B. OXON., F.R.C.S. ENG.,
SURGEON TO THE VICTORIA HOSPITAL FOR CHILDREN.

MR. PRESIDENT AND GENTLEMEN,—Some of you may perhaps think that I owe the society an apology for bringing before it such a paper as that which I propose to read. I do not think so. The older we get and the more the cares of this world threaten us, the more necessary is it to have a hobby. We need not ride it so as to be a nuisance to our friends, but in reason we are better for it; and if, as in my case, the hobby leads us to become intimately acquainted with the manner of life and thoughts of a bygone age, it is, I humbly conceive, an advantage. We are too apt to think that everything at the present day has reached its acme of perfection. It is not so; *vixere fortes ante Agamemnona multi* is as true now as when Horace wrote it nearly two thousand years ago. To condemn our ancestors is the vice of imperfect knowledge and of a second-rate education. We can learn from the past quite as much as from the present, and the knowledge which we acquire for ourselves is the better if it be founded upon a historical basis. Pepys is remarkable for the plain and unvarnished accounts which he gives of the facts coming under his notice during the eight years succeeding the Restoration of Charles II. The details of his own illnesses and of those of his wife are as clear as everything else in his Diary. From his accounts we can gather very much more than it would be possible to do had one of the surgeons, or, still worse, one of the physicians, who attended him left us an even more detailed description of his ailments. I think that there is nothing so difficult to determine from contemporary sources as the nature of an illness occurring during the sixteenth, seventeenth, or eighteenth centuries. The humoralist doctrines held sway during this period, as they had done since the beginnings of medicine, and the symptoms of the patient are so overlaid by the theories of his medical attendant that it is often impossible to arrange them in a sufficient sequence to obtain even an approximate diagnosis. The pathology of this date was humoralism tinged with methodism—the doctrine of Themison of Laodicea allied with that of Hippocrates and Galen.

Pepys, like Montaigne, has dissected himself so completely that it is no sacrilege to carry the process farther and lay bare his physical infirmities as thoroughly as he has exhibited to us his many psychical weaknesses, for we shall see that the one depended to some extent upon the other. So much has been written of Pepys that it is only necessary to remind you that he was descended from an old East Anglian family of yeomen farmers, that he was born on Feb. 23rd, 1632-3, and that at the age of twenty-five he married Elizabeth St. Michel, who was then only fifteen. His Diary commences on Jan. 1st, 1659-60, two years after he had been cut successfully for stone at the house of Mrs. Turner in Salisbury-court, Fleet-street, by James Pearse, who was afterwards surgeon to Charles II. and the Duke of York, and Master of the Barber Surgeons' Company in 1675. The tendency to stone was doubtless an inheritance bequeathed to Pepys by his eastern county ancestors, and it appears to have descended to him through the maternal side, for he relates (Nov. 4th, 1680) that his mother was "in greater and greater pain of the stone" when he went to visit her, and (Dec. 21st, 1660) that "my aunt at Brampton has voided a great stone (the first time that ever I heard she was troubled therewith)." He also informs us (Jan. 27th, 1662-3) that his brother John, who had just put on his bachelor's cap at Cambridge, "hath the pain of the stone and makes bloody water with great pain, it beginning just as mine did. I pray God help him." Evelyn, the contemporary diarist, says that the stone removed from Pepys' bladder

was as large as a tennis ball. It weighed, therefore, about two ounces, and I have little doubt that it consisted of uric acid, or of a uric acid nucleus with peripheral layers of ammonium urate, for the recorded symptoms do not in any way point to a mulberry calculus, and it was certainly of renal origin. It may perhaps be found some day, for Pepys treasured it for many years, and in 1684 he paid 24s. for a case in which to keep it. Although the stone was successfully removed on March 26th, 1658—when he was twenty-six years old and had been married for three years—Pepys suffered throughout the period covered by the Diary from certain symptoms in part due to the operation and in part to the formation of fresh stones in his kidney. These renal calculi only once found their way into his bladder, for on March 7th, 1664-5, he passed two after an attack of renal colic. When he died at the age of seventy a nest of seven stones was found in his left kidney. These calculi were, I believe, embedded from the beginning in the renal cortex—a rather unusual situation—and it is to this accident of position that Pepys owes his long life and his comparative immunity from symptoms, for in such cases the secreting substance of the kidney does not suffer, except in the immediate neighbourhood of the stones. He had no increased frequency of micturition, for he would certainly have noted the fact when his nights had been disturbed from such a cause. He had occasional attacks of pain, which were increased by walking, but not by riding. He hardly ever suffered from typical renal colic, but he repeatedly had attacks of pain radiating along his spermatic cord. He never passed blood, and only once in a way did his urine contain phosphates and mucus. These symptoms all point to a cortical stone which would have led him, had he now been living, to have had his kidney opened and the calculi removed, and he would thus have been spared many days of pain and anxiety. The symptoms detailed in his Diary are so explicit that it is possible to ascertain when the calculi were formed or at any rate when his kidney underwent changes in connexion with the presence of the calculi. He had several atypical attacks of renal colic. The first one noted in detail was on Dec. 27th, 1660. Again, on Aug. 1st, 1662, he complains of pain. This attack must have been transient, for on the following day he rode to Rochester, and a few weeks afterwards to Cambridge, on both occasions without producing further symptoms. On Dec. 31st, 1662, he was "very weary and in a little pain from my riding uneasily to-night in the coach." Six years after he had been cut for stone (April 9th, 1664) he says: "I did wake about one o'clock in the morning, a thing I most rarely do, and pissed a little with great pain, continued sleepy, but in a high fever all night, fiery hot, and in some pain." Later in the day he expresses himself as "sick in my stomach and vomited, which I do not use to do." This attack he himself thought was a threatening of ague, but I am more inclined to consider it as marking the formation of a renal calculus, for before the attack became acute he had been complaining of severe pain in his testes from the mere act of crossing his legs. He suffered for many months in 1663 from a pain referred along the course of his spermatic cord, and the least irritation set up an acute or subacute orchitis which (March 26th, 1664) he thinks is "very strange and troublesome to me, though upon the speedy applying of a poultice it goes down again and in two days I am well." The poultice consisted of (Oct. 18th, 1661) "a good handful of bran with half a pint of vinegar and a pint of water, boiled till it be thick, and then a spoonful of honey put to it and so spread in a cloth and laid to it." These attacks of colic were sometimes attended by other symptoms which point to the extension of the inflammatory processes through the perinephric tissue to the posterior surface of the descending colon, where it set up a slight enteritis, leading to constipation from paralysis of the intestinal wall. Thus he gives the following account of such an attack and its cause (June 13th, 1661): "We went toward London in our boat. Palled off our stockings and bathed our legs a great while in the river, which I had not done some years before so to the tavern, where we drank a great deal both wine and beer. So we parted hence and went home with Mr. Falconer, who did give us cherries and good wine. So to boat, and young Poole took us on board the *Charity* and gave us wine there, with which I had full enough, and so to our wherry again and there fell asleep." He reports himself sorrowfully on the following day as "having got a great cold by my playing the fool in the water yesterday, so that I

¹ The meeting was postponed on account of the funeral of Sir William S. Savory, Bart., consulting surgeon to St. Bartholomew's Hospital. No. 3744.

was in great pain and went not to the office at all." He had a worse attack on May 14th, 1664, and it seems to have begun with some cystitis. He describes it very graphically: "Up, full of pain, I believe by cold got yesterday, so to the office where we sat, and after office home to dinner, being in extraordinary pain. After dinner my pain increasing I was forced to go to bed, and by-and-by my pain rose to be as great as ever I remember it was in any fit of the stone both in the lower part of my belly and in my back also. No wind could I break. I took a glyster, but it brought away but little and my height of pain followed it. At last after two hours lying thus in extraordinary anguish, crying and roaring, I know not what, whether it was my great sweating that may do it, but on getting by chance among my other tumblings upon my knees in bed my pain began to grow less and less till in an hour after I was in very little pain, but could break no wind nor make any water, and so continued and slept well all night." Although the acute symptoms subsided and he was able to get about and transact business, it was not until May 19th that he was able to write: "A pretty good stool, and broke wind also." He soon had a fresh attack, and a few days later he sent for Mr. Hollyard, his surgeon, who diagnosed a stone and gave him something to dissolve it. The pain, however, continued, and, as he was not satisfied with the progress he made under Mr. Hollyard's treatment, Dr. Burnett was summoned on July 1st, 1664, "who assures me that I have an ulcer either in the kidneys or bladder, for from my water which he saw yesterday he is sure the sediment is not slime gathered by heat, but is direct pusse. He did write me down some direction what to do for it, but not with the satisfaction I expected. I did give him a piece, with good hopes, however, that his advice will be of use to me." The poor man, however, required but few more fees, for he died in August, 1665 from the plague, which he seems to have caught whilst making a post-mortem examination of one of its victims. If Pepys had but little faith in Dr. Burnett's prescription he trusted implicitly in the utility of a hare's foot to keep off these attacks of colic, and when (Jan. 20th, 1664-65) "Mr. Batten, in Westminster Hall, showed me my mistake that my hare's foot hath not a joint in it It is a strange thing how fancy works, for I no sooner almost handled his foot but my belly began to be loose and to break wind, and whereas I was in some pain yesterday and t'other day, and in fear of more to-day, I became very well and so continue." After such a proof of the efficacy of a hare's foot with a joint in it he got rid of the one he had carried and sent to buy a hare that he might obtain so invaluable a remedy in its proper form.

The attacks of pain from which Pepys suffered were only too often produced by less legitimate causes than cold due to playfulness, and there is no doubt that he suffered directly from the effects of the lateral lithotomy to which he had been subjected, and to the manipulations necessary to remove so large a stone from his bladder. The round shape of the stone, too, would render it difficult to remove, especially with the duckbill forceps and guiders then in use. Johnson's translation of Ambrose Paré's works was first published in 1649, so that we may be certain that the operation was performed after the manner which he describes and with such instruments as are there recommended. Paré says that, after the wound has been made laterally in the perineum and of the bigness of one's thumb, "some one of the silver instruments called by the name of guiders are thrust into the wound as the probe [i.e., the staff] is withdrawn from the bladder. The guiders are then to be thrust and turned up and down in the bladder, and are at length to be staled there by putting in the pin. Then must they be held betwixt the surgeon's fingers. It will also be necessary for the surgeon to put another instrument called the ducks-bill between the two guiders into the capacity of the bladder; hee must thrust it in somewhat violently, and dilate it so thrust in with both his hands, turning it everie way to enlarge the wound as much as shall be sufficient for the admitting the other instruments which are to be put into the bladder: yet it is far better for the patient, if that the wound may with this one instrument bee sufficiently dilated, and the stone pulled forth with the same, without the help of any other." Pepys was sterile, and no doubt exists in my mind that his sterility was due to the left ejaculator having been divided at the time of the operation, whilst the right one was so much bruised by the system of dilatation then employed that it afterwards became occluded. Le Dran states definitely

that injury was often done to seminal ducts in the old operation by the apparatus major, and although in a properly directed lateral incision the deep wound is external to the prostatic portion of the ejaculatory duct, Teevan² records four instances in which after lateral lithotomy there was no emission during sexual intercourse. It is certain that Pepys suffered some permanent injury from his operation, for he had repeated attacks of pain and swelling in his testes, which were independent of the referred pain already described. His testes remained functional for many years, and his prostatic secretion was always sufficiently abundant to prevent him suffering from any lack of emission. The local pain in his testes usually occurred, upon his own confession, when his sexual feelings had been unduly excited, so that it appears clear that the pain was associated with the functional activity of these organs. The mere act of getting drunk he takes but little account of, and it was an event of no infrequent occurrence in the earlier part of his career, for he confesses to sixteen times between April and November, 1661. He considers it troublesome, however, under the following conditions. He and two friends on Nov. 10th, 1661, "sent for two bottles of canary to the Rose, which did do me a great deal of hurt, and did trouble me all night, and indeed came home so out of order that I was loth to say prayers to-night, as I was used ever to do on Sundays, which my wife took notice of, and people of the house, which I am sorry for." Much of Pepys' incontinence must be attributed to the double irritation to which his genito-urinary system was subjected, for on the one hand his kidneys were in a state of constant but subacute irritation owing to the presence of a stone upon the left side, whilst on the other hand his testes, continually secreting, could not give vent to the semen in consequence of the blocked condition of the vasa deferentia. His long spells of sedentary office work and his rather gross habits of life no doubt tended to foster his sexual feelings.

The second great trial in Pepys' life was the trouble he had with his eyesight. He appears to have been ametropic from an early period, but it is clear that he had not used his eyes much during boyhood. He acquired a taste for reading soon after his marriage, and about the time the Diary opens he found that it was necessary for him to improve himself in many branches of education. His work first as Clerk of the Acts, and afterwards as Secretary to the Admiralty, and his post as a Clerk of the Privy Seal, demanded constant perusal of documents, and if we add to this his self-imposed labour of keeping a voluminous diary it is not a matter of any surprise that he soon complains of ocular strain due to such prolonged efforts to converge. He slightly injured his right eye on May 22nd, 1660 by holding his head too much over a gun which he fired off to the honour of the King when he came aboard the fleet which carried him back to England at the Restoration. The injury was soon cured, and it does not appear to have done any permanent injury. It is not until April 25th, 1662, that he complains of his eyesight. He then says: "I was much troubled in my eyes, by reason of the healths I have this day been forced to drink." He began to have a watery eye in the following year, for he says (March 2nd, 1663-4): "Up, my eye mightily out of order with the rheum that is fallen down into it," his left eye being more affected than the right. From this time the complaints about his eyes become more and more frequent, and it is clear that the error of refraction was somewhat greater in his left than in his right eye. He attributed his defective vision at first to cold and to a variety of causes, but he learnt the true cause after a time, and though he suspected it on July 31st, 1663, it is not until June 8th, 1664, that he states "my eyes did ake ready to drop out" after a long evening of writing notes in shorthand. He applied to Ed. Cocker on Oct. 5th, 1664, to ascertain "how I shall do to get some glasse or other to help my eyes by candle-light, and he tells me that he will bring me the helpe he hath within a day or two and show me what to do." Cocker, the altered author of the arithmetic and engraver of letters [1631-1675] whose memory we still commemorate when we say, "According to Cocker," appears to have suggested the use of a pair of green spectacles, which Pepys employed for many years. Increasing age, however, added presbyopia to his hypermetropia, and his sight at last became so bad that after trying many expedients he found himself unable to write up his Diary, which he concludes on May 31st, 1669, with the words: "And thus ends all that I

² Transactions of the Clinical Society, vol. vii., 1874, pp. 179-180.

doubt I shall ever be able to do with my own eyes in the keeping of my Journal, I being not able to do it any longer, having done now so long as to undo my eyes almost every time that I take a pen in my hand." The presbyopia no doubt increased, but he was able to transact the ordinary business of a useful life until May 26th, 1703, when he died.

The minor illnesses of Pepys are neither numerous nor interesting. He suffered from severe attacks of indigestion, usually caused by surfeits, and he records that after a visit to Epsom in July, 1663, which was then a fashionable watering-place, he suffered from a pile the result of the purging produced by a course of the waters, coupled with the additional riding exercise in which he indulged. He was in fear for some time lest the pile should prove a rupture, thereby displaying his lack of even the rudiments of surgical knowledge. He was extremely liable to catarrhal affections, for he was constantly catching cold; on one occasion it was from having his hair cut, on another from leaving off his periwig, and even from sitting without his hat at dinner. The cold was usually cured by simple remedies and left no after-effects, but on one or two occasions he had attacks of tonsillitis. He says (June 12th, 1663) that he was "mightily troubled all night and next morning with the palate of my mouth being down from some cold I took to-day sitting sweating in the playhouse and the wind blowing through the windows upon my head." He suffered, too, from boils, for on Feb. 8th, 1659-60, he records that he "went to bed with my head not well by too much drinking to-day, and I had a boil under my chin which troubled me cruelly." The boil increased in size and there was some stomatitis, for on the following day he "went home and got some alum to my mouth where I have the beginnings of a cancer, and had also a plaster to my boil underneath my chin. The scare of his having a cancer in his mouth subsided after Feb. 10th, when he had been into "London to Mr. Fage about the cancer in my mouth, which begins to grow dangerous, who gave me something for it." Pepys had repeated attacks of nettlerash, which came on annually as soon as the weather began to get cold in the autumn. He cured himself by keeping warm and sweating. He only records one occasion on which he was bled. It was on May 4th, 1662, a very hot Sunday, that he was let blood to the amount of sixteen ounces, when he began to be sick; "but lying upon my back I was presently well again, and did give [Mr. Hollyard, the surgeon] five shillings for his pains." He dined well after the operation and went out walking with his wife after dinner, "my arm being tied up with a black ribbon, our boy waiting on us with his sword, which this day he begins to wear to outdo Sir W. Pen's boy." A few days later he felt constrained to whip this boy with "my whip till I was not able to stir, and then, not being willing to let him go away a conqueror, I took him to task again and so to bed, my arm very weary"; and on several other occasions he administered "salt eel" to the boy, doubtless to neutralise the effect of the sword.

The illnesses of Mrs. Pepys are of less general interest than those of her husband. She was married at the age of fifteen years, so that she had been a wife for four years when the Diary commences. Mr. Wheatley remarks that it is a most curious fact that so methodical and careful a person as Pepys should be in doubt as to the date of his wedding day. Yet so it was, for the register certifies that he was married on Dec. 1st, 1655, in St. Margaret's Church, Westminster, and yet both he and his wife kept the anniversary of their marriage upon Oct. 10th in each year. Mrs. Pepys was childless owing, as I have endeavoured to show, to the sterility of her husband. She had, however, on several occasions a belief that she was pregnant; indeed, the Diary opens with the statement that "my wife gave me hopes of her being with child." Again, on Nov. 6th, 1663, "This morning waking my wife was mighty earnest with me to persuade me that she should prove with child, which, if it be, let it come and welcome." The hope was belied, however. In the following year, on Sept. 27th, 1664, he notes: "So home, where my wife, having (after all her merry discourse of being with child) her months upon her, is gone to bed." The Diary for several years contains an almost uninterrupted account of the pain from which Mrs. Pepys suffered monthly. It was so severe that it quite incapacitated her from doing any household work, and it usually compelled her to keep in bed. She seems to have met the trial bravely, lying up when she was forced to do so, but getting about again as soon as possible. As time wore on the entries about the pain

became fewer and fewer, so that the attacks doubtless became less marked. The pain during the worst period sometimes preceded the flow by a week, but it was more usually coincident with it, and in no case, so far as I can find, did it come on afterwards. It would, therefore, be of that variety to which the term spasmodic (neuralgic or obstructive) dysmenorrhoea is now applied—a condition which, as my friend Dr. Griffith points out to me, is often met with in childless women who have been married young. Mrs. Pepys had a long illness in the winter of 1663. It began, so far as I can ascertain, as an abscess in the vulva, though I think that it is more likely to have been ischio-rectal, pointing, perhaps, a little more anteriorly than is usual. It terminated in a fistula. The surgeon was called in, for Pepys records, on Nov. 16th, 1663, that "in the evening Mr. Hollyard came, and he and I about our great work to look upon my wife's malady, which he did, and it seems her great conflux of humours, heretofore that did use to swell there, did in breaking leave a hollow, which has since gone in further and further, till now it is near three inches deep, but, as God will have it, do not run into the bodyward, but keeps to the outside of the skin, and so he must be forced to cut it open all along, and which my heart I doubt will not serve for me to see done, and yet she will not have anybody else to see it done, no, not even her own mayds, and so I must do it, poor wretch, for her. To-morrow night he is to do it." On the following day, however, "Mr. Hollyard [Thos. Hollier? one of Sergeant-Surgeon Wiseman's wardens in the Barber Surgeons' Company in 1665³] being come to my wife, and there she being in bed, he and I alone to look again upon her [perineum] and there he do find that though it would not be much pain, yet she is so fearful, and the thing will be somewhat painful in the tending, which I shall not be able to look after, but must require a nurse and people about her, so that upon second thoughts he believes that a fomentation will do as well, and though it will be troublesome yet no pain, and what her mayd will be able to do without knowing directly what it is, but only that it may be for the piles. For though it be nothing but what is honest, yet my wife is loth to give occasion to discourse concerning it." The affection ran its usual tedious course; but eventually the fistula healed, and shortly after Christmas Pepys "went after dinner straight on foot to Mr. Hollyard's, and there paid him £3 in full for his physic and work to my wife [about the abscess], but whether it is cured for ever or no I cannot tell, but he says it will never come to anything, though it may be it may ooze now and then a little." I cannot find out when the abscess causing this fistula began, but so far back as 1661 there is an entry that she was suffering from some abdominal trouble, for on May 12th, 1661, "My wife had a troublesome night this night and in great pain, but about the morning her swelling broke, and she was in great ease presently as she useth to be. So I put in a vent (which Dr. Williams [of Eltham?] sent me yesterday) into the hole to keep it open till all the matter be come out, and so I question not that she will soon be well again." It was some time before the abscess healed, for on Midsummer Day Pepys went with his father "and Dr. Williams (who is come to see my wife, whose sore belly is now grown dangerous as she thinks) to the ordinary over against the Exchange, where we dined and had great wrangling with the master of the house when the reckoning was brought to us, he setting down exceeding high everything." There is, however, no further entry in regard to this illness of his wife, though it may have been the starting point of the subsequent fistula.

Mrs. Pepys suffered from earache and from toothache on one or two occasions, but otherwise she appears to have been a tolerably healthy woman. Her earache was cured on June 27th, 1662, by "Mr. Hollard, who had been with my wife to-day, and cured her of her pain in her ear by taking out a most prodigious quantity of hard wax that had hardened itself in the bottom of the ear, of which I am very glad." On Sept. 14th, 1663, she fainted, probably from overfatigue, for setting out from London betimes she came in the evening to Buntingford on the Cambridge road, twenty-nine miles from London, "where my wife by drinking some cold beer, being hot herself, presently after 'lighting, begins to be sick, and became so pale, and I alone with her in a great chamber there, that I thought she would have died, and so in great horror, and having a great

³ The College of Physicians in 1669 bought his house and grounds extending from Warwick-lane to the City walls for £1200 to build a new college in place of the one destroyed by the Great Fire in 1666, which was situated in Amen-corner.

tryall of my true love and passion for her, called the mayds and mistresse of the house, and so with some strong water, and after a little vomit, she came to be pretty well again: and so to bed, and I having put her to bed with great content, I called in my company and supped in the chamber by her, and being very merry in talk, supped and then parted, and I to bed and lay very well." She was well next day, for they went on to Godmanchester [Gumcester] in Huntingdon, and sixty miles from London, where they ate and drank and then to Bampton in Suffolk, which was their journey's end. Once, and once only, she got a black eye—on Dec. 19th, 1664. "Going to bed betimes last night we waked betimes, and from our people's being forced to take the key to go out to light a candle I was very angry, and begun to find fault with my wife for not commanding her servants as she ought. Thereupon, she giving me some cross answer, I did strike her over her left eye such a blow as the poor wretch did cry out, and was in great pain, but yet her spirit was such as to endeavour to bite and scratch me. But I, coying with her, made her leave crying, and sent for butter and parsley, and friends presently one with another, and I up vexed at my heart to think what I had done, for she was forced to lay a poultice or something to her eye all day, and is black, and the people of the house observed it." We have no detailed account of the death of Mrs. Pepys. The fear of becoming blind led to the abrupt termination of the Diary in 1669. Pepys obtained leave of absence from the duties of his office, and set out on a tour through France and Holland, accompanied by his wife. Some months after his return he spoke of his journey as having been "full of health and content," but no sooner had he and his wife returned to London than the latter became seriously ill with a fever. The disease took a fatal turn, and on Nov. 10th, 1669, Elizabeth Pepys died at the early age of twenty-nine years, to the great grief of her husband. Looking to the time of year, to the fact that she had lately returned home from a trip abroad, and to her age, an attack of typhoid fever seems to be the most plausible cause of her premature death, but such a suggestion must be the merest guess. She is buried in St. Olave's Church, Hart-street.

I cannot terminate this short essay without thanking Mr. H. B. Wheatley, the latest and best editor of "Pepys' Diary," and his truest friend, for the kindness with which he has assisted me to certain medical details. In the exercise of a wise discretion, he thought it unnecessary to publish them in a work which, though a classic, is yet read by all classes of Her Majesty's subjects.⁴

THE NEUROTIC ELEMENT IN PULMONARY CONSUMPTION.¹

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THAT disorder of the nervous system plays a prominent part in the production of pulmonary consumption I have long been convinced, and in the various papers which I have written on this subject during the last seven or eight years I have made an effort to show the data on which this theory rests. I now call further attention to this interesting subject. I am by no means the first advocate of the nervous theory of pulmonary consumption. As far back as 1842 M. Cheneau² attributed this disease directly to disorder of the pneumogastric nerves, and indirectly to an abnormal condition of the central nervous system. In 1850 Dr. J. C. Holland defined pulmonary consumption as a disordered condition of the nervous system. Dr. Copland regarded tuberculosis and scrofula as being dependent on abnormal conditions of the nervous system and believed that the accompanying disturbances of digestion, assimilation, circulation, and even the local determination of these diseases are traceable to the

state of the nervous influence of these parts. Dr. Laycock, in his clinical lectures on Physiognomical Diagnosis of Disease,³ says that "defective pneumogastric innervation consequent upon a loss of cerebro-spinal power is a very common predisposing and exciting cause of phthisis." Dr. Clifford Allbutt,⁴ in discussing the pathology of a variety of phthisis, states: "The more, however, I study the relations of the disease the more I am satisfied that the lung mischief is also a neurosis—by which I mean that the lesion is one not originating in the local tissues, but in the nervous system." Dr. Clouston, in his recent work, "The Neuroses of Development," says (p. 92) that "facts seem to show that if tuberculosis cannot itself be called a neurosis, it is in most cases dependent for its existence on a trophic neurosis or bears the closest affinity to it." From this it will be seen that this subject has interested some of the most prominent minds in the medical profession during the last fifty years. Indeed, when the richness and fertility of this field of study are surveyed, one is astonished to find how completely it has fallen into abeyance at the present time. It is practically forgotten, yet I believe that a full and thorough examination of its premises will give us proof of the most convincing character that it is the only key to solve the complex etiology of the disease under consideration. At the very outset I would lay down the proposition that any agent or influence which has the power of disordering or of interfering with the integrity of the respiratory nerves in particular, or with the nervous system in general, also has the power of producing pulmonary phthisis and other forms of lung disease. Thus, in a recent canvass of the pathological literature of this subject I found the records of over a hundred cases of phthisis in which the pneumogastric nerves, or the respiratory centres, were compressed or injured or diseased in connexion with syphilis, alcoholism, diphtheria, measles, diabetes, multiple neuritis, locomotor ataxia, bulbar paralysis, tumour of the pons and medulla oblongata, &c.

Phthisis follows in the wake of many nerve poisons. Mercurial tremor and paralysis are well known, but the investigation of Kussmaul develops the fact that the majority of those who suffer from mercurial intoxication, as looking-glass gilders, mercury miners, &c. are very liable to do, also fall victims to pulmonary phthisis. Even the vitality of the offspring of those who suffer from mercurial intoxication is vitiated, for it is said that scrofula, rickets, and pulmonary phthisis are exceedingly prevalent in the children of those who are engaged in mercury manufacture, and that it induces abortion and still-births among female employees. Dr. Bümler cites an interesting instance of mercurial intoxication in a family. A male aged sixty-nine became a glider when thirty-nine years old and worked as such for twenty-five years, when he was compelled to seek other employment on account of serious mercurial poisoning. He was well and worked for twelve years, when he became salivated and suffered from stuttering, tremor, loss of memory, shedding of teeth, &c. He was married three times, and all his wives followed the occupation of gilding. From the first union there were four children, one of whom died from gangrene of both feet, and the other three and the mother died from phthisis. From the second union there were two children, who, with their mother, died from phthisis. From the third union all the children who were born before the mother was employed in gilding were well, while one who was born after this period was a weakling and died from a cause not given, but the mother died from phthisis.

Lead is another metal which has the power of deteriorating the nervous system and of provoking pulmonary phthisis. Statistics show that the disease is from two to three times more prevalent among lead workers in Wales than it is among farmers living in the same locality, or among the general population of England and Wales.

Among the agents which are most potent in the production of phthisis I would place the abuse of alcohol; and I would call the attention to this subject of those who are directly engaged in the study of inebriety. I know that my friend Dr. Crothers has already made some valuable contributions to this question, and I hope to hear of his further experience in this direction. It is well known that this agent exerts a poisonous influence on the nervous system, and especially on the peripheral nerves. Very frequently the nerves do not show any marked changes, but on closer examination evidence of parenchymatous degeneration with more or less

⁴ It is right to say that we have omitted some of the quotations from the Diary, Mr. Pepys' language being occasionally too blunt and outspoken for publication even in a medical journal.—*ED. L.*

¹ A paper read before the Section on Neurology and Medical Jurisprudence of the American Medical Association at its meeting in Baltimore, May 7th, 1895.

² De l'influence de la Huitième Paire dans la Production de la Phthisie. Paris, 1842.

³ Medical Times and Gazette, 1862, p. 205.

⁴ *Ibid.*, vol. ii., p. 613.

interstitial neuritis is discovered. Suppression of the catamenia in women, paralysis of respiration and of deglutition, and disease of the vagi and of the lungs are also observed to be of common occurrence.

Syphilis is another nerve poison which is often the unsuspected cause of pulmonary disease—the typical pathological changes of which are an abundance of interstitial connective tissue proliferation, peri-bronchial induration, diffuse thickening of the lobular parenchyma, syphilitic gummata, and nodular induration or broncho-pneumonia. The poison seems to attack the cranial in preference to the peripheral nerves. That the vagi are frequently implicated is shown by a number of cases among my collection.

Whooping-cough is pre-eminently a specific spasmodic affection of the respiratory nerves. Hufeland, Hoffmann, Wendt, Walshe, and Pridmore ascribe its principal lesion to irritation of the pneumo-gastric nerve. The pulmonary changes of whooping-cough are interesting because they show the direct relationship between the disease of a nerve and that of the organ which it supplies. In all severe cases there is congestion of the pharyngeal, laryngeal, and bronchial mucous membrane and of the lungs, together with dyspnoea and feebleness of the respiratory sounds. There may also be a shade of dulness in some parts of the lungs. Epistaxis, hæmoptysis, emphysema, chronic bronchitis, broncho-pneumonia, and phthisis are frequent complications, especially in the offspring of those who bear a history of chest disease.

Whatever the precise etiology of *influenza* may be, it is essentially a disease of the nervous system. Its morbid anatomy is principally seen in the meninges of the brain, spinal cord, and peripheral nerves. Pulmonary oedema, broncho-pneumonia, capillary bronchitis, and pleurisy are among its common sequelæ. The pulmonary disease was believed by Graves to be due to paralysis of the vagi, and Walshe says this poison seems to exert a special influence on the pneumo-gastric nerve.

Cerebro-spinal meningitis—an affection which chiefly involves the medulla oblongata and its immediate connexions—is nearly always associated with pulmonary derangement. Then there is another group of diseases—the most prominent of which are beri-beri, pellagra, diabetes, and leprosy—in which disease of the nervous system and disease of the pulmonary organ play a prominent rôle.

Epilepsy is also a disease in which the medulla oblongata is involved, and it is in the latter area that we will have to seek an explanation of the ultimate and long-recognised association between this disease and pulmonary disease. Echeverria⁵ states: "I have most closely investigated the relation of pulmonary tuberculosis and epilepsy, and undoubtedly the genesis of tubercles in the lungs is favoured by the lesion in the medulla oblongata proper to epilepsy. I have traced the pulmonary trouble from its inception, and feel convinced that the association is more than a casual coincidence of both morbid conditions." Besides Echeverria, van der Kolk, Jobert de Lambelle, Stuart Cooper, and Rostan reported a number of cases of epilepsy associated with pulmonary disease in which the pons Varolii, medulla oblongata, and vagi were disordered.

Asthma is a spasmodic affection of the pneumo-gastric nerve, and it is therefore of great interest in this connexion to find whether this disorder develops into more serious lung disease or not. Asthmatics are generally supposed to be long-lived, but I do not believe there is much clinical evidence to support this belief. Of course, there are some exceptional cases which undergo spontaneous cure in the later years of life, but in the majority of these sufferers the attacks incline to become continuous, and it is to these my remarks refer. I believe that the tendency in such is a termination in pulmonary phthisis. In support of this Fuller⁶ states that, in spite of the belief that asthma and pulmonary phthisis are antagonistic, many asthmatics die from the latter disease. Williams⁷ shows that in 385 cases of phthisis 7 began with asthma, and states that the tendency of asthmatic parents to have phthisical children is hardly sufficiently recognised. James⁸ asserts that asthma and whooping-cough are likely to predispose to or terminate in phthisis.

Hysteria implicates the respiratory organs in the form of accelerated breathing, dyspnoea, aphonia, laryngeal and pharyngeal paralysis, &c. and has an innate tendency to

develop into pulmonary disease either in the individual or the offspring. Professor Grasset⁹ found that among the parents, brothers and sisters, grandparents, and uncles and aunts of 44 hysterical patients there were 60 who died or suffered from phthisis. Most if not all of these interesting cases furthermore demonstrate that phthisis may follow, or be followed by, alternate with, or evolve from hysteria and other nervous disorders in the same individual. Thus in Cases 2, 26, 27, 30, 42, and 43 phthisis followed hysteria; in Case 4 bronchitis followed catalepsy, and in Case 17 epilepsy preceded phthisis. In Case 28 there was alternation between hysteria, phthisis, and epilepsy; in Case 29 whooping-cough and hysteria preceded phthisis; in Case 31 phthisis existed first, this was displaced by hysteria, after which the patient suffered from sciatica, then from boils, and in the end recovered altogether. In Cases 32 and 33 there was alternation between phthisis and hysteria, and final recovery from both diseases. In Case 34 the patient became phthisical and then suffered from hysteria, during which time the phthisis improved, and in the end she became paraplegic. In Case 35 hysteria came first and then phthisis, after which the hysteria abated and the phthisis progressed. In the end the patient improved. In Case 36 the patient suffered from phthisis and then became hysterical. She recovered from phthisis, but remained hysterical. Case 37 had phthisis first, then hysteria, after which the phthisis improved and disappeared, but the hysteria continued. Case 38 was phthisical first, then became a somnambulist, after which the patient recovered from phthisis. Case 39 had pneumonia, then paraplegia, then phthisis, and finally hysteria. This patient recovered from phthisis. In Case 40 there was phthisis, then hysteria and hemiplegia, after which the phthisis abated. In Case 41 bronchitis appeared first, then convulsions, then phthisis, and finally hysteria. The patient improved in the end. In Case 44 hysteria was entirely displaced by phthisis.

Idiocy has a powerful bearing on this subject. Thus, in 2380 cases of idiocy and imbecility which were admitted into the Royal Albert and Darenth Asylums in England,¹⁰ it was shown that a family history of phthisis existed in 674 of the inmates, or in 28.31 per cent. Dr. Langdon-Down, late physician to the Earlswood Asylum for Idiots, states¹¹ that the statistics of London show that the deaths from phthisis constitute 115 per 1000 of the general mortality. His statistics at Earlswood Asylum indicate that phthisis was the cause of death in 398 per 1000 of the general mortality. His last 100 post-mortem records show that 62 were phthisical, in some of which cases there was no record of disease in the family, and he believes that in these cases phthisis was the sequence of idiocy. "Defective innervation, in all probability, led to malnutrition and predisposed to a tuberculous condition." Dr. Langdon-Down also contributes the histories of twenty families, each of which was burdened with idiocy, and among the parents, sisters, brothers, grandparents, uncles, and aunts of which there were 35 who suffered from phthisis.

The late Dr. Isaac N. Kerlin, superintendent of the Pennsylvania Institute for Feeble-minded Children, in an essay¹² states that if the tables which he presented in that paper were prepared by a special advocate to prove that phthisis is the main factor in the generation of idiocy the effect could not be more startling; but "as they are the result of careful inquiry, without any theory to prove or disprove, I ask for them your respectful judgment." In the table to which he refers he gives the histories of 100 families, in each of which there existed a case of idiocy, and this shows that there were 145 members of these families, only including parents, sisters, brothers, and grandparents, who were afflicted with pulmonary phthisis. In view of the fact that only about 17 per cent. of the general population die of pulmonary phthisis this death-rate is simply enormous. It means that the mortality from this disease is from eight to ten times greater among this unfortunate class than it is among the ordinary population. Moreover, no one is surprised to find that insanity and epilepsy create a special liability to idiocy in the offspring, but it is certainly very startling, especially in the light of its supposed bacillary origin, that phthisis is more powerful in this respect than any other cause which is known to lead to this disease. Thus the statistics of the Royal Albert and Darenth Asylums already alluded to show that among the hereditary causes of 2380 cases of idiocy and

⁹ Brain, vols. vi. and vii.

¹⁰ See Tuke's Dictionary of Psychological Medicine, vol. 1, p. 664.

¹¹ Mental Affections of Childhood and Youth, p. 22.

¹² Transactions of the Pennsylvania State Medical Society, 1890, Part I., p. 161.

⁵ Epilepsy, p. 313.

⁶ Diseases of the Chest.

⁷ Pulmonary Consumption.

⁸ Pulmonary Phthisis.

imbecility phthisis ranks the highest, having a percentage of 28.31; while insanity, epilepsy, and alcoholism have a percentage of 16.47, 8.69, and 16.38 respectively. Dr. Langdon-Down, in the work already referred to, makes the following pertinent reflections concerning the relationship which exists between phthisis and disorder of the nervous system: "It appears to me that tuberculosis must be accepted as one important cause of idiocy that it impresses special characters thereon, while imparting a strong family likeness to the subjects of this class." It is no less clear to me that idiocy of a non-tuberculous origin leads to tuberculosis. Whether this arises through the influence of the pneumogastric nerve, malassimilation of food, or defective innervation, it cannot but be regarded that the connexion between these two maladies is by no means accidental, and that a due appreciation of this relation is necessary to those who would treat effectively congenital mental lesions.

The clinical association between insanity and pulmonary phthisis has been noticed by many writers, among whom are Van der Kolk, Esquirol, Georget, Burrows, Ellis, McKinnon, Clouston, Boyd, Savage, Norman, Tuke, Laennec, and others. Maudsley says:¹³ "Perhaps I might set it down as a true generalisation that the morbid neurosis, when it is active and gets distinct morbid expression, may manifest itself in four ways: (a) in disorder of sensation—for example, paroxysmal neuralgia; (b) in disorder of motion—for example, epilepsy; (c) in disorder of thought, feeling, and will—mental derangement; and (d) in disorder of nutrition, whereof diabetes is the earlier and phthisis is the later stage." Dr. Blandford states:¹⁴ "I have found, however, that phthisis and insanity do frequently coexist in the same family." Dr. Stearns says:¹⁵ "We often see a consumptive having a child which, instead of developing consumption, develops insanity; and, *vice versa*, an insane person may have children of a phthisical tendency." Dr. Mosher relates an interesting case.¹⁶ A female aged sixteen years was admitted to asylum on Sept. 25th, 1893. She was said to have been insane for eight years, and her attacks were of epileptiform nature, characterised by sudden outbreaks of violence and probably associated with unconsciousness. Heredity was the assigned cause. Eight paternal great uncles and great aunts had died of phthisis, and her paternal grandfather was epileptic in youth and neurotic. During her residence of about six months she had intractable bronchitis and laryngitis with aphonia. Dr. Clouston¹⁷ makes the observations that the death-rate from phthisis among the insane is four times higher than among the general population, and that both diseases are very common in different members of the same family, and that heredity towards phthisis may determine insanity and *vice versa*. The same authority also remarks¹⁸ that the form of insanity which is commonly associated with phthisis is monomania of suspicion and melancholia. Nearly all pure cases of this kind sooner or later die from phthisis. The most marked cases of phthisical insanity are those with a strong hereditary tendency to both insanity and phthisis or to the neuroses. It is surprising how often both diseases occur in different members of the same family. The constitutional weakness which tends to end in insanity (p. 468). Schroeder van der Kolk states¹⁹ that phthisis and insanity frequently coexist or alternate with one another. We often see phthisis occurring in families some members of which are affected with insanity. Dr. Busi, who collected his statistics at the asylum for the insane at Baale, makes the interesting observation²⁰ that in many cases we must regard tuberculosis and insanity as an expression of the same constitutional weakness. In 50 per cent. of his insanity cases there was tuberculous heredity; in 47.2 per cent. there was neuropathic heredity; and in 20 per cent. there was a mixture of the two. On account of the frequency with which both diseases exist in the same families he believes that there is an internal relationship between the tuberculous and psychopathic constitution. Dr. Bianchi describes a pneumonia²¹ which frequently occurs in paralytics, and which differs clinically and anatomically from croupous pneumonia. The temperature is usually low, cough and expectoration are sometimes absent,

the respiratory movements are superficial, weak, and slow, and the affected lung usually remains in a hepatized condition. Frequently there exist larger or smaller gangrenous foci, and nearly always, if the case is of long standing, a puriform infiltration of the alveoli and bronchi. All these manifestations simulate those of pneumonia, which the writer produced in rabbits and dogs by section and compression of the vagi. In a number of paralytics who died of pneumonia he was able to trace a primary degenerative atrophy of the vagi, and hence he believes that these pneumonias are dependent on vagus degeneration. He does not believe, with Traube and Frey, that this pneumonia is engendered by the swallowing of food (Schluck-pneumonia).

This subject is one of vast proportions, and if I had sufficient time I might inquire whether the symptomatic and the therapeutic evidence is not equally as favourable to the neurotic theory of phthisis as that is which comes from the pathological side of this question. Do not the weakness, the easy fatigue, the restless sleep, the extreme nervousness, which is present in many cases, the dyspnea, the hoarseness and aphonia, the thoracic pain, &c., indicate that the principal nature of phthisis is one of nervous exhaustion? And therapeutically is it not true that we get the best results from those measures and agents which prove to be the most efficient in the treatment of nervous diseases? And are not these rest, nutritious food, strychnine, electricity, hypophosphites, cod-liver oil, phenacetin, capicum, quinine, and remedies which appeal to and influence the nervous system?

Philadelphia, Pennsylvania, U.S.A.

TWO CASES OF CARBOLIC ACID COMA INDUCED BY THE APPLICATION OF CARBOLIC COMPRESSES TO THE SKIN.

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AND

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THE following cases, which have recently been under our care in Guy's Hospital, appear to us to be of such rarity and importance as to justify their early publication, and we publish them chiefly with the object of rendering our experience of service to others. Since it has been shown that the disinfection of the skin in the immediate neighbourhood of an operation is of the utmost importance before commencing to wound the integument, it has long been our practice to apply to it a compress of lint soaked in a 5 per cent. solution of carbolic acid in water for a variable time before an operation is undertaken. Many hundreds of patients must have been thus prepared in the wards of Guy's Hospital, but with the exception of the two cases we are about to relate we know of no cases that have presented symptoms of such serious import. Headaches and sickness, together with carbolic acid, may have been occasionally noticed, and the earlier symptoms may have been confused with those attributable to an anæsthetic; but in these two patients complete coma lasting for several hours was induced before any operation was commenced, and in the first case grave symptoms occurred on two occasions. These symptoms, if they developed for the first time during or immediately after an operation, might cause the surgeon the greatest anxiety, especially as the cause might not be immediately obvious. It is not difficult to imagine many circumstances under which the sudden onset of this condition of coma might induce the operator to take steps of an unnecessary or even damaging nature to the patient. Anything more distressing could scarcely be conceived than for a case such as these to occur in private practice. The nurse might have been instructed to apply the compress over-night and the surgeon might be called to find his patient in a state of coma from which it might be impossible to rouse him for four or even eight hours. Happily this peculiar susceptibility to the phenol poison must be of very rare occurrence, or it would have been noticed earlier among the large number of patients

¹³ Pathology of Mind, p. 113.

¹⁴ Insanity and its Treatment, p. 56.

¹⁵ American Journal of Insanity, 1888, p. 87.

¹⁶ Medical Record, 1895, p. 390.

¹⁷ Neuroses of Development, p. 81.

¹⁸ Lectures on Mental Diseases, p. 461.

¹⁹ Publications of the Sydenham Society, vol. xi., p. 170.

²⁰ Neurologisches Centralblatt, 1887, p. 282.

²¹ Ibid., 1890, p. 249.

who have been treated in a similar way. The following are the cases.

CASE 1.—A boy aged fifteen years was admitted into Job Ward, Guy's Hospital, on Aug. 27th, 1894, under the care of Mr. R. Clement Lucas. In 1891, during convalescence from typhoid fever, he suffered acute pain in both legs and in the right hip. Abscesses formed about the right hip, and ankylosis of this joint followed. Considerable thickening of both femora near the knees was also noticed. He had on two previous occasions, during 1892 and 1893, been under Mr. Lucas's care for the treatment of sinuses connected with diseased bone. On this occasion there were three small sinuses remaining in the right thigh and thickening of both femora. At noon a carbolic compress was applied over the right thigh to prepare him for an operation in the evening. The operation, however, had to be postponed. In the evening he was very sick, and at 2.30 A.M. on the following morning the nurse's attention was drawn to him by hearing his breathing stertorous, and on going to him found that he was insensible. She immediately sent for the house surgeon, Mr. G. Lawrence, who found him lying on his back with his head turned to the left. When first discovered he was found to have vomited on the pillow. His pulse could not be counted at the wrist, but by the heart it was 200. The pupils were moderately small, reacting slightly to light. His breathing was very stertorous and complicated by much mucus in the throat. He was in a profuse perspiration all over. There was no corneal reflex. His limbs dropped loosely when lifted, but sharp stimuli excited slight movements, especially in the arms. He had not passed urine. After a time he began to moan with each expiration, and continued steadily to do so, and seemed to get gradually lower. Brandy and strychnine were given at once without producing much effect. Hot-water bottles were put around him. He gradually came round to a state of semi-perception of stimuli, moving his arms slowly and aimlessly and making less noise. He appeared unable to clear his throat of mucus, and the cry at the end of expiration seemed to indicate pain. Later he became more quiet, and his pulse was counted at 150. Pinching his limbs excited cries of pain, but not much movement. The pulse remained very feeble, and cold perspiration continued. The breathing was quiet, but rattling. He was apparently asleep, but pinching did not rouse him. At 10 A.M. he was still comatose and could not be roused to answer questions. He was sick and weak. The pulse was 120 and feeble. About half an hour later he regained partial consciousness, but was heavy and stupid all day. The urine passed was found to be very dark in colour from absorption of carbolic acid. On Aug. 29th the patient still felt sick, and vomiting occurred now and again. He was very thirsty. The pulse was 126 and the temperature 101.8° F. His breathing was quiet. In the evening his temperature rose to 103.4°. On Aug. 30th his temperature at 10 A.M. had fallen to 100.8°. Sickness occurred occasionally. On Aug. 31st the sickness ceased. The patient had a hectic flush on each cheek. He felt much better. The temperature was 99.6°. On Sept. 1st he was feeling quite well. On Sept. 3rd it was again arranged to operate and a short time before some 5 per cent. solution of carbolic acid was applied on lint to the thigh. Soon he was noticed to be sick and shivering, and his skin was bathed in perspiration. His temperature was only 95° and his pulse scarcely perceptible. He was stupid and answered questions with difficulty. The operation was in consequence postponed, the compresses removed, and the skin of the thigh thoroughly washed with warm water. Subsequently for two days his urine was dark from the absorption of carbolic acid.

CASE 2.¹—A boy aged six and a half years was admitted under the care of Mr. Lane on Jan. 30th, 1895, suffering from a swelling in the right iliac fossa, which it was proposed to explore on the following day. The dresser applied to the skin over and in the vicinity of the mass a compress moistened with carbolic lotion (1 in 20). This was done at 12.20 P.M. At 1.30 P.M., after it had been in position for an hour and ten minutes, the sister of the ward heard the child groaning, and on examining him was so alarmed that she sent at once for the house surgeon. On his arrival a few minutes later he found the boy pale, collapsed, and comatose. There was marked dyspnoea, with convulsive twitchings of the eyelids and limbs. The pulse was 130, feeble, and intermittent; the respiration was 72,

and the temperature 97° F. Ether and atropine were injected hypodermically and brandy given by the rectum. The patient was wrapped in blankets and hot bottles were applied. The interrupted current was also used. After this his condition became somewhat less alarming, his pulse improving in character and his respiration being less laboured. At 3 P.M. the pulse was 150 and the respiration 72. The eyelids still twitched and the tetanic contractions of the muscles of the forearm and hand continued. The pupils were dilated and reacted slightly to light, the face was flushed, the lips less livid, and the body was covered by a profuse perspiration. The skin at this time showed no sign of having been irritated by the carbolic lotion. At 4.30 P.M. the pulse was 146, much stronger, and the respiration 72. The twitching of the eyelids had ceased, together with the difficulty of breathing, though the respirations were still abnormally shallow and rapid. The patient had been perspiring freely since the last observation. At 6 P.M. the condition of the pulse and respiration did not differ from that observed at 4.30 P.M. The patient was still perspiring, and he screamed a good deal and appeared to be commencing to regain consciousness. He vomited some dark fluid, which appeared to be imperfectly digested beef-tea, after which he seemed much relieved. At 7.30 P.M. the patient was quite conscious and talked quite rationally. The pulse was 120, full and strong, the respiration 32, and the temperature 98.4°. He had vomited several times since the last observation. He passed some urine which was very dark green in colour, distinctly acid, having a slight deposit of urates, but containing neither albumen nor sugar. It gave the ordinary reactions for carbolic acid and its products in urine. He continued to vomit at intervals until the afternoon of the next day. He passed some more urine in the morning of the same character as the last. The respirations fell in frequency to twenty-four during the night, his pulse not changing. On Feb. 1st, at 2 A.M., his temperature was 99.2°, and at 6 A.M. it was 98.6°. Though on Feb. 2nd the child seemed fairly comfortable except for a little exhaustion, possibly consequent on the vomiting, yet it was several days before he was restored to his original condition of health. It would seem probable that, but for the prompt action of the house surgeon, Mr. D. M. Beddoe, the child's condition might have become much more serious than it did.

Remarks by Mr. LUCAS.—It will be observed that the earlier symptoms in these cases (best studied, perhaps, in the second attack of the first patient) are those of extreme collapse, accompanied by a low temperature, extremely rapid, feeble pulse, vomiting, and profuse perspiration. Then the patient passes into coma, with stertorous breathing and insensitive corneal reflex. The pulse may become so feeble as not to be felt at the wrist and so rapid as almost to defy an attempt to count it. In the first case taken at the heart it was counted as 200, and in the second patient when at the worst 150. The rapid pulse and feeble heart's action seem to suggest the direction in which the greatest danger lies. The stertor was in both cases a most striking feature, accompanied by clogging of mucus about the throat. Although the coma was absolute as regards the intellectual faculties, it will be observed that in both cases the pupils were found to react to light. In the first patient the pupils were described as moderately contracted; in the second case observation does not seem to have been made until after the subcutaneous injection of atropine, and they were probably dilated by that drug, though still not paralysed to light. Twitchings of the eyelids and slight tetanic contractions of the hands and arms suggested the appearance not infrequently noted in uræmia, and as the urine appears to be temporarily suppressed these symptoms may be referable primarily to renal derangement. As the patient improves the pulse becomes stronger and the stertorous respiration is relieved by moans and cries. The time which the coma may last is again remarkable. In the first case, although all dressings were removed, the patient remained unconscious for eight hours, and the second patient was insensible for four hours. Vomiting and carbouluria may continue for two or three days after recovery of consciousness. In one case, after reaction from the collapse, the temperature rose as high as 103.4° F., but in the case which lasted the shorter time the reaction only reached 99.2°. As regards treatment the first indication is to thoroughly wash the skin to which the carbolic lotion has been applied, so as to prevent any further absorption, and next to treat the collapse. Hot bottles and warm blankets to the surface, with warm brandy enemata and the subcutaneous injection

¹ The notes of this case were compiled by the child's dresser, Mr. J. T. Roberts, who watched the child constantly for many hours.

of ether, are the means best adapted for this purpose. Strychnine or atropine may also perhaps be of service. In spite of the alarming and persistent nature of the symptoms our experience would lead us to give a favourable prognosis if the cause were recognised sufficiently early and means at once taken to prevent any further absorption. That the absorption was by the skin in both cases there can be no shadow of doubt, for in the first case there were only three small sinuses open, and in the second the skin was unbroken.

NOTES OF A SEVERE AND PERSISTENT CASE OF HICCOUGH.

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I HAVE thought it worth while to bring forward the notes of this case on account of its comparative rarity, and also because text-books and even books of reference are silent, or tell one little, as regards the treatment of the complaint. In the following case uræmia, the passage of a gall-stone, or implication of the diaphragm, inflammatory or otherwise, could be excluded. Nor was there any evidence of implication of the phrenic nerves in the thorax or neck. There were no signs of intra-thoracic or intra-abdominal growth or aneurysm. There was no evidence of intra-cranial mischief. There was, however, a history that made one suspicious that the attack might have been neurotic. About six years ago the patient had much mental worry and disappointment. Since then, with fairly long intervals between, he has had what he called "fainting" attacks. His description of them was that, whilst thinking deeply on any subject, another intruded itself, the two getting mixed up together; then something seemed to form in the epigastrium and gradually rose up towards his head, whereupon he lost consciousness. Bystanders who had seen him in an attack said that he turned pale, slid down off his chair on to the floor, his eyes being widely open; his hands were flexed at the wrists, there was no struggling, and the attacks lasted a few minutes. Small scars, due to cuts on the head and chin, were visible, these being due to injuries received by falling during an attack some years ago. He never bit his tongue or passed urine or fæces. There had been two previous attacks of hicough, each attack lasting a few hours. Together with these notes it is worth while, I think, to include short notes of a few other cases of hicough—especially of two, with the results of the respective post-mortem examinations.

About twelve years ago a letter of inquiry by Dr. James Weaver as to the treatment of this complaint was published in *THE LANCET*.¹ The patient was a man aged sixty-eight. On and off the hicough had persisted for seven months, alternating with attacks of bronchitis. All known treatments had been tried and had failed to cure. The patient died, the fatal illness presenting the character of broncho-pneumonia complicated by hicough. Often for days he had obtained no sleep owing to the hicough. Morphia, chloral, and bromides produced frenzy. The only treatment that palliated the complaint was inhalation of chloroform. The necropsy showed large masses of scirrhus at the root of the left lung, in which were embedded the pulmonary artery and vein. On the upper and left side of the diaphragm was a patch, rough and hard, covered with millet-seed-looking bodies. Amongst the answers that Dr. Weaver's inquiry called forth a case was mentioned where hicough occurred as the first symptom of cancer of the stomach in an old man.² Another case was the subject of aortic valvular disease. Chloroform inhalation was mentioned as curing in early stages.³ The notes of another fatal case were published soon afterwards⁴—viz., that of a man aged forty-four. At the post-mortem examination the pericardium was found to be completely adherent to the heart, which was very small. The right lung was studded all over with hard caseous nodules about the size of peas. At the root of each lung, surrounding the bronchus, were large caseous masses. The probable cause of the hicough was implication of the phrenic nerve or vagus. In this case there was complete absence of the physical signs and symptoms that

would tend to reveal the true nature of the case. In another medical journal⁵ reference is made to a further fatal case; no mention is made of a necropsy. In the same publication⁶ reference is made to a woman aged forty-eight. She had been ill for nine months, suffering from extensive pulsation of the aorta, just below the diaphragm, with emesis and general wasting and diminution in power over the left side. The duration of the hicough is not stated. There are also notes of a case of long-continued hicough.⁷ Its duration was twenty-two weeks, though it did not occur during sleep. Improvement began when pills containing iodoform, extract of cannabis indica, and extract of hemlock were given. Tobacco-smoking and alcoholism are also mentioned elsewhere as being the causes occasionally of severe hicough. In *THE LANCET*⁸ Mr. D. Ferguson of Camden Town published a case of prolonged hicough which resisted all treatments until the subcutaneous injection of morphia and atropine was tried, but after which most alarming symptoms manifested themselves, the worst feature in this case being the inability to take food. I will now proceed to the description of the case which is the subject of this paper.

A man aged fifty-eight first came under my notice on March 18th, 1895. He was a total abstainer, but was in the habit of drinking much tea. He had smoked half an ounce of tobacco per diem of late years and was a very small eater. He stated that he had had constant hicough for forty-eight hours. I prescribed him chloral hydrate, gr. xv., and bromide of potassium, gr. xxx., in a draught at bedtime. On the following day he had five hours' sleep, but the hicough recommenced on his waking. I now gave him chloral hydrate, gr. xxx., bromide of potassium, dr. i., with water to two ounces—half at 3 P.M. and the remainder at bedtime. Pressure over the region of the phrenics at the lower and front part of the neck stopped the hicough for a short time. On the 20th he had a quiet night on the whole. The hicough was worse in the morning. There were violent and frequent contractions of the diaphragm, frequently one hicough being represented by five or six consecutive contractions. The hicough occurred eight to ten times in a minute, sometimes more frequently. The pulse was good and regular, but the tension was high and the arteries were thickened. The temperature was normal. The face was flushed. There was no vomiting. Pressure over the phrenics had no effect. The urine was of sp. gr. 1025 and contained no albumen or sugar, a normal quantity being passed. A blister three inches square was ordered to be applied over the region of the diaphragm in front, as well as ice to the nape of the neck and spine. At 8.30 P.M. the hicough was still violent. The temperature was 100° F. and the pulse 64. The following was prescribed: chloral hydrate, gr. xx., bromide of potassium, gr. xx., to be taken immediately. As soon as the effect of the draught had subsided he was to have spirit of camphor, min. lxxx., tincture of belladonna, dr. i., bromide of potassium, gr. lxxx., with water to four ounces, one ounce to be taken every three hours. On the 21st the hicough was still severe and frequent. He had had a bad night, talking in his sleep which had been much interrupted. The blister had risen well. The temperature was normal and the pulse 64. The lungs were natural, as was also the urine. Regurgitation of sour fluid into the mouth took place during the early part of the afternoon; after this he had two hours' sleep. The hicough was now violent. He was ordered sulphate of zinc, gr. xxx., with water to one ounce, to be taken immediately. At 10.30 P.M. the emetic caused retching only. One-fifth of a grain of morphia was injected hypodermically. On the 22nd he went to sleep after an injection of morphia. Stertorous breathing came on, which alarmed his attendants for a time. He slept nearly all night, but hicough persisted throughout. The pulse was regular; the specific gravity of the urine was 1023. He was prescribed musk powders (six grains) every two hours. At 5 P.M. the hicough persisted quite as frequently as before and was of a similar character. The patient complained of sore-throat at times. Nitrite of amyl inhalation was tried, but had no effect. He now took nourishment well and was passing a full quantity of urine, which contained ten grains of urea to one ounce, but no sugar. At 9 P.M. he was rather exhausted. A hypodermic injection of one-seventh of a grain of morphia was given. On the 23rd he had no sleep until 5 A.M. He was light-headed and talked a good deal during the night. He was now taking milk or

¹ THE LANCET, Feb. 24th, 1883.

² THE LANCET, March 3rd, 1883.

³ THE LANCET, March 3rd and 10th, 1883.

⁴ THE LANCET, June 10th, 1883.

⁵ Brit. Med. Jour., April 7th, 1894.

⁶ Ibid., Nov. 25th, 1892.

⁷ Ibid., Dec. 17th, 1891.

⁸ THE LANCET, Feb. 16th, 1895.

weak tea with light food and half an ounce of brandy every four hours. The pulse was 56 and regular. The face and the conjunctivæ were somewhat jaundiced. There was no headache or vomiting. The examination of the chest proved to be negative, except that rhonchus and sibilus were heard at the left base behind. There was some cough with expectoration. The heart's apex beat was situated at the fifth interval, half an inch inside the nipple line. There was no distension of the abdomen and no perceptible enlargement of the liver; liver dulness appeared to be natural. Stomach resonance was normal. The urine was rather dark, but did not contain bile pigment. The faeces were hard and of a dark colour. At 9.30 P.M. he was given bromidia, dr. i., with water to one ounce, to be taken at once as a draught. On the 24th he had not much sleep. The pulse was 62. He had some cough. The hiccough had been very severe during the previous night, worse than before; he had, however, taken food well. Dr. Walter R. Jordan of Birmingham kindly saw the patient in consultation with me, and the following medicine was tried: ammoniated tincture of valerian, dr. vi.; bromide of potassium, dr. ii.; chloral hydrate, gr. xc.; with water to six ounces; one ounce to be taken every four hours. On the 25th he had five hours' sleep, during which time the hiccough stopped, but recommenced on his waking. He had a good breakfast. At 6.30 P.M. I was sent for because the patient was "not himself," delirious and drowsy, these symptoms apparently coming on suddenly after a copious motion at midday. The patient was now very drowsy and talking nonsense; his face was flushed; he could, however, be roused, and then complained of severe girdle pain at the epigastric level. The pulse was steady, the tension being low. The hiccough was severe. He also complained of a tingling sensation over the chest and arms. The medicine was ordered to be stopped and hot coffee to be given. At 10 P.M. he was much less drowsy. The skin was hot, the temperature being normal. The epigastric pain had gone. On the 26th, about midnight, he tried to get out of bed. Another dose of bromide and chloral was given, although contrary to orders. He slept for six hours without hiccough. In the morning the patient seemed to be much better. The pulse was steady and the bowels were opened. He had a good breakfast. Hiccough was still frequent. The following was prescribed: chloral hydrate, gr. x., bromide of potassium, gr. xv., and water to one ounce, to be taken at 3 P.M. At 9.30 P.M., after the draught, he slept for five hours. He took food well, but the cough was troublesome. The pulse was good. The urine was of sp. gr. 1015 and contained no albumen. On the 27th he had a fair night. For the first time since the onset of the illness, eleven days previously, he was free from hiccough whilst awake. The pulse was rather weak, but regular and not hurried. He woke up suddenly in the night, startled, and coughed much for a short time. Brandy was increased to one ounce every four hours. Expectorant medicine was administered. At 9.30 P.M. the hiccough had returned, being frequent but not very severe; otherwise the patient's condition was satisfactory, though he felt weak. The pulse was stronger. The draught as given on March 26th was repeated. On the 28th the patient took the draught at midnight and slept well. His condition was quite satisfactory. There was no hiccough, but the voice was husky. The pulse was good. At 9.30 P.M. he had been without hiccough all day. The voice was still husky and the throat sore. There was some precordial pain during the evening, with throbbing of the heart. The pulse-rate was 52. Examination of the fauces gave a negative result. On the 29th he had had a good night's rest without the draught. There was no hiccough for twenty-four hours. He felt very weak, but the pulse was good. On his eyes being examined the fundi were found to be normal, as were also the optic discs, but there was abnormal refraction (both eyes - 6D). On the 30th there was no hiccough. The patient was convalescent and was allowed to get up for half an hour. On the 31st his condition was satisfactory, though he felt very much shaken. He was dressed and came downstairs. The voice was only slightly husky.

Remarks.—In this case the history of previous attacks of hiccough and also of the "fainting" attacks, which appear to have been of an epileptiform character, is interesting. In the absence of any obvious cause—e.g., uræmia, new growth, &c.—one may look upon the attack as a form of epileptic "nerve storm," though, of course, it is possible that there had been some local pathological condition. The pulse, even at the height of the attack, was never more than 64 per

minute and usually not over 56. The best sign all through the attack was that the patient took his food well. The severity of the hiccough may be understood by stating that frequently the spasms so shook the body that the bed, a heavy one, shook also. No other muscle besides the diaphragm was implicated. The urgent symptoms on the night of March 21st, which made his relatives think that he was dying, were not so very alarming as far as I can make out. Some collection of mucus probably caused the noisy breathing, which seems to have awakened the patient himself, for he woke up suddenly and asked what was the matter. The bad symptoms on March 25th may, I think, be put down to the doses of chloral that he had taken. There is no family history of paroxysmal neuroses.

Leeds-road, Rawdon.

THE TREATMENT OF FRACTURES.

By D. M. BEDDOE, F.R.C.S. Eng.

THE recent developments in the knowledge of wound infection, and the resulting increase in the means of preventing such, have led medical men to actively interfere for the relief of patients in regions where, without that means, they dare not trespass. In treating any affection the surgeon, now confident in his aseptic precautions, instead of doubtfully asking himself whether he dare make an incision or not, inquires rather what benefit to his patient will accrue therefrom. This being so, it is curious that, with the exception of one or two isolated cases, attempts have not been made to deal more actively with fractured bones than by placing them in splints. Perchance this is due to a want of knowledge of the after-history of persons who have sustained an injury of this kind. Not long ago, in order to satisfy my mind upon the efficacy of the usual splint treatment of fractures, I made an inquiry into the subsequent history of a number of persons who had sustained such an injury, taking up for this purpose two particular lesions of the lower extremity—viz., simple fracture of the shaft of the femur and Pott's fracture; and I fear that the results will show that we are no whit better off now than when John Bell said many years ago "that an effectual method of securing oblique fractures in the bones of the extremities, and especially of the thigh bone, is perhaps one of the greatest desiderata of modern surgery, and frequent lameness shows that we are still deficient in this branch of practice." In this investigation I have confined myself almost exclusively to those fractures occurring in working men between the ages of thirty and sixty, as it is for them more particularly that the possession of a firm, stable limb is of such vital importance, and I wish it to be distinctly understood that no selection was employed in their collection. The various details concerning these cases, together with the ascertained results, are given in the annexed tables.

Thus, as regards the 16 cases of fractured femur, the following lamentable results occur: 3 are unable to follow any occupation; 1 is able to do but a few light odd jobs; 4 cannot work nearly as well as before, and their wage-earning power has much decreased; 1 can do fairly heavy work, but is unable to climb ladders when carrying weights owing to a stiff knee (he could not do any work for six months); 1 is able to do fairly heavy work, but is out of employment because he could not do any work for seven months; 4 only can do their work as well as before, and of these one was unable to work for five months and another for three. Of the Pott's fractures, 3 have been able to do but very little work since; 5 are able to do their work only at the cost of some pain and considerable inconvenience (one of these was five months before he could do any work at all); 1 cannot walk any distance on account of the pain in his ankle and subastragoloid joints; the remaining 4 are able to do their work satisfactorily, but occasionally suffer from pain in the ankle. When one sees results such as these following treatment, where for broken thigh the patients remained in hospital in no case for less than six weeks, and under all the advantages that skill and appliances can give, it is surely suggestive that there is something radically wrong in our methods of procedure, and a consideration of the conditions of a recent fracture, and the agencies to be overcome in its proper treatment support this contention; thus, in the case of a

TABLE I.—*Pott's Fractures.*

No.	Occupation.	Age.	Date of fracture.	Time in hospital.	Present condition.	Condition as regards work.
1	Carman	30	1893	14 days	Depression at seat of fracture.	Ankle was very weak for some time; still has pain after a hard day's work.
2	Labourer	32	1893	14 days	Distinct depression 1½ in. above external malleolus, the displacement of fragments not having been reduced.	Has continual pain in ankle and subastragloid joints; impossible to do anything but the lightest work, and that with considerable pain.
3	Bricklayer's labourer	49	1893	A few days	Slight depression at seat of fracture; some eversion still.	Quite unable to do any work for five months; has been able to do but very little since from pain in ankle and subastragloid joints.
4	Accountant	58	1893	6 days	Depression at seat of fracture.	Unable to walk any distance from pain in ankle and subastragloid joints.
5	Stickmaker	64	1893	14 days	No displacement, but a little thickening of bone at seat of fracture.	Has pain on standing for some time.
6	Labourer	53	1891	A month	Movement at ankle-joint somewhat limited.	Returned to work in two months; has suffered much pain at intervals; ankle still feels very weak.
7	Leather-dresser	27	1891	3 days	Slight depression at seat of fracture.	Patient does his work, but suffers great inconvenience when standing on it for long.
8	Dock labourer	35	1893	A few days	No displacement.	Pain on change of weather only.
9	Labourer	31	1891	Two days	—	Can work as well as ever; very occasional pain only.
10	Waterside labourer	32	1892	Five days	Slight displacement; no deformity.	Has not been able to do much work since on account of pain in ankle.
11	Constable	29	1893	A few days	—	Can do his work all right; has occasional pain only.
12	Porter	38	March, 1894	Seven days	A slight rim at seat of fracture.	Has a good deal of pain in his foot occasionally, and is able to follow his employment, but with some discomfort.
13	Engine man	43	Feb., 1894	A few days	No displacement.	Can now work as well as before, but he had a good deal of pain for some months after the accident.

TABLE II.—*Fractured Shaft of the Femur.*

No.	Occupation.	Age.*	Date of fracture.	Seat of fracture.	Time in hospital.	Condition on discharge.	Present condition.	Capacity for work.
1	Labourer	50	June, 1892	Junction of middle and lower thirds	Six weeks	Satisfactory; ¼ in. short	Pain and weakness at seat of fracture; pain and stiffness in knee; no obvious deformity.	Is unable to follow his regular employment; can do odd jobs only; earns but very little.
2	Carman	36	June, 1890	Middle third	Eleven weeks	Apparently satisfactory	Lame; pain in knee and hip; knees swell after walking; bowing of femur.	Cannot work nearly so well as before accident; was nine months before he could do any work at all.
3	Boot welter	43	1892	Middle and upper thirds	Seven weeks	Apparently satisfactory	Lame; pain in thigh.	Cannot do his work so well; was eighteen months before he could work, and then could not stand for any length of time.
4	Labourer	58	1890	Fracture in two places	Four months	2 in. short	Pain and weakness in limb at seat of fracture and in knee-joint.	Has done no work since.
5	Riverside labourer	40	1893	Upper and middle thirds	Six weeks	¾ in. short	Lame; occasional pain in thigh.	Is not able to work nearly as well as before; his wage-earning power has much diminished; was six months before he could work at all.
6	Fitter's labourer	55	1893	Upper third	Seven weeks	Some little deformity	Lame; pain and insecurity in limb; limb occasionally helpless, bowing outwards.	Is not able to work nearly as well as before; was four months before he did anything.
7	Blacksmith	40	1894	Above centre	Nine weeks	—	2½ in. short; increasing pain in knee and hip; can only hobble with a stick.	Unable to follow any employment.
8	Porter	38	1890	Upper third	—	—	1½ in. short; pain in the thigh, discomfort in knee and hip; cannot bear his weight upon his leg.	Unable to follow any occupation.
9	Engine driver	53	1893	Lower third	Six weeks	1 in. short; adhesion in knee broken down in three months	No deformity; slight pain in ankle on exertion; foot rotated inwards slightly.	Can perform heavy work, but is out of employment consequent upon his being incapacitated for seven months.
10	Labourer	32	1892	Lower third	Six weeks	½ in. short	No pain; not lame; foot turns out a little.	Can work well.
11	Carman	59	1892	Middle and upper thirds	Seven weeks	1 in. short	No pain; limps a little.	—
12	Drayman	47	1890	Lower and middle thirds	Eight weeks	1½ in. short	Good firm limb, but cannot flex knee to full extent.	Can work satisfactorily, but cannot carry weight uphill; could not work for six months.
13	Carman	37	1899	Lower and middle thirds	Six weeks	½ in. short	No lameness and no deformity.	Can do his work as well as before.
14	Labourer	29	1891	Middle third	Six weeks	½ in. short	No lameness and no deformity.	Can work well, but could not for nine weeks.
15	Watchman	42	1890	Middle third	Seven weeks	—	No lameness, no deformity, and no pain.	Can work well, but was unable to for three months.
16	Drayman	49	1893	Upper and middle thirds	Nine weeks	¾ in. short	No lameness, no deformity, and no pain.	Can work as well as before.

* Age refers to age at time of fracture.

recent fracture of the femur, which in an adult is almost invariably oblique,¹ we may take it that there is almost always some overlapping of the bones, and from the great eversion of the foot, which is almost always constant, there must also be some rotation of the fragments. To take this overlapping first. It is generally said that the cause of this position of the fragments is due, with the exception, perhaps, of the fracturing force, to active muscular contraction; but this overlapping is present, and often almost as difficult to reduce when the muscles are fully relaxed under the influence of an anæsthetic as without, and it seems reasonable to suppose, as Mr. Arbuthnot Lane contends,² that the shortening from a broken bone is due to the blood extravasation and effusion into and beneath the soft tissues around the fracture, which bulging out the skin and tissues causes the limb to undergo in proportion a compensatory shortening and resists reduction. Of the truth of this observation I am perfectly satisfied, for I have seen several cases where this difficulty of reduction could be explained in no other way. To give an example. Not long since I saw two cases of compound fracture of the leg, in one of which there was a large ragged wound through which the effused blood found a ready exit; whilst in the other there was a much smaller hole partly blocked by the fragment. The former was easily reduced, but the latter, even under an anæsthetic, taxed the full powers of the surgeon to satisfactorily reduce it, although the tendo Achillis had also been divided. I have observed also from records of cases that the amount of shortening is often proportionate to the amount of effusion. It is clear, therefore, that to put up an overlapping fracture in an unyielding envelope such as plaster-of-Paris, as is so often done, simply retains the fragments in their abnormal relation, in which undesirable position they become permanently fixed. As regards this, the method of continuous extension is infinitely preferable; but even here it seems, to judge by the invariable shortening, that the bones unite sufficiently firmly to prevent full apposition before the counteracting effusion has ceased to act. As Hamilton³ says: "When the ends have once become completely displaced no means have yet been devised by which an overlapping and consequent shortening of the bone can generally be prevented." Of fifty cases of fractured femur Mr. Holthouse⁴ found that 90 per cent. had shortening varying from $\frac{1}{2}$ in. to $3\frac{1}{2}$ in. The application of the various means of extension also is not without grave inconveniences—chafing of the skin, blisters, intractable ulcers, and stiff joints often resulting. As Velpeau says, most of these contrivances fail to obviate the shortening, and produce eschars, ankylosis, or troublesome arrests of the circulation.

With reference to the second displacement—namely, that of rotation—it is curious what little attention has been paid to it. It seems sufficient to the minds of most surgeons to correct the extreme eversion only without any definite rule for its more accurate position. For instance, if the fractured femur be treated by means of a long Liston or Desault, the foot is at a right angle to the bed, whereas in a Hodgen the foot may lie in any position from a right angle to as much, perhaps, as 65° . Now, as has been pointed out by Mr. Arbuthnot Lane,⁵ the lower extremity in a position of rest has the foot at an angle of about 45° , the limb rotating outwards from the hip-joint; it is clear, therefore, that if the foot be at a right angle the ends of the fragments do not correspond, but the lower one is twisted inwards to the upper, whilst if the foot be rotated out to an extent exceeding about 45° there is a twist outwards of the lower fragment. I have seen instances of these conditions both in living subjects and in museum specimens of old fractures. Concerning the importance to be attached to a certain amount of overlapping and rotation it may be argued by some that so long as the bones are firmly united a slight amount of shortening is a matter of no moment. Thus Erichsen states "that a slight diminution in the length of a limb is of no consequence, the pelvis remedying this"; and Hamilton⁶ says "that in shortening over two-fifths of an inch either they limp, or they have lifted the heel of the shoe, or, in short, the limping is only concealed by a lateral deviation of the spine." What effect in the long run this deviation has one does not exactly know; but I have met with several instances where the patients have complained of pain and weariness in the back after doing work, which they

say they did not experience previously to the occurrence of the fracture. This is suggestive that this compensation on the part of the spine is not altogether to the advantage of the patient. In overlapping of three-fourths of an inch and over, lameness and deformity generally occur, both in some cases being extreme. Out of the sixteen cases nine are lame, eight markedly so.

The evils resulting from the union of fragments rotated upon one another may be less evident at first sight than the lameness resulting from the overlapping, but are on that account none the less real. In this occurrence the dependent joints, which require for the perfect freedom of their action a perfect continuity of the shaft of the bone, suffer undue stress in endeavouring to accommodate themselves to the altered conditions. As Erichsen says: "The rotation outwards of the lower fragment seriously cripples the patient, as the movements of the knee and ankle are rendered almost useless in walking." This undue stress is manifested in two ways: (1) pain and weakness, or limitation of movement in the joint; and (2) organic alterations in the joint or joints. Out of the sixteen cases of fractured femur seven complain of pain in the joints, chiefly that of the knee, but occasionally in the hip and ankle also; and out of the thirteen cases of Pott's fracture four complain of pain in the subastragaloid joint, and seven in the ankle on exertion. Respecting the organic changes in joints, one is unable to draw any deductions from the above cases on account of their not extending back more than five years, whereas for their full development so as to be manifest externally they would probably require a longer time. I have, however, seen in workhouse patients some good examples of organic change in joints resulting from old fractures of the femur, and these alterations seem to be of the nature of the traumatic arthritis described by Mr. Arbuthnot Lane.⁷ After the lapse of time the lipping of the articular margins and the concurrent changes in the joint itself seriously impede the patient in the performance of his work. An examination of the museum specimens of old fractured femora will often show such a condition of traumatic arthritis.

From a consideration of the above facts it is clear that the object we should strive for in the treatment of fractures is to replace and fix the bone in its original position, and it is also plain that the conditions are such as cannot be entirely remedied by means of splints. To go on treating fractures by such means in the face of results such as the above, where in so many cases the result to the patient is so disastrous, could only be justified if there were absolutely no other means of treatment at our disposal; but fortunately there is one method which offers a prospect of perfect cure, and that is to cut down upon the seat of fracture and unite the fragments by screw or wire in the exact relation that they occupied previously. The only possible objection to this will be raised by those who are doubtful of the success of their aseptic precautions. They will probably ask, What if suppuration occurs? Yet nevertheless they open the abdominal cavity to remove ovaries and tumours which do not threaten the life of the individual, and they open knee-joints to remove loose bodies which are a source perhaps of discomfort only. Would not suppuration be as disastrous there? That line of argument is surely a wrong one to advance; the only way to decide the question should be upon grounds such as these: (1) are the present results satisfactory? and, if not, (2) does operation offer a better prospect of fixing the fractured bone in its original position? To the former question there can surely be no other answer after considering the above statistics than that the results are most deplorable, and with reference to the latter I have no hesitation in saying from the cases I have seen done thus that for replacing and fixing the bones in their proper relation, this method is infinitely superior to any means I know.

Guy's Hospital.

⁷ THE LANCET, Jan. 30th, 1892.

NATIONAL SOCIETY FOR EMPLOYMENT OF EPILEPTICS—The first annual meeting of governors was held at 12, Buckingham-street, W.C., on Monday, May 27th, the chair being taken by Mr. E. Montefiore Micholls. In a most encouraging report presented by the honorary medical staff it is stated that the experience of the first half-year from the opening of the colony has been a pleasant surprise even to those who were most sanguine as to the ultimate success of an epileptic colony.

¹ Hamilton: Treatise on Fractures and Dislocations, p. 458.

² Brit. Med. Jour., April, 1886.

³ Treatise on Fracture, p. 468.

⁴ Holmes's System of Surgery, second edition, vol. ii, p. 866.

⁵ Brit. Med. Jour., Nov. 11th, 1893. Fallacy of Vertical Footpiece.

⁶ Treatise on Fracture, seventh American edition, p. 461.

THE TIME OF ONSET OF SYPHILITIC DISEASE OF THE NERVOUS SYSTEM AND THE THREE STAGES OF SYPHILIS.

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REGENT'S PARK.

THE division of syphilitic symptoms into primary, secondary, and tertiary is a legacy left by Ricord of very doubtful value, as it has been a constant source of confusion and a cause of much dogmatic and arbitrary handling of clinical facts. The principal upon which the distinction was made by Ricord—that only the primary stage was infectious by contact, the secondary only infectious by heredity, and the tertiary not infectious at all—has been given up by everyone. The same fate has befallen the other nosological difference introduced by him between secondary and tertiary symptoms—viz., that the former only affected skin, mucous membranes, eyes, and scrotum, while the latter attacked the inner organs. Those who, after Ricord, have tried to put this division of syphilitic symptoms on a different footing do not seem to have been happier than he was. The pathological scheme (Virchow) of dividing the symptoms into irritative and neoplastic is no better than the clinical scheme (Zeissel) of dividing them into papular and gummatous; again, the division of symptoms (Auspitz) into acute and chronic has as many shortcomings as that (Reider) into exanthematous and metastatic. Others have tried to avoid these difficulties by placing upon all these modes of dividing the symptoms of syphilis a chronological meaning, corresponding to earlier and later, and limiting the earlier period to from two to three years after the appearance of the primary sore. Those who seem to rely upon time only as a distinction (Finger) have, however, always introduced in addition some clinical characteristics of the two sets of symptoms following the primary sore, such as benignity, spontaneous recovery, universality, symmetry, &c., and consequently we are told that the secondary stage may extend considerably beyond the time arbitrarily fixed upon as its limit, and we are also told that the latest (tertiary) symptoms not unfrequently appear during the earlier (secondary) stage. In fact, with regard to some "tertiary" lesions, we are led to the paradox that they are most common in the "secondary" stage. Not one of these different divisions or classifications is fully satisfactory, still each of them contains a kernel of truth. They all aim at giving expression to an undeniable fact that in the ordinary course of syphilis a clinical difference exists between those symptoms which accompany and closely follow the eruptive stage, and those which, after a period of latency, appear later on. This fact is not expressed by Hunter's division into "local" and "general." Kaposi, dissatisfied with the unsatisfactory nature of former divisions of symptoms, tried in 1881 to return to Hunter's under the more pretentious, but practically identical, division of syphilitic symptoms into "idiopathic" and "symptomatic." He, however, had to grant in 1891 that those affections which as a rule appear after the so-called second incubation—i.e., the interval elapsing between the primary and secondary symptoms—develop and disappear in a more acute way, that there is an obvious participation of the whole organism, that they attack with predilection certain structures, and that there is a tendency to recovery even without treatment. This is what he calls the "period of eruption"; it lasts from two to eight months. It is followed, according to him, by a "period of latency" extending over several months, and what appears afterwards is comprised by him under the denomination of "period of relapses." This division expresses fairly well the ordinary course of syphilis, of which it is practically only a description. It does not give expression to the infinite variations which may occur in this most erratic disease. In fact, I believe that no classification or division of symptoms can attain this end. Perhaps, for the purpose of everyday practice, the terms secondary and tertiary, having long been in world-wide use, still express this clinical distinction between earlier and later symptoms as well as any of those which have been proposed instead of them, but the distinction between secondary and tertiary has not yet been

placed on any scientific basis. I am not therefore pleading for the abolition of these terms, but for the recognition of their merely practical and conventional character, and, at the same time, for their more careful use, so as to protect us against being driven to such incongruities as that "a large majority of the tertiary phenomena occur in the secondary period."

To get rid of the vagueness of such a division is certainly desirable, but it seems to me that nothing is gained by substituting the term "blood stage" employed by Mr. Hutchinson for the secondary period. It is well known that the blood in syphilis is infectious during the earlier stages, and this knowledge is derived from experimental, accidental, and vaccine inoculations. We further know that inoculations with the blood of patients affected with so-called tertiary symptoms have up to the present given negative results. On the other hand, we do not know in what this infectious condition of the blood consists, nor are we able clinically to decide whether this pathologically undefined condition exists in a patient or not. We consequently do not know over what period this infectious state extends, nor do we know whether its absence is proof that the virus is extinct. Therefore, to define the secondary stage as being that during which the blood is infected is of little or no practical value. That the infected state of the blood coincides with the time during which contagion and hereditary transmission are possible¹ is, again, merely hypothetical. From clinical experience it seems almost certain that the stage of possible transmission extends longer than that of possible infection; but whether this is so or not I do not see how we can make a practical use of the foregoing views. We are told, for instance, that no person should be allowed to marry during the secondary or blood stage, but that he may when it is over.² But who knows whether it is over or not? Who can ascertain whether the supposed poisoned condition of the blood exists or not? Who in the face of the impossibility of deciding this question could undertake to direct a patient on the advisability of marriage? The answer to the question of marriage must at the present day entirely depend upon our own personal clinical experience and on that of others as to the length of the interval which must elapse between the last symptom and marriage in order to practically exclude the danger of transmission. The advice given rests on experience and not on any views as to a poisoned condition of the blood. Mr. Hutchinson's personal experience, which does not agree with some other authorities, has led him to consider an interval of two years between the date of contracting the disease and marriage as sufficient guarantee against any hurt to either wife or child.³ To this rule he has seen only one exception, and he consequently has acted upon it for more than twenty years. In accordance with this outcome of practical observation he comprises by the term "secondary" the first two years.⁴ Further on, however, he thinks that we must extend our conception of the secondary stage and allow it to include a much longer period than we have hitherto done.⁵ While I fail to see that this extension is necessitated by facts, or that anything is to be gained by it, the last-quoted sentence is opposed to Mr. Hutchinson's own clinical experience and the rule derived from it, because if, after an interval of two years, infection and transmission, which are both said to be due to the condition of the blood, are practically impossible, there can be no reason for extending the blood stage. As yet we are unable to tell by the examination of a drop of blood under the microscope or by any other means whether it is infected or not; neither can we show, by combined clinical and bacteriological investigation, whether the freedom of the blood from bacilli or their toxins is in any way a guarantee against infection or transmission. When this is attained, and then only, can there be a practical meaning in the expression "blood stage."

As a consequence of the infected state of the blood Mr. Hutchinson teaches us that secondary symptoms are almost always symmetrical, while in the tertiary stage, the virus having ceased to exist in the blood, we ought not to expect the phenomena to be either general or symmetrical.⁶ Later

¹ Proceedings of the Royal Medical and Chirurgical Society of London. Discussion on the Affections of the Nervous System occurring in the Early (Secondary) Stages of Syphilis, 1895, p. 110.

² Ibid.

³ Jonathan Hutchinson: Syphilis, p. 494. London, 1893.

⁴ Proceedings of the Royal Medical and Chirurgical Society of London, 1895, p. 67. Vide note 1.

⁵ Ibid., pp. 69 and 111; and Hutchinson: Syphilis, p. 12.

⁶ Ibid., p. 111.

I shall have to refer again to the fact that the nervous affections show no more tendency to symmetry during one stage than during the other. Here, however, I should like to draw attention to the odd consequences to which this forced classification of facts must necessarily lead. Interstitial keratitis in hereditary syphilis is, according to Mr. Hutchinson, in the end always symmetrical, as well as the deafness frequently associated with it. Both these affections appear, as a rule, at the age of puberty, but occasionally much later. Still, their constant symmetry seems, according to Mr. Hutchinson, to prove that they really belong to the secondary group.⁸ Consequently, we would have here a secondary period extending over considerably more than ten years. No one will maintain that during this period hereditary syphilis remains either infectious or transmissible, and still the secondary stage was defined as being that during which the blood is infected and as coincident with that during which contagion and hereditary transmission are possible.⁹ Here theory and fact come into conflict, and in trying to stretch the latter so as to fit the former a contradiction arises which cannot be solved.

Perhaps in no chapter of our knowledge of syphilis has this confusion been more apparent than in the study of syphilitic diseases of the nervous system. It is perfectly true that in a great many even of our modern text-books the teaching is that they are the latest manifestations of the disease, and that the rare exceptions are to be regarded as precocious cases. This erroneous doctrine is not due to want of valuable investigations to prove its fallacy, but to the difficulty of getting rid of heresies once accepted as facts and covered by Ricord's great name. In fact, during the last quarter of a century numerous observers have shown that the first two years after the infection exhibit an extraordinary predominance, as far as the development of nervous affections is concerned, over any similar period during the whole course of the disease. They prove that nearly one-half of all the nervous affections met with in syphilis appear during the first two years. I am not speaking here of casual observations of early nerve disease—observations which might be traced as far back as forty years ago and more, and which have given rise to the teaching of "precocious" nervous symptoms—but of systematic statistical compilations of observations made by different men at all stages of the disease. Only these latter are of importance, as they enable us to form a definite idea as to the place which a single symptom holds in the picture of the disease.

I have lately had occasion when the subject was under discussion at the Royal Medical and Chirurgical Society to draw attention to the statistics of Braus, Mauriac, Lang, Rampl, Naunyn, Goldflam, and others. The result of Fournier's curve of so-called tertiary symptoms cannot, in the same way as the statistics of the investigators just mentioned, be applied to nervous symptoms alone, because the latter appear promiscuously with all the other tertiary lesions. It would be only after eliminating the non-nervous affections that his statistics would directly apply to the subject of this paper. Still they corroborate in a way the results of the other observers, as out of 3429 cases of so-called tertiary syphilis which reached the maximum of their frequency in the third year, 1085, or nearly one-third, belonged to the nervous system. It is not correct to state that all these writers considered the nervous diseases during the first two years as "tertiary," as some of the statistics have been drawn up from a merely chronological point of view, without taking into regard any particular classification. Besides, it is not possible to consider a disease a "tertiary" one if it appears in about 50 per cent. during the secondary period. The statistics given by Naunyn in 1888 are of greater importance than any others I have referred to. By giving some of his results as tabulated by him, I believe I am making a useful addition to the English literature on the subject, more particularly as the original is not easily accessible, and has therefore often been overlooked. He gives a series of 326 cases, including seventy necropsies, which have been judiciously selected and carefully tabulated, so as to be comparable one with the other. His object was the prognosis of syphilitic disease of the nervous system. Where the prognosis of a single case is in question, the points to which importance is attached are the following: (1) the age of the patient; (2) the age of the infection; (3) the time which has elapsed between the last other manifestation of syphilis and the appearance of the

syphilitic disease of the nervous system; (4) the duration of the nervous disease before energetic antisyphilitic treatment was adopted; (5) the form in which the disease of the nervous system appears; and (6) whether there was former treatment by mercury or not. Only those cases were selected the notes on which contained definite statements about all, or nearly all, of these points. Out of the vast literature on this subject he was only able to find 290 cases to satisfy this condition, while out of 88 cases observed by himself only 45 seemed reliable enough to be included in his tables. Tabes, general paralysis, and polyneuritis were excluded, as he had only the question of prognosis in view, and because, according to his experience in these three diseases, mercurial treatment was either useless or harmful.

TABLE I. shows the Time of the Onset of the Disease of the Nervous System after the Infection.

(For each period the percentage of the total number of cases is given.)

During first half-year.	During second half-year.	During second and third years.	During fourth and fifth years.	From sixth to tenth year.	From eleventh to fifteenth year.	From sixteenth to twentieth year.	After twentieth year.	Summary of the cases.
Per cent. 11.0	Per cent. 14.4	Per cent. 18.6	Per cent. 15.7	Per cent. 24.6	Per cent. 8.6	Per cent. 4.4	Per cent. 2.8	70 necropsies.
11.4	8.6	19.7	15.0	24.9	10.7	5.2	4.3	325 cases (inclusive of necropsies).

This table demonstrates beyond doubt that syphilitic diseases of the nervous system appear most frequently during the first year after the infection, that this frequency decreases from year to year, and that within the first year they seem to be a little more frequent during the first than during the last six months. It must also be noted that this proportion remains the same whether the results are drawn from the total number of cases or from those ending in death only. This result is in contradiction to Mr. Hutchinson's latest statement that it is very exceptional that any disease of the nervous system occurs earlier than the sixth month.¹⁰ The statistical dates lately given by Erb on syphilitic spinal paralysis are in accordance with Naunyn's numbers. Of 22 cases reported by Erb in which the date of the infection could be determined, 59 per cent. appeared during the first three years and 82 per cent. during the first six years.

TABLE II. relates to the Dependence of the Prognosis on the Age of the Patient at the Onset of the Syphilitic Disease of the Nervous System.

	0—19.		20—29.		30—39.		After 39.		Summary of cases.	
	Total number.	Percentage of cured & uncured.	Total number.	Percentage of cured & uncured.	Total number.	Percentage of cured & uncured.	Total number.	Percentage of cured & uncured.	Total number.	Percentage of cured & uncured.
Cured ...	0	...	51	47	57	47	33	41	142	45
Uncured ...	0	...	57	53	65	53	48	59	170	55

The relation between cured and uncured cases is nearly the same between the ages of twenty and twenty-nine as it is between the ages of thirty and thirty-nine, and also very nearly the same as for the total number of cases. After the fortieth year the prognosis becomes somewhat less favourable. It must be noted that under cured cases only those were registered which were considered as such by the writer. Of the improved cases those alone were counted as cured in which the improvement seemed closely to approach complete recovery. All the other improved cases are registered as not cured.

⁸ Ibid., p. 32.

⁹ Proceedings of the Royal Medical and Chirurgical Society of London, 1895, p. 110. Vide note 1.

¹⁰ Ibid., p. 89.

TABLE III. deals with the Dependence of the Prognosis on the time which has elapsed between the Appearance of the Nervous Disease and the Infection.

	During first half-year.		During second half-year.		Second and third years.	
	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.
Cured	21	57	13	45	27	42
Uncured	16	43	15	55	37	58
	Fourth and fifth years.		Sixth to tenth year.		Eleventh to fifteenth year.	
	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.
Cured	24	47	44	54	11	30
Uncured	25	53	37	46	24	70
	Summary.					
	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.
Cured	140	48				
Uncured	154	52				

Cases in which the interval was more than fifteen years were not registered at all as the number was insignificant. From the above table it seems that as long as the nervous disease appears within about ten years after the infection it is of very little moment whether it appears early or late. After the interval of ten years the prognosis becomes less favourable.

TABLE IV. shows the Dependence of the Prognosis on the Time which has elapsed between the Last Other Manifestation of Syphilis and the Commencement of the Nervous Disease.

	During first year.		During second and third year.		During fourth and fifth year.	
	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.
Cured	58	53	33	51	20	49
Uncured	52	47	32	49	21	51
	From sixth to tenth year.		From eleventh to fifteenth year.		Summary of cases.	
	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.
Cured	32	52	3	17	146	49
Uncured	29	48	15	83	149	51

The above table demonstrates that it is irrelevant as far as the prognosis is concerned what time has elapsed since the last syphilitic manifestation as long as the interval does not exceed ten years. After the tenth year the prognosis becomes decidedly more unfavourable.

TABLE V. gives the Dependence of the Prognosis on the Time which has elapsed between the Appearance of the Disease of the Nervous System and the Commencement of Treatment.

	Less than four weeks.		Less than three months.		Less than six months.	
	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.
Cured	73	62	20	44	12	35
Uncured	45	38	23	56	22	65
	Less than twelve months.		More than one year.		Summary.	
	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.	Total number.	Percentage of cured and uncured.
Cured	12	35	43	47	160	50
Uncured	22	65	49	53	160	50

From the above it appears that the prognosis is considerably more favourable in cases with early treatment—viz., before the end of the first four weeks. After the first four weeks cures are considerably less frequent. On the other hand, the table does not show that after four weeks the prognosis becomes continually worse as the time without treatment extends. On the contrary, after the first four weeks the chances of a cure remain the same for a period extending over more than one year. Other tables refer to the dependence of the prognosis on the nature of the nervous disease on previous mercurial treatment &c. Another point of importance elicited from the post-mortem statistics is that, with the exception of tabes and general paralysis, no syphilitic disease of the nervous system and its membranes is peculiar to a certain age of the infection. During the first year after infection gummatous disease and disease of the bloodvessels with its consequences are not rare. On the other hand, disease of the baso-cranial nerves, generally considered of comparatively early appearance, is often met with in the latest stage. This result entirely coincides with the experience of Dr. Gowers, who says¹¹ that disease of the arteries might occur at any time between the first and the twenty-fifth year after the chancre, although usually before the seventh or eighth year, that whenever it occurs it is exactly the same in appearance, and that the gummatous lesions are less common, but are found at the same period of syphilis as the arterial lesions. He, therefore, distinctly states that he knows nothing of two distinguishable forms of constitutional syphilis in the nervous system corresponding to the secondary and tertiary stage respectively. According to some, including Mr. Hutchinson,¹² the arterial disease of the nervous system belongs to the secondary or intermediate stage, while the tertiary symptoms are mostly of the nature of gummatous. This statement is not borne out either by Dr. Gowers or Naunyn. Naunyn's results were gained from a mere statistical examination of cases, unbiased by any preconceived theory as to the stages of the disease. In fact, the words "secondary" and "tertiary" do not appear at all. By his tables, the fact that nervous affections belong to the earliest manifestations of syphilis has been put on a new and firmer basis. It will be left to further investigators to repeat for each affection of the nervous system separately what has been done by him for the bulk of them, with the exception of tabes, general paralysis, and polyneuritis. Not until this has been done shall we be able to decide in what relative frequency the different affections of the nervous system appear to the age of the infection.

No more tendency to symmetry is observed in those nervous affections which set in soon after the infection than in those of later date. Mr. Hutchinson says: "If there are any forms of nervous disturbance due to the general poisoning of the blood which occurs in the secondary stage of syphilis, we should expect them to be symmetrical or even general."¹³ This expectation is not fulfilled by facts. As regards symmetry there is no distinction between earlier and later nervous affections. The paralysis of single nerves does not show any more tendency to symmetry during the first two years—secondary stage—than later. Tabes, the latest nervous manifestation of syphilis with which we are acquainted, is intrinsically symmetrical; but here, as in those cases of transverse myelitis which appear together with the first skin eruption, the symmetry is explained by anatomical peculiarities of the part affected and not by the age of the infection. The number of late syphilitic diseases of the nervous system must undoubtedly diminish as we become better able to decide what proportion of nervous diseases in syphilitic patients is due to syphilis and how much to other causes. Certainly not every nervous disease in a patient who has been subject to syphilis is of syphilitic origin. At present a tendency still prevails to accept a previous history of syphilis as sufficient evidence of the specific nature of a nervous affection, however remote its onset may be from the time of the infection or from the time of the last undoubted manifestation of syphilis. Of two cases of an identical affection of the third nerve occurring at the same time of life, say, between fifty and sixty—one in a patient with a history of syphilis dating back twenty years or more, and the other in a patient without such a history—one case will be diagnosed as late syphilitic disease and the other as probably of senile origin. The difficulty is

¹¹ Ibid., p. 90.¹² Loc. cit., pp. 37 and 42.¹³ Proceedings of the Royal Medical and Chirurgical Society, 1895, p. 69. Vide note 1.

increased by the fact that syphilitic diseases of the nervous system do not differ in appearance from those due to other causes. Dr. Ferrier very appropriately objected to Erb's paraplegia¹⁴ being raised to the rank of a disease *sui generis* as it is in symptoms identical with other cases of transverse myelitis. I have only to add that Erb himself, in his original communication, speaks with the greatest reserve on this point. Should we learn to discriminate between syphilitic nervous diseases and non-syphilitic nervous diseases in syphilitic subjects, the frequency of "tertiary" affections of the nervous system will shrink considerably, and the fact will stand out clearer still that nervous disease is an early manifestation of syphilis.

Welbeck-street, Cavendish-square, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ANGIO-NEUROTIC OEDEMA ('GRAVES' DISEASE) ASSOCIATED WITH PREGNANCY.

By C. S. EVANS, M.B., B.C. CANTAB., M.R.C.S. ENG.

A PATIENT aged about thirty years, in easy circumstances, the mother of three children and expecting her next confinement in three months, complained in April, 1893, of increasing shortness of breath, and an enlargement of the neck which had been noticed only two months. There was no exophthalmos or tremor at any time. During previous pregnancies she had, she said, "always suffered in a similar way, and also from excessive swelling of the body, face and limbs. Each labour was succeeded by extreme collapse, followed, rather than caused by a tendency to flooding." Subsequent events fully justified this description. The condition of the abdomen in May suggested hydramnios, the feet and hands increased to nearly double their ordinary bulk—so that rings had to be cut from the finger—with a soft, vascular swelling and a visible distention of vessels, recalling the appearance of subcutaneous naevi, without tenseness or blanching of the skin, and without pitting on pressure. The face was so swollen and altered as to be unrecognisable. The extremities were constantly moist and clammy. The pulse varied between 86 and 120 per minute, more on the slightest exertion. No cardiac abnormality was detected. There was slight anæmia. The urine was pale and abundant, and contained no albumen. There was no history of any severe illness except a series of sharp attacks of pain for three or four years past, attributed to gall-stones, but there had been no jaundice, and no calculi had been recognised in the motions or in the gall-bladder. Calculi in the gall-bladder were, however, felt by Mr. Knowsley Thornton in February, 1894. The bowels were habitually very constipated. The patient when in her ordinary health is lightly built, spare rather than stout, and her usual habit of mind and body is active and bright. She was restless and irritable, but never in the least anxious, from May to July. About three weeks before the confinement she and all the other inmates of the house were attacked with mild influenza. The delivery of the child was very easy, the whole process from the onset of regular pains occupying only eight hours. Chloroform was administered during the descent of the head, about twenty minutes. Ergot was given after delivery, and the uterus contracted firmly. About fifteen minutes after the return of consciousness the anticipated phenomena occurred. Pallor, faintness, and profuse perspiration suggested sudden hæmorrhage, but the uterus only relaxed slightly and there was no exceptional loss of blood. Collapse such as described followed at intervals of twenty or thirty minutes with somewhat lessening intensity, and in about an hour and a half the patient was fairly easy, though the pulse was still rapid and there was an acute pain like cramp referred to the region of the right crus of the diaphragm, perhaps due to the six or seven five-minim doses of tincture of nuxvomica which had been administered every two hours before delivery. Six hours after delivery there was a fresh and alarming attack of collapse, with considerable hæmorrhage, the pulse being 124 per minute and feeble. The uterus contracted on pressure;

sal volatile and three or four enemata of hot coffee were given, and there was no return of hæmorrhage. Convalescence was interrupted by a septic condition of intra-uterine clot, facial neuritis, neuritis of the left musculo-spiral and median nerves, and influenza cough for two or three weeks. The temperature ranged from 101.8° to 99° F. She left her bed for the first time in the sixth week after confinement. Her legs swelled almost instantly to nearly the same size as before delivery and were very painful, but this was avoided the next time by bandaging and more gradually lowering the feet. The general vascular engorgement was present in some degree at the end of September. In January, 1894, the neck measured thirteen inches. The patient was still troubled with palpitations and the abdominal pain, but relief of the latter symptom was generally obtained by castor oil. There was no cough or any special sign of progressive disease. The bodily weight was maintained, but the patient looked worn. A course of arsenic and iron was given for two months, with considerable improvement. In August, 1894, there was still some weakness and the pulse ranged over 80, but there was no swelling nor was palpitation troublesome. The excitability, tachycardia, increased perspiration, altered vascularity and nutrition of the skin, enlarged thyroid gland, and active mental condition unite in showing the case to be a phase of Graves' disease, or what has been called by Dr. Ramsay Smith¹ angio-neurotic oedema. No doubt influenza seriously modified the condition after confinement; but the most remarkable features of the case, vascular swelling and collapse, were repetitions of the history of former confinements. Since October, 1894, small patches of dry eczema have given trouble, but the general health and activity are as good as ever, anæmia is absent, and the goitre remains unchanged. I may add that none of the children present anything for remark. But in the district where this lady lived since 1891, and still lives, five women out of ten show some goitre.

Shottesbury.

A CASE OF PRIMARY SARCOMA OF THE KIDNEY IN A CHILD AGED ELEVEN MONTHS.

By M. MACKINTOSH, M.D. GLASG.

THE symptoms in this case were constipation, sickness, and gradually increasing weakness following in a few days the discovery by the child's mother of a small swelling in the left side of the abdomen. The previous history was negative and the family history uneventful. On examining the abdomen a smooth, painless swelling was found on the left side between the crest of the ilium and the floating ribs, freely movable, and easily grasped between the thumb and finger. The sensation conveyed was that of a firm, non-fluctuating globular body, apparently about the size of a small orange; it was dull to percussion. There were no distended veins to be seen anywhere, and the skin over the tumour was freely movable. Owing to the difficulty of collecting the urine—the child being a female—the presence of blood was uncertain, though on one occasion the secretion was distinctly bloody. The spleen was enlarged, but not to any marked extent, and the other organs seemed healthy. The further progress of the illness may be summed up in a few words. Sickness continued whenever food was given, sleep was absent, and the child remained quite conscious until just before her death, which took place on the eleventh day after the commencement of the symptoms. On opening the abdomen it was found that the descending colon was firmly adherent to the front of the tumour, which came into view as soon as the adhesions were torn through. The tumour itself was in like manner bound down to the posterior abdominal wall, and considerable force was necessary for its removal. It was a smooth kidney-shaped swelling about the size of the closed fist; the capsule was not adherent, and on its removal two or three dark blood-cysts were found on the surface of the organ. My friend, Dr. J. Lindsay Steven of Glasgow, kindly examined the tumour for me, and the following is his report: "On laying open the kidney you sent me the interior of the organ is found to be occupied by a large rounded tumour, which seems to have filled up the pelvis of the organ, and to have crushed the proper renal tissue aside,

¹⁴ Ibid., p. 100.

¹ THE LANCET, July 14th, 1894

so that it forms a ring round the growth. On examining a scraping microscopically the cells of the growth indicate that it has been a round-celled sarcoma."

Sister's-avenue, Clapham-common, S.W.

A CASE OF HERPES ZOSTER WITH LONG-PERSISTING NEURALGIC PAIN AND BELL'S PARALYSIS.

By G. A. VAN SOMEREN, M.D. EDIN.

A MAN, married, with no family, in good circumstances, of good physique and hitherto in good health, came under my care at the latter end of September, 1894, complaining of an eruption on the right side of the face, which extended from the crown of the head on that side to the right shoulder and clavicle, a few spots also existing over the right first rib and over the deltoid of the right arm. The eruption was fully developed and had existed for three or four days before I saw him. He complained of no pain at the time. Neuralgic pains, however, soon occurred, and then in a week or ten days from the first appearance of the eruption he showed a well-marked Bell's paralysis of the affected side. The eruption soon healed soundly, leaving very distinct scarring all over the area affected. The neuralgic pains, however, persisted, and also the Bell's paralysis, though the latter became somewhat better. Bromides, iron, strychnine, sulphate of berberine, and chloride of ammonium were all exhibited, not to mention leeches and liniments. Two and a half months from the date of the primary observation the patient was still liable to recurrent spasmodic attacks of severe and agonising pain over the mastoid process behind the right ear, these pains interfering with sleep. The appetite was good, although very occasionally he refused a meal. The bowels, at first obstinate, acted regularly. The patient walked about and was fairly cheerful. The right side of the face was smooth relatively to the opposite side, but not absolutely so. He could not close the right eye, or whistle or frown on that side. The tongue was protruded straight. The right cheek hung limply, but he had not much difficulty in moving the food about on that side of the mouth. The application of the galvanic current, begun in the early stages and long patiently persisted in, had not resulted in any perceptible improvement. What has led to my seeking to put this case on record has been the occurrence of three notices of herpes zoster in THE LANCET¹ and reperusal of the cases of Dr. Darabseth² and Mr. H. A. Spencer,³ all of which seem to show an attitude of inquiry which I desire to emphasise by the above record. No doubt in all these cases there exists an inflammation of the nerves affected, but why should this manifest itself so differently in different cases, and why should recovery occur so soon in some cases, as in that of Dr. Darabseth, and be so intractable in mine, which I judge to be longest in duration of any as regards the persistence of the neuralgic pain? In reference to this point of the severe pain the patient at first located it as over the emergence of the occipital nerve, but later it was fixed at an area exactly represented by that uncovered by hair behind the ear. The pain came and went, but while it lasted it caused him to roll about and grind his teeth with agony. It appeared at no particular period during the twenty-four hours, and analgesics like opium, exalgine, antipyrin, quinine, and the salicylates had no more than a temporary influence. One point more may need mentioning, and that is that the patient seemed to be of a markedly neurotic temperament and had had domestic worry. This seems to have introduced a hysterical element into the case, and I have since tried valerian.

Orange, New South Wales.

¹ THE LANCET, Oct. 13th, 1894.

² THE LANCET, May 5th, 1894.

³ THE LANCET, June 9th, 1894.

FOREIGN UNIVERSITY INTELLIGENCE.—Erlangen: Dr. G. Hauser has been promoted to the chair of General and Anatomical Pathology, vacant by the retirement of Dr. von Zenker.—*Gratz:* Drs. Drasch and Jarisch have been promoted to Professorships of Histology and Dermatology respectively.—*Opporto:* Dr. I. do Valle, Professor of General Pathology, has been appointed to succeed Dr. Carlos Lopez in the chair of Materia Medica, Dr. Maximiano de Lemos taking the chair of General Pathology.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF OVARIAN CYST WEIGHING OVER EIGHTY POUNDS SUCCESSFULLY REMOVED FROM A GIRL UNDER SEVENTEEN YEARS OF AGE.

(Under the care of Dr. C. J. CULLINGWORTH.)

THE following account is chiefly of interest from the success which followed the attempt to remove so large a tumour, and from the other points so clearly indicated in the remarks. It also affords another lesson, if any were needed, as to the uselessness of tapping ovarian cysts, except to relieve urgent symptoms or to diminish shock by the removal of some of the fluid contents before the operation for the removal of very large cysts. Dr. Briddon¹ has recorded a case in which an attempt at removal of a very large multilocular cyst was unsuccessfully attempted; the cyst weighed 149 lb. In the case of a woman aged twenty-six a tumour which had been growing for three years, and weighed with the fluid contents 91 lb., was removed by Mr. J. E. Abbott;² here the case also terminated fatally. It is stated that Dr. Estes³ successfully removed a tumour which weighed 125 lb. Dr. Kelly⁴ has recorded two successful operations for tumours weighing 100 lb. and 116 lb. Dr. Goodell⁵ removed one of 112 lb., Dr. Ramsay⁶ one of 95 lb., and Sir Spencer Wells one of 125 lb., and in each instance the patient recovered. These cases prove that it is possible to successfully remove these large tumours of the ovaries, but the risk is, of course, very considerable, and such tumours are rarely seen at the present day, for the diagnosis is now made at an earlier stage than was the rule a year or two ago, and operations performed while the tumour is still small as a rule are very successful. For the notes of this case we are indebted to Dr. W. E. Tinley, senior obstetric house physician.

A girl aged sixteen years was admitted to St. Thomas's Hospital on April 30th, 1895. Until the illness under discussion commenced she had always been healthy. She had menstruated once only—viz., in March or April, 1893. In the latter month the patient noticed that she was getting larger, and from that time the enlargement had continued to increase. She was tapped at Christmas, 1893, and a large quantity of fluid removed. She was tapped again in February, 1894, and a third time in May, 1894, but on neither of these occasions with any useful result. She had had no symptoms in connexion with the bladder or rectum; her appetite had been fairly good, and she had only occasionally suffered from sickness. For the previous six months she had been almost entirely bedridden, owing to the great size of the tumour. In November, 1893, she was seen in consultation by the consulting surgeon to a provincial hospital, who strongly advised that no operation should be performed. This advice the friends had hitherto acted upon. On her admission into the hospital it was noted that the patient was much emaciated and anxious-looking; her eyes were sunken, and on her cheeks was a patchy redness which easily became livid. She was very weak and could only take a few steps with assistance; she was just able to turn over in bed unassisted. The chest was very thin, the lower ribs were much everted; the thoracic viscera were displaced upwards, so that the heart dulness began at the lower border of the third cartilage, and the apex beat was best felt in the third space. Below this there was a band of (stomach) resonance before the dulness of the tumour began. The liver dulness began at the lower border of the fourth rib cartilage, in the

¹ New York Medical Journal, Feb. 8th, 1890.

² American Journal of Obstetrics, New York, vol. i, 1890.

³ American Practitioner and News, Jan. 3rd, 1891, referred to by Cartledge.

⁴ Maryland Medical Journal, Baltimore, 1886.

⁵ Medical News, Philadelphia, 1883.

⁶ Sajous' Annual of the Universal Medical Sciences, vol. ii., 1892, G. 13.

nipple line. The heart sounds were normal, the pulse being 140 per minute. The abdomen was enormously distended and covered by numbers of large veins running from below upwards on to the thorax. The distension was due to a cystic tumour formed of small cysts in its upper part and somewhat larger cysts in the lower; the abdomen was very tense, especially in the upper part; about three inches and a half above the umbilicus was a sulcus with its convexity downwards. There was dulness over the whole abdomen, except at the back on either side, parallel with the lumbar spines, where there was a resonant band, and above the tumour where was the stomach resonance. The greatest girth was 54½ in. There was slight œdema of the left leg. There was a trace of albumen in the urine, the specific gravity of which was 1018. Per vaginam the cervix was found to be pulled up and obliterated; the anterior vaginal wall was bulged downwards by the abdominal tumour. On May 3rd abdominal section was performed. Ether was given at first, but as it was not well taken the patient was anaesthetised with chloroform and afterwards with ether, which was given by the open method. Dr. Cullingworth made an incision, which eventually measured eight inches, in the mid-line of the abdomen. No ascitic fluid was found. The cyst was extremely adherent to the anterior abdominal wall and to the liver, spleen, and omentum. The adhesions were separated by the hand, and the cyst was tapped with a large trocar; after as much fluid had come away as was possible the fingers were introduced through the opening made by the trocar and other cysts were emptied by breaking down septa with the finger. The patient was much collapsed at this stage of the operation, and one-twentieth of a grain of strychnine was given hypodermically, followed by twenty-five minims of ether and a second hypodermic injection of strychnine (½ gr.). The tumour arose from the left ovary; the pedicle was small: there was no burrowing between the layers of the broad ligament. The pedicle was tied in the ordinary way, and the cyst was removed. The uterus and right ovary were healthy but ill-developed. A hot boracic douche was given and the abdomen closed by silkworm gut sutures passing through the whole thickness of the abdominal wall. The wound was covered with dry dressings, and the patient, who had recovered a little after the hypodermic injections, was lifted into bed and taken back to the ward. The weight of the tumour was between 80 lb. and 90 lb. (The cyst, with as much of its contents as could be collected, was found to weigh 79½ lb., but much fluid, of course, escaped. A nearer estimate of the actual weight of the tumour was arrived at by deducting the weight of the patient a week after the operation (the earliest period at which she could be placed in the weighing-chair)—i.e., 79½ lb. from her weight the night before the operation—i.e., 170 lb. The difference is 90½ lb., or 11 lb. more than her entire body-weight.) At nine o'clock on the night of operation she was extremely collapsed. A hypodermic injection of one-twentieth of a grain of strychnine was given, followed in three-quarters of an hour by a hypodermic injection of twenty-five minims of brandy, which was repeated at 10.45 P.M., 11.45 P.M., and 4 A.M. next morning. Another hypodermic injection of one-twentieth of a grain of strychnine was given at 1.15 A.M. She had one fluid ounce of brandy by the mouth before 3 P.M., and four fluid ounces between 3 P.M. and 8 A.M. next morning. She also had a tablespoonful at 8 P.M., 2 A.M., and 8 A.M. in three ounce nutrient enemata. She had fortunately no sickness whatever. She passed flatus naturally during the night. Next morning the skin was dry and warm, and the pulse, which previously could not be counted, was 136. The day after the operation the patient passed urine and faeces naturally. She slept a little during the night after the operation and fairly well the next night. After this, convalescence was uninterrupted; the stitches were removed on the eighth day, the wound having healed perfectly. On the fifteenth day after the operation she was on the couch for a short time. She had lost her livid colour and was daily gaining strength and increased power to move about. The abdomen, for the first few days hollow in appearance from retraction of the parietes, was now assuming a more natural contour. The gain in weight during the first week after the operation could not, for obvious reasons, be accurately determined. It was probably inconsiderable; but the gain during the second week was 5 lb., and during the third exactly the same.

Remarks by Dr. CULLINGWORTH.—The interesting points in this case are: (1) the age of the patient; (2) the enormous

size and weight of the tumour, especially in relation to the size and weight of the patient; and (3) the advice given by the surgeon who visited her. The first tapping appears to have given considerable relief, but at subsequent tapplings the trocar evidently entered small cysts with viscid contents, with the result that little or no fluid escaped. Under these circumstances there seemed nothing for it but to watch the patient die. Her size became so great that she had been bedridden for some months previously to her admission. Her friends happened to hear of someone living in another part of the same county who had had an unusually large tumour removed, and the result of a visit to this patient was a determination to send the girl up for operation. They were doubtful whether she would survive the long journey, but she bore it fairly well. The case was one that only a strong sense of duty would lead one to undertake. It was impossible not to recognise the peril that must necessarily attend the removal of a tumour so large as to exceed in weight the rest of the patient's body. Manifestly, however, the girl could not be allowed to die without an effort being made to save her. It was foreseen that a large incision would be required, as the tumour was made up of a multitude of small cysts, and it was therefore impossible to reduce its size to any considerable extent before removal. The anterior surface, as invariably happens in these tumours of extraordinary size, was firmly adherent to the abdominal wall and to some of the abdominal viscera. The pedicle, fortunately, was not inconveniently broad. Once during the operation, and two or three times during the night following, alarming symptoms of collapse presented themselves. Happily on each occasion the patient responded to stimulation, and the danger was averted. Since the first twenty-four hours the progress of the patient has been uninterrupted. For the first fortnight the pulse continued to be abnormally rapid, but after that time it gradually became slower, and no doubt it will soon be normal. I have thought it worth while in recording this case to give the precise details (obtained from my house-physician, Dr. Tinley) as to the quantity of stimulant administered and the various other means adopted to prevent death from shock. The case calls to mind one that was described in THE LANCET about four years ago⁷ in which the tumour I removed was still larger. In that case the delay in operating was due to the patient's own obstinacy.

ROYAL BERKSHIRE HOSPITAL.

CASE OF BILATERAL PARALYSIS OF THE CRICO-ARYTÆ-NOIDEI POSTICI ASSOCIATED WITH TABES DORSALIS; ASPHYXIA; TRACHEOTOMY; RECOVERY; REMARKS.

(Under the care of Dr. FRANCIS HAWKINS.)

FOR many years the subject of paralysis of the abductors of the larynx in connexion with various affections of the nervous system has been under the consideration of neurologists and laryngologists. Many explanations have been offered and much has been written on the subject. The question was recently discussed in the columns of THE LANCET in an able paper by Dr. Cagney,¹ and the greater liability of the abductors to paralysis was ascribed to the absence of a cortical centre in their case and the connexion of the adductors with such a centre. The history of the investigations into this condition is given in that paper, and the arguments for and against other theories are fairly and impartially discussed.

A man aged forty-two years was admitted to the Royal Berkshire Hospital on Aug. 7th, 1894, complaining of hoarseness and cough which had been present on and off for four years, but latterly was more constant. Fifteen years previously the patient had contracted syphilis; he was now married and had healthy children. He was a tall, well-built, healthy-looking man. There was marked myosis of both pupils, but slightly more in the left. Argyll-Robertson's symptom was present. The ocular movements and fundi were normal; there was no nystagmus. The patient said that occasionally he saw specks before the eyes. Tactile sensibility was normal over the whole body, but there was marked analgesia. Sensibility to heat and cold was impaired on the legs. Muscular sense appeared to be normal. There was a feeling of numbness in the hands and feet, and occasionally

⁷ THE LANCET, May 2nd, 1891.

¹ THE LANCET, June 16th, 1894.

there were pains in the abdomen, but not in any other part. The knee-jerks were absent, but the plantar and other superficial reflexes were present. The gait was only slightly ataxic. There was some unsteadiness when the heels were placed together and the eyes closed, but the patient did not fall. As to the larynx, the voice was only very slightly rough; the epiglottis was normal, but the vocal cords were seen to be lying close to each other in the middle line. The heart and aorta were normal. The lungs were somewhat emphysematous. The urine contained a trace of albumen, and sometimes incontinence was complained of. On Aug. 10th, at 5.30 A.M., the patient suddenly became greatly distressed with his breathing and quickly became asphyxiated. Tracheotomy was at once performed, and instant relief followed. For several weeks the patient was kept under observation. An india-rubber tube was then supplied to him, and, being instructed how to take it out and replace it, he was discharged. In March, 1895, the patient came for a new tube. He stated that his health had improved. He had gained in weight. Laryngoscopic examination showed the vocal cords to be in the same position (abduction) as on former examinations.

Remarks by Dr. F. HAWKINS.—Bilateral paralysis of the abductors is rare and is always attended with danger. Dr. Percy Kidd, writing in *THE LANCET*,² states that evidence is accumulating to show that the abductors are specially liable to paralysis. This form of paralysis occurs as a central affection in the course of bulbar paralysis, multiple sclerosis, and tabes dorsalis. It may also be due to pressure within the thorax, upon the vagi or the recurrent, as in cases of aneurysm, cancer of the œsophagus, and enlarged bronchial glands due to malignant disease or pulmonary tuberculosis. It is also met with in hysteria and as a sequel to laryngitis, diphtheria, and typhoid fever. Strümpell says that it may be due to ankylosis in the crico-arytænoid articulation. It is met with more frequently in men than in women. In some few instances it is recovered from, but tracheotomy usually has to be performed; by this means life has been prolonged for nine and for fifteen years. In sixty cases, tabulated in *THE LANCET* for 1887,³ only two were associated with tabes dorsalis for certain, one case being doubtful. It would, therefore, appear to be rare. An interesting case of bilateral paralysis is recorded by Boulay and Mendel⁴ occurring in a man four years after the primary infection of syphilis, when he was seized with right-sided paralysis of the face, arm, and leg, with loss of speech; the hemiplegia passed off in four months, when right oculo-motor paralysis developed; the voice was then hoarse, and dyspnoea was present on exertion; the vocal cords were found to be abducted; the cause assigned was syphilitic pachymeningitis. There is no doubt that syphilis is a frequent cause of this form of paralysis. In the sixty cases referred to, six were due to this, one occurring in the secondary stage, and one was due to syphilitic tumour of the gullet.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Micro-organisms in the Healthy Nose.

AN ordinary meeting of this society was held on May 28th, Mr. HUTCHINSON, F.R.C.S., President, being in the chair.

Dr. ST. CLAIR THOMSON and Dr. R. T. HEWLETT read a paper on *Micro-organisms in the Healthy Nose*. They stated that they had been working at the bacteriology of the upper air passages. Commencing with the nose, they first of all investigated its bacteriological condition in a state of health. The results arrived at contrasted in a striking way with those obtained by the majority of previous observers. About 500 litres of air, bearing on a low average 1500 organisms, were inspired every hour. As all, or at least the greater portion, of this came in contact with the moist mucous membrane lining the tortuous passages of the nasal fossæ, it had been taken for granted that the interior of the nose must show a rich profusion of micro-organisms. This

conception was now widely adopted, and its general acceptance probably accounted for the scarcity of recorded observations of bacterioscopic examinations of the nasal cavity in a state of health. The literature of the subject was gone over in chronological order. Only two papers had been found devoted entirely to the bacteriology of the normal condition; all other references to the healthy state were only made incidentally in the course of researches on diseased conditions. The most diverse results had been arrived at both as to the varieties and abundance of organisms met with. Only two authorities—Löwenberg and Hajek—found a scarcity of bacteria in the nose; others recorded a greater or less variety and profusion. One observer found the streptococcus of Fehleisen present in one out of every five healthy individuals, and another found the diplococcus pneumoniae (Fränkel-Weichselbaum) once in every four observations. This latter observer frequently met with the bacillus pneumoniae (Friedländer), the streptococcus pyogenes, and the staphylococcus pyogenes aureus, and not only in considerable numbers, but sometimes in pure culture. The method of examination adopted by Dr. St. Clair Thomson and Dr. Hewlett was that of cultivations on agar and cover-glass preparations stained with gentian violet. No attempt was made to differentiate the organisms met with. This research only dealt with the presence or absence of bacteria, and a simple method was adopted to ensure uniformity of comparison. Thirteen healthy individuals were examined. Twenty-seven cultures and fourteen cover-glass preparations were made from the vestibule of the nose. Seventy-six cultures and thirty cover-glass preparations were made from the mucous membrane of the nasal cavity. The results were summarised as follows. 1. In all bacterioscopic investigations of the nasal fossæ, in all researches as to the action of nasal mucus, &c., a clear distinction must be made between the vestibule of the nose and the proper mucous cavity. The former was lined with skin and was furnished with hairs and with sudoriferous and sebaceous glands; it was not part of the nose cavity proper, but only led to it. 2. The neglect of this distinction might account for the discrepancy in previous observations on the subject. Contamination with the lining of the vestibule was difficult to avoid even when this source of error had been realised. 3. In the dust and crusts of mucus and debris deposited among the vibrissæ of healthy subjects micro-organisms were never absent. They were rarely scanty in number; as a rule they were abundant. 4. On the Schneiderian membrane the reverse was the case. Dr. St. Clair Thomson and Dr. Hewlett did not assert that micro-organisms were completely absent; obviously some must occasionally occur, but under normal conditions they were never plentiful; they were rarely even numerous, and in more than 80 per cent. of their observations no organisms whatever were found, and the mucus was completely sterile. 5. The occurrence of pathogenic organisms must be so infrequent that their presence on the Schneiderian membrane could only be regarded as quite exceptional. Clinical experience bore out the above conclusions, and their applications in practice were sufficiently obvious. In conclusion, they touched upon the problems suggested by the above, and referred to the questions they were at present engaged in solving.

Mr. SPENCER WATSON said that it would appear from their experiments that all, or nearly all, of the micro-organisms contained in the inspired air were arrested in the vestibule by the moist surfaces and vibrissæ there present. If this be so it testified to a very beautiful provision for purifying the air, but it was perhaps a little premature for us to decide that the great majority of the microbes in the air were really thus arrested. In children the vestibule was very small and ill developed as compared with the adult, and the vibrissæ were represented only by some down. It was difficult to conceive that in children the micro-organisms could be arrested by that ill-developed vestibule. The mucus taken from the interior of the cavity proper had been taken only from the accessible parts. The greater portion of the interior of the cavity proper was inaccessible in the sense in which they employed the term, and it seemed very possible that the stream of air carrying the microbes might pass over the smooth anterior surfaces and yet become deposited upon the rougher and more extensive parts of the turbinates, which had a distinctly different character in the adult as compared with the child. He asked in what way they thought the nasal cavities were self-cleansing—whether by the filter which was provided in the vestibule, or whether we were to understand that there were certain processes going

² THE LANCET, July 16th and 23rd, 1887.

³ THE LANCET, Oct. 2nd, 1887.

⁴ Archives Internationales de Laryngologie, July and August, 1894.

on in the deeper parts by which micro-organisms which had passed the vestibule were neutralised, absorbed, or taken up by phagocytes. There was a sort of hint given that the bacilli or cocci were being devoured by phagocytes. Did they credit the nose with possessing a large proportion of defensive phagocytes? It was a source of satisfaction to him, however, that they had come to the conclusion that the mucous lining of the nose was to a large extent aseptic. He had often been struck by the facility with which wounds in that situation healed and how seldom it was for surgical fever or septic infection to follow operations there. It must not be forgotten, however, that wounds of the face—including the nose, mouth, &c.—had a tendency to heal very rapidly even in the absence of antiseptic precautions, and it was possible that this tendency might explain the absence of surgical fever after operations on the nose.

Dr. FELIX SEMON said that the fact that so few bacteria had been found was astounding. He agreed that there was no need to seek to render the cavity aseptic before operating, but it was advisable to use local antiseptics afterwards, because after these operations lacunar tonsillitis sometimes followed though the pharynx was previously healthy. Tuberculosis of the nasal mucous membrane was exceedingly rare. He had only met with two or three cases. There certainly appeared to be some ground for the suggestion that the nose was anatomically antiseptic. It was an extraordinary thing that the naso-pharynx, which was a cul-de-sac apparently excellently adapted for the development of micro-organisms, did not show any such tendency. Years ago, when performing the then popular operation for the removal of adenoid growths in children, he always used to cleanse the naso-pharynx by means of some antiseptic solution; but the number of ear accidents which followed this procedure made him give it up, and since he had abandoned the practice, employing practically no after-treatment whatever, these complications had not occurred. This, from a practical point of view, argued against the presence of pathogenic micro-organisms.

Dr. ALLAN MACFADYEN said it was not an easy matter to make a bacteriological examination of the nasal cavities without the possibility of some fallacy creeping in. In this instance the conjunction of a rhinologist with a bacteriologist had added greatly to the value and the accuracy of the results. The preconceived notion of most medical men was that the nasal cavities swarmed with microbes. From the nature of things one would be tempted to think that such was the case, and the most interesting part of the paper was precisely that which proved that this was not so; that while the vestibule contained a large number of microbes the mucous membrane of the cavity proper had few or no organisms. No doubt the discrepancies which had occurred in the results obtained by other observers were largely due to the want of a clear distinction between the vestibule itself and the cavity proper. These results were striking because they had taken the maximum number of micro-organisms likely to enter with the inspired air during an hour, and they had shown that the vast majority of these had disappeared before they had reached the upper portions of the nose. It showed what an efficient filtering apparatus the nasal cavity was for impurities of all kinds. No doubt a good part of this result might be due to the mechanical action of the vibrissæ and the presence of sticky mucus; still a certain number of organisms must pass up, and the question arose as to what became of them. That brought up a very interesting question as to the possible action of mucus upon organisms. It might be that the mucus did not furnish a suitable soil for the growth of bacteria and consequently that they degenerated and died, or that the mucus itself had a bactericidal action upon bacteria. He referred to the investigations of Santorelli in respect of sputum. He found that most organisms died or lost their virulence under its influence with the exception of the diphtheria bacillus. Still, there was a possibility of pathogenic material remaining for a very long time in the nasal cavities.

Dr. HABERSHON said the paper possessed a double interest, especially to rhinologists, in its bearing on operations, and the question how far the pathogenic organisms could be absorbed in this situation. There was also a special bearing on the clinical and pathological side as to how far absorption might take place from the healthy mucous membrane. Some years ago when he was working at Vienna a view was very generally held that all the portions of the mucous membrane that were covered with ciliated epithelium were not the first to be infected, this being explained on the ground of the

mechanical action of the cilia in moving on the organisms and so preventing absorption. There were certain pathological facts in support of that view. Some years ago he worked out the question with regard to the larynx, and he found that those parts of the larynx that were covered with ciliated epithelium were not so frequently affected, at any rate in the first instance. Possibly the same cause might prevent the nasal mucous membrane from being the seat of absorption in respect of pathological micro-organisms. He had recently met with four successive cases in which the tonsils were evidently the seat of absorption of the tubercle bacillus and probably the starting point of the whole disease.

Dr. HEWLETT, in reply, said that, although it was mentioned that many microbes were arrested by the vibrissæ, it was not stated that this was the essential factor which prevented the microbes getting into the nose. With regard to the method of self-cleansing this was a point which was engaging attention, and there were, of course, several factors to be considered. One important factor was that suggested by Dr. Habershon—viz., the protective power of a ciliated surface. Then, too, there was the question of phagocytosis, but this was probably subsidiary. Another point, probably of great importance, and which some experiments seemed to bear out, was that the nasal mucus appeared to be a very bad nutrient medium for microbes. This was borne out, also, by certain experiments carried out in respect of vaginal mucus. This quality, at any rate, prevented the rapid multiplication of the microbes, such as might be seen in the mouth, &c. Then there was the mechanical action of the mucus, which was constantly trickling over the surfaces and must necessarily carry down microbes and dust. Similar observations had been made in respect of the freedom from microbial invasion of the conjunctival culs-de-sac. With regard to the arrest of bacteria they had made a good many observations as to this, but they had been rather a failure.

Dr. ST. CLAIR THOMSON, in reply, said that they had not attempted to deal with the character of the bacteria at all. He had looked at a good many children's noses, and had noticed that they were all provided with down, which often had some dust upon it and was usually kept very wet by mucus. As to the accessible regions, the back part of the nose might be bacteriologically accessible, but though the posterior part of the nose might appear to be accessible, it was difficult to imagine that any microbes could escape the anterior part and lodge behind. He did not wish to discuss the pathology of lacunar tonsillitis after operation, although he had read the papers referred to by Dr. Semon, and was aware that French observers regarded it as a septic infection. Sir Joseph Lister used to point out that empyemata, which discharged through the bronchi through which the patient breathed very seldom, became septic, which he ascribed to the ciliated epithelium, and he compared this with what took place when the empyema communicated with the air through a fistula. In this connexion he used to insist upon the necessity of keeping the ear aseptic in cases of fractured skull, holding that the mischief was mostly of a septic nature. He disregarded the Eustachian tube because it was lined by ciliated epithelium.

CLINICAL SOCIETY OF LONDON.

Thickened and Contracted Mesentery simulating Tumour in a case of Cirrhosis of the Liver.—Splenio Abscess associated with Hepatic Suppuration and Death from Pyæmia.—Recovery from Tuberculous Meningitis.—Calculus of Kidney associated with Simple Growth in Renal Pelvis.—Annual General Meeting.

THE last ordinary meeting of this society for the present session took place on May 24th, Mr. LANGTON, Acting President, being in the chair.

Dr. F. LUCAS BENHAM read a paper upon a case of Thickened and Contracted Mesentery simulating Tumour in a case of Cirrhosis of the Liver. The patient was a man aged fifty-five years suffering from advanced cirrhosis, with a history of former excess of alcohol and of an attack of jaundice some years ago. He had a large amount of ascites and was almost in *extremis* when first seen. Paracentesis was performed to give relief, and it did so, but he died two days after. The unusual feature of the case was that, during paracentesis, when thirteen quarts of clear reddish fluid had been removed, a large, irregular, rounded, solid tumour was noticed fixed in

the centre of the abdomen, the nature of which was doubtful, as it presented some of the characters of a malignant growth. At the necropsy about a gallon and a half of remaining fluid escaped. There was no acute peritonitis, but the surface of the peritoneum was without gloss. The liver was typically cirrhotic without perihepatitis. The kidneys were normal. The tumour discovered during life was found to consist of the enormously shrunken mesentery, which was shortened, thickened, and loaded with fat, the small intestines being huddled up compactly together. The omentum was thickened and condensed into the shape of a sausage. The condition was evidently that of a form of chronic peritonitis, but one which had not been described, as far as Dr. Benham knew, in connexion with cirrhosis of the liver, though a slight degree of the affection—viz., condensation of the omentum—was not uncommonly met with post mortem in cases of this disease. The points of interest seemed to be: (1) the question of the pathology of the complication, especially in its relation to alcoholism and cirrhosis; and (2) the practical fact of the presence of a tumour whose nature might be mistaken.—Mr. BARKER was interested in the case, as it possibly explained one which he had some difficulty in understanding. A man aged forty-eight years entered University College Hospital with obscure symptoms of intestinal obstruction of fifteen years' duration. He had passed pus per rectum, and there was difficulty with the bowels. In the abdomen a distinct sausage-shaped tumour was felt in the mid-line lying transversely below the umbilicus. The length of time during which this tumour had existed negatived malignant disease, and some benign growth of the colon was suspected. He performed laparotomy a fortnight ago, and found a much thickened parietal peritoneum; the intestines were thickened, and the mesentery enormously so. The swelling was found to be composed of this mesentery, which belonged to the descending colon.—Dr. HALE WHITE had seen several cases of this condition, which was a well-known form of chronic peritonitis in which the omentum became puckered up and was mistaken for malignant disease. Usually on careful percussion a line of resonance could be distinguished between it and the liver. The affection was often connected with granular kidney, but the liver as a rule was not cirrhotic, though he had met with one or two instances of this association.—Dr. BENHAM, in reply, said that as a rule in cases of cirrhosis the mesentery was fatter. The late Dr. Fagge had stated that the majority of cases of chronic peritonitis were of this form and not of the exudative variety.

Dr. SIDNEY PHILLIPS related a case of Suppurative Pylephlebitis with Abscess in the Spleen and a Foreign Body in the Mesenteric Vein. The patient was a man aged fifty-two years who had had rheumatic fever at the age of seventeen, had suffered from asthma, and had been a free spirit-drinker. On Aug. 15th, 1894, when in good health, he was suddenly seized by a violent rigor; rigors and sweats succeeded on the four following days, and after an interval of eighteen days he had another rigor. He was admitted into St. Mary's Hospital on Sept. 11th. The liver and spleen were then very greatly enlarged, but both organs were hard and without signs of abscess; the respirations were 40 a minute, and there was much bronchitis. There being evidence of left pleural effusion, an exploring needle was introduced and the fluid was found to be pure blood; the temperature throughout the patient's stay in hospital was 101° to 102° F. Microscopic examination of the blood (from the finger) showed only a great decrease in the number of red corpuscles. Ten ounces of pure blood were removed from the pleura by aspiration, relieving the dyspnoea, but the patient's septic condition advanced; he became delirious and more exhausted, the fever persisted, the signs of enlargement of the liver and spleen decreased, and he died on Sept. 17th. At the necropsy the portal vein was found full of pus, which extended into its ultimate ramifications in the liver, so that on section of any part of the organ pus exuded, though it contained no localised abscess. The spleen was almost destroyed by three large abscesses in its substance. The mesenteric veins were full of pus, and in the interior of the upper part of the inferior mesenteric vein were discovered two bristles three-quarters of an inch and a quarter of an inch long; they were probably parts of one original bristle which had broken. There was no ulceration or disease of any part of the intestine or stomach. In commenting on this case Dr. Sidney Phillips remarked it was evident during the patient's life that there was suppuration in some part of the abdominal

cavity, but no abscess could be detected in the liver or spleen, and it seemed doubtful where the pus formation had occurred. The cause of the general suppurative pylephlebitis found at the necropsy was in all probability the bristles seen in the inferior mesenteric vein; they had probably been swallowed at some previous time, and must have passed, probably as one bristle, through the wall of the intestine and that of the vein, though no trace could be discovered of their passage. The splenic abscesses probably resulted from the pyæmic state ensuing while the splenic vein was intensely engorged with blood from the thrombosis of the portal vein. A case of traumatic pylephlebitis somewhat similar to this had been recorded in 1842. In that case a fish-bone passed through the stomach wall and became impacted in the superior mesenteric vein. It would be well in future cases of splenic abscess found post mortem without any evident cause to search for any foreign body in the intestinal veins. Among other points of interest in the case recorded was that the pleural effusion was hæmorrhagic, probably on account of the pyæmic condition of the blood and the disturbance in the function of the spleen. It was also noteworthy that when the spleen became purulent it was so much softened that it gave the erroneous impression that its enlargement had lessened.

Dr. SAMUEL WEST described a case of Recovery from Tuberculous Meningitis. The patient was a female child aged two years and six months who was admitted to hospital on account of frequent vomiting, loss of appetite, and constipation. She had been quite well until April 3rd, 1894, when she became febrile and began to vomit frequently. On the 5th she had a fit, became stiff, and her mother said she was distinctly convulsed. She remained in this condition for two days, when she rallied somewhat, but hardly slept at all, picked her face a good deal, and seemed to dread being touched. She was admitted on the 11th. She lay on the left side with her head drawn back, and took little notice of her surroundings. The eyebrows were slightly contracted, the eyes half open, and the pupils and the movements of the eyes normal. She was continually grinding the teeth. The pulse was 165 per minute and the evening temperature rose to 103° F. On the 14th a patch of broncho-pneumonia was found at the right apex. The child continued delirious and on the 20th slight strabismus was observed. The pulse had fallen to 120 and the temperature was subnormal. On the 23rd the right pupil was seen to be smaller than the left. On the 28th he examined the eyes and found a double optic neuritis, most marked on the left side. On May 2nd the patient was semi-comatose, vomited constantly, and had to be fed through the nose. The pupils scarcely reacted at all to light. On the 4th the breathing became very irregular and only numbered about 8 to the minute; the pulse was 54 and the temperature was subnormal. During the night the child had an attack of twitching all over, and appeared to be dying from what seemed to be tuberculous meningitis; however, from this time she began to improve, though at first slowly and with many relapses, but the twitchings continued, and there was pain in the head. During the month of June the symptoms varied from day to day, but with gradual improvement, though the retraction of the head and stiffness of the legs continued. The knee-jerks were absent, as they had been for some time. By July 18th the optic neuritis had almost disappeared, but the child did not seem able to see much, though the pupils reacted to light. On Sept. 6th the patient had a relapse, but by the 19th this had subsided. By Oct. 26th she was able to understand what was said to her and was able to sit up a little. By Dec. 1st she could walk with a little assistance. In February she was running about actively, could see perfectly, and spoke plainly. Her health at the present time was excellent. During this child's illness (June 19th) her little brother, aged nine months, was admitted into the hospital with a history of having been ill for three weeks with vomiting and fits. On admission there was marked retraction of the head, tense fontanelle, varying strabismus, and frequent vomiting. The discs were normal and the temperature not raised. This child died on Aug. 16th, and post mortem the lesions of tubercle were not very numerous, nor was the amount of inflammation great. Dr. West pointed out that as this child did not die until the tenth week it might be presumed that the inflammation was not very severe or extensive. As to the diagnosis in the first case, he admitted that in the absence of a necropsy this must be a matter of opinion and judgement. The evidence of the meningitis being tuberculous in many cases was not strong, but considering that in the majority of cases of tuberculous

meningitis the diagnosis was confirmed at the necropsy it was not really as difficult as it might seem. The special interest of the case lay in the fact that two children of the same family were attacked at the same time, and the same diagnosis was made in each case. The one patient died and the diagnosis was confirmed at the necropsy. The presumption was, therefore, that the diagnosis was correct in the case of the other patient, who recovered. Both cases ran a somewhat unusual course.—Dr. CHARLEWOOD TURNER said that it would have been more satisfactory if bacilli had been found, for very similar lesions might be produced with different micro-organisms, and the cases related were certainly not typical of tuberculous meningitis.—Dr. GLOVER said that the diagnosis of tuberculous meningitis must be accepted with scepticism.—Dr. HALE WHITE, replying for Dr. West, said that the late Dr. Fagge advised the use of hydragryum cum creta in these cases.

Mr. W. H. BATTLE read the notes of a case of Calculus of the Kidney associated with Simple Growth in the Renal Pelvis, for which nephrotomy and subsequently nephrectomy had been performed. The patient, a man aged fifty-one years, had been under treatment in St. Thomas's Hospital in 1893 for hæmaturia which had first been noticed in April of the previous year. The hæmaturia was constant on admission, and there was a history of renal calculi seven years before. Mr. Anderson, under whose care the patient first came, explored the bladder, but no disease was found there. Blood was issuing from the left ureter. In consequence of the illness of Mr. Anderson the patient came under the care of Mr. Battle, who agreed in the diagnosis of calculous pyelitis with new growth, and explored the kidney from the loin on Feb. 23rd. Several oxalate of lime calculi were removed, and a villous growth growing from the lower anterior aspect of the renal pelvis was scraped away. It presented no signs of malignancy, but was reported as squamous epithelioma on examination. The patient left the hospital in April, the operation having quite arrested the hæmaturia. He resumed work on June 25th, but in August noticed that blood was again appearing in the urine. This was at first only at intervals, once a week or so; then it became more frequent until Christmas, 1893, when the urine always contained blood. From that Christmas until July, 1894, the hæmaturia was profuse and constant, so that he was obliged to keep his bed, and only left it to come up for admission on the 19th. He had become very anæmic as contrasted with his appearance a year before, but was not losing flesh. The urine was always of a deep purple colour. He had passed some small stones per urethram during the previous twelve months. The kidney on the left side was enlarged somewhat and adherent to the scar, and there was a little pain on manipulation. There was much albumen in the urine, which during the twenty-four hours after admission measured forty-one ounces. On Aug. 15th the left kidney was removed from the lumbar region, the delay before operating having been purposely made in order that the man might recruit his strength. Hamamelis appeared to diminish the loss of blood for a time, and the kidney had become less easily felt; the highest temperature had been 99° F. on one or two occasions. The kidney was found at the operation to be extremely adherent to the old scar, and on separating the adhesions a small abscess was found communicating with the renal pelvis and containing one or two stones. The adhesions were very dense on the anterior and lower surfaces of the organ, and it was necessary to increase the incision. After removal the capsule was stitched over the stump and the wound closed, with a drainage-tube passed down to this. On the 17th there was no blood, pus, or albumen in the urine. A month later the wound was closed satisfactorily and the quantity of urine passed was normal, there was less anæmia, and he was gaining strength rapidly. He went home on Sept. 19th, but has been seen recently and is in good health. The kidney removed showed some thickening where involved in the scar, which extended so as to form a tumour that projected into the pelvis. The surface towards the pelvis was papillated and firm. Sections examined under the microscope showed no new growth in this part. Mr. Battle said that the most unusual character of the growth was a reason for bringing the case before the society. He had expected at the first operation to find an epithelioma, but the examination showed a growth of innocent nature, and he had felt justified, therefore, in removing it as thoroughly as possible by scraping. The report of the pathologist that it was squamous epithelioma came as a surprise, and he regretted then that he had not

done nephrectomy at once. When the patient again came under care there was a sufficient reason for removal of the organ in the constant and prolonged hæmorrhage, but the clinical signs were still those of innocent growth. Subsequent examination had caused the pathologist to alter his verdict in favour of simple papilloma.

The business of the annual meeting was then proceeded with. The membership of the society was now 546, and the losses by death included its President (Mr. Hulke), one of its Vice-Presidents (Sir George Buchanan), a late Vice-President (Mr. Arthur Durham) and Dr. Maunsell. Allusion was made to the successful working of the new arrangements for the exhibition of clinical cases and to the appointment of a committee to investigate the clinical value of the antitoxin of diphtheria. The Treasurer reported that the finances of the society were in a satisfactory state.

The following distinguished physicians and surgeons were elected honorary members of the society:—Sir G. M. Humphry, M.D., F.R.C.S., LL.D., F.R.S.; J. Burdon Sanderson, M.D., F.R.C.P. Lond., D.C.L., LL.D., F.R.S.; Samuel Wilks, LL.D., M.D., F.R.C.P. Lond., F.R.S.; Dr. Carl Gerhardt, Dr. Theodor Kocher, Dr. Just Lucas-Championniere, Professor H. Nothnagel, and Professor Rudolf Virchow, D.Sc. Cantab., D.C.L. Oxon.

The following were elected office-bearers for the ensuing year:—President: Thomas Buzzard, M.D. Vice-Presidents: Frederick Taylor, M.D., T. T. Whipple, M.B., Thomas Barlow, M.D., Robert William Parker, William Henry Bennett, and Rickman John Godlee, M.B. Treasurer: William Miller Ord, M.D. Council: W. H. Allchin, M.D., W. P. Herringham, M.D., Constantine Holman, M.D., Patrick Manson, M.D., Frederick Walter Mott, M.D., H. Montague Murray, M.D., Sidney Phillips, M.D., G. Newton Pitt, M.D., Seymour J. Sharkey, M.D., Edward Markham Skerritt, M.D., Dawson Williams, M.D., C. A. Ballance, M.B., M.S., W. Watson Cheyne, M.B., W. Bruce Clark, M.B., A. Pearce Gould, M.S., C. R. B. Keetley, W. Arbuthnot Lane, M.S., Bilton Pollard, A. W. Mayo Robson, and J. Bland Sutton, Honorary Secretaries: W. Hale White, M.D., and G. H. Makins.

HARVEIAN SOCIETY OF LONDON.

Splenic Anæmia.—Exhibition of Cases.

A MEETING of this society was held on May 16th. Sir JOHN WILLIAMS, Bart., M.D., being in the chair.

Dr. LEONARD GUTHRIE showed an infant aged one year and eight months suffering from Splenic Anæmia of eight months' duration. The anæmia was profound. The spleen could be felt half an inch above the umbilicus. The blood contained about 36 per cent. of the normal amount of red corpuscles, and a similar reduction in the percentage of hæmoglobin was found. There was a slight increase in the number of white corpuscles, but it did not amount to leucocythæmia. The cervical and inguinal glands were slightly enlarged. The child was rickety, but showed no symptoms of hereditary syphilis, malaria, or tubercle. The condition was slowly progressing and had resisted a variety of forms of treatment. Recovery in such cases was almost hopeless. Dr. Guthrie therefore suggested that splenectomy might afford a chance of life and invited discussion on the point.—Dr. CLIFFORD BEALE mentioned a recent case in which enlargement of the spleen and extreme anæmia developed in a child aged eighteen months after a severe attack of bronchopneumonia. The splenic enlargement took place rapidly and with a temperature of a hectic type, with intervals of apparent improvement and normal temperature. Corpuscles and hæmoglobin were both reduced in quantity. Arsenic had not been well borne, but some improvement had been noted after the exhibition of dialysed iron.

Dr. G. A. SUTHERLAND showed an unusual case of Rickets in a child aged three years.—Mr. JACKSON CLARKE took part in the discussion.

Mr. C. MANSELL MOULLIN showed a case of Phelps' Operation for Inveterate Talipes; one of Laminectomy for Intra-spinal Caseous Abscess pressing upon the anterior columns of the cord; and a third of Meyer's Operation for Carcinoma of the Breast. Mr. Mansell Moullin pointed out the exceedingly unsatisfactory position of the operation for removal of the breast as performed at present, stating that nearly every surgeon admitted at least 60 per cent. of local recurrences (as distinguished from metastatic deposits and

regional recurrences), and many of them an even higher proportion. Meyer's and Halstead's operations aimed at a much more thorough removal; the skin was excised very widely, without regard to apposition when the operation was completed; the whole of the axillary and infra-clavicular spaces were cleared, both pectorals were excised, and the whole of the mass removed was taken away *en bloc* without the growth being touched or even approached, so that there was no risk of cancer dissemination during the operation. The operation took but a very little longer than the ordinary one; there was practically no hæmorrhage and but very little shock. Unfortunately Halstead's statistics were useless, as only two out of his fifty cases were of three years' duration. Volkmann, however, who admitted 60 per cent. of local recurrences in his ordinary cases, had performed a somewhat similar operation (removing the pectorals &c.) in thirty-eight especially bad cases with a local recurrence in only 35 per cent. Mr. Mansell Moullin pointed out that it was practically impossible to remove the fascia covering the pectoral muscle (and with it the lymphatics running upwards from the carcinomatous deposit) without removing the whole of the muscle; and to this free removal must be attributed the much higher percentage of success attained. The arm, it is true, was tied down to the side, but if the risk of local recurrence was reduced by 25 per cent. this was of little importance.—Mr. PEXTON BEALE thought that laminectomy should only be performed as a means of reaching some special part—for example, the posterior aspect of the body of a vertebra. If the surgeon was going to operate upon the body of a vertebra, the seat of tuberculous disease, it was certainly his duty to remove all the disease most thoroughly, and this would often involve the cutting through and removal or displacement of the whole or part of one or more laminae. If attempted, it should be done thoroughly, just as if tuberculous glands in the neck were to be removed they should be completely removed, and the necessary operation might be a serious one; but it was better to leave them alone than not to be thorough in their removal.—Mr. C. B. KEETLEY and Mr. JACKSON CLARKE also commented on these cases.

Dr. WILLIAM HILL showed a case of Tuberculous Disease of the Nose.—Dr. CLIFFORD BEALE called attention to the need of early diagnosis in cases of tubercle of the nose. The disease probably attacked from the surface and was amenable to treatment so long as it remained superficial, but became exceedingly resistant when infiltration of the deeper tissues had taken place.

ÆSCULAPIAN SOCIETY OF LONDON.

Exhibition of Case and Specimens.—Morbus Cordis.

A MEETING of this society was held on May 17th, Dr. A. G. BARTLEY, President, being in the chair.

Mr. STEPHEN PAGET showed: 1. A case of True Acute Arthritis of Infants in a child six months old. An acute abscess formed in the lower epiphyseal line of the femur and was opened at once. Though the joint had appeared involved the infant recovered with a freely movable joint. 2. A specimen from a somewhat similar case in a child two and a half years old with abscess in the upper epiphysis of the humerus, suppurative of the epiphyseal cartilage spreading to the shoulder-joint and requiring removal of the head of the humerus and of the upper end of the shaft, which was hollowed out and full of fungous granulations. The child did well after operation. 3. A specimen of Acute Tuberculous Disease of the Larynx in a man in whose case there was some difficulty in diagnosis, the fixity of the tongue suggesting cancer. The patient died from advanced pulmonary tubercle. The thyroid cartilage was necrosed, the epiglottis destroyed, and the greater part of the tongue was covered with a sloughing ulcer. The cervical glands were also infected.

Dr. A. HAIG read a paper on the Treatment of Morbus Cordis by Iodides and other Drugs which lower Blood Pressure. The principle underlying this treatment consists, as he showed, in strengthening the heart by relaxing the arterioles, and so reducing the arterial resistance with which it had to contend. The Schott system aimed at the same effect by using baths to relax the cutaneous vessels and exercise to relax those in the muscles.¹ A consequence of vascular dilatation in the cardiac muscle was, he observed,

the direct and increased nutrition of this organ. Tracings were shown illustrating the influence (1) of exercise, (2) of opium, and (3) of iodides upon cardiac action. The use of opium was objectionable on account of the rebound with contraction of arterioles which quickly followed relaxation. The same reaction, indeed, followed in the case of iodides, but much more slowly, and therefore gave little trouble, cardiac nutrition having improved meanwhile. Dr. Haig drew an important distinction between (a) heart failure due to mechanical lesion, which was best treated by digitalis and like remedies, and (b) failure on account of excess of work from contracted arterioles and high blood pressure. This state was often the precursor of Bright's disease; it was particularly benefited by vascular relaxants—e.g., iodides.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Quinine Poisoning.—Intestinal Obstruction.—Exhibition of Cases and Specimens.

A MEETING of this society was held on May 15th, Dr. J. S. TEW, President, being in the chair.

Mr. THRESIDDER showed two cases:—1. A woman aged forty afflicted with Diffuse Scleroderma, which involved the lower part of the face and neck, the forearms and hands, and the lower part of the legs and feet. The thickening exists in the true skin, so that it can with difficulty be caught between the finger and thumb; the surface is glossy. The joints of the hands and feet are deformed and their movements restricted. The extremities are also subject to attacks of blueness lasting about half an hour each and resembling Raynaud's disease. Nodules like those of rheumatism have from time to time appeared on various bony prominences. The symptoms from which the patient suffers are extreme debility and intermittent vomiting. The pathology of the disease is obscure, but in all probability is a tropho-neurosis. She has suffered from the disease for eighteen months. 2. A man aged forty-two on whom he had performed Nephrectomy for Calculous Abscess of the Kidney; the man had been twice operated on successfully for stone in the kidney.

Mr. KINGDON showed five cases: (1 and 2) a man aged fifty and his daughter aged eighteen, who suffered from Anterior Pyramidal Cataract; (3) a boy aged ten suffering from Hydrophthalmos; (4) a woman aged twenty-eight afflicted with Lupus of the Conjunctival Surface of the Upper Eyelid; and (5) a woman aged eighteen affected with Double Dermoid of Cornea.

Mr. WOOD described a case of Quinine Poisoning from a dose of forty grains. The symptoms were deafness, staggering gait, and giddiness, and much relief was obtained by the administration of an emetic.

Dr. MICHIE read notes of a case of Operation for Intestinal Obstruction in a man aged twenty-eight. Constipation was of long standing.¹ Finally there was no action of the bowels for fourteen days, and vomiting also supervened with some abdominal distension and visible peristalsis. Nothing was revealed by rectal examination. At the operation a growth was found in the splenic flexure of the colon and another in the remains of the urachus; a temporary artificial anus was made on the proximal side of the growth, as the patient's condition would not then admit of a prolonged operation. At a subsequent operation the growth was removed and the artificial anus closed, the patient making an excellent recovery. Dr. Michie had operated in all on thirteen cases of intestinal obstruction; ten recovered, though one died from recurrence of malignant disease.—Dr. Cattle, Mr. Tresidder, Dr. Hunter, and Mr. Wray spoke, and Dr. Michie replied.—Dr. MICHIE also showed the following pathological specimens: 1. The Portion of Intestine showing the Tumour removed from the case described. 2. Solid Ovarian Tumour. 3. Hydronephrotic Kidney. 4. Two Specimens of Vermiform Appendix removed by operation. All the cases recovered.

Mr. WILLIAMS showed specimens from a case of Double Hæmato-salpinx which had been successfully removed by operation. On one side the distended tube had ruptured into the space between the layers of the broad ligaments, the tumour being the size of a large cocoanut at the time of the operation.

¹ The kidney was shown, and also a large branched renal calculus from this case.

¹ Broadbent: Practitioner, May.

Reviews and Notices of Books.

Introduction to Physiological Psychology. By Dr. THEODOR ZIEHEN, Professor in Jena. Translated by C. C. VAN LIEW, Ph.D., and OTTO W. BEYER, Ph.D. Pp. 305. With twenty-one Illustrations. Second Edition, enlarged and improved. London: Swan Sonnenschein and Co. New York: Macmillan and Co. 1895.

It cannot be a matter of surprise that when the functions of the principal organs of the body had been subjected to scientific examination those of the brain and nervous system should be carefully scrutinised, and, although at first sight the operations of the mind do not seem to lend themselves to those methods of inquiry which have proved so valuable in the case of the kidney and urine and of the various glands that pour their secretions into the alimentary tract, yet it could not long be overlooked that the organs of sense were amenable to strictly physical methods of inquiry, and that, as the sensations which are the foundations of the mental faculties can be tested and modified in various ways, so the mental powers themselves can be indirectly made the subject of examination, and thus the products of the activity of the cerebro-spinal and sympathetic systems be brought under the same laws as those which are found to be in operation in other organs.

Professor Ziehen starts with the antithesis of material and psychical phenomena, but lays down as a proposition, which is fundamental for the entire field of physiological psychology, "that there are undoubtedly a certain number of psychical phenomena or processes that do not occur independently of, or without relation to, certain material phenomena and processes, but stand in obvious correlation to the latter," or, in other words, that certain concomitant material processes correspond to a certain series of psychical processes, so that the latter cannot occur without the former, or the former without the latter; and he instances in proof of this the fact that removal of the occipital lobe of the brain in the dog causes permanent and complete blindness. He proceeds to say that if we investigate the question as to whether such material processes in the central nervous system accompany all psychical phenomena the answer will be decidedly in the negative.

It is proper to observe that Professor Ziehen regards the terms "psychical" and "conscious" as, at the beginning of the inquiry at least, identical terms. He does not admit the possibility of an unconscious psychical process. The simplest nervous process is a reflex action, but, although these actions often exhibit certain coördinated and purposive characters, yet he maintains we know nothing of any psychical correlate for this reflex purpose, and so with motor reactions that are not the invariable result of a definite stimulus like reflex acts, but which are modified while in progress by the action of new intercurrent stimuli. These he calls "automatic acts" or "reactions," and holds that they are not psychical. He instances the pianist, who executes an often-practised piece of music whilst his thoughts are wandering elsewhere, and as another example the descent of a flight of stairs whilst in deep thought. But we imagine that in all such cases a psychical process, feeble, indeed, and to which the attention is but slightly directed, but still existing, is being carried on, though the higher faculties of the mind may be exercised in another direction.

The distinction between reflex and automatic actions is exemplified by Dr. Ziehen in the frog from which the cerebrum has been removed. Here, if the foot be pricked and a movement of retraction made to withdraw the foot from the stimulus a reflex action is performed; but if, in leaping, the animal avoids an obstacle placed in front of it by jumping to one side an automatic action is accomplished, which is still

entirely destitute of psychical significance, and differs but little from a reflex act. It will be seen how completely this explanation of the phenomena observed differs from George Lewes' doctrine that in the frog destitute of brain a certain psychical power remains in the rest of the nervous centres.

From the consideration of reflex and automatic acts Professor Ziehen proceeds to that of simple conscious acts, in which a psychical process is really involved, and endeavours to show that, apart from and outside of the chain of sensory stimulus, sensory centre, motor centre, and muscle which exist in reflex and automatic acts, and in which the acts performed are modified through the agency of external intercurrent stimuli, the motor act in conscious acts is modified by intercurrent mental images or is accompanied by psychical processes. This psychical process, he considers, consists of three chief factors: the sensation or perception, the play of motives or association of ideas—that is to say, deliberation—and, lastly, the action. Anatomically, it has been shown by Ramon y Cajal and others that as the sensory fibres ascend in the cord they give off collateral branches, by which the stimulus is transferred to motor elements, the lowermost of which terminate in the cord, and are thus subservient to reflex acts, whilst others go to some higher centre, as the sensory ganglia in the medulla oblongata or at the base of the brain, and minister to automatic or instinctive acts; whilst others, again, pass to the brain cells and thus constitute the paths by which conscious action is induced.

Several chapters are occupied in discussing the sensations aroused through the several senses and the modifications they present. In the sensations of touch, for example, Dr. Ziehen discriminates four classes: sensations of position, of active motion, passive motion, and of active touch, the last differing from passive touch in having a motor element in it. He then considers the time properties and the emotional tone of the sensations, and proceeds to the "association of ideas." The following quotation—in which *Ec* stands for central or cortical excitation, *Ei* for ideational excitation, and *El* for latent excitation—will give an idea of the author's style and mode of treatment of his subject. "The association of ideas," he says, "is accomplished by the use of two kinds of elements: new sensations are received from the external world, and the mental images of former sensations are already at hand in the cerebral cortex. These latent ideas are constantly called up in consciousness and associated with the new sensations. We see a dark cloud—i.e., a stimulation *Ec* (cloud)—has been transmitted from the retina to the sensory cells of the cerebral cortex. The psychical correlate of this material excitation of the cortex is the visual sensation of the dark cloud. A series of related ideas are connected with this sensation by association—for example, among others, the idea of rain. The material excitation *Ei* (rain) in the memory cells of the cortex corresponds to this idea of rain, which is associated with the visual sensation of the cloud. This material excitation *Ei* (rain) did not exist before; only the material disposition *El* (rain) was already at hand in the memory cells, where it had been deposited by one or more visual sensations of rain. Previous to its excitation no psychical process corresponded to this *Ei*; it was merely a material trace, a latent image of memory. Only after the association of ideas has changed *El* into *Ei* does a psychical phenomenon, the idea of rain, also appear as the correlation of *Ei*. In the same manner this one idea is followed by numerous others; latent images of memory are constantly called up above the threshold of consciousness, or, as it is often expressed, reproduced. It is just this process of reproduction that we designate as the association of ideas or ideation."

The nature of memory is discussed in one of the chapters, and the author regards it as another phase of the association of ideas. He considers that to recall the mental image of an

object or sensation it is necessary that the image of the object in memory must be intact, and that the association as such must take place normally, which does not seem to carry us much further than to say that memory is, as it were, memory. However, he refers to some interesting observations by Ebbinghaus, who endeavoured to estimate the influence of time on memory by arranging words in series of different lengths, but without regard to sense. After learning them he tested the degree to which, and rapidly with which, the memory failed in regard to them, and expressed these numerical relations in the following law: that "the quotients of the amounts retained, by the amounts forgotten, are to each other inversely as the logarithms of the various periods of time that have elapsed." It is more interesting to know that the verses of an epic poem can be ten times more easily retained than senseless series of syllables, and that in Ebbinghaus' case one reading was sufficient to fix in the memory a series of from seven to eight syllables, but that forty-four repetitions were necessary for a series of twenty-four syllables. There must be great differences in this respect, for Theodore Hook is stated to have remembered the names over all the shops in Oxford-street from the Circus to Tottenham-court-road after once walking down the street in question with that object in view.

The work is a suggestive one, and has been very well translated by Drs. van Liew and Beyer. An index would have added considerably to the value of the book.

An Introduction to Pathology and Morbid Anatomy. By T. HENRY GREEN, M.D., F.R.C.P., Physician and Soecial Lecturer on Clinical Medicine at Charing-cross Hospital and Physician to the Hospital for Consumption and Diseases of the Chest, Brompton. Eighth Edition. Revised and Enlarged by H. MONTAGUE MURRAY, M.D., F.R.C.P., Physician to Out-patients and Lecturer on Pathology and Morbid Anatomy at Charing-cross Hospital. Illustrated by 224 Engravings. London: Henry Renshaw. 1895. Price 17s.

To past generations of students Green's Pathology was so well known in the Renshaw's Manual Series that the black book in foolscap octavo with red edges is what first comes to the mind when a text-book of pathology is mentioned. As the subject grew, however, and more attention had necessarily to be paid to it, this little book had to be gradually enlarged, and under the editorship of Mr. Stanley Boyd it assumed much more formidable proportions. Now we are offered an eighth edition still further revised and enlarged by Dr. Montague Murray, who has, we may say at once, performed his editorial duties with great discretion and consequently with marked success. It is an exceedingly difficult matter for any editor to bring the work of another man well up to date without breaking the continuity of plan or without interfering with the general scheme, but Dr. Murray has been as successful as his predecessor in maintaining a continuity of idea and expression which cannot be too greatly praised, and in its present form we predict a success for Green's Pathology almost equal to that which it attained in its earlier editions. We think, however, that it would have been well if some of the old illustrations had been removed or replaced by drawings made from specimens prepared by more recent methods; we will only indicate in this connexion some of the drawings illustrating the section on cancer, but there are others to which the same remark applies. The new illustrations are, many of them, most admirable, those illustrating vegetable parasites and the nervous diseases, the section on which has been drawn up by Dr. Mott, being specially noticeable.

In these days of ponderous text-books Green's Pathology and Morbid Anatomy may be accepted with confidence by the student as containing a very good and accurate description

of the groundwork of the subject, and an excellent introduction to the larger treatises with which he may have ultimately to deal. The work is, of course, very considerably increased in size, but it is still a very handy, manageable volume.

Annual of the Universal Medical Sciences: a Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHARLES E. SAJOUS, M.D., and seventy Associate Editors, assisted by over 200 Editors, Collaborators, and Correspondents. Illustrated with Chromo-lithographs, Engravings, and Maps. Five Volumes. 1894. Philadelphia, New York, and Chicago: The F. A. Davis Company. London: F. J. Rebman.

MOST of the readers of THE LANCET are acquainted with this excellent and important work, to which we have year by year as the volumes appeared drawn attention in our columns, and to which we have frequently made reference when introducing a note on the latest contributions to subjects of special interest. There is no other work of reference with which we are acquainted which supplies the want so ably satisfied by this annual. The important papers written during the previous year are epitomised, the cases of interest mentioned, new inventions or discoveries in every branch are placed in their right position as regards others of similar character, the action of remedies, new or old, is carefully noted, &c.

The first volume deals with the diseases of the lungs and pleura; of the heart and pericardium; of the stomach, pancreas, and liver; with diseases of the intestines and peritoneum, and with cholera; with animal parasites; the kidneys and bladder, and with diabetes, &c.; with fevers; diphtheria, croup, pertussis, parotitis, scarlet fever, measles, varicella, and röteln; with rheumatism and gout; and with diseases of the blood and spleen. Possibly the most interesting parts are that dealing with fevers and the one which treats of the diseases of the intestines and peritoneum; in the latter there is a section in which the experience of physicians in Russia and other parts in dealing with cholera by various remedies is summarised, and statistics of the results obtained by different observers are given.

The second volume treats of the following subjects: diseases of the brain and spinal cord; peripheral nerve diseases; mental diseases; inebriety and morphinism &c.; diseases of the uterus, ovaries, and tubes; menstruation; diseases of the vagina and external genitals; diseases of pregnancy; obstetrics; diseases of the new-born; dietetics and the digestive disorders of infancy. The editor specially draws attention to the sections which treat of the diseases of the brain and spinal cord and of the uterus and adnexa.

The third volume treats of surgical subjects—the surgery of the brain, spinal cord, and nerves; of the thorax; of the abdomen; of hernia; of the rectum and anus; of the genito-urinary apparatus in the male; of syphilis; of deformities; of amputations, excisions, and plastic operations; of fractures and dislocations; of diseases and injuries of arteries and veins; of oral and facial surgery; of surgical mycosis; of surgical diseases; of traumatic neuroses; of surgical dressings and antiseptics; and of anaesthetics. This volume more than any other brings before the reader the amount of work done during a twelvemonth, and conveys some impression of the advance which is being continually made in this department of our art.

The fourth volume contains the sections on diseases of the skin; ophthalmology; otology; diseases of the nasal cavities, naso-pharynx, pharynx, larynx, trachea, and cesophagus; intubation of the larynx; diseases of the thyroid gland; legal medicine and toxicology; medical demography; and bacteriology. The section which treats of ophthalmology is, perhaps, the most fully illustrated of any in the annual, and deals with the extensive literature of the subject in a very

complete manner. This section occupies no fewer than 168 pages.


The sections in volume five are devoted to the following subjects: general therapeutics and pharmaceutical chemistry; experimental therapeutics; electro-therapeutics; gynaecological electro-therapeutics; climatology, balneology, and hydrotherapy; hygiene and epidemiology; anatomy; anomalies and monstrosities; physiology and biology; histology; and microscopical technology. In this volume the article to which attention is especially directed is the one on general therapeutics.

A feature of great importance in a work of the magnitude of this annual is the accuracy and fulness of the index; here the general index at the end of the last volume is full and satisfactory. It is arranged in parallel columns, "general index," "therapeutics," and "authors quoted," and reflects great credit on those responsible for it, Dr. D. Braden Kyle of Philadelphia, and M. Eugène Devereux, A.M., and Madame N. J. Devereux of Paris. After the general index comes a reference list of journals 1153 in number, and books, monographs, theses, &c. to the number of 176. We should mention that there is also an index to each volume prepared by Madame N. J. Devereux.

New Inventions.

A SIMPLE URETHROTOME OR URETHRAL KNIFE.

I HAVE long been impressed with the inaccurate way the little operation of meatotomy is performed, and no one can deny the equally inaccurate way in which its more important



congener, internal urethrotomy, is done in spite of the multiplicity of contrivances invented. Meatotomy is nearly always underdone or overdone, sometimes merging into hypospadias in the latter case. These and other defects are owing to the absence of really scientifically constructed mechanisms capable of allowing varying adjustments and of making certain defined incisions in regions out of sight and touch. The urethrotome is a blind, expensive, and too often a disastrous tool, transforming the urethra into a zig-zag pocketed route instead of affording a capability of restoring a normal axis and calibre to this canal. Hence, owing to this and to the unpleasant sequelæ which often result, many surgeons now adopt external division as a more satisfactory expedient. If, however, we lay down a rule—viz., "confine incisions to stricture tissue, and to where it is most abundant, and follow up by dilatation by means of the gentle use of tapering sounds"—I think internal division would not be open to the objections laid to its charge. I beg to offer to the notice of the profession in the present instance the instrument herein figured—and which has been excellently made for me by Messrs. Arnold and Sons, London—for the performance of meatotomy and the division of certain penile strictures. It cuts only at B.C. It is blunt at A, and so it slides over the mucous membrane until the stricture is met, which it cuts with the edge, B.C. Hence it cuts flush with the mucous membrane, and that is the chief advantage claimed, the seat and site of the coarctation being first determined by a bougie demi-boule. On another occasion I hope to offer a modification of this knife, for the division of deep strictures, fitted with a guard which, by rising any desired extent from the blade, can ensure any desired incision as regards depth and direction.

Finsbury-pavement, E.C.

JAMES MACMUNN.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 5.30 P.M. on Wednesday, May 22nd, 1895, at 25, Grosvenor-street, W. Dr. Robert Barnes took the chair in the unavoidable absence of the President, Mr. George Pollock, and there was a large attendance of members. The minutes of the last meeting of the committee were read and confirmed. The following letter was read by the Honorary Secretary (Mr. H. Percy Dunn):—

"10, Old Burlington-street, Feb. 27th, 1895.

"DEAR SIR.—On behalf of Mrs. John Whitaker Hulke, who is too unwell to attend to any correspondence, I beg that you will tender to the committee of the Association of Fellows of the Royal College of Surgeons her most grateful thanks for the kind resolution of sympathy forwarded to her on the occasion of Mr. Hulke's death. I need scarcely say that such marks of esteem for him are greatly appreciated by Mrs. Hulke.

"I am, dear Sir, gratefully yours,

"EDWARD W. WILMOT.

"H. Percy Dunn, Esq., 52, Wimpole-street, W."

A letter was also read from the Secretary of the Royal College of Surgeons of England acknowledging the receipt of a copy of the resolution of sympathy upon the death of Mr. Hulke, as President of the College, and conveying the announcement that the resolution would be laid before the Council at its next meeting; and the Honorary Secretary reported that the resolution had been acknowledged with the thanks of the Council (on March 7th). The Honorary Secretary called attention to the fact that a new President of the Royal College of Surgeons of England had been appointed in succession to Mr. Hulke, and pointed out that the time had now come for the subcommittee appointed at the last meeting in reference to proposed alterations in the charters and by-laws to begin its work. Thereupon a resolution was passed that the subcommittee should be summoned to meet on the 28th inst. at 101, Harley-street, to determine the points which should be pressed upon the Council of the College by the subcommittee acting as a deputation to the committee of the Council.

The Honorary Secretary having reported that there would be five vacancies on the Council of the College to be filled on Thursday, July 4th, the committee proceeded to consider the names of Fellows who should be invited to represent the views of the Association at the election. After some discussion it was unanimously resolved that Mr. A. T. Norton, Mr. Victor Horsley, and Dr. Ward Cousins should be invited to come forward as the candidates of the Association, Mr. A. T. Norton, who was present, accepted with thanks the nomination of the committee, and the Honorary Secretary was instructed to communicate with Mr. Horsley and Dr. Ward Cousins.

It was understood that of the three retiring members of the Council of the College—viz., Sir Spencer Wells, Mr. J. Hutchinson, and Mr. Alfred Willett—only Mr. Willett was likely to offer himself for re-election, and it was decided that the committee should recommend the members of the Association to support his candidature.

A vote of thanks to Dr. Barnes for presiding terminated the proceedings.

INVERNESS MEDICAL SOCIETY.—At the last meeting of the Inverness Medical Society the question of medical clubs and medical aid societies came up for discussion. There was a full attendance of members, and the general opinion of those present was that the salaries paid to the medical officers of medical clubs and friendly societies were quite inadequate to the amount of work performed. The conclusions arrived at by the meeting are embodied in the following resolutions, which were carried unanimously:—1. That all candidates for admission to any friendly society, medical club, or any other medical benefit society be charged an examination fee of 2s. 6d. whether "passed" or not. Such fee to be paid by the society. 2. No "married members'" branch to be countenanced on any terms. 3. That 2s. 6d. per head per annum be the minimum sum paid to the medical officer for attendance on members of these societies. This not to include medicines.

THE LANCET.

LONDON: SATURDAY, JUNE 1, 1895.

THE full interest of a meeting of the General Medical Council is rarely developed in the first two days of the session. But enough has already taken place to enable us to say that the present session—the fifty eighth—will not compare unfavourably in this respect with its predecessors. It is undeniable that of late years there has been more life in the Council, and that it has been more in touch with the profession than in the anterior period. We believe this to be the case and to be a considerable part of the justification of the Act of 1886.

The first event of consequence of course in any session is the opening address of the President. A great deal depends on this. To take a metaphor from the orchestra, he is responsible for the reading of the piece. He shapes the estimate of the proportion of subjects, and he can often contrive to give a turn to the course of business. It is but mere justice to Sir RICHARD QUAIN to recognise that his opening addresses have been intrinsically interesting as *résumés* of the history of the subjects with which the Council has to deal. It is inevitable that the proclivities of the President himself should appear in these addresses. On the present occasion there is no concealment of the fact that the coming edition of the Pharmacopœia is the subject which engrosses the most of the President's attention. If Sir RICHARD QUAIN shows himself a little conservative in regard to the conditions of editorship and preparation, it is impossible to deny that he speaks with a rare experience and a large responsibility. The question of any changes in these arrangements is undoubtedly important, and will be dealt with by the Pharmacopœia Committee, which has been already appointed. It is undoubtedly expected that the new Pharmacopœia will mark a step in advance of the present one. But it must be conceded that the present volume, with the addendum, has creditably sustained its place in the estimation of both practitioners and pharmacists of the three divisions of the Kingdom. It is easy to find fault with it—to show that it has left undone that which it ought to have done, and in particular has done that which it ought not, but, as a whole, it is a creditable starting-point for a new edition. We trust that the editorial arrangements in the entertainment of new drugs will carefully avoid both errors—"raw haste" and undue delay. This does not imply any very great change in the aspect of the book, but it may imply a great advance in its utility and may place it in a much more favourable position as respects the rival volumes which enterprising druggists publish as amateur performances in the nature of pharmacopœias.

The subject which at the moment at which we write figures most largely in the proceedings of the Council is that of the Registration of Midwives Bill. The minutes of the first day's meeting have an appendix consisting of communications to the Council in regard to certificates issued to and the registra-

tion of midwives, extending over twenty-seven pages, from all sorts of interested parties—*vis.*, one from certain Fellows of the Obstetrical Society, one from the Lancashire and Cheshire Branch of the British Medical Association, one from certain members of the Lancashire and Cheshire Branch of the British Medical Association, one from certain practitioners in Liverpool, one from the Midwives' Institute, one from the Workhouse Infirmary Nursing Association, one from the parish of St. Mary Abbots Kensington, one from the Ladies' Charity and Lying-in Hospital, one from St. Mary's Hospital Manchester, and one from the Association for Promoting the Compulsory Registration of Midwives. Two of these are unfavourable to the certification—or, rather, to the registration—of midwives as such. The rest are very much in favour of such steps and of legislation to enforce them. But if the majority of the communications to the Council are in favour of some way of certifying or registering midwives, the quality of energy and activity of protest seems to be possessed most largely by those who object to any such measures. On Wednesday a large part of the afternoon was taken up by a deputation of fourteen gentlemen who offered the most uncompromising opposition to the recognition of the midwife as such. The spokesmen of these gentlemen were Mr. COLIN CAMPBELL, Dr. HELME, and Dr. WOODCOCK. They described in powerful terms the evils of a little knowledge in midwifery. Whether they succeeded in convincing the Council that the little more knowledge possessed by the women of a few months' training, as compared with that of the woman who has had absolutely no training, constitutes any real danger to the community is another matter. They certainly stated their views in a dignified way. The Council very properly contented itself with merely hearing their statements, reserving all judgment on the matter till it has received a report from its own committee, appointed long since to watch any Parliamentary Bills on this subject, and now busily engaged in examining the Bill of Lord BALFOUR OF BURLEIGH. A great tactical error was committed by a section of the Council representing the extreme views as regards midwives in trying to snatch a premature victory by committing the Council to hasty resumption of the controversy with the Obstetrical Society with regard to the form of its certificate to midwives. This controversy, as we had all along anticipated, has been brought to an end by the Obstetrical Society adopting a form of certificate approved by the Executive Committee to which the Council relegated its functions in the matter. But a minority of the Council tried to reopen the controversy and throw on the President and his colleagues on the Executive Committee the ungracious duty of reopening the negotiations and obliging the Obstetrical Society to exchange the words "Examination in midwifery" for "Examination in midwifery nursing." This was, we think, an error of policy, considering that the whole subject is under the examination of a Committee of the Council, and the Council showed its sense of this by rejecting the proposal by a very large majority.

An important piece of business has been settled by the Council at its present meeting—the purchase of the property which includes the present premises, 299, Oxford-street and also 16, Hanover-square. The financial terms are

favourable. The money needed—not to exceed £20,000—including alterations and the purchase of the lease, will be advanced by the English Branch Council to the General Council at the rate of three per cent. There seems little prospect of the Council finishing its business before the Monday or Tuesday of next week.

WE should imagine that the result of the division last week upon Sir JOSEPH PEASE'S resolution regarding the Royal Commission on Opium could not have given rise to any surprise; the surprise would, indeed, have been great had he succeeded in carrying it. As it was, the resolution was negatived by a majority of 117 in a small house of 235, where we may be sure the anti-opium party mustered as strongly as they could. Mr. FOWLER had little difficulty in replying most effectively to Sir J. PEASE, whose speech involved an unprecedented personal attack on the members of the Royal Commission. The composition of that Commission apparently received the approval of even the anti-opium party, every witness offered by the Anti-Opium Society was heard, the investigation was of an exhaustive character—the Commissioners examined altogether over 700 witnesses,—and the weight of the evidence taken was such as to leave no reasonable doubt in the minds of unprejudiced people that the Commissioners were fully justified in making the report they did. The Commissioners were practically unanimous, for eight out of nine of their number signed the Report; and we think it is much to be regretted that Mr. WILSON, the dissident, did not submit his criticisms or suggestions for the consideration of his colleagues. We cannot be surprised that Mr. FOWLER indignantly repudiated the utterly ridiculous suggestion that because the Commissioners had accepted the hospitality which is proffered to everyone, and which it would have been churlish to have refused, they had thereby lost their character for impartiality. Mr. FOWLER deserves great credit, too, for his honesty and courage in going to the root of the subject. We do not go to India in this matter with clean hands. Whilst this wealthy country raises a revenue of from thirty to forty millions from drink it is not in a position to ask a poor country like India to give up its revenue from opium. The prevalence of the use of opium is partly attributable to the universal tendency among mankind to take some form of stimulant with which to comfort or distract themselves, and partly to a popular belief in its efficacy as a domestic medicine. The misery, disease, and crime connected with the abuse of alcohol in Europe are infinitely greater and more common than the evils resulting from the abuse of opium in the East. As regards China, we believe that only about one-fifth of the total amount of opium consumed in that country is obtained from India, and it is perfectly true that if China did not get this amount from India she would supply herself. We do not say, of course, that a Government is any more justified than an individual would be in acting immorally because its action in this respect happens to be of limited extent; but it would surely be little short of criminal to make a vain attempt to remove one evil at the risk of introducing another and far worse one. There are several other considerations also, and Mr. FOWLER was quite

right in declaring that the Government objected to Sir J. PEASE'S motion because it involved a flagrant injustice on the one hand and was impracticable on the other, and because it would seriously menace our relations with the friendly States, with whom it was our duty to be upon the most friendly terms. As to excessive consumption [of opium causing harm there is no difference of opinion, but the use of opium in India is a moderate one, and there is no evidence of extensive moral or physical degradation from its use. Opium smoking is little practised in that country at any rate, and is considered a disreputable habit. The fact is that the anti-opium party had altogether overstated their case, and a variety of exaggerated and sensational statements have been made which have not been substantiated by the evidence that has been adduced. They consequently now find themselves in the unpleasant position of contemplating a pricked bladder. We hold no brief for the Indian or any other Government, and it is no part of our duty to support their officials as such; but we cannot help seeing that whilst so many of our countrymen in India have been doing all they can to strengthen the empire abroad by their courage and character for justice there are a number of people in this country who, if their counsel were followed, would do a great deal to weaken if not destroy it. There are several physiological and medical points referred to in the voluminous published evidence and in the Report of the Royal Commissioners, and more especially in Sir WILLIAM ROBERTS' memorandum, with which we may subsequently deal.

IN a few weeks' time the Fellows of the Royal College of Surgeons of England will once more be called upon to exercise their privilege of electing representatives to serve upon the Council of the College. This year the election of councillors will be invested with more than ordinary importance, for there will be no less than five seats to be filled, four of the five seats being absolute vacancies. Moreover, the election will in all probability be held under an amended by-law, and if this be so, voting papers will be sent unasked to every Fellow of the College in the United Kingdom whose address is known, and the number of Fellows voting ought to be largely augmented. These circumstances are bound to exercise a healthy and stimulating effect upon the Fellows, and many of them, formerly apathetic or indifferent, will doubtless begin to evince an intelligent interest in the affairs of the great professional institution whose destinies it is in their power to direct and control. With a view, therefore, of assisting the Fellows generally in their deliberations upon the constitutional questions which have been frequently discussed in THE LANCET, and which the Association of Fellows and the Society of Fellows have pressed or are likely to press upon the attention of the Council, we propose during the time that remains before the election to define the exact position of collegiate politics in a short series of leading articles. These we begin to-day by considering the position between the Council and the Fellows in particular relation to the work of the Association of Fellows.

Eleven years ago a revision of the Charters and by-laws

of the College was undertaken by the Council of the College, and the proposals of the Council were submitted to several meetings of the Fellows and Members held in the theatre of the College. At the very outset four resolutions were adopted by the Fellows and Members affirming the necessity of investing the Fellows and Members with a larger share in the management of the College; the necessity of having an annual general meeting of Fellows and Members for the reception, discussion, and adoption of a report from the Council; the necessity of submitting any change in the constitution or external relations of the College to the Fellows and Members for approval; and the desirability of conferring upon the Fellows of the College the privilege of electing the President of the College. These four cardinal points, which were proposed by Mr. PAUL SWAIN, with the cordial approval of the present President of the College, became the charter of the Association of Fellows, which then sprang into existence simultaneously with the late Association of Members. The Association of Fellows worked indefatigably to obtain material alterations in the Charters and by-laws for the purpose of conferring upon the Fellows greater influence over the administration of the affairs of the College; and though several of the more important proposals for the revision of the constitution were rejected by the Council, these concessions were secured:—1. The appointment of scrutineers to take the ballot at the election of the Council. 2. The discontinuance of the payment of a fee at election by members of the Council and by members of the Court of Examiners. 3. The appointment of a treasurer and the auditing of the accounts by a professional auditor. 4. The holding of an annual general meeting of Fellows and Members, at which a report from the Council should be presented and discussed. 5. The suspension of the confirmed minutes in the hall of the College for the inspection of the Fellows and Members. 6. The holding of meetings by direction of the President or Council or on a requisition signed by thirty Fellows or Members. 7. The reduction of the number of signatures required for nomination of candidates for the Council from six to three. These concessions were obtained after repeated applications and deputations to the Council. One only was embodied in the Charter of 1888, three were effected through amendment of by-laws, and the rest depend for their continuance on the good pleasure of the Council. One of the most important of these concessions—that granting the annual general meeting of Fellows and Members—may at any moment be suspended or abolished by the Council. This surely ought not so to be. When the Charter of 1888 had been obtained the Council of the College strongly urged the Fellows and Members to “rest and be thankful,” and it required steady perseverance as well as much dissemination of information among the constituency upon the true points at issue—information which we took every care should be clear, impersonal, and impartial—to secure further privileges for the Fellows. In 1890 a common room was assigned for the use of the Fellows and Members. Then followed meetings of the Fellows twice a year, separately from the Members, after counsel’s opinion had been obtained through the agency of a deputation of the Association of Fellows. The separate meetings of Fellows,

though established only by resolution of the Council, and not resting, as they should do, on a provision in the Charter, are capable of being made a great instrument for good in the life of the College. To this concession has at length been added such a simplification in the mode of distribution and collection of voting papers as will ensure the record of a larger number of votes by Fellows of the College at the election of councillors, and will make it the fault of the Fellows themselves if they abstain from interesting themselves in the administrative work of the College.

A further series of recommendations, which was formulated by the Association of Fellows more than a year ago and submitted to the Council, will be pressed forward by a deputation of the Association to the Committee of the Council appointed a few months ago to receive deputations from the Fellows. The following comprised the main points:—

1. That it should be lawful for the Fellows in meeting assembled to appoint an annual committee or other committees to consider and report on subjects referred to them, and to confer when necessary with the Council of the College.
2. That the President of the College shall be elected by the Fellows from among the past or present members of the Council at the meeting of Fellows in July.
3. That no alteration in the constitution and external relations of the College shall be effected without the consent of the Fellows convened to discuss such alteration.
4. That the term of office of members of the Council shall be six years instead of eight (making four vacancies instead of three annually), and that the system of substitute members be abolished.
5. That members of the Council shall not be eligible for re-election after serving for two consecutive periods of six years.
6. That the Council shall have power to increase the number of the members of the Court of Examiners from ten (as now limited) to any number not exceeding twenty.
7. That the meetings of the Fellows, the election of the President by the Fellows, the six years’ term of office of members of the Council, and the annual meeting of the Fellows and Members for the reception and discussion of the report of the Council shall be provided for in a new Charter, and that the conduct of the meetings at the College and other matters referred to in the above recommendations shall be regulated by by-laws. It will be seen from this programme that the Association is unflagging in its efforts, but we defer, for the present, consideration of the points raised.

Annotations.

“Ne quid nimis.”

THE BIRTHDAY HONOURS.

THE honour lists gazetted on the two preceding anniversaries of Her Majesty’s birth had led us to hope that the services which the medical profession render to humanity were to be recognised in the future to a greater degree than they had been in the past. It would seem, however, that these hopes are not to be realised, for the list of honours issued on the occasion of the Queen’s seventy-sixth birthday contains the names of but three gentlemen who also find a place in the Medical Register of the United Kingdom—Dr. Joseph Ewart of Brighton, Director-General James Nicholas Dick, C.B., and Dr. Salvatore Pisani. We trust, however, that the time is not far distant when a profession

which can furnish men who make themselves conspicuous by their bravery in defending a fort in the wild hills of the Pamira, who show their tact and ability to govern a province in South Africa, or, to come nearer home, do their best to keep England from epidemics like cholera, will be recognised by a grateful country. Sir Joseph Ewart, who has received the honour of knighthood, has rendered excellent service both to his country and to his profession and is a worthy recipient of the honour which has been conferred upon him. About the year 1852 he went to India where his important investigations into the sanitary condition of that country were rewarded with the highest medical post which the Government could bestow upon him. The records he prepared on the subject still remain a monument to his industry and ability. A considerable part of his life was spent in the service of the East India Company, and he was in medical charge of the Meywar Bheel Corps at Kherwarra during the time of the Indian Mutiny. His services to promote the health, wealth, and prosperity of Brighton, the town in which he resides, have been recognised by his grateful townsmen by their thrice returning him as Mayor of the borough, and he has just been chosen as a candidate to contest the representation of the borough in Parliament. Sir James Nicholas Dick, C.B., is the Director-General of the Medical Department of the Royal Navy, and his promotion to Knight Commander of the Most Honourable Order to which he belongs is well deserved. We have further alluded to the honour bestowed upon him under the heading of "The Services." Mr. William Hales Hingston, M.D., of Montreal has been made a Knight, and Mr. John Christian Schultz, M.D., LL.D., late Lieutenant-Governor of the Province of Manitoba, has been made a Knight Commander of the Order of St. Michael and St. George. The chief medical officer in the island of Malta, Mr. Salvatore Pisani, M.D., receives a Companionship of the same Order.

HYDROPHOBIA IN YORKSHIRE.

RABIES in dogs still prevails in its old haunts in Lancashire and Yorkshire, though it is present in other parts of England and also in Ireland. It is no wonder, therefore, that cases of persons who have been wounded by really rabid or suspected dogs, and who have been hurried off to Paris to undergo preventive inoculation, are frequently recorded; while a death from mad dog-bite is now and again brought under our notice. The most recent of these fatal accidents occurred quite lately, and according to the report received it presents some rather unusual, though not by any means novel, and instructive features; and it is also the more painfully noteworthy from the fact that the victim was brother of Mr. Nunneley, senior surgeon of the Leeds Infirmary. From the evidence given at the coroner's inquest, held at that institution on May 20th, it seems that the deceased was bitten or scratched by a dog towards the end of last December, though the injury was so slight that no importance was attached to it. Early in January the animal was ill, and on being examined by a veterinary surgeon was found to be "out of sorts," and it is stated that no symptoms of rabies were present, yet for some reason or other it was considered advisable to have it destroyed, perhaps because it had the reputation of being naturally savage, though this is not, we believe, a characteristic of its breed—the dachshund. Mr. Nunneley (the victim) cut one of his hands with a piece of glass in March, but the wound was neglected and tedious in healing, and lately there was some pain in the cicatrix remaining. Two days before his death he complained to his brother of being unwell, the chief symptoms being slight difficulty in breathing and swallowing; on the following day he was much worse, and died in the evening. The medical

witnesses were of opinion, from the symptoms, that death was due to hydrophobia, though they considered the latent period between the infliction of the injury and the manifestation of the malady to be much longer than is usually the case. The veterinary surgeon stated that the dog, though it showed no symptoms of rabies, was savage, and a necropsy revealed no indications of that disease. The deceased was inoculated in Headingley, and on May 20th a dog suffering from rabies was brought from that place to the surgery of this veterinary surgeon in Leeds; it was said to have bitten a person some time ago. The points to be noted in the above painful case are the very trifling nature of the injury by which the rabific virus found admission to the circulation, the apparent freedom of the dog from rabies, and the rapidity with which death took place after the symptoms set in. Had rabies been suspected in the dog it should have been kept alive until its condition was ascertained—adopting all possible precautions against its doing damage, of course; and a very brief time would have settled the question, as rabid dogs live only a few days after the symptoms are developed. The prolonged latency is, of course, another matter to be noticed, though it is not at all infrequent, and many instances are to be found in which it has been much more protracted. It is greatly to be desired that more energetic and effective measures should be taken to suppress this most distressing and awe-inspiring disease of man and beast in the United Kingdom; for with the present measures, as has been so often insisted upon, we shall never succeed in getting rid of it, and such cases as the one now noticed will inevitably occur. Human life may not, in the opinion of some people, be of so much value pecuniarily as that of animals, but here we have both at stake, and this might induce the Board of Agriculture to have recourse to similar measures to those adopted for the stamping out of, say, the contagious pleuro-pneumonia of cattle, a disease that could not be transmitted to mankind, and yet was got rid of, though at an enormous expense in money and great public inconvenience.

AMYOTROPHIC LATERAL SCLEROSIS.

IN the spring number of *Brain* Dr. Mott publishes a very full account, both clinical and pathological, of a case of this disease. When Dr. Charcot first directed attention to the subject he described this as a deuteropathic form of progressive muscular atrophy, meaning by this name that he regarded the affection of the motor cells on which the muscular wasting depended as a secondary result of the sclerosis which was present in the pyramidal tracts. In this country and in Germany, however, some of the leading observers, and more especially Dr. Gowers, insisted that the difference between this and progressive muscular atrophy was only one of degree, and that in all cases of progressive muscular atrophy there was sclerosis of the pyramidal tracts. It is quite conceivable that in certain cases the sclerosis in the pyramidal tracts may be so slight as not to show itself in the usual clinical phenomena of lateral sclerosis, while in others it may be so extensive and so severe that even the muscular atrophy which is present fails to mask it, and so, in addition to the wasting of muscles, we have in such a case the spasticity and exaggerated reflexes which are characteristic of lateral sclerosis. Dr. Mott's case is interesting because of its completeness, and more particularly because of the very exhaustive and careful microscopic examination which he has carried out. The patient was a woman aged thirty-nine who for five months before her admission to hospital had been troubled with a feeling of cold in the right leg and a sense of weight in walking. The weakness gradually increased, affecting also the right arm and later the left leg, and after that the left

arm. Very great wasting of the muscles of the limbs accompanied the weakness, the deep reflexes were all exaggerated, the sphincters were unaffected, and there was no sensory impairment anywhere. The wasting increased, the thoracic muscles became paralysed, bulbar symptoms were superadded, and the patient died rather more than a year after the onset of her symptoms. At the necropsy no distinct naked-eye changes were noted in the central nervous system except the wasting of the central convolutions of the brain. On microscopic examination of these convolutions numbers of granulation corpuscles were found, while sections in the occipital lobes failed to reveal any. Many nerve fibres were also noticed to have disappeared, and the large pyramidal cells were absent. Degenerated fibres were also found in the internal capsule, in the crus cerebri and the pons, and in the pyramidal system of fibres, and the pyramids and pyramidal tracts in the medulla and cord were much degenerated. The cells of the hypoglossal, the lower facial, and the spinal accessory nuclei were also found to be affected, and some had disappeared. In the spinal cord, besides the sclerosis in the pyramidal tracts, crossed and direct, already alluded to, the anterior horns were atrophied, and the anterior and internal groups of cells had disappeared in the cervical region. In the dorsal cord also the anterior horns were atrophied, but Clarke's column was unaffected. In the lumbo-sacral cord likewise the anterior horns were atrophied, and the wasting and degeneration of cells affected chiefly the anterior and internal groups of cells. The anterior roots and the peripheral nerves showed numerous degenerated fibres, while the posterior roots were unchanged. It will thus be seen that the whole motor tract showed signs of degeneration, and Dr. Mott expresses the opinion that a simultaneous degeneration of the upper and lower segments of the motor path took place, a view which he thinks is justified by the clinical history, as well as by a study of the manner in which the different parts of the nervous system were affected. If the disease depended upon a chronic inflammation it is not easy to conceive any reason for its limitation to certain groups of cells in the cord and the complete escape of Clarke's column. If, however, it is regarded as a degenerative process affecting the motor path, the course of the disease not only in this case, but in others widely different, is explained. If, for example, the incidence of the degeneration is chiefly on the lower segment, the symptoms of progressive muscular wasting will be more obvious; while, if the incidence is mainly on the higher segment, then the symptoms of spasticity will be very evident, and the case will answer more to the descriptive term "amyotrophic lateral sclerosis." We congratulate Dr. Mott upon the care and skill with which he has examined a very interesting case, and upon the light which, by means of its study, he has been able to throw upon one of the numerous vexed questions of neurology.

THE PREVENTION OF OVERLAYING.

THE deaths of two more children smothered in bed formed the subject of an investigation last week in the Liverpool coroner's court. A singular fact observed in connexion with both of these cases was the recurrence of this apparent accident in two families a second and a third time respectively. In the circumstances it was natural and right that the coroner's jury should return an open verdict, at the same time severely censuring the careless parents. The question of motive, however much we may wish to exclude it, cannot be entirely omitted in dealing with cases of this kind. Let us grant that they are, for the most part, of accidental causation, and still the mere fact that some hundreds of infants are annually suffocated by overlaying in London alone is enough to prove inexcusable neglect or mismanagement on the part of parents and the need of providing some

appropriate corrective. Repetitions of the same offence twice or oftener in one family argue thus much at least. The reprimand administered by the coroner and his jury will not fail, we hope, to impress once more on all who have the charge of infant children the absolute necessity of providing them with separate sleeping places. Law has of late years gone far to ensure the protection of children. It has made abundant provision against their being cruelly used, overworked, or systematically neglected. It has, nevertheless, been singularly apathetic as regards the danger of overlaying, to which infants are still constantly exposed. Surely this fact is enough to constitute a ground of intervention and to warrant the imposition of a sufficiently deterrent penalty.

FILTRATION AND FEVER.

A VERY important statement relating to the efficiency of the Pasteur-Chamberland filter in warding off water-borne diseases occurs in the report of the Minister of War recently presented to the President of the French Republic, and published in the *Journal Officiel* dated April 11th. It will be remembered that on the increase of typhoid fever in the French army some years ago measures were taken to ensure the purity of the water-supplies. That water used for drinking purposes was the origin of the disease had been clearly proved, and the remarkable reduction in the number of cases of typhoid fever since these steps were taken, which in the majority of instances consisted in the application of the Pasteur-Chamberland filter to existing supplies, affords ample confirmation upon this point. Thus, the contamination of the water-supply of Avesnes raised the number of cases from 2 to 3 per year to 105 in 1891; after the installation of Pasteur-Chamberland filters it was reduced to 1 in each of the three following years. The epidemic at Auxerre in 1862 attacked 129 men; these filters were installed and the number was reduced to 1 in 1893 and 1 in 1894. At Melun, where the water has always been polluted and is extremely bad, the number of cases in 1889 was 122, and since the application of this filter has fallen to 15, 6, 2, 7, and 7 respectively for the succeeding years. In the present year the filters were stopped through frost, and 28 of the cavalry who then drank unfiltered water were attacked with typhoid fever, while no case occurred among the infantry, who during this period drank only tea. The Cherbourg garrison had 110 cases in 1888 and 119 in 1889; these filters were installed in 1890, and the number of cases for the following years were 21, 8, 11, 3, and 3. At Dinan the annual average number of cases for the three years before Pasteur-Chamberland filters were supplied was 278, being in the following years 1, 2, 3, and 1. Typhoid fever existed constantly in the garrison of Lorient, the number of cases being 179 in 1888 and 171 in 1889. These filters were supplied during 1890, and the number of cases fell to 58 for that year and 2, 2, and 1 for the following years, rising in 1894 to 11 on the temporary use of an unfiltered water at that time considered pure, but subsequently condemned. Up to the present time typhoid fever has remained constantly present among the civil population, which was also attacked severely by the cholera epidemic of 1893; 1 case also occurred in the garrison, contracted by a soldier when visiting his mother, who had died from the disease. Absolutely identical results in the mitigation of typhoid fever by the adoption of these filters have been noted from year to year at Montpellier, where the number of cases was reduced from 391 to 49, and then to 14; at Perpignan, it was reduced from 131 and 197 to 18; at Blois, Vendôme, Lure, Auxonne, Vitry, Tulle, Clermont-Ferrand, Chambéry, Privas, Arignon, Toulon, Nice, Tarascon, Béziers, Lunel, and so on. Dealing with collective figures, in the 15th Corps a previous total of 1018 typhoid

fever cases has been reduced to 337; in the 12th Corps the number has fallen from 616 to 68; at Angoulême from 326 to 25; and in the 18th Corps from 292 in 1888 to 38. The total number of cases of typhoid fever in 1886 was 7771, since which year it has constantly and progressively fallen till in 1894 it was 3060. This interesting report concludes that the more the individual cases which occur are examined the more clearly it is shown that soldiers who possess in their barracks a pure water-supply are none the less exposed to the infection of typhoid fever in inns, public-houses, restaurants, and other public places which they have so many opportunities of frequenting. Thus at Nantes, where typhoid fever had formerly been reduced to isolated attacks, the majority of the 17 cases which occurred in 1893, and the 30 in 1894, were orderlies who took their meals at inns where the water was shown to be contaminated by infiltration of sewage from cesspools. The same thing occurred at Saint-Germain, La Flèche, Blois, Maubeuge, &c., and it may be taken as the best explanation of the sporadic cases which, occurring throughout an army of 450 000 men, are always found to make up a substantial total, and probably can never be altogether avoided. These results, which are obviously of an eminently practical and satisfactory kind, are of great interest, also, in that they are strikingly confirmatory of the experience which has always been furnished in the bacteriological laboratory in regard to the efficiency of this filter in removing pathogenic micro-organisms from water.

PLAGUE IN ATHENS, ENGLAND, AND HONG-KONG.

WE have received a most interesting report upon the epidemic of bubonic plague in Hong-Kong during the year 1894. Plague is perhaps the one disease of which we have an authentic description at periods of time coming down from 430 B.C. to mediæval times (1348), and so through the Great Plague of London (1665-66) to this last epidemic in 1894. The character of the disease seems not to have altered in any way since the time of Thucydides. The sudden invasion and the other symptoms, the buboes and hæmorrhages, are all as plainly marked in the Hong-Kong epidemic as they were in Athens 2500 years ago. There is one similarity between the epidemic at Athens and the plague of 1665 which we do not find mentioned in Dr. Lawson's report of the Hong-Kong epidemic, so perhaps the same conditions did not obtain—i.e., the absence of other diseases. Thucydides says the season had been healthy, and *ei δὲ τις προέκαμνε τι ἐς τοῦτο πάντα ἀπεκρίθη*. "If anyone were ill in any way all (those complaints) resulted in this (the plague);" while Boghurst in his description of the plague in London tells us "almost all other diseases turned into the plague." A great deal has been said of the heroism of the military in cleaning out and pulling down infected houses, and we would be the last to make little of their bravery; for to face an unknown danger and one invested with a nameless horror, as is the plague, to a non-professional mind is a far higher act of bravery than the facing other sorts of physical peril. Still, we think that the manful way in which the various medical officers, nurses, and hospital officials stuck to their work deserves no less recognition, although it was no more than their duty.

THAMES PORT SANITARY AUTHORITY.

THE Thames port is at present the scene of some of that steadily maintained public health work on which the freedom of this country from imported infection is so largely dependent. It is quietly and continuously carried out by day and by night, but it is only on special occasions that it is heard of and that it receives the recognition which it merits. During the last few weeks its usefulness has more than once

been prominently shown, as vessels have arrived in the Thames, which, after leaving the cholera-infected ports of South America, have had one or more attacks of that disease on board at some time during the voyage. Every such vessel is carefully examined by Dr. Collingridge or his deputy medical officer; the crew and passengers, if any, are examined; those who may be suffering from diarrhoeal symptoms of a suspicious type are temporarily removed to the port hospital at Denton; and such parts of the vessel as are deemed to need it, together with suspected articles, are disinfected. The vessel is then free to proceed up the river, enter dock, and discharge its cargo. This is a type of the work which has long been carried out by the port sanitary authority of London. It involves a considerable day and night staff, a hospital, steam launches, &c., and when it is remembered that the officers of the port authority of our metropolitan river have numberless other duties along both banks of the river, involving riparian districts in several counties, extending far up the river beyond the metropolis, and that they undertake all these duties without imposing any tax on the authorities and population abutting on the river, there can be no doubt that the services they render to London, and incidentally to the country, are deserving of public recognition and thanks. Again and again has the metropolis been saved from dangerous infection owing to the admirable organisation at the mouth of the Thames, and much the same may be hoped to occur again during any cholera prevalence this year, whether in one or other hemisphere or continent. Incidentally we may remark that the unity of London, which is now so much talked of, could hardly bring into being any improvement of this work; for the port sanitary authority of London not only takes in all the Thames waters within the metropolitan area, but extends the area of its action and jurisdiction far beyond. It begins at the Nore where the river is bounded by Kent and Essex, and includes the Middlesex and Surrey portions of the Thames to a considerable distance above the metropolis; and the whole service is not only efficiently performed, but is all paid for out of corporation funds. Londoners would here, at least, have nothing to gain by unification.

MEDICINE AND THE FINE ARTS.

M. ANDRÉ BROUILLET, the painter of the celebrated "Leçon Clinique," has completed another work with a medical motif. It is entitled "Un Coin du Pavillon de la Diphtérie à Trousseau" and comprises the portraits of several men whose names are household words throughout the entire civilised world. The following description of this masterpiece is from the facile pen of Dr. Marcel Baudouin, who was favoured with an early view:—"The scene is enveloped in the light of a fine autumn day, which throws into vigorous relief the forms of the personages represented. On an iron cot lies a chubby-cheeked, plump-limbed infant, while standing close at hand the *chef de service*, clad in working garb and wearing on his head the characteristic *calotte*, is in the act of injecting into the tissues of the small patient a whole syringe of the beneficent serum. The individual thus depicted is Dr. Molzard. Bending over the child we see the superintendent, Madame Gigot; and standing at the foot of the bed are MM. Chaillou and Martin. Finally, to the right, with his elbow resting on a small *étagère*, is Dr. Roux, clothed, like the others, in the classic white blouse. With an anxious eye he surveys the operation; but already the glimmerings of hope are perceptible in the expression of his eyes. When this scene was depicted the efficacy of the remedy had not been so fully tested as it has been since. The painting is blue in tone, and pervaded by that luminosity specially affected by the artist, who is not only an

able draughtsman but also a master colourist. His canvas without doubt will be the *clou* of the whole *Salon*, and we hasten to felicitate our friend and compatriot very sincerely." No doubt the skill of the artist fully merits the high eulogium passed by Dr. Baudouin; nevertheless, it may be questioned whether art is served by being employed as a method of depicting with painful realism scenes from the hospital ward. The public will be attracted to the picture neither on account of its artistic merits nor of its portraiture of eminent members of the medical profession, but on account of the fascination which such subjects always have for the curious. In this country it may be doubted whether the selection by an artist of subjects of this nature could possibly excite approval, and that a work of this class would ever be exhibited on the walls of Burlington House is in the highest degree improbable. But, whether owing to our insular prejudices or to a fundamental difference in taste, the British and French conceptions of art and its mission have never been quite the same. —

THE CHINO-JAPANESE WAR AND THE PRICE OF CAMPHOR.

JAPAN has refused to reconsider the cession of Formosa. The Chinese have been compelled to hand over the island to the Japanese, who have appointed a viceroy and will no doubt soon make their own arrangements with the native Malayan population. The *Spectator* adverts to a curious incident in connexion with this cession, which, it states, will directly affect every druggist and manufacturer of projectiles in Europe in consequence of camphor being produced only in Japan and Formosa, and of the use that is made of it in medical practice and in the composition of all the new explosives. The Japanese have, our contemporary states, limited and taxed the export of camphor, and its cost is therefore going up and may attain a high price; but if the Japanese push their advantage too far the *Spectator* thinks that science will avenge herself and provide a substitute.

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE.

DR. TUFFIER gives an interesting account of a case where surgical interference caused complete disappearance of all symptoms of the disease, which had resisted all other kinds of therapeutic treatment. The patient was a young woman aged twenty-seven, who had suffered with the malady for seven years and its beginning was marked by a cystic enlargement of the right lobe of the thyroid gland, which was soon accompanied by severe exophthalmos and the other usual symptoms. Iodine injections, tapping, and electrical treatment were all tried in vain, and the patient became so ill that she could not work, and, in addition, showed signs of distress from the pressure which the enlarged thyroid gland was producing on the trachea. It was then decided to perform partial thyroidectomy, and this was successfully accomplished, with the result that the general symptoms rapidly disappeared, the woman now being in good health and able to work. The exophthalmos also almost entirely disappeared and no other unpleasant symptoms have followed. Dr. Tuffier believes the success of the operation to lie in partial removal of the gland, which he thinks gives better results, both immediate and future, than complete extirpation of the organ.

LAY DIAGNOSIS AT WORCESTER WORKHOUSE.

THE Tewkesbury guardians have been instrumental in bringing to light what appear to be somewhat unsatisfactory methods of procedure at the Worcester workhouse. The guardians in question complained to the Local Government Board that a man suffering from skin disease—apparently scabies—was in effect refused medical advice at Worcester workhouse, and this in spite of the regulations as to casual

paupers, which provide that in the event of illness the master or superintendent of the casual ward should obtain the attendance of the medical officer. In this case the pauper, who was an inmate of the casual ward, requested to see the medical officer; he was, however, taken to the infirmary nurse, who, on her own responsibility, is reported to have administered medicine and even to have expressed the opinion that the man was in a fit condition to leave the institution. On quitting the workhouse the patient appears to have proceeded to Tewkesbury, where he was admitted into the workhouse and treated until well. It is difficult to regard this case as an isolated one, and we are tempted to generalise and say *ex uno disce omnes*. Whoever may be to blame in this instance it would certainly appear that the nurse in venturing to prescribe and to express what was practically a medical opinion acted *ultra vires*. A little knowledge is a dangerous thing, more especially when the possessor of it applies it to the differential diagnosis of skin eruptions. This, then, is another of the channels by which disease is spread amongst us, whether it be scabies or small-pox, and it may be that practices such as these have had something to do with the very substantial part which tramps have in recent years taken in the dissemination of variola.

ANTRAL EMPYEMA OF TUBERCULOUS ORIGIN.

A CASE of antral empyema, apparently of tuberculous origin, is recorded by J. Kekwick in the *British Journal of Dental Science* of May 15th. The patient, a woman aged thirty, complained of the usual symptoms indicative of antral empyema. The left upper second bicuspid was extracted and a free opening into the antrum made through the socket. For twelve months local treatment, combined with change of air and the administration of tonics, was carried out, but to no avail, the patient's condition remaining practically unchanged. The pus being of a curdy character and the history of the patient led to a suspicion of tubercle, &c., and on the discharge being examined microscopically, the tubercle bacillus was found in large quantities. Constitutional treatment for tubercle, combined with the insufflation into the antrum every day of powdered iodoform, lead to rapid improvement in the patient's condition, the discharge becoming less and the hectic condition which the patient had commenced to acquire being lost. The following reasons are given in support of the diagnosis: (1) the chronic course of the case, with no local causes such as loose sequestra; (2) the tuberculous character of the pus; (3) the amenability of the disease to iodoform; (4) the history of the patient (uncle died from phthisis; sisters suffering from phthisis; no signs of tubercle in the patient herself, but a queried history of tuberculous cervical glands—cicatrices); and (5) the bacilli in the pus which was washed directly out of the antrum through the nose.

THE PHARMACEUTICAL SOCIETY.

WHETHER or no it is because this society has come into greater prominence of late in connexion with the commendable activity it has exercised in repressing the indiscriminate sale of poisons and in watching over the conduct of practising pharmacists, there was an unusually large and influential company present at the annual dinner, held in the Whitehall Rooms of the Hôtel Métropole on May 21st, and it must be a source of considerable satisfaction to the members of this important and evidently prosperous society to find that they are vigorously supported by the leaders of all branches of science. The medical profession, to begin with, was very strongly represented by the President of the General Medical Council, Sir Richard Quain, Bart.; the President of the Royal College of Surgeons of England, Mr. Christopher Heath; the medical officer of the Local Government Board, Dr. Thorne Thorne, C.B.; Professor Burdon Sanderson, Sir Walter

Foster, M.P., and Sir Dyce Duckworth; while the learned societies were well represented by Professor Michael Foster, M.D., Secretary of the Royal Society; Professor A. Vernon Harcourt, F.R.S., President of the Chemical Society; Dr. Stevenson, President of the Society of Public Analysts; Dr. Russell, President of the Institute of Chemistry; Sir Frederick Abel, President of the Imperial Institute; and Professor T. E. Thorpe, President of the Society of Chemical Industry. In replying to the toasts (most of which were proposed from the chair by Mr. Carteighe, the President of the Pharmaceutical Society, and which included "The Houses of Parliament," responded to by the Right Hon. J. Bryce, M.P., President of the Board of Trade; "The Medical Profession," acknowledged by Sir Richard Quain and Mr. Christopher Heath; and "Science" by Professors Michael Foster and Vernon Harcourt) the speakers gracefully acknowledged their indebtedness to pharmacy and admitted also the importance to the community of the existence of a society such as the Pharmaceutical. Dr. Thorne Thorne proposed the toast of the society in a speech in which he confessed that, though he had to do with preventive rather than with curative medicine, he was none the less convinced of the value of drugs in therapeutics. An interesting and very successful gathering terminated with the toast of "Our Guests," to which Professor Burdon Sanderson, Sir Dyce Duckworth, and Dr. W. J. Russell replied in suitable and congratulatory terms.

INFECTIOUS HOSPITAL FOR CREWE.

A LOCAL government inquiry was held last week at Crewe by Dr. Sweeting on an application by the town council for power to borrow £8000 for the purposes of erecting a hospital for infectious diseases. The isolation of small-pox cases did not arise, since the town council have a small separate hospital for that purpose. Amongst the objections raised to the proposal was the fact that certain sums of money had been spent in maintaining the small-pox hospital during years when no cases of that disease had occurred and during one other year when the attacks admitted had been only two in number. It never seems to have occurred to the objector that the annual cost of an isolation hospital corresponds very much to a premium of insurance against infectious disease, and that to grumble because the premium is paid in years when there is no such disease is much the same thing as to grumble at having to pay a fire insurance premium during years when the building insured is not burned down. And as to a payment of £66 in one year when two small-pox cases were isolated, we can only ask what would have been spent in the borough if the cases had not been isolated and an epidemic had resulted? The other objections related mainly to the amount asked for being extravagant and the site not being the most suitable one. The evidence on this score was strongly refuted, and the question of its value may well be left to the central authority. In the meantime, we are pleased to note this evidence of sanitary progress on the part of the Crewe corporation.

TWO CASES OF CEREBRAL ABSCESS.

In the last number of the *Neurologisches Centralblatt* appears a short abstract of a paper by Dr. Nasse, which was originally published early in the year in the *Berliner Klinische Wochenschrift*. The first case was that of a man forty-three years of age who had received a perforating wound of the skull, and who eleven days after the accident experienced difficulty in speaking, and twitching of the mouth. He became apathetic, with slight fever and a pulse of 60. The diagnosis of abscess was arrived at, and the patient was trephined. The dura mater was perforated, and softened brain substance was extruded through the hole. An abscess was reached in front of the anterior

central convolution and evacuated. After the operation the general condition of the patient improved, but the facial paresis and the aphasia remained for a time, and right-sided general weakness was superadded. These symptoms, however, gradually subsided and a complete cure was effected. The second case was equally satisfactory. It was that of a boy aged six on whose head a piece of wood fell, and a nail in it was driven deeply into the head on the left side. There was vomiting on the day of the accident, and three days later interference with speech and twitchings on the right side. The general condition was good. Six days after the accident trephining was performed, and a piece of softening was found as large as a pigeon's egg in which were a number of bone splinters. After the operation the twitchings ceased, the aphasia disappeared, and the progress was uninterrupted.

THE DIFFUSION OF SMALL-POX.

THE Registrar-General tells us that there were in London in 1894 only 89 deaths registered from small-pox as compared with 206 in the preceding year, and that of these 89 24 were in vaccinated and 43 in unvaccinated persons, the state of vaccination of the remaining 22 deceased persons not having been ascertained. We further learn that of the vaccinated individuals not one was aged under five years, as against 26 in the unvaccinated class. In London in the fortnight ended last Saturday there were only some score of recorded cases of small-pox, and the number of patients remaining under treatment in hospital was at the close of each of the two weeks identical—namely, 27—not 1 death being registered; indeed, only 3 fatal cases have occurred since the beginning of March. The suburban districts have been free from the disease, and Bedford has had but slight continuance of the malady, cases having occurred in two or three instances only. Birmingham also retains the freedom from small-pox of which it has had such a large share in the past two years, and the southern midlands have been happily saved from any experience of invasion, except here and there a stray attack; but further north, Derby is passing through a somewhat severe outbreak of small-pox, which has in the two weeks numbered 30 or more cases, 22 occurring within the space of five days, and 30 patients being under treatment in the borough hospital on Saturday last. The original case seems to have been a tramp from near Ashbourne, who is stated to be responsible for the infection of 23 persons in the town of Derby, including three police constables who assisted in his removal to court on a charge of vagrancy and to the workhouse, wherein he died half an hour afterwards, he having been sent thither by the Bench out of charity in consequence of his condition. But all this time his illness had not been diagnosed as small-pox, nor indeed until death had supervened. Then two nurses at the workhouse caught the disease in laying out the body, a barmaid at a public-house where the man had called also developed the disease, and several inmates of two lodging-houses where he stayed have likewise developed small-pox, and other persons in different parts of the town, but mostly in the vicinity of the lodging-houses, have been notified as suffering from small-pox. The hospital at Little Chester contains fifty beds, and it is intended to erect temporary accommodation if this should unhappily prove necessary. In the meantime the health officials are doing all in their power to minimise the chances of the spread of the epidemic. Not far away—at Ripley—there have been two cases of the disease discovered in two lodging-houses, the one in the person of a man who has been sent to the Derby Hospital and the other in a child, the lodging-house having been ordered to be closed. One or two attacks have occurred in and around Liverpool in the last fortnight, and other towns in Lancashire, as Bolton and

Wigan, have had to deal with odd cases, as also Manchester, the infected person being removed to the Clayton Hospital. In Dublin matters have certainly improved of late, and in the two weeks ended May 18th there were but 15 and 12 admissions respectively to hospital, the 61 patients under treatment a month previously having decreased to 44, though there have to be added to the latter number 35 convalescents in hospital at Kilmalnam. Only one death took place in the two weeks, of a person aged over twenty years and vaccinated. These data serve to show that the epidemic is on the wane in the city.

THE BORDEAUX CONGRESS OF GYNÆCOLOGY, OBSTETRICS, AND PÆDIATRICS.

THE Congress of Gynæcology, Obstetrics, and Pædiatrics, which was to have been held at Bordeaux on Aug. 12th, is to take place four days earlier—namely, on Aug. 8th. Medical men desirous of taking part in the congress are desired to signify their intention of so doing as soon as possible to the secretary, Dr. Lefour, Rue Duffour Dubergier, 11, Bordeaux.

THE INCORPORATED MEDICAL PRACTITIONERS' ASSOCIATION.

THIS young association has acquired strength in the course of the past year under the vigorous guidance of Dr. Eady, who has now retired in favour of a provincial president—Mr. George Jackson, F.R.C.S. Eng., of Plymouth. Its membership has increased, especially in the provinces. One of the members justified the existence of the association as a distinct society on the ground that the British Medical Association was giving too little attention to the interests of men in general practice. This view is scarcely tenable, but it is worthy of note by the larger association. The questions which chiefly occupied the association were those of the medical aid associations and the Midwives Registration Bill. A necessity for some legislation with regard to midwives was admitted, but the feeling was in favour of highly trained nurses rather than midwives proper. A deputation was appointed to wait on the General Medical Council on the subject of medical aid associations and kindred devices for sweating medical men. The executive committee of the Council have considered this request, but have declined to recommend the Council to receive the deputation, seeing that the Council has already considered and reported on the subject of such associations. Among other features of the association are an insurance department and an arbitration board. What is wanted in the profession is a strong *esprit de corps* which will lead to united action not only in large centres but in smaller ones. A cordial coöperation between such associations and the medical authorities would help much to preserve the prestige of the profession. An account of the annual meeting and dinner of the association will be found opposite.

At the Levée held at St. James's Palace on Monday last the following gentlemen were presented to H.R.H. the Prince of Wales on behalf of Her Majesty the Queen: Dr. Allchin, by the Duke of Westminster, K.G.; Dr. T. Lauder Brunton, by Sir Trevor Lawrence, Bart.; Dr. Radcliffe Crocker, by Sir John Russell Reynolds, Bart. (Physician to the Household); Sir John Eric Erichsen, Bart., and Sir John Russell Reynolds, Bart., by the Earl of Rosebery, K.G. (First Lord of the Treasury); and Mr. Christopher Heath, President of the Royal College of Surgeons, by Lord Ribblesdale.

We understand that there is a somewhat severe outbreak of typhoid fever in Plumstead and Woolwich, attributable, it is alleged, to milk contamination.

At a meeting of the governors of the Middlesex Hospital on May 28th Mr. Leopold Hudson, F.R.C.S. Eng., aural surgeon to the hospital, and assistant surgeon to the Hospital for Sick Children, Great Ormond-street, was elected assistant surgeon to the Middlesex Hospital, in succession to Mr. Andrew Clark, who has been recently appointed surgeon.

THE INCORPORATED MEDICAL PRACTITIONERS' ASSOCIATION.

THE annual meeting of this Association was held at the Holborn Restaurant on Thursday, May 23rd. Among those present were Dr. G. J. Eady (President), Mr. George Jackson, F.R.C.S. (President-elect), Dr. J. W. J. Oswald, Dr. F. H. Alderson and Mr. George Brown (Vice-Presidents), Mr. R. J. W. Oswald and Mr. Frank Greaves (hon. sec.), Dr. Bedford Fenwick (hon. treasurer), Mr. J. B. Cook, Dr. J. Pollock Simpson, Dr. Mark Sharman, Mr. A. G. Beale, Mr. H. Rainsford, Mr. J. L. Callaghan, Dr. Rivers Willson, Dr. J. W. O'Brien, Mr. A. Primrose Wells, Dr. Fletcher Beach, Dr. R. M. Benton, Dr. R. Paramore, Dr. Andrew Murray, Mr. H. Banks, Mr. A. Kisch, and Mr. M. Cursham Corner.

The annual report stated that the number of members had been nearly quadrupled during the past twelve months, and whereas formerly the majority resided in the metropolis there was now a very large proportion who practised in the provinces, in Scotland and Ireland. The debt-collecting department had obtained a fair measure of success. The sale and transfer of practices department had been thoroughly organised, and was now available for the assistance of members. The legal assistance department secured from the solicitor to the Association first-class legal advice and assistance at much reduced charges. There had been no necessity for a formal arbitration during the past year; but in various cases the Council had advised upon differences which had arisen between members and other practitioners, or other persons outside the profession, and in all but one of these cases the advice had been adopted and further trouble prevented. In several instances members had insured their lives or property through the agency of the Association, and had thereby saved themselves a considerable sum, while the funds of the Association had also benefited to a similar extent. The Council considered that the dangers to which the poor were at present exposed at the hands of ignorant and incompetent midwives were too great to be ignored, and it therefore recommended the members to authorise the Council to carry out a scheme for the improvement of the education and control of a new class of workers, in the shape of obstetric nurses who shall not be certificated until they are properly trained and efficient, and who will be required to work directly under the supervision of medical men.

Among the resolutions discussed at the meeting and unanimously carried was one proposed by Dr. Bedford Fenwick, and seconded by Dr. Alderson, approving of the scheme suggested by the Council for the better education and control of obstetric nurses, and authorising the Council to carry the same into effect.

On the motion of Mr. George Brown, seconded by Mr. George Jackson, the following resolution was passed *nem. con.*: "That this meeting considers that the Bill at present before the House of Lords would, if passed into law, be fraught with the greatest danger to the public, and especially of the poor women of the labouring classes, who would thus be misled into believing that women qualified under this Act were really skilled practitioners of midwifery. This meeting considers that such legislation would largely tend to undo the good effects secured by the Medical Act, and would be harmful to the whole community by placing the practice of midwifery upon a lower level of skill and efficiency than that required from other branches of the medical art."

On the motion of Mr. A. G. Beale a resolution strongly approving of the action of the Council with regard to medical aid associations, and appointing a deputation to wait upon the General Medical Council and present to that body petitions signed by registered medical practitioners against the action of medical aid associations, was also carried.

Dr. Eady, Mr. Brown, Mr. Beale, Dr. Oswald, Mr. Greaves, and Dr. S. Jarman were elected to form the deputation.

A resolution authorising the Council to promote such a scheme of home hospitals and out-patients' dispensaries as may seem to be most suitable to the needs of general practitioners and the public was unanimously adopted.

Dr. Eady then delivered his valedictory address, in which he referred to his successful year of office and the help he had received from the Council and officers of the Association. He briefly passed in review the work of the year and called attention to the insurance department, which helped both the insured and the Association. He also referred to the success of the arbitration board. Referring to the friction between medical officers of health and practitioners, he thought a little good sense and kindly forbearance would effectually smooth over any difficulty that might otherwise arise. In conclusion, he paid a tribute to the memory of Dr. Henty, who had gone to his rest full of years and honour, and who had left behind a name that would always linger in the hearts of those who knew him.

Dr. Eady then conducted Mr. Jackson to the presidential chair, and the meeting came to a close with the usual compliments to the chairman.

THE DINNER.

The members present afterwards adjourned to the Queen's Salon for dinner, where Dr. Eady again took the chair. He was supported by Sir Walter Foster and Dr. J. G. Glover, and many friends and members of the Association, besides those present at the previous gathering, rallied round the retiring President.

The loyal toast of "The Queen" having been duly honoured,

Dr. Eady proposed the toast of the evening, "The Incorporated Medical Practitioners' Association." After referring to the satisfactory position of the Association, he passed to the question of the Midwives Bill. He was sorry to say a few members of the profession had separated themselves from the great majority, and because the latter did not think with them it was assumed that they did not want legislation on this important point. That was an error. They were fully alive to the evils of the present day and were anxious for legislation to remedy the existing state of things. They objected to the Midwives Registration Bill because it would in no way tend to mitigate those evils, but, on the contrary, would increase them tenfold and foist on the general public a large number of practitioners belonging to an uneducated class who would know just enough to be dangerous, and if licensed would with difficulty be constrained or controlled. There were no penal clauses in the Bill, and no penalty was provided in cases of a complicated character. Still-born children would become more common and other offences against the law would be rife. The Association had not confined itself to finding fault with the Bill, but had adopted an alternative scheme. The present Bill started with the assumption that a midwife was a necessity. He maintained that a midwife was not a necessity. What had been done for sick nursing must be done for obstetric nursing. This was not to be done by three months' training. A better class of women must be taken and given a longer and better training. The scheme referred to did away with a midwife and substituted for her the obstetric nurse. Two years' general training as a sick nurse and one year's special training were proposed.

The President-elect, Mr. George Jackson, spoke of the harm that the medical aid associations had done in Plymouth.

Dr. Bedford Fenwick proposed "The Visitors," coupling with the toast the names of Sir Walter Foster and Dr. James Grey Glover.

Sir Walter Foster, M.P., Parliamentary Secretary to the Local Government Board, in responding, said he had made a special effort to be present at this dinner in order that he might show the interest which he took in the work of the Incorporated Medical Practitioners' Association, and to apologise for his absence on previous occasions. No man had a greater interest than he had in the thorough training of women to look after their sisters in the peril of labour, and he was sure that all would desire to place them in a better position; but he looked upon the present Bill as a severe blow not only to the public, but to the profession. The Midwives Registration Bill, he thought, was a contravention of the Medical Acts of 1886. He had laid it down in a Minute, which he hoped the Local Government Board would be guided by, that no woman was to be recognised by the Local Government Board

as capable of attending midwifery cases unless she was fully qualified in medicine, surgery, and midwifery. If she had not those three qualifications she must attend cases only under the direct superintendence of a medical officer. He (Sir Walter Foster) stated that he had given notice to the General Medical Council that at their meeting in the ensuing week he would move the following resolution: "That this Council, while desiring to improve the education, training, and control of women who act as midwifery nurses, is unable to give any support to the Midwives Registration Bill, inasmuch as that Bill would give women a legal status to undertake the sole charge of cases of midwifery, for which no persons are qualified unless qualified in medicine, surgery, and midwifery." Speaking of the competition among medical men, he said all attempts to raise salaries of medical officers were rendered futile. Cases were sent up to him where he considered the fees inadequate, but if he told the local bodies so they replied that they could have half a dozen medical men at the same price. As long as this ineane competition went on no Minister, however strong his desire might be to benefit them, could do any good.

Dr. Glover congratulated the Incorporated Medical Practitioners' Association upon the satisfactory state of its affairs. He wished to touch for a few moments on the question of the Midwives Bill, but he could not help feeling that there were other matters of importance besides this Bill, and he did not wish them to lose sight of other things which were eating into the dignity and character of the profession. There were members of the profession pursuing methods of practice on a huge scale which would very seriously alter its whole character. With regard to the Midwives Bill he recognised with pleasure the amount of unanimity among them. He was deeply sensible of the evils caused by untrained midwives, and some remedy must be found. He recognised the respect that had been paid to the General Medical Council, and he believed that that body would not wantonly disregard the interests of the profession. It was suggested that the women should have three years' training like the highly trained nurse. But such highly trained nurses were the luxury of the rich. The only way to supply them to the classes who now employ midwives would be to make midwifery free, like education, and throw it on the rates. This would be a serious course, and one of very questionable advantage to the profession. If the provision of a humble class of midwives acting in strict subordination to medical men is a blow to the profession, the provision of a class of highly trained nurses would be "a staggering blow."

Other toasts followed, and the meeting was brought to a close.

THE ROYAL MILITARY TOURNAMENT.

THE Royal Military Tournament now being held at the Agricultural Hall, Islington, promises to prove in every way as successful as its predecessors and in many respects to surpass them. From a spectacular point of view it is a decided success, and we sincerely hope that when the Tournament closes on June 6th we may say as much from a financial point of view. To Colonel Onslow and to Colonel Tully and his committee the highest praise is due, not only on account of the efforts they have put forth to please the public, but also for the way in which they have endeavoured to minister to the health and comfort of the troops.

The main object of the Royal Military Tournament is to provide money for military charities; but apart from this the amount of good that must be done to the soldier throughout the British army, both moral and physical, is almost incalculable. Only the men who have proved their ability at local tournaments are allowed to compete at the Royal Military Tournament, and thus a spirit of emulation is fostered among the troops for the honour; and this increased interest in feats of strength, skill, and precision must necessarily improve the moral tone, for intemperance of living and high physical skill are incompatible. No colonial troops have entered for competition this year, but almost all branches of the services are represented, and a small contingent of the Egyptian army, or fellahien soldiery, under the command of Sergeant-Major De Vere, a past instructor in the gymnasium at Aldershot, who go through some gymnastic exercises, show what excellent soldiers they make when properly trained.

It is invidious to single out any one item from the programme, but the grand historical military pageant and the display by non-commissioned officers deserve at least a passing word of notice. In the former the 3rd (King's Own) Hussars and the Buffs march past dressed in the various costumes worn by the respective regiments from Stuart times to the present day. Both foot and horse soldiers are represented, and the pageant, in regard to which no efforts have been spared to make it historically accurate, down to the minutest details of the horses' bridles, reflects great credit upon its organisers and makes it one of which they may be justly proud. The other display to which we have referred is under the command of Colonel Fox, and illustrates the system of physical exercise as taught to recruits and soldiers in the army. Major Greatrex is also responsible for the training. About sixty of the 140 non-commissioned officers now under training at the head-quarter gymnasium at Aldershot, representing different branches of the service, go through a drill which develops in a scientific manner, not only the muscular strength, but also the intellectual faculties. It would be difficult to explain the *modus operandi* of the exercises on paper, and it must suffice to say that while equal attention is paid to the upper and lower limbs all the muscles of the trunk are brought into play. After six months' training (working five hours a day) the chest measurement on an average increases by three inches, and a most desirable sense of interdependence is developed among the men. To a certain extent they each act independently; the system teaches them to support each other under difficulties, and, besides generally "sharpening" them up, we are assured that the moral effect is great, and that the men feel no tendency to indulge in those intemperate habits to which the ordinary soldier is too often unfortunately addicted. The object of the training is that the men shall qualify at the end of six months for a gymnastic certificate in order that they may go back to their regiments as instructors. Every regiment is obliged by regulations to have at least three of these instructors on its strength. This regulation will have the effect in a very short time of showing a great improvement in the physique of our army. Colonel Fox endeavours to maintain in his men that *mens sana in corpore sano* which shall fit them for the exigencies of modern warfare, and the rapidity of movement and precision of action displayed by the men under his command seem to show that that end has been attained.

From time to time during the fortnight that the Tournament is in progress as many as 1500 troops, representing every branch of the service, occupy the building, and 300 horses are in requisition. This year, as last, the men are quartered in cubicles instead of in tents, and as far as is possible everything is done to ensure their comfort. The mess-rooms are well provided, and the food and cooking excellent. One thing that seems to have escaped attention, however, might easily be remedied. The cubicles are erected in the galleries immediately below skylights, and the rays of the sun pouring down on the men must only tend to discomfort, especially after a hard contest in the arena. Draw-blinds, or even a strip of canvas, would obviate this, and the cost would be infinitesimal. The sanitary arrangements are almost as perfect as can be desired, the latrine accommodation is sufficient, and the water-supply is quite satisfactory. There is a little more ventilation than last year, but in this direction there is still much room for improvement. What is really wanted is a steam punkah, or something of that kind, to force the air through the building, and until this is supplied the ventilation cannot be considered satisfactory. Another point that calls for attention is the non-efficient lighting of dark corners. In the stables peat moss is used in the place of the ordinary litter, and so well are they kept that the absence of effluvia is remarkable. The foul litter is cleared away twice a day, and the scavenging, which is very systematic, takes place between 5 and 6 A.M., when the horses are out for exercise, and the last thing at night. This year some of the horses have been stabled outside the building upon some adjacent ground, and this necessarily is an advantage from a hygienic aspect. In order to lessen the risk of fire the forage is stored outside the building.

Surgeon-Major Tyrrell, A.M.S., who is assisted by Surgeon-Lieutenant Cameron, A.M.S., is the principal medical officer in charge of the troops, and the remarkably good health of the latter speaks well for the ability of these officers. Surgeon-Major Tyrrell has made every effort to induce the authorities

to adapt the building to hygienic requirements, and in a very great measure his efforts have been crowned with success. There has been only one hospital case, diagnosed as influenza, and this has been sent to the divisional hospital. No serious accidents have occurred. The temporary hospital is advantageously situated outside the building, where almost perfect quiet can be maintained, and is fitted with two beds and all the necessary medicines and appliances required in a hospital of this kind. An orderly is in constant attendance.

The ambulance department is under the command of Surgeon-Major Lawless, Army Medical Reserve, and ample arrangements are made to treat any accident that may happen to the audience. A trained orderly is always stationed close to the spectators with a bag containing splints, dressings, &c., and there are two dressing stations in the Arcade, which have been fitted up with all necessary material by Messrs. Evans and Wormull, 31, Stamford-street, for male and female cases. Two trained orderlies are in attendance at the male station, and Miss C. J. Woodward and Miss A. Woodward are the Sisters who minister to the female cases.

NATIONAL HEALTH SOCIETY.

A MEETING of this society took place at Grosvenor House on May 11th. Dr. Edward Seaton, after commenting on the excellent course of instruction given by the lecturers appointed by the society and the success achieved by Surrey students, proceeded to offer a few remarks under the following heads—viz.: (1) the advantages of popular teaching in matters relating to public health; (2) rural sanitation as part of popular teaching; and (3) village nurses.

1. *The advantages of popular teaching in matters relating to public health.*—This he illustrated by past experience in relation to improved dwellings for the working-classes. In 1875 he had, at the suggestion of a well-known citizen of Nottingham, Mr. Richard Esfield, inaugurated lectures on health, especially in relation to the influence of dwellings and the necessity for sufficient light and air about them. At that time the town council of Nottingham was attempting to deal with unhealthy areas (rookeries) by street improvements. That was a highly important work, but it was still more important that the dwellings of the future should be built with sufficient air space about them. The Local Government Board had issued an admirable series of model by-laws to ensure this, but it needed the force of local public opinion to secure their adoption and observance. Land-owners and builders were a powerful class, and they were generally more than sufficiently represented on town councils and local governing bodies. Their views did not always coincide with those of the guardians of the public health in the essential matter of light and air about dwellings. For that reason public opinion needed to be created or aroused. He (Dr. Seaton) found that popular lectures were most useful for this purpose. He could not but think that in London they were much wanted, as he had in the course of inquiries made about four years ago, under the directions of the Home Office, become acquainted with cases where lofty buildings, arranged on the "flat" system, had been allowed to be erected—in the East-end—under conditions that made it impossible that the lower dwelling-rooms could ever be penetrated by the sun's rays. There were other illustrations he could give of the advantages of popular teaching as to public preventive measures; as an instance he mentioned the notification of infectious diseases, a system which had been adopted throughout the whole county of Surrey in a voluntary manner.

2. *Rural sanitation as part of popular teaching.*—He then spoke of the views of Miss Florence Nightingale as to the need of giving instruction to cottagers and members of parish councils respecting the best methods of safely disposing of refuse matters—liquid and solid—so as to prevent country dwellings and their immediate surroundings from becoming unhealthy. Dr. Poore had partly dealt with this subject in his most interesting and valuable book on Rural Hygiene. He (Dr. Seaton) believed the subject to be one of vital importance to dwellers in the country. It was constantly before him in connexion with river pollution, which had from the first engaged the attention of the Surrey County Council, whose responsible adviser and official he was. The

remedy always suggested for a state of things almost invariably found in the country was the establishment of drainage or sewerage schemes. But although everyone was agreed at the present day as to the necessity for such provision in towns, it by no means followed that sewerage systems were equally advantageous in sparsely populated rural districts. At any rate, the circumstances of the closely built town and the village or parish consisting of clusters of houses situated widely apart were so obviously different that it should be seriously considered whether they did not call for essentially different treatment. It was for that reason that he would urge on the society the desirability of extending the sphere of their teaching so as to include all matters pertaining to rural sanitation.

3. *Village nurses.*—He came now to the brief consideration of a rather delicate topic—delicate because of the many and complicated considerations involved. He understood from conversation with Mr. Macan that among the supporters of technical education were some who thought it practicable to make the nursing of the sick and of women in childbirth part of the system of technical education carried on under the auspices of the society. As he had no connexion with medical practice he might speak more freely than others on this matter. He felt it right to remind them that nursing was an art not to be acquired without a long, special, and systematic training. The difference between the art of the nurse and the profession of the medical man was, of course, essential, and needed not to be insisted on for a moment. But there was this in common—they both required a long course of special training. There were at the present day some lady members of the medical profession, and he hoped there would be many more. They would be the first to understand the difference between the person who had merely succeeded in acquiring a considerable amount of technical knowledge or skill and the trained nurse who, by discipline or associations, had in addition learnt to understand the ethics (if he might so use the word) of her business. Cleanliness and tidiness, personified as they were by the nurse, were naturally objects of aspiration among the members of the society; but, if he rightly understood the views of some, the considerations he had named were, he thought, not out of place on the present occasion, his remarks being intended as words of caution on a subject of great practical importance.

ROYAL MEDICAL BENEVOLENT COLLEGE.

At the annual general meeting, held on May 30th, at the offices of the College in Soho-square, the following candidates for pensionerships and foundation scholarships were reported by the scrutineers—Dr. M. Baines, Dr. Frederick Taylor, and Colonel Gordon Watson—to have obtained the largest number of votes, and were declared to have been duly elected:—

Pensionerships.

1. Mathias, Dinah G. ...	6750	3. Rust, Thomas P. ...	4956
2. Moffat, Elizabeth G. ...	5463	4. Guy, Eleanor, M. C. ...	3330

Foundation Scholarships.

1. Arnold, Alwyne C. ...	7736	5. O'Meara, Hubert ...	4456
2. Snow, Edward L. R. ...	7650	6. Mac Sheehy, James G. J. ...	4340
3. Cummins, Arthur G. ...	5935	7. Kinder, Kenneth ...	3935
4. Twining, Daniel O. ...	4685	8. Jenkins, Reginald L. ...	3609

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chelsea Urban Sanitary District.—In his annual report for 1894 Dr. Louis Parkes, in dealing with the water-supply of Chelsea, refers to the unsatisfactory character of the Thames at Hampton Court as a source of drinking water for London. He points out that in every month of the year the water of the Thames was described as turbid and yellow, while in January it was reported to be "very turbid and pale-brown," and in November "extremely bad." It cannot be doubted, Dr. Parkes states, that at times the raw material on which the water companies are required to operate is in a

highly polluted condition, and he insists upon the paramount importance of continual care and watchfulness in conducting the filtration. All will agree with him on this point—those who have the immediate control of the filter-beds are in a position of enormous responsibility, as also are those who examine the water from time to time bacteriologically and chemically.

Stoke Newington Urban Sanitary District.—That the value of compulsory notification is not limited to the control of the cases notified is patent to all, but it is nevertheless well from time to time to note some of the other advantages which the knowledge obtained by notification affords. Dr. H. R. Kenwood, in reporting on his district for 1894, points out that the notifications received during the last forty weeks of the year were instrumental in bringing about a sanitary inspection of 117 houses, in which 46 "grave" and 56 "slight" sanitary defects were remedied. He also draws attention to the fact that notification leads to the discovery of sanitary defects at a time when the occupiers of infected houses are easily influenced to procure improvements. Dr. Kenwood states that in 1894 he examined the exudation from a severe sore-throat and found no diphtheritic bacilli, whereas forty-eight hours afterwards he detected them in large quantities. He mentions this case as an illustration of the danger of arriving at a conclusion from one examination only. As regards water-supply, Dr. Kenwood reports that the greater part of Stoke Newington is supplied with water on the intermittent system, and the cisterns, he states, are often in very undesirable positions.

Surbiton Urban Sanitary District.—Among the cases of enteric fever incidence in Surbiton during 1894 was one which the medical attendant considered was probably contracted from eating oysters, the patient's companion, who apparently consumed oysters at the same time, being subsequently attacked by the disease. It would have added to the interest attaching to these two cases if the dates of the consumption of the oysters and the attacks had been given. It is the accumulation of cases such as these which may eventually form a valuable body of evidence. Dr. Owen Coleman in his report also draws attention to the number of typhoid fever cases developing in this country which in all probability were contracted abroad. As he points out the gradual feeling of malaise &c. with which attacks of enteric fever usually begin leads the traveller to turn his steps homeward and to swell the typhoid fever attack and death-rate in his own country. Dr. Coleman has, he states, met with cases which contracted the disease in Vienna and even in Chicago.

The Strand Urban Sanitary District.—Commenting upon the subject of oysters and enteric fever in his annual report for 1894, Dr. Francis Allan observes that out of nineteen cases of the disease notified in his district no less than seven were employed in hotels and restaurants, and one of these persons was also an oyster merchant. Amongst the more important drainage works carried out in the Strand during 1894 we are glad to note the re-drainage of the Gaiety and Lyceum Theatres and the Royal Italian Opera House. The Strand sanitary authority have now a shelter under Section 60 of the Public Health (London) Act available, but Dr. Allan adds that "it is a general experience that persons do not care to make use of such accommodation."

Bournemouth Urban Sanitary District.—Mr. Philip Nunn reports that in May, 1894, a sharp outbreak of variola was occasioned by a man who had apparently contracted the disease near London. The notification of the case only reached Mr. Nunn when the patient was in the pustular stage of the disease. This case gave rise to twelve others, one being, we regret to see, that of a laundry maid at the fever hospital. Mr. Nunn states that during a period of eighteen years he has had to contend with eight outbreaks of small-pox, and that in every case the disease has in the first instance been imported from a distance. The practice of granting sanitary certificates to householders has, he thinks, increased the confidence of visitors to Bournemouth. During 1894 135 applications for such certificates were made to the sanitary authority, and the sum of £140 5s. was received in fees.

Bristol Port Sanitary District.—During the year 1894 a permanent port sanitary authority for this district was constituted by the Local Government Board, and Dr. D. S. Davies gives in his report a capital sketch map showing the limits of the port sanitary authority's jurisdiction. The arrangements made during 1894 for securing the medical inspection of vessels arriving from suspected ports were the same as those in the preceding year, and day and

night inspection was carried out by the port medical officers from Aug. 8th to Oct. 28th. Although no actual case of cholera was introduced into the port of Bristol during 1894 several vessels arrived from infected ports in which there had been suspicious cases of diarrhoea. The report of the chief port sanitary inspector, Mr. Dimond, which is appended to Dr. Davies' report, shows that very good work is being done in this district in the matter of the sanitary supervision of vessels.

Uxbridge Urban Sanitary District.—Mr. William Rayner, in his current annual report, draws attention to the fact that in some instances he found samples of water in his district contaminated by sewage and gas. This contamination he regards as being due to defective service pipes, some of which have been laid at least forty years. By the in-suction of specifically polluted filth into defective service pipes Mr. Rayner accounts for some cases of enteric fever which occurred in his district.

Ormskirk Rural Sanitary District.—Mr. Herbert Peck, in urging his sanitary authority to provide proper isolation accommodation, reminds them that without such a hospital and proper means of disinfection full benefit from the compulsory notification of infectious disease cannot be obtained. As an illustration of the difficulties with which he has to contend, Mr. Peck cites instances where infectious disease might probably have been controlled had isolation provision been procurable. In one case a trained nurse contracted enteric fever from one of her patients, owing, it appears, to the impossibility of taking proper precautions. It certainly seems very unfair to place a medical officer of health in a position where he is expected to control the spread of infectious disease without a hospital and without a disinfecting apparatus. The information conveyed by the Infectious Disease (Notification) Act will not enable a medical officer of health to do much for his sanitary authority unless the Act is supplemented by efficient machinery.

Mile-End Urban Sanitary District.—Mr. Thomas Taylor furnishes in his current report a *résumé* of Dr. Hamer's report to the London County Council on the sanitary condition of the district. The inquiry, Mr. Taylor states, was instituted owing to the report of the Jewish Board of Guardians for 1893, which raised questions as to the adequacy of the sanitary staff. Dr. Hamer made a very thorough inspection of the district, and his report revealed the fact that much good work had been and is being done. The whole tenour of Dr. Hamer's report, Mr. Taylor states, conclusively shows that the report of the Jewish Board was "misleading and highly coloured."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6432 births and 3529 deaths were registered during the week ending May 25th. The annual rate of mortality in these towns, which had been 17.7 and 17.6 per 1000 in the two preceding weeks, further declined last week to 17.4. In London the rate was 16.3 per 1000, while it averaged 18.2 in the thirty-two provincial towns. The lowest rates in these towns were 9.5 in Croydon, 10.1 in Portsmouth, 11.8 in Leicester, 12.0 in Gateshead, and 13.1 in Huddersfield; the highest rates were 21.8 in Salford, 23.2 in Bolton, 25.1 in Burnley, 26.0 in Manchester, and 27.3 in Liverpool. The 3529 deaths included 354 which were referred to the principal zymotic diseases, against 351 and 304 in the two preceding weeks; of these, 95 resulted from whooping-cough, 84 from measles, 65 from diphtheria, 55 from diarrhoea, 29 from "fever" (principally enteric), 26 from scarlet fever, and not one from small-pox. No fatal case of any of these diseases occurred last week in Gateshead; in the other towns they caused the lowest death-rates in Leicester, Oldham, Swansea, and Birkenhead, and the highest rates in Salford, Liverpool, Bolton, Plymouth, and West Ham. The greatest mortality from measles occurred in Plymouth, Cardiff, Newcastle-upon-Tyne, West Ham, and Bolton; and from whooping-cough in Norwich, Sunderland, Bolton, Salford, and Plymouth. The mortality from scarlet fever and from "fever" showed no marked excess last week in any of the large towns. The 65 deaths from diphtheria included 37 in London, 5 in West Ham, 4 in Wolverhampton, 3 in Liverpool, and 3 in Birmingham. No fatal case of small-pox was registered either in London or in any of the thirty-two large

provincial towns. There were 29 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, May 25, against 34, 33, and 27 at the end of the three preceding weeks; 7 new cases were admitted during the week, against 8, 6, and 4 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1503, against 1413, 1438, and 1446 on the three preceding Saturdays; 214 new cases were admitted during the week, against 107, 179, and 185 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 247 and 240 in the two preceding weeks, rose to 245 last week, but were 67 below the corrected average. The causes of 60, or 1.7 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Nottingham, Bradford, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Birmingham, and Leicester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18.7 and 21.1 per 1000 in the two preceding weeks, declined again to 20.2 during the week ending May 25th, but exceeded by 2.8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14.5 in Paisley and 15.2 in Edinburgh to 23.1 in Glasgow and 23.3 in Aberdeen. The 584 deaths in these towns included 19 which were referred to diarrhoea, 18 to measles, 17 to whooping-cough, 4 to scarlet fever, 3 to diphtheria, 3 to "fever," and not one to small-pox. In all, 64 deaths resulted from these principal zymotic diseases, against 59 and 66 in the two preceding weeks. These 64 deaths were equal to an annual rate of 2.2 per 1000, which was 0.5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 30 and 24 in the two preceding weeks, further declined to 18 last week, of which 4 occurred in Aberdeen, and 3 each in Glasgow, Edinburgh, and Leith. The deaths referred to whooping-cough, which had been 17 and 14 in the two preceding weeks, rose again to 17 last week, and included 12 in Glasgow. The fatal cases of scarlet fever, which had declined from 7 to 1 in the three preceding weeks, rose again to 4 last week, of which 2 occurred in Glasgow and 2 in Edinburgh. The 3 deaths from diphtheria were within one of the number in the preceding week, and were all recorded in Glasgow. The fatal cases of "fever," which had been 3 and 5 in the two preceding weeks, declined again to 3 last week. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 98 and 109 in the two preceding weeks, declined to 103 last week, but exceeded by 14 the number in the corresponding week of last year. The causes of 43, or more than 7 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27.4 and 27.7 per 1000 in the two preceding weeks, further rose to 28.5 during the week ending May 25th. During the past eight weeks of the current quarter the death-rate in the city has averaged 30.0 per 1000, the rate during the same period being 17.6 in London and 18.8 in Edinburgh. The 191 deaths registered in Dublin during the week under notice showed an increase of 5 upon the number in the preceding week, and included 7 which were referred to the principal zymotic diseases, against 7 and 5 in the two preceding weeks; of these, 3 were referred to whooping-cough, 2 to small-pox, 1 to "fever," 1 to diarrhoea, and not one either to measles, scarlet fever, or diphtheria. These 7 deaths were equal to an annual rate of 1.0 per 1000, the zymotic death-rate during the same period being 1.7 in London and 1.5 in Edinburgh. The fatal cases of whooping-cough, which had declined from 4 to 1 in the three preceding weeks, rose again to 3 last week. Two deaths were referred to small-pox, making 12 deaths from this disease registered within the city during the present quarter. The 191 deaths in Dublin last week included 31 of infants under one year of age and 54 of persons aged upwards of sixty years; the

deaths both of infants and of elderly persons exceeded those recorded in any recent week. Four inquest cases and 2 deaths from violence were registered; and 77, or more than a third, of the deaths occurred in public institutions. The causes of 14, or more than 7 per cent., of the deaths in the city last week were not certified.

HEALTH OF THE SMALLER ENGLISH TOWNS IN 1894.

One of the most interesting features of the annual summary for 1894 recently issued by the Registrar-General is the statistical information it contains bearing upon the health and sanitary condition of sixty-seven towns other than the thirty-three great towns specially dealt with in the weekly and quarterly returns. The thirty-three great towns, including London, had an estimated population of nearly ten millions and a half in the middle of 1894, and the estimated population of the sixty-seven other large towns was at the same date rather more than three millions and a half. Thus the estimated population of the 100 largest English and Welsh towns in the middle of last year exceeded fourteen of the thirty millions estimated to be living in England and Wales. The smallest of these sixty-seven towns are Dover and Scarborough, with populations respectively estimated at 34,349 and 34,913. The three largest towns are Middlesbrough, with 83,278; South Shields, with 87,007; and Ystradgynodwg, with 102,683 inhabitants respectively. The mean birth-rate in the sixty-seven towns in 1894 was 30.5 per 1000, 0.9 above the mean rate in England and Wales and almost identical with the rate in the thirty-three larger towns, which was 30.7. The birth-rate in the several towns ranged from 18.4 and 18.9 in Bournemouth and Hastings, to 37.8 in Wigan, 39.6 in Warrington, and 39.7 in Longton. The mean recorded death-rate in the sixty-seven towns did not exceed 16.0 per 1000, and was 2.1 below the mean rate in the thirty-three larger towns. It is also especially worthy of remark that the mean rate in these sixty-seven towns, with populations ranging between 34,000 and 87,000, was in 1894 0.6 per 1000 below the mean rate in the whole of England and Wales. The recorded death-rates in the individual towns showed, however, a very wide range; the lowest rates were 9.5 in Hornsey (which is rather a London suburb than a town in the ordinary sense of the word), 10.0 in Bournemouth, and 10.3 in Eastbourne; while the rates ranged upwards to 20.7 in Merthyr Tydfil, 21.8 in Exeter, 22.0 in Longton, and 22.1 in Dudley, these being the only towns among the sixty-seven in which the death-rate last year exceeded 20 per 1000. It may confidently be asserted that in no other country in the world could such satisfactory urban mortality statistics be published. The mean death-rate from the principal zymotic diseases in the sixty-seven towns was 1.68 per 1000, against 2.44 in the thirty-three larger towns, and 1.76 in England and Wales. The fatality of small-pox, measles, and diphtheria in the sixty-seven was less than half that recorded in the thirty-three towns, and the death-rate from scarlet fever, whooping-cough, and diarrhoea also compared very favourably with that in the larger towns. Fever, principally enteric, was the only disease of this class that was more fatal in the small than in the larger towns; the highest fever-rates were 0.56 per 1000 in Barnsley, 0.59 in Bury, and 0.63 in Bootle. Scarlet fever showed fatal prevalence in Bootle and Warrington; diphtheria in Rochdale; and measles in Exeter and Dudley. Judged by the test of infant mortality the returns from the smaller towns were relatively more unfavourable, the deaths of infants under one year to 1000 registered births averaging 143, against 152 in the larger towns and 137 in England and Wales; it corresponded with the London rate of infant mortality. In the several towns this infant death-rate ranged from 92 and 94 in Dover and Bournemouth, to 187 in Ystradgynodwg, 188 in Hanley, 192 in Stockport, and 236 in Longton. Thus the rate of infant mortality in Longton, a pottery town, was in 1894 not far short of three times as high as it was in Dover and in Bournemouth. The health condition of Longton is conspicuously unfavourable, whether judged by the gross death-rate, the zymotic death-rate, or the infant death-rate; the death-rate among persons aged upwards of sixty years is also exceptionally high. It may be hoped that these valuable and uniform statistics now published by the Registrar-General for 100 of the largest English towns may serve to stimulate local interest in sanitation in some of those towns in which the value of public health is even yet not fully recognised and the true economy of sanitary expenditure is not appreciated.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL MAJOR has embarked for Singapore to assume Charge of the Medical Staff in the Straits Settlements in succession to Brigade-Surgeon-Lieutenant-Colonel Hughes. Surgeon-Major Baker has been posted to Chatham; Surgeon-Major Morris to Alderney; Surgeon-Major Thomson to York; and Surgeon-Major Mulvany to Belfast. Surgeon-Captain Hughes has been transferred to Dublin, and Surgeon-Captain Forrest to Belfast. Surgeon-Captain Hickson has embarked for South Africa. Surgeon-Captain Wilson has arrived from the West Coast of Africa on completion of a tour. Surgeon-Lieutenant Milner has been transferred from Alderney to Portsmouth.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major J. Anderson, Civil Surgeon, Bareilly, is appointed to the Visiting Medical Charge of the Pilibhit District, in addition to his other duties. The services of Surgeon-Colonel J. H. Newman, M.D. (Bengal), Residency Surgeon and Chief Medical Officer in Rajputana, are placed at the disposal of the Home Department. Surgeon-Captain W. R. Clark, Civil Surgeon, is transferred from Ferozepore to Mooltan. Surgeon-Lieutenant Bray, A.M.S., has been transferred from general duty, Poona District, to general duty, Aden. Surgeon-Lieutenants Evans and McDonald have been posted to general duty, Deesa District. Surgeon-Captain E. C. Hare, now employed as a Supplementary Medical Officer in Assam, is appointed to officiate as Civil Surgeon, Lakhimpur, until further orders. Brigade-Surgeon-Lieutenant-Colonel Arthur Luke Hackett, Madras (Surgeon, 2nd District), retires from the service.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—C. Bradley to the *Herald*; J. P. Willis to the *Mosquito*; T. D. Halahan to the *Ripulse*; E. J. Fitch to Plymouth Hospital; and E. H. Meaden to the *Wildfire*.

ARMY MEDICAL RESERVE OF OFFICERS.

The undermentioned Surgeon-Captains, 5th Lancashire Volunteer Artillery (Southern Division, Royal Artillery), to be Surgeon-Captains: Henry Christopher Lampport, M.B.; James Arthur Rigby, M.D.

VOLUNTEER CORPS.

Artillery: 1st Kent (Eastern Division, Royal Artillery): Charles Macdonell Anderson, M.B., to be Surgeon-Lieutenant. *Submarine Miners*: *Royal Engineers*: Surgeon-Captain T. K. Dalziel, M.B., resigns his commission. *Rifle*: Galloway: David Duke Morro, M.B., to be Surgeon-Lieutenant. 4th Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant H. Marriott, M.B., to be Surgeon-Captain. 2nd Volunteer Battalion the Oxfordshire Light Infantry: Surgeon-Captain G. A. Edsall resigns his commission. 2nd Volunteer Battalion the Duke of Edinburgh's (Wiltshire Regiment): Surgeon-Lieutenant H. J. Mackay, M.B., to be Surgeon-Captain.

THE LEVÉE.

The Services were represented at the Levée held on Monday last by the following gentlemen, who were presented to H.R.H. the Prince of Wales on behalf of the Queen:—Surgeon-Lieutenant Campbell Boyd, by Colonel S. B. Bevington; Surgeon-Lieutenant Eustace Maude Callender, Civil Service Rifles (12th Middlesex), by the Earl of Albemarle; Surgeon-Lieutenant E. P. Dickinson, 1st Volunteer Battalion the Northampton Regiment, by Colonel the Earl of Euston; Surgeon-Captain Joseph Fayer, Royal Horse Guards, by Colonel Brocklehurst; Surgeon-Major E. H. Fenn, C.I.E., Scots Guards, on being made a C.I.E., by Colonel W. J. Gascoigne; P. B. Handyside, M.B., Surgeon R.N., by the Medical Director-General of the Navy; Surgeon-Major Knott, 3rd Volunteer Battalion the Hampshire Regiment, on promotion, by General H.R.H. the Duke of Connaught, K.G., &c.; Surgeon-Major Leahy, I.M.S., by Sir Gerald Seymour Fitzgerald; Inspector-General W. H. Lloyd, M.D., R.N., on appointment as Honorary Surgeon to Her Majesty, by the Medical Director-General of the Navy; Surgeon-Major-General Markley, A.M.S., on promotion and on being made C.B., by the Adjutant-General; Surgeon-Captain Penny, Indian Medical Staff, by the Secretary of State; Surgeon-Captain J. R. Roberts, I.M.S., by the Secretary

of State; Surgeon-Lieutenant Austen-Smith, I.M.S., by the Secretary of State; Surgeon-Lieutenant-Colonel R. G. Tatham, 15th Middlesex R.V.C., by Colonel Chambers; Brigade-Surgeon-Lieutenant-Colonel William Daniel Campbell Williams, Principal Medical Officer, N.S.W. Military Forces, by Lord Carrington, G.C.M.G.; Surgeon-Captain E. Wilkinson, by the Secretary of State; Surgeon-Lieutenant P. Macleod Yearsley, 16th Middlesex (London Irish) R.V., by Colonel Ward, C.B.

NATIONAL VOLUNTEER MEMORIAL TO SIR JOHN C. BUCKNILL, M.D.

The connexion of Sir John Bucknill with the Volunteer movement is well known, and by many he is regarded as the originator and founder of the Volunteer force in Great Britain. In recognition of his services in this cause he received the honour of knighthood on the occasion of Her Majesty's seventy-fifth birthday; and a memorial in the form of a monument of grey granite and Portland stone, rising twenty-five feet in height, has just been unveiled at Exeter by the Duke of Cambridge. The memorial, which is surmounted by a regal diadem in stone, is erected on the site of the castle supposed to have been built by the West Saxons, which offered such a powerful resistance to the Norman Conqueror. The monument is embellished with a medallion of Sir John Bucknill, and on the west side is the following inscription:—"Erected to commemorate the formation in Devonshire in 1852 of the Volunteer force of Great Britain, as a consequence of communications from John Charles Bucknill, M.D., F.R.C.P., F.R.S., to the Right Hon. Hugh Earl Fortescue, K.G., Lord Lieutenant of the county of Devon and of the county of the City of Exeter. In recognition of his services to the Volunteer movement the honour of Knighthood was conferred upon Sir John Charles Bucknill by Her Majesty Queen Victoria in 1894."

THE MEDICAL SERVICES AND THE BIRTHDAY HONOUR LIST.

We congratulate the medical department of the navy on the birthday honour which has been conferred upon the head of their service and tender also our hearty congratulations and best wishes to Sir James Nicholas Dick, K.C.B. The public medical services are, with the foregoing exception, conspicuous by their absence in the list of birthday honours bestowed on this occasion in recognition of meritorious or long services in connexion with the army and navy. As regards those officers who have been so prominently brought to notice in connexion with the siege and relief of Chitral, a special gazette will presumably be published later. Surgeon-Major Robertson might well, we think, receive some titular distinction for his exhibition of ability and fortitude in the heroic defence of Chitral; and the valour, coolness, and self-abnegation displayed by Surgeon-Captain Whitechurch—about whom Surgeon-Major Robertson says "it is difficult to write temperately," and with reference to whom Captain Baird expressed a dying wish that "Whitechurch should not be forgotten"—fully entitle him to the Victoria Cross; that is the opinion of those who are best competent to judge as well as the opinion of his countrymen generally.

SMALL-POX IN CALCUTTA.

It has been stated that the recent epidemic of small-pox in Calcutta was of a severer type than that of 1865, but the *Times of India* says that this has no foundation in fact. In the epidemic of thirty years ago the mortality was over 3700, while the total mortality in the recent outbreak was a little over 1500 in the town and suburbs of Calcutta. With regard to typhoid fever and other diseases of an allied etiology, the report of the health officer of Calcutta, to which our Indian contemporary is indebted for its information, is far less satisfactory. It will be remembered that Dr. Simpson was not satisfied with the sewerage system of Calcutta, and succeeded in inducing the municipality to obtain the services of Mr. Baldwin Latham to report upon the subject, which he did. We do not find, however, that anything has been done to improve matters. The town is said to have been growing much more unhealthy of late years in respect of these diseases.

THE INDIAN VIEW OF THE OPIUM REPORT.

The report of the Royal Commission on the opium question seems to be regarded as likely, after all, to do great good in the way of putting a stop to further agitation on the subject, as far, at least, as all reasonable, unprejudiced people are concerned. The average Englishman will, it is believed,

look at Mr. Arthur Pease's signature as the most noteworthy of the eight that are appended to the report. The inquiry was generally regarded in India as perfectly unnecessary, and under the circumstances of the financial straits of the Indian Government unwarrantable, but the thoroughness and results of the investigation, and the fact that India has not had to pay for it, have produced a great change of opinion.

ARMY MEDICAL EXAMINATION.

An examination of candidates for thirteen commissions in Her Majesty's Army Medical Staff will be held at the Examination Hall, Victoria Embankment, W.C., on Aug. 2nd next and following days. Application for admission to the examination should be made in writing without delay to the Director-General, Army Medical Department, War Office, London, S.W.

Surgeon-Captain Alcock, of the Calcutta Museum, has been appointed Medical Officer to the Pamir Commission.

Correspondence.

"Audi alteram partem."

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS.—In THE LANCET of May 25th you print a letter from Dr. Rentoul with what he appears to wish us to take as the opinion of counsel on the Midwives Bill, 1895. He published and gave wide circulation to a "counsel's opinion" on the last Bill, and the fallacies which formed the greater part of the opinion were promptly exposed and their arguments refuted by another lawyer. Many of the fallacies included in the original opinion are now again "trotted out"; but, as you observe, "'a case for counsel's opinion' is not the same thing as 'counsel's opinion,'" and it is open to grave doubt whether the "case" has ever received the sanction of a barrister. Some of the clauses contained in it, however, seem to call for remark from the authoritative way in which they are put forward. In the first place, it is not compulsory for a person to be on the Medical Register in order to "lawfully practise midwifery." On the other hand, the Midwives Registration Bill proposes to make it compulsory on all persons who wish to call themselves midwives or any similar name that they should be on the Midwives Register. Great importance is attached to this. It is not possible, apparently, to prevent people from practising as midwives, any more than people can be prevented from acting as medical men, and the next best thing is to prevent the confusion which will be caused by the assumption of any name like that of midwife. The Bill does not either "recommend the repeal of the Medical Acts," or does it "enact that a 'midwife' may practise midwifery without having studied either medicine or surgery." The Bill is intended to limit the practice of midwives to cases of a simple nature, and to place midwives under the restriction of rules of practice approved by the General Medical Council—neither limit nor rule is now applied to midwives' practice.

An old point is raised in Clause 5, that there is not sufficient material to train both pupil midwives and medical students. Dr. Rentoul distinguishes between these two classes, although he would have us believe that midwives can lawfully be placed on the Medical Register in spite of its being provided in Clause 4 of the Midwives Registration Bill, 1895, that a "certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Act, 1858, or the Acts amending the same."

In respect to the supposed deficiency in training material, special inquiries have been made at every training school for medical students in England, and the replies completely refute Dr. Rentoul's assertion. In addition, there has been no complaint at any time made by the authorities of the medical schools in respect to this point. Dr. Lovell Drage stated before the Select Committee, in 1892, if my memory serves me correctly, that St. Bartholomew's Hospital would suffer greatly in this respect. In reply to a query, the hospital authorities state they have an unlimited supply of maternity cases. As regards permitting men to be registered as midwives, perhaps Dr. Rentoul will remember that it was

especially pointed out by critics of one of the other Midwives Bills, that male unqualified assistants, if allowed to go on the Midwives Register, would be a very serious danger to the public and profession alike.

Dr. Rentoul makes an extraordinary number of incorrect remarks as to what is and what is not contained in the present measure. Provision is made for the supervision of midwives, for making rules for striking a midwife off the Midwives Register, for exceeding her duties, for judging her when accused of infamous conduct, for using instruments, for acting as a medical practitioner, and the other thousand-and-one inadvisable things a midwife may *now* do without let or hindrance, without pains or penalty, but which this Bill is expressly intended to meet. It is obvious—perhaps not to Dr. Rentoul—to say that if it were attempted to put into a Bill such as this one *all* the things a midwife might not do, even supposing such a disputable Bill to pass, any operation not specially mentioned would thereby be permitted to a midwife to perform. Dr. Rentoul objected to the word "operation," which appeared in another Bill (and he still quotes the clause in which the word appeared as showing the dire intentions of the backers of the Bill), yet he wishes to see the present Bill include a list of minor operations with implied permission to perform far more serious ones. Dr. Rentoul complains in his Clause 27 that no penalty is provided "should any person or persons other than those recognised by the Midwives Board lecture, examine, or grant a certificate to women which will qualify them to act as midwives," and yet in Clause 24 he says: "The Bill is not fair to midwives certificated and residing in Scotland and Ireland, as all such practising midwifery and using the title of midwife in England may be fined £5." I pass over the impossible conditions attached to the midwives in this clause to remark that the Bill is not intended to apply to either Scotland or Ireland, or to interfere in any way with either Scottish or Irish midwives.

I am, Sirs, faithfully yours,

F. ROWLAND HUMPHREYS.

South Hampstead, N.W., May 25th, 1895.

To the Editors of THE LANCET.

SIRS,—If in Dr. Pratt's letter in THE LANCET of May 25th we changed the words "woman," "midwife," and "midwifery" to man, doctor, and medicine, we might imagine ourselves to be reading a letter in opposition to the Medical Bill of 1858, and I doubt whether we should have approved the reasoning then. The arguments used for the one would apply also to the other. And why are we to be so fearful of the competition of the new midwife? I fear the opponents of this Bill do not credit the morals and methods of the medical profession, to which they belong, with a very high position or a very sure foundation if they believe that this competition will be injurious. We may be said to have been brought into competition with dentists and chemists, but, excepting in our pockets, I was not before aware that we suffered thereby. This has now become a public matter, and it behoves us as a profession to beware what arguments we use in discussing it. The public expect much of us, and we shall lose their help if we disappoint them and they see that we are influenced in our opinions and actions too largely by motives of sordid gain, and not by the highest considerations for the well-being of humanity. It is time now that we tried to come to some terms among ourselves as to what form we wish the measure to take, as otherwise there is a serious danger that the public may take it into their own hands and settle matters in a way that few of us approve. I have suggested elsewhere and in the columns of THE LANCET¹ that there is a middle course open to us, and the middle being proverbially the safest course I would ask both parties to this Bill to consider it. My suggestion is that the new registered midwives shall only be allowed to practise as the servants of some body such as a board of guardians, a nursing association, or a maternity charity, and that they shall there serve under certain stated regulations, including rules as to the advice and assistance of medical men. If we could agree on this salient point I believe the rest would be plain sailing.

I am, Sirs, yours obediently.

Freshford, May 23th, 1895.

CHARLES E. T. FLEMMING.

"ADENOID GROWTHS IN CHILDREN."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 25th there appears a paper by Dr. Eustace Smith on "Adenoid Growths in Children." He refers to that very interesting and obscure affection, infantile respiratory spasm, and, if I understand him correctly, states that in his experience it is always associated with, and due to, adenoid hypertrophy. In these cases he has "never failed to detect either actual vegetations or a thickened granular state of the post-nasal mucous membrane." He further asserts that if this unhealthy condition be remedied "the breath sounds soon recover their normal quiet." It is not my intention to enter into a discussion on the tempting subject of infantile respiratory spasm. Nearly all that can at present be said about it has been carefully stated by Dr. John Thomson in the *Edinburgh Medical Journal* of September, 1892. That it is a spasmodic and not a paralytic phenomenon is made certain by the periodic intermissions which occur in most cases, while the researches of Semon and Horsley make it highly probable that the stridor is due to cortical irritation. Adenoid vegetations are responsible for much evil and many symptoms, but it is extremely important that we should only ascribe to them phenomena which can be proved to be a direct result of the condition. To say that a child has some enlargement of the pharyngeal tonsil and at the same time laryngeal spasm proves nothing. In my own mind there still remain some doubts as to what is the normal size of the pharyngeal tonsil in young children. No doubt, however, Dr. Smith writes from careful observation, and I should, in conclusion, desire to ask him the following questions: (1) How many cases of infantile respiratory spasm has he observed? (2) How many were cured by treatment of the naso-pharynx? To establish a connexion the patient must have been immediately benefited by such treatment, for we know that the tendency in these cases is usually towards cure. I feel sure that a publication of the statistics on which Dr. Smith has based his statements will be looked forward to with much interest by many of your readers. I trust that he will see his way to giving them to the medical public immediately, if only in abbreviated form, for I feel sure that one always so accurate and careful would only have committed himself to the statements I have quoted on carefully recorded evidence.

I am, Sirs, yours faithfully,

Chester-street, Edinburgh, May 27th, 1895.

P. MCBRIDE.

CARAVAN HOSPITALS.

To the Editors of THE LANCET.

SIRS,—Seeing a notice in THE LANCET of to-day of a hospital caravan for infectious diseases, originated by Mr. James Wyllie, I think I ought to send you an account of a portable hospital for the same purpose which I arranged last summer for this district council. Like Mr. Wyllie, I procured a van fully sixteen feet long by seven feet wide, but, instead of using my van for the sick, I fitted it up as a kitchen, with dresser, drawers and cupboards, and an American cooking stove with hot-water attachment, so that there is always plenty of hot water for a bath or any other purpose. For the sick I have two Kadcliffe hospital tents with double walls and boarded floors, having four beds in each, so that I can accommodate eight patients; and I have a bell tent with two beds for the nurses, or nurse and servant. My hospital is fully equipped, and I think I have provided everything necessary for its purpose. When the hospital is not in use everything, excepting the floor-boards of the tents, which can be carried in an ordinary waggon, is stored in the van, so that there is no delay in transporting the hospital to any part of the district, and in two hours it can be erected and ready to receive patients. This hospital is, at the present time, in use at West Bergholt (about two miles from Colchester Railway Station), and I should be delighted to show it to any person who might desire to see it, on any day but a Wednesday, on his giving me notice of his visit. The tents are warmed by two paraffin stoves, and are very comfortable. During the first week they were in use the weather was, for a few days, very hot, and then suddenly we had a week of extremely cold days and nights. There was no complaint, however, of cold, but all the seven patients suffering from scarlet fever expressed themselves as being perfectly warm and comfortable. I send you by this post two copies of my annual

¹ THE LANCET, March 2nd, 1895.

report to this Council, and, if you look at page 8, you will find a short account of my portable hospital.

I remain, Sirs, yours faithfully,

Colchester, May 25th, 1895. JOHN W. COOK, M.D.

"THE PSYCHOLOGY OF ANÆSTHESIA."

To the Editors of THE LANCET.

SIRS,—I am much interested in Dr. Guthrie's critical remarks in THE LANCET of May 25th in answer to my letter in THE LANCET of March 23rd; but as there must be some 20,000 medical readers of your weekly journal in the British Isles and America I am surprised that Dr. Guthrie only has noticed my letter. There can scarcely be fewer than 1000 cases put under anæsthetics weekly, or say 50,000 a year in Great Britain, including midwifery and dental cases, and therefore, as I said before, the profession must be in possession of an enormous mass of evidence as to what patients say when so placed, and surely it must be important to discover what proportion of these 50,000 cases on recovery say that their impressions were that they had been out of their bodies.

In ordinary dreaming this impression is extremely rare, and the dreamers dream, not that they were out of their bodies, but that they fly with their bodies and get fixed in the dreadful grip of nightmare. Probably not fewer than 99 in the 100, on submitting to anæsthesia as a preparation for some operation more or less serious, are impressed with more or less anxiety and even awe, and if they dream, surely their dreams should be coloured by these sensations, and therefore it becomes the more surprising when we find that many of the dreams, instead of being terrible are celestial, and the visions are beheld "which eye hath not seen nor ear heard, nor hath it entered into the heart of man to conceive." Ordinary sleep and the condition of anæsthesia are not degrees of the same order, for out of the deepest sleep the subject can be awakened by the prick of a pin, but when under the influence of an anæsthetic the limbs may be amputated, and the patient simply smiles and dreams on. This condition is not one of sleep, but of trance, and trance is a condition outside of physiology to explain—a condition of the mind or soul independent of the body. The drowned man is altogether impervious to pain, because his soul or mind has been driven out of his body, and the patient whose lungs are filled with a foreign gas is in the position of a drowned man. But the drowned man may be resurrected by long-continued manipulations, and then he will often tell you, as in the case of those recovering from anæsthetics, that his dreams had been beatific. Dr. Guthrie says that my suggested method of experimental psychology would be that of "Philip sober appealing to Philip drunk," but I would answer that there is no proverb truer than *in vino veritas*. He when under an anæsthetic dreamed that "he was a great man driving in a grand carriage in the Row," but when the transcendental chemist, Davy, took anæsthetics he exclaimed prophetically, "Nothing exists but mind." The nature of the dream has a relationship to the character of the dreamer, and goes in the direction of showing that when we have shuffled off this mortal coil we only pass into a transcendental life and carry our individuality along with us.—I am, Sirs, yours truly,

Wimbledon-park, May 26th, 1895. GEORGE WYLD, M.D.

A SUMMER HOLIDAY FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Now that the holiday season is approaching, members of our profession after their hard winter's work will, in common with the general public, be contemplating where and how to spend their few weeks' well-earned rest. For many years past I have been in the habit of seeking a change in foreign climes, but last summer was persuaded to stay at home and try a tour round our "tight little island." Acting on this advice I joined the s.s. *Princess Louise* (one of Langland's steamers) Liverpool, on a Friday in July, and had what turned out a twelve days' perfect trip combining variety and rest—two essentials, I think, in a medical man's holiday. The places called at included Oban, Gairloch, Loch Eriboll (in Sutherlandshire), Aberdeen (with a drive up Dee side), Leith (with nine hours to visit modern Athens), Newcastle, Hartlepool, Hull, Southampton, Plymouth, Devonport, and Falmouth. The catering was of the best, the company most

agreeable, and the charge exceedingly moderate at £8 for the whole tour (including meals). I think that a holiday of this kind has only to be known to be appreciated by those requiring a change.—I am, Sirs, yours faithfully,
May 25th, 1895. FRANCIS W. GRANT, M.D., B.Sc.

INOCULATION FOR SNAKE-BITE.

To the Editors of THE LANCET.

SIRS,—The enclosed cutting has been copied, I believe, from a short note of mine appearing in the *South African Medical Journal* and the *Agricultural Journal* in February last. I shall be glad if you will direct my attention to similar practical observations, or even experiments, and their results—for, being cooped up in a country like this, I have little opportunity, except by reading your journal, of knowing what steps have been, or are being, taken in the direction my note suggests. It is my intention during next snake season to pursue a series of practical experiments with the view of endeavouring to discover whether it be possible to cultivate and attenuate a virus capable of inoculation, and rendering human beings safe from the effects of bites from at least one class of poisonous snakes hitherto considered so deadly in their character.

I am, Sirs, yours obediently,

S. CARTWRIGHT REED, M.D.

Herschel, South Africa, April 30th, 1895.

[ENCLOSURE.]

INOCULATION FOR SNAKE BITE.—Science has been making rapid strides in the discovery of poisons which counteract poisons, and diseases which are made to conquer themselves. The latest is the antitoxin for the cure of diphtheria, but something even later appears to be on the eve of discovery as a positive cure of snake bite, the following particulars are correct. Certainly they are worthy of investigation, and if the poison of the cobra can be cultivated and attenuated as to form a virus capable of inoculation and rendering human beings safe from snake bite, the boon would be invaluable. Dr. Cartwright Reed of Herschel says that two years ago a pointer dog was killing a cobra, and got bitten badly, with the usual severe symptoms of snake poisoning. Ammonia was used, and the dog recovered. A second dog was bitten, but milder symptoms followed. Both these dogs now go for snakes of all kinds, and get bitten about the lips especially. Last week one of these dogs got hold of a large hooded snake by the head, and the other by the body. The snake fastened upon the dog's lip in this case made it bleed, the other actually pulling the body in half. Five or six have been killed by them this season, but they seem both to be protected by the previous bites. A native was bitten twice in succeeding years. The first bite caused most severe symptoms of snake poisoning; the second bite, from a young fierce cobra, though apparently more severe than the first one, yet no bad symptoms, beyond a little local sore, followed. The doctor thinks that there must be something in the report by natives that when once bitten by a poisonous snake with marked symptoms of poisoning, there is no fear whatever from any subsequent bites.

"MEDICAL EVIDENCE AT INQUESTS."

To the Editors of THE LANCET.

SIRS,—I am obliged to you for inserting my letter of Feb. 22nd in THE LANCET of the 4th inst. and also for sending me a copy of your paper. All that seemed to trouble you before was my accepting a constable's evidence of a gunshot wound which, as I explained, was not correct, and now you raise a new point by stating that it would have been advisable to take the evidence of the medical man who first saw the wound. I have been candid with you and stated my reasons for taking the evidence of the medical man called at the inquest, and, being a lover of fair play, wish to know your reasons for making this new statement, and will thank you to insert them in your next issue along with this letter. Do you suggest that both practitioners should have been called, or that the one you refer to was the best to call? I think you should bear in mind that in this case there was no doubt as to the cause of death, and no two medical men could differ on that point, and it is the duty of coroners not to call more witnesses (medical or otherwise) than are absolutely necessary to assist in arriving at a proper verdict, otherwise they would be throwing the ratepayers' money away, and in many places the rates are too high already to indulge in this lavish expenditure.

I am, Sirs, yours faithfully,

H. W. MILLIGAN.

May 7th, 1895.

Coroner for Wigan.

* * In our original notice, under date Feb. 2nd, we expressed the opinion that the medical man who first saw

deceased should have been called in to give evidence. In a matter of violent death it is highly important that no facts should be missed that can possibly throw any light on the cause of death, and as to whether it was accidental, suicidal, or homicidal. Our text-books lay down that all surrounding circumstances and conditions should be observed and noted by the medical man as soon as he is called to the case, and to this we fully subscribe. Our information led us to understand that the constable's evidence as to the nature of the lesions was taken. If Mr. Milligan says this was not the case we accept his statement without the least reserve, and express regret that our remarks should have misrepresented the facts. We stated that the family medical attendant was called, but we understood that it was done with a view of throwing light on the probable state of mind of the deceased at the time of his death. In Mr. Milligan's letter published in our issue of May 4th he informed us that the practitioner in question arrived shortly after death and examined the wound, and that he gave evidence thereon at the inquest. Under these circumstances it must be conceded that Mr. Milligan took a reasonable course, and we regret that our notice should have conveyed an intimation to the contrary. At the same time, we cannot but think it would have been better to have taken the testimony of the medical man who first saw the deceased.—
ED. L.

COLLECTIVE INVESTIGATION IN LUNATIC ASYLUMS.

To the Editors of THE LANCET.

SIRS,—At a recent meeting of the Medical-Psychological Association it was decided to collect facts by pursuing in lunatic asylums the method of collective investigation. May I through your columns ask those medical officers of asylums who are willing to coöperate in the scheme to communicate their willingness to me?

I remain, Sirs, yours truly,

Catford, S. E., May 26th, 1895.

CHAS. MERCIER.

THE SWEATING OF MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Again and again some member of the profession returns to the charge in the battle against the degrading impositions which are forced upon us, and yet again the only answer of our representatives in the General Medical Council is a feeble *non possumus*. That it would be difficult and perhaps dangerous to interfere with the private arrangements between medical men and their patients may be taken for granted, but in public or semi-public appointments, not in the hands of medical men but run by syndicates and societies for their own profit, surely there would be no difficulty. All the General Medical Council has to do is to declare that such arrangements are "infamous in a professional respect," as, indeed, they are, whether the Council think so or not. The hiring of medical men on such terms is slavery in the specious guise of semi-charity. Cork has the courage of its opinions and has led the vanguard; will our somewhat weak-kneed Council come in at the last when the battle is almost won and claim the credit? Council or no Council, there are many of us who will go on agitating until some measure of reform of such glaring abuses can be gained, and every day some fresh recruit is enlisting for the fight for decency and respectability, if nothing more, in our financial relations with the public.

I am, Sirs, yours obediently,

May 27th, 1895.

J. B. PIKE.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—We have weekly gained evidence as to the workings of this company as compared with charitable provident dispensaries, clubs, &c., and the answers to my queries of March last have been clearly and lucidly evolved. What can be done to remedy the evils and abuses which exist

beyond dissociation from such by medical men individually? The medical practitioner is handicapped against charitable provident dispensaries and medical aid companies by reason of the restriction of the staffs of the former to a few, together with the just prohibition to advertise and tout. Under these existing circumstances he must join the company or else lose ground. But such should not be allowed to be the case. Organisation of the profession in these matters is required (Dr. Humphreys suggests a central coöperative medical association), but the General Medical Council through its representatives ought to safeguard the profession from its abuses, whether existing in hospitals, charitable provident dispensaries, medical aid companies, or commercial undertakings, and by their power, with the aid of legislation, rectify the existing abuses and degradation of the profession which are becoming so intolerable. We hear of coöperative drug stores, but not of coöperative legal associations; then why of the arts of medicine and surgery? There requires to be a thorough search into the whole matter and proper regulations should be made to meet the requirements of the times in which we live, and no one would be happier to assist in it than myself.

I am, Sirs, yours faithfully,

May 22nd, 1895.

INQUIRER.

"SMALL-POX IN CALCUTTA."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Gramshaw's inquiry in THE LANCET of May 25th, vaccination in India is not compulsory, neither would it be possible to make it so owing to the style of habitation of the natives and the caste prejudice of many of them regarding the females of their families. I do not know that any caste or creed look upon either small-pox or vaccination with particular disfavour. The former they certainly consider to be a form of wrath of one of their many gods. The difficulty in making vaccination compulsory exists in the fact that the majority of the poorer classes live in small mud huts, crowded closely together, and that they are constantly changing their location, no small number of them having no home at all, but simply sleeping and eating when and where convenient, and performing their scanty toilets in the same style. The registration of them would be about as easy as undertaking to separate the sexes of an ant-hill. Native servants will come to their daily household duties, look after one's children, clothes, and washing, and cook one's food, though all the members of their household are down with the disease. This is no doubt partly due to fear of losing their situations, but principally to the utter indifference of the native mind to the danger of any infectious disease.

I remain, Sirs, yours faithfully,

May 29th, 1895.

L.R.C.P.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday Fund.

YEAR by year the amount asked for in the contributions to this fund grows and swells in degree. £13,000 is the sum which the managers have put down this time for the public to realise. So far the payments into the bank justify the sanguine expectations of the promoters of the movement. Thus, on Tuesday last the total received at the bank was £10,809 16s. 10d., as compared with £9692 13s. 1d. at the corresponding period of last year. If this increase is maintained up to the time of the closing of the account it may be hoped that the contributions will reach the sum asked for by those who have devoted so much time and energy to the project.

Death of Mr. Hugh Thomas.

The lamentable accident which resulted in the death of this popular practitioner has given rise to some discussion on the lighting of vehicles at night. If cyclists are required to show lights after a certain time in the evening it is argued with some degree of force that it is quite as necessary that lights should be attached to all vehicles. It is true that Mr. Thomas was slightly deaf, and probably did not hear the approach of the butcher's cart which knocked him down and caused the fatal injuries he received; but had the vehicle shown lighted lamps it is possible that the use of his eyes might have atoned for any slight defect in his ears. At all

events, the subject is worth the consideration of the authorities with a view to prevent the occurrence of such accidents.

Gift of a Sanatorium.

A munificent offer has been made by Colonel J. H. Wilkinson and accepted by the committee of the Birmingham and Midland Counties Sanatorium. It consists of the building now known as the Royal Hotel, Sutton Coldfield, the value of which is estimated at £15,000. At present Colonel Wilkinson is the treasurer of the sanatorium committee, and so has a thorough knowledge of the requirements of a large artisan population. The hotel is splendidly situated, well built, and surrounded by beautiful scenery. Of the value of such a gift it is hardly possible to form an adequate idea; future generations will reap enormous benefits by such an institution, and immense gain will be realized to the health and comfort of the poorer classes.

"House Nerves."

The local press has contained an animated discussion on this subject. There appear to be two sides to the question, but in the present controversy the male part of the public here evidently got the worst of it. No doubt each sex looks at the subject from its own point of view, but the conditions are so complex and the opinions so various that it is impossible to form an estimate of the actual truth. Divested of all the acrimony and bitterness of debate, it is possible that there is an element of truth on both sides, and that, as usual, the mean is to be deduced as the most likely solution.

The Endowment of Research Scholarships at Mason College.

A notice has been issued by the registrar of the College concerning three Priestley scholarships in chemistry, two Bowen scholarships in engineering, and one in metallurgy, which have been founded by the late Mr. T. Aubrey Bowen of Melbourne. These scholarships are intended to encourage and afford facilities for the higher study of these subjects in Mason College, where they are tenable for one year with the possibility of renewal at the discretion of the council of the College. The annual value of each is £100. Although naturally good work done at Mason College will be regarded as a specially favourable qualification, the council have generously thrown all the scholarships open to general competition. The first award will be made in September next, and all particulars may be learned on application to the secretary of the College.

May 28th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Cottage School Homes for Pauper Children.

THE Chorlton guardians are making an important and interesting departure from the barrack system of dealing with pauper children. They have adopted plans for cottage homes and schools for about 300 children at Stryal, a pleasant district in Cheshire several miles from the city. The set of designs selected out of eighteen sent in for competition is estimated to cost £26 500. The buildings and playgrounds &c. will occupy an area of about eighteen and a quarter acres. The architect, Mr. J. B. Broadbent, has eliminated whatever would savour of institutionalism, and arranged the homes, the grounds, and everything connected with the general plan as far as possible after the fashion of a country hamlet, with as much freedom to the children as if they were living with their parents. There will be double roads with the recreation grounds between, placing the houses 125 yards apart. They will run from north-west to south-east parallel to each other, and the houses will have a southerly or south-westerly aspect. The children will be encouraged to healthy exercise and play, as the recreation grounds will be close at hand, while supervision will be easy, as the officers in their houses can see all that takes place. There will be a superintendent's house and board-room, administrative offices, workshops, bath, &c. On one side will be the boys' houses, and those for the girls on the other, and at the extreme end of the site a cottage hospital. The boys' playground between the two roads will be 100 by 130 yards, and the girls', 100 by 60 will be behind the school. The water-supply is said to be good. The drainage will be good, but the only practical outfall will be to a sewage farm on the estate. The whole

establishment is to be lighted by electricity, for though the first outlay is somewhat greater than for gas the cost of management is much less. The details as to living-rooms, dormitories, &c., seem to have been carefully considered, and it is to be hoped that the attempt to bring up these poor children with less of the atmosphere of pauperism about them will succeed as it deserves to do.

Dr. Niven on Jewish Mortality.

Manchester has a large and increasing population of working-class Jews, chiefly congregated in one part of the city, and one of the most useful of the benevolent institutions of that community is the Jewish Ladies' Visiting Association, which "through personal intercourse and sympathy endeavours to raise the status of those to whom the community must mainly look for its future development and strength." In moving the adoption of the report at the annual meeting held the other day Dr. Niven, our medical officer of health, said it was a most wonderful thing that year after year and quarter after quarter the mortality amongst the Jewish people of the poorest class was so very much below that of the population surrounding them, being in some cases not more than half that of the poorer districts of the city generally. It was remarkable "to find in the lower part of Strangeways a death-rate such as might compare with the healthiest cities in Great Britain." It was by no means easy to say to what it was due. Last year he thought it might be due to the fact that Jewish mothers stayed at home and nursed their children more carefully than was the habit of a great many of the industrial workers of our own people, but he could not find anything to show that this was the chief cause of the low death-rate. The comparative lowness of the mortality was not greater in children than in adult life. General causes must be at work, and as the first and chief he would suggest temperance. "Dirt was a great cause of disease, and it was an excellent thing that attention to personal cleanliness had been one of their religious observances. Then again they took very stringent precautions against the consumption of impure meat, and, what was even more important, they insisted upon getting pure milk." Dr. Niven made a serious charge, which I fear was justified, in saying: "A great many of the dairies of Manchester were mere cowsheds and were in a most disgraceful condition, and the milk sold among the poorer classes was often a means of spreading disease," and he advised that it should be boiled before use. "Another thing that would contribute to their health was the fact that even the poorest of them contrived to get good food and to eat well and heartily."

Light Sentences for Savagery.

Either the law is strangely lenient or some of its administrators consider that brutal assaults should be dealt with tenderly. At the City Police-court the other week two women and a youth were charged with assaulting a girl. One of the former had a grudge against the girl's sister and sought vicarious revenge, so, going up to her as she was sitting on her door-step, she said: "If I can't take it out of your sister I will take it out of you." The girl was thrown to the ground and savagely kicked and struck. Then the youth joined in and hit her while down on the right eye with the buckle end of his strap, bursting the eyeball and destroying the sight. As one of the local papers says: "We want something like the old Mosaic law, 'an eye for an eye, and a tooth for a tooth,' in order to deal with the 'scuttling spirit.'" The magistrates on the bench—whose names are given in the paper—evidently do not think so. One of the women had already been convicted several times—was therefore a well-known character—and deserved the severest punishment, so she was fined one guinea. The other female fury, who dragged the girl off the door-step and threw her down, was fined half a guinea; while the gentle youth who burst her eyeball was sent to the workhouse for a week. The Manchester workhouse is conducted most humanely, with every consideration for the comfort of the inmates, so it may be hoped the poor fellow will survive his sad fate. No doubt the tender hearts of the magistrates were wrung with anguish when duty compelled them to punish with such sternness these estimable members of Ancoats society who had only kicked a girl—and these women can kick,—struck her, dragged her off her own door-step, burst her eyeball, and left her bruised and horribly disfigured for life. If this is a sample of even-handed justice of the modern type it would be almost better to go back to the times when the victims of such brutes would have received

some of the sympathy now lavished on our criminals of both sexes. The sentences were said to have caused amazement in court.

Imprisonment for exposing Bad Meat.

A butcher of Salford was summoned on May 22nd, at the instance of the health authorities of Salford, for exposing for sale a large quantity of beef, mutton, &c., which was unfit for food. Mr. Paget, the medical officer of health, said some of the meat was quite green and putrid. The defendant said the bulk of it was intended for the "bone man," but the stipendiary magistrate evidently did not believe this, as he said it was one of the worst cases that had ever come before him, and he could not impose a fine, but the defendant would be sent to prison for six weeks. The poor Jews of Strangeways are saved from the danger of being poisoned by bad meat, but the poor Christians of Salford will have to be careful. The salutary punishment of this man may perhaps be somewhat deterrent to the brotherhood of "slink butchers," and it is in marked contrast with the mistaken leniency of the sentences on the assailants of the girl in Ancoats.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

University of Durham College of Science Concert.

THE Choral Society of the College of Science gave its third annual concert in Newcastle-upon-Tyne on May 21st. The programme consisted of Cowen's "Rose Maiden" and Mendelssohn's "Come, let us sing," both of which were very efficiently rendered. The new song, "Salve Boreale Lumen," written by Professor Dufl and set to music by Professor Terry, both of the College of Science, for the Durham undergraduates, was sung for the first time publicly with great spirit, and was much appreciated by the large and fashionable audience. I give the first stanza, that your readers may appreciate the swing and go of the verse:—

"Salve boreale lumen
Resplendentis Anglie!
Salve venerandum nomen
Veteris Dunelmie!
Alma Mater, ave! salve!
Floreas in secula!"

The concert was a most successful and enjoyable one and reflected great credit upon the society.

Durham University Sports.

The University athletic sports were on May 23rd for the first time held in Newcastle-upon-Tyne, and the afternoon being bright and fine the meeting was a great success. Mrs. H. P. Gurney, the wife of the new principal of the Durham College of Science, distributed the prizes to the successful competitors. Medicine, science, and arts were all represented. The success of the meeting was due greatly to the President of the University of Durham College of Medicine Athletic Club, the popular Professor of Anatomy, Dr. Howden, and to the secretary of the athletic sports, the Rev. E. R. T. Biggs, to both of whom, as well as to Mrs. Gurney, a hearty vote of thanks was given. The music was supplied by Mr. R. Smith's military band, and contributed in no mean degree to the enjoyment of the day. In future time sports will be held alternately in Newcastle and in Durham. It is rumoured that the constabulary grounds, upon which, by the kind permission of Captain Nichols, the sports were held, are to be sold for building purposes. Here is an opportunity for some philanthropist to purchase, for the good of the students, an excellent recreation field.

Newcastle-upon-Tyne, May 28th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Alkali Works in Scotland.

IN his last annual report to the Secretary for Scotland, Mr. A. E. Fletcher, the chief inspector of alkali works, notes that there have been no prosecutions in Scotland under the Alkali Act during the past year. He attributes this largely to the result of continual inspection and to the "critical eye"

of the Government officer. Whilst the legal limit of hydrochloric acid gas permitted to escape from an alkali works is 5 per cent. of that produced, the average from all the works during the year has been only 2.81 per cent. The amount of alkali produced in Scotland is gradually decreasing, and the same is the case in England as regards the Leblanc soda process. This is due in part to the competition of other countries, and partly to the success of the ammonia process; the coalminers' strike, by increasing the price of coal, having also been a recent influence in depressing the soda industry. Mr. Fletcher also refers to the new process of Mr. Donald for the manufacture of bleaching powder from chlorine produced by the action of nitric upon hydrochloric acid. He regards this as being still in the experimental stage.

Teachers' Guild, Glasgow.

At a recent meeting of this guild a lecture was delivered by Dr. Elizabeth Pace upon the Conditions of Healthy Study. The lecturer insisted upon the necessity for physical training, and recommended the use of the Swedish system of exercises.

The New Deputy Commissioner in Lunacy.

Dr. J. F. Sutherland, until recently medical officer to the prison in Glasgow and secretary to the Scotch Departmental Committee dealing with the question of habitual offenders, appeared on May 21st before the Lord President of the Court of Session and took the oath of secrecy on his appointment as Deputy Commissioner in Lunacy.

Medical Appointments.

The Largs Commissioners have appointed Dr. J. Miller to be burgh medical officer, and Mr. Syme to take charge of the hospital for cases of infectious disease. Dr. McLachlan and Dr. Mitchell have been elected medical officers under the Cardross parish council; and Dr. Black Morrison and Dr. Moore have received similar appointments from the Ayr parish council.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Irish Academy.

AT a general meeting of the Academy held on the evening of May 27th Professor D. J. Cunningham, F.R.S., read an interesting paper on Head Injuries inflicted by Stone Weapons. The paper was illustrated by a series of crania from the valuable collection made by Dr. Haddon when he visited some years ago New Guinea and Torres Straits. The natives of New Guinea are continually engaged in blood feuds and inter-tribal warfare, and as it is their custom to preserve as trophies the skulls of their enemies, just as the Indians do their scalps, a craniologist and collector has special opportunities there, of which Dr. Haddon seems to have very fully availed himself.

The Sir Patrick Dun's Hospital Bazaar.

The mammoth bazaar in aid of the funds of this, the Trinity College hospital, has been, as far as can yet be known, a conspicuous success. It was open during the day and evening for all the past week, and the returns show that during that time no less than 75,000 persons passed through the turnstiles.

A Bacteriological Institute in Dublin.

IN reply to a question recently asked in the House of Commons by Mr. McNeill as to whether applications from various quarters had been made to the Irish Local Government Board to take the necessary steps to establish a Pasteur Institute in Dublin, Mr. John Morley said he understood that the boards of guardians of a large number of unions in Ireland had adopted a resolution of the nature referred to, and that the Local Government Board was now collecting information as to the amount expended from the poor rates in sending poor persons to the institute in Paris for treatment, and that "his honourable friend might rest assured that the whole matter would be carefully considered." Now a strong feeling exists among the educated public and among medical men in Ireland that "when the whole matter" is being "carefully considered" some steps may be taken to establish and endow a bacteriological institute in Dublin. There is at least one eminent pathologist here who devotes all his time to that subject, and it would obviously be to the advantage of the public and of the profession if a

suitably endowed and properly equipped laboratory was established. It has been done, as we know, recently at Leeds, while at Liverpool University College a new pathological and bacteriological laboratory was formally declared open on May 18th.

The Rotunda Hospital, Dublin.

A very successful "At home" was given in the grounds of this hospital on Friday last, by the Master and Mrs. Smyly.

Royal College of Surgeons in Ireland.

An examination for the Fellowship, under the new regulations, has been held during the past week. In Grade I., open to surgeons of less than ten years' standing, three candidates presented themselves for the primary examination, of whom one was rejected in practical histology, another failed in practical anatomy, while the third passed the primary and afterwards presented himself for the final examination. There were seven candidates for the final examination, four of whom satisfied the examiners and were formally admitted Fellows of the College. They were Messrs. Cox, Finlay, Greer, and Trehwella.

The Ligoniel Sewerage.

At a meeting of the Belfast board of guardians held on May 21st one of the members reported that the grazing lands from the Fourth River Bridge to Ligoniel were not provided with water for cattle, except sewage matter from privies. The milk of these cattle, he said, was delivered to the better parts of the city. The chairman said the guardians should provide the water, and it was decided to appoint a committee to visit the place and report to the board. There can be no question that a new sewerage scheme is urgently needed for Ligoniel as well as a water-supply; both are at present greatly wanted. The former could be best supplied by an extension of the city boundary so as to embrace Ligoniel and the connexion of the sewerage of that place with the city system. As to the water-supply, a new one must be made, as the village is too high to be supplied by the Belfast Water Commissioners.

Royal University of Ireland: the Examinations for the Degree of M.B.

At the medical degree examinations of the Royal University Mr. James A. Craig was awarded a first class and an exhibition of £40, and Mr. Thomas Houston, B.A., a second class and an exhibition of £25. Both candidates are Belfast students. No other honours in the M.B. examination were awarded.

Medical Appointments, Belfast.

At the Belfast Hospital for Sick Children Dr. T. S. Kirk has been appointed assistant surgeon, and Dr. W. Steen assistant physician. A new departure was made in the method of election. No candidates were proposed, and the election was by ballot.—Dr. Lyness has been appointed resident physician in the Union Hospital, Dr. Patrick has been transferred to his place in the Union Infirmary, and Dr. Gibson succeeds to Dr. Patrick's place.—Dr. Whittaker has been elected extern house surgeon to the Royal Hospital.

The Belfast Hospital for Sick Children.

The board of management are at present making considerable structural alterations in this hospital, involving a cost of £700, to enlarge principally the extern department, where the number of patients attending has been steadily increasing. Last year there were 11,438 new extern cases.

The Dundalk Workhouse Drainage.

The defective sewer from the workhouse has now been closed and the sewage is being pumped into a disused quarry on the grounds. At a meeting of the board of guardians held in Dundalk on May 27th letters were read on behalf of Lord Roden protesting against the sewage being permitted to escape into the Rampart river, and from the Great Northern Railway against the pollution of a stream running through their works and workmen's houses which, it is alleged, was contaminated by sewage escaping from the sewer. No reply has as yet been received from the Local Government Board to the guardians' resolution asking for a sworn inquiry into the causes of failure of the sewer, which cost over £1000 three years ago. A general meeting is to be summoned to deal with the question of the construction of a new sewer.

Belfast Royal Hospital.

At the quarterly meeting held on May 27th it was reported that 476 intern patients had been treated during the year, 240 medical and the remainder surgical, while during the

same period there were 5144 extern cases. To the end of April the receipts had been £5380 19s. 6d. and the expenditure £6290 7s. 1d., being an excess of expenditure over receipts of £909 7s. 7d., but as the year ending Aug. 31st commenced with a balance of £199 17s. in favour of the hospital the actual debt at the end of April was £709 10s. 7d.

The Maintenance and Care of Harmless Lunatics at Millstreet.

The decision of the Lord Lieutenant that the governors of district lunatic asylums are primarily responsible for the maintenance of harmless lunatics has led to numerous discussions at various meetings of boards of guardians. The Millstreet board by a large majority decided that it is desirable to amalgamate their union with adjoining unions, and thereby escape large establishment charges for the maintenance of comparatively few paupers, and they consider the present a favourable opportunity for amalgamation, as they hope their buildings may be purchased for the purpose of converting them into an auxiliary district lunatic asylum. The Fermoy guardians, too, have been considering what they had best do with the harmless lunatics in their workhouse. Colonel Johnson, who is also a governor of the Cork Asylum, recommended the guardians, in the interests of these poor afflicted patients, to send them to the asylum, where he considered they would be better looked after, and he gave some interesting statistics with regard to the chargeability of such cases. He pointed out that in the Fermoy Union the cost of maintenance is £16 14s. 4d., and that the cost in the District Asylum would be £20. He further added that half of the £20 is paid by Government, the remaining half being paid by the occupiers—that is to say, practically by the farmers. On the other hand, half the £16 14s. 4d. is paid by the landlords and half by the tenants. Apparently the latter arrangement is preferred by the guardians, as they decided to look after their own harmless lunatics. Dr. Magner, *ex-officio* guardian of the Cork Union, considers imbeciles and idiots ought not to be removed to the lunatic asylum, as he believes it would be better for them mentally and physically to be kept in the Cork workhouse.

The Battle of the Clubs at Cork.

At a meeting of the council of the medical profession of the city of Cork held on May 22nd it was unanimously resolved: "That we cordially approve of the action of the Inverness medical profession in the stand they are taking against the absurdly low rate of society remuneration hitherto paid in that city; that we wish them every success in their effort, which we hope will be extended to every city in the United Kingdom, to raise the rates paid to medical men and to discountenance in every way the admission of unsuitable members to the societies; that a copy of this resolution be forwarded to Dr. Munro Moir (secretary to the Inverness Medical Society) and the medical journals."

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Intravenous Mercurial Injections in the Treatment of Syphilis

M. ABADIE¹ reminds us of the hesitation prevailing amongst many practitioners in instituting mercurial treatment before secondary symptoms have in a given case declared themselves. When, moreover, syphilides appear most practitioners (in France, at least) limit their endeavours to counteract the inroads of the virus by prescribing an altogether too brief course of green iodide of mercury. The application of this method is, indeed, generally productive of a cure which is, unfortunately, but too frequently only apparent. M. Abadie would have the profession more far-seeing, and this one can understand in an ophthalmologist who is so often called upon to combat tertiary affections of the eye, such as choroido-retinitis, and atrophy of the optic nerve either simple or associated with medullary lesions. Neuro-pathologists meet with numerous cases of cerebrospinal disease in patients who, afflicted with syphilis ten, fifteen, or twenty years ago, have received only inadequate treatment. M. Abadie states that these grave tertiary affections of the eye and nervous system are habitually met with in individuals in whom the primary and secondary lesions have been mild and who have, consequently, been subjected

¹ Société Française de Dermatologie et de Syphiligraphie, April 19th, 1895.

to a treatment which one may qualify as theoretical. Those persons who, on the contrary, have, on account of the severity of the early symptoms, been treated seriously and for a lengthened period generally escape these dangerous tertiary affections. M. Abadie would treat every case as soon as the diagnosis is made, not with the green iodide, but by means of inunction, or preferably with subcutaneous injections of a soluble mercurial salt. These injections conducted intermittently after this plan—one month's treatment followed by a rest of ten or twelve days—he continues for at least six months. Should tertiary symptoms appear, recourse must be had once more to the hypodermic plan. If the retrocession of the symptoms be not procured rapidly, the subcutaneous must be replaced by intravenous injections, which are much more efficacious. With a Debove's iride-platinum needle and a perfectly aseptic syringe no apprehension need be entertained as to the safety of this method, which is painless. The solution used by M. Abadie is thus composed: cyanide of mercury, 1 gramme; distilled water, 100 grammes. Of this solution one gramme (one centigramme of the salt) is injected every other day for twenty days, this being followed by a rest of fifteen days, and this again by a resumption of the injections if necessary. A ligature is placed around the upper arm, and, the skin and glass syringe being previously well disinfected, the solution is introduced into a prominent vein of the bend of the elbow, the ligature being removed directly the needle has penetrated into the vein. The proceeding is painless, and the patient returns immediately to his work.

Comparative Number of Medical Students in Italy, Germany, and France.

From figures recently published it would appear that the number of medical students studying in the twenty-one universities of Italy during 1894-95 is 19,043. These numbers are very unequally distributed amongst the universities, 3697 being found at Naples and only 87 at Milan. Altogether there are in Italy 61 students of the healing art to 100 000 of the population, the corresponding proportion in Germany and France being 63 and 57 respectively.

Successful Treatment of Puerperal Septicæmia with Anti-streptococcic Serum.

Dr. Jacquot² of Creil, near Paris, reports an instance where Roger and Charrin's serum was successfully applied in combating the above-mentioned dangerous condition. After quinine and intra-uterine douching had been unsuccessfully tried, the temperature reaching 40.8° C. (105.4° F.), 30 c.c. of the serum were injected. In a few hours the temperature had descended to normal. Two more injections were given, and the woman appeared to have quite recovered. Three days later, however, the patient's mother fell ill with erysipelas of the face, and this seems to have determined in the *accouchée* (two days later still) rigor accompanied by a temperature of 104° F. Three days after this relapse a fresh injection of the serum was practised, the temperature falling quickly to normal. From this time forward recovery was uninterrupted. This case serves to illustrate the prompt antithermic action of the serum and the intimate connexion existing between puerperal fever and erysipelas.

The Cold Bath in the Pneumonia of Children.

M. Comby³ calls attention to the excellent effects yielded by balneotherapy in the pneumonia of quite young infants. Applied at a temperature of 25° or 20° C., according to age and circumstances, the cold bath is most serviceable in reducing the temperature, restoring lost tone, and slowing the pulse and respiration. Chemical antithermic agents, such as antipyrin, quinine, &c., are generally useless and may be dangerous. In his wards M. Comby gives cold baths to all his little pneumonic patients whose temperature exceeds 39° C. (102.2° F.) and whose hearts are not diseased. Quite recently he had an opportunity of noting the good effects of this treatment in a little boy affected with influenzal pneumonia of the right apex, uninfluenced by ordinary antithermic drugs. M. Comby adds that baths of 25° C. are quite well supported by even very young infants. M. Sevestre states that the application of the above method of treatment determines the onset of the crisis on the fifth instead of the seventh day and so materially shortens the duration of the disease. M. Rendu also characterises the cold bath treatment as the best

means of obtaining prompt defervescence in the pneumonia of adults. M. Siredey informs us that at the Aubervilliers fever hospital he has derived great advantage from the employment of cold baths in the treatment of broncho-pneumonia consecutive to specific fevers, and M. Le Gendre made a statement corroborative of their efficacy in all congestive complications of eruptive fevers. Professor Hayem says that at the Hôpital St. Antoine the most fatal disease of all is pneumonia, and that eighteen out of twenty of these patients are "alcoholics." During the first two years, 1879-1880, of his physicianship at that hospital he lost 50 per cent. of these cases. He then instituted the cold bath treatment and the mortality fell to 27 or 28 per cent. For some time past this mortality has further diminished (to 8 or 10 per cent.), but this improvement he ascribes to a new special treatment he has devised for the benefit of these alcoholic patients. Employed in the *crèche* attached to his wards, Professor Hayem finds the cold baths more powerful for good against pneumonia than when used for adults.

M. Pasteur.

It is stated that M. Pasteur, having been sounded on the subject, has replied that he cannot be induced to accept a German decoration.

May 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Reform of International Congresses.

IN the last number of the *Quarterly Journal of Public Health* (*Vierteljahrsschrift für Öffentliche Gesundheitspflege*) the editor, Dr. Pistor, in an article on the Hygienic Congress in Budapest, energetically argues that the general management of medical congresses requires improvement. His principal complaint is that the entertainments, such as formal dinners, evening parties, invitations to visit industrial establishments, &c., consume a great part of the time which ought to be given to the meetings. This, he says, was the case in London in 1891, and also in Rome last year, but far more conspicuously in Budapest, where he was sure that a large proportion of the native members only attended the Congress in order to take part in the festivities. The best way will be to discontinue all official entertainments. Visitors who desire sumptuous festivities should provide them at their own expense, and ought not to expect the municipality and townspeople to lay out money for this purpose. Many towns are, in fact, unwilling to receive international congresses on account of the heavy expenses connected with them. In Dr. Pistor's opinion the committees ought only to provide a suitable building for the sittings, and in the smaller towns sufficient accommodation for the temporary excess of visitors over the usual number of strangers. Congress committees, however, seem to be proud if their visitors surpass in number those of any former meeting, and it has accordingly become quite usual for them to endeavour to attract foreigners by announcements in the ordinary newspapers. This, as Dr. Pistor remarks, far exceeds the limits which committees ought to observe. It would be quite enough if early intimation were given in the medical press of the date at which the congress is to be held, and the principal subjects which will be discussed. In this way only those will attend who have a real interest in the work of the congress; not the number but the scientific renown of the members is the criterion of its importance. Another source of difficulty is that the number of papers to be read is usually far too great. The subjects of discussion ought to be fixed by the executive committee, and the introductory addresses should be delivered by previously selected speakers. In the subsequent discussion everyone ought to have ample opportunity of expressing his views, and in the event of there being sufficient time after the discussion of the official subjects other questions might be taken up. The present custom of allowing everyone to speak on any subject, and often on matters of no actual or general interest, causes much loss of time and induces many leading men to abstain altogether from attendance at congresses. The number of sections should also be restricted. Dr. Pistor is confident that he is in agreement with the great majority of medical men and adds that also in France the reality of these inconveniences is fully

² Société de Biologie, May 11th, 1895.

³ Société Médicale des Hôpitaux, May 17th, 1895.

recognised, as M. Vallin, the chief medical officer of the French army, had expressed nearly the same opinion. No doubt the reforms suggested by Dr. Pistor would make medical congresses what they ought to be—meetings for professional work and not for social entertainment.

Penalties for Ethical Misdemeanours.

In several of the Confederated States of Germany there are medical boards elected by all the practitioners of the country, their duty being to act as representatives of the profession in matters which come before the Government. They are wont to be consulted if the Government intends to alter laws affecting the profession or if important questions of public health arise, and on other occasions when the authorities wish to hear the opinion of independent medical men in addition to that of their permanent medical officials. But their principal duty is to form courts of discipline (*Ehrenrath*) if any controversy in matters of ethics happens to arise between medical men, or between practitioners on the one side and the public on the other. For this purpose they are authorised to compel the attendance of the disputants and to pronounce judgment in the case. They have, however, no punitive authority, but can only withdraw from a medical offender the right to be elected a member of the board, or to vote in the elections. In Prussia some years ago the Government asked the representative boards (*Aerztekammern*) if they wished to impose further penalties on delinquents. The great majority of the provincial boards declined the proposal; some, however, were willing to adopt it, provided that they were allowed to judge also the medical officers of the army and the civil service. As the Government totally refused this condition the matter dropped. The kingdom of Saxony now proposes to its medical board that a Bill shall be brought before the Saxon Parliament in order to extend the powers of the boards. According to that Bill the medical boards shall draw up a code of ethics and shall form a court of honour (*Ehrenrath*) for each district, which will judge infractions of this code. If the court, after trial, thinks a medical man guilty it may, according to the degree of his culpability, punish him by simple warning, by reprimand, or by a fine of from 20 to 1500 marks (£1 to £75). The defendant shall have the right of appeal to a superior court consisting of a learned judge and three members of the profession. The decisions of those medical courts shall have the same authority as if pronounced by an ordinary law court. The medical assessors, however, should not be subject to the jurisdiction of the board. This proposal of the Saxon Government is of the utmost importance. Medical men have not hitherto been authorised to impose penalties on their professional brethren for ethical misdemeanours. If the Bill becomes law—which, however, is still very doubtful—a great responsibility will be laid on the medical judges. The success, if any, of the experiment contemplated by the Saxon Government will unquestionably depend upon the good sense and the tact of the members of the courts. If it proves successful, other German Governments will probably follow the example of Saxony. Many medical men, however, doubt whether the ethical tone of the profession will be improved by the legal enactment of a code and the infliction of penalties.

ROME.

(FROM OUR OWN CORRESPONDENT.)

he Red Cross in Abyssinia.

THE mountain ambulance, consisting of fifty beds, sent by the Croce Rossa Italiana to Abyssinia, arrived at Massowah on the 28th ult., having had a successful transit, and a hearty welcome at every stage—Naples, Messina, and Alexandria—at which it touched. Its immediate destination is the upland of Asmara, the summer quarters of the army of occupation. The health of the entire *personnel* leaves nothing to be desired, and the most cordial relations are already established with the combatant force, the superior officers of which have arranged that the medico-surgical staff of the Red Cross shall regularly share their mess. Dr. Gino del Prete, the head of the mountain ambulance, writes in the most gratified terms of the success, so far, of this new experiment in African warfare—a success which has had a healthy stimulative effect on all the subcommittees and female sections of the Red Cross Association throughout Italy. These subordinate branches of the organisation have already been of signal

service to the central committee in collecting funds for the mountain ambulance now in Abyssinia—the sub-committees, for instance, of Piacenza, Vicenza, and Bari having each subscribed 500 fr. (£20), while those of Mantua and Padua have contributed 300 fr. each, and others in like proportion according to their ability. The subcommittee of Padua, besides its subscription of 300 fr., has undertaken to provide, at its own expense, the entire outlay of the mountain ambulance in the department of *matériel*, and that of Verona has volunteered to supply it with liqueur cognac and 2000 of the finest lemons from the famous groves on the Lago di Garda.

The Earthquake in Florence.

Not for centuries has the City of Flowers—or, for that matter, Tuscany—sustained so severe a shock of earthquakes as at 8.55 on Saturday evening, May 18th. In the neighbourhood of Florence the casualties were much greater than within the gates. At Lampeggi, for instance, there were at least three deaths from the collapse of outhouses belonging to the famous Medici Villa, which itself was damaged beyond all recognition. The skilled seismologists at the two observatories—that of the Querce and that of the Scolopi—were unable to predict the catastrophe in time, although the Padre Bertelli at the former, by the tromometer he invented in 1870, was able to give more than an hour's notice of the earthquake of 1873—the last considerable one experienced in Florence. All the indicators were, however, at fault on this occasion, the earthquake being characterised by movements rarely found in combination, and assuming, as the Padre Giovannozzi of the Scolopi has announced, a movement “*ondulatorio, sussultorio e vorticoso*” (undulating, subsultory, and eddying) all at once. Besides the absence of fatal cases Florence may congratulate herself on being spared any considerable damage to her works of art or her world-famous buildings. The alarm caused to the inhabitants, however, was great, and half the population bivouacked in the streets or patrolled the city all night in carriages or humbler vehicles. In conversation with a distinguished alienist this morning I was told that within the last decade, and more notably since the terrible cataclysms in the island of Ischia in 1881 and 1883, to say nothing of the now almost epidemic convulsions of the earth's crust in southern Italy, a distinct fear peculiar to the inhabitants of earthquake-haunted districts has manifested itself often enough to entitle it to a subsection under *pantophobia*—“*seismophobia*” being the term proposed in classification. Of course, a certain neurosis, most marked in super-sensitive, ecstatic, abnormally emotional natures, must underlie the particular development of derangement, but the subject still awaits systematic study and discussion. Meanwhile the scenes at the Florentine hospitals during and after the shock of Saturday evening were as instructive as they were painful. In the Santa Maria Nuova the patients, with few exceptions, even those suffering from grave maladies, leaped out of bed, all of them making for the doors. The physicians and their subordinates tried in vain to induce calm—the patients would insist on going out at any cost. Curiously enough the inmates of the “*Corsie Veneree*” (syphilitic wards) were the most panic-stricken, the whole of them leaving the hospital *en masse* only to return, however, next morning. At San Giovanni di Dio and the Maternità di San Salvi similar scenes were witnessed. Science awaits further developments of seismology, not only in the greater refinement of its instruments, but also in the direction of the late Padre Denza's¹ researches, which have gone far to determine the probable trend of the “*seismic axis*” in earthquake visited regions and have laid something more than the foundation of a working theory of telluric storms.

The General Election.

“Eclipse first and the rest nowhere,” describes Dr. Baccelli's triumph at the poll in the third electoral division of Rome on Sunday last—indeed, his Excellency was not seriously opposed. The returns already known in the various cities and provinces give a clear majority for Signor Crispi—a majority which cannot possibly be much affected by the supplementary ballotings on Sunday next, and which, it is to be hoped, will continue strong enough to admit of his entering on the statute-book the various reforms, educational and administrative, for which Italy has long been yearning. Among these Dr. Baccelli's University Bill has a prominent place, and if carried into law without organic modification will mark an era in professional qualification, especially in the faculties of medicine and law.

May 28th.

¹ Vide THE LANCET, Dec. 22nd, 1894.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Small pox and Vaccination.

RELIABLE statistics relating to vaccination and small-pox are not often forthcoming in this country. This renders the following figures even more valuable than they would otherwise be. The figures were collected by Dr. A. N. Sotin and published by him in a dissertation to the St. Petersburg Academy last year. He was led to collect the statistics in the following manner. The *volost*, or subdistrict, of which he was in charge lay in the western corner of the Mologn *uyezd* or district, in the government of Yaroslavl. Observing that an epidemic of small-pox was approaching from the east, Dr. Sotin personally examined every child under fourteen years of age in his district before the disease arrived. The total number of children examined was 1564, distributed amongst 665 families, and in thirty villages. He found that 1055 had been vaccinated and had visible scars; 75 children formed a second group of doubtful cases, which were said to have been vaccinated, but in which no scars were visible; and 434 had never been vaccinated. The small-pox arrived and a wide-spread, though not very fatal, epidemic resulted. It was then found that of the 1055 "vaccinated" children only 16, or 1.3 per cent., had contracted the disease; of the 75 "doubtful," 35, or 46.6 per cent., suffered; while of the 434 "unvaccinated" children as many as 244, or 56.2 per cent., caught the disease. In other words, the unvaccinated suffered to an extent forty-five times as great as the vaccinated. Further, it was observed that in 189 families all the children were unvaccinated, and in these families if one child sickened with the small-pox the disease spread (with only seventeen exceptions) to every other child in the house. On the other hand, in houses where some children were vaccinated and others not, the disease always attacked the last, and the first escaped. Dr. Sotin believes that there is no danger from vaccination performed during a small-pox epidemic, but that general vaccination will with certainty cut short an epidemic, and that the immunity following vaccination does not last more than eight years, at the end of which time revaccination is necessary.

The Diphtheria Antitoxin.

At a recent meeting of the Kazan University Medical Society Professor Kazem-Bek reported 30 cases in which he had employed the antitoxin. In 17 of these cases only was Löffler's bacillus demonstrable. In all the administration of the remedy was followed by marked improvement both in the local and the general symptoms. There was only 1 death, that of a patient with severe renal complications. A scarlatiniform rash appeared in two patients. Dr. Rojanski had had good results with the new treatment in the children's clinique of the Moscow University. In all, 68 children had been treated with the serum since last September, and of these 13 died, the mortality rate being therefore 19.4 per cent. Before that date the diphtheria death-rate had always been from 46 to 48 per cent. Eight of the fatal cases had œdema of the neck and chest; before the introduction of the serum treatment 90 per cent. of such cases had always proved fatal. Dr. Rojanski had also given serum injections as a precautionary measure in about 100 pupils of the synodal choir school in which cases of diphtheria had occurred. One of these contracted diphtheria in a light form on the fifth day after injection. The remainder escaped infection.

St. Petersburg, May 11th (23rd).

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

A Martyr to Science.

DR. JAMES W. BYRON, who became well known as a bacteriologist through valuable service which he performed as a member of the quarantine staff, died in the New York Hospital on May 6th from tuberculous phthisis, aged thirty-four. He had been ill with the disease for more than a year

and his case was remarkable because he contracted the disease while he was studying the tuberculous bacilli in the Loomis Laboratory. He was the first to make the discovery that he had contracted the disease. He was in vigorous health at the time he began his studies and weighed 165 pounds. It was Dr. Byron's custom to receive samples of the sputum of persons who were suspected of having incipient phthisis and to examine them under a powerful microscope in order to detect, if possible, the presence of the bacilli. Dr. Byron said months ago, when he knew that he had contracted the disease, that he must have become careless after some of his examinations and allowed the samples of sputum to become dry. In that way he had inhaled the bacilli of tuberculosis without at the time being aware of the fact. Early last year Dr. Byron began to have a hacking cough and his suspicions were aroused. He examined his own sputum and made the discovery that he was suffering from tuberculous phthisis. He made repeated examinations and each time discovered the bacilli. He did not appear to be greatly alarmed by the discovery which he had made, but he told his friends of his condition and made no secret of the manner in which he had contracted the disease. He was advised to seek a warmer climate, and he went to Southern Italy in the hope of regaining his health. He remained abroad all the summer but he returned to the city in the fall much worse than when he went away. He had wasted almost to a skeleton and he was so weak that he could with difficulty walk about the city. His cough was incessant and his nights were restless. Dr. Byron was attacked with dangerous hæmorrhage of the lungs on May 8th, and he thought his death might occur immediately. He was removed in an ambulance to the New York Hospital, where his condition seemed to improve slightly. Another and fatal hæmorrhage occurred the next day. A citizen has contributed \$500 towards a memorial to this "martyr to science."

Tax on Medical Men.

The North Carolina Legislature, composed in part of members whose constituency depends upon the gratuitous services of physicians, has imposed an annual tax of \$10, to be paid into the state treasury for the privilege of practising medicine. "That," remarks the *North Carolina Medical Journal*, "is a damnable outrage, worthy of the gang who perpetrated it, and we feel sure that among the first things done by the next Legislature will be the repeal of this section. In the meantime, we suggest to those doctors who may have to serve one of the Solons (!) who voted for this tax, that they increase their charges to cover the amount of the tax. If the legislator be a dead-head, as he is now a dead letter, cast him off and let him go to ———! no, the country doctor."

A Memorial to Dr. Loomis.

The late Dr. Loomis inherited tuberculous phthisis and in early life had marked symptoms of that disease. He had long anticipated an attack of lung affection which would prove fatal, and it finally came in the form of a pneumonia which quickly ended his life. Hence his attention was more directed to phthisis pulmonalis than to any other disease. He had studied the effects of climates more thoroughly than any other physician in this country. It was largely through his efforts that the Adirondacks became a popular mountain resort for phthisical patients. In recent times he became interested in the highlands of Sullivan County as a health resort for those suffering from lung affections, and it has been learned since his death that he contemplated establishing a sanitarium for persons suffering from phthisis, who had limited means, in that region. A lady patient who had been benefited by a residence in these mountains has offered a large sum for the purpose of purchasing a tract of land and erecting suitable buildings for a sanitarium. Her purpose is to carry into effect Dr. Loomis's ideas. The establishment is to be called "The Loomis Sanitarium" and will be exclusively for the benefit of those suffering from phthisis who would not otherwise be able to leave the city.

A Typhoid Fever Epidemic due to Infected Milk.

The State of Connecticut is now suffering from a terrible visitation of typhoid fever, Stamford and New Milford being the places where the epidemic has raged most severely. The medical records of the State do not show an epidemic equal in extent to that at Stamford. It began three weeks ago with a score of cases in various parts of the city and spread rapidly. At first physicians were unable to explain it, but it was soon traced to the milk from a farm. The total number of cases since the disease began is 327, the deaths numbering 5.

¹ It may be as well to explain briefly the administrative divisions of the Russian country. Each village constitutes a rural commune or *mir*; a number of rural communes are united together to form a *volost*; a number of these, again, constitute an *uyezd* or district; while the largest administrative division of all, containing many *uezds*, is called a *gubernia* if under civil rule or an *oblast* if under military rule. European Russia is divided into sixty such large divisions.

All the deaths and most of the cases reported can be directly traced to the infected milk-supply. The State Board of Health issued the following bulletin. "The most severe epidemic of typhoid fever of which there is any record in Connecticut is now in progress in Stamford. Thus far more than 200 cases have occurred in the town of 18,000 inhabitants. Careful investigation of its origin is now being made, and in due time will be published. The evidence at present seems to be conclusive that the disease spread from infected milk, and that the milk became infected by washing the cans in water from a highly polluted well. How the special infection got into the well has not been definitely determined, but the close proximity of two vaults is suggestive. There could not be a more convincing illustration of the importance of some authoritative supervisor of the ways and methods of milk production for public use."

Comparative Qualifications of the Graduates of Different Schools of Practice.

The State of New York has three State examining boards, representing the "regulars," the "homœopaths," and the "eclectics." The schedule of questions is alike for each. An analysis of the results of the licensing examinations since Sept. 1st, 1891, shows that 8.9 per cent. of the "old school" candidates were rejected in 1892, 7.4 per cent. in 1893, and 20.3 per cent. in 1894; that 25 per cent. of the "homœopathic" candidates were rejected in 1892, 9.5 per cent. in 1893, and 13.7 per cent. in 1894; and that 50 per cent. of the "eclectic" candidates were rejected in 1892, 28.5 per cent. in 1893, and 50 per cent. in 1894. During the three years 56, 267, and 390 "old school" candidates have been examined; 8, 21, and 51 "homœopaths"; and 4, 7, and 4 "eclectics," making a total of 808, of which number 121, or 15 per cent., were rejected. This result is remarkable when it is considered that admission to the licensing examinations presupposes the preliminary education required by statute, and graduation with the degree of Bachelor or Doctor of Medicine from a registered medical school.

May 17th.

Obituary.

JOHN NOTTINGHAM, F.R.C.S. ENG., L.R.C.P. LOND.

THERE has lately passed away a very remarkable man who once occupied a prominent position in Liverpool, where he was known to almost everyone and highly respected. Mr. John Nottingham came from Yorkshire and was apprenticed to the father of Mr. C. G. Wheelhouse. He studied medicine and surgery at Guy's Hospital and in Paris under Dupuytren and Velpeau, and some time about the year 1837 was appointed house surgeon to the Liverpool Infirmary, as it was then called, now the Royal Infirmary. While there he was noted for the eagerness with which he pursued his clinical and pathological studies, and a contemporary friend who survives him has recounted to the writer occasions on which they made post-mortem examinations together in the early morning, a time of day when Mr. Nottingham was actively at work during a good portion of his long life. He was a great student, an omnivorous reader with a most retentive memory, and a very good linguist, the consequence being that his well-stocked brain, great conversational power, and affable manner made him a charming companion to his friends. He began general practice (without midwifery) in the centre of Liverpool about the year 1840, and quickly succeeded in getting plenty of work, especially surgical, to which he was introduced by practitioners of his own age who had less taste and capacity for surgery than himself. In a very few years, at the death of a Mr. Wainwright, who had a large practice in the then charming and wealthy suburb of Everton, Mr. Nottingham settled in the neighbourhood. Here he lived for many years, in fact until he retired from practice altogether. In conjunction with the late Mr. J. Penn Harris and other friends Mr. Nottingham founded the St. Anne's Dispensary, an institution which quickly attracted notice and popularity, and where he devoted himself to the study of ear and eye diseases. Later, the St. Anne's Dispensary became merged in the Liverpool Dispensaries, and is now known as the East Dispensary. In 1850 or so Mr. Nottingham was

appointed surgeon to the Southern Hospital, where his general surgical work was characterised by prudence, ingenuity, and considerable operative address. During his period of office, in 1872, this hospital was rebuilt on a larger scale on a new site and reopened as the Royal Southern Hospital. Soon after his retirement from hospital practice he became affected with cataract and passed a couple of years in a state of practical blindness. This affliction, which would have tried many men of equal intellectual vigour, he bore with conspicuous patience, and left Liverpool for his country retreat at Whitchurch, Salop, where he remained secluded from all but a few intimate friends until relieved by the extraction of his cataracts by Mr. Bader in 1880 and 1881 respectively. His sight became and continued useful for years, and he lived at Whitchurch for the rest of his life. At Christmas, 1887, an acute inflammation of one eye took place after slight exposure one chilly evening, and he submitted a few days later to extirpation of the globe, rapid healing and recovery ensuing. He continued always very timid about his sight, apparently from a dread of losing the second eye, and never went out unless he was thoroughly muffled and veiled. For the last twenty years he had been invalided, first by blindness, then by bronchitis, and latterly by senile decay. He was apparently merely worn out, and died on May 7th, at the age of eighty-four and a half years. He married Miss Sarah Worthington, of Whitchurch, to whose unrelenting care and attention he owed the comfort of his declining years.

HUGH THOMAS, M.R.C.S., L.S.A.

THE result of an accident on the evening of May 22nd cut off Mr. Thomas in the prime of life. It seems that he was returning home from visiting a patient when, crossing from the footpath to a tramcar, he was knocked down by a butcher's horse and cart. He did not complain much at the time, but died the following afternoon. It was found at the post-mortem examination that there was a severe laceration of the liver and that three ribs were broken. Mr. Thomas was born in 1850 and was a native of Beaumaris. He received his medical education at Queen's College, Birmingham, where he passed an exceptionally good curriculum. He became L.S.A. in 1876 and the following year M.R.C.S. For some time afterwards he was resident at the Queen's Hospital and subsequently settled in practice at Small Heath, one of the suburbs of the town. Here, amid the arduous duties of a rapidly increasing practice, he became a popular and respected citizen. Taking a great interest in municipal matters, he was returned as councillor for the Bordesley Ward in 1887, and again three years afterwards by a large majority. In politics he also took a keen part. He was ever ready to promote the well-being of the poor and to devote his energies to their relief and interests. The opportunities of his public position enabled him to advocate various reforms and to prove himself an enlightened and advanced member of the community. Mr. Thomas leaves a widow, but no children.

THOMAS BOOTH BRIERLEY, M.B., C.M. EDIN.,
M.R.C.S. ENG., L.R.C.P. LOND.

A VERY promising career has been cut short by the death, on May 14th, of Dr. Brierley, jun., of Tattenhall, Cheshire. The deceased gentleman, who was only twenty-six years of age, studied medicine in Edinburgh and at St. Thomas's Hospital and graduated at Edinburgh University in 1891. He had recently been acting as house surgeon at the Sheffield Children's Hospital and was hoping to join his father in practice at Tattenhall, when he was seized with an unexpected illness which rapidly proved fatal.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. G. Coppola, Professor of Medical Pathology in Palermo.—Dr. Fernandez de la Vega, formerly Professor of Anatomy in the University of Saragossa.—Dr. Godoy y Rico, Professor of Operative Medicine in Granada.—Dr. Maklakoff, Extraordinary Professor of Ophthalmology in the University of Moscow.—Dr. Isaac Himes, Professor of Pathology in the Western Reserve University of Cleveland.—Dr. B. F. Westbrook, Professor of Anatomy and Surgical Pathology in Long Island College Hospital, Brooklyn.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE summer sitting of the General Medical Council, which opened on Tuesday, May 28th, had before it a full and important programme. The attendance upon each day has so far been very good.

The official announcement of the resignation of Sir John Simon, though not coming to the members of the Council as new information, was received with very general regret. Sir Richard Quain's graceful allusions to the services of his late colleague were heartily endorsed by Sir William Turner, while all who know Sir John Simon will recognise that by his retirement the Council have lost a most wise voice in their deliberations, as well as a most valuable and responsible councillor in the eyes of the medical public. The appointment of Dr. Thorne Thorne to the vacancy will, we know, be thoroughly acceptable to all our readers. Sir John Simon, with the prestige arising from the scientific and practical work that he has done and the high offices that he has discharged with eminent success and dignity, must necessarily leave behind him a vacancy difficult to be filled; but in the medical officer to the Local Government Board a successor has been selected of whose merits there can be no doubt, and whose record is so well known that we need not expatiate upon it.

The President of the Council, who is also chairman of the committee engaged upon the revision of the British Pharmacopœia, not unnaturally devoted a great portion of his opening address to consideration of the direction that revision should take. His position in the matter is well indicated by his words, "it is desirable that the Pharmacopœia should not be made a book on Therapeutics and Pharmacology," and it is a position which is very tenable. All the profession have been aware that the present edition of the Pharmacopœia would be the better for emendation and perhaps for considerable omission, but it does not follow that it would become a more useful book by transforming it into a treatise on medical treatment. And certainly this is not the object of a work bearing the title "Pharmacopœia."

There seems to be an immediate prospect of structural improvement in the buildings occupied by the Council, since arrangements are being made for a more permanent tenancy of 299, Oxford-street. In accordance with a resolution passed by the Executive Committee of the Council on Feb. 25th, 1895, the President and Treasurer, with the coöperation of the solicitor and the architect, have completed the formal arrangements for the purchase of the freehold reversion of the premises, of which a portion is now in the Council's occupation. Plans of alterations in the buildings occupied by the Council are ready and will be submitted to the Council for approval—dependent of course upon the completion of the purchase.

TUESDAY, MAY 28TH.

SIR RICHARD QUAIN, President, in the chair.

Opening of the Session.

The fifty-eighth session of the General Council of Medical Education and Registration was opened at the offices of the Council, Oxford-street, London, on Tuesday, May 28th. Sir Richard Quain, President of the Council, occupied the chair, and there were few vacant places around the table. Mr. W. J. C. Miller (Clerk to the Council) officially announced the resignation of Sir John Simon, as one of the Crown repre-

sentatives, and the appointment of Dr. R. Thorne Thorne to fill the vacancy. Dr. Thorne Thorne was introduced to the President and Council by Sir Dyce Duckworth.

THE PRESIDENT'S ADDRESS.

THE PRESIDENT, in his opening sentences, referred to the loss the Council had sustained by the resignation of Sir John Simon, and paid an eloquent tribute to his labours. He then, in the name of the Council, welcomed Sir John Simon's successor, Dr. Thorne Thorne. The President continued: During the year ending Dec. 31st, 1894, 1426 medical practitioners were registered, a number which may be compared with 1579 in 1893, and 1513 in 1892. During the year 1894 1671 medical students were registered, a number which may be compared with 1747 in 1893, and by a singular coincidence with exactly the same number, 1671, in 1892. A slight falling off will be observed in all but one of these instances.

[He then passed to the consideration of the revision of the Pharmacopœia. Beginning from the earliest known Pharmacopœia issued at Nuremberg in 1542, he went on to give a *résumé* of the history of the British Pharmacopœia and its various editions, and continued:]

After an interval of ten years since the last edition of the Pharmacopœia was published it is proposed to issue a new edition. In this interval very considerable movement has taken place in all the matters which relate to the composition and construction of the Pharmacopœia. It may well be questioned whether that movement is in all instances one of progress, but, whether it is so or not, it is the duty of the Council to take care that, in all that relates to it, the work is as accurate and complete as the most diligent research, care, and experience can make it. With a view of obtaining the fullest information on the subject, communications have been addressed to the whole of the licensing authorities, inviting suggestions as to additions, omissions, and emendations, and sixteen of these bodies have responded. The reports with which they have favoured the Council show the great interest and care which they have devoted to the subject. All these reports have been printed for the use of the Pharmacopœia Committee. A request for coöperation in the work was also addressed to the Pharmaceutical Society, which has responded by sending a report on the articles which, in the opinion of its council, should be added to or omitted from the Pharmacopœia. The Council are greatly indebted to the several medical licensing authorities for the assistance which they have thus rendered. Communications have also been received from India and the colonies through official sources. These communications have also been printed for the use of the committee. The interest which the preparation of the Pharmacopœia has excited might be judged by the numerous papers which have appeared in the various journals and by communications from other sources. It will be the duty of the Pharmacopœia Committee, increased in number if thought fit by the Council, to thoroughly investigate these various communications, of which analyses and summaries have been prepared for their convenience by the editor. For this purpose it will be necessary for the committee to hold a special meeting during the summer or autumn as may be most convenient to the members, the fees for which should be as for a meeting of the Executive Committee, according to a former precedent. Perhaps I may here point out briefly the conditions under which the Pharmacopœia Committee will have to act. They will have to regard, first, the legal definition of their duties as set forth in the Medical Act; secondly, they will have to regard their duties to the profession, which will require them to decide as to those preparations which should be omitted and those which should be introduced—to repeat a quotation of the remarks of the Royal College of Physicians of London, to which I have already called your attention, by rejecting medicines of little use, altering formulæ that are absurd and inconsistent, excluding such as savour of superstition, and generally endeavouring to make the work consonant with reason and experience; they have, thirdly, to regard the interests and education of pupils who have to make themselves acquainted with the contents of the work. Above all things, it is desirable that the Pharmacopœia should not be made a book on therapeutics and pharmacology. To do this would be to introduce a great novelty into the practice of physic—that is, the treatment of disease by Act of Parliament. My conviction is that the forthcoming edition of the British Pharmacopœia will be one worthy of the Council under whose direction it is issued. The attention of the General Medical Council has been

called by the Lord President of the Council to a Bill on the subject of midwifery, which has been introduced by Lord Balfour of Burleigh and read a second time in the House of Lords. With a view of giving the members of the Council time for the consideration of this subject, I have caused to be forwarded to each a copy of the letter from the Privy Council, together with a copy of the Bill, and also copies of the last resolutions previously adopted by the Council on the like subject. In addition to this communication, the subject of the registration of women for the practice of midwifery will be brought before the Council by numerous and varied communications in regard to the question, and by a deputation from the Lancashire and Cheshire Branch of the British Medical Association. These communications have been collected in the form of a pamphlet, which will be in the hands of members.

The visitation and inspection of the Final Examinations are not yet quite complete. The examinations of the Conjoint Board in Ireland of the Royal College of Surgeons and the Apothecaries' Hall were revisited in April last by Mr. Wheelhouse, accompanied by Dr. Duffey, the inspector, and a report will be presented. The Examination Committee will present a report on the Final Examinations for further consideration. As the visitation and reports are not yet quite complete it will be necessary to postpone any immediate action on the following resolution of the Council passed on Dec. 4th, 1894: "That the Council, in pursuance of its resolution of Nov. 27th, 1891, arrange for the visitation and inspection of the several examinations in physics, chemistry, and elementary biology, held by the various licensing bodies in the years 1895 and 1896."

On Dec. 13th, 1894, the Registrar requested the licensing bodies to furnish the dates of these examinations, and, with a few exceptions, the requisite information has been supplied by them. In accordance with the resolution of the Council passed on Nov. 29th, 1894, the reports on the examinations in Public Health have been circulated amongst members prior to this meeting. In addition to those already presented at the last session, it will be noticed that there are now reports on the examinations of the Conjoint Board in England, the Conjoint Board of Physicians and Surgeons in Ireland, and the Universities of London and Dublin, all inspected by Dr. Duffey, leaving reports on the Royal University of Ireland, the Victoria University, and the Universities of Oxford and Glasgow to complete the series of reports on examinations in Public Health. The Examination Committee will also present a report on the returns from the public departments of the results of the competitive examinations for commissions in Her Majesty's Services. The Education Committee will present a report dealing with communications from the Scottish Universities Commission, from the University of Wales, and also dealing with the question of the registration of dental students. This reference to the subject of the reports by the Examination and Education Committees cannot be made without acknowledging the services of these committees, but more especially of their chairmen, Sir Dyce Duckworth and Dr. Tuke. The duties of the chairmen have involved much correspondence and much consideration before the reports could be submitted, labours which claim, and cannot fail to receive, the best thanks of the Council.

Since the last meeting of the Council twenty-one charges of alleged misconduct by registered medical practitioners have been received. All these charges have been investigated by the solicitor and the Penal Cases Committee, who decided that fifteen cases should be set aside and that six of these practitioners should be summoned, five to attend during the present session and one, residing in Australia, at the November session. In reference to dental business I may mention that Mr. Charles S. Tomes, F.R.S., the visitor to the dental examinations appointed by the Council, has commenced his visitation and will present a report on the examinations of the Faculty of Physicians and Surgeons of Glasgow. The examinations of the other dental licensing bodies will be visited during the present year. One case of a penal nature will be considered by the Dental Committee, who will find the facts and report thereon to the Council. In conclusion, I feel that I must not detain you longer from the consideration of the many serious and important matters which will now come before you.

Mr. WHEELHOUSE moved that the Council do thank the President for his address and ask his leave to have it printed and inserted in the minutes.

Sir WILLIAM TURNER, in seconding the motion, asked to be allowed to re-echo all that the President had said with regard to Sir John Simon. All members of the Council must have been strongly impressed with the thorough, masculine, statesmanlike grasp that he had of all subjects, educational and otherwise, which were brought before the Council, and he (the speaker) for one felt it as a great loss that he was no longer with them. He wished also to welcome Dr. Thorne Thorne. He felt that the Lord President of the Council, in appointing so eminent a public servant, showed his desire that this Council and the most important branch of the public service which Dr. Thorne Thorne represented should move in unison, and it was the more especially necessary that this should be now that this Council was entrusted with such large powers under the Act of 1886 in connexion with the inspection, and indeed the authorisation, of registrable diplomas in public health.

Dr. HAUGHTON expressed his interest in what had fallen from the President with reference to the Pharmacopœia, and asked the Council not to forget the great work done by the President himself in this connexion. He (Dr. Haughton) believed very much in general education—Latin, Greek, and mathematics—but he asserted that their predecessors here, in working out the British Pharmacopœia, did a work which they would find it very hard to rival, much less to surpass.

The PRESIDENT assured Dr. Haughton that his work in connexion with the Pharmacopœia had always been a great pleasure to him.

The motion was cordially agreed to.

PROCEEDINGS OF THE COUNCIL.

Business Committee.

The following members were appointed to the Business Committee: Mr. Wheelhouse, Sir William Turner, Mr. Bryant, and Dr. William Moore.

Yearly Tables.

Sir WILLIAM TURNER handed in a series of yearly tables as to the results of professional medical examinations, examinations for qualifications in State medicine, professional dental examinations, &c., and suggested that there should be no discussion upon them until the Council had received a report on the question of the form of the returns.

Midwives Registration Bill

Mr. MILLER read the following communication on this subject—viz.:—

"Privy Council Office, Whitehall,
"May 16th, 1895.

"SIR,—I am directed by the Lord President of the Council to transmit to you, to be laid before the General Medical Council, the enclosed copy of the Midwives Registration Bill now before the House of Lords; and I am to request that you will move the Medical Council to favour his Lordship, as early as possible, with any observations they may decide to offer in regard to the Bill.

"I am, Sir, your obedient servant,
"C. L. PEEL."

Sir WILLIAM TURNER moved: "(a) That the Midwives Registration Bill, transmitted by the Lord President of the Council, be referred to the committee of the Council appointed on Nov. 20th, 1890, to consider the provisions of any Bill for the registration of midwives which may be submitted by the Government to the Council. (b) That the two vacancies in the committee should be filled by a member from each of the Irish and Scottish Branch Councils. (c) That the committee should report to the Council as early as possible during the present sitting." The Council, he said, so far back as November, 1890, anticipated that a Bill connected with the registration of midwives would in course of time come before the Council for its consideration, and they passed a resolution to the effect "that a committee, consisting of the President, Sir John Simon, Dr. Quain, Dr. Glover, Sir Walter Foster, Mr. Carter, and Mr. Wheelhouse, be appointed to consider the provisions of any Bill for the registration of midwives which may be submitted by the Government to this Council." It would be noticed that this committee consisted entirely of members of the English Branch Council, and he saw no reason, seeing that the Council were now in session, why they should not have representatives upon the committee of Ireland and Scotland. Two of the gentlemen named in the resolution were no longer members—namely, Sir John Simon and the then President, the late Mr. Marshall. There were, therefore, two vacancies.

Dr. MACALISTER seconded the motion.

Dr. GLOVER suggested that Sir William Turner and Dr. Thorne Thorne should be appointed to the Committee. The

nationality question did not come in here because the proposed legislation did not apply to Ireland or Scotland.

Dr. HAUGHTON concurred in this suggestion. He had spent a great deal of time in reading this Bill, and he was greatly astonished by it. A more extraordinary Bill he never read in his life. He was glad, however, to find that Ireland and Scotland were to be left alone, and he advised Irish and Scotch members of the Council to have nothing to do with the Bill.

Dr. HERON WATSON reminded Dr. Haughton that it was the opinion of the General Medical Council, and not that of the English Branch Council, which the Lord President desired.

Sir WILLIAM TURNER said he understood it to be the intention of Dr. Bruce to nominate Dr. McVail, and in his absence he would do so.

The PRESIDENT thought they must insist on the aid of Sir William Turner.

Dr. McVAIL said he would have much pleasure in supporting the nomination of Sir William Turner.

Other names having been suggested, it was decided that the committee should be given general power to add to their number, and the motion thus amended was agreed to.

Sir WALTER FOSTER had on the notice paper a motion to this effect: "That this Council, while desiring to improve the education, training, and control of midwifery nurses, cannot support the 'Bill for the Registration of Midwives,' now before Parliament, inasmuch as that Bill would give a legal status to women who are not properly qualified to take sole charge of midwifery cases." Sir Walter Foster said he thought the Council had adopted a wise course in referring the Bill to this committee, and he would defer action on this motion until the report of the committee had been received.

Dr. MACALISTER pointed out to the Council that on the following day they were apparently to receive a deputation of fourteen members from the Lancashire and Cheshire Branch of the British Medical Association to speak on this Bill, among other subjects. Having regard to the reference just made to the committee, he thought it would be waste of time for the Council to hear the deputation, and suggested that it should go before the committee.

The PRESIDENT said they must receive the deputation, because they had promised to do so.

Dr. GLOVER thought it most desirable to receive the deputation. His only regret was that they were not to receive a deputation on the other side of the question.

Sir DYCE DUCKWORTH was sure the Council would be greatly maligned if they did not receive the deputation.

Sir WALTER FOSTER said that any attempt to prevent the deputation coming before the Council would be viewed not only as an act of discourtesy, but would be more or less unconstitutional in its character.

Dr. HERON WATSON thought the Council could make no greater technical error than to refuse to receive this deputation.

The matter was not pressed further, members understanding that the deputation would be received.

PHARMACOPEIA COMMITTEE.

Dr. LEECH moved: "That standing order No. 8 be amended as follows: 'The Pharmacopœia Committee shall consist of the President of the Council and eight members, of whom four shall be elected from the English, two from the Scotch, and two from the Irish Branch Council. The Pharmacopœia Committee shall have charge of all matters relating to the preparation and publication of the Pharmacopœia, and shall report from time to time to the General Medical Council.'" It was pointed out last session that the committee was not quite according to the standing orders, and that in consequence the committee might be placed at a disadvantage in its work. He thought it very desirable that each of the divisions of the kingdom should be represented on the committee.

The motion was agreed to, and the following members were nominated to the Committee: The President, Sir Dyce Duckworth, Mr. Carter, Dr. MacAlister, Dr. Leech, Dr. Batty Take, Dr. McVail, Dr. Charles Moore, and Dr. Atthill.

The Society of Apothecaries.

On the motion of Mr. CARTER, it was agreed to appoint Mr. Bilton Pollard an Assistant Examiner to the Society of Apothecaries, in place of Mr. Andrew Clark, who retires by rotation.

The Council then adjourned.

WEDNESDAY, MAY 29TH.

The Council resumed to-day, Sir Richard Quain in the chair.

The Midwives Question.

The first business of the Council was to receive a deputation from the Lancashire and Cheshire Branch of the British Medical Association on the following questions: (1) the diplomas issued by the Obstetrical Society and other bodies; (2) the continuance of lectures by unauthorised persons on midwifery to persons other than registered students of medicine; and (3) the Midwives Bill at present before Parliament. The deputation consisted of James Taylor, F.R.C.S. Eng., ex-President Lancashire and Cheshire Branch British Medical Association, senior surgeon to the Chester General Infirmary; George Edw. Shuttleworth, B.A., M.D., ex-resident medical superintendent of the Royal Albert Asylum, Lancaster, ex-President of the Lancashire and Cheshire Branch of the British Medical Association; Sam Woodcock, M.D., J.P., President of the Medico-Ethical Association, Manchester, member of the Parliamentary Bills Committee Lancashire and Cheshire Branch of the British Medical Association; J. Brassey Brierley, M.D. Edin., Vice-President of the Medico-Ethical Association, Manchester; F. H. Walmsley, M.R.C.S., L.S.A., J.P., ex-Mayor of Salford, ex-President of the Manchester Clinical Society, Governor Owens College; W. H. Hughes, M.R.C.S., L.S.A., J.P., M.O.H., Hon. Surgeon to the Ashton-under-Lyne Infirmary, Chairman of the Lancashire and Cheshire Branch Committee of the British Medical Association; John Holden, M.R.C.S., L.R.C.P. Edin., J.P., ex-Mayor of Preston, hon. surgeon to the Preston Royal Infirmary, &c.; J. G. Gledhill, M.B. Glasg., barrister-at-law of the Honourable Society of the Middle Temple; Colin Campbell, M.R.C.S., L.R.C.P. Irel., and L.M., hon. secretary of the Lancashire and Cheshire Branch Committee of the British Medical Association; T. A. Helme, M.D., C.M. Edin., F.R.S. Edin., M.R.C.P. Lond., M.R.C.S. Eng., ex-resident obstetrician at St. Mary's Hospital, Manchester, hon. assistant surgeon to the Clinical Hospital for Women and Children, Manchester; George H. Broadbent, M.R.C.S., L.R.C.P., member of the Lancashire and Cheshire Branch Committee of the British Medical Association.

Dr. GLOVER introduced the deputation to the Council, explaining that they represented one side only of this important question, and saying he was sure they appreciated the kindness of the Council in receiving them.

The PRESIDENT welcomed the deputation. The Council, he said, were prepared to listen to what they had to say, but they had agreed not to address questions to members of the deputation.

Mr. COLIN CAMPBELL said he understood that the position of the deputation as representing the Lancashire and Cheshire Branch had been questioned, and he would be glad to know whether the Council desired him to address himself to that point.

The PRESIDENT said that was a matter for the deputation to decide.

Mr. CAMPBELL then addressed the Council. They appeared, he said, as representing the Lancashire and Cheshire Branch of the British Medical Association, and they asked the Council, as they set forth in their petition, that they would continue to object and withhold their sanction from any form of certificate or diploma issued to so-called midwives other than such as testified to the ability of the holder to act as a midwifery nurse; to declare infamous in a professional respect the conduct of those registered medical practitioners who continued to deliver unauthorised lectures on the science and art of midwifery to other than registered students of medicine; to countenance only such courses of lectures and instruction as were limited in their scope to the knowledge necessary to competence to perform the duties of a midwifery nurse; and to oppose in such a way as the Council might determine the passing of the Bill on this subject now before Parliament. All the deputation asked on the first point was that the Council should maintain the strong ground they had already taken up. They called the attention of the Council to the fact that the training of the so-called midwives and the issue of diplomas, in spite of the condemnation of the Council, still went on. In the Manchester papers, side by side with the advertisements of quacks and all sorts of specialists, there were the advertisements of lectures upon midwifery.

Dr. HELME next addressed the Council. He dwelt upon two

points—namely, the field of practice in which the midwife was called upon to work and the present system of training midwives. In Manchester, he said, Dr. Tatham had shown that of the registered stillbirths in that city 45 per cent. had been attended by women, and it was his (Dr. Helme's) settled opinion that every one of these labours must be considered abnormal. The available statistics, however, gave no idea of the real mortality, because still-born children need not be buried in a public burying ground and they could be buried without a certificate. If the midwife was to undertake to attend even so-called normal labour upon her own responsibility and without medical supervision, she must be competent to recognise concurrent disease, to diagnose abnormalities, and to deal with emergencies, and for these she required a thorough knowledge of midwifery. As to his second point, Dr. Helme read extracts from a course of lectures for midwives delivered in Manchester. As to the practical training, he said it was limited and insufficient. For three years he had had practically the sole control of a large obstetric department where 3000 labours occurred annually, and he had a good deal to do with the midwives who presented themselves for examination. Some were educated women and some were good and conscientious, but the majority were ignorant women and utterly unfit for the work of midwives. Diplomas were granted to women who had only the minimum training required—i.e., attendance on twenty labours. He would give a short experience of the training at one institution. A woman of little or no knowledge, and probably possessing little capacity for receiving knowledge, went to the house of a midwife and lived with her for from ten to fourteen days. This midwife would probably attend from three to six labours in the day, and she took this midwife pupil with her. The house was generally some miserable hovel where there was no means even of washing the patient. He himself had seen the patients lying on straw. The midwife pupil was taken to this room and saw the process of labour going on. In many cases she had not the opportunity and was not allowed to examine the case. What she did was to watch the proceedings of the woman who was almost as ignorant as herself, and after she had seen twenty of these labours she received a certificate to that effect from the midwife. This was presented to the hospital authorities and received as evidence of practical training. The woman had never seen the inside of a hospital ward and knew nothing about antiseptics. With this certificate in her possession she passed an examination of a ridiculously low standard and got her diploma, which she duly placed in her window to attract customers. She went about the neighbourhood telling people that she had got this diploma, and was consequently a very superior person. As a matter of fact she was really more dangerous than the ordinary midwife, because she raised a false feeling of security among the public. He was all in favour of high education for women, but he did not believe that the education given at present produced a woman even slightly better than the old-fashioned woman in the great majority of cases. He submitted that such a course of lectures and instruction as was now given to pupil midwives was a source of menace to the safety of pregnant and lying-in women, of grave moral danger to the public, and of great temptation to the midwife to exceed her legitimate functions.

Dr. WOODCOCK also addressed the Council. He told the Council that the Lancashire and Cheshire Branch, which was one of the largest branches of the British Medical Association, had been greatly exercised about this question of the registration of midwives. From time to time they had discussed it, and so strongly were they impressed with the necessity of some pronouncement being made on their behalf that an influential committee was appointed some time ago actively to oppose legislation such as that proposed in this Bill. A sum of £250 was voted from their reserve fund to enable them to meet whatever difficulties might be met with in the course of their legitimate work. The branch were actuated by no mere selfish motives. They knew perfectly well that a Bill such as that now before the House of Lords could in no sense safeguard the interests of the community, while it certainly stamped with the hall-mark of efficiency, on the part of the Government, women who were entirely unworthy of the position. They objected to the term midwife because it was taken by the public to mean that a midwife was a woman who was competent to undertake the entire charge of obstetric practice. The Bill emphasised this point by saying in the second clause that the term "midwife" meant a woman who undertook to attend cases of

natural labour without the direct supervision of a medical practitioner. The whole scheme of the Bill seemed to be to create an inferior order of practitioners who were to be placed on the same platform as men who had been carefully instructed in the three branches: medicine, surgery, and midwifery. They were anxious to forward a movement for the registration of all nurses. As medical men they knew the value of the assistance of educated medical nurses, and surgical nurses, and midwifery nurses. But these nurses were drawn from a very different class to the midwives. It was stated in the Bill that these women were not to be allowed to grant certificates of death or stillbirth, but there was no penal clause added, and they knew perfectly well that at the present moment midwives did grant these certificates. Dr. Woodcock then referred to the constitution, proposed in the Bill, for the Midwives' Board and condemned it in several particulars. He also took exception to the idea that medical officers of health, especially in large cities, could be expected to exercise any efficient control over midwives. In conclusion, he thanked the Council for the courtesy and patience with which they had listened to the views of the deputation, and expressed the hope that they would be favourably entertained.

The deputation thereupon withdrew.

The Council and the Scottish Universities Commissioners.

Dr. BATTY TUKE, on behalf of the Education Committee, presented and moved the adoption of a report with reference to communications which have been passing between the Council and the Scottish Universities Commissioners as to the medical curriculum. The following passages occur in the report:—

Section X. of the Ordinance of the Scottish Commissioners provides that instruction in the three subjects before passing a preliminary examination (i.e., before registration) may count as the first year of medical study. Thus the name of any Scottish university student who is permitted to avail himself of the provisions of the section may stand on the Students' Register for four years only before graduation, instead of five. This, in the words of the Commissioners, constitutes a "power of exemption conceded to the universities" which cannot be extended to the licentiates of other examining bodies. The position of the Scottish universities is therefore entirely anomalous. It has been brought about by want of consideration on the part of the Commissioners for the administrative functions of the Council, which is appointed by statute to "regulate the qualifications of practitioners in medicine and surgery." Had the Commissioners afforded to the Council the same opportunity for criticism as was accorded to the various licensing bodies in Scotland, the complication would not have arisen. Draft ordinances were forwarded to the latter, with requests that objections to any provision might be intimated. The Council was not consulted in any one particular, nor was any draft ordinance ever forwarded to its President. The consequence of this omission has been the enactment of an ordinance which is opposed to one of the most important of the Council's *Requirements*, and which directly and indirectly has seriously interfered with its action in respect of regulating medical education. The Commissioners state that they have now no power to repeal or suspend the action of this section. Judging from the concluding paragraph of their letter they appear, however, to appreciate the fact that Section X may have a detrimental effect on medical education; and they propose that, in order to facilitate its repeal after the cessation of their powers, it shall be stated in their report that their reason for declining to reconsider the propriety of the section in question is that they are powerless to record what has received Her Majesty's approval. In the opinion of the Committee, the Council must now await the expiry of the Commission, and then take steps to represent the state of matters to the University Courts of the Scottish universities. These bodies will no doubt be prepared to exercise, in respect of this section, the powers of alteration and revocation of ordinances, with the approval of Her Majesty in Council, conferred on them by Section 21 (2) of the Universities (Scotland) Act, 1889. The universities will thus be enabled to bring their regulations into accord with those of all the other licensing bodies of Great Britain and Ireland which have accepted loyally the five years' curriculum prescribed by the General Medical Council.

Sir DYCE DUCKWORTH reminded the Council that they had the remedy in their own hands of refusing to recognise the qualifications.

The report was adopted.

The Registration of Dental Students.

On the recommendation of the Education Committee, it was decided to amend the resolution on this subject so as to read: "The registration of dental students shall be carried on at the General Council office in London in the same manner as the existing registration of medical students—as hereinbefore set forth—and subject to the same regulations as regards preliminary examinations, but in the case of dental students professional study may commence by pupilage with a registered dental practitioner."

Matriculation Examination of the University of Wales.

The Council agreed, on the recommendation of the Education Committee, that this examination be accepted and that

the University of Wales be included under Division I. in the "List of Examining Bodies whose Examinations in General Education are recognised by the Medical Council as qualifying for Registration as Medical or Dental Student," on the condition that the certificate of its Matriculation Examination shall show that the student has been approved in one of the optional subjects required by the Council, and that the whole examination has been passed at the same time.

The Certificates of the Obstetrical Society of London.

Mr. MILLER (Clerk) read the following communication from the Obstetrical Society of London—viz. :—

"42, Upper Brook-street, W., May 28th, 1895.

"DEAR MR. PRESIDENT,—I beg to acknowledge the receipt of your communication forwarding to me a copy of the resolution of the Executive Committee of the General Medical Council, approving of a form of certificate for adoption by the Obstetrical Society of London.

"In reply, I beg to say that now, knowing what the wishes of the Medical Council are, I, in the name of the Council of the Obstetrical Society, accept the form of certificate approved by the Executive Committee, which shall in future be issued.

"F. H. CHAMPEYNS, President of the Obstetrical Society.

"To the President of the General Medical Council."

Mr. WHEELHOUSE, seconded by Sir WALTER FOSTER, moved that the communication be received and entered upon the minutes.

The PRESIDENT said he was sure this would be regarded as a very gratifying result of what had been an unpleasant controversy.

Dr. HAUGHTON pointed out that the form of the certificate had not been approved by the Council, but only by the Executive Committee.

Dr. HERON WATSON said the matter had been handed over to the Executive Committee.

The PRESIDENT said that in the absence of the Council it was represented by the Executive Committee in all things, even to the extent of spending £18,000 on the purchase of the site of their buildings.

Sir WALTER FOSTER warned the Council that this matter was sure to come up again, because there was a good deal of dissatisfaction about the certificate.

Sir WILLIAM TURNER said that the only point which came before the Committee was really whether this certificate issued by the Society was a colourable imitation, and in the judgment of the Committee the Society had removed from the certificate anything which would lead anybody to regard it as a colourable imitation. The certificate referred to nothing but midwifery, and it expressly said that it conferred no legal qualification to practise under the Medical Acts. It was a simple certificate that A. B. had passed an examination in midwifery.

Sir WALTER FOSTER thought the words should be added, "an examination in midwifery instituted for midwifery nurses."

Dr. McVAIL supported Sir Walter Foster, saying that if the Society objected to these words then it would be plain that they intended the certificate to be used for the practice of midwifery. He moved that the matter be referred back to the Executive Committee with a view of having such words added.

Dr. PETTIGREW thought the Council were indebted to Sir Walter Foster for the suggestion he had made.

Mr. BRUDENELL CARTER asked whether the new diploma would have the appearance of the old one. The exact wording of such a document was less important than its size and the style in which it was engraved.

The PRESIDENT said the Council had no control over the Obstetrical Society or any other society unless they did something illegal. The Obstetrical Society in the present instance had adopted the form of certificate approved by the Executive Committee, and they as a Council had really no control over the matter.

Dr. GLOVER was of opinion that this discussion was objectionable. It had for a while been irregular because no motion was before the Council. Then the subject involved was under the special consideration of a committee, and if the question was to be raised again it should not be raised until the report of the committee was before the Council.

Dr. ATTHILL thought the action of the Executive Committee had been judicious, although the form of the certificate was not what he should like to see. He approved of the suggestion of Sir Walter Foster, and thought the subject should drop.

Dr. HERON WATSON pointed out that when this matter was before the Council in December last they found that the certificate of the Society as then before them was such that it might be regarded as a docu-

ment coming within the purview of the Council's previous resolution, that certain documents issued by various societies as diplomas of education and examination were colourable imitations of diplomas conferring a legal right to admission to the Medical Register, and both contravened the spirit of the Medical Acts and were calculated to deceive the public. On receiving a communication to that effect the Obstetrical Society had held a meeting at which the matter was brought up as a matter of urgency, with the result that they agreed to submit for the Council's consideration the existing diploma and a modification of it which they hoped would meet the requirements of the Medical Council. In the same month the Executive of this Council gave the matter consideration, and came to the following conclusion: That the Executive Committee are of opinion that the words in the diploma, "a skilled midwife, competent to attend natural labour," are open to legal objection, seeing that under the Medical Act (1886) midwifery is one of the three branches in which a regular practitioner must pass an examination in order to obtain a registrable qualification. The above cited words suggest that the holder has a registrable qualification. This both contravenes the spirit of the Medical Act of 1886 and is calculated to deceive the public. Again, the formal character of the document, which is described on its face as a diploma, is fitted to deceive the more ignorant part of the public—that part which most needs protection. That the Executive Committee request the President and Council of the Obstetrical Society of London to inform the General Medical Council within one month what steps they have taken to bring their certificate within the terms of the resolution of the Council. That simply meant that the Executive Committee disapproved of the modified form agreed upon by the Obstetrical Society in February. Afterwards there was a further communication from the society begging to be informed what sort of certificate would be regarded as satisfactory in the eyes of the Council, and it was then decided by the Executive Committee that such a form as that which had appeared in the programme of business for the previous day would be satisfactory, and in his opinion it would be captious criticism to require any further change.

Dr. McVAIL formally moved: "Remit back to the Executive Committee the matter of the midwifery certificate proposed to be given by the Obstetrical Society in order that the committee may ensure that the certificate shall clearly bear out that the examination is only to ascertain the qualification of candidates for midwifery nursing."

Dr. BRUCE seconded this proposal. He contended that the Executive Committee had no power to deal with anything that was never delegated to them.

Sir W. TURNER, as a member of the Executive Committee, wished to say that this had been a matter of extremely delicate and difficult negotiations, and the Council owed a great deal to their President for the care and judgment he had shown in the conduct of these negotiations. The Executive Committee, he thought, had come to an equitable decision, and he should be extremely sorry to think that that decision was going to be questioned and fresh negotiations entered upon. The real question the Executive Committee had before them was whether the certificate of the Obstetrical Society was or was not a colourable imitation of a legal document—was a diploma in the sense of the Medical Acts, and calculated to deceive the public. When they had the draft certificates before them they took a deal of trouble to exclude anything from what they might offer to the society as satisfactory which even the most critical could say amounted to colourable imitation of the legal document, and the result was that the certificate the committee approved of was simply a certificate that A.B. had passed to the satisfaction of the signatories an examination in midwifery. That was all. The Obstetrical Society, he thought, had met them in an extremely kindly spirit, and he did not think they should disturb the arrangement come to, which seemed to him to be a very equitable one.

After some remarks by Dr. MACALISTER,

Dr. McVAIL said that if the Council settled this matter now the essential point which was referred to the Committee on Tuesday, which the Lord President had referred to this Council, and which would come up for discussion on the report of the Committee, would be practically settled, for what the Council would do, if it approved of the action of the Executive Committee, would be to approve of a certificate intended to allow a certain class of persons to practise midwifery without the supervision of this Council.

The PRESIDENT said it would now be his duty to put Dr. McVail's motion to the vote. If the subject was opened up again it must pass out of his hands, for he would have nothing further to do with it.

On the roll being called 7 voted for Dr. McVail's motion and 20 against it.

The Council's Offices.

The PRESIDENT submitted a communication on the subject of the purchase of the premises now occupied by the Council at 299, Oxford-street, and 16, Hanover-square, and on the motion of Sir William Turner, seconded by Dr. Bruce, it was unanimously resolved to accept the offer of the English Branch Council to lend £20,000 at 3 per cent. interest to enable the Council to complete the purchase. It was further resolved that the President and Treasurer have authority to complete the purchase, power being given them to purchase if necessary the interim lease of the premises. The President having remarked that it would be a very happy thing for them to feel that they were in their own freehold premises, the Council, on the motion of Dr. GLOVER, seconded by Dr. PETTIGREW, resolved to record in the minutes a vote of thanks to the President and the Treasurer for the trouble they had taken in bringing the negotiations to a satisfactory conclusion.

Members' Travelling Expenses.

On the motion of Mr. WHEELHOUSE it was agreed to receive and enter on the minutes the following reports from the Branch Councils in regard to the alterations suggested by the Executive Committee in the Standing Orders as to the fees paid to members of the Council for attendance:—

(a) From the English Branch Council.—The English Branch Council reports that it approves of the suggested alterations in the Standing Orders in the following amended shape: that Clause 4 remain unaltered, and that Clause 6 be as follows:—

	£	s.	d.		£	s.	d.
Edinburgh	6	6	0	Cambridge	1	1	0
Glasgow	6	6	0	Leeds	3	3	0
St. Andrew's	7	7	0	Manchester	3	3	0
Aberdeen	7	7	0	Birmingham	2	2	0
Dingwall	8	8	0	Newcastle	4	4	0
Dublin	6	6	0	Filey	4	4	0

(b) From the Scottish Branch Council.—The Scottish Branch Council reports that it recommends: "That the General Medical Council do adhere to Clauses 4 and 6 of Chapter XI. of the existing Standing Orders."

(c) From the Irish Branch Council.—The Irish Branch Council reports that it is of opinion: "(1) That the sum of 5 guineas is insufficient to cover the travelling expenses of the Irish members of the Council; (2) that the travelling fees of the members of the Medical Council should not be reduced, seeing that the average income of the General Council exceeds its average expenditure by a large amount."

Dr. PETTIGREW objected to any change in the standing orders. Both the Scottish and the Irish branch councils were agreed that there should be none. If the alteration suggested by the English branch council were put in operation it would press unnecessarily on the Irish as well as Scotch members of the Council.

Sir WALTER FOSTER remarked that the subject had been started because it had seemed to some of them that gentlemen from Scotland and Ireland were extremely tender in their consciences about taking too much from the funds of the Council.

The Rev. Dr. HAUGHTON wished to distinguish between Irishmen and Scotchmen. The latter had long railway journeys to take in order to attend the meetings of the Council, but they had not to cross the Irish Sea like the members from Ireland, who ought to get an extra guinea for the sea-sickness they suffered on every journey between Kingstown and Holyhead.

On the motion of Dr. WILLIAM MOORE, seconded by Dr. PETTIGREW, the recommendation of the Scottish Branch Council was accepted.

Hours of Meeting.

Sir PHILIP SMYLY moved: "That the Council shall meet each day at 11 A.M. and rise at 1.30 P.M. for lunch, and again meet at 2 P.M., not sitting after 6 P.M." In supporting this proposal he mentioned that all the members received the same honorarium; but while those resident in London had to give only three or four hours daily to the business of the Council, the Scotch and Irish members had to give day and night. By the present arrangement they were deprived of the afternoon—the interesting and amusing

time in London. They might have a portion of some afternoons if they adopted his motion. Under present arrangements the Council's sessions lasted sometimes as many as ten days. If they adopted his motion they might get through the session in five days, and that would mean a very important saving to the funds of the Council.

Dr. BATTY TUKE, in seconding the motion, said that long ago he, with Dr. Leishman, had advocated the adoption by the Council of a policy of economy and retrenchment. Both of them held that it would be far better for the members of the Council to work without any fee whatever, but they found that any such policy as theirs was not likely to be adopted by the Council, and they came to the conclusion that if the members were not to work for nothing they might be induced to work longer hours. If they would now adopt the motion before them it would tend to reduce their sessions by at least one-third, and, of course, there would be a corresponding reduction of the expense. Many of them suffered materially by being so long away from their practices, and to him personally it had on more than one occasion been a serious loss to have to stay away so long from Edinburgh.

The PRESIDENT thought it would be a great pity to disturb the arrangements which had been in existence for so many years.

Dr. ATTHILL said it was a hardship and a serious loss to the provincial members when they had to stay in London over Sunday. To get rid of the necessity for that the Council might somewhat extend the duration of the daily sittings.

Sir JOHN BANKS objected to any change.

The Council divided and rejected the motion by seventeen votes to eight.

The Medical Acts.

The Council entered on the minutes the following report: "That with regard to the communication from the Parliamentary Bills Committee of the British Medical Association (see *Minutes* for May 22nd, 1894, Vol. XXXI., pp. 45-52)—on which the Executive Committee reported on Nov. 28th, 1894, but which was recommended by the Council on the same day to the Executive Committee for further consideration and report,—the Executive Committee recommend that the Council should intimate to the Parliamentary Bills Committee of the British Medical Association their readiness to consider the provisions of any bill for amending the Medical Act (1858) or any subsequent Acts which may be submitted to this Council by the Government."

Sir WILLIAM TURNER moved the adoption of the recommendation.

Mr. WHEELHOUSE seconded.

Dr. MACALISTER asked whether the recommendation meant that the Council were ready to consider the provisions of any Bill proposed by the Government only.

Sir WILLIAM TURNER replied in the affirmative.

The recommendation was unanimously adopted.

Committees.

The Education Committee and the Examination Committee were re-elected without alteration. The Students' Registration Committee was also nominated, Dr. Hector Cameron taking the place of Dr. Bruce.

For the rest of the afternoon the Council sat in private.

THURSDAY, MAY 30TH.

The Council resumed its work to-day, with Sir RICHARD QUAIN again in the chair, and proceeded to the consideration of disciplinary cases.

Medical News.

THE annual dinner of the West London Medico-Chirurgical Society was held at the Café Royal on May 22nd. The President, Dr. Banning, was in the chair, and among the numerous guests was the President of the Royal College of Surgeons of England. Prosperity to the society was proposed by Mr. Keetley in a humorous speech, and the health of the guests was given by Mr. A. G. Wells. Mr. Christopher Heath, in replying for the visitors, mentioned that he was specially interested in this society, since he had been surgeon to the West London Hospital thirty-five years ago. Mr. Edwards proposed the health of the President, which was received with acclamation, and the evening concluded

with the toast of "The Officers," proposed by Dr. Alderson, to which Messrs. Lake and Bidwell replied. The dinner was enlivened by selections of music by the Oliveira quartet.

SUPERANNUATION ALLOWANCE.—Mr. C. H. Buncombe, F.R.C.S., medical superintendent of the City of London Infirmary, Bow-road, has been granted a superannuation allowance of £517 8s. per annum.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—

The following gentlemen having passed the necessary examination have been admitted Fellows of the College: Mr. Robert H. Cox, Mr. Sinclair Finlay, Mr. William J. Greer, and Mr. William J. Trewbella.

PRESENTATIONS.—Dr. F. Sidney Gramshaw of Stillington, Yorks, has been presented with a morocco case, suitably inscribed, containing a set of solid silver Queen Anne salt-cellars. The presentation was made by Miss Fairfax-Cholmeley (the honorary secretary), and a deputation on behalf of the ambulance classes lately conducted by him at Brandsby under the auspices of the St. John Ambulance Association.—Mr. Peter Bradford, L.R.C.P. Lond., M.R.C.S. Eng., on his resignation as resident medical officer of the Convalescent Hospital at Southport, was presented on the 16th ult., by the Chairman of the institution on behalf of the committee, with a handsome clock, inscribed as follows: "Presented to P. Bradford, L.R.C.P., M.R.C.S., L.S.A. Lond., by the committee of the Southport Convalescent Hospital as a grateful expression of their regard for his valuable services as resident medical officer for the last seventeen years."

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Factory and Workshops Bill.

This Bill is still in the hands of the Grand Committee. At the meeting on Tuesday, May 28th, an attempt was made to alter the clause with reference to overtime in special trades, such as dress-making, millinery, artificial flower making, bookbinding, dyeing and bleaching, lithographic printing, &c. The clause prohibits overtime in these trades in the case of young persons between fourteen and eighteen years of age. Mr. Matthews moved to carry the prohibition only so far as to young persons under sixteen years. There was a very long debate on the question, the result being to keep the fourteen to eighteen years prohibition.

HOUSE OF COMMONS.

THURSDAY, MAY 23RD.

The Hours of Bakers.

Mr. John Burns at the commencement of this sitting presented a petition signed by 6000 operative bakers in London and the provinces, praying that the Government might see their way to reduce their working hours to forty-eight per week, having regard to the lengthy hours and the insanitary conditions in which they had to work, too frequently in underground bakehouses.

Opium and Bang in Ceylon.

Mr. Sydney Buxton, replying to Mr. Caine, said that reports had been received from the Governor of Ceylon regarding the consumption of opium and bang in the colony, but before deciding what action, if any, should be taken on those reports the Secretary of State had been awaiting the issue of the reports of the Royal Commission on Opium and of the Indian Hemp Drugs Commission. Those two reports having now been received, the Secretary of State hoped to address the Governor of Ceylon very shortly on the subject, and the correspondence as soon as it was complete would be presented to Parliament.

FRIDAY, MAY 24TH.

The Case of Dr. Cornelius Herz.

Mr. Asquith, replying to a question on this case put by Mr. Griffith Boscawen, said that the "arrest" of Dr. Herz had consisted in the presence of a police-constable in the same hotel in which he was lying ill. As it was represented to him that the fact of the officer being in the house was mentally disquieting to Dr. Herz, he recently took the responsibility of removing him. He strongly deprecated the use of such phrases as that the Government were "trifling with the life of Dr. Herz." The French Government had demanded his extradition on very serious charges, and, in reply to the suggestion of Her Majesty's Government that in view of his state of health they might withdraw their demand, they had, acting within their right, refused to do so. Under these circumstances our course was prescribed by our treaty obligations, and those obligations had been and were being performed with the greatest consideration possible for the health of Dr. Herz.—Mr. Hanbury asked whether the Government had a Bill to deal with this particular case.—Mr. Asquith replied that the Bill was one to amend the general law, but no doubt it was suggested by the circumstances of this case. The Bill would not in the least degree improve the position of Dr. Herz, because

it was quite obvious that if he was too ill to leave his bed he was too ill to be examined by a magistrate. The Bill referred to was read a second time the same evening in the House of Lords. In explaining its purpose the Lord Chancellor said that under the Extradition Act if a person charged with an extradition offence was too ill to be conveyed to Bow-street, London, there was no means of holding an inquiry at all, even though the person charged might be well enough to be present at the inquiry. The Bill proposed that in these circumstances the Secretary of State should have power to order an inquiry elsewhere than at Bow-street.

The Debate on the Opium Question.

The sitting of the House between nine o'clock and midnight was devoted to a debate on the opium question. The subject was introduced by Sir Joseph Pease, who moved the following resolution—viz.: "That this House, having had before it its resolution of June 30th, 1893, pressing on the Government of India to continue their policy of greatly diminishing the cultivation of the poppy and the production and sale of opium, and having had presented to it the report of the Royal Commission appointed Sept. 2nd, 1893, to inquire into various matters connected with the cultivation of the poppy in India, is of opinion that the system by which the Indian opium revenue is raised is morally indefensible, and would urge upon the Indian Government that they should cease to grant licences for the cultivation of the poppy and sale of opium in British India, except to supply the legitimate demand for medical purposes, and that they should at the same time take measures to arrest the transit of Malwa opium through British territory." Sir Joseph Pease said he wished to seize the opportunity of endeavouring to remove the impression which appeared to prevail in many quarters that this Royal Commission had terminated for ever the question of the trade in opium, that it had met the views of those who had been opposed to this trade, and who had for many years fought against its continuance in our Indian Empire. They still held to the opinion that the system by which this revenue was raised was morally indefensible, and he asserted that the report of the Commission confirmed the view that this trade was morally indefensible. On the appointment of the Commission he had received assurances from Lord Kimberley that the inquiry would be a fair and free inquiry in India; but having obtained the Commission the Indian Government at once proceeded to dry-nurse it. They provided it with three consecutive secretaries previously in their pay, and he believed that at this moment these gentlemen were attached to the Government of India. Five ladies were attached to the Commission; there was a review of troops at which Lord Brassey, the chairman, nearly lost his life; and, in order to bring this great Commission on a moral question up to the mark, the whole of the members except his hon. friend behind him (Mr. Henry J. Wilson) were entertained at an Indian Nautch dance. A very high official of the Indian Government was attached to the Commission for the purpose of bringing up the evidence. The evidence was collected by Mr. Dane; a large quantity of it passed through the hands of the Calcutta Government; but the anti-opium members were not aided to bring up a single witness. The whole power and money of the Indian Government were against the two subscribers to the anti-opium movement. He was struck by the manner and style—the Old Bailey style—in which Sir James Lyall put his interrogatories to the witness brought against the opium traffic, and anyone who read the evidence must be struck with its hearsay character and tone. It was, moreover, difficult to find out what the Commission had reported. There was little or no positive recommendation except on the question of smoking, and here it was suggested that the use of opium should be restricted. Then again the Indian Government thanked the Commission for their trouble because the inquiry held strengthened the hands of the Government. The Commission also thanked the two paid officers who were their secretaries for having drafted their report. No doubt the secretaries ought to have drafted the report, but ought they to have been in the pay of the Indian Government or ought they not rather to have been independent secretaries? He asserted that the report was settled in the India Office. Dealing in detail with the report, Sir Joseph Pease said that the paid officers of the Indian Government occupied 240 pages out of 392. Of the 130 medical men examined, 82 were official, 14 missionary, and 34 independent. Of the officials, 44 were favourable, 18 indifferent, and 20 unfavourable. All the missionaries were unfavourable to the use of opium and half of the independent medical men. He then quoted from the report to make good these positions—that as a febrifuge and prophylactic opium was not wanted, that the cultivator could do without it, that we could arrange with the native States, that the native soldiers were better without it, that opium smoking was condemned in India as a low and vicious habit, and that in China it was undermining society, while from its effects the people were surely deteriorating.—Mr. John Ellis seconded the resolution.—Mr. Fowler, Secretary of State for India, defended the Commission from the attacks made upon them. He explained the elaborate arrangements they made for their inquiry, and the number and the place of their meetings. They examined, he said, 723 witnesses, these including every witness offered by the Anti-Opium Society. They put something like 25,000 questions. They sent interrogatories to China and to the Straits Settlements. The report was signed on April 16th. It was placed on the table of the House of Commons on April 25th; it was delivered to members on May 4th; it was sent to India by the mail of May 10th; and now on May 24th, not three weeks from the date it was first placed in the hands of members, and while it was absolutely impossible for the Government of India to have read it, and the minority report contained a very serious censure upon that Government, this House was asked to declare that it was a prejudiced document, and that all the Commissioners save one were wrong, and one only was right; and between the hours of nine and twelve o'clock this House was asked to pass this resolution of censure of the greatest magnitude. Such a course was not fair to the Commissioners, nor to the people of India, nor to the Government of India, nor to the members of this House themselves. After referring to some of the qualifications for the work possessed by the members of the Commission, Mr. Fowler said that the discharge of this public duty involved a great amount of physical and mental labour. It was a thankless duty, but, after all, Englishmen were in the habit of treating men who did a public duty with the greatest generosity and the greatest consideration. It was said that these gentlemen went to dances of the Nautch girls and were entertained by the Viceroy. When they were told that because they were asked out to dinner they could not

deal with this case impartially, he must protest against this mode of dealing with a commission of this character. There was an end of Royal Commissions, which had hitherto been one of the most powerful and convenient modes of inquiry, if gentlemen discharging duties of Commissions were to be treated as those gentlemen had been treated. These Commissioners arrived at a series of distinct conclusions. They all admitted that the report of the Commission conflicted with many preconceived opinions. There was a new light thrown upon the whole of this case by the report. He was not going to say that his hon. friends were wrong and the Commissioners right, but questions had been raised affecting the opium consumption, affecting the opinions of missionaries and medical men, and he maintained that before the House of Commons gave a decision these questions must be argued out. Public opinion must be informed on the question and scientific opinion must be ascertained. The matter must be decided not by personal attacks upon the Commissioners, but by the weight and value of the evidence. His hon. friend said that the medical evidence was nearly equally divided. There were 146 medical witnesses examined, and of these only 20 were against the use of opium and 126 went the other way. Then the Government of India had a right to be heard before any decision was arrived at by this House. They would not treat any parish council in the manner in which his hon. friend proposed to treat the Government of 300 millions of people. He would leave this question, as Lord Beaconsfield said, "to the instinctive justice of the House," and he was sure that the House of Commons would not decide in such a manner. The Government objected to this motion because it was premature and because it was immature, because it involved a flagrant injustice on the one hand and because it was impracticable on the other. They were asked as a Parliament to reject the deliberate judgment of a competent commission, and to do so without the slightest opportunity of examining, much less testing, the evidence on which that judgment was founded. They were asked to deprive the Government of India of a large portion of its revenue without making any provision for the inevitable deficit which must follow, thereby involving one of two things—either disabling the Indian Government from meeting its engagements or necessitating the imposition of a heavy extra taxation.—Mr. Mowbray, one of the members of the Royal Commission, then addressed the House. He claimed that anybody who carefully studied the evidence would believe that the report they had given was a fair and impartial report, and the only report which they could possibly have given. There were certain heads of evidence for the presentation of which to the Commission the Government of India held itself responsible, but the rest of the witnesses were selected by the local governments because they were supposed to know best what persons were likely to give good evidence. The Government of India, instructing the local governments as to the selection of the independent and non-official witnesses, said: "It is desirable that they should be gentlemen of some social standing, of independence of character, and of good general intelligence, and so completely in touch with public feeling in their respective provinces as to command the respect and confidence alike of the people of India and of the members of the Commission." The local governments, he believed, did their work honestly in that way, and he also believed that the witnesses who were examined supplied a fair representation of the views of the people of India.—Mr. Henry J. Wilson, another member of the Commission, rose, but he had only addressed a few words to the House when the closure was moved and agreed to. Thereupon the division was taken, when 59 members voted for the resolution and 176 against it.

MONDAY, MAY 27TH.

Foreign Butter.

Mr. Herbert Gardner, replying to a question, said that arrangements had recently been made by which samples of butter would be taken at the ports of importation and analysed by the principal chemist of the Government laboratories, who was also the chief agricultural analyst. A certain number of samples had, in fact, already been taken, and he was in communication with the Treasury and the Board of Customs with a view to the settlement of the course to be pursued in the event of its being found that any offences under the Sale of Food and Drugs Acts, the Margarine Act, or the Merchandise Marks Acts, had been or were likely to be committed.

The Vaccination Commission.

Mr. Asquith said that all he could say about the publication of the final report of the Royal Commission on Vaccination was that the Commissioners were at present busily engaged upon the report, but that they could not say when it would be published.

TUESDAY, MAY 28TH.

Nursing in Workhouses.

Mr. Shaw-Lefevre, replying to a question, said that the Local Government Board were fully impressed with the importance of securing efficient nursing in workhouses by an adequate staff, and the Board had recently addressed a communication to all boards of guardians bringing this matter specially under their attention. They at the same time stated that, whilst they were not prepared to lay down as a rule that in no case should pauper inmates act as attendants in sick wards as clearly distinguished from nurses, they considered that their services should only be used with the approval of the medical officer and under the closest supervision at all times of paid officers.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the question of the Adulteration of Food Products resumed the examination of witnesses on Tuesday, May 28th, Sir Walter Foster presiding.

Mr. Haaleside, manager for Messrs. Colman, mustard manufacturers, of Norwich and London, said that when mustard seed came in from the farmers the first thing that was done was to clean and dry it. In the process of manufacture a great deal depended upon the proper separation of the husks. There were brown mustard seed and white mustard seed. The mustard condiment in general use was practically an admixture of the flour of those two seeds, with a slight colouring matter and a small proportion of wheat flour and chillies. The flour of the brown mustard seed was a perfectly pure

mustard. It was the most pungent. Its flavour, however, was too bitter to render it fit for actual use. They got considerably more flour out of the white mustard seed. When any customer required the brown mustard he was supplied with it; that mustard would not, however, bear export through the tropics. French mustard was made with the husks mixed with the flour of mustard and other ingredients which were not used in England. The process of mustard seed growing is understood better in England than anywhere else. Mustard could be made from very inferior foreign seeds, and would not be affected by the Adulteration Acts. He recommended that public analysts should have a chemical rather than a medical training.

Sir William Pink, J.P., Knight of the Legion of Honour, of the Grocers' Federation, said he had had great experience of the grocery and provision trade, and he expressed the opinion that an invoice sent by a wholesale merchant to a retailer should be sufficient to hold the latter free from prosecution.

The Committee again adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ARNOLD, G. J., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

BLOUNT, G. B. C., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

BRACKENRIDGE, F. J., L.R.C.P., M.R.C.S., has been reappointed Non-Resident House Physician to St. Thomas's Hospital.

BRANSON, GUY J., L.R.C.S., L.R.C.P. Edin., L.S.A. Lond., B.A. Lond., has been appointed House Surgeon to the Queen's Hospital, Birmingham.

CANDLER, G., B.A. Camb., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

CARTER, A. H., M.D. Lond., F.R.C.P., M., M.R.C.S., has been appointed Honorary Consulting Physician to the Smallwood Hospital, Redditch.

CLARK, FRANCIS W., M.B. Durh., D.P.H. Camb., M.R.C.S., L.R.O.P. Lond., has been appointed (by the Crown) Health Officer for Hong-Kong.

COLLIS, A. J., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Weston-super-Mare Hospital and Dispensary.

CONFORD, G. J., B.A. Oxon., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

CRAN, GEO., M.D., C.M. Aberd., has been reappointed Parochial Medical Officer for Banchory.

DANIEL, E. G. C., L.R.C.P., M.R.C.S., B.A. Camb., has been appointed Resident House Physician to St. Thomas's Hospital.

DAVIS, H. J., M.A. Camb., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

DIXON, W. E., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

DUMHILTON, C. E., M.A., M.D. Camb., M.R.C.S. Eng., D.P.H., has been appointed Surgeon to the Dalby Hospital, Queensland.

DURRANT, T. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Market Harborough Urban Sanitary District, vice Allen.

EGAR, R. T. S., M.D. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Stourbridge Urban District Council.

EMERY, W. D'ESTE, M.R.C.S. Eng., L.R.C.P. Lond., B.Sc. Lond., has been appointed House Physician to the Queen's Hospital, Birmingham.

GENGE, G. G., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

HAINES, AUBREY WHEELER, L.S.A. Lond., B.Sc. Lond., has been appointed Obstetric and Ophthalmic House Surgeon to the Queen's Hospital, Birmingham.

HARDING, H. W., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

HORNE, THOMAS, M.D. Durh., L.R.C.P. Edin., L.R.C.S., has been appointed Medical Officer for the Borough of Stockton and Medical Superintendent for the Stockton Fever Hospital.

HUDSON, C. E. L., F.R.C.S., L.R.C.P. Lond., has been appointed Assistant Surgeon to the Middlesex Hospital.

HUGHES, JOHN E., M.D. Edin., M.R.C.S., L.S.A., has been appointed Coroner for West Denbighshire, vice Evan Pierce, deceased.

HUGHES, R. JAMES, M.B., B.S. Durh., L.S.A., has been appointed Honorary Surgeon to the Denbighshire Infirmary and Dispensary.

HUXLEY, F. E., M.R.C.S., L.D.S.R., C.S. Edin., has been appointed Honorary Consulting Dentist to the Smallwood Hospital, Redditch.

JENNER, L. L., M.A., M.B., B.Ch. Oxon., M.R.C.P., has been appointed Resident House Physician to St. Thomas's Hospital.

KIRK, T. S., M.B., B.Ch. Irel., has been appointed Assistant Surgeon to the Belfast Hospital for Sick Children.

LAVIE, J. W., L.R.C.P., M.R.C.S., has been reappointed Non-Resident House Physician to St. Thomas's Hospital.

LISTER, S. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the fourth and fifth Sanitary Districts of the Wisbech Union, vice Seccombe.

LYNASS, J., M.B., B.S. Irel., has been appointed Resident Physician to the Union Hospital, Belfast.

MCARDY, JAMES, L.F.P.S. Glasg., has been reappointed Parochial Medical Officer for Banchory-Ternan.

MATHEWS, B., L.R.C.S. Irel., has been appointed Honorary Medical Officer to the Smallwood Hospital, Redditch.

MAY, B., F.R.C.S. Eng., has been appointed Honorary Consulting Surgeon to the Smallwood Hospital, Redditch.

MILWARD, F. V., B.A., M.B., B.C. Camb., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

MORTON, E. M.D. Edin., C.M., has been appointed Honorary Medical Officer to the Smallwood Hospital, Redditch.

PAGE, H. M., M.D. Brux., M.R.C.S., D.P.H. Camb., has been appointed Honorary Medical Officer to the Smallwood Hospital, Redditch.

PATRICK, J., M.B., B.S. Irel., has been appointed Resident Surgeon to the Belfast Union Infirmary.

PRICE, J. E., M.R.C.S., has been appointed Honorary Medical Officer to the Smallwood Hospital, Redditch.

PORTER, W. E., M.D., M.S. Edin., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer to the Printers' Almshouses, Wood Green.

PRIN, J. L., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

RICHARDSON, S. W. F., M.B., B.S., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

ROCHE, ANTONY, M.R.C.P. Irel., has been appointed Professor of Medical Jurisprudence and Hygiene in the Catholic University Medical School, Dublin.

RUSSELL, A. E., M.B. Lond., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

SECOMBE, P. J. A., L.R.C.P., M.R.C.S., M.A. Camb., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

SENGWICK, H. R., B.A. Camb., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

SHEEHAN, JOHN, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Southrepps Sanitary District of the Eppingham Union.

SMITH, W., M.R.C.S., has been appointed Honorary Medical Officer to the Smallwood Hospital, Redditch.

SMITH, C. C., M.B. Camb., M.R.C.S., has been appointed Honorary Medical Officer to the Smallwood Hospital, Redditch.

STEEN, WM. C. M.D., M.Ch. H.C.U.L., has been appointed Hon. Assistant Physician to the Belfast Hospital for Sick Children.

STEPHEN, JAMES, M.D., C.M. Aberd., has been appointed Parochial Medical Officer for Peterhead.

STONE, W. G., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

SWICK, E. H. W., M.D. St. And., M.R.C.S., D.P.H. Camb., has been reappointed Medical Officer of Health for the Droitwich Rural Sanitary District.

SYMONS, CHARLES J., M.S. Lond., F.R.C.S. Eng., has been appointed Consulting Surgeon to the London and South-Western Railway Servants' Orphanage, vice A. E. Durham, deceased.

SYMONS, R. FOX, L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

TAYLOR, E. H., M.B., B.Ch. Dubl., has been appointed to the Surgical Staff of the Sir Patrick Dun's Hospital, Dublin.

TOOMBS, H. G., L.R.C.P., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

TREB, JOHN F., M.R.C.S., has been appointed Medical Officer for the North-Eastern Sanitary District of the Greenwich Union, vice Nicholson.

TURNER, GEORGE, M.B. Camb., D.P.H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Government of the Cape of Good Hope.

WAKELAM, EDGAR, L.R.C.P., L.R.C.S., &c., has been appointed Medical Officer of Health for the Springhead Urban District of the West Riding.

WALLIN, FRED. C., M.B., B.C. Cantab., F.R.C.S., has been appointed Surgeon to the Out-patients at Paddington-green Children's Hospital.

WATKINS, A. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse and the Whitechurch Sanitary District of the Whitechurch Union, Salop, vice George.

WATTS, BRIAN, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Children's Hospital, The Wicker, Sheffield.

WRIGHT, J. F., M.R.C.S., has been appointed Medical Officer for the West Bolton Sanitary District of the Bolton Union, vice Morris.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board, residence, and allowance for washing provided. Applications to the Secretary, Office, 24, Finsbury-circus, E.C.

DERBY COUNTY ASYLUM, Mickleover.—Second Assistant Medical Officer, single. Salary £100 a year, increasing £10 annually to £130, with board (except beer), lodging and washing.

EVERINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing. Also Junior Resident Medical Officer. Salary £50, with board and washing.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY, Cardiff.—Assistant Resident Medical Officer, for six months. Board, washing and apartments provided.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Surgeon to Out-patients (non-resident), for six months. Salary 25 guineas.

KENSINGTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £125 per annum, with furnished apartments, coal, gas and attendance. Applications to the Honorary Secretary, 7, Stamford-road, Kensington-square.

LEICESTER INFIRMARY.—House Physician, for one year. Salary £80 per annum, with board, apartments, and washing. Also Assistant House Surgeon for six months. Board, residence at the Infirmary, and washing will be provided.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Senior Demonstrator of Anatomy. Salary by a percentage on fees.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for one year, unmarried. Salary £150 per annum, with board and residence.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (ALBANY MEMORIAL), Queen-square, Bloomsbury.—Senior and Junior House Physician respectively. Salary of the former £100 per annum, and of the latter £50 per annum, with board and apartments, in each case, in the Hospital.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum.

PARISH OF BIRMINGHAM WORKHOUSE INFIRMARY.—Resident Assistant Medical Officer. Salary £100 per annum, with furnished apartments, rations (which do not include alcoholic liquors), coals, gas, washing, and attendance. Applications to the Clerk to the Guardians, Parish Offices, Birmingham.

PARISH OF LAMBETH.—Medical Officer for the Infirmary, Brook-street, the Workhouse, Renfrew-road, and the Workhouse, Prince's-road. Salary £300 per annum, with furnished house and allowance for coals, gas, and water. Applications to the Clerk, Guardians' Board-room and Offices, Brook-street, Kennington, S.E.

RAIDLIFFE INFIRMARY, Oxford.—House Physician, for six months. Salary at the rate of £60 a year, with board, lodging and washing.

ROYAL VETERINARY COLLEGE, Camden Town, N.W.—Lecturer on Biology (Botany and Elementary Zoology). Salary £100 per annum.

RURAL DISTRICT COUNCIL OF DROXFORD.—Medical Officer of Health for this rural district. Salary £125 per annum, to include travelling and all other expenses. Applications to the Clerk, Bishop's Waltham.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

SOMERSET AND BATH LUNATIC ASYLUM, Wells, Somerset.—Second Assistant Medical Officer, unmarried. Salary £100 a year, with board, lodging, and washing.

VESTRY OF LAMBETH.—Medical Officer of Health for the Parish. Salary £700 per annum, such salary to include the cost of a carriage to be provided by the officer. Applications to the Clerk to the Vestry, Vestry Hall, Lambeth.

Births, Marriages, and Deaths.

BIRTHS.

BARR.—On May 27th, at Wentworth, Rotherham, the wife of Horace Carlos Barr, M.R.C.S., L.R.C.P., of a daughter.

BRINTON.—On May 26th, at Queen's-gate-terrace, S.W., the wife of Dr. Roland Danvers Brinton, of a son.

CALEY.—On May 21st, at Castlebar-road, Ealing, the wife of Guthrie Neville Caley, M.D., of a daughter (stillborn).

CORNER.—On May 23rd, at Earlswood Asylum, Redhill, the wife of Harry Corner, M.D., of a son (premature, and only lived a few hours).

KINGSTON.—On May 20th, at Alsager, Stoke-on-Trent, the wife of Henry F. Kingston, B.A., M.B., B.Ch. Dubl., of a daughter.

MALDEN.—On May 25th, at Pembury, Tunbridge Wells, the wife of Walter Malden, M.A., M.B., of a daughter.

FARE.—On May 21st, at 18, Portland-place, W., the wife of J. W. Fare, M.D., C.M. Edin., and L.D.S. Eng., of a son.

PARKER.—On May 19th, at Rickmansworth, the wife of Charles A. Parker, F.R.C.S., of a son.

ROBERTSON.—On May 25th, at Hill House, Adderbury, near Banbury, the wife of Jas. S. Robertson, M.R.C.S., of a son.

RUSHWORTH.—On May 24th, at Langdale, Goldhurst-terrace, Hampstead, the wife of Frank Rushworth, M.D., of a daughter.

SCHOFIELD.—On May 25th, at Camberwell House, Camberwell, S.E., the wife of Frank Schofield, M.D., of a son.

WALTERS.—On May 26th, at 5, Fairfield-road, Croydon, the wife of F. R. Walters, M.D., M.R.C.P., of 60, Welbeck-street, of a daughter.

WIGHT.—On May 22nd, at The Cannons, Colchester, the wife of Surgeon-Major E. O. Wight, A.M.S., of a daughter.

MARRIAGE.

HAGUE-HAMES.—On May 23rd, at St. James's Parish Church, Bath, Samuel Hague, M.D., of Camberwell, to Emily, widow of the late J. Hames, Esq., of Queensland.

DEATHS.

ALFORD.—On May 28th, at Royal-crescent, Weston-super-Mare, George Ernest Alford, L.R.C.P. Edin., M.R.C.S. Eng., aged 42.

COWARD.—On May 25th, at his residence, at Knysna, Cape Colony, suddenly, Richard Courtenay Coward, M.R.C.S., L.R.C.P. Lond., aged 39.

TURNBULL.—On May 27th, at Camden-crescent, Bath, George Wardlaw Turnbull, M.D., L.R.C.S. Edin., aged 62.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 30th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
May 24	29.90	N.E.	54	51	109	69	50	0.03	Cloudy
" 25	29.95	S.E.	53	51	107	70	50	...	Overcast
" 26	30.30	S.W.	62	57	106	75	53	...	Hazy
" 27	30.37	S.E.	58	55	110	74	53	...	Hazy
" 28	30.32	S.E.	50	48	111	69	48	...	Hazy
" 29	30.14	S.E.	55	51	115	78	48	...	Hazy
" 30	29.91	S.E.	64	59	128	85	55	...	Bright

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians. 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Drs. Duncan, Playfair, Griffith, Lewers, Addinell, and Mr. O'Callaghan. Papers.—Dr. Eden: On the Development and Normal Structure of the Human Placenta, with limelight demonstrations.—Mr. Alban Doran: Placental Polypus.

THURSDAY.—NEUROLOGICAL SOCIETY OF LONDON (20, Hanover-sq.).—8.30 P.M. Drs. J. R. Lunn, C. E. Beevor, and C. A. Ballance: Case of Removal of Cerebellar Tumour.—Dr. Buzzard: Neuritis and Blocking of Brachial Artery.—Dr. Taylor: Case of Morphia in an Epileptic Patient.—Drs. Penrose and Beevor: Case of Schrodernia.—Dr. Hale White: A case in which Breathing is carried on by the Diaphragm only.—Dr. H. B. Donkin: Two cases of Friedreich's Disease.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Climacteric and Senile Insanity.

ROYAL INSTITUTION.—3 P.M. Professor E. Ray Lankester: Thirty Years' Progress in Biological Science (IV.).

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Glaucoma, with Illustrative Cases.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Urticaria and Allied Affections.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. A. E. Garrod: Congenital Heart Disease.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Taylor: Varieties and Treatment of Epilepsy.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Prof. Clifford Allbutt: Cases in the Wards.

ROYAL INSTITUTION.—3 P.M. Mr. William Huggins: The Instruments and Methods of Spectroscopic Astronomy (III.). (Tyndall Lecture.)

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Actinomyces and Glands.

ROYAL INSTITUTION.—9 P.M. Professor Alfred Cornu: Phénomènes Physiques des Hautes Régions de l'Atmosphère.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Alcoholic Insanity.

ROYAL INSTITUTION.—3 P.M. Professor Edward Dowden: Elizabethan Literature (II.).

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular in question.

TOUTING FOR PATIENTS.

WE have received from a correspondent a letter enclosing the following enterprising communication:—

"May 29th, 1896.

"DEAR SIR!—I take the liberty of calling your attention to the fact that I am practising as a physician at Carlsbad, having been formerly under the care of the famous Specialist Professor Osier, of Vienna, and I will now be in the position to give consultations, in the English language, in all cases of Diseases of the Stomach, Intestines and Liver, and in Diabetes etc. I will be greatly pleased to answer any enquiries about Carlsbad, as to the qualities of the place, the conveniences of living, the climate, hotel-rates etc. I shall be very much obliged to my colleagues, if they will shew me their confidence, when sending patients to Carlsbad, by committing them to my care, and I have reason to hope that the patients themselves will feel satisfied in every particular, and this the more as I can speak English with perfect fluency, having spoken it from my childhood, and having done much work as a Vienna Correspondent of English Medical Journals.

"I beg you, dear Sir, to believe me,

"Yours most respectfully,

"Dr. L. L."

Sir.—If our correspondent is satisfied that the classes of persons to be attended are entitled to be attended on club terms he may be justified in offering to attend them. As to the terms on which he should offer to do so he is the best and only judge, knowing the means of the people, the distances, and the remuneration for like work in the district. He should be careful not to make his services too cheap.

Mr. Edward C. B. Ibbotson, L.S.A.—Views on the subject which our correspondent suggests have already been expressed in our columns. We may refer him to the article on page 259 of THE LANCET of Jan. 26th, 1895.

STRANGE REMEDIES.

To the Editors of THE LANCET.

SIRS,—I am curious to know if the following remedy is in vogue elsewhere. A child has thrush, and at the advice of certain septuagenarian ladies, less cleanly than clever, a frog is hung head downwards in the patient's mouth until the reptile dies. One man boasted his little son had "wore out" four. Last of all, in this particular case the child died also, but from convulsions. Have babes in other neighbourhoods, I wonder, to undergo this very disagreeable line of treatment?

I am, Sirs, yours faithfully,

H. GUTHRIE.

Clun, Salop, May 27th, 1896.

THE MIDWIVES REGISTRATION BILL.—LOCAL DEPUTATION TO
BARON DE WORMS.

THE *Liverpool Daily Post* reports that a large deputation of medical gentlemen waited on Baron De Worms, M.P. for East Toxteth, to explain their objection to the Bill, and begging him to offer opposition to it in the House of Commons. Dr. Rentoul and Mr. Campbell were the principal speakers. Baron De Worms, who had passed two years in a medical school, agreed with the deputation, and said they might depend on him to adopt any practicable means to prevent it becoming law.

Corabill.—We are unable to support our correspondent in his action in withholding the certificate. The fee he asks for is for the performance of the vaccination. It appears to us that the method of payment by instalments is calculated to land him in the difficulty he has now encountered. The Vaccination Act requires that the vaccinator shall return a certificate of successful vaccination, and this has obviously no reference to the arrangement under which the vaccination was performed. If a parent is unable to afford the small sum mentioned she should take her child to the public vaccination station.

Medico.—We have been unable to find our correspondent's name on the Register, and would for that reason suggest that his *nom-de-guerre* is not very well-chosen. We fail to see any points calling for comment in the case which he brings before us. The good "specialist" is surely not a person who may not be consulted at all save upon the subject to which he is, or is supposed to be, singly devoted.

"MEDICAL ADVERTISING AT HARROGATE."

To the Editors of THE LANCET.

SIRS,—I quite agree with what you say about advertising; but I find that Dr. A. S. Myrtle, J.P., and Dr. J. A. Myrtle, J.P., advertise their book on the Harrogate Waters. I also find that both these medical men have been presidents of the Harrogate Medical Society, and I naturally concluded that their action was concurred in by all the medical men of Harrogate; hence I decided to insert my advertisement. Drs. A. S. and J. A. Myrtle's advertisement is often accompanied by an extract from THE LANCET or some other medical paper. I therefore took the liberty to insert one of your remarks on my pamphlet. I forward to-day's paper with the above-mentioned book advertised in it, and an extract from THE LANCET. If, however, the medical men who have thus far supported their late presidents, who advertise their book, will get Drs. Myrtle to stop their advertisements I will stop mine.

I am, Sirs, yours sincerely,

Princes-square, Harrogate, May 25th, 1895. ARTHUR ROBERTS.

To the Editors of THE LANCET.

SIRS,—Thanks for calling my attention to the advertisement in the Harrogate paper. I have nothing to do with it. The editor of the paper published the book, and maintains that he has a right to advertise it in his own paper. I am not going to try this right by legal proceedings, although I regret that this act on his part may give offence to such narrow-minded people as your informant. I do not see how I can put a stop to it.

I am, Sirs, yours truly,

Harrogate, May 21st, 1895.

A. S. MYRTLE.

. We insert the above letters, and note that Dr. Myrtle considers himself quite without responsibility for the advertisement, and that he has no intention of questioning the right of the editor of the paper to do as he likes. We can only regret that Dr. Myrtle should so have put himself in the power of an enterprising publisher. A medical author owes it to himself and to the profession to part with his book only on such terms as prohibit anything that looks like personal advertisement. An objector is not necessarily narrow-minded, and we hope that both Dr. Myrtle and Dr. Roberts will do all they can to stop these advertisements.—ED. L.

CHARGE AGAINST A MIDWIFE.

THE borough magistrates of Sunderland have lately had before them a case in which a midwife was accused of having persisted without change of clothes in attending cases of lying-in women during her attendance on a case of puerperal fever, and after being warned by Mr. Wood, the medical officer of health. In one of the cases so attended puerperal fever occurred. Mr. Wood asked the bench to inflict a fine. On the defendant promising not to attend a case for two months the bench allowed her to go free, with the understanding that if she violated this undertaking she would be brought up again on this charge.

LONGEVITY.

To the Editors of THE LANCET.

SIRS,—Commenting on the longevity of man in one of your interesting leading articles of last week you quote from the Book of Ecclesiasticus to show that an old estimate "gave a man's days as possibly 100 years."

I would beg to mention that there are besides some remarkable passages in Isaiah bearing on the same subject. The prophet, speaking of a time that is coming, says: "There shall be no more thence an infant of days, nor an old man that has not filled his days; for the child shall die an hundred years old." And again: "For as the days of a tree are the days of my people."

I am, Sirs, yours truly,

Lincoln, May 27th, 1895.

WILLIAM O'NEILL, M.D. &c.

COÖPERATION WITH QUACKS—SEQUAH OR OTHER.

A CORRESPONDENT has brought a charge against a medical man in Ireland before his College—the Royal College of Surgeons in Ireland—of cooperating with Sequah, being constantly at his meetings, on his platform, &c. This does seem very remarkable conduct for a member of a College which prides itself on its high spirit of professional honour. But the College has replied to the following effect: "The Council have had Dr. —'s letter before them, and are of opinion that the alleged conduct of — does not require any action on their part." We cannot go behind the judgment of the College. We can only infer that they have thought the proofs of the offence insufficient.

In the Parliamentary Report in our issue of May 18th a statement by Mr. Leckie, in his evidence before the Committee on Food Adulteration, was omitted, the statement being as follows: That he (Mr. Leckie) had Dr. Ringer's authority for saying that the application of certain quotations from his (Dr. Ringer's) book on Therapeutics could not possibly be taken to apply to Van Houten's Cocoa. A written authority from Dr. Ringer was handed in to the chairman.

UTERINE STEMS.

To the Editors of THE LANCET.

SIRS,—The endless variety of uterine stems clearly indicates their failure to accomplish their intended purposes, and justly accounts for their gradually falling into disuse. Without, however, pretending to have solved the difficult question of a perfect stem, I think I may lay before the profession a simple and, as far as I know, the most useful of uterine stems—one which in the hands of a practical gynaecologist affords him a means of not only dilating, but also of maintaining in a state of dilatation, and for as long as he may desire, the cervix uteri without the aid of an anæsthetic, in his own consulting-room when preferable, and without pain. This is accomplished by the aid of a series of five-graduated stems, each having a central hole through its long axis, the diameter of the hole in the largest stem being a quarter of an inch. It is through this hole that the practitioner can make repeated applications, as often as deemed necessary, of those medicaments which he may consider most suitable for the cure of a host of diseases incidental to the uterus and its appendages, such as endometritis, metritis, hypertrophy, perimetritis, salpingitis, ovaritis, &c. In the largest of these stems will also be found the most convenient means of alleviating the sequelæ of acute ante-flexion without the aid of the knife. I shall be pleased to show the stem to any member of the profession.

I am, Sirs, yours faithfully,

Peckham, May 11th, 1895.

ROBT. HUGH HODGSON.

. We feel bound to point out that intra-uterine stem pessaries had their origin in the false pathology which attributed an altogether exaggerated, not to say imaginary, importance to the necessity of keeping the axis of the uterus straight. It is difficult to understand how anyone can suppose that applications to the endometrium through a hole in the centre of a stem pessary can have any good effect on salpingitis. On the other hand, there is no doubt whatever that endometritis, metritis, perimetritis, salpingitis, ovaritis, and death, by which we may be allowed to translate our correspondent's " &c.," have been caused by the use of intra-uterine stems.—ED. L.

UN SOUND MEAT.

HENRY TAYLOR CAIRNS, a butcher in Sunderland, has been fined £2 and costs for exposing for sale unsound meat. Inspector Downes, a butcher himself, said the meat had been killed a fortnight at least. The "muggy" weather was blamed for the state of the meat.

Mr. S. Wesley Wilson.—We cannot see any internal evidence in the paragraphs that the practitioner in question has the remotest responsibility for their wording.

"AN OPHTHALMOLOGICAL HINT."

To the Editors of THE LANCET.

SIRS,—I am informed by Mr. Sydney Stephenson that the method of applying solutions to the conjunctive which I mentioned in your journal of the 18th inst. had been previously described by him in a book called "Ophthalmic Nursing." Of this at the time of writing I was unaware.

I am, Sirs, yours faithfully,

Eversley, Hants, May 23rd, 1895.

F. HYDE MABERLY, M.D. Dub.

During the week marked copies of the following newspapers have been received:—

Court Journal, Irish Times, Bedford Advertiser, Sheffield Weekly Telegraph, Chicago Daily News, Hobart Mercury, Wolverhampton Chronicle, Rochester Journal, West Lothian Courier, Halifax Guardian, Hornsey Journal, New Zealand Mail, Barnet Press, Adelaide Observer, Macleod's Courier, Birmingham Gazette, Eastern Morning News, South Australian Register, La Presse Médicale (Belge), Sunderland Herald, North-Eastern Daily Gazette, Australasian Medical Gazette, South American Journal, Harrogate Advertiser, Guy's Hospital Gazette, New York World, Cumberland Advertiser, Buxton Herald, Journal of the Royal Institute of British Architects, Fame, Reichs-Medicinal Anzeiger (Leipzig), Devon and Exeter Daily Gazette, Melbourne Argus, Banffshire Advertiser, Lynn News, Bury Times, Elgin Courant, Auckland Weekly News, &c. &c.

Communications, Letters &c. have been received from—

- A.—Dr. E. Antrobus, Great Malvern; Mr. P. R. Ash, Wakefield; Achilles; A. Z.; Alpha, Lond.
- B.—Dr. Barloia, Genoa; Mr. C. A. Brookes, Lond.; Mr. C. Birchall, Liverpool; Mr. T. B. Browne, Lond.; Mr. C. S. Bowker, Newport, Mon.; Mr. M. Bell, Lond.; Messrs. Burgoyne, Burldiges, and Co., Lond.; Messrs. Boca Frères, Turin; Messrs. Blondeau et Cie, Lond.; Messrs. A. and C. Black, Lond.; Messrs. Bryce and Rumpff, Lond.; Messrs. Bates, Hendy, and Co., Reading; British Castor Co., Lond.
- C.—Dr. L. J. G. Carré, Lond.; Dr. A. K. Chalmers, Glasgow; Mr. W. Watson Cheyne, Lond.; Mr. E. Collins, Sawbridgeworth; Mr. W. Catmur, Lond.; Miss Canning, Lond.; Messrs. A. H. Cox and Co., Brighton; Corabill.
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- E.—Messrs. Eason and Son, Dublin; Erin, Lond.; E. E.
- F.—Dr. F. Fox, Strathpeffer Spa; M. H. Firth, Woolston.
- G.—Mr. J. J. Griffith, Lond.; Mr. F. Goodeve, Birmingham; Messrs. Greeff and Co., Lond.; General Life Assurance Co., Lond., Sec. of.
- H.—Dr. M. Hunter, Lond.; Dr. S. H. House, Grimsby; Mr. J. Heywood, Manchester; Messrs. Hardy and Co., Manchester; Messrs. J. Haddon and Co., Lond.; Hospital for Sick Children, Great Ormond-street, Sec. of.
- I.—Dr. A. Inglis, Cheltenham; *Indian Textile Journal*, Bombay, Editor of.
- J.—Dr. H. L. Judge, Huron, Ohio, U.S.A.; Dr. D. Jamison, Belfast; Dr. O. Jennings, Paris; Mr. R. G. Jack, Lond.
- K.—Mr. F. H. Knaggs, Huddersfield.
- L.—Mr. P. Lee, Cork; Lumleys, Lond.; Laicus.
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- N.—Dr. H. F. Norbury, Plymouth.
- O.—Dr. W. O'Neill, Lincoln; Dr. H. O'Neill, Belfast; Messrs. Orridge and Co., Lond.; Orleans Parish Medical Society, New Orleans, Librarian of; Omega, Lond.
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- R.—Dr. T. Robinson, Lond.; Dr. A. G. Robb, Belfast; Mr. J. H. Rodgers, Cardiff; Mr. J. Rothschild, Paris; Mrs. A. Rayner, Exbridge.
- S.—Dr. H. Snow, Lond.; Dr. W. Stirling, Manchester; Dr. J. Sutherland, Netherfield; Mr. C. Simpson, Sheffield; Mr. F. H. Simmons, Johannesburg; Mrs. Stubbs, Lond.; Messrs. G. Street and Co., Lond.; *South American Journal*, Lond., Editor of; S. and T. Tyre Co., Lond., Managing Director of; Scalpel.
- T.—Dr. G. Thin, Lond.; Mr. F. Treves, Lond.; Mr. T. F. Tracey, Glasgow; Mr. J. K. Thornton, Lond.; Messrs. Teetgen and Co., Lond.; Tasman.
- U.—University of Edinburgh, Dean of.
- V.—Dr. A. M. Vargas, Barcelona; Vi-cocoa Co., Lond.
- W.—Dr. F. J. Waldo, Lond.; Mr. W. Spencer Watson, Lond.; Mr. J. P. Wightman, Rawdon; Mr. H. Wright, Gainsborough; Mr. S. W. Wilson, Newcastle-on-Tyne; Mr. V. Wood, Lond.; Mr. F. Wilson, Lond.; Mr. S. Wand, Leicester; Messrs. Wright, Layman, and Umney, Lond.

Letters, each with enclosure, are also acknowledged from—

- A.—Dr. G. A. Abrath, Sunderland; Dr. E. Allen, Hawes; Mr. R. E. Anderson, Carmarthen; A., Lond.; A. M. D., Lond.; Alpha, Lond.
- B.—Dr. L. Beale, Lond.; Dr. L. H. Bennett, East Ilsley; Mr. F. W. Bailey, Hawarden; Mr. J. T. Brickwell, Watford; Messrs. Blake, Sandford, and Co., Lond.; *Birmingham Daily Gazette*, Proprietors of; Barth'sche Buchhandlung, Aachen; B. A., Lond.; Bart's, Lond.
- C.—Dr. P. I. Cook, Bromley, Kent; Mr. N. M. Cummins, Queens-town; Messrs. T. Christy and Co., Lond.; Clerical and Medical Bank, Bristol, Sec. of; Catholic, Scarborough; C. E. O. L., Lond.; Climo, Lond.; Crico, Lond.
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- S.—Dr. H. Snow, Lond.; Mr. C. H. Sers, Lond.; Mr. A. O. Smith, Durham; Mr. Durganand Sen, Buxar, India; Mr. C. Simpson, Sheffield; Scapula, Sheffield; Surgeon, Lond.
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- U.—University of Durham College of Medicine, Newcastle-on-Tyne, Sec. of.
- W.—Dr. F. R. Walters, Croydon; Dr. J. J. Welply, Bandon, co. Cork; Mr. E. S. Wylie, St. Ives, Cornwall; Messrs. W. Wood and Co., New York.
- Z.—Z. Y. W., Lond.

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Agent for the Advertisement Department in France—J. ASTIER, 2, Rue Traversière, Amiens, Paris.

Lecture

ON

STAMMERING AND OTHER IMPEDIMENTS OF SPEECH, AND THEIR TREATMENT ON PHYSIOLOGICAL PRINCIPLES.

A Post-Graduate Lecture delivered at the Hospital for Sick Children, Great Ormond-street, on May 16th, 1895,

By W. S. COLMAN, M.D., M.R.C.P. LOND.,

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GENTLEMEN,—The subject of impediments of speech is one which receives scant attention in the ordinary text-books of medicine, being too often regarded as lying outside medical practice and as beyond the resources of therapeutics. The treatment of sufferers is almost entirely relegated to lay "professors" of elocution and voice culture, each with his secret "system" of cure. It is, however, as unreasonable for a physician to ignore and refuse to treat these complaints, and to hand them over to laymen, as it would be for a surgeon to refuse to undertake the treatment of deformities and to leave them to the instrument-maker. You will find that these affections possess considerable scientific interest, and that patient, intelligent, long-continued treatment on definite physiological principles will remove them in many cases and make them less prominent in almost all. It is unnecessary to enlarge on the serious disabilities caused by a marked stutter. Not only is it irritating to the patient's associates, but the consciousness of it in a sensitive individual may keep him from many social engagements, close up for him many ways of earning a living, and often make him morbidly self-conscious and timid. In order to understand clearly the character and mode of production of the various defects of speech, which are usually in this country classed together under the common name of "stammering," it is necessary in the first place to have a clear idea of the processes in normal speech. For the production of articulate speech we require the orderly coöperation of three muscular mechanisms, each of great complexity, and with a nerve supply which is by no means simple. These are: (1) the respiratory apparatus, for supplying a blast of air; (2) the larynx, for transforming this blast of air into voice; and (3) the musculature of the tongue, lips, and palate, for so modifying the voice as to give rise to different sounds which may be combined into words. Not only must the component muscles of each of these most delicate mechanisms act in perfect concert, but there must be also a coördination of the three mechanisms with one another, and if there is any failure of such coördination the various forms of stammering will be produced.

For the proper understanding of the defects of speech we require to construct another alphabet. The English alphabet, as grammarians tell us, is both defective and redundant, and it is necessary to reconstruct it on a phonetic basis, the letters being further grouped according to the position in the mouth, &c., where the voice is modified to produce the various consonantal sounds. The most convenient and complete alphabet is that given below, which was devised by my former teacher, Dr. John Wyllie of Edinburgh, whose views on the subject, given in his recent work,¹ have in the main been followed in this lecture.

Physiological Alphabet (Wyllie).

	Voiceless oral consonants.	Voiced oral consonants.	Voiced nasal resonants.
Labials	{ P —	B W	M —
Labio-dentals	F	V	—
Linguo-dentals	{ Th S	Th Z	— —
Anterior linguo- palatal	{ Sh T Ll —	Zh D L R	— N — —
Posterior linguo- palatal	{ K Ch (hard)	G —	Ng —

¹ Disorders of Speech. Edinburgh: Oliver and Boyd. 1894. No. 3745.

It will be noticed that in the physiological alphabet a distinction is drawn between "voiced" and "voiceless" consonants, which we shall see is of great importance in considering treatment. In the former, sound is produced simultaneously in the larynx each time the consonant is produced; in the latter there is merely an almost noiseless blast of air. B is an example of the former, P of the latter. This grouping corresponds to the grammarians' division of the letters into "sharp" and "flat." The voiceless group contains the "sharp" consonants, the voiced contains the flat consonants plus the nasals. Many find some difficulty in realising what is meant by "voiced" and "voiceless." The best method of demonstrating it was suggested by Dr. Wyllie. Let them pronounce slowly in a monotone the word "wonder," in which all the letters are voiced. The vocal element produces a continuous murmur, which can be extended indefinitely by merely repeating the word—"wonder, wonder, wonder," &c. If now the syllable "ful," containing the voiceless consonant "f," be added, and the word "wonderful" be pronounced in a similar way, a break will occur in the vocalisation of the word which will be at once obvious to the ear.

Coming now to the actual impediments of speech, we find that they may be divided into two groups: (1) spasmodic cases, familiar under the name of "stuttering"; and (2) cases where there is inability to produce particular sounds clearly. In its simplest form this is known as lisping, and may be due to clumsiness and pass off if the child is made to pay attention to it. Sometimes, however, it is due to structural defects in the mouth, and is then more difficult to treat, and in an important group of cases, described by the late Dr. Hadden under the name of "idioglossia," the patient substitutes for the letters he has difficulty in pronouncing some easier one—most frequently D or T. In most English works both groups are confused under the common term "stammering." In Germany "stammering" refers only to cases in the second group, those in the first being cases of "stuttering." In a few cases we find both conditions present, but the German grouping seems to me to be reasonable and well-founded. To avoid confusion the ambiguous word "stammer" will be used as little as possible during this lecture.

I.—STUTTERING.

This affection, distressing to the patient and irritating to his companions, is found in all degrees of severity, and may be represented only by slight hesitation in commencing to speak, or there may be violent, fruitless efforts to articulate, combined with associated movements of the muscles of the face and limbs, so extensive as to resemble a convulsion—a resemblance which is heightened by the engorgement of the vessels of the face caused by the violent expiratory efforts. These latter cases are fortunately rare. Stuttering is a widely spread complaint. Frequent allusions are made to it in ancient history, and at the present day it is prevalent in all parts of the world. It is met with among the negro races of Africa and is common among the Mongolian inhabitants of China, where it has been given the suggestive name of "kobi-ko." For some unexplained reason it is twice as frequent among males as females. Although stuttering is often met with in individuals whose mental capacity is far above the average, yet there is reason to believe that the proportion of sufferers is higher among epileptics and among those of defective mental development than among ordinary people, and that the prognosis in these subjects is less hopeful. The affection is rarely congenital. It usually comes on either in early childhood or not infrequently begins with some epoch in a child's life, such as the first going to school, period of second dentition, puberty, and so forth. Cases are not infrequently met with in which a child who has been a stutterer and recovered relapses on going to a boarding school. A well-known physiologist, who had almost completely mastered the defect, found it return to a distressing degree on going to live abroad, where he had to converse in an unfamiliar language. Generally speaking, there is a slight natural tendency to spontaneous recovery, but this recovery may be expedited and years of discomfort avoided by appropriate treatment.

Causation.—Although stutterers are frequently timid and morbidly self-conscious, this appears to be the effect rather than the cause. Hereditary tendency does not appear to play a large part in causation. Many cases that have been described as hereditary were probably cases of imitation of the parent. Imitation of other people's stutter is one of the commonest exciting causes, especially

in the cases where stuttering begins in early childhood. In many cases stuttering is first noticed after some infectious disease, notably diphtheria, a disease which has its seat in the articulatory apparatus. Adenoid vegetations in the nasopharynx are a frequent complication, but malformations of the mouth &c. are rare. The phenomena of simple stuttering are familiar to every one. It is in almost all cases the laryngeal and articulatory mechanism whose action is ill-timed. In rare cases, however, the respiratory muscles are in a state of spasm, and the patient stands, with glottis open but with the chest fixed, unable to emit a sound. In other cases, also infrequent, the larynx is the organ chiefly at fault, and the glottis is kept closed. The patient makes violent expiratory efforts, becoming red in the face, when suddenly vocalisation commences and he speaks rapidly. But in the great majority of cases the defect is due to two causes: (a) spasmodic action of certain muscles concerned with articulation; and (b) imperfect synchronism of the action of the laryngeal and articulatory mechanisms. It is by paying attention to this latter factor, as will be shown later, that the best results of treatment are obtained. On listening to the conversation of a stammerer you at once observe that he does not have equal difficulty with all consonants, and that those on which he stutters give difficulty only when occurring as the initial letter of a word or more rarely when commencing a syllable. Stuttering on vowels is very infrequently met with. When he comes to one of his stumbling blocks he makes evident attempt to pronounce it, but in the majority of cases remains silent. Occasionally he manages to pronounce the consonant and then keeps on repeating it, talking, for example, of a b-b-b-bath b-b-bun. This form, although so frequently met with in fiction and in anecdotes, is decidedly less frequent than the silent form. When once the difficult sound has been produced the words tumble out rapidly in a jerky way, "like water being poured out from a bottle," until the flow is checked by a fresh stutter. This curious, jerky mode of speech frequently persists when the stammer has been overcome, and may even last during the whole of the patient's life. Stuttering is always increased by excitement, dread, or any strong emotion, and by alcohol. Even in a healthy person stuttering is common under the influence of strong emotion—"speechless with anger" and "stammered out a few words of apology" are expressions which we frequently meet with, and which we probably know by experience to be accurate descriptions. This simple stutter, this inability to pronounce initial consonants, is, however, a mild affliction compared with those forms in which there are either associated sounds or associated movements. In the former case the noise made may only be an exaggeration of the "er" interpolated by many nervous and hesitating speakers, or more unpleasant noises may be made. One of my patients, when coming to a difficult consonant, would purse his lips up tight and keep up an unpleasant whimpering sound for five to ten seconds, when the word would be suddenly ejaculated. Sometimes the noises made are ineffectual but recognisable efforts to pronounce the consonant. It is curious that stammerers will never substitute another word for the one they have difficulty in pronouncing, even when it is suggested by a bystander, but persevere with increasing effort and discomfort to pronounce the word. But very often the sounds that are made were used in the first place to correct a stutter. A patient finds, for example, that by drawing in his breath and starting again he can avoid stuttering on the word which was giving difficulty. He gets in the habit of thus drawing in his breath, and not infrequently vocalises at the same time, so that a little whoop or crow—"drawback phonation," as it is called by Dr. Wyllie—is produced and interpolated in the patient's conversation. At other times some easy syllable or word (usually meaningless) is interpolated, such as "nana," "hedera," and this interpolation may persist when the stutter has disappeared. It has been unnecessarily described as a special complaint under the term "embololalia." Even more annoying to the patient's friends than these associated sounds are associated movements, which vary greatly as to their seat and their degree of violence. Most frequently they are confined to facial contortions, but occasionally there are gestures of the arms and hands. In a few exceptionally severe cases general convulsive movements of the trunk and limbs have been observed, leading the patient's friends to imagine that he was about to have an epileptic fit. These general spasms are usually accompanied by great congestion of the face and neck owing to the violent expiratory attempts made by the stammerer.

Treatment.—In treating a case it is most important to direct special attention to the above-mentioned associated sounds and movements as well as to the defects of articulation proper. In investigating any particular case the first thing is to ascertain the nature and extent of the articulatory defect and the presence or otherwise of associated movements or sounds. The most convenient method is to put down on a sheet of paper the "physiological alphabet" and ask the patient to read aloud half a page of prose (not poetry) or a paragraph from a newspaper. It is often well to choose some unfamiliar subject in order to bring out the stuttering thoroughly. As he reads attention should in the first place be given merely to the stuttering, and whenever he stumbles a mark should be made against the letter concerned. By the time he has read half a page we shall know whether the stuttering occurs with any particular group of letters, and the treatment can be directed accordingly. The patient then continues his reading, and we now notice if he is taking full breaths, if he speaks with a firm voice, and if there are any associated noises or movements. Note should be made of all these. We may then inquire if the patient stammers when singing, if the complaint is constant, and what circumstances aggravate it. The treatment of individual cases must vary with the age and intelligence of the patient and his individual circumstances, but general rules based on the physiological processes in speech may be applied in nearly every instance. It must be impressed on the patient and his friends that a sudden cure is out of the question, and that in patient perseverance lies the only hope of success. Everyone has heard of Demosthenes, stammerer and afterwards orator, and of the means he took to rid himself of the defect. The mode of treatment (by shouting with pebbles in the mouth) is not one to be recommended, but the means he adopted to force himself to persevere with treatment sets a valuable example. He retired to a lonely place to practise elocution, and, in order to strengthen his determination not to return till he had conquered, he shaved one half of his head. General treatment may be required if the patient is depressed, restless, or in any way out of health, but there is no drug known which has any specific influence. The patient should be instructed to keep his chest full of air when speaking. If his chest is small and breathing shallow much good may be done by daily exercising with dumb-bells or by practice in a regular gymnasium. When speaking he must endeavour to get into the habit of doing so in a clear, resonant voice, and must not speak rapidly. This is usually extremely difficult for him, and several months of steady practice may be required before the desired end is obtained. He and his relations must be instructed in the processes concerned in articulation, and should be shown the position of the tongue, lips, &c. requisite for the production of each consonant. Exercises consisting of sentences containing as many as possible of the consonants with which he has difficulty should be given him to learn by heart and repeat frequently. He must remember that in ordinary speech vocalisation and articulation occur simultaneously, and when he comes to a difficulty he must try to vocalise and not concentrate his efforts fruitlessly on articulation. Thus in trying to say B U N he should think not only of framing his lips for B, but must also remember that it contains a vocal element, and try to pronounce this, when it will be found that the labial sound is produced without difficulty. Similarly, he if stumbles over such a word as P O R T he should think not merely of the voiceless letter P, but of vocalising the vowel O, and he will find it quite easy to cap on the P as the word is uttered. This method, which we owe to Dr. Wyllie, has been of more help to those of my patients who were intelligent enough to understand it than any other. There is, however, necessity for a caution. Several patients had already found for themselves that by vocalising they could check a stutter, and so had got in the habit of making a meaningless noise before difficult consonants, making their conversation more unpleasant than ever. The patient should be warned that the laryngeal sounds must be appropriate, consisting either of the vocal element of the consonant he is about to utter or, if it is voiceless, of its succeeding vowel. It is important that not only the patient, but some member of his family, should be instructed in the principles of the treatment. The patient should be instructed to read aloud for at least half an hour twice a day, practising every difficult word in the way described above until its utterance becomes easy. A note should be made of each word which gives difficulty in order that it may be practised subsequently.

If there are any associated movements the reading practice should always be performed in front of a mirror, in order that he may become aware of and check any gestures.

II.—LISPING, IDIOGLOSSIA, &C.

In these cases we are dealing with defects in the articulatory mechanism only. They may be mechanical and due to oral deformities, or they may be due to clumsiness or in the use of the tongue, lips, &c., in which case the necessary skill can be acquired by patient practice. Such lispings are seen in all infants who are learning to talk, but the difficult letters are gradually acquired. In a few, however, there remains some defect in the pronunciation of particular consonantal sounds which may remain permanent and form quite a personal characteristic. Usually the sound which is produced is closely allied physiologically to the one which it is desired to pronounce, such as *w* for *v*, and *vice versa* (everyone will remember the use of this made by Dickens in giving individuality to some of the prominent characters in "The Pickwick Papers"); *R* and *L* are frequently interchanged by children, and *w* not infrequently is pronounced by children in preference to *R*—a preference which is imitated occasionally by affected adults. The same difficulties are met with in attempting to learn a foreign language. For a long time certain consonants present an insuperable difficulty, and are often never spoken with facility. The difficulties which Frenchmen have with the English *TH*, and which we experience with the German gutturals, and still more with those of Eastern languages, are an example of the same thing. The difficulties can only be got over by continued practice, but may be much aided by a knowledge of the correct position of the tongue &c. which is required for the production of the sound. Sometimes, however, the difficulty becomes insuperable, and the peculiarity of pronunciation becomes a racial characteristic. The most notable instance of this occurs in Jewish history, in the Book of Judges: "And it was so that when those Ephraimites which were escaped said, 'Let me go over,' that the men of Gilead said unto him, 'Art thou an Ephraimite?' If he said 'Nay,' then they said unto him, 'Say now Shibboleth'; and he said, 'Sibboleth,' for he could not frame to pronounce it right. Then they took him and slew him," &c. It is curious that at the present day this difference in the pronunciation of the sibilants *s* and *sh* forms one of the characteristics of the Jewish inhabitants of this country. In some cases, however, the affection is a more serious one. There is not only inability to pronounce several letters, but the substitution for them of totally dissimilar sounds, so that the patient's speech becomes quite unintelligible. These cases were described very clearly by the late Dr. Hadden in the *Journal of Mental Science* for 1889. He gave the affection the name of "idioglossia," and cases are by no means uncommon. I have myself full notes of eight cases in which the defect was well marked. Although the children are often intelligent and quick, the difficulty of making themselves understood gives other people the impression that they are idiots. In several of my cases there has been some other disease. One had an attack of right hemiplegia when five months old, which had left no permanent paralysis behind; another had a systolic and presystolic mitral murmur, and several came of a highly neurotic stock. The letters which cannot be pronounced include in almost all cases the posterior linguo-palatals, the labials and the linguo-dentals nearly always escaping. Next to the gutturals, *F*, *V*, and *B* appear to give most difficulty. The average number of consonants which my patients failed to pronounce was eight, and for these nearly all of them substituted *T* or *D*, the former for voiceless and the latter for voiced consonants. In some cases it was easier for the patient to pronounce consonants when they were terminal than when they were initial, a point of some importance in setting them vocal and reading exercises to enable them to overcome the disability. In investigating a case the child should be made to pronounce simple words of one syllable, first with the consonant under consideration as an initial, and then as a terminal letter, and note the result. It will then be seen at a glance to which part of the articulatory apparatus our attention should be directed. In all my cases the pronunciation of the vowels has been good and there has been no attempt at substitution. The following two cases well illustrate the condition.

CASE 1.—A boy aged six years was brought to me for defective speech. The notes are as follows: "Mental

condition distinctly above the average. His gestures and facial expression are so appropriate that it is usually quite easy to gather the sense of what he is saying, although the words are indistinguishable. When his speech is analysed it is found that he pronounces the vowels correctly except *o* in 'not,' which he pronounces 'naht.' He is unable to pronounce *F*, *V*, *S*, *Z*, *L*, *R*, *K*, or *G*, substituting for them the linguo-dentals *T*, *D*, or *N*. When he speaks rapidly he also substitutes *T* or *D* for many other letters, so that the words become quite unrecognisable. He says the Lord's Prayer in this fashion: 'Ouë tahde ne nah e nedde, anno de di na: i tede ta, i du de di on eeth a te e edde. Te ut te da ouë dade de, e didde ah tetedde, ä ne adin to tetedde adase us, ne notte tetate, ninné utte enu, to i arte nene, pouë e daude, to edde e edde. Ame.'" He could sing fairly well, but his articulation was as indistinct as when speaking. After about six weeks in hospital he improved greatly, and rapidly picked up and practised the methods for the clear pronunciation of the difficult sounds, except *K* and *G*, which he continued to express by *T* and *D*.

CASE 2.—This was a boy aged six years, a very nervous child. There was no deformity about the mouth. He pronounced the vowel sounds well. In speaking rapidly he substituted *T*, *D*, and *N* for most of the consonants. Even with an effort he could not pronounce all *F*, *V*, *TH*, *SH*, *R*, *K*, and *G*. His speech, therefore, was quite unintelligible, and as he was not quick at expressing himself by pantomime he had been supposed to be an idiot. He pronounced the Lord's Prayer thus: "Ouë dahde e ah edde, ayo be di na: i tede da, i ill be der o ert at it id e edde. Did ut it day ouë daidy ded, e diddu one destasses as ne didde da detass dast us, ed us not datadeh be deta us ede dor dis is de deda, pa de dorde, dow de ede. Ame." He was only under observation a short time. He learned to pronounce all the sounds at command, but could not be induced to use them correctly in ordinary conversation.

It was strongly insisted on by Dr. Hadden that these cases should be isolated from other children while under treatment. It is a comparatively easy thing to teach them the pronunciation of the consonants when making an effort, but it is a very lengthy and laborious business both for teacher and pupil to get them to use these correctly when speaking rapidly and automatically. However, the results obtained when time and patience are given to the work by some constant companions, such as a sister or a governess, who keep the child all day in their company, amply repay the trouble taken.

SALICIN AND SALICYLATES IN THE TREATMENT OF PSORIASIS AND SOME OTHER SKIN AFFECTIONS.¹

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THERE are so few drugs or other medicaments which when administered internally have any striking influence on diseases of the skin apart from syphilides that any addition to their number will, I am confident, be welcomed by the profession, especially by those who have not had the opportunity of availing themselves of the improvements in local treatment of modern dermatology. The undoubted success in many respects of this treatment which dermatology, like surgery, owes in great measure to antisepticism has had a tendency, coupled with the great authority of Hebra and the German school, to make us concentrate our efforts on directly affecting the cutaneous envelope, and to think comparatively little of what can be done by acting upon its contents. To those who have gone somewhat too far in this direction the discovery of the influence of thyroid extract on diseases of the skin must have been a rude awakening, and although, as usually happens, the limits of its efficacy are somewhat narrower than was at first hoped and believed, yet it was a startling reminder that the old humoral pathology, though buried, is perhaps not yet dead, and that a germ of truth still survives to bring forth a healthier and stronger plant than the original one. The drugs for which I am now claiming a not unimportant place

¹ This is a part of the introduction to a discussion on the Internal Therapeutics of Psoriasis at the annual meeting of the Dermatological Society of Great Britain and Ireland.

in cutaneous therapeutics have won an established reputation in other diseases, and this new field for their employment may give and receive assistance in our understanding the nature of the diseases in which they are useful, and to some extent their *modus operandi*.

The first case in which I gave salicylates was in that of a man aged thirty-two years, in whom psoriasis had only existed for a month, and who said that it came on two weeks after the commencement of a quinsy; the tonsils were still somewhat swollen at his first visit to the hospital on Dec. 8th, 1894. The well known association of tonsillitis and rheumatism induced me to give him salicylate of soda in fifteen-grain doses three times a day without any external treatment. The brief notes on the out-patient paper taken at the time state that the psoriasis was in round, defined patches on the arms, elbows, legs, chest, and abdomen. The patches were very abundant, bright red, and scaly, and had coalesced into large sheets of eruption on the chest and loins. At his next visit, a week later, I was astonished at the improvement. The patches had become much paler and most of the scales had fallen off. In another week improvement had continued and there was no longer any crusted scalliness left. The surface was paler, and by Jan. 19th, 1895—i.e., in six weeks—it was quite smooth and pale, except for a few fragments here and there; for these, on Jan. 26th, a resorcin ointment was given, and he did not attend again. Naturally this case led me to try salicylates much more extensively.

I will give an instance of psoriasis guttata thus treated. The patient was a woman aged twenty-eight years, who attended as an out-patient on Feb. 5th, 1895. She had been subject to the eruption off and on for fourteen years, was never absolutely free from it, and was generally worse every two years. The attack in question was recent and consisted of small spots from an eighth to half-an-inch in diameter, very abundantly distributed all over the limbs and trunk. Her father had suffered from gout, but she presented no evidence of gout or rheumatism. Fifteen grains of salicylate of soda in one ounce of infusion of quassia were given three times a day after meals. At her next visit, on Feb. 19th, it was noted that the eruption was much paler and that the scales had for the most part peeled off, even on the legs. The medicine in the same dose was continued, and on March 26th it was noted that the eruption had almost cleared off the legs, leaving very slight staining. The knee patches had entirely lost the hyperæmia, and the lower part was quite well, but there was some crusting at the upper part. A few small patches still had the remains of a scaly crust upon them, but when this was removed—and it was easily detachable—there was only very slight redness beneath. The eruption on the trunk had entirely cleared off, leaving very faint fawn-coloured stains. On the left forearm there was still a single patch the size of a florin, slightly reddened and rough, but there was very little crusting. Now, for the first time, a local application was given in the form of weak ammoniated mercury ointment, and she did not attend again.

Since these I have had several cases in which the result was equally striking and conclusive, and the form in which this was particularly so was in extensive spreading cases of psoriasis guttata of recent development—the very form which is usually unsuited both for thyroid extract and for arsenic, the former especially sometimes producing a very rapid extension and multiplication of the patches in this class of case. In cases where there were only a few chronic patches the result was not, as might be expected, so brilliant. Many of them distinctly improved, and some got quite well; but it is difficult to get patients to persevere with the same medicine for some weeks without having something to rub on, and I have always carefully abstained, where possible, from local treatment until quite the end of the case, when, the drug having amply proved its efficacy, a few remaining fragments of disease could obviously be at once removed by local treatment.

The first effect of the drug appears to be the diminution of hyperæmia, so that the patches become paler, the scales are no longer formed abundantly, and the old scaly crusts are detached or are easily detachable, exposing a pale red surface, which gets smoother week by week, and finally leaves only a slightly stained surface. I have not met with any case in which salicylate of soda aggravated the disease, with a slight exception of one who had been improving under its use, when I increased the dose to twenty-five grains three times a day. It produced gastro-intestinal irritation, and the eruption, which was very extensive and severe, began

to get more hyperæmic and crusted; but as soon as the drug was stopped and a gentian-and-soda mixture substituted the unpleasant symptoms passed off, he was soon able to resume his salicylate in fifteen-grain doses, and the disease again began to improve. He was a patient with extensive general psoriasis, which had on previous occasions gone on to pityriasis rubra.

In the case of a man aged thirty-nine years, with extensive psoriasis punctata, improvement was slow at first, but at the end of two months he only required a very little local treatment to remove the last traces of the disease. I have only used salicyl derivatives or its allies in one case. This was in the case of a woman aged thirty-two years, who was admitted with a very extensive eruption in every region of the body. The eruption was much crusted, not very hyperæmic, and I thought it was just a case in which thyroid extract would be beneficial; but in this I was disappointed, for it upset her considerably and made the eruption more hyperæmic and irritable, so that I was obliged to stop it. Two or three weeks later I gave her salophen in fifteen-grain doses three times a day. This was too large a dose, though it was the dose recommended, and it produced diarrhoea and other signs of intestinal irritation. The stomach was given a rest and then a ten-grain dose of the drug was given. Considerable improvement took place, but as she was also having local applications I am unable to say more than that I believe the salophen played a considerable part in the beneficial result of the treatment.

These are by no means all the cases of psoriasis that I have treated in this way, but I will not relate case after case. I will simply state what drawbacks I have found. In the more chronic forms of the disease the improvement has not been so striking, though, except in a few very old patches, there has nearly always been marked improvement. Where progress is slow it is difficult to get out-patients to persevere unless they also have something to apply, and then of course the exact apportionment of the credit to internal and local treatment is difficult. With the single exception I have mentioned, where the dose was excessive and excited intestinal irritation, it has never produced aggravation of the eruption. A few patients, however, were unable to continue salicylate of soda, as it produced dyspepsia in the form of pain in the epigastrium soon after taking it. It was always given after meals to obviate any gastric irritation as far as possible. In one case it actually produced nausea and occasionally vomiting and sweating. The patient was a boy aged thirteen years, who had a moderate amount of eruption, chiefly on the trunk. In spite of this—for I did not stop the drug at once—improvement in the eruption took place, but not to a striking extent. After taking it for a month salicylate of potash in seven-and-a-half grain doses was given, but this disagreed still more; then three grains of salicin three times a day were substituted, and this he was able to take without discomfort, so that the eruption, which was in rings, improved considerably in a fortnight. He is still under treatment. It is possible that the pure natural salicin or salicylate may be more easily tolerated in such patients, but in the great majority of cases the cheaper synthetical product is sufficiently efficacious.

I will only touch briefly upon some other diseases of the skin in which salicylate of soda has been administered with more or less decided benefit. In various forms of erythema multiforme, including erythema iris, I have long used this drug—and, I believe, with advantage—in shortening the course of the eruption; but as so many cases run a short course without any treatment it is difficult to obtain conclusive proof that in any one the short course was due to the drug and not to a spontaneous involution. I would especially suggest its administration in erythema nodosum, a disease which only rarely comes to skin departments at the hospital. In lupus erythematosus, in one case, striking improvement ensued after its administration, which, I believe, was due to the drug. The patient, aged thirty-nine years, had suffered from lupus erythematosus for three years. The patches on the malar eminences and on the bridge of the nose were small and had the usual seborrhœic characters, but he had several large, actively inflammatory patches on the scalp which formed an irregular band of patches distributed posteriorly for about two-thirds of the circumference of the scalp. He was subject to chilblains, but his general health was good and there was no phthisis in the family. I had seen him in March, 1894, and among other remedies he had taken two tabloids of thyroid extract for a

considerable time without any result. I did not see him again until Feb. 14th, 1895, when the patches on the scalp had increased considerably in extent and were very hyperæmic, though I could not say there were new ones. He was given fifteen grains of salicylate of soda three times a day, and locally a mild antiseptic was rubbed gently on to the patches,—viz., four grains of lozoin with one ounce of lanolin and oil. On March 20th all the places were immensely improved. The ears and nose were quite well, and all the scalp patches were very much better. The congestion had almost vanished from most of them, they were becoming cicatricial, and there were only left some sebaceous plugs in some of the patches. Although I believe this improvement must be ascribed to the salicylate of soda, I do not wish to lay much stress on a single case. I have seen a very brilliant cure apparently due to arsenic; but it must be reluctantly admitted that arsenic is of little or no value in the great majority of cases. I have also thought that thyroid extract is occasionally beneficial in lupus erythematosus, and the success of these two drugs, although in exceptional cases, renders it probable that salicylate was the cause of the improvement and suggests that it may at least be tried, the more so as it is less likely to upset the patient than either of its rivals. I have not had time to try it sufficiently in other cases of this form of lupus to enable me to give a more decided opinion as to its merits. In eczema also I have not as yet had any good evidence either for or against it. The irritation is usually so great that local treatment must nearly always be employed, and this complication makes it difficult to appraise the value of internal treatment until it has been used in a large number of cases. I do not expect any great advantage in the majority of cases.

Finally, I would only mention that Arning a few years ago claimed to have had good results in some cases of leprosy from salicylates, but in the few cases in which I have had the opportunity of trying it I have not been able to trace any particular benefit from it; but it might be that it is only useful in the more active cases seen in the tropics, and that in the comparatively quiescent condition of the disease, as it is usually met with, it is less likely to be of benefit. At all events, in the next case with a febrile exacerbation I shall try salicylates instead of quinine, which I have usually employed.

The question which naturally suggests itself is, How does salicylate of soda act beneficially in these various forms of skin disease? In psoriasis, for instance, is its beneficial action a confirmation of the French view of the close relationship of psoriasis and arthritis, whether rheumatic or gouty, or what in our ignorance we call "rheumatoid"? Without denying that these conditions do favour the development of psoriasis, I do not think that the fact that salicylates are beneficial to both acute rheumatism and psoriasis must necessarily be interpreted as a proof of their being more closely connected etiologically than has generally hitherto been suspected; I would rather suggest that the result is due to a microbicidal action of salicylates in the blood—the more so as the evidence accumulates, and has recently been ably marshalled by Dr. Newsholme, that rheumatism is itself a microbic disease—and that the result in both is due to the microbicidal action of the drug. Possibly both microbes find a common factor in the organism which affords a congenial soil. The psoriasis microbe, it is true, is at present hypothetical, and is possibly only one factor in the causation of the eruption, and if it is admitted that it is microbic in origin the clinical facts point to its acting from within the body, and that it is not a microbe simply deposited *ab extra* on the skin. Further, this microbe must have periods of quiescence from which it may be awakened by various conditions of body or mind, chiefly of a depressing character; for Hebra's famous dictum, "that psoriasis is a disease of the healthy," is too often contradicted by clinical facts for it to be accepted as anything more than a paradox to attract the student's attention to the ruddy, clear complexion seen in many young patients suffering from psoriasis.

[Dr. Radcliffe Crocker concluded by asking the members of the society to state their experience as to the indications and contraindications for arsenic and thyroid extract respectively, and as he believed that he was the first to publish good results in the treatment of psoriasis by the internal administration of salicylates summed up his conclusions on these drugs as follows:]

Salicylate of soda and probably salicin and its derivatives are of great value in psoriasis, especially in the period of active development and in hyperæmic cases which are

unsuitable, as a rule, for arsenic and thyroid extract. They are useful in all forms except when they produce dyspepsia, and perhaps in old chronic patches. Finally, they are much less likely to upset the general health of the patient than either arsenic or thyroid extract.

Harley-street, W.

THE TREATMENT OF PSORIASIS.

By TOM ROBINSON, M.D. ST. AND.

How few specifics we can boast of possessing. I suppose if we asked a candidate for a medical examination to name those drugs which we could rely upon to cure a certain malady he would probably say mercury will cure syphilis and quinine will cure ague, and he might possibly say arsenic would cure psoriasis. Can any of us say we possess more knowledge than this hypothetical student? I confess to commencing the study of psoriasis with the most unbounded belief in the power of arsenic to cure my cases; for had I not been saturated with this belief by my reading and teaching? But, alas, when I came face to face with the malady I discovered that my remedy failed most dismally to fulfil my high anticipations, although it was pushed sometimes with all the boldness of Hunt and men of his school. It would be impossible, and it certainly would be wearisome, if any attempt were made to embrace in these few remarks the experience of other drugs in the treatment of psoriasis. Suffice it to say that cantharides, aconite, turpentine, green iodide of mercury, cod-liver oil, phosphorus, and sulphur have been put into the balance and found wanting as specifics for psoriasis. If we wish to ascertain accurately the influence of any treatment we must first obtain the natural history of the disease which we are dealing with. It is very seldom that we are able to do this without some possible error creeping into our considerations, as so few cases of psoriasis come before us which have not been subjected to treatment. On one occasion, however, I have had an opportunity given me for obtaining this desirable information; and so important a bearing had it upon the whole question of treatment that I venture to give it in some detail.

A woman from Lincolnshire aged seventy-six years consulted me in 1891 for chronic gout. On examining her quite a cluster of typical psoriasis spots were to be seen on her knees and elbows. These, she said, had existed since she was thirteen years old, but many times during her life she had been "almost covered" (I give her exact words) with a scaly rash. She was certain that since she had ceased menstruating the eruption had been getting less and less, and she did not think it came out in crops like it used to do. She had had four children, and each time during her pregnancy the rash "nearly left her." During the middle period of her life the eruption was always worse when she was suckling, and it invariably became more exuberant in the spring of the year. She was told when a girl that the eruption "must not be driven in" or it would fasten itself upon some vital organ, and for this reason she never either applied remedies or took any drugs for the disease. If we gather up the facts of this case we shall see they arrange themselves into four headings: (a) the disease commenced at puberty; (b) it has had cycles of rise and fall; (c) it subsided during pregnancy; and (d) it always became more exuberant in the spring. If this woman had been subjected to treatment how impossible it would have been for the most impartial of us not to attribute the improvement which took place to our therapeutic efforts. The practical question is, Can we not subject our psoriasis patients to any treatment with the confident hope that we shall either cure or benefit them? It would be of deep interest if the opinion and experience of a number of those engaged in skin practice would give an answer to this question; for my own part, I should direct my endeavours to—(a) improve the general health of the patient if any error of nutrition or function could be detected; and (b) treat the disease locally. Nothing but experience and what may be called the instinct of the physician will enable anyone to use the first factor. But to remove the scales, and sometimes, I was nearly saying "frequently," to prevent their recurrence, there is nothing which has succeeded so well as a consecutive, efficient, and constant application of equal parts of Stockholm tar, soft soap, and spirit of wine to the psoriatic spots. The remedy must be rubbed in with hot and moist flannel until

the patient can submit no longer, and if the patches are local and large a piece of lint should be saturated with the tincture and tied on for several consecutive hours, even days, if necessary. The treatment must be persevered with until the whole of the morbid material is cast off; and when this occurs we shall find the true skin smooth and shining, looking like gutta-percha tissue, stained as it is with the tar. The misfortune is that this treatment is tedious and objectionable for both nurse and patient, and can only be carried out efficiently in a hospital or medical home, or at least with the assistance of a trained nurse. When the patient has sacrificed three or four weeks to this treatment the general result has been satisfactory, and some cases have, so far as I know, been completely cured; but I doubt whether any measures are capable of preventing a relapse. It is scarcely necessary to add that no claim is raised for originality in the application of soap, spirit, and tar in cases of psoriasis. Hebra, that king of dermatologists, was, so far as I know, the first to use the combination.

A CASE ILLUSTRATING AN EARLY STAGE OF HERNIA OF THE BLADDER.

By FREDERICK TREVES, F.R.C.S. ENG.,
SURGEON TO, AND LECTURER ON SURGERY AT, THE LONDON HOSPITAL.

THE comparative rarity of hernia of the bladder and the little knowledge possessed of the mode of formation of this rupture may excuse the publication of the following case.

A man aged thirty-one came under my care with a double inguinal hernia. He had lived a life of undisturbed leisure, was the reverse of energetic, and took little or no exercise. His whole muscular system was below the average in the matter of development, his tissues were very flabby, and although he was by no means corpulent he had been increasing in weight for some little time. The abdomen was lax and unduly pendulous for a man of his years, and the amount of subcutaneous fat in the parietes was large. He had noticed the hernia for about two years, the left rupture having appeared before the right. A well-fitting double inguinal truss had been worn for the last twelve months. The right hernia was the larger of the two. It formed a swelling which was about the size of a hen's egg as it projected beyond the inguinal ring. It had reached but a little way into the scrotum. It felt soft and was peculiarly rounded. The impulse on coughing was marked, and the protrusion was perfectly reducible. I noticed that while the hernia could be most readily replaced it appeared again the moment the fingers were taken away. The contents appeared to be omental. The ring readily admitted two fingers. The hernia on the left side was very like that on the right. The ring was about the same size, but the protrusion was much smaller. The patient complained of strange, indefinite pains about the lower part of the abdomen. He had no bladder trouble, and his chief complaint was of a constant sense of painful weakness in the groins. He had some pain, moreover, along the inner side of the right thigh. He was very anxious to have both hernia treated by operation. He was much worried by wearing a truss, and expressed his intention of discontinuing the apparatus in any case. It was pointed out to him that the ruptures could be perfectly supported by a truss, and that an operation was not a necessity. He claimed, however, that the truss gave him so much inconvenience that he could not submit to the continued wearing of it. This persistent sense of discomfort in the groin, even when an admirable truss was being worn, was a very noticeable feature. I proceeded to carry out the operation for the radical cure. On exposing the external ring on the right side I found a soft, well-defined, and well-rounded protrusion behind the structures of the cord. It looked like an omental hernia in a very thin sac, but an examination showed that it was in reality a retroperitoneal fatty hernia. When I had removed the fat composing this reducible mass I found in its interior a peritoneal sac about one inch and a half in length as measured by the part drawn out beyond the external ring. This sac, which was quite empty, was ligatured and removed. The removal of this fatty hernia revealed another and larger fatty protrusion behind it. There seemed, indeed, to be two hernia projecting from the inguinal canal, one behind the other, and in front of the anterior of the two was the cord. The removal of the fat

from the second protrusion disclosed in its interior a strange-looking mass which was soon shown to be the bladder. The fat seemed to be adherent to it. When the fat was dragged upon the viscus was drawn out of the ring, while a very little pressure served to reduce it. When reduced I could readily pass a finger into the ante-vesical space. No serous membrane came into view. An examination of the muscular fibres of the exposed bladder made it apparent that the part protruded was the extreme summit. The extruded portion when dragged forward projected (or rather could be made to project) about two inches beyond the external ring. I removed as much fat as possible and closed the external ring with sutures. The hernia on the left side was also a fatty hernia which had come down behind the cord, and which likewise contained in its interior a small empty peritoneal sac. The patient's recovery was uneventful.

Remarks.—This case certainly serves to illustrate the "traction" theory of hernia as held by some. There is an increase in the subperitoneal fat; it grows in a direction of little resistance—viz., along the inguinal canal—and drags a small pouch of peritoneum after it. In the same way the fat in the ante-vesical space extends along the inguinal canal and drags a portion of the bladder after it. Had the fatty hernia extended to the scrotum the hernia of the bladder would have been quite considerable, the protrusion would have been free of any sac, and the viscus would probably have become more or less irreducible. The case certainly shows the part a fatty hernia may play in producing a protrusion of the bladder.

Wimpole-street, W.

ON A SEVERE FORM OF ULCERATIVE COLITIS OCCURRING IN YOUNG CHILDREN IN THE ARGENTINE.

By GEORGE MACKERN, M.D. LOND.,
LATE VISITING PHYSICIAN TO THE BRITISH HOSPITAL, BUENOS AYRES.

As the subject of colitis seems to be attracting some attention just at present, and as an *addendum* to Dr. Hale White's article on "Colitis" which appeared in THE LANCET of March 2nd, I should like to describe a form of severe ulceration of the lower bowel which I have observed as occurring in young children in Buenos Ayres, and which differs very much in its clinical aspects from the usual forms of colitis referred to in that article and in the various textbooks. The form I am about to describe must be carefully distinguished from the other and acute forms of intestinal disease which are commonly observed in semi-tropical climates. The Argentine Republic over its greater extent, and more especially the province of Buenos Ayres, enjoys a semi-tropical or temperate climate, subject, however, to great and sudden changes in temperature. The hot months are January and February, with a mean temperature of 80° to 85° F., with occasional exacerbations to 90°, 95°, or even 100° in the shade, this excessive rise being usually accompanied by a soft north wind blowing from the extensive swamps of the Upper Parana and Matto Grosso districts of Southern Brazil. This north wind produces an extraordinarily depressing and nervous effect on both native and foreign residents. Lassitude, disinclination for bodily and mental exertion, and a peculiar irritability of temper are felt alike by all classes during the two or three days the wind lasts. On such days special precautions must be taken with regard to fresh foods, milk turning sour in a couple of hours, fresh meat beginning to decompose in three or four, while certain fruits rich in sugar will also ferment in a few hours. This great heat culminates in a storm of wind often accompanied by hail, and the temperature drops perhaps 25° or 30° in an hour's time. It is at such times as these that acute and fatal forms of diarrhoea may occur both in adults and in children, in the latter case chiefly due, no doubt, to the ingestion of milk rendered toxic under the influence of the microbe-bearing north wind. Children under two years of age succumb much more rapidly to this form of diarrhoea than older children using a more mixed diet, and adults, though they suffer severely, seldom die from acute attacks. Clinical and pathological observations show that it is the upper part of the intestinal tract which chiefly suffers, and there is often vomiting at the beginning of the attacks, which

are always sudden and violent. The chief symptoms are: 1. Frequent evacuations (the first being often natural and formed) very large, dark in colour, slimy, offensive, and accompanied by great pain and some tenderness over the upper part of the abdomen; towards the end of a fatal case motions become thin and watery though still dark in colour, very frequent, the pain disappears, and there is some tenesmus, due, however, to local irritation of the rectum and anus; the motions are never blood-stained, and mucus is rarely voided alone. 2. High fever, from 103° to 105° being common; no rigors; towards the end the fever drops, except in the very acute cases (under twenty-four hours) when the temperature usually rises to 105° or 106°. 3. Great restlessness and a very anxious expression, very great thirst. 4. Tongue much furred, becoming quickly brown and dry. 5. Abdomen tender in its upper part, but soft and doughy; no tympanitis as a rule. 6. Pulse quick and small from the very commencement. 7. In fatal cases coma precedes death, which occurs from exhaustion. I have given this brief description of acute disease attacking the upper portions of the intestinal tract because it is the only form I have met with which differs from the usual varieties described in textbooks, such as summer diarrhoea, cholera infantum, true or Asiatic cholera, &c.

Returning now to our more immediate subject—ulcerative colitis—the cases I have seen have all been in children under four years of age, the most frequent age being from twelve to twenty months—that is to say, a few months after weaning, and the child out of arms and being able to walk a little; this latter point is important as bearing on the causation. The children of all classes are liable, the differences in nutrition between the richer and poorer classes in Buenos Ayres not being so marked as in the more crowded populations of the larger European capitals. Most cases occur in the early winter (June and July), more especially if cold and wet come together rather suddenly, and this offers the only clue towards the discovery of the etiology of this remarkable disease. Most of the houses in the city possess large open courtyards (*patios*) and often small gardens, and the children live to a great extent an open-air life, and on the advent of the cold and damp winter are allowed to run about perhaps too freely, and so from sitting down on the damp grass or on the marble steps may catch cold, and the lower bowel become affected directly. Casting about for a cause, this seems to me to be the only likely one.

I shall now give the description of a severe and typical case which occurred in my own practice. An infant aged fifteen months, male, of English parentage, no previous illness, strong and well nourished, though somewhat backward in teething, had been weaned at ten months, the mother rather overtaxing her strength in nursing so as to bring him well over the hot weather before beginning the new diet, which consisted chiefly of groats prepared with milk, prepared food, cracknels, and well-made beef-tea once or twice a day, with an egg occasionally. The child thrived, and at the time of his illness (July) was allowed to run about the *patios* and garden, although the weather had turned somewhat cold and damp. On a Thursday night he suddenly awoke with a croupy cough, and when I saw him he was flushed with a temperature of 100.5° F. and had a short brassy cough, the pharynx being normal in appearance. I treated him with drop doses of tincture of aconite, minute doses of Dover's powder, and hot turpentine stupes to the neck. Next day the croupy symptoms had passed off, the temperature was down to 99°, and the bowels were fairly moved after small doses of calomel. On the Friday night he had very slight return of croupy symptoms, and on Saturday morning he appeared to be well. But in the afternoon he began to pass clear mucus from the bowel without any pain or straining, and during the next two or three days mucous discharges alternated with fairly normal motions every six or eight hours, and there was very little, if any, constitutional disturbance, the temperature varying from 99° to 100°, the tongue fairly clean, the appetite good, and but little restlessness at night. During the fourth and fifth days the mucous discharges became more abundant, some of them being distinctly pink in colour; the motions were infrequent, but very large, rather slimy, and slightly offensive. On the seventh day he began to pass the masses of mucus characteristic of the disease, some being about the size and shape of a cricket ball, and of a peculiarly dark red colour like port-wine jelly; there would be perhaps not more than two or three of these masses in the twenty-four hours, and in between these would be a fairly good motion,

though loose and slimy; the appetite failed somewhat, and the tongue was only slightly furred; sleep was rarely interrupted, and there was absolutely no pain or tenesmus on defecation; but the temperature went up to 102°. On the eighth and ninth days the masses of mucus were mixed with membranous shreds and sloughs decidedly fetid, and the motions became looser, flaky and curdy, and horribly offensive. On the tenth day in the afternoon the temperature suddenly went up to 105° and the pulse to 130, and the child for the first time threatened to become collapsed. I gave him a warm bath rapidly cooled down with ice, and the temperature came down to 102°, and he became bright again; he continued taking food well and enjoying very fair sleep. During the next few days he passed the masses of mucus mixed with shreds of sloughy membrane, and on several occasions black gangrenous masses horribly fetid. Small quantities, never exceeding a teaspoonful, of bright red blood usually followed the gangrenous sloughs, evidently coming from the edges of the ulcerated patch. After a particularly good sweeping of the surface of the ulcer (for so it seemed to me) there would follow two or three slimy offensive motions not showing a trace of membrane or slough. By this time the child had become somewhat emaciated and pale, but his general appearance was no index of his grave condition. For some days he remained more or less in the same state, passing mucus, sloughs, and bright blood, though in less quantity, and the motions were large, loose, and foul, but not so frequent as to exhaust the little patient alarmingly, and during this trying time he rarely refused his food, slept fairly well, and was with difficulty kept in bed during the day; the temperature never rose again. The symptoms gradually improved, the discharge of blood ceased entirely, sloughy-looking masses were passed at longer intervals, and the motions improved in consistence and appearance, and about five weeks after commencement of the illness he was able to be moved to the suburbs. Convalescence was slow and vexatious; the bowels were irregular, with occasional mucous discharges and fetid motions, and, strange to say, the appetite became capricious and poor; the attractions of a large garden and fine weather were trying to him, and he was liable to overtax his strength in getting about. Ten months afterwards he was brought to England, where he now is perfectly well and strong; but on the voyage he had a short but mild relapse, with mucous discharges and fetid motions.

I confess I did not at first recognise the gravity of the case, the absence of fever, constitutional disturbance, and tenesmus dispelling all fear of dysentery. But on the appearance of the first masses of blood-dyed mucus and the rise of temperature I sought the aid of Dr. Ricardo Gutierrez, senior physician to the Children's Hospital, who, in view of the immense quantities of blood and mucus that were being passed, and especially in the presence of sloughs, gave a very serious prognosis. For the first day or two we gave a castor-oil emulsion, one teaspoonful every two hours, with two or three grains of powdered salol every four hours as an intestinal disinfectant, the object being to keep the bowels fairly loose and so prevent any damage to the ulcerated surface, and also to remove intestinal accumulations as quickly as possible and to hinder stasis. This we followed up with calomel in frequent minute doses (one-fifth of a grain), combined with opium (one-third of a grain) and salol (one grain). By these means we kept the intestinal circulation going well, and perhaps avoided retention and absorption of toxic material. Later, when the discharge became alarmingly abundant and the large ulcerating surface apparently increasing, recourse was had to astringents, both vegetable and mineral, but they failed to make much impression, the best being hæmatoxylin mixture, which, however, was often passed unchanged. At the worst and gangrenous stage we tried rectal injections of all known astringents, including raw and clear starch and opium, extract of rhatany, extract of hamamelis, tannic acid, alum, iron, turpentine, nitrate of silver, permanganate of potash, carbolic acid, &c., with but little appreciable effect, the best perhaps being liquor ferri perchloridi, twenty or thirty drops per ounce of water. Small injections only were used, not exceeding 3 oz. of liquid, for fear of dilating the diseased and thinned-out colon. In subsequent relapses I gave the calomel, opium, and salol powders, the hæmatoxylin mixture, and the nitrate of silver or iron injections. But in future cases, so soon as the diagnosis is established, I mean to use enterocolysis to its fullest extent, giving rectal injections, with the long tube, of

astringent and antiseptic solutions, not less than a pint or a pint and a half at each injection. This treatment is much recommended by the Italian school, but it is obviously only applicable in the earlier stages. A properly regulated diet is exceedingly important, the indications being to give a bland, nutritious, non-irritating food, easily absorbed and grateful to the patient, who has to fight it out but poorly aided by drugs. But when curdy, fermenting masses appear in the motions the diet must be varied, and we used with great advantage fresh and rather weak beef-tea, fresh veal broth, and calves' feet jelly; and, when all these were refused, raw meat, prepared by finely scraping good fresh mutton, mixed with quince jelly, was well taken and well digested. In convalescence prepared food twice a day and underdone mutton or beef are the best, with small quantities of the best old port wine you can get. Rice water, linseed water, weak tea, and slightly acid drinks may be given to relieve thirst.

From the foregoing description it will be seen that this disease differs very considerably in its clinical symptoms from dysentery and ordinary colitis and so-called "mucous disease." In the first place, the large masses of mucus are peculiar—they are "blood-dyed," if I may use the expression, just like lumps of dark wine-jelly, and at first contain no liquid blood or even small clots; they are voided easily, without straining; there is no pain, either preceding evacuation or after, and fairly good motions at first follow these masses. Later, the motions become slimy and blood-stained, or accompanied by small clots of a bright-red colour, which may be seen on the top of the motion if the child has used the chamber. In the later stages and in the worst cases sloughy masses and black, gangrenous shreds, smelling horribly, may be passed. From the increasing size of the masses of mucus in the above case, their compactness and their shape, we could easily deduce that the ulceration was more or less circular in shape, that it advanced by the circumference, that the older portions first sloughed and then became gangrenous, and that at one time the ulcerated patch must have measured at least six or seven inches in circumference. The pathological sequence of events was apparently as follows: (a) catarrhal inflammation of the mucous coat just above the sigmoid flexure of the colon; (b) increasing hyperæmia and venous vascularity giving rise to wine-coloured mucous discharges; (c) breaking down of the surface of the mucous membrane with formation of sloughs, and a process of auto-infection due to development of toxic inflammatory products; (d) gangrene and extension of ulceration along the edges; (e) constitutional disturbance due to absorption of morbid products; (f) limitation of infective process and further ulceration by the formation of a protection zone in the lymphatic system just below the muscular coat; and (g) healing of ulcer from the circumference to the centre. The perusal of the clinical history of the case will clearly prove this series of pathological changes; in fact, as Dr. Gutiérrez put it to me, the diagnosis, course, and even treatment of these cases can be made out by mere inspection of the napkins and dejecta alone. What connexion there was between the laryngeal catarrh of the preceding two days and the intestinal attack I am not prepared to state. In another of my cases a similar sequence took place; but Dr. Gutiérrez assures me he has not observed the complication, if complication it really be. Another very interesting point in this case was the comparative ease with which nutrition was kept up, differing in this respect so widely from dysentery, the explanation being that the ulcer, large as it was, was situated at the extreme end of the alimentary tract; secondly, that blood infection and constitutional disturbance were comparatively slight in proportion to the large local lesion; and, thirdly, the child was kept as much as possible to his usual regime, being encouraged to take his food and to sleep at his accustomed hours. Ultimate and complete recovery is usually retarded for two or even three years, nutrition being but slowly carried on. In my case, in spite of considerable emaciation and wasting of legs, buttocks, and upper extremities, recovery was complete within the year, and due, I think, to very efficient nursing and a very great care in the preparation of the food during the acute stage. Another important point is that, according to Dr. Gutiérrez, cloacal contraction of the lumen of the bowel never follows, and in my case—one of the worst he had ever seen—the child is now (eighteen months after illness) having motions of proper shape and size. In all these points the natural history of the disease differs

widely from dysentery, with which the earlier symptoms may be confounded, and as a remarkable instance of extensive local intestinal ulceration with recovery I have ventured to put the case on record *in extenso*.

Buenos Ayres.

TWO CASES OF FÆCAL FISTULA TREATED BY RESECTION OF BOWEL.

By HERBERT W. PAGE, F.R.C.S. ENG.,

SURGEON TO ST. MARY'S HOSPITAL.

IN THE LANCET of Jan. 13th, 1894, I recorded two cases of resection of small intestine, gangrenous in hernia, one of which was primary and fatal, the other secondary and successful. The notes of two more recent cases of secondary resection—one of large bowel which had been ruptured by injury and was followed by fæcal fistula, and the other of small gut which had in all probability been gangrenous in a femoral hernia, and was likewise followed by fistula—both of them successfully undertaken, may be thought to be of some interest and worthy of publication.

CASE 1.—A man aged twenty-seven years was admitted to St. Mary's Hospital on Oct. 21st, 1893, having been run over a few minutes before by the trap which he had been driving and from which he had been thrown. He believed that a wheel had passed over the lower part of his back, and here there was a decided linear bruise. He complained of pain below and to the outer side of the left anterior superior iliac spine, and at this place there were slight redness and swelling. There was no marked collapse, nor did he seem very ill, but it was thought right to keep him in the hospital and in bed. There were, so far, no evidences of internal injury, but the man was restless and uncomfortable; and on the 28th—that is, a week after his accident—his evening temperature rose for the first time to 100° F. Coincidentally with the fever he made greater complaint of pain in the left loin and ilio-inguinal region, and this steadily increased day by day. His temperature, moreover, rose to 101°. Presently there was a suspicion of fulness and increased resistance in the left flank, the part became tender, and on Nov. 11th—the temperature on the previous evening having been 102°—there was distinct fluctuation between the left great trochanter and the crest of the ilium. From this spot fæcal pus was evacuated by incision, and soon afterwards solid fæces came from the opening. Two days later it became necessary to make a second incision immediately internal to the anterior iliac spine, and from this also there was a copious fæcal discharge. The first wound below the iliac crest closed soon after the more internal and direct route had been established for the discharge. The character of the fæces pointed clearly to their escape from the large bowel, but it was impossible to say with certainty whether the perforation had been the immediate result of the injury or had followed the sloughing of a severe contusion. The history of the case rather inclined us to regard the second cause as the more probable. At any rate, the fæcal escape was altogether extra-peritoneal, and we determined to see what rest, drainage, and cleanliness might do towards closure of the fistula before hurriedly resorting to operation. Although from time to time it looked as if the hole were going to close, the hopes of it were blasted by renewed discharge, and on Jan. 20th, 1894, three months having passed since the accident, and the discharge of fæces being as great as ever, it was resolved to expose the gut, and, if the orifice were a small one, to endeavour to close it by infolding of the wall with lateral sutures. Free incisions were required in order to find the bowel. It was firmly bound by adhesions, but by carefully following the route of the fistula that part of the bowel which was perforated was found without disturbing the whole circumference of it. In this way the general peritoneal cavity was avoided. A longitudinal rent with jagged edges, three-quarters of an inch in length, was found at the lowermost end of the descending colon and, as far as could be judged in the confusion of adhesions, at that side of it which is commonly uncovered by the peritoneum. A sufficient length of bowel having been freed to make the manipulations easy, lateral Lembert sutures were inserted so as to infold the wall of the gut and hide the rent, in the hope that peritoneal adhesions might be formed

of sufficient strength to close the opening. The depths of the wound were packed with iodoform gauze. The man, who had been extremely nervous beforehand and had with difficulty consented to the operation at all, bore it badly and was very sick after it. The next day his abdomen was a good deal distended, and the distension had increased so much by the third day that I felt sure no sutures could possibly hold, and when the wound was dressed on the 23rd we were not surprised to find that there had been much escape of feces. The explanation of this great accumulation of flatus lay in the fact that he had been continually gulping and swallowing air, a habit of which it was obviously imperative to cure him before undertaking any further operation. In the meantime, however, he was wishful that another chance should be given to spontaneous closure, and it was therefore not until March 10th that, the fistula being as bad as ever, resort was had to resection of the damaged piece of bowel. On this occasion it was necessary to open the peritoneum by a vertical incision three inches in length external to the linea semilunaris, and, having joined this by a second at right angles which included the fistulous track, the piece of damaged gut was found adherent to the pelvic and neighbouring abdominal wall. By careful dissection it was ultimately separated, and a couple of inches were then removed. The ends were united by the Czerny-Lembert suture. The abdominal wound was closed by tiers of sutures, save in that part where the external opening of the former fistula was, and here the depths were plugged with iodoform gauze. The after-history was uneventful, but on the 12th and two following days the dressings were fecal in odour, and there was certainly escape of flatus if not of solid feces. The opening, however, must have been very small, for by the 21st there was no longer any suspicion even that the ends of the gut were not soundly united; and on the 25th the patient had his first natural action of the bowels. Thereafter all went well, the abdominal wound healed in due course, and he was discharged on May 4th. When seen a few months afterwards he was in all respects perfectly well.

Although more than six months were spent over the treatment of this case it is questionable whether a better result would have been attained had resort been had to resection at a much earlier time. Apart altogether from the man's aversion from operation, it would in all probability have been a more dangerous thing to have opened the abdomen when the surrounding parts were in a state of acute inflammation from the spread of fecal contamination, and it was doubtless better to wait until the route for the fecal discharge had settled down into the comparative quietude of a distinct sinus. The ultimate result in this respect justified the delay. How far the failure of the earlier operation in January was due to faulty methods or to the impossibility of closing the rent—or, indeed, any rent—by the method adopted it is impossible to say, but I had no doubt at the time that the enormous distension of the gut with air had much to do with the yielding of the sutures and the early escape of feces.

CASE 2.—A woman aged forty-two years was admitted on Nov. 15th, 1893, with a fecal fistula at the upper part of the right thigh. The position of the opening was immediately below Poupart's ligament, external to the pubic spine, and suggested perforation of gut from gangrenous hernia. This diagnosis was supported by her history, for she said she had had a violent attack of pain a year before at this site, with the development of a lump which gradually increased in size. After the lapse of six months she became much worse, was laid up at home with inflammation, and then the lump burst. There had been discharge of feces ever since, now from one point and now from another, fresh abscesses having formed and burst from time to time. One fistula alone was present on her admission, but there were the scars of former orifices. She suffered a good deal of pain. The patient absolutely declined to submit to operation, and attempts were made to close the sinus by injections of nitrate of silver. They had no influence, and, still declining operation, she left the hospital on Dec. 7th. She returned on March 31st, 1894, converted by the inconvenience and suffering to the necessity of operation, and this was accordingly undertaken on April 11th. A vertical incision, which had to be extended through Poupart's ligament, was made over the site of the fistula, and it was soon found that a small area of the circumference of a piece of ileum, with an orifice in the centre, was adherent to the tissues of and adjoining the upper end of the crural canal. Part only of the lumen of the gut was

thus adherent, and everything pointed to gangrene of a hernia of Richter's variety. There was no difficulty in isolating the implicated portion of the bowel, and, three inches having been removed by slightly diagonal section, the ends were joined by the Czerny-Lembert method of suture. The whole of the abdominal wound and the major part of that in the thigh were closed by sutures, but the exact site of the fistula was plugged with gauze. The woman bore the operation extremely well, the wound healed forthwith, and she had her first natural action of the bowels on the 20th. Her general health rapidly improved afterwards, and when seen in April of the present year she was well and having a daily natural action without pain or difficulty.

This case was a good example of one of the results of gangrene from the neglect of a hernia which has not been recognised and submitted to treatment. In all probability the general symptoms were never very grave, and had the woman come under observation at the time the case would have been especially suitable for primary resection, and the use of some artificial method for the rapid approximation of the divided ends of the bowel. Of the various instruments for this purpose there can be no question, I think, that Murphy's button has in the main been followed by the best results, and is the one most free from danger. My thanks are due to my dressers, Mr. Tenison, Mr. Herrington, and Mr. Austin, for their careful notes and the interest they took in the treatment of these two patients.

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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(Continued from p. 865.)

THE present communication brings my cases of abdominal nephrectomy up to date, and I am sorry to say that two of the cases were fatal, though one of them was so on account of an unfortunate complication not properly to be referred to the operation itself.

CASE 47.—A young woman aged thirty-two years was first seen in the spring of 1894 on her return from wintering abroad for her health which had long been unsatisfactory. She had for many years suffered very frequently with most severe spasmodic asthma, and her menstruation had never been properly established, there being only an occasional slight pale discharge hardly to be considered. When I first saw her emaciation was extreme; I hardly ever saw anyone so thin, and yet she was bright and full of "go," and would join in the social pleasures of her position. On examining the abdomen, in which she said she had a painful swelling, I found a large, tender, and very mobile kidney, and at this visit I thought it might be merely a floating kidney distended with urine. Subsequent examinations, and the use of the thermometer, soon convinced me that the condition was much more serious, and that she was suffering from advanced tubercle of the kidney, and I asked Sir William Broadbent to see her with me. He had already seen her some years before, and had then found the urine normal. He agreed with me as to diagnosis, but thought there was no immediate urgency, and that the nephrectomy which I had suggested might be deferred and the patient watched for a time. Soon after our consultation she became so much worse that I was obliged to confine her to bed. The pain became very severe; the evening temperatures ran high—from 102° to 104° F.; sweating was profuse; and the kidney became fixed, so that I feared some perirenal infection had occurred. The patient herself was very averse to operation, and much valuable time was lost before I could obtain her consent, her general condition through these weeks becoming daily more serious and more unfavourable for a severe operation, while the local condition led me more and more to fear perirenal complications, such as I have described in previous cases as most seriously affecting the immediate results of operation. In July Dr. Douglas Powell kindly saw her with me, pronounced the lungs to be sound, and joined me in urging the necessity for operation; at last she consented, and I operated on July 24th. The kidney was a

mere thin-walled sac full of pus and cheesy debris; enucleation was very difficult, and some fouling of the tissues of the capsule was unavoidable, but the peritoneum was kept entirely free from any contamination, and whenever I was conscious of any escape the parts were at once cleansed with a 1 in 1000 corrosive sublimate solution, and the whole sac was carefully washed out with the same solution as soon as the kidney was out. Some idea of the difficulties of the enucleation may be gained from the fact that the operation lasted two hours and a half, the greater part of the time being spent in separating the kidney from its upper and posterior attachments, where the adhesions were remarkably dense. The sac was drained with a glass tube in front, very little bloody serum being obtained, and from first to last there was not the least suspicion of odour about the discharge—indeed, its scantiness was sufficient proof that it was aseptic. The patient began to vomit spasmodically and violently immediately she recovered from the effects of the chloroform, and continued to do so till she died rather more than forty-eight hours after the operation, severe hiccough being also troublesome during the last twenty-four hours. The temperature was practically normal till the ante-mortem rise, and the remaining kidney acted well in spite of the small amount of fluid retained in the stomach. There can be no doubt that this patient's condition was most unfavourable for so serious an operation; but the result disappointed me, and I believe that she would have made a good recovery had it not been for this sickness, which seemed to partake of the spasmodic nature of her asthma and was quite unlike the sickness following anaesthesia. Before the operation she was very much depressed and quite made up her mind that it would kill her, a condition most unfavourable for recovery; but after it was over she was quite hopeful in spite of the sickness, and was greatly disappointed when I told her shortly before death that I feared she was dying, remarking, "Oh, I thought I was doing quite well if I could only get over this sickness." The lesson to be learned from the case is to avoid all unnecessary delay when once it becomes evident that operation offers the only hope of cure. The young woman (*vide* Case 23 in my table) upon whom I operated in 1888—sorely against my own will, because I considered the case hopeless—is married and pregnant, and the condition was worse than in the case just recorded, but the one patient was determined to get well and the other was certain she should die.

CASE 48.—The patient, a young woman about thirty years of age, was never very strong, and her family history was not a good one. I had operated twice upon one of her sisters for renal calculus. She herself had suffered from pain in the left renal region ever since she could remember anything, but I only saw her first for it in 1894, and then found a large and very mobile kidney, and advised a belt and pad, which gave temporary relief, but later in the year the kidney became so large and painful that I advised its removal. The operation was performed on Oct. 15th, 1894, and was perfectly simple so far as the kidney was concerned, and I could find no cause for the hydronephrosis except the mobility. I found a small tumour of the right ovary and removed it at the same time—a matter of some little difficulty—through a left lateral incision. She made an excellent recovery from the double operation, and has since been in better health than she had been for some long time previously.

CASE 49.—This case was a very disappointing and very sad one, because I believe the fatal result was due to a chain of circumstances entirely outside my control. The patient was a married woman aged thirty-seven; her first child was born in 1881 and she made a smooth recovery, but in two subsequent confinements in England, in 1883 and 1884, the convalescence was slow and there was much swelling of the legs. The same occurred when she was confined of triplets two years later. In 1891 Dr. Pye-Smith diagnosed misplaced kidney, but advised against operation. In 1893 she was again pregnant, but had such severe attacks of pain, with loss of consciousness and slight convulsions, that abortion was induced. She came to me in December, 1894, and I found a much enlarged mobile right kidney, markedly tender all over. I recommended its removal, and she came up to town immediately. I returned from my Christmas holiday in January. The weather was bitterly cold; she had only recently returned from India, had been taken great care of before coming up to town, came

up in a well-warmed railway carriage, and then drove in a hansom cab to a nursing home. She felt that she had got a chill, but never said a word to me and let me proceed with the operation next day. The operation was a perfectly simple one. The patient was very slow in going under the chloroform and very dusky-looking while under, but came out quickly and well. Very soon afterwards she began to complain of her throat, and then told me about the chill and that she was subject to laryngitis on slight provocation. The operation was performed in 1895, and the mischief spread from the throat into both lungs; on the third day the pulse, which had remained quiet and good up to this time, suddenly became quick and weak, and there were severe attacks of cardiac pain. She died early on the morning of the fourth day, evidently from the double pneumonia. There was never any symptom from first to last to suggest any trouble in connexion with the operation, and the kidney acted well till she was in a dying condition, thirty-three ounces and a half of good urine, with copious deposit of urates, being passed the day before she died. I could not in any way blame myself for this unfortunate result, as it was not till after the operation that I was told anything about it, and I had taken every possible care. One naturally reviews more closely all one's proceedings in an unfortunate case of this kind, and I could not help wondering whether the result would have been different had I contented myself with fixing the kidney into the loin. My rule is never to remove a floating kidney simply because it is a floating kidney, but if it is also hydronephrotic then I remove it as I do any other kidney in which there is decided hydronephrosis, because I believe nothing but removal is of any use. This case was just on the border line, and I could not help feeling, when "wise after the event," that had I decided in favour of the less serious operation the exposure would have been much less than in opening the abdomen, and the condition of the patient with two kidneys in place of one better for fighting through the serious illness which followed. The danger in fixing a loose kidney which has become hydronephrotic is that the ureter, having been already stretched and altered, may be too long when the kidney is fixed in its natural position, and then more or less kink will become permanent and the patient be in a worse condition than before. I have seen this condition produced in a case not hydronephrotic, in which the mobile kidney was fixed too low, the result being that the ureter was always more or less bent on itself, and the pain, which before had been occasional, became constant, because the pelvis of the kidney was always more or less distended with urine.

Having completed the record of my experience in abdominal nephrectomy, I propose very briefly to record the results I have obtained in fixing the loose kidney by sutures into its proper place in the loin—i.e., nephrorrhaphy. The first time I performed this operation was on May 12th, 1886, at the Samaritan Hospital, and I cannot say with what success, as I have entirely lost sight of the patient; but I think it is probable that the result was not perfect, as, having at that time neither experience of my own nor the record of that of others to guide me, I performed it in what I should now consider to be an imperfect manner. The patient was a young woman aged nineteen. She was placed under my care by my colleague Dr. Amund Routh. I merely exposed the kidney in the loin, and attached it by four fine silk sutures to the capsule, cellular tissue, and muscle in the incision, passing the sutures for about half an inch under the true capsule of the kidney. The second case was also sent to me by Dr. A. Routh. The patient was aged twenty-six and had begun to suffer from dragging in the right side and pain in the right groin in 1885; then a lump appeared which she could move about, and in March, 1886, just a few weeks before my first case, she had the kidney sutured into its place by a well-known surgeon who has devoted special attention to renal surgery. The dragging sensation was relieved for about a year, but the pain in the groin was rather worse; at the end of the year the mobile lump in the side reappeared, and very soon the dragging sensation also returned. I determined in this case to open the abdomen and see exactly what the condition of things was. I operated on July 2nd, 1890, and found that the kidney was twisted, so that its lower end pointed forwards, and it was evidently still held in this position by the adhesions formed after the previous operation. I freed it, and, holding it in proper position, passed

two strong sutures through an incision in the loin, carrying them more deeply into the kidney substance than I had done in the previous case, and bringing them out through the loin tissues, except the skin, one at each edge of the loin wound, which I left gaping open without sutures and dressed from the bottom with gauze. The result in this case was satisfactory, and the patient was able to do her work quite well. I last saw her about a year ago. I did not again perform the operation till January, 1893, when I operated upon a woman whom I saw in consultation with Dr. MacLagan. In this case I adopted the method which I have since followed, making a longitudinal incision from an inch and a half to two inches long well through the true capsule of the kidney, whereupon the wound gapes, and I then pass four sutures, one at each side and one at each angle, well into the substance of the kidney, and then through all the tissues of the loin wound at its upper and lower angles and in each side, as in the renal wound, and tie them externally, including a small edge of the skin. I then put in a rubber drainage-tube up to the kidney, and carefully suture the loin wound round it. I arrived at this method of operating from a study of the literature of the subject and a consideration of the importance of involving in the newly formed adhesions some tissue less yielding than the loose cellular tissue and fat around the kidney. The true fibrous capsule is an excellent material, and its cut edge curls back and comes into close union with the other cut fibrous tissues in the loin wound when the sutures are tied. Since adopting this plan I have had uniformly satisfactory results. I always clip away all the loose fat and cellular tissue which is pulled into the wound in exposing the true capsule of the kidney, as I think the contraction which results from its cicatrization aids in retaining the kidney in its place. I have only performed the operation eight times altogether, but my results since adopting the above method have been so encouraging that I have no hesitation in recommending it in any case in which the kidney is not only mobile but is a cause of inconvenience or of suffering. I have no doubt that undue mobility of the kidney is much more common than is supposed, and that it is a cause of many obscure pains and nervous conditions which are put down to fancy or hysteria.

(To be continued.)

THEORETICAL AND PRACTICAL CONSIDERATIONS ON WHOOPING-COUGH,

WITH AN INQUIRY INTO THE THERAPEUTICAL VALUE OF COCAINE IN UPWARDS OF 300 CASES.

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THERE are many features in the history of whooping-cough, such as its fairly definite incubation period, its infectiousness, and the immunity conferred by one attack, suggesting a microbial origin, and various specific parasites have been described by Poulet,¹ Letzerich,² Ischmer de Gratz,³ Burger,⁴ Moncorvo,⁵ Afanassiew,⁶ and Ritter;⁷ but we are not at present in a position to state that any bacillus has definitely been proved to be the cause of the disease. Other investigators regard whooping-cough as purely a neurosis, and a few cases have been recorded where the post-mortem appearances

seem to lend support to this view. The late Dr. Sturges⁸ was a strong supporter of the primary nervous nature of pertussis. On analysing the clinical history of a large number of cases spread over a considerable period of time the fact that the disease is very infectious becomes remarkably obvious, and the frequency of incidence shows curves similar to those for other infectious diseases.⁹ After infection there is an incubation period of about twelve days, then the temperature rises, the child becomes peevish, there are inflamed conjunctivæ, running at the nose, sneezing, and the symptoms of bronchial catarrh. These persist for a varying length of time, averaging perhaps a fortnight or less. Cases may occur in families of which other members have well-marked pertussis that show the symptoms, but never have the spasmodic whoop. In a typical case after or gradually developing out of the catarrhal stage there arises the paroxysmal stage when the whooping inspirations occur that give the disease its name. There may be other signs of vagal excitability, such as sudden and frequent vomiting, during the paroxysms even momentary stoppage of the heart's action (Steffen), the child may faint, and Lerve symptoms, such as twitching of the muscles of the face, convulsions, and strabismus, occur, while ascending paralysis has been observed in a few cases to follow whooping-cough. Constipation is frequent. Such symptoms as ecchymoses, turgid veins, or cerebral hæmorrhages, which are probably produced by the mechanical strain of the paroxysms, do not concern our present purpose; but the well-known fact may be mentioned that at the end of the attacks a little mucus is usually expectorated. It is very remarkable that with the onset of the violent whoopings the temperature, elevated in the catarrhal stage, becomes normal, the appetite may be good even when there is vomiting, the peevishness disappears, and, except for the paroxysms, the child appears quite well; but in a large number of cases slight causes, such as the taking of food, produce whooping, which is followed by vomiting, or there may be frequent vomiting without preceding paroxysms. The child, finding from experience that food often produces the distressing attack, refuses it, and consequently becomes emaciated, while the loss of sleep due to the exacerbations of cough at night tends in the same direction. When rises of temperature occur in this stage they are almost always due to concomitant broncho-pneumonia.

It seems to us that the disease may be explained on the assumption that it is due to some microbe (whether this be the particular bacillus described by Afanassiew or not is immaterial) which has a local habitat in the respiratory mucous membranes, and by its presence and the products of its activity produces the catarrhal stage of the disease just as the diphtheria bacillus produces membrane locally and general pyrexia. We believe the pertussis microbe also fabricates some virus, which taken into the circulation acts as an irritant poison to the nervous tissues, especially the respiratory and vagal centres, rendering them far more easily excitable than normal. We therefore regard the catarrhal stage as the period of microbial activity and the whooping one as due to the after-effects of a poison generated by the microbe. This affords, if true, a complete reconciliation between the bacillary and neurotic theories of the disease. We are not at present in a position to give experimental proofs, but think the following clinical facts point strongly in favour of our theory. The onset, infectious nature, and subsequent immunity are quite similar to those of diseases commonly accepted as due to microbes, while the absence of pyrexia and often improved general condition of the patient during the whooping stage, its chronic and variable course, the fact that lesions have been found post mortem implicating the medulla, brain, and vagi,¹⁰ and that the whooping when once fully established becomes chronic, tending to slow and sure recovery, not to increased violence, together with the observation that remote nerve lesions are occasional sequelæ, all seem to point to the effects of chemical traumatism of nerve tissues rather than to the presence of active bacilli. The strong resemblance in some respects to the clinical history of post-diphtheritic paralysis seems to show that it is possible a somewhat similar condition obtains to that which Martin has shown occurs in diphtheria. It may be objected that in diphtheria subsequent paralysis

¹ Comptes-rendus de l'Académie des Sciences, 1837.

² Ueber Lungenmycose bei Keuchhusten, nebst Angabe einer Methode zur Heilung der letztern. Virchow's Archiv, 1873, Band lvii.

³ Jahrbuch für Kinderheilkunde, Band x., Heft 4, 1870. Schmidt's Jahrbuch, No. 1, 1874.

⁴ Berliner Klinische Wochenschrift, 1883.

⁵ De la Nature de la Coqueluche et de son Traitement par la Résorcine. Rio de Janeiro, 1883. Della Tosse Convulsiva e della sua Cura con la Resorcina (Archivio de Patologia Inf., Napoli, 1885).

⁶ St. Petersburg Medicinische Wochenschrift, 1887, Neue Folge, iv.

⁷ Berliner Klinische Wochenschrift, No. 50, 1892.

⁸ Lectures on some of the Distinctive Characters of Disease in Early Life. Medical Times and Gazette, July 4th, 1855.

⁹ Ransome: Proceedings of the Manchester Literary and Philosophical Society, vol. xix., No. 8, 1879-80.

¹⁰ Aberle: De Tusse Convulsiva, p. 45. Vindobona, 1843.

is only an occasional result, while in pertussis this view demands that the nerve poisoning should be constant. It is quite possible that such is actually the case, but one must remember that the catarrhal stage of whooping-cough is unrecognisable from many cases of simple cold, and perhaps the disease without the subsequent paroxysms is far more common than we at present have any idea of; indeed, according to Goodhart pertussis in very young children is often not attended by any whoop. Another possible difficulty is that in diphtheria a paralysing lesion occurs, while here an irritating one is suggested; we do not, however, consider the conditions identical, but only analogous. It may also be objected that, given the presence of irritating bacilli in the respiratory mucous membrane, there is no necessity to invoke the aid of any nerve poisoning in explanation of the symptoms; but we fail to see how the vomiting, which is often quite out of proportion to the whooping, the stopping or slowing of the heart's action, the constipation, the facial convulsions, strabismus, &c., can be explained on the simple presence of an irritant in the respiratory tract, or why the disease should show two such different stages, for if the presence of the microbes were the sole cause why do the pyrexia and first constitutional symptoms not continue during the paroxysmal stage? The fact that the whooping is often started by draughts, irritating vapours, and especially by taking food is exactly what would be expected on the assumption of an increased excitability of the respiratory and vagal centres, while the observation that children not suffering from pertussis sometimes whoop quite fits in with the above view, for what is claimed is a hyperæsthetic condition of part of the medullary centres comparable to the condition of the spinal cord in strychnine poisoning. Probably in some cases the microbes may exist in the respiratory tract for a long period after the catarrhal stage has passed off in the same way that Löffler's bacilli may be present in the throat of a diphtheria patient some weeks after the clinical signs have disappeared; and this supposition would account for those cases which apparently suffer relapses from chills during recovery. The mucus that is expectorated after an attack of whooping is probably due to the congestion of the lungs produced during the paroxysm; very likely each attack, by congestion, secretion of mucus, and other mechanical effects, helps to prepare causes of irritation which give rise to the next by acting on afferent nerves going to the too easily excited centre. In this connexion it may be mentioned that we consider the congestion and mechanical injury done to pulmonary tissue by the spasms of whooping, together with the debilitated state of the child from vomiting, as the chief causes of broncho-pneumonia and other pulmonary diseases in these cases, rather than any subtle influence of the specific cause of pertussis. After examining a large number of cases, and consulting a copious literature on the disease, we do not know of any symptoms which may not be explained on the above hypothesis or as the mechanical effects of the paroxysm.

Treatment.—If the views we have stated be correct the best method of treatment would obviously be by some agent which should destroy the microbe and counteract the effects of its poison. Such a drug is unknown and would have to be applied early in the catarrhal stage, when cases, as a rule, are not seen and cannot be diagnosed with certainty, so we must look for some drug which will antagonise the effects of the poison. It should have a paralysing action on the vagal (vomiting) and respiratory centres, or should stimulate nerves antagonistic in action to those involved, and should, if possible, lessen the sensibility of the peripheral terminations of the afferent nerves from the respiratory and gastric mucous membranes to the medulla. If it hinder the secretion of mucus so much the better. We have a drug which will do all these things in cocaine. This agent has been recommended by many writers as a local application in whooping-cough. Moncorvo¹¹ in a series of papers recommended the application of resorcin to the mucous membrane of the pharynx, the parts having first been rendered insensitive by hydrochlorate of cocaine. Barlow,¹² pursuing the same line of treatment, obtained satisfactory results in fifty cases. Holt,¹³ using 4 per cent. solutions of hydrochlorate of cocaine in five cases of children aged three months, four months, six months, eight months, and twenty-one months old respectively, and after that resorcin, obtained toxic symptoms in all, the chief being restlessness, convulsive movements,

dilated pupils not responding to light, rapid pulse, and delirium. These results are certainly exceptional, though the dose, which appears to have been at least a grain, is, we consider, large, taking into account the age of the children. Possibly the nurse used more than Holt knew, or perhaps the drug was impure. It is not surprising to hear that none of the children received notable benefit. Prior¹⁴ painted the pharynx and larynx with 10 per cent. solutions of cocaine, and also gave inhalations of 20 per cent. solutions. He obtained good results, but less so with the spray. Michael¹⁵ found it of some value. Schuch¹⁶ using 3 per cent. and 1 per cent. solutions, found it of doubtful value. Pott¹⁷ obtained excellent results from painting the pharynx with 5 per cent. solution. He has no fear of evil consequences even with infants six months old. W. L. Carr¹⁸ has frequently swabbed the throat with 4 per cent. solutions, and never totally failed to obtain benefit. He has never seen a case of poisoning. It will be noticed that all these observers use the drug purely as a local application. In this way it is apt to give rise to dryness of the throat, and is not nearly so likely, according to our view, to be of service as if given internally, for the too irritable centres are to be attacked rather than the small area of peripheral endings which one can hope to affect locally. Even on the theory of local action the method of swabbing, and still more so of spraying, the throat leaves comparatively untouched the nerve endings in the stomach, and vomiting is certainly one of the most troublesome symptoms of the disease. It is noticeable that more satisfactory results have been obtained by swabbing than spraying, as we should expect, for more of the drug is swallowed in the former method. Our practice is to give doses of hydrochlorate of cocaine in water based on the standard of a one-grain dose for an adult, three or four times a day by the mouth. We determined to try cocaine in whooping-cough on account of the following facts. Death in cocaine poisoning results from respiratory failure; Stockman,¹⁹ in his extensive investigation on the action of the coca alkaloids, says: "It is difficult to analyse the action of cocaine on the mammalia owing to the early occurrence of death from paralysis of the respiratory centre." H. M. Biggs²⁰ draws attention to the same fact in frogs and recommends the drug as indicated both in tetanus and strychnine poisoning. Many other observers might be cited in support of this paralysing effect. The question arises, What part is affected? We are inclined to think that the drug either paralyses the vagal centre or else excites some part antagonistic to it. Many of the effects of cocaine may be explained on the assumption that it acts on the sympathetic system, particularly the vaso-constrictor nerves; thus it dilates the pupils, causes peripheral vaso-constriction, and acceleration of the heart. In many respects we know that the sympathetic and vagus are antagonistic nerves, at any rate as far as the heart and intestines are concerned. In support of the sedative action of the drug, at least on a part of the respiratory centre, may be urged the good results which Mosler²¹ obtained from subcutaneous injections in cases of asthma. Many observers say cocaine increases the respiration; this we are not sure of; still, it is quite reconcilable with what has gone before, for possibly with a less excitable centre the respirations become more rapid and less deep. It is known that emotion, which one may conceive excites both the respiratory and cardiac centres, causes the respirations to be fewer and the heart's beats more frequent. Laborde²² found on injection of the hydrochlorate into the veins of rabbits that insensibility of the mucous membranes of the pharynx, larynx, and tongue appears. Most observers are agreed that it lessens the secretions, and its efficacy in vomiting is well known. Finally, it is remarkable that in some respects cocaine resembles atropine in its action, and belladonna is the drug which at the present time is perhaps most in favour for treating whooping-cough. Lauder Brunton,²³ speaking of cocaine, says: "The quickness of the pulse appears to be due to paralysis of the vagus, and the action of cocaine on both pulse and blood pressure is very like that of atropine." Unfortunately from the conditions

¹¹ Loc. cit.¹² THE LANCET, May 22nd, 1886.¹³ New York Medical Journal, Oct. 23rd, 1886.¹⁴ Berliner Klinische Wochenschrift, 1885, No. 45.¹⁵ Deutsche Medicinische Wochenschrift, 1886, Jahrgang xii., p. 74.¹⁶ Der Fortschritt, May 20th, 1886.¹⁷ Jahrbuch für Kinderheilkunde, 1886, Band xxiv., Heft 1.¹⁸ New York Medical Journal, Nov. 6th, 1886.¹⁹ Brit. Med. Jour., vol. i., 1889, p. 1112.²⁰ THE LANCET, March 7th, 1885.²¹ Brit. Med. Jour., July 17th, 1886.²² Ibid., Dec. 27th, 1884.²³ Pharmacology, p. 879.

under which the observations were made it is impossible to present our results in a tabular form. When the children recovered the mothers frequently ceased to attend, though in as many cases as possible they were induced to continue for from six weeks to two months after the symptoms of whooping-cough had disappeared, so we are enabled to state that the improvement was permanent and not merely a temporary lull in the course of the disease. As whooping-cough is not admissible into the wards of the Hospital for Sick Children, Great Ormond-street—at which the cases were seen—a considerable number of cases were those of severe disease, with attendant broncho-pneumonia. The total number treated was 323, and as all first came under observation during the most unfavourable months of the year—namely, the late autumn and early winter of 1894—one would expect the course of the disease to be as long and unfavourable in these cases as it ever is; however, only two cases died, both under six months; one from broncho-pneumonia, and the other, in which cocaine was only tried as a last resource when other remedies had failed, from persistent vomiting, and the drug was only given for about two days before the fatal termination, which could in no way be attributed to its use. We may here mention that we have never seen any marked evil effects follow the use of cocaine; the only symptom which could in any way be construed as unfavourable was in some cases slight relaxation of the bowels, and this, we consider, rather beneficial on account of the constipation so often found in whooping-cough. The average duration of the disease under cocaine treatment is about three weeks; in slight cases it may be a fortnight or less—indeed, it seems as if pertussis may be made to abort in many of the slightest cases if the patient is seen and treated early. Of course, severe and more obstinate cases do occur where the disease is somewhat more protracted, but if these numbers are compared with the usual course it will be seen that the drug has a very marked effect in lessening the duration, which is generally stated at from six weeks to two or three months. The child, as a rule, when taking cocaine, soon begins to show great improvement in its general condition; the sickness, when present, stops, the anorexia disappears, the cough becomes less frequent, the sleep at night improves, and restlessness vanishes, but the whooping, while diminished, may persist for a fortnight, when it usually stops, never to reappear. The mothers, on coming a week after the commencement of the treatment, very often say: "The child is much better; it still whoops sometimes, but I do not mind that, for it is less frequent, and otherwise its health is much improved; the vomiting has stopped and appetite is good." Naturally, one does not expect that cocaine will cure broncho-pneumonia when that has developed, but even in these cases of complicated whooping-cough it seems to be of benefit, and children under its action do better than without. We now give notes of a few of our cases; these have not been specially selected, and give a very accurate representation of the whole number.

CASE 1.—A girl aged six years attended at the Hospital for Sick Children, Great Ormond-street, on Oct. 19th suffering from cough, which was worse at night, accompanied by either vomiting or expectoration, and when severe followed by whoop. The physical signs exhibited a few moist râles in the chest. The temperature was normal. There were loss of appetite and constipation. The patient was ordered cocaine hydrochlorate, a third of a grain three times a day. On Oct. 26th her mother described her as "almost well." The cocaine was increased to half a grain three times a day. On Nov. 9th the pertussis was quite cured. She was then ordered cod-liver oil and Parrish's food.

CASE 2.—A boy aged three and a half years attended at the Hospital for Sick Children, Great Ormond-street, on Oct. 16th suffering from well-marked whooping-cough. He had been ill with a "cold" and now had a severe spasmodic cough accompanied by whoop and expectoration. There were moderate constipation and anorexia. The temperature was normal. Cocaine hydrochlorate, one-fifth of a grain three times a day, was ordered. On Oct. 23rd the mother described the child as "much better." The cocaine was increased to one-quarter of a grain. On Nov. 2nd the cough was quite cured and the vomiting had ceased. Cod-liver oil and Parrish's food were prescribed, which the child continued to take for about a month, and he was then discharged.

CASE 3.—A boy aged five and a half years, brother of the preceding patient, attended on Oct. 23rd suffering from

whooping-cough. The symptoms were well marked. There were cough, whoop, expectoration, vomiting, and constipation. The temperature was normal. The eyelids were puffy, with suffused conjunctivæ. One-third of a grain of cocaine hydrochlorate was ordered three times a day. On Nov. 2nd the patient had improved in all respects. On Nov. 10th the cough was quite gone and there was no vomiting. The patient was then given cod-liver oil and Parrish's food. He was kept under observation for a month and then discharged.

CASE 4.—A girl aged three years attended on Nov. 5th suffering from whooping-cough, which had also attacked several other members of the family. The symptoms were severe spasmodic cough accompanied by whoop and always terminated by the expectoration of thick ropy mucus; he occasionally also vomited. There was constipation, the face was puffy, and the eyes were injected. One-fifth of a grain of cocaine hydrochlorate was ordered three times a day. After this the child improved so much that, contrary to instructions, the mother did not attend for a fortnight. On Nov. 19th the patient was greatly improved. The cough was still severe, but the vomiting had quite ceased. The dose of cocaine was increased to a quarter of a grain. On Nov. 29th the cough was much less, but the child was not yet quite well. On Dec. 3rd the cough was quite cured. She was given cod-liver oil and Parrish's food for six weeks and then discharged.

CASE 5.—A boy aged two years and seven months attended on Oct. 15th suffering from severe rickets complicated by pertussis. The child looked ill. There were some general bronchitis and severe night cough accompanied by whooping and vomiting. He was ordered a purge and one-sixth of a grain of cocaine hydrochlorate three times a day. On Oct. 22nd he was better, but the cough was still severe, and the medicine was repeated. On Oct. 31st the patient was still improving, but was not well, whoops still continuing. The cocaine and purge were repeated. On Nov. 9th he was much better and coughed very little. The medicine was repeated, and cod-liver oil, one drachm three times a day, was ordered. On Nov. 16th the cough was quite cured. He was given cod-liver oil and Parrish's food for a month, and then discharged.

CASE 6.—A male infant aged eight months was brought to hospital on Oct. 9th suffering from the effects of injudicious feeding and rickets, for which he was suitably treated. On Oct. 13th he was very ill and was heard to definitely whoop. There was general bronchitis and some broncho-pneumonic patches. The temperature was 101.6° F. There were vomiting and restlessness. The patient was given a purge, a cotton-wool jacket, creosote as a dry inhalation, and one-sixteenth of a grain of cocaine hydrochlorate three times a day. On Oct. 15th he was much better. The temperature was 99.4°; the cough was still severe, but the vomiting had ceased and the severer lung symptoms had abated. He was given a purge and the medicine was repeated. On Oct. 18th he was seen again, and improvement was continued. The temperature was 99.2°. He still coughed, but the child's general condition was vastly improved since the 13th. The dose of cocaine was increased to one-twelfth of a grain. On Oct. 25th the temperature was 99.2°. There was still some general bronchitis, with bronchophony over the right base. There was no vomiting, but occasional whooping. The cough was worse at night and of the pertussis type. General improvement was great, and the dose of cocaine was increased to one-tenth of a grain thrice daily. The purge was repeated. On Nov. 2nd the temperature was still 99.4°. The patient coughed much less, but occasionally whooped. The medicine was repeated, and one drachm of cod-liver oil was given twice daily. On Nov. 9th the temperature was normal, the cough had quite disappeared, and the child was perfectly well. Cod-liver oil and Parrish's chemical food were given for one month, after which the patient was lost sight of.

CASE 7.—A boy aged five years, brother of the preceding patient, attended on Oct. 15th suffering from pertussis. The case was a straightforward one, not complicated, like the preceding, by broncho-pneumonia. The temperature was normal. There were some fulness about the palpebral region and suffused conjunctivæ; spasmodic cough, worse at night; choking, terminating by expectoration; and frequent vomiting almost immediately after meals. There was no definite whoop. The patient suffered from anorexia and constipation. He was given a purge and a quarter of a grain of cocaine hydrochlorate three times a day. On Oct. 25th the mother described the child as "very much better." The vomiting had quite stopped, and the child coughed "scarcely at all." He had, however, definitely whooped after the last

visit. The cocaine was increased to one-third of a grain. On Nov. 2nd the child had quite recovered. He was given cod-liver oil and Parrish's chemical food for eleven weeks; he then ceased to attend.

CASE 8.—A boy aged two years and two months attended on Nov. 7th suffering from whooping-cough. The patient was a small, weakly looking child, somewhat rickety, with severe cough lasting several minutes. It was worse at night and produced vomiting. There were no definite lung symptoms beyond a few moist sounds. He was given one-sixth of a grain of cocaine hydrochlorate three times a day and dry inhalation of creosote. On Nov. 14th he was reported to be "much better"; the cough was much less frequent and less violent, and vomiting had ceased. He coughed and whooped occasionally. Cocaine was increased to one-fifth of a grain. On Nov. 21st there was continued improvement. On Nov. 28th he continued *in statu quo*. On Dec. 5th there had been a little more bronchitis since the last visit, but the whoop was practically absent. The medicine was repeated, and one drachm of cod-liver oil three times a day was ordered. On Dec. 12th the patient was better, and scarcely coughed at all. On Dec. 19th the cough was quite cured. Cod-liver oil and Parrish's food were given and continued for five weeks. The patient was then discharged. (The longer period of treatment necessary in this case was caused by a chill contracted either just before or after Nov. 23th; this complicated the results.)

CASE 9.—A girl aged four and a half years attended on Oct. 28th with symptoms of an ordinary cold. The temperature was 99.4° F. There were cough and slight watery condition of the eyes, but no rash; some moist sounds in the chest were present, but no consolidation. On this occasion it was not recognised as pertussis. The patient was given a purge, a cotton-wool jacket, and ipecacuanha mixture. On Oct. 30th she was no better, but there was no whoop or vomiting. The medicine was repeated. On Nov. 8th it was found that since the last visit the cough had changed in character and become spasmodic, being worse at night; on some occasions she had been heard to whoop. There was considerable expectoration. One quarter of a grain of cocaine hydrochlorate was given three times a day. On Nov. 23rd the child had improved so much on the cocaine that the mother, instead of attending in a week's time, allowed a fortnight to elapse, during which she continued the cocaine, and the cough was now quite cured. The patient was given cod liver oil and iron, and kept under observation for five weeks. She was then discharged.

CASE 10.—A girl aged three and a half years, sister of the preceding patient, attended on Nov. 23rd suffering from severe rickets, for which she was given cod-liver oil and Parrish's food. On Dec. 6th it was found that since the last visit the child had developed a cough, but there were no distinctive characters of pertussis. There were a few moist sounds in the chest. Ipecacuanha mixture was given. On Dec. 20th the temperature was 99.4° F. The cough was worse, accompanied by whoop and vomiting, and most severe at night. There was some general bronchitis. The patient got red in the face from the violence of the cough. One-fifth of a grain of cocaine hydrochlorate was given three times a day, also a purge and a dry inhalation of creosote. On Dec. 28th the cough was quite cured. She was given cod-liver oil and iron for a week, when the child was reported as "recovered."

CASE 11.—A boy aged five years attended on Oct. 16th suffering from severe symptoms of pertussis. The child looked ill. The temperature was 99.8° F. There was some general bronchitis, but no definite consolidation. The cough was severe and frequent, lasting several minutes, accompanied by whoop and terminated by expectoration or vomiting. Ingestion of food was always followed by vomiting. The patient suffered from constipation and had a furred tongue. The cough prevented the child getting any rest at night. He was given a purge, a cotton-wool jacket, and one-third of a grain of cocaine hydrochlorate three times a day. On Oct. 23rd he was reported to be "much better." There was no vomiting and the cough was less. The temperature was normal. On Nov. 2nd the temperature was 100.8° and the child looked very ill. There was general bronchitis, and broncho-pneumonia at the right base. The cough was very violent and was accompanied by epistaxis and hæmoptysis, with continual vomiting. The cocaine was increased to two-fifths of a grain; one drachm of cod-liver oil three times a day, and a dry inhalation of creosote were given, and the purge was repeated. On Nov. 13th he had much improved in general condition, though

the temperature was 99.2° and the cough severe. All the remedies were repeated and the cocaine increased to half a grain. On Nov. 20th the temperature was 100.6°. The cough continued, but the child was much better. On Nov. 27th the temperature was 99.2° and the cough much less. On Dec. 4th the temperature was 98.8° and the cough very slight and seldom. On Dec. 11th the patient still coughed occasionally, but otherwise was quite well. On Dec. 18th the cough was quite cured, and he took medicine and cod-liver oil for fourteen days and then ceased to attend. (It will be observed that this was a very severe case and complicated by broncho-pneumonia; hence the longer period of treatment necessary before recovery.)

CASE 12.—A boy aged three years attended on Sept. 24th suffering from follicular tonsillitis, which was suitably treated. On Oct. 3rd the throat was well, and tonics were ordered, which he took for a month. On Nov. 2nd the child began to exhibit symptoms of pertussis, severe "tearing" cough with occasional whoop, worse at night, and accompanied by expectoration, which on two occasions was blood-stained. He was ordered one-fifth of a grain of cocaine hydrochlorate three times a day. On Nov. 9th he was better, the cough was less, and the expectoration very slight. There was no vomiting, and the cocaine was increased to one-third of a grain. On Nov. 16th the patient was much better and coughed very seldom; he had decidedly put on flesh. The cocaine was increased to half a grain. On Nov. 23rd the cough was completely cured. The cocaine was stopped and the boy was given tonics. He was kept under observation for two months and then ceased to attend. (It will be observed that this case is one in which whooping-cough arose while the child was under observation for another affection.)

CASE 13.—A male infant aged three months was brought to hospital on Aug. 11th suffering from congenital syphilis and wasting, for which he was suitably treated and seen at intervals until Oct. 27th, when definite symptoms of pertussis declared themselves. There were cough and vomiting, and the patient again commenced to waste. There were some bronchitic sounds in the chest, and the mother said that the "cough nearly choked the child." One sixteenth of a grain of cocaine hydrochlorate was given three times a day. On Nov. 3rd the patient's condition had greatly improved. There were still coughs and whoops, but the sickness had ceased. The cocaine was increased to one-fourteenth of a grain. On Nov. 10th there was continued improvement; the cough was now only slight and occurred much less frequently. The cocaine was increased to one-twelfth of a grain. The improvement in the child's condition was so well maintained that the mother omitted to attend in a week's time, and the date of her next visit was Nov. 24th, when the cough was completely cured, so the child was ordered tonics, which he took for eight weeks and then ceased to attend. (This, like the preceding case, is one in which whooping arose during treatment for another affection.)

It will be observed that in most cases the children were kept under observation long after the symptoms had ceased. We hope these results may stimulate other observers to give cocaine a lengthened trial in similar cases, so that our conclusions may be either confirmed or refuted, and we feel we may say with Sir Thomas Browne: "This is the tenour of my belief, wherein, though there be many things singular and to the humour of my irregular self, yet if they square not with mature judgments I disclaim them, and do no further favour them than the learned and best judgments shall authorise them."

A HEAVY BRAIN.

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It is now fairly well recognised that "superiority of size of brain cannot be regarded as a constant accompaniment of superiority of intellect."¹ Nevertheless, it is still a popular impression that there is a connexion of some sort between the size of the brain and the intellectual capacity of its possessor. The following case is of interest both on account of its being, so far as I can find, the heaviest recorded in Scotland, and because it may throw some light on the above question.

¹ Wagner: Vorstudien zu einer wissenschaftlichen Morphologie und Physiologie des menschlichen Gehirns als Seelenorgan.

The brain was that of a patient who was admitted to Morningside Asylum in 1852, at the age of thirty years. He was deaf and dumb and his vision was very deficient. He had for a number of years been able to do very little work except dig in the garden at times. He was very weak in mind, but he had been taught to speak a little on his fingers. This shows that his deafness was probably in existence very early in life. His disposition was variable, being at times very passionate, but on the whole he was easily managed. He was said to have suffered in infancy from hydrocephalus. Two years before his admission his mind, never very strong, began to lose much of its power and he became more imbecile. He at that time also suffered from chorea and had diplopia, but this gradually passed off. Just before his admission he became restless and inclined to wander about. He then had hallucinations of hearing and held conversations on his fingers with the voices he imagined he heard. He gradually developed delusions of persecution and became dangerous to those around him. Ultimately he escaped from home and created a disturbance in the street, which necessitated his removal to the police office, from which he was taken to the asylum. On his admission there was found to be no hereditary history of insanity, and his bodily health, except for the attacks of hydrocephalus in infancy and of chorea already mentioned, had been good. On account of his history and symptoms he was regarded as a case of idiocy due to hydrocephalus. During his residence of forty years in the asylum his history was comparatively uneventful. At first he had occasional attacks of excitement, but these ultimately ceased altogether. His vision, already impaired, became much worse, and after several years he became quite blind. He was, however, capable of speaking a little on his fingers, and was taught to assist in dressing and undressing other and helpless patients. Apart from this he did nothing, and his existence was almost purely negative. Indeed, during the last few years of his life it was purely so, as his mind seemed to be almost entirely gone. He died in June, 1892, at the age of seventy, from an attack of pneumonia.

Necropsy.—The following conditions were found. The head had a decidedly large appearance, and the circumference a little above the eyebrows was twenty-four inches. The shape was not that usually associated with chronic internal hydrocephalus, but was more rounded, with a high dome. The bones of the skull were considerably thickened, especially the inner table. The dura mater was slightly adherent all over the inner surface of the skull cap, and there was slight general thickness of its substance, with a distinct subdural membrane on the right side and rusty staining on both. The brain weighed immediately after removal 65 oz. This was at once recognised to be a very large weight and was carefully verified. The pia arachnoid was not milky, but presented a healthy appearance. There was no adhesion to the grey matter of the cortex. The convolutions appeared to be full and rounded, and there was no striking abnormality in the arrangement. The absence of atrophy is remarkable, considering the age at which the patient died—viz., seventy. The optic nerves and the auditory nerves had undergone degeneration and atrophy. When the brain was cut up there was no abnormality to be seen except a cystic condition of the choroid plexuses of the lateral ventricles and a slight dilatation of these chambers, which contained a little over 2 oz. of fluid. The pituitary and pineal bodies seemed to be normal. Sections were made from various regions of the cortex by Bivan Lewis's fresh method and were naturally examined with considerable interest. The following conditions were found in those taken from the anterior end of the left inferior frontal convolution, which may be regarded as typical of the others also. As regards the *grey matter*, the pia mater had a normal appearance, both as to thickness and the number of nuclei present in it. The outermost layer of the cortex showed a slight sclerotic change, there being a small amount of fibrillation, due to the processes of spider-cells. These were present in numbers somewhat more numerous than the normal and were faintly stained, and most of them had, in addition, distinct evidence of fatty change. They were apparently not in a very active condition and did not indicate any acute change. In the outer part of the fibrillar network there were a few colloid bodies. The nerve cells in all the layers showed decided pigmentary degeneration. Most of them were in the condition described by Bivan Lewis as characterising the second phase of the first stage of that cellular change. The cells were somewhat rounded in shape; the processes were still quite evident and took on the

stain well; the protoplasm was fairly uniform in appearance, but was beginning to retract; and the pigment was increased in amount and was more widely distributed over the cell than in the healthy condition. The neuroglia appeared to be normal. The protoplasm of the cells forming the walls of the arterioles and capillaries had apparently undergone a slight hyaline change, but there was little, if any, increase in the nuclei of the adventitial cells. There were small masses of pigment in the perivascular spaces of most of the arterioles. The number of cells in the grey matter did not appear to be increased, and the whole thickness of the cortex was not greater than is seen in the normal condition. In the *white matter* the chief morbid appearance and the one which immediately attracted attention was the presence of a number of delicate spider-cells all through its substance, but they were especially numerous in the parts near the cortex. They were faintly stained, though they could be made out with little difficulty and were quite distinctly morbid elements, being more numerous, better stained, and larger in size than the few which can be seen in the healthy state. As in the outer layer of the cortex, however, they did not indicate an acute process of any kind, and their function, whatever it may be, was apparently in a state of more or less quiescence. The vessel walls showed a hyaline appearance similar to that already described as existing in those of the grey matter, and in addition there was some nuclear proliferation in the adventitial sheath. The nuclei of the neuroglia were somewhat increased in number. The axis cylinders of the nerve fibres did not stain well and there appeared to be a slight increase in the size of their medullary sheath. They also appeared to be separated more widely than normal by the neuroglia substance. The structure of this material was not brought out by the method of staining, but it seemed that the separation of the nerve fibres was due to an increase of some sort in this portion of the white matter. This was also borne out by the appearance of the sections under the low power, as the white matter had then a more diffusely dark appearance than the normal, owing to the new material taking on the dye fairly strongly. In sections from other regions of the brain the changes above described were also present, with slight individual differences in the appearance of the cortex, but the white matter was everywhere the same.

Remarks.—The interest of this case is due in the first place to the fact that the brain weighed so much above the average, and that this occurred in a person who, to all outward appearance, might as well have had no brain at all, at least so far as its higher functions were concerned. It is, therefore, all the more necessary to endeavour to find some explanation of this apparent contradiction to a widespread general opinion. This seems to be found in the changes which were discovered to be present on the examination of sections. As stated above, the grey matter was to all intents and purposes normal to a person of the same age, so that the explanation must be found in the changes which the white matter presented. The exact nature of these changes is still uncertain, but a comparison with a case of so-called hypertrophy of the brain, which I lately examined and hope soon to put on record, seems to indicate that this case was also one of that disease. It is of course unusual for a patient affected with it to survive, but so little that is definite is known about its pathology and clinical symptoms that too much stress should not be laid on this fact. Any other explanation is at present impossible, and, though diagnosis by exclusion is often fatal to accuracy, I think there are also positive grounds for the opinion. Another point of interest in the case is the examination into the question as to whether atrophy of a sensory nerve is followed by recognised changes in the nerve cells of the cortex which are known to subserve the same sensory function. In this case, as already stated, both optic and auditory nerves were atrophied, and before death the patient had been blind and deaf for many years; yet a careful examination of sections from the regions generally recognised to be associated with sight and hearing—viz., the angular gyrus and first temporo-sphenoidal—did not reveal any material difference from those taken from other regions. This is quite on a par with my experience in three cases where a limb had been removed by amputation, and in which no characteristic changes were present in the corresponding motor cortex. This is somewhat different from what is known to follow section of a peripheral nerve, and is a proof (were any further needed) that the intercentral connexions between different parts of the nervous system are much more complex and numerous than

those between the periphery and the cord, or *vice versa*. A reference to previous recorded cases of heavy brain reveals the interesting fact that the heaviest of all was found in an imbecile, while several others of extraordinary weight, including the subject of this paper, have been those of inmates of asylums. Unfortunately in most cases no record of microscopic examination is given, so that it is impossible to say whether the weight was due to such an abnormal condition as has been described or not. That some morbid change would have been found if looked for may, I think, be safely asserted, and the necessity for such an examination in subsequent cases is all the more demonstrated.

Literature of the subject.—There is a reference in Hack Tuke's Dictionary of Psychological Medicine, article "Brain, Anatomy of," to a case recorded by Dr. Levinge. The brain weighed 1998 grammes (70.5 oz.) and belonged to an imbecile, an inmate of Hants County Asylum. The following may also be consulted:—Bergmann: "Einige Bemerkungen über das Gewicht des Gehirns" (*Allgemeine Zeitschrift für Psychiatrie*, 1852, vol. ix, p. 361); Boyd: *Philosophical Transactions*, 1861, cli., p. 241; *Brit. Med. Jour.*, vol. ii., 1876, p. 425; Sir J. Crichton-Browne: *Brain*, vols. i. and ii., 1879; Clapham: *West Riding Asylum Reports*, vols. iii. and iv.; Hills: *Proceedings of the Connecticut Medical Society*, 1878 p. 161; Lawson: *THE LANCET*, vol. ii., 1875, p. 306 (weight of brain of senile dement, 64 oz.); Marshall: *Journal of Anatomy and Physiology*, July, 1892; Morris: *Brit. Med. Jour.*, vol. ii., 1872, p. 464 (weight of brain, 67 oz.); Obersteiner: *Centralblatt für Nervenheilkunde*, 1890, p. 193; and Wilson: *Edinburgh Medical Journal*, January, 1891, p. 650 (weight of brain, 64 oz.).

Morningside, Edinburgh.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RAILWAY OR TRAIN SICKNESS.

By J. A. SHAW-MACKENZIE, M.B. LOND., M.R.C.S. ENG.

INQUIRY elicits the fact that there are many who suffer from railway sickness. I am not aware that direct attention has been given to this special cause of *migrain*; I am satisfied, however, that the inconvenience is real and that there are many who are more or less knocked up by a long journey, and in whom a railway journey of two hours produces as much dread and misery as a sea passage. I venture to draw attention to the value of sulphonal in these cases, and to suggest its further and more extended trial in both railway and sea journeys. In children train sickness is common, while in adults railway *migrain* varies from undue fatigue and inability to sleep the same night to intense headache, sickness, and prostration coming on after some two hours in the train. The dose of sulphonal would vary, of course, according to the severity of the symptoms and the length of the journey. In my own case I find that ten to fifteen grains are sufficient for the day journey to Edinburgh, while twenty to thirty grains in divided doses are necessary for the night and day journey to the North of Scotland. The following cases are further illustrative. 1. A married woman who generally suffers from headache, nausea, and sleeplessness after a long journey took on starting fifteen grains of the drug. She travelled from London to Newcastle-on-Tyne on a day journey without headache and sickness, while refreshing sleep followed at night. 2. Another married woman who journeyed from Paris to Pau, on taking ten grains, felt well and fresh, while her governess and little boy, who are usually sick, travelled better and were not sick on taking ten and five grains respectively. She thinks a second dose might have been taken by them with advantage. 3. A single woman who journeyed from London to Cannes, after taking fifteen grains, did not feel the journey more than in going from London to York, though usually knocked up. I might say I have tried antipyrin, phenacetin, the bromides, and chloral, but have not experienced the same benefit as with sulphonal. An aperient dose the day before travelling is, I think, advantageous, while facing the engine or lying down is helpful. As to the value of sulphonal in sea-sickness

I can only produce three cases in its favour. Many patients who suffer from railway sickness do not suffer from sea-sickness, or only slightly. 1. A married woman travelling from London to Guernsey, who was usually sea-sick, after taking ten grains had a good journey and was not sick. 2. A single woman travelling from London to Flushing, who was always sea-sick in the calmest weather, after taking fifteen grains slept well and was not sick, arriving fresh. 3. A married woman travelling from London to Dublin, who had always been sick and dreaded the journey, after taking ten grains slept well, was not sick, and arrived altogether fresh and well.

Savile-row, W.

FOREIGN BODY IN THE FOREARM FOR SEVEN YEARS.

By W. OWEN EVANS, L.R.C.S., L.R.C.P., L.M. EDIN.,
L.F.P.S. GLASG.

THE curious case about to be recorded came under my notice recently; it is that of a man who came to me complaining of most severe pain in his forearm. On examination I found the anterior aspect of the forearm to be very much swollen, livid, and indurated over a great area, at the centre of which was a small pin-head-sized opening, about four inches from the bend of the elbow. Before I proceeded further with the case I may say that this man met with a somewhat trivial accident some seven years ago, which resulted from a fall in trying to escape from a shot which was about to be fired down a coal-mine. The result of the accident was that the man had a small wound on the posterior aspect of his forearm, which bled profusely at the time. He immediately proceeded to the colliery surgeon, who dressed the wound, which healed in the course of a few days. After that the man returned to his work; but in about two years he complained of pain at the seat of the old injury, and, becoming unable to work, he again visited the surgeon, who painted the painful spot with various lotions and liniments, but without success. The patient, however, managed to go to work off and on until last September, when he was forced to give up owing to the most excruciating pain, sleeplessness, and anxiety. Up to two months ago he consulted various medical men, who advised rest and poulticing, but without success, and he came to my surgery as a last resource. As he said then, he at first avoided coming to me, being under the odd impression that I was a butcher and that I would remove his whole arm. At last he plucked up sufficient courage to come, with the result that I immediately probed the pin-head-sized opening to the depth of three inches and there detected a foreign body. Needless to say, I had to coax for a long time before I could get consent to make an incision. After great deliberation he gave in, and the result was that I began work and extracted with a slight twist of my dressing forceps an irregular piece of rock, which had become rooted in the depths of the forearm, weighing eleven and a half grains, half an inch long, and three-eighths of an inch broad in its widest dimensions. I dressed the wound with antiseptic dressings for five weeks, when it healed up well. The man has since resumed his duties with no ill effects except that he has had very slightly a peculiar tingling sensation in his little finger and half the next finger, the area which is controlled by the ulnar nerve. I attribute the tingling sensation to a slight twig of that nerve becoming attached to a little puckering at the corner of the wound.

Buckley, near Chester.

TEREBENE CONTRA-INDICATED IN GOUTY KIDNEY.

By CHARLES W. CHAPMAN, M.D. DUB.,
PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE HEART,
80, SOHO-SQUARE.

TEREBENE is so useful a remedy in some forms of chronic bronchitis that it is important to note any condition in which the exhibition of the drug may be harmful to organs which it is undesirable to stimulate. A man aged fifty-eight years, who had been subject to gout for many years and to bronchitis for the last eight winters, cough and wheezing being nearly always present, sought advice owing to the cooling in his chest disturbing his rest at night while

visit to the seaside. As the symptoms showed no signs of abating medical treatment was suspended, and the patient was directed to take simply ten to fifteen drops of terebene on going to bed and to repeat the dose at intervals if required. On his returning to town I was again consulted. I examined the urine and found it to be of the same low specific gravity I had noticed for a long time—1004; but in addition there was a distinct cloud of albumen. Thinking that the terebene might be responsible for the albuminuria I directed that the use of the drug should be discontinued for three days, and that some urine should be sent to me after that interval. This, on its arrival, was found to be absolutely free from albumen, and subsequent examinations have given the like negative result.

Weymouth-street, W.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proemium.

MIDDLESEX HOSPITAL.

A CASE OF CONGENITAL DILATATION OF BOTH URETERS; RIGHT URETEROTOMY AND LEFT NEPHROTOMY IN A NEW-BORN CHILD; REMARKS.

(Under the care of Mr. H. MORRIS.)

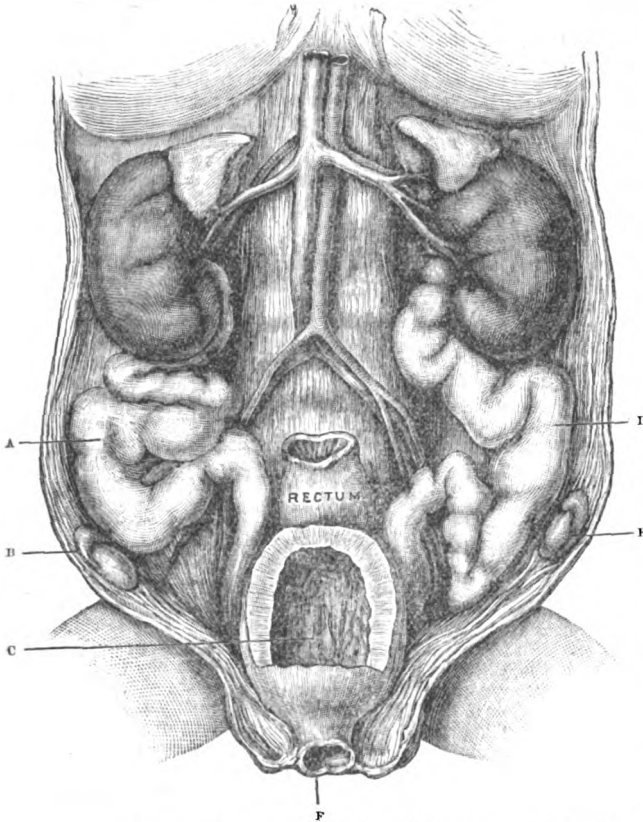
CONGENITAL hydronephrosis (usually affecting both sides) is sometimes found in the stillborn, or the subjects of it may live for several years; it is, however, a very fatal disease, and few patients survive their birth for many weeks. The fact of the existence of the condition proves that the secretion of urine goes on to a very considerable extent during the latter half of intra-uterine gestation, and that when any obstacle to the outflow of urine exists the same pernicious effects of distension of the bladder, ureters, and kidneys occur before birth as are commonly known to arise from urethral stricture, calculus, and other causes of obstruction after birth. The opportunity of attempting to prolong life in this condition has not often presented itself or been taken advantage of when it has done so, therefore the description of this case is of more than usual interest and importance. The following account is from the notes of Mr. E. Griffin, the dresser, who devoted much time and care to the case.

A male infant aged twenty-two hours was admitted to the Middlesex Hospital on Nov. 30th, 1893. The child was born at 6 P.M. on Nov. 29th and was brought to the hospital at 4 P.M. on Nov. 30th by an attendant, who stated that though the infant had passed a small quantity of faeces there had been no urine discharged, or, if any, only a drop or two. The midwife and mother had directed the child to be brought to the hospital, thinking he was suffering from "water on the stomach." Mr. Morris was asked to see him by Mr. B. H. Lee, the resident obstetric assistant at the time. The boy was small for a full-time child; he was well formed about the face and head, except that the right ear was somewhat misshapen; the legs and arms were very small, and the feet, like those of most new-born children, in a position of equino-varus. The abdomen was very greatly and irregularly distended, the distension being most marked in each anterior lumbar region and extending downwards towards the symphysis pubis. The lateral enlargements gave the impression of their being irregular oval cysts. They were dull on percussion, were greatly distended, and became tense when the infant cried. The remains of the umbilical cord were dried, and separation by ulceration was commencing. Extending downwards from the umbilicus in the middle line towards the symphysis pubis there was felt to be a hard cylindrical swelling connected with the abdominal parietes. The penis was enlarged, elongated, bent and twisted upon itself, and of a size more in accordance with that of a boy aged ten or more. On passing a finger into the anus the gut was found to be patent as far as could be reached, and on withdrawal some meconium stained the finger tip. A catheter slipped readily into the bladder, but the end could not be freely moved within it, and only a drop or two of blood-stained watery fluid escaped. The catheter

was kept in, anaesthesia was then induced, and an incision made above the umbilicus in the median line, large enough to admit the index-finger. The intestines were not distended; an enlarged urachus was felt as a resisting tubular swelling; and the two large lateral swellings appeared to lie behind the peritoneum. On compressing the abdomen about an ounce of quite clear fluid was discharged through the catheter, but the stream ceased in spite of abdominal compression, which made no appreciable effect on the distension. The laparotomy wound was then closed, and an incision made in each loin, a large urine cyst containing clear fluid evacuated on each side, and the cut edges of the cysts were stitched to the margin of the skin. After this the abdominal distension quite disappeared. Iodoform was sprinkled over the wounds and the infant wrapped up in cotton-wool. Next day he weighed 7½ lb. (with about ½ lb. of wool). The urine drawn off from the cysts was clear, pale, of sp. gr. 1004, faintly acid, and contained a trace of albumen, with phosphates, chlorides, and sulphates. The urea was 0.24 per cent. There was a free discharge of urine from the loin wounds, and on Dec. 3rd the child twice passed urine per vias naturales. The discharge from the loin was slightly bile-stained, and the infant's skin was jaundiced. The bowels acted. On the 6th he weighed 8 lb., with less wool than before. The jaundice had disappeared. The patient had been fed on cow's milk (one part) and water (two parts), with a little sugar of milk added. He was now given donkey's milk (a pint daily). On the 7th he passed urine per penem and a great deal through both loins. On the 13th, as the infant was not thriving, the food was changed. On the 14th his net weight was barely 5 lb. On the 17th some urine was passed at the umbilicus, through the urachus (the dried umbilical cord had separated on the 15th). On the 20th some pus welled up from the umbilical opening, and a slight amount also came from the penis; a probe was passed down the urachus for a distance of three inches into the bladder. On the 27th two distinct swellings were noticed in the abdomen, on pressing which much pus and urine came through the umbilicus and also through the loin wounds. On Jan. 1st, 1894, the infant weighed barely 4½ lb. On the 7th it was noted that the infant was slowly wasting, although a variety of diets had been tried, including cow's milk and water, ass's milk, humanised milk, &c. The last addition to the diet was six drachms of port wine daily. The infant, however, showed signs of intoxication with this quantity, and it was accordingly reduced to ten minims every four hours. On the 12th an ounce of cod-liver oil was rubbed in daily, and on the 17th the net weight was 4½ lb. On the 28th a slight discharge of pus from the umbilicus was noted. The infant weighed 5 lb. The urachus was smaller than on admission. On Feb. 8th no urine had passed for a fortnight from the umbilicus. Another kind of food was ordered. On the 23rd the child weighed only 4½ lb. On March 1st he was attacked with severe diarrhoea, and he died on the next day—the ninety-fourth day after the operation.

Neuroscopy by Dr. VOELCKER.—The following conditions were found. The body was very emaciated; there was a wound in each loin 1 cm. in length, and 2 below the last rib. There was a linear median scar above the umbilicus. The penis was long, 4.5 cm. in length, and bent and twisted upon itself, bowed with the convexity to the right, the urethral orifice appearing as a horizontal slit. The glans penis appeared on manipulation to be natural. On opening the abdomen both the testes were found to be lying high up in the inguinal canal. The allantois was patent and dilated, 1 cm. in diameter and filled with thick creamy fluid. No communication could be made out between it and the bladder, from which it was closed abruptly. The intestines were natural; there was a small Meckel's diverticulum 46 cm. from the ileo-caecal valve. The liver, spleen, and pancreas appeared to be normal. On raising the peritoneum the perirenal tissue was found to be condensed and the kidneys somewhat firmly bound down. The ureters were enormously dilated and ran a tortuous course. On the right side the ureterotomy wound was found to lead directly into the first convolution of the ureter and on the left side the nephrotomy wound had opened into the pelvis. The right kidney appeared to be somewhat cuboidal in shape and to be rotated round a vertical axis, so that its posterior surface looked inwards and somewhat forwards. The suprarenal capsule appeared to be normal and lay at a considerably higher level than that of the left. The right ureter at first ran behind the lower border of the kidney and was 1.2 cm. in diameter; in this

position it was firmly bound down to the abdominal wall and marked the position of the ureterotomy; it then took a convoluted course downwards to the right iliac fossa, gradually increasing in calibre, being at its widest part 2.5 cm. in diameter opposite the iliac crest. It then turned sharply on itself upwards, getting narrow, and finally bent down again, abutting against the rectum, and opened into the bladder at the usual situation. The *left kidney* had the usual reniform shape, but the pelvis of the kidney had been pulled backwards by the nephrotomy and formed an acute angle with the ureter. The left ureter coursed at first behind the lower half of the kidney, being in this situation of the same diameter as that on the opposite side. It took a somewhat straighter course downwards into the left iliac fossa; it then was bent



A, Convoluted ureter. B, Testicle. C, Bladder opened on its posterior wall. D, Convoluted ureter. E, Testicle. F, Remains of urachus turned down with the abdominal wall.

upwards on itself, forming an extremely acute angle, turned over the left hypogastric artery, and ran downwards again, coming into contact on this side also with the rectum, and opened into the bladder normally. On this side likewise the widest part of the tube was opposite the highest point of the crista ili and measured 1.8 cm. The walls of the bladder were much hypertrophied, and its cavity was contracted.

Remarks by Mr. H. MORRIS.—The points of pathological interest are (1) the distorted, enlarged penis; (2) the hypertrophied bladder; (3) the enormously and irregularly distended, and convoluted ureters, with well-formed kidneys; and (4) the enlarged and patent urachus. It would seem that the latter three conditions were caused by the first mentioned. It should be stated that on first attempting to pass the catheter it met with a ledge-like obstruction about two inches from the meatus, but this was readily overcome by untwisting and straightening out the penis. As a secondary effect of the distension of the ureters, the kinking of these tubes further increased the obstruction in them. The points of clinical interest are (1) the peculiar shape of the abdomen; (2) the large-sized urachus at birth; (3) the subsequent partial closure and suppurative of the urachus; and (4) the early age at which these triple operations were borne and the length of life—ninety-four days—of the child with these defects.

ANCOATS HOSPITAL, MANCHESTER.

CASE OF NEPHRECTOMY FOR CYSTIC KIDNEY; RECOVERY;
REMARKS.

(Under the care of Mr. E. STANMORE BISHOP.)

THIS case is one of hydronephrosis probably due to a kink in the ureter. The changes induced in the renal tissue made it necessary that the cyst should be excised and not simply incised and drained. Such a procedure, although still recommended in similar cases by some of our text-books, would have been quite useless where the disease was so advanced as in this instance. There is little doubt that the diminished mortality after nephrectomy, especially nephrectomy as performed through a lumbar incision, has much to do with the greater boldness now displayed in attacking such a diseased organ. This disease of the kidney is one in which the lumbar operation is especially indicated, and the mortality should not much exceed that which follows ovariectomy at the present day, as compared with that given by Newman (30.5 per cent.) and that by Gross (36.93 per cent.) for all cases of nephrectomy by this route.

The patient, a single woman aged twenty-one years, was sent to Ancoats Hospital by Dr. Wm. Armstrong of Buxton on Feb. 12th, 1895, complaining of a tumour in the right side of the abdomen. Her family history was good. There was no history of carcinoma or tubercle. Her catamenia had always been regular, very little being lost. They commenced when she was eighteen years old. There was some little premenstrual pain. Two years ago she first noticed some swelling, mainly after taking food. There was also aching pain in the anterior axillary line, midway between the ribs and ilium. The swelling diminished a good deal from time to time, but never entirely disappeared. When the aching pain came on—about once in three months—she had to go to bed and be poulticed, which relieved her. These attacks were becoming more frequent. She had had three bilious attacks, vomiting bile, coincidently with the pain. There was never any oedema of the legs or jaundice. She had always passed urine freely and had noticed no deposit in it until very recently. She remembered no accident. Her work had always been light. The measurements were as follows: circumference at the level of the tip of the sternum, 29½ in.; the same at the umbilicus, 33 in.; the same midway between the above, 28½ in.; half circumference at the level of the umbilicus, left, 16 in.; right, 15½ in. The tumour, which was easily seen and felt, lay in the right lumbar region, extending as far forward as the umbilicus, with a clear percussive note between it and the liver dulness. Percussion was dull over it. Its longest diameter, which was transverse, was 9½ in.; its widest vertical diameter at its anterior edge was 5 in., diminishing gradually to 3 in. behind. The surfaces were smooth, elastic, and rounded. No notch was to be felt. There was no pain on palpation and no sensation of nausea. The tumour moved with respiration, and whilst immovable to any extent upwards or downwards by external pressure, had fair lateral movement. It could not, however, be displaced backwards into the renal region. The urine contained a small quantity of blood and pus, recognised by the microscope and the guaiacum test. Recto-abdominal examination showed that the tumour did not spring from any pelvic organ. The diagnosis appeared to lie between greatly enlarged gall-bladder and omental and renal tumours. On Feb. 22nd, Dr. Armstrong being present, an exploratory incision (Langenbuch's) was made over the tumour. It was found to be beneath the peritoneum, the ascending colon being pushed over to the left side, the omentum drawn up and the tumour, covered by peritoneum, presenting at the opening. The peritoneum was closed and the patient turned over on to the left side. A second diagonal incision six inches long was made at the junction of the upper and middle thirds of the loin. After the muscles had been divided the tumour, dark chocolate in colour and very tense, presented. It was separated all round by the finger and scissors, the perirenal fat being all absorbed. When free, and pushed outwards by the assistant's hand over the abdomen, a small opening was made and a straw-coloured fluid gushed out. About a third was lost, but thirty-six ounces were collected, being of sp. gr. 1.002. It was neutral and contained albumen and chlorides, with small amounts of blood and pus, but no crystals or epithelium. The tumour collapsed and was easily drawn out. The ureter appeared

to spring from the lower extremity of the tumour and in its then position lay partly curved over the lower third of the tumour. It was not dilated. It was separately tied with a silk ligature. Another ligature was placed around the vessels and the tumour cut away at a short distance. Several small vessels still bled in the walls, and were tied separately. A large drainage-tube was placed in the cavity beneath the diaphragm. The action of this muscle produced a great deal of pumping in and out of air, this being drawn into the loose folds of connective tissue and expelled with some force. A small opening into the peritoneum was closed by catgut. The exterior of the ascending colon could be seen. The muscular layers of both incisions, and especially the fascia, were united by buried silkworm gut sutures, and the skin by horse-hair. Both were dressed with iodoform gauze and covered by wood-wool, and a flannel bandage was tightly applied. The operation, which was done on a hot-water table, lasted one hour and a quarter. The patient bore it well, and left the table with a good, full pulse—viz., 108—respiration 32, and temperature 96° F. A nutrient enema with brandy was given directly after the operation, and repeated every six hours. A catheter passed four hours after the operation removed thirteen ounces of clear urine. Collapse came on about one hour after the operation, and lasted for about an hour. About eight hours after the operation she complained of great pain under the diaphragm on the right side, but was relieved by four minims of the hypodermic solution of morphia. There was some nausea during the night, but no vomiting. At 6 P.M. the temperature was 97°, the pulse 98, and the respiration 23. A catheter was passed every eight hours. At 1 A.M. on the 23rd three ounces of urine were withdrawn, at 9 A.M. six ounces, and at 5 P.M. six ounces, and so on. The urine became loaded with urates after the first evacuation. On the next day (the 23rd) a teaspoonful of hot water was given every hour from 10 A.M. At 1 30 P.M., there being no sickness, half an ounce of milk and soda water was given, and at 5.30 P.M. half an ounce of beef-tea. On the 24th an enema had a slight result. On the 25th a punctiform rash resembling measles showed itself on the chest and legs, but there were no coryza or bronchitic symptoms. The urine was slightly alkaline. On the 27th, although no discharge showed itself outside the dressing, there being a slight sour smell the dressings were changed, and the large tube was replaced by one of smaller calibre. There was some puriform discharge. The amount of urine on this day was 32 oz. and alkaline. On the 28th it was 25 oz., and on March 1st 59½ oz. The rash had gone. On the 2nd the patient passed urine naturally for the first time. On the 3rd the urine was clear and acid and of sp. gr. 1020. On the 5th the stitches were removed from the wounds. The anterior wound was perfectly healed. The drainage-tube in the posterior wound was pushed outside and was not replaced. From this time the patient's progress was uneventful.

Remarks by Mr. STANMORE BISHOP.—I am glad to see that it is becoming the fashion to mention the name of the nurse in conjunction with any case in which her skilful co-operation has been of conspicuous value, and I have much pleasure in expressing my sense of the importance of Nurse Ward's help in the treatment of this case. Her constant attention, and especially her care to assure the perfect asepticity of the case from first to last, deserves all praise, and it is greatly due to her that the patient is now in perfect condition. As is evident from the specimen, the kidney has been reduced to a mere sac represented by the tightly distended capsule. The secretory tissue is only shown by a congeries of vessels in the fundus of each lobular dilatation. No calculus or any new growth was discovered. There had been no history of the passage of a stone, and the normal calibre of the ureter, as far as it could be seen, appeared to disprove any idea of a calculus wedged below. Moreover, the absolute freedom from pain since the initial soreness had passed off tells against the presence of any such cause. What, then, had produced this cystic degeneration? I suggest that it was, in the first place, a wandering kidney, and at the same time one with an abnormally placed ureter; that when its superior extremity moved downwards and forwards the ureter was bent sharply upon itself, forming a valve-like closure at its very origin; and that as urine accumulated in its pelvis and the kidney began to enlarge this bend would become more and more watertight, whilst the secretory tissue would, of course, under the intra-renal pressure, become gradually

absorbed. Removal appeared to be the only reasonable treatment, and was the more justifiable since all secretion had evidently been for a long time performed entirely by the other kidney, and the prolonged period necessary for such complete absorption of the secretory tissue in the right kidney would have given the left ample time for compensatory hypertrophy.

LEEDS GENERAL INFIRMARY.

A CASE OF SYMPHYSIOTOMY; REMARKS.

(Under the care of Dr. BRAITHWAITE.)

THE operation of symphysiotomy appears to have been introduced by Sigault in 1768, and performed for the first time in 1777 by Sigault and Lerz, but did not obtain much support from the profession. Its revival under more favourable conditions of wound treatment by Professor Morisani of Naples in 1890 has caused a further trial to be made of its value in certain cases of deformed pelvis. We published in THE LANCET in 1893¹ a list of Professor Pinaud's cases, thirteen in number, all of which were successful, and have also given a case under the care of Dr. Lewers.² The most complete account of the operation of symphysiotomy which is now available for reference is probably contained in the paper by Mr. C. Hubert Roberts in the last volume of St. Bartholomew's Hospital Reports.³ He mentions some cases which are not yet published, and as a result of his consideration of the subject proposes the following as the necessary conditions: (1) the woman must be at full term; (2) she must be in labour and the cervix fully dilated; (3) it must not be a desperate case—previous exhaustion, obstructed labour, high temperature, and sepsis contraindicate it; (4) the child must be alive when the operation is commenced; (5) the pelvis must not have a conjugate vera below three inches; and (6) the separation must never exceed two inches. For the notes of this case we are indebted to Mr. F. Walker.

A woman aged twenty-eight years, primipara, was sent to the Leeds General Infirmary on the evening of Nov. 25th, 1894. She had then been in labour eleven hours, and it had been found impossible to deliver her by forceps, owing to contraction of the pelvis. The membranes had been ruptured some hours, and the fully dilated os had receded over the fetal head, which was resting on the brim, so as to be felt with difficulty. The pains had for some hours been strong, but on the patient's admission were feeble. Her condition, however, was fairly good. The pelvis was found to be contracted antero-posteriorly, the true conjugate diameter being three inches and three quarters. On her being put under chloroform the forceps were again tried, but without success, and symphysiotomy was then decided on. The incision made was only an inch and a half in length—central, of course—and its lower edge just touched the upper border of the pubic symphysis, behind which the finger was then passed, gently but freely separating the soft parts to the lowest border of the joint. An ordinary probe-pointed hernia knife was used to divide the cartilage, the trochanters being at the same time firmly held together lest the bones should spring apart too suddenly. It was found quite impossible to divide just the lower edge of the cartilage and fibrous tissue with the knife because its cutting edge could not be brought to bear upon it owing to the depth of the wound. Traction was then made upon the head by the forceps, which had been left *in situ*, when the remaining portion of the cartilage broke audibly, and the head was delivered without any difficulty. When the parts were stretched to their widest it was attempted to measure the amount of separation of the pubic bones, but the wound was so closed by the pressure upwards of the post-pubic fat that the finger could not be inserted, and it could only be estimated by pressure on the skin over the divided symphysis that the separation was about an inch and a half. The wound was closed by deep silkworm gut sutures. The child lived, and is, or was when the patient left the hospital, quite well. The mother rallied well, and the bones reunited, so that for a week before her discharge in the third week of January she was able to walk about the ward—of course, with care and slowly. The bones were kept together by a "working man's belt," the belt commonly worn by workmen

¹ THE LANCET, Feb. 18th, 1893.

² THE LANCET, Aug. 5th, 1893.

³ Vol. xxx., 1894.

to enable them to dispense with braces. It has three buckles and straps, and is about six inches wide. It can be bought at any clothier's shop for a shilling.

Remarks by Dr. BRAITHWAITE.—The points brought out or illustrated in the above case are the following: 1. That something stronger and more curved at the point is required than a delicate probe-pointed hernia knife. Morison's symphysiotomy knife is admirably suited for its purpose. 2. That by making the incision above the symphysis and leaving the skin intact over it external support and pressure are given to it, and at the same time sepsis from the subsequent lochial discharge is avoided. 3. That the way to avoid hemorrhage is to gently but freely separate the soft parts behind the symphysis before dividing it, by which plan the stretching of the soft part is lessened in amount and distributed over a larger area. It would also be a good plan to put a few turns of bandage round the hips—not tightly—so as to prevent the separation of the symphysis occurring too suddenly. The operation is extremely easy if there is a suitable knife, but on an emergency in a country practice a sharp penknife would do. It is well to keep close to the bone so as to avoid wounding the bladder.

Medical Societies.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Prognosis of Cerebral Hemorrhage.—*Symphysiotomy.*—*Antitoxin Treatment of Diphtheria.*—*Exhibition of Cases and Specimens.*

A MEETING of this society was held on May 3rd, Dr. WEST SYMES being in the chair.

A paper was read by Dr. BARRE on the Prognosis of Cerebral Hemorrhage.

Dr. BRAITHWAITE read an account of a successful case of Symphysiotomy.

Dr. MANTLE of Halifax read a paper on the Antitoxin Treatment of Diphtheria and related two successful cases treated by this method. Case 1, a child aged four years, was seen on Feb. 18th evidently suffering from a mild attack of diphtheria. Both tonsils were swollen and upon each was seen a small patch of membranous exudation. The temperature was only slightly elevated, the pulse quick, the submaxillary glands enlarged, but there was no albuminuria. A cultivation of the bacillus made at the British Institute of Preventive Medicine, to which institution a portion of the membrane was sent, proved the case to be one of true diphtheria. The throat condition remained much the same for six days, but the left nostril then showed signs of obstruction and there was a sanious discharge from it, proving the mucous membranes of the nose to be also affected. The child all this time showed but little constitutional disturbance, the temperature never being over 100° F.; and although a supply of antitoxin serum was obtained it was not used, the symptoms being considered comparatively mild, but the usual local germicidal remedies were adopted and perchloride of iron was given internally. On the eighth day a very marked change in the condition of the patient took place. The temperature suddenly rose to 103.4° and the pulse to 140, and the heart was much embarrassed, a systolic murmur being heard at the apex and base. The child was evidently in a grave condition, and the friends consented to the injection of antitoxin; 10 c.c. were injected into the buttock. In fifteen hours the nose was perfectly clear, and at the end of twenty-four hours the temperature had gradually fallen to 99°, and the right tonsil alone showed a little membrane, the left being clear. Although the membrane had quite disappeared and the temperature was 99° next day a second injection was urged, but the friends refused it. A rise in the temperature to 102° occurred the following day, and fresh membrane was seen on the right tonsil. A second injection of 5 c.c. was then allowed under chloroform, after which the throat cleared and the temperature became and continued subnormal. The murmurs were still heard, proving them to be of endocardial origin, but otherwise the child made an excellent recovery. Case 2, a boy aged nine years suffering from hip-joint disease, was one of several patients in the children's ward of the Halifax Infirmary who suffered from sore-throat produced, as in Case 1, by

frozen drainage. On both tonsils there was seen membrane which on examination showed the bacillus of diphtheria. The temperature was not more than 100° F., the glands under the jaw were enlarged, but there was no albuminuria. As in Case 1, local and constitutional treatment were used, but there was every evidence of the larynx becoming involved and 2 c.c. of Behring's antitoxin were injected, the house surgeon being instructed to perform tracheotomy if the symptoms became very urgent. Next morning the breathing was markedly better and the membrane on the throat very much less, but a second injection was given. The following day, the ward being closed, the child, whose breathing and throat were still better, was removed to the fever hospital, but the medical officer stated that no more membrane was seen, and the patient made a good recovery. Dr. Mantle, having discussed the lines of thought by which investigators have been led up to the discovery of the antagonistic nature of toxins and antitoxins, expressed strongly the opinion that inasmuch as it has been proved that the bacilli do not enter the tissues, but are found chiefly near the surface of the exuded lymph, local germicidal treatment, and preferably the application of bichloride of mercury to the fauces, was most important in order to destroy these bacteria. The injection of antitoxin merely neutralised the toxins produced by the bacilli after becoming absorbed by the blood and tissues, but was most powerful in its action.

Cases and pathological specimens were shown by Drs. Solly and Moullot, Drs. Hallier, Mantle, Barra, Griffith, Bronner, and Churton, and by Messrs. Robson, Littlewood, and Robinson.

Reviews and Notices of Books.

The Elements of Pathological Histology, with Special Reference to Practical Methods. By Dr. ANTON WEICHELBAUM, Professor of Pathological Anatomy and Director of the Institute of Pathological Anatomy in the University of Vienna. Translated by W. R. DAWSON, M.D. Dub., Demonstrator of Pathology in the Royal College of Surgeons, Ireland. London: Longmans, Green, and Co. 1895.

THIS work forms a welcome addition to the already extensive literature on pathological anatomy, and we may at once congratulate Dr. Dawson upon having introduced it to the English-reading community of laboratory workers; for it is essentially a laboratory manual, although arranged on a plan which will make it useful also as a text-book upon pathological histology. The descriptive text, abundantly illustrated by engravings and plates that lack nothing in point of delicacy and finish, covers the whole ground, a due proportion in the subjects being kept throughout. Of necessity a book primarily intended for practical instruction, there is not to be found in it such detailed description of morbid changes as we are accustomed to meet with in books of wider scope, yet we think that no one will study its chapters without gaining a very wide and accurate insight into the nature and results of pathological processes.

In reading such a book as this the mind involuntarily contrasts the teaching of morbid anatomy of to-day with that which prevailed more than a generation ago when Professor Weichselbaum's distinguished predecessor in the Vienna chair, Carl Rokitanaky, produced his famous treatise, a work now almost forgotten, and yet one which gave a great impetus to pathological study all the world over. Attention was at that time rivetted upon gross and obvious changes in tissues and organs, and terms that sound crude to us were employed to denote lesions of whose true nature nothing was really known. Theoretical and, as it seems to us now, fanciful speculations were invoked to explain the results that met the unaided eye. The microscope was not, it is true, disregarded, but its use was limited, and it served to carry knowledge but little farther than did observation without its assistance. Indeed, the growth of pathological inquiry has been one of gradual evolution, and thanks to the firm foundations which were

laid by the pioneers in this study from Morgagni to Rokitsansky there was ready to hand a firm basis for the upbuilding of the more delicate superstructure of histology which now claims so large a share of attention. The perfecting of histological methods and the far-reaching application of the microscope, which has unfolded to view the new and ever-growing domain of bacteriology, are surely among the most striking advances in science made in a half century notable for scientific progress. The insight which histology has given into normal and morbid changes extends beyond the anatomical, for in many directions it has led to a more correct appreciation of the vital processes that initiate structural phenomena. Nevertheless, marked as the advance has been, we do not agree with those who, in these latter days, seem to think that finality has been reached, and that nothing remains to be discovered in the field of morbid anatomy. On the contrary, we believe that we are still on the threshold of researches into the physiology and pathology of cell-life which will open up still wider vistas and solve many problems of vital importance to the true conception of health and disease. The classical work of Rokitsansky marked an epoch in pathological study; the manual before us marks the utmost limit to which the same study has reached at the present day. Perchance the Vienna Professor of fifty years hence will produce a work on the same subject which will contain a record of facts as strange to the pupil of Weichselbaum as the teaching of the latter would sound in the ears of the pupil of Rokitsansky.

We must turn from these not unnatural reflections, however, to the book the perusal of which gave rise to them. Its plan is methodical and systematic. The first part deals with Methods of Investigation—first, with that of Histology, and, secondly, with that of Bacteriology. The instruction is at once simple and practical, free from any redundancy, but strictly confined to the matter in hand. It is clearly the work of one thoroughly conversant with all the technique of modern microscopical work, and may be taken as a safe guide in its numerous details. The editor has added an useful note upon the "Gum-freezing" Method, to which no allusion was made by the author. The bulk of the work is occupied by the systematic description of subjects coming under the head of General Pathological Histology (which includes also a terse but sufficient account of Micro-organisms), and then follow chapters upon Special Pathological Histology. Appended to each section of descriptive matter are paragraphs in smaller type giving an account of the methods most appropriate to the examination of the lesions described. As an example of the style of the text we may quote a few passages descriptive of a disease associated with the name of the author, whose work in the study of its micro-organisms is so well known—we mean Pneumonia:—

"Lobar or croupous pneumonia, also known as true pneumonia, is in the great majority of cases caused by the diplococcus pneumoniae, and only in a few instances by the bacillus pneumoniae or streptococcus pyogenes, or by a combination of two of the bacteria named. Even the lobar pneumonia which occurs in the course of other diseases—notably those of infective origin—may be due to the diplococcus pneumoniae, or to such bacteria (streptococcus or staphylococcus pyogenes and perhaps also bacillus typhosus) as are already present in some other organ in the particular disease. The latter bacteria then exist in the pneumonic lung either alone or along with the diplococcus pneumoniae. The form of pneumonia caused by the sole action of the diplococcus pneumoniae has a tendency to spread rapidly over considerable sections of the lungs, but may sometimes also take a more local form when occurring in the course of other infective diseases. The latter mode of appearance is especially characteristic of pulmonary inflammations caused by the streptococcus or staphylococcus pyogenes. In all these pneumonias we find in the alveoli, alveolar passages, and bronchioles, an exudation of somewhat variable

composition. At the commencement it is merely serous—i.e., in sections of hardened preparations a finely granular mass is found, with which are mingled isolated leucocytes, as well as desquamated epithelial cells, either large and squamous or small, and not uncommonly containing fat-droplets. The capillaries in the walls of the alveoli are also turgid with blood at this stage. Later, not only do the leucocytes in the exudation increase in numbers, but besides red corpuscles there appear more or less abundant fibrin filaments, delicate and difficult to recognise, or thick and with sharp outlines; and this is especially the case in pulmonary inflammations due to the diplococcus pneumoniae, whereas in pneumonia excited by the streptococcus or staphylococcus pyogenes the exudation is much less rich in fibrin. The red corpuscles in the exudation and the hyperæmic condition of the capillaries give the inflamed pulmonary tissue its red colour, whilst the granular appearance of the cut surface of the lung is due to the richness of the exudation in fibrin (red or brown hepatization). An exudation similar to that in the alveoli is also found in the lymphatics of the lungs, and further, the fibrinous mass which forms in the bronchioles may sometimes advance into the nearest branches of the bronchi, though the latter are not usually completely blocked by the exudation. The still larger bronchial ramifications show as a rule the appearances of an acute catarrh."—P. 278.

The above gives a fair example of the limits within which the author confines his work. He writes with the single aim of describing histological changes only, and he does not enter into needless disquisitions. The teaching is therefore dogmatic, but so good teaching must needs be. The student has to be instructed upon definite facts, and it will be time enough to amplify and dissect them when he has grasped them fully. We can warmly commend this work, which we think will prove of great service both to teachers and pupils. It is clear, accurate, and concise, and, as it should be, is thoroughly practical. We may regret the use of such a barbarism as the term "vasculitis," but this is a venial and comparatively unimportant *lapsus* in a work singularly free from such solecisms. The translator has done his task admirably, whilst the manner in which the work has been produced is worthy of the publishing firm that has issued it.

Atti dell'XI Congresso Medico Internazionale. Roma, 29 Marzo—5 Aprile, 1894. (Proceedings of the Eleventh International Medical Congress; held at Rome, 1894.) Vols. II. and III. Roma: Tipografia della Camera dei Deputati. 1894.

IT was announced in THE LANCET of Jan. 5th, 1895, that the Proceedings of the Medical Congress at Rome would be ready in April, and the appearance of these portly volumes, of more than 600 pages each, is the fulfilment of the promise. A loose leaf inserted in Vol. II. states that the issue of the Transactions to those entitled to receive them commences "with the present volume." Italian is naturally the predominant language; very many papers, however, are in German and French, a few in English, and at least one is in Spanish. Vol. II. contains the headings Anatomy, Physiology, General Pathology, and Pathological Anatomy. The anatomical memoirs include articles on the Skull of the Horse, by Professor Staurenghi of Pavia; on the Segmentation of the Ovary of *Seps Chalcoides*, by Professor Todaro of Rome; on the Coexistence of Pigmy with the tall European Races during the Neolithic Period, by Professor Kollmann of Bâle; and on the Osteology of the Anthropoid Apes, by Professor Waldeyer of Berlin. Professor Jimenes of Madrid recommends for anatomical injections a solution of 5 parts creosylic acid in 500 parts of glycerine, to which 500 parts of alcohol are subsequently added. Under physiology Dr. Lo Monaco of Rome gives an account of Experiments on the Excretion of Nitrogen and Phosphoric Acid during Chronic Poisoning with Phosphorus; and, in conjunction with Dr. Dutto, contributes an article on Fasting Men, illustrated by tabulated observations recorded during two prolonged fasts undertaken by Succo.

Professor Stefani of Padua gives the results of Five Years' Experiments on the Physical and Physiological Alterations in the Capacity of the Bloodvessels. Mr. F. Macdonald of London has a short communication (in English) addressed mainly to veterinary surgeons, on Transplantation of the Recurrent Laryngeal Nerve. Professor Lambing of Lille states that the spectroscopic examination of blood gives discordant results, varying with the instruments employed. Dr. Corso of Florence has found that fish are practically unaffected by removal of the cerebellum. The bulky section of Pathology has many contributors. Professor Lambi of Warsaw describes the Effects of Rickets in the Vertebrae. Professor Arloing and Dr. Chantre of Lyons give the results of their investigations into the nature of Parulent Infection following Surgical Operations; they find that the active agent is a streptococcus akin to that of erysipelas and puerperal fever. Professor Sirena of Palermo gives some hundreds of measurements of the body of an Egyptian, 7 ft. 10 in. in height, who died of parenchymatous nephritis in his twentieth year. Dr. J. Hawtson describes (in English) the organisms observed in the blood of 531 patients suffering from malarial fever and treated in the Johns Hopkins Hospital, Baltimore. Professor H. Manley of New York writes (in English) on Traumatic Lesions of the Spine and Spinal Cord. He has seen nothing to support the view that a railroad injury of the spine possesses uniform characters peculiar to itself. Professors Ch. Bouchard and A. Charrin of Paris contrast the virulence of the bacillus pyocyanogenus with the comparative harmlessness of the *Osipora Guignardi*. Professor H. Roger of Paris describes the Lesions and Derangements of the Liver in certain diseases; he concludes that the liver by transforming bacterial toxins acts as a protection against the morbid influence of bacteria. In the section on Diseases of Children, with which Vol. III. opens, there are contributions on the Pathology of Diphtheria, by Professor T. Escherich of Graz and Professor A. Baginsky of Berlin, and on the Serum Treatment of the same disease by Professor O. Heubner of Leipzig. Professor G. Mya of Florence describes the results of experiments performed on guinea-pigs by the injection of pure cultures of the diphtheria bacillus, and by mixed injections containing also streptococcus, staphylococcus, and pneumococcus. Dr. More Madden of Dublin writes (in English) on the Hygiene of Childhood, and Dr. Ducl of Milan on the Influence of School-life on the Eyesight. Professor H. Manley of New York has a long paper on Early Operations for Harelip, illustrated with characteristic photo-engravings. Drs. Moore and Sierra of Santiago state that in Chili the death rate of children under seven years of age is 474 per mille, and that for 663 legitimate births there are 343 illegitimate. Drs. P. Celoni and L. Sacchi of Florence report Three Cases of Successful Surgical Treatment of Tuberculous Peritonitis in Children of five and seven years of age. In the Pharmacological section, Professor Fraser of Edinburgh has articles on Bichromate of Potassium as a Remedy in Gastric Affections, and on the Treatment of Myxoedema with Thyroid Gland. Dr. Lauder Brunton describes an Instrument for maintaining Artificial Respiration for a long time, and Dr. John Gordon of Aberdeen adds a contribution to the study of Piperazine. Professor Rajmondi and Dr. Rossi of Siena give the results of Observations on Poisoning by Coal-gas. Drs. C. Falcone and L. D'Amore of Naples state that long-continued small doses of phosphorus cause diffuse parenchymatous nephritis and fatty degeneration of the liver. In the section of Medicine there is an elaborate paper by Dr. N. Pane of Naples on the Immunisation of Rabbits against the Virus of Anthrax and Pneumonia, and a similarly important one by Professor R. Feletti of Catania on the Febrile Process Excited by

Laveran's Microbe of Malaria. Dr. M. Delneau of Paris writes on the Resuscitation of Asphyxiated Persons by forcible, rhythmic, alternate traction and releasing of the tongue fifteen or twenty times per minute, corresponding to the rate of the respiratory movements. Dr. Fenton B. Turck of Chicago, having found that the mucus adherent to the stomach in chronic glandular gastritis is not removed by lavage, has devised a sponge swab mounted on a braided wire and caused to revolve within the stomach so as to cleanse it effectually. In his paper, which is in English, he mentions that of 123 cases treated by this method 90 were cured in from four to eight weeks. Professor Fraser of Edinburgh, writing in English, gives details of his treatment of Pernicious Anemia with Bone-marrow; Professor Stokvis of Amsterdam writes on the presence of Hematoporphyrin in Urines absolutely free from actual blood, recommending Garrod's method of collecting it by precipitation along with the earthy phosphates thrown down on the addition of caustic potash; Professor Guido Baccelli of Rome, Italian Minister of Public Instruction and President of the Congress, has an important and suggestive paper on the Vaso-motor Apparatus of the Heart and the Diagnosis of Heart-Disease; he also contributes articles on Malaria and on the treatment of obstinate cases of Syphilis by means of intravenous injections of a solution containing one part of corrosive sublimate and three parts of chloride of sodium per 1000.

Several of the memoirs contained in these volumes were, immediately after delivery, published in THE LANCET of April 7th and 14th, 1894, such as those by Sir Dyce Duckworth on the Rheumatic Nature of Chorea (which now appears in Italian), by Professor Lindsay Steven of Glasgow on Pancreatic Hemorrhage and Necrosis, by Dr. Calmette of Paris on the Immunisation of Animals against Snake-bites, by Professor Guarneri of Pisa on the Germ of Small-pox, &c. The forthcoming volumes of these proceedings, dealing with Surgery, Obstetrics, Dermatology, Syphilography, &c., will be awaited with much interest.

MAGAZINES.

Science Progress. Vol. III., No. 15, May, 1895.—To the medical profession the most attractive articles in this number are that by Dr. Augustus D. Waller on Two Fundamental "Laws" of Nerve Action in Relation to the Modern Nerve Cell, and that—which is an excellent *résumé* of the subject—on the Antitoxins of Diphtheria by Dr. G. A. Buckmaster of St. George's Hospital. In addition, Professor Oliver Lodge contributes Light and Electrification; Alfred Harker, M.A., Methods of Petrographical Research; J. W. Rodger, A.R.C.S., Progress in Physical Chemistry during 1894; George Murray, F.L.S., Notes on the Reproductive Organs of Olive-brown Seaweeds; and W. Garstang, M.A., a Note on Budding in Tunicata—all of which, in accordance with the traditions of the journal, are severely scientific. The appendices contain a few short notices of books and the usual "enumeration of titles of chemical papers appearing in March, 1895." Why *chemical* papers only, it may be asked, in "a monthly review of current scientific investigation"?

Chapman's Magazine.—The June number of this periodical is an improvement in sundry ways over the first issue. The pages are cut, there are no inset advertisements, while the contents show a fairer proportion of narrative form to dialogue. The latter is a tempting form of composition, but requires to be exceedingly well done. Mr. George Glasing contributes one of his powerful and lurid studies of lower middle-class life, dealing this time with religious mania. The Microbe of Pessimism is a clever sketch by an "unknown writer," from whom we hope to hear more. In the Rousing of Eve Garland Mr. Richard Pryce gives a carefully studied picture of the curious way in which pathos and comedy

are blended in the human mind. The two serials by Mr. Bret Harte and Miss Violet Hunt are going well. The latter is one of the few writers who can handle dialogue form with success and safety. She always knows how far to go, and paints the individuality of her characters very forcibly with extraordinarily few touches.

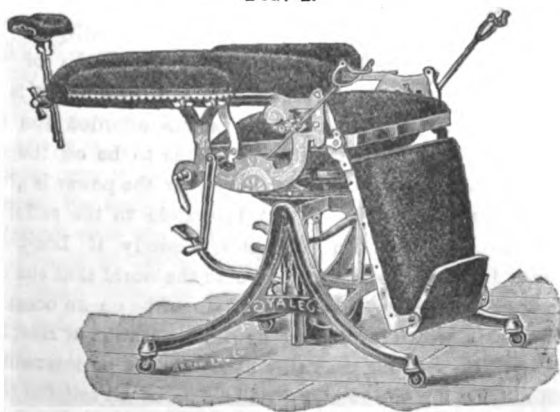
The Journal of Physiology. Edited by MICHAEL FOSTER, M.D., F.R.S., and J. N. LANGLEY, M.A., F.R.S. Vol. XVIII. Nos. 1 and 2. London: C. J. Clay and Sons. May 20th, 1895.—The articles contained in this part are six in number—namely: 1. Vaughan Harley: the Normal Absorption of Fat and the Effect of the Extirpation of the Pancreas on it (we have referred to this article in another column). 2. Leonard Hill: the Influence of the Force of Gravity on the Circulation of the Blood, with twenty-five figures in the text. 3. J. W. Pickering: Synthesised Colloids and Coagulation. 4. J. N. Langley and H. K. Anderson: on the Innervation of the Pelvic and adjoining Viscera; Part I., the Lower Portion of the Intestine. 5. J. B. Leathes and Ernest H. Starling: on the Absorption of Salt Solution from the Pleural Cavities. 6. J. Burdon Sanderson: the Electrical Response to Stimulation of Muscle and its relation to the Mechanical Response, with four plates and thirteen figures in the text.

New Inventions.

THE YALE SURGEON'S CHAIR AND THE GOULD DENTAL CHAIR.

We give below illustrations of these two new and elaborate chairs, the invention of the Canton Surgical and Dental Chair Company, of Canton, Ohio, U.S.A. The Yale Surgeon's Chair is in appearance, when none of its numerous movements are being employed, an ordinary arm-chair, only the rather portentous pedals and levers about the base suggesting for it any further purpose than to sit in, for the head-rest is adjustable, not fixed; but by simple arrangement of racks and levers its component parts can be made to assume various angles with and planes towards each other, so that the body of the patient, following the various shapes of the chair, will assume any attitude that could be desired by physician, surgeon, or gynaecologist. The illustration shows the

FIG. 1.



The Surgeon's Chair as a three-quarter length operating table.

chair in the position called "the three-quarter length operating table," and it will be seen at a glance that by elevating the back it would become a suitable chair for eye operations, while by raising the leg-rest it is transformed into a full-length operating table. Such a full-length couch can also be made by pedal movements to rise on its legs to any reasonable height to suit the convenience of the surgeon, and will also rotate through the vertical plane, so that the head of the patient can be raised or depressed at will. The head-rest, is provided with a peculiarly constructed universal joint

which can be solidly locked by the turn of a single screw. The arm-rest is capable of being placed in various positions either for operating purposes, to economise space, or in cases of operations on the throat or eye as a seat for the surgeon. A special head-rest for ophthalmic work forms an additional and useful attachment.

The Gould Dental Chair, like the chair previously described, has pedal and lever movements by which it can be made to assume any necessary shape that will enable the dentist to treat his patient most conveniently. It is provided with a

FIG. 2.



The Gould Dental Chair.

lateral oblique movement, so that the body can be thrown obliquely towards or from the operator, while it can be raised, lowered, and rotated on its pedestal. It is provided with an adjustable back moving through a range of seven inches, so that it can be made to form a well-fitting seat for patients of all sizes.

These two chairs are decidedly ingenious of construction, and, having regard to their highly finished workmanship, cannot be considered expensive, costing from £15 to £20 according to the material in which they are upholstered. The Approved Novelties Company, 91, Queen-street, Cheapside, are the English agents of the Yale Surgeon's Chair and the Gould Dental Chair.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—

The nineteenth annual meeting of the British Medical Temperance Association was held on May 28th at the Holborn Restaurant, under the Presidency of Sir B. W. Richardson. The hon. secretary, Dr. Ridge (Enfield), read the annual report, showing 29 new members during the past year and 3 student associates, making altogether 411 members, 55 student associates, and three associates. It was announced that the examiner, Dr. Barlow, had awarded the first prize of £5, offered for the best essay by medical students in their third year on the Arguments derivable from Physiology for Total Abstinence from Intoxicating Liquors, to Miss M. Stewart of the London School of Medicine for Women; no essay had been deemed worthy of the second and third prizes. More than 15,000 copies of the *Medical Pioneer*, the organ of the association, had been sent gratuitously to medical men, hospitals, &c. The constitution was then amended, so as no longer to require subscriptions from student associates. After the usual votes of thanks the meeting was concluded, and several members and friends dined together at the Restaurant.

THE LANCET.

LONDON: SATURDAY, JUNE 8, 1895.

SUNDAY, June 16th, is the day selected this year for the simultaneous appeal from London pulpits on behalf of the medical charities of the metropolis. For two-and-twenty years this annual appeal has gone forth, and the people of this great and wealthy community have been asked to spare, in the midst of the pleasures and attractions of the season, a few thoughts for the needs of the sick poor and to bestow some contribution in money towards the support of those institutions whose glory is that they are "maintained by voluntary contributions." The Hospital Sunday Fund has during its existence done much to regulate the great charities for whose assistance it was founded. In the bestowal of the sum entrusted to them for distribution the members of the committee of the Fund, presided over by the Lord Mayor of London, have endeavoured to be guided by the strictest impartiality, and have performed their philanthropic duty with justice and discretion. The share taken by THE LANCET in the institution of this annual collection from every religious community, and in particular the devoted and practical sympathy which, while he lived, its then Editor, the late Dr. JAMES WAKLEY, evinced on behalf of the Fund, are well known, and we have endeavoured to continue in each succeeding year to help its work on definite lines. It has been our main object to assist those who plead the cause of the hospitals with persuasive eloquence, by preparing for distribution among their congregations a summary of the objects of the Fund and of the needs of the hospitals. If in so doing we may be thought to have diverged in any degree from the objects of a medical journal, we can only say that the cause of charity knows no limitations, and that we claim no recognition for the performance of a task which we regard as at once a duty and a pleasure. For once, then, in the pages of the Supplement which it has now been our custom to issue on this day for many years, we address a wider audience than is our wont and do our best to arouse our fellow citizens to a sense of the claims that their less prosperous fellow men have on their thoughts and sympathy. The medical profession is daily, nay hourly, engaged in this devoted service of man. Those only can speak of the amount of its devotion to this cause who are of it, and who have followed it into the by-ways of misery which abound in this huge and densely crowded city. As medical journalists, then, we feel that we have a right to ask that some small share of the burden should be borne by others whose sole opportunity, perchance, of joining in this gracious service is limited to a response to the appeal from the pulpit on Hospital Sunday.

In order that no member of the congregations which will be invited next Sunday to contribute to the Hospital Sunday Fund may plead ignorance of the work done by the hospitals as a pretext for complying with the request for aid in the letter rather than in the spirit, we have devoted the whole

of this year's Supplement (125,000 copies of which will be gratuitously distributed throughout the congregations to-morrow), apart from the statistical tables, which tell their own tale, to a brief description of the machinery by which the benefits of skilled medical and surgical attention are brought within the reach of those who are prevented by fate or misfortune from obtaining them by payment. These details, trite and familiar to the members of our profession, will, we venture to think, come as a revelation to a large number of those who are asked to contribute to the Sunday Fund. It would have been easy to have amplified the account in many respects, but so far as it goes it cannot fail to show that the organisation of a hospital demands the energies of a large number of persons and the co-operation of many minds trained for the most differing pursuits. Then, too, it must be borne in mind that much of this labour—in truth, the chief part of it—is given willingly without return; whilst of that for which there is remuneration this latter is singularly small compared to the rewards to be gained in other walks of life. It is, we know, often urged that an appointment to a position on the honorary staff of a public hospital brings its reward indirectly in reputation and in consulting practice. This may be so, and in some conspicuous instances it is patent; but we have no hesitation at all in declaring that the hospital physician or surgeon does not necessarily reap such benefit, even after long years of unselfish service. If only the contributions of the laity could in the very smallest degree approximate to the value of the services rendered by a hospital staff within one single year there would be no more heard of the poverty of these institutions.

The conscience of London has not yet been thoroughly aroused upon this question of hospital relief. Year by year this great city grows greater; year by year it grows wealthier; year by year the claims on charity grow more urgent and more needful. How are these claims being met? How is the Londoner to be made aware of his high responsibilities, we might say of his great privileges? It is surely something to belong to the metropolis of the world, but it is better to prove that this citizenship is no mere name. Once in every year he has afforded him the opportunity of proving that he is worthy to be on the roll of this vast community. Once every year the power is given him of proving that he is not insensible to the suffering that surrounds him on all sides. Surely if London—Greater London—desires to prove to the world that she can be stirred by a common impulse, it would be on an occasion such as this, which is afforded by the institution of Hospital Sunday. It is fitting that this cause should be interwoven with religion, for the sum and substance of all religion is to succour the poor and needy, to love one's neighbour as oneself. But whether a man profess his religion openly, under one of its many forms, or whether he prefer to follow the dictates of his own conscience, it matters not. To one and all the lesson of Hospital Sunday must be taken to heart, the lesson of self-sacrifice which is as ancient as humanity itself and is the crowning glory of mankind. With such a theme we might be tempted to pass beyond our proper sphere, but it is with those whose office

It is to kindle consciences that the duty lies. We must be content to affirm that London has not yet in any one year since the Metropolitan Hospital Sunday Fund was started made such a contribution as is at all proportionate to her wealth or population. May she redeem herself from this reproach next week by providing a sum of at least £50,000.

To all those who take an interest in our water-supply the note sent out from the Surgeon-General's Office of the United States War Department, Washington, will convey an idea of the great importance that is nowadays attached to the bacteriological examination of water by State and municipal authorities who are not too firmly bound down by tradition to ancient methods of procedure and inactivity. The Committee on Water Pollution of the American Public Health Association, in a report presented at a meeting of the Association held at Montreal in 1894, in this note strongly recommends coöperative work in the study of bacterial forms in water as bearing on scientific questions. The Chairman of the Committee, Major and Surgeon CHARLES SMART, U.S. Army, writes: "This was approved, and the Committee is now organising the laboratories of the United States and Canada in the investigation. A subcommittee on methods of laboratory work was appointed. The subcommittee considered that by getting in detail accounts of the methods in use in the various laboratories, consolidating these, and submitting the resulting scheme to an advisory council of the prominent bacteriologists in America, it would then be able to proceed with coöperative work in the study of the bacteria of water." Certain difficulties have arisen, but so much progress has been made that a special meeting of bacteriologists, at which the following questions are to be discussed, has been called for this month (June): the differentiation of species and the production of varieties which may arise—(1) from differences in environment in nature, and (2) from divergent conditions in laboratory methods. With regard to the former, it is evident that the conditions under which these occur or are produced can be but little controlled by the investigator; but in respect to the second heading, it is evident that by combined work, carried on under a common system, the varieties produced in this way may be greatly diminished or, at any rate, reduced to uniformity; whilst, as the report points out, it is evident that the first-named varieties cannot be satisfactorily studied until control has been obtained over the latter. The circular letter which has been sent to all the bacteriologists in America insists that more accuracy must necessarily be gained if the data under the four headings following are thoroughly understood: (1) the due recognition of the great importance of the reaction of culture media; (2) the variability of the composition of media exclusive of acid or alkaline; (3) the divergencies of conditions for development other than media in published reports on the bacteriology of water; and (4) the imperfectly systematised records of the results of cultivation experiments. In order to facilitate discussion and to allow of the evidence being readily classified the committee, consisting of four members, with Dr. J. G. ADAMI as secretary, submits the following points as amongst the most important for consideration:—

1. What methods shall be followed in neutralising all

- media, and what standard degree of reaction shall be adopted? 2. What effects upon species differentiation are produced by ordinary differences in composition of peptone, meat juice, gelatine, &c.? 3. What media shall be used for all species differentiation, and how shall they be uniformly prepared? 4. What shall be the medium for, and the conditions of, the stock culture from which all media are seeded? 5. What shall be the systematic detailed method to be followed in observing the results of cultivations and the manner of recording them? 6. What method shall be adopted by which full benefit may be derived from morphological characteristics? 7. What tests shall be used for separating bacteria into clearly marked groups? 8. What shall be the method followed in determining the relation of bacteria to temperature? 9. What special methods are of value in the isolation of pathogenic bacteria in water? 10. What shall be the method of procedure in determining the pathogenesis of bacteria found in water? 11. What evidence is there at hand with regard to the variability of species? 12. What new methods can be suggested for the separation of bacteria into groups and for the identification of species?

As the question must necessarily be raised in connexion with the examination of the London water-supply, in view of suggested changes, these points should be carefully studied. A slight attempt has been made by the Water Research Committee of the Royal Society, aided by a grant from the London County Council, to clear up some of the questions involved in such an investigation, but the fringe of the subject has only been touched, and the published work, both by what it contains and by what it has been unable to achieve, gives evidence of the enormous amount of work still to be done and of the great necessity there is for a combined investigation on an extensive scale.

At last week's meeting of the Liverpool Health Committee the question of the employment of female sanitary inspectors came up for discussion on the report of the medical officer of health. It appears that the Ladies' Health Society of Liverpool had recently addressed to the corporation a request that a certain number of properly trained female sanitary officers should be employed in that city for the discharge of those duties to the female portion of the community which cannot with decency be carried out by inspectors of the opposite sex. The question is in many respects an important one, and should be carefully discussed in all its bearings; we are therefore glad to note that it has been decided to encourage further conference with regard to the matter between the Ladies' Health Society and the administrative departments of the corporation. At the committee meeting above mentioned it was agreed that the employment of women for the execution of sanitary functions was an untried experiment, and several members expressed the opinion that such appointments were open to grave administrative objections. As regards the experimental nature of the scheme, however, it may be mentioned that at least one of the London vestries has already appointed a female sanitary inspector; and although the women employed by the Ladies' Health Society of Manchester are not specifically designated sanitary inspectors we nevertheless find, from the weekly health reports of that city, that they discharge functions

which in their nature are distinctively sanitary. The contention of certain of the Liverpool councillors is doubtless valid—viz., that many of the duties under the Public Health Acts which devolve upon sanitary inspectors are arduous and sometimes dangerous, and are therefore such as women are physically unfit to undertake. But, on the other hand, it may surely be urged that many of the most important of the duties under the Acts not only can but obviously ought to be performed by females only. For example, the routine of what is known as sanitary inspection constantly involves entry by the inspector into private dwelling-houses, and as such visits have frequently to be made to females or children whilst suffering from illness and in bed it is obviously fitting that they should take place under conditions which do not tend to diminish those feelings of propriety and self-respect which it should be our object to encourage amongst the wives and daughters of the labouring classes. In case of childbirth, and especially on the supervision of puerperal complications, domiciliary visits by sanitary officials are often urgently necessary. It is intolerable that services which, under these circumstances, we know to be essential to life should be performed otherwise than by medical practitioners or by those whose sex specially fits them for the task.

The experiment of sanitary inspection by female agency, although perhaps technically novel, has nevertheless virtually passed beyond the experimental stage in other towns besides Manchester. In Salford and in Glasgow the same practice obtains, and in the latter city we believe that the employment of female officers for the visitation of the sick poor and for certain other sanitary purposes has long been in vogue, and as the practice is still continued under such able sanction as that of Dr. J. B. RUSSELL we may rest assured that the plan is a success. We find from the local press that Liverpool was the first English city to employ successfully a woman as a School Board officer, and should the sanitary authorities of that city decide to appoint tentatively a sufficient number of female officers for the execution of certain kinds of sanitary work amongst the poor it is not improbable that the result will be equally satisfactory.

Soon after the promulgation of the recommendations formulated by the Association of Fellows, which were detailed in our leading article on the Royal College of Surgeons of England in our issue of last week, a second body of Fellows sprang into existence and took the name of the Society of Fellows. Its scope and objects differed essentially from those of the Association of Fellows, and consisted not in originating reforms, but in submitting propositions put forward by others to the Fellows of the College for the purpose of ascertaining to which side the preponderance of opinion inclined. This may be gathered from the first resolution passed at the meeting held on April 5th, 1894: "That in view of the two annual meetings of Fellows now arranged for by the Council a Society of Fellows of the Royal College of Surgeons of England be forthwith formed with the object of ascertaining by conference and otherwise the opinion of the general body of Fellows on any subjects which may properly be brought forward at the official meetings of the Fellows

of the College and of presenting them thereto to the Council; and, in addition, of taking such steps as from time to time may seem best calculated to promote the interests of the College." Three points were submitted to the Fellows in May, 1894: the amendment of By-law XVI., to deal more effectively with the misconduct of Fellows and Members; the mode of election of the President; and the constitution of the Court of Examiners. With the first of these questions the Council had already dealt, whilst the third has aroused but little interest amongst the Fellows generally.

The solution of the second question—the question of the best method of proceeding to elect the President—has been advanced a stage by the action of the Society, the result of a preliminary canvass inducing the executive of the Society to submit the following resolution to the meeting of Fellows held on July 5th, 1894: "That the Council be requested to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President." This resolution was carried by 23 votes to 8, and was considered by the Council of the College at the quarterly meeting held on July 12th. Mr. BRYANT then moved, and Sir SPENCER WELLS seconded, the following resolution: "That the Council of the College are not prepared at the present time to consult the Fellows or solicit their opinion through other means than the meetings of Fellows which have been lately established." An amendment, proposed by Mr. RIVINGTON and seconded by Mr. WILLETT, "That, in compliance with the request of the meeting of the Fellows on the 5th inst., the Council do take steps for obtaining the opinion of the Fellows on the mode of election to the office of President," was lost, and the original motion carried, with the following addendum: "The Council would, however, point out that if any Fellow is anxious to test the opinion of the general body of Fellows as to whether or not it is desirable to make any change in the present mode of election to the office of President it is open to him to do so by submitting a motion on the question to the meeting of Fellows in January or to some subsequent meeting." The outcome of this decision was a conference between the Association of Fellows and the Society of Fellows, at which it was agreed that the canvass of the Fellows generally should be undertaken by the Society of Fellows. This canvass was carried into effect, and, so far as it went, resulted in showing that nearly two-thirds of the Fellows who replied desired that the President should be elected by the Fellows either directly or after nomination by the Council.

For the time being the question of the mode of election of the President of the College has become of secondary importance, or rather a matter of detail in connexion with the larger question of obtaining a new Charter. We have for some time contended that the concessions granted by the Council both to the Fellows and Members ought not to rest merely on resolutions and regulations of the Council which are subject to revision or revocation at the good pleasure of the Council, and leave the Fellows and Members to hold their new privileges on sufferance only. This view has also been taken by the Association of Fellows, on whose behalf a resolution was proposed at the half-yearly meeting of Fellows held at the College

on July 5th, 1894, to the effect "that, in the opinion of this meeting, the concessions made by the Council, and such other changes as the general body of Fellows may desire, should be embodied in a new Charter." In a small meeting, however, an amendment was carried "that it is premature to consider the question of a new Charter until the changes required have been resolved upon." In the course of the discussion it was suggested that the best mode of procedure would be to form a conjoint committee of members of the Council and other Fellows of the College to consider the whole question, and such a resolution would have been carried (instead of the amendment passed at the meeting) but that it was ruled by the President that notice of a motion involving a new departure ought to be given. Under these circumstances the discussion of the proposal had to be adjourned to the meeting of Fellows in January, 1895, when, with the support both of the Association of Fellows and the Society of Fellows, the following resolution was adopted: "That the Council be requested to appoint a conjoint committee of members of the Council and Fellows of the College to consider the desirability of obtaining a new Charter, together with the details thereof."

On referring the question of the appointment of such a committee to the legal adviser of the College the Council was informed that it would not be illegal to obtain "the advice of such a committee or of any other body they might think fit to consult," but that "such a committee could have no official character and could do no act or pass any resolution that would have any binding effect whatever; and, indeed, its proceedings would have no more legal effect than that of any outside body whom the Council might think fit to consult. Such a course, though not illegal, would be calculated to give rise in the future to legal complications, as the purely non-official character of the committee would in course of time be liable to be overlooked." On the other hand, "a committee of the Council to meet and confer with a deputation of Fellows would meet the desired object without giving rise to any such complications as those referred to."

The result was that at the meeting of the Council held on Feb. 7th the Council "did not deem it expedient to accede to the resolution passed at the meeting of Fellows held on the 3rd ultimo"; and further resolved "that a committee of the Council be appointed to receive deputations from the Fellows of the College upon the subject of the resolution of the meeting of Fellows on Jan. 3rd last, and to report thereon to the Council." It was also resolved that "copies of the two foregoing resolutions be forwarded to the mover and seconder of the resolution of the meeting of Fellows." The Council then appointed "Mr. BRYANT, Mr. HOWSE, Mr. RIVINGTON, Mr. TWEEDY, and Mr. MORRIS, together with the President and Vice-Presidents, members of the committee to receive the deputations." The sudden and lamented death of the late President, Mr. HULKE, entirely prevented any action being taken to give effect to the foregoing resolutions, but we understand that a request for the reception of a deputation by the committee has been sent to the secretary of the College on behalf of the Association of Fellows, and that the President of the College has appointed Monday, June 10th, for the reception of the deputation. It is not improbable that the Society of Fellows will

also send a deputation to the committee, and it ought to be understood by the Fellows of the College that it is open both to metropolitan and to provincial Fellows individually to apply to be received by the committee. The Association of Fellows intends, we believe, to adopt the recommendations which it promulgated some time ago as the basis for its suggestions, and we trust that other bodies of Fellows who have definite propositions to make will not fail to utilise the favourable opportunity which is now presented for the furtherance of substantial reforms in the constitution of the College.

Annotations.

"Ne quid nimis."

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

WE have already had occasion to comment upon the appalling ignorance of the laws which govern the conduct of medical men towards one another displayed by a certain London vestry, but that was a local matter. A danger affecting the honour of the medical profession throughout the metropolis has now arisen, and the exciting cause is that association of servants of the ratepayers known as the London School Board. At the debate on Thursday, May 30th, Mr. Sharp, chairman of the School Attendance Committee, moved:—

"That the West Lambeth Divisional Committee be authorised to appoint for one year, upon the under-mentioned conditions, six doctors in that division to examine cases in which the medical certificate produced is considered by the divisional superintendent to be doubtful, or in which it is desirable to have a definite medical opinion. (a) That each case be first referred to the divisional member in charge of the school where the child ought to attend. (b) That a payment of 2s. 6d. shall be made for each case examined. (c) That the number of cases to be dealt with in this manner shall not exceed 100 in the year. (d) That the names of the doctors selected shall be forwarded to the magistrates having jurisdiction in the division."

He explained that in view of the favourable result of the experiment tried in the Tower Hamlets Division the committee were of opinion that the plan should be adopted in the West Lambeth Division, the divisional superintendent having recommended that course. Mr. Athelstan Riley moved as an amendment to strike out all words after "produced" in the first paragraph and to insert "is not signed by a properly qualified medical man." Mr. Riley's very sensible amendment was negatived by 26 to 20, and the recommendation of the committee was carried by 26 votes to 18. Let us now examine the scheme of the Board more in detail. It is quite evident that it has a profound distrust of (1) the parents of children, and (2) of the medical men whom they employ. Besides this, the person who is to decide upon the validity or accuracy of the certificate is not the Board's medical officer or any other medical man, but the divisional superintendent, and what qualifications can he possibly have for deciding these points? A Mr. Macnamara said he knew of "a place where they could get pretty nearly as many certificates as they liked for a penny—at a medical mission." We would ask him if by this remark he meant that certificates were granted on other than sufficient grounds for the price of a penny? If he did not mean this there is no point in the remark, for out-patient physicians or surgeons, to say nothing of house physicians and surgeons, are constantly signing certificates for nothing. We protest in the strongest manner against the proposition of the Board; it is a deliberate and wanton insult to the members of the profession. To supervise certificates which are signed by

unqualified practitioners, herbalists, &c. is quite right, but that the guarantee of a properly qualified man should be called in question by a divisional superintendent is unwarrantable. Nor do we believe that six medical men will be found to sit in judgment upon another practitioner's certificate. The Board, like other corporate bodies, has neither a soul to be saved nor a body to be kicked, so it is hard to influence; but if it persists in its present course the only result will be that no medical man will sign School Board certificates at all—the parents will be summoned, the medical man in question will give evidence, and the charge will be dismissed. If the Board thinks that this course of action will enhance its popularity with either parents or ratepayers, let it go on. If not, we advise it to treat the profession with the courtesy we have a right to demand. We believe the orthodox manner of bringing outside opinion to bear upon the Board is by means of a deputation, and we would point out to the profession that in this manner the gross breach of etiquette which the Board has committed may be pointed out to it. A deputation of representative medical men would be able to lay a mass of evidence of great weight before the Board, and to such members of the profession we commend this idea.

"HE WANTED TO KNOW, YOU KNOW."

MR. OLIVER PEMBERTON, the city coroner at Birmingham, has been emulating Mr. Clennam, who "wanted to know, you know," and has received a remarkable proof of the fact that among certain of our public bodies the habits and traditions of the Circumlocution Office still linger. Mr. Pemberton held an inquest on the last day of May upon the body of one Albert James Grimshaw, who was stabbed and who died at the Birmingham General Hospital from the injuries he had received. A man named John Saunders was taken into custody by the Aston police and charged with causing the death of Grimshaw. It is clear that the inquest may possibly result in a verdict of wilful murder against the arrested man, for which reason Mr. Pemberton very properly and fairly desired that Saunders should have an opportunity of appearing at the coroner's court if he chose to avail himself of it. And now begins the game of circumlocution. The Aston magistrates appear not to have desired to sanction the presence of Saunders at the inquest. Mr. Pemberton wrote to the clerk to the magistrates to ask that Saunders should be permitted to come before him if he wished to do so, and in return received a reply stating that the magistrates had no power to direct the police to take the prisoner to the coroner's court. Mr. Pemberton then applied for assistance to the superintendent of police at Aston, begging him to deal with the matter, but the superintendent said that it was out of his jurisdiction. Mr. Pemberton next wrote to the governor of the gaol where the prisoner was in custody, and from him (Admiral Tinkler) received a formal communication that the prisoner desired to be present at the inquest, the governor also promising to write to the Commissioners of Prisons to ask for orders to produce Saunders at the coroner's court. Now, what all this circumlocution may mean, who is served by it, and which of our national liberties is safeguarded by it does not lie very near the surface, but what is abundantly clear is that gross injustice may be done to the man Saunders by withholding from him the opportunity of appearing to listen to, and if necessary refute or attempt to refute, the serious charges that may be made against him in the coroner's court. Mr. Pemberton's action in being determined to find out why the doing of such an obvious act of justice was beyond the powers of three different sets of officials and required the sanction of the highest authorities after an interval of ten days' thought is commendable; certainly any public official who brings to light these irritating flaws in our social

economy is also a public benefactor inasmuch as he has spared himself no trouble to obtain justice for a man over whose head the most serious charge known to the law is impending. Could not Mr. Pemberton have succeeded in obtaining the presence of Saunders by application to the Home Office in the first instance? We think it probable that by this means the desired result would have been attained.

CREMATION ON THE BATTLEFIELD.

WHEN the great surgeon Billroth, elected to the Austrian Upper Chamber, made his memorable speech for the rehabilitation of the Medico-Military Academy of Vienna, he pointed out some of the inevitable incidents of modern as contrasted with past warfare, which would make the educative function of such an academy more than ever indispensable. The advance of military science, he showed, with its arms of precision and its smokeless powder, would so encumber the battlefield with wounded that the transport service, hitherto available for the removal of these to the rear, would have to be greatly improved in promptitude and efficiency if the combatant arm was not itself to be paralysed by its own fallen encumbering the ground. To this admonition the International Red Cross responded nobly, and the exposition of the various modes of picking up and carrying off the wounded which were on view at Rome during the last great Medical Congress satisfied the medico-military world that, if not absolutely solved, the problem of carrying the wounded to the rear was on the high road to solution. But the dead on the battlefield offer as difficult a *crux* for the army medical or the Red Cross organisation to deal with as the dying. How are they to be disposed of after those of the fallen who may yet be saved are happily put under treatment in the field ambulance? Not for the first time has the question been propounded to the War Departments of the European Powers. The other day the Emperor William, in view of the carnage inseparable from latter-day warfare, took counsel with the medical staff of the German War Office as to whether, or to what extent, cremation might not be utilised for the disencumbering of battlefields after such sanguinary combats as those, for example, around Metz in the campaign of 1870. The subject is full of difficulty, and even if cremation be eventually put in practice for such an end it must, without question, call into operation a much larger, a much more variously disciplined medico-military personnel than hitherto. The electric light, after darkness has set in, may be trusted to aid in distinguishing the dying from the dead; but expert examination will be needed before such an irrevocable process as that of the crematorium is applied to bodies in which the vital spark, not wholly extinguished, may yet have a chance of being fanned into flame. This examination will not be called for in the case of those who are either killed outright or whose condition is such that only a few minutes can intervene before rigor mortis begins to declare itself. It may be spared also in those cases where after operation the resources of the field ambulance have failed to reinforce the powers of life. But from the two sides of the battlefield—from the front and from the rear—the crematorium will never be without food, all too abundant, if the provisions of the Emperor William as to the "butcher's bill" of the next great European war are to be realised. The subject, as we have said, is not now for the first time propounded. In the great International Congress for the Relief of the Wounded in War, held in Paris twenty-eight years ago, Dr. Bertani, the distinguished Genoese surgeon, who sacrificed a brilliant academic career and a rapidly extending private *clientèle* to organise the medico-military department of Garibaldi's campaigns, proposed cremation as the humanest and, from the hygienic point of view, the soundest

modus operandi to be employed in the disposal of the dead on the battlefield. His proposal was ably seconded by another sagacious Italian sanitarian, Dr. Castiglioni—seconded, moreover, by arguments so powerful that nothing but the short interval between its recommendation and the outbreak of the Franco-German War explains its not having been put in practice during that most sanguinary of nineteenth century campaigns. The testimony of the great soldier-surgeons of Italy's struggles for independence will, however, bear revival and recapitulation, especially under the auspices of the "predominant partner" in the Triple Alliance, the Emperor William, whose capabilities in the art of war are not more conspicuous than his wise provisions for the abatement of its horrors, and whose steady patronage of all that pertains to the sanitary protection of his people will one day reflect as much honour on his reign as the most brilliant achievements of his ancestors in the military council-chamber or on the stricken field.

PROFESSOR BROUARDEL ON THE MEDICAL PROFESSION.

ONE of the great questions of the day undoubtedly is, What shall we do with our sons? In the profession with which we are more immediately concerned there are at the present moment close on 33,000 gentlemen with British qualifications practising the science and art of medicine in all parts of the world, but chiefly within the narrow limits of our own small islands. The plethora of *alumni* in our schools is truly alarming, and yet we have cause to congratulate ourselves that matters in this respect are not so bad with us as they are elsewhere. In the United States, for instance, the medical student roster last year was said to contain no fewer than 38,850 names, being an augmentation of more than 5500 since 1892. In France the overcrowding of the medical schools is also excessive, but in this connexion we cannot do better than quote the remarks delivered by Professor Brouardel at a recent meeting of the Association des Médecins du Département de la Seine: "Two years ago I drew your attention to the fact that the number of medical students was increasing rapidly. The augmentation still continues unabated. In all the French faculties our future *compères* are now twice as numerous as they were ten years ago. The same kind of thing is going on in Germany and likewise in England. Various causes have been invoked in explanation of this state of affairs; many people thought that the law regulating military service was to blame in the matter. There is no reason whatever for this supposition. The laws have not been altered in Germany or in England, and yet the rate of progression remains the same. In France the female midwifery candidates, who have nothing to do with military service, have doubled their numbers in the last five years. For my part I am convinced that it is the publicity accorded to the achievements of science which is responsible for the illusory ideas entertained by heads of families. Day by day in their newspapers they see the great importance that on all sides is attached to public health, civil and military, and logically enough imagine that the persons charged with the solution of the great problems involved receive a proportionate compensation. They conclude that their offspring will derive both honour and profit while pursuing this grand career. They would be much astonished if anyone were to point out how the efforts we make to render houses wholesome, to root out epidemics, to improve medical charities, all have the effect of narrowing more and more the field wherein the medical man was formerly wont to garner a meagre harvest. Now, in ten years' time the number of reapers will have doubled. I do not want to forecast the consequences from the point of view of medical practice, but there is one thing of which we may be perfectly sure: if the number

of medical men has doubled, the number of unsuccessful practitioners will have increased threefold." The eminent French sanitarian doubtless correctly estimates the motives that induce his fellow countrymen to enter their sons in medicine. All communities are alike and, although many-headed, are not endowed with a corresponding amount of intelligence. And yet it is difficult to conceive how any reasoning being can suppose that the average medical man's life is either an easy or a lucrative one. There is no other profession or calling in which the hours are so long. A busy practitioner (and if he has to live by his labour he is compelled to be busy) must remain on duty twenty-four hours out of the twenty-four. At no period of the day does the happy moment arrive when he can put his business on one side and say, "Now I may enjoy myself." Professor Brouardel's remarks regarding the way medical men cut the ground from under their own feet, as it were, by their persistent endeavours to improve the sanitary condition and general health of the community are very pertinent and should be widely disseminated. In no other walk of life do we hear of men who, as a matter of course and without the smallest fuss, are ready and willing to act in a manner that is diametrically opposed to their pecuniary interests.

STREET NOISES.

"SATED with home, of wife and children tired,
The restless soul is driven abroad to roam."

So say "Rejected Addresses," but if Mr. Vaughan's decision at Bow-street on Tuesday holds good the restless soul will be driven abroad by something worse. Three youths were charged with playing an organ to the annoyance of Mr. Kent, a hotel proprietor. He naturally enough requested them to go away, and when (as is the custom of organ fiends) they refused he called a policeman and gave them into custody. Mr. Vaughan delivered himself as follows: "Unless you are disturbed in your business, or there is sickness in the house, or your health is affected by the sounds of the organ you cannot interfere." If this be the case we can only say the sooner the law is altered the better. It is absolutely intolerable that any lazy, hulking lout should have the power to annoy his fellow creatures simply for the purpose of getting money. That organs are a source of pleasure to poor children we do not deny, and we would be the last to deprive them of it, but any householder ought to have the power of ordering an organ to be removed, not merely from the front of his house, but out of hearing, say half a mile away. If the organ-grinder should refuse he should at once be given into custody and dealt with by the law.

THE NORMAL ABSORPTION OF FAT AND THE RELATION OF THE PANCREAS TO ABSORPTION OF FAT.

DR. VAUGHAN HABLEY, in experiments made to determine the relation of the pancreas to the absorption of fat in dogs, which are recorded in the current number of the *Journal of Physiology*, pursued the following plan. The animals were kept fasting for two days and the bowels were daily washed out with an enema of hot water, a small glycerine enema being subsequently given to effect the expulsion of the water. On the third day the pancreas was removed under an anæsthetic, the enemata being continued for two days. These animals were compared with others that were intact. Each set of animals were then supplied with a measured quantity of warm milk, and after a certain number of hours, varying in different cases, the animals were killed and the entire contents of the stomach and intestines separately analysed. In the intact animals the maximum rate of absorption of fat occurs about seven hours after the ingestion of food, for normally a dog absorbs from 9 to 21 per

cent. of the total fat given in from three to four hours, from 21 to 46 per cent. in seven hours, and 86 per cent. in eighteen hours. In a normal dog the passage of fat from the stomach varies with the individual as well as with the time allowed for digestion, but in eighteen hours the whole has entered the intestines. In dogs which have had the pancreas removed the quantity of fat given is not only again recovered, but a surplus is found which is probably derived from the intestinal secretion or excretion. Dr. Vaughan Harley also found that the capability of passage of fat from the stomach is very much delayed by the extirpation of the pancreas, such dogs only passing in seven hours from 9 to 22 per cent. through the pylorus instead of, as in normal dogs, about 86 per cent.

OUT-DOOR NURSING FOR THE POOR.

A CORRESPONDENT writes to us saying that at the Hunslet board of guardians, of which he is a member, he proposed and carried a resolution to the effect that a subcommittee should be nominated to consider the appointment of a parish nurse to look after the out-door sick and infirm poor. We think this a very admirable suggestion, and cordially hope that the subcommittee in question will report favourably to their board. The importance of nursing is gradually becoming more and more realised, and the comfort of a chronically ill patient—e.g., one afflicted with emphysema or rheumatic arthritis—depends to a very great extent upon nursing. There is also the difficulty, when the mother of a family is laid up, of providing means for doing the household work, washing, cooking, &c. This necessity our correspondent proposes to meet in what we fancy is a novel manner. He wants the board to cause the able-bodied women receiving out-door relief to give one day's service per week for cleaning and washing purposes. In this way the patient's mind would be freed from the anxiety which would otherwise arise as to how the household work should be done, and so one great impediment to getting well would be removed. We have also received the report of the Affiliated Benefit Nursing Association (12, Buckingham Palace-road), which aims at supplying nurses to look after cases in remote country districts, under the supervision of a medical man. Parishes combine to support one or two nurses, the number varying according to the size of the parish, and in addition a small weekly fee is charged. In the case of our correspondent's scheme falling through he might find it useful to communicate with the association we have mentioned.

THE CORPORATION OF MANCHESTER AND MONSALL HOSPITAL.

THE treatment of infectious disease, including small-pox, in Manchester, has hitherto been carried out by the infirmary, but the question of taking up the responsibility properly devolving on it has from time to time occupied the attention of the corporation. It has been brought to the front again by the serious and prolonged visitation of small-pox from which the city has recently suffered, and negotiations have taken place between the sanitary committee of the corporation and the infirmary authorities as to the terms on which Monsall Hospital could be transferred. The original cost of the estate and buildings first erected (in 1870) was £21,400, and since that time £49,260 have been expended on additional land and buildings, so that £70,660 has been the total capital expenditure. Its gradual increase to a hospital of 380 beds has been the result of the arrangement between the two bodies. The patients have had the advantage of treatment by the honorary staff of the Royal Infirmary, assisted by highly qualified resident medical officers, and the corporation has been relieved of its obligations. The rates paid for the

patients have at times been considerably in excess of expenditure, and the "profits" have always been applied to reducing the balance of the sum of £49,260, so that on Dec. 31st last only about £17,000 remained, for which sum, as no gain is sought, the infirmary would hand over the hospital on certain conditions, the most interesting of which to our profession is that, "in view of the great public value to be derived from the teaching of medical students in the wards, facilities be given for such instruction to the students of Owens College by the honorary staff of the Royal Infirmary." The sanitary committee has also had in view the necessity for a small-pox hospital remote from population and yet sufficiently easy of access, and on May 22nd, at an adjourned discussion, the following resolutions were unanimously adopted by the city council: "1. That the sanitary committee be authorised by the council to make all arrangements necessary for the transfer of Monsall Hospital from the Manchester Royal Infirmary to the corporation upon the terms above set forth, with a view to the treatment of small-pox cases being entirely removed therefrom, and that your committee be authorised to arrange for the purchase of such adjoining land as they may deem necessary. 2. That the sanitary committee be authorised by the council to make inquiries and report as to the steps they recommend to be taken for the provision of accommodation for the treatment of small-pox cases." The chairman of the sanitary committee stated that they had in view "a very suitable site at Carrington," where the corporation has a large estate, including Carrington Moss.

THE MINERAL WATERS OF FACHINGEN.

AMONG the new claimants for attention as watering-places and health resorts is Fachingen, near the town of Diez in the department of Wiesbaden. An analysis of the mineral springs of Fachingen made by Dr. Meincke yielded the following results: in 1000 parts of water there were found to be 3.54 parts of bicarbonate of soda, 0.55 of bicarbonate of lime, 0.64 of bicarbonate of magnesia, 0.63 of chloride of sodium, and small quantities of bicarbonate of iron and bicarbonate of manganese. This amount of soda is large and exceeds that found in the principal well-known alkaline springs, with the exception of Vichy and Bilin. Of all the purely alkaline springs Fachingen is said to have the largest amount of earthy salts—chalk, manganese, &c. The free carbonic acid present in the waters amounts to 1.78 per 1000. It is claimed for these waters that they dissolve and clear away mucus from the throat or stomach, that they excite the secretion of gastric juice and promote the peristalsis of the bowels, that they increase the alkalescence of the blood, and, above all, that they materially modify the character of the urine and exercise a solvent action upon urates and uric-acid deposits. The list of affections said to be favourably influenced by the Fachingen waters is a long one. When the mouth and throat are covered with a tenacious mucous secretion the waters, especially if used warm, are efficacious in giving relief. In morning vomiting, acidity of the stomach, heartburn, acid eructations, and the like, good results follow their use. Gout is said to be favourably influenced by these waters. It is recommended that they should be taken to the extent of half a bottle or a bottle per diem in the intervals between the attacks of gout, but that their use should be suspended during the attacks. It is also claimed that the Fachingen waters are beneficial in diabetes. It is, however, in renal and vesical affections that these waters are said to possess their greatest value. In acute and subacute nephritis, catarrh of the pelvis of the kidney, uric-acid concretions of the pelvis of the kidney and of the bladder, and acute catarrh of the bladder the best results are claimed for this method of treatment. In chronic catarrh

of the bladder these waters are less applicable, but are said to be occasionally useful. We give the above particulars without pledging ourselves to the opinions expressed, but the applicability of the Fachingen waters to most of the diseased conditions specified is obvious from their chemical composition. It seems impossible to doubt that the natural mineral waters seem on the whole to succeed better than the equivalent amount of the salts which they contain. The probability is that the combinations naturally existing in many mineral waters are favourable for absorption, while the presence in some of them of large quantities of free carbonic acid renders them grateful to the palate and the stomach. It is their comparative poverty in this gas which stamps with inferiority so many of the British waters. There is one disease mentioned in the above category with regard to which we are exceedingly doubtful whether any known mineral water exercises any appreciable influence—viz., well-marked typical diabetes. That some waters—e.g., those of Carlsbad—are very useful in the glycosuria of middle-aged and elderly persons we are fully prepared to admit; but where we find typical diabetes—i.e., where thirst and wasting coexist with marked polyuria and a large excretion of sugar—we believe these waters to be practically useless, and the same remark applies to other mineral waters. To send abroad patients with fully developed and hopeless diabetes in the illusory search for mineral waters which are to accomplish what ordinary medical treatment has failed to effect is, in our judgment, not only unwise but wrong. If dietetic treatment and opium fail to arrest diabetes, no mineral water is in the least likely to do so.

"THE PREVENTION OF OVERLAYING."

WITH reference to an annotation on this subject in our issue of June 1st, a correspondent calls attention to a plan adopted by many parents to prevent their offspring from being accidentally suffocated whilst in bed. The method adopted is simply to clothe the child in flannel so that it need not necessarily depend for warmth on the ordinary bed-clothing, and then to place it high up upon a pillow laid lengthwise between the mother's pillow and the opposite side of the bed, which should be so arranged that the infant could not possibly fall out, or when the parents sleep together the infant's pillow could be placed between the pillows used by the parents. The medical attendant might easily persuade the mother to adopt this plan, and if it were done the mortality from overlaying would in all probability be considerably reduced, as if it could be shown that the mother had wilfully neglected the advice of the medical attendant she might be liable to a serious charge. In view of the fact that many mothers would consider it a great hardship to be deprived of their babies during the night the suggestion is one to which some attention might be given.

OBESITY.

To judge from daily papers the problem of "How to be happy though fat" is one which still exercises the lay mind largely, and from the same sources of information the demand appears to have created the supply, and numbers avow their readiness to give "good advice" for a consideration. Sometimes even the advice, at first sight, is more disinterested, and a charitable individual, whose name is not to be found in the Medical Directory, offers to part with the secret of his own health and happiness to anyone who will send a stamped addressed envelope, but the secret generally consists of remedies unknown to fame, even of extra-pharmacopœias and lists of recent drugs, and obtainable only, at a price, from a special source. After all, the problem is not new; it is merely a revival. Some of the methods of reducing obesity, however,

have a certain air of novelty which seems to captivate those to whom the Banting system does not appeal. None the less, however, have the warnings so frequently given in the Banting age to be repeated in these days of hot water and nitrogenous diet. There is no doubt that weight can be rapidly reduced by such measures, independently of exercise; there is equally no doubt that the rapid reduction of weight and the sudden alteration of habits for most people constitute a source of danger. Most medical men can mention instances amongst their patients of unexpected illnesses which have supervened during a course of treatment for the reduction of obesity, and in recent obituary notices references have, rightly or wrongly, been made to supposed injuries to the constitution attributable to the same cause. Doubtless, in most cases, some disease has contributed its share; but the danger of hastening latent disease, or even of reducing vitality, so that the inroads of disease are no longer successfully resisted, is one which must always be borne in mind by those who are anxious to make themselves other than they are. Obesity is often the result of errors of diet and hygienic rules; but it is not uncommonly the sequence of some constitutional condition which renders exercise a matter of difficulty or impossibility, and in such cases it is hopelessly unscientific suddenly and violently to reduce the weight.

THE WORKHOUSES OF IRELAND.

WE have received from Sir Philip Smyly, the chairman of the Irish Medical Association, and Mr. William J. Hepburn, the honorary secretary to the council of that body, the following, with a request for its publication:—

"We address this letter to you in the hope, with your powerful assistance, of enlisting the sympathy of the public with the effort now being made to reform and ameliorate the general conditions of the workhouse system in Ireland. It would be impossible in such a communication as this to go fully into the misery and wretchedness awaiting those unfortunate poor who are doomed to enter and perhaps terminate their days in some of these institutions. A circular letter asking for definite information as to the condition and wants of workhouses and workhouse infirmaries having been addressed to the medical officers, seventy-nine of those gentlemen replied, others declined, saying they feared to incur the hostility of their respective boards. On carefully examining in detail the replies of those seventy-nine we find that forty-three infirmaries have no trained nursing, the nursing being entirely in the hands of pauper women, most of whom have come in burthened with children. Be it remembered, these women have to take charge of serious medical and surgical cases as well as of the lunatic patients: in sixty-one infirmaries the latter are in charge of paupers both night and day, and, in short, in almost all of them the nursing is quite insufficient and inefficient; in sixty-five the beds and pillows are of the roughest description, being merely bags filled with straw; in six only is there satisfactory ventilation; in fifty-nine the sanitary arrangements are of the most disgusting character imaginable—in fact, there is an absence of all sanitation; in forty-three there are neither plates, knives, nor forks for the poor inmates to eat their food with. Without going further into particulars, we may say there is in almost all an absence of proper food, nursing, sanitation, and comfort for those poor creatures who are compelled by dire necessity to enter these institutions, which the public would find it difficult to believe. We would, therefore, call upon the boards of guardians and the public to examine into these matters for themselves, and give us their active sympathy and help that this uncouth system may be improved and altered—that the infirmaries may no longer be disgraceful to this country, but provided with the proper necessities, conveniences, and comforts, as in any hospital for the sick."

We are happy to give publicity to this letter and to join our voice to those of the chairman and honorary secretary of the council of the Irish Medical Association in enforcing upon the local guardians and the Irish public itself the necessity of examining first hand the conditions of their workhouses and workhouse infirmaries. It is just thirty years since we

commenced in these columns drastic criticism of the management of our workhouses and workhouse infirmaries. The series of articles we then published, which had their origin in the story of the deaths of inmates of the Holborn and St. Giles's workhouses, resulted in a great humanitarian movement in the metropolis and furnished the British public with a capital object-lesson as to the power of the press. Much remains still to be done both in London and in the provinces in workhouse reform, but the communication from the chairman and honorary secretary to the council of the Irish Medical Association shows that in Ireland even a beginning has to be made. Surely such crying abuses will not in these days be left to the remedial assistance that a few zealous philanthropists, a few outspoken journalists, and a few practical Christians may be able to give. The people of Ireland as a whole should see to the matter for themselves. If each particular community will bring the proper pressure to bear upon its guardians the latter can be made to ameliorate, at any rate, the grosser conditions with remarkable alacrity.

THE FUTURE OF CHARING-CROSS HOSPITAL.

A STARTLING proposal has recently been made with regard to Charing-cross Hospital—namely, that the institution should be transferred to Battersea or Camberwell. That this would be a great advantage to South London we can imagine, but that it would aid the hospital in its financial position is, we think, more than doubtful, unless, and we assume this to be a fact, the present site and buildings are the property of the hospital. This being the case, the authorities could doubtless, with the money thus obtained, build a new hospital and school in a district where land is less valuable, and have a balance in hand. But consider the future. Would the subscriptions from the neighbourhood be as large, would the school be as popular, and would not the work be crippled even more than now on account of financial difficulties? A correspondent, writing in the *Times*, says in its new position the hospital would serve a much larger country area. To our thinking this is just what a metropolitan hospital should not aim at doing. The needs of London afford ample scope for the energies of any hospital. Another question to be considered is the convenience of the staff. Camberwell is much farther away in point of time from the consultants' quarter than Whitechapel or Hammersmith. In the *Times* of June 5th there is a letter signed "Southerner," who says: "There are many suitable men residents in the southern districts who would be willing to devote a certain portion of their time and means." For the managing board this would be all very well, but for the visiting staff let us remember that not everyone can bend the bow of Odysseus. The skill and learning of the general practitioner have been necessarily exercised in a different direction to those of the medical officer of a hospital staff. Neither can at a moment's notice replace the other, and each body would be equally ready to acknowledge this.

SPASTIC AND TABETIC TYPES OF GENERAL PARALYSIS.

IN a recent number of the *Journal of Mental Science* there is a paper on this subject by Dr. R. S. Stewart, who points out that cases of general paralysis are more or less roughly grouped in two classes, in one of which the clinical symptoms and pathological changes indicate a more or less close relationship to tabes dorsalis, while in the other the resemblance is to the conditions found in cases of lateral sclerosis. Dr. Stewart bases his views on an examination of the conditions found in 317 cases of general paralysis treated during the last ten years in the Glamorgan County Asylum. He found that the proportions of the two types per cent. were very unequal, 85 per cent.

being of the spastic type, while only 15 per cent. were tabetic in character. He also finds that, whereas in general paralysis as a whole the average age of onset is thirty-nine, in the spastic type it is thirty-eight and in the tabetic forty-one; and he points out that, according to Dr. Gowers, lateral sclerosis as a disease is more frequent than tabes dorsalis between the ages of twenty and thirty, and less frequent between the ages of forty and fifty. Taken generally also the tabetic cases have a longer duration than the spastic, and congestive seizures are more common in the latter than in the former. Thus, these seizures occurred in 72 per cent. of the spastic cases and in only 65 per cent. of the tabetic. Many of the tabetic cases, however, in their later stages become complicated with symptoms of lateral sclerosis, and in such cases congestive seizures are by no means rare. Again, in the two types a difference is found to exist in the character of the mental change which is present, melancholia being the rule in tabetic cases and mania in those of the spastic type. A comparison of pathological conditions also shows a greater diminution in brain weight in cases of the spastic type; while in the spinal cord, in cases of the tabetic variety, the shrinkage is greater antero-posteriorly, and in the spastic cases in the lateral diameter. There are other points of distinction, Dr. Stewart adds, but these are sufficient, as indicating the more prominent ones, to show that in general paralysis there are two more or less distinct varieties—one occurring in association with lateral, and the other in association with posterior sclerosis. The relation of the brain condition to the spinal condition he does not regard as in any way secondary. Both the cerebral and the spinal changes he regards as part of a widely spread morbid process.

THE HEALTH OF MR. GLADSTONE.

WE are glad to have authority for stating that Mr. Gladstone's attack of bronchial catarrh has been of a very slight nature. He was kept to his room for two or three days as a matter of precaution. On Wednesday morning Mr. Gladstone was much better, his pulse and temperature were normal, his cough was nearly gone, and he was allowed to go into another room.

SANITARY IMPROVEMENTS AT RHYL.

ON Whit-Monday the urban district council celebrated the completion of the new sewerage scheme at Rhyll, carried out by the advice and under the supervision of Mr. Baldwin Latham. Sir Charles Cameron of Dublin was present, and invitations were sent to about forty medical officers of health of the large midland and other towns. These were extensively accepted, and Mr. Baldwin Latham conducted the party over the works and explained the scheme and the apparatus. The large storage reservoir, which is unique in construction, can contain 382,000 gallons, nearly treble the maximum amount ever likely to be collected, and discharges twice a day within about an hour of the first ebb tide by an 18-inch iron pipe carried three-quarters of a mile into the sea and bent towards its outer end so as to suit the tidal current. The engine-house contains six gas engines, two smaller engines being used for ordinary pumping, two larger being used in dealing with storm water, and the remaining two small engines being employed in working a screening apparatus. All the engines are in duplicate, and each is complete in itself and entirely independent of the others. An automatic gearing apparatus controls the action of the pumps, so that while the engine works uninterruptedly the pumping goes on only when there is material to be removed from the discharging end of the sewers. The town sewers have all been reconstructed of new materials laid down on concrete foundations. All dead-ends are fitted with

automatic flushing tanks, and the whole system is ventilated by lofty shafts so constructed as to diffuse the sewer-air into the atmosphere at once. The chief features of this system in a town where many difficulties had to be surmounted are constant discharge from the town sewers, perfect flushing and ventilation, and the absence of tide-locked sewers. The advantages of the system were abundantly evident in the total absence of smell in the pumping house and the storage reservoir. Mr. Baldwin Latham stated that the scheme had been carried out in twelve months at a cost of £30,000, and that Rhyl was the third town in the United Kingdom, in point of time, to adopt a system that was perfect in every feature.

TYPHOID FEVER AT PLUMSTEAD AND WOOLWICH.

THE somewhat severe outbreak of typhoid fever at Plumstead and Woolwich, the occurrence of which we announced last week, appears now to have terminated; at any rate, in the sanitary district of Woolwich there has not been a case for the last few days. The outbreak was decidedly severe in Plumstead; 120 cases are known to have occurred in the district, and the outbreak was supposed to have taken its origin in a certain dairy. This dairy has been closed, and samples of water and milk from it have been sent to Professor W. R. Smith, medical officer of health of Woolwich, for bacteriological investigation. No typhoid fever organisms have been found. In Woolwich 21 cases occurred, and here again the dissemination of the mischief seems to have been due to a dairy. But the owners of the Woolwich dairy would seem to point to the owners of the original incriminated dairy at Plumstead as the real source of the trouble, as they state that they have made up their supply of milk by adding to it a gallon of milk from the Plumstead dairy. There are, we understand, no cases among the cadets at the Royal Military Academy.

REAL CHARITY.

THE town of Holbeck, near Leeds, has just embarked upon a laudable enterprise. Last winter a relief committee, organised to deal with the distress arising from the prolonged frost, became aware that there were always cases needing assistance of one form or another. Therefore a social and sanitary improvement committee was founded to carry out such work as providing convalescent home letters and sending poor children into the country under the auspices of the organisation already existing for that purpose. The committee further ascertained that the consultants of the town are willing to give their services free in any case of poverty where a second opinion is needed and the patient cannot be moved to the hospital. The committee also inquire into sanitary conditions and bring defects to the notice of the authorities. Of course, there is nothing new in such a body; it is only a revival of the functions of the deacons and parabolani of the Primitive Church, but an organisation such as this makes for the unity of Christendom far more than any amount of Grindelwald picnics, and we wish it every success and the compliment of imitation.

THE EASY ACCUSATION OF THE PROFESSION.

THE chief feature of a recent inquest at Carmarthen on a little girl unfortunately drowned was a long reflection by the coroner on the evil behaviour of a medical practitioner in hesitating to rush to the case when summoned on the ground that he did not see who was going to pay him. This censure of a professional man was founded on the unsupported evidence of an ironmonger's apprentice, and apparently in the absence of the accused gentleman. Surely the least the coroner could have done would have been to

have summoned Mr. Bowen-Jones before blaming him. It was not in evidence that the fate of the unfortunate child was in any way affected by what Mr. Bowen-Jones did or did not do. The child had been in the water a quarter of an hour when she was taken out, apparently quite dead. Artificial respiration was immediately used, first by the storekeeper and then by Dr. Parry, who arrived in a quarter of an hour. We should have no apology to offer for a medical man who was summoned to a case of drowning and declined to go till the question of his fee was settled. But we protest against a coroner lightly taking such statements as evidence against a member of the medical profession and passing judgment on him in his absence, and in leading the jury to do so. It is the duty of a coroner to confine his inquiry to the ascertainment of the cause of death and to refuse to entertain aspersions on a practitioner's conduct by a boy who confessed that he did not make the medical man understand that it was a case of drowning, and contented himself after his unsuccessful visit with going home.

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

THE annual report for 1893, prepared by Mr. Shirley F. Murphy, medical officer of health for the county of London, has just been issued. It contains elaborate statistical tables, as well as much valuable information of other kinds, and merits the extended notice which we shall give it shortly. Mr. Murphy estimates the London death-rate for 1893 at 20.9 per mille, being a slight increase on the average of the preceding decennium, but, nevertheless, being lower than that of Liverpool, Manchester, and Salford. The general zymotic death-rate of London for 1893 shows a slight increase on that of preceding years.

"RETURN" CASES OF SCARLET FEVER.

THIS subject is so often approached either exclusively from the view point of the medical officer of health or from that of the fever hospital medical superintendent that it is refreshing to be able to refer to cases where the medical officer of health acts in a dual capacity and is responsible for the disinfection both of infected houses and of discharged patients. Such cases are recorded by Dr. Cooper-Pattin, medical officer of health of Norwich, who reports that during 1894 eleven cases of scarlet fever occurred in connexion with patients discharged from the Norwich Fever Hospital. In endeavouring to explain the origin of these "return" cases, Dr. Cooper-Pattin observes that in some instances rhinorrhœa, which had ceased at the time of the patient's discharge from hospital, recurred after a short interval and was apparently instrumental in conveying infection to other members of the family. He thinks, and we believe there are many medical officers of fever hospitals who hold the same opinion, that nasal discharges set up by scarlet fever retain for a long period of time an infective quality. Secondary peeling—a manifestation to which we have on former occasions referred—took place in some of the cases under Dr. Cooper-Pattin's care, and he mentions one where a boy who had desquamated completely prior to his discharge from hospital was readmitted three weeks later with secondary desquamation manifesting itself. He is of opinion that these secondary desquamations account for the occasional occurrence of "return" cases, and he further thinks that in five of the eleven cases above referred to the source of infection was the recurrence of rhinorrhœa. Certainly there is an accumulation of evidence pointing to recurrent nasal discharges as a source of infection, but we have not ourselves come into contact with cases where the awakening of infection in a discharged patient's family suggested secondary desquamation.

as the cause of it. However, it is a difficult matter to dogmatise upon, and we must remain on the look-out for evidence. "Return" cases of scarlet fever are certainly sometimes associated with unfinished primary peeling, but whether after intervals of some three or four months the two phenomena stand in relation of cause and effect is perhaps hardly demonstrated. We notice, too, with interest that Dr. Cooper-Pattin regards three of the "return" cases alluded to as due to the exposure of infected clothes put away in the early stages of the patient's illness, before perhaps its nature was recognised. A short time since we asked, "What is 'Premature Discharge' from a Fever Hospital?" and we commend the above considerations to those who, with ourselves, are anxious to furnish an answer to the question.

AMERICAN ELECTRO-THERAPEUTICS. I.—

THERE appears to be a "boom" in electro-therapeutics on the other side of the Atlantic which is conspicuous by its absence on this. Nor is it a mere fashion of the day; there is solid work behind it. The American Electro-therapeutic Association is evidence of this. Established on the usual lines of other medical societies, this association presents one very exceptional feature. The Fellows "shall either be practitioners of medicine of good standing or electrical experts." The wisdom of such a rule may be open to question, but its aim is obvious and its intention excellent. It proclaims a due recognition of the principle that in electro-therapeutics "the physical problem underlies the biological one," and its object is to attain a higher standard of medical education in the physics of electricity. The annual report of the Society's transactions for 1894 does not seem yet to have reached this country, but in 1893 the association consisted of about eighty Fellows. Its various committees then submitted reports on standard coils, standard meters, static machines, constant current generators and controllers, electrodes, etc. The latter committee appears to be a standing one, and furnishes an example of painstaking and methodical work. Its chairman has addressed a circular which now lies before us, "to every manufacturer of electro-therapeutic apparatus whose address is known" in order to secure "the universal adoption of uniform connexions, a standard gauge of screw throughout construction, and efficient, durable, simple, and interchangeable electrodes." The report of this committee and the discussion thereon will form part of the proceedings of the society at its meeting in Toronto on Sept. 5th. Such a committee has much useful work before it. If in electro-therapeutics results are to be compared and a definite procedure followed, there is an evident necessity for the use of electrodes of a definite size and shape, easily procurable, and with distinctive designations. It is evident, for example, that a current strength (intensity) unbearable through an electrode of a certain size may be easily and painlessly passed through one of a greater surface area. It is long since the necessity for standard electrodes was recognised and advocated by Erb. Important steps in this direction were taken at the society's meeting two years ago, and it was also recommended on that occasion that all connexions be by "standard hole and pressure screws." The adoption of this simple detail would "soften the lot and sweeten the temper" of many a practitioner sorely tried by the treacherous and even dangerous insecurity of certain "plug and socket" connexions.

DR. NESTOR TIBARD has been appointed Secretary to the Pharmacopœia Committee of the General Medical Council.

THE Corporation of the City of London have made a grant of 30 guineas towards the funds of the Surgical Aid Society.

Pharmacology and Therapeutics.

PHOSPHO-GLYCERATE OF LIME.

DR. LAFAGE has recently published in the *Tribune Médicale*¹ an account of a number of cases in which he employed the phospho-glycerates of lime with advantage. These substances were brought to the notice of the profession last year by M. Robin, who communicated a paper upon their physiological and clinical properties to the Paris Académie de Médecine,² in which he showed that they increase the general nutrition of the body by means of the nervous system in certain forms of neurasthenia, where there is a want of muscular strength, incapacity for mental work, insomnia, and giddiness. Phospho-glycerate is also useful in ataxia, some paralyses, phosphaturia, chlorosis, anæmia, phthisis, and in the convalescence from acute disease, more especially in that following influenza. In these last cases Dr. Lafage has used phospho-glycerate of lime in the form of wine, syrup, and capsules and has obtained remarkable results, the impaired strength improving in the most rapid manner. He also mentions cases in which this drug appeared to have re-established the secretion of milk in nursing women where it had failed.

EXTERNAL USE OF GUAIACOL.

The *Journal de Praticiens* (March 16th, 1895) gives an account of the successful external use of this drug by M. Brice. It was given in 4 cases of pneumonia, 5 of typhoid fever, 4 of phthisis, 1 of bronchitis, and 1 of rheumatism. The amount applied each time was 1 to 2 cubic centimetres. Larger doses produced profuse sweats, with tendency to collapse.

TREATMENT OF WHOOPING-COUGH BY MANDELATE OF ANTIPYRIN.

The same number quotes M. Rehn's experience of this preparation, which appears to have been successful and not followed by any of the poisonous symptoms which have occasionally been known to follow the use of antipyrin in this disease. The salt is obtained by treating antipyrin with mandelic acid and M. Rehn prescribed it in sixty cases in children of various ages. In all the cases except two the paroxysms rapidly diminished in number, the appetite improved, and vomiting ceased, and M. Rehn attributed this to the sedative action of the drug. The dose given was five to ten centigrammes for children of three to five years of age.

DERMATOL IN OPHTHALMIC PRACTICE.

Dermatol, which is a subgallate of bismuth and has been employed in eczema and various skin diseases, is said by Dr. Romeo Roselli to be very efficacious in many forms of inflammation of the eye, causing effusions to be absorbed and possessing an astringent, drying, and cicatrising action. In bactericidal power it is more active than insoluble powders, such as calomel or iodoform, and rapidly disappears itself, probably by being absorbed. It is very useful in simple keratitis without photophobia or marked conjunctival hyperæmia, in corneal ulcers (especially in those of a traumatic origin), and even in diphtheritic conjunctivitis, but it is of very little good in blepharitis or in granular lids. The only objection to its use is that it causes smarting and lachrymation for a few minutes. Dr. Roselli's observations were made both on patients in the Eye Clinic and on animals in which inflammation had been produced by the *staphylococcus pyogenes*.

LACTIC ACID IN CORNEAL ULCERS.

Lactic acid, which is said by M. Mosetig to exhibit a partiality for diseased tissue, destroying it while leaving untouched healthy parts, has been found by Dr. Delschenoff very useful as a local application in corneal ulcers. In chronic cases with intense photophobia and marked hyperæmia of the vessels surrounding the cornea a single application of a 50 per cent. solution of lactic acid made with a pointed bit of wood generally enables the patient to bear the light quite well, and sometimes is sufficient to prevent the ulcer spreading, especially if it has not already attained any very considerable dimensions. An eschar is of course formed, which falls off in three or four days, revealing a healthy base, which is seen to be already commencing to cicatrise. The application of the acid is not painful, and if by accident a healthy

¹ Quoted in *Le Scalpel*, March 31st, 1895.

² *THE LANCET*, Nov. 10th, 1894.

part of the conjunctiva is touched the effect is so slight that by the next day the epithelium will be found to be replaced.

ANTIPIRYN AS A HÆMOSTATIC.

The hæmostatic effect of antipyrin has been noticed by MM. Huchard, Henocque, and Olikoff,³ though some other observers have not been able to confirm their statements. A remarkable instance of its power of rapidly coagulating blood in a very critical case has recently been published by Dr. Broussolle,⁴ surgeon to the Dijon Hospital. The patient had a large aneurysm affecting the transverse portion of the aorta which had encroached upon the walls of the chest so as greatly to thin the integuments. A rupture took place, and at first firm pressure on the sternum was used, which temporarily diminished the copious flow of blood, but the hæmorrhage was as violent as ever the moment the pressure was relaxed. Under these circumstances Dr. Broussolle determined to try the effect of antipyrin. After rapidly clearing away the clots from the skin a drachm of antipyrin was sprinkled on the wound and a pad of absorbent cotton wool applied with a bandage. The effect of the antipyrin was first to form a clot, which caused the hæmorrhage to diminish and ultimately to stop. It did not return, though the patient lived for forty-eight hours and died from pulmonary complications of long standing. The pad was found to be scarcely stained, and the size of the aneurysmal tumour had decreased to a marked extent.

THERAPEUTICS OF HEPATIC AND RENAL COLIC.

Mr. Fleiner has for two years investigated the mode of treatment which consists of injections of oil in cases of hepatic colic, and on the whole thinks it preferable to the administration of oil by the mouth, as much larger doses can be tolerated and more frequent repetition is well borne. The oil is supposed to act as a purgative and cholagogue, and so to favour the expulsion of calculi which have become arrested in the biliary ducts. This treatment may be continued over a long period of time and does not lose its purgative effect. From 300 to 500 grammes of pure olive oil should be given, and to attain success the injection should be made very slowly. It should be repeated every day for the first seven days, and then gradually reduced at first to every two days and then every three days, and so gradually dispensed with. The following prescription is also recommended for both hepatic and renal colic: Valerianate of amyl, sulphuric ether, of each three minims; to be made into capsules; two capsules to be taken every half-hour until six have been taken in the day. Amyl valerianate has a sedative and stimulating action, and in hepatic colic is said to be a specific, not only suppressing the attack, but dissolving cholesterin and preventing its return. In renal colic it is not so radical in its action, but eases the pain of the attack.

THE APPROACHING REVISION OF THE BRITISH PHARMACOPOEIA: NEW ORGANIC REMEDIES.

Messrs. Helbing and Passmore have just published in brochure form some good and useful suggestions, embodying what they consider should be the Pharmacopœial requirements of the new organic remedies. Their conclusions are evidently based upon a practical and intimate acquaintance with the drugs described. As representing the later remedies which synthetic chemistry has recently placed at our disposal, and the use of which has been justified by extended clinical observation, the following are mentioned:—chloralamid, dermatol, formaldehyde, guaiacol (crystalline), ichthyol, naphthalene, naphthol, phenocoll hydrochloride, piperazine, resorcin, salol, and trional. No exception can be taken we think to the suggestions in regard to the necessity for more stringent requirements for lanoline, saccharin, and sulphonal, and also in regard to some minor alterations in the characters and tests of acetanilide, antipyrin, paraldehyde, and phenacetin. The paragraphs dealing with the suggested pharmaceutical text for each remedy, and containing the character and tests by which purity and uniformity are to be recognised, are distinctly good and such as convey the impression that they could only have been the outcome of actual laboratory observation.

³ THE LANCET, Oct. 29th, 1887, p. 880.

⁴ La Semaine Médicale, April 10th, 1895.

THE MEASUREMENTS OF THE SKULL OF SIR THOMAS BROWNE.

By CHARLES WILLIAMS, F.R.C.S. EDIN.

SIR THOMAS BROWNE died on Oct. 19th, 1682, and was buried in the church of St. Peter Mancroft, Norwich. In 1840 his skull was "knaved out of its grave" by the sexton. It appears that some workmen who were employed in making a grave for the incumbent's wife accidentally broke into the vault which contained the coffin of Sir Thomas Browne. In some unexplained way they fractured the lid of the coffin, and thereby exposed the skeleton. The sexton did not consider it an act of sacrilege to take possession of the skull and to offer it for sale. Eventually the late Dr. Edward Lubbock became its possessor, and in 1845 the skull was deposited by him in the pathological museum of the Norfolk and Norwich Hospital, where it is still to be seen. It has recently been claimed by the vicar of St. Peter Mancroft, but unsuccessfully. The hospital authorities refused to relinquish the precious relic, and there it remains under its glass case, reverently preserved and protected, and long may it remain, not as an object of curiosity, but as a means of directing the attention of visitors to the learned works of that great scholar. The coffin plate of brass was also broken lengthwise at the same time. On it were engraved the remarkable lines, most probably written by his eldest son, Edward: "The best bred man" of Charles II.'s Court, President of the College of Physicians, and Physician to St. Bartholomew's Hospital. "*Hoc loculo indormiens corporis spagyrici pulvere plumbum in aurum convertit.*" It is a singular circumstance that the lead of which the coffin was made was found to be completely decomposed and to have changed to a carbonate which crumbled at the touch.

The measurements of the skull are expressed in English inches and tenths, and have recently been taken by means of Flower's craniometer, according to the plan suggested and carried out so extensively by the late Dr. Barnard Davis, the possessor of 1800 human skulls, recently deposited in the Museum of the Royal College of Surgeons of England, and to whom, as well as to Dr. Thurnham, the science of anthropology is so deeply indebted for the production of that great work, "Crania Britannica." The skull may be placed in the dolicho-cephalic class. It is quite edentulous, but is in a state of excellent preservation. The forehead is remarkably low and depressed; the head is unusually long, the back part exhibiting a singular appearance of depth and capaciousness. The following are the measurements:—Internal capacity, in ounces avoirdupois of dry sand, 69 ounces. Circumference round the forehead about an inch above the naso-frontal suture and over the most prominent part of the occiput, 21.5 in. Fronto-occipital arch, from the fronto-nasal suture along the centre of the calvarium to the posterior edge of the foramen magnum, 15 in.—(a) length of the frontal portion, 5 in.; (b) length of the parietal portion, 5 in.; (c) length of the occipital portion, 5 in. Intermastoid arch, from the tip of one mastoid process across the vertex to the tip of the other, 14.5 in. Longitudinal diameter, or length from the glabella to the most prominent point of the occiput, the glabella being regarded as about an inch above the naso-frontal suture, 7.7 in. Transverse diameter, or greatest breadth—interparietal, 5.8 in.; intertemporal, 5.4 in.—(a) frontal breadth at the most divergent points of the bone in the coronal suture, 5 in.; (b) parietal breadth at the protuberances, 5.6 in.; (c) occipital breadth at the junction of the occipital with the posterior inferior angles of the parietals, 4.8 in. Height from the plane of the foramen magnum at its centre to that of the vertex, 5.1 in.; (a) frontal height, 5.5 in.; (b) parietal height, 5 in.; (c) occipital height, 4.8 in.; taken from the axis of the auditory foramina these measurements are respectively 4.3 in., 4 in., and 4.5 in. From one auditory foramen to the other—(a) over the most prominent part of the frontal bone, 11 in.; (b) over the parietal bones, 12 in.; (c) over the occipital bone, 13 in. Length of the face from the nasal suture to the tip of the chin, an allowance of 0.6 in. being made for the absent teeth and absorption of alveolar ridges, 4.5 in. Breadth of the face from the most prominent point of one zygomatic arch to that of the other, 5.2 in.; from the external border of one orbital ridge to that of the

The Dean of Rochester presided last week at the Church House at the annual meeting of the Church Sanitary Association. The proceedings closed with a paper upon "Public Slaughter-houses and the Proper Inspection of Meat," by Dr. J. F. J. Sykes, medical officer of health for St. Pancras.

other, 4·2 in. Width of the lower jaw at the angles, 4 in. Proportion of the greatest breadth to the length (the latter taken as 100), 0·72. Proportion of the height to the length, 0·66. The above measurements were taken at the request of the late Dr. W. A. Greenhill of Hastings, who, at the time of his death in October, 1894, was engaged in preparing for the press a new edition of Sir Thomas Browne's "Urn Burial." It was his wish "to make the account more complete by giving the measurements of that great man's skull." Is it not strange that one who meditated so deeply on the transitory duration of monuments and the great mutations of the world should have exemplified in his own relic his words to Thomas Le Gros? "But who knows the fate of his bones, or how often he is to be buried? Who hath the oracle of his ashes, or whether they are to be scattered?"

Norwich.

ROYAL MEDICAL BENEVOLENT COLLEGE.

DR. HOLMAN presided at the annual general meeting of this institution on May 30th, when the report for the past year was presented to the governors and unanimously adopted. The report, which is a very satisfactory document, states that the full number of pensioners and foundation scholars has been maintained, and that there has been a slight increase in the receipts from annual subscriptions, upon which income the benevolent side of the institution in a great measure depends. The continued success of the school has compelled the council to give serious attention to the question of extending the accommodation, and it has been decided to build a lower or junior school capable of accommodating 100 boys. As many of the boys come to the college with a very limited education, this will be of immense benefit to them. The seating accommodation of the chapel has been inadequate for some time past, and with an addition of 100 boys its extension will become absolutely necessary. Plans for this purpose have been submitted by Sir Arthur Blomfield, and contributions to the amount of about £1175 are already in hand, but further subscriptions are urgently needed. In a few months the college will possess its own laundry. This is desirable, both from an economical point of view and also as a safeguard from the risk of infection. In accordance with the Act of Parliament which came into force on July 1st, 1894, the college is now open to all classes of boys, although special privileges are reserved for the sons of medical men. The gift by Mr. France of a ninth perpetual presentation to the School of St. Anne's Society for the orphan daughters of medical men has been completed; and the council are happy to report that under the provisions of the will of the late Mr. Bowen of Melbourne a considerable residuary estate is left to the college to be employed in the amelioration of the condition, or otherwise for the benefit, of the widows and orphans of medical men from time to time under the care and protection of the college. The council propose to increase the out-pensions from £21 to £30 per annum on and after July 1st, 1895. As it is upon the income from annual subscribers that the success of the charitable side of the college mainly depends, the council earnestly ask everyone interested in the institution to endeavour to obtain more annual subscribers. The progress of the school is well maintained. Several scholarships have been gained, and almost every Epsomian at Cambridge who is a scholar of his college had his scholarship either increased or extended, which speaks well for the training they received in the school in the past. The health of the boys has been remarkably good; work and discipline have been satisfactory; and the continued interest taken by the boys in their games is a healthy sign. Both cricket and football have been played with vigour.

It is probable that before July next there will be some vacancies for exhibitors, who must be sons of some of the less fortunate members of the medical profession. Application should at once be made to the secretary at the offices in St. O-square.

Dr. HOLMAN, in proposing the adoption of the report, remarked that the school was full to overflowing, and it had been decided to build a lower school, to enlarge the chapel, and to erect a laundry. As they were now in the flood-tide of success, it would be impossible to stand still, and they

must go forward. Referring to the generous gift from the late Mr. Bowen of Melbourne, the Chairman said the council had met with very inefficient support from their brethren in England, and they had been pushing the claims of the college in all parts of the world. A South African paper had published a leading article on the merits of the college, and only about a week ago a subscription had been received from Hong-Kong. Dr. Harvey of Calcutta had moved very actively in the matter in India, and two subscribers of £10 a year had been added to the list. Adverting to the new Act of Parliament which had been passed for the benefit of the school, he said that when the asylum was empty it would be used for school purposes, but the school would pay a rental which would go towards the benevolent part of the work. Under the Act they had powers to borrow, and for the proposed extensions it would be necessary that these powers should be used.

The retiring members of the council, Dr. M. Baines, Dr. R. H. Bradley, Dr. Charles Drage, Colonel Gordon Watson, Mr. J. J. Purnell, Mr. H. E. Vardon, Sir Edward Sleveking, Sir Arthur Watson, Mr. C. L. Smiles, and Surgeon-Major De Tatham, were re-elected for a further period of three years, and the proposed increase to the out-pensions in consequence of the legacy of Mr. Bowen of Melbourne was agreed to.

The new by-laws received the approval of the Governors, the auditors were reappointed, and a vote of thanks to the Chairman for his great services as treasurer and for his able conduct in the chair brought the meeting to a close.

The lists of successful candidates for the pensionerships and for the foundation scholarships were published in THE LANCET of June 1st. There is no vacancy for a Fugh pensionership or for a Morgan annuitant.

THE ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, AND THE HALF-YEARLY MEETING OF THE FELLOWS OF THE COLLEGE.

NOTICE has been given that "a meeting of the Fellows of the Royal College of Surgeons of England will be held at the College in Lincoln's-inn-fields, on Thursday, the 4th day of July next, at 1.30 o'clock in the afternoon precisely, for the election of five Fellows into the Council of the College." Intending candidates may be reminded that "blank forms of the requisite notice from a candidate and of his nomination may be obtained on application to the secretary, and that the same must be received by him, duly filled up, not later than on Monday, the 10th of June next." Candidates are as liable as other people to make mistakes, either of commission or omission, and delays in providing themselves with the necessary forms, in getting them properly filled, and in transmitting them to the secretary in time may prove dangerous or fatal to their prospects of election. Last year a casualty occurred, and on another occasion the friends of an intending candidate were kept employed all day in rectifying his inadvertent omissions to comply with the official requirements, with the result that it was only upon the stroke of twelve at midnight on the last day for the reception of applications from candidates that his papers were lodged inside the doors of the College.

It is satisfactory to note that the election will be held under an amended by-law (Section IV.), and that Fellows of the College will no longer be required to apply for voting-papers. A voting-paper will be sent by post to each Fellow whose address in the United Kingdom is registered at the College on Saturday, June 22nd next.

Notice has also been given to the Fellows that a meeting of the Fellows will be held at the College on Thursday, July 4th next, at 5 o'clock P.M., for the following purposes:

1. To read the minutes of the half-yearly meeting of Fellows on Jan. 3rd last.
2. The President to report proceedings in connexion with the application to the Secretary of State for alterations in Sections IV., XVI., and XXV. of the By-laws.
3. To read the following resolutions adopted by the Council on Feb. 7th, 1895, in reference to the resolution

adopted at the last meeting of Fellows requesting the Council to appoint a conjoint committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new Charter—viz.: (a) that in accordance with the opinion of the legal advisers of the College, the Council do not deem it expedient to accede to the resolution passed at the meeting of Fellows held on the 3rd ultimo; (b) that a committee of the Council be appointed to receive deputations from the Fellows of the College upon the subject of the resolution of the meeting of Fellows of Jan. 3rd last and to report thereon to the Council; (c) that copies of the two foregoing resolutions be forwarded to the mover and seconder of the resolution of the meeting of Fellows.

4. For the consideration of any motions which may be introduced by Fellows, in accordance with Clause 6, Section XXIII. of the regulations of the Council, relating to meetings of Fellows.

It is added that motions must be signed by the mover or by the mover and other Fellows, and must be received by the secretary not later than Wednesday, June 12th next.

RECENT IMPROVEMENTS IN THE PRODUCTION OF COD-LIVER OIL AND CASTOR OIL.

CHIEFLY through the interesting and important researches of Heyerdahl it is now known that cod-liver oil can be prepared not only free from objectionable taste but also from the tendency it has after administration to cause unpleasant eructations. The first improvement—viz., that of taste—was effected on the introduction of what is known as Peter Müller's steam process, which, when properly carried out, produces an oil absolutely free from decomposed albumens and consequently from repulsive taste, but still not from the tendency to set up irritation in the stomach, with eructation as a sequel. The latter very disagreeable property was ultimately removed when the cause was made known by the investigator just mentioned. Thus Heyerdahl showed that the fats of cod-liver oil (which he named *therapin*, 20 per cent., and *jecolein*, 20 or more per cent.) are entirely different from other fats, and that one of their most remarkable characteristics is a much stronger tendency to form hydroxylated compounds than that possessed by all other known fatty substances. The formation of hydroxy-acids is probably the true cause of the rancidity, and therefore of the irritating and repeating qualities of the oil, while as the medicinal value of the oil depends on these fatty acids, combined of course in the form of glycerides, it is obviously desirable that these glycerides should be retained in the oil absolutely unimpaired. This end is accomplished by completely excluding the fats from the action of free oxygen throughout the whole process of preparation. This is effected by keeping the oil under an atmosphere of carbonic acid gas from the moment it leaves the liver cells till it is bottled and corked. Samples of cod-liver oil said to be prepared in the manner described have been recently submitted to us for examination by Messrs. Müller and Co., 43, Snowhill, E.C. In view of the care and skill which are exercised during the course of its preparation, it is hardly surprising to find that the oil is what it is stated to be—free from objectionable taste and smell, of a pale straw colour and according to our examination of a specific gravity at 60° F. of 0.9275. The specimens afforded, indeed, distinct evidence of the success which has deservedly attended the long and painstaking research instituted by Messrs. Müller, the results of which are not only satisfactory in having manifestly cleared up some obscure points in regard to the composition and constitution of cod-liver oil, but also in that it has led to a means of preparing one of the most powerful nutrients at the physician's disposal, and that in a form which is most acceptable for administration.

Curiously enough, we have had brought before our notice almost simultaneously with the foregoing an improved process for the production of castor oil, in which precautions similar in kind to the process described in the preceding paragraph are adopted. Indeed, it is not unlikely that under the oxidising influences of the air castor oil is susceptible to the same changes as cod-liver oil. There is no more valuable

and useful member of the *materia medica* than castor oil, and as a safe and efficient cathartic it stands alone; but as everyone knows it is commonly repulsive to the taste, and, unfortunately, this drawback proves frequently strong enough to render its administration impossible, except perhaps in capsules or when it is highly flavoured and the original taste masked by a strong and agreeable aromatic. It has recently been made perfectly clear to us, however, that the repulsive taste of castor oil can be largely if not entirely obviated by a better mode of extraction of the oil from the seed, and by adopting certain measures in carrying out refinement prior to bottling. It appears that the opinion has hitherto been that the seed must first be ground so as to break the oil cells before they are submitted to the crushing process, whereas it has been shown by Mr. Mitchell, of the British Castor Oil Company, 47, Victoria-street, Westminster, that this treatment previously to the application of direct pressure is unnecessary, if, indeed, not prejudicial to the condition of the oil. All that is done in the Mitchell process, every detail of which we have inspected at the factory, is merely to press the seeds by hydraulic means (taking care so to adjust the pressure that the oil is not too forcibly expelled) first in the cold—the oil so obtained being reserved exclusively for medicinal purposes—and then raising the temperature so as to express the residual oil, which is one of the best known for lubricating purposes. After leaving the press the cold-drawn oil is forced up in vacuo into filter presses containing filter cloth of varying degrees of thickness, and after a series of refinements in this way, all conducted rigidly in vacuo and without any appreciable rise of temperature, the oil is received into bottles, from which also the air has been previously exhausted. The oil so obtained is of a clear, pale straw colour, of a specific gravity of 0.964, and remarkably free from obnoxious taste. Indeed, it will be found to possess, on the contrary, an agreeable nutty flavour, which, as has been said by Professor Atfield, "is as attractive as that of ordinary castor oil is repulsive." Unless care is taken, however, to exclude the air as far as possible from this pure cold-drawn product—if, for example, there is any neglect to keep the bottle containing it well corked—it deteriorates in course of time, as might be expected, and eventually yields a white crystalline deposit, the taste then becoming as objectionable as that of the ordinary kinds of oil. It is worth mentioning also that this oil appears to possess just twice the therapeutic effect of castor oil obtained by ordinary methods, so that it is probable that when castor oil is exposed to the air and deposits part of its fatty constituents there carry with them an important part of the valuable medicinal property of the oil. This observation suggests a line of investigation which would probably throw light on the question as to what the active purging principles of castor oil really are. Mitchell's process of extracting and refining castor oil is obviously an improvement which the profession cannot fail to approve and welcome, since in removing the great objection to the oil—namely, that of repulsive taste—as well as in securing its full therapeutic effect it is calculated to assist and to facilitate the administration of a very valuable therapeutic agent.

DIPHTHERIA IN LONDON IN 1894.

THE issue of the annual summary of the Registrar-General for 1894 enables us to ascertain how the several sanitary areas of the county of London stood during the year as regards diphtheria in its fatal form. And the result is to disclose widely differing rates of mortality from the disease in the forty-three sanitary districts into which the county is now divided. As a whole, London suffered less from diphtheria in 1894 than in the preceding year, the rate being considerably lower, and the total deaths 2670, or, with croup added, 2836, a number 646 below that of 1893, but 786 in excess of the average of the preceding decennial period. The diphtheria death-rate per 10,000 living was last year 6.1, as compared with only 3.6 as the annual average of the nine years 1885-93. If we look to the distribution of the deaths over the county, we find that of the forty-three areas there were ten which had deaths identical in number, or practically so, in both 1893 and 1894; that seven other areas had excess of

actual deaths in 1894 as compared with the preceding year; and that as many as 26 had fewer deaths last year than in 1893. In respect of locality of deaths occurring last year, it will be seen from the accompanying diagram how the several areas figure in relation to London as a whole, and in regard to the means of the five groups into which the Registrar-General divides the metropolis. One noticeable feature is that in the eastern group the several districts, with one trivial exception, all exceed the mean for London, whilst not one of the central group reaches it; and another that the mean is reached only by two districts in the western group, and would, judged by the mean of the group, be much below the line for London had it not been for the two excessive rates of Paddington and Fulham. There is but little doubt remaining after study of the diagram that the conditions of life in East London are conducive to heavy diphtheria mortality, and that next thereto those obtaining on the south side of the Thames exercise a baneful influence on the death-rate from the disease, the mean of the group being above that of London, and in itself exceeded by eight of the fifteen areas. Looking to the populous districts in the northern group, they compare very favourably with other parts of the metropolis, and outside Islington and Hackney are well below the mean.

The admissions of patients suffering from diphtheria

to hospital are given by the Registrar-General for the years 1885-94, together with the annual deaths among such cases; and we have taken out the percentages of fatality for the past seven years in this metropolitan hospital practice, the record running thus:—

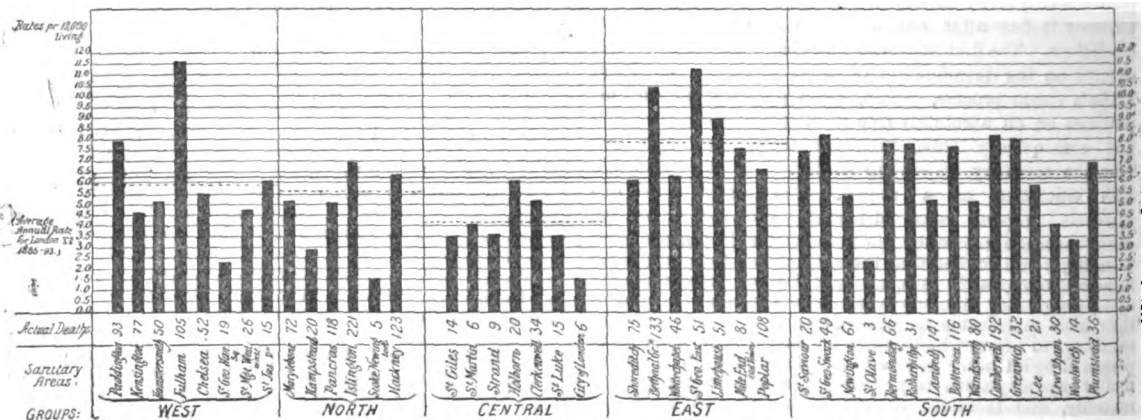
Year.	Admissions.	Deaths.	Mortality per cent. of admissions.
1888	111	50	45.0
1889	740	278	37.6
1890	965	317	32.8
1891	1330	399	30.0
1892	2021	584	28.9
1893	2853	866	30.4
1894	3691	1041	28.2

The data show that, although the admissions have much increased in the period, the rate of mortality has been fairly steady in the last five years, and that with a number far in excess of any previously recorded annual statement the death-rate in hospital-treated diphtheria cases last year in London was the lowest in the list.

FATAL DIPHTHERIA IN LONDON, 1894.

In Rates per 10,000 living in each Sanitary Area, relatively to the Mean Rate for the County and for the several Groups of Districts.

(The dotted lines are the Group Mean Rates.)



RAILWAY ACCIDENTS IN 1894.

THE Blue-book recently issued giving the returns of accidents and casualties as reported to the Board of Trade by the several railway companies in the United Kingdom during the year ending Dec. 31st, 1894, sets forth some interesting and instructive figures respecting the working of our great railway systems, which go to show that many accidents might be prevented if more rigorous measures were adopted both with respect to railway servants and the general public. The number of accidents to railway servants while engaged in shunting operations might be considerably lessened if stringent rules were made and applied prohibiting jumping on and off engines while in motion; and many of the buffer accidents might be prevented if the men were severely discouraged from their foolhardy and venturesome proceedings. With passengers, too, a little thought and care would prevent many of the accidents that overtake them on the railway, but over these the companies have little control. With the railway servants it is different, and the companies should devise some means of preventing their servants from running into danger.

During the twelve months under consideration the total number of personal accidents amounted to 1185 killed and 9165 injured, but these figures include accidents which occurred upon the premises of the railway companies and in which the movement of vehicles used exclusively upon railways was not concerned. The total number of persons killed

during the course of public traffic in 1894 was 1115, and of injured 4120. Taken as a whole the figures do not show any striking comparison with those for 1893, which were 1011 and 4109 respectively; but the detailed tables bring out some interesting points. The number of persons killed and injured while passing over railways at level crossings during 1894 was 80 and 31 respectively, as compared with 55 deaths and 30 injuries in 1893. The number of trespassers killed, including suicides, was 395, and injured 137, an increase of 35 and 2 respectively. Sixteen passengers were killed and 347 injured from accidents to trains, rolling stock, permanent way, &c.; and of the companies' servants 6 were killed and 62 injured from the same causes. Of the 620 persons killed and 1052 injured by other causes than accidents to trains, including accidents at level crossings, 101 of the killed and 821 of the injured were passengers. Of these, 27 were killed and 49 injured by falling between carriages and platforms, either in getting into or alighting from carriages; 22 were killed and 16 injured while passing over the line at stations; and 16 were killed and 61 injured by falling out of carriages during the travelling of trains.

The accidents to servants of the various companies include 473 fatalities and 2649 injuries. Of these, 23 of the deaths and 298 of the injuries were caused whilst the men were coupling or uncoupling vehicles; 1 fatal case and 19 injuries are reported as being caused by the shunters coming in contact, whilst riding on vehicles during shunting, with other vehicles standing on adjacent lines; 19 injuries were caused

by standing on buffers, and 18 deaths and 196 injuries from getting on and off engines and waggons which were being shunted from one line to another.

Three passengers were killed and 159 injured while ascending or descending steps at stations, and 38 were injured by being struck by barrows, falling over packages, &c. on station platforms.

The following cases, which fortunately involved no personal injury, are instructive, inasmuch as they direct attention to possible sources of accident which increased care would prevent: 1 case of a train coming in contact with projections from another train travelling on parallel lines; 38 cases of trains running through gates at level crossings; 1 case of the bursting of boilers, tubes, &c. of engines; 387 failures of tyres; 2 failures of ropes used in working inclines; 5 failures of tunnels; 254 failures of rails; 1 case of fire in trains; and 4 fires at stations.

The evidence and reports of twenty-two inquiries into accidents instituted by the Board of Trade are included in the Blue-book, and complaint is made in several cases by the inspecting officers as to the long hours of the railway men.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool Port Sanitary District.—There were 3306 vessels inspected in the waters of this district during 1894, and of this number 2700 were British and 258 Norwegian. Notices were served in 170 cases, and only in one case was it necessary to obtain a magistrate's order. Regulations under Section 125 of the Public Health Act, 1875, for the removal of infected persons from on board ship were made by the port sanitary authority during the year. There was, Dr. E. W. Hope reports, a great reduction in the number of emigrants passing through the port during 1894 as compared with the previous year, the respective numbers being 106,147 and 167,468. The reduction was due in large part to the restrictions placed upon emigrants in the United States. Of the total number of emigrants in 1894, 53,164 were English, 2378 Scotch, and 6926 Irish. A considerable number of emigrants are rejected after medical inspection on board ship owing to unfitness of one kind or another. Varicella appears to be one of the most frequent causes of rejection, while alcoholism also ranks high.

Stoke-upon-Trent Urban Sanitary District.—The infantile mortality in this district for 1894 was 242.1 per 1000 births, the general death-rate being but 15.7 per 1000. Dr. Samuel Johnson states that the condition of the potters has been much improved during the year under review. Overalls have been adopted for all workers in dust and glaze, and mess-rooms have been provided for the employes in the lead departments. Lavatories have also been provided for the lead workers, and they are compelled to wash before partaking of meals. Respirators have been advised for all potters, but their use is at present optional.

Maidstone Urban Sanitary District.—An interesting instance of local pollution in a water-main is recorded by Mr. M. A. Adams in his current annual report. A polluted sample of water attracted attention, and it was found by some control analyses which were made that the pollution was confined solely to the water drawn from a certain hydrant. On laying bare the main it was found to be perforated at two points just below a surface gully. In-suction of polluted matter had apparently taken place, and the analysis of water drawn from the neighbouring hydrant led to its detection. Mr. Adams reproduces in the report before us the paper he read at the International Congress at Budapest on the Movements of Subsoil Water in relation to the Occurrence of Diphtheria in Maidstone. Those who attended the Seventh International Congress of Hygiene and Demography in London in 1891 will remember that Mr. Adams then contributed an interesting paper on the above subject, in which he endeavoured to show that diphtheria (1) is primarily due to the special micro-organism bred and born on the soil; (2) that, given the special organism implanted upon the soil, the initial factor that determines its propagation is the condition of the soil with respect to moisture, temperature, aëration, and organic pollution; and

(3) that its dispersal from the soil to persons living upon the soil is due to movements of the subsoil air. As a result of his further investigations, which seem strongly to support his primary conclusions, Mr. Adams would add to the above propositions: (4) that the quality of the disease, as measured by its fatal effect, is controlled by the range of the movements of the subsoil water. In the report before us there is furnished a chart showing for the years 1885-93 inclusive the diphtheria incidence in Maidstone in relation to the height and fluctuations of subsoil water. The paper is well worth reading, and a comparison between the results at Maidstone and those at other and larger districts would be instructive.

Lowestoft Urban Sanitary Authority.—It is certainly, as Mr. Francis Clarke observes, somewhat surprising to hear that in a town like Lowestoft there should be still nearly 1000 houses obtaining their drinking-water from wells many of which are shallow and receive soakage from neighbouring privies and middens. Out of twenty-six samples of well water sent to the public analyst during 1894 not one was a potable water. In connexion with the general town supply, Mr. Clarke reports that the analyses show that during the latter part of the year the filtering tanks were severely taxed by the heavy rains which then occurred. At the Lowestoft Sanatorium two of the staff contracted disease from the patients, and these cases, Mr. Clarke points out, illustrate the risk which the staff at a fever hospital incur and show the justice of basing the salaries on a liberal scale. In endorsing this statement we would add that a high degree of risk is not by any means the only drawback attached to the staff of a fever hospital.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6369 births and 3491 deaths were registered during the week ending June 1st. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 17.7 to 17.4 per 1000, further fell last week to 17.2. The lowest rates in these towns were 9.9 in Derby, 11.4 in Cardiff, 12.3 in Hull, 13.4 in Bradford, and 13.6 in Croydon; the highest rates were 21.8 in Preston, 23.0 in Burnley, 23.8 in Manchester, 27.6 in Liverpool, and 28.0 in Wolverhampton. The 3491 deaths included 347 which were referred to the principal zymotic diseases, against 304 and 354 in the two preceding weeks; of these, 91 resulted from measles, 82 from whooping-cough, 69 from diphtheria, 41 from diarrhoea, 34 from "fever" (principally enteric), 30 from scarlet fever, and not one from small-pox. No fatal case of any of these diseases occurred last week in Swansea, Huddersfield, or Halifax; in the other towns they caused the lowest death-rates in Cardiff and Croydon, and the highest rates in Gateshead, Manchester, Bolton, Plymouth, and Wolverhampton. The greatest mortality from measles occurred in Plymouth, Bolton, Manchester, and Newcastle-upon-Tyne; from scarlet fever in Burnley; from whooping-cough in Wolverhampton, Norwich, Blackburn, and Gateshead; and from "fever" in Derby. The 69 deaths from diphtheria included 41 in London, 5 in Wolverhampton, 4 in West Ham, and 3 in Leeds. No fatal case of small-pox was registered last week either in London or in any of the thirty-two large provincial towns. There were 20 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, June 1st, against 33, 27, and 29 at the end of the three preceding weeks; 1 new case was admitted during the week, against 6, 4, and 7 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1524, against 1438, 1446, and 1503 on the three preceding Saturdays; 187 new cases were admitted during the week, against 179, 185, and 214 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 240 and 245 in the two preceding weeks, declined to 194 last week, and were 90 below the corrected average. The causes of 47, or 1.4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leicester,

Leeds, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21.1 and 20.2 per 1000 in the two preceding weeks, rose again to 21.4 during the week ending June 1st, and was 4.2 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14.9 in Leith and 16.7 in Aberdeen to 22.2 in Edinburgh and 26.0 in Dundee. The 617 deaths in these towns included 17 which were referred to whooping-cough, 17 to diarrhoea, 12 to measles, 8 to diphtheria, 6 to "fever," and not one either to small-pox or scarlet fever. In all, 60 deaths resulted from these principal zymotic diseases, against 66 and 64 in the two preceding weeks. These 60 deaths were equal to an annual rate of 2.1 per 1000, which was 0.4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 14 and 17 in the two preceding weeks, were again 17 last week, of which 16 occurred in Glasgow. The deaths referred to measles, which had declined from 30 to 18 in the three preceding weeks, further fell to 12 last week, and included 5 in Edinburgh, 2 in Glasgow, and 2 in Leith. The fatal cases of diphtheria, which had been 4 and 3 in the two preceding weeks, rose to 8 last week, of which 5 occurred in Glasgow and 2 in Edinburgh. The 6 deaths referred to different forms of "fever" exceeded the number recorded in any recent week, and included 3 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 109 and 103 in the two preceding weeks, rose again to 118 last week, and exceeded by 23 the number in the corresponding week of last year. The causes of 43, or nearly 7 per cent., of the deaths in these eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the five preceding weeks from 27.0 to 28.5 per 1000, declined again to 26.7 during the week ending June 1st. During the past nine weeks of the current quarter the death-rate in the city has averaged 29.6 per 1000, the rate during the same period being 17.4 in London and 19.2 in Edinburgh. The 179 deaths registered in Dublin during the week under notice showed a decline of 12 from the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 5 and 7 in the two preceding weeks; of these, 3 resulted from diarrhoea, 2 from small-pox, 1 from scarlet fever, 1 from diphtheria, 1 from whooping-cough, and 1 from "fever." These 9 deaths were equal to an annual rate of 1.3 per 1000, the zymotic death-rate during the same period being 1.9 both in London and in Edinburgh. The 3 fatal cases of diarrhoea exceeded the number in any recent week. The 2 deaths from small-pox corresponded with the number recorded in the preceding week; since the beginning of April 14 fatal cases of this disease have been registered within the city. The death referred to diphtheria was the first recorded during the past four weeks. The 179 deaths registered in Dublin last week included 26 of infants under one year of age and 44 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the number recorded in the preceding week. Nine inquest cases and 7 deaths from violence were registered; and 64, or more than a third, of the deaths occurred in public institutions. The causes of 17, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR WILLIAM JAMES BAKER, from half-pay, to be Surgeon-Major, vice G. Laffan, M.D., deceased.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain J. M. Cadell, Officiating Civil Surgeon, is appointed to the Civil Medical Charge of the Etawah District. **Surgeon-Major A. E. J. Croly, A.M.S.**, is appointed to act temporarily as Civil Surgeon at Satara, in addition to

his own military duties. The services of Surgeon-Lieutenant **W. Young**, North Lushal Hills, are placed at the disposal of the Government of the Home Department. The following officers are transferred:—**Surgeon-Major T. H. Sweeney**, from Fyzabad to Benares, as Officiating Civil Surgeon, 1st class; **Surgeon-Major D. F. Barry**, Civil Surgeon, from Sitapur to Gorakhpur; **Surgeon-Major C. C. Vaid**, Civil Surgeon, from Kheri to Sitapur; **Surgeon-Major C. P. Lukia**, Civil Surgeon, from Shahjahanpur to Fyzabad; **Surgeon-Major J. C. C. Smith**, Civil Surgeon, from Bara Banki to Shahjahanpur; **Surgeon-Major G. A. Emerson**, Civil Surgeon, from Jaunpur to Jhansi; **Surgeon-Captain L. G. Fischer**, Civil Surgeon, from Budaun to Moradabad. **Dr. C. Banks, M.B., C.M., D.P.H.**, is confirmed in the Uncovenanted Medical Service, and his services are placed permanently at the disposal of the Government of Bengal.

NAVAL MEDICAL SERVICE.

Deputy-Inspector-General of Hospitals and Fleets Walter Reid, M.D., has been placed on the Retired List at his own request, with permission to assume the rank of Inspector-General of Hospitals and Fleets.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Charles S. Smith to be Surgeon-Major.

VOLUNTEER CORPS.

Rifle: 3rd Glamorgan: Surgeon-Lieutenant-Colonel J. G. Hall resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement.

THE SEWAGE FARM AT ALDERSHOT.

In reply to a question recently asked by Mr. A. Morton in the House of Commons regarding the alleged sickness and mortality caused by the sewage farm at the North Camp, Aldershot, and an inquiry as to whether anything had been done to remedy the evils complained of, the Secretary for War said that it was not known that any cases of death could be attributed to the sewage farm in question, although it was a fact that the farm was in an unsatisfactory state. Mr. Campbell-Bannerman added that negotiations were in progress with the local authorities with a view to the provision of another sewage farm at a greater distance from the camp, but steps were being taken in the meantime to improve the present farm. Everybody agrees with the Secretary for War as to the very unsatisfactory state of the existing farm, and we can only hope that it is not intended to continue it for a moment longer than is necessary to provide a new site as a substitute for it. Although it may be quite true that a properly worked sewage farm is not productive of any disease—and the good health of the labourers and their families employed upon sewage farms and residing in their immediate vicinity may be cited in proof of this—it cannot be said that they are never a nuisance. It is difficult to ensure such a perfect system of working them under all conditions as invariably to prevent their being so, and we certainly think that where ground is available, as it presumably is at Aldershot, a sewage farm should be established at a reasonably long distance from all barracks and hospitals. We hope that this will be the case with regard to any sewage farm and works proposed to be established for a big camp like Aldershot.

THE DEFENCE OF CHITRAL.

The coolness, courage, and gallantry displayed by the medical officers who took part in the defence of Chitral form a decided refutation of the calumny that puts the army medical officer on a lower footing than his lay brother in arms. In times of war the rôle of the surgeon is to attend the wounded, but circumstances often compel him to act in the double capacity of fighting the human enemy as well as keeping at bay the enemy death. How well he has performed this double rôle is shown by the history of all modern campaigns and no better example of his coolness, combined with courage and presence of mind could be afforded than by that of the heroic feat performed by **Surgeon-Captain Whitchurch**, when, at the risk of his own life, he rescued **Captain Baird**, who with his last breath hoped that his gallant rescuer would not be forgotten. It was only natural that the dying captain should be grateful for the services rendered by **Surgeon-Captain Whitchurch**, but when almost without exception military men and civilians speak of the deed as one of the bravest of the century nothing less than the honour of wearing upon his breast the medal whose legend is "For Valour" can adequately reward

Surgeon-Captain Whitechurch. Of Surgeon-Major George Scott Robertson we have already spoken, and when the long-deferred Chitral honours are promulgated we trust that he will occupy a prominent place upon the list.

THE LATE SURGEON-COLONEL C. McD. CUFFE, C.B.

A telegram from India has, we regret to say, been received announcing the death of this officer, who held the post of principal medical officer at Allahabad, Bengal. He entered the army as an assistant surgeon in 1863, passed through its various grades, and was promoted to be surgeon-colonel in 1893. The deceased officer had taken part in much field service. He was principal medical officer of the Transkei column throughout the operations against the Galekas in the Kaffir war of 1878, he served throughout the Zulu campaign to the conclusion of the war, was mentioned in despatches, and received the Companionship of the Bath, and medal and clasp; he also served in the Burmese expedition of 1887-8 (medal and clasp).

THE RECONSTRUCTION OF THE MILITARY MEDICAL SERVICES IN INDIA.

This subject is apparently again under consideration and is being freely discussed at the present time in the Indian press. The late military expeditions and the financial needs of the Indian Government have no doubt given a fresh impetus to the matter, which is one that was discussed many years ago in the pages of THE LANCET. It is contended that there should be some sort of amalgamation of the medical services, and that the Indian Medical Service should consist of a military and a civil branch, separate and distinct from one another.

THE MEDICAL SERVICE AND THE WAZIRISTAN EXPEDITION.

General Sir William Lockhart in his despatches refers to the medical service in connexion with the late Waziristan expedition. He states that Surgeon-Colonel Spencer most ably administered his department in the field and recommends the excellent work that was done by him, his officers, and other subordinates for very favourable consideration. He also gives special prominence to the valuable services of Surgeon-Lieutenant-Colonel Bookey and Surgeon-Major Shearer.

Surgeon-Major-General C. E. McVittie, Indian Medical Service, has been awarded a good service pension.

Correspondence.

"Audi alteram partem."

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—The words of which I made use before the Select Committee of the House of Commons were these: "If the proposed class of midwives were established, what will probably be the result? There will be great interference with the practical training of students at such medical schools as that of St. Bartholomew's." The proposed class has not yet been established, and I venture to prophesy never will be in this country; but if it ever is, I can only hope that the slipshod attendance upon cases at present permitted by the Obstetrical Society will not be sanctioned. I believe that even now, if midwives at present certificated were compelled to honestly attend twenty-five cases, there would be interference with the supply of cases required, at all events at some of the large medical schools. As it is, a proportion of the twenty-five cases required are in some cases only seen when the pupil walks round the wards with the physician.

I have no intention of discussing the present Bill or any other Bill for the registration of midwives. The principle upon which such legislation is based is essentially a vicious one, and I certainly trust that our profession will be true to itself and insist upon the rejection of the principle involved. An interested body, in the shape of the Midwives Institute, has made a loud cry in the interests of humanity; but what has said *Nursing Notes* recently (the organ of that Institute)? "It behoves every midwife who cares for her old and honoured profession, and who does not desire to see it confused with the work of monthly nurses, to

give time and interest in supporting the Bill, with the principle of which many are already familiar." And yet Mr. Humphreys, one of the champions of this Institute, tells us that the Bill is intended to limit the practice of midwives to cases of a simple nature. I had not intended to publish at present what I believe to be the practical method of solving the problem of providing attendance for those lying-in women unfortunately situated; but as Mr. Flemming has got hold of the same idea, though he believes, apparently, in registration, I venture to send a copy of a draught scheme which I have had prepared for some time past. It can scarcely be called a scheme, but rather the outlines of one. Please use your discretion in publishing the whole or a summary of it.

I am, Sirs, your obedient servant,

Hatfield, June 2nd, 1895.

LOVELL DRAGE.

DRAUGHT SCHEME.

The conclusions arrived at from a study of the actual conditions of the problem point in the direction of decentralisation as opposed to centralisation. Further, they tend in the direction of the assertion that the evils to be dealt with are local and not general, and, therefore, that a measure giving local authorities powers to deal with conditions complained of in any part of the district, with discretion and latitude of power in dealing with them, is the measure most likely to give practical effect to the humanitarian views which have prompted the promoters of the legislation for registration of midwives to forward that proposed legislation by every means at their command. From the point of view which I have the honour of submitting, it appears certain that a measure affecting the whole community in the various ways which I have from time to time set out will not bear comparison with a measure intended to deal with such districts only as have been found, after competent inquiry into their actual conditions, to need such special treatment. Now the measure which will, it is believed, be most likely to attain the object in view must be based on the following lines:—

1. On complaint being made to the medical officer of health or directly to the district council by any persons that—(a) the women of any portion of the district are unable to obtain sufficient assistance at the time of their lying-in, or (b) if it comes to the knowledge of the medical officer of health that there have been cases of infective puerperal disease or death amongst lying-in women, caused by want of proper assistance, that it shall be the duty of the medical officer of health to make inquiries on the spot, and report to the district council.

2. If the district council are satisfied on the report of the medical officer of health that the women of the whole or any part of the district are unable to obtain proper assistance at such times, it shall be the duty of such council to forward to the county council the report of their medical officer of health and any decision at which they may have arrived.

3. If the county council are satisfied that some definite steps are necessary, it shall be their duty to cause inquiry to be made.

4. That such inquiry shall be conducted by a barrister assisted by the medical officer of health of the district, or such other registered medical practitioner as the county council may appoint.

5. That such barrister shall report to the county council (a) as to whether the women in the district reported upon are unable to obtain that assistance during the lying-in which is sufficient; (b) whether there have been an excessive number of deaths either from accidents or diseases connected with childbirth in the district; (c) whether it is necessary to provide the services of a nurse-midwife in the district; (d) whether there is any woman at present assisting in the district who would be suitable for acting as a nurse-midwife to that district if she were given a short training in a maternity hospital; (e) further, upon any special points connected with the subject which such barrister may consider to be necessary; and (f) sufficient power to be given to the barrister to call witnesses and to examine them on oath.

6. If the county council are satisfied that there are sufficient grounds for their interference, that it shall be their duty to provide for the needs of the lying-in women in their district.

7. That they shall base their action upon the lines of the present Poor-law system.

To the Editors of THE LANCET.

SIRS,—Whilst thanking you for the terms in which you allude in your issue of June 1st to the work of our deputation to the General Medical Council, there are two points in your leading article to which we desire to call your attention.

1. You suggest a doubt as to whether "the little more knowledge possessed by a woman of a few months' training, as compared with that of the woman who has had absolutely no training, constitutes a real danger to the community." Now this is perhaps the gravest question at issue and it is needful that our position be clearly stated. We say that the "little more knowledge possessed" is of the wrong sort, for whilst "nursing" is not taught to so-called "midwives," the use of poisonous drugs—such as ergot, opium, chloral—is suggested to them (as well as the management of abnormal labours); and, further, there is nothing to prevent the mistress of a brothel from entering herself for a course of lectures in which she is taught how to facilitate abortion. And we assert that this "knowledge" constitutes a real danger both to the health and morals of the community.

2. You minimise the importance of the objections to the certificate of the Obstetrical Society, which has been

approved of by the Executive Committee of the General Medical Council. Hitherto the Council has refused to sanction any certificate of competency issued by unauthorised bodies purporting to qualify in any branch of medicine, surgery, or midwifery. We freely acknowledge that the new certificate is a vast change for the better. All the same the question will arise, Is it not, now that it is "approved," a certificate of competency? Surely if a person holds a certificate of having passed an "examination in midwifery" approved of by the General Council of Medical Registration and Education the holder becomes *de facto* qualified in that "science and art," otherwise what is the use or intention of the certificate? New difficulties begin with this "new departure" on the part of the General Medical Council. The Act of 1886 suppressed diplomas in the separate branches of medicine. If the Council, however, sanctions the new certificate in "midwifery" (without qualification) does it not at once constitute a twentieth qualifying body? But further complications arise. The Parliamentary Bills Committee of the British Medical Association recommends the substitution of the term "midwifery nurse" for "midwife" throughout the Midwives Registration Bill, and our ever-active direct representative, Sir W. Foster, proposes that the General Medical Council do the same. The position, in the face of the new certificate, will be truly anomalous. For what can a person be who possesses an *approved* certificate of having passed in "midwifery" if she be not a "midwife"? and how can she be a "nurse" if she has had no training in nursing?

As general practitioners, we feel that the question is one which the public should determine. If the educated classes desire to palm off on their poorer sisters a midwife of three or four months' "education" (!) as capable of piloting them through the dangers of childbirth, we say it is a false philanthropy. The most skilled medical aid, male or female, should be available for even the poorest of mothers. Anything less than this constitutes a grave danger both to the health and to the morals of the community.

We are, Sirs, yours truly,

WM. HUGH HUGHES,

Chairman.

COLIN CAMPBELL

Hon. Secretary, Lancashire and Cheshire Branch Committee
of the British Medical Association.

Manchester, June 3rd, 1895.

"ADENOID GROWTHS IN CHILDREN."

To the Editors of THE LANCET.

SIRS.—I see that in your issue of June 1st Dr. McBride takes exception to my statement that the laryngeal stridor of young infants is often due to the irritation set up by adenoid growths in the naso-pharynx, and desires to know my authority for the assertion. The cases in question are rare and I do not profess to have seen many of them. Since connecting them in my mind with post-nasal vegetations I have only seen two, but in each of these cases the mucous membrane in the post-nasal region was not merely thickened but coarsely granular; and in one of them the end of my finger came in contact with a softish irregular lump which I took to be a small mass of adenoids. The children to the best of my recollection were three or four months old. That these vegetations are common in young infants I have satisfied myself by repeated observation, and that they are often congenital I feel sure. It is far from rare to find in an infant six months old the naso-pharynx blocked by a quantity of growths and to hear that the child had habitually snored in his sleep from the time of his birth. As to the mechanism of the stridor I prudently refrained from giving an opinion. Whether it be a spasm or a paralysis or something else I do not know. Probably it may be set up by widely different conditions. Dr. Lees has shown that it is sometimes due to a congenital malformation, for he has recorded a case in which the epiglottis was found to be folded upon itself in such a manner as to bring the ary-epiglottic folds close together and narrow the laryngeal opening to a mere pin-prick. Dr. Lees stated at the time that this was the fourth case of the kind he had seen; and Dr. Barlow tells me that he has met with similar cases. Had my paper been upon the subject of laryngeal stridor instead of upon that of adenoid growths I should have gone more fully into this question; as it was, I referred to it only so far as it bore upon the matter I was engaged

in considering. That the stridor may be put a stop to—sometimes, at any rate—by treatment of the adenoid overgrowth I stated on the authority of Dr. W. Robertson, who has published some interesting cases in which this treatment was successful. These cases seem to me to be conclusive as far as they go; yet I admit that they hardly warrant the inference that stridor associated with adenoid growths can always be cured by treatment directed to the naso-pharynx; for it is quite conceivable that post-nasal vegetations may coexist with laryngeal abnormalities such as Dr. Lees has described. Still, wherever these growths are met with in cases of stridor I think treatment should be directed to them, as it can do no harm, and Dr. Robertson's experience is very encouraging.

I am, Sirs, yours truly,

EUSTACE SMITH.

Queen Anne-street, Cavendish-square, June 5th, 1895.

MEMORIAL TO THE LATE SIR EDMUND LECHMERE, BART., M.P.

To the Editors of THE LANCET.

SIRS.—There are many friends of the late Sir Edmund Lechmere, M.P., who are aware how much he interested himself in the establishment of an ophthalmic hospital at Jerusalem, under the management of the Order of the Hospital of St. John of Jerusalem in England, and who would be glad to subscribe to a fund for placing that hospital on a permanent basis as a memorial of the services rendered by him in that and other philanthropic work. This proposal, I am permitted to state, has the entire concurrence of the Grand Prior of the Order, His Royal Highness the Prince of Wales, and as the chairman of the committee appointed by His Royal Highness I should be glad, through your columns, to invite support to the scheme.

The British Ophthalmic Hospital was established at Jerusalem in the year 1881, and the magnitude of the work may be estimated by the simple statement that there is no other hospital in Palestine dealing with the numerous diseases of the eye so prevalent in that climate, so that people come from all parts of the Holy Land to seek the restoration of sight or to obtain relief from suffering. The report furnished by the medical officer in charge for the last three years is as follows:—

Applicants for admission	...	...	...	6068
In-patients	...	...	...	2379
Out-patients, new cases	...	...	...	25616
Out-patients, total cases	...	...	...	69379
Operations	...	...	...	4823

It is sad to record that during the last year 905 applicants were turned away because they could not be treated with any hope of success as in-patients, and there were neither beds in which to receive them nor funds to pay for their support. The hospital stands alone among the charitable institutions of Jerusalem in preserving an attitude of absolute impartiality among the holders of different creeds, and in admitting to its benefits on equal terms Christians, Jews, and Mohammedans, not only without any attempt to make proselytes, but with full security for religious freedom to them all. The present annual subscriptions are inadequate for the maintenance of the hospital, which, even in its present state of efficiency, requires an annual income of at least £900. This appeal is to raise an amount necessary to endow the hospital, and thus not only to maintain but to widen the sphere and to increase the scope and usefulness of a charity which has won for itself a first place among the institutions of the Holy Land.

I am authorised to add that Katherine, Lady Lechmere, will contribute £1000 as a donation to the fund. Donations will, unless otherwise directed, be acknowledged in your columns, and should be sent to the honorary secretary, Mr. R. Gofton-Salmond, 73 Cheapside, E.C., or to the account of the hospital at the London and Westminster Bank.

I am, Sirs, yours truly,

EGERTON OF TATTON.

St. James's-square, S.W., June, 1895.

"DR. NIVEN ON JEWISH MORTALITY."

To the Editors of THE LANCET.

SIRS.—I shall be obliged if you will allow me to make some corrections in the report of the remarks which I made

at the annual meeting of the Jewish Ladies' Visiting Association, and which you have done me the honour to insert in THE LANCET. I did not say that the Jews insisted on getting pure milk, but, on the contrary, regretted that they did not bestow a care on their milk-supply similar to that which they gave to their meat-supply. It is not the case that the death-rate in the Jewish quarter is in any case not more than half that of the poorer districts of the city generally, and I did not say so. What I said was that it was not more than half the death-rate in some of the poorer adjoining districts. I did not say that the Jewish people were exceptionally clean, except as regards the weekly ablutions which their law prescribes. What I said was that the very poorest class of Jews compared not unfavourably with the corresponding class in neighbouring districts, but that, on the other hand, there was reason to believe that the industrial classes rather higher in the scale were more slovenly in their habits than the corresponding class of English people—that is, so far as their houses and yards are concerned. While I believe that there is much to be learned from the Jewish people, and not a little good in their customs which might be extracted by people who can free their minds from cant and prejudice, one must guard oneself against the imputation of remarks which are not well founded.

I am, Sirs, yours faithfully,
Manchester, May 31st, 1895. JAMES NIVEN.

SEWAGE EMANATIONS AND ENTERIC FEVER.

To the Editors of THE LANCET.

SIRS.—Although it is a generally accepted fact that sewage emanations may give rise to enteric fever, it is comparatively seldom that one has such positive evidence of the direct relationship between the two as the following case affords. In the Finchley district about eight weeks ago a house in a good sanitary condition, and showing from my register a "clean bill" so far as any previous visitation of zymotic disease among any of its occupants was concerned, became insanitary by reason of a sudden stoppage of the drain and the consequent bursting of the joint with the soil pipe. The result was that every time the upstairs water-closet was used the excremental matter escaped at this leak, accumulated under the "footings," and after a time appeared above the cellar floor, where it was discovered standing to a height of about an inch. Before the condition could be rectified the odour was more especially complained of by one of the occupants of the house, who occupied a bedroom situated over the escape, and in this particular room the odour of the sewage made itself very manifest, more especially at night time. The individual had previously enjoyed immunity from those conditions that have ever been shown to have their origin in such emanations, but in eighteen days he was laid up with enteric fever. My letter would be too long if I went into the grounds that I have for believing that it is highly improbable that the patient contracted the disease away from the house.—I am, Sirs, yours faithfully,

HENRY KENWOOD,

Medical Officer of Health for Stoke Newington, and
also for the Finchley District.

Stoke Newington, N., June 1st, 1895.

"THE CARE OF YOUNG IMBECILES."

To the Editors of THE LANCET.

SIRS.—In your annotation under the above heading in THE LANCET of May 25th you mentioned that ample and satisfactory means in our highly organised social fabric for dealing with the defective at a comparatively early stage do not exist in any widespread or general sense. To the ordinary medical practitioners opportunities are not afforded for obtaining knowledge of abnormalities in institutions, but the writings of Warner, Shuttleworth, Strahan, Beach, and others give full instructions how to proceed with cases at this particular stage. In dealing, however, with the great vital question we have lost sight of the principles which Connolly advocated more than thirty years ago, which, had he lived, would in all probability long since have been in voluntary coöperation with State medicine. He maintained that the moment the defective are born the moulding ought to begin. The enormous amount of positive proof of the successful management at this early stage of the

enfeebled cannot for the benefit of humanity in general be too often reiterated. Day and night the family medical attendants are brought into the closest relations with the domestic circle. Their frequent visits afford ample opportunities of acquiring minute details of the family and personal histories, details which are of vast importance as adjuncts for dealing with abnormalities in infant life. This thoroughly true work of the practitioners of medicine is not sufficiently entertained. When much thought, energy, and guarded level-headed care are bestowed on these matters it is really marvellous how angularities, peculiarities, and other weaknesses the prodromes of thieving, madness, and suicides can be almost obliterated before the children reach the more unyielding and callous stage. These statements on my part are not mere theories deduced from inaccurate facts or doubtful statistics, but are sought out from the experience of years which has made a written and sealed impression on my mind. So much has it impressed me that I brought the subject forward in Rome at the Medical Congress, and before other societies too. You, Sirs, were also good enough to publish a letter of mine bearing on it in THE LANCET of July 28th, 1894. Still, notwithstanding all our efforts, all our methods of organisation, and the compiled and reiterated literature, this sad fact remains that suicides, discontent, and mental miseries are increasing, and insanity is not diminishing. Is the young practitioner to learn his work in the treatment of these phases of the abnormal in infant life, unhelped as many of us in the past have had to do? Is he also to learn too late by the bitter experience of blundering how grander results might have been gained by him had the State put into his hands a code which would have invested him with authority? Why does the State still hold back in this particular? The progress of society, the hope of humanity wait for its intervention. Let the State strike the hammer of legislation on the anvil of conviction and place in the hands of those whose first medical work is among children a supplied system of general laws with which the many-sided mischiefs of infantile life can be combated.

I am, Sirs, yours faithfully.
Londonderry, June 1st, 1895. WALTER BERNARD.

MEDICAL CERTIFICATES IN LUNACY.

To the Editors of THE LANCET.

SIRS.—A few days ago I was requested to go to London to see a relative who was suffering from acute mania. The medical man who was attending her considered it necessary that she should be placed in a home for the treatment of mental diseases, and at his suggestion the second certificate was signed by a medical man who had previously attended the lady.

As under the new Lunacy Act I was compelled to seek the assistance of a magistrate I applied to one living in Kensington, in which district my relative resided. After I had explained the case the magistrate told me that he only filed in these orders after the cases had been seen and certified to by his own medical attendant. This, I told him, I did not think necessary, as the patient had been seen and certified to by two well-known practitioners in London, and I did not see the necessity for putting the patient to extra expense, and also I considered that it would be discourteous to the medical gentlemen who had already seen the case to call in a third opinion.

The magistrate said he was not compelled to fill up the papers, and as he made it conditional on his own medical attendant seeing the patient I left and applied to another magistrate, who signed the order without making any stipulation. I should like to have your views, firstly, as to whether you consider a magistrate is justified in refusing to fill up the papers as required by the new Lunacy Act unless he can show that there is irregularity or a want of compliance with the law; and, secondly, whether it is not somewhat irregular, and going beyond the requirements of the Act, for a magistrate to insist upon a third opinion, that opinion being given by his own medical attendant.

I am, Sirs, yours faithfully,
Cheltenham, May 24th, 1895. ALEXANDER INGLIS, M.D.

* * This is a case to which the attention of the Lord Chancellor should be called. The medical certificates accompanying the petition are by law equivalent to evidence

on oath; and, though a justice has the right to postpone the inquiry if he thinks there is reason to doubt the *bona fides* of those signing, the refusal of the justice in question to sign until his own medical attendant had seen the patient was, we think, certainly *ultra vires*. Section 6 of the Lunacy Act does not seem to allow the justice to give any such reason for refusing to sign.—ED. L.

INSOMNIA AND CHLOROBROM.

To the Editors of THE LANCET.

SIRS,—Professor Charteris' admirable paper in THE LANCET of May 25th is as interesting as it is edifying. The treatment of insomnia, like that of every other diseased or unhealthy state, should be based on the pathological condition, the alteration in function or structure on which it depends; but chlorobrom cured Professor Charteris' patient without, so far as I can gather, any reference to the cause or origin of the insomnia. Chlorobrom is such a valuable medicine that, irrespective of its nature and constituents, it cannot be too widely known how and where it can be readily procured for cases of emergency. It is sold in four-ounce bottles bearing a trade-mark, and a large pink label, commonly called a chemist's label, is affixed to each bottle, on which is conspicuously printed: "This preparation is recommended by Professor Charteris of Glasgow University as an effective and safe hypnotic, giving excellent results in all cases of insomnia and sea-sickness." The name of the worthy professor so boldly printed on the label is so unmistakable, and such a source of comfort and security to both prescriber and patient that the efficacy of the medicine is augmented by the confidence it inspires.—I am, Sirs, yours faithfully,

D. MACKINTOSH, M.D.

Alexander-square, S.W., June 3rd, 1895.

"MICRO-ORGANISMS IN THE HEALTHY NOSE."

To the Editors of THE LANCET.

SIRS,—In your report of the discussion on the above subject at the meeting of the Royal Medical and Chirurgical Society on May 28th there are several inaccuracies which might be so misleading that I venture to ask for a small space to correct them. Dr. Semon did not say that "the fact that so few bacteria had been found was astonishing." His words had an entirely opposite meaning, for he remarked that our results had agreeably surprised him, since our experiments—while contradicting the majority of previous experimenters on the subject—were quite consonant with his own clinical experience. The sentence where he is quoted as saying that "the nose was anatomically antiseptic" contains a printer's error in not reading "automatically"—the expression employed in the original paper. Your report as to Dr. Semon's referring to the removal of adenoid growths in children being "the then popular operation" might be very misleading. He referred to it as the very frequent operation—not only a common operation "years ago," but also at the present time. In my own reply I never said that "Sir Joseph Lister used to point out that empyemata, which discharged through the bronchi through which the patient breathed very seldom, became septic, which he ascribed to the ciliated epithelium, and he compared this with what took place when the empyema communicated with the air through a fistula." (1) Fortunately this quotation is so evidently self-contradictory that few readers will fail to see its inaccuracy. I said that Sir Joseph Lister was in the habit of pointing out that when an empyema communicated with a bronchus, through which the patient breathed freely, thus allowing the cavity to communicate with the air, the pleural contents did not become septic nearly so readily as when the cavity communicated with the external air through an opening in the chest wall. This difference of result he partly ascribed to the action of the ciliated epithelium in the former case. These corrections are made with the authority of Sir Joseph Lister and Dr. Semon, who are both anxious that I should see that they are made public.

I am, Sirs, yours faithfully,

ST. CLAIR THOMSON, M.D.

Queen Anne-street, W., June 5th, 1895.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of Cruelty to Children.

THE citizens of Liverpool are justly proud of the fact that the local Society for the Prevention of Cruelty to Children was the first of its kind. This, however, is somewhat discounted by the answer to the question, What led to the formation of the society? For several years past the condition of many children in the streets and at their own homes was a painful fact known to medical practitioners in the district, to clergy, ministers, and police officials, but to very few others. Travellers from America and the Continent, and even visitors from neighbouring towns have been appalled at the bare-footed, ragged condition of the beings variously termed "wails and strays," "gutter children," and "street arabs." Much of this was deliberate cruelty, the children being turned out in the streets in this state to excite sympathy and earn money for their unnatural parents. The Liverpool Society for the Prevention of Cruelty to Children has now completed its twelfth year of work, and the following details are given in the annual report just issued. It was the earliest society of the kind in Great Britain. Owing to the generosity of a citizen (the late Mr. William Cliff) it has possessed a commodious shelter in a central part of the city, where the secretary, Major Leslie, and his efficient staff carry out the operations of the society. Sometimes there are as many as sixty to sixty-five children sleeping in the shelter. The society receives and shelters children suffering from violence or neglect or in dangerous surroundings. It investigates the cases, listens to and counsels the parents or persons in charge, and restores the children, watching the cases afterwards. In the more serious cases it prosecutes the offenders. It endeavours to check that standing disgrace of Liverpool, the employment of children in begging and selling in the streets. The society works in thorough accord with the police, the School Board, and the various societies and institutions of every kind for the reception of children which are scattered over the city and suburbs. For the last six years the average number of children dealt with has been 2100, and a marked improvement has taken place, though much remains to be done.

"The Prevention of Overlaying."

Referring to the annotation in the last issue of THE LANCET, it may be remarked that in not a few instances coroners' juries have returned verdicts of manslaughter against parents who have gone to sleep in a drunken state with an infant in the same bed. Unfortunately the result has not been such as to encourage the repetition of such verdicts. In 1893 a drunken mother was convicted and sentenced by Mr. Justice Day to three months' hard labour. The course which legislation should take is indicated by the result of Prussian legislation as described by Casper. "According to a former penal code mothers and nurses were forbidden under pain of imprisonment to have children under two years old in bed with them." As might have been expected, contraventions of this peculiar statute were of frequent occurrence, and any attempt to enforce a similar one in the United Kingdom would certainly share the same fate. The new penal code of Prussia no longer recognises this offence; but the Public Prosecutor institutes proceedings in all cases of death from neglect. There can be no doubt that this might be done with a reasonable hope of success in all cases where drunkenness could be proved. It must not be forgotten that poverty is, in many cases, the reason why there is no separate cot for the infant, and that in this respect there is work for philanthropists.

A Female Drunkard's Career.

The three leading local papers of the 3rd inst. contain paragraphs variously headed "Death of a Notorious Liverpool Character," "Death of a Well-known Character in Walton Gaol," and "Death of a Notorious Police Character." The paragraphs vary in length from thirty-two lines to nearly half a column. What bitter irony is contained may be judged from the following facts. The deceased was about fifty years of age and had been before the magistrates on 277 occasions, 93 being acquittals and 184 convictions. It may interest physiognomists to learn that she looked somewhat older than her actual age, was of a wiry and powerful build, possessed a thin, angular, and irresistibly quaint face,

and had a voice which, though ordinarily as hoarse as the cry of a corn-crake, could when necessary be as shrill and ear-splitting as a "Clan liner syren." Her frequent appearance before the bench was mostly on charges of being drunk and disorderly; she was often guilty of violence, having shown her resentment against the magistrates by the discharge of missiles—huge pieces of stale bread, pieces of glass, and even her crutch. Quite recently Mr. Sampson, the city coroner, who presides as magistrate in the "drunkards' court," had a narrow escape from a dangerous blow, the crutch having been hurled at him as the prisoner left the dock. Her last appearance was on the 24th ult., when she was charged before the stipendiary magistrate with stealing a shawl, and was fined 5s. and costs, or a month. She chose the latter, and should have come out of prison on the 31st; but she became ill, was removed to the infirmary of the gaol, and died on the following day. An inquest was of course held, and a verdict of "Death from natural causes" was returned.

The Magistrates and Crimes of Violence.

In contradistinction to the case reported in the Manchester letter in THE LANCET of last Saturday it is satisfactory to note here that a very wholesome result has followed the action of the local magistrates in dealing with all cases of assault. Those involving such serious personal injury as the loss of an eye would be certainly sent to the assizes, judges having power to award penal servitude for such savage conduct. Where the injury is less serious imprisonment for a longer or shorter period is the general rule, especially in assaults on the police, the "roughs" having been frequently warned by the stipendiary magistrate that he has power to give six months' hard labour for wounding or serious assault. The lay magistrates, moreover, are by no means disposed to regard assaults leniently, and the total number of persons charged with assault during 1894—2530—will not appear excessive in such a city as Liverpool, while there is every probability of its being considerably reduced this year.

The Liverpool Northern Hospital.

At the meeting of the City Council on June 5th a resolution was carried granting to the trustees of the Northern Hospital two sites adjacent to the present hospital consisting respectively of 630 and 1545 square yards, and also to give £10,000 to the funds of the hospital. The new hospital is to be built by the David Lewis trustees and will be on a greatly enlarged site, including part of that now occupied by the present building. The hospital, which was the second one established in Liverpool, was founded sixty years ago, and the present hospital was built in 1844. It is needless to remark that it is now totally out of date and wholly inadequate to meet the demands made upon it; while it is expected that the new hospital will not only have every modern improvement, but will be fully capable of meeting any future demands.

June 5th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Professor Fraser at the Edinburgh Royal Society.

AT the Edinburgh Royal Society on June 3rd Professor Fraser made an interesting communication regarding an important investigation he was undertaking on the venom of the cobra and other serpents. He had been engaged in this work since 1889, and had experimented with venom from many of the poisonous snakes in Asia, Africa, and Australia. He had separated the venomous principle and obtained it in crystalline form and was able to determine the lethal dose of the crystalline poison in various of the smaller quadrupeds. He gave a historical account of the belief that human beings could resist the venom of serpents, and also stated that venomous serpents were protected from the effects of bites of both their own species and of others. It was largely with a view to investigate this side of the subject that he had undertaken the experiments. After ascertaining the minimum lethal dose for an animal he proceeded to administer a succession of graduated doses, with the result that rabbits had received by subcutaneous injection as much as ten, twenty, thirty, and even fifty times the minimum lethal dose without manifesting any obvious symptoms of poisoning; they even increased in weight and were alive and well. The rabbits had

received as much venom as would kill fifty non-protected animals of the same size, and it was incidentally ascertained that the protection lasted for a considerable time. Having thus succeeded in producing a high degree of protection in animals, he collected the blood serum of those animals for the purpose of testing its antidotal powers. Experiments were described which he held clearly established that the blood serum of animals protected against large lethal doses of venom was able, in varying conditions of administration, perfectly to prevent lethal doses of the most poisonous of serpents from producing death in non-protected animals. He promised further experiments with a view to the effect in man, and also to discover the constituents by which the antidotal effects were produced. There was a large meeting of the society, the members very heartily manifesting their appreciation of the importance of this communication, and it is needless to dwell upon the far-reaching importance of this discovery should the various steps of it be confirmed, which there is every reason to believe they will be.

The Lord High Commissioner and the Marchioness of Breadalbane.

The Lord High Commissioner and the Marchioness of Breadalbane have, during their stay at Holyrood Palace for the meetings of the General Assembly of the Scottish Church, paid their usual visit to the medical charities, including the Royal Infirmary, the Hospital for Incurables, and the new Deaconess Hospital.

The Habitual Offenders Committee.

In the report of the Scottish Departmental Committee appointed by the Secretary for Scotland the question of habitual inebriates is dealt with *inter alia*. The committee recommend that the powers of the Inebriates Act should be considerably extended and that provision should be made for the compulsory committal to a retreat of those proved to the satisfaction of the sheriff to be habitual drunkards. The application for such committal, it is proposed, may be made either at the instance of the friends of the person concerned or by the procurator-fiscal acting in the public interest. It is also suggested that power should be given to employ the property of an inebriate for his own support, and that in the absence of available funds he may be confined either in a "labour retreat" or in a poor house for a period not exceeding two years. Another proposal is that the term "habitual drunkard" shall be extended to include persons reduced to the condition it describes through the abuse of opium and other drugs as well as alcohol. Amongst the signatures to the report are those of Sir Charles Cameron, M.P. (chairman), Dr. Robert Farquharson, M.P., and Dr. J. F. Sutherland, the latter of whom acted as secretary to the committee.

University of St. Andrews.

The annual statistical report of the University to the Secretary for Scotland, just issued as a Parliamentary paper, contains the following information with regard to the emoluments of the professors and lecturers in the Faculty of Medicine. Practice of Medicine (J. Bell Pettigrew, M.D.), £368 7s. 2d.; Chemistry (Thos. Purdie, B.Sc.), £299 2s. 3d.; Natural History (D'Arcy W. Thomson, B.A.), £425 8s.; Botany (Patrick Geddes, F.R.S.E.), £222 11s. 4d.; Anatomy (A. Melville Paterson, M.D.), £408 16s.; Physiology (E. W. Reid, M.B.), £386 9s.; Chemistry (Percy F. Frankland, F.R.S.), £459 12s. 4d. With the exception of the two first mentioned the work of these chairs is conducted in University College, Dundee. During the year eleven gentlemen have been admitted to the degree of M.D. Amongst recent benefactions is the residue of an estate estimated at £35,000, and bequeathed to the college at Dundee.

Glasgow University.

It is announced that a gentleman—whose name is not divulged—has offered a considerable sum of money—not less than £10,000—to found a chair of Political Economy in the University. This will come as grateful news, more especially to those who have recently been taking steps to secure adequate representation of the subject of political economy in the university of Adam Smith. In addition to this prospective vacancy the University Court will have shortly to make appointment to two other chairs—the professorship of Divinity vacated by Dr. Dickson, and the Professorship of Logic which was held by the late Dr. Veitch. The Victoria University has conferred the honorary degree of Doctor of Science on Lord Kelvin, from whom, according to Professor

Welkins, the first suggestion for the foundation of that University originally came. The final examinations for degrees in medicine and surgery of the Glasgow University commenced on the 5th inst. This is the last year for candidates who commenced to study under the four years curriculum, and the rush which took place before the five years system became compulsory is shown by the large number of entrants on the present occasion. The number of candidates is 194.

Glasgow Public Dispensary.

The annual report of this institution shows that the number of consultations during the year has been 3706, an increase of 554 on the previous year. Two new departments have been recently added, one for diseases of the eye and one for nervous diseases. A small ward for the reception of patients has also been opened during the year. One of the principles of the dispensary is that each patient pays a small sum, and to this feature Professor McKendrick drew special attention in seconding the adoption of the report. The treasurer's statement shows a balance in hand of £42 3s. 8d.

Glasgow Health Committee.

A subcommittee has been appointed to take action in reference to the Factory and Workshops Bill at present before a Select Committee of the House of Commons. It is contended that if passed in its present form the Bill will produce considerable confusion between the Government inspectors and the local sanitary authorities, and will inevitably lead to friction in the administration of sanitary and factory legislation. Steps will therefore be taken to place the views of the committee before the House of Commons. The committee of the town council on cholera precautions has ordered the repetition of the measures taken last year in the form of cleansing outhouses, ashpits, &c. These and other active sanitary operations seem to be called for by the extent to which diarrhoea has been prevalent in the city for the last week or two. The number of cases of small-pox has considerably decreased; there are now only twenty-four patients in the hospital.

The Purification of the Clyde.

It is reported that one effect of the sewage works opened some time since in the east-end of Glasgow has been to produce a distinct improvement in the condition of the Clyde. Plans for dealing with the sewage on the north of the river have now been completed, and the authorities have under consideration a scheme for application to the south side, so that it is expected that the necessary steps may be taken for submitting proposals to Parliament at the beginning of next session.

Glasgow Maternity Hospital.

Dr. P. McBride and Dr. Patrick have been appointed house surgeons in place of Dr. Cumming Grant and Dr. Jameson, whose term of office has expired.

Faculty of Physicians and Surgeons of Glasgow.

Dr. Robert Jardine, and Dr. R. M. Buchanan, having passed the necessary examinations and been duly elected, have been admitted as Fellows of the Faculty.

The Queen visits a Medical Staff Corps in Camp.

The Aberdeen Volunteer Medical Staff Corps went into camp at Birkhall, near Ballater, on the 30th ult. Besides officers there were one first-class and two second-class sergeants, five sergeants, and over ninety rank and file. On Friday afternoon the Queen drove from Balmoral Castle, her Highland residence, about seven miles from Birkhall, and inspected the camp. Some of the juvenile Princes and Princesses were delighted at the novelty of camp life. Among those who accompanied the Queen was Mr. Profeit, L.R.C.S. Edin., Her Majesty's Commissioner at Balmoral. Her Majesty drove along the lines, showing interest in the "wounded" lying bandaged on the stretchers and in the soldierly ranks of the others standing at attention by their side. Sir Fleetwood J. Edwards presented individually to Her Majesty Surgeon-Captain Macgregor, Surgeon-Captain Riddell, and Quartermaster De Lessert. Surgeon-Lieutenant Urquhart was also presented to the Queen. H.R.H. Princess Beatrice and suite were present at the inspection on Saturday. The men returned to Aberdeen on Monday.

Clearing out the Slums in Aberdeen.

Some time since Mr. Sheriff Brown held a local inquiry as to an application by the Aberdeen Town Council for sanction of a scheme under the Housing of the Working Classes Act for

dealing with an unhealthy area in the east end of the city, bounded by Exchequer-row and Ship-row. The Secretary for Scotland, having perused the evidence and considered the learned Sheriff's report, has now granted the order applied for. This scheme proceeded on a representation by Mr. Matthew Hay, medical officer of health of the city of Aberdeen. The area embraces three narrow courts and the principal portions of two others. It measures about 3124 square yards, or two-thirds of an acre. Dr. Hay found that it contained 98 dwelling-houses, 5 common lodging-houses, one house let in lodgings, 13 shops and stores, and 2 offices. The total population of the area at the date of his report was 508. Of the occupied dwelling-houses, 39 were one-roomed, 43 were two-roomed, and 16 had three or more rooms. The larger houses mainly fronted Castle-street and Ship-row. Dr. Hay reported this area, with only 6.3 square yards to a person, as the most overcrowded in the city and as having an exceptionally high death-rate, equal to 28 per 1000 per annum, against 19.9 for the city generally. It was impossible to adequately light and ventilate the individual dwelling-houses or to find space for sanitary conveniences. The town council have therefore acquired the buildings. The best of them—i.e., those on the margin which front public streets—will not be removed. The others will be taken down, but it is not yet quite settled whether to run part of a new street through the area or leave an open space or children's playground. The total cost of the properties acquired will be £25,776; those available for re-sale, £10,950; and the net cost of the scheme, £14,826.

New Bursaries at the University of Aberdeen.

The Aberdeen Highland Association have agreed that a bursary of £10 should be given to a student attending the art classes at the University of Aberdeen, and another of £10 to a student of medicine, both tenable for one year.

Typhoid Fever in Inverness-shire.

Dr. Ogilvie Grant, the medical officer for the county of Inverness, gives in his recent report an instance of cowardice, the result of superstitious fear, which occurred in connexion with an outbreak of typhoid fever in a remote part of the country. The houses in the neighbourhood of the infected district were all deserted, and no native could be persuaded to attend upon the sufferers or even to bury the bodies of those who died. The proverbial courage of the Highlander is not always proof against the mysterious terror associated with anything in the shape of "fever."

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Belfast Society for Providing Nurses for the Sick Poor.

The report presented to the annual meeting of this society, held in Belfast on May 24th, showed that, owing to the increase in the population, two new districts have been added, and for one of these a lady has given £100 to maintain a nurse for one year. Belfast is increasing at the rate of 10,000 each year, and yet for some of the districts with a population of over 44,000 there is only one nurse. The subscriptions last year were £876 11s. 3d., while there is an income of £253 16s. 4d. from funded donations.

The New Lunatic Asylum at Purdyburn.

I understand that it has been decided to make such structural alterations in the old mansion at Purdyburn as will render it capable of affording accommodation for seventy-five inmates. There are 300 acres on this fine property, which is situated in a very healthy district. The new County Antrim Asylum at Holywell, which is at present in course of construction, will be ready for the reception of patients in about two years. At the present time, in the Belfast asylum there are 260 inmates over and above the number for which there is accommodation. Belfast has the most limited asylum accommodation of any city in the United Kingdom. At Purdyburn increased buildings can easily be built.

Downpatrick Water-supply.

Mr. Cotton, who presided at the inquiry held at the instance of the Local Government Board into the alleged defects in the new water-supply at Downpatrick, has just issued his report. He thinks that, as regards the efficiency of the works for the supply of a sufficient quantity of water at all times, the inhabitants of Downpatrick

need not be under any apprehension. The cause of the defective quality of the water in the reservoir is due, he thinks, to peaty water from the catchment area, and to the bed of peat or bog under the water area. The quality is further deteriorated in the distribution pipes of the town by the effect produced by water laying in pipes newly laid and coated as usual; but this effect is only transient. Mr. Cotton recommends as remedies: (1) covering the bog in the reservoir, and (2) providing filter-beds, both of which had better be undertaken without delay. As to the depth of covering, he would leave this open until the progress of the work enables the engineers to form a definite opinion on the point. He recommends sand filters of sufficient area and depth of filtering material. Downpatrick is now depending for its supply of water mainly on pumps.

The Ligoniel Sewerage.

At the meeting of the Belfast board of guardians held on May 28th the committee appointed to inspect the Fourth river and its tributaries reported that the first offensive place was a large excavation in a field near the centre of Lower Ballysillan, into which the sewerage of at least fifty houses flowed; it was also a receptacle for dead animals, and the smell from it was unbearable, and they believed it was the cause of a great deal of sickness. The overflow from it ran in an open drain, the water being black, and it was reported that cattle drank from it. The committee concurred with the inspector, Dr. Clibborn, that the severe outbreaks of typhoid fever which had occurred in Lower Ballysillan were chiefly caused by the insanitary state of the district of which the stream in question was an important element, and they recommended that the board should proceed to have a complete scheme for the sewerage of Ligoniel and Lower Ballysillan carried out, and they suggested that until this was done the owners of cattle in the fields referred to should be required to supply the cattle with pure water, and by erecting fences to prevent the cattle from drinking the sewage matter. Another member of the board reported that he examined the river between the point at which the committee left off and where it joined the river Blackstaff at Broadway, and at several places there was evidence that dairy cattle drank from this polluted stream. It was also stated by another guardian that cases of sickness could be traced from house to house where milk had been used in those districts where pollution of the water existed. It is thus evident that there is a nuisance in the form of an open sewer both within as well as without the city boundary. After this report had been considered a very influential deputation representing the large majority of the ratepayers of Ligoniel appeared before the board of guardians, and suggested that instead of launching a large and expensive sewerage scheme at present they should adopt a plan of purification by chemical means (alumino-ferric) until the neighbourhood had still more increased, when a large and complete system, taking in the entire watershed, could be developed and carried out. The deputation said the cost of this plan would be small, and they asked the guardians to collect a small rate—say, 3d. in the pound—over the district to cover the expenditure. It seems that in the district, at some bleach works, the chemical plan has been tried on bad putrid water with great success. It was finally settled that the committee in charge of the Ligoniel sewerage scheme should meet together with the deputation and report to the board.

Rabies in Belfast.

Two people who were bitten by a dog (certified to be suffering from rabies) at Newtownbreda have been sent by the Belfast board of guardians to the Pasteur Institute, Paris, for treatment.

The Supply of Water to Belfast.

The amount of store-water is greater at present than at the same time last year, there being six months' supply in the reservoirs, but as the city is increasing so rapidly, and as there is considerable loss by evaporation in warm months, the ratepayers have been warned not to be wasteful. In the meantime the Mourne scheme, which will give an inexhaustible supply, is being proceeded with. No. 3 Contract of this scheme has been accepted for £139,746 13s.

Flat-roofed Houses in Belfast.

A new departure is about to be taken in Belfast by the erection of houses with flat roofs. At a recent meeting of the Improvement Committee of the city corporation plans were put before them for such houses, and before coming to a conclusion they instructed the officials of the Surveyor's

Department to visit such houses which have been fitted with these roofs, and as a result of their report it has been decided to allow such style of houses to be erected. These flat roofs are made of a bituminous, horn-like, and elastic substance which becomes in time as hard as metal, and is without seam or joint and is impervious alike to snow, water, or dust. The walls being carried up above the roof, the space thus formed can be utilised as a garden, playground for children, or for any other useful or ornamental purpose.

Rainfall in May in Belfast.

In the Belfast district May has been a phenomenally dry month this year. Only 0.31 inch fell, while in 1894 it was 3.30 inches. There were six days on which rain fell in May, 1895, while in 1894 there were twenty. The total rainfall for the present year is 11.23 inches, as against 17.36 last year. The country is becoming parched through the want of rain, and unless it falls soon hay will be very short, and turnips and flax (a very important crop in the north of Ireland) will be much below the average yield.

The Strangford Lough Boating Accident.

The body of the older of the two boatmen was found floating on Strangford Lough on Saturday.

The Armagh Government Board Inquiry.

The result of this inquiry is to transfer from the County Armagh Grand Jury to the Armagh urban sanitary authority the jurisdiction with reference to roads, bridges, footpaths, &c. within the township. The matter will be considered at the next assizes, and should assent be obtained the order will be made and sent to the Irish office to be introduced into Parliament, but it will probably not be confirmed until 1896. At a meeting of the Armagh town commissioners held on June 3rd it was decided to approve of a new sewerage scheme suggested by Mr. J. F. Peddie, C.E., the estimated cost of which is £8562 2s. 2d., exclusive of law, engineering, wayleaves, and other contingent expenses. It was also arranged to apply to the Board of Works for the loan of £10,000 to carry out this sewerage scheme.

Cork Societies' Medical Officers' Indemnity Fund.

The following additional subscriptions have been received by the treasurer, Mr. D. D. Donovan:—Dorset and West Hants Branch, British Medical Association, £3 3s.; South Wales and Monmouthshire Branch, £5. The council of the Incorporated Medical Practitioners' Association have forwarded £5 to the Indemnity Fund, and have promised to aid in every way they can the Cork medical men in their contest with the clubs.

The Proposed Dissolution of the Millstreet Union.

The proposal of the Millstreet board of guardians to dissolve the union and amalgamate it with adjoining unions has met with anything but universal approval in the district. A large public meeting has been held, presided over by the Very Reverend Canon Griffin, P.P., chaplain to the workhouse. The reverend chairman stated that he had carefully examined the financial aspect of the question, and was convinced that the amalgamation would not result in lessening local taxation. In support of that view he pointed out amongst other things that the existing officials would be entitled to substantial pensions to be paid from the rates. But he said what mainly concerned him and all of them was the inconvenience likely to be caused to the sick and the poor by conveying them in many instances long distances to the workhouses of the other unions. "Christ said that the poor would be always with us, but the present guardians of Millstreet Union think and act differently. They would banish the poor from our midst to remote towns where their hearts would never be gladdened and their faces brightened by the welcome visit of a dear relative, by the look from kindly eyes, or the touch of a loving hand." A series of resolutions were adopted and a petition to the Local Government Board was numerously signed, asking that Board not to accede to the guardians' request.

June 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Penetrating Wound of the Bladder through the Buttock.

A MAN standing erect received a knife-thrust in the buttock, with the result that shortly afterwards the urine voided

contained blood, and two days later urine escaped through the wound.¹ Supra-pubic cystotomy was performed and abdominal drainage established, the gluteal and operation wounds healing in the order named and the man recovering. In order to clear up the question of penetration by this curious route, Dr. Soulié performed a number of experiments on the dead body, which led to the following conclusions:—1. A cutting or pointed instrument passing through the buttock easily reaches the bladder, provided it enters through the smaller sacro-sciatic notch and is propelled in the direction of the anterior superior spine of the opposite side of the body. 2. The bladder is involved if the blade penetrates to a depth of from 28 to 75 millimetres (average 61 millimetres). 3. The bladder wound is almost invariably situated at the trigone, and nearly always close to the opening of one of the ureters. 4. The fact of the bladder being empty does not, in the above conditions, preclude its being wounded. 5. When the blade passes through the great sacro-sciatic notch the bladder is wounded towards the summit, but only if the viscus be full and if the knife is plunged to a depth exceeding 10 centimetres.

The Title of "Dr."

A friend of mine was some few months ago the guest of an American lady, the occasion being an evening party. He was astonished to find almost every other male guest being announced on his arrival as "Dr. So-and-so." On inquiry he discovered that these graduates were all American dentists. Now, although there exists in this country no law interdicting the assumption in society on the part of these foreign dental practitioners of any high-sounding title that may best please them, it would appear that they are not allowed to employ the prefix "Dr." in bills, circulars, or door-plates unless the degree has been granted by a French faculty. Two foreign dentists were recently prosecuted by the Syndicat des Dentistes de France for this offence. The defence was that as there was no illegal practice of dentistry the usurpation of the term "Dr." did not constitute an offence. The tribunal ruled, however, that the issuing of an advertisement or prospectus by a foreign dentist styling himself "Dr." who did not possess the degree of M.D. of a French faculty, was punishable. Had the dentist in question indicated in the incriminated advertisement the origin of his degree he would have escaped the fine inflicted of 100 fr. and the nominal damages of 1 fr. claimed by the prosecuting syndicate.

The New Maternity of the Beaujon Hospital.

On Tuesday last there was inaugurated the new maternity built in the gardens of the gloomy Hôpital Beaujon, situated in the Faubourg St. Honoré. The new building contains fifty-eight beds instead of the sixteen provided under the old order of things. The principal building (fifty-two beds) is exclusively reserved for accouchements. It comprises on the ground floor a consulting-room, on the first and second floors lying-in wards, on the third floor a convalescent ward, and finally on the fourth storey accommodation for the nurses and personnel generally. A separate block is reserved for suspicious and infected cases, whilst another block consists of a histological laboratory and a small museum. The entire cost of the building was 500 000 francs, or 8500 francs per bed. I take the opportunity of congratulating my friend Dr. Ribemont-Dessaignes (the physician-accoucheur of the Beaujon Hospital), to whose perseverance we owe this distinct progress.

Encysted Glandular Urethritis.

Hospital surgeons are but too cognisant of the rebellious nature of certain forms of urethritis in the woman. Dr. Verchère, surgeon to the St. Lazare Hospital for Venereal Diseases, informs us in the *Presse Médicale* of May 25th that he has solved the problem of the chronicity and intractability of the disorder in question by the discovery of its cause. He finds that the submucous tissue of the urethra contains in these cases a number of small cysts filled with thick brownish pus, some of these cysts being quite closed, whereas others communicate through a minute orifice with the urethral canal. These latter furnish the drop of pus seen in chronic urethrorrhoea to exude from the urethral orifice on pressure. But in the majority of cases there exist other cysts, which, being closed, no amount of pressure can evacuate. Their presence gradually determines a thickening of the areolar tissue in which they are situated, and

the urethra is felt as a thick cord when the finger is passed along the upper wall of the vagina. All intra-urethral treatment is useless in this disease, which Dr. Verchère has christened *urétrite glandulaire enkystée*. Despite its gonorrhoeal origin, the pus contained in the cysts is most frequently free from the gonococcus. Only one mode of treatment can bring about recovery, and that is a free incision of the lower wall of the urethra with complete removal of the cysts. One blade of a pair of scissors being introduced into the urethra and the other being in the vagina, an incision of the length of from one to one and a half centimetres is made. The lips of the incision being separated, ochre-yellow pouches the size of a millet seed or a pea are brought to view. Each of these cysts is dissected out, this being sometimes an easy matter. In the event of any difficulty being experienced, the urethral above and the vaginal mucous membrane below are respectively dissected from the areolar tissue, which latter is then, with its contained cysts, removed bodily. One or two sutures suffice to reconstitute the urethral canal, and the operation is at an end and recovery assured.

June 4th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Vaccination in Italy.

THE care with which vaccination is practised in Italy is highly commendable, the lymph as a rule being scrupulously taken from calves inoculated with cow-pox. This wholesome innovation, however, is comparatively recent, and THE LANCET has had more than once to stigmatise the shameful frauds perpetrated on the Italian public, particularly of the southern and insular provinces, by the adulteration of the lymph supplied to the vaccinating stations. In Western Sicily, it will be remembered, there was a brisk trade in spurious lymph, one of the main ingredients in which was glycerine. The offenders were made an example of, and now all over the peninsula there are springing up "Istituti Vaccinogeni," directed by accomplished physicians, who make it their business not only to supply the purest lymph, but also to practise gratuitous vaccinations, at stated periods, to the poor. It is here, however, where the primary defect of the Italian prophylaxis against small-pox comes in. Compulsory vaccination in the sense in which it is enforced in Northern Europe, does not exist in Italy. The children of the well-to-do classes, the pupils at elementary schools, the recruits for the army and navy, the young candidates for offices under Government or in the municipal administrations, are all required *de rigueur* to be vaccinated; but still, to say nothing of the "submerged tenth," the seething proletariat that haunts such towns as Naples and Palermo, the "court-and-cellar" population of the great centres as a whole, there are families whose children are never vaccinated at all, to whom urgent appeals are addressed in the lay journals to repair on such and such a day to this or that "Istituto Vaccinogeno," to have their children brought under the protective operation. How often these appeals fall on deaf ears may, in fact, be read in the peculiarly solemn and even imploring language in which they are couched. The result of this partial enforcement of the prophylactic operation is all too conspicuous in the intermittent outbreaks of small-pox in the large towns and landward villages—places where the disease is always smouldering, ready to burst into flame whenever the specially favouring conditions are present. The new Parliament about to emerge from the throes of the general election going on to-day has many reforms to bring about, but none, I am sure, of more urgent necessity than the introduction into Italy of a vaccination system as thorough and all-reaching as that which has long shown such good results as, for example, in Denmark.

Rescue of the Drowning.

Our able professor of Medical Jurisprudence, Dr. David Toscani, presided the other day at a meeting of the "Società Romana di Soccorso agli Asfittici" (Roman Society of Aid to the Drowning)—an institution, I am sorry to say, which the increase of suicides in the Tiber makes yearly more necessary—and, as the result of its deliberations, it was resolved to announce a series of prizes for those who, at the risk of their own lives, shall, during the year now passing, have rescued

¹ Marseille Médical.

from drowning any individuals who, voluntarily or involuntarily, have been immersed in the river. Last year there were some brilliant deeds of heroism on the part of at least three Roman citizens in wresting unfortunates from a watery grave, affording fresh proof of the physiological fact embodied in the beautiful motto of your Humane Society, "Lateat scintillula forsan." Though not, perhaps, brought to the same perfection as in the stations on the Thames, the Serpentine, or on the Seine, the means of "salvataggio" available on the Tiber are much in advance of what they once were, and the interval between the rescue of the drowning man and the practice of artificial respiration, friction &c. is reduced to a minimum. In these precious moments so much depends on the promptitude and effect with which the operation and the special *matériel* of resuscitation are brought to bear on the semi-asphyxiated subject that no effort should be spared to perfect the discipline and enrich the apparatus of the "corps de sauvetage." Professor Toscani, with such assessors as Dr. Tullio Spaziani, Signor Ferdinando Gerardi, the engineer, and others interested in the humane work, professional and lay, may be trusted to place the Tiber service on a footing worthy of the Roman school, and with that conviction the public, to whose generosity they make appeal, will, I hope, unite in a response equally prompt and liberal.

Political Mania.

Excitement ran so high during the election that cases of mental disturbance amounting to mania have already been announced. One of these was at Rovigo, where, after a tremendous contest, the socialist candidate was defeated, and one of his most fervid committee-men who had wrought himself to an extreme state of tension felt the disappointment so keenly that inhibitory paresis declared itself in a number of violent excesses. He had, in fact, to be removed to the Manicomio at Rovigo, where his shrieks and struggles became so alarming that he was put into a *camicia di forza* (strait-waistcoat). Other victims to mania from the same cause—some of them homicidal in their outbreak—are reported from the Southern provinces. Hitherto Italians have taken their political elections with a sober self-possession which outsiders are apt to call indifference, but the agitation, directed against Crispi and availing itself of the most violent weapons of party warfare, has acted on them like a pernicious stimulant and driven them to words and deeds so extravagant as in many instances to pass the bounds of sanity. The same cause nexus between political excitement and mania has been observed and commented on in France, where the eminent *aliéniste*, M. Regnard, precisely nine years ago published a monograph on its various forms. One of these he classified as "monomanie grandiose," a not unfrequent result in the amateur saviour of society; and he described a typical example of it in a young ecclesiastic who, after making himself a public nuisance by posing as a self-styled "complementary supplement to Leo XIII.," had to be placed in the Maison de Santé. Last year in the House of Commons the increase of lunacy in Ireland was, in a discussion on the Commissioners' report, attributed by more than one member to the high-pressure excitement of the last political decade; and certainly the "Italian Ireland," as Sicily has been not inaptly called, has within the twelvemonth been prolific of agitation and moral tension which the Southern brain is little able to bear up against. "Mania contionabunda" has already found its way into alienist classification south of the Alps, where the "Morbus Comitialis" has also become all too common, though in a sense somewhat different from that of Celsus. The whole phenomenon of political mania has, indeed, been so pronounced in Italy ever since Signor Crispi's Cromwellian closure of the Camera dei Deputati that we may expect it to form the subject of one of those interesting studies in which no one has more distinguished himself than Professor Lombroso.

Coming Congresses.

Besides the Congress on International Medicine, at which the question of sero-therapeutics will have a "full-dress debate" all to itself, there will be held in Rome, also in September next, a great Geographical Congress, the second of the series which was initiated three years ago in Genoa on occasion of the quatercentenary of Christopher Columbus. Elaborate arrangements are already in progress for the reception and entertainment of foreign delegates, who will receive all information on applying to

the secretary of the Congress, at the rooms of the Società Geografica Italiana, Via del Plebiscito, Rome. Climatology will form an interesting feature of the *agenda*, and the experience of more than one medical explorer as to the resources of the dark Continent in health-resorts—notably, the Asmara uplands of Abyssinia—will be available in its discussion. I may add, as an item of news, that the place of Padre Denza at the Specola Vaticana has just been filled by the appointment of the Padre Bertelli, the distinguished physicist and seismologist. The Padre Denza¹ could have no abler successor than the Padre Bertelli, whose investigations of air-currents and telluric storms will occupy a prominent place in the history of climatology.

June 2nd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Ménière's Disease.

At the last meeting of the Vienna Medical Club Dr. Frankl read a paper on Ménière's Disease. That observer was the first to show that persons might be seized with sudden deafness, vertigo, tinnitus aurium, and vomiting. This deafness may be complicated with facial paralysis. Cases not uncommonly occur where hearing is lost in consequence of injury, and post-mortem examination shows that a fissure of the occipital bone passes through the labyrinth and extends to the inner surface of the tympanic cavity. Ménière's symptoms, however, may result from syphilitic diseases of the labyrinth, and some poisons—such as quinine, nicotine, and nitrate of silver—may produce similar effects. Vertigo and tinnitus are the most important symptoms. Some patients suffer from continual vertigo, which ceases only in a constant position of the body (lateral or the head downwards); this is the so-called status Ménièreus. Such patients show plunging movements as if they would fall sideways, and this condition characterises Ménière's disease, for neurasthenia presents no plunging movements. Moreover, the oscillatory, rotatory, or deviating movements of the eyes are of great importance. These paroxysms are accompanied by ataxia and increased reflexes. Dr. Frankl exhibited a patient twenty-nine years old who was admitted to hospital some eight months ago. His illness began with congestion in the head and weakness. After having recovered his senses he experienced vertigo and tinnitus and vomited a slimy substance. Since that time he has suffered from imperfect hearing in the right ear and is harassed by a noise which he compares to that of boiling water. Dr. Frankl explained that this condition may be regarded as a consequence of a disease of the semicircular canals caused by hæmorrhage into the labyrinth.

Treatment of Spasmodic Torticollis.

Dr. Heinrich Weiss has published² a case of Spasmodic Torticollis treated by Curare. Following Professor Benedikt, he describes five forms of torticollis: (1) those which occur continually or in paroxysms; (2) clonic and tonic forms; (3) unilateral or bi-lateral spastic forms; (4) cases where several muscles are affected; and (5) torticollis with muscular hypertrophy. All these cases apparently occur on both sides. The muscles of the side which seems to be sound become atrophic, whereas those of the affected side show hypertrophy. The symptoms being misinterpreted, it has been proposed to treat the apparently sound side by faradisation, and the success obtained was trifling. Inveterate cases are to be treated by nerve stretching. At a meeting of the Vienna Medical Society Dr. Weiss exhibited a patient who suffered a short time ago from torticollis with spasms of the right sterno-mastoid muscle, the rotators of the head and vertebral column. The head was turned round the vertical axis with the chin to the left and round the sagittal axis to the right, the occiput almost touching the right shoulder; the right sterno-mastoid was hypertrophied. As arsenic, bromine, and faradisation of the left side had been used without any success, nerve stretching was performed. The right accessory nerve, which was stretched, was found to present a peculiar condition—that of hyperlymphosis nodosa. A too forcible operation being hazardous, only the bundle of fibres at the place of entrance into the muscle was

¹ Vide THE LANCET, Dec. 22nd, 1894.

² Therapeutische Wochenschrift.

stretched. Three weeks after this operation the previous symptoms returned, and Dr. Weiss injected a solution of curare (half a Pravaz's syringeful) into the neck. The solution contained 0.15 gramme (=2.5 grains) curare and 10 grammes water (=167 grains). The injection was made every two days; the patient's condition improved from day to day, and at present he is entirely free from torticollis. As for the strength of the preparation, the solution is to be straw-coloured. At first half a syringeful is to be injected, and the amount is to be increased until tremulousness is induced.

The Use of Trional for the Sleeplessness of Children.

Dr. Klaus³ has used trional in some diseases of children, such as chorea, epilepsy with persistent sleeplessness, and sleeplessness due to indigestion. He has obtained gratifying results, but in one case symptoms of irritation were observed. According to the age he recommends the following doses: one month to one year, 0.2 to 0.4 gramme (3 to 6 grains); one to two years, 0.4 to 0.8 gramme (6 to 13 grains); two to six years, 0.8 to 1.2 gramme (13 to 18½ grains); six to ten years, 1.2 to 1.5 gramme (18½ to 23 grains). The remedy is to be taken in hot milk or honey half an hour after the evening meal.

Inebriates in Lunatic Asylums.

A paper on this subject was recently read by Dr. Tilowsky, Director of the Lower Austrian Lunatic Asylum at Ybbs. He said that inebriates could not be reclaimed in lunatic asylums, alcohol being prescribed there for dietetic or therapeutic reasons. Experience, however, has proved that recovery from drunkenness was possible only by complete abstinence from alcohol. Temperance does not help, for the taking of a small quantity of liquor causes an inordinate thirst for more. Dr. Tilowsky therefore advocates the absolute exclusion of drunkards from lunatic asylums and the institution of compulsory measures, such as already exist in the English colonies and the United States. If it is requisite in the interests of public health to isolate patients affected with typhus fever or trachoma, it is also a duty of society to protect lunatics from association with inveterate drunkards and to found inebriate asylums, for drunkards in their lucid intervals are disturbing elements in lunatic asylums by reason of their mental superiority.

A Peculiar Case of Suicide.

Dr. Aczel has published in the Hungarian medical journal *Gyógyászat* the following case of suicide. Being recently sent for he found a woman bathed in blood and beside her splinters of glass and a bloody knife. In her throat there was an incised wound six inches long and her larynx was removed, but the carotid arteries were unhurt and pulsated on both sides. She was still alive, but her breathing was deep and irregular. The larynx was found in the blood. The woman was admitted to hospital and died in six hours. It is singular that such terrible injuries had not caused instantaneous death.

Dr. Heitzmann.

The eminent abilities of the well-known author of the "Anatomical Atlas" not being at first recognised at Vienna, he left his native town some twenty years ago and founded a microscopical institution at New York. Last Friday he was the guest of the Vienna Medical Society, and read a paper on his microscopical researches. He was the first to prove that the red blood-corpuscles possess a reticular structure. When treated with chromate of potash they show amoeboid movements, and half an hour later filaments reticularly interwoven pass through the inside of the corpuscles, the hæmoglobin being enclosed in this network. This reticulum may also be found when blood is mingled with stale urine. The red blood-corpuscles, therefore, possess life as protoplasm, the reticulum exactly representing the living matter. Where much living matter is found the constitution of the individual is good. Dr. Heitzmann infers the nature of the constitution from the quality of the reticulum, and has been able to predict the end of an illness three weeks in advance by means of microscopical examination. The organism is a living continuous structure and not an aggregation of individual cells.

June 2nd.

³ Kijinsche Rundschau.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Opposed to Vivisection.

A SURGEON of Philadelphia recently proposed to splice a divided nerve with a section of a dog's nerve, and applied to the keeper of the public pound for the animal. The vagrant dogs were in the keeping of the Society for the Prevention of Cruelty to Animals, and the request was promptly refused by a lady member. "In reply to your note," she said, "I will say that, although I should always approve of sacrificing a dog's life to save that of a man unless the latter was a curse to the world and the former a boon and blessing (which is sometimes the case), I think that I am justified in refusing to give you one of the dogs at our pound for the experiment, which may prove of benefit to one of your patients or may not, the latter being the most likely alternative." The surgeon replied: "Aside from myself, there are three parties who are to be considered in this matter: first, the dog; second, the man; and third, mankind. First, the dog. I stated to you that the dog would not suffer, that he would be treated with the same care as the man, and that after the operation I should continue the anæsthetic till the dog was dead. Secondly, the man. This man knows what I am going to do and is anxious to have it done. His leg is paralysed. If by an ordinary surgical procedure I can re-establish the continuity of the nerve I may be able to cure his paralysis. In that case I should not have recourse to the dog. If, on the contrary, the gap between the two ends of the nerve is so great that I cannot bring them together, either the man must be condemned to paralysis for life or some other means must be tried to re-establish the nerve and so restore to him the use of the leg. This might be done by the process of nerve grafting. Yet you refuse me a dog on the ground that it is an experiment. Granting that it is, it is at the most a perfectly harmless experiment, for it would not be more painful than any ordinary operation; and even if it absolutely fails, it leaves the patient not a whit the worse off. If it succeeds, it will be of the greatest possible service to him. Thirdly, mankind. The only way in which surgery can make any progress is by testing new methods of treatment which have at least a reasonable prospect of success. In your misguided zeal for dogs you are guilty, in my opinion, of cruelty to this man, and cruelty to all mankind, because you thwart scientific progress under the guise of love for animals. You would condemn to the torture and disabilities of accident and disease people who have happily been rescued by the more humane scientists of my profession."

Practical Test of the Qualifications of Trained Nurses.

The hospitals of New York have each a training-school for nurses. It has been customary to have public graduating exercises when the diplomas have been conferred. The Presbyterian Hospital made an interesting departure a few days ago by giving a demonstration of the methods of work by nurses, and of their ability to perform their tasks. Patients were brought from the wards and laid on cots and operating-tables. Then the more difficult and delicate work required of the nurses was practically shown. First came an object-lesson on the making of beds and the changing of sheets and mattresses without removing the patient from the cot, and then the lifting of the patient from one cot to another, all being done quickly and with no disturbance of the subject. After this followed the application of the different kinds of bandages to the head, chest, abdomen, arm, leg, hand, and foot, one of the bandages, forming a kind of jacket, encasing the subject from the neck to the hips. Hot and cold water applications were made, and the method of dry-cupping as practised was practically shown. The method of artificial respiration, used when the patient's breathing is deficient or has stopped, consisting of raising and lowering the arms, was likewise exhibited. One of the most interesting treatments given by the nurses was the cold bath to reduce the temperature in cases of typhoid fever. The subject was lowered into a bath of cold water, accurately regulated, and kept there for several minutes, being vigorously rubbed by the nurses all the time. The making and filling of icebags and the preparation of poultices were performed rapidly. One subject supposed to be suffering from a disease of the throat

had her throat sprayed and was then enclosed in a sheeted framework, where a preparation was administered by means of a vapour.

Obituary.

JOHN ANTHONY, M.D. CANTAB., F.R.C.P. LOND.

ON June 1st, at Birmingham, Dr. Anthony passed peacefully away at the ripe age of 81 years. In many respects Dr. Anthony was a remarkable man, his life being devoted to the pursuits of natural and applied science. At an early age he became a Scholar of Caius College, Cambridge, and a Mickleburgh scholar in chemistry. He took his M.D. degree in 1859, and was made a Fellow of the Royal College of Physicians in 1876. His younger brother was Mark Anthony, the celebrated painter of landscapes. Dr. Anthony was also a devoted lover of nature in every shape and form. He had travelled extensively, and made abundant use of his exceptional powers of observation and his intelligence. An accurate and enthusiastic worker in scientific research, particularly in astronomy and microscopical investigation, he acquired all the latest and modern appliances relating to these subjects. With a wide range of knowledge and a disinterested and impartial mind he enjoyed his life in the midst of his pursuits with singular felicity and ardour, seeing that by reason of his love of work and admiration of all nature's wonders he passed his time unmoved by worldly perturbations. Some forty years ago he was physician to the General Dispensary and to the Children's Hospital, but never took an active part in practice. His studies engaged the whole of his time, and his collections of natural history and scientific apparatus occupied his mind and his time. Genial, kind-hearted, and full of the most varied information, his place will be hard to fill for those who knew him well and partook of his friendship and his memories.

CHARLES JAMES SYMONDS, M.R.C.S. ENG., L.R.C.P. ED.

THE death occurred on May 21st, at Mutley House, Southampton, of Mr. Charles James Symonds, M.R.C.S. Eng., L.R.C.P. Edin., at the age of seventy-six years. Deceased was the son of the Rev. Samuel Symonds, M.A., Rector of Philligh, Cornwall, and a Justice of the Peace for that county. He was educated at Guernsey College and St. Bartholomew's Hospital, London. After taking his qualifications he joined the Royal Mail Steamship Company, and was surgeon to the troops conveyed by them to and from the Crimea, he being present at the Siege of Sebastopol and the Battle of the Alma. After his marriage, in 1859, Mr. Symonds gave up the sea, and in 1867 he commenced practice at Woolstone, near Southampton, where he remained for a lengthened period, and as a medical practitioner was known for miles round. He was held in the highest respect and esteem by all who knew him, and among the poor—to whom he was always most generous and kind—his name was quite a household word. He lived to a good old age, and although now numbered among the great majority his memory will ever remain green with those whose pleasure it was to be acquainted with him.

ROBERT HODGENS LLOYD, M.D. BRUX., M.R.C.S. ENG., L.S.A.

DR. LLOYD, whose death occurred on May 10th, had for nearly twenty years held the responsible position of medical superintendent of the Lambeth Infirmary, and was highly esteemed among his colleagues in the metropolitan Poor-law medical service. He studied medicine at Westminster Hospital and took the diplomas of the Royal College of Surgeons of England and the Society of Apothecaries in 1869. Under the auspices of the National Society for the Aid of the Sick and Wounded he served in the Franco-German campaign of 1870-71, and soon after his return to England he was selected to be medical superintendent of the Woolwich Union Infirmary. In 1876 he succeeded the late Dr. Bullen as medical superintendent of the Lambeth Infirmary, and held the appointment up to the time of his death, which occurred at the comparatively early age of forty-seven years. Dr. Lloyd contributed papers to THE LANCET on various subjects during a series of years.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

LAST week we gave a detailed report of the proceedings of the Council on Tuesday, May 28th, and Wednesday, the 29th. On Thursday, the 30th, and Friday, the 31st, the whole time of the Council was taken up with the consideration of a single item of business—namely, the case of Mr. Robert Fitzroy Benham, registered as Member of the Royal College of Surgeons of England 1881. Mr. Benham had been summoned to answer a series of charges in relation to the Queen's Jubilee Hospital, Richmond-road, Earl's-court, Kensington, formulated by the solicitor of the Council on the complaint of the Medical Defence Union. He appeared before the Council, attended by counsel and solicitor, and offered an absolute denial to each of the charges made against him. Several witnesses were examined on either side and a great number of documents were read, and the Council, at the close of the second day, after deliberating in private for a considerable time, announced to Mr. Benham that they found him not guilty of the charges laid against him. When the minutes of the proceedings came to be read on the following day the President informed the Council that the trial had been an additional cost to the Council of nearly £600.

The position of the Council towards penal cases is one the profession will wish to see defined, if not strengthened. It does not, of course, follow that the time and money of the Council are thrown away in investigating charges against a practitioner which end in nothing but his acquittal. On the contrary, no disciplinary body could be better engaged. But it is necessary that a tribunal should have proper power to try or its seriousness of import will be jeopardised. In the case of Mr. Benham it almost appeared as if the defendant desired the investigation by the Council of the charges brought against him, and it will be a curious use of the Council's investigations that they should be courted by a medical man to clear his character of charges which he should meet in a court of law.

In one case the course of events was curious. The Medical Defence Union withdrew the charges it had made. Dr. Bateman explained that he did so in consequence of the witnesses who had signed the statements on which he relied afterwards signing other statements contradicting these. The Medical Defence Union has not had an easy time of it. It is open to abuse from all sides, and it came in for not a little in connexion with this case. It has a difficult part to play, and when its able representative has to contend with such a foeman as Mr. Bucknill, Q.C., the contest is scarcely a fair one. It would seem but fair to Dr. Bateman that the Union should employ counsel in those cases which it brings before the Council. But even so the collapse which happened in this case could not have been averted. The honorary secretary explained that the Union had been at an expense of £60 with no result and with no credit to itself, while the abortive action told heavily upon the funds of the Council. The profession is under a great debt to the Union for the work it has done, and it will be a pity that it should not make that work more effective and complete. The General Medical Council is less to be pitied. It has its highly paid lawyers, and it is not too much to expect that they should facilitate the trial of fit cases and save the Council from listening to those which cannot be satisfactorily dealt with under its powers.

Up to Wednesday it is not too much to say that the most striking feature of the present meeting was the attempt of Sir Walter Foster to change the whole spirit and action of the Council towards the midwives question. There had been premonitory intimations that Sir Walter Foster was about to make what Dr. Donald MacAlister called "this sharp turn." But, to do Sir Walter Foster justice, he made it with no sense of embarrassment. He proposed to abolish the word "midwife," in spite of Genesis and the language and custom of law and the common people, for the term "midwifery nurse." This was rejected by the Council, as was a compromise suggested by Dr. Glover—the use of the term "nurse-midwife." Sir Walter Foster made no secret of his objection to legislation of this sort in any form. His action was the more remarkable, as he had himself moved a resolution in 1889 urging the Government to bring in such a Bill, alleging that much suffering and mortality were going on among poor women for want of it. "He was no pedant" and not hindered at all by such an inconsistency. The consistency of the Council was, of course, not more to be revered than his own, and he spoke as if he were quite prepared to disregard the action of the Council for twenty years. On Tuesday of this week he excelled himself in proposing that instead of "woman" the word "person" should be used. The effect of this would be to enable men to be registered as women after a few months' training. In other words, it would be an invitation to the unqualified assistants to take the midwifery practice into their own hands. The Council became properly alarmed at this proposal, some of Sir Walter Foster's Scotch and Irish supporters (the Bill, by the way, not affecting either Scotland or Ireland) even hesitating and holding back. Fortunately, the proposal was rejected by 21 votes to 7, and thus a real danger to the profession was averted.

On Wednesday afternoon, on the proposal of Sir William Turner that the amendments of the Bill made by the Council in committee should be adopted and forwarded to the Government as a reply to its wish for the opinion of the Council, Sir Walter Foster proposed a motion practically rejecting the Bill or any other legislation to the same effect. But the Council rejected his proposal by eighteen to seven, and carried that of Sir William Turner, the original motion, by twenty-three to six. His discomfiture would have been still more complete, but for the support of a few Scotch and Irish members, though, as we have said, the Bill did not apply to their divisions of the country. Sir Walter Foster's opponents had an easy task in showing how the credit of the Council as a deliberative and advising body was at stake in the matter. Dr. MacAlister spoke with great force, and Dr. Glover pointed out that the Bill was the most modest of proposals for meeting a great evil and that the alternative remedies were likely to be disastrous to the profession.

Dr. Tirard has been invited and has consented to act as secretary to the Pharmacopœia Committee and to render assistance to the President in matters relating to the preparation of the new edition of the Pharmacopœia. We congratulate the Council and Sir Richard Quain upon having secured a gentleman so eminently competent to discharge the requisite services. Dr. Tirard is Professor of Materia Medica and Therapeutics in King's College, London, and the author of "The Prescriber's Pharmacopœia," and has been an examiner in materia medica at the University of London, at the Royal College of Physicians of London, and to the Conjoint Board; so that to the result of his ten years' work at King's College there must be added the amount of varied and practical experience that comes

from exercising the arduous task of examining, placing him in an excellent position to know the directions in which the current edition of the British Pharmacopœia is useful to students and practitioners and in which it falls. As physician to King's College Hospital and the Evelina Hospital for Sick Children, Dr. Tirard also will be able to lend the assistance to the committee of the practical physician, as well as that of the skilled pharmacologist, so that from every point of view we are pleased to be able to notify his appointment.

SATURDAY, JUNE 1ST.

The Council resumed to-day with Sir Richard Quain again in the chair. The practitioner concerned in the first disciplinary case on the agenda did not appear when called upon, and Mr. Muir Mackenzie informing the Council that the registered letter containing the summons had been returned, it was decided to postpone the consideration of the case until the November session.

The Case of Mr. George Francis McCarthy.

The Council then proceeded to the case of Mr. George Francis McCarthy, registered as Lic., Lic. Midwif., 1876, K. Q. Coll. Phys., Irel.; Mem. R. Coll. Surg. Eng., 1876, who, on the complaint of Mr. Braxton Hicks, coroner, had been summoned to answer the following charge:—

"That he systematically acted as cover to an unqualified person named Francis Morley Coppin, and by acting as cover to him, and by allowing him to use his (McCarthy's) name and qualifications, and by his presence and assistance, enabled the said Francis Morley Coppin to practise and attend patients as if he were a duly qualified registered practitioner."

Dr. BRAXTON HICKS addressed the Council in support of the charge. He explained certain circumstances brought to light at the inquest on the body of a man named Collet, who died in Oakley-street, Lambeth, in the course of last February. These went to show that Coppin was in the habit of attending serious cases and treating them on his own responsibility, the people understanding him to be "Dr. McCarthy" and a duly qualified practitioner. He also presented to the Council the death certificate, bearing Mr. McCarthy's name, of a child which died when Mr. McCarthy was away at Brighton on holiday. Mr. McCarthy, said Dr. Braxton Hicks, saw the child last on Feb. 13th, and it died on the 18th, and in the presence of two witnesses Coppin filled up the certificate. He produced two other death certificates which he claimed were in Coppin's handwriting.

Cross-examined by Mr. Schultess-Young, who appeared for Mr. McCarthy, Dr. Braxton Hicks said he did not suggest that Coppin shared with Mr. McCarthy the earnings of the practice; all he suggested was that Mr. McCarthy must have known that Coppin was acting as a qualified practitioner. Coppin was not a man learning the profession; he was what might be called a stock unqualified assistant.

Mr. McCarthy afterwards was examined. He stated that he came to London in 1876, and for a year acted as assistant to Coppin's father. He left for a time, but returned and purchased a partnership with Dr. Coppin senior. That partnership continued until 1881, when he acquired the entire practice. Mr. Coppin, jun., had acted as his assistant from time to time, according to the exigencies of the practice, but he had no responsibility for the practice. Since the certificates mentioned came to his knowledge he had dispensed with the services of Coppin, and he was carrying on the practice without an assistant. He gave Coppin no authority to sign death certificates for him.

Mr. EDWARD JOHN SMITH, registered practitioner, residing in Lambeth-walk, gave evidence as to his habit of acting for Mr. McCarthy while the latter was away from home.

The PRESIDENT, announcing the decision of the Council, said it was his duty to tell Mr. McCarthy that they were of opinion that he committed the offence charged against him, but at the same time, moved with merciful consideration, they postponed proceeding further in the matter. The Council determined that he should be called up again in November in order that he might produce evidence as to the manner in which he was conducting his professional duties.

The Case of Mr. Samuel Frederick Murphy.

The PRESIDENT suggested that the Council should dispose of the next case on the programme of business, that of

Mr. Samuel Frederick Murphy (registered as Licentiate of the Royal College of Surgeons in Ireland, 1885), who had been summoned to appear before the Council to answer a charge of covering an unqualified person at Coventry. He said he was informed by their legal adviser that the case might be dealt with in two or three minutes.

Dr. McVAIL objected to their legal adviser assuming anything of the sort.

Mr. WHEELHOUSE moved the suspension of the Standing Orders for such time as the Council saw fit.

Only Dr. McVail voted against this proposal.

The PRESIDENT pointed out that it would save expense to the parties and the Council if the case could now be taken.

The parties were called, and Dr. Bateman appeared for the Medical Defence Union in support of the complaint. Mr. Murphy did not appear.

Mr. MUIR MACKENZIE said that Mr. Murphy's case was one of covering a notorious person called Millerchip, and it was brought on the complaint of the Medical Defence Union. There was very full evidence of Mr. Murphy's having covered Millerchip and permitted him to sign his certificates. Through his solicitor Mr. Murphy put in a defence, in which it was stated that on the complaint being made known to him he had at once severed his connexion with Millerchip, that he did not think what he was doing would be looked upon so seriously, that he desired to apologise in the simplest manner possible, and that if the Council overlooked the offence he would take care not to offend again. The solicitor who wrote added that Mr. Murphy was a young man, and he trusted the Council would accept his apology and not inflict upon him the penalty of removal from the Medical Register. He (Mr. Muir Mackenzie) suggested that the Council should accept the apology offered. They could record in their minutes that as Mr. Murphy had apologised for the offence, stating that it was committed through inadvertence, the Council did not see need to proceed. That would not prevent Mr. Murphy's being summoned on a fresh charge.

Dr. HERON WATSON asked whether Mr. Murphy should not have appeared. It was the least thing he could have done in order to show that he respected the Council.

Dr. FRASER pointed out that Mr. Murphy had pleaded guilty to doing what the Council had punished other men for doing, and it would be a rather unreasonable way of dealing with the case to adopt the course suggested.

Dr. HECTOR CAMERON said that Mr. Murphy had been enabling a man to practise against whom there was a long list of convictions. He must have known that this man Millerchip had been taken off the Register. He had been summoned and he ought to have appeared.

Dr. CHURCH said that he pleaded youth also.

Mr. CARTER said that in the documents in the case they had a letter of March 29th and another letter in reply to it.

Dr. McVAIL moved that consideration of the case be postponed till Monday, and that Mr. Murphy be summoned to attend on that day.

Sir WM. TURNER submitted that Mr. Murphy must make an appearance. He did not see why the Council should allow anyone to treat them in the way Mr. Murphy was doing. He seconded the motion.

Dr. ATTHILL objected to postponement. This gentleman had pleaded guilty, and in his opinion the Council should adopt the same course as was taken in the case of Mr. McCarthy. They should accept the apology, postpone punishment, and call upon Mr. Murphy to give evidence in November that in the interval he had conducted his practice in a regular manner.

The PRESIDENT thought there were strong reasons for the case going on.

Dr. FRASER said it seemed possible that, if the man came up on Monday, he might give some reason to enable the Council to take a favourable view of his case. But in the meantime he had pleaded guilty, and unless he could give some reason why the Council should not proceed further, his name should be removed from the Register.

Dr. HAUGHTON suggested that there was nothing to prevent Mr. Murphy's being summoned to appear on Monday. It was treating the Council with rather scant courtesy, and was rather an off-hand way of proceeding to write, "I plead guilty; let me off."

The motion was then put and was unanimously carried.

The Council adjourned at ten minutes past four o'clock.

MONDAY, JUNE 3RD.

The Council met again to-day, Sir RICHARD QUAIN in the chair.

The Case of Mr. Samuel Frederick Murphy.

The Council took up the case of Mr. Samuel Frederick Murphy, who was summoned to appear on the following charge as formulated by the Council's solicitor: "That he had acted and did act as cover to an unqualified person named Thomas Millerchip, who resided and carried on a medical practice at 4, Swanswell-place, Coventry, and by his presence and the aid of his name and professional qualifications enabled the said unqualified person to carry on, and assisted him in carrying on, a medical practice as if he were duly qualified."

Mr. Murphy did not appear.

Mr. MUIR MACKENZIE said that on Saturday afternoon a telegram had been sent to Mr. Murphy at 4, Swanswell-place, Coventry, advising him that his case had been postponed till Monday at 2 o'clock, and that his attendance was imperative. As Mr. Murphy did not now attend, the Council, Mr. Muir Mackenzie added, could adjudicate on his case.

Dr. BATEMAN then, for the Medical Defence Union, put in three certificates of Millerchip's convictions in criminal courts, and said he was a person whose case had given a good deal of trouble in Coventry, four or five medical practitioners in the district having been brought before the Council on a charge similar to that now made against Mr. Murphy. He read affidavits in support of the charge.

Mr. MUIR MACKENZIE again read the defence sent to the Council on behalf of Mr. Murphy.

After a brief conversation, in the course of which it was elicited that Mr. Murphy had not attended at the offices in Oxford-street at all, the Council considered the case in private. When, five minutes or so afterwards, the public were readmitted,

The PRESIDENT said the Council had decided that Mr. Murphy had committed the offence charged against him, that the offence was in the opinion of the Council infamous conduct in a professional respect, and that the Registrar should be directed to remove Mr. Murphy's name from the Medical Register.

A Case Withdrawn.

The next business on the programme was the case of a gentleman who had been summoned to answer a charge of covering an unqualified person. On the charge being read by Mr. Miller, the Registrar,

Dr. BATEMAN asked to be allowed to make a statement in regard to the case.

Mr. MUIR MACKENZIE: You wish to withdraw it?

Dr. BATEMAN gave his reasons for withdrawing. The Union had made the usual inquiries at a considerable cost, and finally received from their agent statutory declarations which were drafted by their legal advisers and signed by certain persons. The evidence thus collected was forwarded to the General Medical Council in the usual manner, and upon it a summons was issued; but to his (Dr. Bateman's) surprise and utter astonishment, when the defence was issued it contained statements from the original set of witnesses entirely contradicting their former evidence. As the truth could only come out under cross-examination, and as they had no power to compel the attendance of these persons, he felt that it would be hopeless to attempt to arrive at or do justice to anyone connected with the case, and after some further conversation the Council deliberated for a few minutes in private. On the public being readmitted the President announced that the following was the decision at which the Council had arrived: "Dr. Bateman having declined to proceed further with his complaint, on which the summons was issued, the Council does not think fit to proceed further with the case at this session."

The Apothecaries' Hall of Ireland.

The next business on the notice paper was the following motion in the name of Dr. Atthill—viz.: "That the Council consider the application of the Apothecaries' Hall of Ireland for the appointment of examiners in surgery, without waiting for the report of the Examination Committee on the autumn report on the Conjoint Examinations of the Royal College of Surgeons and Apothecaries' Hall of Ireland."

Sir PHILIP SMYLY moved that this motion be not put. He thought it premature to discuss this question before they had before them the report of the Examination Committee.

Dr. ATTHILL reminded the Council that they were near

the end of the session, and if they did not deal with this question now it would probably have to be postponed till November.

Dr. CHARLES MOORE thought the report should come first. The motion was not seconded, and the Council accordingly passed to the next business.

Removals from the Register.

Dr. BATTY TUKE asked the President whether, in pursuance of the resolution adopted by the Council on the recommendation of the Executive Committee, the solicitor had taken any proceedings against persons assuming qualifications of which they had been deprived by the licensing authorities, and whose names had been erased by the Council from the Medical Register.

The Council considered this question in private, and when the public were readmitted the President merely announced that he had answered it.

Medical Practice in the Netherlands.

Dr. BATTY TUKE moved: "That, in accordance with the recommendation of the Education Committee, the President be requested to inform the Lord President of Her Majesty's Privy Council that the General Medical Council, while they fully appreciate the importance of the privileges granted to British medical practitioners by the provisions of the Royal Decree of March 26th, 1895, transmitted by the Dutch Minister of Foreign Affairs, are of opinion that these do not constitute such 'privileges of practising' as are contemplated in Section 17 (1) of the Medical Act (1886), and accordingly do not deem it expedient that the Netherlands should at present be recognised by Her Majesty's Government as a foreign country to which the provisions of this section should be applied." The section of the Act referred to was as follows: "Her Majesty may from time to time, by Order in Council, declare that this part of this Act shall be deemed on and after a day to be named in such Order to apply to any British possession or foreign country which in the opinion of Her Majesty affords to the registered medical practitioners of the United Kingdom such privileges of practising in the said British possession or foreign country as to Her Majesty may seem just; and from and after the day named in such Order in Council such British possession or foreign country shall be deemed to be a British possession or foreign country to which this Act applies within the meaning of this part thereof; but until such Order in Council has been made in respect of any British possession or foreign country this part of this Act shall not be deemed to apply to any such possession or country; and the expression 'the prescribed day' as used in this part of this Act means, as respects any British possession or foreign country, the day on and after which this part of this Act is declared by Order in Council to apply to such British possession or foreign country." This section contemplated the case of a foreign country which afforded to the registered medical practitioners of the United Kingdom "privileges of practising" in the said foreign country. It did not appear to the Education Committee that such privileges were as yet afforded by the new decree of the Netherlands. A British practitioner was, they understood, to be permitted to practise in the Netherlands only on condition that he passed the "theoretical medical examination" of that country, and so obtained a Dutch qualification.

Dr. MACALISTER, in seconding the motion, said he was delighted to recognise in the concession of the Netherlands the first fruits of the admirable memorandum drawn up by the President and approved by the Council and forwarded to foreign nations. In this particular case, however, Holland asked for a privilege which at present was only conceded to India and some of our Australian colonies who put the licences of British medical men on the same footing as their own. In the case of Holland they insisted upon a Dutch examination, which made the case a little different. They must acknowledge a great step forward, but at the same time the committee thought that the reciprocity was as yet somewhat one-sided.

The motion was adopted, and on the suggestion of Sir WILLIAM TURNER it was agreed to send also to the Lord President some portion of the report of the Education Committee on the subject.

The Case of Mr. John Eustace Dennan.

On the recommendation of the Dental Committee the Council decided to remove from the Dentists' Register the name of Mr. John Eustace Dennan, who on Jan. 7th, 1895,

at the Central Criminal Court was convicted of obtaining money by false pretences and sentenced to ten years' penal servitude. Mr. MUIR MACKENZIE said that Mr. Dennan had written a long memorial complaining that his trial was an unfair one.

The Cost of the Disciplinary Cases.

The PRESIDENT said the Council would be glad to find they had got to the end of the disciplinary cases. The expense of these cases to the Council had been £700. Of course it was their duty to deal with these cases, but the question was whether the present preposterous system could not be modified in some way. It had been suggested that all the penal cases should be postponed till the end of the other business, and taken then by the members who were able to remain. In this way the expenses might be reduced.

Midwives Registration Bill.

The Council then went into committee to consider the Midwives Registration Bill and the report by the committee upon it.

Sir WILLIAM TURNER presented the report.

This document set forth that the Bill had been transmitted by the Lord President of the Privy Council to this Council with a request that the Council would favour him with any observations they might desire to offer on it. It was introduced into the House of Lords by Lord Balfour of Burleigh, and had passed the second reading. The Bill proposed that the term "midwife" should mean "a woman who undertakes to attend cases of natural labour without the direct supervision of a medical practitioner"; that a register of midwives should be kept in pursuance of the Act; and that a "Midwives Board" be constituted under the Act for the purpose of carrying out its provisions subject to the approval of the General Medical Council. The report then gave the various resolutions on the subject passed by the Council. Summarising these, it said that since 1877 the Council had on more than one occasion expressed the opinion that it would be desirable to provide by legislation for giving certificates to competent midwives; that the lives of women in labour should, as far as practicable, be protected from the incompetent; and that, whilst the Council did not approve of the institution of a central register for midwives, it was of opinion that there should be local registers, under the charge of the local governing authorities; that the Council would be willing to advise as to general rules of education, examination, and discipline, but would not undertake any duties of detail as to the registration of midwives or as to the local arrangements for licensing and controlling them. The committee recommended that the Bill be amended as follows:—

"That the word 'midwives' should be struck out of the title of the Bill and out of the several clauses, and that the term 'midwifery nurses' be substituted for it. N.B.—This amendment was carried on a division by a majority.

"Clause 2.—That in lines 9 and 10 the words following 'natural labour' should be struck out, and that the words 'but not to discharge any other duties than those of a midwifery nurse' should follow the words 'natural labour'.

"Clause 3, subclause 2.—That in line 23 the word 'registered' be substituted for 'legally qualified'.

"Clause 4, line 19.—After 'surgery' add 'or midwifery, except as defined in this Act'; line 20, add 'if any such name, title, or designation is assumed, or if any certificate of death or of stillbirth be granted, the midwifery nurse, on conviction, should be subjected to a fine not exceeding'

"Clause 5.—The committee see strong objections to the wide powers given under this clause of the Bill for the registration of midwives who may represent themselves as at present engaged in *bona fide* practice. They consider that the conditions under which the registration of these persons should be permitted ought to be made much more stringent, or the register would be flooded with ill-educated persons. It is, in their opinion, important that certificates of character and of competency, as well as proof of occupation as a midwife, should be furnished by each candidate for registration under this clause.

"Clause 6.—That the Midwives (Midwifery Nurses) Board should have an official chairman, to be appointed either by the Lord President of the Privy Council or by the President of the Local Government Board. The committee consider that the Incorporated Midwives Institute should appoint only one representative on the Board, and that the Obstetrical Society of London should appoint a representative.

"Clause 8.—The committee consider that the fees named in this clause will not be sufficient to provide for the payment of the charges to be met by the Midwives (Midwifery Nurses) Board. They suggest that power should be given to the Board to fix the fees.

"Clause 16.—The committee ask the Council to point out to the Lord President that no similar provision exists in the Medical Acts for the prosecution of offences, and they venture to suggest that, if such provision is considered necessary, the consenting authority should be either the Registrar of the Midwives Board or the local supervising authority referred to in Clause 12."

Sir WILLIAM TURNER, commenting on the Bill and the report of the committee, said that if the former became law

it would give to midwives a legal status they had not hitherto possessed, and the qualifications of women to act as midwives would in future be tested by a statutory board. It followed, therefore, that the Bill was a most important one and required very careful consideration by this Council. It was quite possible that the Council might desire to make other amendments in addition to those proposed by the committee, and it would be open to any member to put such forward. As to the first recommendation, that dealing with the title of the Bill, the committee were almost equally divided. There was merely a majority of one for the conversion of the term "midwife" to "midwifery nurse." He was one of the minority, and if he, as chairman of the committee, moved the adoption formally of the first recommendation he must reserve his individual rights.

Sir WALTER FOSTER seconded the first recommendation. He yielded to no one in the desire that poor women should have competent treatment on the part of the midwives who attended them at their confinements, but he did not think that that would be facilitated by this Bill. Indeed, he feared that greater, and possibly more serious, evils might await them if this Bill were passed in its present form. Some time ago the following resolution was adopted on his motion—viz.: "That this Council regards the absence of public provision for the education and supervision of midwives as productive of a large amount of grave suffering and fatal disease among the poorer classes, and urges upon the Government the importance of passing into law some measure for the education and registration of midwives." In moving that resolution he was actuated by a desire to save poor women from endless suffering and from bad treatment at the hands of ignorant women who undertook to attend them during their confinements; but since that time they had received a large amount of evidence in connexion with the diplomas granted to some of these women, showing that these women with certificates or diplomas were guilty of the very practices they were then anxious to put a stop to. They had received evidence that these women disseminated puerperal fever and had been guilty of certain practices which were not at all desirable in the interests of the community. What he objected to about this Bill was that it would give to women (who were in no sense competent to undertake the sole charge of midwifery cases) a quasi-legal sanction, so that they would practically become practitioners of midwifery. He did not object to women becoming practitioners of midwifery, but he wished them to become so on the same terms as men. In the case of men knowledge of medicine and surgery, as well as of midwifery, was required by law for the practice of midwifery. The only limitation prescribed was the limitation of natural labour, but whether a labour was natural or not it required great command of knowledge for its treatment. There were many unqualified practitioners who were very skilful in attending midwifery cases, and surely, if the employment of one of these men was condemned by the Council, they could not admit a woman who had no knowledge of medicine or surgery and whose knowledge of midwifery was picked up in the course of a few months' instruction and attendance on a small number of cases. He would have nursing treated in all its branches and have properly trained medical and surgical and midwifery nurses and treat them all alike. The woman who attended poor people at their confinements should be as well educated as the surgical or medical nurse.

Mr. WHEELHOUSE supported Sir Walter Foster's view and the recommendations of the committee. At the present moment there was scarcely a village or hamlet throughout the length and breadth of the land where a qualified medical man could not be obtained either immediately or upon very short notice. In former times this was not the case. Moreover, there had been great changes in the law. No one could practise midwifery before he had passed a test in medicine and surgery as well as in midwifery. Further, the whole science of nursing had undergone an entire change in recent years. Nurses were now trained for all portions of their work, and they had trained medical and trained surgical nurses. Why should they not also have trained obstetrical nurses? And why, if the medical and surgical nurse was at all times to be kept in subservience to the medical man, should the obstetrical nurse be allowed by law to take the whole of his duties upon her own shoulders and without any control from him or anybody else be allowed to practise the whole art of midwifery? He did not think it right that they should constitute by statute a new order of practitioners.

Mr. TEALW said the Council were not asked to sanction or

approve a Bill for the creation of a new order of nurses. Nurses were not in question at all. They were asked to sanction a Bill for doing a certain thing in reference to a large body of persons who had been existing under this name from time immemorial, and who existed in this country at the present moment in very large numbers. He quite understood the fears of some medical men, but there was a demand here which must be met, and the Council would make a mistake if they tried to alter this name. Their better course was to endeavour to obtain suitable safeguards.

Dr. MACALISTER thought Sir Walter Foster was taking a sharp turn indeed when he asked the Council to ignore not only his own resolution of 1889, but to ignore their whole proceedings on this question. Absolutely nothing would be gained by anyone going through as many as ten and a half pages of this report to lead him to suppose that the first resolution of the Council would be one to substitute "midwifery nurse" for "midwives." Mr. Wheelhouse, he thought, had put the dots on Sir Walter Foster's "i's" when he indicated that what ought to be done was to change the title to a Bill for the abolition of midwives for the benefit of medical practitioners. To leave out "midwives" was to change the whole character of the Bill. Many of the midwives of the present day were uneducated, some of them were dangerous, and the question was whether they should be allowed to continue and whether or not the dangerous ones should be weeded out. The fact that they must keep in mind, and which seemed to have been constantly before the Council in connexion with its previous resolutions, was this—that women did help women in their labour, women might legally help women in their labour, and for doing so might at the present moment sue for their fees. They were under the law. Were they also to be supervised? Should they be registered? The Council wanted to raise their status by placing them on a register and making them liable to a penalty if they broke the conditions on which they were registered. They could not present such a resolution to the Government without stultifying themselves. If they agreed to recommend such a change—such an unwise change—some strong reason would have to be given for it. The only reason he could give for it was that a certain number of practitioners had agitated for it. He believed it was the opinion of the Council that supervision was absolutely necessary. If the abuses complained of could exist under the present state of the law, to ask that no law should be passed was to stultify their own position. They had to recognise the fact that midwives exist, and the question was whether, like plumbers and others, they should be registered. He objected to any change in the title of the Bill.

Dr. BRUCE did not know whether it was right for him to take part in this discussion seeing that the Bill did not affect Scotland, but if it passed for England and Wales the chances were that it would pass for Scotland also, and therefore he wished to take this opportunity of giving reasons in support of Sir Walter Foster's position on the subject. He did not think it was fair to say that because some of the Council did not approve of this Bill they did not approve of any Bill. He approved of the term "midwifery nurse," but this Bill did not meet the difficulty. The effect would be, instead of improving the kind of midwives, they would have women not one bit improved who thought themselves the equals of medical men. He did not think that a proper position for midwives. Those women must not assume themselves to be educated and of the same status as medical men. That would do a great deal of harm amongst the poor people they were anxious to protect. This Bill should be qualified as Sir Walter Foster had suggested, and the Council should take care that they put these women in a subordinate position. It would be doing a great injustice to the public if they gave the right to these women to practise midwifery. Their training was quite insufficient for that.

Dr. WILKS pointed out that if they adopted this recommendation they would be going back to the use of the word midwifery as a term including all the diseases of women. The word "midwives" was a simple one, known to everyone, and used from time immemorial to mean women attending women in the natural process of delivery. To use the term "midwifery nurse" would destroy the whole of the Bill.

Dr. MCVAIL said he was not in the Council when the resolutions embodied in the report were passed, but he saw no inconsistency whatever between these resolutions and the recommendations they were now asked to adopt. These

resolutions were resolutions in favour of the registration of midwives. He was perfectly satisfied there was no objection on the part of anyone to the registration of midwives. But what did this Bill mean by midwives? In what sense did it mean the registration of midwives? In 1886 they had no legal definition of "midwives." Midwifery in that year became one of the standing branches of the medical profession, and he believed that no man or woman could practise midwifery who did not know medicine and surgery as well. This Bill referred to a woman who attended cases without the direct supervision of a medical practitioner. That meant that a new class of practitioners was to be created, that midwife was to mean something else than it ever meant before. Were the Council prepared to advise the Lord President to support the Bill and introduce into this country a new class of practitioners who were to practise midwifery without the supervision of any medical man? That was the point. Clause 1 set forth that the midwife was a woman who attended a woman in natural labour. Would anyone define "natural labour." The clause did not attempt it, and he did not think any member of the Council would try, but these midwives of the Bill, this new independent class of practitioners, were to define what "natural labour" was. It would be possible under the Bill for a midwife to say, "I was engaged for a case of natural labour, and yours is not natural labour at all." Yet there was no provision in the Bill to meet such an emergency as that. If the Bill had provided that the woman was to be under the supervision of a properly qualified medical man, who could come to help her whenever she called him, he would be able to support the Bill, but it did not do that, and the recommendation was an attempt to get it into the mind of the Lord President that there should not be set up a new set of practitioners who were not only to attend natural labour but to define it.

Mr. BRUDENELL CARTER said that during the last twenty-five years the Council had been constant in pressing upon the Government the necessity for some measure for the better education and registration of midwives. He was not prepared to go back from that. He approved of the word "midwives" because he knew what it meant. He did not know what "midwifery nurse" meant. He knew that there were thousands of poor women throughout the country who were unable to pay a medical man's fee and were attended by midwives. Though difficult to define, the arrangement worked very well in practice so long as they found a midwife who was conscientious. The Bill contained nothing about midwives' education. That would be regulated by the Midwives Board, and no doubt would be improved in time. He thought the Council might fairly trust the Midwives Board to lay down such rules as would guard the public against the abuses at present complained of, and furnish a class of women on whose conduct in ordinary cases the public might safely rely. He believed the Council would be supported in proceeding on the lines of their action hitherto.

Dr. GLOVER did not think it would be right for them to part with the word "midwife," but he thought it should be made clear that the person who was called midwife was a midwife and a nurse and in that respect was differentiated altogether from the medical man. The midwife's value consisted, not only in delivering the woman, but in acting as her nurse for several days afterwards. To make it clear that she was not a medical practitioner, and was also a nurse, and at the same time to retain the old word that was so familiar to all, he proposed to substitute "nurse-midwife" for "midwifery nurse." He thought this might meet the approval of the Council, for, after all, the points on which they were not agreed were very small. At any rate, on this occasion he could not go back upon a resolution of his own embodied in the committee's report, nor could he dissociate himself from the long list of able members of the Council who had asked for legislation on this matter of midwives' education and registration.

Mr. BRYANT, in seconding the amendment, said he had some affection for the word "nurse-midwife," as he believed he was the introducer of it. He did not think they could altogether throw aside the term "midwife."

Dr. LOMB AITHELL said that in the Irish hospital which he is connected the equivalent term used for monthly nurse was "midwife and nurse." He held that every woman who was to have to do with women at their times of labour should be as carefully trained to be a nurse as to be a midwife, and every woman who was able to afford it should have such an attendant. He thought that the Bill would be a very valuable measure if properly amended, and one

amendment the Council should endeavour to obtain should be a provision under which women would be trained to be nurses as well as midwives.

After some remarks by Dr. LEECH,

Professor GAIRDNER said it seemed to him that the definition of the term "midwives" in the Bill would exclude the medical practitioner, for it would allow a woman to attend natural labour without the supervision of a medical practitioner. They must take that into account. The Bill was evidently intended to legalise a new class of practising women who would be independent of the medical practitioner, and he was therefore entirely in favour of the substitution of "midwives" by "nurse-midwife."

Sir WALTER FOSTER said it was intended, if the recommendation was carried, to move a further amendment placing the midwifery nurse under the direct superintendence of a medical man.

The Council proceeded to vote on Dr. Glover's amendment, with the result that 8 voted for it and 16 against it. Thereupon a vote was taken on the committee's recommendation, when 12 voted for the recommendation and 14 against it.

Sir WALTER FOSTER asked that the roll should be called. This was done with the same result.

The recommendation accordingly was rejected by a majority of 2. Dr. Glover declined to vote and Dr. Kidd was absent.

The Council adjourned at six o'clock.

TUESDAY, JUNE 4TH.

The Council met again to-day, Sir RICHARD QUAIN presiding.

Midwives Registration Bill.

The Council resumed in committee the consideration of this Bill and the report made upon it by the special committee.

Sir WILLIAM TURNER said that as they left the definition clause yesterday its first section ran thus: "The term 'midwife' means a woman who undertakes to attend cases of natural labour without the direct supervision of a medical practitioner."

Sir WALTER FOSTER moved to leave out "woman" and insert "person," in order that he might call the attention of the Council to the position in which they were placed by this Bill.

The PRESIDENT said he should like to have a clear understanding as to what they were about. They had been asked for their opinion with regard to this Bill by the Lord President. If they chose to say they had no opinion about it and desired none of it, that was another matter.

Sir WALTER FOSTER claimed to be allowed to discuss the Bill.

The PRESIDENT: Our duty is to the Government who ask us for our opinion.

Sir WALTER FOSTER: My duty is to my constituents.

Sir WILLIAM TURNER: I think Sir Walter Foster is perfectly in order.

The PRESIDENT: If Sir Walter Foster's amendment is carried there is an end to the report of the committee.

Dr. HAUGHTON: It appears to me that Sir Walter Foster is putting his finger on the very point we have to discuss. His amendment goes to the root of the whole Bill, and it will save time to have it discussed now.

Sir WALTER FOSTER then proceeded with his speech. He was anxious, he said, that women should have a fair field and no favour in the practice of the profession or any branch of it, and this Council very early in its career showed a laudable desire to remove restrictions upon the entry of women to the profession, and in accordance with that they now had women capable of becoming members of the profession just as men were after passing certain tests. This Bill, however, proposed to give women privileges over men. When a man got into general practice one of the first difficulties he encountered was the difficulty of attending midwifery cases. He used to be able to meet this with the system of pupillage and more recently with the employment of an unqualified assistant. The latter practice grew into an abuse because the registered practitioner got into the habit of setting up the unqualified assistant in a branch practice, and this Council had gradually brought that within the purview of their definition of covering. If this Bill became law they might very well have a condition of things in which all the resolutions of the Council with regard to covering could practically be set at naught. A medical practitioner instead

of employing a man as an unqualified assistant would employ one, two, or three of these women in different localities near his home, each having her name on her door as a registered midwife. These women would call in the practitioner when he was wanted for complicated cases, and transfer to him all the general practice arising out of the cases of midwifery. If, therefore, such a practice of midwifery was to be instituted he said it was only fair that men should share it with women. They were bound in common fairness to put men in as good a position as women.

Mr. WHEELHOUSE, seconding the amendment, said he did not see why they should take away from men a privilege which they had possessed for any number of years or why they should give the privilege to women alone. If they passed this amendment then they would have equality of treatment between the sexes.

Mr. TEALE could not believe that Sir Walter Foster was serious in bringing forward this amendment, because men could not in any sense be described as midwives. The idea of a midwife was a person who would not only attend the labour but remain afterwards to nurse the woman, and surely Sir Walter Foster did not propose the latter function for men.

Dr. MACALISTER said that until both men and women were subject to the attentions of midwives men and women were hardly on the same footing with regard to the duties and privileges of midwives. It was quite clear that Sir Walter Foster meant to destroy the Bill. His amendment was an ingenious one, but he hardly thought it would commend itself to the common sense of this Council.

Dr. GLOVER agreed that the object of Sir Walter Foster was to make the Bill ridiculous. If Sir Walter Foster held a brief for the unqualified assistants in this country he thought he should tell the Council; but that he should ask the Council to pass a resolution which would give them a function and standing and immensely enlarge the competition with the profession was asking them to believe either in their simplicity or his own. He (Dr. Glover) distinctly, in the interests of the profession, refused to open a door to let in, wholesale, uneducated men on the footing that the humble women contemplated by this Bill were to be admitted to practise midwifery. The necessity for this legislation arose distinctly from the tragedies that happened in the practice of uneducated women, and now it was proposed to admit an inferior class of general practitioners. This amendment asked them virtually to qualify and admit and recognise all the unqualified practitioners in the country, and he refused, and he hoped the Council would refuse, to do anything of the sort.

Dr. MCVAIL said he intended to vote for this amendment. Dr. Glover spoke about the Bill getting rid of the scandal of the tragedies connected with the practice of ignorant women, but the Bill proposed to license a certain number of women after going through some short course of study and submitting to some slight examination. If that were a right thing to do in the case of women it ought unquestionably to apply to men. According to the Bill, men who had studied anatomy, physiology, and the fundamental sciences of medicine, in a way that these women would never study them, would if they went before the proposed examining board be turned away and told, "Go and put on petticoats; it is not what you know that is to admit you, it is your sex." This state of things was preposterous.

Dr. BRUCE confessed that he would not be sorry to see the bottom knocked out of this Bill, because he considered it was essentially a bad Bill, and that we were not yet quite ripe for legislation on this subject.

On a vote being taken on Sir Walter Foster's amendment, 7 members voted for it and 21 against it.

Sir WILLIAM TURNER then moved in accordance with the recommendation of the committee to strike out all after the words "natural labour," and insert "but not to discharge any other duties than those of a midwifery nurse."

Mr. WHEELHOUSE seconded the motion.

Mr. BRUDENELL CARTER said that this amendment would prevent a woman performing any of the customary duties of social or domestic life. Under this definition of a midwife a woman could be a midwife but nothing else; she could not be a mother, a housewife, or a cook.

Dr. ATTHILL thought it was essential to the protection of the medical profession that there should be some definition of the legal duties of a midwife.

Dr. MCVAIL said that the best way to meet the difficulty was to say that a midwife meant a woman who undertook to

attend cases of natural labour "with the direct supervision of a medical practitioner."

Dr. HERON WATSON moved to substitute for "woman" the words "lying-in nurse."

This motion was negatived by 19 votes to 11.

Dr. MCVAIL asked whether in this instance Sir William Turner intended to vote for the amendment which he had moved.

Sir WILLIAM TURNER said he desired to hear the arguments before he committed himself.

Dr. MACALISTER, seconded by Dr. CHURCH, moved to add after "natural labour" the words "and to nurse lying-in women."

This motion received 10 votes, while 14 members voted against it.

Mr. TEALE suggested that a way out of the difficulty would be to add the words "subject to the restrictions and regulations made by the Board provided under Clause 6."

Sir WILLIAM TURNER did not think there was any necessity for these words, because it followed that midwives must be subject to the provisions of the Act.

Dr. GLOVER thought there could be no harm done by inserting the words, which certainly emphasised the limitation.

Dr. KIDD pointed out that there was no definition of natural labour.

Dr. MCVAIL, seconded by Dr. HERON WATSON, moved to add after "natural labour" the words "under the supervision of a regular medical practitioner." Dr. McVail explained that he only meant this to pave the way for other alterations to be proposed later.

The motion was rejected by 14 votes to 9.

Dr. KIDD, seconded by Dr. WILLIAM MOORE, moved to insert these words: "That for the purposes of this Act the term 'natural labour' means labour completed within twenty-four hours of the commencement."

Mr. TEALE thought it was most undesirable to stereotype any definition of natural labour.

This motion only received the support of the mover and seconder.

Dr. MACALISTER, seconded by Dr. GLOVER, then moved that the definition of "midwife" stop at the words "natural labour."

This was carried as an amendment by 20 votes to 7.

On it being put as a substantive motion,

Dr. MCVAIL objected to it. In this form the clause was in his view an absurdity. They had not defined and they could not define natural labour; yet this clause meant that they had defined it.

Dr. MACALISTER said that the object of the Bill was to make the scope of the law as wide as possible, so as to bring within it the largest possible number of the present unqualified and uncontrolled midwives; therefore, the wider they made the definition the better.

The amendment of Dr. MacAlister put as a substantive motion was then carried by 20 votes to 5.

No objection was taken to the definitions in the Bill of "Midwives Register" and "Midwives Board"; and Clause 3, which sets up registration, was also accepted after being altered by the substitution of "registered" for "legally qualified." On Clause 4 of the Bill, Sir WILLIAM TURNER said this clause was a very important one, because it laid down what were the privileges of registration under the Act. It was as follows:—

"A woman registered under this Act shall be entitled to act as a midwife in England and Wales. From and after the first day of January, 1896, no woman shall be entitled to recover any fee or charge in any court for attendance or service rendered as a midwife unless such woman be registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as a midwife in cases of natural labour only, in accordance with the prescribed regulations made in pursuance of the terms of this Act. A certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Act, 1858, or the Acts amending the same, in respect of such certificate, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery or that she is qualified to grant a certificate of death or of stillbirth."

On this clause, as would be seen from their report, the committee had suggested certain amendments. The first of these related to midwifery "as defined in this Act." He was afraid that could not now stand, seeing that the Council had rejected the proposed term "midwifery nurses," and as apart from the proposal to introduce that term the term midwifery did not occur in the Bill.

Sir WALTER FOSTER said that the Bill disclosed its object

here. It intended that these people should be practitioners—practitioners in midwifery. He suggested the withdrawal of the committee's proposed amendment as being no longer of use for the purpose for which it was framed.

The amendment was not pressed.

Dr. GLOVER suggested that the latter part of the clause should be so altered as to provide that the woman certified under the clause should have no right to assume any name, &c. implying that she was a licentiate or practitioner in medicine, surgery, or midwifery under the Medical Acts.

Some discussion favourable to this proposal ensued, and ultimately it was agreed that the part of the clause affected should read as follows: "Implying that she is by law recognised as a practitioner in medicine, surgery, or midwifery entitled to be registered under the Medical Acts."

Sir WILLIAM TURNER then moved the other amendment suggested by the committee—viz., "If any such name, title, or designation is assumed, or if any certificate of death or of stillbirth be granted, the midwife on conviction should be subjected to a fine not exceeding —."

Mr. BRUDENELL CARTER thought it would be a mistake to introduce the term "stillbirth" into the Bill. It would be better to say "cause of death." He believed stillborn children were constantly being buried on the certificate of the nurse.

Dr. ATTHILL agreed. Midwives would from time to time have stillbirths, and they were the only persons cognisant of them. He, however, was against midwives having the power to give a certificate of death, but unless there was some prohibitory enactment the existing practice would continue.

Dr. GLOVER thought the words were very valuable, and he hoped they would be maintained. They all knew that one of the scandals of the times was the large number of stillbirths that were certified by midwives. They were told the other day that the number amounted to 45 per cent. of the whole.

Dr. HERON WATSON took the view that what was to be guarded against was the midwife giving a medical certificate. That could be secured by the insertion of the word "medical" in the last line of the clause.

Sir WILLIAM TURNER said the point that was really before the committee was that there should be a penalty.

Dr. MACALISTER pointed out that there were penal clauses in the Bill, and if it was now wanted to introduce a penalty that should be done later, after Clause 14. He suggested that if further alteration was made in the clause it should be to provide that midwives with certificates were not legally qualified under the Medical Acts to grant any medical certificate as to the cause of death.

Dr. CHURCH said he had been on the point of making a similar suggestion. He had been going to propose too that the words "or of stillbirth" should be left out of the last line of the clause, and that the ending should be "or that she is qualified to grant any medical certificate or any certificate of the cause of death."

Sir WALTER FOSTER reminded the Council that under certain Acts of Parliament certificates would probably be wanted that a woman had been confined, and the midwife would be able to give a certificate to that effect.

Sir WILLIAM TURNER said he would withdraw the committee's recommendation and accept Dr. Church's.

The Council agreed. On Clause 5, provision for existing midwives,

Sir WILLIAM TURNER said this Clause 5 was as follows:—

"Any woman who at the passing of this Act is in *bona-fide* practice as a midwife, or has obtained a certificate in midwifery from some hospital or workhouse infirmary, or from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be approved by the General Medical Council, and claims to be registered before the expiration of two years from the passing of this Act, and produces the prescribed evidence of her title to be so registered (such title to be determined by the General Medical Council), shall be entered on the Midwives Register at such reduced fee as the Midwives Board shall prescribe."

He said that this was a clause to preserve existing rights, and the Council would see at once that it would sweep in a very large number of persons, some of whom might be fairly qualified and others of whom might have very small qualifications. The committee had felt that it was too wide and that it ought to be restricted. The Council had had considerable experience of existing rights in connexion with the Dentists Act. That was so wide that it permitted almost every man who had ever drawn a tooth to claim registration, and the result was that they had to put on the Dentists Register nearly 5000 names. The question was whether in connexion with the registration of midwives there

should be some preliminary investigation as to competency. He believed it was the practice in country districts of Scotland for women to be attended by their neighbours in the cottages near, women of absolutely no education at all. So long as the labour was natural there was no harm, but should not the Council now recommend that this clause should be made more restrictive? The committee had not specified precise amendments on the clause, which, in fact, would need entire reconstruction. They had contented themselves with a general statement of the matter, which hardly amounted to a recommendation. In connexion with that he desired to call attention to extracts from the minutes of the Council which formed an earlier part of the committee's report. These showed that the Council had always recommended that there should be certificates of character exhibited before registration. The Bill, strangely enough, omitted any reference to certificates of character, which, in a matter of this kind, the committee thought ought to be made imperative. He moved that the recommendation—if he might so call it—should form part of the Council's statement to the Lord President so that those interested in the passing of the Bill might see what their opinion was.

Dr. HERON WATSON thought that as the Council had the whole Bill in their hands it was for them to determine what should be the regulations under which these women were to be set up as registered midwives.

Dr. MACALISTER believed the last Midwives Registration Bill was wrecked in the House of Commons because it was proposed to insert a clause that a midwife should have a certificate from a clergyman. The titles were to be determined by the Council, and it would cover what certificates were required preliminary to registration.

Sir WILLIAM TURNER said that if it was the opinion of the Council that the Bill already gave sufficient power to the Council to require proper evidence of character he should not press his proposal.

Dr. ATTHILL thought there could be no objection to the recommendation going to the Lord President.

Dr. GLOVER did not see that any harm could result from taking the opinion of the Council on the recommendation.

The PRESIDENT then put the question, and it was adopted as part of the Council's statement to the Lord President.

Sir WILLIAM TURNER then read the following part of Clause 6:—

"Within six months from the passing of this Act a Midwives Board shall be formed, which shall consist of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, and three by the Incorporated Midwives Institute. One-fourth of the members of the Board shall annually retire, but shall be eligible for re-election after the lapse of one year."

He said the committee recommended important amendments on that. Before proceeding to them he wished to remind the Council that this Bill applied to England and Wales only, and therefore the Midwives Board it proposed to constitute was exclusively formed by certain bodies in England. The committee did not wish to alter the number of practitioners on the Board or the numbers to be appointed by the bodies named, with the exception of the Incorporated Midwives Institute. They did not know anything about the Institute, and they did not know by what right it was to be put on the same footing as those other medical authorities. The Council knew those other authorities as consisting of the great body of the profession in England, but they knew nothing whatever about the Incorporated Midwives Institute. Therefore it was that the committee suggested an alteration of the proposed constitution. They proposed that there should be an official chairman, appointed either by the Lord President of the Privy Council or by the President of the Local Government Board. That chairman should be one of the twelve medical practitioners. They further proposed that the Obstetrical Society of London should appoint one representative, and thinking that this Incorporated Midwives Institute might be an institute which had certain good qualities although it was unknown to them they suggested that it should appoint a single representative. The Board would thus consist of three from the Royal College of Physicians, three from the Royal College of Surgeons, three from the Society of Apothecaries, one from the Midwives Institute, one from the Obstetrical Society, and the chairman.

Dr. BRUCE thought that, as this whole matter was a woman's matter, it should be left to the women. If a board was to be constituted at all it should consist of women.

Dr. CHURCH asked if the committee could not give the

Council a little light about the Midwives Institute. If they recommended even one representative from it they were recommending a society of which the Council knew nothing. The composition of this Midwives Board was the most important and most serious thing in the Bill, and when this Midwives Institute came into the question he felt in a difficulty.

The PRESIDENT pointed out that the existence of such a body as the Midwives Institute was recognised by the Bill having been read a second time in the House of Lords. The Bill originated with the Institute.

Dr. ATTHILL supposed that the Institute was a self-elected body.

Sir DYCE DUCKWORTH: Can no one tell us anything about this Institute? Is it composed of women or obstetrical practitioners?

The PRESIDENT: I do not know. I believe the Bill originated entirely with the Institute.

Sir DYCE DUCKWORTH remarked that in the correspondence the Council had before them a week ago there was a letter from a Midwives Institute having its office in Buckingham-street, Strand. When, he asked, did they become incorporated?

Professor GARDNER: Represent to the Privy Council that the General Medical Council know nothing about this body.

Dr. GLOVER did not think it was any essential part of their duty to make inquiries about this Institute. He saw from a Blue-book he had in his hand that a Mrs. Smith, treasurer, in giving evidence before the Select Committee, stated that this Midwives Institute was the only incorporated body of midwives.

As no further information appeared to be forthcoming,

Dr. ATTHILL moved that the Council was of opinion that the Midwives Board should consist of ten registered medical practitioners, nine to be elected in equal proportions by the Royal Colleges of Physicians and Surgeons and the Apothecaries' Society, the chairman to be appointed by the Lord President of the Privy Council or the President of the Local Government Board, and that one-third of the members elected by the medical corporations should retire annually.

Mr. BRUDENELL CARTER seconded this proposal, which was at once agreed to.

On consideration of that part of the clause relating to the duties to be performed by the Midwives Board, all the sections were passed without amendment with the exception of that providing for the filling of casual vacancies. This was struck out, and the preamble of the clause altered to enact that casual vacancies should be filled by the bodies who originally appointed. On Clause 7 an amendment was agreed to providing that the Midwives Board should draw up a form of certificate to be granted to midwives for approval by the General Medical Council. On Clause 8, "fees and expenses,"

Sir WILLIAM TURNER said the committee had gone into this clause very carefully, and the unanimous feeling was that the fees specified in the clause would not turn out to be sufficient for the purpose of working the Act. It was proposed that these fees were to be used to pay all the examiners, all the expenses of the Board, the secretary, and all clerical and other expenses. Besides, there were the medical officers of health, who were to have the supervision of these midwives. There were many outlets for the money for which these fees had to provide, and the feeling of the committee was that the amount of the fee should not be fixed by Act of Parliament. It was a dangerous thing to fix a fee by Act of Parliament, for if it was found that the fee was not sufficient Parliament would again have to be applied to. Therefore, they recommended that the Midwives Board should fix the fees in the first instance, perhaps getting the Privy Council's approval of them. The fees as specified were, at any rate, altogether inadequate, and it would be most unwise to fix the fees in an Act of Parliament.

The PRESIDENT wished the Council to remember that these poor women had not much means, and there should be some representation by this Council on the subject.

Mr. BRUDENELL CARTER suggested that Sir William Turner should draft a paragraph calling attention to the subject.

Sir WILLIAM TURNER said he would bring up one on report.

Clauses 9, 10, 11, and 12 were gone through, but no alteration was made. Dr. CHURCH, however, suggested that the initial register should be prepared under the direction of local bodies, such as the county councils.

Further consideration was put off till Wednesday, and the Council adjourned about six o'clock.

WEDNESDAY, JUNE 5TH.

The Council met again to-day with Sir RICHARD QUAIN in the chair.

Midwives Registration Bill.

The Council went into committee and resumed the consideration of this Bill and the report of the special committee upon it.

Sir WILLIAM TURNER called attention again to Clause 12, which proposes that the medical officer of health shall supervise the midwives in his district, and invited Dr. Thorne Thorne to express his opinion with regard to it.

Dr. THORNE THORNE said that of late years there had grown up a habit of imposing upon medical officers of health duties which they never undertook to perform, which did not properly belong to them, and for which they were either not paid at all or most inadequately paid. As to this clause he quite recognised that the medical officer of health was the proper man for the proposed work, for which he was eminently qualified. They had some 1100 or 1200 medical officers of health in England, and of these at least 900 were engaged in the practice of midwifery as well as of surgery and medicine. At the present moment the medical officer of health was the only man in the district who received any notice as to puerperal fever because he received the notice under the Infectious Diseases Act, and having received this notice he very often told the nurse that she had no right to take any more cases. But the woman snapped her fingers at him and went on attending fresh cases. With this Bill the medical officer of health would receive considerable powers and he made little doubt that he would be able to prevent a good deal of puerperal fever. He did think, however, that this important duty should not be imposed without adequate remuneration, and he proposed that the portion of the clause dealing with this matter should run thus, viz.:—"Such medical officer of health, or, in case either he shall decline the office or the local authority shall otherwise determine, such other registered medical practitioner as the local authority may appoint shall be the local supervising authority over midwives in his district." There was another point to which he wished to call attention. If it were true that the Midwives Board was not likely to have very large resources, it would be a great strain upon it to supply the 1100 or 1200 medical officers of health in the country with a free register every year, and he thought it would be a great waste of money. He was inclined to support the idea that some other body ought to keep the register.

The proposal made by Dr. Thorne Thorne was seconded by Dr. Bruce, and on being put to the Council was agreed to unanimously.

In connexion with the clauses providing penalties for offences, Dr. ATTHILL suggested that a midwife giving a document certifying or purporting to certify the cause of death should be subject to a penalty.

Dr. THORNE THORNE pointed out that anybody could give a certificate of the cause of death, and it was for the Council to consider whether these women should be placed in a singular position.

Clause 16 provides that "any offences under this Act punishable on summary conviction may be prosecuted and any fine under this Act recoverable on summary conviction may be recovered in manner provided by the Summary Jurisdiction Acts. A prosecution for an offence under this Act shall not be instituted by a private person except with the consent of the Attorney-General, but may be instituted by a county council or the council of a municipal borough. The expenses of any prosecution shall be defrayed out of the county fund of the district where the prosecution takes place."

Sir WILLIAM TURNER said that in this connexion the committee asked the Council to point out to the Lord President that no similar provision existed in the Medical Acts for the prosecution of offences, and they ventured to suggest that if such provision was considered necessary the consenting authority should be either the Registrar of the Midwives Board or the local supervising authority referred to in Clause 12.

The Council decided that this should be done.

Sir WILLIAM TURNER, on the last clause, which provides that the Act shall not extend to Scotland or Ireland, said

that such an amendment as Dr. Kidd had given notice of to amend Clause 4 by the omission of "England and Wales," and putting in place of these words "Great Britain and Ireland" would hardly be applicable. He did not think Dr. Kidd would allow that the whole of the administration of midwives in Ireland should come under a Midwives Board sitting in England and on which there was no Irish representative.

Dr. KIDD said he should be very sorry to see it.

Sir WILLIAM TURNER: But if your amendment were carried that would be the result.

Dr. KIDD: I thought the Bill would be altered.

Sir WILLIAM TURNER: With the entire reconstitution of the Midwives Board.

Dr. KIDD: I withdraw.

Sir WILLIAM TURNER, in then moving that the Council resume, suggested that some of the other business on the paper should be proceeded with while the report of the proceedings in committee of the whole Council was being prepared.

Rearrangement of Committees.

On the Council resuming Sir DYCE DUCKWORTH moved: "That Section IX. of the Standing Orders be amended so as to read:—'IX. Committees for Education, Examination, Public Health, Dental Education and Examination, and Students' Registration Committees. 1. Five committees shall be appointed, the first to be termed the Education Committee, which shall consider and report on all matters concerning preliminary general education and examination, the registration of medical students, and the course of professional study; the second to be termed the Examination Committee, which shall consider and report on all matters connected with professional examinations and with the inspection and visitation of these examinations; the third to be termed the Public Health Committee, which shall consider and report on all matters connected with the courses of study and examination for diplomas in public health and State medicine; the fourth to be termed the Dental Education and Examination Committee, which shall consider and report all matters connected with professional dental examinations, and with the inspection and visitation of these examinations; the fifth to be termed the Students' Registration Committee, to consider and report upon all doubtful cases for registration which may be referred by the several registrars.'" Adverting to the circumstances that had led to this proposal, he said that as times went on the business of the Council increased more and more, the work of the committees became heavier and heavier, and the duties the Council were called upon to perform also increased from year to year. As chairman of the Examination Committee he could say that the duties of that committee for the last three years had been very heavy indeed. These duties had been increased by the addition of the work thrown upon the committee in connexion with the inspection of examinations in public health and the inspection of the examinations in dentistry. It was thought that there should now be a special committee for Public Health, and the present was a suitable time to set it up now that the Council numbered among its members such an authority upon the subject as Dr. Thorne Thorne. In regard to the Students' Registration Committee it was thought the time had come when the committee should be placed under standing orders as a recognised committee of the Council. There was already a Dental Committee, but the Dental Examination Committee proposed to be set up was a special committee for a special purpose. It was proposed that the first three committees—the Education, Examination, and Public Health Committees—should consist of nine members each. The other two committees might be constituted with fewer members. Out of the thirty members forming the Council there were some who were not very busily engaged in the committee work, and it was proposed in this rearrangement to enlist the services of such. If the Council consented to the motion he believed the work of the Council would be more efficiently carried on and there would be less strain on the committees.

Dr. BARRY TUKE, in seconding the motion, proposed that the first three committees should consist of nine members each, three from each division of the kingdom, with power to appoint a chairman and subcommittees; and that the Dental Examination and Students' Registration Committees should consist of six members each.

Mr. TEALE proposed that the Public Health Committee should consist of six members.

This was seconded by Dr. BRUCE, but on a division was rejected by twelve votes to eight. Sir Dyce Duckworth's motion as modified by Dr. Tuke's proposal was then carried unanimously.

Sir DYCE DUCKWORTH remarked in answer to a question that it was not necessary to fix a quorum. The members of the Council's committees attended excellently well, and outsiders were not aware of the great quantity of work that was done in these committees. The Council's work could not be judged by only what took place around the table they were sitting at, because the heaviest, gravest, and most important issues that the Medical Council had to decide were dealt with in committee.

Appeal of Mr. R. M. Theobald.

The Council next gave consideration to the following part of the agenda paper:—

"Appeal from Mr. R. M. Theobald against the decision of the Executive Committee, according to which he was informed that the application for the restoration of his name to the Medical Register—like all such applications—could be considered at the November session of the Council only. Mr. Theobald urges that the reconsideration of his case is urgent, inasmuch as he regards the whole process that resulted in the erasure of his name as utterly irregular in an unexampled degree."

On the suggestion of the PRESIDENT and the formal motion of Dr. MACALISTER, the communications in respect to this matter were referred to Mr. FARRAR, the Council's solicitor.

Finance.

Mr. BRYANT moved the adoption of the report by the Finance Committee. This showed that the income of the General and Branch Councils for the year ending Dec. 31st, 1894, had been £8957 11s., an amount which was £730 7s. 10d. less than the income for the year 1893. The fees received by the English Branch Council in 1894 were £197 12s. 6d. less than those received in 1893; those received by the Scottish Branch Council in 1894 were £380 12s. 6d. less than those received in 1893; while the receipts of the Irish Branch Council from registration fees during the same period showed a decrease of £96 15s. against those received in 1893. The expenditure during the year 1894 had been £9449 9s. 6d., an amount less than that of 1893 by the sum of £301 19s. 8d. A comparison of the income with the expenditure showed that the expenditure during the past year had exceeded the income by the sum of £491 18s. 6d. The receipts and expenditure of the Dental Registration Fund showed that the receipts amounted to £676 13s. 11d., showing an increase of £62 18s. 7d. on those of 1893, which were £613 15s. 4d. On the other hand, the expenditure had been £521 16s. 6d., being less than the income by the sum of £154 17s. 5d. The report, Mr. Bryant thought, would be regarded as a satisfactory one. They were paying their way, and although the balance was not increasing very rapidly, still there was a balance.

Sir DYCE DUCKWORTH seconded.

Dr. BRUCE asked if, with deficiencies in income in both 1893 and 1894, the Council really were paying their way.

Mr. BRYANT replied that in these two years the Council had had to meet extra expenditure which would not continue. For ordinary purposes they certainly were paying their way.

The report was adopted.

Midwives Registration Bill.

Sir WILLIAM TURNER brought up the report on this Bill. He also brought up a new recommendation in regard to Clause 8. The latter, after some conversation, was adopted in the following form:—The Council would suggest to the Lord President that the fees to be paid to the Midwives Board should not be fixed in the Act. It seems desirable that the Midwives Board should be authorised to fix the fees, subject to the approval of the Privy Council. It should also be pointed out that the General Medical Council, as the supervising authority for the Midwives Board, will require to devote during each session a portion of its sittings to the business of that Board, and will incur expense in connexion therewith. As the funds of the Council consist solely of the fees paid by medical practitioners for admission to the Medical Register it does not seem to be equitable that they should be expended upon work imposed upon the Council in connexion with the Midwives Board. Further, the practitioners in Scotland and Ireland would contribute to the expenses of an Act applicable only to England and Wales. The Council would point out that, as the Bill has been introduced in the

interests of the public and as midwives are not in a position to pay large fees for purposes of registration, a grant should be made by the Treasury to meet the expenses of the Midwives Board and the additional charges imposed on the General Medical Council.

Dr. WILKS asked the Council to receive information about the Incorporated Midwives Institute. So far as he could understand the institute was a highly respectable institution, managed by a committee including the Governor of the Bank of England, Members of Parliament and well-known benevolent ladies of London. Dr. Thorne Thorne had been making inquiries and could give more information about it.

Dr. THORNE THORNE said that on the previous day he felt rather troubled when he found the Council had erased from the Midwives Board every single woman, and had put on only men to control these women. He thought that might be misinterpreted out of doors. It might be thought the Council had decided that women should be put entirely aside in respect to this matter. The only reason given for ignoring this Midwives Institute—the only women's body—was that they did not know the institute, and he had made inquiries. He found that the institute was founded in 1881 and got a charter in 1891. There was a Royal Princess at their head, a committee composed as Dr. Wilks had said, and a number of respectable people connected with it. Such being the case, it would be very improper that this Council should erase the name of the institute from the Bill on the ground merely that they had never heard of it. If there was any body of women who had a right to be placed under this Bill it was a body of the sort that the institute was composed of. He, therefore, proposed that Clause 6 of the Bill, as altered on Tuesday, should be further altered to provide that the Midwives Institute should have three representatives—three female practitioners—on the proposed Midwives Board. He was not giving women a high position. Even with the representation he proposed they would be in a minority of three in a board of thirteen.

Sir DYM DUCKWORTH did not think the question of sex was before the Council on Tuesday at all. What caused him to vote as he did was the fact that the Medical Council had not hitherto recognised private societies or incorporated bodies except the universities and those great corporations qualified under the Medical Acts. Of the latter they were quite sure, of others they were not sure.

Professor GAIRDNER pointed out that Clause 7 of the Bill provided that, failing the Medical Council, the Privy Council should invite some other body to undertake the duties. He thought they should take advantage of that provision, wash their hands of the whole Bill, and let the Privy Council get some other body.

Mr. CARTER considered Dr. Thorne's proposal to give the institute representation by female practitioners was calculated to add a new terror to the male members of the Midwives Board. He had had some experience of a mixed board lately, and he sincerely trusted that experience would not be enlarged.

Sir WILLIAM TURNER was of opinion that Dr. Thorne ought to give the Council some assurance that this Institute possessed something of the elements of permanency. He had entertained from the first a strong objection to putting this society, that had been incorporated only four or six years, upon the same footing as those historical and most important institutions with which they were acquainted and which played so large a part in connexion with the medical profession in England and Wales.

The PRESIDENT said he believed that the Bill originated entirely with the institute. To leave out the authors would be something like leaving the Prince of Denmark out of the play of "Hamlet." He thought they should put back the constitution that was originally in the Bill.

Dr. GLOVER: Do I understand that all the ladies to be elected are to be members of the medical profession?

The PRESIDENT: Yes.

On the question being then put, Dr. Thorne's motion was carried by 14 to 10.

On the motion of Dr. ATTHILL, seconded by Dr. KIDD, it was agreed to recommend that the title of the Bill should be "A Bill to Promote the Better Training of Women as Midwives and Midwifery Nurses and for the Compulsory Registration as such." It was further agreed, on the motion of Dr. MACALISTER, to recommend that the Bill should explicitly provide punishment for persons registered under it who illegally assumed a title, improperly granted a certificate of death or infringed the rules of practice approved by the

General Medical Council. Clause 5, moreover, was altered so as to prevent any particular hospital being named.

There being no other amendments,

Sir WILLIAM TURNER moved that the communication to the Lord President in reply to his request for the observations of the Council on the Midwives Registration Bill should consist of two parts: (a) the report of the Committee, omitting the recommendations, and (b) the resolutions which the Council had adopted.

Mr. TEALE seconded the motion.

Sir WALTER FOSTER moved as an amendment that the answer to the Lord President should be that the Council, while desiring to improve the education, training, and control of midwifery nurses, could not support the Bill for the Registration of Midwives now before Parliament, inasmuch as that Bill would give a legal status to women who are not properly qualified to take sole charge of midwifery cases; but should the Bill be proceeded with the Council considered that it should be amended according to the report and resolutions. He thought the preamble to this proposal was necessary not only for the honour of the Council but for the safety of the public and the interests of the medical profession. They were in a difficult position. It would be known in both Houses of Parliament that the Council had been engaged for three days discussing a Bill which was the Bill of a private member of the Upper House, which was the product of a somewhat small and obscure body called the Midwives Institute, and which had not been brought before the Council by any of the great bodies with which it was associated, but was opposed by a large number of the medical profession. If the Bill went back unaccompanied by his motion, it would be said that it was no longer the Bill of Lord Balfour of Burleigh, but was a Bill amended by the General Medical Council. It would have a sanction and authority it never could have had if it not been discussed here. He thought the whole Bill was bad. It would be dangerous inasmuch as it would create a new class of practitioners; it would be dangerous because it was calculated to increase the number of what they were in the habit of calling unqualified persons. It would menace in that way the discipline the Council exercised over the profession. He believed it would be a danger to the public interest, inasmuch as many who had carried on objectionable practices in the past would be able to get on the register, and in their new position continue to carry on these practices. If they introduced a class of persons who must be imperfectly educated they endangered the public health. Let the Council qualify their opinion of the Bill by passing his proposal so that they might not mislead the Government on the one hand, and the public and the House of Commons on the other, by expressing their approval of a measure that would be dangerous to the public health, injurious to the medical profession, and not conducive to the morality and well-being of the public.

Mr. WHEELHOUSE seconded the amendment.

Dr. MACALISTER thought the position of the Council very grave in a direction other than that present to the mind of Sir Walter Foster. They were entrusted by the Lord President, the official representative of the Government, with the privilege of discussing and making observations on the Bill. That he took to be a considerable compliment, and it would ill become them to answer cavalierly. If they returned the answer Sir Walter Foster proposed he ventured to think they might expect to never have another Bill submitted to them. The Council had been consistent up till this session on the subject of the registration of midwives—not midwifery nurses. They had been agreed that the practice of midwifery in the ordinary sense required close supervision and control, and to return an answer of the kind proposed by Sir Walter Foster would be to stultify the Council, and make it appear that their opinion, when at a pinch the Government wanted it, was one not to be depended upon. He trusted they would stick to what they resolved in the motion proposed by Sir Walter Foster in 1889 and agreed to by the Council, namely:—

"That this Council regards the absence of public provision for the education and supervision of midwives as productive of a large amount of grave suffering and fatal disease among the poorer classes, and urges upon the Government the importance of passing into law some measure for the education and registration of midwives."

The Government had that resolution and asked on the first opportunity the opinion of the Council upon a measure on the subject. Their answer ought to be carefully weighed

and not to be evasive, as it would be if they were to return the answer that Sir Walter Foster now proposed to send.

Dr. GLOVER, keeping himself in the old lines, wanted the Council to remember that the object for which legislation was desired was, in historic words, "the protection of women from the incompetent." That was the object of the Bill they had been discussing. There was no question that it was wanted. There was no use of saying that a little knowledge was a dangerous thing, for the Bill was an attempt to abate the evil of the little knowledge. They did not need to go far afield to seek proof that women with such training as was contemplated in this Bill were in ordinary cases safe practitioners. They had it in the statistics of a London institution where only two deaths had occurred in 1600 cases. All Sir Walter Foster's arguments were directed not against this Bill only but against all Bills. In so far as that was so, Sir Walter Foster was in the minority, for the profession generally were agreed that there must be some legislation.

Sir WALTER FOSTER said he had been prepared to accept this Bill if "midwifery nurses" had been put in the place of "midwives."

Dr. GLOVER wanted to know how they were to go on for twenty years more insisting that the matter was urgent, while when a Bill came before them they rejected it. The position of the Council was indeed a grave one, for if they did what Sir Walter Foster wanted them to do they should be discredited as an advising body guiding the medical profession. He hoped the Council would give the Bill as amended by them a very hearty support.

Dr. MCVAIL said that if his views on Tuesday were the same as those of Sir Walter Foster they were much more so on Wednesday. As a Crown representative he was going to vote for Sir Walter Foster's resolution, and he only regretted that it was not stronger than it was. Had the Bill been amended so as to put these women under medical men of competence he should have had no hesitation in allowing it to go, but they were saying to the Lord President "You may pass this Bill and authorise women to attend natural labour—which no one could define—without the supervision of a medical man." The Bill was so entirely bad that he had no help for it but to vote for the amendment.

Dr. BARRY TUKES said they must guard against an attempt to kill all such bills as this one not in the interests of the women who suffered but in the interests of a small and inconsiderable part of the medical profession.

Mr. BRUDENELL CARTER held the Bill to be a beginning in the right direction, and he hoped the Council's action would be sustained by a large majority.

The PRESIDENT said that the question had been before them for three-and-twenty years, and he did not see any action to take better than that expressed in Sir Walter Foster's own resolution of 1869. He thought in that Sir Walter Foster answered himself.

Sir W. FOSTER: Is it not possible that a man may grow wiser?

Dr. HAUGHTON: Quite possible, but very rare.

The PRESIDENT: We have spent three days on this matter, and I hope the recommendations of the Council will be carried by an overwhelming majority.

Sir PHILIP SMYLY: Are the Irish and Scotch members expected to vote? They are not interested in the Bill at all.

The PRESIDENT: Certainly.

On the vote being then taken, the amendment was defeated by 18 votes to 7 and Sir William Turner's proposal carried by 23 to 6.

After appointing the Executive Committee, the Council adjourned at 6 o'clock.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the M.B. Examination for May, 1895:—

FIRST DIVISION.

Harvey, John Owen, St. Bartholomew's Hospital.
Hickinbotham, James Hyland, Mason College and General Hospital, Birmingham.
Pollard, Walter Henry, St. Bartholomew's Hospital.
Rigby, Hugh Mallinson, London Hospital.
Tait, Archibald, Yorkshire College and General Infirmary, Leeds.
Turner, William, King's College.
Walt, Joseph Edward, University College.

SECOND DIVISION.

Branson, Guy Joseph, B.A., Mason College.
Burnett, Frank Marsden, St. Bartholomew's Hospital.
Cochrane, Archer William Rosa, St. Bartholomew's Hospital.
Elliot, William Henry Wilson, Guy's Hospital.
Fenwick, Percival Clennell, St. Thomas's Hospital.
Gostling, George Wilfrid, University College.
Horner, William Ernest Leethem, University College.
James, Sydney Price, St. Mary's Hospital.
Jones, Richard Llewellyn, University College.
Knight, Harriet Edith Florence, London School of Medicine and Royal Free Hospital.
Mace, John, Yorkshire College and General Infirmary, Leeds.
Mantell, Hugh Fraser, St. Mary's Hospital.
Martin, Antony Alexander, St. Mary's Hospital.
Miskin, Leonard John, St. Thomas's Hospital.
Norrunn, Richard Henry, Westminster Hospital.
Oldfield, Carlton, Yorkshire College.
Richmond, Benjamin Arthur, B.Sc., Guy's Hospital.
Roberts, Cecil David Dale, Mason College and General Hospital, Birmingham.
Slater, George Nathan Osceot, St. Bartholomew's Hospital.
Sly, Edwin, King's College.
Starkey, Thomas Albert, University College.
Steinhäuser, John Robert, Guy's Hospital.
Swatman, Helen, London School of Medicine and Royal Free Hospital.

UNIVERSITY OF EDINBURGH: FACULTY OF MEDICINE.—The following candidates passed the First Professional Examination, March, 1895:—

Old Ordinance.—W. H. Dawson, M.A., M. L. Dhillra, Miss A. M. C. Giddes, D. J. Head, D. J. Hughes, B. E. Myers, R. M'K. Sinner, and John Vane (passed in July, 1894).

New Ordinance.—J. G. Bell, F. P. Bester, H. W. Boreham, E. R. Branch, H. H. Broome, A. L. P. Brown, E. A. Brown, G. H. J. Brown, Robert Bruce, A. R. Buchanan, D. A. Callender, John Cameron, Robert Cameron, H. G. Carlisle, J. G. Carr, H. E. Coghill, Leonard Crossley, E. T. Cyriax, R. M. Dalziel, William Darling, Y. A. Diedzian, F. H. Domuisse, David Ferrier, E. G. Fiench, R. G. Ford, Charles Forsyth, J. J. Galbraith, W. A. Gilbert, A. E. Goldie, T. B. Gornall, J. M. Gray, A. M'W. Green, Bruce Greig, A. H. Griffith, George Haddow, W. D. S. Harrison, H. T. Holland, P. S. Hopkins, C. A. B. Horsford, Alexander Hunter, James Husband, B. S. Hyslop, B. D. King, M.A., H. C. Kenn, A. C. Kirkpatrick, G. R. Laing, J. D. Laing, Thomas Livingstone, James Lucknoff, J. C. M'Conaghey, Edward M'ulloch, P. H. Macdonald, W. R. Macdonald, John M'Gregor, T. J. T. M'Hattie, A. M. M'Intosh, Andrew M'Kaig, G. A. Mackay, W. M. Mackay, Maxwell M'Kelvie, R. C. M'Lachlan, P. A. MacLagan, L. C. MacLagan-Wedderburn, G. C. M'Leary, R. H. Macneill, William Macniven, J. F. Martin, James Mason, M.A., Thomas Meldrum, C. W. F. Melville, F. N. Menzies, G. H. Menzies, F. G. Middleton, J. G. Mitchell, A. H. D. Moore, Alexander Mount, J. H. Munroe, C. F. Neville, T. P. Oates, L. J. L. de Pavillet, John Pender, H. G. P. Raeburn, William Raife, F. E. Robinson, G. B. Robinson, J. R. Robinson, William Rogers, J. M. Ross, Alfred Shearer, T. S. Shepherd, G. F. B. Simpson, A. B. Slater, A. K. Smith-Shand, F. H. Stirling, C. S. Stevenson, W. J. Stuart, W. W. Thom, A. H. Thomas, J. P. Thorne, N. D. Walker, C. H. J. Watson, Arthur Whittome, and A. H. Wood.

The following candidates passed the Second Professional Examination (Old Ordinance) in March and April, 1895:—

D. N. Anderson, Frederick Anderson, R. W. Anthony, Eustace Arkwright, H. S. Ballantyne, B.Sc., J. E. Blackburn, Edwin Bramwell, William Buchanan, L. M. Cairns, T. M. Callender, A. F. Cameron, M.A., H. O. Dougall, Hugh Douglas, Stanley Ducat, A. R. Eates, William Finlay, John Forbes, M.A., B.Sc., Harry Fowler, P. W. Freyer, J. M. de Freitas, D. D. Gold, Norman Gunn, W. F. Harvey, W. J. H. Hislop, J. D. C. Howden, R. K. Howden, Walter Jagger, J. B. Jamieson, C. H. Johnson, T. F. Johnstone, D. T. R. Jones, Henry Jones, R. W. Knox, C. D. Lander, James Lee, J. F. Lindsay, R. E. Loney, A. L. Low, G. C. Low, M.A., J. D. M'Grindle, J. L. Macfarlane, George M'Kellar, A. D. Macpherson, M. W. Manuk, J. E. Martin, Edwin Matthew, Noel Maudsley, F. H. Merry, James Patton, C. H. Phillips, E. C. Porritt, Charles Porter, M. S. Raa, B.Sc., J. A. Rees, John Richards, T. A. Ross, G. B. Serle, J. T. Shirclaw, J. W. Simpson, G. S. Small, H. W. Smith, H. T. J. Thacker, H. M. Traquair, J. R. H. Walker, A. H. Watt, A. E. White, J. H. White, A. R. Wight, W. G. Wight, F. M. Wilcox, A. E. Williams, T. A. Williams, and J. F. Woolie.

Anatomy and Physiology (Old Ordinance).—A. W. G. Clark, James Graham, J. S. Grinsell, Norman Gunn, E. H. Jones, Leslie Kingsford, W. M. Milne, M.A., John Muir, and Oswald Rait.

The following candidates have passed the Second Professional Examination (New Ordinance):—

B. C. R. Aldren, T. R. W. Armour, Thomas Biggam, William Burns, M.A., C. M. Cooper, J. F. Falconer, J. S. Fraser, William Hamilton, Patrick Kinmont, Ian L. MacInnes, John Malcolm, F. W. More, R. G. Riddell, and J. R. Williamson.
Anatomy and Physiology (New Ordinance).—E. P. Baumann, L. W. Davies, W. S. Eaton, George Gatenby, Andrew Gibson, W. E. M'Kechnie, G. W. Miller, J. D. S. Millin, A. H. Pirie, C. M. Robertson, J. D. Slight, M.A., W. M. A. Smith, W. R. Somerset, and J. W. Struthers.

* Passed with distinction.

THE death is announced, at the advanced age of eighty-seven, of Mr. J. Bell Sedgwick, J.P., the old member of the weekly board of governors of the Middlesex Hospital and for many years its vice-chairman. Mr. J. Bell Sedgwick was also for a long period a member of the Metropolitan Asylums Board.

BELGRAVE HOSPITAL FOR CHILDREN.—A special general meeting of the governors of this hospital, to consider the proposal to transfer the hospital to new premises in the Battersea district, will be held at Grosvenor House on Friday, June 14th, at 5 o'clock, by the permission of his Grace the Duke of Westminster, K.G., who has consented to preside.

THE Churchyard of St. Mary's, Woolwich, was opened on May 31st by the Duchess of Fife as a public garden. The work of laying out the ground was undertaken, with the permission of the present rector, by the Metropolitan Gardens Association, the entire cost, over £1200, being defrayed by Mr. Passmore Edwards.

MEDICAL MAGISTRATES.—Mr. John Moir, L.R.C.P., L.R.C.S., L.M. Edin., of Canning-town, has been placed on the Commission of the Peace for the borough of West Ham—Mr. Francis Pafr, L.R.C.P. Lond., M.R.C.S., of Al'ora, and Mr. Joseph Lanterer, M.D. Freiburg, of South Brisbane, have been made Justices of the Peace for the Colony of Queensland.

EAST LONDON HOSPITAL FOR CHILDREN.—The anniversary dinner of the East London Hospital for Children was held on Thursday, May 30th, in Leathersellers' Hall, St. Helen's-place, under the presidency of the Earl of Erroll, who in proposing the toast of "Prosperity to the Hospital" spoke highly of the economy and efficiency of its management. Donations amounting to £2378 were announced.

ST. BARTHOLOMEW'S HOSPITAL.—The committee of the Medical School and of the Amalgamated Clubs of St. Bartholomew's Hospital announce the opening to-morrow (Saturday, June 8th) of the new cricket, lawn-tennis, and football ground at Winchmore Hill, Finsbury Park. The ceremony will be performed by Sir Trevor Lawrence. There will be cricket and lawn-tennis competitions between past and present members of the medical school during the day.

THE Hospital for Sick Children in Great Ormond-street has been enriched by the gift of an isolated building containing a ground-floor ward with three beds for measles, a top storey ward for the same number of scarlet fever cases, together with offices and rooms for the nursing staff. The building has been given by the Misses Lucy and L. nisa Cohen, in memory of their niece, the late Countess of Rosebery.

BETHNAL GREEN GARDENS.—These gardens, which have been purchased from the Government by the London County Council at a cost of £6000, were formally declared open to the public for ever on Monday last, June 3rd. Situated in a densely populated neighbourhood close to the Bethnal Green Museum and covering a space of about nine acres, the gardens, which are beautifully laid out, form a delightful playground for children, while they furnish numerous attractions for the youth and adult.

THE ROYAL SURREY COUNTY HOSPITAL.—At the annual meeting of this institution held in February last it was mentioned that a gentleman had promised a donation of £500 provided that a similar sum could be raised within three months. This offer has been so generously responded to that over £750 has been collected. The cheque has accordingly been forwarded to the hospital for the amount promised, and the donor, Mr. R. C. Garton, of Worplesdon-place, has given permission for the publication of his name.

THE BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.—Mr. Priestley Smith presided at the seventy-fifth annual meeting of this society on Friday, May 31st, when a most satisfactory report was presented. The total sum distributed during the year was £550. Each year shows some slight improvement, and the invested funds now amount to £11,996. The good which the society does in granting relief is performed in a quiet, unostentatious manner and is much appreciated by the recipients. Mr. John Greene was elected president.

PRESENTATION.—On the 29th ult., on the occasion of the distribution at the town hall, Eastbourne, by the mayor of the borough, of the certificates and medallions to the successful members in a recent examination, in connexion with the St. John Ambulance Association, of the borough police force, who had attended the class conducted by Dr. W. G. Willoughby of that town, the mayor presented Dr. Willoughby, on behalf of the members of the

class, as a slight token of esteem and of their appreciation of his valuable services on first aid, with a handsome silver-mounted salad-bowl, fork, and spoon.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Fellows held on Monday, June 3rd, for the election of president, vice-president, secretary, and Council of the College for the ensuing year, the following gentlemen were elected:—President: William Thornley Stoker, F.R.C.S. Vice-President: William Thomson, F.R.C.S. Secretary: Sir Charles A. Cameron, F.R.C.S. Council: Sir George H. Porter, Bart., F.R.C.S.; Archibald H. Jacob, F.R.C.S.; Edward Hallaran Bennett, F.R.C.S.; Henry Gray Croly, F.R.C.S.; Sir Philip Crampton Smyly, F.R.C.S.; Robert Lafayette Swan, F.R.C.S.; Henry Roseborough Swanzy, F.R.C.S.; William Stoker, F.R.C.S.; William Ireland Wheeler, F.R.C.S.; Austin Meldon, F.R.C.S.; William Carte, F.R.C.S.; Sir Charles A. Cameron, F.R.C.S.; Frederick Alcock Nixon, F.R.C.S.; Kendal Franks, F.R.C.S.; Richard D. Purefoy, F.R.C.S.; Charles Bent Ball, F.R.C.S.; Henry Fitzgibbon, F.R.C.S.; Arthur Henry Benson, F.R.C.S.; Francis T. Heuston, F.R.C.S.

LITERARY INTELLIGENCE.—Messrs. J. and A. Churchill have nearly ready a new work for the use of physicians by Mr. Alfred H. Allen, F.R.C.S., entitled "Chemistry of Urine: a Practical Guide to the Analytical Examination of Diabetic, Albuminous, and Gouty Urine," with illustrations.—The following works are announced by Messrs. Longmans and Co. as nearly ready for publication:—"The Life of Sir Andrew Clark, Bart., M.D., LL.D., F.R.S.," by Malcolm MacColl, M.A., and W. H. Allchin, M.D., F.R.C.P. &c., with an introduction by the Right Hon. W. E. Gladstone, M.P.; "Darwin and after Darwin," by the late George John Romanes, M.A., LL.D., F.R.S.; "Inorganic Chemistry," by G. S. Newth, F.I.C., F.C.S.; "Physics," by W. Watson, B.Sc.; "Ophthalmic Surgery," by William Lang, F.R.C.S., Surgeon to the Royal London Ophthalmic Hospital, &c.; and a "Text-book of Forensic Medicine and Toxicology," by Arthur P. Luff, M.D., B.Sc. Lond., Assistant Physician to and Lecturer on Medical Jurisprudence and Toxicology at St. Mary's Hospital. Dr. Luff's work has been written not only as a text-book for students, but also as a reliable and practical work of reference for general practitioners who may be summoned as witnesses in medico-legal cases.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Whitsuntide Recess.

On Thursday, May 30th, the House of Lords, and on the following day the House of Commons, adjourned for the Whitsuntide recess. The latter will meet again on Monday, June 10th, and the former on Monday of the week following.

Factories and Workshops Bill.

When the Grand Committee on Trade adjourned for its holiday it had not completed the discussion of the clause in the Factories and Workshops Bill dealing with the restriction of overtime. At the last meeting an amendment was moved by Sir Charles Dilke to put women in the same position as young persons, but it was outvoted by 30 votes to 16. Mr. Asquith, while opposing the amendment on behalf of the Government, said that, as a goal to be aimed at, he was entirely in favour of the abolition of overtime for women.

HOUSE OF COMMONS.

THURSDAY, MAY 30TH.

Death Certification.

Mr. Heywood Johnstone asked the Secretary of State for the Home Department if his attention had been called to the death of Charles Rowe, of Charmouth, Dorset, who was brought back to his lodgings at midnight on Dec. 16th, 1894, in an insensible condition and died two days afterwards. Was he aware that Rowe was allowed to remain all night in the passage of the house where he lodged, and no medical man was called in to attend him until late in the afternoon the next day? By whom was Rowe's death certified, and what was stated upon the certificate to have been the cause of death? Was any inquiry made by the police into the circumstances under which Rowe met with the injuries which resulted in his death or any inquiry held? And did he contemplate taking any steps to carry out the recommendations of the Select Committee on Death Certification, and to ensure that every case of sudden, violent, or suspicious death shall be inquired into by a public official?—Mr. Asquith replied that his attention was called to the case in January. Mr. Kerbey,

M.R.O.S., who attended the deceased, gave a certificate that death was due to concussion of the spine and paralysis. Before giving this certificate he informed the coroner of the facts, and was told by him that he might properly give the certificate. Inquiries were made by the police, but they failed to find any ground for supposing the injury to be other than accidental. The coroner, in whose discretion it lay to hold or not to hold an inquest, did not consider it necessary to hold one. The recommendations of the Select Committee were receiving consideration by the Local Government Board, but they could hardly affect a case like this, where the facts came fully before the officer empowered by law to hold a public inquiry. He thought the case was one where an inquiry might properly have been held, but he had no power to give instructions in this matter to the coroner.

The Sewage Farm at Aldershot.

Mr. Campbell-Bannerman, replying to a question on this subject, said it was not known that any case of death could be attributed to the sewage farm at Aldershot, but it was admitted that the farm was not in a satisfactory state. Negotiations with the local authorities were proceeding with a view to a new sewage farm being established at a greater distance from the camp, and meanwhile steps were being taken for the improvement of the present farm.

Increase of Rabies.

Mr. Chaplin asked the President of the Board of Agriculture whether rabies was increasing to such an alarming extent in Great Britain that 339 cases had been reported during the first twenty weeks of 1895, as against 69 cases in 1894, 34 cases in 1893, and 9 cases in 1892 during the first twenty weeks of each of those years respectively.—Mr. Herbert Gardiner replied that it was unfortunately the case that rabies had increased to the extent stated in the question, the increase, however, being practically confined to the counties of Cheshire and Lancashire, and the West Riding. He need scarcely say that the subject was one which was engaging his anxious attention, and he was constantly in communication with the local authorities with a view to secure the efficient enforcement of the muzzling regulations which were now in operation over practically the whole of the dangerous districts. If, in addition, they secured adequate support from public opinion and from the magisterial bench when breaches of the regulations were brought under their notice by the police, there should be no difficulty in effecting an early and substantial improvement of the position as regards this terrible disease.—Mr. Chaplin asked whether the Board of Agriculture were taking any direct action in this matter apart from the local authorities.—Mr. Gardiner said it did not seem necessary for the Board to take direct action because they had induced the local authorities over the whole of the area where the disease existed to put into force the muzzling orders, and the local authorities could see to the enforcement of these orders much better than the Board of Agriculture.

Drainage and Ventilation of the House.

These subjects were raised in the course of the debate on a vote on account, several members complaining of the existing state of things. Mr. Herbert Gladstone, First Commissioner of Works, said the drainage of the House was considered by a committee in 1891, and all the main defects were then made good. He had good authority for saying that the atmosphere in the Chamber itself was as pure as that on the terrace overlooking the river. No sewer air could come into the House because it was carried by shafts in which coke fires were always burning to the top of the Victoria and the Clock Towers.

FRIDAY, MAY 31ST.

Experiments on Living Animals.

Mr. A. C. Morton asked the Home Secretary whether it was possible for the vivisection experiments to be attended by outside and independent persons, so that the public might receive information as to whether there was any cruelty to the animals experimented upon.—Mr. Asquith replied that he had no power to order that the public should be admitted to vivisection experiments, these experiments being carried on in private places. The inspector visited the places under Parliamentary authority, but neither the inspector nor the Home Secretary had any authority to authorise anyone else to go there. The experiments were often of a very delicate nature and could not be carried on properly if the operators were liable to be intruded upon at any moment by representatives of the public. When occasion arose he would be glad to see that the system of inspection was thoroughly efficient, but at present there was no real ground for apprehending any cruelty to the animals.

BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

La Fièvre Typhoïde. Par P. Brouardel et L. H. Thoinot. Avec 24 figures dans le Texte. 1895. pp. 340.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

Diabetes and its Treatment. By A. Vintras, M.D. 1895. pp. 24. Price 2s. 6d.

BALE, JOHN, & SONS, Great Titchfield-street, Oxford-street, London.

Heart Inflammation in Children. By Octavius Sturges, M.D., F.R.C.P. Being the Lumleian Lectures. 1894. 1895. pp. 82. Price 3s. 6d.

BLACK, ADAM & CHAS., London.

Text-book of Operative Surgery. By T. Kocher. Translated from the second German edition by H. J. Stiles, M.B., F.R.C.S. Edin. Illustrated. 1895. pp. 303. Price 20s.

CASSILL & CO., La Belle Sauvage, London.

St. John Ambulance Association. Hints and Helps for Home Nursing and Hygiene. By E. MacD. Cosgrave, M.D. Irell, and R. F. Collier, M.D. Nineteenth thousand. Price 1s. net.

CHURCHILL, J. & A., New Burlington-street, London.

The Lumleian Lectures on Etiology of Disease, to which is added the Harveian Oration and Memoir, and an Appendix of Statistical Tables. By P. H. Pye-Smith, M.D., F.R.S. 1895. pp. 238. Price 7s. 6d.

CONSTABLE, T. & A., Edinburgh.

Atlas of Clinical Medicine. By B. Bramwell, M.D. Edin. Vol. III. Part 2. 1895.

DONN, T., & Co., Brownlow-hill, Liverpool.

A Handbook of Pathological Anatomy. By R. Boyce, M.B., and J. H. Abram, M.D., M.R.C.P. Issued by authority of the Medical Faculty. 1895. pp. 501.

GOVERNMENT PRINTING OFFICE, Washington, U.S.A.

Department of the Interior; Census Office. Vital Statistics of Boston and Philadelphia, covering a period of six years ending 31st May, 1890. With Maps. By J. S. Billings, M.D., Deputy-Surgeon-General U.S. Army. Expert special Agent. 1895.

HIRSCHWALD, AUGUST, Berlin.

Untersuchungen über die Respiration und Circulation. Von Dr. A. Loewy. 1895. pp. 155.

KEGAN PAUL, TRENCH, & Co., Charing-cross-road, London.

From Matter to Mind. By M. R. P. Dorman, M.A., M.B. 1895. pp. 319. Price 7s. 6d.

MACMILLAN & Co., London.

The Causes and Treatment of Lateral Curvature of the Spine. By R. Barwell, F.R.C.S. Fifth Edition. Illustrated. 1895. pp. 216. Price 6s.

A Text-book of Physiology. By M. Foster, M.A., LL.D., F.R.S. Illustrated. Sixth Edition. Part II, comprising Book II: The Tissues of Chemical Action with their respective Mechanisms; Nutrition. 1895. Price 10s. 6d.

MASSON, G., Boulevard Saint-Germain, Paris.

Le Phéol Sulfuricé dans la Tuberculose Laryngée. Par A. Ruault. 1895. pp. 91.

SMITH, ELDER, & Co., Waterloo-place, London.

Fifty Years of Dead Leaves and Living Seeds. By the Rev. Harry Jones, M.A. 1895. pp. 228.

A Junior Course of Practical Zoology. By the late A. M. Marshall, M.D., D.Sc., F.R.S., and C. H. Hurst, Ph.D. Fourth Edition. 1895. pp. 466. Price 10s. 6d.

THE JOHNS HOPKINS' PRESS, Baltimore, U.S.A.

The Malarial Fevers of Baltimore. By W. S. Thayer, M.D., and J. Hewetson, M.D. Reprint. 1895. pp. 218.

THE TIMES PRINTING HOUSE, Philadelphia, U.S.A.

The History of the Pennsylvania Hospital, 1751-1895. By T. G. Morton, M.D., assisted by F. Woodbury, M.D.

VOGEL, F. C. W., Leipzig.

Lehrbuch der Arzneimittellehre und Arzneiverordnungslehre. Von Dr. H. Tappeiner. 2. Auflage. 1895. pp. 302.

WRIGHT, JOHN, & Co., Bristol.

The Eye in its relation to Health. By Chas. Prentice, M.D. Chicago. 1895. pp. 214. Price 6s. 6d.

Methods of Chest Examination: Supplementary to Auscultation and Percussion; by E. O. Otis, M.D. Boston: reprint (Darnell & Upham, Boston, U.S.A., 1895).—The Friend of China (P. S. King & Son, King-street, Westminster, S.W., May, 1895); price 3d.—Royal Commission on Opium: Minute of Dissent, (P. S. King & Son, King-street, Westminster, May, 1895); price 1d.—The Journal of the College of Science, Imperial University, Japan; Vol. VIII, Part 4; 1895.—The Indian Textile Journal Directory of Indian Manufactories, 1895, with a Chart of India (published by M. C. Rutnagar & Co., Meadows-street, Fort Bombay).—House Connections of Sewers in Bombay; by N. K. Katrak, L.M. & S., Municipal Councillor, Bombay; reprint (N. K. Rao & Co., Tardeo, Bombay; and Baillière, Tindall, & Cox, London, 1895).—Essential Oils in their relation to the British Pharmacopoeia and Trade; by J. C. Umney; reprint (W. J. Richardson, Great Queen-street, London, W.C.).—A Clinical and Experimental Study of the Leucocytosis of Diphtheria; by J. L. Morse, M.D.; reprint (Rockwell & Churchill, Boston, 1895).—Bulletin de l'Académie de Médecine, No. 19; Séance du 14 mai, 1895 (G. Masson, Paris).—The Natural History of Plants, Part XIII. (Blackie & Son, London); price 2s. 6d. net.—Magazines for June: the Strand Magazine; the Picture Magazine; Illustrated English Magazine; Hearth and Home; Our Bubble; Boy's Own Paper; Girl's Own Paper; Leisure Hour; Sunday at Home; Pall Mall Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADAM, GEO. R. W., M.B., Ch.M. Edin., has been appointed pro tem. Honorary Medical Officer to the Women's Hospital, Victoria, Australia.

AMBLER, J. R., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Birkenhead Workhouse.

BOHARDT, A. O., M.B., Ch.B. Melb., has been appointed Surgeon to H.M.S. Dart, surveying vessel on the Australian station, Victoria.

BOWHAY, ALBERT, D.P.H. Camb., L.K.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer of Health to the Calstock Rural District Council.

BREWER, REGINALD R. W., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Newport and County Infirmary (Mon.).

CLARK, ANN E., M.D. Borne, M.R.C.P. Irel., has been reappointed Honorary Surgeon to the Birmingham and Midland Hospital for Women.

COOKE, FRANCIS H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the Loxden and Winstree Union.

COWAN, J. J., M.B., C.M. Edin., has been appointed Medical Officer for the Knightwich Sanitary District of the Martley Union.

DERHAM, T. H. C., M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Preston and County of Lancaster Royal Infirmary.

DICKSON, J. D., M.D., M.Ch. Irel., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Wycombe Rural Sanitary District.

DONNS, K. D. R., L.R.C.P., L.R.C.S., I.M. Irel., has been appointed Medical Officer of Health by the Tullyhury Rural District Council.

FLETCHER, T. J., M.B., C.M. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Castle-Donington Sanitary District of the Shardlow Union.

FORBES, FRANCIS C. S., M.B., Ch.M. Aberd., has been appointed a Public Vaccinator for Ohiemaru, New Zealand.

GIBSON, JOHN L., M.D., Ch.M. Edin., M.R.C.S. Eng., has been appointed Honorary Ophthalmic Surgeon to the Brisbane Hospital for Sick Children, Queensland.

GLADSTONE, HOWARD B., M.B., has been appointed House Physician to the Royal Hospital for Diseases of the Chest, City-road, E.C.

HARVEY, L. E., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Preston and County of Lancaster Royal Infirmary.

HANSELL, GRAY, M.D., Ch.M. Aberd., has been appointed Medical Superintendent, Avondale Lunatic Asylum, Auckland, New Zealand.

HUGHES, J. R., M.D. Edin., M.R.C.S., has been appointed Honorary Medical Officer for the Denbighshire Infirmary, vice Turnour.

HYSLIP, T. BUCKLEY, M.D. Edin., has been appointed Lecturer on Mental Diseases in St. Mary's Hospital Medical School, Paddington.

JORDAN, J. F., M.B., B.Ch. Irel., F.R.C.S., L.R.C.P. Lond., has been reappointed Honorary Surgeon to the Birmingham and Midland Hospital for Women.

LEWIS, R. W., M.B., Ch.B. Melb., has been appointed an additional Public Vaccinator for the District of Foxton, New Zealand.

LEWIS, THOS. H., M.R.C.S. Eng., has been appointed Health Officer at Auckland, New Zealand, vice Hooper.

MARKE, E. G. K., M.D., Ch.M. Irel., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Surgeon to the Aramac Hospital, Queensland.

MARTIN, CHRISTOPHER, M.B., C.M. Edin., F.R.C.S., M. Eng., has been reappointed Honorary Surgeon to the Birmingham and Midland Hospital for Women.

PIMBLETT, W. H., M.B., C.M. Edin., has been appointed Senior House Surgeon to the Preston and County of Lancaster Royal Infirmary.

POWELL, HENRY A., M.B., Ch.B. Adel., has been appointed a Public Vaccinator in South Australia.

RANDALL, W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Bridgend Subsanitary District.

SAVAGE, THOS., M.D. St. And., M.R.C.P. Lond., F.R.C.S., has been reappointed Honorary Surgeon to the Birmingham and Midland Hospital for Women.

SAWREY, E. E. R., M.B., Ch.B. Melb., has been appointed pro tem. Resident Surgeon to the Geelong Hospital, Victoria, Australia.

SCRATCHLEY, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Poole Union.

SEDDON, H. B., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Honorary Out-patient Surgeon to the Newport and Monmouthshire Infirmary.

SENIOR, A. M.B., B.C. Camb., has been appointed Medical Officer by the Esher and Ditton Urban District Council.

SHIELDS, CHAS. J., M.B., Ch.B. Melb., has been appointed a Public Vaccinator for the District of Hyde, New Zealand.

SPANFIELD, G. S., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer to the Birkenhead Workhouse.

STRITCH, GEO. A., L.F.P.S. Glasg., L.M., L.A.H. Dubl., has been appointed Medical Officer to the South City Dispensary District, Dublin, vice Morris.

TAYLOR, J. W., F.R.C.S., has been reappointed Honorary Surgeon to the Birmingham and Midland Hospital for Women.

THOMPSON, J. H., L.R.C.P., L.M. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Mytholmroyd Sanitary District of the Todmorden Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF LOWESTOFT.—Medical Officer of Health and Medical Attendant at the Sanatorium for the Urban and Port Sanitary Districts of Lowestoft. Salary for the Urban Sanitary District, £100 per annum; for the Port Sanitary District £20 per annum, and as Medical Attendant at the Sanatorium £30 per annum. Applications to the Town Clerk, Lowestoft.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board, residence, and allowance for washing provided. Applications to the Secretary, Office, 24, Finsbury-circus, E.C.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing. Also Junior Resident Medical Officer. Salary £50, with board and washing.

FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house; rent and taxes free; also coal, light, water, and cleaning; or in lieu thereof the sum of £20 per annum. Applications to the Secretary, Board-room, Bagillt-street, Holywell, N. Wales.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Surgeon to Out-patients (non-resident), for six months. Salary 25 guineas.

KENSINGTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £125 per annum, with furnished apartments, coal, gas, and attendance. Applications to the Honorary Secretary, 7, Stamford-road, Kensington-square.

KENT COUNTY LUNATIC ASYLUM, Barming Heath, near Maidstone.—Fourth Assistant Medical Officer and Pathologist, for two years, unmarried. Salary £175 per annum (rising £5 a year), with furnished quarters, attendance, coal, gas, garden produce, and washing.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Vacancy on the Honorary Medical Staff. Applications to the Secretary at 13, Kilburn Park-road, W.

LEICESTER INFIRMARY.—House Physician, for one year. Salary £80 per annum, with board, apartments, and washing. Also Assistant House Surgeon for six months. Board, residence at the Infirmary, and washing will be provided.

LONDON HOSPITAL, Mile End, E.—Medical Electrician.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Senior Demonstrator of Anatomy. Salary by a percentage on fees.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for one year, unmarried. Salary £150 per annum, with board and residence.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Board and lodging (including washing) will be provided.

RATCLIFFE INFIRMARY, Oxford.—House Physician, for six months. Salary at the rate of £60 a year, with board, lodging, and washing.

ROYAL BERKS HOSPITAL, Reading.—Assistant Medical Officer for six months. Board and lodging provided.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Clinical Assistant and Anaesthetist for six months. Salary at the rate of £30 per annum.

ROYAL VETERINARY COLLEGE, Camden Town, N.W.—Lecturer on Biology (Botany and Elementary Zoology). Salary £100 per annum.

RURAL DISTRICT COUNCIL OF DROXFORD.—Medical Officer of Health for this rural district. Salary £125 per annum, to include travelling and all other expenses. Applications to the Clerk, Bishop's Waltham.

ST. GEORGE'S UNION, London.—Medical Officer for the No. 2 Relief District. Salary £100 per annum, with such extra medical fees as allowed by the Local Government Board. Applications to the Clerk, Clerk's Offices, St. George's Vestry Hall, Mount-street, W.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. PASCAS AND NORTHERN DISPENSARY, 125, Euston-road.—Resident Medical Officer. Salary £105, with residence and attendance.

STOCKTON UNION.—Medical Officer and Public Vaccinator, who will be required to discharge the duties of the several offices of Medical Officer and Public Vaccinator for the medical district of Stockton, and Medical Officer for the Stockton Workhouse. Salary £170 per annum as Medical Officer for the Stockton district, £130 per annum as Medical Officer for the Workhouse, with the usual fees for vaccination. Applications to the Clerk to the Guardians, Union Offices, Stockton-on-Tees.

VESTRY OF LAMBETH.—Medical Officer of Health for the Parish. Salary £700 per annum, such salary to include the cost of a carriage to be provided by the officer. Applications to the Clerk to the Vestry, Vestry Hall, Lambeth.

Births, Marriages, and Deaths.

BIRTHS.

HEWLETT.—On May 26th, at St. Anne's, East Sheen, S.W. (the residence of her father), the wife of Richard T. Hewlett, M.D., M.B.C.P., of a daughter.

ORCHARD.—On May 25th, at Ashby-de-la-Zouch, the wife of Alfred Orchard, M.R.C.S. and L.R.C.P., of a daughter.

ROUTH.—On May 29th, at St. Saviour's, Bridgewater, Somerset, the wife of R. Henry F. Routh, M.R.C.S., of a son.

STILES.—On June 2nd, at 5, Castle-terrace, Edinburgh, the wife of Harold Jalland Stiles, M.B., F.R.C.S. Edin., of a daughter.

MARRIAGES.

HAWKE-PARK.—On June 1st, at St. Peter's, Belsize-square, Edward Drummond Hay Hawke, L.R.C.P. Lond., M.R.C.S., of Shortlands, to Dora Annie, fourth daughter of Charles Park of Holmefield, Haverstock-hill, and Wingham Lodge, Minster, Kent.

HOUGHTON-JONES.—On May 30th, at Gellifor, near Ruthin, Leonard Frank Houghton, M.R.C.S., L.R.C.P., of Looe, Cornwall, second son of George Houghton, of Brondesbury, to Jennie, third daughter of Thomas Jones, of Plas Coch, near Ruthin, N. Wales.

REYNOLDS-COBBOLE.—On June 1st, at the church of the Holy Trinity, Worthing, Francis Mortimer Reynolds, M.B., C.M., of Ottery-St. Mary, Devon, to Mary, daughter of the late Spencer Cobbold, M.D., F.R.S.

WHITMORE-CHOVEAUX.—On June 1st, at the Parish Church, Carlton Colville, Lowestoft, Suffolk, J. Whitmore, Esq., M.R.C.S. and L.R.C.P., of Oldham, Lancashire, to Mary Agnes, youngest daughter of L. N. Choveaux, Esq., of Carlton Colville, Lowestoft.

DEATHS.

ANTHONY.—On June 1st, at Greenfield-crescent, Edgbaston, Birmingham, John Anthony, M.D., M.B. Cantab., Fellow of Caius College, and F.R.C.P. Lond., aged 81 years.

MILLS.—On May 29th, at Andover, Joseph Mills, M.R.C.S., late of Queen Anne-street, W., aged 44.

SCOTT.—Suddenly, at his residence, Basingbourne, Fleet, Hants, Horatio Scott, M.D., Surgeon-Major Army Medical Staff, Retired List, aged 61 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, June 6th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Yards.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
May 31	29.81	S.W.	64	60	124	76	62	0.09	Cloudy
June 1	29.82	S.E.	62	59	103	69	58	...	Cloudy
" 2	29.87	S.W.	58	52	107	65	50	0.03	Cloudy
" 3	30.09	W.	60	55	115	75	52	...	Hazy
" 4	30.20	N.E.	59	57	86	66	57	...	Raining
" 5	30.30	N.E.	58	56	110	68	57	...	Raining
" 6	30.28	N.E.	58	63	103	62	52	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.). St. Bartholomew's (1.30 P.M.). St. Thomas's (3.30 P.M.). St. George's (1 P.M.). St. Mark's (2 P.M.). Chelsea (2 P.M.). Samaritan (Gynaecological, by Physicians, 2 P.M.). Soho-square (2 P.M.). Royal Orthopaedic (2 P.M.). City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.). St. Bartholomew's (1.30 P.M.). Guy's (1.30 P.M.). St. Thomas's (3.30 P.M.). Westminster (2 P.M.). West London (2.30 P.M.). University College (2 P.M.). St. George's (1 P.M.). St. Mary's (1.30 P.M.). St. Mark's (2.30 P.M.). Cancer (2 P.M.). Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.). University College (2 P.M.). Royal Free (2 P.M.). Middlesex (1.30 P.M.). Charing-cross (3 P.M.). St. Thomas's (2 P.M.). London (2 P.M.). King's College (2 P.M.). National Orthopaedic (10 A.M.). St. Peter's (2 P.M.). Samaritan (2.30 P.M.). Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.). St. Thomas's (3.30 P.M.). University College (2 P.M.). Charing-cross (3 P.M.). St. George's (1 P.M.). London (2 P.M.). King's College (2 P.M.). Middlesex (2 P.M.). Soho-square (2 P.M.). North West London (2 P.M.).

FRIDAY.—London (2 P.M.). St. Bartholomew's (1.30 P.M.). St. Thomas's (3.30 P.M.). Guy's (1.30 P.M.). Charing-cross (3 P.M.). St. George's (1 P.M.). King's College (2 P.M.). Cancer (2 P.M.). Chelsea (2 P.M.). Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.). Middlesex (1.30 P.M.). St. Thomas's (2 P.M.). London (2 P.M.). University College (9.15 A.M.). Charing-cross (3 P.M.). St. George's (1 P.M.). Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.). the Royal London Ophthalmic (10 A.M.). the Royal Westminster Ophthalmic (1.30 P.M.). and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Paper:—Mr. George Cunningham: The Immediate Treatment of Irregular Teeth. Casual Communications:—Mr. Sidney Spokes: Some cases of Immediate Regulation. —Mr. L. Matheson: An Odontome removed from the Upper Incisor Region.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. F. H. Champneys and Mr. A. A. Bowlby: Further Observations on the Development of Mammary Functions by the Skin of Lying-in Women. —Mr. W. J. Walsham and Mr. W. Ernest Miles: A case of Intra-peritoneal Rupture of the Bladder; Suture; Recovery: with Remarks on the Inflation Test, and with a Table of Cases of Rupture of the Bladder treated by Suture since 1838.

THURSDAY.—BRITISH GYNAECOLOGICAL SOCIETY.—Nomination of Fellows: Ballot. Dr. Fancourt Barnes: Some Difficulties in the Use of the Curette. Specimens:—Dr. Laurie: (1) Removal of Suppurating Ovarian Tumour with Purulent Peritonitis and Adhesions; (2) Total Extirpation of the Uterus and Ovaries; (3) Fibro myoma of the Uterus removed by Enucleation. —Dr. John Shaw: A New Form of Uterine Dilating Bag.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8 P.M. Card Specimens by Mr. H. Secker Walker, Mr. Devereux Marshall, Mr. Morton, Mr. Mott, and Mr. Treacher Collins. Papers:—Mr. J. B. Lawford: Ophthalmia Nodosa. —Mr. Simeon Snell: Nine cases of Chancere of the Eyelids and Conjunctiva.

FRIDAY.—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—9 P.M. Special Meeting. Dr. W. R. Gowers: Subjective Visual Sensations. (Bowman Lecture.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M. Mr. W. Lang: Corneal Affections. —London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Woakes: Ear Diseases in Infancy and Childhood.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Hyslop: General Paralysis of the Insane.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloombury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 to 6 P.M. Dr. Morgan Dockrell: Epithelioma.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Ocular Paralysis. —Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Prurigo and Pruritus.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., The Medical Registrar: Pathological Demonstration.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Gowers: Clinical Lecture.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. W. Watson Cheyne: Cases in the Warle.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: General Paralysis of the Insane.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—6 P.M. Dr. Morgan Dockrell: Bazema.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular in question.

MEDICAL QUESTIONS AND THE "ECHO."

WE have received a letter from "Lennox" of the Echo, referring to a letter from Mr. Lennox Browne which appeared in our issue of May 18th. "Lennox" wants to know if Mr. Browne has the sole prescriptive right to the name Lennox. This seems to us to be rather beside the point. A man is, of course, at liberty to assume any nom-de-plume he chooses; but when it is pointed out to him that this choice annoys someone else it would be courteous to change it. As for prescriptive right, that probably belongs to the dual family of Richmond and certain other Scottish families; and the owners of this ancient name may well exclaim when they see it attached to newspaper medical advice, given, moreover, without the patient being seen, "Ichabod, the glory has departed from Israel."

Laicure.—We agree with our correspondent in most of the points that he makes. But "speaking out bravely"—certainly a compliment in a general sense—may in some circumstances be harmful. We have been exceedingly relieved to see that nearly all the great journals of England have considered that the subject matter of the late scandals made it necessary to abstain from unnecessary comment. With the end of the case has come the end of the chatter.

A FRIVOLOUS CORRESPONDENT suggests that, as the General Medical Council have refused to substitute either of the terms "midwifery nurses" or "nurse midwives" for "midwives," no more appropriate designation could be adopted than that of "foster-mothers."

"AN OPHTHALMOLOGICAL HINT."

To the Editors of THE LANCET.

SIRS.—It seems surprising that no correspondent has drawn attention to the fact that the above is described by Mr. McNamara at page 163 of his work on "Diseases of the Eye," published a quarter of a century ago. It cannot, therefore, be novel to the profession. I have been in the habit of using it for the past twenty years.

I am, Sirs, yours faithfully,

Greenawn Gowra, Naas, June 4th, 1895. JOSEPH SMYTH, M.D.

J. O. E. D.—The name mentioned does not appear upon the current Register of the United Kingdom or in the Medical Directory for 1895. This is not proof positive of absence of qualifications, as duly qualified persons are removed from the Register on failing to notify change of address. There is no reliable or official Register of the members of the medical profession in the United States of America.

Mr. R. H. Baxter.—We never recommend individual practitioners.

THE CASE OF MR. C. B. TOWNSHEND.

The following additional subscriptions have been received or promised, and are hereby gratefully acknowledged:—

Mr. John F. Churchill (Chesham) ...	£1 0 0	Dr. J. H. Wood (Ledbury) ...	£0 10 0
Dr. Robert E. Halden (co. Cork) ...	1 1 0	Dr. Walker (Peterborough) ...	2 2 0
Mr. Thomas Windsor (Ardwick) ...	5 0 0	Mr. A. F. Cold (Bromley) ...	2 2 0
Mr. George Wynne Bird (Leeds) (second donation) ...	2 2 0	The British Medical Benevolent Fund ...	15 0 0
Mr. J. C. Worthington (Lowestoft) ...	0 5 0	Sir Hugh R. Beevor (Norwich) ...	1 1 0
Dr. J. T. Windle (Halifax) ...	0 10 0	Mr. S. Wyborn (Windsor) ...	0 10 0
		Dr. E. A. Wright (Manchester) ...	0 10 0
		Dr. Robert L. Bowers ...	1 1 0
		Dr. J. Anderson ...	1 1 0

Further subscriptions are earnestly requested, and will be received and acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

Tasman.—The manner in which the price should be fixed must depend on the security of the income. For some practices two years' purchase may be asked; for others no one could be advised to give one. The larger number of years during which the vendor can show an increasing return for his work the more he has a right to good terms, but we cannot advise upon an individual instance.

M. M. E.—The Society of Apothecaries of London gives a certificate after examination qualifying the successful candidate to act as an assistant in compounding and dispensing medicine. For dates of examination, fees &c. apply to the Hall of the Society, Blackfriars, E.C.

Dr. FitzStevens.—It is certainly not strictly professional, but it is not fair to assume that the paragraph has been furnished by the gentleman himself. He may have had an injudicious friend.

"STRANGE REMEDIES."

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. H. Cuthbert, seems to be somewhat surprised at the treatment in his neighbourhood of thrush by hanging a frog head downwards in the patient's mouth, and asks if babes in other localities are subjected to this very disagreeable method. In his interesting book on folk medicine Mr. Black mentions the practice as by no means uncommon in Cheshire as well as in Shropshire, and many of your readers who take an interest in popular customs could not doubt endorse his statement. "It is still by no means uncommon," he says, "for a young frog to be held for a few moments with its head inside the mouth of a sufferer from aphthae or thrush. The frog is supposed to become the recipient of the ailment, which has, indeed, in some districts received the folk-name of 'the frog' from the association. 'I assure you,' said an old Shropshire woman, as she finished her account of the cure, which she had often superintended, 'we used to hear the poor frog whooping and coughing mortal bad for days after; it would have made your heart ache to hear the poor creature coughing as it did about the garden.'"

Under the heading "Humoral Pathology" you mention that a correspondent sends you a cure for jaundice which consists of a drink composed of ale, lemon, saffron, and nitre, followed by a dose of castor-oil on the third day. At the same time the first water after 12 o'clock is to be buried with an ounce of blue stone vitriol. The interest here resides in the burial of the urine, and it is a pity that your correspondent did not give fuller particulars as to circumstances and locality of what is a very widespread practice. Mr. Black, whom it is impossible not to quote in all that refers to folk medicine, says: "In the county of Moray the people were formerly in the habit of paring the nails of the fingers and toes of persons suffering from hectic and consumptive diseases. The parings were put in a rag cut from the patient's clothes, and waved three times round his head with the cry, 'Deas soil.' After this the rag was buried in some unknown place. Among medical men the 'Galenist of much repute' of whom Boyle writes was induced, when other means of cure failed, to boil an egg in his own urine. The egg was afterwards buried in an ant-hill, and as the egg wasted the physicians found his distemper go and his strength to increase. In Staffordshire to cure jaundice a bladder is often filled with the patient's urine and placed near a fire; as the water dries up the jaundice goes."

I am, Sirs, yours truly,

OSCAR JENNINGS.

Paris, June 3rd, 1895.

HOMES FOR THE DYING.

To the Editors of THE LANCET.

SIRS,—An old servant of our family has malignant disease in an advanced stage, seated somewhere at the top of the rectum. He has been advised at more than one general hospital by unimpeachable surgeons that the disease has now made too much progress for an operation. I want to find some place pleasantly situated where he could enjoy the few months he may still have without pain, and yet have proper attendance at hand whenever he has to be medically treated (for a minor operation or injection of morphia). Could you or any of your readers help me by telling me of such a place? Whatever is done should be done at once, as I have gathered from the medical men that six months is the probable limit of the poor man's life. I should like to hear of some place where it is cheerful, and where the patient shall have small indulgences as to hours, &c., good feeding, and good air.

I am, Sirs, yours truly,

June 3rd, 1895.

H. A. B.

ADVERTISING IN SOUTHPORT.

DR. ROBERT ROGERSON, who calls himself "Consulting Physician and Specialist on Diseases of the Chest," has largely distributed in Southport a circular, in which he purports to give references to distinguished men in New York and Scotland. Amongst the latter are the names of Professor Gairdner and Dr. Henry Littlejohn. It would almost be an insult to ask these gentlemen if they had authorised such use of their names.

A. Z.—The obvious arrangement would seem to be as follows. While our correspondent remains the senior partner, his assistant, as junior partner, or salaried subordinate, should draw such share of the returns as represents the work that he does, allowance being made for the influence and prestige of his senior; and when the senior retires, as the junior is not in a position to buy him out, a properly secured charge on the income of the practice should be effected in the senior's interest. What share the junior partner should receive at first, and what share as pension the senior partner should receive later and for how long, are points that can only be settled between the parties; but they should easily be settled with the assistance of a solicitor and good mutual understanding.

Eus would be glad to know of any work dealing with the construction and cost of small isolation hospitals in rural districts or of any society which would advise him on the subject.

Nemo has omitted to enclose his card.

"BILATERAL PARALYSIS OF THE CRICO-ARYTENOIDEI POSTICI."

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a clerical error in my report of a case of "Bilateral paralysis of the crico-arytеноidei postici," &c. The crico-arytеноidei postici being the dilators or abductors of the glottis and the vocal cords being seen "lying close together," it must be obvious to all who know anything about the larynx that the abductors being paralysed the vocal cords must be adducted. Hence all who read my notes carefully will observe that the word in brackets should have been (adduction) and not abduction. I am sorry the mistake has arisen, but feel confident that those who know will notice that it is but a slip of the pen. I am glad to have this opportunity of adding a few remarks, for since sending my note for publication I have read Dr. Pierre Marie's lecture on *Tuberc Dorsalis*, and find that he states that paralysis of the abductors of the larynx is frequently observed in association with tabes. For my own part, having seen a considerable number of tabes, and never before having met with this association, I think it is rare. Most writers on nervous diseases seem to imply the same.

I am, Sirs, yours faithfully,

FRANCIS HAWKINS.

Reading, June 4th, 1895.

Mr. H. B. Matthew.—We do not know anything of the nostrum or its inventor. The claims made on its behalf are obviously preposterous, and the diet-schedule to accompany the administration of the drug is without meaning. No English physician would treat a case by correspondence unseen and guided only by a record of symptoms detailed to him by the patient or the patient's lay friends.

A Protest.—Our correspondent does not mention precisely of what he complains, and has omitted to enclose exact references to the peccant passages.

THE TREATMENT OF LYMPHADENITIS.

To the Editors of THE LANCET.

SIRS,—A patient of mine has undergone several operations for lymphadenitis. After each it has again returned, but in a different place—the last where it cannot be touched by the knife. I think it might be destroyed by caustics. The patient in every other respect is in excellent health, and not yet fifty years of age. Will any of your subscribers kindly suggest treatment for such a case?

I am, Sirs, yours faithfully,

P. F.

June 5th, 1895.

"INTRA-LARYNGEAL INJECTIONS."

Trachea writes:—"Unfortunately in the inquiry regarding guaiacol and menthol in tuberculous laryngeal disease, signed 'Trachea,' probably from my writing of the word, 'tuberculosis of cords' was printed 'tuberculosis of cows.'"

Detector is thanked for his communication.

During the week marked copies of the following newspapers have been received:—*Cardiff Times, Bradford Daily Argus, Cork Constitution, Nottingham Evening Post, Chester Courier, Scarborough Post, Western Daily Mercury, Oldham Standard, Beverley Record, Bootle Times, Newcastle Chronicle, Manchester Courier, Birmingham Argus, Walsall Advertiser, Liverpool Courier, Goolle Times, Leicester Chronicle, Brighton Gazette, Denbighshire Free Press, Bristol Times and Mirror, Sydney Morning Herald, Brisbane Courier, Cheltenham Examiner, Birmingham Daily Post, Hobart Mercury, The Welshman, Australian Medical Journal, The Journal (Carmarthen), Westmorland Gazette, Easingwold Advertiser, Carrickfergus Advertiser, Nelson Chronicle, Somerset City Herald, Hull News, Durham Chronicle, Bridgewater Independent, Times of India, Bedfordshire Standard, Bombay Gazette, &c., &c.*

Communications, Letters &c. have been received from—

- A.**—Dr. H. L. Atkinson, Lond.; American Laryngological Association, New York, Secretary of; Aconite, Lond.; Assistant, Lond.; A. B., Lond.; Abire, Lond.
- B.**—Dr. C. Black, Glasgow; Dr. T. L. Bruntton, Lond.; Dr. J. Braithwaite, Leeds; Mr. H. W. Barclay, Stevenage; Mr. J. G. Braden, Dover; Mr. R. E. W. Brewer, Newport, Mon.; Mr. H. J. Buck, Lond.; Mr. C. S. Bowker, Newport, Mon.; Mr. W. Bernard, Londonderry; Messrs. Black and Co., Lond.; Messrs. Blundell and Co., Glasgow; Messrs. Blondeau et Cie., Lond.; Messrs. Bates, Hendy, and Co., Reading; Messrs. Burgoyne, Burdidge, and Co., Lond.; British Castor-oil Co., Lond.; British Antitoxine Manufacturing Co., Lond.; Bradfield College, Berks.
- C.**—Dr. W. S. Colman, Lond.; Surgeon-Lieut.-Col. W. L. Chester, Cairo; Mr. T. Champness, Rochdale; Mr. A. M. Cato, Sleaford; Mr. N. M. Cummins, Queens-town; Miss Condy, Lond.; Messrs. T. Christy and Co., Lond.; Messrs. Carrick and Co., Lond.; Messrs. Cotterell Bros., Bristol.
- D.**—Dr. C. R. Dickson, Toronto; Mr. F. J. Davies, Cwm Carne; Mr. G. DeAth, Buckingham; Disposal, Lond.
- E.**—Lord Egerton of Tatton, Lond.; Dr. E. T. Ensor, Lond.
- F.**—Dr. W. F. Farquharson, Carlisle; Mr. N. H. Forbes, Tunbridge Wells; Messrs. Ferguson and Osborne, Lond.; Messrs. Fletcher, Fletcher, and Co., Lond.; Fides, Lond.
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- I.**—Irish Medical Association, Dublin, Hon. Secretary of.
- J.**—*Journal de Médecine*, Bordeaux, Editor of.
- K.**—Surg.-Major G. Kelle, India; Mr. P. J. Kavanagh, Lond.
- L.**—Dr. E. S. Lee, St. Leonards-on-Sea; Dr. J. F. Lees, Hartlepool; Messrs. Longmans, Green, and Co., Lond.; Lowestoft Borough, Town Clerk of.
- M.**—Dr. J. A. Menzies, Godalming; Dr. C. F. Moore, Dublin; Dr. P. W. MacDonald, Dorchester; Mr. Henry Morris, Lond.; Dr. J. McClymont, Lond.; Mr. R. F. Mackenzie, Lond.; Mrs. D. G. Mathias, Cardigan; Messrs. Milton and Co., Lond.; Messrs. Macmillan and Co., Lond.; Medicus xv., Lond.
- N.**—Mr. J. V. Navudu, Puduchottah, India; National Model Dwellings Co., Lond.
- O.**—Dr. W. G. O'Neill, Lincoln.
- P.**—Dr. J. P. Parkinson, Lond.; Dr. S. P. Preston, New York; Dr. E. F. Potter, Lond.; Mr. O. Pemberton, Birmingham; Mr. Y. J. Pentland, Edinburgh; Messrs. Parkins and Gotto, Lond.; Pleiades, Lond.
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- T.**—Dr. A. M. Turnbull, Neemuch, Central India; Mr. T. F. Tracey, Glasgow; Mrs. Turner, Lond.; Messrs. Teetgen and Co., Lond.
- U.**—Urbanus, Lond.
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W.—Mr. F. Moore, Lond.; Mr. V. Wood, Lond.; Mr. H. Wright,

Gainsborough; Messrs. W. Wood and Co., New York; Woodhall Spa Sanatorium, Manager of.

Y.—Y. Z., Lond.

Letters, each with enclosure, are also acknowledged from—

- A.**—Dr. G. A. Abrath, Sunderland; Mr. R. R. Anderson, Carmarthen; Apollinaris Co., Lond.; Alpha, Lond.; A. B. C., Lond.; Abire, Lond.; A. B., Lond.
- B.**—Mr. R. W. Branthwaite, Rickmansworth; Mr. C. S. Bowker, Newport, Mon.; Mr. H. P. Butterworth, Lond.; Mr. A. J. Brookes, East Molesey; Mr. J. S. Buck, Eaton Socon; Messrs. Brady and Martin, Newcastle-on-Tyne; Bolton Infirmary, Secretary of; *Birmingham Daily Gazette*, Proprietors of; Berkshire, Lond.; Bath-road, No. 15, Chiswick; B. C. D., Lond.; Banks, Lond.
- C.**—Dr. Cooper, Sale; Confidence, Lond.; C. M., Lond.; Comfort, Lond.; Casual, Lond.; C. H., Birmingham; Crico, Lond.
- D.**—Dr. R. Davies, Wrexham; Mr. W. Davis, Heston; Droxford Rural District Council, Brixhop; Waltham; Domus, Lond.; Disposal, Lond.; Dunelm, Lond.
- F.**—Dr. J. Findlay, Penpont; Dr. T. R. Fraser, Edinburgh; Flintshire Dispensary, Holywell, Secretary of.
- G.**—Messrs. R. W. Greef and Co., Lond.; Messrs. Gilyard Bros., Bradford.
- H.**—Dr. L. Hunt, Ellesmere; Mr. H. S. W. Hall, Hertford; Mr. W. Haines, Amberley; Mr. W. A. Hardiker, Brynboi; Mr. B. H. Herbert, Uttoxeter; Mr. A. O. Haslewood, Buxton; Messrs. Hooper and Co., Lond.; Hendon Grove Asylum, Medical Superintendent of; High Shot House, Twickenham, Secretary of; Halifax, Lond.; H. M. W., Wickhambrook; Hornsey-road, No. 378.
- J.**—Mr. G. H. W. Jones, Eckington; J., Lond.; J. H., Lond.; Justice, Lond.
- K.**—Messrs. Keith and Co., Edinburgh; Kensington Dispensary, Secretary of.
- L.**—Mr. B. Lord, Manchester; Mr. T. Laffan, Cashel, co. Tipperary; Mr. T. S. Luke, Matlock; Mr. A. J. Lowe, Manchester; Leeds Union, Clerk of; L.R.C.P. & S., Lond.; Locum, Lond.
- M.**—Mr. E. F. Mortimer, Silka, Alaska; Messrs. Milmont and Co., Lond.; M.O.H., Guildford; M. C. B., Lond.; M.R.C.S. 1850, Lond.; Medico, Lond.
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- Q.**—Quest, Lond.; Quita, Lond.
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- S.**—Dr. P. C. Smith, Lond.; Dr. J. B. Stewart, Glasgow; Dr. W. C. Steele, Londonderry; Mr. C. Scratchard, Faversham; Mr. W. Selgwick, Lond.; Mrs. Semple, Harrow; Messrs. Slinger and Son, York; St. John Ambulance Association, Lond.; S. R. P., Lond.; S., Ipswich; S. W., Lond.; Scalpel, Lond.; S. S., Lond.
- T.**—Mr. J. Taylor, Glasgow; Mr. J. Thin, Edinburgh; T. C. S., Liverpool; Tenaculum, Lond.; Trephine, Lond.
- W.**—Dr. J. W. Watterson, Morecambe; Dr. W. Wilson, Pontypool; Mr. F. Moore, Lond.; Mr. B. Wheeler, Manchester; Messrs. R. F. White and Son, Lond.

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THE LANCET

SPECIAL SUPPLEMENT

IN SUPPORT OF THE

METROPOLITAN HOSPITAL SUNDAY FUND

Published in aid of the Appeal to be made on Sunday, June 16th, 1895.

THE HOSPITALS AND MEDICAL CHARITIES OF LONDON.

THE nature and magnitude of the operations carried on by the hospitals of London have received illustration in our annual supplements of THE LANCET published in support of the Metropolitan Hospital Sunday Fund Collection, of which it has hitherto been our custom to distribute abstracts for the information of those attending places of worship. This year we have so far departed from that custom as to circulate equally widely the whole text of this Supplement, feeling that the immensity of London's charities can only be adequately realised by a study of the actual figures. These figures speak in no uncertain voice of the great demand made on the resources of the Fund, and the need for its careful and discriminating distribution; but they prove also how far it falls short of the real need. It ought to be known that in the metropolis about 2500 hospital beds are unfilled by those for whom they were primarily intended, and that many a noble charity is barely able to exist owing to lack of necessary income. In order that some idea of the actual working of these institutions may be given to those whose help is invoked on Hospital Sunday, we propose to devote this Supplement to a description of the main features of the organisation and resources of a general hospital, which may be said to be at the command of any wayfarer who is unfortunate enough to be struck down by accident in one of London's crowded streets.

It is of course not possible to do justice, by the story of any single case, to the entire organisation which is grouped together under the comprehensive title of the Hospitals and Medical Charities of London, but we shall be content if we can succeed in conveying to the minds of the readers of this Supplement an impression, though vague and inadequate, of the vast and merciful work which is going on daily and hourly in their midst. The details of our story are drawn from the life, although for the sake of continuity in the narrative we may concentrate upon one subject the painful and pleasurable experiences drawn from many individual stories; and the hospital depicted, which to avoid any appearance of invidious selection we leave unnamed, may be taken to be the type which may be found embodied in institutions situated north, south, east, and west in this great metropolis, one of which can always be reached by a short cab ride from any part of the County of London.

A STREET ACCIDENT.

Our patient then is chosen from the ranks of that very numerous and very mixed body who fall victims every day to the street traffic of the city. This is by no means the only considerable source of accident which distinguishes London. On the contrary, as we pointed out in our Hospital

Sunday Supplement for 1891, the street accident forms a comparatively insignificant addition to the sum total of injuries inflicted on the mass of workers in this great metropolis—as, for instance, among the dock labourers and ship hands who fill the East-end hospitals, or the workmen in large breweries and factories, or those engaged in the oft-times perilous duty of house building and repairing, or those who are daily exposed in London's railway termini to risks of injury to life or limb in the operations of shunting and the like.

But the danger of a street accident is ever present to every foot-passenger in the London streets, and can therefore be the better appreciated by the ordinary reader of this article. As a matter of statistics let us quote the following

Return of the Number of Persons taken to Hospital by Police during the Years 1884 to 1893.

Year.	Suffering from accidents.	Suffering from other causes.	Total.
1884	3,192	1,676	4,868
1885	3,126	1,650	4,776
1886	3,289	2,018	5,307
1887	3,512	2,001	5,513
1888	4,033	2,267	6,300
1889	4,096	2,366	6,462
1890	4,381	2,240	6,621
1891	4,735	2,385	7,120
1892	4,694	2,845	7,739
1893	5,248	3,067	8,306
Totals	40,506	22,505	63,011

Take then the following case, which may be paralleled from almost any morning's daily paper:—

"John Smith, aged fifty, was crossing ———-street when, in attempting to dodge an omnibus, he lost his foothold and fell under the vehicle, which passed over him, causing a compound fracture of the bones of his left leg. He was removed by the police to the ———-Hospital."

The newspaper reporter has here in this meagre story skipped the first incident which exemplifies the work of the hospitals. It is not necessary to wait until the patient is brought within the walls of the institution in order to see the work of medical charity in progress. In old days this was otherwise. A requisitioned shutter or the ubiquitous cab would have furnished means of transport from the scene of the accident to the hospital door, with the not infrequent result that the mischief done by the accident was aggravated, and, perhaps, rendered incurable in the course of the journey to the hospital. But now the Hospitals Association has established ambulance stations at suitable points in all

the much-frequented quarters of the town and, under the direction of the police-constable who is quickly on the spot, a convenient and well-appointed stretcher mounted upon wheels is promptly brought from the nearest station. The instruction in ambulance work and "first aid" now so widely given by means of the St. John Ambulance Association has borne much fruit; for many a fracture which with careless handling might have become "compound" has been spared this further injury, and many a limb has thus been saved from amputation. The police, trained to realise this danger that confronts the victim, know how essential it is that the raising of the patient should be done with the utmost possible care, and that he should be placed in such a position on the ambulance that the injured limb is not subjected to any strain or concussion. Once securely lodged on the ambulance, the victim is conveyed through the crowded streets with facility and without the slightest jolting until the door of the hospital is reached. Arrived at the hospital the patient is delivered by the police to

THE HOSPITAL PORTER.

Here we may pause to sketch in a few words the type of man who is to be found at many of these institutions, where he often serves in the same capacity so long as to be thoroughly identified with the hospital. His experiences during this long service must be very wide, and he has to assist in many a pathetic scene. He appears not only as the custodian of the portal, which he jealously guards from intruders, but as the embodiment of the charity which receives every sufferer with open arms. A man of sterling honesty, probably a time-lapsed soldier, and, therefore, well versed in the value of discipline and the importance of deference to authority, he is firm in his exclusion of those who have no business in the place and gentle in his welcome to the sick and maimed. In fine, he is a worthy fellow who may be confidently trusted to carry out his orders and to follow a prescribed routine with the precision of a piece of clockwork. Under his guidance the police officers convey their burden into the casualty receiving room and deposit it upon the couch.

THE CASUALTY DEPARTMENT.

In a large London hospital there is hardly an hour of the day or night in which some unfortunate victim to accident is not being attended to in this department. Injuries of all kinds, from the most trivial of wounds to grave internal contusions, fractured and torn limbs, an abrasion of the scalp or a fracture of the skull, burns and scalds of all degrees—these and many others are admitted in regular sequence, so that the casualty room affords the surgical pupil a large field of experience hardly to be obtained in any other of the departments of the hospital. There are nurses specially told off to assist the dressers in this department, under the supervision of the house surgeon of the week or of a casualty officer, whose duty it is to examine each case in turn and decide whether it be of sufficient gravity to be admitted for treatment into the wards. In the case we are considering there is little time lost in arriving at a decision. The injured man, not yet recovered from the effects of the shock of the accident, is carefully examined, the nature and extent of his injuries taken note of, and directions given for his immediate removal to the accident ward. The porters bring to the side of the couch the ward ambulance, upon which he is carefully lifted, the house surgeon seeing that the injured limb is disturbed as little as possible, and in a few minutes he has been received by the ward sister and placed in the bed which is ready for his occupation. The necessary steps are then taken by the house surgeon and dressers to "set" the fracture; the wound is carefully cleansed and dressed and splints are bound to the limb, so that within the space of an hour or less from the moment of his fateful passage of the street-crossing John Smith is installed in the bed which he must occupy for the next six weeks, and, save for the consequences of a severe shock to the nervous system and the aching pain of his fractured limb, he is in personal comfort and really much more at his ease than the reader inexperienced in such matters could at all suppose.

THE PATIENT'S WIFE OR FRIENDS.

But in the meantime other steps have been taken in a totally different direction. From the letters found in the man's pocket his name and address have been discovered, although he may have been too dazed to give any account of himself. The arrangements which are made for communicating with

patients' friends are simple, but sufficient. If within a reasonable distance of the hospital, the house surgeon despatches a messenger in a cab with directions to bring the wife or other relative back at once, or else a telegram is sent notifying the fact of the accident and the place to which the sufferer has been taken.

So summoned, his wife quickly repairs to the hospital and is conducted at once to the matron's rooms. Here she learns the whole story of the accident and is tenderly and tactfully made aware of the extent and gravity of the injuries suffered by her husband. When the poor woman has recovered from the outburst of grief occasioned by the shock of this intelligence, and, soothed by the tender thoughtfulness of the matron, has regained her self-control, she is permitted to see her husband for a few minutes, and gains comfort from finding how carefully he is being tended.

Now, while this is taking place we may pause to answer a natural question on the reader's part. Who are the various people to whom we have thus been introduced, and whom we have seen fulfilling their various duties with so much skill and tact?

THE HOUSE SURGEON.

The house surgeon is a junior medical officer already possessed of a qualifying degree or diploma, whose studies have been prosecuted at this particular hospital, and whose abilities have marked him out among his fellow students for preferment. He must not only be at hand to deal at any moment with an emergency like the present, but he must also make the round of his particular wards, attending to any patient there who needs his help, and satisfying himself that all is going well. He is, so to speak, the navigating officer during his period of duty, and has qualified for his post not only by obtaining a degree or diploma or both from his examiners, but also by distinguishing himself in the eyes of his instructors by his professional ability and his general fitness for the exercise of his chosen profession.

THE PROBATIONER NURSE.

The probationer nurse is, as her title signifies, a young woman who, having selected nursing as a profession, is undergoing a period of training. Her duties are less responsible than those of the sister or staff nurses, but much of the comfort of the patient depends upon her fitness for her post. She brings his meals, keeps his pillows smoothed, and in a hundred-and-one ways can minister to his comfort by thoughtful acts of tenderness and kindly words. The qualities that go to make up womanliness rather than those which come by training are the qualities which she has the opportunity of displaying; but even in these matters training cannot be dispensed with, for there is a way of performing the simplest service for the sick which cannot be acquired save by instruction and practice.

THE STAFF NURSE.

To the qualities which fit a probationer nurse for her place the staff nurse must add the results of a long and careful training. She must be quick to observe and careful to report all symptoms that indicate the condition and progress of her patient. She must be prepared to undertake the performance of all services which require the eye or hand of a skilled nurse. Her work is not only to look after the comfort of her patient, but also, and even primarily, to promote his recovery, for she must carry on and supplement the surgeon's work, and, under his direction, take the general charge and continuous oversight of the case. To administer medicines, to apportion diet, and to be the patient's *alter ego* in so far as he is incapacitated by injury or by disease is her special province—a province which demands from her some of the very highest qualities of heart and head.

THE WARD SISTER.

The head nurse of the ward is one who has been selected either from among the nurses of this hospital or from another training institution. She must have skill to direct her probationers and the moral power to control her patient. Qualities like these have been her qualifications for her post and have recommended her to the choice of hospital authorities. She directs and controls all the nursing work in the ward, and is held responsible for its efficient performance.

THE MATRON.

The matron is a woman whose position demands still higher qualifications. The whole nursing department is under her hand, and she therefore cannot afford to be deficient in any one of the traits which appertain to an accomplished nurse. If anything is wrong in this branch

of the hospital work she must be qualified to detect it and to set it right. She must therefore have the most complete training for her post. But more than this, she must have the faculty for rule. A hundred times a day her word is law, and it must, therefore, carry weight. But she rules not in a military, but in a domestic, sense, and must be fitted no less to win affection than to command respect. In a word, she must be both a lady and a nurse, and each in an eminent degree.

THE PATIENT.

But it is time that we returned to the patient whom we left in company with his wife. The few minutes' interview is over, the visitor has gone, the house surgeon has paid his evening visit, the night nurse has taken charge, the lights are turned down, and the patient, settled for the night's rest, is holding communion with his thoughts. Slowly the incidents of the day revisit his memory. The departure from home amid the caresses of his children, the fateful walk, and the unlucky crossing of the street, the horrible sensation of falling in front of that advancing omnibus, the rearing of the horses, the frantic grappling at the ground, the stunning

to whom he imparts from his rich store of knowledge those clinical facts which the case in question illustrates. He dwells on the mode in which the injury was inflicted, describes its nature, and explains the method adopted for its treatment, pointing out that the art of the surgeon lies in determining how to so place the limb that the broken fragments of bone are kept in apposition and in a state of absolute rest, so that the "vis medicatrix nature" may be exerted most advantageously. He may have occasion to point out that the bandaging requires readjustment, and he dwells on the injurious effect of careless and too tight application of the bandage. He shows how important it is that the union should be perfect and that the limb should on healing not suffer any "shortening" from want of accurate apposition of the ends of the broken bone, and that the wound will require great attention. The signs of the fracture are indicated and varieties in this form of injury sketched. Then he alludes to the probable course of events, the pitfalls that have to be avoided, and the possible dangers to be encountered, much depending upon the condition of the patient at the time of infliction of the injury.

STATISTICS OF HOSPITAL WORK IN LONDON DURING THE YEAR 1894.

TABLE I.—GENERAL HOSPITALS.*

N.B.—The figures referring to out-patients in these Tables represent the number of VISITS paid by out-patients—NOT the NUMBER of out-patients.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Con-valescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
Charing-cross	£ 1,006	2,049	978	883	100	135	174	68,086	247
French	383	825	260	468	27	59	38	18,944	1,032
German	555	1,446	554	703	335	94	96	50,926	2,282
Great Northern Central	335	1,301	1,103		79	69	93	59,999	21,077
Guy's	527	5,998	5,275		688	405	539	78,763	31,674
Hampstead	86	221	43	163	—	21	15	772	68
Italian	77	211	8	190	1	15	12	4,583	94
King's College	1,485	2,304	789	1,065	192	178	187	67,040	11,014
London	3,546	9,703	2,383	5,000	890	605	1,014	258,666	17,104
London Homoeopathic	134	496	176	209	319	40	22	23,902	313
London Temperance	623	1,044	254	701	93	70	59	16,207	5,965
Metropolitan	585	733	160	498	—	61	75	78,233	9,373
Miller Hospital and Royal Kent Dispensary	235	283	36	188	6	19	17	35,224	3,909
North-West London	345	530	75	371	44	48	38	44,582	16,844
Poplar	307	719	168	508	62	49	43	31,209	—
Queen's Jubilee	43	189	27	147	10	9	6	23,289	3,737
Royal Free	863	1,460	1,245		130	100	112	72,098	11,325
St. George's	1,294	4,194	3,713		1,069	330	381	95,430	7,730
St. John and Elizabeth	105	94	67	—	24	50	26	—	—
St. Mary's	2,013	4,141	840	2,487	276	261	344	113,529	14,503
Seamen's Hospital Society	891	2,404	1877	328	—	197	151	60,000	4,500
The Middlesex	2,060	3,182	2,564		319	265	315	102,118	24,981
Training Hospital, Tottenham	307	—	—	—	—	—	—	—	—
University College	1,594	3,035	999	1,687	317	171	283	140,406	29,588
West Ham	240	272	267		—	—	15	54,223	6,633
West London	575	1,522	1,345		—	83	177	77,742	28,602
Westminster	1,054	2,934	2,552		444	158	224	—	10,504
Estimated to supply omissions	20,998	51,100	9,884	15,546	5,415	3,491	4,446	1,565,978	262,599
	—	980	6,090	12,780	170	160	50	118,470	1,780
Total	20,998	52,080	15,474	28,326	5,585	3,591	4,496	1,684,448	264,379

* We reproduce the term "General Hospitals" as employed by the Council of the Metropolitan Hospital Sunday Fund.

blow, and the slow awakening in this ward with his tearful wife at his side. The meditations are sad, even very sad, but they might have been much worse, and note that even while we are pitying him he has fallen quietly asleep.

With the morning comes a new routine, and the patient finds himself already among friends. He recognises the day nurses of the day before, and feels in a sense at home with them. But there are still new experiences in store for him.

THE SURGEON.

The fractured limb has been set, but the work has yet to be submitted to examination by the surgeon, who will take charge of the case. A careful study of the way in which the fracture has been put up is accordingly made by a surgeon whose high qualifications and large experience have given him rank among the leaders of his profession. He makes any remarks to his juniors that may be necessary and gives directions for the nursing of the patient. On his visit he is accompanied by the house surgeon and dressers and by a number of students,

COMPLICATIONS.

In an ordinary case it might well happen that the course of recovery would from this point be uneventful. But not every case is an ordinary case. Complications arise even out of the simplest conditions, and it is no far-fetched hypothesis to suppose that the patient whose fortunes we are following should develop some acute disorder—such, for example, as pneumonia—in the course of treatment for his fractured limb. This new trouble will demand a fresh line of treatment and lay another department of the hospital under contribution. The rise of temperature will be promptly reported by the nurse, and the house physician will be summoned to diagnose its cause.

THE HOUSE PHYSICIAN.

A very few words will suffice to introduce this official to the reader, for his position corresponds in the medical department precisely to that of the house surgeon in the surgical department, and this latter has been already described. The house physician is soon able to make up his

mind sufficiently to prescribe the general course of treatment and administer remedies.

THE PHYSICIAN.

But the next day the patient is seen not only by the surgeon but also by one of the physicians to the hospital, a man, like his surgical confrère, of the very highest professional standing.

HOSPITAL ADVANTAGES AND THEIR RESULTS.

Thus in all that relates to the treatment of his maladies

being still under treatment. With reference to the number who have died, as we stated in our Supplement of 1890, it must not be supposed that these figures represent so many failures on the part of the hospitals to afford relief. On the contrary, in the great majority of these cases the only form of relief possible was the alleviation of their sufferings during their last moments.

THE TREATMENT.

But once more we must return to our hospital patient, whom we left in the hands of the physician, as well

TABLE II.—SPECIAL HOSPITALS.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Con- valescent homes.	Remaining under treatment.	Died.	Out- patients' visits.	Accidents and emergencies
City of London for Diseases of Chest.. ..	£ 939	962	838	—	—	115	114	67,336	—
Hospital for Consumption	1,488	1,543	1,277	—	275	313	254	72,620	—
North London	235	413	368	—	—	50	37	18,812	—
Royal Hospital for Diseases of Chest ..	235	477	429	—	—	54	45	19,718	—
Royal National Hosp. for Consumption ..	288	793	542	—	—	132	24	—	—
Alexandra Hospital for Hip Disease ..	192	164	19	04	34	66	6	1,417	—
Children's Home Hospital	33	60	26	23	—	12	—	—	—
Belgrave Hospital for Children	153	243	120	102	20	24	16	—	789
Cheyne for Incurable	144	75	7	10	19	48	7	—	—
East Lond. Hosp. for	479	1,519	301	653	181	82	321	12,582	17,372
Evelina Hosp. for Sick	498	811	594	—	—	57	160	34,708	43
Home for Incurable	67	37	1	—	—	28	4	—	—
Home for Sick	144	191	32	148	60	30	10	4,729	34
Hospital for Sick	787	1,678	667	698	454	130	245	69,896	—
North-East. Hosp. for	288	—	—	—	—	—	—	—	—
Paddington-green for	153	175	153	—	30	17	5	27,764	2,969
Victoria Hospital for	527	1,157	941	—	508	69	133	57,975	600
"The Vine"	24	46	7	18	1	20	—	—	—
British Lying-in Hospital	48	193	—	195	5	16	3	290	—
City of London	96	492	—	491	15	24	1	—	—
Clapham Maternity	15	302	—	301	—	24	1	11,631	30
East-end Mother's Home	38	218	—	217	—	—	1	281	—
General Lying-in	54	535	—	531	—	—	4	1,624	—
Queen Charlotte's Lying-in	316	1,079	—	1,071	—	—	8	9,226	—
Chelsea Hospital for Women	—	336	196	174	132	22	3	2,510	—
Hospital for Women	383	466	315	220	68	52	9	24,393	—
Grosvenor Hosp. for Children and Women	96	135	66	54	7	13	2	7,449	—
New Hospital for Women	173	532	177	242	—	37	17	27,875	—
Royal Hosp. for Children and Women ..	225	591	540	—	25	51	51	32,100	—
Barnard Free	556	575	103	441	50	40	10	25,603	—
Cancer	671	787	621	693	21	72	94	11,147	—
London Fever	431	490	435	—	—	30	15	—	—
Gordon for Fistula	88	213	22	187	—	1	2	8,728	—
St. Mark's	106	65	19	35	9	—	—	15,730	—
National for Diseases of Heart &c. ..	94	132	104	30	—	17	8	12,370	—
Female Lock	211	729	620	—	—	149	3	2,417	—
Male	10	365	253	—	—	22	2	21,151	—
Hospital for Epilepsy &c.	48	98	—	—	5	16	1	8,445	—
National for the Paralyzed &c.	719	927	301	231	106	118	51	33,236	—
West-end for Nervous System	67	—	—	—	—	—	—	—	—
British Hospital for Mental Disorders	—	—	—	—	—	—	—	—	—
Central London Ophthalmic	38	230	—	—	—	—	1	22,813	631
Royal Eye	105	490	459	—	—	17	—	41,010	1,000
Royal London Ophthalmic	537	1,981	270	1,750	25	44	—	113,556	1,500
Royal Westminster	96	432	33	376	—	17	1	84,475	—
Western	14	118	17	131	3	—	—	16,090	—
City Orthopædic	67	175	60	100	—	15	1	9,000	—
National	43	216	153	—	—	63	—	2,733	—
Royal	36	176	63	58	—	50	—	7,372	—
Royal Sea Bathing Infirmary	383	490	249	122	—	98	5	980	—
Hospital for Diseases of Skin	19	14	12	—	—	2	—	15,636	—
Western Skin	—	94	—	—	—	—	—	4,251	—
St. Peter's for Stone	58	445	432	—	—	—	13	34,452	—
Central London Throat and Ear	43	258	51	182	3	10	6	40,939	—
Hospital for Diseases of Throat	77	610	35	534	9	24	8	40,541	—
Royal Ear	7	304	24	150	—	118	—	9,223	—
Phillips's Memorial Homeopathic	34	75	15	51	6	6	3	1,344	—
The Dental	106	—	—	—	—	—	—	53,499	—
National Dental	38	—	—	—	—	—	—	—	—
Estimated to supply omissions	12,985	26,471	6,502	10,199	2,126	2,441	1,713	1,072,188	25,460
	—	1,500	2,970	4,400	40	250	110	133,500	200
Total	12,985	27,971	9,472	14,599	2,516	2,791	1,823	1,205,688	25,660

our casual patient is able to obtain every advantage that skill can confer or wealth procure. The most complete appliances, the most approved ability, and the newest discoveries in medicine and surgery are freely placed at his service, and with what excellent results the large proportion relieved or cured out of the total number of in-patients in 1894 (see summary of tables on page 8) very strikingly shows:—In-patients, 105,014; relieved or cured, 90,361; died, 6493; the remainder

as of the surgeon, to the institution. The details of his treatment, the daily routine of the hospital ward, need not long detain us. The reader will easily understand that where the whole system has been worked out with a view to the successful treatment of disease there is not much which thought and experience can suggest as conducive to the comfort and well-being of the patient that is left undone. As compared with the confusion which

prevails in a small household when a sudden necessity arises for treating a case of sickness, the arrangements of the hospital ward are luxury itself. The cheery faces and manner of the attendants, the comfortable space, the wholesome light, the soothing quiet, the reassuring knowledge that skilful eyes are ever present and skilful hands are instantly at call, these things conspire to make the lot of the hospital patient one of great comparative comfort at the worst, and one which is, to patients whose lot is ordinarily a hard one and subject to severe privation, a season of relief and repose. But whether the stay in hospital be marked for the patient by ease or pain it does not usually last long. A detention of six weeks is about the average duration for such a case as we have here supposed, and the present is a severe case. Taking accidents all round the average period of treatment does not extend beyond three weeks, and although it is not possible to give an equally clear idea of the ordinary duration of a medical case, for the variations are naturally much greater

who, though still confined to bed from physical disability, are yet well enough to take a keen interest in this recreation. Thus in many ways the life in hospital is brightened and made more homelike, and many a patient looks back with pleasure to the time that he spent within its walls. The memory of the pain he suffered there is obliterated by that of the comfort and, indeed, enjoyment of its restful days. A lady visitor tells how a poor cobbler coming from a small dark room in the basement of a dwelling in a court off Oxford-street, and who with some difficulty was persuaded to leave this dreary habitation and exchange it for the bright, airy, and cheerful hospital ward, was so impressed with the difference between the squalor he had left and the comfort he had attained that he confessed how gravely his mind had been prejudiced against hospitals, for in his imagination he had fancied to find them prisons. The realisation of the true facts was almost overpowering. He would lie for hours quietly watching the nurses, who with

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Con-valescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
Metropolitan Convalescent	£ 623	3,548	1,260	2,197	—	84	7	—	—
Bexhill	297	1,623	484	1,095	—	42	2	—	—
All Saints	537	—	—	—	—	—	—	—	—
Mrs. Gladstone's	115	743	—	—	—	17	—	—	—
Hahnemann	34	—	—	—	—	—	—	—	—
Hanwell	19	—	—	—	—	—	—	—	—
Herbert	84	453	236	166	—	41	1	—	—
Herne Bay Baldwin-Brown	24	313	—	—	—	—	1	—	—
Homoeopathic Convalescent	10	205	—	—	—	—	—	—	—
King's College	96	464	89	332	—	17	—	—	—
Mrs. Killo's	77	—	—	—	—	—	—	—	—
" Marshman's	77	2,644	—	—	—	—	—	—	—
Mary Wardell	97	143	—	—	—	—	—	—	—
Morley House	182	986	—	—	—	—	2	—	—
Princess Frederick's Convalescent	19	139	—	—	—	—	—	—	—
St. Andrew's (Clewley) Convalescent	163	606	512	98	—	67	14	—	—
Do. (Folkestone)	221	1,924	—	—	—	—	1	—	—
St. John's Home for Convalescent Children.	38	226	225		—	—	1	—	—
St. Joseph's Convalescent Home	63	462	380	40	—	60	4	—	—
Convalescent Home for Poor Children, St. Leonards-on-Sea	129	807	—	—	—	—	—	—	—
St. Mary Magdalene's Convalescent	—	—	—	—	—	—	—	—	—
St. Michael's	48	251	—	—	—	—	—	—	—
Seaside	144	—	—	—	—	—	—	—	—
Beckenham Cottage Hospital	48	—	—	—	—	—	—	—	—
Blackheath and Charlton Cottage Hospital	67	147	23	74	—	6	12	3,571	6
Bromley, Kent	67	189	81	107	—	16	18	—	62
Chislehurst, Sidcup, &c.	48	184	26	93	—	10	4	5	18
Eltham	24	70	11	47	9	6	5	160	10
Enfield	88	73	4	51	—	10	8	—	15
Epsom and Ewell	67	—	—	—	—	—	—	—	—
Hounslow	38	77	37	44	—	3	6	7,523	21
Reigate and Redhill	63	218	26	132	17	11	8	—	49
Sidcup	29	99	16	72	2	4	5	338	13
Wimbledon	38	111	14	87	—	4	4	100	25
Woolwich and Plumstead	84	78	14	60	5	6	4	—	35
Establishment for Gentlewomen	115	147	19	98	—	6	4	—	—
National Sanatorium for Consumption	77	293	89	111	—	57	2	—	—
Invalid Asylum	53	197	65	50	6	18	2	—	—
Firs Home	38	—	—	—	—	—	—	—	—
St. Catherine's Home	38	35	31	4	—	11	1	—	—
Royal Mineral Water Hospital	—	1,422	943	194	—	169	3	—	—
Estimated to supply omissions	3,888	18,463	4,319	5,186	39	655	114	11,742	244
	—	6,500	3,536	9,500	—	450	60	2,116	—
Total	3,888	24,963	7,854	14,686	39	1,105	174	13,858	244

in this department, it may be stated as a general result that the average in-patient, surgical and medical taken together, spends about twenty-five days within the hospital walls.

As the patient progresses towards recovery and is allowed to get up or to spend a few hours in the garden (a rare adjunct to a London hospital) or on the terrace, his life is by no means so monotonous as the uninitiated might think. There may be a room set apart where smoking is permitted and reading and games are to be enjoyed. The library department is generally controlled by the chaplain to the hospital, and many of these institutions possess a good assortment of light and wholesome literature furnished by the liberality and thoughtfulness of their supporters.

LADY VISITORS.

It is customary, too, for certain hours to be set apart in the week for the visits of ladies, who undertake the duty of reading aloud to, or conversing with, those patients

gentleness and patience were continually responding to the summons of the sick, and when his turn came to be attended to he would, with enviable courtesy, deprecate the trouble he was causing, and he was once heard to say, half to himself, "Surely Paradise cannot be better than this."

VISITORS TO PATIENTS.

At stated hours twice or thrice a week the patients receive visits from their friends, and whenever occasion calls for it the authorities summon the friends to the bedside. The amount of consideration that is shown in this respect may not be widely enough appreciated; but the more this and similar features of hospital life are known, the more keenly will the public resent the cruel and baseless imputations that are sometimes brought against hospitals.

CHAPLAIN AND OTHER MINISTERS.

One word as to the religious side of hospital life. The

office of chaplain—who in some hospitals is a resident official—is one which demands of its holder many qualities. If he performs his duty conscientiously and sympathetically, if he is a man of tact and discretion as well as full of the charity that he inculcates in others, he may do very much to alleviate the burdens of the sick. But he has need, too, of a wide knowledge of human nature, for he is brought into contact with all sorts and conditions of men and women, some of whom perchance may have no sense of the religious spirit. His ministrations must be unobtrusive and full of kindness. The hospital, however, is unsectarian, and those of the patients who do not belong to the Church of England are allowed to be visited by a duly accredited minister of their own denomination. All, however, can join in the simple services which are held morning and evening in the wards without offending their consciences or disturbing their faith.

THE CONVALESCENT HOME.

But now a new aspect of the case comes into view. After six weeks' treatment a cure has been effected, but the patient is by no means in a condition to resume his ordinary avocation. Even if no permanent disablement should result from his injuries he will be weak from the effects of the accident and the disease. To send him home in this condition would be to impair his chance of perfecting his recovery, and, at the very least, to entail upon him a very serious loss of time by plunging him into surroundings that must needs delay and protract his convalescence. On the other hand, it would be a very bad economy of the means which public charity has placed at the disposal of the hospital authorities to permit the convalescent patient to continue to occupy a bed in the hospital ward. There are cases more pressing than his clamouring for admission, and to retain him would involve the exclusion of one of these. Then, again, the hospital ward is but little adapted to promote the mere recovery of strength. It is organised for a different purpose and cannot well be made to serve the present one. In the case of a patient comparatively well-to-do the solution of the difficulty is simple. He is advised to pay a visit to the country or the seaside, and with a few directions for his management of himself is sent to recruit in sunshine and fresh air. But only a few hospital patients are so situated as to be able to obtain such advantages as these. To the vast majority the loss of wages incidental to the enforced absence from work is a serious drain upon slender resources, and if they are to enjoy the benefits of a convalescent home it must be one provided and supported by public charity. Thus have arisen in connexion with most of the great hospitals smaller affiliated institutions, where the work of cure can be perfected, or Samaritan funds from which the convalescent's own means can be supplemented and the benefits of a pay institution of the kind can be secured to him.

Indeed, the convalescent home has become an indispensable adjunct to the hospital and is one of the features of the extension of well-directed charity which has only been developed within the past thirty years. Amongst the first of these excellent institutions to be founded in connexion with the metropolis were Mrs. Gladstone's Home at Woodford and the All Saints' Convalescent Home at Eastbourne, which for a time were practically alone in supplying the needs of the London hospitals; but now, as the preceding table (No. 3) shows, their number is not only considerable (twenty-three), but many a hospital has, through private munificence and without encroaching upon its own funds, been enabled to establish for itself a home in the country whither patients may be drafted as soon as their condition justifies the removal. Indeed, in not a few cases it is possible to continue the treatment commenced in town under the stimulating and strength-giving influences of pure air and sunshine, with the result that recovery is hastened and complete restoration to health made more permanent. The cost of maintenance of such a home is obviously much less than that of the hospital itself. It requires a much smaller administrative staff, whilst the selection of an appropriate site demands far less outlay than an extension of the hospital building in the heart of London would entail. Nor should it be omitted to mention that by the liberality of the railway companies the cost of removal of convalescents to and from these homes has been made as moderate as possible.

PATIENTS WHO DO NOT RECOVER.

The triumph of hospital work is seen of course in the cases of the patients who are discharged cured. But it must not

be supposed that the death roll affords a measure of its failure. On the contrary, the work of mercy is no less real even although it be less successful in these instances. The subject is not one to which we can venture to do full justice. The horrors of a death chamber from which the stern hand of poverty has shut out the ministrations of the physician and the nurse cannot be here portrayed; but no one who has spent painful hours in the house of death will need to have them explained.

OUT-PATIENT DEPARTMENT.

The treatment of the sick and maimed poor is in no hospital limited to those who gain admission into the wards. As a matter of fact, these form but a relatively small minority of the whole number who are annually the recipients of the charity. The dispensary system—i.e., the obtaining of medical advice and treatment which can be carried out

TABLE IV.—DISPENSARIES.

Name of Dispensary.	Hospital Sunday Fund award.	Out-patients' visits.
Battersea Provident	287	90,000
Bloomsbury	10	—
Brixton and Streatham Hill	58	5,203
Brompton	26	—
Camberwell	93	96,394
Camden	12	—
Chelsea, Brompton, and Belgrave	45	4,682
Child's Hill Provident	10	—
City	83	—
City of London and East London	19	—
Clapham General and Provident	36	10,116
Eastern Dispensary	38	6,517
East Dulwich Provident	19	—
Farringdon General	43	24,281
Finchley	53	38,767
Forest Hill	31	—
Gipsy Hill and Upper Norwood	12	—
Hackney Provident	7	—
Hampstead	41	—
Holloway and North Islington	62	29,903
Islington	43	49,583
Kensal-town Provident	10	5,346
Kensington	67	—
Kilburn, Maida-vale, and St. John's-wood	43	10,491
Kilburn Provident Medical Institution	28	12,935
London	19	—
London Medical Mission	62	8,716
Margaret-street Infirmary for Consumption	—	17,000
Metropolitan Dispensary	43	12,182
Notting-hill	21	8,663
Paddington Provident	34	13,062
Pimlico	17	—
Portland-town	19	—
Portobello-road Provident	7	856
Public	48	—
Queen Adelaide's	43	26,364
Royal General	41	—
Royal Pimlico Provident	43	—
Royal South London	62	12,155
St. George's and St. James's	48	8,294
St. George's (Hanover-square)	45	20,000
St. John's-wood and Portland-town Provident	26	6,189
St. Marylebone General	38	4,495
St. Pancras and Northern	48	12,262
South Lambeth, Stockwell, & North Brixton	—	—
South London Medical Aid Institution	53	32,765
Stamford-hill, Stoke Newington, &c.	43	12,343
Tower Hamlets	11	4,574
Walworth Provident	10	3,372
Wandsworth-common Provident	14	9,992
Westbourne Provident	58	30,762
Western	125	—
Western General	24	—
Westminster General	25	24,186
Whitechapel	—	—
Estimated to supply omissions	2,038	649,045
Total	2,038	1,104,045

by the patient at home, or which does not necessitate his confinement to bed—has been engrafted upon that of the hospital proper, until it has become one of the most important branches of the work of the latter. The organisation and arrangements of the out-patient department of a general hospital are matters which have often received much attention and no little criticism. The returns, as given in the Summary of Tables, show the enormous proportions to which this branch of hospital practice has attained, for, whereas in 1890 the total number of visits to this department was 2,429,219, it reached last year to no less than 4,108,039.

A SYNOPSIS

SHOWING APPROXIMATELY THE NUMBER OF INDIVIDUALS (270 IN ALL) ENGAGED IN THE WORK OF

A GENERAL HOSPITAL

OF ABOUT 500 BEDS.

Medical Staff.		Governing Body.		Nursing Staff.	
HOSPITAL.				HOSPITAL.	
Consulting Staff	4	President	1	Matron	1
Physicians and Surgeons ..	8	Vice-Presidents	9	Night Superintendent ..	1
Assistant Physicians, Assistant Surgeons	8	Treasurers	2	Ward Sisters	10
Medical Officers to Special Departments	5	Board of Management ..	24	Staff Nurses	40
Anæsthetists	2	Administrative Staff.		Probationer Nurses	40
Medical and Surgical Registrars	2	Secretary	1	Ward Maids	12
Casualty Officers, Medical and Surgical	2	Office Clerks	3	CONVALESCENT HOME.	
Resident Medical Officer ..	1	Collector	1	Matron	1
House Physicians and House Surgeons	8	House Steward	1	Nursing Staff	2
Clinical Clerks, Dressers ..	40	Kitchen Department	5	Domestic Servants	3
Dispensary Department ..	6	Laundry Department	6		
		Domestic Servants	6		
		House Porters	6		
		Hall Porter	1		
		Religious Staff.			
CONVALESCENT HOME.		The Chaplain	1		
Resident and Visiting Staff	3	Visiting Ministers	3		
Dispenser	1				
	90		70		110
		TOTAL 270			

Now, when it is remembered that each one of these receives individual attention, the labour thrown upon the medical and surgical staff—labour wholly unremunerated—cannot fail to strike the imagination. In several hospitals it has been found necessary of late years to considerably increase the staff of the out-patient officers, each of whom aims at obtaining eventually his promotion to the charge of in-patients—a promotion which may not come to him until after ten or even twenty years' devoted service. In spite of this there is, as ever, a keen competition for the offices of assistant physician or surgeon; and this fact bears testimony to the high repute which our hospitals bear in the estimation of the medical profession, when a position on the staff involving years of patient work is so keenly sought for.

THE OUT-PATIENTS.

To the patients themselves the attendance demands a considerable sacrifice of time as they await their turn for examination; and here arrangements are generally to be found for supplying them with refreshments at small cost. The charge that the out-patient department is taken advantage of by those who can well afford to pay for medical attendance at their own homes has, we fear, some basis of fact. The various branches included in this department, each with its special officer in charge, comprise those of diseases of the skin, of the eyes, of the ear, of the throat, of the teeth, of diseases peculiar to women, and of diseases of children. To the student the out-patient department is invaluable, for here he meets with examples of the less grave forms of disease which will constitute the bulk of his future practice. During the time allotted to these visits the dispensers are fully and actively engaged preparing and dispensing the drugs prescribed with admirable accuracy and celerity.

THE DISPENSARY.

No visitor desirous of becoming acquainted with the work of a hospital should omit a visit to the dispensary. This department will be found everywhere fully equipped, and its arrangements based on good order and method. It would be impossible for the daily dispensing to be got through within the time at disposal were it not so. The work there goes on almost without interruption, for not only have the out-patient prescriptions to be attended to, but every day there come down from the wards fresh orders which have to be promptly and regularly obeyed. The expenditure upon drugs alone forms no inconsiderable item in the hospital balance-sheet; but there is no such false economy as the stinting either in quality or quantity of the materials supplied. The wishes of the medical staff as to the articles required for efficient treatment are invariably and cheerfully acquiesced in, so that the poorest sufferer may derive the utmost benefit from remedies which would otherwise be far beyond his reach.

THE MATERNITY DEPARTMENT.

There yet remains to be mentioned one sphere of activity in which these great institutions share, that has to do with the care of poor women in their hour of trial, a department which, we venture to think, is regarded by the public with less consideration than it merits. It is an extension of practical charity in a direction which must appeal to the heart of every mother, whilst the manner in which the department is organised and conducted is truly admirable. It is here, probably, that the highest feelings of humanity are experienced amidst the most sordid surroundings, and many a lesson in gentleness and patience under suffering is imperceptibly given to the young man, who learns therein the sanctity of his calling and the magnitude of his future

SUMMARY OF TABLES.

—	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Con- valescent homes.	Remaining under treatment.	Died.	Out- patients' visits.	Accidents and emergencies
General Hospitals	20,988	52,080	15,474	28,326	5,585	2,591	4,496	1,684,448	261,379
Special Hospitals	12,085	27,971	9,472	14,099	2,526	2,791	1,823	1,205,688	25,900
Cottage Hospitals and Con- valescent Homes	3,888	24,063	7,854	14,636	39	1,105	174	12,558	244
Dispensaries	2,038	—	—	—	—	—	—	1,204,045	—
Total	39,909	105,014	32,800	57,561	8,150	7,487	6,493	4,108,089	290,283

responsibilities. That the poorest woman can command, in time of stress and difficulty, the most skilled attention and service, is something of which our civilisation may well be proud.

GENERAL SURVEY.

We must perforce leave our task half completed. To refer to each of the administrative departments necessary for the smooth working and conduct of a hospital would involve far more space than we have at our disposal; but in order that some idea may be formed of the numbers actually engaged in this charitable work, we have prepared a plan (see previous page) that may be taken as fairly representative of the several sections of hospital management. It is not intended to apply to any existing institution, but to be simply a fair average enumeration of the officers and their subordinates in the governing body, and the three main departments—administration, medical, and nursing—into which the work of a hospital may be divided. When it is considered that all these individuals, from the highest to the lowest, are engaged in the one object—the management of a charitable institution—it is not too much to say that for organisation and discipline a large hospital cannot be surpassed.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

The fact that the machinery of public medical charity, as illustrated by the Metropolitan Hospital Sunday Fund, should have been organised upon so large a scale by voluntary effort will occasion no surprise to an English reader. The service is not only nobler for being voluntary—it is in an important sense more efficient also. It is not a small matter that men of business and great experience of affairs are found willing to devote to the service of the hospitals a large amount of their scanty leisure time; it is

perhaps even more important still that the leaders of the profession in medicine and surgery consider it to be an honour to serve in the cause; and it is of the very greatest consequence to the cause of suffering humanity that a vast body of subscribers and supporters of hospitals are induced to take a personal and purely disinterested concern in their welfare, seeking neither emolument nor dignity for themselves from the connexion, but watching with solicitous care over the fortunes of the institutions in which their interest has become engaged. Thus the Hospital Fund occupies a position of pre-eminent advantage, but its influence is entirely moral, derived from its power of fearless criticism and its application of rules for the just and fair manner in which it apportions its awards. A statement of these awards has been published again in the first column of the tables, which can be compared with the other figures, showing the amount of the work in each hospital and dispensary.

Before the Committee of the Hospital Sunday Fund proceed to their awards they have to be satisfied as to the good and economical management of the institution, the expenses of administration not being disproportionate to that of maintenance.

It would not be too much to say that these rules have passed absolutely without challenge. It will, therefore, we think, be felt that the congregations of the various places of worship of the metropolis could not show in a more practical and unostentatious way their sympathy with hospital work than through the council of the Metropolitan Hospital Sunday Fund. In this way, aided by the eloquent advocacy of their ministers, we may hope that at least £50,000 will be obtained on this Hospital Sunday.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Amounts received and disbursed in the year 1894.

Dr.	RECEIPTS for the year ending 31st October, 1894.				Cr.
1894.	£	s.	d.	1894.	£ s. d.
To balance at Bank of England, 1st Nov., 1893	1,968	15	7	By Awards to 117 Hospitals	37,365 7 4
„ Balance in hands of Secretary	8	9	0	„ Awards to 5 Institutions	316 5 0
			1,972 4 7	„ Awards to 53 Dispensaries	2,031 9 2
„ Collections made at Sundry Places of				„ Surgical Appliances	1,959 7 1
Worship	35,931	13	11		41,672 8 7
„ Collections at Schools	30	11	4	„ Rent	170 0 0
„ Donations, including £18 14s. 0d. for				„ Fuel, Gas, and Office Cleaning	21 18 1
Surgical Appliances	3,217	6	5	„ Printing and Stationery	216 2 4
„ Legacy: the late W. J. Whitaker, Esq. ..	4,500	0	0	„ Stamps and Postage	87 8 1
			43,679 11 8	„ Advertisements	261 15 8
				„ Salaries and Wages	776 16 6
				„ Sundries	8 5 2
					1,682 5 10
				„ Balance at Bank of England	2,384 19 10
				„ Balance in hands of Secretary	12 2 0
					2,397 1 10
			£45,651 16 3		£45,651 16 3

Audited and found correct, this 6th day of November, 1894.

(Signed) HART BROTHERS, TIBBETTS, & Co., Chartered Accountants, Moorgate-street.

* * In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Hospital Sunday Fund Committee) we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. To them we desire, as on many previous occasions, to return our sincere thanks.—ED. L.

A Clinical Lecture

ON

SYPHILITIC ULCERATION AND SOME
OTHER DISEASES OF THE RECTUM;

WITH REMARKS ON THE TREATMENT OF HÆMORRHOIDS.

*Delivered at St. George's Hospital on Dec. 11th, 1894,*By WARRINGTON HAWARD, F.R.C.S. ENG.,
SURGEON TO THE HOSPITAL.

GENTLEMEN.—As there are at present in the hospital several instructive cases of disease of the rectum, and as diseases of this part of the bowel are of very common occurrence, it may, I think, be useful to take some of these cases as the text of a clinical lecture.

CASE 1.—The first patient to whose disease I will direct your attention is a young woman in Princess Ward, who is the subject of syphilitic ulceration of the rectum. She complains of pain before, during, and after defecation, and of troublesome constipation. These symptoms are of about five months' duration, and were preceded by a dull red rash over the body and some soreness of the throat. Examination of the rectum with the speculum revealed numerous superficial ulcers, which were mostly above the sphincter, but there was one rather deeper ulcer with indurated edges which was immediately within the anus and extended to the junction of the mucous membrane with the skin. The skin round the anus was red and irritable and the anal folds somewhat thickened. There were superficial ulcers on both tonsils and a fading brownish roseolous rash over the trunk. There was slight, firm enlargement of the cervical and inguinal lymphatic glands. The patient was given two grains of grey powder three times a day; an incision was made to the depth of about a quarter of an inch through the base of the anal ulcer, and a suppository of grey oxide of mercury ointment introduced twice a day into the rectum. Under this treatment you will have observed that the ulcers of both rectum and throat have nearly all healed. She is free from pain, and the bowels act without discomfort or difficulty. In this case, as so often happens, we were not able to obtain a distinct history of syphilitic infection; but the rash upon the skin, the ulceration of the throat, and the amygdaloid enlargement of the glands, together with the characters of the rectal ulcers, made the diagnosis of syphilis sufficiently easy and secure. You will observe that this patient complained of pain alike before, during, and after defecation; and this led us to suspect that there was ulceration extending along the rectum to some distance above the anus. The case contrasted well with that of another woman on the opposite side of the ward (Case 2) who complained of pain during and after defecation, but who had no discomfort until the motion began actually to pass, and in whom we found a single oval ulcer at the anus, and nothing above. In Case 2 we could see the edge of the ulcer at the anus, but any attempt to introduce the finger or speculum gave so much pain and excited so much spasm of the sphincter that it was necessary for a proper examination to administer ether. You will often meet with this difficulty when an ulcer is situated just within and at the margin of the anus, where the nerve-supply is very free and the reflex sensibility very acute, whereas even extensive ulceration above the sphincter gives rise to much less pain and spasm. When, therefore, you have to examine a case of painful ulcer at the anus, give a sufficient dose of castor oil to act freely on the bowels, and then let ether be administered; and, the patient being placed in the lithotomy position, an expanding speculum should be introduced and the interior of the rectum exposed to view. As the introduction of an enema tube is often in such cases very painful, it may be undesirable to administer enemata before the examination; a syringe and warm water should, therefore, be at hand to wash out the bowel during anaesthesia, and you should be prepared at the same time to incise the anal ulcer.

The lithotomy position is much the most convenient for examining and operating upon the rectum during anaesthesia, and it can be adopted without any disagreeable exposure even in women, the lower limbs being wrapped in a loose flannel gown and a towel placed over the vulva. An extending

No. 3746.

and self-retaining speculum, made in three skeleton segments, which being separated dilate the rectum without concealing its surface, is a most efficient aid to the examination. With this instrument dilated and fixed in position the rectum can be washed out and a most complete inspection made of the mucous surface. This was the method adopted in the case before us (Case 1) and you were able to see clearly the long oval narrow ulcer with its long axis across the margin of the anus, with its hard, raised edges and its grey base. You saw, besides, that higher up the rectum and within the sphincter were a number of superficial, irregularly-shaped ulcers, of diameters varying from a quarter of an inch to an inch and coated with a whitish film. You will also have noticed that the folds of skin round the anus were thickened and, where they joined the mucous membrane, red and irritable-looking. These were conditions quite characteristic of syphilis and clearly indicating the need of constitutional as well as local treatment. The local treatment consisted in the forcible dilatation of the sphincter so as to produce a condition of temporary paralysis, the free division of the base of the ulcer at the anus and the scraping away of the granulation layer on its surface, and the application of iodoform to all the ulcers. Subsequently an ointment of grey oxide of mercury was used, but this local treatment alone would have been quite insufficient for the healing of the ulcers, which were only one manifestation among others of the general syphilitic infection. You will frequently meet with cases of syphilis in which patients consult you on account of some one prominent symptom, the connexion of which with the preceding infection they do not recognise. For this reason, or perhaps because they wish to conceal it, they do not mention the fact that they have had syphilis, so that it is the more necessary that you should recognise syphilitic symptoms, both by their individual characters and by their concomitants. It must be borne in mind, moreover, that symptoms both of syphilis and of other diseases are liable to considerable modification by the position, the tissue, or the function of the part affected. Thus in the case before us the formation of an ulcer at the margin of the anus gave rise to symptoms which were special to the position of the ulcer rather than to its origin; for the patient had the severe pain at the time of and after defecation, the spasm of the sphincter, and the constipation characteristic of ulcer of the anus. These were the symptoms exhibited in the following case.

CASE 2.—A woman, otherwise healthy, had a simple non-specific ulcer of the anus. It was an example of the vicious circle into which the habitually constipated are apt to enter. Habitual constipation is much more common in women than in men, and women suffer much more frequently than men from ulcer of the anus. This woman had been in the habit of allowing large quantities of hard faeces—which were often expelled with great difficulty—to accumulate in the rectum. For the last few weeks defecation had been accompanied and followed by great pain, and the motions were streaked with blood. The pain and the spasmodic contraction of the anus made defecation increasingly difficult, so that the bowels now only acted at intervals of several days, and then only after aperients. Doubtless the passage of hard faeces had caused a crack or fissure at the anus, and this had been prevented from healing by the repeated irritation to which it was subjected. Then, increasing in area and depth, the ulcer became irritable and painful, and gave rise to reflex spasm when an attempt was made to empty the rectum. Thus, the constipation caused the ulcer, and the ulcer kept up the constipation. For this case all that was needful was an incision through the base of the ulcer, a dressing of iodoform gauze, and the proper regulation of the bowels so as to ensure a daily soft motion.

Let me add to these cases another case of syphilitic disease of the rectum which I have recently seen in private practice, and which illustrates the value of concomitant symptoms in aid of diagnosis.

CASE 3.—A patient aged forty-eight years was brought to me for consultation on account of disease of the rectum, which it was suspected might be malignant. The history told that she had been losing flesh for a year, during which time also she had suffered with increasing frequency of defecation. For about six months she had been passing small quantities of mucus and blood, sometimes without any fecal admixture, and she was distressed by the great irritability of the bowel and the frequent desire to empty it. She had become dyspeptic and depressed, and her complexion had undergone a notable change from that of health to a dull bistre tint.

A A

She was very thin, and an examination of the abdomen revealed four spots of marked tenderness along the course of the colon. In the rectum, above the level of the sphincter, were several irregular, somewhat raised patches of ulceration coated with a grey film; no growth could be seen or felt. The folds of skin around the anus were much indurated. She had pain before defecation, but felt a sense of relief after the bowels had acted. I noticed that she had numerous linear scars on the edges of the lips, and on further inquiry I learned that she had suffered from ulceration of the throat, and from several circular ulcers on the legs, of which I saw the depressed, pigmented, and nearly symmetrical scars. On these facts we based the diagnosis of syphilitic disease of the bowel, and we placed the patient upon the treatment appropriate for that. After our consultation, my friend who had brought the patient reminded me of what I had forgotten—viz., that ten years previously I had treated this patient's husband for a syphilitic stricture of the urethra.

You will notice that in this case there was no ulcer actually at the anus, and therefore there was no pain attending the act of defecation. The pain was felt before the bowels acted, evidently from the irritation of faeces moving over the ulcerated colon and rectum, and when the bowel was emptied a sense of relief ensued. The relation of the pain to the act of defecation will thus often help towards the diagnosis of the situation of the ulcer. The diagnosis of the character of the ulceration will depend partly on the appearance and situation of the ulcers and partly on the concomitant symptoms. Remember that in syphilis ulceration of the rectum is very common, especially in women; and that when in a case of syphilis you see ulceration at one end of the alimentary canal (the throat) it is very probable that there is ulceration at the other end of the alimentary canal (the rectum). Thus you see superficial ulcers and mucous patches in the secondary stage affecting both throat and rectum; somewhat later, when the tonsils are infiltrated and sore; irregular, multiple ulcers with slightly raised bases and grey necrotic surface are found in the rectum; and later still, when gummatous growth and ulceration are occurring in the tonsils, the same condition is frequently met with also in the rectum. This last form of ulceration sometimes simulates malignant disease, and is occasionally almost as destructive; the diagnosis will be aided by the history and other symptoms, and by noting that the syphilitic disease is usually more scattered, and less confined to one part of the bowel, than the malignant. Multiple ulcers of the rectum, especially in young people, are mostly syphilitic or tuberculous. The tuberculous are probably not confined to the rectum; they are more apt to lead to suppuration in the adjacent tissue than the secondary ulcers of syphilis and have not the surrounding growth of those of the tertiary period. Other forms of ulceration to be borne in mind, but which will be distinguished by their concomitants, are the dysenteric, and that rather rare condition, ulcerative colitis. In the investigation, therefore, of cases of ulceration of the rectum, do not neglect to note carefully any symptoms that may help you towards a correct diagnosis of their character, and remember that in none is the ulceration of the bowel to be considered as a mere local disease. Even in so simple a case as the second of those I have brought before you, the due regulation of the bowels was as essential as the local treatment for obtaining a cure, and in the first and third cases, without the recognition of their syphilitic origin, treatment would have been entirely futile. The treatment, then, of syphilitic ulceration of the rectum must be constitutional as well as local. For the first, mercury is almost always necessary, but inasmuch as many of the subjects of this condition are dyspeptic, anæmic, and ill-nourished the administration of mercury should be combined with iron or other tonics and with careful feeding. In the later stages, and in the cases of gummatous ulceration, iodide of potassium should also be given. I think, as a rule, small doses of grey powder, with a little opium if the bowels are irritable, constitute the best way of giving mercury in these cases; but if the digestion is very easily disturbed the drug should be given by inunction or by the calomel bath. When the iodide is given it may be conveniently combined with the ammonio-citrate of iron, and each dose should be given in three or four ounces of water. The bowels must be so regulated as to ensure a soft daily motion without irritation or purgation. For this purpose the admixture of salad oil with the food (or, for instance, with finely minced green vegetables, or with mashed potato, or as a sauce with fish &c.) will often answer well; or the

oil may be taken separately the last thing at night; or a tumblerful of hot water may be taken at night. Aperients are best avoided, but if something more active than olive oil is needed, castor oil or the composed liquorice powder is probably the best. The diet should be nutritious and easily digestible, and all foods leaving an irritating residue (such as currants, figs, and brown bread) carefully excluded. Milk and oily foods are beneficial, and plenty of fluid should be taken. Locally, if the ulceration is severe, and especially in the gummatous form, it is useful to wash out the rectum with a warm solution of permanganate of potash after the action of the bowels, and then to introduce a suppository, which may be of iodoform or of grey oxide of mercury. Iodoform is best at the commencement of the treatment, and if the ulcers are foul or indolent; afterwards the grey oxide of mercury (a drachm to the ounce) is an excellent application. This last I learned from Sir Prescott Hewett. Occasionally, when the ulceration is very extensive and destructive, and especially when it has extended into the bladder, colotomy is necessary. Let me now call your attention to a case of hæmorrhage from the rectum of unusual origin.

CASE 4.—A woman aged thirty was admitted on account of severe hæmorrhage from the bowel. She was extremely anæmic and very weak; the heart was irritable and she suffered from palpitation and dyspepsia. With every action of the bowel she lost a considerable quantity of venous blood, and large masses of venous hæmorrhoids protruded, which were returned with difficulty. All the veins of the lower extremities were enlarged, and many were varicose, especially those of the left leg. Over the left leg there were numerous purpuric spots. Examination of the rectum revealed great dilatation of the whole hæmorrhoidal plexus, and near the anus were numerous large masses of dilated veins which bled freely when touched and which were protruded whenever a motion was passed. The history which the patient gave us was that a year previously she had had a difficult labour, at which instrumental assistance was necessary; that after this she was extremely ill and that the left lower limb became greatly swollen; since then the veins of both legs had become varicose, she had had daily hæmorrhage from the bowel, and she had become increasingly weak from loss of blood. Evidently this woman had had pelvic phlebitis after parturition, with blocking of the iliac veins and consequent obstruction to the middle and inferior hæmorrhoidal veins, upon which followed the venous dilatation and bleeding. An attempt had been made before I saw the patient to ligature some of the more prominent masses of veins; but the bowel was so congested and softened, and bled so freely on being touched, that this was abandoned. The treatment adopted was the long-continued maintenance of rest in the recumbent position with the pelvis well raised, the careful regulation of the bowels, and the application of astringents to the protruded mucous membrane. The long-continued rest gave time for the venous circulation to accommodate itself to fresh routes; for the regulation of the bowels daily small doses of sulphate of soda in hot water were given, which you will find a very useful aperient for producing soft motions and facilitating the portal circulation; the local application was a weak solution of acetate of lead freely applied over the protruded bowel before it was returned. This treatment was continued for nine months, after which she was allowed gradually to resume the upright posture and to walk about. The dilatation of the veins was then greatly diminished. There was no return of hæmorrhage or prolapse, and she went home quite free from discomfort and greatly improved in health.

This leads me to speak of some matters connected with the treatment of hæmorrhoids, three cases of which you have seen recently operated upon, each of which was admitted on account of hæmorrhage from the bowel. This complaint is so common, and you have so many opportunities of learning its treatment, that it may seem hardly worth while to occupy your time in speaking of it in a clinical lecture; but I do so with the object of drawing your attention specially to certain points connected with the subject which I think may be not without interest and use to you. First of all let me remind you that because a person suffers from hæmorrhoids it does not therefore follow that an operation is necessary. I say this because the cases admitted into the hospital are usually such as require operation; but you must remember that these are the severe cases, that they have mostly been subjected to treatment before being sent in for operation.

and that there are a great number of milder cases which are treated outside the hospital, examples of which you will meet with frequently in practice, and which require no operative interference. If, therefore, you judged of the frequency with which operation is necessary in the treatment of hæmorrhoids from the proportion of cases operated upon in hospital practice, you would form a very exaggerated idea of the necessity for operation. Consider for a moment what is meant when we say that a person is suffering from hæmorrhoids. Usually this—that the patient has more or less fulness and dilatation of the veins of the rectum; that this condition may have given rise to the formation of one or more venous tumours which may be protruded and bleed when the bowels act. Sometimes these dilated veins are around the anus and external to the sphincter (external hæmorrhoids), sometimes chiefly within the sphincter (internal hæmorrhoids), and sometimes both at the margin of and within the anus. The skin and mucous membrane over the external and marginal hæmorrhoids are apt to become very much thickened and hardened, and this condition you must take care to distinguish from the hypertrophy and induration of the folds of skin at the margin of the anus often seen as the result of syphilis and also of long-continued vaginal discharge—a condition to which the patient often erroneously gives the name of hæmorrhoids. Internal hæmorrhoids are apt to become pendulous and indurated in proportion to the length of time during which they have existed, and, moreover, often present more or less ulceration upon their surface. There is besides, another variety of internal hæmorrhoids, less common than those already mentioned, which consists of a small sessile vascular growth, chiefly arterial, and which gives rise to very little pain, but very profuse hæmorrhage. Now it will be evident to you that the conditions I have described may be due to a variety of causes, and will require a corresponding variety of treatment, or perhaps no treatment at all; and certainly in many of them no operative interference will be necessary. For instance, a considerable proportion of those who are the subjects of hæmorrhoids are persons whose veins throughout the body are weak and varicose. They have varicose veins in the legs, perhaps also in the arms, and probably also in the spermatic cord. You will remember that the submucous tissue of the rectum is very loose, so as to allow of the varying condition of distension to which this part of the bowel is liable; the veins, therefore, have but little support; they have a long column of blood above them and no valves, and so easily become dilated. Now if such persons avoid constipation and portal congestion and take a reasonable amount of exercise the veins of the rectum, though always somewhat dilated, may give them no more trouble than the veins of their spermatic cord or of their extremities; but if they eat and drink largely, lead a sedentary life, and become constipated the distal veins generally (legs, spermatic cord, and rectum) will become troublesome, and there will be aching pains in the legs, in the testicles, and in the rectum; then, a little bleeding occurring from the bowel, the patient seeks your advice on account of his hæmorrhoids. Such a case requires not an operation, but a reasonable modification of the mode of life, and, if this is taken heed of, may never require anything else. Of course, if these weak-veined people neglect the action of their bowels and otherwise live imprudently, they may easily develop hæmorrhoids of a severity requiring operation; but what I wish to impress upon you is that in the earlier stages of the complaint, such as you will more often meet with in private practice, only such simple measures as I have indicated are required, and that the cases that come into the hospital are mostly the severe and neglected ones. All persons with lax veins should be made to appreciate the immense importance of position in regard to the venous circulation. Many such would avoid all trouble both with the veins of their legs and rectum if they would simply observe the precaution of resting, whenever possible, with the legs raised. This is especially desirable at the end of the day, when it is also usually most practicable; so that the recumbent position in the evening and an occasional dose of Epsom salts would keep many of these patients out of the hands of the surgeon. Another class of persons who are prone to suffer from hæmorrhoids are anæmic young women, who are habitually constipated and who lead inactive lives. Their circulation is feeble, and the presence of hard feces in the rectum is a continual obstacle to the return of the venous blood, and so the veins of the anus become dilated. The mischief is often aggravated by

the repetition of irritating purgatives and by irritating food taken with the idea of combating the constipation, and perhaps by the injudicious administration of alcohol. For such as these the treatment indicated is the careful regulation of diet, exercise, and the digestive apparatus. These girls often have defective teeth and are dyspeptic; the teeth should therefore be attended to, and the food be digestible and unirritating, and taken with a proper amount of fluid. Warm clothing and fresh air are of great importance, and if the patient is too weak for sufficient exercise massage may be used with advantage. Salad oil, hot water, the sulphates of magnesia and of soda, aided by nux vomica—these are appropriate aperients. Such measures as these, carried out carefully and perseveringly, will usually render operative interference needless.

A contrast to this class is met with in the patient who eats and drinks largely, takes but little exercise, and who comes to you with painful hæmorrhoids, a large congested liver, some gouty symptoms, and perhaps a little albumen in the urine. In such persons, especially if gouty, thrombosis is apt to occur in one or more hæmorrhoids, and often with this there is a good deal of inflammation round the blocked vein. These are not good patients for operations of any sort, and probably none will be needed for their hæmorrhoids if they will be persuaded (which they very often will not be) to moderate their diet, leave off alcohol, and take a course of Carlsbad or other saline aperient.

I need hardly remind you that the pregnant uterus and other abdominal tumours may give rise mechanically to temporary enlargement and distension of the hæmorrhoidal veins, which will entirely or to a great extent subside when the cause is removed. Of course, however, repeated pregnancies may lead to persistent hæmorrhoidal dilatation which may require to be removed by operation. Remember also that cirrhosis of the liver and mitral disease are conditions in which occasional bleeding from hæmorrhoids may be salutary. One other point let me remind you of in connexion with the presence of hæmorrhoids—namely, that they may be only part of a much more serious condition. Above the hæmorrhoids may be a malignant growth which, by its interference with the circulation, may give rise to dilatation of the veins below.

But although, as I have endeavoured to impress upon you, there are many cases of hæmorrhoids which need no operation for their cure, yet there will always remain a considerable number which can only be satisfactorily treated by operative measures. Let me conclude my lecture, then, by a few words on the operative treatment of hæmorrhoids. There are a great many different operations for removing them, but the two methods most commonly practised in this hospital are clamping and tying, and in my judgment these two are by far the best operations for ordinary cases. The small, sessile, arterial hæmorrhoid can be successfully and painlessly destroyed by the application of strong nitric acid, but this treatment is not adapted for the other and more common forms of hæmorrhoids. Of the two methods of which I have spoken—the clamp and the ligature—I prefer on the whole the clamp, as it is certainly the less painful; but practically I often combine the two, using the clamp for the removal of the chief masses, and tying any vessels or small surfaces which bleed after the clamp is taken off. If, however, a patient has been greatly weakened by loss of blood it is best to use the ligature only. The results of both methods seem to me to be equally good, but I think the amount of pain after the operation is less and the recovery more rapid when the clamp is used. I find in the hospital records of the last ten years 140 cases of operation for hæmorrhoids; in 85 of these the clamp was used and in 55 the ligature. Among the 140 cases there were three deaths. One of these was certainly in no way due to the operation. The patient, a woman aged thirty-five years, was brought to the hospital in a state of extreme exhaustion and anæmia, having been for six years losing blood from the bowel. A few hæmorrhoids were ligatured, but she died eight days after admission from simple exhaustion. Post mortem nothing was found excepting extreme anæmia. The second death was that of a woman aged eighty-one years, who died from erysipelas following the operation by ligature. No post-mortem examination was obtained. The third death occurred in a patient under my own care. A man aged thirty-four years had suffered for thirteen years from hæmorrhoids and was extremely anæmic. I removed several by the clamp and ligature, and a few days after the operation he developed broncho-pneumonia, from

which he died. The post-mortem examination gave evidence of the broncho-pneumonia and nothing else. There was no peritonitis, no suppuration, and no thrombosis, and the mucous membrane of the bowel was natural. Still, the lung affection followed quickly upon, and was probably in some way connected with, the operation. Considering, however, the number and severity of the cases operated upon it will be evident that the mortality of either of the methods referred to is very small. In conclusion, let me remind you that it is worth while to advise patients who have been operated upon for hemorrhoids so to regulate their bowels, their diet, and their habits of life as to avoid conditions which favour the development of the disease.

THE NATURE OF CERTAIN CATARRHAL AFFECTIONS.¹

By ARTHUR FOXWELL, M.A., M.D. CANTAB.,
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[DR. FOXWELL first pointed out that the word "catarrh" as used at present simply indicated a morbid histological process common to a great variety of diseases and that it possessed no useful clinical signification. He then referred to views held by him in 1885² to the effect that there was a number of acute febrile affections characterised by catarrhal inflammation which received various names according to the part of the body chiefly involved, but all of which so fundamentally resembled each other that they could but be varying manifestations of the same disease, this disease being of specific constitutional nature, for which he had suggested the name "catarrhal fever." Further reflection made it plain that pyrexia was no invariable concomitant of these affections, so that the substantive term "fever" was somewhat of a misnomer. This led to a discussion of the essential value of the adjective "febrile" in the phrase "specific febrile disorder" and to the conclusion that "absence or presence of pyrexia was no bar to the unity of disease." Dr. Foxwell then continued as follows:]

There thus opens out a very wide group of affections which I would wish to unite under one designation. For the sake of clearness I will ask you to allow me to use a new term for this purpose, and the one I have chosen is "catarrhus." Catarrhus, then, I look upon as a constitutional specific disorder having many varieties of local expression, but I am inclined to think it need not always produce constitutional symptoms, any more than does tubercle in the tuberculous affections of glands or in lupus. It would seem that the toxins of its germ and of the bacillus of tubercle are often incapable of wide diffusion, or else that they cannot induce symptoms unless in a concentrated form, so that for the disease to become constitutional the germs must either exist in several scattered foci or else have an unusually virulent nature. Some localised catarrhs, with frequent subacute recurrences, such as the pharyngeal and bronchial, may thus be cases of catarrhus, the small localised nests of germs undergoing repeated increases in their families whenever any depression in the tissue in which they are dwelling makes it a more suitable culture medium for them. Similarly there may be constant small outbursts of localised tuberculous mischief strictly limited to the apex of one lung. But many—perhaps most—localised catarrhs are due to quite other causes—some entirely independent of any germ and arising from chemical or mechanical irritation; some to the impaired nutrition of the affected membrane remaining after the ravages of a germ other than that of catarrhus—as measles, diphtheria, and whooping-cough; and some again resulting from the impaired nutrition caused by an acute attack of catarrhus itself, though none of its specific germs remain. Thus the track of a tornado may be traced by the devastated land long after the atmosphere has resumed its wonted serenity, just as the damaged mitral valve remains to tell how rheumatic fever once held sway, and the pock-carred

skin witnesses to the disease whose terrors Jenner long since took away. I would include under the specific disorder "catarrhus" the following affections: a variety of acute pneumonia, coryza, tonsillitis, quinsy, glossitis, sore-throat, laryngitis, croup, bronchitis, gastro-intestinal catarrh, meningitis, peritonitis, pleurisy, pericarditis, nephritis, hepatic congestion, vesical catarrh, and some skin affections, as herpes catarrhalis, some erythemas and urticarias.³ I say a variety of these affections, for they can all occur in disorders other than the one under consideration, but then, clinically, their course is different. I never remember to have seen any one of these occurring alone in an attack of catarrhus; and the combinations and permutations of their concurrences in individual attacks are endless.

These combinations are a great argument in favour of etiological unity of the things combined. Who amongst us doubts that the cutaneous and alimentary disturbances of scarlet fever are etiotogically identical? Yet the certainty that exists in this matter is due to their frequent combination in the disease and not because the specific poison has been found in these localities. It is true that often there is a special character in them when they occur in scarlet fever; but, equally so, there is a special character in the respiratory and alimentary disturbances of catarrhus. No one will gainsay that, taking a large number of consecutive cases, the tonsillitis of catarrhus is as characteristic as that of scarlet fever. With regard to frequency of combination, I think the involvement of the respiratory and alimentary systems is quite as frequent as that of the cutaneous and alimentary in scarlet fever. Moreover, this is not all: not only are these conditions frequently combined, but sometimes one and sometimes another element of this combination takes the chief position; and yet—and this is the important point—the general course of the disease is unchanged, though naturally modified in detail in accordance with the special lesion produced. Thus Dr. Ashby⁴ describes the various varieties of pneumonia, his fourth being gastric pneumonia, which he thus defines: "In these cases gastric symptoms are most marked; the attack may begin with vomiting, diarrhoea, coated tongue, fever, and abdominal pain, and it is only after a day or two, when the classical signs of pneumonia appear, that a diagnosis of pneumonia is made." Surely this is no logical position; "gastro-intestinal catarrh with some pneumonia" would be a name much more in accordance with the facts. But as yet it has not been decided to acknowledge a so-called idiopathic form of gastro-intestinal catarrh, so when we come upon it we restlessly search till we find it in the company of some other affection whose right to the term "idiopathic" has already been admitted. Hence, though the pneumonia, even when it is discovered, occupies a very small portion of the disease-picture, yet it is eagerly seized upon as something that is known, and one insists upon calling the whole complaint by its name.

But to my mind the most convincing proof of the unity of all acute catarrhs is in the definiteness of the duration and course of the disease, no matter what part of the body be the chief local sufferer. Take, first, the duration. This varies from three to seven days, depending upon the severity of an attack; a mere coryza may last the seven days, while a pneumonia may end in three; and a peritonitis may be shorter lived than a pleurisy. But whatever the severity or local condition, all varieties of catarrhus have as much right to the designation "one week" as typhoid fever has to its historical "three weeks," and their existence is quite as determinate as that of scarlet fever or of influenza. The course is still more striking in its unity than its duration, and whatever the part affected—

¹ A paper read before the Midland Medical Society on Dec. 5th, 1894.

² Vide (1) The Nature of Acute Pneumonia in Children, Practitioner, July, 1886; (2) Acute Laryngitis in Children, Birmingham Medical Review, February, 1887; (3) Acute Primary Peritonitis, Ibid., July, 1887; and (4) for a full account of the whole subject, Essays in Heart and Lung Disease, published by Griffin and Co., May, 1895.

³ It has been objected to this category of affections that it is so extensive that any disease which includes them all has denotation so largely writ that its connotation must be attenuated almost to a vanishing point. But first, it must be remembered, I do not include all these affections, but only a variety of them all. Bronchitis, e.g., is a name given to the genus of a local morbid process; this genus has many species, some of these species are complete affections, but many are only the various bronchial manifestations of an equal number of constitutional diseases. Secondly, other specific disorders include just as large a number, only the variety is different. To take scarlet fever, Dr. Crooke, in those extremely valuable papers of his on the morbid anatomy of this disease (Birmingham Medical Review, July, August, September, and November, 1886, and June and July, 1887), describes inflammatory affections of the tongue, tonsils, throat, larynx, lungs, intestines, liver, spleen, kidneys, and joints, as well as general acute adenitis; and to these Dr. Line adds (Ibid., March and May, 1887) coryza, otitis, cellulitis, peritonitis, stomatitis, herpes, and the rash; to these, again, I may add pleurisy, meningitis, and bronchitis—a list, it will be seen, quite as formidable as the one I have above detailed.

⁴ Ashby and Wright: Diseases of Children.

whether it be a coryza, the outcrop of a few vesicles, as in herpetic fever, or a severe pneumonia—the onset is always sudden, and in a few hours the disorder is at its height; there it remains for a few days, with little variation; then, in as short a time as it took to arise, it vanishes, leaving traces, it is true, locally, but the constitutional symptoms go completely, leaving only the lassitude of convalescence. Now this rapid vanishment, this crisis, does not strike one so keenly in simple coryza as in pneumonia; but it is there, cut just as clear. Only, the constitutional attack is slight in coryza, and therefore its going does not strike one so vividly; moreover, the local repairs which have to be effected are on the surface and insistent, requiring a blowing of the nose for several days to come, and a cold is not considered to be gone till this local annoyance has gone also. In pneumonia the local repairs take still longer; they are seldom finished in a fortnight from the crisis, but they are neither felt nor seen, and they do not intrude themselves, so that it is convenient to forget their existence. Yet, let the coryza be a severe and prostrating one—an influenza cold, as it is sometimes termed (which, by-the-by, is a bad term, for influenza is an entirely distinct disease)—then the crisis will be as marked as in pneumonia, for the constitutional symptoms were equally severe, and their equally sudden disappearance naturally produces an equal effect upon the senses, especially as in these cases the nasal discharge often goes with almost equal celerity. It will be said that coryza more frequently relapses. I do not think so, if it be treated with equal care. How often is there seen amongst the poor evidence of relapsing pneumonia against which the sufferer has vainly struggled, till at last he has been compelled to take to his bed. But pneumonia cases are usually put to bed at once, and if the same were done for coryza but little of relapses would be seen or heard of. These very relapses are an indication of the unity of catarrhus, for a relapsed coryza is not seldom a bronchial catarrh or a pneumonia itself. Is it not a well-known laic saying that "his death was due to a neglected cold"? But a relapse or exacerbation does not change the specific nature of a disease. Hence in such cases, at least, the added pneumonia and bronchial catarrh can be but fresh symptoms of the original affection.

[It was then argued that in geographical distribution and meteorological conditions bronchial catarrh and pneumonia were practically identical. Further, Hirsch has shown that true croup resulting "from harmful meteorological conditions" generally becomes epidemic under the same influences which set up an unusual prevalence of bronchial catarrh. Alimentary, like respiratory, catarrh is also world-wide, and, as one would expect, the exciting cause is oftener evil food than chill, as is strikingly shown in the recorded outbursts of epidemic catarrhal jaundice. In fact, all these acute catarrhs occur under very similar climatic and meteorological circumstances, and from these points of view, therefore, are probably single in origin. Dr. Foxwell went on to say:]

All these acute catarrhs are probably mutually contagious. Pneumonia and coryza are generally recognised as being capable of reproducing themselves in fresh subjects, and it is also admitted by most of us that, given three men who are equally exposed to, say, chill, the chances are much against all three getting any one form of catarrh; but, whilst one has pneumonia, another will get a head cold, and the third gastric catarrh. Further, it is agreed that, though no doubt a cold may run through a house—that is, is infectious—yet this cold takes very different forms in the different individuals of the household: one has nasal catarrh, another chiefly shivering and general pains, a third a cold on the chest, and a fourth an upset stomach. In this instance, at any rate, all these varieties of catarrh must be etiologically identical, and it is equally evident that this single cause cannot be "chill." On this point Dr. R. Percy Smith wrote to me as follows in 1886: "With regard to the contagion of ordinary catarrh, do you know the interesting fact that at St. Kilda, which is very much isolated from the rest of the world, they have an epidemic of what is called 'stranger's cold' whenever a ship visits the place, and never at any other time, although they are exposed to bad weather and storms!" In the same letter Dr. Smith states that at some schools which he at one time supervised there was an outbreak of various diseases, including facial erysipelas, acute pneumonia, and "thirty to forty cases of herpetic fever," the exciting cause of all these being, he thinks, defective drainage, and he goes on to make this suggestive comment: "I suppose all

one can say is that the 'germs' of these different diseases happened to be knocking about, searching for a proper nidus for development," intending me to conclude, no doubt, that the defective drainage was a depressing cause which afforded this "proper nidus." At Pendlebury, if a nurse in the scarlet fever ward developed a sore-throat, though no other symptom of the fever, we did not hesitate to put it down to the scarlatinal poison; but if a nurse whilst nursing pneumonia patients develops a cold or sore-throat, as she not seldom does—indeed with a frequency, I think, unaccounted for by the logic of chances apart from infection—one does not dream of calling it a pneumonia cold or pneumonia throat. Further, families are often attacked by scarlet fever where some individuals have had nothing but slight sore-throats which would have passed unnoticed at any other time, but which the dread sequela of nephritis has enabled the hitherto hesitating practitioner to diagnose as "scarlatinal throat." Similarly, I have had personal experience of two or three instances—and believe it to be by no means rare—for catarrh to exist in various forms in a household, and for one member to suffer from acute pneumonia; yet it never suggests itself to say that the acute pneumonia, if coming first, produced the other catarrhs, or, if coming later, was caused by one of them. But I feel convinced that if once the contagiousness of catarrh were authoritatively recognised there would speedily be multitudes of examples of such contagion afforded. Another argument in favour of the infectious nature of catarrhus is the frequency with which all other causes fail. The action of chill is greatly overrated. Of pneumonia Dr. Ashby states that in Manchester it is almost equally prevalent at all periods of the year; whilst Dr. Fagge asserts that most writers who have tabulated their cases from this point of view fail to trace chill as a cause in any but a small proportion (59 in 603). And, in speaking of colds, is it not an everyday saying, "I cannot make out how I caught it"? And so long as there is a determination to look only to chill as the cause of coryza, it is likely that this phrase will maintain its reputation.

Of the infectious nature of catarrh of the serous membranes it is harder to speak; it is very rare for catarrh to occur in them alone, and when it does, even if infectious, it would have little chance to spread if limited in its action to a closed sac. But there is the serous catarrh styled "cerebro-spinal meningitis," and Drs. Sturges and Compland suggestively point out the close relationship of this to acute pneumonia. Both conditions are infectious, but are they one and the same? Infection from any disease of the alimentary canal does not often occur except through the stool, and there is good reason to believe that the summer diarrhoea of children is sometimes caused by such direct infection. Hence, though there is by no means direct clinical proof, yet there is much to suggest that all these varieties of catarrh are mutually infectious.

Infection one can scarcely think of nowadays apart from a germ. If, then, all these various affections are to be included under one disease the same germ must occur in them all. The pneumonococcus has been found in all respiratory catarrhs, in meningitis, in pericarditis and pleurisy, in peritonitis, and in nephritis; and cultivations of it have induced a condition resembling acute pneumonia when injected into an animal. I can find no record of its having been searched for in the alimentary tract, but it cannot be doubted that there it would be found as well. Indeed, Flügge, in his work on Micro-organisms, states that injection of cultivations of the "bacillus of pneumonia" into the veins sets up marked gastro-enteritis. It does this, it is true, in company with other germs, but I am not now arguing that the pneumonococcus is the sole cause of gastro-intestinal catarrh, but that one form of this affection is produced by its agency. Its etiological value in peritonitis is much disputed, but Mr. Treves in his *Lectures on Peritonitis* for 1894 on Peritonitis makes it the cause of one of his five subclasses of this disease. He quotes Fraenkel as showing that in 1 out of 20 cases of peritonitis wherein he sought it the pneumonococcus was the only germ found. Also he states that Tavel and Lanz, Weichselbaum, Courtois, Suffit, Scavestre, Nélaton, Gallard, and Monisse have reported cases of peritonitis where the pneumonococcus seems without doubt to have been the cause. In some of these the peritonitis was primary and the sole affection; in others it was secondary (*sic*) to ordinary pneumonia. On the other hand, he states that Netter found the pneumonococcus in the peritoneum in 151 cases of fatal pneumonia,

but that in only two of these was there peritonitis. I do not consider these results of Netter's investigations to be much of an argument against the causative power of the pneumonococcus. If catarrhus be a constitutional disease, then either the germ or its toxins are scattered throughout the body and able to set up mischief in all parts. The peritonium is but little affected by its influence, else peritonitis would be as common as pneumonia. Moreover, the germ of catarrhus must be even more omnipresent than that of tubercle; yet one is no more always being attacked with the disease than one is constantly the subject of tubercle. The bacilli of tubercle have been found in the expectoration of non-tuberculous subjects; similarly the pneumonococcus may be found where no evidence of its evil power is discoverable. Again, Mr. Treves remarks that irritants—e.g., tincture of iodine and liquor ferri perchloridi—produce peritonitis by so affecting the bowel that this allows bacteria to pass through its coats, which, when healthy, it will not do. It may be that the depressing irritation of chill or evil food may similarly allow the passage of the pneumonococcus.

There are several kinds of pneumonia bacilli; they are probably but varieties of the same species, for they are well-nigh identical morphologically as well as in producing pneumonia experimentally; they agree, also, in most of their cultivations, the chief difference being in their growth in gelatine. Of these varieties, those of Friedländer and Fraenkel are the most important. My remarks refer solely to Friedländer's, as I have discovered very few facts concerning the other.

The unity of these catarrhal affections and their specific constitutional nature by no means stand or fall with the capacity of the pneumonococcus to produce them. The germ possessing this power may well be yet to find; and if, on other grounds, there be strong evidence of the existence of such a specific disease as catarrhus this germ lacuna should only be an incentive to fresh germinal research. But, whatever germ be the cause of catarrhus, it must be, like the bacillus of tubercle, very largely dependent upon the suitability of the soil attacked. This suitability, as with tubercle, depends upon two things—viz., inherited predisposition and an exciting cause, this latter being usually of the nature of a sudden depressant.

There are numerous individuals, otherwise robust, who are peculiarly liable to this disease—they "catch cold" on the least occasion. It is true that these colds are usually nasal; but that is merely because frequent bronchial, pulmonary, and intestinal attacks are not consistent with robust health, the individuals suffering from them soon descending into the class of feeble lives and thereupon not suffering so frequently, since they guard themselves more carefully against the exciting cause. But, though the inheritance of catarrhal susceptibility is undoubted, yet the germ of catarrh is pre-eminently, perhaps more so than any other, dependent upon the aid of exciting causes. By far the commonest of these exciting causes is sudden lowering of temperature; so powerful, indeed, is this cause, and so comprehensible in its theory of producing the resulting inflammation, that it is hard to believe that it is not of itself all-sufficient. Years ago I firmly held this creed, and I have given it up with great reluctance. More and more, as time goes on, it is established that in the production of acute disorders three causes are usually brought to bear—viz., predisposition, exciting, and a germ. The exciting cause is the striker of the germ match to the laid fire of predisposition; and, indeed, as with the fire so with the individual, the striking cause is the one which is chiefly amenable to control. Still, though the germ of catarrhus is thus usually so extremely dependent upon external conditions to work evil, this is not always so. And herein lies one of the principal arguments in favour of its existence. Sometimes it does not lie like a dead match with potential vitality only, waiting for the exciting hand to make it kinetic, but unaided it possesses the power to light up disease—to wit, when catarrhal affections become contagious—for a cold not seldom runs through a house, and pneumonia itself occasionally becomes epidemic. It is the existence of these attacks, arising apart from evidence of predisposition or exciting cause, which forms a chief bond of union between catarrhus and other acute specific disorders. Moreover, the indubitably proved greatest frequency of catarrhus at periods of the year and in climates where sudden depressions of temperature and excessive moisture are chiefly concomitant points to these conditions as being peculiarly favourable to the vitality of its germs, and to the supposition that the frequency

of the disease at these times is in great measure due to unusual germinal activity. The occurrence of enterica at special periods is similarly explained.

Catarrhus, then, I would define as an acute specific disorder of a week's duration. The incubation is short, seldom more than forty-eight hours and more often only twenty-four, and during it no special symptoms are discernible. The onset is sudden, the height of the disease being reached in twelve to thirty-six hours; it is usually accompanied by chilliness or a distinct rigor, and vomiting is frequent. There are also headache and muscular pains. The disease continues at its height for from three to six days, and, whatever form its local expression may take, the constitutional symptoms are very constant in duration and cease by crisis. If these should be prolonged there is usually evidence of fresh local injury, and the prolongation is of the nature of a recrudescence or relapse. Pathologically it is essentially an exudation—serous, fibrinous, cellular, or membranous—from one or more of the lining membranes of the body. In severe cases some glandular organs become so seriously affected that acute interstitial inflammation, or even their suppuration, results. Some portion of the respiratory and alimentary tracts are always affected, the naso-pharynx being the commonest of all regions to be attacked. The tonsils and tongue rarely escape, "quinsy" and "glossitis" being the terms used when these regions are most severely involved. Next in frequency to suffer are the bronchi, and after them the pleura, the alveoli of the lungs, and the stomach. Not seldom the intestines are injured as well as the stomach, sometimes so severely as to cause ulceration, when the term "enteritis" is adopted. The pericardium and the meninges of the brain are occasionally the chief foci of the disease, that covering the convexity of the cerebrum—and, curiously, often only one half of it—being the portion of the meninges which usually suffers. The skin lesion is common and consists in a herpetic eruption, usually on the face, especially near the naso-labial junction, but occasionally on other parts of the body. Sometimes this forms the only striking lesion, and the condition is then styled "herpetic fever." A transient erythema, limited to the chest and face, is by no means rare at the onset. The question of the nature of the involvement of the kidney tubules is a very complicated one; that they not seldom suffer is generally admitted, but whether they are often the chief focus of the disease—that is, whether the condition called "catarrhal nephritis" is only one expression of catarrhus—is not so certain, though I believe it to be the case. Peritonitis is without doubt sometimes but one of the local lesions of this disease, as is also a form of acute inflammation of the urinary bladder. The crisis which puts an end to the constitutional symptoms occurs before any attempt at local repair has been attempted. It is evident that, as the parts to be repaired vary so much in character in different attacks, the time occupied by repair will also greatly vary—that is, the duration of convalescence is uncertain. Moreover, it is equally evident that the signs and symptoms arising from the injury done to the parts of the body which have borne the brunt of the attack will vary with the locality, and when the organs affected are important ones may so overshadow the general morbid state that the constitutional nature of the affection may fail to be diagnosed. Pyrexia is usually present, and when present is characteristic. At the onset the temperature rises suddenly to 103° or 104° F. in about twelve hours; with irregular remissions it continues at much the same level till it suddenly drops below normal, when the constitutional symptoms of illness as suddenly cease; thereafter there is usually a day or two of subnormal temperature, followed by a few more days of slight hectic ("post-crisial hectic") whilst the brunt of repair to the damaged organ or organs is being accomplished. The remarkable constancy of this pyrexia, whether it be only the tonsils or a whole lung which are involved, points very strongly to the specific nature of the complaint.

Catarrhus is contagious, though this quality is never strongly marked; the incidence of its attacks nearly always depends upon inheritance and opportunity, as does that of tubercle; but, whereas inheritance plays the more important part with tubercle, with catarrhus opportunity is by far the most powerful. This opportunity is always of the nature of a sudden depressant, and is oftentimes the sudden influence of cold acting in a damp atmosphere. The essential cause is a micro-organism, in all probability the pneumonococcus of Friedländer, but its exact nature is not yet determined. It, like the bacillus of tubercle, is world-wide in distribution

and practically omnipresent where humanity is gathered together, but it only occasionally acquires sufficient virulence to successfully attack an individual in a condition of health. It is not self-protective, in this particular being allied to tubercle and malaria, one attack increasing the predisposition of the sufferer to fall a victim to another. Like other acute specific affections, restoration to apparently perfect health is the rule from a first acute attack, but, as with them, so with catarrhus, the local damage may not be thoroughly repaired, and a debilitated pharynx may be left, just as the ileum in enterica may remain permanently disabled.

It will be perceived that I have for the most part confined myself to generalised statements, and have not attempted to clinch my argument by reference to illustrative cases or analysis of accumulated facts. Time is my apologist, not lack of cases or facts.

Birmingham.

TURBINAL VARIX.

BY WYATT WINGRAVE, M.R.C.S. ENG.,

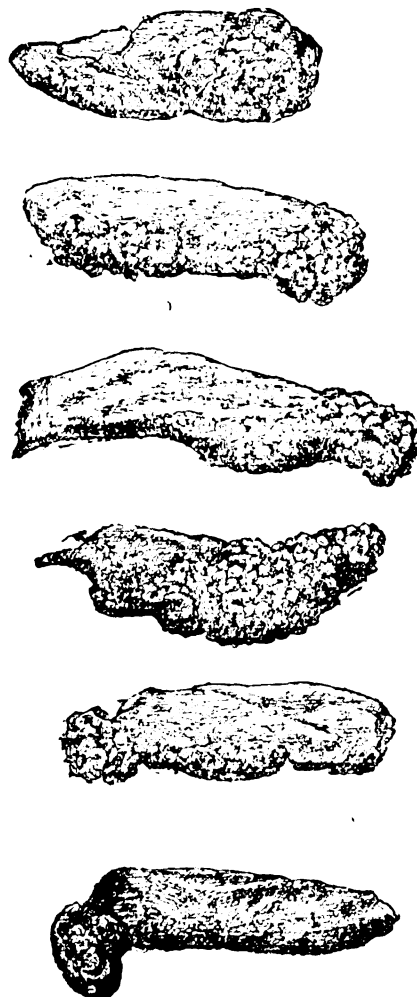
ASSISTANT SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL.

TURBINAL VARIX may be defined as a particular form of hypertrophy which involves the posterior half of the inferior turbinal body, and is characterised by a permanent distension of the venous sinuses.

Morbid anatomy and pathology.—Nasal obstruction with catarrh is usually referred to under the comprehensive term "hypertrophic rhinitis," which embraces nearly all forms of thickening of the mucous membrane. But as there are many varieties of hypertrophic rhinitis, varying in degree from simple swellings to localised accentuations constituting polypi, it will be expedient to classify them according to the predominating morbid changes and in their order of frequency under four chief forms—viz.: (1) vascular, (2) mucoid, (3) lymphoid, and (4) glandular. In the simple and temporary cases each or all of these changes may be found; it is, therefore, somewhat difficult, even microscopically, to decide which variety is represented; but when the disease assumes a chronic or permanent character certain features will predominate and readily determine its nature. It is to a special form of the vascular group that attention is now directed, which, although occurring occasionally in the middle turbinal and even in the septum, will be found to constitute a disease almost peculiar to the inferior turbinal itself. A glance at a normal inferior turbinal will at once throw some light upon this peculiarity. The anterior two-thirds or half appears perfectly smooth, but the posterior portion and lower border present a striking and sharply defined contrast, being rough, swollen, and wrinkled even after soaking in spirit. Serial sectioning equally accentuates the contrast, for whilst the smooth region is characterised for the most part by the presence of glandular and lymphoid structure, the wrinkled part is mainly occupied by cavernous vascular spaces lined by epithelioid plates. These vascular channels—the "Schwellkörper" of Zuckerkandl—are surrounded by several layers of visceral muscle fibres, arranged for the most part in circular and longitudinal directions, whilst some form a series of interlacing bands continuous with obliquely disposed bundles which traverse the intervening connective tissue. Many writers seem to have entirely ignored these muscle fibres; even so high an authority as Greville Macdonald describes the venous sinuses as "consisting of a thin layer of connective tissue apparently not elastic and lined with endothelium."¹ He further states that he failed to find muscular fibres in the trabeculae. This oversight is probably explained by the fact that specimens were examined whose walls were already the seat of morbid changes. These cavernous spaces are apparently supplied by thin venous radicles which, commencing in the hyaloid basement membrane, run a comparatively straight course inwards through the lymphoid and connective tissue to open obliquely in the sinus. In some sections the sinuses are distended with blood, whilst in others they are quite empty and tortuous, a condition which has been described as collapse. This variation doubtless depends upon their condition when removed and the methods of removal. Although their general arrangement does not

conform entirely to that of the corpora cavernosa and corpus spongiosum, the slight histological difference does not justify the view that their nature is not erectile, and that they are never erectile in health or disease (as maintained by Bosworth²); still less so in the light of the remarkable sympathy which these bodies exhibit with sexual and developmental phenomena. Attention is specially directed to these muscular fibres, because in their morbid conditions is to be found an interpretation of the pathology of one form of turbinal disease. Owing to the courtesy of my colleague, Mr. Carmalt Jones, an abundant supply of material has afforded me an opportunity of tracing the varying degrees of degeneration which this erectile tissue undergoes, and the conditions were so constant in their appearance as to justify the view of a more

FIG. 1.



Portions of inferior turbinals exhibiting different degrees of varix (natural size).

than merely coincidental connexion. The peculiar villous or brain-like macroscopic appearance of the surface was seen microscopically to correspond with a cystic invagination of the surface epithelium, covering distended loops of vessels with very thin walls, embedded in mucoid tissue—that is, connective tissue in which the matrix mucin was in excess of the fibrous reticulum and cells. The muscular walls of the vascular sinuses presented well-marked atrophy and degeneration, varying from simple thinning to complete disappearance, owing to the fibres apparently sharing in the surrounding mucoid changes. (Figs. 2 and 3.) In places the intervening mucoid tissue simply formed their boundaries, whilst in other parts the walls seemed to have undergone fibrotic changes. This condition is therefore not a mere hypertrophy of the structures, but consists of a true degeneration and infiltration of the walls of these vascular spaces, a morbid process

¹ Diseases of the Nose, pp. 14-16.

² Treatise on Diseases of the Nose and Throat, vol. i.

which is responsible for the disease, for the walls gradually losing their power of active recoil, the vessels by degrees become more and more distended and a permanent enlargement ensues which is in fact a varix.

Etiology.—The conditions which favour the development of this disease are so gradual and progressive in their influence that it is somewhat difficult to discriminate between the direct or immediate and the indirect or remote causes. Whilst admitting that a persistent exaggeration of the functions of the turbinal bodies may constitute a predisposing factor, it is difficult to believe—particularly in the light of the histological changes—that simple hypernutrition could be followed by any change other than hypertrophy of the vessel walls. But, given a tendency to mucoid degeneration or diathesis, due probably to some tropho-neurotic influences (local or general), excessive erectile activity of the parts must play an important rôle. In some instances the presence of an excess of small-cell tissue is strongly suggestive of an inflammatory process preceding the mucoid changes, and from the frequency of this disease among the London East-end aliens it is highly probable that various unhygienic conditions of living—such as prolonged exposure to very dry or very moist atmospheres more or less charged with impurities, particulate and gaseous—must exercise marked predisposing influences by keeping up constant irritation. That there is a hereditary tendency to hypertrophy of the mucous membranes of the nostrils there can be but little doubt, and this is often associated with a highly emotional temperament.

FIG. 2.



Section of the posterior end of an inferior turbinal with dilated vascular spaces (low power).

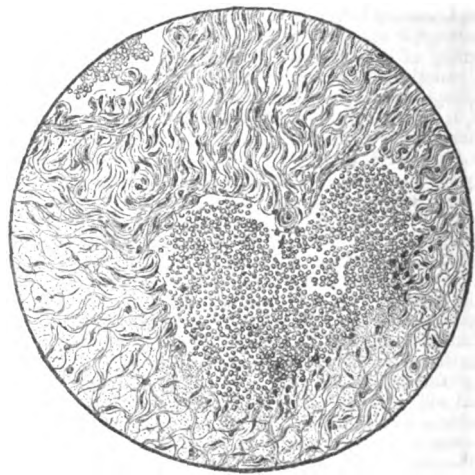
With regard to sex, males appear to be more frequently affected than females in the proportion of about five to three. Although considerable enlargement of the turbinals may be seen in early youth, turbinal varix is extremely rare before puberty, but after this period it may appear at any age. All conditions in which the venous flow is interfered with, such as intemperance with its attendant hepatic troubles, gout, pulmonary and cardiac diseases, with sedentary habits, will naturally be predisposing factors, for in most of the well-marked cases varix was present either in the tongue, legs, arms, or spermatic cords. The presence of enlarged faucial and pharyngeal tonsils will doubtless predispose by favouring nasal catarrh and by mechanically interfering with the venous flow; but the coincidence of adenoids is by no means frequent, which is not surprising considering the age. Excessive use of the nasal douche must not be overlooked; but perhaps by far the most likely exciting or direct cause will be found in the different forms of nasal stenosis, such as morbid states of the septum, collapse of the alæ, and general thickenings of the nasal mucous membrane, which not only favour catarrh and the accumulation of its products, but by obstructing nasal breathing cause exhaustion or rarefaction of the air posteriorly and consequent expansion of the venous sinuses, whose muscular walls may be already undergoing mucoid changes. Thus, nasal obstruction, combined with a predisposition to

varix and mucoid degeneration, may be considered as mainly responsible for this disease.

Symptoms.—Collectively, the symptoms are those of nasal stenosis, such as mouth breathing and its inevitable sequelæ, parosmia, anosmia, and middle-ear troubles, especially distressing tinnitus. But there are several which, from their constancy and persistence, possess a special significance—viz., a shiny, sanguinolent discharge, generally expectorated in large quantities on waking and not euphemistically described by patients as "blood and corruption," occasional attacks of severe epistaxis, and either painful tenesmus of the faucial and pharyngeal muscles or paresis of the palate. These constitute a group of phenomena interesting in their striking resemblance to those of hæmorrhoids elsewhere and are in themselves almost pathognomonic of the disease.

Diagnosis.—Owing to the swollen state of the nasal mucous membrane a view of the hinder half of the inferior turbinal by anterior rhinoscopy is generally difficult, whilst a satisfactory posterior rhinoscopic image is prevented by the frequent faucial tenesmus; but a thorough cleansing, followed by the application of cocaine, will greatly facilitate an inspection in either direction. If seen from the front a dull red or purple mass may be found at a varying depth, on one or both sides, which does not shrink much under cocaine, but readily yields to the probe and does not change its position on forcible respiration, features which will enable an experienced observer to exclude ordinary catarrhal tumefaction and simple polypus. Still, it not infrequently

FIG. 3.



Section of the posterior end of an inferior turbinal exhibiting degeneration of the muscular fibres of a vascular space (one-sixth of an inch).

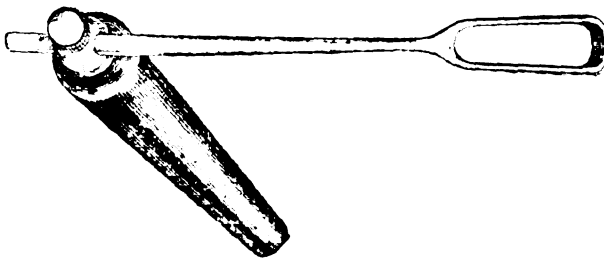
happens that the actual conditions can only be appreciated by a successful posterior rhinoscopy, which will reveal a red or purple brain-like mass projecting into the post-nasal space on one or both sides. In all instances, however, digital examination will at once afford by far the most reliable and available evidence. A soft, resilient, yet sharply circumscribed symmetrical mass will be felt on each side of the nasal septum, free all round except at its attachment to the inferior turbinal bone. This evidence, together with the existence of varix elsewhere, faucial tenesmus or paresis, blood-stained discharge, and the general history, will sufficiently indicate the nature of the lesion and enable a satisfactory diagnosis to be made from other forms of hypertrophic rhinitis, from polypi, and from other neoplasms, innocent and malignant.

Prognosis.—Should the foregoing description and interpretation of the morbid anatomy be correct, it is obvious that the possibility of a spontaneous cure is most remote, for the tendency will be towards a gradual but certain increase in the size of the varix. The clinical history of these cases amply confirms this view, for although the severity of the symptoms may vary, or even sometimes apparently remain stationary under palliative treatment, the almost inevitable result is that radical measures are demanded sooner or later. But it is quite possible that milder forms may, by judicious treatment, be arrested in the early stage. Should treatment,

however, be delayed for several years, the enlargement assumes such proportions that, on surgical attention becoming urgent by reason of the profuse bleeding and the stenosis, a diagnosis of angiomyxoma, papilloma, or some other form of nasal growth is often made.² General thrombosis of the mass is a somewhat rare termination.

Treatment.—The treatment will be palliative and radical. Palliative remedies, such as alkaline and astringent douches with general depletion, can only afford temporary relief, and must only be considered as preliminaries to a more thorough and permanent treatment. The radical measures will be directed first towards the removal of obstructions in the anterior regions of the nostrils, and afterwards to the treatment of the varix itself. Should any mucous polypi be present they must be removed, and any localised hypertrophy of the anterior end of the turbinal bodies or septum should be reduced by the galvano-cautery, chromic acid, or snare. Activity of collapsed also may be restored by massage and wearing short pieces of rubber tubing or nasal rings. The portal system should be depleted by a mild course of mercury and chalk or saline aperients. Direct treatment will be determined by the size and duration of the varix and its response to the action of cocaine, for should it be small and of probably only a few years' duration it may more readily contract. This degree of hypertrophy will most likely yield to the galvano-cautery, which should be applied either by plunging a fine point well into the substance of the cavernous tissue or by deeply scoring it with the fine edge of a flat point. Fused chromic acid if applied *secundum artem* is often very satisfactory. A slough generally separates about the fifth day, and cicatricial fibrosis with strangulation of the enlarged vascular spaces soon follows. Both nostrils should on no account be cauterised at the same sitting. When the swelling, however, is very large, and does not shrink under cocaine, caustics are absolutely useless, and complete removal is necessary. This may be affected either by means of a snare or a cutting instrument. Of the former the cold snare or *torasseur* is preferable to the galvanic, for it will, if necessary, cut through a portion of the bone, and if gradually tightened will not be followed by hæmorrhage, nor will it cause any subsequent sloughing, as is often the case with the galvanic loop. If only soft tissues are to be removed Krause's snare succeeds admirably, but either Jarvis's or Wilkin's is preferable when it is decided to include the bone. As a rule, there is no difficulty in engaging the swelling if the wire is directed by a finger in the post-nasal space. But by far the most satisfactory results, as far as complete enucleation is concerned, are to be obtained by the ring- or draw-knife, as introduced by Spencer Watson in 1888, and greatly improved by Carmalt Jones. (Fig. 4.) It has the great advantages of being effective,

FIG. 4.



Carmalt Jones's improved ring-knife.

rapid, safe, and painless, only ordinary dexterity being demanded by the operator. The operation is conducted as follows. The patient is seated on a chair in the usual position for nasal inspection, the head being steadied by an assistant. After freely cleansing the nostrils with an antiseptic douche and applying cocaine (a mouth prop being introduced at discretion) the knife is introduced into the nostril with its cutting side directed towards the diseased turbinal; the guarded index-finger of the disengaged hand is passed by the mouth into the post-nasal space and directs the ring into its proper position around the varix. The shaft is then directed slightly towards the opposite side of the face and sharply but firmly withdrawn in that direction,

cutting its way through the turbinal body, which either escapes at the same moment or is subsequently removed by forceps should it not be dislodged by the patient blowing down the nostrils. By keeping the axis of the instrument across the median line and by varying the angle it is possible to remove only the particular part which is diseased, so that the anterior and healthy portion is left intact and the possibility of laying open the maxillary sinus is reduced to a minimum. The opposite side is then treated in the same way. Bleeding is generally profuse for a few minutes, but is easily controlled by dry tannin and lint plugs. These should be followed by plugs of boracic lint, firmly packed and left in for twelve or twenty-four hours, absolute rest in the semi-recumbent position being insisted upon. The plugs are removed at discretion on the second day, when the nostrils should be gently cleansed with Dobell's solution. Owing to the rapidity and almost painlessness of the operation the major æsthetics are neither necessary nor are they expedient, cocaine proving quite sufficient; still, in the case of very nervous patients nitrous oxide gas may be exhibited with advantage, for the operation is easily completed during its influence. The use of the ring-knife has one advantage in particular over the snare in that it removes all the diseased tissue at once, for it often happens that the varix extends for some distance along the inferior border of the turbinal and is very difficult to include in the snare. Two important complications are to be guarded against—viz., septic changes and secondary hæmorrhage. The first of these need not be feared if ordinary antiseptic precautions are taken, especially with regard to local cleansing before and after the operation, for, beyond a slight elevation of temperature, in upwards of 200 cases of turbinotomy at the Central London Throat and Ear Hospital there is no record of any trouble of this kind, which is somewhat remarkable, considering the dirty domestic surroundings of many of the out-patients. With regard to secondary hæmorrhage, this may occur as late as fourteen days after operating, and, as it is generally occasioned by the patient's disregard of the instructions as to absolute rest and removal of the dressings, whenever practicable he should remain in bed for three or four days, and under observation for at least a fortnight. Although sometimes the bleeding is alarming, ordinary measures are quite sufficient to stop the flow.

Results.—The swollen anterior end of the inferior turbinal soon shrinks, and free breathing is quickly established, with a corresponding amelioration of the symptoms. But are the results always so satisfactory? Certain undesirable sequelæ have been advanced as likely to follow turbinotomy—viz., (1) increase in size of the nasal cavities, anæmia, general atrophy of the mucous membranes of the nose, naso-pharynx, and larynx, with the usual troubles attendant upon imperfect filtration of the atmosphere; (2) opening up of the maxillary sinns and subsequent suppuration; and (3) falling-in of the nostrils and deformity. Having personally investigated the subsequent history of over 200 cases, some of which were operated upon as far back as three years, none of these evils were found to have occurred. That atrophy of the mucous membranes may follow it would be unreasonable to deny, but it is only fair to assume that it occurred in patients who were subject to atrophic rhinitis, which was not recognised in its early stage and for which milder measures would have sufficed. Permanent deformity due to collapse of the nostrils I firmly believe to be a phantom, for it not infrequently happens that, instead of an unnaturally roomy nostril, a distinct reproduction of the mucous membrane follows in the form of a ridge extending backwards from the anterior vestige of the turbinal crest which remained, presenting the appearance of a normal inferior turbinal. This was so remarkably shown in a case treated by Mr. Carmalt Jones that he removed a portion of the new turbinal two years after turbinotomy for microscopic examination. I found that it consisted of normal mucous membrane complete in its details. In two instances this turbinal spur was sufficiently prominent to require reduction by cautery. It is quite possible that the hiatus maxillaris may be enlarged, but that does not necessarily entail any serious results; at all events, I am not aware of its having occurred in the practice of the hospital to which I am attached. It is easily avoided by confining the portion removed to the region which is diseased, a restriction which is not always observed. In conclusion, it is not surprising that there should be some diversity of opinion regarding the pathology of a structure whose normal histology is the subject of so much dispute. It was, therefore, with the hope of obtaining some further evidence that I

² Sandford: Transactions of the British Laryngological and Rhinological Association, vol. III., p. 13. Luc.: Archives de Laryngologie, December, 1890. Spencer Watson: Journal of Laryngology, July, 1893.

availed myself of the plentiful supply of material at my disposal. This investigation has, I venture to advance, established not only that visceral muscle fibres do exist in the walls of the venous sinuses, but that their morbid changes are responsible for the form of vascular hypertrophy which I have ventured to call "turbinal varix."

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CASES OF LIVER AND GALL-DUCT SURGERY.¹

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In this paper I propose to relate in detail the histories of all the cases of disease of the liver or of the gall-ducts on which I have operated. The cases consist of three in which exploratory incisions were made, two operated on for hydatids, and three in which gall-stones were extracted. The three patients on whom I performed exploratory operations died from the progress of diseases which it was impossible to cure by surgical means, but the operations did not, directly or indirectly, bring about or even hasten the fatal results. The other patients are alive now.

CASE 1. *Exploration; nature of disease not discovered.*—The first of the exploratory operations was performed on a woman forty-five years of age, whose family history gave no assistance in diagnosis. She said that a soft tumour had been taken out of her lower jaw eighteen years before I saw her, but I have not been able to get any account of this operation. She had suffered from bilious attacks for ten years at almost every menstrual period; the severity of these attacks had, however, been much less for two or three years. A swelling in the abdomen was first noticed in February, 1891, and it had grown considerably before she was admitted to the Samaritan Free Hospital in the following May. At that time there was a slight yellow discolouration of the skin and conjunctivæ. In the right loin there was a solid, smooth tumour, with a rounded outline, fairly movable and not tender, extending from the costal margin to close to the pubes and beyond the edge of the rectus muscle on the left side. It stood out prominently from the rest of the abdominal surface in front. The growth was believed to be connected with the liver, but no definite diagnosis was made. As it was growing rapidly an exploratory operation was performed on June 16th. The tumour was found to consist of a rounded swelling of the upper part of the liver, the gland being so displaced and twisted that the abnormal enlargement presented anteriorly. There was no hardness and no irregularity of outline in the growth, and, except for the alteration of shape, the surface of the organ appeared to be quite healthy. By passing the finger below the liver I found that the anterior border of the gland was of normal shape, but was directed downwards and slightly backwards, so that it had not been palpable before the abdomen was opened. It seemed as if the whole liver had been displaced downwards and twisted on its axis by something growing in or behind the upper and posterior part of it. I plunged a trocar and cannula deeply into the thickest part of the gland. The instrument appeared to pass through soft tissues of uniform consistence, and when the trocar was withdrawn nothing but blood escaped. The hæmorrhage was very free, spouting a foot and a half to two feet into the air, and continuing after the cannula was withdrawn, so that I feared it might go on to a dangerous extent. It did not seem as if anything more could be done in the way of curing the patient, and I therefore applied sponge-pressure to the puncture opening and inserted the sutures in the external wound. By the time these were in place the hæmorrhage had almost ceased, and I closed the wound without any anxiety on this point. There was no trouble during convalescence. The patient went home on July 6th, the swelling continued to enlarge, and she died on Oct. 8th of the same year. There was no post-mortem examination and I did not see the patient after she went home, but, as far as I can gather, death was due to asthenia, and no definite diagnosis was made. The operation in this case was most unsatisfactory in that no benefit resulted, and I did not even find out the

exact nature of the disease. The fact that there was no post-mortem examination leaves the case permanently an obscure one, but I think some light may be thrown on the matter by the following history. On Nov. 30th, 1894, I saw a woman thirty-eight years of age in consultation with Dr. Malcolm Mackintosh, of Clapham-common. She was suffering from abdominal distension and pain, sickness, and frequent profuse evacuations of the bowels, the stools consisting almost entirely of watery mucus. There was some slight fever, but no jaundice and no renal or heart disease. The patient had borne three children, the third being eleven months old. The symptoms, which had developed very rapidly, suggested the possibility of some pelvic mischief causing irritation of the rectum, but after a careful examination I could find no explanation of the condition of the patient in her pelvis. The liver was very much enlarged, the anterior border of the right lobe being quite free, soft, and natural to palpation, but displaced downwards nearly as low as the anterior superior iliac spines. Owing to the distension I could not define the left lobe by palpation, but percussion showed that it also was enlarged. No definite diagnosis was made, but I thought the mischief was due to something in or behind the liver, which was pushing its lower border, and especially the right lobe, downwards. Treatment was directed to relieving the distension and supporting the strength of the patient, and sometimes the flatulence dispersed, the abdomen becoming flat, but a tendency to tympanitis continued to the last. The progress of the case continued to be very rapid, and about a week after I had seen the patient Dr. Mackintosh discovered distinct nodules on the surface of the left lobe of the liver and was able to make an exact diagnosis. The patient died a month after my visit, on Jan. 1st, 1895. After death Dr. Mackintosh obtained permission to examine the body, and found a moderately hard carcinoma, which seemed to have originated on the under surface of the liver in the region of the portal fissure. There were cancerous nodules scattered through the whole organ; but these were more numerous in the left lobe, fewer and apparently of more recent development on the right side. Dr. Mackintosh attributed the profuse discharge of mucus from the bowel to congestion of the intestine from pressure on the portal vein, a view with which I fully agree. No cancer was found in any other part of the body. There is a considerable resemblance clinically between this case and that of the patient whose abdomen I explored, as above related; and if we accept the view that pressure on the portal vein was the cause of the exhausting discharge in Dr. Mackintosh's case it is obvious that a tumour more deeply placed in the liver substance might have led to a more prolonged illness, and might have induced death without yielding any signs by which a positive diagnosis could be made during the life of the patient, as in the first case.

CASE 2. *Exploration; malignant disease of the liver.*—My second exploratory operation was performed on a patient about sixty years of age, who was under the care of Mr. Evans of Clapham-common. She had suffered from pain in the neighbourhood of the gall-bladder with liver symptoms of many years' duration, and Dr. George Harley had seen her and had advised that an exploratory operation should be performed. When I saw the patient on Jan. 22nd, 1892, she was emaciated and intensely jaundiced. The liver edge was somewhat lower than it normally should have been, and immediately below it, in the position of the fundus of the gall-bladder, there were two very hard substances, about the size of hazel-nuts, which lay close to the abdominal wall and exhibited some mobility on each other. They felt very like two calculi in the gall-bladder. I made an incision through the abdominal wall just large enough to admit my finger, and on examining the parts I found that the two hard substances were growths standing out from the lower surface of the liver close to its anterior border, and that there were many nodules scattered over this surface as far as my finger could reach. The upper surface showed no irregularity of outline. The gall-bladder was not distended. As the disease was evidently malignant I at once sewed up the wound. The operation gave rise to little disturbance and the incision healed without trouble, but the patient became gradually weaker and died of asthenia on March 5th, six weeks and a day after the operation. When I had examined the parts with my finger inside the abdomen in this case I at once observed that calculi in a gall-bladder could not have remained in position close behind the abdominal wall without being fixed in some way, and there had been no

¹ A paper read before the Medical Society of London, Feb. 25th, 1895.

evidence of distension of the gall-bladder or of any condition that would place and firmly hold two calculi fixed in the fundus.

CASE 3 Exploration; malignant disease of the pancreas and duodenum.—A third case on which I operated may be regarded as one of exploration of the gall-ducts. The patient had intense jaundice and a large ovarian tumour which prevented any satisfactory examination of the hepatic region. I removed an apparently simple ovarian cystoma, and found that the patient had also a malignant growth of the pancreas. There was no trouble from the operation, but the patient died five weeks after from asthenia, and at the necropsy it was found that the pancreatic tumour involved the descending portion of the duodenum, which was converted into a tube of cancerous tissue so thin in parts that it appeared to be just on the point of bursting. (The case is fully reported in THE LANCET of Sept. 8th, 1894.)

CASE 4. Three operations for hydatids of liver and of sub-peritoneal connective tissue.—My first case of hydatids was sent to the Samaritan Free Hospital in November, 1890, by Mr. Starling of Charlton. The patient, who was then thirty-three years of age, complained of having "lumps" in the upper part of her abdomen, and said that she had suffered from crampy pains in the bowels from time to time for sixteen years. These pains had become more frequent and more severe, and she had first noticed the tumours when she was carrying a child that was born two years before I saw her; but two years before that time Mr. Power of East India-road, who attended her in her first confinement, told her that she had a tumour, for which he recommended her to seek treatment in some hospital. On examination I found an oval mass at the back of the abdominal cavity a little below the position of the left kidney, somewhat movable, but too small and deeply placed to allow of an opinion being formed as to the presence or absence of fluctuation in it. A little to the right of the normal position of the gall-bladder there was another tumour, rather larger than the first, attached to the lower surface of the liver and distinctly fluctuating. After the patient had been under observation for some weeks a third tumour was discovered a little to the left of the middle line and fixed to the lower edge of the liver by a band-like attachment about half an inch long. All these swellings rapidly increased in size, and in February, 1891, the left one was rather larger than a healthy kidney; the right was nearly round and measured four inches in diameter. On percussion it exhibited the peculiar thrill of a hydatid cyst. The more central growth measured about two inches across. The liver dulness began at the level of the nipple above. Immediately below this point an absolutely dull note was elicited for nine inches, as far as the lower border of the largest swelling, the patient being rather a small woman. To the right and left of this swelling the liver dulness was lower than normal, but the note was resonant over the two smaller tumours. The whole abdomen was slightly distended. At the back the liver dulness was absolute for one inch and a half above the border of the ribs on the left side, and the upper border of the dull area as it crossed over to the right passed gently upwards and round to the nipple line in front. The uterus was anteverted, and there was some endometritis. I thought I could feel both ovaries, of about the usual size and in their proper positions, but somewhat tender to palpation. The patient said she seldom had any cough or expectoration. At the right apex there were some crepitations heard on auscultation, but otherwise the lungs were normal. The apex beat of the heart was displaced upwards and to the left, but the cardiac sounds were normal, and the pulse was fairly strong, beating 64 to the minute. The action of the bowels required to be assisted by medicine and the patient was thin and losing flesh, but except for the conditions related she seemed to be a healthy woman. The kidney action was good. There was nothing in the patient's history to show how she had become infected by hydatids; she had lived in Woolwich all her life, and said she had never had anything to do with dogs or animals of any kind. Her husband was a waterman.

I operated on Feb. 17th, 1891, making an incision in the middle line of the upper part of the abdomen. After exploring the parts I first removed the growth from the left loin. It lay in the connective tissue behind the peritoneum, its connexions being easily separated except posteriorly, where they were more dense and much more vascular, so that

numerous vessels required to be ligatured, although I did not tie them until the end of the operation in the hope that pressure by forceps might arrest the bleeding. I attempted to remove the cyst unopened, but I had to use a good deal of force, and it unfortunately burst. There was little of the contents spilled over the peritoneum, however, because the sac was ruptured by considerable pressure, and the fluid was in great measure, if not entirely, discharged outwards. The tumour consisted of a single sac, having the characteristic lining of membranous tissue formed by the parasite surrounded by the usual adventitious fibrous capsule developed by the host. It contained no daughter cysts. I next took out the smaller of the cysts below the liver. It seemed to be outside this organ, but connected with it by a kind of pedicle, which I tied as I would tie the attachment of an ovarian tumour. This hydatid contained daughter cysts. The largest of the tumours was in the liver substance. I cut into it and removed much fluid and numerous daughter cysts, taking great care to keep the peritoneum clean by means of sponges packed round the opening. When I had removed most of the contents of this cavity I again explored the abdomen and found that there was a chain of hydatids running backwards along the lower surface of the left lobe of the liver. Some of these I enucleated, but the manipulation became more difficult as I had to follow the cysts deeper, and when the patient had been about three hours on the table I felt compelled to desist from further attempts. It was obvious that there were more cysts in various parts of the peritoneum, and that there were other cysts in the liver substance. A very long time would have been necessary to deal with them all, and the patient's condition did not warrant a continuance of the operation. I was, however, able to separate two of the chain of hydatids at which I was working without opening either of them. I washed out the empty cyst cavity in the liver with iodine and water, sewed its opening to the opening in the abdominal wall so as to make a sinus, and closed the rest of the incision in the usual way. Two drainage-tubes were passed through the sinus into the cavity, and the wound was dressed with a large quantity of carbolic gauze. The patient was on the operating table nearly three hours and a quarter. She quickly recovered from the chloroform, and convalescence took place without causing any serious anxiety. The temperature rose to 103.6° F. in the vagina and the pulse to 120 twenty-four hours after the operation. The temperature then fell and fluctuated between 99.6° and 101° for three weeks, after which time it was below 100° and the pulse was below 90. There was some difficulty with the bowels during the first nine days; but afterwards they moved freely, and the patient then had only to contend with the weakness natural after such an operation and with some bronchitis. The discharge from the wound was never very copious, but the incision did not completely heal for nearly three months, although long before this the patient had gained strength and put on flesh, and was able to get about freely. She left the hospital in the eleventh week after the operation. She remained under my observation, and soon after she went home the upper part of the right side of the abdomen began to enlarge again, and there was much colicky pain in the abdomen, especially after food. The bowels still required to be assisted by laxatives, but they acted better than before the operation. Menstruation was regular.

The patient was readmitted to hospital on Nov. 20th, 1891, nine months after the first operation. The right costal margin was then much more prominent than the left, the greatest measurement from the spine to the middle line in front being seventeen and a half inches on the right side and sixteen inches at the same level on the left. The scar was very wide at the part where the tubes had been, and was dragged considerably to the right of the middle line. To the left of the scar, and close to the costal margin, there was a rounded swelling measuring about two and a half inches across and standing about an inch out from the surface of the abdomen. To the right there was a large, smooth, rounded swelling reaching well down towards the pelvis and filling the whole of the right side. These swellings exhibited the thrill on percussion that is characteristic of hydatids; they were evidently in, or closely connected to, the liver and they were dull on percussion except at their lower margins, which were rounded and partially overlapped by the intestines. Above the costal margin the percussion note was absolutely dull as high as the level of the nipple in front, and was impaired up to

the second intercostal space on the right side. The absolute dulness behind was bounded above by a line crossing the middle line at the level of the spine of the sixth dorsal vertebra, and gradually curving downwards on the left. The lungs were very greatly compressed, and there was considerable cyanosis, but I detected no signs of active lung disease, and although there was a slight cough there was no expectoration. The heart's action was fairly good, the pulse usually beating 72 times to the minute. The apex beat was felt six and a half inches from the middle line in the fifth interspace. The temperature was normal or sub-normal. In the right side of the pelvis a small tumour was felt by bimanual examination, exactly resembling an ovarian tumour and about the size of an orange. On Dec. 2nd I carefully opened the abdomen by removing the old scar. After freeing some omental adhesions I exposed the smaller and more prominent cyst. This I aspirated, laid open, and cleared out in the same way as I had treated the liver cyst at the first operation. It contained numerous daughter cysts. When all was clear I made a careful examination of the abdomen and found a number of small tumours low down in the pelvis. I counted five. Leaving them I returned to the liver and cut into the large cyst on its inner side, where it bulged into the one already opened. A very great quantity of fluid and daughter cysts was removed, but the bulk was not measured, as much of it was caught in towels and thrown aside. The size of this cavity may be estimated by the fact that after it was partially collapsed my sponge forceps, which measure eight and a half inches beyond the handles, did not reach a large part of the upper and posterior boundaries of the sac. It was with much difficulty that I got the parasitic sac of the main hydatid cyst away. This was very thick and firm, and would not fold up sufficiently to come through the opening until I had many times seized it and brought away small pieces. At last I succeeded in removing the bulk of it in one mass, but many small pieces were afterwards washed away with iodine and water. When the cyst was thus partially cleared the patient was so blue and collapsed that it was out of the question to attempt to remove the other tumours. I therefore sewed the opening in the liver to that in the abdominal wall, and closed the incision, draining the liver cavity and dressing the wound as at the first operation. This second operation lasted an hour and a half. The temperature rose to 102° on the day following the operation and again on the fifth day, the pulse on the first of these occasions being 120 and on the second 96. The respirations were not counted above 32 to the minute. There was an occasional cough and considerable dyspnoea, but very little expectoration, or other evidence of bronchitis. The lung resonance quickly increased, and there was marked tenderness on percussion over the upper surface of the liver for some days. The cyanosis and breathlessness disappeared very gradually, and the feebleness, which was extreme for more than a fortnight, was also slowly recovered from. The bowels again gave a good deal of trouble for a little more than a week, but when they acted freely the patient gained strength more quickly. The discharge from the liver was very profuse, and at times it contained a great deal of bile. Hydatid membranes escaped in considerable quantity at first, and later at intervals, the last observed coming away on Feb. 13th, 1892, two months and eleven days after the operation. On the twenty-fifth day the drainage-tubes, which had already been considerably shortened, were taken out and cleaned. The longest measured ten inches. They were gradually shortened, and on Jan. 20th one tube was removed. On March 18th there was only one small tube remaining, which measured two and a half inches in length. On March 3rd the patient was allowed to get up, but the wound was still discharging a large quantity of fluid, which was now of a thin, serous character. She went home on April 2nd, four and a half months after the operation. The wound continued to discharge very freely till about Christmas, 1892. About the beginning of December the quantity of discharge began to diminish and the wound healed very quickly and has given no trouble since; it had been open over thirteen months. When the wound healed the patient was about three months advanced in pregnancy, and I am inclined to think that the upward pressure caused by the enlarging uterus facilitated the healing of the wound. After the patient went home she had much colicky pain in the abdomen, but she said she felt better while carrying her last child than in either of her other pregnancies. After the child was born the patient

became weaker and thinner and had more pain, and on examination from time to time it was evident that the pelvic tumours were increasing in size.

The patient was readmitted on March 6th, 1894. At this time, except for the presence of the cicatrix, the abdomen was quite normal on inspection, but on palpation I mapped out three very tender rounded swellings in the right side, the lowest being close to the pelvis; the highest was the largest and was the size of a small orange. The whole abdomen was resonant on percussion and the liver dulness began at the level of the fifth rib and ceased a little above the costal margin below. By combined vaginal and abdominal examination I found that there were several cysts in the pelvis, but I was not able to say how many. The lungs were resonant everywhere, but the respiratory sounds were not nearly so free on the right side as on the left, and the patient now frequently suffered from bronchitis. On March 12th, two years and three months after the second operation, I again opened the abdomen, making the incision on this occasion below the umbilicus. The three tumours in the right loin and four in the pelvis were brought out and enucleated. Each consisted of a hydatid membrane, containing very little fluid, but full of collapsed daughter cysts and enveloped in an adventitious fibrous capsule. They were attached to subperitoneal connective tissue and to neighbouring structures. A fifth cyst in the pelvis was so closely connected with the back of the cervix uteri that I cleaned it out and drained it as I had treated the sacs in the liver. The cysts removed varied in size from that of a large orange to that of a duck's egg. Before closing the wound I examined the lower surface of the liver and found some more hydatids under the left lobe, evidently the remains of the chain I had felt at the first operation, but they had considerably enlarged. It was impossible to manipulate these through the incision already made, and I therefore cut directly down on them by a vertical incision a little to the left of the middle line and close to the ribs. Three hydatids were removed from close to the lower surface of the liver, two being about the size of duck's eggs and one the size of a sparrow's egg. The liver seemed to be of fairly normal shape and freely movable, having only loose adhesions to the scar, the upper end of which was considerably below the lower edge of the liver. Through these loose adhesions I felt a hard nodule which I thought was another small hydatid, but it was enveloped in adherent omentum, and as the operation was already a long one I thought it unwise to begin what might be a very troublesome and prolonged enucleation. This operation lasted over three hours, but it was not such a severe proceeding as either of the other two, and the patient was not so ill afterwards. During convalescence the highest temperature was 100·8° F. on the fourth day, and the highest pulse was 96 on the second day. The patient was almost free from fever and practically well after ten days, but there was a discharging sinus till June, when the wound finally healed. On leaving the hospital early in June the patient went to a convalescent home for a few weeks, and was very well while there; but after going to her own home she was for long troubled by a cough, sometimes accompanied by considerable expectoration. On Oct. 25th she came to see me on account of a small hernia at the lower end of the incision below the umbilicus. This had been noticed for five weeks, and was no doubt due to the persistent cough. The lungs were not dull on percussion anywhere, but the liver dulness was somewhat higher than it should have been on the right side posteriorly, and the respiratory murmur was everywhere very feeble. There were very few crepitations or râles, and at this time there was little expectoration.

I again saw the patient on Feb. 21st, 1895. She then complained of severe pains in the region of the liver, which had continued for about seven weeks and were very bad during the prolonged frost, but had been rather better since the weather became milder. On examination I found the abdomen quite flat; the incisions measured 3½ in., 3 in., and 2½ in. respectively, in the order in which they were made. The patient's cough had been much less frequent, and the hernia, which had been supported by a pad, was smaller and caused little trouble. The liver near the middle line was very tender to percussion and palpation. Through the scar of the second operation I could feel a hard nodule about the size of a bean, which seemed to be the chief seat of tenderness, and I have no doubt this was the hard substance I had felt at the end of the last operation. The liver seemed to be smaller than normal in front, but its dull area extended rather higher than usual behind. The lungs had

greatly improved, and, except at the right base behind, the air everywhere entered them freely. Since the severe pain in the liver region began some eight weeks previously the patient said she had lost flesh and she was very thin. It seemed as if some cyst were developing in or below the liver. I hope to keep the patient under observation, and if there is any further development I trust that I may be permitted to communicate the sequel.

(To be continued.)

THE PHYSICS OF CARDIAC SOUNDS AND MURMURS.

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MORE than twenty years ago Dr. Walshe wrote¹ that "the difficulty of unravelling the mechanism of the normal sounds of the heart is broadly and emphatically proved by the fact that from the time of Lennec to the present day some five-and-thirty theories, more or less completely differing from each other, have been proposed in its explanation." During these last twenty years the problem has still remained unsatisfactorily solved. I propose in the course of this paper to relate a few simple experiments which bear on the subject, and which appear to throw a great deal of light not only on the mechanism of cardiac sounds, but likewise on that of cardiac murmurs, and which, moreover, have the advantage from their great simplicity to be within everybody's reach. It will be advisable to study first the second sound. If after excision of the heart the aorta be firmly ligatured at a short distance from the semilunar valves, and the left ventricle having been opened, a stream of water be forcibly driven by means of an indiarubber syringe into the aorta from the ventricle, then the following takes place: the aorta becomes distended with liquid, and in the height of its distension the semilunar valves close in and shut the ventriculo-aortic orifice so that not a drop of water escapes back into the ventricle. From the ventricular side the valves are thus seen stretched by the fluid contained within the aorta. The semilunar valves have thus been shut by a forcible injection of liquid directed from the ventricle towards the aorta. In this experiment the ligature of the aorta is made to represent the resistance offered by the column of blood in the living subject; the stream of water injected forcibly into the aorta takes the place of the ventricular contents that normally pass into the vessel with each ventricular contraction; and, lastly, the indiarubber syringe is made to represent the ventricle. How is this closure of the semilunar valves brought about?

Physiologists hold that the semilunar valves are "probably closed almost immediately after the escape of the ventricular contents,"² and assign this closure to the refluxes produced by the negative pressure of the mere movement of the column of blood and by the elastic recoil of the arterial wall. Now, in the experiment just referred to the "negative pressure of the mere movement of the column of blood" cannot be a factor of the closure of the valves, for the simple reason that the ligature of the aorta prevents any such movement taking place. That the closure of the semilunar valve is likewise completely independent of the elastic recoil of the arterial wall the following modifications of the above experiment will plainly show. Let a part of the aorta together with the rim of the ventricle near the aortic orifice be dissected out; let a piece of linen be now sewn round the aorta from the level at which the extremities of the valves are attached to the wall of the vessel outwards, sufficiently close to prevent distension of the artery, but not too tight to occlude its lumen; if now, after ligaturing the vessel, water be forcibly driven into the aorta from the ventricular side the vessel fills with fluid and the semilunar valves close the orifice. Here no recoil of the arterial wall can come into play, inasmuch as its distension is prevented by the linen sewn round it, yet the valves close and shut the orifice. Again, if the aorta be ligatured as before, some distance beyond the orifice, and the ventricle having

been opened, a column of air is forcibly driven into the aorta from the ventricle by means of a gum elastic syringe, the following takes place: the vessel dilates somewhat, and the valves not only close in perfectly well, but even bulge prominently backwards towards the ventricle. Here, once more, no recoil of the arterial wall can explain the closure of the valves, as in order to produce this effect it is not necessary to drive the column of air too forcibly into the aorta so as to produce marked distension of the wall. The closure of the semilunar valves can thus be brought about irrespective of the refluxes produced either by the recoil of the arterial wall or by the negative pressure due to the mere movement of the column of blood. How, then, is this closure effected? The circumference of the aorta at the level of insertion of the extremities of the semilunar valves may be divided for purposes of description into three equal parts, the points of division corresponding to the points of insertion. If direct lines be drawn across these points of insertion an equilateral triangle will be described within the circumference of the aorta, the sides of the triangle corresponding to the loose edges of the semilunar valves. This is at once made apparent if, a part of the aorta having been dissected out together with the rim of the ventricle surrounding the orifice, dilatation of the vessel be effected by means of the fingers from both sides of the orifice at the same time. It is then seen that in the dilated state of the vessel a triangular lumen occupies the centre, and the space between the sides of the triangle and the circumference of the vessel is occupied by the somewhat lax semilunar valves. It is likewise to be observed that the edges of the valves in their lax condition dip downwards concavely between their extremities disclosing the aortic wall, which at this level is thinner and encloses a wider lumen than at the level of insertion of the extremities of the valves and upwards. When, therefore, water is forcibly injected into the ligatured aorta from the ventricle the wall of the vessel becomes distended; this distension, *per se*, by separating from each other the extremities of insertion of the valves, causes the edges of these to assume collectively the sides of an equilateral triangle, the interior of which forms the lumen of the vessel at its orifice, a space occupied by valvular surface being left between the sides of the triangle and the distended wall of the vessel. Now, according to Pascal's law, pressure exerted anywhere upon a mass of liquid is transmitted undiminished in all directions and acts with the same force on all equal surfaces and in a direction at right angles to their surfaces. Therefore, the same amount of liquid pressure that, acting at right angles to the wall of the aorta, produces its distension will also act at right angles to the exposed valvular surfaces which extend from the sides of the triangle to the circumference of the vessel, this exposure of valvular surfaces being due, as just stated, to the distension of the aorta. The liquid pressure on this exposed valvular surface will bring about the stretching of the valves; and this stretching of the valves in its turn forces them to adopt the pouch-like form which they owe to the concavity of their bases of attachment. The liquid pressure which is being transmitted equally in all directions tends to separate these pouches more and more from the sinuses of Valsalva, this separation from the sinuses causing the pouches to approximate each other, until at last they touch and close the orifice. But this approximation of the valves being due to their separation from the circumference of the vessel, and this separation being in its turn due to the fluid pressure which is being exercised in all directions by the water which is entering the aorta from the ventricle, it follows that the closure of the semilunar valves is effected solely by the injection of water into the aorta. During the height of the distension outwards of the aortic wall, does the distension inwards and backwards of the valves take place, both being effected by the same liquid pressure? The distension inwards and backwards of the valves being effected by the column of water entering the aorta, it is clear that this column (in its latter part) as it enters the aorta by this very act is closing the orifice against itself. When the last drop has passed the orifice the valves firmly close upon each other, this last drop being the end of that column of water which directly produces the closure of the valves. In that modification of the experiment, where the sewing of a piece of linen into and around the wall of the vessel from the level of insertion of the extremities of the valves upwards prevents the distension of the aorta from that level upwards,

¹ Dr. Walshe: Diseases of the Heart, p. 51.

² Text-book of Physiology (Foster), p. 246.

the injection of fluid, though unable to distend that part of the vessel, distends, nevertheless, the portion below it—that is, immediately behind the valves—and thus separates these from the sinuses of Valsalva, causing them to adopt the pouch-like form and eventually to close the orifice. But here also the closure is effected directly by the injected liquid.

The first experiment illustrates well what actually takes place in the living heart. The first effect of the ventricular contraction is to separate asunder the semilunar valves; the ventricular blood rushing into the aorta brings about the distension of this vessel. This distension, owing to the anatomical relations existing between the valves and the wall of the aorta, places the valvular pouches in conditions favourable to their being distended inwards and backwards by the same inrushing ventricular blood, this latter distension closing the orifice *pari passu* with the ingress of the last portion of the ventricular column, the ingress of the last drop being coincident with the firm closure of the valves. It is thus demonstrated that the semilunar valves are closed *directly* by the ventricular contraction before any negative pressure of the mere movement of the aortic column can come into play, and certainly before any recoil of the arterial wall is exercised. The contraction of the ventricle is then the direct cause of the closure of the semilunar valves. It has been alleged that during the contraction of the ventricle the semilunar valves are never kept perfectly separated from each other, but that their position is one of semiclosure during the act. Were this a fact then a murmur would always accompany the ventricular systole, for the alleged position of the valves would of necessity give rise to a murmur. In order that the semilunar valves may be even partially closed during the ventricular contraction it is necessary that the aortic wall be fully dilated first so as to afford a fixed support against which the fluid pressure can sustain itself while it reacts against all parts which are not fixed, and it is thus that it reacts against the semilunar valves until they attain a fixed posture in their closed state. But this full dilatation of the aortic wall cannot take place till the end of the ventricular contraction, for the first and greater portion of the ventricular column is expended partly in propelling the aortic column directly onwards, and partly in distending the aortic wall; it is only the latter and shorter portion of the ventricular column that brings about the full distension of the aorta, which extreme distension, as we have seen, must first take place before the fluid pressure brought about by the ventricular contraction can avail itself of the anatomical relations existing between the aortic wall and the semilunar valves, so as to commence and finish the closure of these valves. The semilunar valves are completely pushed asunder by the entrance of the ventricular column into the aorta, and it is only as the latter end of this column is leaving the ventricle that the valves rapidly close in and shut the aortic orifice. Such being the direct cause of the closure of the semilunar valves, it remains to ascertain what is the direct cause of the sonorous vibrations which, produced in these valves, give rise to the second sound.

It is generally held that the sonorous vibrations of the semilunar valves are effected by the recoil of the elastic aortic wall. It is easy to demonstrate that this view of the mode of production of the second sound involves a physical impossibility. If a small elastic balloon, such as children play with, be somewhat distended with water and then tied at its orifice, and if now the end piece of a binaural stethoscope be applied to any part of its surface, and pressure be suddenly made upon the balloon, the elastic membrane will bulge forcibly outwards at the point where the stethoscope is applied, but no sound will be produced. The same observation, with the same result, can be made with an ox's bladder; but in the case of the elastic balloon the thinness of the wall approximates itself more closely to the physical condition of the semilunar valves. The experiment can yet be more advantageously effected with a piece of the fresh small intestine of an ox. If a small piece of this intestine be somewhat distended with water, and after its two ends have been ligatured the end piece of a binaural stethoscope be applied to any part of its surface; if now, sudden and forcible pressure be made on any part of the intestine the other part will be rapidly and forcibly distended, but no sound will be emitted. It is thus demonstrated that a membrane possessing more or less the same physical characters as the semilunar valves does not emit a sound when it is forcibly distended by a mass of liquid which it encloses. The semilunar valves

being perfectly closed before the recoil of the aortic wall comes into play, and therefore, during that recoil, forming part of a membrane which encloses liquid, may receive a second distension owing to the mass of liquid which will be pushed against them by the recoil, but cannot through this distension be thrown into sonorous vibrations. The recoil of the aortic wall cannot, therefore, cause the semilunar valves to emit a sound. For the same reasons neither can the negative pressure of the moving aortic column be the direct cause of the second sound.

It might be supposed that the second sound could be produced by eddies created at the aortic orifice during the latter part of the passage of the ventricular column into the aorta; that these eddies would strike against the aortic surface of the valves, and thus give rise to the sound. That this is not so may be easily demonstrated. If a small piece of fresh intestine of an ox be filled with water and tied at both ends, and an indiarubber syringe be filled with a strong solution of permanganate of potash and in this state its nozzle be introduced into the intestine filled with water through one of its ends by loosening the ligature and then tying it tightly again over the nozzle; if now the intestine be held upwards against the light and the contents of the syringe be suddenly and rapidly injected into the intestine the wall of the intestine is seen to bulge outwards, the coloured solution is seen to go directly upwards and no eddies are seen to be produced immediately at the orifice of the nozzle. This observation can likewise be made with a transparent elastic balloon instead of a piece of intestine. It might once more be supposed that the second sound would be produced by molecular changes in the so-called fluid veins at the aortic orifice. Whatever be the character of the sonorous vibrations to which these fluid veins give rise, that they do not constitute the second sound may be demonstrated by filling a small piece of intestine with water, inserting into one of its ends the nozzle of an indiarubber syringe likewise filled with water, and firmly ligaturing both ends of the intestine; if now the end piece of a binaural stethoscope be applied to the intestine immediately behind the orifice of the nozzle and the syringe be rapidly compressed no sound whatever is heard at the indicated spot—in other words, the fluid veins have not given rise to a sound. Having thus shown how the second sound is not produced I will now endeavour to demonstrate what is its direct cause, and in doing so I will relate a very simple experiment which illustrates the mode of production of all cardiac sounds and murmurs.

Let a small piece of fresh intestine from an ox be filled with water, and through one of its ends let the nozzle of a good-sized indiarubber syringe, likewise filled with water, be introduced; let both ends of the intestine be firmly ligatured. If now the end of a binaural stethoscope (and this kind of stethoscope is recommended as it leaves the hands of the experimenter free) be applied to any part of the intestinal surface and the syringe be forcibly compressed no sound is heard, or at best only a very weak rumbling noise. If now the nozzle of the syringe, instead of lying in the axis of the intestine, be directed so that the column of water issuing from it strikes the intestinal surface at any angle whatever, the acoustic phenomena completely change. If the end piece of the stethoscope be now applied near the orifice of the nozzle, so that the column of liquid issuing from the nozzle will either strike it at any angle whatever, or will strike any portion of the intestinal surface between it and the orifice of the nozzle, the following acoustic phenomena are produced, according as the indiarubber syringe is compressed forcibly and rapidly or not. If the syringe is compressed rapidly and with some force a distinct highly pitched sound is produced; if the compression is effected with great force as well as rapidly, then a loud sound is produced, but of the same pitch as before. If the compression is effected slowly a soft blowing murmur is produced; if the compression be effected a little faster and with a little more strength, then a rough murmur is produced. The same observations can be made with an elastic balloon. If, instead of the thin-walled intestine, the experiment be performed with the thick-walled aorta of an ox, the same acoustic phenomena will be produced, with the exception that the sound emitted in this case is of a lower pitch than that produced in the case of the thin-walled intestine. It is therefore a physical law that when a membrane enclosing a liquid receives on its internal surface a stream which impinges against it, at any angle whatever, it will be thrown into sonorous vibrations, these vibrations giving rise to a sound when the stream

impinges with rapidity and force, the pitch of which sound will depend upon the relative thinness of the membrane (the thinner the membrane the higher the pitch), and the intensity of the sound will depend upon the force with which the stream is emitted; the vibrations giving rise to a soft blowing murmur when the stream impinges with little rapidity and force, and to a rough murmur when this rapidity and force are somewhat increased. These are principles the truth of which can be ascertained by everybody, as the elements with which the observations can be made are within everyone's reach. The question now arises whether the conditions which in the experiment give rise respectively to sounds of different pitch, as well as to murmurs of different character, are present in the normal and in the pathological heart. The answer will be seen to be in the affirmative.

It has been seen that during the first part of the ventricular systole the aortic orifice remains perfectly patent, and that it is only during the latter part of the contraction, after the aorta has been well distended, that the semilunar valves, owing to the anatomical relations already described, suddenly close in and shut the orifice. Now this sudden closure of the valves, taking place at the time when a stream of liquid is passing from the ventricle into the aorta, forces this stream to impinge against the ventricular surface of these valves; this stream being produced rapidly and suddenly by the rapid contraction of the ventricle, the semilunar valves being constituted by a thin membrane. Here are all the conditions present for the production of a high-pitched sound exactly similar to those which were present in the experiment with the indiarubber syringe and the intestine, and in point of fact both sounds resemble each other very much. There is, therefore, sufficient ground to conclude that the second cardiac sound is directly produced by the latter part of the ventricular contraction owing to the semilunar valves being thrown into sonorous vibrations by the latter part of the ventricular stream impinging against the ventricular surface of these valves in the act of their closing in. The degree of intensity of the second sound depends then solely upon the degree of hypertrophy of the respective ventricle; the pitch of this sound will depend upon the relative thinness of the semilunar valves. When these valves are normal the sound will be high-pitched, but when these valves become thickened through inflammation then the pitch will be lowered. The presence of an aneurysm *per se* cannot give rise to a real accentuation of the second sound; if the aneurysm protrudes forward then there will be an apparent accentuation of the second sound, simply because then the acoustic media of conduction are more favourable than normally for the propagation of the ordinary sound to the listening ear. Likewise high tension of either circulation *per se* cannot intensify the second sound. Under these conditions the second sound will be accentuated only when the high tension has caused the respective ventricle to hypertrophy. These are logical deductions from ascertained physical phenomena, which render more accurate the physical diagnosis of the conditions of the ventricular muscles and of the semilunar valves.

Now follows the examination of murmurs produced at the aortic orifice. Murmurs have been supposed to be produced by fluid veins created during the passage of a stream from a narrowed orifice into a wider channel. In the experiment described above, when an indiarubber syringe filled with water has its nozzle introduced into a piece of small intestine also filled with water and having both its ends ligatured, as long as the nozzle is held in the axis of the intestine the syringe may be compressed in any form and yet no distinct murmur will be imparted to the stethoscope placed over any part of the intestinal surface. Yet in this experiment having a stream issuing from the narrow nozzle into the wide intestine there are exactly the conditions which have been supposed to give rise to murmurs. The mode of production of a murmur is otherwise. As already described, if the nozzle of the syringe is directed so that the stream issuing from its orifice shall impinge against the intestinal surface, no matter at what angle, a high-pitched sound is heard when the syringe is rapidly and forcibly compressed, which changes into a murmur when the rapidity of the compression is diminished. It is demonstrated, therefore, as a physical fact, that a stream of liquid slowly impinging against a membrane will throw it into such sonorous vibrations that these will impart to the listening ear the sensation of a murmur. Stenosis of the aortic orifice is known to produce a murmur described as systolic murmur at the base. How is

this murmur brought about? The narrowing of the aortic orifice prevents the ventricle from contracting rapidly, because the ventricular column requires more time to pass through a narrowed than through a patent orifice. Again, in stenosis there is a surface of membrane which from the beginning of the ventricular contraction is so placed that it will receive against itself part of the ventricular stream as it passes through the narrowed orifice. There are here, then, the two necessary elements for the production of a murmur: a slow issuing—that is, a prolonged stream—and a membrane against which it impinges. If the prolonged stream issues forth with great force a rough murmur will result; if with less force a blowing murmur will take its place.

If an aneurysm with undistensible walls be situated just beyond the aortic orifice a murmur may occur during the contraction of the ventricle, not because a stream issues from a relatively narrow orifice into a wider channel, but because the want of distensibility of the aneurysmal wall is an actual obstruction to the rapid voiding of the ventricle, and it is an obstruction because, whereas normally a great part of the ventricular column goes to dilate the first part of the aorta, when this aorta, owing to an undistensible aneurysm, cannot distend, then the ventricular column must progress solely in an onward direction, which implies more time in the voiding of the ventricle. Again, owing to the undistensibility of the aortic aneurysmal wall, the fluid pressure caused by the entering ventricular column will from the very first have a fixed support against which it can sustain itself while it reacts on the unfixed semilunar valves, separating these from the aortic wall and tending to their closure. Under these conditions the semilunar valves will be partially closed during the greater part of the ventricular contraction. There are present, therefore, the two necessary elements for the production of a murmur—a prolonged ventricular stream and the semilunar membranous surface against which this stream will impinge during the prolonged ventricular contraction. It will be likewise seen that the same murmur must take place even in the absence of an undistensible aneurysm, provided that the aortic walls through disease are incapable of distension, and under this condition the murmur must take place although the semilunar valves be perfectly healthy. If the semilunar valves are completely destroyed and the aortic rim does not in any way protrude inwards so as to form a membrane, then the ventricular contraction cannot give rise either to a sound or to a murmur, for one of the necessary elements for the production of either a sound or a murmur is wanting here—viz., a membrane against which the stream can impinge.

(To be continued.)

DISTURBANCE OF THE CARDIAC RHYTHM AND PULSE

DUE TO IRRITATION OF THE ALIMENTARY TRACT, AND THE INFLUENCE OF OPIUM THEREON.

BY GORDON SHARP, M.B. EDIN.

IT is a well-known physiological fact that the vagus centre may be stimulated reflexly, producing slowing or stoppage of the heart, this stoppage being sometimes temporary, but at other times permanent. The nucleus of the fifth nerve and the nucleus of the vagus lie near each other, hence stimulation of the fifth nerve may stimulate reflexly the vagus and so affect the heart. But powerful stimulation of any sensory nerve may produce a similar result, as also stimulation of the sympathetic nervous system, especially the abdominal sympathetic nerves. Anyone who has performed physiological experiments knows that if a frog be pithed, the abdomen opened, and a coil of intestine sharply pinched the heart rhythm is often disturbed and there may be a momentary full stoppage of the organ, or, indeed, the stoppage may be permanent. During the past two or more years I have observed cases in which the regularity of the cardiac rhythm has been interfered with, due, I believe, to reflex stimulation of the vagus centre through the vagus nerve itself or through the abdominal sympathetic, most probably the latter. In all the cases the stimulating agent was in the shape of a catarrh of the stomach and bowels, or one of these, or the presence of some irritating body in the alimentary canal, or a constricting

body, or an inflammation of a part of the alimentary tract. In all, pain was a prominent symptom, and for the relief of this opium was employed, either in the shape of pill or tincture, and with beneficial effect as regards the pain and heart condition. This illustrates the value of pain as a symptom of disease, especially when the pain is severe. It calls for speedy relief, and the attainment of this places the patient on the high road towards recovery, and it gives the physician time and opportunity to investigate the true nature of the disease. Now abdominal pain is peculiarly amenable to treatment by opium, not the morphine salts or the expensive fanciful preparations bearing names borrowed from the ancient classics, but the old-fashioned drug. Morphine salts rapidly go the round of the circulation, and where one wants general analgesic effects they answer well, but where local effect is desired in the first instance the crude drug is the best agent to employ. The local action of opium in pain affecting the stomach and bowels is probably dependent on the fact that when it enters the stomach it forms (because of its astringency) a coagulum with the mucus, which is only again slowly broken up in its passage along the alimentary tract, but in the process of breaking up and setting free of the alkaloids an extensive local anæsthetic effect is produced. The result of this is the establishment of the fundamental physiological principle of repair of tissue—namely, rest. It must not be forgotten likewise that opium contains alkaloids other than morphine, and they, too, may play a part in this beneficial action. In addition, there is the astringency of the opium, which must check the secretion of mucus, and this of itself will stop peristalsis, and so another point is gained.

CASE 1.—A man aged sixty-six years was seized with vomiting and diarrhoea following an indiscretion in diet. Having known him for some considerable time I was aware that the heart and pulse presented nothing beyond what might be expected in a man of his time of life, but with the onset of the disturbance of the alimentary tract the heart showed signs of suffering and the pulse at the wrist was 120 and missed a beat in something like every thirteen. The diet was restricted to soda-water and milk, and ten minims of laudanum were prescribed every two hours till the condition improved. In twenty-four hours the heart and pulse had so much improved that only one beat was missed in every fifty or sixty, and with this the diarrhoea and vomiting had ceased. Further improvement followed, but I do not know that ever the pulse became quite regular again, for if the finger was kept on the pulse for a minute or two one beat was lost in every 150 or 200.

CASE 2.—I was called to see a man aged sixty years one afternoon about two o'clock. I had previously attended him and knew that four months before his heart was to all intents and purposes sound. He was the unlucky possessor of double hernia, which gave him no trouble. When I saw him he told me that he had severe pain at the lower part of the right lumbar region, and on examining him I found there was a tender spot of about the size of a penny. The bowels had been well moved some hours before my visit, and about an hour previously to my seeing him he had vomited green, bilious fluid. The pulse was most irregular and beat 86 in the minute. The intermission in the pulse was one in four, one in six, one in eight, one in ten or thereby, but never more than eleven beats followed one another without one being missed. The hernial sites were examined and the hernie found up. The diagnosis lay between a constriction within the abdomen or commencing inflammatory mischief of the bowel. To relieve the pain was the first consideration, and for this a one-grain opium pill was given at once, and five minims of laudanum were prescribed every hour till the pain abated. At the same time hot linseed-meal poultices placed between two layers of soft flannel were ordered, and were to be repeated every hour. I saw him six hours later and found that the pain had abated, and there was now only tenderness on touching the spot in the right lumbar region; but, what is more important as far as my present purpose is concerned, the pulse had undergone great improvement, and only one beat was missed in 40. In the next twelve hours one beat was missed in 60, and twenty-four hours later the rhythm was re-established.

CASE 3.—A man aged thirty-six years complained of pain in the right side of the abdomen in the line of the colon. The bowels were confined. Vomiting was present, but not severe. There was a certain amount of tenderness, although

this was not a prominent symptom. The pulse was only 48 in the minute at the wrist and was intermittent. The man expressed no desire to have the bowels moved, as is so often the case in peritonitis, and no purgative was given. A one-grain opium pill was given, followed in half an hour by five minims of laudanum, and the latter was to be repeated every two hours till the pain was removed or considerably relieved. At the same time poultices were repeatedly applied. Relief followed in a few hours, the pulse became regular, and the man recovered in some days.

CASE 4.—A man aged thirty-four years had severe recurrent colic, and on each occasion of the attacks the pulse was 50 to the minute, and every tenth beat was followed by intermission, which disappeared in every case after he had been placed under the influence of opium. After three relapses the condition was overcome and has not since returned. There was no reason to suspect lead poisoning.

In the first two cases the pulse was rather rapid; moreover, they were severe in type, and this may account for the comparative rapidity of the pulse. The two latter cases showed slow pulse and were not so acute, and would agree with what one would expect theoretically from a reflex stimulation of the vagus centre. In all, the interesting points are the intermission and the fact of it yielding so readily and effectually to opium. Details have only been mentioned in so far as they illustrate the points under discussion.

Grafton-street, Leeds.

MALTA FEVER IN RELATION TO LOCAL SANITARY CONDITIONS, AND THE HERMITE PROCESS.

By W. HILL CLIMO, M.D. Q.U.IRELL.,

BRIGADE-SURGEON-LIEUTENANT-COLONEL, ARMY MEDICAL SERVICE (RETIRED).

THE attention given at present to Malta fever both by the medical profession and by the general public is a sufficient indication of its importance and (paradoxical as it may appear) of the obscurity with which it has been surrounded. It is to the nebulous views which have prevailed as to its causation, and for which the medical profession is in a measure responsible, that is owing the want of sanitary effort to combat the disease. The history of Malta fever is strangely similar to what obtained a few years ago in reference to the increasing prevalence of, and mortality from, enteric fever in India. From time to time various explanations were hazarded to account for the phenomena connected with it; but they had to be discarded, and now the disease is admitted to be in every respect identical with the typhoid fever of European countries, being specific in origin, and traceable to a sewage-polluted soil affecting the water-supply. It is believed that in the near future a like view will be taken of Malta fever and its specific character recognised, the disease originating in local insanitary conditions, and the action of climate in its production being chiefly manifested by its influence on these conditions, and not directly on the constitutions of individuals in the first instance. In this view will be comprised all those diseases of the Mediterranean littoral which are of a febrile character, and which are associated with gastric or enteric symptoms. No observant traveller voyaging between England and Suez, taking Malta *en route*, can have failed to notice the grave sanitary defects of that island and its land-locked and tideless harbours. On all sides he sees conditions favourable to the spread and production of zymotic diseases. These are its geological formation, the nature of the soil, the density of the population, its imperfect scavenging, its water and food supplies exposed to the danger of sewage pollution, and its harbours made pestilential from floating excreta and organic debris of all kinds. The first two conditions may be taken together, for in this case the natural soil, where it exists, has been formed from the wearing away of the rock by climatic influences. About two-thirds of the island are cultivated, and the remaining third consists of barren rock. A shallow soil, imperfectly drained and largely saturated with organic refuse, presents every natural feature favourable to the production and development of the enteric germ. Added to this is the density of the population, which at present (exclusive

of the troops) is over 1330 to the square mile, and it is annually increasing. Much of the refuse is eaten by goats, which are kept in large numbers. It is a reproach to our modern methods of sanitation that nothing is done to arrest the increasing defilement. As long as the harbours of Malta are allowed to continue in their present state there must always be sanitary risk and danger to the public health. Moreover, as these conditions are mainly caused by our own navy and by our mercantile marine, while they are not remedied by what right can we impose sanitary obligations on the civil population? Certainly none. It is a case of putting our own house in order first. The proposal, then, is that the sewage &c. of our ships should be disinfected and rendered innocuous before being poured into the harbours of Malta by the electrolysis of sea water. No better locality could be selected for the trial of the Hermite process than in those harbours and in the Suez Canal. After much experience it is asserted that the health of passengers in troopships would be greatly improved if the ship's latrines, bilges, &c. were subjected to some such process as herein indicated; for, being fitted with steam engines, the cost of plant and of working would be trifling. Recent facts connected with the origin of typhoid fever from eating shell-fish poisoned by sewage in tidal waters give an emphasis to this question and accentuate its importance.

Colchester.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AN ILLUSTRATION OF THE VALUE OF RECTAL FEEDING IN A CASE OF CARCINOMA OF THE STOMACH.

By HENRY WRIGHT, M.R.C.S. ENG., L.R.C.P. EDIN., I.M.,
MEDICAL OFFICER OF HEALTH, GAINSBOROUGH RURAL DISTRICT.

IN June, 1894, a man aged sixty-five years, who was accustomed to good living and led an active life, had an attack of influenza, followed by erysipelas of the scalp. These naturally enfeebled him very much, and as soon as he was able to get about again I sent him away for change of air. On his return I saw him, and he told me he had been suffering a great deal from dyspepsia, and it was plainly to be seen he was losing flesh very fast. I tried all I knew to relieve the trouble, but nothing did him any good, and, lastly, in November, I became convinced that he was suffering from carcinoma of the stomach, a diagnosis that was confirmed by Dr. F. J. Smith, who saw him in consultation with me on Nov. 15th, and who expressed the opinion that, judging from the severity of the symptoms and the extreme degree of emaciation, he would not probably live till Christmas. It soon became obvious that feeding by the mouth would be sufficient to maintain life but for a short time, since, beyond a little brandy, he only took one teaspoonful of peptonised milk every four hours, from Dec. 10th until his death, and very often could not even take that, or, if he did, could not retain it, on account of persistent vomiting. I then had to resort to rectal feeding, and used at first some of the ordinary nutrient suppositories, but they caused irritation of the rectum and the fæces were very foul-smelling. I then obtained some suppositories of "Mosqueras" peptonised beef-meat. One of these suppositories, containing sixty grains of peptonised beef meal, was administered three times a day from Nov. 27th, 1894, until the patient's death on April 30th, 1895, a period of over five months. The irritation of the rectum subsided and the fæces did not smell nearly so badly. Dr. Smith saw him again on Jan. 17th, 1895, and expressed his surprise at what the feeding had done for him, and said he thought they would keep him alive for some time longer. There can be no doubt whatever that they afforded an "immediate available supply of nourishment," for his pulse, which ranged from 90 to 105, was considerably improved in less than half an hour after the administration of a suppository. Unlike artificial fluid peptones, nutrient enemata, and other forms of suppositories, they did not cause any local or reflex irritation—in fact, they were not only tolerated, but the patient frequently expressed his

appreciation of their support, or, to use his own words, said, "I can feel those things feed me." His motions were regular and natural, and he was never troubled with diarrhoea. That his life was prolonged for at least three months, with practically no inconvenience to himself or others, there can be but little doubt, and further experience in other cases has confirmed my opinion that in them we have a very valuable and reliable adjunct to rectal alimentation.

Gainsborough.

NOTE ON "HEAVY BRAINS."

By J. A. CAMPBELL, M.D. GLASG., F.R.S. EDIN.,
MEDICAL SUPERINTENDENT OF THE CUMBERLAND AND WESTMORLAND
COUNTIES ASYLUM, CARLISLE.

I READ Dr. Middlemass's paper on a case of unusual weight of brain in THE LANCET of June 8th and particularly noted the quotations of recorded heavy brains. It may be of interest to put on record the experience of Garland's Asylum. A post-mortem examination has been made in the case of each death (except two) which occurred here since Jan. 1st, 1867. The total deaths during that time have been 1148 and the necropsies 1146. A record of each examination has of course been kept, and the weights of the viscera recorded in a uniform and systematic manner. I have looked over the brain weights and in the following table show certain facts concerning the instances in which the brain weighed sixty ounces or above that weight.

No.	Date of necropsy.	Sex.	Age.	Mental condition.	Weight of brain in ounces.
1	Jan. 8th, 1857	M.	33	Epileptic mania	62½
2	Dec. 26th, 1867	M.	28	Epileptic mania	62½
3	Nov. 4th, 1869	M.	44	Mania	60
4	May 22nd, 1871	M.	24	Epileptic dementia	71½
5	Nov. 3rd, 1873	M.	38	General paralysis	60½
6	April 17th, 1876	M.	61	Mania	60½
7	Sept. 23rd, 1876	M.	39	Mania	62
8	Dec. 16th, 1881	M.	38	Epileptic dementia	60½
9	Feb. 20th, 1883	M.	20	Dementia	60
10	March 18th, 1883	M.	71	Mania	65
11	Oct. 5th, 1883	M.	41	Dementia	62
12	April 9th, 1885	F.	65	Melancholia	62½
13	Jan. 23th, 1887	M.	55	Mania	63½
14	Dec. 18th, 1891	M.	37	Epileptic dementia	62½
15	July 15th, 1893	M.	36	Mania	61

I think that in the case of No. 4 the weight of the brain is so great that I give the measurements of the skull which were noted. The skull without the scalp measured 8½ in. antero-posteriorly, 8 in. diagonally, and 6 in. in width, and across the frontal bone at the junction with the parietal 4½ in. The following are points of interest: a third of the whole brains above sixty ounces were those of patients who had suffered from epilepsy, and though one at present hears so much of the increase of stature and general development of the female, yet only one female brain figures in the heavy list, though I have, and have had, females of gigantic proportions both as to length and breadth and of truly appalling weights. I may say that the population of Cumberland and Westmorland is recognised as one of big stature, and the brains should be proportionately large. I should, however, like to see some statement as to the Aberdeen size and weight of brain. It is said that Aberdonians take an exceptionally large size of hat. I merely give my experience of weight; I do not touch on the other topics, such as mental power and its relation to the size of the brain.

Garland's Asylum, Carlisle.

WESTERMARK'S OPERATION FOR UTERINE PROLAPSE.

By OTTO HOLST, L.R.C.P. LOND., M.R.C.S. ENG.

I VENTURE to call the attention of the British medical profession to a new operative treatment of this affection devised by a Swedish surgeon, Dr. F. Westermarck. In order to show the efficacy of his operation he takes the very worst

cases—cases which have resisted other treatment, even the operative treatment now in common use—i.e., anterior or posterior colporrhaphy, or excision of the cervix. Of such cases he has treated twenty-two with good and permanent results, requiring no subsequent employment of any pessary whatsoever. His method of operation is as follows: The patient being under the influence of an anæsthetic and in the lithotomy position, any hypertrophy or ulceration of the cervical lips is cut away, first the anterior and then the posterior. The bleeding is stopped with deep sutures, which are left long for subsequent use. The wounds in the lateral fornices, caused by the excision, remain open for the time being. Should a cystocele be present an elliptical piece of the vaginal wall (not only the mucous membrane), extending from the anterior lip of the portio vaginalis to within one centimetre from the urethral opening, is dissected up, and the wound closed by deep and superficial sutures. If now, by means of the long sutures left in the cervix, the prolapsed uterus be drawn to the right side, the left lateral attachment of the vagina to the paracervical and paravaginal connective tissue becomes well marked. An incision is then made along the anterior fold thus made apparent, beginning from the anterior end of the wound left open in the cervix, and extending straight down the side of the vagina to within about three centimetres of the vaginal opening; parallel with this, and from one to one and a half centimetres behind, another incision is made from the posterior end of the cervical wound. These incisions meet below at an acute angle. The intervening piece of the vaginal wall is dissected up, so that the subjacent connective tissue lies exposed. The bleeding is stopped and deep sutures are inserted, but not tied. The uterus is now drawn over to the left side and the same performance repeated; the womb is then pushed up and the sutures on either side are tied. If the perineum be imperfect, a perineorrhaphy, according to the principles laid down by Tait, is performed. The novelty in this method of treatment lies in the operation of colporrhaphy being lateral. Dr. Westermarck's reason for this modification of operating is that it is the strong connective tissue in the broad ligaments which keeps the vagina *in situ* even when the perineum is imperfect, and not the connective tissue found between it and the bladder anteriorly, and the rectum posteriorly. That this view is correct is shown by the fact that prolapse of the anterior and posterior vaginal walls occurs without corresponding prolapse of the bladder or rectum, as the case may be. This is no doubt due to the loose and lax condition of the connective tissue found in these situations. He compares the relation between the uterus and the vagina to a funnel hanging down the neck of a bottle, and contends that, the uterine ligaments—i.e., the upper part of the broad ligaments, the round ligaments, and the sacro-uterine ligaments—being too feeble to keep the uterus in position, it is the lower part of the broad ligaments and their strong connective tissue which keep it *in situ*.

Eastbourne.

AN UNUSUAL FORM OF STRANGULATED HERNIA.

By DONALD F. SHEARER, M.B. OXON., F.R.C.S. ENG.

THE patient who forms the subject of this communication was a weakly woman sixty-two years of age, who had worn a truss for a right inguinal hernia for several years. On two previous occasions she had been under my care for apparent strangulation, which I was able to reduce after the application of an ice-bag. On this third occasion, when I saw her at 11 A.M., the hernia was as large as a goose's egg, quite dull, and very tender. She stated that it came down about 2 A.M., and that she had been unable to get it back, although she had kept ice on it since 6 A.M. I found it was not possible to reduce it, and left it under an ice bag till 6 P.M., when, with the assistance of Mr. Sidney Turner, she was put under chloroform, and a further unsuccessful attempt made to reduce the rupture. I then cut down on the sac, and found that it was full of clear fluid, with a knuckle or two of gut protruding through the internal ring into a dilated canal of Nuck. The gut, which was dark red and congested, was easily returned when the pressure of the fluid was removed without incising the neck of the sac. The cause of the strangulation was then obvious. The internal ring had, by repeated descent of the hernia, been invaginated into a distended sac to the extent of nearly an inch, causing a

circular depression around and above it, into which the prolapsed intestine had been forced, and subsequently compressed and strangulated by the increasing fluid. The sac was removed, and the neck ligatured as high as possible. The patient recovered satisfactorily.

Norwood, S.H.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

CARCINOMA OF THE URETHRA AND BLADDER; REMOVAL OF THE GROWTH, WITH CLOSURE OF THE RESULTING SUPPUBIC WOUND, AND ESTABLISHMENT OF PERMANENT SUPRA-PUBIC DRAINAGE.

(Under the care of Mr. W. H. BATTLE.)

PRIMARY carcinoma of the peri-urethral tissues in the female is a rare disease, and little has been written about it. There are many monographs on urethral caruncle, but few on other new growths of this part. The contrast between the symptoms produced by the growth in this case and the distress caused by the much less dangerous urethral caruncle is very marked. In the former there was merely pain when the bladder became over-distended in consequence of the mechanical obstruction caused by the growth; in the latter the symptoms are very severe and occasion great distress, resembling very often those produced by stone, and are not infrequently increased by a cystitis. We have only found one case recorded of similar disease in which the same method of operation was carried out. Dr. J. H. Dunn¹ had a patient under his care for recurring malignant disease which involved the bladder, vagina, external genitalia, and inguinal glands. He operated in two stages: firstly, he removed the inguinal glands and performed the first stage of a cystotomy, the bladder being opened on the fifth day; he then removed the growth and sutured the bladder wall in front to that behind. The treatment of the resulting wound in the bladder differed from that adopted in the following case. The condition of the patient was satisfactory five months after the operation. "By using a catheter four to five times in twenty-four hours she was comfortable and in perfect control of the urine, and never soiled by overflow day or night." The account of this case is from the notes of Mr. Wheeler, dresser.

The patient, a widow aged sixty years, who had had children, was sent to Mr. Battle in the out-patient department by Mr. Sydney Fairland on March 20th, 1894. She was a stout, red-faced, emotional woman, who complained of pain, the result of being unable to pass urine. She had had attacks of retention of urine on and off for from three to four months for which she had to seek medical advice. There had not been much pain, excepting when the bladder became distended, then the pain was very severe. A catheter had frequently been required to give relief. She had not noticed any vaginal discharge or unusual swelling, had not lost flesh, and her general health was good. The family history was indefinite. She had not suffered from any serious illness. As the woman was suffering from retention of urine and was in considerable pain she was sent up to the ward at once and relief was afforded by catheterism. The urethra was the site of a new growth, which was evidently the cause of the obstruction. Further examination next day showed this growth to be very hard, rounded, and nodular, completely surrounding the urethra along its whole length and reaching up to the bladder. The finger could be just passed beyond the limits of the growth, which was movable over, but in close relation with, the ramus of the pubes on each side. No ulceration could be detected, and there was no area of softening, the mass being of uniform firm consistence. There was no bleeding when the catheter was passed. There was no abnormal enlargement of

¹ Annals of Surgery, 1894, vol. i., p. 961.

lymphatic glands to be detected. The urine, withdrawn with a catheter, was thick, with a deposit of muco-pus, and showed about a third albumen; there was no blood. The abdomen was well covered with fat and had thick walls. The patient appeared to be quite healthy, excepting for the growth and its effects. Until the operation it was always necessary to draw off the urine with a catheter, the patient becoming much distressed at times from the retention, and quite unable to pass urine without assistance. On March 22nd she was placed under the influence of ether and a supra-pubic cystotomy was performed. The bladder was washed out and then injected with a small quantity of boracic acid solution. No rectal bag was used. After incision of the bladder wall the sides of the incision were sutured to the edges of the skin wound on each side. A large drainage-tube was placed in the bladder, and the upper part of the wound was brought together with silk sutures. The patient was then placed in the lithotomy position and the growth fully exposed by the use of Sims's speculum and retractors. An incision was made on each side from before backwards; the one on the right side extended to the bone; these were joined in front by a curved incision following the arch of the pubes in front of the clitoris; the whole of the mass beneath the pubic arch, including the attachments of the clitoris, was now rapidly dissected back, the bone being bared. The upper limits of the growth were more accurately defined, and it was removed with the scissors by cutting through the bladder beyond it. The invasion of the bladder by the growth had extended further along the anterior than along the posterior wall, and as the section had gone through the edge of the growth in front, an additional inch or more of the anterior wall required removal, leaving an opening through which three fingers could be passed. The bladder was in a condition of subacute catarrh. After the arrest of hæmorrhage, which was comparatively slight in amount, the posterior wall of the bladder was drawn forward and attached to the anterior edge of the wound by means of wire sutures. There was some tension on the stitches towards the right side of the wound, but the bladder was completely closed by the sutures, which brought the edges well together. Iodoform was used to the wounds, iodoform gauze was applied to the supra-pubic wound around the drainage-tube, and plugs of the same gauze were placed in the vagina. Two days after the operation she developed bronchitis, and the temperature rose to 103° F. at night. She was delirious, abusive, excited, and tried to get out of bed at night. It was difficult to manage the supra-pubic tube, as she tried to pull it out and interfered with the flow of urine through it. Possibly in consequence of obstruction to the flow thus caused some leakage took place from the subpubic wound. There was no sloughing. On the 30th the wire stitches were removed. The wound had closed very well, excepting to the right of the middle line close to the pubic ramus, where there was a small sinus surrounded by indurated tissue. Syringing with boracic acid lotion was carried out daily. She was still very noisy at night, but quieter during the day; the temperature had been generally above 103° in the evenings of the days which had intervened since the 24th, but the condition of the chest was improving. By April 3rd the temperature had become normal and the previous condition of excitement was followed by a period of depression, with low temperatures. The bronchitis cleared up, and the subpubic sinus diminished in size after the application of solid nitrate of silver. It had not closed entirely when she left hospital on May 23rd, but was not larger than a crow's quill at the surface, and the leakage was very slight when she walked about, but she refused to have anything done to close it. There was no evidence of glandular infection. She was in good health bodily and mentally, and apparently quite able to manage the apparatus (Buckston Browne's), which answered its purpose admirably. Microscopical examination of the growth showed it to be a carcinoma without cell nests.

Remarks by Mr. BATTLE.—I have been called upon to treat several cases of malignant disease (chiefly epithelioma) of this region during the past few years, in some of which the urethra had become involved in extension of the growth. In the removal of these growths it proved possible to do the operation without impairing the action of the sphincter. The question as to what would be the best course to pursue should it be necessary to remove the whole of the urethra had necessarily presented itself. In the excision of growths of malignant character from this part of the body it is

advisable to make a free removal, otherwise the disease will speedily recur. It was probable, therefore, that a case might apply for relief in which removal of the growth would result in a condition of permanent incontinence of urine. Some months before this case came under care I had considered the question of the treatment which it would be advisable to follow, and had decided to act in the way described. Had the bladder been much inflamed I should have done the supra-pubic operation some days before proceeding to excise the growth, for I had some fear lest an unhealthy mucous membrane with decomposing urine should interfere seriously with the healing of the subpubic wound, and possibly cause a spreading inflammation in the cellular tissue about the bladder. As the cystitis was but slight, I completed the operation at one sitting. Since the patient went out of the hospital I have heard nothing from her; before she left she was far happier than when admitted, and appeared able to manage the apparatus quite satisfactorily. It might, however, be possible to arrange so that the bladder should be emptied at intervals and the necessity for wearing constantly an apparatus, such as that supplied, done away with. The mental condition after the operation was that of an insane person, and it is interesting to note that such a state of mind has most frequently followed operations on the genito-urinary organs. The character of the delirium was not accounted for by the severity of the bronchitis or by any apparent septic condition of or about the wounds. My best thanks are due to Mr. A. R. O. Milton, the house surgeon, for his great care of the patient.

LEEDS GENERAL INFIRMARY.

INTESTINAL ANASTOMOSIS BY THE MURPHY BUTTON FOR RELIEF IN AN ADVANCED CASE OF CANCER OF THE COLON AND STOMACH; NECROPSY; REMARKS.

(Under the care of Dr. A. G. BARRS and Mr. MAYO ROBSON.)

ALTHOUGH in the following case life was probably neither materially lengthened nor shortened by the operation performed, it seems to be desirable to report it as an example of a comparatively new method of treatment in a patient extremely ill and unable to bear a prolonged operation.

A man aged sixty-five years was admitted under the care of Dr. Barrs on March 25th complaining of abdominal pain, vomiting, and constipation, the pain having been present for nine months and the vomiting for a fortnight. During the latter part of his illness he had rapidly lost weight, decreasing from 14 st. to 10 st. 12 lb. On admission the patient looked ill and emaciated and the abdomen was generally distended. He complained of pain in the region of the umbilicus, the pain being increased by food and relieved by the vomiting which shortly followed the taking of anything solid. An ill-defined hardness was felt under the left ribs, though there was no tenderness here or elsewhere in the abdomen. No peristalsis was visible. Though a little flatus was passed, after the rectum had been cleared by enemata no proper action of the bowels occurred. The tongue was coated. Mucous râles and emphysema of the lungs were noted. The urine was normal. Dr. Barrs diagnosed the case as one of intestinal obstruction, probably dependent on growth, and advised operation, the patient being transferred to the surgical wards on March 29th, under the care of Mr. Mayo Robson, who opened the abdomen the same day by a three-inch incision in the middle line below the umbilicus. Exploration showed a large tumour on the left of the spine involving the splenic flexure of the colon and the stomach, and being too extensive for removal even if the patient had been in a condition to bear a prolonged operation, which he was not. The ileum and sigmoid flexure of the colon were therefore brought into the wound, surrounded by an elastic tourniquet, and made to communicate by means of a medium-sized Murphy's button, after which the abdomen was closed. The anastomosis occupied a little under five minutes, the time being noted without the operator knowing this was being done. The parietal wound was united by silkworm gut sutures. No shock followed, and after the ether sickness had passed off there was no further vomiting. The wound pursued an ordinary course and the sutures were removed on the seventh day. Flatus was passed on the second day and the bowels were moved by an enema on the third day. Prepared food, milk, and other light diet were given from the second day onward. There

had been a little cough and expectoration throughout, and on April 2nd the patient complained of his chest. The temperature remained normal and there were no abdominal symptoms, but the hypostatic congestion of the bases of the lungs and purulent expectoration increased in spite of stimulants and propping up in bed, and he quietly succumbed on April 9th, eleven days after the operation. Post-mortem examination showed hypostatic congestion of the lungs and entire absence of peritonitis. A free opening was found between the ileum and sigmoid flexure of the colon. The detached button was found in the cæcum. The connexion between the ileum and colon was quite secure, but easily detachable, as there had been very little inflammatory reaction, and the margins only of the two apertures in the gut were united. The cancerous mass had completely blocked the splenic flexure of the colon and was adherent to the stomach and omentum.

Remarks by Mr. MAYO ROBSON.—The case illustrates, first, the ease and rapidity with which anastomosis by means of Murphy's button can be effected even in the presence of general distension of the intestines; secondly, the slight amount of shock following a short operation on the intestines even in a patient extremely debilitated by disease; and, thirdly, the very slight amount of inflammatory reaction caused by the sloughing out of the button and, therefore, the slender bond of union between the connected loops. In this case the button fell into the bowel on the proximal side of the stricture, and, therefore, the stricture being impassable, it could not have been parted with. Although in an incurable case this was a matter of no importance, in other cases the imprisonment of the button might make a great difference to the patient. I should think that the difficulty might be overcome by making the distal flange of the button slightly larger than the proximal. The button has been so successfully employed by the inventor and by others that it now must form a necessary part of the armamentarium of all surgeons who perform abdominal work; though, like others who have written on the subject, one cannot help feeling the undesirability of leaving large foreign bodies inside the alimentary canal. The great advantage possessed by the button is the rapidity with which it can be employed. Where, however, such haste is not necessary, as in many cases of enterectomy for new growths and other similar procedures, I still prefer the use of the decalcified bone bobbin, which I have hitherto found of so great service.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.

OVARIOTOMY FOR MULTICULAR CYST; RECOVERY, COMPLICATED BY FEMORAL HERNIA; REMARKS.

(Under the care of Mr. J. B. PIKE.)

THE following case is an example of the rare complication of strangulated femoral hernia after the removal of a large ovarian tumour. For the notes we are indebted to Mr. A. Palmer, house surgeon.

The patient, a feeble edentulous female stating her age to be sixty years, but looking more like seventy, was admitted to the Loughborough and District General Hospital early in June, 1894, for the treatment of a tumour which nearly filled the abdominal cavity. The growth had been very rapid, and it had not attracted her attention until about six months before her admission. Percussion gave dulness anteriorly, extending more to the right side, and resonance in both flanks. The uterus was movable, and fluctuation could be felt in Douglas's pouch. An ovarian cyst with several compartments was diagnosed, and ovariectomy was performed by Mr. Pike on June 10th, with the assistance of Messrs. Eddowes, Corcoran, and Phelps. The tumour having been exposed by an incision extending from near the umbilicus to within about two inches of the pubes, a large anterior cyst was tapped with Wells's trocar, and seven or eight pints of fluid were evacuated. With slight traction a second cyst came through whole, and this was incised and carefully emptied. No adhesions could be felt, but the tumour still did not present itself. Mr. Pike therefore enlarged the opening in the second cyst by tearing with the fingers, and passed his hand into it. He was thus able to break down the remainder, and by squeezing it in the hand to draw it through the opening. This portion was multilocular, containing thick gelatinous matter. No fluid

escaped into the abdomen. The pedicle was thin and was ligatured by transfixion with a blunt needle. The cavity having been sponged out, a Keith's tube was inserted and the wound closed with silk sutures. The tube was removed on the third day with some difficulty, a band of lymph having insinuated itself through one of the perforations and requiring to be snipped through with scissors. The patient suffered from severe shock, but rallied quickly, the wound healing by first intention and the temperature scarcely rising above 100° F. On the 27th the patient was attacked by bilious vomiting, with severe symptoms of shock, almost amounting to collapse, which caused considerable anxiety as to the lymph bands which might possibly exist in the pelvis. This was found to be due, however, to a small femoral hernia, which had not descended as long as the tumour was *in situ*. The hernia was reduced by taxis, and since then the progress of the case has been satisfactory.

Remarks by Mr. PIKE.—This case appears to be of interest on account of the feeble condition of the patient and the very misleading complication during convalescence. I attribute the success of the operation to strict asepticism; to only one person's hand entering the abdomen, that one hand having been frequently cleansed with perchloride of mercury solution during the operation; and to the care bestowed upon the case by our house surgeon and nurses.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Special General Meeting.—Further Observations on the Development of Mammary Functions by the Skin of Lying-in Women—Intra-peritoneal Rupture of Bladder successfully treated by Suture.

A SPECIAL general meeting of this society was held on June 11th, Mr. HUTCHINSON, President, being in the chair, for the purpose of electing a treasurer in the room of the late Surgeon-General J. A. Bostock, C.B. The Council nominated Mr. J. Warrington Haward for the office, and he was duly elected.

The last ordinary meeting of the society for the present session was then held.

Dr. CHAMPNEYS and Mr. BOWLBY contributed a paper on Further Observations on the Development of Mammary Functions by the Skin of Lying-in Women. Reference was made to the previous paper¹ containing a record of thirty cases, and the description of the lumps there given was quoted. The opinion there expressed was that the lumps were developed from the sebaceous follicles of the skin. Three sets of specimens had since been obtained and subjected to microscopical examination. They were seen to consist of (a) a covering of normal skin; (b) loose subcutaneous tissue and fat; and (c) aggregation of glands. The glands were situated deeply, in the situation of sweat glands, and much more deeply than the sebaceous glands, which were seen unaltered. The glands were of the tubular type, the deeper parts much convoluted, the terminal ducts nearly straight and opening through interpapillary processes. The cells of the deeper parts appeared to be columnar; those of the duct were polyhedral, in two or three layers. The glands, in short, were like sweat glands, but extended more deeply, were more irregular both in structure and extent than those in normal skin, and were interpenetrated by plentiful unstriated muscular fibres; they formed the lumps in question. There was no appearance of mammary tissue or any other tissue except that described. They agreed in microscopical appearance with the description of skin glands in the human axilla by Dr. Creighton.² The conclusions drawn were (1) that the lumps consisted of modified sweat glands; and (2) the fact that various mammary secretions were produced by modified sweat glands seemed to show either that mammary tissue was not necessarily a direct modification of sebaceous gland tissue or that similar secretions could be produced by more than one variety of skin

¹ Transactions of the Royal Medical and Chirurgical Society, vol. lxxv. p. 419.

² *Ibid.*, vol. lxx.

gland. In this connexion it might be remembered that the ceruminous glands of the ear which secreted "wax" were coiled-tubular and not acinous in structure.—The PRESIDENT remarked that the axilla was the common seat of a peculiar disease affecting the female—namely, the succession of a series of abscesses. It was probable that these arose in the glandular structures described.—Mr. GODLEE remarked that he had once been surprised at finding this glandular tissue in an axilla which he was examining in connexion with scirrhus.—Dr. MITCHELL BRUCE called attention to the fact that atropine powerfully affected both the mammary and the sudoriferous glands by arresting their secretion, while pilocarpine powerfully stimulated both sets of glands, and also the ceruminous glands of the ear.—The PRESIDENT inquired if Dr. Champneys and Mr. Bowlby had examined the glands of the ornithorhynchus, which animal had no proper mammary glands.—Mr. BOWLBY, in reply, said that they had not examined the glands of the ornithorhynchus, though Dr. Creighton in his paper had pointed out their analogy to those of the dog and of the human axilla. The difference between the glands described and those of normal skin was one of size and not of structure. The gland elements became hypertrophied together with the adjacent fat, and these formed the lumps found in pregnant women.—Dr. CHAMPNEYS, in reply, said that he had seen these lumps acquire the size of a hen's egg in the axilla.

Mr. WALSHAM related a case of Intra-peritoneal Rupture of the Bladder in which Suture was followed by Recovery. He also made remarks on the inflation test. He said that in 1888 he read before the society a case of intra-peritoneal rupture of the bladder successfully treated by suture, supplementing the paper with a table of 11 cases, all he could find published, of that injury treated in like manner. He now related a second successful case, and Mr. Miles, late house surgeon to the Metropolitan Hospital, had collected 17 additional cases in which suture was employed, making altogether 28 published cases of intra-peritoneal rupture of the bladder treated by suture. The patient, aged forty-two, was admitted into the Metropolitan Hospital on March 8th, 1895, with an intra peritoneal rupture of the bladder. The diagnosis was established by inflating the bladder with a few cubic inches of air forced in by two or three compressions of the rubber ball of an ether-freezing microtome. The abdomen at once became tympanitic and the liver dulness effaced. The rent was closed by fourteen silk Lembert sutures, the pelvic cavity irrigated with perchloride of mercury and boracic lotion, and the abdominal wound sewn up after the bladder had been proved competent by injection with milk. An uninterrupted recovery took place. The value of the inflation and injection tests for ruptured bladder was discussed. The present appeared to be the first case in which the inflation test had been actually put into practice. The conclusions drawn from a single experience were: (1) that the amount of air to be introduced need only be very small, not more than three or four cubic inches; (2) that only very moderate pressure was required for the inflation; (3) that the presence of quite a small amount of free gas in the abdominal cavity was sufficient to establish the diagnosis beyond a doubt; and (4) that the introduction of gas into the abdominal cavity, even in small quantity, was attended by a profound disturbance in the patient's general condition. The disturbance which followed in this case at once passed off on opening the abdomen and allowing the free air to escape. It was suggested, therefore, that the test in future should not be applied till the patient was on the operating table, so that should the collapse threaten life the abdomen could be opened at once. In the after-treatment of the case it was contended that a catheter should not be left in the bladder: firstly, because it was not necessary; and secondly, because of the risk of cystitis and septic infection. Of the 28 cases included in the two tables 11 recovered and 17 died. In the 11 that recovered, in only 1 was peritonitis present at the time of operation; whilst conversely in the 17 that died in 8, and probably in 9, peritonitis had already set in. The cause of death in the 8 cases in which there was no peritonitis at the time of operation was in 5 shock or hæmorrhage, or the two combined, and in 3 peritonitis, the peritonitis in 2 out of the 3 being due to leakage of the rent or giving way of a suture. In no less than 4 out of the 28 cases was the bladder found at the post-mortem examination to leak. The importance of testing the competency of the bladder by injecting milk or other bland and easily detectable fluid could not therefore be too strongly urged.—

The PRESIDENT congratulated Mr. Walsham on the ingenious expedients he had resorted to in order to make the diagnosis certain. The success of these operations evidently depended upon attention to small details, and one of these details was the use of a proper needle. He himself had closely watched many interesting cases of rupture of the bladder which illustrated the tolerance of the peritoneum in some cases to considerable urinary extravasation. He had never sutured a ruptured bladder, as his experience of them lay in the days before this was a recognised procedure.—Mr. BAKER asked why it was that the injection of three or four cubic inches of air into the abdominal cavity produced these very serious symptoms. He thought that other factors were probably at work to account for the symptoms of collapse. The structures within the abdomen were constantly subjected to varying degrees of pressure without producing constitutional reaction, and he did not think that in the case related it was proved that the symptoms followed from the entrance of air alone. If a large volume of soda water were taken into the stomach no such sudden symptoms followed, and in other cases, accompanied by the escape of gas into the peritoneum, no such shock was produced. He thought that after suture some fluid other than milk should be used to test the soundness of the suturing, for milk might be anything but an innocuous fluid. In one case he operated upon a hydronephrosis and made an aseptic fistula in the loin. He was anxious to discover whether fluid passed down the ureter on this side into the bladder, and so he allowed some milk to trickle from the loin sinus down the ureter into the bladder. It set up a most violent cystitis and inflammation of the pelvis of the kidney.—Mr. WALLIS said that the man was not collapsed at first, the history was erratic, and the symptoms indefinite. When water was injected into the bladder it returned forcibly with only a small amount of blood, and he thought that the slight diminution in volume might be due to inaccuracy in measurement. The air test was most striking, and gave rise to absolute symptoms at once, such as would be likely to be produced by a very sudden alteration of abdominal tension. He thought from this experience it would be better to inject the air after an anæsthetic had been administered. He had seen milk injected over and over again into the bladder in cases of vesico-vaginal fistula without producing any distressing symptoms.—Mr. SHEILD remarked that the diagnosis was always the difficulty in these cases, and the facility in diagnosis appeared to be in direct proportion to the size of the rent. In one case which he saw while house surgeon at Addenbrooke's Hospital the history and the symptoms of ruptured bladder were quite clear, but yet when large quantities of water were injected the bladder formed a distinct rounded tumour. Furthermore, the fluid injected was all returned per urethram and was blood-stained. In that case no operation was done and the patient got quite well. Some of these cases were probably instances of partial rupture, and others were small rents which on distension of the bladder were closed by pouching of the mucous membrane. Injection of air was a good method of diagnosis, and had been adopted by Senn for suspected intestinal ulceration and for perforation of the intestine from bullets. Senn had used hydrogen gas, which might not be so irritating as air, for no mention was made of collapse. He asked if the sutures penetrated the vesical wall through the mucous membrane; if so, calculi might form.—Mr. BOWLBY said that he had seen calculi which had been formed on the sutures employed in a case of supra-pubic lithotomy. He thought that the escape of air into the peritoneal cavity would, as a rule, cause such symptoms as had been described. A very small quantity of air would cause disappearance of liver dulness, and such disappearance of dulness had been observed a few minutes after perforation in typhoid fever.—Mr. WALSHAM, in reply, said that the object of the paper had been to discuss the inflation test. He thought that the symptoms described were due to the entrance of air, for the signs of shock passed off directly the peritoneum was opened. He had never seen any harm follow the use of milk injected into the bladder. It appeared that the injection of air would be of chief value where the rent was small. He did not pass the sutures into the vesical cavity. The peculiar grating sound produced when the catheter was passed through the rent in the vesical wall into the recto-vesical space was very marked, and he did not think that he had laid sufficient stress on it from a diagnostic point of view.

OBSTETRICAL SOCIETY OF LONDON.

The Development and Normal Structure of the Human Placenta.—Exhibition of Specimens.

A MEETING of this society was held on June 5th, Dr. F. H. CHAMPNEYS, President, being in the chair.

Dr. EDEN read a paper on the Development and Normal Structure of the Human Placenta, which was a short abstract of a communication about to be published in the *Journal of Pathology*. He said the placenta consisted of two series of structures: one developed from the ovum—the foetal placenta; the other developed from the uterus—the maternal placenta. The foetal placenta was developed from the external foetal envelope or chorion. At the end of the second week the chorion was covered with villi, the reflexa had closed over the ovum, and the tips of the villi were loosely embedded in it. The foetal and maternal vessels were thus brought into close relation, and the general arrangement represented a simple type of diffused placenta. The development of the discoidal placenta merely consisted in the specialisation of a part of the chorion. The placental chorion consisted of three sets of structures: (1) a covering of epithelium, (2) a connective tissue stroma, and (3) bloodvessels. The chorionic epithelium consisted of two layers; the superficial layer or trophoblast represented the foetal epiblast and was the more important of the two. By a process of proliferation buds were formed from the trophoblast, which developed into new villi, and the steps of the process were described. The stroma consisted of a delicate reticulum of branching connective tissue corpuscles with numerous leucocytes. The meshes of the stroma formed a system of lymphatic channels which were in communication with the capillaries. The vessels of the villi were very large and numerous, and ran for the most part immediately beneath the epithelium; this was an arrangement favourable to osmosis. The lymphatic system of the stroma could be artificially injected from the capillaries. In uninjected placenta blood was often found in the stroma, so that the villi appeared to be soaked with blood like a sponge. The maternal placenta was developed from the uterine mucosa. The earliest changes were a continuation of those found in menstruation, for the fertilised ovum was engrafted on the mucosa in its active phase. The development of the decidua consisted of three stages. In the first stage extensive hæmorrhages occurred in the decidua, and decidual cells were formed in large numbers from the connective tissue corpuscles. These changes were preparatory, and could be found in all parts of the decidua during the first month. In the second stage the chorionic villi invaded the serotina, and the maternal vessels were opened up, thus establishing a circulation through the intervillous spaces. The invasion of the serotina appeared to be the result of the great activity of the trophoblast layer, and the steps of the process were described. The decidual cells also showed great activity in the absorption of blood effused into the serotina. Large lacunæ were formed by the opening up of neighbouring vascular and glandular channels. The changes characteristic of this stage were found at the growing margin of the placenta up to the last weeks of gestation. The third stage represented the adult stage of the serotina. All active processes had then ceased, and the serotina had undergone some amount of consolidation and repair. The course of the maternal vessels through the serotina and their openings into the inter-villous spaces were described in detail. The inter-villous spaces were, according to Dr. Eden, made up (1) of the space existing primarily between the decidua and the chorion; (2) of spaces formed by destruction of decidual tissue; and (3) of glandular and vascular channels opened up in the same way. The circulation through the inter-villous spaces was not rapid, the outflow being chiefly promoted by the intermittent contractions of the uterus. The giant cells so often described in the serotina were really embedded trophoblastic buds. The foetal and maternal structures of the placenta were firmly bound together by the attachment of numerous villi to the serotina; the changes occurring at the site of attachment were described. Owing to this firm union, separation of the placenta during labour occurred, not between the foetal and maternal layers, but through the loose cavernous layer of the serotina. The paper was illustrated by a large number of lantern slides (photo-micrographs), in which the processes described by Dr. Eden were depicted.

Mr. ALBAN DORAN showed a lantern slide (photo-micrograph) of a Section of Placental Polypus. He proposed to deal with the subject of placental polypi and their relation to malignant disease in a paper.

The following specimens were shown:—

Dr. W. DUNCAN: (1) Large Gangrenous Myoma removed by Hysterectomy; (2) Early Embryo in Amniotic Sac which had been retained in utero eight months; (3) Tubal Mole Pregnancy removed by Abdominal Section; and (4) (for Mr. G. H. JONES) Double Monster (Thoracopagus).

Dr. PLAYFAIR: (1) Ovum in a Sarcomatous Uterus which had been extirpated per vaginam; and (2) Sarcoma of Uterus extirpated per vaginam.

Mr. R. O'CALLAGHAN: Myoma of Uterus removed by Hysterectomy.

Dr. LEWERS: Six Specimens of Cancer of the Cervix Uteri removed by Supra-vaginal Amputation, in which eight years, seven years, five years, five years, three years, and two years respectively had elapsed without recurrence.

Dr. ADDINSELL: Deformed Fœtus.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases and Specimens.—Cobra Venom.—Tuberculous Pleurisy.

THE twelfth meeting of this society was held on June 5th, Dr. CLOUSTON, President, being in the chair.

Mr. SHAW MACLAREN showed a Right Kidney removed for Malignant Disease. The tumour was too large to remove between the ilium and ribs, and so it was removed by an anterior incision from the ribs to the groin, with a second incision backwards into the lumbar region. The patient only survived three days, though there was entire absence of shock. There was no peritonitis or suppression of urine. The tumour was a malignant adenoma.—Mr. MacLaren also showed a photograph and microscopic specimen from a case of Malignant Adenoma of the Scalp.

Dr. LEITH showed: (1) the Skeleton from a case of Double Congenital Dislocation of the Hip-joint combined with Rickety Curvatures in the Vertebral Column and Tibiæ; (2) three conditions of Hydronephrosis, in the first of which there was stricture of the urethra; the second showed enormous dilatation of the bladder, marked left hydronephrosis, and hypertrophy of the right kidney; there was no obstruction in the urinary passages; the patient suffered from diabetes mellitus.

Dr. ELDER showed a specimen of a Brain with Hæmorrhage into Broca's Convolution and the part between Broca's Convolution and the Internal Capsule. The part of Broca's convolution affected was the posterior half. The symptoms during life were almost those of bulbar paralysis. There was paralysis of the lower part of the face on the right side, the muscles of the lips, tongue, throat, and those involved in deglutition. The vocal cords were not involved. There was no real motor aphasia.

Dr. ALLAN JAMIESON showed a case of Psoriasis with Peculiar Crateriform Arrangement of the Scales.

Dr. NORMAN WALKER exhibited a case of Eczema and a case of Lupus Erythematosus in an early stage.

Professor FRASER showed Rabbits under the Influence of Cobra Venom. He remarked that he had been struck with the statement, which seemed to be a fact, that snake charmers seemed to be immune to the bites of the most poisonous snakes, and that snakes were immune to the venom of other poisonous snakes. Since 1889 he had been collecting the venom of serpents from India, Africa, Australia, and other parts, especially cobra venom. The experimental work formerly brought forward had been unsatisfactory, though it tended to show that a certain amount of immunity might be produced. In his own experiments he had found it very difficult to immunise animals, more difficult than in the case of diphtheria, for the death-producing qualities of the venom were much greater than that of diphtheria toxin; the minimum quantity killed within a few hours, while in the case of diphtheria it was a matter of several days. He found considerable difficulty, but after a time he succeeded in rendering the animals immune. He had begun by injecting small doses, one-tenth of the minimum lethal dose of the venom at short intervals of two to three days. In about twenty days the dose had been increased to half the minimum lethal

dose; the dosage was gradually increased till, at the end of five months, fifty times the minimum lethal dose could be administered. Two rabbits which had received fifty times the minimum lethal dose were shown. They were in good health and had increased in weight. One animal had received enough cobra venom to kill 320 rabbits of its own weight. Observations with the blood serum of animals immunised to thirty times the minimum lethal dose had been made. He showed a rabbit which had received twice the minimum lethal dose. Thirty minutes afterwards, when toxic symptoms had developed, the antitoxin serum was injected, and the animal almost at once began to recover, and complete recovery took place. In most cases of death in man the fatal issue occurred at a longer period than three hours after the bite, so that probably the individual had not received much more than the minimum lethal dose, and thus the conditions were very favourable to the use of an antidote.

Dr. ALEXANDER JAMES read a paper on Tuberculous Pleurisy. He dwelt on the well-known connexion between pleurisy and tuberculous affections of the lungs, and pointed out how often pleurisy preceded tuberculous phthisis. He described the case of a patient who had been admitted to the infirmary for pleurisy which had lasted two and a half months. There was no tuberculous history in the family. The illness had begun acutely with shivering and pain in the side. Pleurisy with effusion was developed, with breathlessness. As fluid remained in the chest, two and a half months after the commencement of the attack he was sent to the infirmary. The temperature on admission was fluctuating. After some weeks the chest was tapped, 130 oz. being removed by repeated tapplings. No improvement took place. He began to complain of pain in the opposite side. Pleurisy was discovered and effusion rapidly took place. Both sides were tapped repeatedly to relieve dyspnoea. As his condition in the next three months deteriorated the left side was opened and drained, but the patient sank and died. Post mortem the pleura was found very much thickened on both sides; miliary tuberculous nodules were numerous in the lung and pleura; other organs showed tuberculous nodules. Such cases, he remarked, were not uncommon. There had been right-sided pleurisy of a chronic character, followed after some months by pleurisy on the left side, the miliary tuberculous process commencing in the pleural membrane while in a low state of vitality, and spreading to the lungs and other organs. There was no evidence of the tuberculous process having begun in the lung. Cases of pleurisy with a similar course might be met with, but then there was no evidence of tubercle. Thus a man aged forty-seven was admitted to his ward complaining of pleurisy. The family and personal history was good. He had been ill for one and a half months. Effusion was present on the right side, and this was followed by pleurisy and effusion on the left side. Tapping was repeatedly performed, but no improvement took place. He developed catarrhal pneumonia and died, his entire illness having lasted six months. No evidence of tubercle was found post mortem. In these chronic cases no ordinary treatment did good. He advocated the trial of free incision, as it held out the best prospects of a cure. A second plan of treatment might be to aspirate part of the fluid and inject the chest with an aseptic fluid which would increase the absorption from the pleura. Drainage held out the best prospects.—Dr. Affleck, Dr. Philip, Dr. Leith and Mr. Gilles took part in the discussion which followed.

Mr. WALLACE's paper on Some Notes on Hæmaturin Tumours of the Bladder and the Treatment of Enlarged Prostate was taken as read.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Imperforate Anus necessitating Colotomy.—Exhibition of Specimens.

A MEETING of this section was held on May 10th, Dr. R. D. PURSER, the President, being in the chair.

Dr. KIDD described the case of an infant three days old whose bowels had not acted since birth, although it had passed urine. An endeavour was then made to introduce a small soap suppository, but this failed. On examination it

was found that the abdomen was distended and that the anus was normal for a distance of about half an inch, but that even a fine probe could not be passed any further. Unavailing attempts were then made to reach the cul-de-sac of the bowel from the anus. There did not exist any chord-like structure that might serve as a guide to the bowel, nor when separating the tissues (although, as was seen by the specimen, the top of the little finger was within about one-sixteenth of an inch of the cul-de-sac) was there ever felt any impulse when the child cried, nor was there any indication from the sense of touch that the cul-de-sac of the intestine was so near. The tissues were divided with a fine tenotome and scissors for some distance backwards from the anus towards the tip of the coccyx, afterwards exploring as carefully as possible with the tip of the little finger. There is very little room between the rami of the ischia in a new-born infant when a finger, even the smallest, is in the anus. The advice given by most authorities to keep close to the anterior surface of the coccyx was followed. A spring wire nasal speculum of small size was used in the hope of getting a view of the tissues which were being dissected, but no success was obtained. Amussat has recommended the removal of the coccyx as a step of the operation, it allows so much more room. On looking at the specimens now exhibited this is quite evident, and it is a matter of regret that recourse was not had to this procedure. Failing to reach the bowel, the wound was well powdered with boracic acid and dressed with a little iodoform gauze and gauze tissue. On the following day another attempt was made to reach the rectum from the anus, but with no more success than the first. No cutting was done with the knife where the part could not be reached with the finger tip. All endeavours being futile, left inguinal colotomy was performed, but the child only survived six days, dying when it was ten days old. The colotomy relieved it, but death ensued from exhaustion. At the necropsy there was no evidence of any peritonitis. A frozen section of the parts was exhibited, the points of interest in which are: (1) the extreme beauty of the specimen, showing so clearly as it did the exact relation of all the parts—notably, the height to which the empty bladder extends above the level of the uterus; (2) the absence of any chord-like structure that would act as a guide to the termination of the rectal cul-de-sac; (3) the very small amount of oozing from the anal wound after two attempts had been made to reach the bowel; (4) absence of any evidence of peritonitis after death; (5) although the tip of the little finger could be got within one-sixteenth of an inch of the rectal cul-de-sac there was no evidence from bulging or from any impulse conveyed by the child crying that the bowel was so close; and (6) considering the distance of the bowel from the anus, could the rectum have been successfully freed and drawn down so as to stitch it to the anus?—Dr. GLENN said the Academy were very grateful for the opportunity of inspecting the frozen section. In two cases which he had seen operated on in the Rotunda one had recovered, but in the other the rectum could not be found. He would remove the coccyx if he had a case similar to Dr. Kidd's, and he would prefer a Littre's operation to a loin operation, the advantage of a Littre's operation being that after the bowel was opened it was possible to wait till the child got stronger, and then, by passing down a bougie, it could be cut on through the anus. If the rectum was brought down and stitched to the anus there was great trouble in keeping it dilated afterwards.—Dr. SMITH, when assistant-master at the Rotunda, had operated on a case and had succeeded in opening into the rectum. He stitched the rectum to the anus. The child only lived a few days. Except when there was only a simple membrane between the rectum and anus he had not seen any cases operated on which had recovered.

Dr. ALFRED SMITH showed an Ovarian Cystoma removed from a married woman aged twenty-nine years. The diagnosis caused considerable difficulty. In September, 1894, the patient had a severe pain in her right side in the neighbourhood of the umbilicus, and shortly afterwards felt a tumour in this region. She stated that it underwent great alterations in size. The sudden diminution was followed by an increased quantity of urine. Examination revealed a tumour the size of a small foetal head, freely movable in every direction, capable of being easily pushed up under the ribs, and distinctly reniform, the hilum being well marked. Drawing down the uterus to the full extent and pushing up the tumour under the ribs did not stretch the pedicle so as to convey impulse. Operation revealed a multilocular ovarian

tumour having an extremely long pedicle and a shape distinctly like that of a kidney. One of the cysts was perforated by a well defined punched-out hole, through which the cyst contents escaped into the peritoneal cavity. This hole explained the sudden diminution of the size of the tumour. The recovery was rapid.—Dr. KIDD asked whether any peritonitis was present. According to Dr. Smith's theory the tumour emptied itself through the opening into the peritoneum. The fluid in most multilocular cysts was irritating to the peritoneum.—Dr. SMYLY said the tumour had a close similarity to one caused by hydronephrosis, both in its shape and in its becoming larger at times. Referring to the escape of the fluid he said that, if the cyst was an ordinary proliferous glandular cyst, it would contain pseudo-mucin, which is not easily absorbed by the peritoneum, and which would, therefore, have been found in the peritoneum. On the other hand, if it was a papillomatous cyst the prognosis was very bad.—Dr. SMITH, replying, said there was no evidence of peritonitis except that there was a fair amount of ascites present. He hoped that it was not a papillomatous cyst.

Dr. GLENN exhibited a Uterus removed by Vaginal Hysterectomy for Epithelioma of the cavity.—Dr. SMYLY thought that in cases of cancer of the body not involving the cervix removal by ligature was the best method, as the uterus had not then to be opened. The uterus might, however, be too large to remove entire.

SECTION OF PATHOLOGY.

Chronic Articular Rheumatism.—Fracture of the Fibula.—Exhibition of Specimens.

A meeting of this section was held on May 17th, the PRESIDENT being in the chair.

Dr. BENNETT read a paper upon the Limitation of Chronic Articular Rheumatism. Referring to the extraordinary polish shown by the pisiform bone in one of the specimens, he said that where there was the least range of movement there was always the greatest amount of polish.

Dr. E. H. BENNETT gave the details of three cases of Fracture of the Fibula, with Dislocation of the Ankle-joint, which had united with great deformity; he had, however, been able in great measure to rectify this by extension and manipulation. The cases had been left unreduced for periods respectively of a month, six weeks, and, lastly, three months. He pointed out the error of regarding Pott's fracture as the commonest injury of the fibula found associated with dislocation of the ankle. He showed by the series of fractures collected in the museum of Trinity College and by his own clinical experience that the oblique fracture of the external malleolus, caused by traction acting through the external lateral ligament, is of much more frequent occurrence than the classical Pott's fracture.

Mr. H. GRAY CROLY and Mr. GRAVES showed an Aneurysm of the Abdominal Aorta which had commenced posterior to the cœliac axis. The sac had become firmly adherent to the lumbar vertebrae, and had also firm adhesions with the left side of the diaphragm and the left psoas muscle. There had been no symptoms of aneurysm during life, no pulsation, and no pain in the back, although the anterior surfaces of the first dorsal and first and second lumbar vertebrae were eroded, pain in the region of the left kidney alone being complained of. The kidney was displaced downwards by the aneurysm. Death took place suddenly from rupture through the diaphragm into the left thorax.—Dr. McWEENEY wished to know how an aneurysm situated behind the cœliac axis ruptured into the left pleural cavity. A short time ago he saw a case in which an aneurysm situated in the middle of the dorsal region of the aorta had ruptured into the substance of the lung and not into the pleural cavity.—Dr. GRAVES, in reply, said that the aneurysm had become glued to the psoas muscle, and had eroded it and pushed it up, and that it had then burst through the diaphragm.

Dr. J. O'CARROLL exhibited the Brain and Spinal Cord of a case of Syringomyelia.—Dr. McWEENEY said the case was absolutely unique in his experience. The only part that he had as yet been able to make sections of was in the cervical region. The section was stained by Pal's method. The central canal was lined by the usual columnar epithelial cells. At each lateral aspect there was a cleft or aperture through which the central canal communicated with two wing-shaped cavities, which extended back to the exit of the posterior nerve roots. There were then two things which had occurred. One a dilatation of the pre-existing central

canal, and the second a channeling out of the grey matter on each side of the cord. There was no evidence of neuroglia either of new formation or of embryonic origin. The cavity in the grey matter was bounded by inspissated grey matter. The dilatation of the cavities of the central nervous system must have been forming many years before the spinal cord symptoms appeared. Then it suddenly opened out the grey matter on each side of the cord, forming there two large cleft-like cavities, extending through its whole length. In the cervical region there was a small aperture between the central canal and the canal in the grey matter. This aperture gradually widened out, so that in the dorsal region there was no division between the two canals. The sclerosis was chiefly situated in the white matter of the posterior columns.

SECTION OF SURGERY.

Injuries involving the Articulations of the Metacarpal Bone of the Thumb.

A meeting of this section was held on May 24th, the President, Mr. W. THORNLEY STOKES, being in the chair.

Dr. E. H. BENNETT, speaking on the subject of Dislocation of the Metacarpal Phalanx of the Thumb forwards, exhibited photographs of a recent specimen of unreduced dislocation, and casts of several others, the histories of which prove that this dislocation frequently remains irreducible, even while still recent—a fact the cause of which was as yet not ascertained. He next projected on the screen with the lantern representations of the lateral dislocation of the metacarpo-phalangeal articulation outwards, published by Beasel Hagen, which is the only example of this lesion recorded. He then exhibited photographs of a lateral dislocation of the joint inward, taken from the cast of the limb previously to dissection. This is the first record of an internal dislocation of the joint. In this hand the metacarpal bone of the thumb was at its base completely dislocated backward, presenting a deformity which Dr. Bennett contrasted with the deformity produced by fracture of the base of the metacarpal bone of the thumb, of which he exhibited a large number of photographs, in proof of his assertion that this fracture is a very common injury.—The PRESIDENT said the paper was exhaustive, and, to a very great extent, original.—Mr. MYLES had only met with one case of Hey's dislocation in the living. After some trouble he had reduced it by exaggerating the deformity, the patient being under chloroform. He did not comprehend how the sesamoid bones got between the head of the metacarpal and the base of the phalanx, with their articular surfaces turned towards the latter.—Mr. HEUSTON said that five months after the occurrence of a compound dislocation of the carpo-metacarpal joint of the thumb, when the dislocation was still present, he dissected down on the articulation, from the internal aspect, and found that the sesamoid bones had got between the two parts. He dissected them out, and was then able to reduce the dislocation. He did not see which way the articular surfaces of the sesamoid bones were turned.

THE CONVERSAZIONE of the Society of Arts is fixed to take place at the South Kensington Museum on Wednesday, June 19th. The reception will be held by Major-General Sir John Donnelly, K.C.B., Chairman, and the members of the council of the Society; and promenade concerts, a glee and madrigal concert, and a vocal and instrumental concert will be given at intervals during the evening.

GORDON'S NATIONAL MEMORIAL.—The annual general meeting in connexion with the Gordon Boys' Home was held on Monday last at the Mansion House, under the presidency of Sir Reginald Hanson. The annual report showed that the number of boys in the Home during the year ending March 31st last was 340. It had been necessary to send some of those admitted away, while a few wild Arabs had absconded. Of the remainder some had enlisted in the army and navy, others had been found situations in civil occupations, and three had been helped to emigrate. The total expenditure for the year had exceeded the income by £4423, £2013 of which deficiency had been made good from the donations received during the year. A most deserving charity, instituted in appropriate honour of one of our most popular, and deservedly popular, national heroes, should not be thus left to depend on its capital for its current expenses.

Reviews and Notices of Books.

Traitement des Fractures par le Massage et la Mobilisation.
Par le Dr. LUCAS-CHAMPIONNIÈRE, Chirurgien de l'Hôpital
Beaujon. Paris: Rueff et Cie. Pp. 564. 1895.

OF recent years many departments of surgery have advanced with enormous strides, but in the treatment of fractures of bones very little progress has been made. Long ago it was laid down as a rule admitting of practically no exceptions that absolute immobility was the essential element in the treatment of fractures, and the changes made were chiefly attempts to attain to the perfection of immobility. But of late years there have been a few who have urged that the harmful results of complete immobilisation of a fractured limb more than counterbalance the advantages claimed for it, and the work before us is the fullest account hitherto published of the treatment of fractures with the minimum of fixation. Dr. Championnière tells us that in 1867 he saw a case of unrecognised fracture of the radius which had united without any impairment of the function of the limb, the patient having used the hand from the time of the accident. This case induced him to attempt the treatment without fixation of all fractures of the radius which came under his observation. Later in 1874 he applied the same principles to fractures involving joints, but it was not until 1884 that his treatment assumed its present form.

The book commences with a historical introduction, and a chapter is devoted to proving that the results of fixation are far from being all that could be desired; thus, although fixation may relieve the pain at the time, yet the pain felt on attempting to use the limb subsequently is often very great, and, though six weeks after a fracture of the leg a patient may be able to get about on it, yet it is much later before he can use it as freely as he could before the accident. The author then proceeds to lay down the principles which should, in his opinion, govern the treatment of fractures. He urges that some degree of mobility at the seat of fracture is essential for the formation of sufficient callus, and that massage, judiciously applied, assists the consolidation of the bone and preserves the suppleness of the joints, muscles, and tendons in the neighbourhood of the fracture. The author lays great stress on the painlessness of the process of massage over the seat of fracture, and even claims that the pain which has previously been present is relieved. He then describes four ways in which massage may be applied. In the first the massage is commenced immediately after the accident and regularly continued. The cases suitable for this are those fractures which are not liable to displacement, as fractures of the radius and the fibula; it is also to be used in fractures near joints, as in fractures of the neck of the humerus and certain fractures of the condyles of the femur. In the second class of cases immediate massage is employed, followed by the application of a splint. This may be used for the fractures already mentioned when the tendency to displacement is great, and also for fractures just above the malleoli. By the third method an immobilising apparatus is applied, and removed at the end of two or three days, when massage is performed and the splint is reapplied, this procedure being repeated every day. This can only be done for fractures where the displacement has a medium tendency to recur, as in the leg and the arm, especially the forearm. In the last class of cases complete immobilisation is employed, and after the commencement of consolidation, massage is used. This applies to cases where the mobility of the fragments is very great; by the fixation at first a mass of callus rapidly forms, sufficient to allow the splint to be withdrawn for the purpose of performing massage, and the splint may or may

not be replaced after the massage, according to the mobility of the fragments. In this class are included fractures of the upper end of the humerus and of the lower end of the same bone. Dr. Championnière acknowledges that there are certain fractures for which massage cannot be employed, and for some others massage is possible, but difficult. The contraindications for massage are two in number—firstly, when the mobility of the fragments is very great and threatens to lead to permanent and marked deformity (though in some of these it may be usefully employed when partial consolidation has occurred), and, secondly, when the fracture is compound and the wound is in a situation to interfere with the massage. It is advised that each application of massage should be at least a quarter of an hour in duration, but that half an hour is better, except just at first.

Many chapters are devoted to the consideration of the various fractures in detail, and those forms of massage are described which are applicable to each. Numerous explanatory illustrations are given of the manipulations to be employed. As to the results the author claims that the full function of the limb is obtained as soon as the bone is firm enough to be used. The method advocated in this volume deserves at least a careful trial at the hands of the surgeons of this country; and though its application may prove to be somewhat more restricted than its inventor claims, yet probably its employment in some cases will lead to results not to be obtained by the methods hitherto in use.

A Manual of Gynecological Practice for Students and Practitioners. By Dr. A. DÜHRSEN, Privat-docent in Midwifery and Gynecology in the University of Berlin. Translated and edited from the fourth German edition by J. W. TAYLOR, F.R.C.S. Eng., and FREDERICK EDGE, M.D. Lond. With 120 illustrations. London: H. K. Lewis, 1895.

THE translators have done good service by rendering Dr. Dührsen's excellent little text-book available for the general English reader. Much of it is, as they say, coloured by the individuality of modern German thought and method. We agree with them that this is rather an advantage than not, and that it gives a freshness to subjects which are otherwise somewhat well-worn. The translators have added footnotes at various parts of the work where the author's views seemed to them to require amplification or qualification. Among the special features of the book may be noticed the description of Dührsen's vaginal operation for fixation of the uterus. In this operation, by which it is claimed that retroflexion may be completely and permanently cured without any danger, the peritoneal cavity is opened between the bladder and the uterus, and the body of the uterus is sutured to the anterior vaginal wall. Another operation evidently in favour with the author is vaginal coliotomy; the vesico-uterine pouch of the peritoneum is opened, not Douglas's pouch, as would perhaps have been more generally expected. Although it is claimed that after the operation there is no more disturbance than after a curetting, the sphere of the operation would seem to be a very limited one. There are two points in regard to pessaries which seem to us of general interest. First, as regards the treatment of retroflexion by pessaries, the author is of opinion that a permanent cure may be obtained in varying periods of time; that is to say, that the uterus will then remain in its normal position without a pessary. The second point concerns the treatment of prolapse by pessaries. Dr. Dührsen considers that a true prolapse can only be cured by operative means and not by pessaries. Although these may keep the prolapse up, it is only by stretching the vagina, so that in the end they make matters worse. He concludes, therefore, that the use of pessaries in the treatment of prolapse is to be rejected as

wrong in principle. We do not think that in cases of prolapse where the vaginal portion comes outside the vulva it is quite correct to say, as is stated in the text, that the fundus uteri retains its normal elevation; nor, on the other hand, do we agree with the footnote made by the translators on this point, in which they say that in most of the cases in question the sound will not pass beyond the usual distance. Generally the sound in such cases passes four or five inches. We see that the translators consider that the liquid extract of viburnum prunifolium is of all drugs supposed to have any influence on chronic oöphoritis, the most reliable. The translators recommend for obtaining and keeping up anæsthesia a mixture of two parts of ether with one of chloroform, given with Clover's Inhaler without using an air-bag. There is an excellent section on the disinfection of instruments and appliances, and, indeed, the whole work will amply repay perusal by all interested in the subjects of which it treats.

Manual of Practical Morbid Anatomy. By H. D. ROLLESTON, M.A., M.D., F.R.C.P., Fellow of St. John's College, Cambridge, Assistant Physician and Lecturer on Pathology at St. George's Hospital, and A. A. KANTHACK, M.D., M.R.C.P., Lecturer on Pathology at St. Bartholomew's Hospital. Cambridge: University Press. 1894.

THIS small and beautifully printed volume is one of the biological series of the Cambridge natural science manuals, and is intended to serve as a handbook for the post-mortem room, and it does so most completely. Its objects are two: (1) to indicate the incisions and the most convenient way of examining the organs of the body, and (2) to point out the morbid changes to be looked for, thus making it a valuable manual of morbid anatomy, and not a mere post-mortem guide. A systematic method of examination has been described paragraph by paragraph, and, in special cases, modifications are also introduced. The normal appearances of organs, the common variations, and the effects of post-mortem change are carefully pointed out. But besides the ordinary methods of a post-mortem examination, in confirmation or otherwise, of the diagnosis of the physician or surgeon, the higher pathological uses of the necropsy are carefully kept in the foreground of the work. Details of preparations for further microscopical and bacteriological observations are most carefully given, and in the introduction directions are also added for the temporary or permanent preservation of specimens of morbid anatomy. These are taken almost literally from a letter of Mr. E. W. Willett, curator of the Museum of St. Bartholomew's Hospital, published in THE LANCET of Nov. 25th, 1893. The first chapter in the work is devoted to general matters, and the signs of death, rigor mortis, hypostatic congestion, the examination of the skin, the peculiarities of a medico-legal examination, the nature and direction of wounds, and the points to be specially noted in a necropsy on a newly-born infant are briefly but clearly described. The other chapters deal successively with the preliminary examination of the abdomen, the examination of the thorax, the detailed examination of the abdominal viscera, the examination of the kidneys and pelvic viscera, the head (including the brain, eye, ear, and nose), the spine and spinal cord, the joints and bones, and lastly the female breasts. One point of detail in which we differ from the authors is with regard to the removal of the small and large intestines during the preliminary examination of the abdomen before the thorax is opened. We should certainly leave them *in situ* until we had completed the examination of the thorax, and examine them in anatomical order with the other abdominal viscera. Again, we should not cut across the duodenum but the commencement of the jejunum, and should always apply a double ligature and cut the gut between, for no one can ever be sure at this stage that the preservation of the contents of

the stomach and duodenum may not be required for further examination. These, however, are points of but minor importance, and we would add that in our opinion it should be a compulsory part of every student's medical education for him to have made some post-mortem examinations under the supervision of a teacher. If these were carried out in the thorough and orderly manner laid down in this handbook this experience would be of the utmost service to him in his after career, whether as a practitioner or teacher.

LIBRARY TABLE.

Comfort in the Home. By M. J. LOFTIE. Leadenhall Press. 1895.—The progress of medical science is universally allowed to be tending more towards the prevention of diseases than to the curing of them when once they are established. Some sage once said it was worry, and not work, that killed; and in the unpretending little book before us we find various plain directions for the prevention of worries in the home—not, indeed, the worries which arise from babies or "incompatibility of temper," but matters like lamps, fires, and dust-bins. Nothing is more annoying than a lamp which smokes, and how few servants know how to "do" a lamp properly. If they will look at Mrs. M. J. Loftie's plain rules they will find out. We rather disagree with the author's direction, "Blow lamps out, don't turn them down." In certain forms of cheap lamp to blow down the chimney means death; and in those of better construction the flame should be turned low and then blown out by a sharp puff *across* the chimney-top. This, however, is the only flaw we have been able to find in a really admirable little work.

Dental Microscopy. By A. HOPEWELL SMITH. Pp. 119. With Eight Lithograph Plates from the author's original drawings. London: The Dental Manufacturing Company, 6 to 10, Lexington-street. Philadelphia: The S. S. White Dental Manufacturing Company, Chesnut-street.—This is an excellent little volume. The present standard works on histology give hardly sufficient data with regard to the preparation of good specimens of the dental tissues, but this want will be no longer felt, for Mr. Hopewell Smith's book contains all the information that can possibly be needed. The subject matter is divided into eight chapters, the first of which deals with the necessary apparatus required; the second, third, and fourth with the preparation of the hard and soft tissues; the fifth, sixth, and seventh with imbedding, staining, and injecting; and the last with photo-micrography. Preceding the subject matter are eight lithographed plates illustrative of dental histology. These are worthy of much praise, the drawings being very fine and conveying a truthful impression of the actual appearance of specimens when viewed through the microscope. Altogether this book will form a correct and concise guide to those who work, or intend to work, in the much-neglected field of dental microscopy.

Report of the Devonshire Hospital and Buxton Bath Charity.—This report, which includes the period from May 1st, 1894, to April 30th, 1895, shows that during the year 2610 in-patients have been under treatment in the institution. This number is fewer by 141 than was recorded at the last subscribers' meeting. More than the whole of this lessened number applies exclusively to the first three months of the present year, as the number under treatment during 1894 was 97 in advance of the year preceding, and this smaller number was therefore due to the exceptional severity of the weather during the period. The results of the residence and treatment were not less satisfactory than usual. Of the 2610 patients under treatment 2279 were discharged as "improved," 109 as "no better," 7 by "own request," 5 were found to be "unfit cases" for the hospital, 2 were "infected with vermin," two were "transferred" to be out-patients, one

was found to be "mentally affected," one was discharged for "breach of rules," four "died" during their stay in the hospital, six left "without report," and 194 remained "on the books" on April 30th. The four deaths serve to impress the fact that many of the cases are of seriously urgent character, and also to demonstrate the nature of the work of the hospital. By means of a postcard, given to every patient on leaving the hospital, and returned after an interval of six weeks, more than two-thirds are stated to have been benefited, and seven of these to have died within this short period after discharge. It may be noticed that no fewer than 454 of the cases of rheumatic character were found to be complicated with morbid conditions of the heart, and that 2279 of the cases were of a rheumatic or gouty nature.

Analytical Records FROM THE LANCET LABORATORY.

BINIODIDE OF MERCURY AND OTHER SOAPS. (EDWARD COOK AND CO., SOAP WORKS, BOW.)

AMONGST the number of excellent medicated as well as toilet soaps manufactured by this firm the antiseptic soap made with the periodide of mercury stands first in point of interest to the profession. The powerfully antiseptic action of mercuric iodide (HgI_2) is well known, and has been made use of with very good results in parasitic and other diseases, and the convenience of being able to employ it in the comparatively harmless form of soap is obvious. This is done by first dissolving mercuric iodide in potassic iodide, forming a double salt, which is none the less antiseptically powerful than the pure metallic iodide, while with soap it is perfectly compatible and quite stable. Excellent results are recorded of its application in skin diseases, eczema, ringworm, &c. The biniodide soap is prepared in two forms—the first for ordinary usage, and the second (a well-dried soap) for toilet purposes. From its composition it should be a very effectual antiseptic agent, and of peculiar service where antiseptic treatment is indicated. We have examined also two specimens of carbolated soaps—one intended for ordinary purposes and the other of a superior kind and adapted for the toilet. Lastly, the specimen of pure toilet soap, known as "super-fatted Riviera soap," leaves little to be desired in regard to its composition, since it contains a minimum of moisture (5 per cent. only) and gives no indication of free alkali; on the contrary, it contains (as its name implies) a slight excess of fats. It is, therefore, free from those qualities present in carelessly-made soaps which are injurious to delicate skins.

RECENT TABLOIDS.

(BURROUGHS, WELLCOME, & CO., SNOW-HILL-BUILDINGS, E.C.)

"Residuam Rubrum Tabloids" consist practically, as our examination by the spectroscope of an acidulated and alcoholic solution shows, of the hæmatin of bullock's blood, which is, of course, a natural organic iron compound, and therefore one which is likely to be readily appropriated. "Thymus Gland Tabloids" are obviously convenient for use in all lymphatic conditions, and, as recent experience has shown, in some forms of pernicious anemia and leucocythemia. "Dried Sulphate of Iron Tabloids" are supplied for the treatment of anemia, the iron being more permanent in this form than in many other salts. On the assumption that "zymines" or the pancreatic ferments when taken by the mouth are digested and destroyed by the gastric fluids, tabloids coated with keratin containing these ferments are prepared. Their passage unimpaired into the duodenum and intestinal tract is thus ensured. A powerful

antiseptic and germicidal compound is represented in zinc permanganate, which in tabloid form may be readily used for the preparation of a solution for injection, as in gleet, or for gargling the throat. One of the most satisfactory features of the tabloid (omitting the specially coated tabloids) is the surprising and ready way in which it first swells up when placed in water and then collapses into fine powder, so that the employment of the drug in the best possible physical form is inevitable.

VARIOUS TEAS GROWN AT HIGH LEVELS.

We have recently received a number of samples of tea forwarded by Mr. Feltwell of Tolcarne, Chiswick, which are said to illustrate that the greater the elevation at which the tea plant is grown the smaller is the amount of astringent matter developed in the leaf, although it is further stated that at the same time no practical depreciation in regard to the refreshing qualities and alkaloidal constituents of the plant takes place. These teas are said to differ, therefore, in the important respect that they contain much less tannin than the bulk of teas which, on the contrary, are grown comparatively quickly under the influence of the greater warmth of lower elevations. So far as regards the character and taste of the infusions yielded by these high grown teas we found distinct evidence that to some extent this is the case; there is a marked absence of roughness on the palate, the taste is smooth and delicate, whilst it lacks little of the peculiar aromatic character of ordinary teas of excellent quality. Some analyses we made lend further support to this view, since in the accompanying table it will readily be seen that the five minutes' infusion of the high-grown teas—using the same amount of tea in every case—contains a goodly proportion of caffeine (nearly as much, in fact, as in the powerful variety of tea placed side by side in the table), but a notably less proportion of

COMPOSITION IN GRAINS OF HALF A PINT OF CLEAR TEA
IN WHICH ONE TEASPOONFUL OF LEAF (40 GRAINS)
HAD BEEN USED.

TABLE I.—Five Minutes' Infusion.

Constituents.	Pekoe.	Pekoe Souchong.*	Broken Pekoe.*	Broken Souchong.	Pekoe Souchong.	Indian tea (Assam).
Extract	11.50	11.30	13.60	14.00	12.00	14.40
Mineral matter ...	1.30	1.40	1.30	1.90	1.70	1.80
Tannin	1.90	2.00	2.66	3.33	2.65	4.00
Caffeine	1.00	0.80	0.92	0.96	1.21	1.50

* These samples had been submitted to a drying process.

TABLE II.—Thirty Minutes' Infusion.

Constituents.	Pekoe.	Pekoe Souchong.*	Broken Pekoe.*	Broken Pekoe.	Pekoe Souchong.
Extract	16.66	16.00	17.33	18.23	17.82
Mineral matter ...	1.83	1.66	1.76	2.33	1.66
Tannin	3.10	3.17	3.33	3.73	3.17
Caffeine	1.36	1.34	1.40	1.64	1.64

* These samples had been submitted to a drying process.

tannin. Even a thirty minutes' infusion of the high-grown teas (Table II.) is found to contain less tannin than a five minutes' infusion only of strong Indian or low-grown tea. We have obtained evidence also which shows that there is a distinct increase in the amount of those essential oils which largely determine the agreeable character of tea. There would appear to be, therefore, a distinct dietetic advantage

gained by cultivating the plant on high elevations, where it grows slowly and where it never attains anything like the height and proportion of the plant grown on lower, warmer, and probably moister levels. Thus, to take one example, at Darjeeling, 7000 feet above sea level, the yield is said to be but 200 to 300 lb. per acre, while on the plains of Assam, where the level is only 100 to 500 feet above the sea, it averages from 800 to 1200 lb. per acre. The former teas, however, are moderate in price, and there is considerable interest attaching to the fact, we think, that we have been able to confirm by our own analyses and examination the important dietetic advantage claimed for them, which is that while they do not lack the refreshing qualities of tea as regards flavour and substance, yet they are destitute of that harshness which in powerful teas is ascribed to a preponderance of astringent substances.

STOUT.

(WHITTHREAD & CO., LIMITED, 277, GRAY'S-INN-ROAD, E.C.)

This is a moderately priced and genuine malt liquor, containing 6.43 per cent. of absolute alcohol by weight and 8.01 per cent. by volume; malt extractives, 7.46 per cent.; nitrogenous matters, 0.75 per cent.; and mineral matter, 0.29 per cent. It is free from undue acidity, and, as the above analysis shows, contains to a satisfactory degree those additional nourishing properties which beer, when made with burnt malt, is well known to possess. Its flavour is ripe but mellow.

PREPARED SOUPS.

(LONDON AGENCY: A. CHADWICK, 7, CARLTON-STREET, REGENT-STREET, S.W.)

A very satisfactory feature of these preparations is that, in spite of being "tinned," they yield a highly nourishing liquor which possesses all the characteristics of fresh soup. Two kinds were submitted to us, respectively called "turtle for invalids" and "beche-de-mer soup," the latter being made from the fresh test fish, which has afforded a source of food much prized by the mandarins and wealthy Chinese for centuries. The soups were quite free from objectionable preservatives, and we could trace no injurious metals. They are excellent and satisfactory substitutes when the material cannot be easily or freshly procured.

New Inventions.

SOUTHALL'S NEW SANITARY TOWEL.

THE sanitary towel of this firm, as originally devised, has been a great convenience to women of all classes as a cleanly and economical method of dealing with catamenial troubles. It consisted of a pad of absorbent cotton-wool enclosed in a gauze covering, with a thin layer of non-absorbent cotton-wool as a backing. The contrivance was in every way superior to the ordinary diaper, being more absorbent, comfortable, and cleanly, while it was offered to the public at the cost of the washing of a diaper—viz., one penny. But it was admitted that inconvenience frequently arose in the use of that sanitary towel in consequence of the area of the discharge contracting as the discharges advanced in the pad. The viscous nature of the catamenia was answerable for this failure, which in some cases, where the discharge was copious, led to serious discomfort as well as to injury of the clothes by the arrest of the absorption. The manufacturers are now making the towel in a modified form by which the absorbent qualities are enhanced. A pad is constructed of alternating layers of absorbent cotton-wool and gauze, and it has been found that when the discharge has passed through a thin stratum of absorbent cotton-wool its area, which in its passage through the wool had been gradually contracted, immediately upon coming in contact with the gauze spread laterally and, as it were, made a fresh start of larger area in entering the next layer of cotton-wool, when the process of contracting and spreading was repeated. In this way the tendency in the flow of the discharge to contract its area is counterbalanced, and the inconvenience of

imperfect absorption—dammed-up discharge with consequent roughened edges of the pad and perhaps overflow soiling of the clothes—is remedied. The improved "towels," like the original "towels," are, of course, intended to be burnt after use, and are sold at one penny each.

THE "HOLDFAST" ENEMA SYRINGE, WITH ANCHOR END.

WE have received from Messrs. W. H. Bailey and Son, 38, Oxford-street, a specimen of their new enema syringe. There are two points to be noticed about this instrument: first, it is entirely free from metal; and, secondly, the end which is placed in the solution to be injected is fashioned on the principle of the toy known as a sucker, so that it adheres to the basin, and thus the annoyance so common with the older forms of syringe of either having to hold the end under water or of seeing it slip out is entirely done away with.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 5.30 P.M. on June 5th, at 101, Harley-street, W. Mr. George Pollock, the President, occupied the chair. The minutes of the last meeting of the committee were read and confirmed. A letter from the Secretary of the College was read stating that the President of the College had appointed Monday, the 10th inst., at 4 P.M., for the reception of the proposed deputation from the Association of Fellows, and asking to be furnished with the names of those constituting the deputation and with the special matters which the deputation intended to bring before the committee of the Council. The committee then took into consideration the points of reform to be pressed upon the committee of the Council appointed to receive deputations from the Fellows of the College by the deputation from the Association and the composition of the deputation.

A letter was read from Dr. Ward Cousins accepting the invitation of the committee to stand at the approaching election as a representative of the views of the Association, and the honorary secretary reported that Mr. C. B. Keasley and Mr. Victor Horsley were unable to come forward as candidates. The selection of Mr. A. T. Norton and Dr. J. Ward Cousins as the candidates of the Association was then unanimously confirmed, it being understood that Mr. Willett's re-election should also be supported.

The committee then proceeded to draw up a circular letter to be issued to the Fellows of the College detailing the concessions already gained for the Fellows by the agency of the Association, and the further alterations in the Charters and by-laws which the Association was endeavouring to secure.

A deputation from the Fellows' Association had a conference with a committee of the Council of the College in the council-room of the College on Monday, June 10th, at 4 P.M. The members of the deputation were Mr. George Pollock (President), Mr. A. T. Norton, Mr. Vincent Bell (Rochester), Mr. Victor Horsley, Mr. Herbert Allingham, and Mr. Percy Dunn (honorary secretary). They were received by the President (Mr. Christopher Heath) and Vice-Presidents (Mr. Reginald Harrison and Mr. Willett), Mr. Howse, Mr. Morris, Mr. Rivington, and Mr. Tweedy. Mr. T. Holmes, Mr. Parnell, and others were prevented from attending the deputation, and Mr. Bryant was unable to appear on the committee. The suggestions for the alterations in the Charters and by-laws, which had been previously submitted to the committee and have appeared in our columns, were formally submitted and explained. A long discussion ensued, and at the termination of it the deputation was asked to furnish the committee with a *précis* of their reasons for urging the various proposed changes. This the deputation undertook to do, and the conference, which lasted for nearly two hours, terminated with a vote of thanks from the deputation for the courtesy with which they had been received and the attention with which they had been listened to by the President and the committee.

THE LANCET.

LONDON: SATURDAY, JUNE 15, 1895.

THE fifty-eighth session of the General Medical Council, lasting nine days, came to an end on Thursday, the 6th inst. The discussion of the Midwives Registration Bill may by many be thought to be superfluous, seeing that the principle of it has received the attention of the Council for nearly twenty years. It would be quite within the truth to say that the Council has for that period unanimously accepted the principle of it. The Act of 1886, though it made little difference to midwives, did raise midwifery to the level of medicine and surgery. But the Act of 1886 did something more: it gave direct representation. And until now it can scarcely be said that a Midwives Bill has been discussed in the light of direct representation. That can no longer be said.

The Council has devoted the best part of three days to the subject and, under the strong pressure of a party much opposed to any such legislation, has reconsidered its many resolutions in favour of it. The result is to reaffirm the conviction that something must be done to remove the scandals of midwives' midwifery; but the Council has taken the utmost pains to minimise this something, so that the contemplated midwife shall be, as in the past, a nurse-midwife, and nothing more; that she shall discharge no medical functions and assume no medical airs or titles; and that if she does assume such functions or titles she shall in so doing expose herself to penalties, including removal from the register. The Council has, moreover, suggested that in regard to the form of certificate to be given—and this only by bodies approved by the Midwives Board—the approval of the Midwives Board and the General Medical Council shall be secured. The Council also desired amendment of the absurd provision in Clause 16, requiring the consent of the Attorney-General to prosecutions under the Act, and the substitution of the consent of the Midwives Board or of the local authority. It will thus be seen that the Council has endeavoured to safeguard the profession. There is a very general agreement that public opinion demands some legislation of the sort which was under discussion. They are no friends of the General Medical Council or of the principle of direct representation who would set the Council and the direct representatives of the profession against such a demand. The bulk of the profession recognise that there is a great section of the community who are too poor to be attended at any fees which a registered medical practitioner can take, and yet cannot be treated as if they were paupers. It is inevitable that they should largely be attended by midwives. The least that law can do is to secure that they shall be in a degree "protected" from a class of women who have absolutely no knowledge and very little character; that a class with a little knowledge and some character shall be placed within their reach, whose training shall be sound, if rudimentary, and who shall at least be taught to understand that they are to act only in normal cases

and in subordination to medical men. These are the views which the General Medical Council has affirmed again for the fourth or fifth time. Fortunately the Council enjoys now in a large degree the confidence of the profession. It has in the matter of the certificates of the Obstetrical Society shown its determination to protect the medical profession, as in the recent debate it has shown its anxiety to "protect lying-in women from the incompetent." It is not likely to revert to this subject again for many years. It would scarcely be justified in doing so. Henceforth the responsibility for "Gamps" must rest with the Government and with Parliament. Those who are opposed to any legislation will have to make their influence felt without the help of the Council. It may well restrain them to know that by resisting this modest demand they are preparing the way for an inferior race of quasi-medical practitioners, be they trained nurses of three years' standing or unqualified assistants in the form of man-midwives, whose pretensions will be a far more serious competition to medical practitioners than anything contemplated in the Midwives Bill.

It is an illustration of the serious demand on the Council's time made by such matters as the Midwives Registration Bill and lengthy penal cases that when the time came for a formal discussion of the Final Examinations, based on the reports of the Inspector and Visitor and of the Examination Committee, the subject had to be referred to next session. The only consolation is that the General Medical Council in this way keeps some control over the lines of legislation. It would be very unsatisfactory if such Bills as a Midwives Bill could be passed without the amendments suggested by the Council. Another illustration of the importance of the advising functions of the Council is to be found in its action in regard to the recognition of foreign diplomas. The Government of the Netherlands asked for leave to practise in the United Kingdom for its subjects holding a Netherlands diploma. The Council, through its Education Committee, pointed out to the Lord President of the Privy Council that while the Netherlands Government insisted on an examination in final subjects from those holding British diplomas wishing to practise in the Netherlands it would be wrong to concede the privilege asked. Such action on the part of the Council is of the first importance; and it is no slight testimony to the moderation and impartiality with which in public questions the Council discharges its duties that it should be consulted by the Privy Council. We have before now had occasion to find the General Medical Council not entirely alert to its best method of procedure, and even not alive to its weighty responsibilities—our readers will not desire the occasions to be more precisely instanced; but on the whole we congratulate the members upon the result of their fifty-eighth session's work.

THERE seem many signs that we are witnessing the decay of hypnotism. The stream of hypnotic literature would appear to be gradually subsiding—not, perhaps, before it was time—and the interest in the subject, both public and professional, is evidently on the decline. The claim of hypnotism to take rank, not as a curious psychological phenomenon, but as a recognized branch of therapeutics, is

now pressed with much less insistence and sincerity than was the case a few years ago; and it would seem that history is once more repeating itself, and that the periodic burst of attention and curiosity evoked by the subject has for the present, as on former occasions, spent its force. To readers of THE LANCET such a course of events will be in no way surprising. While admitting that modern hypnotism presented some new developments and refinements, we have always maintained that in essence it was identical with the mesmerism, Braidism, animal magnetism, and electro-biology of former times, and that in due course it would be found to be barren, if not noxious, in the field of medicine. Students of psychology must always be interested in the curious phenomena of hypnotism, but we feel more than well justified in having resisted the intrusion of hypnotic doctrine and practice into the domain of medical science. The dangers of the proposed new departure were evident and grave, its advantages at best problematical, at worst illusory and deceptive. It may not be amiss to recall some of the salient features of a controversy which, we suspect, is nearing its predestined termination.

A cardinal point, *ab initio*, was, Are hypnotic phenomena normal or abnormal, physiological or pathological? It has been alleged that the phenomena were perfectly normal and natural, and some of the apostles of the movement have even gone so far as to assert that more than ordinary strength and balance of mind were necessary to constitute anyone a thoroughly good subject for hypnotism. It was said that the power of sustained concentration of attention was the most essential point in securing the success of the experiments, and that such a power was the very antithesis of hysteria or morbid neurosis. On the other hand, the more general and gradually prevailing opinion has been that the hypnotic trance and all the curious attendant phenomena were of the nature of disease and showed a mind not abnormally strong or even normally sane, but to a more or less extent temporarily off its balance. This latter view is, in our judgment, most in accord with recorded fact and most consistent with theory. The hypnotic subjects who abounded in Paris and Nancy did not seem to most dispassionate observers to be good examples of sane and vigorous intellect. On the contrary, the atmosphere of morbid introspection, display, and more or less charlatanism seemed to cleave to these practised performers and all their curious evolutions. Ordinary experience of life teaches us that one of the most potent forces in human nature is the love of notoriety and the desire to become the centre of interested attention. *Possunt quia posse videntur* is a principle of very wide application. Granted an atmosphere of excited interest and a strong expectancy of certain results on the part of subjects and operators, and the most astonishing effects can easily be produced. Again, if it is of the essence of hypnotism that the subject should yield his will to that of the operator, and more or less merge his personality in that of another individual, we think such a condition much more likely to be associated with mental weakness than with mental strength. We by no means assert that conscious imposture was usual in these experiments, although we believe it had often a considerable share in the results, and we quite admit that hypnosis is a genuine phenomenon—as genuine, for example, as somnambulism; but we believe it to be

essentially morbid, and associated with feebleness of will and unusual impressionability. The most probable theory of its causation has always seemed to us the view that was put forward by HEIDENHAIN and other good physiologists—viz., that the hypnotic trance is the result of an inhibition of some portions of the cerebral substance, the remaining portions acting abnormally and giving an extraordinary response to ordinary stimuli.

The second great controversy had regard to the question, Granting that hypnosis is real and can be evoked according to definite rules, is it capable of being turned to useful account in the field of therapeutics? When we reflect upon the strong claims that were put forward for hypnotism as an anæsthetic, an analgesic, a nerve stimulant, and what not, it must seem not a little surprising that so potent an agent should be allowed to rust in the not over-stocked armoury of treatment. We suspect the marvellous results alleged to have been attained have not well withstood the crucial tests of time and wider experience. There was a stage in the annals of this curious history when even grave organic maladies—e.g., hemiplegia, Bell's paralysis, &c.—were alleged to be submissive to hypnotism. We are not sure that even tumours were not alleged to have vanished on the waving of the magic hypnotic wand. But by degrees one claim only was insisted upon—namely, that hypnotism was a potent remedy for "functional" nervous affections. Every experienced physician knows that these maladies constitute the most illusive of all fields for therapeutic experiment. The victim of functional nerve-disorder not infrequently gets well with any treatment or no treatment. Above all is it clear that any strong impression on the nervous system, whether produced accidentally or by deliberate therapeutic endeavour, frequently results in the cure of such cases. That hypnotism is one way of producing such an impression we fully grant, and its beneficial effect might be freely admitted if there was no reason to suspect that the cure might be worse than the disease. To drive out neurasthenia by inducing the hypnotic state is a procedure fraught with so much peril, both on the moral and the physical side, that it can only be undertaken with grave apprehension. The broken-down nervous systems that form the bulk of neurasthenic cases are bad material for doubtful psychical experiments. Rather should we commend in such cases the old and well-tried methods of treatment by rest, change, fresh air, diet, tonics, modification of unwholesome environment, suitable occupation, and recreation. These methods often succeed, and it can at least be said that their failure does not make the last case of the patient worse than the first.

Hypnotism is undoubtedly worthy of study, but we suspect that more and more it will be handed over to the psychologist, perhaps sometimes to the alienist, and that its interest for the practical physician will steadily wane. Until the evidence of its utility is a hundredfold more conclusive than it at present appears we shall not regret having striven to preserve medical science from identification with doctrines and methods which are tainted with charlatanism.

THE review of the position of the Fellows of the Royal College of Surgeons of England in relation to the Council, which formed the substance of our two preceding articles,

must have impressed our readers with the steady progress which has been made during the last ten years by the movement which commenced in 1884 to secure for the Fellows of the College constitutional privileges on a par with those enjoyed by the Fellows of the other professional Colleges in the United Kingdom. Before 1884 the Council of the Royal College of Surgeons reigned supreme and there was no efficient organisation by which its rights could be challenged. Little interest was evinced in the elections to the Council, which were largely in the hands of the metropolitan Fellows, and too often resulted in the return of the typical hospital surgeon favourable to the maintenance of the existing *régime*. A comparatively small number of votes sufficed to secure a seat upon the Council. Consultation with the Fellows and Members of the College was a rare event; the ideas of the responsibility of the Council to the constituency, of an annual meeting, of allowing the Fellows to vote by means of voting papers *in absentia*, and of calling the Fellows and Members together regularly for consultative purposes were scouted by those whose hands held the reins of management.

It was at length perceived by those most interested in the cause of reform both within the Council and outside that it was only by united efforts and efficient organisation any impression could be made upon the *vis inertia* of the Council. As many thought at the time, and as is now sufficiently obvious, the course of litigation upon which certain Members of the College entered with the Council did for a time exercise a prejudicial effect upon the reform movement. These Members pursued a mistaken policy, and, overrating the strength of their position, endeavoured to win by force that which could only be obtained by diplomacy. Many friends were alienated by the extravagance of their demands, but the moment the pressure of these demands was relaxed by the adverse decision in the Chancery Division the wheels of constitutional progress again began to revolve. The Fellows obtained their separate half-yearly meetings, the Fellows and Members obtained their common room, and the Members were benefited by being able to claim to be called together to discuss any subject on which the Fellows had been consulted. The Council became effectually leavened by the introduction of a strong reforming element, and at the present moment there is but a small remnant of the ancient class of councillors still surviving on the Council.

But the very success which has attended the claims of the Fellows constitutes a source of danger. The foundations have been securely laid and the edifice has been erected, but it has not been crowned or rendered proof against adverse elements. Seeing the goodly structure, the Fellows and Members will be apt to imagine that the battle has been successfully fought and that they may lay aside their arms. They forget that all that has been gained for them rests solely upon resolutions of the Council, which might be rescinded or remain a dead letter if apathy is allowed to follow effort and enthusiasm. The great necessity at the present moment is to secure a new Charter conferring upon the Fellows and Members that substantive position which is their due. Statutory meetings must necessarily be more influential than meetings having no official character. Moreover

a new Charter should provide for the election of the President in the mode which commends itself best to the opinion of the constituency authoritatively obtained, and for that change in the constitution of the Court of Examiners and in the term of office of its members which would bring the College more into line with kindred institutions. It is undoubtedly an anomaly that the members of the Council of the College should be able to elect themselves to posts of profit and emolument as examiners, and scarcely less anomalous that examiners should be elected for five years and the term be renewable without any interval. The members of the Senate of the University of London are not eligible for examinerships, and not even boards of guardians can elect their members to lucrative offices. At the College this anomaly has prevailed from its origin and has been an immense hindrance to the cause of reform. At first the examiners entirely controlled the Council, for all were elected from the Council. Now it is true a certain proportion of the court are, though not necessarily, elected from outside the Council.

The foregoing remarks will show that the work of reform at the College, although it has advanced steadily in the last few years, is still incomplete even in relation to the Fellows of the College. The Fellows should not neglect the opportunity afforded by five vacancies to return candidates prepared to comply with the reasonable requirements of the constituency and to make the College a model of good government, instead of presenting features which would never be sanctioned by the State in the case of any new institution. In another column will be found the names of the intending candidates for the forthcoming election. Many of these are more or less identified with the liberal movement, and some have taken an active part in carrying on the work of collegiate reform. We propose to discuss their respective claims to fill the vacant seats in an early issue.

Annotations.

"Ne quid nimis."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THIS is the last opportunity we shall have of urging upon our readers the claims of the Metropolitan Hospital Sunday Fund for 1895. Before our next issue the appeal to the public of London will have been made from every pulpit, and to a certain extent the material result of that appeal will have become apparent. It is not our intention to state, or rather to re-state, the grounds upon which we base our belief that contributions to the Metropolitan Hospital Sunday Fund fulfil in every conceivable direction the demands of well-directed charity. From year to year and for many a year we have given the reasons for our unvarying advocacy of the Fund, and by our distribution annually of special supplements setting forth the needs of the hospitals of London have aided to the best of our ability the efforts of the executive. We note that this year our example in this direction has been followed by an institutional journal whose imitation we welcome as a proof of the utility of our many previous issues. We do not intend now even to recapitulate our numerous pronouncements on the Fund, but we may be permitted, at a time when the columns of the lay press have been so repeatedly and pointedly open to

the distressful appeals of more than one of our best known metropolitan institutions, to urge upon our readers the extreme need of support in which the objects of the Fund stand. London, the richest city in the world, is content to allow the institutions which provide for her sick to struggle on from day to day begging and ever begging. The aggregate results of these incessant appeals to charity, let it be conceded, are noble. But it must be remembered that poverty is a cause of sickness, and as it is true that an enormous proportion of the patients at the hospitals can directly or indirectly trace their plight to the exiguity of their circumstances, so it is true that our hospitals, if kept at a perpetually low dead level of poverty, may tend to become inadequate to the stress put upon them. How can they look forward to doing better? How can they plan improvements, inaugurate reforms, classify schemes for placing their affairs upon a sounder financial basis, and tabulate arrangements for more competent organisation against the inroads of sickness in the community, if the time of all concerned in the management is for ever occupied in despairing endeavours to make both ends meet? We have deliberately preferred on this occasion not to set out the manifold claims of the Fund on the attention of our readers—they are summarised in the lucid and eloquent letter from the Lord Mayor which we received as we were going to press—and confine ourselves to saying: To-morrow is Hospital Sunday, give according to your power.

THE SECRETARY OF STATE, THE SOCIETY OF MEMBERS, AND THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SOME misconception seems to have arisen in certain quarters concerning the attitude of the Secretary of State towards the Council of the College in reference to the recent application of the Council for approval of alterations in some of the by-laws of the College. These by-laws were Section 4, relating to the election and admission of Members of the Council; Section 16, relating to misconduct of Fellows and Members; and Section 25, relating to dental surgery. The amendment of Section 4 was for the purpose of simplifying the mode of distribution and collection of voting papers in accordance with the wishes of many Fellows of the College, and the amendment of Section 25 was for the purpose of increasing the fee for the certificate to practise as a dentist from ten guineas to twenty guineas over and above any stamp duty. The amendment of Section 16, relating to misconduct of Fellows and Members, was, we believe, required because the terms of the existing by-law were not sufficiently precise to enable the Council always to remove from the lists of Fellows and Members members of the profession included in the list who had been judged by the General Medical Council to be guilty of infamous conduct in a professional respect, and it has happened more than once that the Council of the College has not been able to deprive of his diploma a Member or Fellow of the College whose name had been erased from the Medical Register. This anomaly the Council, we understand, wished to rectify, and they proposed a formula for the purpose which received the sanction of the annual general meeting of Fellows and Members and the half-yearly meeting of Fellows in January. As soon as the formula had passed the Council and had been submitted to the Secretary of State, the Society of Members of the College took steps to oppose the proposed changes. The Society objected to further increasing the powers of the Council under the present charters and constitution of the College, alleged a want of confidence in the Council as the sole judge of "disgraceful conduct," because the new by-law might be used to repress actions directed against the present government of the College

which might not be covered by By-law 17, and contended that no change in the by-laws ought to be sanctioned which did not include the amendment of Section 17, a by-law most obnoxious to many of the Members. The objections of the Society of Members were forwarded, with the sanction of the Society, to the Council, who drew up a reply, which was sent to the Secretary of State in April. At the Council meeting, held on May 9th, the reply of the Home Secretary was read to the meeting. Mr. Asquith thought there might be some objection to the proposed wording of the paragraphs of the amended By-law 16, on the ground of the wide and indefinite character of their provisions, and suggested that the objects the Council had in view could be attained by means of a by-law in terms similar to those of Section 29 of the Medical Act of 1858, and requested the Council to consider the matter with a view to amending their proposals accordingly. To the other proposed changes Mr. Asquith did not propose to raise any objection. After hearing the letter read, the Council referred it to the President and Vice-Presidents to take such steps in reference to Section 16 of the by-laws as they might deem expedient after consultation with the legal advisers of the College. The result was, we are informed, that the amended by-law was re-worded and the sanction of the Secretary of State has been given to the proposed changes.

WHITSUNTIDE CUSTOMS IN MANCHESTER.

MANCHESTER and the surrounding districts observe Whitsun-week as the great holiday of the year, and it is wholly given up to festivities of one kind or another. Thousands pour out of the city each day in every direction and to various distances on pleasure bent, and the railway companies reap an abundant harvest of third-class fares. With numbers of young men and women employed in offices, shops, and warehouses, it is an eagerly seized opportunity for spending a day or two with their friends at a distance. Moreover, it is the great festival of the various Sunday schools, and is looked forward to by the children as the brightest week of the year, and this year the weather has been exceptionally brilliant. Dressed in their best, and marshalled by their teachers, they assemble in Albert-square and then march in procession through some of the principal streets. On the Monday the children of the Church of England Schools, over 23,000 in number, so assembled, sang the Old Hundredth hymn, and then marched out of the square at 9.30 A.M. The rear was brought up by the boys of the Strangeways Refuge, who did not leave the square till nearly twelve. On Friday a similar scene was enacted by the Roman Catholic schools. These slow-moving, almost endless processions attract thousands of spectators, who line the streets through which the children pass. All traffic is stopped. The ends of the side streets are barricaded with lorries &c. Trams, cabs, carriages, and lorries come to a dead stop till the procession has passed. In however great a hurry, the most energetic man can but rarely cross the line of march, and those driving across the town to the various stations have to wait and let their trains go without them, unless they go round considerable distances by all sorts of circuitous routes. The organisation and management of these processions must be a work of much difficulty, but it would be well to carry it a little further. If occasional gaps were allowed—say between the different schools—the traffic would be less seriously interrupted. At one time it was too much the custom to take the children by rail to places sometimes as far as eighty or ninety miles away, starting early and returning late, with many of the younger ones half dead from fatigue and sometimes wet through. In such marvellous weather as that of last week no great harm perhaps would be done, but it may easily be imagined what half-drowned,

miserable little creatures a wet Whitsuntide would be accountable for. Many, very many deaths have in the past resulted from these Whitsuntide excursions. A more sensible custom seems now to prevail and long railway journeys are not so commonly taken. On the other days the various schools usually hire a field as conveniently situated as possible, in which the children play at various games. The whole of the country round Manchester—especially on the Lancashire side—observes Whitsuntide in the same fashion, so that it is easy to understand the anxiety very widely felt as to weather forecasts.

HABITS AND DISEASE.

THE tyranny of the body finds its most striking exemplification in the subjects of chronic disease, which without actually threatening life so restricts vitality as to modify the whole character of the individual. The old classification of temperaments may be largely interpreted in a pathological sense, for a real basis in organic derangement may be at the root of the physical and moral attributes that the individual possesses. This is, we fear, too often overlooked in persons who belong to the great class of hypochondriacs, for whom, it may be, less sympathy is shown than is deserved. The case of Coleridge is an illustration of this. A recent review of his life in the columns of the *Times* interpreted his "perpetual cry of ill-health" to mean "little less than opium and indolence." This opinion brought forth from the grand-daughter of Mr. Gilman "with whom the poet lived for more than eighteen years" a reply containing a most interesting account of Coleridge's chronic ailment penned by Mr. Gilman, which accounts for much of his idiosyncrasies of character and habits. The passages cited are as follow:—

"From some expressions in your letter I am induced to give you a short account of Mr. Coleridge's personal sufferings and their physical causes, which sufferings at the last were agonising to himself and to those about him. After his decease his body was inspected by two able anatomists appointed by Professor Green, a task too painful for either him or myself to perform. The left side of the chest was nearly occupied by the heart, which was immensely enlarged and the sides of which were so thin as not to be able to sustain its weight when raised. The right side of the chest was filled with a fluid enclosed in a membrane, having the appearance of a cyst, amounting in quantity to upwards of three quarts, so that the lungs on both sides were completely compressed. This will sufficiently account for his bodily sufferings, which were almost without intermission during the progress of the disease, and will explain to you the necessity of subduing these sufferings by narcotics and of driving on a most feeble circulation by stimulants, which his case had imperatively demanded. This disease, which is generally of slow progress, had its commencement in Coleridge nearly forty years before his death. To the general observer his disease masked itself; and his personal sufferings were hidden and concealed by his fortitude and resignation and by the extraordinary power he had of apparently overcoming and drowning them, as it were, at times in fervid colloquy."

The account here given of the post-mortem examination was probably not intended for professional perusal, and is therefore not so precise and definite as to be quite clearly interpreted. Thus it is somewhat puzzling to define the condition described in the right pleura. The large "cyst" mentioned could hardly have been a hydatid. It is more likely, we think, that it was really a pleural effusion, which seemed to be encysted from the presence of adhesions of the lung to the chest wall. If this be so then this effusion may be regarded as dropsical in character, occurring towards the close of life in a subject of chronic cardiac dilatation. The account which describes the enormous size of the heart and the extreme tenuity of its walls is silent as to the pericardium, but such a degree of enlargement may well have been due to universal adhesion of the heart to the pericardial sac, from inflammation of the latter in early life. The record, however,

suffices to prove that this intellectual giant must have suffered more than the world was aware of, and it can be understood that his "indolence" as well as his opium habit had a physical basis. It can only add to the marvel with which his achievements are justly regarded that one so physically disabled should have made such extensive and profound contributions to philosophy and literature. It is one more instance of the triumph of mind over body.

MEDICINE AND CRICKET.

WE congratulate Mr. W. G. Grace on the enthusiastic unanimity with which all classes of the community have welcomed the idea of presenting him with a testimonial. We entirely sympathise with a movement having for its object a material proof of the general recognition of the qualities which have raised Mr. Grace to his position of champion exponent of the national game and—by far the more wonderful thing to tell—have maintained him in that position for twenty years. Skill, endurance, patience, courage, strength, delicacy of movement, and alertness constitute in different proportions the endowments of the successful cricketer, and the pre-eminent champion at the game may therefore be credited with having displayed for years a just combination of them all. What better man can the sport-loving Briton find to honour than the author of such a display? Mr. Grace's connexion with our profession naturally turns our thoughts, subdued to what they work in, in one direction: Has his profession assisted in this maintenance of a remarkably high level of athletic prowess? And we make bold to say, Yes. We are not claiming that because the well-trained eye, the skilful hand, and the temperate mood equally comprise the chiefest virtues of the surgeon and the cricketer, a medical education should turn out experts at Lord's. Such a claim, by working both ways, would land us logically in the recommendation to our readers of Gunn for an enterostomy or the younger Druce for a litholapaxy! But we do claim that Mr. Grace's profession has counted for much in keeping him through two decades in the absolute front of the cricketing world. It has given him a wise insight into the rules of health, and furnished him with a knowledge of reasons that cannot have failed to be useful to him in times of physical or mental depression on the field, in unfortunate conjunctions of the game, even in seasons of comparative ill-success. And, considering that his display of ever-green vigour reflects honour upon the principles of medicine, we recommend to the favourable consideration of our readers the project of a national testimonial to our professional brother.

COLOUR MUSIC.

ON Thursday, June 6th, a large number of people interested in physics and in music were present, at the invitation of Mr. Wallace Rimington, an artist, to witness the first public demonstration of "a new art," the application to colour of qualities—rhythm, and the capability of instantaneous and varied combinations—which have till now been associated with music only. This Mr. Wallace Rimington effects by means of a "colour organ," the exact construction of which was not explained. The organ has a key-board like that of an ordinary organ, and by some ingenious contrivance the keys introduce corresponding coloured discs in front of a powerful arc or lime light, so that any particular colour, or combination of colours, may be projected on a screen. Each note on the key-board has its own colour, an octave representing the ordinary spectrum. The spectrum has been divided up into diatonic intervals or notes, the intervals being calculated according

to the rate of vibration at different parts of the spectrum in the same manner as with the musical scale. Single notes and chords can be struck on this organ with the same ease as on a pianoforte, and a rapid flitting of soft, transparent tints on the screen is the result. In order to show what could be done, extracts from Chopin were rendered simultaneously on the colour organ and on the pianoforte, and later selections from Wagner's "Rienzi" were given by an orchestra and the colour organ together. The effects were novel and in the main pleasing, but it was difficult to appreciate exactly the artistic value of the performance, the eye being at present entirely untrained for following and enjoying the rapid changes of colour. It was evident, too, that even if, which is by no means proved, the spectrum and musical octave are physically exactly analogous, there is a much less close resemblance in the psychical effects produced. Two points which were very obvious at the demonstration illustrate this point. Red and green occur close to one another in the spectrum, but the contrast in passing from red to green on the keyboard of the colour organ is much greater than that perceived with the analogues on the musical keyboard. Another difference was noticeable when a chord was struck. Instead of the chord being richer than its component notes, in many cases only a neutral greyish tint was obtained owing to the physiological antagonism of many of the colour sensations. Possibly more pleasing effects may be produced by compositions specially designed for the exhibition of colour in a rhythmical manner than by merely using pieces composed for musical instruments. The departure is a novel one, and we would congratulate Mr. Wallace Rimington on the perfection to which he has brought his mechanical contrivance and on being a pioneer of a new mode of artistic expression the ultimate developments of which may possibly rival painting and music.

DEFECTIVE NERVOUS SYSTEM IN A CAT.

In a recent number of *Brain* Dr. Risien Russell gives an account of the central nervous system of a cat, the symptoms in which during life had reminded Dr. Carruthers, from whom he received the animal, of the conditions presented by some dogs shown by Dr. Russell at a meeting of the Neurological Society in which ablation of one lateral lobe of the cerebellum had been practised. In this cat during life there was evidence of paresis of both posterior extremities and of the right anterior extremity, a condition corresponding to that met with in dogs after ablation of the right lateral lobe of the cerebellum. After death it was found that the skull presented no asymmetry, and the membranes were normal and not unduly adherent at any particular spot. The whole brain was below the average size, but there was no evidence of special atrophy or defective development of any part in particular except that the right hemisphere was a little smaller than the left. In the cerebellum notable changes were present. The whole organ was smaller than normal, smaller also in proportion to the small size of the cerebrum, but the right lobe was only about one-third of the size of the left. It was diminished in all its dimensions, and the right half of the pons and medulla shared in the defect, although not in such a marked degree. The two lateral halves of the cord did not seem to share in the asymmetry. The cranial nerves were smaller on the right side than on the left; the spinal ones presented no notable difference. Examination of the specimen after hardening and staining revealed further points of interest. The internal capsule and the crus cerebri on the right side were found to be distinctly smaller than those on the left. The right pyramid was completely absent except at the lowest part of the medulla, but at the level of the decussation a few fibres were seen occupying the region of the

anterior pyramid on the right side. At the decussation the normal left pyramid bifurcated, and while most of its fibres passed to the opposite crossed pyramidal tract a considerable number passed to the crossed pyramidal tract of the same side. Compensation by this means seemed to be so complete that with the exception of a possible slight difference in the lumbar region the spinal cord appeared to be quite symmetrical. Practically no trace of fillet fibres could be found on the right side, and on this side also the superior, middle, and even the inferior cerebellar peduncles were extremely diminutive. The cranial nerves also were found to be smaller on the right side, although they were not all equally so. The superior olivary body was slightly smaller on the right side, but the inferior on this side was very well developed, while on the left side it was very poorly developed. The nucleus of the funiculus gracilis and that also of the funiculus cuneatus were smaller on the left side than on the right. In conclusion, Dr. Russell points out that in this case there was clearly a well-marked condition of defective development on the right side of the cerebellum, pons, and medulla. The associated defects in structures of the left side and the integrity of certain structures on the same side, in which defect might have been expected to be present, are referred to in a series of deductions at the conclusion of the paper, to which we would refer the reader. The paper is also illustrated with a series of good collotype plates, and furnishes an excellent account of an interesting and instructive case, especially interesting in reference to the valuable experimental work recently carried out by Dr. Russell on the functions of the cerebellum.

THE "ALCESTIS" AT BRADFELD.

THE presentation of a Greek play to a modern audience, with, as far as may be, all the essential features of Greek tragedy reproduced, has been attempted many times, but never, we fancy, with such success as at Bradfield. This success mainly depends upon the play taking place in an open-air theatre constructed after the classical model, a fact which necessarily tends to make the representation far more realistic than any performance in a college hall. The dresses were faithfully copied from vases and sculptures, and the music was written strictly in ancient modes, the instruments being five lyres and four "flutes," or rather chalumeaux, a primitive form of clarinet. We must warmly congratulate Mr. Abdy-Williams, the composer, and his musicians for the way in which the music was rendered, and if a reed did "quack" now and then that is an accident which may happen to the most accomplished player. Of the play itself we can truthfully say that all the actors bore themselves with becoming dignity. One or two minor points in stage management may be noticed. The actor who played Death had his hands stained blue, while his face retained its natural colour. Now, if Death was meant to be made up like a person deeply cyanosed, which we presume was the case, his face ought to have been blue too. Again, when the *dead* Alcestis was brought on and her face uncovered by Admetus, she exhibited the rosy hue of perfect health. A little artificial pallor would have remedied this. Perhaps this may seem captious criticism, but when all else was so carefully done it seems only right to point out how the slight flaws which did occur could have been avoided. Mr. Wood Hill's reading of the part of Alcestis was very careful and all over-exaggeration successfully avoided, and Dr. Gray succeeded in making one feel really sorry for Admetus, a difficult task when we take into consideration what a miserable person he was. This is not the place to discuss the various theories which have been formulated as to Euripides' ideas of the legend; but for our own part we think a slight extension of Dr. Verrall's rationalistic theory will suit. Euripides was a sort of

Athenian Gilbert; the whole play is a solemn burlesque like "Engaged" or the scenes in "Iolanthe" between the two peers as to which of them shall sacrifice himself on account of Phyllis; while the obvious truism uttered at the last by the chorus, "The unexpected always happens," is in the purest spirit of burlesque. Be this as it may, the performance was most interesting, and the organisers are to be warmly congratulated, not only upon their dramatic success, but upon the excellent arrangements made for the comfort of their guests in the way of transport and seating accommodation. On June 11th the guests included many distinguished in literature and art. From Oxford came the heads of Trinity, Corpus, Brasenose, Oriel, and University, the Deans of Pembroke and Magdalen, from Cambridge Professor Sidgwick. Art was represented by Mr. Waterhouse, R.A., and Mr. David Murray, A.R.A.; education, from a Government point of view, by Lord Lingen, and by the Headmaster of Winchester as representing the public schools.

THE FUTURE OF CHARING-CROSS HOSPITAL.

IN our issue of last week we remarked that it was very doubtful whether the proposed transfer (as suggested by "X." in the *Times* of June 1st) of Charing-cross Hospital to South London would improve its financial position. "X." now writes to the *Times* saying that he has heard rumours that in consequence of his letter of the 1st inst. money has ceased to flow in, and subscriptions have stopped because the hospital is going to be moved. If this be the case when the removal is merely suggested, how much the more would it be when the change was accomplished? There may be "the potentiality of riches beyond the dreams of avarice" in Camberwell; but we still fancy that "Cælum, non animum, mutant qui trans mare currunt" would be the result of a move across the river. At a meeting of the council held at Charing-cross Hospital on Wednesday the schemes recently projected in *The Times* were repudiated, and the idea of entertaining any of the proposals on the lines suggested was emphatically rejected.

THE ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the election to the Council of the Royal College of Surgeons of England, which will take place at 1.30 P.M. on Thursday, July 4th, there will be five vacant seats to be filled. The three members of the Council who are retiring by rotation in accordance with the terms of the Charter of 1843 are Sir T. Spencer Wells, Bart., Mr. Jonathan Hutchinson, and Mr. Alfred Willett. Sir T. Spencer Wells, Bart., was elected in 1871 and re-elected in 1879 and 1887, and has therefore served on the Council for nearly a quarter of a century. Mr. Hutchinson was elected in 1879 and re-elected in 1887, and has therefore served for sixteen years. Neither Sir T. Spencer Wells, Bart., nor Mr. Hutchinson is a candidate for re-election. Mr. Alfred Willett, one of the present Vice-Presidents, who was elected in 1887 and has therefore completed one full term of office, is standing for re-election. By the lamented deaths of Mr. Hulke and Mr. Durham two other vacancies have been created. Mr. Hulke was elected in 1881 with the present President of the College, and re-elected in 1889, so that his term of office would have expired in 1897. Mr. Durham was elected in 1884 and re-elected in 1892, and his term of office would not have expired till 1900. The candidates who are returned to fill the vacancies created by the decease of Mr. Hulke and Mr. Durham will be elected as "substitute members" to complete the respective terms of office which Mr. Hulke and Mr. Durham would have enjoyed. The candidate who stands fourth on the poll will take the place of Mr. Durham,

whilst the seat of Mr. Hulke will fall to the fifth successful candidate. This system of "substitute membership" gives rise to much inconvenience and inequality and should be abolished. For the five vacant seats there are nine candidates, including Mr. Willett (Fellow, 1862; Member, 1859). In the order of seniority as Fellows the other candidates for election are: J. Ward Cousins (Fellow, 1860; Member, 1856), A. T. Norton (Fellow, 1867; Member, 1862), William Anderson (Fellow, 1869; Member, 1867), Alfred Cooper (Fellow, 1870; Member 1861), J. N. C. Davies-Colley (Fellow 1870; Member, 1868) H. T. Butlin (Fellow, 1871; Member, 1867), H. W. Page (Fellow, 1871; Member, 1869), and Frederick Treves (Fellow, 1878; Member, 1875).

PRESCRIBING DRUGGISTS.

AGAIN the old story. Frederick William Biggs of Cardiff had a son, Arthur, who was taken ill. The father, instead of sending for a medical man, applied to a druggist, who supplied him with some medicine. The child died from, as a post-mortem examination showed, acute bronchitis. The medicine had done no harm. The coroner thereupon censured the chemist for prescribing, in which censure the jury concurred, while they also very justly blamed the parents for not calling in a medical man sooner. This sort of cases will continue to occur until ignorant people can be divested of their fixed idea that a medical practitioner is a man who gives "bottles" each containing a specific remedy, or until druggists are prohibited from prescribing by law; and as anyone, no matter how ignorant, may prescribe, we fear that the latter course will hardly be followed.

AN ACTION BY A DENTIST FOR THE RECOVERY OF FEES.

AN action brought by a dentist for recovery of fees has recently taken place at Doncaster. The amount claimed was £33 12s. for professional services rendered to the family of the defendant, and of this sum £21 10s. were charged for the treatment of an "irregularity of the teeth." The defence set up was that the fees were excessive. Professional evidence was given on both sides, a verdict being returned for the plaintiff for the full amount, with costs. In fairness to the plaintiff it would have been difficult to have arrived at any other conclusion; while looked at from a general point of view the result is satisfactory, inasmuch as it shows that the law is willing to protect the professional man who charges reasonable fees against clients who place their own estimate on services they know but little or nothing about.

THE TRANSPORTATION OF THE DEAD IN AMERICA.

THE *Journal of the American Public Health Association* publishes a paper on the Innocuous Transportation of the Dead, by Dr. J. D. Griffith, in which he remarks: "Until we are educated to the point of the thorough sanitation of cremation the transportation of dead bodies by railways is, and always will be, a source of danger." This danger, however, we are happy to think, does not threaten our own country in the same degree as it does America, where dead bodies are quite commonly put in baggage cars along with, perhaps, twenty or thirty trunks. It is clear that if the person has died from an infectious disease and the coffin is not hermetically sealed, the luggage may become infected, and by its distribution could prove the cause of wide-spreading mischief. Not only this, but the health of the railway employes is menaced. In 1888 the National Association of General Baggage Agents, including most, if not all, of the main carriers of the United States, adopted a schedule of rules and forms to govern the transportation of corpses, in which it was suggested that a corpse should be wrapped in a sheet saturated with a strong solution of bichloride of mercury and packed in a specified casket.

The writer gives it as his opinion that many dangerous maladies have been spread by handling and shipping the dead body, and believes that the whole country must have benefited from these rules, as most of the State boards of health have not only approved but adopted them with little or no modification. It has been suggested that in all cases where a death occurs from an infectious disease the body should be interred in the same neighbourhood where the death takes place; but, as Dr. Griffith points out, endless trouble might follow with many people who would leave no stone unturned to enable them to remove the body if they so desired. This being so, the only practical suggestion seems to be that a portion of the baggage car should be provided with metal-lined compartments and be used exclusively for the purpose of conveying dead bodies from one place to another. By this means the risk of infection would be considerably minimised, both to the employes of railways and the travellers who entrust their trunks to the care of the railroad companies.

MR. GLADSTONE AND HIS CORRESPONDENTS.

No one, perhaps, except a statesman, can fully appreciate the meaning of Mr. Gladstone's request that no letters should be addressed to him during his absence from England. To the very young the postman is generally looked upon as a kind messenger who always brings glad tidings, and when adolescence is reached and the mischievous heathen deity has caused the pulse to quicken and the pupil to dilate the double knock is far from being an unwelcome sound. To the man of business, however, the postman is looked upon with far different feelings, and the sight of the Post-office messenger is very apt to call up in his mind a vision of a large batch of letters marked urgent and confidential, which for the most part when opened will be found to contain advertisements relating to somebody's New Neuritic Nervine, or a request for a subscription to the Mutual Protection Society of Nostrum Advertisers. Such things are not calculated to conduce to a peaceful state of mind even in the ordinary man of business, and are certainly not likely to soothe an over-worked statesman. It is said that Lord Rosebery during his recent illness was the recipient of a considerable number of letters marked private and confidential which contained recipes for insomnia, and we do not doubt that the late Premier has received similar well-meaning attentions during the time he has served the State. Mr. Gladstone, who is now in his eighty-sixth year, was found, when examined by his medical attendant in the early part of 1894, just before his resignation from active political life, to have a vigorous heart, a good appetite, sound lungs, and muscular limbs, and to be full of vivacity and vitality after sixty years of Parliamentary life. He left England for his annual rest on Tuesday last—if such a man can be said to ever take rest,—when his temperature was 98° F., and he started in excellent spirits after a very good night's rest. We sincerely hope that he may return in good health, and that his simple request that he may not be worried by a needless correspondence may be complied with.

THE CORONER OF BIRMINGHAM AND THE COUNTY CONSTABULARY.

We commented last week on the action of the county constabulary in resisting the request of Mr. Oliver Pemberton, the city coroner of Birmingham, that a man named Saunders, under arrest upon the charge of murder, should be present, if he so desired, at the inquest upon his victim. The bare fairness of the proceeding would seem to everyone to justify Mr. Pemberton in his objection to subordinate resistance, and we are glad to say that after a week's delay, and

at the cost of trouble to himself and the jury, he secured the presence of the man. The Commissioners of Prisons sent an order to the Governor of Warwick Gaol directing that the prisoner should be brought to the coroner's court independently of the action of the constabulary. The verdict that was eventually returned showed how completely the coroner was right in his action, and we hope that other coroners finding themselves in the same position will use this example as a means to their end. The case, it may be noted, was not without interest to the profession from a purely medical aspect. The evidence went to show that the victim had been stabbed about the head with a clasp-knife, but as the external injuries—two stabs, one above the left eye and the other below the left ear—appeared to be slight, and were accompanied by no signs of serious mischief, no objection was raised at the hospital to his desire to return home. This was on the Saturday evening, May 25th, but on the Monday morning symptoms of cerebral inflammation were present, and he was detained at the hospital. He was trephined, but died on Tuesday of meningitis. The post-mortem examination showed that the knife had penetrated the brain substance for some distance, though the injury to the skull was one which it would have been impossible to detect.

THE INFORMAL PURCHASE OF POISONS.

We print under this heading in another column a letter from a Brighton surgeon who, in reference to the numerous cases of dog-poisoning that have recently occurred in Sussex, points out the extreme ease with which it is possible for laymen, complying with no formality whatever, to procure large quantities of deadly poison from wholesale druggists. The anecdote which he relates in his letter (p. 1543) discloses a distinctly illegal proceeding, and one which we hope is not common, which, indeed, cannot long be common without the occurrence of some terrible accident. The business of wholesale dealers in supplying scheduled poisons, as the *Pharmaceutical Journal* points out this week, is only exempted under the Pharmacy Act, 1868, in so far as they supply them "in the ordinary course of wholesale dealing." Transactions with private individuals who require poisons for their own use are not covered by this exemption, and it is quite possible, therefore, that if satisfactory evidence of such illegal sales were forthcoming, the Pharmaceutical Society would be able to move in the matter and check a practice which is both unworthy of any respectable wholesale house and pernicious in its tendencies.

THE MANUFACTURE OF COMPRESSED GASES.

In a leading article in *THE LANCET* of March 23rd we expressed the hope that the Government would see its way to institute with little delay an inquiry with the view of placing the manufacture of compressed gases under some kind of legislative control. Our remarks were based upon the explosion of a gas cylinder at Fenchurch-street Station a short while ago, by which one man lost his life, while the damage done to property was by no means trifling. We now learn with satisfaction that the Departmental Committee which has been appointed by the Home Secretary to inquire into and report on the manufacture, filling, and use of gas cylinders will meet shortly to elect a chairman and arrange certain preliminaries. Visits are then to be paid to the centres in London and in the country where these cylinders are produced, and expert evidence is afterwards to be taken on the whole question of the manufacture of compressed gases. It will be remembered that the cause of the cylinder exploding at Fenchurch-street Station could not easily be accounted for, and the evidence given at the inquest was somewhat conflicting. The explosion may have been due to the

cylinder receiving a shock by coming suddenly into contact with a hard surface like the stone platform, in which case the metal must have become brittle or crystalline through neglect to re-anneal it, or to the cylinder containing inadvertently a mixture of hydrogen and oxygen, besides some oil which may perchance have trickled down from the connecting screws of the cylinder into the interior, and, heat being established by the oxidation and possible ignition of the oil, the union of hydrogen with oxygen with explosive violence was inevitable. Whatever may have been the cause it is perfectly clear that the subject is ripe for inquiry, especially as this comparatively new industry (the compressing of gases such as hydrogen, oxygen, carbonic acid, &c.) is largely on the increase. We are glad, therefore, to learn that the Home Office has so far acted with the promptitude which the question demands; the committee is to sit on the 24th inst., and the proceedings will not, it is thought, occupy longer than a fortnight. We await their report with interest.

"LE MÉDECIN MALGRÉ LUI."

AN account appeared recently in the columns of the *St. James's Gazette* and the *Pall Mall Gazette* of an ingenious application of the "put-a-penny-in-the-slot" system. The machine is figured in the likeness of a man, and reduces specialism to a fine art, for instead of the one or two slots which the carnal and earthly sweetmeat or cigarette machine has, this is provided with slots corresponding to every member of the body. Has anyone a headache? On inserting a coin into the slot in the head the machine, after due consideration, hands out a prescription for the evil in question. The machines do not make up medicine, but the address of the nearest druggist is given. It only remains for some enterprising philanthropist to supply London with these machines, and the relief to the overcrowded out-patient department of our hospitals would be marked. Gone, too, would be the occupation of "Lennox" and "Bernal, M.D.," of the gentleman who appeals so eloquently from the boardings with "Why suffer longer?" and all the other newspaper prescribers.

THE CARMARTHEN DROWNING CASE.

IN our issue of June 8th we noticed the severe strictures passed on Mr. Bowen-Jones by the coroner. We have since had the opportunity of perusing a report of the inquest contained in a local paper, with the result that we adhere fully to our previous remarks. It appears that a boy on his own initiative—prompted, no doubt, by a most excellent motive, instinctive humanity—went to Mr. Bowen-Jones and said that aid was wanted as some children had fallen into the water. The lad deposed that he was so excited at the mishap and with running that he was not certain what impression his words would exactly convey to Mr. Bowen-Jones, but that he gave that gentleman to understand medical aid was needed. It is alleged that Mr. Bowen-Jones asked the boy who was going to pay his fees if he went. From information supplied by Mr. Bowen-Jones it seems that unfounded rumours of accidents are not uncommonly raised and circulated, and that on several occasions he has attended calls only to find that he was not wanted. As regards the inquiry as to the payment for his attendance we are assured that it was only made in a playful way, and indeed this seems to be the most reasonable explanation of Mr. Bowen-Jones's words, for he would not expect to receive a guarantee of remuneration from a lad under the circumstances narrated. We learn that Mr. Bowen-Jones at the time was on his way to minister gratuitously to a patient, and therefore it was not greed of gain that deterred him from acting on the statement made by the

boy. But apart from these facts, which we consider Mr. Bowen-Jones has reasonably explained, we maintain that the coroner would have more fully acted in the spirit of judicial impartiality if he had adjourned the inquest for the purpose of taking Mr. Bowen-Jones's evidence. To condemn him unheard, and that, too, in the strongest denunciatory terms, runs counter to our sense of equity. No doubt the coroner was entirely within his legal rights in taking the course he did, but there are statements which are privileged, and which yet do not meet with the sanction of abstract right. At the inquest the jury were not unanimous in adding a rider censuring Mr. Bowen-Jones for his conduct, a fact showing that there were some at least who felt that such proposed rider was not justified by the evidence before them. It is matter for regret that the coroner did not identify himself with the course these gentlemen adopted.

THE SPREAD OF INFECTION.

A CASE recently decided in the Borough Court, Brighton, is instructive in its bearing upon the isolation of cases of infectious disease. The defendant was summoned for having travelled from Brighton to London by rail and cab while conscious that he was suffering from scarlet fever. In defence he pleaded ignorance of his condition, and alleged in support of his statements the uncertain opinion of his medical attendant respecting the early phase of his disorder. This plea not being proved, a sentence of £5 and costs was inflicted. This unfortunate sequel to a successful recovery possesses more than one feature of medical interest. It impresses the great importance of dealing cautiously even with cases of doubtfully infectious character, and of treating them so as to cover the possibility of contagion. As regards their removal, this of course is undesirable as much in the interest of the patient as of the public. Where it is for any reason imperatively called for, the needful arrangements ought to be entrusted to the local sanitary authorities.

A HEALTH CRUSADE.

A PROPOSAL by Mr. Samuel Osborn, F.R.C.S., which was discussed at the Slough Ruridecanal Conference, touches a subject the importance of which is only equalled by the extent of its application—that of hygiene among the poor. A motion "that combined action be taken by the clerical and medical professions for the purpose of inculcating among the poor some of the more important principles of hygiene," notwithstanding a certain apparent confusion of ideas, cannot but evoke the respect due to its disinterested sincerity. We do not quite see how the clergy can be joined in partnership with the medical profession as teachers of hygiene. Mr. Osborn explains himself, however, and the riddle no longer seems to be inscrutable. He does not desire to form within the ranks of the Church a new staff of medical officers of health, but rather to obtain for the existing members of this order, and for such of their purposes as may be classed as a species of first aid in sanitation, the local influence wielded by the spiritual arm. Fresh air, cleanliness and thrift, simple, nutritious, and cheap feeding, good plain cookery, and regulations as to burial,—such, in brief, are the subjects which it is proposed to bring within the active sphere of the new administration. The same object has been in some degree attained already in North Bucks by the appointment of what are called "health missionaries," a class of women who visit among the poor and teach them the outlines of sanitary science as applied in the practice of household duty. Those of us who know something of the gross ignorance and indolence which prevails in many country districts respecting this important subject will welcome help which is reliable from whatever quarter. We hope, too, that sanitary authorities, being thus befriended with assistance, will exert

themselves, in country as in town, to incorporate the facts of sanitation more and more with the daily life of their respective districts.

DIPHTHERIA IN LONDON.

THERE are at present no signs of diminution of diphtheria prevalence in London such as were apparent some time back, seeing that, whether regard be had to the cases or to the deaths, the disease has been maintaining itself in recent weeks in a manner which suggests endemicity of considerable proportions. In the four weeks ended May 18th there were 638 notified cases of the disease in London, and 135 registered deaths therefrom, the per case mortality thus yielded being just under 21·2 per cent. In the three weeks that have since elapsed the cases have averaged 165, or nearly 500 in all, and the deaths 111, the per case mortality in the successive weeks having been 22·3, 25·2, and 20·0 per cent. In the four-weekly period just named the disease was present in all the London sanitary areas save two; and of the 638 cases there were 20 and upwards in each of the 15 districts, the largest numbers occurring in Camberwell (63 cases), Poplar (46 cases), Lambeth (34 cases), and Hackney (33 cases). In the four weeks ended last Saturday the registered deaths from diphtheria numbered respectively 41, 37, 41, and last week 33, a figure 7 in excess of the corrected average of the corresponding week of the preceding decennium. Of these deaths 3 each are credited to Paddington, Islington, Hackney, Shoreditch, and St. George-in-the-East sanitary areas. All the 33 were in persons aged under twenty years, and 23 at ages one to five years. The admissions to hospital were 86, as compared with 87, 79, and 88 in the three preceding weeks, at the close of which the patients remaining under treatment numbered 484, 492, and 508, as compared with the increased total of 529 last Saturday. In Greater London last week there were 16 registered deaths from the disease, of which no fewer than 8 were in the West Ham district.

INSECTS AND CONTAGION.

IT is generally understood that the stings of some insects are essentially poisonous in a greater or less degree, and must therefore be early and carefully treated. Pain alone in such cases will suffice for a danger signal, and few when thus warned would care to neglect the puncture made by a hornet, a wasp, or even a bee. The fact that other insects, like some species of fly, are capable of equal or even greater mischief, is not so commonly known as it ought to be. The recent death of a woman Kingston from septic erysipelas thus caused may be quoted in illustration. In accounting for such occurrences two points are specially noteworthy—namely, the condition of health of the person attacked, and the previous *habitat* of the assailant. In no case probably is it possible to define exactly the influence exercised by each of these contributing factors. This much we know, however, that no matter how trivial or how great the effect of the conveyed poison, it is much enhanced by all conditions of weakness or blood impurity existing in the sufferer. A mere midge or gnat-bite in one person will prove almost as serious in its effect as a septic wound in another. There are in the system all the materials for a conflagration, and a spark may light it up as well as a fire-brand. The habits of insects afford a clue to the seeming vagary of their occasional and accidental virulence. The sting or the mandibles, which perhaps were buried an hour previously in some putrid sore, excreta, or offal, cannot penetrate a living tissue without leaving in it something of the same putrid character. It is safer therefore for the medical practitioner to regard each and every injury of this kind, however slight, as a possible source of illness, and at once to contrive its relief

by poulticing, antiseptic compresses, or like means. For prevention we can suggest no better safeguard than some form of antiseptic veil, to be worn after the manner suggested in THE LANCET of Aug. 6th, 1892.

SIR WILLIAM MACCORMAC has received an official letter, signed by the president and secretaries of the Belgian Surgical Society, saying: "Nous avons l'honneur de vous informer que la Société Belge de Chirurgie, dans sa séance du 27 avril dernier, vous a conféré le titre de Membre Honoraire en témoignage des grands services que vous avez rendus à la science chirurgicale." We congratulate Sir William MacCormac on this intelligent and graceful appreciation of his surgical work.

ON Friday next, June 21st, at 6 P.M., in the Town Hall, Kensington, an interesting ceremony will be performed. The Marquis of Lorne will preside at the presentation to Mr. and Mrs. J. J. Merriman of a testimonial subscribed by their friends in Kensington in recognition of Mr. Merriman's services as a medical man. The Merriman family have been medical men in Kensington for over 100 years.

THE Cavendish Lecture of the West London Medical-Chirurgical Society will be delivered at 8.30 P.M. on Thursday, June 20th, in the Vestry-hall, The Broadway, Hammersmith, W., by Sir J. Crichton-Browne, M.D., F.R.S., who has taken as his subject "Dreamy Mental States." A conversazione will be held after the lecture.

THE annual dinner of the Army Medical Staff will be held in the Whitehall Rooms of the Hôtel Métropole at 7.30 P.M. on Monday next, the 17th inst. Those intending to be present are requested to communicate immediately with Brigade-Surgeon-Lieutenant-Colonel Hector, 25, Anerley-park, Anerley, S.E.

THE Bowman Lecture of the Ophthalmological Society was delivered to-day (Friday) by Dr. Gowers, who took as his subject "Subjective Visual Sensations." We shall print Dr. Gowers's able paper in an early issue.

THE annual meeting of the British Dental Association will be held in Edinburgh on Aug. 28th, 29th, 30th, and 31st.

THE death is announced, at an advanced age, of M. Verneull, the eminent French surgeon.

THE ROYAL SOCIETY CONVERSAZIONE.

"LADIES' night" at the Royal Society, which this year was held on Wednesday last, sees a repetition of the things shown at the previous *soirée* held in May,¹ which to science is as the opening of the Academy is to art—a revelation of the year's work and of the year's developments. Probably the council arrange that the exhibits that are found to attract the greatest interest at the first conversazione shall be shown again for the delectation of the fair visitors and friends of the Fellows. Thus for brilliant effect the projections upon the screen by means of a lens and mirror of the molten contents of the electrical furnace of Professor Roberts Austen, which is used for the preparation of the diamond form of carbon and for the melting of chromium and similar refractory metals, could hardly be rivalled, while the four globes exhibited by Mr. W. N. Shaw, in which were illustrated the phenomena associated with the formation of cloud, were equally attractive and pretty, though they were not concerned in the employment of such powerful forces. Again the interesting collection of Mr. W. T. Burgess, consisting of cultivations of alices of potatoes over which flies

¹ THE LANCET, May 4th, 1896.

infested with a chromogenic organism had walked, demonstrating in a most striking way the extreme possibility of the transmission of infection by flies, was, as the importance of the exhibit demanded, shown once more. The spectra of argon and of helium (or helion, as we should now write it) mixed with argon were of course re-exhibited by Professor Ramsay, and the interest in these recent discoveries was accentuated by the excellent series of photographs shown by Professor J. Norman Lockyer. Amongst them were the photographs of the apparatus employed for collecting the gases obtained from minerals by the distillation method *in vacuo*; the photographs of the spectra of Bellatrix and of a part of the solar chromosphere, showing coincidences with the lines photographed in the spectra of gases from "uraninite"; and photographs also of the spectra of the new gases. The ingenious electrograph of Messrs. Nalder Brothers and Co. attracted a good deal of attention. In this process the fabric is first damped and then a current is passed for about two seconds from a silver die, the metal of which in contact with the fabric appears to form a cellulose compound, which is colourless. On reversing the current, however, the silver in the fabric is reduced, the result being that an indelible mark of metallic silver in the tissue is made, which to some extent corresponds with that produced by marking ink. Mr. Francis Galton showed the value of observing minutiae in finger prints. In a very distinct photograph in a case of twins, whose portraits, classificatory measures, and finger-print *formule* were closely alike, it could be clearly seen that the finger-print *minutiae* are quite different. Excellent demonstrations are commonly expected of Mr. Boys, who in past years has been known for his remarkable experiments with bubbles and the velocity of bullets. On the present occasion he showed on the screen the exceedingly pretty effect of the ripples produced by tuning forks upon the surface of mercury, which are so small and travel so quickly as to be invisible unless illuminated either instantaneously or intermittently at the proper rate. Dr. J. Joly exhibited his photographs in natural colours, the process of taking and reproducing them differing in no way from ordinary photography upon the dry plate, except that the sensitive plate is exposed behind a screen in the camera in particular colours. The colours so registered are brought to view by means of a superimposed screen lined with three other colours. One of the points of interest connected with the exhibit of the Marine Biological Association consisted in the fact of the efficacy of formic aldehyde in dilute solutions in preserving transparent organisms.

Lastly, the interest shown in the exhibit of the Postmaster-General in the archives room was almost beyond the limits of accommodation afforded by the room. Here for the first time telephonic communication was established with Edinburgh, Glasgow, Belfast, and Dublin. Those who were fortunate enough to secure receivers were amused and almost awed to hear the spoken communications of individuals in Dublin, which by the route taken by the cable was 467 miles away. At Edinburgh and Glasgow a musical programme was provided, the performance of which could be heard with marked distinctness, the notes of the bagpipe from the latter place being particularly audible. The wires to Ireland extend through Leeds and Carlisle to Portpatrick, thence by cable across St. Patrick's Channel to Donaghadee, thence to Belfast and Dublin. The charges for communication between the principal towns varies from 6d. in the case of Glasgow to Edinburgh, to 7s. 6d. London to Dublin, for three minutes' conversation. The line is built with the heaviest copper wire ever erected, and weighs on an average 800 lb. per mile.

REPORT OF THE COMMITTEE ON PRISONS.

IV.¹

Is the present prison system sufficiently deterrent? We have already pointed out that it is the opinion of the committee that so far as first offences are concerned the present prison treatment in convict and local prisons is amply sufficient for the purposes of deterrence. The Royal Commission of 1883 expressed an opinion that the penal servitude system

then in force "appeared not to be sufficiently dreaded either by those who have undergone it or by the criminal classes generally." The Royal Commission of 1879, however, declared, after full investigation, that "the system [i.e., in the case of convicts] is effective as a punishment"; and the committee go on to say that "a similar opinion in relation to local as well as convict prisons has been expressed by the most competent witnesses whom we have examined." But here a question of the utmost importance arises, that of the length of sentences. Among the numerous witnesses examined there appeared to be a consensus of opinion on two points in this connexion. First, they agreed that as a general principle short sentences were most desirable in the case of first offenders and where extenuating circumstances could be shown to exist. Secondly, they agreed that short, non-cumulative sentences on old criminals and on persons habitually drunk and disorderly were almost altogether ineffectual. Although this leaves out of consideration that group of offenders who are brought to trial for the first time because they have committed serious crimes against property or gross or violent crimes against the person, we may fairly take it that this consensus of opinion has reference to the great bulk of persons engaging in crime and coming under penal discipline in prison. This being so, we arrive at an excellent basis whereon to build up a scheme of practical dealing with the vast majority of offenders, so long as due care is taken not to let the term "first offenders" become too elastic in its application. It may not be out of place here to point out that the factors of which punitive deterrence in prisons is made up are mainly five in number—viz.: (1) deprivation of liberty, (2) restricted diet, (3) compulsory labour, (4) disciplinary training in regular and cleanly habits, and (5) interdiction of social companionships and comforts. But it must not be forgotten that, although these factors are primarily punitive and repressive, they are all more or less the elements upon which consistency and strength of moral character are based, and that it is impossible to do without them in any efforts that are made in moulding or reforming the moral tone of individuals. We believe the committee themselves would recognise this position. Speaking of what they refer to as the "character of necessary changes" they say: "We think that the [prison] system should be made more elastic, more capable of being adapted to the special cases of individual prisoners; that prison discipline and treatment should be more effectually designed to maintain, stimulate, or awaken the higher susceptibilities of prisoners, to develop their moral instincts, to train them in orderly and industrial habits, and, whenever possible, to turn them out of prison better men and women, both physically and morally, than when they came in." This is the veritable Utopia which all prison legislators and philanthropists are ever dreaming of and looking forward to. It is an ideal which is far more easily planned out than put into practice. The "less elastic" system has proved to be fruitful of good results, so far at least as it can lay claim to having been a means to an end, that end being the reduction of the prison population; and if a more elastic policy is now to find favour we feel sure that the elasticity must be instituted as an adjunct to, and not as a substitute for, those factors of deterrence to which we have referred, and which form the groundwork of the existing prison system. This, we think, ought to be made sufficiently clear before any fancied "new broom" methods are placed upon their trial. The committee are satisfied that they have not been able to solve the knotty problem of "crime" in its various relationships, and they speculate on the subject in the following terms. "Crime, its causes and treatment, has been the subject of much profound and scientific inquiry. Many of the problems it presents are practically at the present time insoluble. It may be true that some criminals are irreclaimable, just as some diseases are incurable, and in such cases it is not unreasonable to acquiesce in the theory that criminality is a disease and the result of physical imperfection; but criminal anthropology as a science is in an embryo stage, and while scientific, and more particularly medical, observation and experience are of the most essential value in guiding opinion on the whole subject, it would be a loss of time to search for a perfect system in learned but conflicting theories when so much can be done by the recognition of the plain fact that the great majority of prisoners are ordinary men and women, amenable, more or less, to all those influences which affect persons outside." We have italicised the last clause because to our mind it contains for all practical

¹ Parts I., II., and III. were published in THE LANCET of May 4th, 18th, and 25th respectively.

purposes the pith of the whole matter. We are not unwilling to accept the compliment honestly paid to the work done by the medical profession in this relation; but we are strongly of opinion that, as the committee imply, it is only in the small minority of imprisoned criminals that the pathological and psychological phenomena are at all likely to take us outside the pale of common sense or beyond the ordinary rules which guide conduct in our everyday life.

The committee ask the question: "Upon what does the reformatory influence which we desire to bring to bear more fully on the prison system depend?" And they answer: (1) the administrative authority; (2) individual effort; and (3) a proper classification of prisoners. We have already dealt with the principles upon which the committee are anxious that the classification of prisoners should be worked out. They are, perhaps, not much more than a development upon existing lines, but we believe them to be sound and not impracticable. On the subject of (1) administrative authority they say: "The population of every prison is a community in itself, changing with greater or less rapidity, but composed of individuals of varying character, aptitude, and history. For purposes of prison discipline it is comparatively easy to mass them all together, to call each of them by a number, and by a cast-iron system to make them all go through the same tasks, observe the same hours, and lead the same lives. But under this orderly equality there exist the most striking inequalities. The hardened criminal bears the discipline without much trouble; others are brutalised by it; others suffer acutely and perhaps are permanently weakened by it in mind and body. It is impossible to administer to each man a relatively exact amount of punishment. But yet it is these very inequalities which often must produce that bitterness and recklessness which lead on to habitual crime. These inequalities must exist under the best available system. But the responsible authorities of the prison should have sufficient time at their command to observe prisoners individually, and sufficient discretionary power to give or obtain for an individual prisoner that guidance, advice, or help which at such a crisis in his life may make a priceless change in his intentions or disposition, and it should be the duty of the central executive to coöperate with the local officials in carrying out satisfactorily this most important part of their functions." They go on to say as to (2) that without an excessive and impossible increase in the number of higher prison officials adequate individual attention to prisoners "could not be given. But the warders could be trained to do some of this work, and under proper rules and regulations outside helpers could be brought in to supplement the work of the prison staff. Ordinary amateurs, as a rule, would be worse than useless. There are, however, many men and women in every centre of population who by training and temperament are amply competent to render valuable assistance." We have no doubt that if the higher prison officials had time to devote to the work they would be able to exercise a beneficial personal influence upon the characters of a sufficient number of prisoners to justify larger efforts in this direction being made, but that such influence could be made to permeate any large proportion of the inmates of a prison is very doubtful. We are far from sanguine about the good results that the committee would lead us to expect from the operative interference of warders, even if they could be "trained," in "awakening the higher susceptibilities of prisoners and developing their moral instincts." The most that could be expected in this direction would be in the selection of warders of an honest, manly, and not unsympathetic cast of mind—men whose manner and example would tacitly impress themselves upon the prisoners with whom they are brought in contact, and whose conversation (when available) would be wholesome and sensible.

The "mark system," which has done so much in convict prisons to stimulate industry and good conduct, is said to "work well." The committee were given to understand that it is the practice to restore marks forfeited by inadvertence or some trivial offence subsequently compensated for by diligence and good conduct, and they commend the practice. They are also of opinion that prisoners should not forfeit marks by reason of physical or mental weakness or illness. "We considered," they say, "whether the power to earn remission of sentence should be extended from convict to local prisons. It is difficult to see the logic or the advantage of allowing a three-year convict to earn a remission of one-fourth of his sentence, and of forbidding a local prisoner sentenced for eighteen months or

two years to earn any remission. We suggest that the remission system might be extended to local prisoners sentenced to the longer periods." Some difficulty—not a very great one, it is true—might arise in altering the apportioned length of sentences which, but for the length, are to be regarded as in all respects identical. But apart from this, when the length of sentence comes to be reckoned in years, and not months, there can be no doubt that the longer the sentence the greater is the intensity of that weariness of heart which the "long vista of years" may produce, and which almost demands the introduction of some bright element of hope such as that of which the mark system is the embodiment.

PORTSMOUTH MEDICAL UNION.

We append the prospectus of this new association, whose objects are thereby sufficiently defined, and we wish it all good fortune in safeguarding the interests of the profession, promoting good fellowship and an intimate *entente cordiale* between the medical men of the neighbourhood, and in securing for them the strength that is given by union.

The positive necessity for some organised action by practitioners for protection against unfairness and encroachment has become very urgent. No one who has read the recent correspondence in our columns on this subject, or who is conversant with the whole story of the battle of the clubs at Cork, can doubt that the profession often nowadays finds itself placed where opposition to grave abuses, so far from being evidence of cantankerousness or greed, is the only course that is left to the self-respecting man who sets a proper value upon his services.

GENERAL OBJECTS.

1. To safeguard and support the interests of the medical profession in the town and district.
2. To encourage cordial relations and amicable feelings between medical men practising in the district.
3. To enable members to obtain the advice and united support of the local profession.
4. To give opportunities of discussion and interchange of views on the business side of medical practice.
5. To obtain the combined action and consolidated influence of members of the union upon points of difficulty which may arise from time to time in local practice.

PARTICULAR OBJECTS.

1. To consider and take action upon the relations of medical officers with friendly societies and medical aid associations, and with regard to Poor-law and other official appointments.
2. To establish, maintain, and circulate among members of the union a patients' black list.
3. To promote the improvement of medical fees.

OBJECTS WITH REGARD TO FRIENDLY SOCIETIES.

1. To obtain the united action of members to enforce a wage limit.
2. To enforce payment for certificates by members of the club who do not subscribe to the surgeon's fund, and for all certificates not belonging to the club.
3. To enforce requirement of medical examination of new members and an examining fee.
4. To raise the rate of subscriptions for juveniles.
5. To alter the tenure of office to a suggested three months' notice on either side.
6. To refuse the admission to medical benefits of visiting members except after satisfactory medical examination.
7. To obtain the united action of members of the union with regard to the admission of females to the medical benefits of friendly societies.

PROPOSED RULES.

1. The society shall be called the Portsmouth Medical Union, having for its chief object to safeguard and support the interests of the medical practitioners in the town and district.
2. Every registered medical practitioner shall be eligible for membership.
3. Each member shall pay an annual subscription of 5s., due on June 1st in each year.
4. The affairs of the union shall be governed by a president, two vice-presidents, hon. secretary and treasurer, and a committee of six members, the above officers being *ex-officio* members of the committee. At committee meetings four shall form a quorum.
5. All officers, including the committee, shall be elected at the annual meeting to be held in the month of June in each year.
6. The committee shall have power to fill up vacancies in their own body.
7. The committee shall meet once a month, or when convened by the hon. secretary, to consider applications for advice or assistance, but may call a general meeting at any time if considered necessary.
8. A special general meeting shall be called by the president at any time upon a requisition signed by six members, such special meeting to consider no other topic than that for which the meeting was called.
9. Every member of the union shall give a personal pledge not to oppose any practitioner in any course of action which he may take in his official capacity concerning any public appointment with the concurrence of the committee.
10. Any member acting, in the opinion of a special meeting called for

the purpose, contrary to the laws and regulations of the union shall, upon a majority of at least three-fourths of the members present, be suspended or expelled (and without appeal) from the advantages of the union.

11. A special meeting called for the purpose of considering the conduct of any member of the union shall only be convened after fourteen days' written notice has been sent to the last known address of each member, and such notice shall state clearly the purpose for which such meeting is convened.

12. No new law shall be adopted, and no existing law be altered or rescinded, except at the annual general meeting, or at a special meeting called for the purpose, and fourteen days' notice of such proposed alterations, signed by at least three members, shall be sent to every member of the union in the circular convening the meeting.

The officers of the Portsmouth Medical Union are as follows:—President: Mr. F. Lord, Vice-Presidents: Mr. James Green and Dr. Lyander Maybury. Committee: Mr. Goss, Mr. Kythin, Mr. Hackman, Mr. Colt, Mr. Emmett, and Mr. McGregor. Hon. Secs. and Treasurer: Dr. Frederick Pearse, Dr. J. Blackman (and Treasurer). The temporary address is 5, Pembroke-road, Portsmouth.

CAMBRIDGE SUMMER SCHOOL OF MEDICINE.

A SHORT time ago we published a provisional notice of the Cambridge Summer School of Medicine. We have now received a detailed programme of the proceedings as far as they are at present arranged. The subjects for laboratory demonstration have not yet been settled, nor have those for the hospital clinics, but special notices will be issued later, together with more definite information.

The session will commence on Monday, July 1st, and will open with a conversazione in the Physiological Laboratory and with an address by Sir George Humphry. At 10.15 on Tuesday, Wednesday, and Thursday mornings clinical lectures will be delivered in Addenbrooke's Hospital by members of the staff; on Friday a pharmacological demonstration will be given in the Physiological Laboratory. At 10.30 all through the week physiological, alternating with pathological, demonstrations will be given. The rest of the time will be occupied with various lectures and addresses, garden parties, visits to colleges, organ recitals, &c.

It is to be hoped that the profession will take advantage of the offer so generously made by the Cambridge Medical School, an offer which shows University Extension in its best aspect, for apart from the professional knowledge to be gained there can be no more delightful place in which to spend a week of summer weather than Cambridge, unless, indeed, it be Oxford. We hope the day is not far distant when Oxford will offer the same combination of intellectual and physical pleasures that her sister University is offering to those who have never tasted the pleasures of university life.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

A GENERAL MEETING of this association was held at 11, Chandos-street, Cavendish-square, on Thursday, May 16th, under the presidency of Mr. Conolly Norman, F.R.C.P. Ire.

The President proposed the following resolution: "That this association assembled in general meeting desire to express their deep sense of the loss which the association has sustained in the death of Dr. Daniel Hack Tuke." This was seconded by Dr. Blandford, supported by Dr. Rayner, and carried unanimously, and the honorary general secretary was requested to send a copy of it to Mrs. Tuke.

Dr. Mercier then read a paper on Collective Investigation. He referred to the Collective Investigation Committee of the British Medical Association, and said that although the results of its labours did not equal the sanguine anticipations of its promoters, yet they were by no means fruitless or unimportant. This association had advantages and opportunities for collective investigation that were vastly superior to those of the British Medical Association, for their members had their patients under constant observation, and had the regulation of the whole life of their patients. Dr. Mercier then took as an example the subject of epilepsy, giving a number of instances of questions that were awaiting solution, and claimed that they could be solved by the method of collective investigation, and by that method only. He concluded by moving that a committee should be appointed to

deal with the matter and that members should be invited to coöperate.

Dr. Andriezen had arranged to read a paper on *Insomnia and Cephalalgia and their Correlated Brain Changes in Early Alcoholic Insanity*, but at the last moment a telegram arrived saying that he was too unwell to be present. After the meeting the members dined together at the Café Royal.

THE EXTENSION OF THE WEST LONDON HOSPITAL.

THE Duke of Devonshire presided on Wednesday afternoon last at a meeting at Devonshire House in aid of the proposed building fund of £20,000 for the extension of the West London Hospital. Among those present were H.R.H. the Princess Louise, the Marquis of Lorne, Cardinal Vaughan, Sir A. Borthwick, M.P., Mr. Hayes Fisher, M.P., Sir William Priestley, M.D., Mr. Leopold de Rothschild, and the Rev. the Hon. E. Carr Glyn, the rector of Kensington.

His GRACE, in opening the proceedings, expressed his regret at the unavoidable absence of Mr. Arthur Balfour, whose powers of eloquence, however, he thought could not have added greatly to the force of the bare facts. He then detailed the population of the districts served by the hospital, pointing out that hospital accommodation sufficient for 218,000 persons—the number resident in the neighbourhood when the buildings were first planned—was clearly inadequate for 460,000, the present population.

The Marquis of LORNE moved: "That, recognising the great importance of the work of the West London Hospital to the community in the West London district, this meeting cordially recommends it to the sympathy and support of the benevolent on the ground that it performs a most useful work in an efficient and economical manner."

The resolution was seconded by Cardinal VAUGHAN, supported by Sir ALGERNON BORTHWICK, and carried unanimously.

Mr. HAYES FISHER moved the next resolution in place of Mr. Balfour: "That, having heard of the necessity of enlarging the West London Hospital, this meeting cordially approves the action of the board of management in proceeding with the erection of the proposed extension, and engages itself to support the undertaking by every means in its power."

Sir WILLIAM PRIESTLEY seconded the resolution.

Mr. STEPHEN PAGET, a member of the staff of the hospital, supported it, and explained the variety of the cases dealt with.

The resolution was unanimously carried.

The meeting concluded with a vote of thanks to the Duke and Duchess of Devonshire, moved by the Rev. the Hon. E. CARR GLYN, and seconded by Mr. L. ROTHSCHILD.

It was announced that subscriptions had been given or promised amounting to £1095.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5435 births and 3139 deaths were registered during the week ending June 8th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 17.7 to 17.2 per 1000, further fell last week to 15.5. In London the rate was 14.8 per 1000, while it averaged 15.9 in the thirty-two provincial towns. The lowest rates in these towns were 10.4 in Portsmouth, 11.3 in Croydon, 11.4 in Derby, 11.7 in Bradford, and 12.7 in Nottingham; the highest rates were 20.0 in Blackburn, 20.3 in Salford, 20.9 in Liverpool, 21.4 in Bolton, and 25.7 in Burnley. The 3139 deaths included 294 which were referred to the principal zymotic diseases, against 354 and 348 in the two preceding weeks; of these, 72 resulted from measles, 59 from diarrhoea, 51 from diphtheria, 51 from whooping-cough, 33 from scarlet fever, 28 from "fever" (principally enteric), and 2 from small-pox. No fatal case of any of these diseases occurred last

week in Croydon or in Halifax; in the other towns they caused the lowest death-rates in Sheffield, Newcastle-upon-Tyne, Leeds, and Sunderland, and the highest rates in Gateshead, West Ham, Plymouth, Salford, and Bolton. The greatest mortality from measles occurred in West Ham, Plymouth, and Bolton; from whooping-cough in Gateshead; and from "fever" in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The 51 deaths from diphtheria included 33 in London, 4 in Birmingham, 3 in West Ham, and 3 in Wolverhampton. One fatal case of small-pox was registered in Bolton and one in Oldham, but not one in London or in any other of the thirty-three large towns. There were 23 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 8th inst., against 27, 29, and 22 at the end of the three preceding weeks; 5 new cases were admitted during the week, against 4, 7, and 1 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1589, against 1446, 1503, and 1524 on the three preceding Saturdays; 179 new cases were admitted during the week, against 185, 214, and 187 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 245 and 193 in the two preceding weeks, further declined to 163 last week, and were 96 below the corrected average. The causes of 50, or 1.6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Bradford, Newcastle-upon-Tyne, and in sixteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Huddersfield, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20.2 and 21.4 per 1000 in the two preceding weeks, declined again to 19.7 during the week ending June 8th, but was 4.4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15.7 in Leith and 16.3 in Aberdeen to 21.8 in Greenock and 24.0 in Perth. The 567 deaths in these towns included 25 which were referred to diarrhoea, 12 to measles, 11 to whooping-cough, 4 to scarlet fever, 4 to "fever," 1 to diphtheria, and not one to small-pox. In all, 57 deaths resulted from these principal symtotic diseases, against 64 and 60 in the two preceding weeks. These 57 deaths were equal to an annual rate of 2.0 per 1000, which was 0.6 above the mean rate last week from the same diseases in the thirty-three large English towns. The 25 fatal cases of diarrhoea exceeded the number recorded in recent weeks, and included 11 in Glasgow, 4 in Edinburgh, and 4 in Paisley. The deaths referred to measles, which had declined from 30 to 12 in the four preceding weeks, were again 12 last week, of which 4 occurred in Glasgow and 3 in Greenock. The fatal cases of whooping-cough, which had been 17 in each of the two preceding weeks, declined to 11 last week, and included 6 in Glasgow. The deaths referred to different forms of "fever," which had been 5, 3, and 6 in the three preceding weeks, were 4 last week, of which 2 occurred in Glasgow, where 3 of the 4 fatal cases of scarlet fever were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 103 and 118 in the two preceding weeks, were 112 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 30, or more than 5 per cent., of the deaths in these eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28.5 and 26.7 per 1000 in the two preceding weeks, further declined to 22.1 during the week ending June 8th, a lower rate than has been recorded in any week since November last. During the past ten weeks of the current quarter the death-rate in the city has averaged 28.9 per 1000, the rate during the same period being 17.1 in London and 19.1 in Edinburgh. The 148 deaths registered in Dublin during the week under notice showed a decline of 31 from the number in the preceding week, and included 11 which were referred to the principal symtotic diseases, against numbers

increasing from 5 to 9 in the three preceding weeks; of these, 4 resulted from diarrhoea, 3 from small-pox, 2 from whooping-cough, 2 from "fever," and not one either from measles, scarlet fever, or diphtheria. These 11 deaths were equal to an annual rate of 1.6 per 1000, the symtotic death-rate during the same period being 1.6 in London and 1.3 in Edinburgh. The fatal cases of small-pox, which had been 2 in each of the two preceding weeks, rose to 3 last week. The 4 deaths referred to diarrhoea showed a further increase upon the numbers recorded in recent weeks. The mortality from whooping-cough and from "fever" also exceeded that recorded in the preceding week. The 148 deaths registered in Dublin last week included 25 of infants under one year of age and 35 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from the numbers recorded in recent weeks. Twelve inquest cases and 4 deaths from violence were registered; and 51, or more than a third, of the deaths occurred in public institutions. The causes of 13, or nearly 9 per cent., of the deaths in the city last week were not certified.

SANITATION IN NEW JERSEY, U.S.A.

The State Board of Health of New Jersey, U.S.A., has since the publication of its seventeenth annual report suffered a loss which must, we fear, seriously affect its future. In the death of Dr. Ezra M. Hunt, the former secretary to the board, there has been removed the hand which to a large extent was instrumental in forming the board itself and which has in no small degree shaped its destinies from the date of its foundation eighteen years ago to the present time. The eighteenth annual report of the board, which is now before us, contains, side by side with the "In Memoriam," three able articles from his pen, one on Recent Sanitary Progress, another on Thoughts for Sanitary Workers, and the third an introduction to the Sixteenth Report of the Bureau of Vital Statistics. In the first of these articles Dr. Hunt refers largely to the recent contributions of English workers in sanitary science and to the reports of our Royal Commissions; and in dealing with the subject of cholera he remarks that the last International Conference in Paris "showed that no longer will we wait for this marauding pestilence to start forth on its mad mission; but that it, or the causes that produce it, will be attacked at the starting points, and thus our dealings with it will be far more radical and successful." Governments, he states, "are beginning to erect monuments or bestow other honours on their sanitary officers, and what was once patronised as a philanthropy is now held to be a necessary department of political economy, to be legislated for in the interests of the masses and for the welfare of all citizens." Dr. Hunt's executive duties have now fallen upon the shoulders of Dr. Henry Mitchell, who, in his secretarial report, deals in the main with administrative questions. He points out that one of the most useful functions of the central health authority is the investigation of epidemic outbreaks. Frequently, he observes, the source of infection is situated outside the jurisdiction of the local board in whose district the outbreak is chiefly manifesting itself. The present laws of the State, however, though they impose upon the State Board the duty of making such investigations, make no provision for the notification of outbreaks of infectious disease by the local boards. The effect of this is that the information with regard to the outbreak is often received in a casual manner and at a time when the difficulty of tracing its origin is very materially increased. The necessity for State interference has, Dr. Mitchell reports, been well illustrated during the year under review, when investigations into ten outbreaks revealed the fact that only in two instances were the local boards capable of dealing in any adequate degree with the epidemic; they could neither protect the neighbouring portion of the State nor their own citizens. The inquiries referred to have conclusively shown the urgent need for instant official notification from local boards to the State Board of Health. The difficulty of arranging the sanitary administration of large summer resorts is drawn attention to by Dr. Mitchell, and as an instance of this he mentions Jersey City, which in January has a population of some 200,000 and in July one of over a million; such sudden and extreme changes in population present most serious questions in relation to water-supply, sewerage, and scavenging. Among the epidemic outbreaks which took place in New Jersey in 1894, a subject dealt with by Dr. Clark

Hunt, we note two of enteric fever apparently due to the consumption of infected milk. In a paper on Diphtheria contributed by Dr. Daniel Strock a statement is made that "a well in proximity to a cesspool that receives the expectorated matter from a patient must be a menace to those who partake of its waters; and water-supplies that receive the sewage of cities and towns where the disease prevails are no doubt active factors in distributing the bacillus." This opinion will, we expect, hardly be accepted by English sanitarians, as no well-authenticated instance of the dissemination of diphtheria from polluted water has, as far as we are aware, been recorded in this country. Dr. Henry Colt contributes to the New Jersey report a very original and interesting paper on the Causation of Disease by Milk, in the introduction to which he remarks: "In the days of the Roman Empire it was the custom to accord to the noble infant civilian, with respect to his food, that which was his birthright; and the fabled and exceptional relation of Romulus and Remus to a lower mammal was the work of tradition. Two thousand years later this order is well-nigh reversed, and we sit in quiet complaisance and realise that as a result of the disastrous effect of civilisation upon human life a large and growing proportion of our race must needs be nourished by a domesticated lower mammal of the bovine species." From the report of the vital statistics for New Jersey we learn that among the counties of the State the general death-rate per 1000 for the year ended June 30th, 1894, ranged from 12.21 to 24.47, the total death-rate for the counties being 19.09. Among the cities of the State having populations above 5000 the rates range from 9.88 to 28.47.

PUBLIC HEALTH IN HONG-KONG.

The annual report of Colonial-Surgeon P. B. C. Ayres, C.M.G., on the work performed during 1893 in the different establishments in Hong-Kong under his supervision is an interesting volume, though a somewhat heterogeneous collection of matter, embracing as it does the reports of the Superintendent of the Government Civil Hospital and of the epidemic hulk *Hygeia*, as also those of the medical officer in charge of the gaol, the Superintendent of the Vaccine Institute, and the Government analyst. The report now before us has, the Colonial Surgeon observes, been delayed owing to the outbreak of plague, which, as we can well believe, taxed severely the energies of the administrative department. In reference to the operations of the Lock Hospital, Mr. Ayres reports that the return now submitted is the last he will be called upon to make owing to the fact that the Secretary of State has abolished the medical examination of women. For the last six years these examinations have been voluntary, and they seem to have been most highly appreciated by the women concerned, so much so, indeed, that at their request Mr. Ayres wrote to the Government pointing out that the women themselves had learned to value the benefits of examination and that they requested its continuance. This request, however, having been refused, the women suggested to the hospital nurse that if she would leave Government employ they would pay her a better salary and furnish a hospital containing rooms for her own private use, and they also proposed to the Colonial Surgeon that he should act as medical examiner. This certainly is very high testimony to the value of examination, and we can but offer our congratulations to the Colonial Surgeon on the tact with which the examinations and general control of the work must have been carried out. The institution has been carried on, Mr. Ayres observes, since 1858, twenty eight years under the Contagious Diseases Ordinance and six as a voluntarily attended venereal hospital for women. The Justices of the Peace have visited the hospital once a week and on no single occasion has a complaint been made. It seems hard, Mr. Ayres points out, that the wishes of the women should not be complied with, and that after forcing attendance upon them for twenty-eight years voluntary examination should be denied them; he regards it as a serious blow to the health of the colony. The Government analyst, Mr. Crow, has presented a report upon the practice among the Chinese community of injecting morphia hypodermically. It appears that some Chinamen came into hospital covered with innumerable puncture scars, and upon inquiry it was found that many small shopkeepers were administering hypodermic injections of morphia with the ostensible object of curing opium eating. The analyst procured samples of the solution used for injection and ascertained that at each injection half a grain of hydrochlorate of morphia was used.

Commencing with two injections per diem, the number was subsequently increased to four or five. We are glad to hear that an ordinance putting a stop to this practice was quickly passed. The Colonial Surgeon's report contains the answers furnished by the several officers at Hong-Kong to the queries presented to them by the Royal Commission on Opium. Dr. J. M. Atkinson, who for the last six years has acted as superintendent of the Government Civil Hospital, states that, as a result of his experience, he has arrived at the conclusion that neither opium nor alcohol when consumed by the Chinese and other native races in moderation is injurious. In answer to the query as to what would be the effect of cutting off the supply of Indian opium, the officials appear to be unanimously of opinion that supplies would be forthcoming from other sources. The Colonial Surgeon, for instance, observes: "Cut down the Indian opium so that it becomes unprocurable in China and too expensive in India, and China will grow opium sufficient for all eastern nations and Europe too if it can make a profit on it." In dealing with sanitation in Hong-Kong Mr. Ayres, after tracing the history of the colony in this matter since his arrival there in 1893, remarks "that many opportunities have been lost, notably after the great fire of 1872, when, to his disgust, the Colonial Surgeon saw the same old insanitary Chinese houses rebuilt more crowded than ever. At the moment of writing the terrible visitation of the plague has given the colony a very severe lesson, and a great opportunity, and there are hopes that the colony may become in the near future a model English settlement."

VITAL STATISTICS OF LONDON DURING MAY, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during May in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 6.8 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 5.9, 5.8, and 5.7 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. James Westminster, St. Martin-in-the-Fields, Strand, St. Luke, City of London, St. Saviour Southwark, and St. George Southwark; while they showed the largest excess in St. George-in-the-East, Limehouse, Poplar, Rotherhithe, Greenwich, Woolwich, and Plumstead. The prevalence of small-pox in London showed a further decline in May, 31 cases being notified during the month, including 8 in Lambeth, 6 in Rotherhithe, and 4 in Lee sanitary areas. The Metropolitan Asylum Hospitals contained 20 small-pox patients at the end of May, against 66, 54, and 34 at the end of the three preceding months; the weekly admissions averaged 5, against 15, 11, and 7 in the three preceding months. The prevalence of scarlet fever in London showed an increase upon that recorded in the preceding month; this disease was proportionally most prevalent in Chelsea, Stoke Newington, St. George-in-the-East, Bermondsey, Rotherhithe, Lambeth, Greenwich, Woolwich, Lee, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1481 scarlet fever patients at the end of May, against 1569, 1485, and 1413 at the end of the three preceding months; the weekly admissions averaged 167, against 141, 145, and 152 in the three preceding months. The prevalence of diphtheria in London showed a further increase during May; among the various sanitary areas this disease showed the highest proportional prevalence in Whitechapel, St. George-in-the-East, Limehouse, Poplar, Rotherhithe, and Camberwell. There were 508 cases of diphtheria under treatment in the Metropolitan Asylum hospitals at the end of May, against 481, 435, and 430 at the end of the three preceding months; the weekly admissions averaged 81, against 50, 62, and 69 in the three preceding months. The prevalence of enteric fever in London showed a marked increase during the month under notice, owing principally to a severe outbreak in Plumstead; among the other sanitary areas of the Metropolis this disease showed the highest proportional prevalence in St. George Hanover-square, Clerkenwell, Greenwich, and Woolwich. Erysipelas was proportionally most prevalent in Kensington, Marylebone, St. Pancras, Bethnal-green, and Rotherhithe sanitary areas. The

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—MAY, 1895.
(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1890.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.				
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhoea.				Total.	Annual rate per 1000 persons living.		
LONDON...	4,392,346	51	1236	823	1	310	9	29	411	—	2850	67	1	104	64	183	169	—	35	1	83	730	17	6680	359	119		
West Districts.																												
Battersea	122,756	—	23	31	—	4	—	—	7	—	65	5.5	—	—	—	4	—	—	—	—	—	4	13	1.1	168	14.3	123	
Kennington	167,671	2	21	26	—	2	—	—	24	—	89	5.5	—	—	—	6	—	—	—	—	—	5	20	1.2	216	13.4	123	
Hammer-smith	108,423	—	23	20	—	2	—	—	11	—	59	5.7	—	—	—	3	—	—	—	—	—	2	9	0.9	136	13.1	118	
Fulham	117,745	—	21	16	—	2	—	—	9	—	49	4.3	—	—	—	4	—	—	—	—	—	2	9	1.7	153	13.6	131	
Chelsea	99,930	—	38	22	—	3	—	—	8	—	71	7.4	—	—	—	5	—	—	—	—	—	1	11	1.3	160	16.7	135	
St. George Hanover-square	74,037	—	22	10	—	2	—	—	3	—	42	5.9	—	—	—	4	—	—	—	—	—	2	9	1.3	96	13.5	95	
Westminster	54,003	—	9	8	—	1	—	—	1	—	21	4.1	—	—	—	5	—	—	—	—	—	—	3	0.6	78	15.1	127	
St. James Westminster	53,149	—	2	4	—	2	—	—	—	—	7	3.2	—	—	—	—	—	—	—	—	—	4	4	1.8	29	13.1	45	
North Districts.																												
Marblebone	137,392	—	34	10	—	4	—	—	19	—	68	5.2	—	2	—	2	—	—	—	—	—	5	16	1.2	243	18.4	115	
Hampton	77,592	—	14	9	—	2	—	—	6	—	33	4.4	—	—	—	2	—	—	—	—	—	—	4	0.5	78	10.5	165	
St. Pancras	233,543	—	63	31	—	7	—	—	30	—	134	6.0	—	5	—	9	—	—	—	—	—	3	30	1.3	346	15.5	109	
St. Giles	338,223	—	73	39	—	2	—	—	23	—	141	4.4	—	8	—	6	—	—	—	—	—	5	39	1.2	458	14.2	121	
Stoke Newington	38,224	—	15	8	—	2	—	—	2	—	26	7.7	—	2	—	4	—	—	—	—	—	3	24	1.2	237	13.9	104	
Hackney	215,123	1	61	40	—	11	—	—	18	—	133	6.4	—	9	—	4	—	—	—	—	—	3	24	1.2	238	13.9	101	
Central Districts.																												
St. Giles	27,654	—	5	7	—	2	—	—	2	—	16	4.4	—	—	—	—	—	—	—	—	—	—	2	0.6	70	19.4	113	
St. Martin-in-the-Fields	13,556	—	2	2	—	—	—	—	—	—	4	3.1	—	—	—	—	—	—	—	—	—	—	—	—	0.5	19	14.6	50
Strand	22,186	—	3	4	—	1	—	—	—	—	8	3.7	—	—	—	—	—	—	—	—	—	—	1	—	44	20.3	145	
Holborn	32,128	—	4	4	—	—	—	—	3	—	14	4.5	—	—	—	—	—	—	—	—	—	—	—	—	1.3	58	18.8	97
Clerkenwell	65,036	—	20	11	—	5	—	—	6	—	45	7.2	—	2	—	2	—	—	—	—	—	—	4	1.4	90	14.4	101	
St. Luke	40,763	—	3	3	—	1	—	—	5	—	13	3.3	—	—	—	—	—	—	—	—	—	—	6	1.2	73	18.7	89	
City of London	53,824	—	6	3	—	1	—	—	1	—	12	3.7	—	2	—	2	—	—	—	—	—	—	7	2.2	53	16.3	154	
East Districts.																												
Shoreditch	122,932	—	43	27	—	4	—	—	16	—	91	7.7	—	10	—	4	—	—	—	—	—	4	34	2.9	223	18.9	131	
Bethnal Green	130,061	1	28	30	—	6	—	—	22	—	60	8.3	—	5	—	7	—	—	—	—	—	2	15	1.2	202	16.2	83	
Whitechapel	76,150	—	22	20	—	2	—	—	5	—	60	11.8	—	13	—	4	—	—	—	—	—	3	32	7.4	128	29.5	166	
St. George-in-the-East	46,227	—	19	18	—	4	—	—	11	—	66	8.6	—	10	—	6	—	—	—	—	—	2	36	6.6	146	26.8	208	
Limehouse	56,355	—	24	23	—	5	—	—	5	—	69	6.6	—	17	—	8	—	—	—	—	—	2	36	3.3	189	18.2	107	
Little and Old Town	106,443	—	24	23	—	8	—	—	22	—	135	8.2	—	39	—	13	—	—	—	—	—	2	71	4.3	331	20.2	154	
Poplar	171,230	—	40	23	—	8	—	—	22	—	135	8.2	—	39	—	13	—	—	—	—	—	2	71	4.3	331	20.2	154	
South Districts.																												
St. Saviour Southwark	26,570	—	9	5	—	—	—	—	—	—	7	2.7	—	2	—	—	—	—	—	—	—	—	6	2.0	51	20.0	186	
St. George Southwark	60,168	—	33	16	—	6	—	—	4	—	18	3.4	—	—	—	—	—	—	—	—	—	1	11	1.9	120	20.8	139	
St. George Southwark	119,158	—	32	16	—	4	—	—	6	—	62	5.4	—	—	—	—	—	—	—	—	—	3	26	2.3	235	20.5	167	
St. George Southwark	40,713	—	27	24	—	4	—	—	7	—	60	7.5	—	—	—	—	—	—	—	—	—	4	14	1.7	144	17.9	153	
Bermondsey	82,410	—	32	14	—	—	—	—	1	—	70	7.9	—	—	—	—	—	—	—	—	—	—	1	0.7	23	18.5	159	
Battersea	294,493	6	105	47	—	13	—	—	12	—	212	7.8	—	13	—	11	—	—	—	—	—	9	19	4.9	81	20.8	121	
Wandsworth	165,130	—	54	22	—	7	—	—	23	—	101	6.4	—	14	—	4	—	—	—	—	—	26	25	1.7	454	16.6	125	
Camden	252,737	—	62	19	—	7	—	—	17	—	107	6.0	—	1	—	4	—	—	—	—	—	31	36	1.6	178	10.0	118	
Greenwich	175,183	—	78	27	—	6	—	—	28	—	169	7.0	—	—	—	18	—	—	—	—	—	3	31	1.6	385	16.9	156	
St. George Southwark	82,410	—	18	8	—	13	—	—	9	—	156	9.2	—	2	—	14	—	—	—	—	—	—	—	0.8	82	16.9	162	
St. George Southwark	106,332	—	20	8	—	16	—	—	4	—	24	2.4	—	—	—	—	—	—	—	—	—	—	—	0.5	62	14.9	143	
St. George Southwark	61,494	—	34	14	—	136	—	—	—	—	192	32.6	—	—	—	—	—	—	—	—	—	—	—	0.5	47	12.6	146	

* Including deaths from membranous group.

* Including 37 cases of membranous group.

29 cases of puerperal fever notified during May included 3 in Lambeth and 2 each in Islington, Hackney, Poplar, Camberwell, Lee, and Plumstead sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, June 1st, the deaths of 6680 persons belonging to London were registered, equal to an annual rate of 15.9 per 1000 of the population, against 30.3, 30.0, and 18.3 in the three preceding months. The lowest death-rates during May in the various sanitary areas were 10.0 in Wandsworth, 10.4 in Lewisham (excluding Penge), 10.5 in Hampstead, 10.9 in Stoke Newington, 12.6 in Lee, and 13.1 in Hammersmith; the highest rates were 20.2 in Poplar, 20.3 in Strand, 20.5 in Newington, 20.8 in St. George Southwark and in Rotherhithe, 26.8 in Limehouse, and 29.5 in St. George-in-the-East. During the five weeks of May 730 deaths were referred to the principal zymotic diseases in London; of these, 194 resulted from measles, 183 from diphtheria, 169 from whooping-cough, 83 from diarrhoea, 64 from scarlet fever, 35 from enteric fever, 1 from ill-defined fever, and 1 from small-pox. These 730 deaths were equal to an annual rate of 1.7 per 1000, against 1.5 in each of the three preceding months. No fatal case of any of these diseases was registered during May in St. Martin-in-the-Fields; in the other sanitary areas the lowest zymotic death-rates were recorded in Westminster, Hampstead, St. Giles, Strand, Wandsworth, and Lee, and the highest rates in Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and Rotherhithe. Only one fatal case of small-pox was registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 29; this fatal case belonged to Rotherhithe sanitary area. The 194 deaths referred to measles were less than half the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, and Poplar. The 64 fatal cases of scarlet fever were 16 below the corrected average number; this disease showed the highest proportional fatality in St. George-in-the-East, Limehouse, and Rotherhithe sanitary areas. The 183 deaths referred to diphtheria exceeded by 43 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Whitechapel, Limehouse, Mile End Old Town, Poplar, Rotherhithe, and Greenwich. The 169 fatal cases of whooping-cough were 136 below the corrected average number; this disease showed the highest proportional fatality in St. James Westminster, Shoreditch, St. George-in-the-East, Limehouse, St. George Southwark, and Bermondsey sanitary areas. The 35 deaths referred to enteric fever were 13 below the corrected average number; except in Plumstead, where this disease was epidemic during the month under notice, there was no marked excess of "fever" mortality in any of the sanitary areas of London. The 83 fatal cases of diarrhoea slightly exceeded the corrected average number. In conclusion, it may be stated that the mortality in London during May from these principal zymotic diseases was as much as 31 per cent. below the average.

Infant mortality in London during May, measured by the proportion of deaths under one year of age to registered births, was equal to 119 per 1000, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. James Westminster, Hampstead, St. Martin-in-the-Fields, Bethnal Green, and Whitechapel; and the highest rates in St. George-in-the-East, Limehouse, St. Saviour Southwark, Newington, Bermondsey, and Woolwich.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-COLONEL O'DWYER has arrived at Halifax and taken over the duties of Principal Medical Officer from Surgeon-Colonel Archer. **Brigade-Surgeon-Lieutenant-Colonel Clapp**, retired pay, has been appointed to the Medical Charge at Pontefract. **Surgeon-Captain Clarkson** has been appointed to the Medical Charge of the Women's and Children's Hospital at Aldershot, in succession to Surgeon-Major Deane, whose term has expired. **Surgeon-Major**

Irvine has arrived in England on leave from Gibraltar, and **Surgeon-Captain Maher** from the West Coast of Africa on completion of a tour of service. **Surgeon-Captain Hale** has been transferred from the Eastern to the Western District, and **Surgeon-Lieutenant Dove** from Woolwich to the Home District.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Alfred Henry Anthony, M.B., to be **Brigade-Surgeon-Lieutenant-Colonel**, vice **P. Le Feuvre Kilroy**, retired.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—**Surgeon-Captain J. B. Jameson** to the Medical Charge of the 28th Bombay Infantry; **Surgeon-Major W. B. Browning** to be **Surgeon**, Second District, Madras; **Surgeon-Major F. C. Reeves** to be **District Medical and Sanitary Officer** and **Superintendent of Gaol, Madura**; **Surgeon-Captain H. S. Peeke**, A.M.S., to be **Staff Surgeon, Murree**; **Surgeon-Major J. Anderson**, Civil Surgeon, Bareilly, to hold Charge of the Central Prison, Bareilly, in addition to his other duties, until further orders; **Surgeon-Captain H. E. Drake-Brockman** (Bengal), on military duty, Nowgong, to the Medical Charge of the Bundelkhand Political Agency, in addition to his military duties, until further orders; **Surgeon-Lieutenant Hamilton**, doing temporary duty at the Native Hospital, Cawnpore, proceeds to Manipur, in the Assam District, for duty; the services of **Surgeon-Lieutenant W. Young** (Bengal) are placed temporarily at the disposal of the Government of the North-West Provinces and Oudh.

NAVAL MEDICAL SERVICE.

Surgeon and Agent H. R. Bramwell, M.B., at Tynemouth.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant John Parkinson Atkinson, M.D., 3rd Volunteer Battalion, the Suffolk Regiment, to be **Surgeon-Captain**.

VOLUNTEER CORPS.

Artillery: 1st Cumberland: **Surgeon-Lieutenant C. H. Powers** resigns his commission. **Rifle**: 6th Volunteer Battalion the Gordon Highlanders: **George Lyon**, M.B., to be **Surgeon-Lieutenant**. **Volunteer Infantry Brigades**: **Tay Brigade**: **Surgeon-Lieutenant-Colonel J. K. Anderson**, M.D., 2nd Volunteer Battalion the Black Watch (Royal Highlanders), is appointed **Brigade-Surgeon-Lieutenant-Colonel**.

THE FILTRATION OF DRINKING WATER.

Professor E. H. Hankin, the bacteriologist and chemical examiner with the Government of the North-West Provinces, India, who recently published a capital little pamphlet on the Bacteriological Test of the Purity of Water, which was noticed in *THE LANCET* of April 6th, has forwarded a communication to the *Pioneer Mail* of May 22nd on the purification of drinking water in India. **Professor Hankin** premises that he is not a water-drinker himself, and has no wish to encourage the habit in others. Ordinary domestic filters, he points out, are not only incapable of removing dangerous microbes from water, but are, on the contrary, to be regarded rather as a breeding-ground for them. The Pasteur-Chamberland and Berkefeldt filters, however, depending on a different principle to other domestic filters, have the power of removing nearly all the microbes from water when they are in working order. All dangerous microbes may be removed with certainty from water by boiling it for a short time. Some microbes are only destroyed by prolonged boiling, but these, so far as **Professor Hankin** knows, are completely harmless. Aerated waters are practically free from microbes if they have been kept for some time after being made. The gas under pressure kills the microbes—the cholera microbe in a few minutes, that of enteric fever perhaps only after a few days. The water of the large rivers in the North-West Provinces is safer to drink than the water from nearly all wells, the precaution being taken not to obtain it immediately below a town or during the rains, as it is, for obvious reasons, safer at other places and seasons of the year. Practically any dangerous microbe that gets into well water in the plains in the North-West Provinces gets there by direct human agency. If the well is properly covered in and the water raised by a pump this risk may be avoided. The good effect of such an arrangement is likely to be nullified if a filter is attached to the well or if any other open wells are left in the same compound. **Professor Hankin** is experimenting with potassium permanganate as a means of cleansing and disinfecting well water.

The results obtained by adding the substance, in the proportion of one ounce to an ordinary sized well, have been encouraging, though they are not sufficiently numerous for him to definitely recommend the practice as a sanitary precaution.

THE LATE SIR EDWARD HAMLEY.

The late General Hamley was a remarkable man in more ways than one. He was a gallant soldier who had distinguished himself by his valour in the Crimea, a strategist who had published a text-book on "The Operations of War" which has a European reputation, a brilliant writer and a novelist and essayist of no mean merit, and yet there can be no doubt that at the time of his death he was a disappointed man and laboured under a sense of wrong. With an unusual number of fine qualities he had an assertive and somewhat austere manner which probably led to his being misunderstood and misrepresented. The main cause of General Hamley's feeling of injustice and disappointment was connected with his services in command of the Second Division at the battle of Tel-el-Kebir, upon which fell, he alleged, the main burden and success of the assault. Mr. Shand, his biographer, who has written a very interesting account of Sir Edward Hamley's life, has gone fully into the subject, and the question which occupies the military mind at present is whether any explanation in the way of reply will be forthcoming. It is a subject that does not come within the province of medical journalism, and about which, of course, we are not competent to express any opinion, but our readers cannot have forgotten that an inquiry took place into the conduct of the medical service in the Egyptian campaign of 1882. Medical officers at the end of that expedition—in which better results had been obtained than had ever before been accomplished in the treatment of wounds and sickness in warfare—found themselves called upon to vindicate their department and its work on that occasion from what they thought unjust and ungenerous attacks. The result was not satisfactory to the medical service, and it was always understood that the late Sir Edward Hamley was no participator in the views of those who attacked it.

ARMY MEDICAL STAFF IN INDIA.

We are pleased to be assured by the Secretary of State for India (*vide* our Parliamentary Intelligence, p. 1555) that the establishment of the Army Medical Staff in India is considered sufficient for the requirements of the Army in peace and war, and that there is no reason to suppose that it is "terribly undermanned"; but this official answer to a question put by Mr. A. C. Morton does not at all dovetail with the following extract from a letter of an officer in India, recently published in the *Army and Navy Gazette*, on the condition of garrisons after the mobilisation of hospitals for the Chitral relief force had been carried out:—"The hospitals have been successfully mobilised for the expedition, but the result is that the stations are denuded of medical officers, chiefly those of the Indian Medical Service; all leave is stopped, and men are going sick with extra hard work. One medical officer is doing duty at the station hospital, is also staff surgeon, and, as well, in medical charge of a native cavalry regiment. Another is in charge of his own corps (a native regiment) and has to look after a large cantonment hospital as well. The Indian Government has no reserve for any emergency like the present. In fact, there is a paucity of medical officers, medical subordinates, hospital assistants, and ward orderlies, to carry on the medical duties of garrison hospitals."

THE LEE-MATFORD ARMY RIFLE.

Some doubt has been felt and expressed by military men as to the efficiency of the small new regulation projectile, used with cordite powder, to break the "rush" of an enemy on a line or square. A communication in the *Standard* of the 12th inst., in calling attention to this subject, quotes from a letter received from an officer engaged in the fighting at the Malakand Pass and at Khar during the recent Chitral expedition. Allowing for the fact that, as the writer does not appear to be a medical officer, his description may be inaccurate, the quotation is to the effect that a wounded Swati in one of the field hospitals was found to have had no less than six bullets through him—through the knee, ankle, trunk of the body, and one through the back of the neck, traversing the mouth, wounding the tongue, and carrying away two upper front teeth in its course. It is stated that the wounded man was able nevertheless to go voluntarily to the hospital for treat-

ment and was doing well. The correspondent of our contemporary asks whether such immunity from immediate disablement to an enemy does not mean greater danger and loss to our own soldiers when withstanding a charge or rush, such, for instance, as we experienced with the Arabs in the Soudan.

THE CHITRAL RELIEF FORCE.

According to the latest accounts, the health of the force—both European and native—is very good. The troops which composed Colonel Kelly's force have been suffering from the effects of their late exposure, severe marches, and the hardships they underwent. As we have already said, the fact that Colonel Kelly and his officers were comparatively unknown men in command of a small force of native soldiers and followers, is one of the most satisfactory things about the grand achievement they undertook and successfully accomplished. The enterprise, the fearlessness and courage of the leaders, and the pluck and endurance of the men who accomplished the work they set themselves to do are qualities of which we must all feel proud. The advance of the larger expedition under General Sir R. Low no doubt materially influenced the course of events and enabled Colonel Kelly's force to do what it did—namely, to make one of the most memorable marches on record. The description of this march from Gilgit to Chitral by the special correspondent of the *Times* is one of the most interesting narratives that has appeared for a long time.

INSPECTION OF THE VOLUNTEER MEDICAL STAFF CORPS.

The London Companies of the Volunteer Medical Staff Corps were inspected by the Duke and Duchess of Teck on Saturday, June 8th, when some 200 men paraded at Putney under the command of Surgeon-Colonel Norton. The smartness of the men, upon which they were complimented by the Duke of Teck, spoke well for the training they had received.

LEAVE FOR MEDICAL OFFICERS SERVING IN INDIA.

The *Pioneer Mail* of the 22nd ult. states that the Government of India have decided that leave out of India may now be granted to medical officers on the usual conditions—viz., if their services can be spared locally and with the consent of the Principal Medical Officer at headquarters.

Surgeon-Captain Michael Thomas Yarr, A.M.S., attached to the Coldstream Guards, has been appointed physician to the Crown Prince of Siam.

Correspondence.

"Audi alteram partem."

HOSPITAL SUNDAY.

To the Editors of THE LANCET.

SIRS.—For the twenty-fourth successive year the Council of the Hospital Sunday Fund—of which, in my official capacity as Lord Mayor, I am president and treasurer—have to claim your indulgence in drawing public attention to the approach of Hospital Sunday, and in invoking increased assistance for the medical charities of this great metropolis. The various congregations in the churches and chapels of London will have their attention drawn on Sunday next (Hospital Sunday) to the needs of these institutions and to the vast work which they are effecting among a population of over five millions, living close to each other, the majority of whom are poor, and many are sick, suffering, and dying.

Last year's statistics afford valuable testimony to the beneficent character of the operations of the hospitals and dispensaries of London. From these it is gathered that the voluntary hospitals and medical charities in the Metropolis relieved during 1894 no fewer than 1,383,000 patients at a cost of £699,527.

The ordinary income of the institutions amounted to only £559,725, leaving a deficiency on the year's work of £139,802. The number of beds in the hospitals is 8391, but only 6490 were occupied and nearly 2000 constantly remain empty for want of funds. The Hospital Sunday Fund distributed last year over £40,000 among ninety hospitals, twenty-two convalescent homes, thirteen cottage hospitals and fifty-four dispensaries, and in addition purchased surgical appliances for 2814 sufferers requiring that form of relief. The number of

contributing congregations was 1799, being the largest ever recorded in the fund's history, and representing every form of faith.

This year the Council venture once again to appeal for funds towards covering the deficiency of over £130,000 which remains when the ordinary income of the charities is exhausted. They feel that if this large sum is not actually raised by this one effort the benevolence of the public will, as in past years, materially supply the needs of the medical institutions. The value of the hospitals is not merely gauged by the amount of suffering relieved; it is within their walls that our medical practitioners acquire their skill, experience, and knowledge, that nurses receive their training, and the sanitation of our great city is improved and advanced.

On the religious aspect of the movement it is not for me to dwell. I would only say that it is an edifying sight on this annual recurrence of Hospital Sunday to witness people of all denominations and creeds sinking their differences and joining heartily in lending helping hands in the interests of the sick and suffering poor of this teeming city.

While it is desirable and conducive to convenience that intending donors should forward their contributions through their respective places of worship, I shall be glad to add to the fund any subscriptions which may be sent direct to me at the Mansion House.

Thanking you for the publicity which I feel sure you will accord to this appeal,

I am, Sirs, your obedient servant,
JOSEPH RENALS, Lord Mayor.

Mansion House, London, June 13th, 1895.

BATHING AND AURAL DISEASES.

To the Editors of THE LANCET.

SIRS,—As the bathing season is commencing it is not out of place to call attention to the fact that every year a number of patients are seen suffering from some aural disease which is directly attributable to bathing, especially sea-bathing. The most frequent troubles are acute otitis media, acute diffuse otitis externa, often associated with a ceruminous plug, a combination of the two preceding lighting up an acute condition in a chronic suppurative otitis media, simple deafness from swelling of a ceruminous plug, and occasional extension of a suppurative process to the antrum, mastoid process, &c. Other troubles from diving, such as concussion of the labyrinth, rupture of the membrana tympani, with subsequent acute otitis media, are occasionally seen; and there seems no doubt that sea-bathing is a cause of exostoses. The question as to how these may be avoided is an important one. It should be a rule that persons suffering from middle-ear discharge should never bathe at all, and those who have had middle-ear discharge and whose membranes have healed, or those who have any tendency to ear troubles, should never bathe without some efficient means for preventing water entering the ears, such as firm plugs of cotton wool with an oilskin cap fitting tightly over them as recommended by Dr. Urban Pritchard. Water remaining in the healthy ear should be let out as soon as possible; to effect this it is a good plan to incline the head well over to the affected side, straighten the meatus by pulling the auricle upwards and backwards, and execute a series of hops on the foot corresponding to the affected ear. The acute otitis seems to be occasionally caused by water which has entered the naso-pharynx being blown into the middle ear by the forcible efforts to expel it by the nose; this danger is of course greater if there is a nasal block present.

I am, Sirs, yours faithfully,
Harley-street, W., June 8th, 1895. ARTHUR H. CHEATLE.

THE "LIBERATOR" RELIEF FUND.

To the Editors of THE LANCET.

SIRS,—In accordance with a suggestion made by numerous sympathisers with the "Liberator" Relief Fund it is proposed to have a "Liberator" Sunday on the first Sunday in next month, July 7th, when the special claims and distressing need of the aged and destitute victims in this truly national and cruel disaster may be declared from every pulpit in the land, and all the worshippers present at least given an opportunity of contributing something. Many of whom may not be able to spare the time or may not think it worth while to send their small subscription by means of a postal order to the office of

the fund. We beg very heartily to commend the proposal to Christian Churches of all denominations, believing that if adopted to any general extent it would go far towards realising the much-needed augmentation of the fund, whilst affording a happy and striking illustration of the essential oneness of the various sections of the Christian Church in the work of Christ-like charity. The Executive Committee are now sending an earnest request for a collection, or part collection, to every clergyman and minister whose name and address they can procure, but lest they should fail to reach anyone who may be willing to join in this final endeavour to raise the Fund to the £100,000 required before it can relieve in any adequate sense the worst cases, we should greatly esteem if you would kindly give your valuable aid by calling attention to this special effort. We should like to add that a pamphlet has been prepared dealing at length with this matter, entitled "Liberator Victims: a First-charge on Christian Charity," copies of which, in any number desired, the Rev. J. Stockwell Watts, honorary secretary (16, Farringdon-street, E.C.), will be pleased to forward to clergymen or ministers willing to distribute the same among the members of their respective congregations.—Sincerely thanking you in advance for the kind insertion of this letter,

We are, Sirs, yours faithfully,
(Signed) KINNAIRD.
F. W. FARRAR, D.D. (Dean of Canterbury).
WILLIAM SINCLAIR (Archdeacon of London and Canon of St. Paul's).
URIAH R. THOMAS (Chairman, Congregational Union of England and Wales).
J. MORRO GIBSON, M.A., D.D. (Presbyterian).
HUGH PRICE HUGHES, M.A. (Wesleyan).
ROBERT F. HORTON, M.A., D.D. (Congregational).
J. CLIFFORD, M.A., LL.B., B.Sc. (Baptist).
MARK GUY PEARSE (Wesleyan).
J. MORGAN GIBBON (Congregational).
H. ARNOLD THOMAS, M.A. (Congregational).

June 12th, 1895.

THE MEETING OF THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—I beg to call your attention to the report in your issue of the 8th inst. of the case of Mr. G. F. McCarthy on page 1470. By some oversight it is stated that "Dr. Braxton Hicks addressed the Council" &c. It is, no doubt, known to you that my father is Dr. J. Braxton Hicks, and in no way was concerned in the matter, and I should be glad if you will correct this in your next issue.

I am, Sirs, yours faithfully,
A. BRAXTON HICKS,
Lupus-street, W., June 8th, 1895. Coroner and Barrister-at-Law.

. We regret the oversight.—ED. L.

DEFECTS OF VISION AND ACCIDENTS.

To the Editors of THE LANCET.

SIRS,—This subject, I am sure you will agree with me, is worthy of notice in your journal. My knowledge of the question extends backwards to the year 1870. I was surgeon of the Cunard steamer *Russia*, and I had a unique experience in that capacity. The *Russia* was then a perfect steam-yacht, carrying no emigrants, and no member of the crew left her except through death or promotion. On one trip, during the muster prior to sailing, I detected a new member amongst the crew, and on looking at him carefully discovered that he had a glass eye. This set me thinking, and I made an examination of all the men who were on duty for that night, the result being that I discovered that the man on the opposite side of the bridge was also imperfect in his vision. These men were relieved from look-out duty. The following night, running down the Channel, we missed almost by a hair's breadth a collision with an East Indiaman. What would have been the result had these men with imperfect vision been on the look-out that night I do not know. *Ad vasa disce omnes*. That is the whole history of the origin of what I have done with reference to the question of defective vision as a cause of disaster at sea. In 1875 I wrote to you on this matter and you noticed my letter in an editorial paragraph. The matter was subsequently brought to the notice of the then President of the Board of Trade, Sir Thomas Grey, and was adopted by the

Cunard Company as an imperative law of their service. Recently an important deputation waited on the President of the Board of Trade on the subject. It seems to me that this deputation has fallen flat. I have personally written to the President, and have received simply an official recognition of the receipt of my document. And now, Sirs, it seems to me that the time is ripe for your powerful journal to take hold of this matter and insist upon one thing, the only remedy—namely, the appointment of a competent medical officer to the Board of Trade, who shall be able to render a full account of the competency of men who have charge of the lives of people at sea. I might prolong this matter further, but I believe this will suffice.

I am, Sirs, yours faithfully,
R. A. CALDWELL.

Sussex-place, Southampton, June 11th, 1895.

To the Editors of THE LANCET.

SIRS,—So many letters have appeared in THE LANCET recently on the subject of "Colour Vision and Accidents" that I think it may interest your readers to know that on the East Indian Railway—the largest undertaking in the East—every precaution is taken to safeguard the travelling public from any accident arising from colour blindness. The East Indian Railway has a medical department of its own, and the medical officers are responsible for the sight and colour vision of every candidate for employment who can in any way have anything to do with the working of trains or signals. For more than twelve years each candidate has had to pass the following tests in addition to the ordinary health examination: Holmgren's wools and army test dots by day, as well as being tested at night with a lamp specially designed for the purpose by Mr. H. H. Bathe, one of the company's medical officers. Both Europeans and natives must pass each test, and if their sight or colour vision is defective they cannot obtain employment. The test at night is very useful, as night blindness is very common in India. The lamp used is of excellent design and can be made to represent a signal at any distance. I have never known anyone who was colour-blind to distinguish correctly between green and red when the colours were alternated with rapidity. Mr. Beaumont, in your issue of April 20th, remarks that drivers can generally tell what the signals are by the difference in intensity, and goes on to say very truly that this is a most dangerous means of differentiating between green and red, as, owing to hurry or foggy weather, a man's train may be off the rails before he has made up his mind whether the signal is against him or in his favour. The lamp we use, representing as it does a signal, is a sure test for this kind of vision, as it can be turned from red to green with such rapidity that a man cannot pass unless his colour vision is perfect, and when taken together with the other tests forms a perfect safeguard. I may add that when a man is to be promoted or granted an extension of service such promotion or extension depends on his passing these tests of eyesight. Should he fall his career as a "running man" is at an end. I trust you will pardon the length of this letter, but the subject of colour vision is now so much discussed in England, and is one of such vast importance both to the public and to the railway authorities, if they would only realise it, that it seemed to me that a sketch of the actual working of correct tests for many years on a large railway in India might prove helpful.

I am, Sirs, yours faithfully,

J. STUART BROOKE.

District Medical Officer, East Indian Railway.

Amansol, Bengal, May 11th, 1895.

THE TREATMENT OF PSORIASIS.

To the Editors of THE LANCET.

SIRS,—Having been unavoidably absent from the Dermatological Society when Dr. Crocker read his paper, I am consoled by finding it published by you, especially as it contains support of the internal microbic nature of psoriasis. At the Birmingham meeting of the British Medical Association I read a paper on the Parasitical Nature of Psoriasis and its Treatment by Mercury,¹ in which I advocated this view on the grounds (amongst others) of its symmetry, the dilatation of the papillary vessels, and the utility of parasitocidal drugs, although there was not verification of Laug's epidermotophyton. Some evidence

of contagiousness was then adduced, and more has since been added. Salicin and the salicylates (which Dr. Crocker recommends), carbolic acid, the iodides, and arsenic are microbicides and can act in no other way. I am satisfied with that proven microbicidal measure, a mercurial course internally, or by inunction, or both combined. For twenty-five years I have treated psoriasis in no other way, and failures and recurrences having been very few, I regret it has not been extensively adopted by the profession. I may add that I have found no evidence of correlation between psoriasis and the rheumatic or any other diathesis.

I am, Sirs, yours truly,

E. D. MAPOTHER, M.D.

Cavendish-square, W., June 10th, 1895.

THE MEDICAL GUILD AT MANCHESTER AND THE INSURANCE OF CHILDREN.

To the Editors of THE LANCET.

SIRS,—With reference to the "Bill to amend the Law relating to the Insurance of Burial Expenses of Children" at present before Parliament, I am requested to send you the following resolution, passed at a meeting held on May 30th: "That in the opinion of the Council of the Medical Guild the most satisfactory check for the evils arising out of the insurance of children would be provided by enacting that it be required of all insurance companies and clubs, whenever a death claim is made and before it can be paid, to obtain in every case a medical certificate of the cause of death directly from the practitioner who attended the deceased during the last illness, and who certifies the cause of death for the purpose of registration." I am to add that, on the death of an insured child, it would be desirable to require of the insurance society with which it was insured to notify the fact of such insurance to the registrar of the district.

I am, Sirs, your obedient servant,

A. STEWART,

Hon. Secretary.

Manchester, June 4th, 1895.

"ADENOID GROWTHS IN CHILDREN."

To the Editors of THE LANCET.

SIRS,—I have to thank Dr. Eustace Smith for his kind and courteous reply to my questions. I am quite aware that adenoids are common in young children, and for this very reason we are not warranted in ascribing to them any symptom which is not relieved by their removal. I feel sure Dr. Smith will agree with me that the occurrence of some degree of adenoid hyperplasia in two cases of infantile respiratory spasm warrants no deductions as to cause and effect. I have referred to the paper by Dr. Robertson upon which Dr. Smith relies to establish his contention,¹ and cannot find that in any sense it corroborates the somewhat sweeping statements as to adenoids as a cause of infantile respiratory spasm, to which I took exception. If Dr. Smith will again refer to the paper he quotes, he will find that only one case can possibly be ascribed to adenoids. Even with regard to it, however, there is no definite statement to this effect, although it is mentioned that the "post-nasum" was scraped. In this very case inhalation of the larynx, nasal sprays, &c., were also employed. It is, therefore, incorrect to say that "cases" were described by Dr. Robertson proving the connexion between adenoids and infantile respiratory spasm, which I have ventured to doubt. I am very well acquainted with a form of pseudo-croup which owes its origin to adenoids in many cases, and in which the symptoms result from the naso-pharyngeal secretion falling into the larynx, and I am by no means satisfied that this single case, which may possibly support Dr. Smith's hypothesis, was not of this nature. In conclusion, I beg to assure Dr. Smith that it was no spirit of captious criticism which induced me to point out what I believe to be an error in his paper. There is in the present day such a great tendency to over-estimate the importance of limited regions of the body that every new symptom ascribed to such a region must be thoroughly proved before it can be accepted. Adenoid growths are most important in many respects, and it can only be pleasing to specialists to find a physician so justly eminent as Dr. Smith recognising their importance. We, however, find so many well-proved

¹ Brit. Med. Jour., Jan. 17th, 1891.

¹ Journal of Laryngology, 1891, p. 407.

symptoms to be due to this adenoid hyperplasia that we cannot afford to admit also those which rest upon pure hypobesias.

I am, Sirs, yours faithfully,
Chester-street, Edinburgh, June 10th, 1895. P. McBRIDE.

THE INFORMAL PURCHASE OF POISON.

To the Editors of THE LANCET.

SIRS,—No doubt you have, in common with many of your subscribers, read the correspondence going on the last few days in the *Standard* about the poisoning of dogs in Sussex. As one who was present and witnessed the horrid spectacle I found myself soon endeavouring to try to discover the perpetrator of the dastardly act, and while conversing with a well-known Sussex veterinary surgeon he told me the following anecdote. A veterinary surgeon practising in this country was recently ill; during his illness a hamper of drugs arrived at his house, but was not meant for him. It was addressed Mr. So-and-so, Veterinary Surgeon. As he was the only member of that profession for miles round it was delivered to him. He recognised the name of the man for whom it was meant. On examining the invoice an ounce of strychnine was found charged for. Therefore the veterinary surgeon wrote to the druggists explaining all the circumstances and asking if they still wished him to send on the hamper with so much poison in it. To this they replied with no little asperity that it was no business of his to meddle with other people's invoices, and he must send on the "goods" at once. They further added that they always executed prepaid orders to anyone who desired them to do so, which is the custom of the trade.

Now, Sirs, if this is so, no wonder that keepers and others can get what poisons they want without troubling the local druggists or going through the formality of signing poison-books. Some stringent measures will have to be taken to prevent a dire calamity from happening some day.

I am, Sirs, your obedient servant,
Brighton, June 7th, 1895. A BRIGHTON SURGEON.

THE BOYLE LECTURE AT OXFORD.

To the Editors of THE LANCET.

SIRS,—Being stone deaf, and—so far as the medical and surgical science and skill of the present day extend—apparently hopelessly so, everything that tends towards the elucidation of the structure and functions of that little understood region, the inner ear, possesses for me an exceptional interest. Professor Crum Brown is reported in a recent lecture to have said that he looked upon the semi-circular canals as constituting a special hydrodynamical mechanism for regulating (amongst other things!) the compensatory movement of the eyes. "When the head is moved rapidly in one direction the eyes have to move to a corresponding extent; this movement is carried on by a series of small jerks with pauses between them. The same phenomena are produced when the head is rotated on an antero-posterior axis. In seeking for the cause of this compensatory action of the eyes Professor Crum Brown comes to the conclusion that we have in the semi-circular canals a perfectly definite sense organ, which acts by the increase of pressure induced by movement of the head in the membranous ampullæ; the stretching of the ampullary walls by the fluid irritates the nerve endings in the crista acustica." Now, if the above may be taken as a correct rendering of the Professor's theory, I venture to think that the latter is open to criticism on more points than one. In the first place, Do the eyes really have to move to a corresponding extent while the head is going through the motions that are commonly regarded as expressive of negation and assent? Evidently not necessarily so. Any person can prove for himself by simple experiment that his eyes may remain fixed on any object during both processes. All he has to do is to exercise his will to that end. Secondly, the ampullary walls must be just as much subjected to increase of pressure during head movement whether the eyes remain fixed on an object or exhibit compensatory action. What, then, in the former case becomes of the irritation of the nerve endings in the crista acustica? Why should increase of pressure acting upon a perfectly definite sense organ excite compensatory eye movement in the one instance and not in the other? In my humble opinion these unanswerable questions invalidate the whole theory, but of course I am open to enlightenment and

correction. The answer to my objections may be as plain as a pikestaff to anyone thoroughly acquainted with Professor Crum Brown's theory; but failing additional data I am unable to pick it out, and hence my desire to read the unabridged lecture. As regards the series of small jerks by means whereof the apparently smooth movements of the eyes are carried on, I would merely beg leave to inquire whether this is not the usual procedure—whether all muscular motion is not carried on by means of series of small jerks, with pauses between them, for all the world like Mrs. Jarley's waxworks on a miniature scale? Such has always been my impression, but I cannot recall the source of origin, or, to be perfectly accurate, it does not seem worth while trying to do so. Finally, what would small jerks be like if there were no pauses between them?

I am, Sirs, yours faithfully,

SURDUS.

** Our correspondent will find the lecture reported in full in our issue of May 25th.—ED. L.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Birmingham Medical Benevolent Society.

THE seventy-fifth annual meeting of this society was held on the 7th inst. under the presidency of Mr. Priestley Smith. The report stated that the directors were able to speak with satisfaction on the work done during the past year. The invested funds amounted to nearly £12,000. The annual value of grants ranged from £20 to £40. The total sum distributed during the year had been £550. The total number of benefit members was 306. Seventeen new members had joined in the year. The usual votes of thanks were passed, and a number of the members dined together afterwards. Some interest is felt in the management of this society owing to the conservative tendencies of the directorate. It is considered by some that a larger amount ought to be available for distribution, and that the invested sum is too high for carrying out the real objects of the founders. No doubt a wider and more liberal basis of benevolence would tend not only to a greater good to a larger number of beneficiaries, but would be calculated to extend the number of the members, the proportion of whom to the number practising in the district being lamentably small.

Milk Adulterated with "Splash."

A dairy company was recently fined at the local police-court to the tune of £10 for selling milk with 19 per cent. of added water. The company's servant stated that the manager had ordered him when he fetched the milk from the farm to take some "splash" with him and put it into the milk. He also put water with the milk on another date. The tricks of the trade in this instance were properly rewarded by the penalty named, which renders this mode of conducting business somewhat expensive.

Sutton Coldfield and the proposed Sanatorium.

In a previous communication it was mentioned that the offer of the Royal Hotel at Sutton Coldfield as a sanatorium had been generously made by Colonel Wilkinson. It seems that certain of the inhabitants of the town have met to express their strong disapprobation of the scheme. A deputation was formed to confer with the donor as to the circumstances as affecting the locality, much alarm being felt that it would seriously affect the future welfare of the borough. It is to be hoped that the exclusiveness of these particular inhabitants will not prevent the execution of this admirable gift.

Lady Factory Inspector at Work.

In a case involving four summonses Miss Deane, one of Her Majesty's lady inspectors of workshops, prosecuted, with the result that fines were imposed of 20s. in one case with costs, 10s. and costs in another, and costs in the remaining two cases. The girls employed were kept until ten and eleven o'clock at night, the proper time for leaving being eight o'clock. The frequent plea of inadvertence was vainly argued, and the law asserted its power—a warning not without its value in a large city with numerous workshops of a similar kind.

Hospital Saturday.

The total amount paid into the bank this year has been

£12,447 15s. 9d., as compared with £11,794 10s. 11d. last year—a very creditable and satisfactory result for all concerned, in spite of the croakings of bad trade and foreign competition so constantly urged.

June 12th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Victoria University: Conferring of Honorary Degrees.

AN interesting ceremony took place on the 30th ult. at the Owens College. For the first time in its history the Victoria University exercised the privilege of conferring honorary degrees. The day's proceedings opened with a special meeting of the Court of Governors, under the presidency of Earl Spencer, K.G., the Chancellor of the University, who moved, and it was resolved unanimously, to confirm the degree of Doctor of Laws in the Victoria University already conferred upon his Grace the Duke of Devonshire, K.G., President of the Owens College, and the Right Hon. the Earl of Derby, G.C.B., President of University College, Liverpool; and on the further motion of the Chancellor it was further resolved to admit the following noblemen and gentlemen to honorary degrees: The Most Hon. the Marquis of Ripon, K.G., President of the Yorkshire College, to the honorary degree of Doctor of Laws; the Right Hon. Lord Kelvin, President of the Royal Society, to the honorary degree of Doctor of Science; the Right Hon. James Bryce, M.P., to the honorary degree of Doctor of Letters; Sir Andrew Fairbairn to the honorary degree of Doctor of Science; Sir Henry Roscoe, M.P., F.R.S., to the honorary degree of Doctor of Science; Mr. Thomas Ashton, to the honorary degree of Doctor of Laws; Mr. Richard Copley Christie, to the honorary degree of Doctor of Laws; Mr. William Rathbone, M.P., to the honorary degree of Doctor of Laws; Professor Arthur W. Rucker, F.R.S., to the honorary degree of Doctor of Science; Mr. Alfred Waterhouse, R.A., to the honorary degree of Doctor of Laws; Professor Adolphus William Ward, Vice-Chancellor and Principal of the Owens College, to the honorary degree of Doctor of Letters; Professor Gerald Henry Randall, Pro-Vice-Chancellor and Principal of University College, to the honorary degree of Doctor of Letters; Professor Nathan Bodington, Chairman of the Board of Studies and Principal of the Yorkshire College, to the honorary degree of Doctor of Letters; Professor Daniel John Leech, M.D., F.R.C.P., Chairman of Convocation, to the honorary degree of Doctor of Science; and Mr. Alfred T. Bentley, Registrar of the University, to the honorary degree of Master of Arts. Later in the day the degrees were conferred in the Chemical Theatre, which had been adapted for the purpose of the ceremony by the erection of a dais running the whole breadth of the room, redeeming it somewhat from its usual well-like aspect. A large hall, suitable for such ceremonies and other large gatherings, is one of the wants of the College. The lower part of the theatre was filled with the invited guests of the University, among whom, by the way, men were rare, their absence, from a picturesque point of view, being more than compensated by the greater brilliancy given to the scene by the gay toilets of the ladies. On the benches above were the graduates, several of whom were ladies, wearing the academical costume of gown and hood. The highest benches were occupied by the undergraduates of the College, who entered, as the *Manchester Guardian* puts it, "like a reservoir that has broken its dam," but were, on the whole, marvellously well behaved. Owing to a family bereavement, Mr. Thomas Ashton and his son-in-law, Mr. Bryce, M.P., were unable to be present. In the evening Earl Spencer and other guests were entertained to dinner at the Queen's Hotel by the members of Convocation. Dr. Leech, Chairman of Convocation, presided, and amongst those present were the Marquis of Ripon, Lord Kelvin, Sir H. Roscoe, Mr. William Rathbone, M.P., Sir A. Fairbairn, Mr. R. O. Christie, Sir B. T. Leech, Alderman Joseph Thompson, Sir Charles Halle, Dr. Ward (Vice-Chancellor), Dr. Randall (Principal, University College, Liverpool), Principal Bodington (Leeds), Mr. Charles Hughes, Professors Wilkins, Dawkins, Young, Tout, Sinclair, Dreschfeld, Schuster, Jones, Smithells, Kastner, Seaton, Reynolds, Ferkin, and Stirling; Mr. E. S. Heywood, Mr. J. E. King, Mr. Henry Wilde, Dr. Caton, Mr. A. T. Bentley (Registrar), and Mr. A. H. Worthington.

"Dr. Niven on Jewish Mortality."

I regret the occurrence of any errors in the notice of

Dr. Niven's remarks on the mortality of the Jews in Manchester. It was taken from the reports in the local papers, which must have been inaccurate; but, so far as I have observed, no correction of those reports has been made.

Visit of the Shahzada.

Manchester has been interested to-day in the visit of the Shahzada, who has been received with all the hospitality the Lord Mayor and corporation have been able to give. He has had the opportunity of seeing some of the poorer parts of Manchester, occupied almost entirely by the working classes, and it would be interesting to know what impression was made on the Oriental mind by the sight of hundreds of cotton operatives of both sexes in their ordinary working attire. The work of the day began soon after ten by the inspection of a large cotton mill in Ancoats. In London it has been said that he is listless, but it has not been so here. He was thoroughly interested in the various stages of cotton spinning, from the raw material to the finished thread, and was so much engrossed in the various processes that he seemed the last to wish to leave. On being asked if he cared to see some large engines at a neighbouring mill he said he would like to do so, although his decision deprived him of the pleasure of seeing a crowd of merchants and manufacturers at the Exchange, where a visit had been intended. These engines are of 800 and 600 horse-power respectively, and the Shahzada showed the most intelligent interest, immediately asking for information about them. In this visit he was accompanied by the Lord Mayor, Sir Joseph Leese, M.P., the Recorder, and Mr. Talbot, the town clerk, and three or four of the aldermen of the city, together with the members of his suite and Colonel Talbot, who acts as interpreter. From the mills the *cortège* drove slowly through the streets, where crowds of people were waiting to obtain a glimpse of the Prince, to the town hall, where an address was presented to him. His reply, which seemed to be spontaneous, was very cordial, and, when translated by Colonel Talbot, elicited hearty applause. The Lady Mayoress was then presented to his Highness, and also Sir J. Harwood, after which the mayors of some twenty neighbouring towns, decorated with their gold chains of office, shook hands with the Prince. He was afterwards entertained to luncheon in the large hall. The members of the council and invited guests numbered about 250. Many ladies were present when he received the address. The last item in the day's programme was a visit to the Ship Canal. Leaving the town hall soon after three, the Shahzada, with his suite and a number of other gentlemen, embarked on the canal at the Pomona Dock and sailed down as far as Irlam Locks. From Irlam a special train was to take them to Liverpool. This is a pretty good day's work, and it must be hoped that the last part of it will not try the endurance of his Highness too much, for the dry hot weather we have had lately has brought the smell, or rather the stench, of the canal to a pitch rarely, if ever, surpassed. If not impressed with the greatness of this engineering work, he will surely bear away a lasting recollection of the odour with which he was regaled. He has been said to look bored and apathetic, but was evidently moved on hearing the volume of sound from the fine organ in the hall, when Mr. Pyne (a cousin, by the way, of Sir Salter Pyne, who is high in the confidence of the Ameer) played "God Save the Queen," and he also seemed to enjoy smoking cigarettes at the conclusion of luncheon.

Theses for the M.D. Degree, Victoria.

The dissertations of the following candidates have been approved by the Council as qualifying for the degree of M.D.:—(1) A. J. Edwards, M.B., on "Disseminated Sclerosis"; (2) W. J. Kerr, M.B., on "The Effects of Alcohol on the Liver"; (3) Frank Robinson, M.B., on "A Clinical Record of 200 Cases of Small-pox"; (4) W. W. Stoney, M.B., on "Ophthalmic Goitre"; (5) R. T. Turner, M.B., on "Infantile Paralysis resulting from Cerebral Disease." The dissertations of A. J. Edwards and W. J. Kerr are highly commended, and the dissertation of W. W. Stoney is commended.

June 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Temporary Hospital in Edinburgh.

THE public health authorities in Edinburgh have had it intimated to them by the Board of Works that it is time they

should remove the temporary hospital erected in the Queen's Park during the small-pox epidemic last year. The erection of the hospital was much objected to at the time, and the citizens will be glad when it has ceased to exist. The authorities, however, propose to delay its removal until it is assured that small-pox has definitely disappeared.

Professor Annandale.

Professor Annandale's numerous friends and old students will be sorry to know that he has been in such indifferent health that he has not been able to attend to his professorial and hospital work for some weeks. He is, however, progressing satisfactorily.

Glasgow Royal Infirmary.

The managers have recently for the first time acted upon their resolution to terminate the appointment of physician or surgeon to the infirmary at the end of ten years. Apart from the hardship this entails upon individuals it may be questioned whether the policy is a wise one from the point of view of the hospital itself. The position of a hospital physician or surgeon ought certainly to be conferred only on those who have trained themselves carefully in the junior and subordinate positions. This means years of tedious and unremunerated work. If at the end of this a short ten years is to be the full time permitted for the more dignified and, in an indirect way, better remunerated positions, younger men may well pause before they deny themselves the more rapid successes of private practice for the sake of cultivating an efficient hospital training. It will certainly be impossible to get men to devote themselves entirely to medicine or surgery, as the case may be, if only so brief a prospect of establishing a definite position is permitted to them.

Medical Evidence in Criminal Cases.

There has been for some time amongst a section of the profession a feeling of dissatisfaction with the regulations which govern the preparation of the medical evidence in murder cases and in other cases involving a post-mortem examination for legal purposes. Under the present system this examination is made by the two medical men appointed by the Crown, and their report is submitted in court as evidence, they themselves being present to support it in the witness-box and to undergo the ordeal of cross-examination. But no attendance of a medical man in the interests of the accused is permitted at the post-mortem examination. This, it is claimed, is unfair, or may be unfair, to an accused or suspected person. On the other hand, it is answered that the Crown representatives are quite independent, and have no temptation to be anything but impartial, whilst the representative of a prisoner must necessarily, in order to justify his existence, endeavour to strain everything in his client's favour. Doubtless the advantages are not altogether on the one side, but it would certainly remove all semblance of unfairness, and be more in harmony with modern practice, to allow the prisoner to have a medical representative at the post-mortem examination; the theories of the defence would of course be subject to examination in open court, and could thus, if necessary, be discredited. And, further, it is difficult to believe that every man appointed by the Crown to be an examiner for medico-legal purposes can successfully resist the bias which the position suggests. Those who are advocating a change in the present practice have brought the question before the highest legal officials, and from a recent answer given by the Lord Advocate to a question put to him in the House of Commons it was supposed that on application a medical man would be permitted to represent an accused person at any post-mortem examination made by the Crown officials. This impression seems to have been unwarranted, as the application of a prisoner at present lying under a charge of wife murder to be thus represented has just been refused by the Crown. It is probable, therefore, that some further movement may be expected in the matter.

Medical Appointment.

Dr. Maxwell Ross, Dumfries, has been appointed medical officer for the burgh of Moffat in the room of Dr. Grange, who recently resigned.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Workhouse Scandal.

THE Irish Medical Association recently addressed a circular letter to the medical officers of the unions in Ireland asking

for definite information as to the condition and wants of workhouses and workhouse infirmaries. Seventy-nine of these gentlemen supplied the required information, while others declined to do so on the ground that they feared to incur the hostility of their respective boards. The replies have been carefully analysed and compared, the result being a series of grave reflections on the administration of many of the Irish workhouses. The matter has now been made public by a letter addressed to THE LANCET and other journals by Sir Philip Smyly and Mr. Hepburn, the chairman and hon. secretary of the Association. From their statement it appears that "forty-three of the infirmaries have no trained nurses, the nursing being left altogether in the hands of pauper women, in fifty-nine there is an absence of all sanitary arrangements, and in forty-three there are neither plates, knives, nor forks." These statements, upon which you commented last week, seem almost incredible, and one is not surprised to see in the press a challenge to the Medical Association to make public at once the names of the unions in which the sanitary arrangements are as described, and of those in which the inmates are not allowed the use of plates or knives and forks.

Irish Representation on the General Medical Council.

It was the good fortune of Dublin to have on the occasion of the recent meeting of the General Medical Council a very full representation, for, in addition to Sir John Banks, Sir Philip Smyly, Dr. Atthill, and Dr. Moore, Dr. Haughton of Trinity College happily found himself strong enough for the journey to London and for the heavy work of the session. Dr. Atthill and Dr. Moore have been working on the Pharmacopœia Committee.

St Michael's Hospital, Kingstown.

Mr. L. Halligan, L.R.C.S., L.R.C.P. Irel., has been appointed resident medical officer to the above hospital for the ensuing year.

Death of Dr. Robert Kerr Johnston of Dublin.

On Saturday, June 1st, the remains of the late Dr. Robert K. Johnston were removed from his residence, 22 Lower Baggot-street, for interment at Mount Jerome Cemetery. The deceased gentleman, whose funeral was largely attended, was most popular in his profession and amongst all classes in Dublin. His demise at such a comparatively early age has caused a widespread feeling of sympathy with his relatives. Dr. Johnston obtained the degree of M.D. in 1885 and was a most distinguished graduate of Dublin University as well as a Senior Moderator and Gold Medallist in Experimental Science. He filled for some years the office of ophthalmic surgeon to Dr. Stevens' Hospital, and was assistant surgeon to the National Eye and Ear Infirmary.

The Irish Medical Association and the Poor-law Officers' Superannuation Bill.

The annual meeting of the Irish Medical Association took place on the 3rd inst. at the Royal College of Surgeons in Ireland, Sir William Sticker, the new president, being in the chair. The report of the delegates deputed by the association to further in Parliament the Poor-law Officers' Superannuation Bill contained a statement, *inter alia*, that all their efforts to induce members of the National Federation party to undertake the task of introducing the measure and watching its progress in the House had failed. Mr. T. W. Russell, M.P., to whom the thanks of the association are due, ultimately undertook the work and introduced the Bill, only to see it peremptorily stopped at its second reading. The delegates now report that they can entertain no hope that the Bill will ever pass unless after discussion as an opposed measure. Under these circumstances the council of the association resolved to consult all the Poor-law medical officers of Ireland as to the advisability of advocating the extension of the English "Bill to provide Superannuation for Poor-law Medical Officers" to Ireland. That measure, introduced in last February, proposes that in return for a percentage contribution from their salaries every Poor-law officer shall be entitled to a superannuation allowance when he becomes incapable of discharging the duties of his office. The council, taking into consideration the probability of its passing, have consulted the medical men in Ireland who are most interested in the matter, with the following result: to 1119 circulars sent out there were 622 replies, which included 423 ayes, 184 noes, and 15 spoiled votes. The Poor-law medical officers of Ireland have therefore, by a substantial majority, pronounced themselves in favour of an extension of the "percentage contribution system" to this country.

Fire in a Medical Man's House.

A fire, involving the loss of some valuable property, took place on the 10th inst. at the residence in Dublin of Surgeon-Lieutenant-Colonel Holmes, who holds an appointment at the Royal Infirmary. The upper rooms of the house were entirely destroyed and several articles of vertu, gold and silver coins from India, &c. were found buried in the ashes.

Society for the Prevention of Cruelty to Children.

On Thursday, June 6th, the annual meeting of the Belfast branch of this society was held. It was reported that during the past year 816 cases were investigated, of which 796 were found to be well founded. These cases involved the welfare of 2396 children. Reference was made at the meeting to the help given by the city coroner, Mr. Finnigan, to the society, and especially to his manly stand on the question of the insurance of children.

Quadruple Birth.

On June 9th a poor woman in the dispensary practice of Mr. Irvine of Ballyhalkamore, Belfast, gave birth to four children; one lived for an hour, and the other three were still-born.

Proposed Museum for Bangor, co. Down.

I understand that Captain John Johnstone, superintendent of the Johnstone Steamship Company, Liverpool, himself a native of Bangor, co. Down, has offered to present to the place of his birth his valuable museum, which is claimed to be one of the finest private collections in the kingdom. It comprises natural history objects, bric-a-brac, ancient weapons, coins, an Egyptian sarcophagus, &c. At a meeting of the inhabitants of Bangor, held on June 7th, it was decided to convey their thanks to Captain Johnstone and to accept his most generous offer. Captain Johnstone will also defray the cost of transit of his museum, and will give a subscription towards a hall. It is thought the present would be a good time to build a town hall in which the museum, library, &c. could be located and which would be a most useful addition to a seaside resort visited by so many Ulster people.

Strangford Lough Boating Accident.

On June 8th the body of another of those drowned on April 11th (Miss Fanny Cheshire, Lady Kathleen Cole's maid) was picked up in the lough at Prieststown, near Portaferry. Of the eight drowned three have now been recovered, so that five bodies are still missing.

Downpatrick Water-supply.

At a meeting of the Downpatrick board of guardians held on June 8th Mr. Olpherts, medical officer of health, reported that, the new water-supply having failed, it would take months (perhaps years) before they could obtain a safe drinking water. The storage reservoir holds a very few days' supply now that it is used for flushing purposes. He says there are nine or ten streets without any supply, one street with a supply unfit for use, and three streets with a scanty supply. The public supply would long since have failed but for the kindness of those who have private pumps. He urges the sanitary authorities to bestir themselves in the face of a water famine. The town now gets its supply mainly from pumps.

A Rector's Bravery Rewarded.

Before the commencement of the ordinary business of the Petty Sessions Court at Tralee last week a very interesting function took place. Mr. Lynch, R.M., presented the medal of the Royal Humane Society to the Venerable Archdeacon Orpen, Rector of Tralee, for conspicuous bravery in saving the life of a boy who had fallen into the canal. The magistrate in making the presentation briefly explained that the Archdeacon, finding the lad was in imminent danger, waited only to divest himself of his great coat, and then plunged in at considerable personal risk. All who had witnessed the rescue were loud in praise of the promptness and pluck exhibited by the rector. Archdeacon Orpen on receiving the medal was greeted with loud applause.

Sad Deaths of Two Brothers from Sunstroke.

The weather in Cork has recently been very hot, and headache has been rather a prevailing complaint. I regret to say that two very distressing cases of sunstroke occurred in the course of last week in the neighbourhood of the city. A boy fourteen years of age, on arriving home from school last Tuesday evening, complained of dizziness and pain in his head. Surgeon-Colonel O'Connell, stationed at Ballincollig, was requested to visit him, and pronounced it to be a case of sunstroke. In spite of assiduous care the lad sank rapidly

and died within about twenty-four hours of the commencement of the attack. A few days later a brother of the deceased, only thirteen years old, was also affected by sunstroke, and survived only some eight or ten hours.

An Entertaining American.

A lady doctor, who states she obtained a medical degree in America, has recently delivered a course of lectures for women in Cork. She made no charge for admission to the first few lectures, but when her subject was "Maternity" payment was demanded at the door. A book entitled "Discourses to Women on Medical Subjects" was on sale at all the meetings, while a *séance* was held every day at the lecturer's residence. She was also ready to sell pessaries and give advice and medicine at fees which seemed to the professional mind out of proportion to the value of her services. In my humble judgment those of the Cork matrons and maids who patronised the lecturer would have shown more prudence by remaining at home and attending to their domestic duties.

June 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Suicide in France.

STATISTICS relating to suicides &c. are issued tardily in this country of red tape; it will, therefore, not surprise your readers if I am able to give them in this year of grace, 1895, the figures of 1892. It would appear that the number of suicides, after having diminished in 1889 and 1890, became more considerable during the two succeeding years. In 1880 there occurred 6638 self-destructions; in 1891, 8884; and in 1892, 9285. Minors appear to have every year more frequent recourse to this tragic method of terminating their real or supposed miseries. Thus, in 1892, 87 individuals under sixteen committed suicide, the corresponding figures for 1880 being 55, and for 1890, 80. The number of suicides between the ages of sixteen and twenty-one was for 1880, 267; for 1890, 358; and for 1892, 475. If my memory does not play me false, Alphonse Daudet, whose recent visit to England has excited so much interest, ascribed long ago in his novel, "Froment jeune et Rialor aîné," the greater frequency of suicide in modern Paris to the growing prevalence of unbelief amongst the young. I for one believe him to be right.

The Prophylactic Properties of Anti-tetanic Serum.

M. Vaillard¹ has rendered useful service in reminding the profession of the marked prophylactic properties of anti-tetanic serum employed hypodermically. The serum is now acknowledged to be powerless to counteract the virus once the disease is declared in an acute form. When, however, the evolution of the tetanus is slow, the injections, associated with removal of the tissues primarily inoculated, increase the chances of recovery. But it is as a prophylactic agent that the value of the serum is conspicuous. Injected into animals it renders them quite immune against the toxine. This immunity is only temporary, lasting from two to six weeks, according to the dose employed. But successive injections may be had recourse to without inconvenience. Certain and complete immunity is further conferred on animals into whose areolar tissue the virus has been introduced, but a like happy result cannot be predicted with certainty when the poison has been introduced into the thickness of a muscle. This is explicable enough when one considers that it is to phagocytosis that we must look for the successful destruction of the virus, and that this process is always rudimentary in the muscle, whereas in the subcutaneous tissue it is most active. The injection of the serum as a preservative is, therefore, called for in individuals who have met with traumatism which, from their situation, their nature, and the circumstances attending their infliction, are known commonly to lead to tetanus (contused wounds contaminated with soil, dust, dung, or river mud; wounds complicated with entrance of foreign bodies that have been in contact with the soil). The employment of the serum is again indicated in animals that have undergone operation known to favour the *éclosion* of tetanus (castration, tail-amputation, and operations on the hoof). M. Vaillard tells us that the preventive use of the serum is destined to render immense services to the inhabitants of

¹ Académie des Sciences, May 27th.

tropical countries, where tetanus is so apt to supervene on trivial injuries as to constitute one of the principal causes of death amongst the natives. The serum will be specially applicable in certain northern countries of Europe where tetanus of the new-born is responsible for as much as 60 per cent. of infant mortality. Again, what a prospect of salvation does the employment of the method hold out in military surgery in time of war. In veterinary practice thousands of valuable lives may thus be saved. Already Professor Nocard has inaugurated this preventive treatment, and the injections have been in the hands of several veterinary surgeons the means of arresting the disease after such operations as castrations and such injuries as penetration of a nail into the hoof. Who would, twenty years ago, have prophesied that tetanus would be converted into what it actually is—a preventable disease?

Butcher's Meat.

The regulations best calculated to protect the public against the sale of tainted meat were the object of discussion at some recent meetings of the Académie de Médecine. They culminated in the adoption of the following resolution, formulated by Professor Nocard: "Toute viande destinée à l'alimentation publique ne peut être mise en vente et colportée que pourvue d'une estampille (stamp) prouvant qu'elle a été reconnue saine par un inspecteur compétent; l'inspection doit être faite partout, dans les villages comme dans les villes; on peut l'organiser aisément et à peu de frais sur des bases analogues à celles qui sont adoptées en Belgique."

June 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Mellage Trial.

SHOCKING revelations concerning a lunatic asylum conducted by monks were brought to light last week in the course of a trial at the assizes at Aix-la-Chapelle (Rhenish Prussia). The case has produced a great sensation throughout Germany, and will no doubt be of particular interest to English readers, as the principal victim is an English Roman Catholic priest. The order of the Alexian monks, to whom is entrusted the care of insane persons and epileptics, possesses several lunatic asylums, both in Germany and elsewhere, under special ecclesiastical management. Public attention was drawn to these institutions by a pamphlet which was some months ago published at Iserlohn (Westphalia), bearing the sensational title "The Sufferings of the Reverend Mr. Forbes, of Scotland, at the Asylum of Marienberg." The author of this pamphlet, Herr Mellage, asserted that a veritable conspiracy existed between the brotherhood and certain bishops to confine as lunatics such priests as had fallen into disfavour with their superiors. He had obtained this communication from a chaplain who had succeeded in escaping from the asylum, and who had further told him that a Scotch priest, the Reverend Mr. Forbes, was still confined in the Marienberg Asylum, and had been treated there as a lunatic for three years. Moreover, among other things, he was assured that the patients were very badly treated. On Herr Mellage's representations a medical commission of inquiry was sent to the asylum, which, after only a minute's examination, declared Mr. Forbes to be sane, and ordered his immediate release. On the issue of the pamphlet the Superiors of the Brotherhood prosecuted its author for libel; but at the trial, which lasted from May 30th till June 8th, he succeeded in proving the truth of all his assertions. Mr. Forbes, who appeared in court, gave evidence that his bishop had asked him to go to Marienberg to be treated for a gastric disorder. He went under the impression that it was a Roman Catholic hospital, and not by any means a lunatic asylum. At first he was allowed outside the asylum, but the brothers, after accusing him of drunkenness, confined him definitively. The certificate required by law was easily obtained of the district officer of health. This certificate was based on a very short examination, which was, moreover, difficult, as Mr. Forbes could not speak German, and merely on the reports of the brothers and on a letter of the Bishop of Aberdeen, who, it was alleged, had stated that there was insanity in Mr. Forbes's family. In order to prove that the statement was unfounded the defendant's counsel had summoned witnesses from Inverness, Mr. Forbes's birthplace. It was,

indeed, an unwonted sight, that of half-a-dozen genuine Highlanders in a German law court. They all affirmed that to the best of their knowledge the members of Mr. Forbes's family had always been sane, admitting only that he was known as being somewhat eccentric, and that he had sometimes declared against the Pope and the Roman Catholic faith. Some medical men, who were called as experts, declared that Mr. Forbes appeared to be of a somewhat weak mind, but that he was not insane, that therefore confinement was unnecessary, and that a grave wrong had, according to their opinion, been committed against him. Still greater indignation was produced in court when it was stated by numerous witnesses that veritable medieval tortures were inflicted on the unfortunate victims in the asylum. It was a common thing to tie the arms and legs of those of them who protested and to dip their heads in cold water until they were nearly suffocated. In one case an inmate was placed on a hot stove till his back was scorched. Some of the victims are said to have died from blows on the head. The medical attendance amounted to a farce; although the asylum had nearly 700 inmates there was no resident physician. Two medical men had been appointed by the brotherhood, who alternately called for an hour daily at the office of the asylum and there inspected those of the patients who were brought before them by the brothers. They hardly ever entered the wards, and when cross-examined by defendant's counsel admitted that they had no special knowledge of mental diseases. They had no influence whatever, and the monks regarded them as their subordinates. As the result of the trial the defendant was, of course, entirely acquitted of the charge of libel, as all his assertions had been proved to be correct. When, after the verdict, the monks left the court they were hissed by the crowd assembled outside, and had to be protected by the police. They will now be charged with ill-treatment and with illegal incarceration, crimes punishable, according to German law, with three years' hard labour. They will, moreover, no longer be allowed to conduct asylums. Public opinion is justified in asking how such things could have been possible at the end of the nineteenth century in a city like Aix-la-Chapelle, and in a civilised country, to boot. No doubt the medical inspection by the district officer of health was wanting in thoroughness. It is impossible to understand how this official, whose duty it is to pay frequent visits to asylums for the insane—without, of course, giving previous notice—had been unaware of the terrible state of things existing in the Marienberg institution. He was also very indiscreet in giving a certificate of insanity in the case of Mr. Forbes. The behaviour of the two medical attendants attached to the asylum is still more blameworthy. They had neglected their duties, and in acquiescing in such proceedings had shown an indifference incompatible with the honour of medical men. Moreover, they had greatly prejudiced their own country by inducing foreigners to believe that it would be the easiest thing in the world to have an inconvenient person stowed away in a German asylum. Some time ago it was claimed at an ecclesiastical meeting that the treatment of the insane ought in most instances to be withdrawn from medical men and committed to the clergy. The Mellage trial will perhaps now make it appear that it is not at all advisable to increase ecclesiastical influence in the management of lunatic asylums, and that religion has nothing whatever to do with the treatment of mental diseases.

The Social Condition of Midwives.

In the last number of the *Archiv für Gynäkologie* Professor Fritsch gives his views on the present condition of midwives, and suggests some measures of reform. According to him it is very much to be regretted that the older midwives have had no training in antiseptics and are not sufficiently intelligent to understand its importance. Although in many districts post-graduate lectures instituted by the Government are delivered for the benefit of midwives, a great many midwives cannot attend the lectures on account of want of time or for other reasons. As they are obliged to abstain from attendance for a considerable time in cases of puerperal fever arising in any of their patients, they often endeavour to conceal the fact from their medical officers. In order to remedy this and other grievances some well-known obstetric surgeons established midwives' associations in order to give midwives an opportunity to complete their education, and to

relieve them if they were prevented from practising for hygienic or other reasons. A journal was also founded to support their interests, and to keep them acquainted with scientific progress. But these arrangements did not meet with much success; the midwives, for instance, of the smaller country places, where improvement was most called for, could not join the associations. In some places the associations, which were at first under the presidency of obstetric surgeons, very soon tried to get rid of their medical chairmen and assumed a rather hostile attitude towards the medical profession in general. They claimed to be no longer called "midwives" (*Hebammen*), but "lady obstetricians" (*Geburtshelferinnen*), and to be treated on the same footing as medical men. To avoid these bickerings Professor Fritsch suggests that midwifery should not be entrusted to women of the lower and uneducated classes, but that those of a higher social level ought to take up its duties. For that purpose the training of midwives ought to be modified. At present it is undertaken in what may be called seminaries, maintained by the provincial authorities, where the candidates have to board together for half a year. As this is not calculated to attract ladies of education, Professor Fritsch proposes that they should be trained in the lying-in hospitals attached to the universities, in common with the medical students. Of course special lectures would be delivered for their benefit. It would likewise be a great advantage to medical students if they learned the nature of the duties of a midwife. At present a young medical man may begin practice without having had an opportunity of observing midwifery, and thus is often at a loss what to do in the presence of a midwife. If the measures suggested by Professor Fritsch were adopted, and if ladies of good family agreed to undertake the arduous duties of a midwife, the social status of midwives in general would undoubtedly be greatly improved.

June 10th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Italian Red Cross.

I HAVE before me the official report of the Central Committee of the Italian Red Cross for 1894, a document full of interest, not only to Italians, but to all nationalities concerned in the humanitarian movement to which it belongs. To begin with, the financial condition of the committee is eminently satisfactory, its available funds amounting to 5 699,221 lire and showing an excess of 41,631 lire over the preceding year. Another most gratifying feature is the development of "mobilisable" hospitals for mountain and river service. One of the former I have already described as consisting of fifty beds and as having reached its Abyssinian destination under the direction of Dr. Gino del Prete; the latter has more than once been referred to in these columns as a new and ingenious departure in Red Cross organisation. To utilise the great waterways of the Alta Italia—so rich in lakes, in rivers, and in canals—for floating ambulances is a project to which Italy has taken very kindly, her many rowing clubs having contributed largely to the manning and the *matériel* of these Red Cross cruisers, of which working models have been on view between Lake Como and Milan, and the first of them was described in THE LANCET of Sept. 19th, 1891, under the title of the "Red Cross Afloat." Another highly instructive section of the report is that relating to the exercises and manoeuvres of 1894, when the Commander-in-Chief of the Army put on record his admiration of the promptitude and efficiency with which the ambulance service in all its departments was conducted. The diffusion of Red Cross hospitals over the provinces—the so-called "*ospedali territoriali*"—occupies another interesting page of the report, the success of the movement in the first five "*circoscrizioni*" being due to the energy and liberality with which the subcommittees coöperated in harmony with the academic authorities and private individuals. Moreover, the recruiting of the *personnel* of the association generally has marked a notable advance within the last official year, in the directing department 76 having been admitted and in the subaltern departments 248. These volunteer bands are all of certified efficiency, thanks in great measure to the courses of instruction given gratuitously by such clinicians as Professor Postemski, who fills the chair of Surgery in our university, and whose "*corsi d'istruzione*," four in number, were opened

to aspirants to Red Cross distinction in the beginning of the present year. Further sections of the report announce a new series of combined "*esercitazioni*" for 1895, and dwell with satisfaction on the intervention of the Italian Red Cross at the *Esposizione d'Igiene delle Facoltà Nazionali di Scienze Mediche* to be held at Buenos Ayres, and also on the fact that the association rendered heroic and efficient service during the recent earthquakes in Calabria—a service on which the Minister of the Interior congratulated the Comitato Centrale. Even in the Chino Japanese War the Italian Red Cross (as we learn from the report) was prepared to volunteer assistance to the Japanese conqueror, and only desisted on ascertaining that it had already been anticipated in the humanitarian offer by the Red Cross of Germany. Among the other features of the report is the gratifying assurance that the War Office has undertaken the expense of transporting all the *matériel* of the Red Cross at home and abroad, while a series of obituary notices of distinguished members of the association deceased within the last official year appropriately occupy the concluding pages.

The Ospedale Maggiore at Milan.

This great historical institution has just made a notable addition to its resources in a new pavilion for the treatment of surgical diseases. It is the gift of the Duchessa Litta-Bolognini in memory of her son Alfonso, and accommodates 120 beds. Every improved hygienic detail has been attended to by its designer and constructor, the engineer Emilio Sperioli, and at its formal opening on the 5th inst. a large company of the leading surgeons and practitioners of the city and province had occasion to admire its advantages in point of salubrious and cheerful exposure, of lighting and of ventilation, as also its many conveniences for clinical treatment and instruction. The building is hailed as a notable illustration of what Italy may yet do for her great hospitals by the further development of that pavilion system so much demanded in clinical schools still mediæval in character and still fraught with the manifold mischiefs summed up by the late Sir J. Y. Simpson in the word "hospitalism."

June 8th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Bay View Asylum Commission's Report.

IN October last a commission was appointed to inquire into the management of the Bay View Asylum, Sydney, and it has just presented its final report. It will be remembered that certain definite charges were made against Dr. Vause, the proprietor of the asylum, to the effect that a certain patient was unnecessarily placed in an isolated room without members of his family or the family physician being informed; (2) that he was confined in a stable which was cold, damp, and deficient in light and ventilation; (3) that the patient had no bedding and insufficient clothing; (4) that the room was not properly cleaned; and (5) that the patient was left for more than twelve hours without food or drink, and unattended. The commission deals with these charges *seriatim*. With regard to the first, they find that Dr. Vause carried out a practice which is in accordance with the rules for the management of similar institutions in Great Britain, America, and the colony, but that he committed an error of judgment in not giving information to the family. It is clear that in isolating the patient Dr. Vause was influenced solely by medical considerations, and not by motives of economy or convenience. As to the second charge, the commissioners find that although the building presents an unprepossessing appearance it was originally constructed for the purpose to which it was applied, and had been so used for many years with the approval of the Inspector-General of the Insane and the official visitors. They do not consider the rooms damp or ill ventilated, but think the ventilation might be improved. Regret is expressed that the rooms are detached from the main building and away from the rooms of the attendants. The allegations under Charge 3 are not regarded as of any consequence. The evidence shows that the patient was most destructive, and is conflicting as to the actual provision made; but the commissioners do not consider that purposes of economy entered into the arrangements. As to Charge 4, in the opinion of the com-

missioners the weight of evidence shows that the rooms were properly cleaned. The evidence on Charge 5 shows that the patient was amply provided with food and drink, and while there was some laxity in the matter of attendance he was not left over twelve hours unattended. The commission recommends that inspection of lunatic asylums should be more frequent. Dr. Manning, inspector-general of the insane, dissents from the general report on the general question of what ought to be understood by the term "seclusion" in regard to the insane.

*Dispute between the Surgeon and Captain of
H.M.S. "Ringarooma."*

A court-martial was recently held in Sydney to investigate a charge of wilful disobedience and contemptuous behaviour preferred against the surgeon of H.M.S. *Ringarooma* by the captain. Some dispute arose about the fixing of an operating table, and the captain became so excited that the surgeon considered he was mentally affected and unfit to command the vessel, which was to proceed to sea next day; he therefore ordered him on the sick list. The captain refused to go and placed the surgeon under arrest. At the court-martial a statement was made on behalf of the surgeon to the effect that the captain had appeared morbid and eccentric for some time past, and instances of eccentricity were detailed. The court refused to allow evidence to be called on the question of the captain's health, and after a short consultation found the surgeon guilty and ordered that he be dismissed from Her Majesty's service. Great indignation is felt at the verdict and at the mode of conducting the inquiry, and an effort will be made to challenge the decision.

Outbreak of Typhoid Fever at Erskineville, New South Wales.

Dr. Ashburton Thompson has presented a report on a recent outbreak of typhoid fever at Erskineville, New South Wales. Nineteen out of twenty-six infected houses were in one ward, and the associated conditions peculiar to that ward were the presence of cesspits and serious faults of subsoil drainage and house construction. The surface channels for foul water were improperly constructed, so that their contents soaked into the soil. The houses were often damp, and many were built on made ground with no impervious covering over it.

Management of Grenfell Hospital.

Dr. Ashburton Thompson has also presented a report on the management of the Grenfell Hospital. In September, 1894, charges of cruelty and neglect were preferred against the matron and medical officer in respect to a certain patient, and on his death the medical officer refused a certificate in order that an inquest might be held and the charges investigated. The coroner's jury found that the patient died from tuberculosis, and that "he was subjected to harsh and cruel treatment at the hands of the matron, and to negligence on the part of the medical officer." The matron and medical officer then resigned, but the latter was subsequently re-elected by the subscribers. Dr. Thompson is of opinion: "(a) That the medical officer failed to take up that independent attitude of caution and control which he should have occupied in the internal management of the hospital, and consequently fell justly under censure of the jury, although no important evidence was before that body to warrant it; (b) that the committee in general must share that same censure in that their supervision and management were such as did not secure to the sick such skilled nursing, humane attention, and necessary appliances (at the least) as are properly believed by the public to be usually provided in a hospital." He recommends further that no person should be appointed matron or nurse in a hospital subsidised from public funds who has not been trained as a nurse, and that the medical officer to the Government should be supplied with proof of adequate training of the person selected before approval is given by him to the appointment.

The Financial Condition of the Melbourne Hospital.

The finances of the Melbourne Hospital are far from satisfactory. The total indebtedness amounts to about £14,000, caused by a reduction in the Government subsidy, payment of heavy interest, and falling off in subscriptions. The committee have reduced expenditure and retrenched in every possible way, but the debt remains. A largely attended public meeting was held in the town hall on April 24th, and it was decided to make a special appeal on behalf of the hospital funds to all classes of the community by a week of self-denial. Circulars will be addressed to the mayors of all the suburban municipalities and of the principal cities

and towns, inviting them to constitute themselves collecting centres; and cards will be issued to be distributed to every individual household, explaining the objects of the movement and inviting the coöperation of every member in the house, and it is hoped sufficient funds will be raised by this means to wipe off the debt.

Aneurysmal Varix of the Left Innominate Vein.

At the March meeting of the South Australian Branch of the British Medical Association Dr. J. C. Verco showed a boy aged twelve with a condition diagnosed as aneurysmal varix of the left innominate vein. There was a distinct thrill on the left side of the neck beneath the sterno-mastoid, continuous with slight systolic increase. On auscultation a very low humming murmur was heard, with its seat of maximum intensity over the left clavicle, about one inch and a half from its inner end, and traceable obliquely downwards and inwards across the sternum from the left first interspace to the right second cartilage, with gradually diminishing intensity. It was continuous with a distinct systolic increase, and was more marked in the recumbent than in the erect posture. The normal heart sounds could be heard distinct and pure, and the murmur could be traced from the clavicle upwards into the neck and outwards along the line of the left subclavian and axillary veins to a point below the insertion of the pectoralis major. The boy had suffered from fits since he was eighteen months old. He had had no other illness except measles. Dr. Verco concluded there was a communication, probably congenital, between the left innominate vein and either the arch of the aorta or, more probably, the left carotid artery.

*Ligature of Carotid and Subclavian for Innominate
Aneurysm.*

At the Melbourne Hospital recently Mr. Charles Ryan successfully tied, first, the right carotid artery, and then a week later the right subclavian for a large innominate aneurysm. The patient has done very well so far, and the aneurysm appears to be consolidating.

Bullet Wound of Femoral Artery.

Mr. Ryan also operated recently on a very interesting case. A boy was shot in the thigh with a revolver, and also in the mouth. There was very little extravasation of blood in the thigh, but no pulsation could be felt in the tibial arteries, and it was decided to cut down on the femoral. It was found that the bullet, which was smaller than the calibre of the vessel, had passed exactly through the centre of the artery. It was ligatured above and below, and the wounded portion excised. The inner coat had retracted and the vessel above and below the wound was plugged with clot; hardly any hæmorrhage had taken place.

Leprosy in Queensland.

At the last meeting of the Medical Society of Queensland Dr. Hardie exhibited a boy eleven years of age, of English descent but born at sea, suffering from leprosy. So far as is known he had never come in contact with any cases of leprosy and had been attending school. The diagnosis was confirmed by bacteriological examination, and filarise were also found in his blood.

Renal Surgery.

At the last meeting of the Victorian Branch of the British Medical Association Mr. G. A. Syme read some Further Notes on Renal Surgery, and brought forward two cases of nephrectomy and one of floating kidney associated with perinephritic abscess. The interest of the first case of nephrectomy was that it was performed for carcinoma occurring in a kidney from which a large calculus had been previously removed by nephro-lithotomy.

Appointments.

Mr. Fred. D. Bird, M.B., M.S. Melb., M.R.C.S. Eng., has been elected Lecturer on Surgery in the University of Melbourne; Mr. G. Rothwell Adam, M.B. Edin., has been appointed Medical Officer to the Infirmary Department of the Women's Hospital, Melbourne, as locum-tenent for Dr. Rowan, absent on leave; Mr. A. E. Salter, M.B. Melb., has been appointed Resident Medical Officer to the Midwifery Department of the Women's Hospital, Melbourne; the Hon. Dr. MacLaurin has been elected Vice-Chancellor of the Sydney University; Mr. E. H. Binney, M.B. Syd., has been elected Senior Resident Medical Officer, and Messrs. R. R. McKinnon, M.B. Syd., M. Veech, M.B. Syd., G. F. Rutter, B.A., B.Sc., M.B. Syd., and E. J. Spark, M.B. Syd., have been elected Resident Medical Officers at the Sydney Hospital.

Obituary.

ALFRED SWANN, M.D. BRUX., M.R.C.S.

WE regret to have to announce the death of a valued contributor to our columns in the person of Dr. Alfred Swann, the medical officer of health for Batley. On May 31st he attended at the House of Lords to give evidence in connexion with the Don water scheme, and upon his return home expressed himself as feeling ill. On June 4th paralysis supervened, and he lapsed into unconsciousness, from which he never recovered. He expired on Thursday, June 6th, the cause of death being cerebral hæmorrhage. Dr. Swann at the time of his death was forty-four years of age. He received his early education at Rawdon Friends' School, after which he studied medicine in Birmingham and at University College, London. He settled at Batley in 1880, and at once began to interest himself in sanitary questions. The health of the town was at that time in a very low state, and the main cause of this was traced by Dr. Swann to the town water-supply being largely contaminated with lead. In 1884 he was appointed medical officer of health, and so was enabled to carry out reforms which he had long foreseen were necessary, though, like all reformers, he was hindered by those who considered, rightly or wrongly, that their interests were being attacked. He held many other appointments, such as certifying factory surgeon, surgeon to the police and Volunteer forces, as well as to the Great Northern Railway Company. He was a true friend to his patients, and ever ready to contribute with his purse as well as with his knowledge to the welfare of the poorer class who sought his advice. He contributed many interesting and valuable papers to our columns, notably communications on Lead Poisoning and various ophthalmic and surgical subjects.

JOSEPH MILLS, M.R.C.S. ENG.

ALL old St. Bartholomew's men, and many of the profession not connected with that hospital, will hear with regret of the death of Mr. Joseph Mills, formerly anaesthetist to the hospital. For some time past he had been in failing health, and a pathetic circumstance connected with his death (which occurred on May 29th at Andover) was that the day before, his wife, who had nursed him devotedly and never left him for eighteen months, came up to town for the day, "because he was so much better." He was the son of the late Robert Mills of Inkpen, and was educated at Andover and Weymouth. He commenced his medical studies at Winchester as a pupil of Dr. Richards, and afterwards entered at St. Bartholomew's, where he became house surgeon to the late Sir William Savory. He was appointed anaesthetist in 1875 and resigned in 1893. His health failed somewhat in 1886-87, but not until 1888 was any serious mischief discovered. It was then found that he had apical trouble, with some pleuritic effusion. He rapidly improved under treatment and spent the winter at Davos. On his return to England in April, 1899, he was in excellent health, and in spite of an attack of influenza in 1890, he continued in good health until the end of 1892, when he began to suffer from cough. In the spring of 1893 he gave up work and retired to Andover. During the last two years he led the life of an invalid, but he was always bright and cheerful, and was much delighted to see any of his old friends. He died quite suddenly on May 29th from pulmonary hæmorrhage. He leaves a widow and one daughter. Of his unvarying kindness and courtesy as a teacher the writer of this brief and imperfect notice can speak from personal knowledge, and though for some years he had retired from active work his memory is green in the hearts of all who knew him.

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on Monday afternoon [the 10th inst.], Sir James Crichton-Browne presiding. The following were elected members: Mr. Benjamin Bennett, Mrs. Henry Burton Buckley, and Mr. William Watson Cheyne, F.R.S. The special thanks of the members were returned to the Right Hon. Lord Playfair for his donation to the fund for the Promotion of Experimental Research at Low Temperatures.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

OUR report of the session of the Council published in last week's issue carried the proceedings to the close of Wednesday, June 5th—that is to say, the eighth day of the session. The Council met again on Thursday, June 6th, when, greatly to the relief of the members it succeeded in getting to the end of its work.

The New Edition of the Pharmacopœia.

THE PRESIDENT presented the report of the Pharmacopœia Committee. It stated that applications for information bearing on the production of the new edition of the British Pharmacopœia had been sent to twenty medical authorities, and that from sixteen of these communications of great value had been received. The Therapeutic Committee of the British Medical Association had sent in a memorandum furnishing important information as to the frequency with which a considerable number of official drugs and preparations are used by the members of that association. The Pharmaceutical Society had supplied the committee with an instructive report and statistics, and Mr. Martindale had forwarded a pamphlet in which the number of times certain drugs and preparations appear in 12,000 prescriptions was stated. Many communications had also been received from the colonies and India which had been summarised by Professor Attfield. Dr. Tirard had consented to act as secretary to the Pharmacopœia Committee. The committee propose to invite Mr. Thisleton Dyer, C.M.G., F.R.S., and Mr. Holmes to act as referees in botany, and to ask Dr. Thorpe, F.R.S., to act as referee in chemistry, or Dr. Russell, F.R.S., if Dr. Thorpe be unable to accept the invitation of the committee. The Pharmaceutical Society of Great Britain have, at the request of the General Medical Council, appointed a committee of pharmacists to assist the Pharmacopœia Committee in the work of revision. In pharmacology and therapeutics Dr. Lauder Brunton, Professor Fraser, and Professor Walter Smith will be requested to act as referees. The Pharmacopœia Committee have already held three meetings during the present session of the Council, and, in order to deal adequately with the materials before them, and to consider the preparation of the first draft of the new Pharmacopœia, the committee propose to hold a meeting in London towards the end of July.

Dr. HERON WATSON asked whether the communications furnished by the various authorities mentioned in the report would be presented to the Council.

THE PRESIDENT replied that the communications were of a very satisfactory kind, and should be sent to all the bodies, as well as to members of the Council.

Dr. HERON WATSON recalled to the Council the remit with reference to the £1250 to be paid to Professor Attfield, and asked why there was no reference to the matter in the report of the committee.

THE PRESIDENT replied that nothing more had been done with regard to Professor Attfield's salary. Professor Attfield had been hard at work, and it was to him they owed the summaries and condensations of the papers.

Dr. HERON WATSON said he did not doubt that, but he was speaking with regard to the remit and the payment of the £1250.

THE PRESIDENT assured Dr. Watson that Professor Attfield would not accept less, and the Committee had appointed him to do the work. He also appealed to the Council to have confidence in the Pharmacopœia Committee.

Dr. HERON WATSON said he did not want to express the smallest want of confidence either in the President, to whom they owed so much, or any member of the committee, or in Professor Attfield, who he believed was the backbone of a great deal of work that could not very well be done by anybody else. All he spoke to was a question of order.

Dr. LEECH moved the adoption of the report, and in doing so referred to some of the work being done by the committee.

The motion, after being seconded by Mr. BRUSHFIELD CARTER, was adopted.

The Conjoint Professional Examinations of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin.

Sir DYCE DUCKWORTH, chairman of the Examination Committee, said it was now the duty of the Council to consider one of the most important questions that had ever come before it. It affected the future of one of the medical corporations in the three kingdoms, indeed, he might say its very existence was at stake. It was the first occasion on which any business of the kind had been before the Council since the passing of the Medical Act of 1886. He would explain briefly the state of the case. This Conjoint Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin had now been inspected no less than four times. The Final Examinations were examined twice by the inspector of the Council, together with one of the members of the Council, Mr. Bryant, and on two occasions by command of the Council the whole of the professional examinations of the board were examined by the inspector of the Council together with another member of the Council, Mr. Wheelhouse. The last examination took place in April, and the report had only been out a short time; but the whole matter was now in order, because they had an official letter saying that the Conjoint Board had no reply to make to the observations of the visitor and inspector. As the matter was important he hoped the Council would allow him to read a portion of the report of Mr. Wheelhouse and Dr. Duffey on the professional examinations held by the Conjoint Board in April and May of the present year. With regard to the First Professional Examination, the visitor and inspector said it was a good and satisfactory test. As to the second, they said that the solitary candidate at the examination presented himself for his second re-examination after a lapse of nearly six years since his first re-examination in two subjects of it only—viz., anatomy and materia medica and pharmacy—and, as on the two former occasions on which this examination was reported upon, the examination in both these subjects was commendable. As to the Third Professional Examination, they said that no exception could be taken to any part of it. As to the Final Examination, they had pleasure in reporting an improvement generally in this examination. The only remark that it appeared necessary to make as regarded the examination in surgery, which on the whole was as satisfactory as heretofore, was that at the oral examination no "specimens, wet or dry, casts, models, &c." were used by the examiners, as the regulations laid down for them recommend. At the oral examination in midwifery and gynaecology there were no morbid specimens provided for examination. A similar omission had been noted in the three last reports. The standard of the examination in medical jurisprudence and in hygiene was higher than that at the three previous visitations. The examination in pathology was quite satisfactory, but they question the advisableness of making a practical examination in urine-testing a part of it. Then the visitor and inspector gave the following conclusion—viz.: "We report that the First, Second, and Third Professional Examinations of this Conjoint Board are 'sufficient.' The Final Examination has been improved in many ways. The examination in medicine was a most careful one, and, we believe, was conscientiously conducted. Holding this opinion honestly, and feeling with the examiners that the candidate they examined had a good theoretical knowledge of medicine, we greatly regret we cannot agree with their judgment in passing him on his clinical examination. In it he showed (1) that he could not ascertain with any degree of accuracy the conditions that presented themselves in a well-marked case of unilateral pleural effusion; that (2) he was unable to recognise the presence of albumen in large quantities in a specimen of urine; and (3) that he could not examine urine for sugar. This proved, in our opinion, that the candidate did not possess 'the requisite knowledge and skill for the efficient practice of his profession' (Medical Act, 1858, Sec. xx.). Excellence in the written or oral examination should not be allowed to compensate for failure in the clinical. For these reasons although we have no fault to find with the actual examination itself, the fact that a candidate was passed who exhibited gross ignorance of clinical medicine compels us to report that in medicine the examination was not 'sufficient.' In the other subjects we report that the Final Examination was 'sufficient.'" He would now read to the Council the report drawn up by the Examination Committee. It was to this effect: "The

Examination Committee, having discussed the report of the inspector and visitor on the fourth inspection of the entire professional examinations of the Conjoint Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin, and having been officially informed by the representatives of these two bodies that they have no remarks to offer upon this inspection, finds that the examination is declared to be insufficient within the meaning of the Medical Act of 1886 in respect of the subject of medicine, although generally sufficient and in some respects excellent in surgery. The Examination Committee, therefore, has to report to the Council that no one of the four inspections of this conjoint examination has afforded proof of its sufficiency in all its statutory departments. The Examination Committee accordingly recommends the Council to represent the same to Her Majesty's most Honourable Privy Council." This was the conclusion of the Examination Committee. It would be in the remembrance of the Council that upon a former occasion as the result of two inspections the Examination Committee thought itself justified in recommending the Council to represent the state of matters to the Privy Council, but tenderer mercies prevailed, and it was thought that another inspection should be made and more time given to see if amendment was possible. Twelve months more had been allowed to this board. Two more examinations had been held and two more inspections had taken place. He begged to move: "That it appears to this Council that the standard of proficiency in the subject of medicine required from candidates at the qualifying examinations held by the Conjoint Board of the Royal College of Surgeons of Ireland and the Apothecaries' Hall of Dublin, after four special visitations, has been found insufficient."

Mr. BRYANT, seconding this, said that it fell to him to visit the Conjoint Board on two occasions. The decision he came to with the inspector on the first occasion was that the examinations in forensic medicine and in hygiene and in medicine could not be regarded as sufficient, and on the second occasion the decision was the same. After reading in the third and fourth reports that the same conclusion was reached he felt perfectly sure that they would be failing in their duty if they did not represent to the Privy Council this very serious state of things.

Mr. WHEELHOUSE said that as he had been engaged in the last two examinations of this Conjoint Board it behoved him to tell the Council his feeling in the matter. He could not but hope on the first occasion on which he visited the examination, judging by the report which had been made to the Council before, that there was a great effort being made to improve it, and he believed that the effort was to a very considerable extent successful. He believed that the third examination was a more perfect one than the first or second, and that at the last one further effort was made in the way of improvement. On reading the last report he thought they would see that they were tolerably well satisfied, except with regard to medicine, and in that connexion there was only one point with them. The question that arose in the mind of the inspector and himself was that a man who showed himself well versed so far as theory was concerned in his medical education, but who knew nothing whatever apparently of practice, should have been passed as a qualified man; and they came to the conclusion that it was a question whether he ought to have been passed or not.

Sir DYCE DUCKWORTH said he thought the Council should have before it the report of the Examination Committee on the report of the inspector and visitor with regard to the examinations in October, 1894. In this report the committee said:—

"The visitor and inspector send in a report on the First, Second, Third, and Final Examinations of this board as held in October, 1894, and express the opinion that the First, Second, and Third of these Examinations are good and satisfactory tests. The Final Examination generally has been much improved since the last report, but the Examinations in medicine, forensic medicine, and hygiene are not considered 'sufficient.' The oral examination in gynaecology was imperfect, and it is recommended that pathological specimens illustrating the diseases of women should in future be employed. New regulations have been made, but some of the examiners were not fully acquainted with them. The First Examination may be passed in piecemeal fashion. The examination in osteology may be passed at the end of the first winter session, but the questions are considered somewhat difficult for a student of anatomy who has had only one such session of study. The examiners in each subject set their own papers, but these are not, as they should be, subsequently submitted to the whole board. Only three out of six questions have to be answered. The Second Examination may also be passed in piecemeal fashion. The written examination for the second part revealed some amazing ignorance and unpreparedness on the part of the candidates, the like of which the visitor and inspector had never before met with. The same remarks apply to the oral examination in

hospital practice, anatomy, physiology, and materia medica. In practical physiology and histology the examination, while adequate as far as it went, was incomplete. The representatives of the Royal College of Surgeons on this Conjoint Board send in a separate report in reply to the report of the visitor and inspector, and state that no part of the examination conducted by the examiners appointed by them has been reported on as unsatisfactory. They hold aloof from their colleagues of the Apothecaries' Hall, and answer only such charges of irregularity as apply to the examiners of their College. This is a new departure, which the Examination Committee trusts may not be followed by any other Conjoint Board. It is alleged that the visitor's and inspector's reports are 'most unfair,' because they give details of bad answering on the part of unsuccessful candidates. But it appears that the liberal marking of unworthy candidates went very near allowing them to pass, and the Council requires a report upon the methods pursued in each examination which is inspected. The College of Surgeons' representatives further express regret that the visitor's and inspector's reports are not written in a more 'judicial' tone. The Examination Committee, however, would remind the General Medical Council that that body desires, and is accustomed to receive, reports, and not judicial utterances, from its visitors and inspector, and reserves to itself alone the power to pronounce 'judicially' upon such reports. Reviewing the whole evidence forthcoming from the several inspections of this board, the Examination Committee desires to express its opinion that, while recognising the efforts which have been made to comply with the recommendations of the General Medical Council by the Conjoint Board, the results are still unsatisfactory."

Sir PHILIP SMYLY, the representative of the Royal College of Surgeons in Ireland, then addressed the Council. He began by reading Section 3 of the third clause of the Medical Act of 1886, in which it stated that the General Medical Council shall forward a copy of their inspector's report to the Privy Council. This reporting to the Privy Council had been held in *terrorem* over them, and he desired to point out that all these reports should have been reported to the Privy Council.

Dr. MACALISTER said the report was only completed to-day, and the time had not come to report to the Privy Council.

Sir PHILIP SMYLY replied that he was referring to former reports. He wished to be clearly understood that he made no charges against the Apothecaries' Hall. The Apothecaries' Hall had always met their suggestions very favourably, and had adopted them in nearly every case. The examiner in medicine must be a hospital physician—that was to say, practically a Fellow of the Royal College of Physicians; and the defects in the examination were accounted for by the systematic boycott instituted by the Royal College of Physicians, which he left his colleague, Dr. Charles Moore, to explain.

Dr. ATTHILL, who represents the Royal College of Physicians of Ireland, said he thought "boycott" a most improper word to use.

Sir PHILIP SMYLY undertook to justify its use. There were three divisions of the word "boycott." One was the method that was adopted in Ireland of putting a bullet through a man; that, as the Kerry man said, precluded a man from holding land for the rest of his life. The second method was that of shooting him in the legs and making him so uncomfortable that he would not hold land. The third method was to starve him out and not allow him to trade or deal with anybody. The first method was performed by the Royal College of Physicians when it issued an injunction from the Court of Chancery prohibiting them from holding the conjoint examinations at all. That was analogous to shooting, but fortunately, as often happened in Ireland, they missed. The second method, of shooting in the legs, was paralleled by the charges which were brought against the Conjoint Board for irregularity. They tried to frighten the board out of their lives by all these charges. These also in a measure fell to the ground. As to the third method, the Royal College of Physicians had carried out a cruel system of starving. The report of the Examination Committee was hardly fair. If members looked through the reports furnished by the inspectors they would find that they obeyed the instructions of the Medical Act and used the two words "sufficient" and "insufficient." In last year's report the inference to be drawn from the advice given was that the Royal College of Surgeons should withdraw from the Conjoint Board. The words were: "The Examination Committee think it would be very desirable that the General Medical Council should suggest to the Royal College of Surgeons in Ireland the propriety of severing their connexion with a board whose proceedings can be thus described." The Royal College of Surgeons promptly acted upon this advice and gave the legal notice, and the Conjoint Board would cease to exist next month. Referring to Mr. Wheelhouse and Dr. Duffey's report, he said there was no word of censure upon the surgical side of the board, and he submitted that the portions of the examination conducted by the Royal College of Surgeons had not been such as to require this Council to report the

examination as a whole, and without any explanation or qualification, to the Privy Council, thereby inflicting an injury to the reputation and prestige of one of the oldest Royal Colleges of Surgeons in the empire. He submitted to the Council that the Royal College of Surgeons in Ireland came out of this matter with clean hands.

Dr. CHARLES MOORE, the representative of the Apothecaries' Hall, then addressed the Council. It was hardly fair, he said, to condemn a body for a particular branch, all-important though it might be, when they were deprived of the means of seeing to that particular branch. Repeated instances had come before him of gentlemen being asked to carry on the medical examination in Dublin and declining. The reason given either directly or indirectly was fear of the displeasure of the Royal College of Physicians. He was glad to say that it was not, properly speaking, the Royal College of Physicians who were at fault, but merely what was called the Young Ireland Section of the College, who were in a majority in a matter of this kind. He had to complain of some of the criticisms offered. He objected to the term "piecemeal," and he complained that the reports of the visitor and inspector were not written in a more judicial tone. Moreover, when the inspector undertook to cross-examine the examiner he thought he went altogether *ultra vires*. As to the position of the Apothecaries' Hall, he might say that its members, about 900 in number, were scattered throughout Great Britain and Ireland and the colonies, and were among the ablest and most esteemed members of the medical profession. Dr. Atthill had spoken about "the scum," but he thought the expression uncalled for and altogether inapplicable. As to the unfortunate student referred to in the report, he took it that he was frightened, for he had passed very successfully the written and theoretical examination.

Mr. WHEELHOUSE denied that Dr. Duffey interfered with the examination or the work of the examiner.

Mr. BRYANT offered a similar denial.

Dr. ATTHILL said that the remarks of Sir Philip Smyly and Dr. Charles Moore made it necessary for him to speak on an occasion when he had desired to remain silent. It was true that the Royal College of Physicians did not consider the Apothecaries' Hall a medical corporation in the proper sense of the word, and that they had tested the right of the Apothecaries' Hall to be so considered by taking proceedings in the Court of Chancery. The decision went against his College. Their counsel—very eminent men—told them without any hesitation that they ought to appeal, but so far from wanting to persecute or give unnecessary trouble they said if the bodies kept up a good standard of examination they would not proceed further in the matter. This Council a year ago took proceedings against the Royal College of Physicians of London for its giving a licence under its Charter. Was that boycotting the Royal College of Physicians of London? He was surprised at Sir Philip Smyly using such a simile. Then he charged the Royal College of Physicians of Ireland with boycotting them by bringing forward before this Council irregularities. These irregularities were accepted by the committee and accepted by the Council.

Dr. KIDD suggested that it was waste of time to proceed with this debate, having regard to the fact that the Conjoint Board ceased to exist on July 1st.

Sir DYCE DUCKWORTH thought the debate should proceed, his opinion being that it was most instructive and useful.

Dr. ATTHILL proceeded with his speech. He related to the Council certain information which had reached him with regard to what took place at examinations of the Conjoint Board, and asked whether it was for his College to remain quiet and allow a system to go on which was a disgrace to Ireland, a disgrace to Great Britain, and, above all, a disgrace to this Council. He had used the word "scum" accidentally, and he apologised for having used it to the extent of substituting "refuse." These men were the refuse of the medical schools of Great Britain and Ireland, and he stuck to his terms, no matter whether he gave offence or not. It was said that his College had prevented their Fellows from examining for the Conjoint Board, and, speaking with perfect knowledge of all that went on in the College, he absolutely denied this. In support of his denial Dr. Atthill read to the Council a number of letters from Fellows, one of whom had actually examined for the Conjoint Board. In conclusion, he denied that there had been anything like a boycott, or an attempt at such a thing.

Dr. CHARLES MOORE said he had a letter from a Fellow who declined to act because he feared the displeasure of his College.

Sir JOHN BANKS said that if the condemnation which had been pronounced upon this examination was complete he should not have one word to say in mitigation of the severe punishment which it was proposed to inflict upon the Conjoint Board. But it was not complete. He could not therefore vote for the proposal to go before the Privy Council.

Dr. HAUGHTON said that as a Fellow of the Royal College of Physicians of Ireland he would be very far from going so far as to use the term "boycott" to the College; but there was what he must call not a friendly feeling between the College and the Apothecaries' Hall. He, as a Fellow of the College, dissociated himself entirely from that unfriendly feeling.

The motion was then put to the Council and carried by 17 votes to 4.

Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, moved: "That in accordance with Section IV. (1) of the Medical Act (1886), the General Council do now make a representation to that effect to the Privy Council."

Dr. KIDD moved an amendment the effect of which was that, as the Conjoint Board was now practically defunct, it was unnecessary to proceed to the Privy Council.

Sir PHILIP SMYLY seconded this amendment.

Dr. MACALISTER said he did not think the Council had any option in the matter, having once decided that the examination was insufficient.

Sir PHILIP SMYLY pointed out that last year a resolution not to inflict this penalty was carried.

Dr. MACALISTER agreed that the Council could choose its time, but the present proposal was that the Council should never make the representation.

Sir WILLIAM TURNER said that this point had been submitted to their legal adviser, Mr. Muir Mackenzie, whose advice was that they were not bound last year to make the representation to the Privy Council at that particular meeting. The Council came to the resolution to defer making the representation, and it ordered further inspection of the examination. There had been further inspection, and he for his part felt they were bound now to comply with the injunction in Section 4 of the Act.

It was agreed not to press the amendment, and on the motion of Sir Dyce Duckworth being put it was carried by 20 votes to 4.

Sir DYCE DUCKWORTH moved: "That, pending the consideration by the Privy Council of this representation, the General Council come to no decision on the application by the Apothecaries' Hall of Dublin, of Nov. 23rd, 1894, to appoint two Examiners in Surgery under the provisions of the Medical Act (1886)." He thought it would be agreed that in the circumstances it would be premature for them to exercise the privilege invested in the Council of appointing examiners as asked.

Mr. BRYANT seconded the motion.

Sir WALTER FOSTER said that Dr. Charles Moore, as representing the Apothecaries' Hall, was quite willing to allow this resolution to pass and not to press for the appointment of examiners this session. Pending the decision of the Privy Council, it might be unwise to come to any vote in this Council.

Sir WILLIAM TURNER asked if they were to understand that Dr. Charles Moore withdrew the letter of application. If he did withdraw it Sir Dyce Duckworth's resolution must drop.

Dr. CHARLES MOORE thought the most suitable course to adopt in the circumstances was to request leave to withdraw the letter of application pending decision of the Privy Council on the representation that was to be made to it.

Leave was given, and the subject dropped.

The letter in question was from the Secretary of the Apothecaries' Hall of Ireland, and stated that the Governor and Court of Directors of the Hall at a meeting on Nov. 23rd, 1894, "resolved to petition the General Medical Council to appoint two examiners in surgery under the provision of the Medical Act, 1886, as their conjunction with the Royal College of Surgeons will cease in July, 1895. When permission is granted the court will be prepared to submit two names for approval of the Council, or receive two names from the Council if so directed."

Report on Qualifying Examinations.

Sir DYCE DUCKWORTH, as chairman of the Examination Committee, said that as the cycle of three years' inspection had now been completed, the Examination Committee had considered their "Report on the Visitation and Inspection of the Final Qualifying Examinations of the Universities and

Licensing Bodies of the United Kingdom." That committee represented that:—

"The whole of the Final Examinations of the several universities and licensing boards in the three kingdoms having now been visited and inspected, the Examination Committee begs leave to offer the following report upon them as a whole. The committee is pleased to find that these examinations are, with one exception, deemed to be 'sufficient' within the meaning of the Medical Act of 1886. In most instances the criticisms of the visitors and inspector have been kindly received, and many defects pointed out have already been acknowledged and rectified. While taking note of the general sufficiency of these examinations, the committee must state that the standard, as might be expected, is found to vary in different institutions. We can never expect absolute uniformity to prevail amongst bodies so widely different in character as are the seventeen universities and conjoint boards of the medical corporations in the three kingdoms. We look for distinctly higher standards in the cases of all the universities granting degrees in medicine, surgery, and obstetrics, but even among them it is not possible to institute exact comparisons. The profession no less than the public is now, with one exception, adequately protected against the admission of imperfectly trained practitioners into the ranks of medicine, and it is also distinctly true that the standard of qualification has been materially raised in every licensing body within the last twenty years. The Examination Committee finds evidence of imperfect early education on the part of many candidates who ultimately become members of the profession, and strongly urges that more strenuous efforts than have hitherto been attempted may be made to secure a higher standard of general education before registration as a medical student is permitted. The Examination Committee takes note of a frequently repeated criticism as to the advisability of requiring, in addition to the ordinary examination of cases, a written report on at least one medical and surgical case in the clinical portion of the examinations. The committee recommends this test to be employed when it can be efficiently carried out. The number of cases of midwifery on which attendance is required is in some instances too few, so small a number as six being considered adequate by some boards. In reply to unfavourable comment upon this matter, these boards declare that it is impossible to provide for a larger number being attended. It is manifestly not easy to find a remedy for this condition, but the Examination Committee is unwilling to believe that the difficulty is insuperable. If the local provision for midwifery instruction in the educational centre itself is inadequate the necessary knowledge could surely be secured elsewhere, under the competent supervision of a registered practitioner, or in a lying-in institution, and certificates be produced of attendance on a large number of cases. The Examination Committee suggests that the Council should consider the propriety of issuing a recommendation to this effect. A more frequently reiterated complaint is made by the visitors and inspector respecting the failure to institute any dependable test in operative surgery. Some boards declare their inability to carry out this test by reason of insufficient supply of material for the purpose. It is manifestly unwise to urge this examination on licensing bodies which are willing, but which, on account of the restrictions imposed by the Anatomy Act, are absolutely unable to conduct it, and the Examination Committee is of opinion that the Council cannot for the present proceed further in pressing this matter upon the attention of the bodies concerned. It is pointed out by the inspector that many of the examining boards hold no special examination in ophthalmic or in aural surgery or in skin diseases. In other cases it appears that candidates are thus tested in the course of the several surgical examinations. The General Medical Council has hitherto made no recommendation respecting special examinations in these subjects. The Examination Committee sees a difficulty in urging the Council to make more specific recommendations on these points, since such a course might lead to the introduction of other tests in special subjects to a burdensome degree. The curriculum of study is now so loaded and the requirements in examinations so detailed and onerous, that it appears advisable to exact nothing further at the present juncture. It might suffice to indicate to the several boards that the Council expects the subject of ophthalmology to form part of the examination for a qualifying licence to practise, and that candidates should be also examined, as far as practicable, in their knowledge of skin diseases. The Examination Committee, by way of summary, would ask the Council to emphasise the desirability of all the examining bodies observing the following points:—

- "1. The maintenance of fixed intervals of time between the several examinations. It is desirable that two years at least should intervene between the examination in anatomy and physiology and the final examination in medicine, surgery, and midwifery.
- "2. The error of sanctioning the extreme subdivision of examinations, and particularly the final, as now permitted by the English, Scottish, and Irish Conjoint Boards.
- "3. Questions in all the written examinations of the different bodies should be submitted to the whole of the examiners under each subject before they can be set at any examination.
- "4. The careful supervision of the candidates in all their examination work.
- "5. The justice of allowing at least half an hour for a candidate to answer each question in the papers on medicine, surgery, and midwifery.
- "6. The rule that no candidate should be examined in any subject or part of a subject, except in the presence of two examiners.
- "7. The necessity of the clinical examinations in medicine and surgery being conducted under the personal surveillance of an examiner, who should always examine the candidate orally on each case, although the adoption of this rule might in practice necessitate in some boards additional clinical examiners.
- "8. That there should always be an examination in the testing of urine and other secretions, in microscopy, and in prescription-writing, and always an oral examination in both medicine and surgery, which should include the recognition of pathological specimens.
- "9. That at every final examination there should be a practical examination in pathology, macroscopic and microscopic, unless this has been included in the examination immediately preceding the final examination.
- "10. The examination in midwifery, forensic medicine, and hygiene should be made as practical as possible.
- "11. Whatever the system of marking may be, the percentage for a pass (50 per cent.) should be uniform in all the boards and in accordance with the recommendations of the Council. The marks given on the

written examination ought not, as is the case with some boards, to dominate those given at the oral and clinical examinations. The recommendation of the Council that knowledge of one subject should not be allowed to compensate for ignorance in others is not sufficiently regarded by some of the examining bodies. Marks given in any part of an examination should be given on the merits of that part alone, and not be subject to future revision unless for the correction of a manifest error.

"12. That as the art of examining is only to be acquired by practice, it is desirable that an examiner should be re-elected where practicable for at least five consecutive years, particularly for the Final Examination."

These, said Sir Dyce Duckworth, were the results that came out from the inspection of the Examining Boards of the three kingdoms, and he proceeded to read an appendix to the report, which appeared to show that among the candidates who have presented themselves to the several Examining Boards there have been some whose ignorance has been such as to render it incredible that they should ever become competent and trustworthy medical practitioners. The committee thinks it highly desirable that such persons should be altogether excluded from the ranks of the medical profession, and recommends the Council to seek the coöperation of the several licensing authorities for this purpose. He moved that the report be received and entered on the minutes.

This was seconded by Mr. WHEELHOUSE and agreed to.

Dr. BATTY TUKE asked if it was contemplated that this report was to be considered during the current session.

Dr. MACALISTER thought the committee's conclusions were very important, and he suggested that they should be drawn up in the form of "recommendations" by the Council for consideration next session.

The PRESIDENT: The bodies should have an opportunity of sending any representations in regard to them. Do you propose to send them to the bodies?

Sir WILLIAM TURNER and others: No, no.

Dr. MACALISTER: They deserve to be permanent recommendations.

Sir WILLIAM TURNER: But they cannot now be sent to the bodies, because the Council may alter them.

Dr. MACALISTER: Then I move "That the Examination Committee be instructed to prepare for the consideration of the Council at its next session, in November, a series of specific recommendations embodying the results set forth in the summary to their report."

Dr. McVAIL seconded this proposal.

Dr. PETTIGREW: I hope that we shall not separate without doing something with these recommendations. Let us sit to-morrow and finish with the matter when it is fresh in our minds.

Professor GAIRDNER was willing to adopt this procedure.

Mr. BRUDENELL CARTER felt that they were in a better position to deal with these matters at once than they would be six, possibly twelve, months hence.

Sir WALTER FOSTER urged that they were at the far end of a long session, that what was wanted was the opinion of those who were not familiar with all the details rather than that of those who were, and that consideration of the report should be postponed.

Dr. PETTIGREW moved that the Council deal with the report on Friday and subsequent days.

Professor GAIRDNER seconded this amendment.

Sir DYCE DUCKWORTH said there was no doubt that if the general pronouncements of the committee were adopted they would be an exceedingly valuable guide to the examining bodies of the country. The subject was one of the most important parts of the work for which the Council met, and even now they were at least six months behind with it. It would be a great satisfaction to get it out of hand. They wanted to clear the way because there was the inspection of preliminary examinations, which should have commenced before this time. Many of them understood the details very much better now than could be expected of them six months hence.

Mr. TEALE thought that if the recommendations were important they were too important to discuss at the far end of the session.

Dr. GLOVER suggested that it would not be quite respectful to the committee to go on now. Considering the value of the report it should be postponed till next session and then be taken as the first business.

The PRESIDENT was of opinion it would be premature to force on a discussion now.

On a division the amendment had only six supporters, and Dr. Macalister's motion was then put and unanimously agreed to.

Public Health Examinations.

The next business was that of receiving reports from the

Examination Committee on the inspection of examinations in sanitary science of the following bodies: (a) the Conjoint Board in England; (b) the University of London; (c) the Conjoint Board of the Royal Colleges of Physicians and Surgeons in Ireland; and (d) the University of Dublin.

Sir DYCE DUCKWORTH proposed that all these reports and the similar reports presented to the Council at their session in November last, together with the provisional reports thereon prepared by the Examination Committee, should be referred to the Public Health Committee for consideration and report. He was happy to congratulate the chairman of the new committee, whoever he might be, on the fact that the reports that were being handed over were all brought up to date, for the Examination Committee had prepared a report on each of the reports of inspection.

Dr. BATTY TUKE seconded the motion, which was agreed to.

The Public Health Committee was then nominated as follows: Dr. Thorne Thorne, Dr. Batty Tuke, Sir Philip Smyly, Mr. Teale, Dr. Cameron, Dr. W. Moore, Dr. Church, Dr. McVail, and Dr. Haughton.

Dental Examination.

The new Dental Education and Examination Committee was nominated as follows: Mr. Carter, Mr. Bryant, Dr. Cameron, Sir Philip Smyly, Dr. Fraser, and Dr. Chas. Moore.

Registration of Students.

Sir DYCE DUCKWORTH presented a report from the Students' Registration Committee. He said it contained no matter that would excite attention—the work of registration was almost automatic.

The report was received and entered on the minutes.

The Pharmacopœia.

The PRESIDENT moved that the Council should place £2000 at the disposal of the Pharmacopœia Committee for the purpose of enabling them to proceed with the work of producing a new edition of the Pharmacopœia.

Dr. MACALISTER seconded the motion.

Dr. HERON WATSON suggested that the sum should be £3000.

Modified in accordance with this suggestion, the motion was agreed to.

A vote of thanks was then, on the motion, of Sir JOHN BANKS, accorded to the President, and this brought the proceedings of the session to an end.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—Bologna:

Dr. S. Salaghi has been recognised as *privat-docent* in Therapeutics.—Bonn: Dr. E. Schulze has been recognised as *privat-docent* in Neurology and Psychiatria.—Halle: Dr. F. Haasler has been recognised as *privat-docent* in Surgery.—Leipzig: Professor J. von Kries of Freiburg, a former assistant of Professor C. Ludwig, has been appointed to succeed him in the chair of Physiology. Dr. R. Kockel has been recognised as *privat-docent* in Pathological Anatomy.—Marburg: Dr. E. Behring has been promoted to the rank of Ordinary Professor of Hygiene. Dr. W. von Sobieranski has been recognised as *privat-docent* in Pharmacology.—Vienna: Drs. Chvostek, Max Herz and Norbert Ortner have been recognised as *privat-docentes* in Medicine, Dr. Salsmann as *privat-docent* in Ophthalmology, and Dr. Réthi as *privat-docent* in Laryngology.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—

At the annual general meeting of this society held on Monday, June 10th, the following were elected office-bearers for the year 1895-96:—President: David Hepburn. Vice-Presidents (resident): Ashley Gibbings, John Fairbank. C. J. Boyd Wallis; (non-resident) W. E. Harding (Shrewsbury), George Henry (Hastings), and J. F. Cole (Ipswich). Treasurer: S. J. Hutchinson. Librarian: W. A. Maggs. Curator: Storer Bennett. Editor of Transactions: Edward Lloyd-Williams. Honorary Secretaries: J. H. Mummery (foreign), J. F. Colyer (council), and Clayton Woodhouse (society). Councillors (resident): C. E. Truman, W. R. Humby, W. B. Paterson, Harry Baldwin, John Gartley, Cornelius Robbins, Sidney Spokes, Alfred Smith, G. D. Curnock; (non-resident) G. G. Campion (Manchester), J. McKno Acland (Exeter), J. H. McCall (Leicester), T. Arkövy (Budapest), A. W. W. Baker (Dublin), F. E. Huxley (Birmingham), Geo. Cunningham (Cambridge), C. B. Mason (Scarborough), and J. J. Andrew (Belfast).

THE triennial festival dinner in aid of the funds of the Royal Maternity Charity, of which the Queen is patron and the Duke of Argyll president, took place on Wednesday night at the Albion Tavern. Dr. Robert Barnes presided, and the Secretary reported that during the evening donations and subscriptions had been received amounting to about £800.

SIR JAMES CRICHTON-BROWNE, M.D., LL.D., F.R.S., will preside at the distribution of prizes to the Stepney Jewish Schools, to be held at the Queen's Hall, People's Palace, Mile End-road, on Monday next, at 7.30 P.M. The prizes will be distributed by Mrs. Adler, wife of the Chief Rabbi, and the proceedings will conclude with a gymnastic and calisthenic display by the pupils.

BATHING FATALITIES.—Although the bathing season has only recently commenced, many fatalities have already occurred. In the past few days—namely, during Saturday, Sunday, Monday, and Wednesday last—in the suburbs of London and the provinces, no less than fourteen boys and young men, and two men have lost their lives while bathing. Of the former it would appear none could swim, and of the latter, both men were seized with cramp, suddenly disappeared, and were drowned. At each recurring bathing season similar casualties occur, and are a striking testimony of the prevailing neglect of the art of swimming and emphasise the necessity of calling public attention to the fact.

At a meeting of the Society for the Study of Inebriety held on the 6th inst., the President, Dr. Norman Kerr, in the chair, it was resolved to memorialise Government to propose legislation, on the lines recommended by the Scotch Departmental Committee on Habitual Offenders, for the compulsory curative detention of habitual drunkards, for provision for the poor, and for the extension of the definition of "habitual drunkard" in the Inebriates Act of 1879 to excessive users of morphine and other drugs. The thoroughness of the inquiry was highly commended, and special mention was made of the three members of the committee having a medical qualification—the chairman, Sir Chas. Cameron, M.P., Dr. Farquharson, M.P., and the secretary, Dr. J. F. Sutherland. Surgeon-Major Pool, Dr. David Walsh, Mr. Hazell, and others took part in the discussion.

PRESENTATION.—At the meeting on the 7th inst. of the general committee of the General Hospital at Birmingham, which was also well attended by friends, Dr. W. F. Wade was presented with a testimonial in recognition of the valuable services rendered by him as physician to that institution. Mr. F. Everitt presided. Mr. J. B. Clarke (chairman of the Testimonial Subcommittee) stated that 106 subscribers had contributed, and the sum available was £261 11s. 6d. A silver tea-tray had been selected by Dr. Wade, on which was engraved the following inscription:—"Presented, with a cheque for £196 11s. 6d., to Willoughby Francis Wade, M.B., F.R.C.P., on his retiring from the office of physician to the Birmingham General Hospital, which he had filled for twenty-seven years, as a token of appreciation of his valued services to the institution. The cheque was generously given by Dr. Wade to the building fund of the New General Hospital. June 7th, 1895." The chairman, on making the presentation, stated that Dr. Wade's services to the medical charities of the city covered a period of forty years.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Whitsuntide Recess.

THE House of Commons, after a recess of exactly a week, resumed its session on Monday, June 16th. The House of Lords takes a recess of a little over a fortnight and will resume on Monday, June 17th.

The Factories and Workshops Bill.

In the present state of the law boys over thirteen possessing the necessary educational certificate can be employed at night in paper mills, ironworks, blast furnaces, and letterpress printing works, and in this Bill the Government proposed to raise the age to sixteen years. When the proposal was discussed in the Grand Committee on Tuesday, June 11th, Mr. Matthews, Sir Arthur Hickman, Sir J. Joicey, Mr. Whiteley, and a number of other members expressed objection to it, and as a compromise Mr. Asquith arranged to take the age of fourteen years as the limit, and to give the Secretary of State power to impose certain conditions as to the night work, conditions as to ventilation, hours worked, &c.

The Diseases of Animals in Ireland.

The Veterinary Department in Ireland has issued a report for 1894 with reference to the diseases of animals. The diseases with respect to which special powers are conferred by statute on the Lord Lieutenant and Privy Council in Ireland are cattle plague, pleuro-pneumonia, foot and mouth disease, and swine fever, but anthrax, rabies, glanders or farcy, sheep-pox, and sheep-scab are also dealt with under an Act passed last year and by Orders in Council. The Veterinary Department report that no case of cattle plague has occurred in Ireland since 1866, no case of pleuro-pneumonia since 1892, and no case of foot and mouth disease since 1884. Twenty-eight cattle were slaughtered as suspected of pleuro-pneumonia, but the post-mortem examination of the lungs by the officers of the department showed that the disease did not exist in any of these cases. The principal work of the department during the year had been connected with swine fever which had been prevalent in Ireland and caused serious losses. During the ten months of the year 1893 prior to Nov. 1st, when the Swine Fever Act came into force, only 196 outbreaks of the disease were reported in all Ireland, while in the fourteen months from Nov. 1st, 1893, to Dec. 31st, 1894, no less than 12,657 separate cases had been reported. In a large proportion of these reports the inspectors of the local authorities on visiting the places found that no disease existed; in many others when a suspected pig was slaughtered the post-mortem examination showed that the affection was not swine fever, but in 7929 instances the outbreak was confirmed by the examination of the viscera by the veterinary officers of the department. As to anthrax, only five outbreaks were reported in 1894 as compared with twenty-two in 1893, while as to glanders or farcy thirteen outbreaks were reported. The cases of rabies reported were 779 in number, or 355 more than in 1893. The report says in this connexion that the provision of the Rabies (Ireland) Order of 1894 authorising local authorities to pay compensation for animals suspected of rabies that are slaughtered by their direction has probably led to an increase in the number of reports, and that there is strong reason to believe that in a large proportion of the cases reported the animals were not really affected with rabies.

HOUSE OF COMMONS.

MONDAY, JUNE 10TH.

The Irish Prisoners at Portland.

Mr. William Redmond asked the Home Secretary whether Gallagher and others of the Irish prisoners at Portland were suffering from excessive ill-health, and if so, whether he would order a special medical inquiry to be held. Mr. Asquith, in reply, said that all the prisoners referred to, with the exception of John Curtin, were now in good health. The prisoner Gallagher was admitted into the hospital for anaemia on May 1st. He was discharged from the hospital on the 30th, having gained 4 lb. in weight and expressing himself as very well. The prisoner Curtin was at present in the hospital, and he had had a special inquiry made by Dr. Gover into his condition. He showed some improvement and his case was being carefully watched.

TUESDAY, JUNE 11TH.

The Condition of Aldershot Camp.

Mr. Alpheus Morton asked the Secretary of State for War whether several officers had been seriously ill caused by the insanitary condition at Aldershot; whether he was aware that they or their friends had been put to large expense in obtaining private medical attendance, and would he explain on what grounds the War Office refused to pay these expenses.—Mr. Campbell Bannerman replied that among the cases that had occurred at Aldershot among officers only those of enteric fever could be caused by insanitary conditions, and of this disease only four cases had occurred since Nov. 1st last. The origin of the disease was in all cases stated to be doubtful. Any officer whose illness was distinctly traced to the insanitary condition of his official quarters was indemnified for any medical expenses he might incur when an army medical officer was not available.

The Army Medical Staff in India.

Mr. Alpheus Morton asked the Secretary of State for India whether his attention had been called to the condition of the Army Medical Staff in India; whether the Medical Department was terribly undermanned; and, whether adequate arrangements were made for a reserve in case of emergencies like the Chitral Expedition.

Mr. Henry Foster replied that the establishment of the Army Medical Staff in India was considered sufficient for the requirements of the Army in peace and war, and there was no reason to suppose that it was "terribly undermanned," as assumed by his hon. friend.

Summer Clothing for the Police.

Mr. Asquith, in reply to a question put by Mr. Snape whether, as an example to the municipal and county constabulary authorities throughout the country, arrangements could be made to promote the comfort of the Metropolitan Police by supplying them with lighter clothing during the hot summer months, said that the matter had been frequently considered, and the opinion of the Commissioner and of the Chief Surgeon of the police was averse to the proposal. He undertook, however, to obtain a fresh report on the subject.

WEDNESDAY, JUNE 12TH.

Funeral Expenses of Children Bill.

On the motion of its sponsor, Sir Richard Webster, this Bill was withdrawn after having reached the Committee stage. The principal provision of the Bill was aimed at the insurance of children under two years of age, and Sir Richard Webster, in asking leave to withdraw the measure, said he had not sufficiently considered the interests of some of the best of the friendly societies. Mr. Abraham took the opportunity to condemn the Bill as an outrage on the feelings and aspirations of the working-classes. Several members suggested that there should be an inquiry before legislation on this subject was again attempted.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the Adulteration of Food Products, of which Sir Walter Foster is chairman, met on Wednesday, June 12th, and resumed the examination of witnesses.

Mr. John Williams, President of the Grocers' Association of Manchester and Salford, said that in 1892 there were a good many complaints about the fraudulent sale of margarine in Manchester and a vigilance committee was appointed to see to the matter. With the assistance of a solicitor they got up a number of prosecutions, but they received very scant encouragement from the authorities. In two cases a nominal fine was imposed, while in a third the accused person got off, and the Association had to pay costs to the extent of £5. He complained that while the corporation of Manchester authorities bestirred themselves with reference to excess of water in butter, they overlooked serious and systematic fraud in connexion with the sale of margarine. In his opinion, if the magistrate was assured that there had been fraud, he could not impose too heavy a fine, and in order to prevent fraud he would have all margarine sent out in certain shapes. The practice of having two counters, one for butter and the other for margarine, was no protection to the purchaser; on the contrary, it was made a means of fraud. Both butter and margarine should, in his opinion, be sold openly. The invoice should be considered as a warranty, and the person who gave it held responsible. With regard to mixtures of coffee and chicory he objected to the percentages being stated on the label. He thought the present label effective enough, but if he did anything to it at all it would be to prevent the use of other words than coffee and chicory upon it. Reverting to margarine, witness said he would have all margarine sold in oblong or brick-shaped blocks, tied up and marked in a particular way. He would not allow more than 6 per cent. of butter in margarine. It was necessary to make some allowance of butter, because he was informed that in every case there was a certain percentage of butter in margarine. He would have all butter and margarine examined at the port of entry by the officials there, travelling inspectors to visit localities and encourage local authorities to carry out the law, wholesale houses and manufactories inspected, and samples taken at hotels and restaurants.

Mr. William Jennings, President of the Bristol Grocers' Association, gave evidence with regard to coffee mixtures and cocoa, saying that the present labels were a sufficient protection to the public. When people bought coffee at 10d. or cocoa at 4d. per lb., they knew very well they were not getting pure coffee or pure cocoa. He took the same view with regard to mustard. In the case of pepper and ginger, he thought they should always be genuine, and that there was no need for adulteration. He had no wish to stamp out the trade in margarine, which, he thought, was a necessary article of food for people who could not afford to pay for butter, but he would put some limit on the power of mixing butter and margarine. He would also have inspection at the port of entry and imprisonment inflicted in case of repeated offence. If imprisonment did not stop fraud, then he would prohibit the colouring of margarine like butter.

Mr. Adam Morton Dunlop, President of the Glasgow South-Eastern Grocers' and Provision Dealers' Association, expressed the opinion that prosecutions in connexion with margarine should not be taken under the Food and Drugs Act, but under the Margarine Act. He said so because in Glasgow customers objected to use the word "margarine," and although they knew they were getting margarine asked for butter, or merely for "fivepenny" or "sixpenny," according to the price of the article. The result was that a grocer in Glasgow was liable to conviction under the Food and Drugs Act every day he opened his shop. Where there was deliberate intention to commit fraud, he did not think too severe a penalty could be inflicted. He did not think there were more than a very few dishonest traders in Glasgow or any part of Scotland, but these few gave a bad character to the trade. He would not allow margarine to be packed in kits or butts or casks identified with special kinds of pure butter, but would have a package for margarine. He objected to any interference with the practice of colouring margarine because it would drive the article out of the market.

Mr. Arthur J. Giles, secretary of the Grocers' Federation and the Metropolitan Butter Association, was also examined. He recommended the appointment of a board of reference, who would deal with such matters as the standard of purity, the colouring of margarine, and the question of what was injurious, and he suggested that on that board there should be representatives of such bodies as the Society of Public Analysts, the General Medical Council, the Grocers' Federation, the wholesale dealers and manufacturers, and Somerset House. He thought an appeal to Somerset House should be given in every case from the decision of the local analyst.

The committee then adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- ALLAN, H., M.B., M.S. Aberd., has been appointed Medical Officer of Health to the Whaley Bridge Urban District Council.
 BAILEY, T. R., M.D., C.M. Edin., has been reappointed Medical Officer of Health for the Bilston District Council.
 BROSTER, A. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Wirksworth District Council.
 BROWN, OSMOND P., M.R.C.S., has been appointed Medical Officer of Health to Knighton Rural District Council.
 BUCHANAN, PETER, M.B., C.M. Glasg., has been appointed Medical Officer of Health to the Coleford Urban District Council.
 BUTLER, P., L.R.C.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Chiddingly Sanitary District of the Hambleton Union.
 CRAWFORD, DOUGLAS, M.B., C.M. Edin., has been appointed Assistant Honorary Surgeon to the Stanley Hospital, Liverpool, vice Smith, resigned.

- DAVIDSON, J., M.B. Lond., M.R.C.S., has been appointed Medical Officer to the Uxbridge Joint Hospital.
 ELLIOTT, R. H., M.B., B.Ch. Irel., has been appointed Junior House Surgeon to the Stanley Hospital, Liverpool.
 FINDLAY, G., M.B., C.M. Aberd., has been appointed Medical Officer of Health to the Campden District Council.
 GARDNER, HAROLD BELLAMY, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Anaesthetist to Charing-cross Hospital.
 GILLAM, T. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Saply Pitchard Sanitary District of the Marley Union.
 HANNAH, NATHAN, L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health to the Abram Urban District Council.
 HARRIS, WILFRED J., B.A., M.D., B.C. Cantab., has been appointed Junior House Physician to the National Hospital for the Paralyzed and Epileptic, Queen-square, vice Warrington, resigned.
 LITTLETON, PHILIP R., M.R.C.S., has been appointed Medical Officer of Health to the Ashbourne Urban District Council.
 LOCKWOOD, B. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer to the Workhouse of the Leeds Union, vice Hirst, resigned.
 MARTIN, ARTHUR J., M.B. Lond., M.R.C.S., has been appointed Medical Officer for the Bloxwich Sanitary District of the Walsall Union, vice Somerville.
 MARTIN, J. T., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer to the Catholic training-ship *Clarence*, Birkenhead.
 MORON, WM., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Matlock Urban District Council.
 PERCIVAL, TROS., M.R.C.S., has been appointed Medical Officer of Health to the Knottingly Urban Council.
 RISHLEY, STANLEY, M.D. Edin., has been appointed House Surgeon to the Rotherham Hospital and Dispensary.
 ROBERTS, EDWARD B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.M., has been appointed Medical Officer of Health to the Hawarden District Council.
 ROBERTSON, JOHN, M.D. Edin., B.Sc. (Public Health), has been reappointed Medical Officer of Health for St. Helen's, Lancs.
 ROSE, F. L.D., F.R.C.S., has been appointed Honorary Dentist to the Stanley Hospital, Liverpool, vice Alexander, resigned.
 RUDH, CHAS. F., M.R.C.S., has been appointed Medical Officer for the Stalham Sanitary District of the Smallburgh Union.
 SKINNER, D. S., M.D. Brux., L.R.C.P. Lond., M.R.C.S., L.M., has been appointed Medical Officer of Health to the Willesden District Council.
 STEELE, JONATHAN, L.R.C.P. & S. Ed., has been reappointed Medical Officer to the Kidsgrove Urban Council.
 STODDART, W. H. B., M.B., B.S. Lond., has been appointed Senior House Physician to the National Hospital for the Paralyzed and Epileptic, Queen-square, vice Whiting.
 SUNDERLAND, OLIVER, L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Bexley Urban District Council.
 TAYLOR, JOHN W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Methley Urban District Council.
 WALKER, B., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Ravenstonedale Sanitary District.
 WEBB, A. LISLE, M.R.C.S., M.R.C.P., has been appointed Resident Medical Officer to the National Hospital for Diseases of the Heart and Paralysis, Soho-square, vice Goldney.
 WILCOX, E. M.D., M.S. Edin., M.R.C.S., has been appointed Medical Officer for the Ashburton Sanitary District of the Newton Abbot Union, vice Brown, resigned.
 WILLIAMS, EDWARD, M.R.C.S., has been appointed Medical Officer of Health for the Aberayron Urban Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

- BOROUGH OF LOWESTOFT.—Medical Officer of Health and Medical Attendant at the Sanatorium for the Urban and Port Sanitary Districts of Lowestoft. Salary for the Urban Sanitary District, £100 per annum; for the Port Sanitary District, £20 per annum; and as Medical Attendant at the Sanatorium, £30 per annum. Applications to the Town Clerk, Lowestoft.
 BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician.
 CITY OF LONDON UNION INFIRMARY, Bow-road, E.—Resident Officer. Salary £450 per annum and unfurnished residence. Applications to the Clerk, Guardians' Offices, 61, Bartholomew's-close, E.C.
 DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £90 a year and board and lodging.
 FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house; rent and taxes free; also coal, light, water, and cleaning; or in lieu thereof the sum of £20 per annum. Applications to the Secretary, Board-room, Bagillt-street, Holywell, N. Wales.
 GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Senior House Surgeon, for six months. Salary at the rate of £60 per annum, with board, lodging, and laundry in the hospital.
 KENT COUNTY LUNATIC ASYLUM, Barming Heath, near Maidstone.—Fourth Assistant Medical Officer and Pathologist, for two years, unmarried. Salary £175 per annum (rising £5 a year), with furnished quarters, attendance, coal, gas, garden produce, and washing.
 LONDON HOSPITAL, Mile End, E.—Medical Electrician.
 LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Senior Demonstrator of Anatomy. Salary by a percentage on fees.
 MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for one year, unmarried. Salary £150 per annum, with board and residence.
 NEW HOSPITAL FOR WOMEN, 144, Euston-road, N.W.—Medical Women, qualified as Clinical Assistants, for the Out-patient Department.
 NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Board and lodging (including washing) will be provided.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-on-Trent.—Assistant House Surgeon for six months.

POPULAR AND STEPHEN SICK ASYLUM DISTRICT.—Medical Superintendent for the Asylum at Bromley, Middlesex, E.—Salary £350 per annum, with rations, furnished apartments, washing, and service.

ROYAL GENERAL DISPENSARY, 25, Bartholomew's-close, London, E.C.—Physician.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Clinical Assistant and Anaesthetist for six months. Salary at the rate of £30 per annum.

SHEFFIELD GENERAL INFIRMARY.—House Surgeon. Salary £120 a year, with board, lodgings, and washing, with a prospective advance of £10 per year for the second and third years. Also, Assistant House Surgeon for three years. Salary £80 per annum, with board, lodging, and washing.

SIR PATRICK DUN'S HOSPITAL, Dublin.—Assistant Surgeon for the Out-patient Department. No salary.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Honorary Dental Surgeon.

UNIVERSITY OF ABERDEEN.—Examiners in Medicine.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—House Physician to the in-patients of this hospital. Honorarium of £50 per annum, and will be provided with board and lodging in the Hospital.

WANDSWORTH AND CLAPHAM UNION.—District Medical Officer for the No. 2 District of the Parish of Streatham. Salary £60 per annum, with fees for surgical operations and Midwifery. Such salary to include the cost of the provision of medicine, &c.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant, for six months. Board, lodging, and washing provided.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum, with furnished rooms, board, gas, coal, and attendance.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 13th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
June 7	30.21	N.E.	62	56	123	79	52	...	Bright
" 8	30.16	N.E.	65	59	124	84	53	...	Bright
" 9	30.07	W.	72	61	122	84	58	...	Overcast
" 10	29.88	N.E.	63	59	103	71	61	...	Cloudy
" 11	29.98	N.	61	53	119	73	53	...	Cloudy
" 12	30.02	N.W.	57	50	112	65	50	0.03	Cloudy
" 13	30.18	N.W.	57	50	114	64	47	...	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular in question.

STAMMERING.

To the Editors of THE LANCET.

SIRS,—In the interesting lecture on Impediments of Speech by Dr. W. S. Colman, reported in THE LANCET of the 8th inst., he says the stammerer "must try to vocalise If he stumbles over such a word as for he should think not merely of the voiceless letter *f*, but of vocalising the vowel *o* This method we owe to Dr. Wyllie." Allow me to say that the late Emil Behnke originated this method as far back as May, 1882, more than nine years before the first appearance in the *Edinburgh Medical Journal* of Dr. Wyllie's articles on "Disorders of Speech," the publication of which commenced in October, 1891. In April, 1891, Mr. Behnke was honoured by an invitation to read a paper before the South Wales Branch of the British Medical Association on "Stammering and other Speech Defects," and to describe the methods by which he had obtained such excellent results; and he afterwards lectured on the same subject to other assemblies of medical practitioners. In his lecture occur the following sentences: "Let the stammerer exaggerate his vowels at the expense of his consonants. The stammerer should therefore dwell on an easy syllable, prolonging the vowel of it." At the request of many medical men the lecture was published under the title, "Stammering: its Nature and Treatment." That Dr. Wyllie has also suggested the same plan as did Mr. Behnke before him, and the coincidence that the majority of Dr. Colman's opinions are identical with those of Mr. Behnke, prove how correct were his theories. I am, Sirs, yours obediently,

Karl's Court-square, S.W., June 10th, 1895.

K. BEHNKE.

Births, Marriages, and Deaths.

BIRTHS.

BURNETT.—On June 4th, at St. Albans-road, Watford, the wife of John Duncan Burnett, M.B., of a daughter.

CAIRD.—On June 5th, at 21, Rutland-street, Edinburgh, the wife of P. M. Caird, M.B., F.R.C.S. Edin., of a son.

ELAM.—On June 8th, at Addington House, New Barnet, the wife of W. H. Elam, F.R.C.S. Eng., of a son.

WILLIAMS.—On June 5th, at Holyrood House, Beckenham, Kent, the wife of J. Lawson Williams, M.D., of a son.

MARRIAGES.

BURTON—PERKS.—On June 6th, at St. Paul's, Burton-on-Trent, by the Rev. N. Jackson, M.A., vicar of Kasingwold, assisted by the Rev. F. H. Beaven, vicar of the parish, James Edward Burton, B.A. Cantab., B.Sc. Lond., head master of Kasingwold Grammar School, fourth son of Frederic Burton, of Knatebull-road, S.E., to Constance May, younger daughter of Charles Perks, M.R.C.S., L.R.C.P., of Burton-on-Trent.

ECCLIS—ANSTIE.—On June 12th, at the Baptist Chapel, Devizes, by the Rev. J. F. T. Hollowes, M.A., of Birmingham, William McAdam Eccles, M.B. Lond., F.R.C.S. Eng., of Harley-street, W., son of W. Soltau Eccles, Esq., of Upper Norwood, to Anna Coralie, second daughter of Edward B. Anstie, Esq., of Devizes.

EDGELOW—MATTHEW.—On June 12th, at St. George's, Hanover-square, William Ford Edgelow, M.D., of Braddonfield, Torquay, to Emily Jane, widow of the late Alexander Matthew, of Braddon Villa, Torquay.

LANGDON-DOWN—CLEVELAND.—On June 6th, at St. Thomas's Church, Portman-square, Reginald L. Langdon-Down, M.B., M.R.C.P., elder son of J. L. H. Langdon-Down, M.D., F.R.C.P., J.P., of Harley-street, to Jane Jarvis, eldest daughter of the late Lieut.-Colonel G. D. D. Cleveland, 98th Regiment.

LAWS—LUMBY.—On June 11th, at the Parish Church, Grantchester, Cuthbert Umfreville Laws, M.B., Dunelm, son of Wm. Geo. Laws, City Engineer, Newcastle-upon-Tyne, to Grace Margaret Bryham Lumby, daughter of Dr. Lumby, of Cambridge.

DEATHS.

ARMSTRONG.—On June 5th, Fergus Armstrong, M.D., of Appleby, Westmoreland.

CARRINGTON.—On June 10th, at the residence of her son, Dr. W. H. Carrington, 143, Lavender-sweep, London, Louisa Maria, widow of the late Mr. F. G. Carrington, of Gloucester, and mother of the late Dr. H. E. Carrington, of Guy's Hospital, aged 80.

CLARK.—On June 6th, at Brompton, William Clark, M.R.C.S., L.R.C.P., aged 38.

DEANE.—On May 7th, at Naini Tal, N.W.P. India, Surgeon-Major William Deane, F.R.C.S., aged 39.

HADDEN.—On June 6th, at St. Thomas's Hospital, London, John Hadden, M.D., of White Hall, Hampton Court, aged 53, for twenty-five years practising at Horncastle, Lincolnshire, and lately at Wilton Lodge, Norton, Kingston-on-Thames.

PARKER.—On May 29th, at Parrock-street, Gravesend, Alfred Edward Parker, M.R.C.S., aged 44.

PERKINS-CASE.—On June 11th, at Wilton Lodge, Croydon, P. W. Perkins-CASE, M.D., aged 41.

SILVESTER.—On June 4th, at Wellesley-road, Croydon, Simeon Talbot Silvester, L.D.S., R.C.S. Eng., aged 49.

TRIMMER.—On June 2nd, at Leytonstone, Essex, Henry Beesley Trimmer, M.D., late of Gamlingay, Cambridgeshire, aged 65.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

THE CASE OF MR. C. B. TOWNSEND.

THE following additional subscriptions have been received or promised, and are hereby gratefully acknowledged:—

Dr. John P. Henry ...	£0 10 0	Mr. Edwd. Gregory... ..	£1 1 0
Dr. T. Willoughby Cole ...	0 10 0	Dr. R. E. Foote	0 10 6
Mr. W. Clark	1 0 0	Dr. Garrod Thomas	3 0 0
Mr. E. C. Greenwood ...	5 6 0	Dr. H. Buss	0 10 0
Mr. Strangman Grubb ...	1 1 0	Dr. Chas. Gage Brown ...	1 1 0

Further subscriptions will be received and acknowledged by the Rev. H. Townsend, 41, King Henry's-road, South Hampstead, N.W.

UNDER the title "Æsculapian Love" the *St. James's Gazette* publishes the following humorous lines in satire of the valetudinarian tendencies of the younger generation:—

"O bid me not, Amanda, as a student of THE LANCET,
To meet you when the moon has tinged the sleeping earth with
The evening is traditionally fitting, but perchance it [gold;
Would bring about bronchitis, or at least a heavy cold.

"And, though we love each other as but few have loved before us,
We need no outward token of unalterable bliss;
Leave that to those less prudent; the authorities assure us
That very often microbes are transmitted by a kiss.

"Nor must you rush towards me to express your satisfaction;
It's true that fate has severed us for many a weary day;
But still, excitement, as you know, accelerates the action
Of pulse and heart in really quite a prejudicial way.

"I'll see you, then, at midday (please make sure the room is heated
To 60° or to 61°); we'll talk about the past,
And how our various ailments by our doctors have been treated—
When, by the way, Amanda, were you vaccinated last?

"And so we'll meet to-morrow; I will sing your favourite ballad
(For vocal exercises greatly benefit the lung),
And, having lunched discreetly off an hygienic salad,
We'll gaze into each other's eyes, and on each other's Tongue!"

An Interested Member &c.—A Licentiate of a Royal College of Physicians has certainly the right to describe himself as a physician. That is exactly what he is. He has not the right to prefix "Dr." to his name, because he is not a Doctor of Medicine.

J. W. W.—Our advertisement columns contain the names and business addresses of several manufacturers of such articles. Our correspondent should write to the different firms for catalogues or price lists.

A QUESTION OF UNPROFESSIONAL ACTION.

To the Editors of THE LANCET.

SIRS,—A, B, and C are neighbouring practitioners. A has held the appointment of medical officer to the workmen of a ship-repairing works for five years. A had a month's notice from the workmen. A deputation of the workmen waited on B and C asking them to become candidates for the appointment. On hearing of this A wrote B and C asking if they were candidates. B replied saying, as he said to the deputation, that he could not become a candidate unless there was a vacancy. C gave a similar answer to A. At the expiration of the month the secretary of the workmen wrote to B and C stating that the appointment was vacant. B and C applied as well as A. A accuses B and C of acting unprofessionally, which B and C repudiate. And assuming that A did canvass the votes of the workmen, did A act professionally? I am, Sirs, yours faithfully,

June 12th, 1895.

X. Y. Z.

* A, having received a month's notice, was right in considering that the post was not vacant until the month had expired. We do not see that there was any concealment on his part of the fact that the post would be vacant at the end of the month, and such concealment was obviated by the action of the workmen. If it is suggested by our correspondent's letter that B and C were prevented from canvassing the constituency by representations made to them by A, who himself did canvass the constituency, A's good taste might be questioned. But if A merely signified during his month under notice his willingness to continue to hold the appointment, possibly under altered conditions, his conduct cannot be impugned. When the secretary at the expiration of the month formally told B and C that the appointment was vacant, they were clearly, on the facts before us, at liberty to apply for it. Our correspondent will recognise that our answer is strictly based upon his representation of the case.—ED. L.

THE INFLUENCE OF THE ADMINISTRATION OF CHLOROFORM UPON THE COURSE OF PHTHISIS PULMONALIS.

To the Editors of THE LANCET.

SIRS,—Having had under observation a case of phthisis pulmonalis in which a surgical operation was performed, chloroform being administered, I am anxious to know if in such cases your readers have noticed any improvement in the lung condition or diminution in the number of tubercle bacilli in the sputum subsequently to the use of the anæsthetic. I am, Sirs, yours truly,

St. Leonards, June 5th, 1895.

EDWARD SAMUEL LEE, M.D.

"ANTITOXINE."

THE British Antitoxine Manufacturing Company have appealed to us to support their use of a term for the product they supply—the properties of which are said to be those of a powerful antipyretic and analgesic—on the ground that the reason for our previous protest no longer obtains. We doubt, however, whether it is the fact that "diphtheria antitoxin" has had its day. On the contrary, we believe that it is still on its trial, and have always held that such a trial must necessarily be a prolonged and patient one before it can be proved to be ineffective. We must therefore still regret this confusion of nomenclature, although we are glad to be informed that the drug "antitoxine" is obtaining an assured reputation. As that is the case it shows that there is not much risk in practice of confounding two remedies so similar in name but so unlike in action.

Newport.—The results to be obtained by the adoption of the Infectious Disease (Notification) Act largely depend upon the means available in the district for utilising the information when acquired; and amongst these means the provision of some hospital accommodation for first attacks of infectious diseases, and means of disinfection, occupy a foremost place. But, even apart from these, very useful work can be done by way of advice, disinfection, the control of school attendance in the case of children living in infected houses, and the like. And there is the further advantage that the mere knowledge of the existence of infectious disease in itself serves as a stimulus to sanitary authorities so to organise their districts that they may prevent the spread of infection. For these various reasons we advocate the adoption of the provisions of the Act in question.

Veritas.—The matter is not under discussion in our columns at the present time, so that our correspondent's communication somewhat beats the air.

Interested.—It is absolutely impossible. The story is a common hoax.

"ALLEGED TOUTING BY A PUBLIC VACCINATOR."

To the Editors of THE LANCET.

SIRS,—In your issue of May 18th you answered a letter of mine with regard to certain alleged irregularities on the part of a public vaccinator. Acting on your advice, I wrote to the Local Government Board, and have received the enclosed reply. Having drawn the attention of this public vaccinator and his principal to your answer, they repudiate any charge of unprofessional conduct, and state that "the conduct denounced by yourself and the Editors of THE LANCET is equally abhorrent to themselves. Further, this public vaccinator admits that it is his custom to call on patients and ask "if they wish to have their children vaccinated publicly or privately," and that "the orders under which I act are to visit all cases that are on my list as needing vaccination, and residing within two miles of my residence." While I must believe that technically this public vaccinator is correct and is acting more or less according to "orders" received from the local body who elected him; and since both he and his principal express their abhorrence at anything which you would call unprofessional, I shall be obliged if, having considered this matter from this public vaccinator's own statements as herein given, you will kindly express your opinion once more.

I am, Sirs, yours faithfully,

June 12th, 1895.

C. H. E.

[Enclosure.]

Local Government Board, Whitehall, S.W.

11th June, 1895.

SIR,—I am directed by the Local Government Board to advert to your letter of the 27th ultimo, and, in reply, I am to state that the Board have no power to prevent Dr. — from adopting the practice referred to therein.—I am, Sir, your obedient servant,

C. H. E., Esq.

ALFRED D. ADRIAN, Assistant Secretary.

* We found it our duty upon our correspondent's previous communication to state our opinion that the conduct of the public vaccinator was indefensible, and if persisted in should be reported to the Local Government Board. The Board, it would seem, have no power to interfere, but, noting the public vaccinator's abhorrence of anything that has the appearance of toutting, we venture to hope that the limitations of the Government office will not affect his conduct, and that he will abstain from an interference with the patients of a fellow-practitioner, which we consider most unfortunate, and, as we have already said, quite unprecedented.—ED. L.

"THE SWEATING OF MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—I have noticed some recent correspondence on the "sweating" of medical men by medical aid societies. Can we be surprised at the laity holding our services so lightly when we ourselves treat them as though they were not worth much, as evidenced by advertisements for locum tenens where "a comfortable home and railway fare" are offered in return for the charge of a practice? Two or three such advertisements are to be seen in the current number of THE LANCET.

I am, Sirs, yours obediently,

June 3rd, 1895.

X.

"UTERINE STEMS."

To the Editors of THE LANCET.

SIRS,—I waited for the next issue of THE LANCET before replying to your strictures upon my letter in the issue of June 1st, in case any other medical man might also criticise my letter, but since no one has done so I now reply to you. First, you accuse gynecologists of the present day of the performance of operations upon ante-flexed uteri on "the false pathology which attributed an altogether exaggerated, not to say imaginary, importance to the necessity of keeping the axis of the uterus straight." I am bold enough to think that gynecologists know sufficient of the pathology of ante-flexed uteri to justify their actions, and perhaps I may be pardoned by you for thinking that intra-uterine stems are used for other purposes than keeping the axis of the uterus straight. Then next your remark, "It is difficult to understand how anyone can suppose that applications to the endometrium through a hole in the centre of a stem pessary can have any good effect on salpingitis." Surely no one will dispute that the nearer one approaches the seat of disease the greater will be the chance of cure. Then comes the sentence which affects me more closely, "on the other hand, there is no doubt whatever that endometritis, metritis, perimetritis, salpingitis, ovaritis, and death have been caused by the use of intra-uterine stems." True, death does sometimes follow even the simplest operation, but since I have used uterine stems in no less than 200 cases without even the shadow of death following, it will take something more than the voice of THE LANCET before I shall feel justified in deterring patients from the many benefits accruing from the use of the stems. Then, Sirs, with regard to your translation of "i.e.," "I do not know if it is intended for a joke, but if so I certainly think you who print "death" in italics would do well to refrain from associating a joke with death. No one values criticism more than I, and I sincerely thank all who trouble to point out my errors.

I am, Sirs, yours faithfully,

Peckham, June 11th, 1895.

ROBERT HUGH HODGSON.

Mr. H. George.—The average experience of the profession in regard to a preparation cannot well be gauged. Many may not use it; many may use it only so little that their report would not be weighty; and many may use it much and yet never report upon it. We have spoken well of the preparation. Of the book alluded to by our correspondent we know nothing.

R. C.—1. "A Guide to the Examination of the Urine," by J. Wickham Legg, F.R.C.P. Lond., &c.; Seventh Edition, edited and revised by H. Lewis Jones, M.A., M.D. London: H. K. Lewis, 1893.—2. Any philosophical instrument maker.

Mr. W. Henry Kesteven is thanked for his interesting communication. If we are able to accede to his request we will communicate with him.

"HOMES FOR THE DYING."

To the Editors of THE LANCET.

SIRS,—H. A. B. will find such an institution as he requires in the Hostel of God, 82, The Chase, Clapham, S.W.—a "free home for the dying," served by the St. James's Servants of the Poor. Persons of both sexes and of every class are taken in, and, though in charge of a Church of England Sisterhood, no distinction is made as to creed. Your correspondent should write to the mother superior to inquire if there is a vacant bed for his old servant. There is not much room in the present temporary premises; but the sisters are now appealing for funds in order to build a permanent hospital.

I am, Sirs, yours faithfully,

Kensington Court, W., June 8th, 1895.

ATHELSTAN RILEY.

SWEATING EXTRAORDINARY:

To the Editors of THE LANCET.

SIRS,—The underpaying of assistants in the profession is not unknown. The following, however, fairly earns the palm. A certain apothecary and surgeon keeps a qualified man to manage a branch practice, six miles away from headquarters, for the magnificent pittance of £30 per annum and board. Surely, a more unqualified assistant gets more. The above manager does all the work, and there are no extras whatsoever.

I am, Sirs, yours faithfully,

June 10th, 1895.

DISGUSTED.

UNFERMENTED WINE.

To the Editors of THE LANCET.

SIRS,—I heard the statement made recently at a church meeting that the unfermented wine used at the sacraments was not the juice of the grape, but merely some kind of fruit juice extracted from, e.g., raspberries. Could any of your readers kindly inform me if this is really so; and, if not, give me the name and address of some firms who make *bond-fide* grape wine (unfermented, of course)?

I am, Sirs, yours truly,

June 11th, 1895.

VINUM.

THE OXYBROMIDES OF MERCURY.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly inform me where I can obtain solutions of the oxybromides of mercury, arsenic, &c., as used in the United States with marked success?—I am, Sirs, yours faithfully,

June 12th, 1895.

S. H.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (22, Gt. George-st., Westminster).—7.30 P.M. Mr. Richard H. Curtis: Hourly Variation of Sunshine at Seven Stations in the British Isles.—Mr. Henry Harries: The Frequency, Size, and Distribution of Hail at Sea.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Mr. W. C. Bosanquet: On the Anatomy of Nyctotherus Ovalis.—Dr. A. Bruce: A New Microtome.

NORTH-WEST LONDON CLINICAL SOCIETY.—8.30 P.M. Clinical Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. R. M. Gunn: Cataract.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Nasal Polypi.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Insanity with Syphilis; Insanity with Organic Brain Disease.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 to 6 P.M. Dr. Morgan Dockrell: Sarcoma.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Secondary Glaucoma, with Illustrated Cases.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Syphilitic Affections of the Skin.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. D. B. Lees: Cases from the Medical Wards.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Dr. Tooth: Diseases of Cranial Nerves.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Frederick Taylor: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Erysipelas and Suppuration.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Insanity with Cardiac Disease, Gout, &c.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Eczema (treatment).

During the week marked copies of the following newspapers

have been received:—Glasgow Herald, Sussex Daily News, Brisbane Telegraph, Western Daily Mercury, Cape Times, Bombay Gazette, Falkirk Herald, Pioneer Mail, Hong Kong Telegraph, Times of India, Express and Star (Wolverhampton), Newcastle Chronicle, Weekly Times and Echo, Ayrshire Post, Hull News, Rochdale Observer, Hampshire Independent, Birmingham Mail, Cork Constitution, Scotsman, Buzler, Brighton Gazette, Bristol Mercury, Architect, City Press, Liverpool Daily Post, Hull Daily Mail, Leeds Mercury, Temperance Chronicle, Yorkshire Post, Liverpool Mercury, Pulman's Weekly News, Bury Guardian, Dumfries Standard, Montreal Daily Herald, West Middlesex Standard, Mining Journal, Reading Mercury, Weekly Free Press and Aberdeen Herald, Sanitary Record, Local Government Chronicle, Devsburry Reporter, Surrey Advertiser, Dover Express, Crewe Guardian, Darlington Echo, Public Health, Guy's Hospital Gazette, Isle of Wight Express, Morning Leader, Oswestry Advertiser, Dundee Courier, Local Government Journal, Courrier de la Presse, Kent Weekly News, Citizen, Argus (Melbourne), Portsmouth Times, County Council Times, Birmingham Daily Post, Southampton Observer, Whitehall Review, Westmorland Gazette, Hertfordshire Mercury, &c., &c.

Communications, Letters &c. have been received from—

- A.**—Dr. Albano, Bucharest; Surg.-Capt. S. G. Allen, Woolwich; Aberdeen University, Secretary of; Ashton-under-Lyne District Infirmary, Secretary of; Achilles, Lond.
- B.**—Dr. Fletcher Beach, Lond.; Dr. D. C. Black, Glasgow; Dr. J. Braithwaite, Leeds; Dr. W. J. Bell, Appleby; Dr. E. Bielley, Bruges; Dr. A. O. Bobard, H.M.S. *Tyne*, near Albany; Mr. A. Wynter Blyth, Lond.; Mr. Lennox Browne, Lond.; Mr. F. H. Bate, South Wimblesdon; Mr. L. M. Bowen-Jones, Carmarthen; Mr. T. B. Browne, Lond.; Messrs. W. V. Bowater and Sons, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; British Medical Association, Hon. Secretary of; Bury Dispensary Hospital, Secretary of; Bradford Infirmary, Secretary of; British Castor Co., Lond.; Bryant Press, Toronto; Benedict, Lond.
- C.**—Dr. J. A. Campbell, Carlisle; Dr. J. G. Connal, Glasgow; Dr. L. J. G. Carré, Lond.; Mr. A. H. Cheate, Lond.; Mr. R. A. Caldwell, Southampton; Mr. W. R. Culling, Lond.; Mr. H. N. Custance, Lond.; Messrs. E. Cook and Co., Lond.; Cortland Wagon Co., Lond.; Central School of Chemistry, Lond.; Catholic, Lond.; Charing-cross Hospital, Secretary of.
- D.**—Dr. P. W. Dlack, Bury; Dr. T. Dutton, Lond.; Mr. W. Drewitt, Kingston-on-Thames; Mr. W. Defries, Lond.; Mr. J. Downes, Lond.; Mr. W. G. Dickinson, Lond.; Messrs. Domerol and Co., Lond.; Messrs. Dawson and Sons, Lond.; Messrs. Driscoll, Lennox, and Co., Lond.; Sir P. Dun's Hospital, Dublin, Secretary of; Dorchester Asylum, Medical Superintendent of.
- F.**—Dr. G. Fitzgerald, Lond.; Dr. G. C. H. Fulton, Eston; Mr. W. Fleming, Lond.; Forceps, Lond.
- G.**—Dr. R. Grieve, Lasswade; Mr. H. L. Gordon, Middleburg, Cape Colony; Mr. J. Griffiths, Lond.; Messrs. Gautier Fils and Neveux, Paris; Great Eastern Railway Co., Continental Traffic Manager of; Gold Medalist, Lond.; G. I., Lond.
- H.**—Dr. G. Holmes, Lond.; Dr. V. D. Harris, Lond.; Mr. J. S. Hurst, Londonderry; Mr. R. N. Hartley, Leeds; Mr. J. Heywood, Manchester; Mr. J. Hill, Grasse-hall; H., Halifax.
- J.**—Mr. J. Jarratt, St. Leonard's-on-Sea; Mr. H. K. Johnstone, Margate.
- K.**—Dr. W. H. Kesteven, Lond.; Dr. Norman Kerr, Lond.; Dr. T. H. Kellock, Lond.; Kin-naird, Lond.; Rev. J. H. W. Kane, Lond.; Mr. R. C. H. Keine, Lond.; Mr. R. T. Kent, Glasgow; Messrs. Keith and Co., Edinburgh; K. C. B., Lond.
- L.**—Dr. A. E. Lloyd, Rhyl; Dr. G. H. Lang, Clifton; Messrs. Leader and Sons, Sheffield.
- M.**—Dr. T. Modlinski, Moscow; Mr. N. Mayne, Longford; Canon F. H. Murray, Chislehurst; Messrs. Macmillan and Co., Lond.; Messrs. Milton and Co., Lond.; Medico; Massage.
- N.**—Mr. L. Newland-Pedley, Lond.; National Orthopaedic Hospital, Secretary of; North Staffordshire Infirmary, Secretary of; Nemo.
- O.**—Dr. W. O'Neill, Lincoln; Oculist, Lond.
- P.**—Mr. J. B. Pike, Loughborough; Mr. J. V. Pestana, Penang; Mr. Y. J. Pentland, Edinburgh; *Phonographic Record*, Editor of; Physiology, a Student of.
- Q.**—Quest, Lond.
- R.**—Dr. A. Robertson, Rotherham; Dr. R. M. Ronaldson, Edinburgh; Mr. R. Redpath, Newcastle-on-Tyne; Messrs. Ridges and Sons, Wolverhampton.
- S.**—Dr. A. Stewart, Manchester; Dr. J. A. Shaw-Mackenzie, Lond.; Mr. W. W. Smyth, Eastbourne; Mr. T. Smith, Lond.; Mr. F. W. Sears, Lond.; Messrs. G. Street and Co., Lond.; Sanitary Wood Wool Co., Lond.; Sanitas Co., Lond.; *Sanitary Record*, Lond., Editor of.
- T.**—Dr. C. B. Taylor, Nottingham; Dr. J. A. Thompson, Sydney, N.S.W.; Mr. T. P. Tracey, Glasgow; Mr. D. Thomas, Garnant.
- U.**—United Horse Shoe and Nail Co., Lond., Secretary of.

V.—Victoria Hospital for Children, Lond.; Secretary of; Volunteer Medical Staff Corps, Lond.; Veritas.

W.—Dr. R. J. Wylie, St. Ives, Cornwall; Dr. Forbes Winslow, Lond.; Dr. A. Wright.

Letters, each with enclosure, are also acknowledged from—

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The Croonian Lectures,

BEING A

CONTRIBUTION TO THE HISTORY OF
THE RESPIRATION OF MAN.*Delivered before the Royal College of Physicians of London on
June 18th, 20th, 25th, and 27th.*By W. MARCET, M.D. EDIN., F.R.C.P. LOND.,
F.R.S.

LECTURE I.

Delivered on June 18th.

MR. PRESIDENT AND GENTLEMEN,—Allow me to begin by returning my best thanks for the honour of being called upon by this College to deliver the Croonian Lectures for the present year. In these four lectures I propose to draw your attention to certain phenomena of human respiration. As far back as 1876 I was led, while mountaineering in the High Alps, to inquire into the influence of altitude on respiration; this work was continued every summer till 1880. The inquiry showed clearly that there was a great deal more to be done on the subject of human respiration; and through the kindness of Professor Schäfer, a laboratory having been placed at my disposal at University College, the work commenced in the High Alps was continued in London, with the aid of assistants, from the year 1883 to the present time. I propose in this first lecture to treat of the relations of the oxygen breathed with the life of the tissues; the second lecture will be devoted to the various forms of respiration in man; the third to the influence of volition on respiration; and the fourth to respiration carried on under exceptional circumstances, concluding with remarks of a more strictly medical character.

THE VITAL ENERGY AND CHEMICAL ACTION WITHIN THE
LIVING BODY.

Vital energy, vital force, or vitality, the cellular life of Virchow, may be defined as power or energy existing in the cell and radiating from it. This cell has oxygen as part of its molecular constitution, and with the aid of this oxygen is constantly undergoing change or metabolism with more or less energy, according to age, health, &c. It might be considered at first sight as if the test of vitality is the degree of power with which life clings to living organisms—such, for example, as seeds. Reliable information on this subject is to be found in *Nature Notes* for 1895, where it is stated by Dr. Carruthers that forty years ago Robert Brown succeeded in obtaining the germination of seeds of the *Nelumbium water lily*, which had been preserved in boxes for fifty years in Sir Hans Sloan's collection and another 100 years in the herbarium of the British Museum. I am much indebted to Dr. Carruthers' kindness in showing me those seeds preserved in acid, which had sprouted to the height of several inches. Dr. Peter of Göttingen has succeeded in obtaining the growth of seeds from the soil of a dense wood with trees 100 or 150 years old; he has also shown that the seeds of many field plants retain their vitality for considerably more than half a century. The vital resistance of seeds is more-over illustrated by the fact that they have been exposed to the greatest degree of cold obtainable by artificial means without losing their power of growth. These remarkable phenomena might possibly find an explanation in the following considerations. Life is a contest between vital energy and that other energy known as chemical decomposition. The instant an animal dies chemical decomposition comes into play, and the first change to take place is a combination of the oxygen, which is part and parcel of the molecular tissue. Once that oxygen gone, recovery of life is impossible.

It has been observed that in the case of animals one of the first decompositions to set in has for its result an acid state of the muscles, this acid being looked upon by Catherine Schipiloff from her experiments as the cause of rigor mortis. If we now return to seed life we shall find that it may be protracted, as it were, indefinitely under conditions which entirely check decomposition. The seeds of the *Nelumbium speciosum*, preserved for 150 years, had dried up and undergone no

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fermentation, and those cultivated by Dr. Peter had clearly found in the soil some preserving or sterilising material. It is but natural to conclude that a molecule of wheat, or of any other seed under such conditions, would retain its oxygen, though without being able to make use of it because of the absence of moisture and probably also of certain bacilli which have been found necessary to vegetable growth; hence the seed was not dead, but its life remained in a potential form, or under the form of vibrations too weak to produce any other effect than maintain themselves. So long as oxygen is present as a molecular constituent these vibrations will continue, but they will cease the instant this oxygen has disappeared. It cannot be said that the vitality of seeds is great, but only that seeds under certain atmospheric conditions are not acted upon by those chemical forces known to decompose vegetable tissues. Given an animal suddenly placed in a state resembling death, but in which it could retain its combined oxygen, would it not be possible to maintain its life in abeyance and ready to be restored on a return to favourable circumstances? The experiments of Raoul Pictet, the physicist who was the first to liquefy air, appear to give an affirmative reply to this question. In his experiments on fishes he has rapidly frozen them so hard that, according to his statement, they were in a state allowing of their being snapped asunder like a stick, and yet they have recovered life when very gradually thawed. It will be seen in the course of this lecture that when fish are frozen up and completely embedded in the ice during a winter's frost they cannot be brought to life again; hence it appears that the essential condition for the preservation of life is that the fish shall be frozen so rapidly that decomposition cannot possibly commence. Indeed, it is reasonable to conclude that, in Pictet's experiments, the molecules of tissue were frozen with their oxygen before they had time to dispose of it, and that this oxygen reacting on the molecules of tissue under favourable circumstances brought the fish to life, exactly as it happened that the reaction of oxygen in the seed brought the seed to life after life had been quiescent for fifty, or perhaps hundreds of, years.

As already stated, no phenomena of metabolism can take place without the interference of oxygen or atmospheric air. The amount of air or of atmospheric pressure required may certainly vary within wide limits, and we all know that with training and slow transition from the seaside to lofty mountain stations a considerable state of adaptation may be obtained. The action of oxygen in the living body, though, so far, very obscure, is a most interesting study, and first I shall hope to be able to show in a conclusive manner that it is not the oxygen in the atmosphere which by offering itself to the tissues brings about the tissue changes, but because the tissues are undergoing change they require and resort to the oxygen of the atmosphere; hence the more active the change the more oxygen required, and *vice versa*. It is often thought that more carbonic acid is formed when an increased volume of air is voluntarily breathed. This is not so, the excess of carbonic acid given out from the lungs being due to the emission of some of the carbonic acid normally present in the blood and not to increased combustion, except a very small amount for the extra muscular work of forced breathing. One of the several objects of oxygen is to produce heat; some of this heat being transformed into motion, is not perceptible by the thermometer, while another portion manifests itself as heat and can be directly observed. In cold-blooded animals the heat produced is entirely transformed into motion, but this is not the case with warm-blooded animals, which have an excess of heat ready for use; the latter find, therefore, in their bodies a large supply of power wanting in the former. If the production of heat is so intimately connected with life that life cannot exist in an active form without it, what is the essential nature of heat? Physicists regard this condition of matter as the result of a vibratory motion of its ultimate molecules, very feeble but very rapid, which is transmitted through the intermolecular and interplanetary spaces by the ether of space. From this view the warmest bodies will be those whose molecules vibrate with the greatest speed and amplitude—bodies as they become warm or cold merely gain or lose motion. Since in the living body heat is continually produced, the molecular vibrations producing it are ever at work; this formation of heat, which is due to the reaction of oxygen on organised matter, may therefore be looked upon as the very fundamental condition of life. If oxygen is thus indispensable to life, it must be within

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takes place in a few minutes, the temperature in the centre of the body remaining nearly constant to the end of this struggle for life. Fishes, frogs, batrachians, and ophidians resist freezing at temperatures varying from 4° to -22° ; they usually die at a lower temperature. The length of time the animals were exposed to the cold is not stated, and this must be an important factor. Raoul Pictet, in one of his lectures, exhibited to his audience a number of gold-fish, pike, and frogs frozen, and in the following lecture these same fishes, having been slowly thawed, were shown living and well. In the *Pall Mall Gazette* of March 23rd, 1891, an apparently authenticated case is quoted of a small fish which had survived six or seven months' enclosure in ice stored in an icehouse at Godalming. I have myself had an opportunity this last winter of observing gold-fish which had been caught in the ice. In every case in which the fish was completely embedded in the ice it showed no signs of life on thawing. One of the fish was only partly encased in ice, and had a small quantity of water left round it; when examined it appeared lifeless, but after a time it recovered perfectly. On another similar occasion the fish showed signs of life, but failed to recover. These observations apparently show that, if not absolutely embedded in the ice, the life of fishes can be held in abeyance for a time at a temperature close to freezing, but for how long I cannot tell. Following up my contention in this first address, these experiments show that the maintenance of the molecular vibration or motion of life requires very little heat in cold-blooded animals, and it may be concluded that at such a low temperature as 4° the heat is just sufficient to keep up life in the feeblest possible way. If the return of life movements be disturbed by too great an accession of heat, the vibration is immediately arrested, and a most careful handling is required to restore life to its full activity. At the beginning of this address I remarked as a proposition to be proved that it is not oxygen which by offering itself to the tissues brings about tissue change, but that the tissues make a call—a demand—on the atmospheric oxygen. In favour of this view the influence of cold on vitality was considered, and it was shown that cold up to a certain limit increased the vitality, but beyond that limit produced an opposite effect.

We have now to consider a state of life which to my mind bears some relation to the increased production of carbonic acid in the body from an accession of cold—I mean muscular exercise. The successive phenomena in muscular contraction are as follows. First, volition towards exercise produces an increase in the volume of air breathed, which occurs immediately before contraction or simultaneously with its commencement. At the same time, as will be shown in my third lecture, a certain amount of oxygen is apparently absorbed in the motor centres of the brain corresponding to that muscular exercise. An excess of carbonic acid is now expired, which at first obtains its oxygen from that contained within the muscles, and in proportion as this is used up the oxygen required is taken from the air breathed, the muscles at the same time charging themselves afresh with oxygen from the atmosphere. A number of experiments I made confirm this view. I must also state that we do not know by what process the carbonic acid is formed. The mode of exercise adopted in my experiments was raising the feet alternately 66 times per minute to a height of about 4 inches, in keeping with the striking of a metronome. The air expired was collected during successive periods and analysed. In the first period of three minutes the oxygen consumed from the air amounted to 719 c.c. per minute, in the second period of three minutes the experiment was lost, the third period of three minutes gave 770 c.c. of oxygen consumed per minute, the fourth 834 c.c., the fifth 799 c.c., and the sixth period of three minutes 775 c.c. From these figures it will be seen that during the first three minutes of exercise the oxygen consumed was only 719 c.c. per minute, although the heat required was the same as after six minutes or nine minutes, when much more oxygen was consumed from the air; hence it cannot be doubted that the muscles drew upon their molecular oxygen to a marked extent. These experiments were made on a former assistant. A series of experiments on myself, and another on my present assistant, gave corresponding result.

The connexion of exercise with respiration will be more fully inquired into later; in the meantime, if the amount of oxygen consumed by the body is a measure of the activity of the tissue change then exercise will be a means of keeping up and exciting the life of tissues, and thereby giving them

additional power to resist any abnormal change constituting disease. The overdoing of exercise is baneful in a great measure because of the difficulty the body will experience in obtaining from the air sufficient oxygen for the work, but perhaps as much also on account of the trouble required to rid the blood of the excess of carbonic acid formed which accumulates in the circulation. Muscular exercise is generally looked upon as raising the temperature of the body, although it may also be attended with a cooling effect; and this leads me to consider the question of the body temperature in the act of ascending. But before entering on this subject allow me to offer a few remarks on the methods in use of testing the temperature of the body.

In 1838 I had occasion to enter into a controversy with a Swiss gentleman, Dr. Vernet, who published results he had obtained from taking his temperature while engaged in mountaineering. He maintained that the only correct method of estimating animal heat was by means of a thermometer introduced into the rectum. Being in the habit of taking temperatures under the tongue, a method in general use clinically, I was anxious to ascertain the accuracy of Dr. Vernet's assertion. We accordingly together ascended the Dôle, one of the highest points of the Jura, and on nearing the summit, about 4000 feet in height, we found that with both of us there was a distinct rise of the rectal temperature. This experiment was not, in my opinion, conclusive, as in the act of climbing the blood, from the effect of gravity, must accumulate in the hæmorrhoidal vessels, leading to a state of congestion, and thus to a rise in temperature. The question, however, could only be settled experimentally. Five simultaneous observations of rectal and sublingual temperatures on different days while resting quietly in bed gave a mean excess of 0.3° F. in favour of the rectal temperature, while very moderate exercise, such as slowly walking about my room, produced a rise of the rectal temperature decidedly in excess of that observed under the tongue. Three experiments gave differences of 1.3° , 0.9° , and 0.8° , or a mean difference of 1.0° excess for the rectal temperature, and this was merely from moderate walking exercise in the room, and could not have been due to a general increase of temperature throughout the body; hence it appears that though there may be a very slight increase of the rectal over the sublingual temperature, when taken under circumstances affecting the temperature in both regions equally, still the moment a person is standing or walking, the rectal temperature is increased notably beyond the sublingual, which is simply due to a state of congestion produced by gravity. There remains the possibility of the cold in high altitudes acting through the submaxillary region and thus reaching the under surface of the tongue. To clear up this point I applied pieces of ice under the chin while the bulb of the thermometer was maintained under the tongue. On two occasions there was a perceptible rise in the temperature the moment the ice was applied, a phenomenon also observed by Raoul Pictet in his experiments on the application of cold to animals, and this was followed by a slight fall; the fall in three experiments amounted to 0.2° , 0.6° , and 0.5° in the course of from thirty to forty-eight minutes; therefore the application of ice to the submaxillary region affected but very slightly the sublingual temperature. The temperature of the body while ascending has been for a long time past subject to discussion. In 1865 Professor Marc Dufour, in his inaugural dissertation to the medical faculty of Zürich, stated from experiments made on himself that in the act of ascending the temperature of the body falls rapidly by about 0.4° . Another gentleman, Professor Fick, has observed the same phenomenon; many observers find that the body temperature is slightly increased by muscular exercise. In 1869 I began to give attention to this subject, and invariably found that my temperature fell while ascending, the extent of the cooling being dependent chiefly on the time which had elapsed since the last meal was taken, and to a less extent on altitude and atmospheric temperature. In general the fall of temperature was most rapid when ascending quickly, while fasting and perspiring freely. These inquiries were followed closely by those of Professor Lortet of Lyons, who obtained similar results. The observations of Dr. Clifford Allbutt, F.R.S., with three exceptions, gave results opposed to ours. Many other reliable observations have been published which seem to contradict one another. Thus Professor F. A. Forel of Lausanne found that the muscular work of ascending raised the body temperature; Mr. Gay of Strasburg observed a decrease of temperature on ascending, and the same

phenomenon was observed by Professor Ray Lankester. Hence it must be concluded that the influence of climbing on the temperature of the body varies with different persons. Some in thorough training, young, perspiring but little, and consuming as a rule a large amount of oxygen, or developing much heat under ordinary circumstances, will observe their temperature to rise in the act of ascending; others, who develop less heat, will generate just the amount they require for the exercise, but, the cold air and perspiration cooling the body, its temperature will fall below the normal.

The Bowman Lecture

ON

SUBJECTIVE VISUAL SENSATIONS.

*Delivered before the Ophthalmological Society on
June 14th, 1895.*

By W. R. GOWERS, M.D. LOND., F.R.S.,

CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL; PHYSICIAN
TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

MR. PRESIDENT AND GENTLEMEN,—I count it no small honour to be one of the links of the chain of "Bowman Lecturers"—a chain which connects the recent past, and also the days that have already faded in the distance, with a future that will be, we hope, remote. Thirty-five years ago the names of Todd and Bowman were those of the makers of some, and the framers of much, of the physiology then current. Their names were on the lips of teachers in connexion with discoveries and work which then seemed distant to the student who made his first entry in the world of science. They seemed so much part of the past that it was almost a shock to learn that, though one of the illustrious pair had ceased from his labours, the other was not only an active worker, but was the leading ophthalmic surgeon of Europe. When, in after years, I came to know him personally, although but slightly, his personal characteristics impressed me as the very ideal of refined mental power, combined with quiet earnestness and with the courtesy that is born of perfect kindness—all expressed in a face and manner which once seen no memory could lose. It will always be a source of satisfaction to me to remember that, though the suggestion would probably soon have been made by another, I had the privilege of directing the attention of the Council to the fitness of connecting the name of Bowman with the Ophthalmological Society by the establishment of this Lecture, that the suggestion bore immediate fruit, and that it was a source of pleasure to him we thus honour, and by which not less are we also honoured. Alas, the lecture is now delivered to his memory, but it is pleasant to think that the society did not postpone its establishment until the time had passed when it could give pleasure to him to whom the expression of regard was given. Is it not sad that so often the living are only awakened to a sense of that which should be, by the death which makes it a satisfaction only to those who render? Although the Bowman Lecture is now only a memorial, the memory which it keeps up is still a vivid recollection to a large number of the members of our society. With each year, however, the number of those who bear in mind that impressive and inspiring personality must become fewer. To one who still retains it, the memory gives to the task of delivering this lecture a keen sense of responsibility, lest he should fail to strike the note of severe restrained regard for all that is highest in scientific effort which Bowman ever set. To rise to his level is beyond the power of more than one of those who each century may give his lecture, but the personal fear of inadequacy is lessened by the recollection that no one was ever more ready than he to see the effort where performance failed, to commend the trifling good, and to ignore that which, far more obtrusive, might reasonably warrant censure, a censure which, for merely intellectual failure, never, I think, came from him. I need this consciousness to-night, for I cannot follow his great example of absolute practical homage to fact, to fact observed with definite precision. Alike in the science of life in general,

and of one part of life in particular, normal and perverted, theory seemed to find no place in his work. No doubt it had its place and influence, in due position and degree, but it was subordinate and never obtruded. To-night I cannot escape from theory or from the compulsion of even obtruding it. True, times have changed. Speculation has grown, and hypothesis, as the scaffold for useful observation, has become necessary in a manner and to a degree of which the workers of half a century ago had perhaps no adequate conception.

In selecting the visual sensations that occur without external cause as the subject for this lecture, I hoped to be able to reduce to some order the numerous facts recorded in my case-books in connexion with epilepsy and migraine, and to do so with the help of that which has been discerned and described by others. But I have found among the facts some which seem to be so instructive in a special relation that I have felt compelled chiefly to limit myself to a small part of the subject. Even within this narrow range, instead of explaining, I find myself able merely to point out that which needs explanation, and this only in its salient outline, in the hope that others may be able to see more clearly from the standpoint to which they may attain, as steps are cut in the steep hill-side of fact. Thence a wider prospect and a true perspective may be obtained, as the winding path of daily work is ever bringing before the eye new views of that which has long been known and perhaps misknown. The facts with which I have to deal are those of everyday experience, and yet are only now and then presented to us in needful definiteness of form and precision of discernment. I can only hope to-night to indicate how the facts should be regarded. Unless some idea exists of what to look for, we shall see but little.

The difficulty of ascertaining the facts depends on their subjectivity. That which is to be discerned can be seen only through the vision of another. Moreover, this is the vision of the unreal; it is the sight of that which is not. Unreal as it is, to the subject it is, as a sensation, a profound reality that confuses the mind and may make even recollection painful. Hence the opportunities for ascertaining trustworthy facts are very rare, and when they come it is important that they should be made the most of. If that which I have to say to-night induces many others to seize some of the opportunities that abound, and to make known the facts they learn, I shall count my effort thoroughly successful.

As I have said, the visual sensations met with in the two diseases, epilepsy and migraine, are far too varied to be considered in detail in all their numerous forms. But they present one relation which transcends all others in interest, in difficulty, and in importance. This is the apparent relation of the sensations to the functions of the cerebral centres in which we must assume that they arise, and through which we must also assume conscious vision of external objects is achieved. In 1885 I put forward the opinion, which has been confirmed by all that I have since been able to perceive, that, in addition to the half-vision centre in the occipital lobe, demonstrated by Munk, the indications obtained by Ferrier are correct, and that there exists a higher visual centre in the region of the angular convolution, which immediately subserves the perception of visual impressions. As I then suggested, impressions seem to pass to this higher centre in each hemisphere from both half-vision centres in the occipital lobes, in such a way that in each higher centre both fields of vision are represented, but that of the opposite eye in greater degree; that the connexion between the two higher centres is very intimate; and that the function of the higher centre differs from the lower in two ways. First, it seems to present the mysterious feature that, while partial disease of the lower centre causes partial loss of the related half-field, which cannot be compensated, partial disease of the higher centre seems to lower the function of the whole in a way we cannot at present understand. Secondly, and perhaps associated with this, there is some capacity for the compensation of loss by the other hemisphere, especially in the lower animals. This may be one reason why the pathological evidence of this centre in man is so scanty, and another cause may be found in the fact that the centre is in the region of the blood-supply of two different arteries, and so is seldom entirely destroyed. The facts that suggest—indeed, I think, indicate—the existence of this centre in man I have repeatedly stated during the last ten years. In the strange hemianesthesia of hysteria we have evidence of arrested action of all the other higher special senses

centres in one hemisphere. We never meet in this association with the hemianopia that results from disease of the lower centre in the posterior extremity of the hemisphere. Instead we have the "crossed amblyopia," as it is termed; peripheral vision is lost in both eyes, central vision persists in a small area in the opposite eye, and in a larger area in the eye of the same side. No trace is found of any relation to the half-fields. But hysteria is a by-word, and all facts, however definite, with which the name can be connected are disregarded by physiologists. Yet the same affection of vision occurs in organic disease. I have given an illustration of it,¹ as a lasting symptom, in a case in which it was caused, with hemiplegia, by a sudden lesion, probably hæmorrhage, in one hemisphere. A similar loss has been met with when the angular region was found diseased.² When hemianopia is caused by disease of the cerebral hemisphere it is common for a like contraction of the remaining half-fields to reproduce the same change, greater on the opposite side.³ A careful scrutiny of pathological evidence makes it probable that in these cases the disease is in the white substance, interrupting the half-vision path and extending forward to the fibres beneath the higher centre or to its grey matter. These may seem meagre grounds for the assertion that here we have a higher visual centre, but they agree in a remarkable way with the experimental results obtained by Ferrier, and a large number of the facts of disease cannot otherwise be understood. A theory that explains is not necessarily true. But if a theory that affords an explanation which can be obtained in no other way, which theory has other, varied and quite independent evidence, it seems to me that we are justified in its assumption. I have to ask you to postulate these higher visual centres, for I can only describe the facts or at least suggest their significance by placing them in front of this hypothesis. I am compelled also to justify my request because these centres seem quite outside the limits of our present scientific physiology.

Note the necessary significance of "crossed amblyopia." With loss of the higher visual centre of the left hemisphere we have in the right eye vision only in a small central region; in the left eye sight remains in a larger central region. In each eye there is peripheral loss. The significance of this is that the vision that remains is subserved by the right higher centre acting alone. This subserves a large central region on the opposite side, a small central region on the same side, but, without the coöperation of the opposite centre, it cannot subservise peripheral vision in either eye. The facts are certain, and their meaning seems to me alike startling and unquestionable. It seems that in the central regions of the fields vision can be subserved by either hemisphere alone, in the peripheral parts by neither alone. It is as if the impulse from the periphery of each retina ultimately reached the higher centre of one side through the opposite visual centre, as if those from the peripheral region of each half-vision centre in the occipital lobe passed to the opposite hemisphere through the higher centre of the same side, and those for the central region passed directly from the half-vision centre to each higher centre. So that, for instance, the peripheral impressions of the right higher centre have to pass through the higher centre in the left eye, and the loss of this involves peripheral blindness on both sides. Whether this is so, or whether some reflected coöperation is essential, the facts show how extremely close is the functional relation of the two. In this higher visual centre we must assume the processes to occur on which the subjective visual sensations depend. From this conclusion I think there is no escape, and this may become apparent as we consider their features on this assumption. The more elaborate function of this centre may be connected with the instability which underlies these symptoms. They reveal not only how extremely close must be the connexion between the visual centres of the two hemispheres, but that, as regards some part of their functions, they must be regarded almost as one centre, as united in a manner more essential than that in which any other centres of the two hemispheres are conjoined. This is, indeed, not surprising when we consider how unique is the function of sight as subserved first by the two eyes, and secondly by the lower visual centres in which the half-fields are represented in so limited a manner. Only from the region of the fovea centralis do fibres pass to each occipital lobe. Only in a

small region around the fixing point, varying in size in different persons, but always too small to be revealed by the ordinary perimeter, is vision subserved by each lower centre. But the whole of each field is in some way related to each higher centre. The subjective visual sensations present the function of these higher centres from another point of view, from that of their activity, and not of their loss. The ground is one on which we have to tread with caution, in which the danger of fallacious inference is great, and yet that which is seen must contain in it evidence of facts which can be discerned in no other way.

THE VISUAL SPECTRA OF EPILEPSY.

The "warning" which occurs at the moment of the onset of an epileptic fit—the first effect on consciousness of the process of "discharge"—is often a visual sensation. This may be, or may not be, the first event. It may be preceded by some other sensory perception or it may be followed by some other, but it shows that the process of discharge occurs first or early in the visual centres. Such sensations are extremely varied, but they are, as a rule, constant in the same patient, and when they occur, consciousness is adequate to permit the memory to retain them. The simplest of these visual warnings are sudden flashes of light or colour, sparks or stars, often in rapid movement among themselves, apparently like the movement of water-beetles on a pond. Sometimes a large luminous object appears, which may move across the field, or seem to approach or to recede. There may be two such objects, rarely three, and they may be white or coloured. More elaborate sensations are figures of persons, faces, often distorted into grimaces; a figure may also move. Occasionally there is a vision of places or of some scene, even such as is quite beyond the possibility of past experience. Such elaborate sensations—"psycho-visual" as they may be termed—are often associated with definite mental states, which may be very curious. The warning in one patient was a definite picture of London in ruins and the river Thames emptied to receive the rubbish; that all the inhabitants had perished, and the patient stood alone in the scene of desolation. The associations of these visual sensations are noteworthy, but I must only mention the fact that the frequent associations are with other special sensations, especially with the sense of hearing, seldom with smell. The associated sensation is generally of the same degree of elaboration. A patient who sees figures will seem to hear words uttered by them, although the words are generally forgotten—an association which reminds us of the celebrated vision on which the fame of Lourdes arose. One curiously complex visual warning, experienced by the same patient through many years before every fit, I have described elsewhere, but it deserves mention. A sense of beating of the heart ascended the chest to the head and became audible as a pulsating sound; then two lights appeared before the eyes, which seemed to approach with jerks; they suddenly disappeared and were replaced by the figure of an old woman in a red cloak, who offered the patient something which had the smell of Tonquin beans, and then he always lost consciousness. The case is remarkable on account of the change of the sensation of simple pulsation to that of sound, and the association of the latter with a pulsating visual spectrum, the replacement of these by a highly complex spectrum, and the final termination with an olfactory sensation, probably elaborate. There is reason to think that the more pleasant subjective sensations of smell are more elaborate than the common disagreeable sensations. The jerky movement, definitely synchronous with the pulse, is not uncommon in such simple visual sensations, and seems to indicate that the process, in the disturbed centre of the brain, is modified by the mechanical influence of the arterial pulsations. I may point out also the interesting fact that the more elaborate sensation, the vision of the woman, followed the more simple one, the two lights. This sequence is more common than the opposite, although now and then an elaborate sensation is followed by one that is more simple. The sudden spontaneous activity, which we call "discharge" of the centre, may occur as a primary event, but it is often preceded by sudden arrest of function, by inhibition of the centre. It is one of many instances of the fact that the same functional derangement, in different degree, may cause cessation of action or increased action. In one case, suddenly all became dark, then there appeared a red light before the eyes, changing presently to green, and then consciousness was lost and the convulsion came on. In another, sight became dim and misty, then two round green lights appeared, compared to a penny at a distance of two feet,

¹ Manual of Diseases of the Nervous System, vol. II., second edition, Fig. 83 (first edition, Fig. 81).

² Ibid., Fig. 15 (first edition, Fig. 14).

³ Ibid., Fig. 82 (first edition, Fig. 80).

which moved from side to side. It is very common for the first darkness to be the background for bright stars. Much less frequently stars or flashes of light are followed by loss of sight and darkness—that is, discharge is followed by inhibition.

COLOURS.

The colours seen in these epileptic sensations are generally either green, red, blue, or yellow; a reddish yellow is especially frequent and seems to be very much the colour commonly assumed to be that of flame. Now and then emphasis is laid on the bright golden character of the yellow. The transition of red to green just mentioned I have met with in two or three other cases. It is interesting, on account of the complementary character of the two colours and the fact that the transition is central; but we are not yet in a position to discern anything regarding the nature of the colour process in the centres. The subject is of extreme interest in connexion with the problems of colour vision, to the physical relations of which so much attention has been lately given. I believe that ultimately the study of the central phenomena will throw light upon the subject, possibly of supreme importance, but the time is not yet come. The perception of colour in the visual sensations which precede epilepsy presents to us one feature which must detain us for a short time, because it is equally obtrusive in the visual sensations of migraine which I shall have presently to describe. It is the fact that the subjective colour sensations seem to extend to the extreme periphery of the field. They are as distinct and frequent in the peripheral region as in the central region. I could give you many illustrations, but one will suffice. Green is the colour which is said to have the smallest colour field, its perception being often described as confined to the central region. But to one patient, before each fit, there appeared the vision of a green colour over the whole lower half of the combined fields, extending from side to side and down to the lowest part, as was clearly shown by his spontaneous description that "it was just as if he were standing in a field of grass."

PERIPHERAL COLOUR VISION.

Different as the arrangement of function in the centres is from that in the eyes, there must be a perfect reproduction of the function of the retinal fields in the higher centres. Although it is in altered form, whatever vision the periphery of the retina subserves, the parts of the visual centres related to the periphery must subserve the same vision in the same way, similar in character and in degree. The fact that the subjective sensations may present every colour in the peripheral field—even green, to which the retina seems least sensitive—brings before us the question of peripheral colour vision. The facts I am about to state have been well known for nearly twenty years, since Chodrin⁴ worked at peripheral colour vision in regard to saturation. They were described by Landolt, but they are not very familiar, and they are curiously inconsistent with the statements commonly made. It is often said that the field in which red can be seen is the central region, the limit of which crosses the outer horizontal radius at 45°. This limit is even spoken of as "the boundary of the field for red." But it is only the area in which red can be perceived on an object one centimetre square. The same statement in regard to a still smaller region is made regarding green. But with larger area of colour it is found that all the colour fields differ in extent very little from the fields for white. On the temporal side in each field red can be seen up to 90°. Taking first the red field, it is found that it depends in size simply on the size of the coloured object. In the outer horizontal radius that for the half-centimetre square is, I find, at 35°, and for a quarter-centimetre square at 25°. If we pass beyond the one centimetre limit, which is commonly figured as that of the field for red, we find that a red area two centimetres square is seen at 60°, three at 70°, four at 78°, five at about 82°, while the area of six centimetres square is seen up to the extreme edge of the field. Upwards, downwards, and on the nasal side of the field, in which the range of vision is so much more limited, the areal limits are closer together, so that on the inner horizontal radius the three-centimetre limit is at 40° and the six-centimetre area of red can be seen at 50°—that is, at the edge of the field for white. Every field is thus practically concentric with the field for white. In

the case of blue and yellow still smaller areas suffice to permit the colour to be seen up to the edge of the field for white. Green alone seems to fall short of the edge of the white field by about 5°. I have spoken of areas of two or more centimetres square. But this is not accurate. At each distance from the centre at which the colour can be seen in an area of a certain dimension, the same in the radial direction and in the concentric direction, it can be seen equally well if the radial dimension is only two-thirds of the concentric dimension. As far as I have been able to ascertain, the peripheral colour vision is determined by area rather than by illumination, but I have found it difficult to get a sufficient saturation to bear strong illumination.

I have spoken of the mysterious way in which peripheral vision seems in the higher centres to be dependent on mutual cooperation, that in neither eye can peripheral vision occur unless the centres of both hemispheres are active, while in the central region there is vision in both eyes although only the higher centre in one hemisphere is active. This peculiar mutual influence of the centres is exemplified further by the colour fields. The field for every area is larger if both eyes are open. This seems natural so far as concerns the part of the two fields which overlap. But it is true also of the temporal part of each field in which the field is single. Binocular intensification extends into this part and extends into it in the same degree as in the part where the fields are double—for instance, in the outer (temporal) horizontal radius of the right field. In the single field red is seen in one centimetre square at 42°, in the double field at 60°, although the left field only extends as far as 56°. In a square of two centimetres red is seen in the single field at 62°, in the double field at 72°, and in a square of four centimetres in the single at 80°, while in the double field it can be perceived almost up to the edge at 90°. The fact that in the part of the fields in which each is single there is increased sensitiveness when both eyes act gives additional emphasis to the strange fact that, in this region, loss of one higher visual centre causes peripheral blindness. It shows how complete is the blending of function in the two centres. In this outer periphery vision is impossible unless both higher centres act, but where the rays of light fall on one retina only their effect is greater if the other eye is open—that is, if both centres are fully stimulated.

(To be continued.)

"RETURN" CASES OF SCARLET FEVER.

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A DEFINITION of the phrase as here used is scarcely necessary. It is intended simply to imply that when infection reappears in a household, after the return of one or more of the inmates from hospital, the two events are in some way connected, and the investigation of which this paper contains a summary was undertaken with the view of ascertaining, if possible, whether this connexion was capable of some definite explanation. It is usual to assume that this explanation is to be found either in the earlier patient or in his clothing; and while this, as a general statement, is sufficiently comprehensive, its application to the patient requires some consideration. In the first place, he may bear evidence of still being infectious; but the end of the period of infectivity is the termination of a pathological process, and there is some reason for believing that it may not coincide with the disappearance of the clinical signs which usually accompany its progress. In other words, the power to transmit infection would, in some instances, appear to attend a patient after recovery (?), and it shall be my endeavour afterwards to point out the conditions which tend to engender this power. Moreover, we have of late been made familiar with the phrase "recurring infectivity" as a clinical fact, of occasional occurrence at least, in cases of diphtheria, and the term would seem to be equally applicable to certain cases of scarlet fever. A third possible source of reinfection may lie in the household of the patient, but here it is to be remembered that the secondary cases are almost always resident at home, and unaffected, till the return of the hospital patient. It is true that articles of clothing which have been subjected to some process of disinfection, and have in consequence come to be regarded, is

⁴ Archiv für Ophthalmologie, Band xxiii. See also Landolt: a Manual of the Examination of the Eyes; and Swanzy: Diseases of the Eye, p. 19.

may be erroneously, as innocuous, may lie unused, under cover, until preparation is being made for the patient's return home, and one cannot exclude this as a possible explanation in some cases. A word may be permitted in this place regarding the manner of dealing with patients and their clothing in Glasgow. During removal to hospital a patient usually wears his ordinary clothing, but it may be supplemented by a blanket as a wrap. Whatever he wears on admission is taken charge of by the hospital authorities and dealt with as afterwards described. After removal, the house from which he comes is visited, and all the clothing worn while sickening, and the bed and bedding used, are disinfected by the "sanitary" as distinguished from the "hospital" staff. A very large number of the cases of scarlet fever occurring in Glasgow are removed to hospital for treatment. In 1894 this proportion reached 74 per cent. of the cases notified. At the present time the older fever hospital of Glasgow, in Parliamentary-road, receives by far the greater number of these patients, and during the period under review this hospital was used exclusively for patients suffering from this disease. A large number also are treated at Belvidere, while those whose residence is in the recently annexed areas of Hillhead and Maryhill are treated at the Joint Hospital, Knightswood. It should be here noted that while the system of "sanitary" disinfection and washing is uniform in all cases, the clothing worn by patients on admission to Knightswood Hospital is dealt with in a manner somewhat different from that followed at Belvidere and Parliamentary-road Hospitals, while patients dismissed from Belvidere are subjected to a carefully designed system of bathing, in a separately constructed "clearing house," which has no equivalent in either of the other two hospitals. My observations were begun towards the end of 1893 and were continued till the spring of the present year, and during this period over 3700 scarlet fever patients were dismissed recovered. The method adopted in the inquiry was to note as it occurred every case arising in a household subsequently to, or shortly before, the return of an earlier one from hospital. A record was taken of the number of days intervening between the date of return of the one and the sickening of the other, and the length of residence in hospital of the former case. This case was also examined for the existence of desquamation, nasal or aural discharge, excoriations, &c.—in general, anything which could be regarded in the light of a lesion—and when such was found the ward journals in the hospitals were subsequently examined for a history of the case. At the time of occurrence inquiry was also made regarding the intercourse which had been permitted between the cases, whether they slept in the same bed or room, whether they played together or had their meals in common, and generally also regarding those demonstrations of affection which naturally accompany the return of any member of a household who has been absent for some time. In regard to clothing the inquiry was directed to ascertain what had been worn on going to hospital and what on returning; and how such clothing as had been worn at the time of sickening, but not on removal to hospital, had been disinfected, and whether it had, during the interval between disinfection and the return of the patient, been kept hanging loosely about the house, or under cover, as in a box or drawer. As might be expected, however, from the natural tendency of many people to discount the presence of infection in any articles of clothing which might be injured by disinfection, this line of inquiry was approached with the conviction that if the wearing of good clothing was coincident with the date of sickening—as might well happen when that occurred on a Sunday or a holiday—error would now and again arise from suppression of the fact that such clothing had been exposed to infection. The careful preservation of such articles in some receptacle against the time when their owner is to be discharged from hospital must be regarded, I think, as a likely explanation of such attacks, at least, as shortly precede the return home of an earlier case. Inquiry was also made as to the existence of any other extraneous source of infection, such as, for example, a case in a neighbouring house. My list comprises 118 cases collected as described. In this list there are, however, 19 which I shall afterwards deal with as "extra" cases, because several are not "hospital" return cases, although having points of interest bearing on the present inquiry, and some are duplicate cases occurring in the same house a day or so after a first sickening. These latter must of course be excluded in calculating the proportion which the re-lit centres of infection bear to the dismissals from hospital, so that the per cent. of

"return" cases to dismissals becomes rather a statement of the number of houses in which infection reappeared in association with those dismissals. In calculating this per cent. I have taken the figures for 1894 because of the greater precision which this limitation affords. During that year 2593 persons were dismissed "well" from the three hospitals above mentioned, and reinfection appeared subsequently in 70 of the houses to which these patients returned, or in 2.6 per 100 dismissals. Of these dismissals 1535 were from Parliamentary-road Hospital, 901 from Belvidere Hospital, and 157 from Knightswood Hospital; and infection reappeared in 37 of the houses receiving patients from Parliamentary-road Hospital, in 22 houses receiving patients from Belvidere Hospital, and in 11 houses receiving patients from Knightswood Hospital. Otherwise stated, infection reappeared in 2.41 per 100 dismissals from Parliamentary-road Hospital, in 2.44 per 100 dismissals from Belvidere Hospital, and in 7.0 per 100 dismissals from Knightswood Hospital. Belvidere and Parliamentary-road Hospitals may therefore be taken to have practically the same proportion of reinfections associated with their dismissals, and in view of the difference which obtains in these hospitals in the method of dealing with the patient immediately prior to dismissal this correspondence is striking. Wherein this difference lies will be best apprehended if I here introduce a description of the process which Dr. Johnston, physician-superintendent of Belvidere and Parliamentary-road Hospitals, has been good enough to write for me. The description covers also the method of dealing with the clothing worn by patients on admission and dismissal. Dr. Johnston says:—

"1. *Patient.*—(a) The minimum period of residence for scarlatinal convalescents is fixed at eight weeks. Only between Nov. 7th, 1892, and Jan. 4th, 1893, was it reduced, owing to unusual pressure, to six weeks. (b) The criteria for dismissal are that patients are in good general health. All the cutis must have separated and the surface of the body be quite intact. There must be absence of discharge from ears or mucous surfaces, and the urine must be clear. Cases have, sometimes to be dismissed with chronic ear discharge or albuminuria, but never are so dismissed under three months. (c) On dismissal patient is taken to a special series of rooms (discharging-rooms). He enters and strips in the first, has a bath with carbolic soap in the second, passes along to the third, where he dresses in clean, non-infected clothes, and thence he is shown outside the gates of the hospital.

"2. *Clothing.*—The clothing worn on admission by a patient is removed and sent to a special laundry within the hospital grounds, where it is thoroughly cleansed by washing and packed away in a bag. These bags are placed on racks in a large, airy store-room, specially built and set apart for the purpose, and carefully preserved from contamination. Immediately before patient's dismissal they are sent to the sanitary washhouse, where they are exposed to superheated steam in a 'Washington Lyon' apparatus. Clothing brought to the hospital to be worn on dismissal is detained either in the 'third' room of the discharging series or in the store-room.

"*Note.*—A nurse from the patient's ward accompanies him to the discharging-rooms and superintends the disinfecting process of bathing &c. The nurse puts on a clean cotton wrapper over her uniform for the occasion."

The foregoing description applies to Belvidere Hospital.

"At Parliamentary-road Hospital there are no discharging-rooms, and the ward bath-rooms (which are to some extent liable to harbour infection) have to be used. In all other respects the practice, however, is the same as at Belvidere."

With regard to the methods followed at Knightswood Hospital, Dr. Iain Clerk, the physician-superintendent, has also favoured me with the following description:—

"1. *Patient.*—(a) The average residence last year was fifty-two days. No case is dismissed under seven weeks, dating from the first day of illness. The criteria for dismissal are (b) completion of desquamation, special attention being directed to the feet, hands, and hairy (!) scalp. An examination of patient is made on the day before that on which he is to be dismissed. Patients with ear or nose discharges are not dismissed until recovered. (c) Patient is bathed in a bath connected with the ward before being dressed for dismissal, and is dressed in the nurses' room—both bath and nurses room being entered from the corridor leading to the ward.

"2. *Clothing.*—Whatever is worn on admission is fumigated with sulphur, washed, and kept in a store (at the offices) until the day of dismissal. Clothing sent in preparatory to

dismissal is simply stored. It is often brought on the morning of dismissal day.

† *Note.*—An occasional case where chronic ear discharge was present before the attack of scarlet fever may have been dismissed 'improved,' but not cured. The patients are dressed by the ward nurses while wearing their ordinary ward uniform."

In the following table the secondary sickness is stated as occurring on the second, third tenth, eleventh days after the return of an earlier case. Deducting the 19 cases formerly mentioned this interval is stated for the remaining 99.

TABLE I.—*Showing Interval between Date of Dismissal and Sickening of Secondary Cases.*

First week.		Second week.		Third week.		Fourth week.	
Days after.	Number sickening.	Days after.	Number sickening.	Days after.	Number sickening.	Days after.	Number sickening.
1	—	8	10	15	2†	—	—
2	6	9	2	16	1	—	—
3	13	10	9†	17	1	—	—
4	15*	11	3	18	2	—	—
5	10	12	1	19	1‡	—	—
6	10	13	4	20	1	—	—
7	7	14	—	21	—	23	1
—	61	—	29	—	8	—	1

* In one case a downstairs neighbour had a case of scarlet fever at home.

† One boy had played with a more recent dismissal from hospital (seven days) who lived at hand.

‡ (Fifteenth day.) In one of these cases—not associated with lesion—the secondary case was sent from home for eight days at time of return of earlier one. The clothing was kept in a box.

§ Earlier cases here on leaving hospital went to the country for thirteen days. All new clothes.

Sixty-one cases are here shown to have sickened within one week of the return of an earlier case from hospital, and 8 in the third week thereafter, but it will be observed in the note to the table that one attack beginning on the fifteenth and another on the nineteenth day after dismissal really occurred on the seventh and sixth days respectively after exposure, and if we transfer these to the first week we have 93 per cent. of the reinfections occurring within a fortnight after dismissal. It may be protested that to credit a dismissal from hospital with a sickening occurring in the third week thereafter is inconsistent with the knowledge which we have, derived from other sources, of the incubation period of scarlet fever, and that to include one sickening after an interval of twenty-eight days is indefensible. In the investigation, however, I practically took every case coming to my knowledge where infection reappeared in a household, and when it became evident that the recurrence of lesions subsequent to dismissal from hospital had at least a time association with cases sickening as late as the fifteenth and sixteenth days, it was difficult to know when absolutely to exclude others where the connexion was not so apparent. To such cases where lesions reappear I am disposed to think we should restrict the term "recurring infectivity," for there are others where no lesion is apparent, but where there is ample ground for the conjecture that the power of transmitting infection is retained after the lesions have ceased.

By far the most obvious connexion between the primary and secondary cases has reference to the presence of desquamation or other physical and easily recognisable lesion on the persons of those discharged from hospital. I do not mean cases where, for well-defined reasons, patients are deliberately dismissed from hospital during the period of desquamation or the currency of any of those lesions which are admittedly a sequel to the disease, but where the opposite policy prevails and where every precaution is taken that no patient shall be dismissed until the last patch of skin has repaired and the patient otherwise has returned to health. This, modified by the existence of a chronic lesion alone, was the policy which controlled the discharge from hospital of the cases under examination. It is interesting, therefore, to observe that in connexion with the reappearance of the disease in 19 households there was lesion of some kind present on the first patient, not, as we shall see, at the time

of dismissal, but at the time when the secondary case sickened. There is only one exception to this in the 19 cases here referred to. The form of lesion present may be classified as follows: in 8 of the patients there was desquamation, and a like number presented sores (excoriations, eczematous patches, &c.) on the lips, ears, or head; in 5 there was a discharge from the ear; 2 had a discharge from the nose; and 1 had sore-throat. It is of importance to examine these cases further with reference to the course followed by the disease during their residence in hospital, and I have accordingly gone over these records in the ward journals, and in the following table (Table 2) I have introduced such notes therefrom as tend to throw any light on the lesions which were present after their return home. In the table the cases are arranged according to the interval which elapsed between the dismissal of the primary and sickening of the secondary case. Thirteen were from Belvidere and 5 from Parliamentary-road Hospitals.

Table II. is largely self-explanatory, and the significance of the morbid conditions found present when the secondary cases arose depends, as I have said, on the fact that, with the exception noted in the table, these were not present at the medical examination prior to dismissal from hospital. It is easy to understand the recurrence of a discharge from the ear when it has once been invaded by suppurative inflammation; but the suggestion in this table distinctly is that it may also be associated with a recurrence of the specific infectivity which at first gave it origin. Again, evidence of desquamation on some part of the body was present in nearly half of the number in which lesion was discovered, and it is impossible to regard its occurrence at the time of the secondary sickening only in the light of a coincidence. Before disputing the connexion, indeed, we should first of all endeavour to realise the effect of the altered conditions which attend a patient on dismissal from hospital. In the Glasgow hospitals there is ample scope for the activity of children who are sufficiently advanced in convalescence to indulge in outdoor play. But otherwise they live under a strict discipline; their meals are regulated, absolute cleanliness is a necessity, and strict attention is paid to the performance of the physiological functions. It is idle to speculate whether, had the cases at present under consideration remained under this régime, the desquamation would have occurred; I am inclined to think it would not. This much, however, is tolerably certain: that on return to their homes the method of their lives is changed—undue strain is thrown on one or other of the assimilative or excretory functions, the physiological balance is for the time being destroyed, and an error in dietary, resulting in disordered digestion, may find expression in the skin relapsing into a habit which it had but lately given over. Nineteen of the 99 cases under discussion presented some such lesion as is here described—that is, 19 per cent., or nearly one-fifth of the whole number associated with secondary cases, may be regarded as examples of "recurring infectivity."

Apart from the correspondence which exists between the proportion which the total yearly number of reimplemented cases bears to the dismissals both from Belvidere and Parliamentary-road Hospitals, suggestive differences appear when the monthly incidence of these cases is considered. In Table III. are given, in monthly periods—(1) the average daily number under treatment; (2) the total dismissals; (3) the number of these associated with cases of reimplemented infection; and (4) the percentage which these last bear to the dismissals. The first feature in the table attracting attention is the constancy with which the dismissals from Parliamentary-road Hospital are associated with return cases, and the break in this continuity from May till August in connexion with those dismissed from Belvidere Hospital. To borrow a term, "return" cases from Parliamentary-road Hospital dismissals assume a certain "chronicity," while those from Belvidere Hospital are "intermittent." Along with this it will also be noticed that the average monthly numbers under treatment at Parliamentary-road Hospital are maintained with a fair amount of constancy, while the Belvidere Hospital numbers are largely diminished during the summer months, and one asks whether there is more than an accidental association between the two. Obviously, it is to be remembered that continued strain either on the accommodation or on the management of a ward will tend to produce impaired efficiency of the work, and that "return" cases associated with dismissals under these circumstances may possibly be the result of conditions which have been overlooked. This would lead us, however, to expect that the largest proportion of

TABLE II.—*Showing Cases where Lesion existed.*

Days intervening between return and sickening.	Day of illness on which first case was discharged.	Nature and Incidence of Lesion.				Sleeping accommodation.		Remarks.
		Desqua-mation.	Discharge. Ear.	Nose.	Other lesions on lips, head, or face.	Same bed.	Same room.	
4	59	—	—	—	Rough patch on face.	1	—	—
4	68	—	1	—	Excoriation behind ear	—	—	Discharge from ear and nephritis in hospital, but had ceased prior to dismissal.
4	64	—	—	—	Excoriation at nostrils	—	—	Illness normal in hospital.
4	62	—	—	1	Rough patch above right ear	—	—	Illness normal in hospital.
5	57	Hands	—	—	—	—	—	—
5	58	—	—	—	—	—	—	Complained of sore-throat on day after dismissal.
6	65	Elbow	—	—	—	—	1	—
7	55	Toes	—	—	—	—	—	—
8	57	1	—	—	—	1	—	—
8	63	—	—	—	Excoriation on lips	1	—	—
8	60	Hands	—	—	—	1	—	—
8	58	Tips of fingers	—	—	—	—	1	—
8	88	—	1	1	—	1	—	Hæmaturia cause of detention; nasal discharge ceased on July 8th; mastoid abscess on Aug. 13th; was dismissed on Sept. 5th.
9	109	—	1	—	Excoriation behind ear	1	—	No ear affection in hospital, but obstinate enlargement of cervical glands.
10	80	—	1	—	—	1	—	First child went for four days to friend's house. Affection of ear in hospital, but discharge had ceased prior to dismissal.
11	52 & 57	Feet	—	—	—	1	—	—
13	56	Body	—	—	—	—	—	First patient left hospital on Oct. 13th and went to friend's house in country; brother joined him there on the 20th, and sickened on the 26th.
15	60	—	—	—	Excoriation of nostrils.	—	—	Lesion present in hospital; mother only allowed to take her home on the express promise that she was not to associate with other children.
16	81	—	1	—	Excoriation on upper lip	1	—	New clothing only worn on return; detained owing to kidney affection; no discharge from ear while in hospital; had eruption on face ending in crusts, but this had been recovered from before dismissal.

TABLE III.—*Showing average daily number under treatment in each month; total monthly dismissals; number of houses in which infection reappeared and percentage of these to dismissals.*

	Belvidere Hospital.				Parliamentary-road Hospital.			
	Average daily number under treatment.	Dismissals.	Number of houses where infection reappeared.	Percentage of return cases to dismissals.	Average daily number under treatment.	Dismissals.	Number of houses where infection reappeared.	Percentage of return cases to dismissals.
1894.								
January	193	119	6	5.0	249	129	6	4.6
February	174	91	5	5.4	261	118	4	3.3
March	126	95	5	5.2	249	160	4	2.5
April	62	54	1	1.8	217	109	4	3.6
May	33	28	—	—	211	122	2	1.6
June	28	20	—	—	225	124	4	3.2
July	28	10	—	—	211	105	2	1.8
August	47	19	—	—	188	117	4	3.4
September	110	29	2	6.8	279	97	4	4.1
October	304	50	1	2.0	297	143	—	—
November	411	169	1	0.5	230	148	2	1.3
December	302	217	1	0.4	288	163	1	0.6
	—	901	22	2.44	—	1535	37	2.41

return cases, and especially those displaying "lesions," would attend dismissals when this strain is most acute, as at the beginning of an epidemic prevalence of the disease. It would, therefore, usually be in the fall of the year that this proportion should be increased, and yet a comparison of all the monthly figures between September and December shows that this is not the case. An excellent illustration, indeed, of this autumnal pressure is afforded by the condition of Parliamentary-road Hospital in the early part of October last year. On the 10th of that month in the twelve wards then in use, and which on a 1250 cubic feet allowance for each patient had only accommodation for 266 patients, there were 316—that is, there was at this date undoubted and excessive strain both on the management and on the bed space; and yet October is the only month in which no return case is recorded against this hospital, while in November these

reached only 1.3 per cent., and in December there was only 1 return case in 163 dismissals. In Belvidere Hospital also, as the table shows, the rapid increase in the numbers under treatment in the later months of the year is not accompanied by an increase in the proportion of return cases. Nor is there any evidence apparent of an increased tendency in "return" cases to associate themselves unduly with the season of large dismissals, and the evidence is altogether adverse to the view that the return cases result either from relaxed stringency in dismissal or from an overcrowded condition of the wards themselves when this is of a temporary character. It will strike one, however, on examining the table that the increase in the numbers under treatment in Parliamentary-road Hospital during the months September to December is not comparable with what took place in Belvidere Hospital during the same period. I have

already stated that during 1894 Parliamentary-road Hospital was used exclusively for the treatment of scarlet fever, and this contrast but serves to show that the available accommodation therein was largely taken advantage of throughout the year, and that when the autumnal rise took place accommodation for it had chiefly to be found elsewhere. In Parliamentary-road Hospital, on a computation of 2000 cubic feet per bed, there is accommodation for 198 beds, while if only 1500 cubic feet per bed are allowed 267 can be accommodated. It is customary to regard children under ten years of age as requiring only one-half the cubic space of adults, but if we allow 1250 cubic feet per bed there is accommodation for 322. In the first nine months of the year only twelve wards were in use in Parliamentary-road Hospital, and on a 1500 cubic feet allowance per bed the accommodation in these is 221. The average daily number under treatment, it will be seen, was frequently much in excess of this and rarely fell much below it. There is, however, a manifest risk in pressing this comparison on averages alone, because mere unequal distribution of patients among the wards might, it can be readily understood, create overcrowding in a ward here and there, while the total number in hospital might be much under the accommodation, and the comparatively small number of return cases at our disposal precludes any effort to follow backwards each dismissal into relationship with the numbers who were treated simultaneously with him in individual wards. In their present form, however, these numbers, I believe, suggest that when wards are continuously worked very nearly up to their maximum accommodation, more especially when this accommodation is based on a low estimate of the cubic space per head required for children, there is a tendency in the dismissals to become associated with return cases, and that the cause thereof would seem to lie in the air of the ward becoming surcharged with the products of scarlatinal elimination. Other results of this we are already, indeed, familiar with. Dr. Sweeting some years ago showed that the aggregation of acute cases in wards led to increased frequency of albuminuria; and there is, moreover, the well-recognised risk that small-pox will attack the population in the immediate neighbourhood of a hospital when the wards are worked at their maximum accommodation and the air has acquired a property which is well expressed by the phrase "explosive intensity." In the present circumstances it would appear that, apart from the possible return of readily recognisable conditions such as desquamation &c. after dismissal, there is a constitutional effect produced which renders the discharged convalescent a danger to susceptible persons who may be brought into close contact with him. That this results from saturation of the system is, I think, clear; but whether it is due simply to delayed elimination, or to the constant breathing of a saturated atmosphere by the convalescent, is matter for conjecture. In the latter case one would expect that nurses would occasionally be the means of carrying infection outside a hospital, and yet evidence on this point, save where clothing has been the medium of conveyance, is wanting. From the analogy of diphtheria it might be expected that an unrecognised retention of infection may take place in the nares or fauces, or even further down the respiratory tract, and proceeding on this assumption, some effort was made to have the naso-pharyngeal cavities of convalescents douched with a boracic acid lotion on dismissal. These observations were, however, too incomplete for any deduction, and, moreover, the occasional recurrence of desquamation apparently points to a much more general retention in the system than any such localisation would explain.

Sleeping accommodation.—It is from this aspect, therefore, that a patient dismissed from a scarlet fever ward may carry with him elements of risk to the susceptible, that an investigation of all such acts as bring them into contact becomes important. I have previously stated that part of the investigation had in view the discovery of the sleeping accommodation both of the dismissed cases and of the cases sickening subsequent to their return from hospital, as well as of any other incident in domestic intercourse which might bring them into contact. The record of the sleeping accommodation shows that of the 61 sickening in the first week 17 occupied the same bed, 21 slept in the same room, and 23 slept in different rooms. Of those sickening in the second week (29 in number) 10 slept in the same bed, 7 in the same room, and 12 in another; while in the third week 3 occupied the same bed, 2 the same room,

and 3 slept in separate rooms. In almost every instance, also, it is noted that the patients either played or had their meals together, and there are few in which contact of one sort or other could not be definitely ascertained.

Clothing.—For reasons already stated this analysis is unsatisfactory, and there is the additional difficulty which arises from the almost hopeless confusion of new with old clothing, as most children leave hospital in clothing which is partly new and partly old. When a patient goes to hospital fully clothed, as is frequently the case, his clothing after disinfection may be sufficient for him when leaving. On the other hand, new clothing or, as most often happens, some new and some old articles of clothing are sent by the friends in preparation for the dismissal. Of the 99 patients 68 left hospital in clothing wholly or partly new—that is, 31 had no new clothing whatever in which to return home; 51 returned wholly or partly clothed with the articles worn by them on admission and retained in hospital; while 48 wore articles which had been kept at home after disinfection by the sanitary department. To these 48 cases most interest attaches, and I find that in 47 this disinfection was carried out by removal of all or part of the clothing to the sanitary wash-house, while in 11 cases articles were also fumigated at home—that is, in only one house had there been nothing disinfected at the sanitary washhouse. As to the manner in which those articles kept at home had been so kept, and chiefly having in view the place of their retention, as in boxes or drawers, or hanging on nails behind doors or otherwise, I find that in 17 cases the clothing was hanging so exposed, while in 29 it was under cover. Apart from the greater proportion of cases associated with clothing kept under cover, there is nothing in the analysis of the clothing otherwise which helps to explain the occurrence of the secondary cases.

EXTRA CASES.

Several of the additional cases on my list fall into the two following groups, which are of some interest.

Group 1.—This group illustrates, I believe, reinfection resulting from overlooked or improperly disinfected clothing. In one family 3 children sickened on the following dates: March 20th and 23rd, and April 2nd. On March 23rd the first two that sickened went to hospital, and the third case, a boy, went to stay with friends, returning home on March 29th. He sickened four days thereafter. While with his friends he wore a new suit of clothing, but on returning to his own home on the 29th he had on clothing which he had been wearing while playing with the others while they were sickening and which had been fumigated at home, the underclothing being washed. In another instance a boy aged two years sickened on the day preceding the return of his brother from hospital. Some old clothes had been looked out in anticipation of the first boy's return home. In yet another case a boy aged two years sickened on the day of his brother's return. The clothing here had been kept at home, some in a drawer, other articles hanging loosely. The last instance is that of a boy who sickened a few hours before the return of his brother.

Group 2.—This group shows that the risk to children residing in a house in which scarlet fever is being treated is largely intensified just at the time when disinfection is being carried out. This is probably sometimes owing to the mechanical displacement of dust while the process of cleaning is going on. In one family the first child to sicken was nursed at home, and the house was disinfected on April 26th. On April 29th one child sickened, followed by two others on May 2nd. These children had been at home during the whole time of the illness of the first case. In another instance the first case was treated at home. After recovery the house and clothing were disinfected, on Jan. 29th. The patient and another boy slept together the same night, and this boy sickened on Feb. 3rd. In a family in which an earlier case was treated at home the house was disinfected on March 20th. One boy, who had been all the time in the house, and another who returned on the 24th from a friend's house sickened on the 26th.

CONCLUSIONS.

1. *The doubtful value of soap and water.*—We have already seen that in Belvidere Hospital the bath on dismissal is taken in a completely detached building and that the toilette is completed in a room on the further side of the bath from the undressing one. In Parliamentary-road Hospital this is done in the ward bathroom. Notwithstanding this, the percentage of return cases is fractionally

greater in connexion with dismissals from Belvidere Hospital than with those from Parliamentary-road Hospital. Theoretically the Belvidere Hospital results should be much better than those in the other hospital, but in the period under observation it has not been so, and, although wider observation might correct the impression, the assumed advantage of the separate system of bathing is not at all apparent in the present investigation; indeed, it raises a doubt whether the *nimbus* of infection which attends a convalescent scarlet fever patient, even beyond the gates of the hospital, is capable of removal by soap and water at all.

2. *Reappearance of desquamation and other lesions.*—In a few cases certain lesions—chiefly desquamation and discharges from the ear and nose—will recur. In the present investigation evidence thereof was present in 19 per cent. of the dismissals associated with return cases. This recurrence would appear to be dependent on the altered conditions which surround patients on their dismissal from hospital.

3. *Influence of overcrowded wards.*—In the majority of dismissals associated with return cases there is no visible lesion, and the endeavour to impugn overlooked or insufficiently disinfected clothing is rarely satisfactory. But there is a tendency in return cases to associate themselves with dismissals from wards where the beds are kept well occupied, and as a very large proportion of scarlet fever patients are children there is some reason to question the accuracy of our present estimate of the smaller cubic space required for them. This could only be finally established by concerted observation of individual wards extending over a long period. From a collective measurement of the ward space the average monthly numbers under treatment in Parliamentary-road Hospital for nine months had an allowance per head ranging between 1250 and 1500 cubic feet, and it is doubtful if at any time the numbers under treatment were within the estimated accommodation at 2000 cubic feet per head. Continued occupancy on a restricted estimate of the requirements, rather than acute but temporary overcrowding, would appear to tend to produce the condition from which many return cases arise.

4. *Interval after dismissal within which the return cases occur.*—Ninety-three per cent. of these are shown to have occurred within fourteen days, and in every case there was community of life either in sleeping or while at meals or play. As a practical instruction to parents the lesson is plain. Every effort should be made to prevent commingling of the recently recovered with healthy children. The restriction placed on their sleeping together should be absolute. Where, moreover, children are treated at home, and the isolation has been successful, special care should be taken of other children during the period of disinfection. All this would seem to point broadly to the necessity for convalescent homes being established as a resting place between the hospital and the patient's home, so that, if the expression be permitted, the system might be washed by the constant breathing of untainted air. But here, again, there would finally arise a scarlet fever laden atmosphere, and if my impression of the effect of this is correct, we shall avoid the consequences rather by regarding the 2000 cubic feet per patient, or its equivalent in air-supply, as an irreducible minimum irrespective of the age of the patient. I have purposely omitted to compare the higher percentage of return cases associated with dismissals from Knightswood Hospital because the numbers are small, but it will not have escaped notice that patients' clothing is not here exposed to steam disinfection, as in the other hospitals.

Sanitary Chambers, Glasgow.

CASES OF LIVER AND GALL-DUCT SURGERY.

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(Continued from p. 1567.)

CASE 5. *Operation for hydatids in a child five and a half years old.*—This case was that of a child five and a half years of age, whose father's father had died from cancer and whose mother's sister had died from an internal tumour after middle life. The child was one of six—two older and three younger, all being very healthy and strong. A lump in the upper part of the patient's abdomen had been noticed for two

years. It was gradually increasing in size and seemed to be the cause of attacks of pain by which the child was occasionally seized. She was under the care of Mr. Soffe of Harling, in Norfolk, and Dr. Benjafield of Lower Edmonton had seen her with him. As the diagnosis was obscure, Dr. Benjafield brought the patient to consult Mr. Knowsley Thornton, who expressed the opinion that the swelling was a hydatid tumour, and it was arranged that I should operate. When I saw the child there was a tense rounded prominence on the front of the liver, measuring about two inches in diameter, and its central part being behind the upper portion of the right rectus muscle. It exhibited a distinct hydatid thrill on percussion. The outline of the liver dulness was not altered, but it was rather lower than is usual even in a child. The patient was the daughter of a farmer who kept and bred dogs, and this child was particularly fond of them, and was especially pleased when playing with the puppies, which are often infested with tapeworms. The child was brought to lodgings near my house, and on April 21st, 1892, assisted by Dr. Benjafield, I cut down upon the swelling, opened a hydatid about the size of an orange, and removed the lining capsule and the daughter cysts. I found that there was a slightly smaller cyst above and close to the first. This was opened and cleaned out through the cavity of the first. On examining the parts around I found a large number of small growths scattered apparently irregularly over the peritoneum. They were about the size of hazel nuts, and I supposed them to be hydatid cysts. Three of them were very slightly attached to the omentum and were removed. I did not cut into these growths for some months, and when I did I found that they were lymphatic glands. They were very large glands, even for a child, and I was then under the impression that lymphatic glands were not to be found in the omentum. I was, of course, prepared to find hydatid cysts in the sub-peritoneal connective tissue by the conditions I had observed in the case last related. The opening in the liver was secured to the abdominal incision and the sacs were drained by rubber tubing. During convalescence there was little trouble except from the fractiousness of a somewhat spoilt child. The temperature, taken in the groin, and the pulse rose respectively to 102.6° F. and 120 on the second day after the operation. By the end of a week they were down to 97.6° and 96. On the ninth day the temperature rose to 103.2° and the pulse to 120 without any cause that I could discover. The drainage-tubes had been removed, washed, and reinserted some days before, and the bowels had also been moved freely before this time. By the tenth morning the temperature was again down to 97.6°, the pulse to 96, and a temperature of 99° was the highest recorded after this until the child had gone home. The drainage-tubes were gradually shortened, and the patient left London five weeks after the operation, on May 25th. The tube was then about an inch long, and it was finally removed a week later, but the wound did not completely heal till the beginning of August. By this time the child had grown much stronger and stouter, but a short time after the wound healed she complained of much pain in the abdomen and of feeling sick. There was some swelling round the scar, and the abdomen was very hard, but there was little if any tympanites. The patient vomited at times, was disinclined for food and lost flesh, and her temperature rose as high as 102°. Dr. Benjafield saw her with Mr. Soffe, and opium and belladonna were administered, with hot applications locally. On Sept. 13th Dr. Benjafield reported a steady fall of temperature, relief of pain, and improvement of appetite. The attack passed off without further trouble, the patient soon grew fat and strong again, and she has had no trouble since. Later, two years and ten months after the operation, the child's mother wrote that she is "perfectly well and strong, and never has an ache or a pain." The cause of the attack of fever and pain four months after the operation in this case is obscure. I am inclined to think that as the child grew stronger the adhesions of the liver to the abdominal wall became gradually weaker by the constant movements of the parts on each other, and that the liver finally broke loose by a rapid rupture of the remaining adhesions. If this explanation is correct the child's liver is probably as free now as if there had been no operation.

CASE 6. *Operation for 789 stones in the gall-bladder.*—The first patient on whom I operated for gall-stones had consulted Dr. Stephen Mackenzie and Mr. Knowsley Thornton,

both of whom had diagnosed the presence of calculi and had recommended operative treatment. The patient was admitted to the Samaritan Free Hospital under my care on June 20th, 1892. She was a healthy, strong woman fifty-eight years of age and had suffered from frequently recurring attacks of pain in the region of the gall-bladder for three years. These attacks began with a very severe one, lasting a week, but not accompanied by sickness or jaundice. A year later, in July, 1890, there was another severe attack, with sickness, jaundice, and clay-coloured stools. The condition of the urine was not noted. This attack ceased suddenly, and after it two small calculi were passed by stool. The patient was free from pain for some months, and then had frequent slight attacks with varying intervals. In February, 1892, she had intense pain for a day and a night, ending, as most of the attacks had done, suddenly. After this the patient never felt well, having always a sense of discomfort and often a dull aching in the hepatic region. Jaundice had only been present on one occasion. There was nothing that seemed to bear on the patient's condition in her family history. She came of a healthy stock, and except for the conditions described and for constipation her own health was excellent. On examination by inspection and by percussion there was nothing abnormal in the abdomen, and by palpation I could not detect any enlargement of the gall-bladder, but in its situation there was some tenderness which varied from time to time, being sometimes diffused over a considerable area, and sometimes hardly present at all. There was always one tender spot on deep palpation, and I judged that this was about the situation of the common bile-duct or cystic duct. The patient wished to go to visit a son in a part of Canada where she would be out of the way of medical assistance, and this was taken into consideration in advising her to submit to operation. On July 12th, 1892, I cut down upon the gall-bladder and found it enlarged but flaccid. On grasping it between my fingers I could bring its opposite sides together, and here and there I could feel and catch hold of a small stone. The impression I got was that there were very few calculi, but when I had drawn off about an ounce of bile by means of an aspirator I found that there was a very large number of stones in the bladder. I made an incision in the fundus and cleared out the contents of the gall-bladder by means of forceps, a lithotomy scoop, and sponges. The opening in the gall-bladder was fixed by silk sutures to the abdominal wound so as to make a fistula. The rest of the incision was secured in the usual way, and the gall-bladder was drained by means of a rubber tube. Of course, great care was taken to prevent fouling of the peritoneum. There were 789 stones collected and counted. The largest was broken. It measured about three-quarters of an inch in its longest diameter, and was of irregularly rounded shape. The greater part of the stones were smaller than a split pea, many were smaller than hemp seeds, and the total bulk in fluid measure when they were dried and well shaken down was a little over an ounce. Besides those counted there were innumerable very small calculi which came freely through the aspirating needle and were seen as mere specks in the bile. Convalescence was very smooth. The temperature rose to 101° F. before midnight of the day of operation, and it was never above 100° in the vagina after the second day. The highest pulse was 80. There was at first a copious discharge of bile, but after a fortnight it diminished greatly. The tube was removed on the twenty-fifth day. There was very little discharge after this, and the patient went home a month after the operation; but it was about three weeks longer before the wound finally healed. The patient gradually regained her strength. I last saw her at the end of August, 1893, thirteen months after the operation. She was then about to start for Canada, having been detained by the illness and death of a son, which had entailed on her much work and worry, but there had been no recurrence of gall-stone symptoms.

CASE 7. Operation for gall-stones.—The next case was that of one of Mr. Alban Doran's patients, but he has kindly permitted me to record it here, as I had charge of the case and performed an operation on the patient during his temporary absence. "A woman aged forty-two years, a widow, came under my care at the Samaritan Free Hospital in October, 1893. She was a laundress, tall and once strong. On Aug. 4th, 1893, she lifted an unusually heavy basket of linen. Three days later she was seized with abdominal pains, vomiting, and sweating. There was no

jaundice. After resting three weeks in bed she went to work. Early in September another attack of pain came on, without sickness. Dr. Nias and Mr. Arathoon attended her at the Marylebone General Dispensary. She recovered from the pain, and I saw her on Oct. 10th. There was a swelling in the region of the gall-bladder. On Oct. 14th a severe attack of pain occurred. On the 19th the patient was admitted. An attack occurred on Oct. 22nd. The swelling grew larger, and the skin over it became reddened. In a few days the pain went away, but the redness increased and the integuments were cedematous. I suspected obstruction of the gall-ducts. Mr. Knowsley Thornton, who kindly examined the patient, was of a similar opinion, though he thought that possibly the swelling might be an inflamed hydatid cyst. On Nov. 7th I, assisted by Mr. Malcolm, made an exploratory incision along the outer border of the right rectus over the middle of the swelling. I found under the muscular layers an irregular cavity containing pus, clots, and shreds of broken-down tissue. There was hardness behind the cavity. A pocket trocar and cannula was thrust into the hard surface, but nothing oozed out nor did the trocar touch anything that felt like a calculus. I then believed that the cavity might represent an abscess in the abdominal walls, developed early in August after a bruise from a heavy clothes-basket. I washed out the cavity with iodine water and drained it. I did so, believing that if the disease was simple abscess it would thus be cured; if it were more than abscess further operation could be more safely undertaken when the cavity was rendered aseptic. For a few days the patient seemed to be better. I then, on account of severe indisposition, left her in Mr. Malcolm's charge." At this time the patient was not jaundiced. The abscess gradually contracted until only a sinus remained, but this showed no tendency to heal, and a thin mucous fluid oozed up from the bottom of the wound. On examining the parts towards the end of November I discovered that I could pass a probe through the wound into the gall-bladder, which was evidently full of stones. It was arranged that I should remove them, and on Dec. 2nd I enlarged the opening upwards and extracted a number of stones, but when I had removed all I could find, no bile escaped. It was evident that if I did nothing more the secretion from the gall-bladder would prevent the closing of the fistula, and but little, if any, good would result from the operation. I therefore made a free incision upwards and downwards about three and a half inches long, opening the peritoneum, separating the adhesions of the bladder to the abdominal wall, and cutting out the track of the fistula. It was still impossible to handle the gall-bladder because the omentum and transverse colon were adherent to it and to the lower surface of the liver. These adhesions were also separated until I could manipulate the gall-bladder freely. By means of the fingers outside the bladder, and a finger or instrument in it, I found and extracted some more stones, making 134 in all. The smallest of these was about a quarter of an inch in its longest diameter; most of them were rather larger than this, and three or four measured half an inch across; one large one was broken. Still no bile escaped, and although I explored thoroughly all the under surface of the liver and the parts along the course of the ducts I could not find any other stones. I was, therefore, reluctantly compelled to close the wound, the gall-bladder being fixed and drained as in the previous case. In this instance I also inserted a glass drainage-tube into the right loin pouch of the peritoneal cavity to remove quickly any discharge from the divided adhesions. Very little serum escaped through this tube, and it was removed forty hours after the operation. The highest temperature after operation was 101° F. on the first day, the pulse did not rise above 100, and the fever quickly subsided. There was very little discharge from the gall-bladder at first, but after the third day it increased and was distinctly tinged with bile. On the sixth day some fragments of stone escaped, and on the ninth day the dressings were soaked with bile. On the tenth day another piece of stone, nearly as large as a pea, was found in one of the drainage-tubes, but now no bile escaped; and after this there was never more than a tinge of bile occasionally in the discharge, which was again scanty. Mr. Doran resumed the charge of the case on Dec. 19th, and "the patient was discharged in the middle of January, 1894, with a fistula. She called on me

¹ Mr. Doran has kindly written the portion in inverted commas for me.

occasionally. She was readmitted in May. As the fistula had not closed and as a hard body could be felt by the probe and the attacks of pain continued I operated on May 25th, assisted by Mr. Malcolm. First I passed a long probe up the fistula. The patient was well under chloroform, yet I could not feel anything like a calculus, though two days before I had made the probe touch a body which felt precisely like a gall-stone. I opened the upper part of the old cicatrix and cut through the fistula in the parietes. After cautious probing I found that the gall-bladder could be entered. By means of a probe-pointed hernia knife the fistulous opening was enlarged. The finger could be then passed into the fundus of the gall-bladder, which was found to be just below the level of the fistula. Therefore I cut upwards to the extent of an inch and a half. Then I passed in my right forefinger and felt a small stone. By manipulation it was extracted. Then I passed a child's lithotomy sound and found the cystic duct dilated with calculi. I pressed my fingers on the parietes immediately over the upper end of the wound and pushed the stones forward into the gall-bladder. They were then extracted with long-handled forceps. They were two in number, one an eighth of an inch in its longest diameter, the other over half an inch and much faceted. I then passed the lithotomy sound four inches up the bladder and duct, reckoning from the wound on the surface of the bladder. After deliberate exploration no calculi could be felt. A stout red rubber tube was placed in the bladder, the thick edges of the wound were united with silkworm gut sutures, but the walls of the gall-bladder were not included in the sutures as they adhered firmly to the parietes. The wound was dressed with alembroth gauze; towels covered externally by a mackintosh were placed over the part and round the right flank. The operation was concluded at 10.35 A.M. Free oozing took place; at 7.20 P.M. it was simply sanious, but at 9 P.M. bright-green bile escaped. At 9 A.M. on May 27th much yellow bile came away. On the morning of the 28th the temperature reached its highest, 100.2° in the axilla; a very free discharge of bile occurred; the patient then declared that she was at last absolutely free from pain. After the 29th the temperature fell to normal. On June 16th the patient left the hospital; the fistula had closed. On July 17th I saw her; she was in good health; there was neither pallor nor jaundice, nor swelling in the region of the gall-bladder. On Oct. 19th she had a severe attack of pain, followed by jaundice next day. On the 24th I saw her; the jaundice was passing off. The fistula remained closed. Early in December I saw her again; she had felt local pain on the day before. On Dec. 23rd the patient was seized with severe pain in the region of the gall-bladder; next day her friends noticed that she was deeply jaundiced. On Jan. 1st, 1895, she felt better and came to see me at the hospital. The conjunctivæ were yellow. No enlargement of the gall-bladder could be detected. A few days later she was attacked with bronchitis and was laid up nearly a month. There was much local pain all the time. After getting up and working for a few days she felt a sharp attack of pain; no jaundice was observed, and the suffering soon passed off. On Feb. 21st I saw her again. She had grown thinner, but her complexion and appearance were healthier than at any other time since she had been under treatment. On June 15, 1895, she visited the hospital in excellent health, free from jaundice and pain. The fistula remained closed."²

At the last operation Mr. Doran suggested that the large stone he removed might have come down the hepatic duct after my operation, and it seems to me almost impossible that a stone of irregularly rounded shape, and more than half an inch in diameter, could have been passed over in the thorough examination which I made if it were anywhere outside the liver. Moreover, it would appear from the history that other stones had been left after Mr. Doran's last operation. There is also evidence to support the view that the bile-ducts may be dilated within the liver substance and may form a receptacle for calculi. Mr. Knowsley Thornton has put on record a case in which he removed over 400 stones from a cavity in the liver close to its anterior surface—a cavity which from its situation must have been a dilatation of a comparatively small duct. On the other hand, in the case under consideration it is obvious that from the commencement of the patient's illness until the bile flowed freely from the wound

after Mr. Doran's last operation the chief trouble was due to obstruction of the cystic duct, and that during the whole of that time there was only occasional obstruction of the hepatic or common bile-ducts. There seems to me to be a considerable weight of evidence in favour of the view that when the patient lifted the heavy basket in August, 1893 the big calculus which Mr. Doran removed at the third operation was forced into, and became jammed with others in the cystic duct and that I failed to discover them. The difficulty in this case is not unique, for from what I know of other men's work there can be no doubt that stones of considerable size may quickly pass down the hepatic duct or that they may be hidden away in corners of the ducts in a most extraordinary manner.

CASE 8. *Operation for four gall-stones found respectively in the gall-bladder and in the cystic, hepatic, and common ducts.*—The last of these cases was that of a woman who was under the care of Dr. Tresilian of Epsfeld, and she sought advice mainly on account of yellowness of the skin. She was twenty-eight years of age, had been married nearly five years, and had no children. Early in 1892 she had had an attack of pain in the region of the gall-bladder, lasting a few hours, accompanied by slight jaundice and followed by discomfort for a week. She got quite well, and remained so till Dec. 11th, 1893, when she had another and more severe attack of pain lasting three days. This was accompanied by jaundice, the absence of bile from the stools, and its presence in the urine. These symptoms did not pass off and the patient began to lose flesh. In January, 1894, there was another attack of pain followed by a constant aching in the hepatic region. The patient was admitted to the Samaritan Free Hospital on Feb. 12th. Constipation was then extreme, but a stool passed the day before the operation, although very pale, was not absolutely devoid of bile. The gall-bladder was felt distended and tender, and the liver dulness was slightly enlarged. The patient was not a strong woman; she said she had had rheumatic fever four times, and there was a slight, harsh systolic aortic murmur. Otherwise she seemed fairly healthy, but was of nervous type. Her mother was supposed to have shown symptoms of gall-stones. On Feb. 17th I opened the abdomen over the gall-bladder. There was no adhesion to the abdominal wall, but the omentum was extensively adherent around the gall-bladder. After separating the adhesions I opened the bladder. It contained no bile, but about an ounce of white secretion and two stones. The first of these was barrel-shaped, with a facet at each end, although there was no sign of a stone having been placed in front of it. Probably before the ducts became occluded, when the gall-bladder was liable to distend and collapse, this stone occasionally changed its position, sometimes one end and sometimes the other being opposed to the deeper calculus. The second calculus was of similar shape, but its inner end had two facets on it and was therefore somewhat wedge-shaped. These stones were removed with the greatest ease. After I had sponged out the fluid in the gall-bladder I passed a finger into it, and by manipulation with the fingers of the other hand in the peritoneal cavity I felt two openings very far back in the cavity of the bladder and could touch a stone in each, whilst outside the bladder I could define these. I judged that my finger was in the dilated cystic duct, the curves of which had been to a great extent straightened, and that I felt one stone in the hepatic duct and one in the common bile-duct, both these stones being of elongated shape. I attempted to remove the lower one, but it was necessary first to dilate the opening. In endeavouring to pass a forceps into the duct I suddenly found that I was able to push its closed blades a considerable distance onwards, and after this I could not find the stone. A careful examination failed to show any sign of rupture of the duct, and therefore I presume that the stone was pushed into the bowel. It was never found in the stools although carefully watched for, but possibly it was broken up by the forceps into small fragments. I next endeavoured to get out the upper stone, but although I could feel the lower end of it distinctly I failed by any means that I tried to extract it until I enlarged the opening upwards with a knife, in doing which I pierced the stone, and it at once broke into many pieces. Almost immediately after the stone broke bile flowed into the bladder, and this facilitated the removal of the fragments. When these had been extracted or pushed out by the fingers in the peritoneal cavity the fundus of the gall-bladder was sewn to the edge of the external wound, and a drainage-tube was inserted as in the two other cases. In

² See note 1.

this case also I placed a glass drainage-tube in the loin pouch. Convalescence was uneventful. The highest pulse was 96. The temperature in the vagina rose to 101.4° in the evening of the second day after the operation, but came well down, as low as 99° F., on the fourth day. On the fifth day the patient's condition was satisfactory in every respect. A saline purge was administered in repeated doses and was followed by sickness, distension, abdominal pain, and a rise of temperature to 101.2°. All attempts to move the bowels by purgatives were stopped, and although the patient vomited a great deal of green fluid the sickness gradually ceased, the temperature fell, and the pain passed off. On the seventh day some very hard masses of faeces were passed after an enema had been administered, and the bowels gave no further trouble. The glass tube was removed forty-eight hours after the operation. There was little discharge of bile from the wound at any time, the urine quickly ceased to contain bile, the stools became normal, and the jaundice very slowly disappeared. The patient went home three weeks after the operation, but it was six weeks before the wound healed, and it reopened four times, discharging a little matter and quickly healing again each time. The last occasion was in July. On Feb. 22nd, 1895, more than a year after the operation, the woman was quite free from irritation; the cicatrix was merely a line with a slight pucker at the point where the drainage-tube had been. The patient had a very sallow complexion, and she said that this was sometimes more obvious than at others. She had had no pain in the region of her liver since the operation, and had been able to do her house-work without trouble. She said that she sometimes felt depressed and lazy, when a purgative would put her all right again. I think there is no doubt that she had been neglecting to attend to the condition of her bowels.

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THE PHYSICS OF CARDIAC SOUNDS AND MURMURS.

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(Concluded from p. 1569.)

It has been seen that the recoil of the aortic wall cannot throw the semilunar valves into sonorous vibrations, because a membrane is not thrown into sonorous vibrations when it is distended by a mass of liquid. If, however, the semilunar valves are incompetent then the recoil of the aortic wall will give rise to the production of a stream of liquid which will regurgitate into the ventricle. Here again there are the two necessary elements for the production of a sound or murmur—viz., a stream of liquid, and the aortic surface of the membranous semilunar valves against which this stream will impinge as it rushes past the aortic orifice, and, inasmuch as this stream will be a relatively slow one, a murmur and not a sound will result. The murmur will also be best heard near its seat of production.

If the semilunar valves are completely destroyed a ventricular diastolic murmur will still be heard. How is this murmur produced? Let the aorta of an excised heart be firmly ligatured; let the greater part of the left auricle be excised, as also the mitral valves; let water be now poured into the left ventricle from the mitral orifice. There are now exposed to view the left ventricle filled with water and the mitral orifice. Let the nozzle of a gum elastic syringe filled with water be introduced into the ventricle through the mitral orifice. If now the end piece of a binaural stethoscope be applied to any part of the external surface of the ventricle and the syringe be compressed, the direction of the nozzle being such that the stream of liquid will impinge against the inner surface of the ventricle in the vicinity of the stethoscope, then a well-marked blowing murmur is heard. It can thus be demonstrated that a muscular membrane enclosing a liquid can be thrown into sonorous vibrations, which will be heard as a blowing murmur when a stream of liquid is made to impinge against its internal surface. This is the explanation of the diastolic murmur heard in aortic incompetence even after complete destruction of the semilunar valves; the regurgitating stream of liquid impinges against the internal surface of the ventricular wall and throws

it into sonorous vibrations; the murmur is here best heard below the position of the semilunar valves, for it is there that its seat of origin lies.

I will now examine the mode of production of the first sound. The muscular origin of this sound may be easily dismissed, not only because, as has been theoretically demonstrated, a cardiac contraction cannot give rise to a sound, owing to its absence of tetanic character, but if a stethoscope be applied to the biceps of a man and this muscle be made to contract powerfully no sound is heard approaching to the first cardiac sound, although here the acoustic conditions would be much more favourable for the audition of a sound if a muscular contraction could give rise to it.¹ If the aorta of an excised heart be firmly ligatured and the left auricle be slit up or excised, so as to expose to view the auricular surface of the mitral orifice, and if now the liquid contents of a large gum elastic syringe be forcibly driven into the ventricle from the auricular surface of the mitral orifice the following takes place: the ventricle becomes distended with fluid, and in its distended condition the mitral valves close in and completely shut the mitral orifice. Exactly the same result is obtained if, instead of injecting liquid, air be forcibly injected into the ventricle. As in the case of the semilunar valves, so also here it is the anatomical relations existing between the mitral valves and the internal surface of the ventricle that force these valves to completely close the mitral orifice in diastole of the ventricle, when the distension of this cavity has been produced by the forcible injection of liquid or air. The valvular flaps are so attached between the fibrous ring of the orifice and the columnæ carneæ that, when the ventricle distends, a space is left between each flap and the ventricle wall. When liquid is made to distend the ventricular cavity it presses equally in all directions. Placed between the ventricular wall and the valvular flaps, it will tend to separate them, and, in doing so, will push the ventricular wall outwards and the mitral valves inwards and backwards. But the fluid which is exercising this liquid pressure is being introduced by the mitral orifice. Therefore a moment will arrive when the pressure within the ventricle will equal that which is being exercised at the mitral orifice, and when that moment arrives the valves which were closing will have closed completely. These valves have closed, however, not owing to any reaction on the part of the ventricular muscle; they have closed solely owing to the liquid pressure which was being exercised behind the flaps, and this liquid pressure was being directly introduced through the mitral orifice, the perfect closure of the valves being coincident with, and the result of, the last drop that entered the ventricle. By substituting the gum elastic syringe for the left auricle it is seen how the mitral valves are closed by the auricular contraction; and this closure, it is important to bear in mind, can only take place at the latter part of the contraction, for the first and greater part of the auricular contraction is occupied with the distension of the ventricle, which distension must of necessity first take place in order that the anatomical relations of the valves may place these under favourable conditions for their rapid and complete closure. Now, applying the principles of production of sounds and murmurs by means of fluid streams impinging against membrane, the nature of sounds and murmurs produced at the mitral orifice may be studied. During the auricular contraction a stream of liquid is rushing past the mitral orifice into the ventricle, but towards the end of the contraction the mitral valves are suddenly thrown in against the orifice, and the stream impinges against them in this act, and as this stream is passing rapidly the valves are thrown into sonorous vibrations, which produce a sound. The first sound is thus the direct result of the auricular contraction. Its intensity will depend upon the relative strength of the contraction; its pitch will depend upon the physical condition of the valves, being lower the thicker the membranes are.

A difficulty will at once be seen to arise with this interpretation of the first sound. We have been taught to consider the cardiac impulse as due to ventricular contraction and the first sound as synchronous with the impulse. Now I do not wish to digress from the main subject of this paper by discussing the cause of the cardiac impulse; suffice it to

¹ Over ten years ago, while occupying the post of house surgeon at the Royal Southern Hospital of Liverpool, I accidentally found out this experiment while washing out a heart under a water-tap after a post-mortem examination. I then showed this experiment to some of the physicians and surgeons present at the hospital. Subsequently I learnt in Dr. Walpole's treatise on Disease of the Heart that this experiment had been previously performed by Baumgarten. It is strange that text-books on physiology make no mention of the experiment.

say that the question is still an open one. For my own part, I believe the impulse to be due to auricular contraction, which, distending the ventricle, throws it against the chest wall; and in proof of this I have sometimes, by placing one finger over the apex beat and another over the carotid pulse, distinctly observed that the former precedes the latter. Leaving aside the cardiac impulse, whose mode of origin is still a matter of dispute, I will take the carotid pulse as a more reliable sign for timing the sounds and murmurs of the heart; but even here the difficulty does not altogether disappear. If the first sound is produced by the auricular contraction one would naturally expect that this sound would precede the carotid pulse, which is the result of the ventricular contraction. As a matter of fact, according to ordinary methods of observation, in many cases the first sound and the carotid pulse appear to be synchronous. There are some cases, however, where the first sound is distinctly observed to precede the carotid pulse. Now, the first sound is only produced, as has been seen, towards the end of the auricular contraction; the ventricular contraction follows immediately; and it is known how rapidly the pulse wave is transmitted, reaching the carotid artery long before the ventricular contraction comes to an end. The carotid pulse must, therefore, follow close upon the first sound—so close that in many cases, to ordinary methods of observation, both appear to be synchronous, though they actually are not so.

Returning now to the examination of murmurs produced at the mitral orifice, it has been seen how a rapid and sudden stream, impinging against the mitral valves, gives rise to a sound. If the rapidity of this stream be sufficiently slowed, so that, instead of being abrupt and sudden, it be somewhat prolonged, then, according to the acoustic principles above enunciated, the sound will be changed into a murmur. This slowing of the rapidity of the stream will take place when the auricular muscle is badly nourished and fatigued, while the mass of circulating blood does not diminish in quantity. Hence the production of the so-called functional murmurs of chlorosis and fevers. These murmurs, being caused by the somewhat delayed auricular stream impinging for a somewhat longer than the normal period against the mitral valves, will actually precede the carotid pulse, but, for reasons given above, in many cases they will appear to be synchronous with it. These murmurs may likewise be produced at the aortic orifices, but, inasmuch as the ventricular are more powerful than the auricular muscles, and therefore less prone to fatigue, they will be less frequent there than at the apical orifices. In mitral stenosis the narrowing of the orifice prevents the auricle from contracting rapidly, and this forces it to take more time in voiding its contents into the ventricle; therefore the rapidity of the auricular stream will be slowed and the first sound will be replaced by a murmur. This murmur will be rough in character if the auricle be greatly hypertrophied, so that the stream, as it rushes through the mitral orifice, impinges with force against the membrane formed at the edges of the orifice. This murmur, known as the mitral presystolic, generally ends with a sound. This can be imitated in the experiment with the intestine and gum elastic syringe. If the syringe be compressed somewhat forcibly there is obtained, instead of a soft blowing murmur, one rough in character. If towards the end of the compression greater and sudden force is imparted to this, then a rough murmur is obtained, which ends in a sound. In mitral stenosis, with hypertrophy of the auricle, the contraction will be at first powerful, but slow; yet towards the end of the contraction, when the auricle is nearly emptied, this, having now only a small quantity of blood to drive into the ventricle, will be able to inject it with greater rapidity and suddenness, the stream in its latter part will be quickened and sudden, and thus the rough murmur will end in a sound. The same phenomenon can be sometimes observed in the case of the ventricle in aortic stenosis. In some cases of mitral stenosis the sound is often unaccompanied by the murmur, except under special conditions. For example, if the stenosis be not very marked, and the hypertrophy of the auricle be well established, then it may be possible that the presystolic murmur will be absent when the patient is standing up and only present when he is in the recumbent posture. In the erect posture the heart works with greater activity than in the recumbent posture; hence in the former the auricular contraction may produce a sufficient rapidity of stream to give rise to a sound, while in the latter the lessened activity of the auricle may prolong the contraction to that degree which is necessary for the production of a

murmur. In the same way is explained the frequent disappearance of the functional murmurs in chlorosis during the erect, and their reappearance in the recumbent posture. In like manner other cardiac murmurs are only heard in the recumbent posture—that is, they are only heard when the respective muscles whose contractions are the direct cause of the murmurs act with greater repose and so prolong the duration of the streams which impinge against the membranes. But, again, a presystolic murmur may only be heard when the patient is made to walk quickly. In this case, when at rest, the hypertrophied auricle is capable of voiding itself with sufficient rapidity to produce only a sound, but when the patient is made to walk quickly the circulation increases greatly in activity, and, as a result of this, the blood accumulates behind the stenosed orifices—that is, it accumulates in the left auricle—and now this auricle, being overfilled, is unable to void itself, in spite of its hypertrophy, with the same rapidity as before; hence the duration of the stream is prolonged and a murmur accordingly takes place, which, however, as already explained, may end in a sound. The same explanation holds good for the appearance and disappearance of at least all murmurs due to stenosis after activity and after rest. The soft murmur which often precedes the ordinary presystolic murmur in mitral stenosis is produced by the slow and prolonged current of blood which, entering the auricle from the pulmonary veins, continues to pass into the ventricle and to impinge against the membrane at the stenosed orifice, before the auricle begins its contraction. If the mitral valves are completely destroyed, and no stenosis be present, then, unless the auricle be extremely hypertrophied, its contraction will be unattended either by a sound or a murmur. If, however, under this condition extreme hypertrophy of the auricle be present, a sound of low pitch may possibly be heard, but this sound will not be due to sonorous vibrations of any valvular membrane. If the pulmonary artery of the excised heart of an ox be firmly ligatured, and, the right auricle having been opened and the bicuspid valves removed, the right ventricle be filled with water, and the nozzle of a gum elastic syringe also filled with water be introduced within it, and if now the gum elastic syringe be compressed so that the liquid will impinge against the inner surface of the ventricle, a blowing murmur will be heard by means of the stethoscope applied to the external surface of the ventricle; if the syringe be very rapidly and forcibly compressed the murmur will be replaced by a sound. It is thus seen that when a muscular membrane enclosing a liquid has a fluid stream directed against its internal surface, provided the stream be very forcibly injected, the muscular membrane will be thrown into such sonorous vibrations as to give rise to a sound. This experiment cannot be produced with a small heart such as that of a sheep, for the force necessary to produce the required rapidity of the stream splashes the liquid out of the cardiac cavity. I have, however, succeeded in obtaining the sound when working with the right ventricle of an ox's heart. It may be asked, Why does not the left auricle ordinarily give rise to a sound, as its stream during its contraction strikes against the inner surface of the ventricle? Because, when the auricular contraction begins, the ventricle is already to some extent filled with blood, and therefore the auricular stream due to the contraction will not impinge directly against the muscular membrane, but against the liquid already contained within the ventricle, which conditions will not be sufficient to produce a sound. If, however, the auricle be extremely hypertrophied, then its stream, during contraction, may force itself through the contained liquid in the ventricle, so as to impinge directly against the inner wall of the ventricle, and produce a sound. This mode of production of a sound may be possible, but it must be rare, for in those greatly hypertrophied hearts where one might look for it the ventricle is also enlarged and must contain more blood before auricular contraction begins, and, therefore, its wall must be relatively more separated from the mitral orifice at the time that the powerful auricular stream enters the ventricle.

Lastly, I come to the consideration of the regurgitant murmur produced at the mitral orifice—the ordinary mitral systolic murmur. The fact that this murmur may exist without any stenosis of the aortic orifice might at first sight appear to destroy the truth of the acoustic principles I have enunciated. It might be argued that in the absence of aortic stenosis, the ventricular contraction being rapid, no murmur could be produced at the mitral orifice; for although the membrane against which the mitral regurgitant stream

would impinge would be present, yet, the ventricular contraction being rapid, the conditions existing would favour the production of a sound and not that of a murmur. It must, however, be remembered that the first part of the ventricular contraction is unaccompanied by any sound at the aortic orifice, and that it is only at its latter portion that the semilunar valves undergo the act of closure, and in this act present themselves suddenly against the ventricular stream that is entering the aorta. The strong ventricular stream thus impinges only for a moment against the membranous surface of the semilunar valves. In mitral regurgitation the ventricular stream impinges against the remains of the mitral membrane during the whole of the ventricular contraction; it is thus a relatively prolonged stream that impinges against a membrane, and hence the production of a murmur.

With regard to the mode of production of arterial murmurs, the same acoustic principles explain them. If the stethoscope is pressed against an artery part of the arterial membrane is pushed into the interior of the artery, and thus a membrane is opposed against a relatively prolonged stream. In aortic regurgitation the diastolic arterial bruit heard over the femoral artery is produced in the same manner.

In conclusion, to avoid confusion, I have omitted to state the combination of murmurs and sounds which may be produced at both orifices. If the sounds and murmurs of the heart are to be explained by the acoustic principle I have related, then it might be advisable to name them according to their mode of production and locality in which they are produced. Thus, the first sound is the auricular sound, and the second the ventricular. Murmurs produced at the mitral orifice and due to auricular contraction are mitral auricular systolic murmurs; these will be practically synchronous with the carotid pulse when they are functional in character—that is, when they simply replace the auricular sound owing to fatigue of the auricular muscle; they will precede the carotid pulse when they are organic—that is, when they are produced by marked delay of the auricular contraction owing to obstruction of the mitral orifice. Murmurs produced at the mitral orifice, due to ventricular contraction, are mitral ventricular systolic murmurs and are synchronous with the carotid pulse. Aortic ventricular systolic murmurs are produced at the aortic orifice owing to the ventricular systole; when these are due to stenosis of the orifice they will be synchronous with the carotid pulse; when functional—that is, due to simple fatigue of the ventricular muscle—they will succeed the carotid pulse; when due to undistensible conditions of the aorta they will be practically synchronous with the carotid pulse. Aortic systolic murmurs (regurgitant aortic) are due to the systole of the aorta and succeed the carotid pulse.

Buenos Ayres.

MILK INFECTION.

By ROBERT BOXALL, M.D. CAMB., M.R.C.P.
ASSISTANT OBSTETRIC PHYSICIAN TO THE MIDDLESEX HOSPITAL.

THE publication of "An Occurrence of Milk Infection" in THE LANCET¹ has induced me to record a similar occurrence which took place ten years previously in the General Lying-in Hospital. Between July 5th and 13th five patients who had recently been delivered and six other members of the establishment were affected, the latter in some instances even more severely than the patients. Each case presented much the same symptoms: abdominal pain and tenderness more or less severe, ushered in by a slight rise of temperature with diarrhoea and tenesmus and followed by loss of appetite, extreme fetor of the breath, and a very coated, foul tongue. The stools were usually much relaxed, slimy, very irritating, and in one case developed the character of the green chopped spinach motions of an infant, and set up aphthous ulceration of the thighs wherever they came into contact. Later, moreover, towards the end of the first week of the illness, in some of the cases the mouth became sore. This soreness often began at the roof of the mouth, and aphthous ulcers subsequently made their appearance along the sides of the tongue on its under surface and along the inner side of the cheek, selecting those parts with which the teeth came into contact. The soreness was accompanied by considerable swelling. Some

of the patients had lacerations about the vulva more or less severe, and in each case the open surface began to ulcerate rapidly and developed a similar aphthous character about the same time as the ulcers in the mouth began. The general condition, meantime, was not affected beyond the extent of the local mischief, and in all the lying-in women the course of the puerperium proceeded uninterruptedly towards recovery. In looking for the cause of the illness it was not difficult to satisfy oneself that the milk-supply was at fault. In the first place, inasmuch as this epidemic among patients and nurses occurred during a period of rather more than a week, it was apparent that some noxious element must have been introduced into the situation at that time only. In the second place, the illness occurring in patients in isolated wards (three in each, but only one affected), where, in view of the possibility of the introduction of infectious disease, every precaution was taken to prevent the spread of infection from one to another, and occurring in the cook and in five nurses, each kept strictly to her own ward (though in two cases attending to patients also affected), this without doubt told against infection through the air. In the third place, the initial symptoms were those of an irritant poison taken into the alimentary canal. But the patients, at any rate, were on a strictly regulated diet, so that no ordinary indiscretion as regards food would account for the illness. On the other hand, it may be mentioned that the diet of the patients during and for the first three days after labour consisted largely of milk, and that all those affected had but recently been delivered. Moreover, the nurses affected and the cook were among those members of the resident staff who were in the habit of drinking milk at dinner and supper instead of beer. Furthermore, in the milk-supply itself at that time evidence pointing to the cause of the epidemic was afforded. For ten days or rather more the milk supplied to the hospital presented the following characters, for which I can vouch from personal observation, my attention having been drawn to it in the first instance by its peculiar taste, which I can only describe as rather earthy. The milk presented a deep yellow colour, imparting to it a rich appearance, gave forth a faint, sickly odour, and though kept in a refrigerator very quickly turned sour. Several of the patients and nurses complained of its taste, and several of those affected, even before I had occasion to suspect the milk, said that the milk did not agree with them. And, lastly, on July 12th a fresh milk-supply was obtained and the milk was boiled as soon as received at the hospital; the epidemic then came to an end.

In what way the milk had become infected I am unable to say, and the milkman either could not or would not afford any clue. When questioned as to his customers, with a view to tracing other cases, he asserted that the hospital absorbed the whole of the milk sent by one farm, and none other; that he supplied no one else from the same source; and that he devoted that special supply to the hospital use because it appeared rich and good. But as the consumption in the hospital varied much from day to day, according to the number of patients, unless the dairyman's cows were exceptionally accommodating to meet the varying requirements of customers, it is obvious that there must have been a remainder which was unaccounted for. The dairyman stated that the farm had been inspected and that no disease was found among the stock. He owned to the practice of adding annatto to the milk, and gave me a sample which, as far as could be ascertained, in itself was free from suspicion. The conclusion which I myself came to at the time was that the disease must have originated in some disease in the cow itself. The following table gives the dates of admission of the patients and of the appearance of the first symptoms and aphthous patches:—

Case.	Admitted.	First symptoms.	Aphthous patches.	
			In mouth.	At vulva.
1	1884. July 3rd	1884. July 5th	1884. July 11th	1884. July 9th
2	" "	" "	" 12th	" 13th
3	" 5th	" 8th	None	None
4	" 6th	" 11th	July 13th	July 11th; on buttocks, July 14th
5	" 11th	" 13th	" 15th	None

The cases above recorded appear to correspond in every respect with those alluded to by Dr. Niven in the paper to

¹ THE LANCET, Jan. 19th, 1895.

which reference has already been made, except that he makes no mention of the subsequent appearance of aphthous patches such as were often observed in the hospital cases. That these patches, both in the mouth and about the vulva, partook of the nature of true aphthæ I think there is little room to doubt. I regret that for want of time I omitted to subject the patches to microscopical examination. The peculiar green stools in Case 4 were remarkable, and, considering that as a rule a case of thrush only occurred on an average once in about 100 infants born in the hospital, it seems rather more than a coincidence that two infants should have been affected with thrush during this epidemic, one in the same ward as Case 4, and the other in the same ward as Case 5. It is possible that the *oidium albicans*, in addition to the other poison, whatever its nature, may have been conveyed also by the contaminated milk. In any case, I consider that it is a subject for congratulation that the hand-fed children, of whom there were several in the hospital at the time, were all taking condensed instead of cow's milk. In November of the same year an isolated case of the same character as the others came under my observation. On admission to the hospital the patient was not well, having had diarrhoea and griping pains for two or three days. From her mother I subsequently ascertained that she had a son at home similarly affected, and that she herself, daughter, and son were in the habit of taking a glass or two of milk in the day, and that the milk had had a peculiar taste and smell, was of a "funny yellow colour," and rapidly turned sour, so much so indeed that complaint had been made to the milkman. The mother herself had not been affected. Dr. Niven draws attention to the fact that in the Manchester epidemic many appear to have escaped. It was the same with patients and members of the resident hospital staff. Of the sixteen patients admitted between July 2nd and July 12th—i.e., between the admission of the first patient who fell ill and the date on which the milk-supply was changed—five only were affected, and not more than half of the resident staff of the hospital, though all probably partook of milk in a greater or less degree, each patient taking at least two pints in twenty-four hours for the first three days after delivery. As until the supply was changed it was not customary to scald the milk received into the hospital, the value of raising infected milk to boiling point with a view to warding off infection could not be determined. The question raised by Dr. Niven of the protective value of mere scalding is an important one. In conclusion, I may add that treatment was based on the assumption that the illness was due primarily to some irritant in the intestinal tract, and, with a view to eliminate the poison, a calomel purge was administered at the outset. If the diarrhoea continued the purge was followed by castor oil and opium, and later by quinine and opium in the form of pill.

Weymouth-street, W.

SECONDARY HÆMORRHAGE IN A CASE OF NECROSIS OF THE FEMUR; LIGATION OF THE FEMORAL AND EXTERNAL ILIAC ARTERIES UNDER COCAINE; RECOVERY.

By R. N. HARTLEY, B.S. LOND.,

HONORARY SURGEON, LEEDS GENERAL INFIRMARY, ETC.

THE interesting report of a case of ligation of the femoral artery, by Mr. Southam of Manchester,¹ for secondary hæmorrhage suggested the desirability of putting on record the following case, the facts of which speak for themselves.

A boy aged sixteen years was sent to me in March, 1889, on account of long-standing necrosis of the right femur. Briefly, the history was an attack of typhoid fever in 1886, followed by an acute periostitis of the whole shaft of the right femur, with some inflammation, apparently, of the hip and knee-joints. The hip was stiff, but the head of the femur remained in its socket; the knee seemed partly subluxated and the heel rather drawn up by the calf muscles. The thigh was much thickened, and several large sinuses discharged daily much pus. The irregular mass of new bone evidently enclosed a large loose sequestrum. The

boy was ill and worn from the long-existing suppuration, and on March 27th, 1889, the sinuses were dilated under ether for better examination, and through an opening made in the new mass of bone a large sequestrum was removed in two pieces, evidently the remains of the whole diaphysis of the femur. There was a very large irregular cavity, which was cleaned as thoroughly as possible and packed with strips of lint dusted over with iodoform. There was no serious bleeding during the operation. All went well till the following Sunday morning when I was hastily summoned to find the boy lying in a pool of blood, blanched, almost pulseless, and only partially conscious. It was practically impossible to make out the source of the bleeding, except that it came from the inside of the sloughy cavity and was probably arterial; and as promptness of action was imperative fifteen drops of a 2 per cent. solution of cocaine hydrochlorate were injected under the skin over the upper part of the femoral artery, and with the help of a nurse the skin was incised, the artery exposed, and a double catgut ligature passed round it at a point about two inches below Poupart's ligament. The ligatures were separately tied upon the artery, and the vessel was divided between them. The hæmorrhage seemed to be quite controlled, and during the day the cavity of the thigh was emptied of clot and packing, cleansed, and repacked. All was quiet for a week, when again on the Sunday morning following I was called, to find that the boy had had a second similar severe hæmorrhage and seemed on the point of death. An injection of cocaine above Poupart's ligament allowed a slightly curved incision to be made a little above it, and a dissection was carried through the lower part of the abdominal wall, the peritoneum was pushed up, and a double catgut ligature passed (as before) round the external iliac artery, the vessel being tied at two points and divided between them. The wound healed rapidly and without trouble, and after this there was no more bleeding at any time. Great care was taken, in the nursing &c., to preserve the vitality of the limb, and the filling up of the thigh cavity was somewhat tedious, but the wearing of a Thomas's knee-splint enabled the patient to get about more comfortably, and the subsequent division of the tendo Achillis greatly lessened the shortening of the limb. The boy is now a healthy man aged twenty-two years, learning the mysteries of "business," but with a very vivid recollection of his experience of six years ago.

Looking back, it is easy to say that it would have been better if the femoral artery had been ligatured higher up in the first instance, while the particular method of tying an artery in its continuity, the use of cocaine for the purpose, and other points might furnish suitable material for comment. The object, however, of this short communication is simply to record the main facts of the case and to express the opinion that the trustfulness and courage of the boy greatly lightened a most anxious and critical experience in a surgeon's life, and helped to avert a "surgical catastrophe."

Leeds.

A CASE OF EMPYEMA WITH COMPLICATIONS.

By SURGEON-CAPTAIN S. G. ALLEN,

LATE ASSISTANT PATHOLOGIST AND CLINICAL OPHTHALMIC ASSISTANT, ST. MARY'S HOSPITAL.

WITH reference to an article by Mr. Stephen Paget which appeared in THE LANCET of May 4th, recording the occurrence of cerebro-spinal symptoms of an obscure character during the treatment by irrigation of certain cases of empyema, I beg to forward the following extracts from the notes of a case of somewhat similar character which has recently come under my observation.

A man aged thirty-five years was taken ill early in January last with left-sided pleurisy, followed by croupous pneumonia of the left lung, the right lung also becoming affected shortly afterwards. This double pneumonia ran a favourable course for a time, the temperature returning to normal by the end of the second week of illness, and the physical signs showing that the consolidation of the lungs was clearing up. This process of resolution gradually came to a standstill, however, and the symptoms became of a more chronic character. His condition varied from

¹ THE LANCET, May 25th, 1895.

day to day, but no noteworthy change appeared in the condition of the chest till early in March, when there was found to be some effusion into the left pleural cavity. This rapidly increased, so that by the 11th the aspirator was used to relieve pressure effects. As the fluid drawn off was found to be purulent I established free drainage of the pleural cavity by resection of a portion of the sixth rib in the axillary line. A large quantity of healthy-looking pus escaped at the time of the operation. His temperature fell to normal, and his general condition began at once to improve. No irrigation was used at first; but a few days after the operation the discharge had become much thinner, of saffron appearance, and with slight odour. Consequently a weak iodine solution (the colour of pale sherry) was used daily from this time to wash out the pleural cavity. Under this treatment the discharge became again healthy in character and gradually diminished in quantity day by day. The compressed lung re-expanded in a satisfactory manner and the remaining consolidation cleared up. For six weeks the daily irrigation was continued, and the patient progressed satisfactorily, the drainage-tube, which was originally 7 in. long, being gradually reduced to 2 in. On May 1st, however, his temperature rose to 101° F., and it was thought by the medical officer (Sergeon-Major Simpson), under whose care he at that time was, that a small collection of pus existed, which was unable to escape through the shortened drainage-tube. A long soft tube of small calibre was consequently passed down the sinus, and a small quantity of pus was evacuated. Some of the iodine solution was then carefully injected down this tube (no distension could have been caused by this, as the fluid during the injection escaped alongside the tube); while this was being done the patient was suddenly attacked with syncope. The attack was so severe that it was at first thought he had died suddenly, but by means of artificial respiration and the use of stimulants he recovered somewhat. I saw him about three-quarters of an hour after this seizure. He was then in a condition of deep stupor, neither speaking nor understanding when addressed. He groaned and cried out frequently as if in pain. His eyes were firmly closed, and he resisted any attempts to open them. On raising the lids, however, the pupils were seen to be dilated and equal. The pulse was rapid (130) and weak in volume. The respiration was irregular. At the time of the attack Cheyne-Stokes breathing was noticed for a time. No motor paralysis was present, but spasmodic contractions of the fingers took place from time to time. There appeared also to be increased excitability of the sensory nerves, as when touched or moved the patient resented it and cried out. Owing to retention of urine the catheter had to be passed later in the day. This excited well-marked spasm of the urethral muscles. On the following morning the condition of stupor and general state was unchanged, but during the day he passed his urine and motions in bed. His temperature was 99°. No change occurred till the morning of May 3rd, when (after a sleep) he was found to have regained consciousness. His temperature was very low (96.4°), but rose to 98° by the evening. His mental condition continued to be very disturbed for the following three days, and he suffered from attacks of delirium, from which, however, he could be recalled by being spoken to. The pupils after his return to consciousness gradually diminished in size, but the left remained somewhat larger than the right; reaction, both direct and consensual, was normal. The temperature kept below 99°, and he was comparatively well till May 9th, when he was suddenly seized with severe abdominal pain and fever (101.4°). There was tenderness in both iliac fossæ, but no tumour or muscular rigidity. The pain was continuous in character, but every now and again it increased in severity. The bowels had been freely moved on the previous day; there was nothing abnormal about the stools and no intestinal distension. The urine contained a faint trace of albumen. The discharge from the sinus had become more abundant, but was quite sweet. Since his seizure on May 1st no further attempt at irrigation had been made. On the three days following this attack of abdominal pain—May 10th, 11th, and 12th—he had an attack of shivering, with rise of temperature every afternoon between 1.30 and 4.30. The pain, although still present, became less severe each day. On the morning of May 13th it quite ceased, and his temperature stood at 97.4°. Since then his progress has been most satisfactory. The wound is rapidly closing, and his general health is excellent.

Royal Arsenal, Woolwich.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON SOME AIDS TO RAPID DILATATION OF THE UTERUS.

BY AMAND ROUTH, M.D., B.S. LOND., M.R.C.P. ENG.,
OBSTETRICAL PHYSICIAN WITH CARE OF OUT-PATIENTS AT CHARING-CROSS HOSPITAL; PHYSICIAN TO THE SAMARITAN FREE HOSPITAL, ETC.

IN dilating the uterus rapidly by the method of graduated bougies one occasionally finds a good deal of resistance from rigidity of the cervix. This may be due to the presence of a fibroid in its wall or to cicatricial tissue, but the ordinary rigidity which is encountered is in the cervical zone of nulliparous women. This rigidity has led many operators to commence the dilatation of such cases by the insertion over night of a laminaria tent, which will soften and partially dilate the cervix. As there are risks of septic infection in this procedure, however carefully one may prepare both the patient and the tent, and as the patient is always in an unsatisfactory state after a night spent in such a preliminary dilatation, I have endeavoured to find means by which rapid dilatation may be so aided that tents may be dispensed with. The following are means by which for some years I have been enabled to rapidly dilate uteri so as to digitally explore the cavity without using any form of tent. 1. Drs. Herman and Braithwaite have shown that the cervix is soft and relaxed and partially patent at the end of menstruation. Clearly, therefore, Dr. Braithwaite is right in advising that rapid dilatation should be performed the first possible day after a period has ceased, and this has been my practice for some years. 2. Dr. Champneys has drawn attention to the fact that a non-secreting cervix will not dilate, whether in labour or otherwise. If a rigid cervix can be made to secrete it becomes at once relaxed. To encourage this secretion I have used a wool tampon saturated with glycerine. This is introduced by the nurse two hours before the operation to the top of the vagina against the external os uteri. This causes all the glandular tissues of the cervix to secrete profusely, and the cervix, instead of feeling like a piece of gristle, gets quite soft. I have thought, but have no proof to offer, that this effect is enhanced by the addition of some cocaine to the glycerine, possibly by allaying local spasm, as is said to occur in the "rigid os" of the first stage of labour when cocaine is applied. 3. If the cervix be considered likely to be unusually rigid, I have found unquestionable advantage from passing into the cervix and, if possible, through the os internum, a strip of antiseptic gauze, six or eight hours before the operation, or even overnight. A few bougies may be passed if necessary to enable this to be done, and the vagina and cervix should be first antiseptically cleansed. The gauze should be soaked in glycerine and iodine. At the operation the cervix will be found to be as soft and nearly as dilated as if a laminaria tent had been introduced, whilst the risk is far less, drainage having been encouraged instead of entirely prevented. This process is painless. Of course, if the uterine discharges be offensive, neither gauze nor tents are applicable. These aids to dilatation almost always suffice to permit digital exploration, and if it should be found impossible to admit the little finger in 1 or 2 per cent. of cases, the uterus can be sawed out and packed fairly tightly with gauze for twenty-four hours, by which time it will easily admit the finger. Gauze, in itself a disinfectant, may here be used, whereas a tent would be absolutely contra-indicated. By these aids I have been able to entirely dispense with "tents" for at least five years, both for hospital and private work.

Manchester square, W.

A MIGRATING OVARIAN TUMOUR.

BY HEYWOOD SMITH, M.A., M.D. OXON.

THE migration of ovarian tumours is sufficiently uncommon to make the narration of such a case not without interest. A woman aged fifty-one years consulted me on April 1st, 1894. She had been married twice—

the first time for a year and a half, having one child—this was twenty-one years ago; she was a widow for three years, whereupon she again married sixteen years ago and had two children—the younger fourteen years ago. Her catamenia lasted from the fourteenth till the forty-eighth year. She said she had overwalked herself when young, and had ovaritis twenty-two years ago. If she walked too much she had pain in the right ovarian region, with heat in the vagina. The bowels acted regularly; there was no vaginal discharge. On vaginal examination her uterus was found to be retroflexed and slightly to the right; the uterine sound showed there was a slight hitch at the inner os. The right ovary was enlarged to the size of a small orange. I saw her again at the end of January this year. On Feb. 2nd, on vaginal examination, the uterus was still found to be retroflexed, and on being replaced it at once returned to its abnormal position; the cervix was congested, and on the passage of the sound there was some slight bleeding. There was a small (pin's head) polypus at the os. The tumour of the ovary on the right was rather hard, and it had increased in size. On the 7th I had a consultation with Dr. Cullingworth; he agreed with me that there was a tumour of the right ovary and that it ought to be removed. The operation was performed on the 27th. Dr. Dudley Buxton gave the anæsthetic, and Dr. Mary Scharlieb assisted. An incision of about three to four inches was made, and a tumour was found on the right side the size of an orange; it was adherent to the omentum and to the oviduct, and when these were broken down the tumour came away without a pedicle. Just below the tumour was a hydrosalpinx of about the same size; this was brought to the surface. It consisted of the fimbriated end, and the rest of the tube was traced right across the retroverted uterus to the left side of the pelvis, where it was tied and cut away. No appendages were found on the left side, but the right ovary and oviduct were found to be deep down in the pelvis, on the right. The ovary was small (size of a bean), and it and the tube were removed. The ovarian tumour was a dermoid, and contained cholesterine, hair, and some bony plates. The wound was closed in three layers, and no drainage-tube was used. On March 21st the uterus was nearly in its normal position, very slightly to the right. On the 27th the position of the uterus was normal. The interesting points about this case are—(1) the migration of the left ovary over to the right side; (2) the extension of the oviduct across the pelvis, forming a bridge keeping down the fundus of the uterus; and (3) the rapid atrophy of the other ovary three years only after the menopause. I should be glad to know whether other observers have noticed any such similar migration on the part of an ovary, and to what it may be attributed.

Harley-street, W.

A CASE OF "DYSPHAGIA LUSORIA."

BY T. H. KELLOCK, M.D. CANTAB., F.R.C.S. ENG.,
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GREAT ORMOND-STREET;

AND

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PATHOLOGIST TO THE HOSPITAL.

THE term "dysphagia lusoria" is used by Fagge¹ in describing a case reported by Dr. Bayford of Lewes in which dysphagia occurred in a child the subject of an abnormal origin and course of the right subclavian artery; Mackenzie² mentions this symptom as occurring in the same connexion; and Prichard³ has described a case where a fish-bone stuck in such an abnormal artery behind the œsophagus and caused death by hæmorrhage. Referring to Dr. Bayford's case, Fagge suggests that the dysphagia was spasmodic and its occurrence in connexion with the abnormal artery probably only a coincidence; that it may be something more than this we think the following case tends to show.

A healthy boy aged two years and ten months was brought to the Hospital for Sick Children, Great Ormond-street, on the evening of March 6th, 1894, having been severely choked whilst eating an apple; on this occasion nothing could be found in the pharynx, but the child had been affected seriously enough by the accident to warrant his being kept in the hospital that night. He was, however, discharged quite

well on the following morning. On Oct. 30th he was again brought hurriedly to the hospital about 2 P.M. with the history that he had been suddenly choked whilst eating his dinner; he was cyanosed and breathing with some difficulty, and whilst in the casualty room became much worse and ceased to breathe altogether; the trachea was opened at once and artificial respiration performed for about half an hour, but without restoring natural breathing. At the post-mortem examination, twenty-one hours after death, a small blood clot was found in the trachea, which had been opened by division of the fourth, fifth, and sixth rings. A large mass of granular-looking material (probably sausage) was found lying fairly loosely at the back of the pharynx, but it is uncertain whether or not it occluded the upper opening of the larynx. On dissecting the arteries arising from the aorta the following arrangement was found. There was no innominate artery; the two common carotids came off practically together, the left following the usual course, but the right crossing the trachea from the left side just above the sternal notch to reach its usual position on the right side of the neck. The left subclavian came off the arch of the aorta next and followed a normal course; then came the right subclavian, arising from the descending part of the arch and crossing obliquely behind the œsophagus between this and the spine and behind the right scalenus anticus muscle to its usual situation at the root of the neck, this arrangement of vessels closely resembling that described in Quain's Anatomy and elsewhere as due to the persistence of the right aortic root and the abnormal closure of the fourth right arterial arch, which normally remains patent as the right subclavian artery.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

FOUR CASES OF TUBERCULOUS DISEASE OF THE BLADDER
TREATED BY SUPRA-PUBIC CYSTOTOMY; REMARKS.

(Under the care of Mr. W. WATSON CHEYNE.)

WHEN publishing recently the account of a case of successful cystotomy for tuberculous disease of the bladder, we commented on the small number of patients who had required this treatment. In doing so we did not mention the first two cases of the following series which had escaped our notice. We now give a short abstract of them, and bring before our readers two others which were treated in a similar manner. A curious fact, and one worthy of note, is the sex of these patients, most of the published cases having occurred in women. We agree with Mr. Cheyne in attaching importance to rest as a curative agent in tuberculous disease, but think it better to scrape these ulcerations after the opening of the bladder. Rest alone is not always sufficient to cure tuberculous disease in other parts of the body, yet when the diseased part has been subjected to the action of the curette cure often follows; few would contend, however, that the operation had removed the whole of the disease in the cases which get well after the scraping.

CASE 1.—A man aged thirty-six years consulted Mr. Cheyne in February, 1891. A short time previously he had begun to suffer from frequency of micturition, accompanied by pain towards the end of the act. This had been getting worse, and for the last two days he had been passing urine every two hours; at the end of micturition pure blood was passed, and the pain in his bladder and penis was very severe. The bladder was very tender, both above the pubis and on examination per rectum. There was no enlargement or tenderness of the prostate or vesiculae seminales. The testicles were normal. There was no kidney enlargement or tenderness. The passage of a sound caused great pain. The urine was acid and contained blood and pus. The temperature was

¹ Fagge's Principles and Practice of Medicine, vol. ii., p. 313.

² Medical Times, 1876, vol. ii., p. 457.

³ Illustrated Medical News, Dec. 1st, 1888.

99° F. The patient was pale and thin, and thought he had been losing flesh lately. Some four or five years ago he had had pleurisy and became much emaciated, but subsequently recovered. There was then a question as to tuberculosis. He was put to bed and ordered the usual sedatives. For a few days he improved, but ten days later the acute symptoms recurred without apparent cause. To sum up, he was kept in bed under treatment for six weeks, during which time he had two severe attacks and the prostate became somewhat larger. The diagnosis came to was tuberculous disease of the bladder, and as no progress was being made Mr. Cheyne thought that the time had come for operative interference. Before doing so, however, there was a consultation with a specialist, who saw and figured and located a tumour, which it is believed, was afterwards modelled. Although Mr. Cheyne could not see it and could not accept the diagnosis, it gave him the opportunity required of insisting on opening the bladder. This was done supra-pubically on April 4th. On examining the bladder most carefully no trace of a tumour could be found, but in the trigone there were four or five deeply congested patches about the size of peas, with slight ulceration on their surfaces, and in the surrounding mucous membrane a number of minute grey tubercles could be readily seen. These ulcers were scraped and iodoform powder applied. A large drainage-tube was left in. For a day or two there was a good deal of spasm of the bladder, but this soon passed off. The drainage was continued for six weeks. The bladder wound closed at the end of June. Up till the end of the year the patient had two very slight attacks of spasm and hæmaturia, but since that time he has had no further trouble and is now quite well.

CASE 2.—A man aged twenty-three years was admitted to King's College Hospital on Oct. 29th, 1891. There was a doubtful phthisical family history. He had what was termed "congestion of the lungs" four years ago and gonorrhœa three years ago. Soon after the attack of gonorrhœa he began to feel uneasiness and pain apparently about the base of the bladder; this lasted for a year and then improved, but he had never been quite free from the uneasiness, especially towards the end of micturition. For the last three months his bladder trouble had been getting worse, and he had once or twice passed a little blood towards the end of micturition; he had been losing flesh. On admission the patient's symptoms were as follows: some pain at the commencement of micturition and a great deal towards the end, the pain being referred to the bladder, perineum, and urethra; coughing set up aching about the bladder; micturition was frequent; and the urine contained a good deal of pus. There was no swelling or tenderness of the kidneys; the testicles and cords were normal. Per rectum the prostate was not enlarged; the vesiculæ seminales were distinctly felt, but were not hard. Just in front of the middle of the right vesicula and apparently in the wall of the bladder was a hard nodule about the size of a threepenny piece, which was exquisitely tender to the touch. On passing a sound no very great pain was felt till it touched the base of the bladder in front of this nodule, when it caused very great pain. With the cystoscope a bleeding, ragged area of considerable size was seen in the trigone; a few tubercle bacilli were found in the urine. On Nov. 24th Mr. Cheyne performed supra-pubic cystotomy and found in the trigone an irregular ulcer with ragged edges about the size of a shilling. On pressing on the nodule from the rectum a little curdy material appeared on the base of the ulcer. The surface was scraped, iodoform applied, and a drainage-tube inserted into the bladder. The patient had a good deal of spasm and pain in the bladder for some days, but these soon ceased. Injections of albumen obtained from tuberculin were also employed. The drainage of the bladder was kept up for six months, till, in fact, the nodule felt per rectum had almost disappeared and was quite free from tenderness. When discharged seventeen days later the wound was almost healed, and he could hold his urine for three hours and had none of the old symptoms. When seen about a year later he was well.

CASE 3.—A boy aged fourteen years was admitted to King's College Hospital on Nov. 14th, 1892. He had suppurating glands in the neck when quite a child. His mother died from phthisis. Four months before admission the patient began to have frequency of micturition and had a burning sensation on passing urine. The condition had been getting worse. On admission he complained of pain in the penis during and for about a minute after passing urine. There was no pain

in the intervals. He passed urine about twenty times during the twenty-four hours. Attempts to hold his urine caused much pain in the bladder. The urine was acid, with much pus; the sp. gr. was 1014. There was tenderness over the bladder both above the pubis and per rectum, the right side being much more tender than the left. There was no tenderness or swelling of either kidney, no disease of testicle, vesiculæ or prostate. With a sound the right side of the bladder was more tender than the left; no stone was felt. The temperature was 99.6° F. On Dec. 7th the bladder was opened above the pubis. There was a much congested, thickened, and somewhat warty patch on the right side of the trigone, but no actual ulceration was found. A large-sized drainage-tube was inserted into the bladder. In the beginning of January, 1893, the patient's temperature rose somewhat and afterwards assumed a hectic type, and about the end of that month tenderness over the left kidney was noted, and a good deal of pus was present in the urine; the kidney was also felt to be somewhat enlarged. This continued, and in the beginning of March the kidney was distinctly enlarged and the patient was losing ground. The tube was left out of the bladder on March 2nd. On March 13th the pelvis of the left kidney was opened; pus was found in it, and a drainage-tube was inserted. For a fortnight his condition improved, but he then began to get worse again, and accordingly on April 17th the left kidney was removed. On examination the kidney was found to be tuberculous. His condition rapidly improved, but the cystotomy wound was long in healing, and indeed, had not quite healed till the beginning of July, when the patient was discharged. At that time he had no pain in passing urine and could retain it for several hours; there were only a few pus corpuscles in the urine. His general health was very good.

CASE 4.—A man aged forty-nine years was admitted to King's College Hospital on April 13th, 1893. About six years previously the patient was in hospital with cystitis, which improved under treatment, but never got quite well. In August, 1892, his condition was such that he went into another hospital and was treated there for cystitis, but did not improve. He had passed a good deal of blood lately and had great pain in passing urine, and especially on trying to hold it. The patient stated that he had a burning pain in the perineum towards the end of micturition and lasting afterwards. He passed urine about every half-hour and frequently in bed while asleep. The urine was acid, with a good deal of pus and a trace of albumen. Tubercle bacilli were found in the urine in small numbers. Nothing was found in the kidneys or testicles. The patient was put to bed, and the bladder washed out daily with boracic lotion. No improvement followed, and on May 8th, 1893, the bladder was opened above the pubis. A thickened mass was at once come upon in the anterior wall, and a quantity of cheesy material was scraped away, leaving a raw place about the size of a florin on the anterior and upper part of the bladder; the rest of the organ appeared to be healthy. A large drainage-tube was inserted, but no iodoform was applied. The tube was left out on June 21st and the wound rapidly closed. He was discharged on June 28th, and was then able to retain his urine for three or four hours and had no pain in passing it. The urine was normal. The patient had greatly improved in his general condition.

Remarks by Mr. WATSON CHEYNE.—Little need be said as to the diagnosis of these cases; the symptoms were those of ulceration of the bladder, and in two of them (Cases 2 and 4) the tuberculous nature of this ulceration was at once settled by the discovery of tubercle bacilli in the urine. In the other two cases I failed to find tubercle bacilli, but such failure does not by any means imply the absence of tuberculosis. As is well known, in tuberculous disease of the urinary tract it is often difficult to demonstrate the bacilli. When they are few in number their discovery in the urinary deposit is an accident; a considerable number might be present and yet not happen to be in the minute portions examined; their discovery really implies the presence of large numbers. In the first case the eruption of tubercles on the mucous membrane of the bladder around the ulcers was, however, so typical that there was no difficulty in the diagnosis, which was agreed to by all who saw the operation. In Case 3 the diagnosis was rendered certain by the subsequent examination of the kidney. Three of these cases (Cases 1, 2 and 4) were certainly examples of primary tuberculosis of the bladder, there being complete absence of all signs of disease in any other

part of the genito-urinary tract both at the time and subsequently. I am inclined to regard Case 3 as also one of primary disease of the bladder, and to look on the affection of the left kidney as a subsequent occurrence, but the converse is quite possible, and there may have been originally a tuberculosis of the kidney which led to the bladder infection, but did not become acute till after the operation, when possibly some septic organisms spread up the ureter and lighted up the tuberculous deposit. The result of the treatment was most satisfactory in all the cases, and I believe that practically the sole curative agent in it is the rest given to the bladder by the suprapubic drainage. Scraping ulcers in the bladder is a very unsatisfactory performance, and one cannot hope to eradicate all the disease in this way. The bladder wall is a lax structure and one cannot scrape an ulcer in it, unless on the anterior wall as in my last case, with sufficient vigour to remove all the tuberculous material. Rubbing in iodoform is still more unsatisfactory. If iodoform has any anti-tuberculous action at all it is not a sudden one, and its application once for all, as in these cases, can have little or no effect. On the other hand, to place the part at rest is to act on the principles which are at the foundation of the treatment of tuberculous disease elsewhere, and this is at once done by the establishment of permanent drainage. It was because I held this view that I continued the drainage so long in these cases (from six weeks to six months), and I did not leave it off till I thought that the disease had been arrested.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

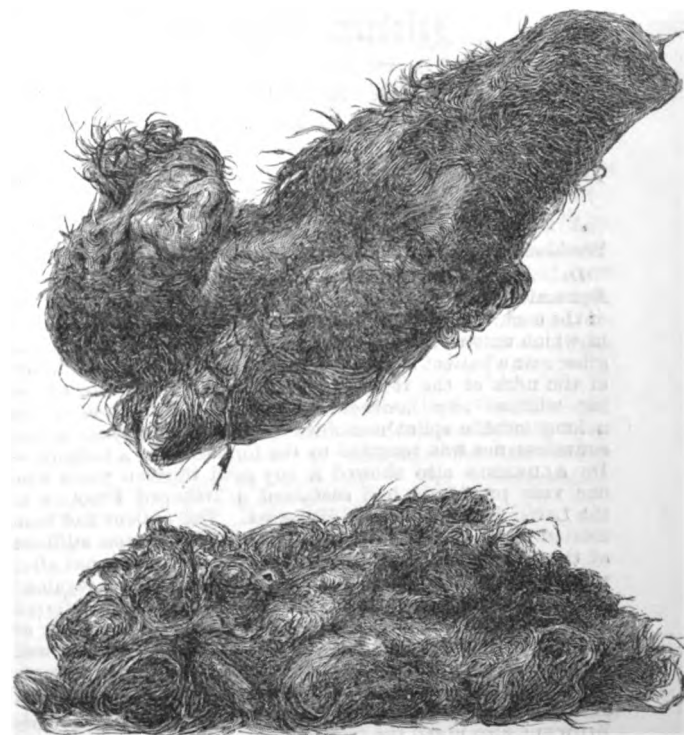
CASE OF GASTROTOMY; REMOVAL OF A MASS OF HAIR WEIGHING 5 LB. 3 OZ. FROM THE STOMACH; RECOVERY.

(Under the care of Mr. PAUL SWAIN.)

IN THE LANCET of Jan. 9th, 1886, there is recorded by Mr. Knowsley Thornton a very remarkable case of removal of a mass of hair weighing 2 lb. from the stomach of a young woman aged eighteen. The patient recovered, and appended to the report Mr. Thornton has given an epitome of cases in which hair was found in the stomach. In only one other case, that of Dr. Schönborn of Königsberg, was an operation performed, and that with success, the mass of hair removed weighing 9 oz. or 10 oz. There are many post-mortem records. The most remarkable is one recorded by Russell in the *Medical Times* in 1869. A woman aged thirty-one died after an abortion, and there was found in her stomach a mass of hair weighing 4 lb. 7 oz. Since 1886 Mr. Swain can find only one case, and that is mentioned in THE LANCET of Nov. 24th, 1888. It is one recorded by Berg of Stockholm, who performed laparotomy on a woman twenty-six years of age and removed a mass of hair weighing about 30 oz. The patient made a rapid recovery. The case Mr. Swain relates is therefore the third on record, and is the most remarkable of the three as regards the weight of the hair removed.

A single young woman aged twenty was admitted into the South Devon and East Cornwall Hospital on March 15th, 1895, with a large abdominal tumour of which she professed to have been ignorant until a fortnight previously, when it was discovered by Dr. Hingston, who sent her into the hospital. Her history was as follows. As a child she had been healthy. Menstruation commenced at thirteen, but for the last year she had suffered from complete amenorrhœa. Five years previously she began to have attacks of vomiting, generally once daily and not always in relation to food; sometimes a week would elapse without sickness. It was for this condition that she first consulted Dr. Hingston two years previously. She had at one time a very fine head of somewhat coarse black hair which fell below her waist; but it is a fact to be noted that on three occasions during her illness she became quite bald. At the time of her admission she was a fairly well nourished girl with florid complexion, red lips, and quiet demeanour. The abdomen was largely distended by a tumour, which on palpation was found to be solid, well defined, and very movable laterally. It stretched obliquely across the abdomen from the left costal cartilages down into the pelvis, but the fingers could be passed round the lower border, between it and the pelvic cavity. It was continued up behind the left costal cartilages by a thick pedicle, apparently about ten or eleven inches in circumference. There was no tenderness on

pressure. The percussion note over the most prominent part of the tumour was slightly subresonant, and in some places there was a sense of crackling as if a bit of bowel were spread out over a solid tumour. The urine was normal. It is a curious fact that from the time of her admission until the day before the operation she was upon ordinary meat diet, which she took without discomfort, being only once sick. The diagnosis seemed to lie between a tumour of the omentum and a splenic enlargement. The constitutional condition of the patient precluded the latter idea. Moreover, on careful percussion over the splenic region it seemed to be possible to map out a normal spleen. On the 20th Mr. Swain opened the abdomen by a median incision about eight inches in length, the umbilicus being the central point. The stomach was immediately exposed and found to be enormously spread out, and on palpation air and fluid were displaced and the fingers came upon a solid tumour. Thinking that this was situated behind the stomach the great omentum was turned up and the whole mass lifted, when the posterior surface of the stomach was revealed. Whatever it was, therefore, it was within the stomach, which was replaced within the abdomen and well packed round with sponges. A small incision about two inches in length was then made through the stomach wall, and the contents were immediately found to be hair. The incision was then prolonged to six inches and the process of extraction commenced. At first small portions were removed with ordinary forceps, but this was soon given up, as the whole mass was welded together so firmly as to be almost impenetrable. At last an impression was made and an entrance effected into the centre with a very strong curved Volkmann's scoop. With this the interior of the mass was evacuated, the lower figure in the engraving representing the hair thus removed. By gentle manipulation, the stomach being carefully supported by the hands of an assistant, the whole mass was delivered, as represented in the upper engraving. The larger portion



lay in the pyloric end, whilst the other end was prolonged up towards the œsophagus, and was, in fact, the pedicle described above. The stomach evolved during the process of extraction was sickening. The mucous membrane at the pyloric end was studded over with circular raised patches of granulations, each about the size of a shilling; towards the cardiac extremity it was healthy. Immediately after the extraction the stomach contracted. It was well washed out with hot boracic solution and the opening closed with twenty-six Lembert's sutures. The sponges were then removed, and although a considerable

discharge of foul fluid had taken place it was found that the abdominal cavity had been well protected. The omentum was turned up over the incision in the stomach to afford extra protection, and the abdominal wound closed with silkworm gut sutures. The mass removed weighed 5 lb. 3 oz. The operation lasted an hour and a half, much time being expended in dislodging the hair. The patient rallied well from the operation. There was some little sickness, the vomited material being principally of a coffee-ground nature, from the blood extravasated during the operation. For two days she was fed with nutrient enemata only, and then small quantities of peptonised milk were given and the enemata lessened in number. The temperature never rose above 100·8° F. and reached that point only on one occasion. On the seventh day the silkworm gut sutures were removed. One near the centre of the wound had suppurated, and it was found, much to our disappointment, that a small gastric fistula was established. One of the Lembert's sutures was discharged through the opening. Feeding by the rectum was resumed, and in two or three days the fistula closed. The patient was discharged quite well on April 6th. It was never possible to extract much information from her. She acknowledged that she had indulged in the habit some time ago of eating her hair, but in very small quantities. The habit had never been noticed by her friends, and her mother could hardly be convinced of the fact until she was shown the mass of hair. The mass of hair has been sent to the Museum of the Royal College of Surgeons of England.

In our report of the case of carcinoma of the urethra and bladder, under Mr. Battle's care in St. Thomas's Hospital, which we printed last week, the name of the house surgeon was wrongly given. It was Mr. S. W. F. Richardson who had charge of the case, to Mr. Battle's complete and expressed satisfaction.

Medical Societies.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Fracture of the Extremities in Old People.—Intra-cranial Tumour.—Exhibition of Cases.

A MEETING of this society was held on June 7th, the President, Dr. R. BANNING, being in the chair.

Dr. ALDERSON related two cases of *Fracture of the Extremities in Old People*. The first case was a fracture of the neck of the humerus in a woman aged seventy-five years, in which union resulted at the end of seven weeks. In the other case a patient aged sixty-seven years sustained a fracture of the neck of the femur and recovered perfect use of her leg without any lameness. She had been treated by a long outside splint combined with weight extension, but convalescence was retarded by the formation of a bedsore.—Dr. ALDERSON also showed a boy aged thirteen years who one year previously had sustained a T-shaped fracture of the Lower End of his Left Humerus. The patient had been treated by wooden splints, and suffered from some stiffness of the elbow-joint after the splints were removed, but after passive movements under nitrous oxide gas he had regained almost perfect movement of his elbow.—Mr. LUNN referred to several cases of *Extra-capsular Fracture of the Neck of the Femur in old people due to indirect violence*, and showed two specimens. He advocated the treatment of such cases by plaster-of-Paris splints, which allowed of the patient getting up on crutches at the end of a week or two.—Mr. BIDWELL also urged the treatment of fractures of the femur by the immediate application of plaster-of-Paris splints. He also recommended that T-shaped fractures of the lower end of the humerus should be treated by a well-fitting plaster splint, which ought to be kept on for a month. If the fracture had been kept completely immobilised the movements of the elbow quickly returned without much trouble.—Mr. YEARSLEY also mentioned some cases of T-shaped fracture of the lower end of the humerus which had been treated by plaster-of-Paris splints, in all of which the subsequent movements of the elbow were excellent.

Mr. JULER read the notes of two cases of suspected Intra-cranial Tumour, one of which was demonstrated to the

society. The patients were women of the ages of eighteen and thirty-eight years respectively, and had come under observation on account of severe double optic neuritis. In one case the swelling of the papilla had subsided into post-neuritic atrophy, with improvement of vision. In the other a severe choked disc existed with complete blindness. Vomiting and severe headache had existed at different times in each case. These two symptoms, however, were almost invariable accompaniments of any severe optic neuritis. Mr. Juler was of opinion that, few as the symptoms were which pointed to intra-cranial mischief, they were sufficient to guide to a diagnosis, for in one case fits, failure of memory, and weakening of the lower extremities existed, while in the other periodical attacks of unconsciousness occurred. He considered that both cases belonged to that class which Dr. Hughlings Jackson has called optic neuritis with non-localising symptoms.—Mr. LUNN mentioned a case of double optic neuritis in which a cerebellar tumour was found and successfully removed. He also referred to a case of cerebral tumour which proved fatal after operation.

Mr. MAYO COLLIER showed a youth aged seventeen years on whom he had operated for Hallux Rigidus. Treatment by rest, tonics, and frictions was tried first without producing any effect, so the head of the metatarsal bone of the great toe was excised. The usual pressure caries was present on the under surface between the sesamoid bones and the head of the metatarsal bone. Locomotion was now completely restored without any changes in the functions or appearance of the foot.—Mr. BIDWELL considered that most of the cases of hallux rigidus could be relieved by forced extension under chloroform, after which the toe should be kept in a state of over-extension, by means of a plaster-of-Paris splint, for fourteen days.—Mr. YEARSLEY remarked on the combination of this condition with flatfoot.

Mr. MAYO COLLIER also showed a man aged thirty-two years who had been the victim of severe Trigeminal Neuralgia for over four years. On examination of the nose several mucous polypi, together with a piece of dead bone, were discovered. These were removed and the patient had not suffered any more from neuralgia. Mr. Collier pointed out that since the whole of the interior of the nasal cavities was supplied by nerve branches springing from the nasal ganglion of the second division of the fifth nerve irritation of the nose was almost the most frequent cause of trigeminal neuralgia.—Mr. LAKE drew attention to the more common situation of neuralgia in nasal cases and said that he was interested in the question of necrosis without even a suspicion of specific history.

Mr. KEETLEY showed two cases of Compound Comminuted Fracture of the Tibia and Fibula which had been treated by pegging and wiring of the fragments. He insisted on the necessity of keeping all the fragments even if several pieces of wire had to be inserted.

Mr. BIDWELL showed a man aged seventy-four years suffering from a Rodent Ulcer on the outer side of the left thigh. It had existed for four years and was of the size of a teacup. A portion had been removed for microscopical examination and was found to be typical of rodent ulcer. Mr. Bidwell recommended free excision, combined with immediate Thiersch's grafting.—Mr. BIDWELL also showed a boy aged seventeen years who suffered from a Warty Growth below the Jaw. This had arisen round the sinus formed from a carious tooth which had existed for five years. He considered that the warty growth was due to the continual irritation of the purulent discharge.

EDINBURGH OBSTETRICAL SOCIETY.

Chorea Gravidarum.—The Blood of the Newly Born Child.

A MEETING of this society was held on June 12th, Dr. A. H. FREELAND BARBOUR, President, being in the chair.

Dr. JAMES RITCHIE showed two Supernumerary Digits removed from a child three days after birth. Both grew from the ulnar side of the first phalanx of the little finger on each hand. The digits consisted of two phalanges and had small nails on them.

Dr. R. C. BUIST read a paper on Chorea Gravidarum in which he gave the histories of some cases as yet unreported and also a careful digest of 255 cases where this complication of pregnancy existed. In one case the movements were noticed to become less during the pain and more exaggerated after it had passed off. The child had two fits after birth. Two cases had for their cause an unruptured hymen and a polypus of the urethra. Both conditions were the source of

much pain, and on being treated the chorea accompanying the pregnancy disappeared. Of the 255 cases 66 had suffered from chorea previously to pregnancy, and 23 had had no previous attack; in 6 cases the chorea appeared at the onset of pregnancy. As regards age, the statistics show that it becomes increasingly less common after twenty-four years. With reference to the period of pregnancy when the symptoms began, it was found that 108 cases commenced in the first three months, 70 during the second three months, 25 in the last trimester, and 15 after labour. There were 45 fatal cases in 255 pregnancies where this complication existed, giving a death-rate of over 17·5 per cent. This is probably much in excess of the actual mortality, as minor cases are not reported and some of these deaths are due to other complications, eclampsia, albuminuria, &c. Induced delivery was effected in 21 cases, with fatal results in 9 cases. A considerable number improved after operation. The general prognosis depended partly on the degree of the symptoms, as the less severe the chorea the more hopeful was the recovery; 61 cases recovered before the onset of labour, 91 after the birth, and 7 became chronic. It was interesting to note that the patient may escape entirely in subsequent pregnancies. Appended to this paper was a table analysing the 255 cases—Professor SIMPSON remarked on the high mortality attending interference with the course of pregnancy, but believed this was due to delay in operating when serious symptoms were present, and where induction was only performed as a last resort.

A paper was read on some observations on the Blood of the Newly Born Child by Dr. GEORGE ELDER and Dr. ROBERT HUTCHISON. The blood of the child was obtained from the umbilical cord on tying it and thus the results show its condition immediately on birth; other observers have noted its composition after six to eight hours. The blood of the mother was obtained from the lobe of the ear. In the child the red corpuscles numbered on an average 5,346 000 per c.mm.; and thus from 350 000 to 500 000 more per c.mm. than in adults. During the first day or two they seem rapidly to increase, and afterwards decrease gradually. There is no difference in size or shape from those of adults. Nucleated red blood-corpuscles are present at birth in considerable numbers, but these vary greatly; on the second or third day they only saw a few and by the fifth day none could be observed. In the mother the red corpuscles in 16 cases varied from 2 to 5 millions per c.mm., and were thus below the normal average. The child had always considerably more than the mother, nearly always to the extent of 1 million per c.mm. It was thus found in these maternity cases that *anæmia* was the prevailing condition in the mother, and *plethora* in the child. In estimating the hæmoglobin the blood of the child was found to contain 95 to 115 per cent. of the normal average, so that each corpuscle was richer in hæmoglobin in the child than in the adult. In the mother the hæmoglobin was found to vary from 60 to 83 per cent., only two-thirds of the richness of the child's blood. The white corpuscles in the child were on an average 17 800 per c.mm. and thus roughly twice as much as in the ordinary adult. These observations gave the proportion of 1 white to 298 red corpuscles in the child, the ordinary proportion being about 1 to 500 in the adult. The number increased shortly after birth and then decreased proportionately with the red. The white corpuscles in the mother in 11 cases were found to have an average of 14 000 per c.mm., this being much higher than in the normal adult. In some cases the number was equal to that of her child. A few days after labour there was a marked decrease in their number, at least in those who nursed their children. From these observations it was very evident that there is no mixing of the maternal and foetal blood. Possibly the increase of hæmoglobin and of the number of red blood-corpuscles compensates for the absence of respiration. Dr. Milne Murray had mentioned in his investigations by spectrum analysis of foetal blood that he had found that in order to get a reduced spectrum he required to add seven times as much reducing agent as was necessary to reduce the mother's blood. The foetal blood was much richer in hæmoglobin than the mother's, but this showed also that the hæmoglobin was more chemically active, so that in the placenta on the maternal side the oxygen was loosely held, while on the foetal side there was very great attraction for it.—Dr. JAMES RITCHIE remarked that these observations showed that the quality of blood in the child was regulated by the quality in the mother, and it was necessary for them as practitioners to promote the health of the mother during pregnancy.

Reviews and Notices of Books.

La Thérapeutique des Tissus: Compendium des Médications par les Extraits d'Organes animaux Par le Dr. M. BRA. Paris: J. Rothschild, Éditeur. 1895. (*Tissue Therapeutics: A Compendium of Treatment by Organic Animal Extracts.* By Dr. M. BRA. Paris: J. Rothschild. 1895.)

THE alternative title of this work—"La Méthode Brown-Séquard: Traité d'Histothérapie"—indicates its scope and purpose. The author, a pupil of the late eminent physiologist, has fulfilled a task to which Professor Brown-Séquard intended to have devoted himself had his life been longer spared. This task was to collate the facts and observations relating to the new departure in therapeutics which he introduced in a somewhat startling and dramatic way by his account to the Société de Biologie of his personal experiences of the tonic effect of an orchitic extract injected hypodermically. It is pathetic to read the text of this first communication of his on the subject, and to hear the aged Professor relate how his physical and mental vigour were restored in a surprising manner by this simple expedient, and yet it is impossible not to admire the enthusiasm with which he advocated a method that almost promised to annul and arrest the natural decay of old age. Arguing from the marked physical and moral effects ensuing on castration in early life, and also on the results of inordinate exercise of the sexual glands, Professor Brown-Séquard inferred that these glands, above all others, supply the blood with principles which furnish energy to the nervous system and also probably to the muscular. He had, he said, long thought that some part of senile debility was to be explained by the withdrawal of their stimulating influence, and so long ago as 1875 he instituted experiments to test the value of his hypothesis. The issue of his researches is well known, and it has come to pass that sterilised extracts of the testes of young and vigorous animals have been prepared and prescribed for administration, mainly by the hypodermic method, for the treatment of neurasthenia, and even of organic diseases of the nervous system, besides a variety of affections such as tuberculosis, cancer, diabetes, and skin diseases. It is astonishing to find from the records here collected how wide has been the field on which this orchitic extract has been tried, and it is difficult to refrain from entering a grave protest at the irrational and extravagant claims that are advanced for its use. If but a tithe of the successes here described could be really substantiated we should possess in this animal extract not merely the most potent of remedies but one which ought to be universally prescribed. But, unfortunately, experience teaches that remedies vaunted the most loudly, and especially those which are ranked as panaceas, never fulfil the expectations of their advocates when tested by an impartial tribunal. The other animal organs which have been impressed into service of this kind of therapeutics comprise the ovaries, the cortical matter of the brain, the thyroid, the heart, the pancreas, the liver, the adrenals, muscle, the kidneys, the lungs, bone marrow, and the spleen—a list which calls to mind the contents of the witches' caldron, and the warranty for which is, with one striking exception, based on the most slender of grounds. Indeed, the author of this compendium himself points out that many of these extracts have not come up to anticipation. The ovarian extract, for example, has never gained much favour; "cardine," "nephrine," and "pneumine" are of little value in restoring the functions of a damaged heart, kidney, or lung. Nor can much be said in proof of the efficacy of extract of pancreas in diabetes, or of that of the liver in biliary intoxication. Undoubtedly

the singular efficacy of the thyroid treatment of myxœdema has done much to excite hopes of a similar good resulting from the use of extracts of other organs in affections where the functions of such organs are in abeyance; but it may be permitted to us to point out that the really positive results hitherto obtained have been mostly in connexion with glands that subserve some purpose in general nutrition, and that therefore there is more to be anticipated from the use of adrenal extract in Addison's disease, and of bone marrow in idiopathic anæmia, than from the use of "cerebrine" in mental disorder or of "nephrene" in Bright's disease. Whether it is quite legitimate to rank thyroid medication as one of the gains of the new principle introduced by Professor Brown-Séquard may perhaps be questioned, since its employment in myxœdema was strictly based on deductive reasoning from the known phenomena of cachexia strumipriva.

We confess our inability to assume any other than a sceptical attitude towards most of the medicaments here so exhaustively treated; but in spite of our belief that in a few years most of them will have fallen into oblivion we fully recognise the ability with which this book has been compiled. More than that, we think it is a book which needed to be written. It contains in the form most suitable for reference every detail regarding the preparation, physiological action, and therapeutical application of animal organic extracts, and the facts so gathered are marshalled with marked skill and candour. It concludes with an interesting summary of the "internal secretions," classified under the two heads of (1) those which maintain the composition of the internal medium, as the "secretion" of the spleen, of bone marrow, of vascular endothelia, and of the generative glands, and (2) those which protect the organism against self-intoxication (chemically acting glands), as the "internal secretion" of the liver, of the suprarenal capsules, of the pancreas, of the kidney, or of the thyroid gland. And the following are given as evidences of the insufficiency of such internal secretions: (a) of generative glands—diminution of the general activity of the nervous system; (b) of the pancreas—glycosuria, diabetes; (c) of the liver—appearance of morbid phenomena coexisting with icterus; (d) of the kidney—uræmia; (e) of the adrenals—asthenia, the chief symptom of Addison's disease; and (f) of the thyroid—myxœdema, cretinism. The work is one which should be read as indicating a remarkable phase in physiological theories; and in testimony of the cosmopolitan interest taken in the subject reference may be made to the letters prefixed to the volume from Dr. Constantin Paul, Professor Ewald, Dr. Byrom Bramwell, Dr. Emminghaus, and Professor Mendel.

Annals of Ophthalmology and Otolaryngology. Published by James Parker, St. Louis, Mo. Vol. IV., No. 2. 1895.

THIS part contains a considerable number of articles, some of which are of much interest. Dr. F. C. Hotz of Chicago discusses and opposes the views of Dr. Savage, who maintains that the oblique muscles are brought into action for the improvement of vision in cases of oblique astigmatism. Dr. F. B. Eaton of Portland draws attention to the discrepancy that exists between the laws of parallel ocular motion, as formulated by Listing and Helmholtz, and their statement and interpretation in text-books, and suggests various modifications of the views generally accepted. Dr. M. W. Zimmerman of Philadelphia contributes an article on Hypermetropia of High Degree, and points out, *inter alia*, that astigmatism is present in about 50 per cent. of hypermetropes of high degree, but decreases as the error becomes higher, and also that the principal complication is convergent strabismus, which is more frequent with lower degrees of the error. Dr. Chalmer Prentice of Chicago proposes a

new operation for the advancement of the recti, in which two small curved aluminium plates are employed over which the ligatures are tied. For the details of the operation we must refer our readers to the original. Dr. Maurice F. Pilgrim of Carbondale propounds the question, "Is Glaucoma curable without Operation?" and answers it in the affirmative, giving illustrative cases. Dr. Wendell Reber of Pottsville asks, "Is the Physiognomy of the Fundus Oculi in Epilepsy characteristic?" and from observations that he has had the opportunity of making on a large number of epileptics has arrived at the conclusion that in typical cases the optic disc is too abundantly supplied with capillaries, whilst it is grey in its deeper portions; that the scleral ring is sharply cut on the temporal side, that the retinal fibre layer is increased in thickness, especially above and below the disc, and that the retinal lymph sheaths are distended and opaque. Dr. W. Franklin Coleman of Chicago treats at some length the subject of Amblyopia ex Anopsia, which he holds may occur, basing his argument on the improvement of vision observed in strabismic eyes after operation. Dr. Charles Stedman Brill of New York records cases of Purulent Inflammation of the Eyeball and Orbital Tissue and Paralysis of the Ocular Muscles as possible Complications or Sequelæ of Influenza. Dr. Robert Saunders of Philadelphia describes an anomalous case of Interstitial Keratitis. Lastly, Dr. Frank W. Ring contributes a case of a thorn which remained buried in the sclera without occasioning inconvenience for thirteen years, when it worked its way out. The second part of the volume is devoted to Otolaryngology, and is chiefly occupied with a paper by Dr. M. A. Goldstein of St. Louis on Exfoliation of the Cochlea, Vestibule and Semicircular Canals; an account of an unusual case of Aural Deformity and operation thereupon, by Dr. J. Hollinger of Chicago; and an account by Dr. David N. Dennis of Erie of the Injector of Delstanché with Modified Middle-ear Lip.

The Schott Methods of the Treatment of Chronic Diseases of the Heart. Illustrated. By W. BESLY THORNE, M.D., M.R.C.P. London: J. & A. Churchill. 1895.

IN six short and very readable chapters the author gives an interesting account of the methods used in the treatment of heart disease at Nauheim. After giving an account of the waters of Nauheim and showing that effervescent saline baths may be used elsewhere, the effects of such bathing upon the pulse-rate and circulation generally are illustrated, the usual effect being a diminution of its frequency and increase in its force. Sphygmograms in proof are given. We may mention in passing that No. 6 of these shows that pulse pressure may be increased at the same time as pulse frequency. The pulse-rate of this illustration is not given, and our inference is based upon the sphygmogram. The therapeutic movements, which are conveniently and copiously illustrated, also result in retardation and increased force of the pulse. Their "immediate" effect is stated to be to slow the pulse. The sphygmograms given, however, show that the immediate effect is to quicken it somewhat, as is the case with all forms of exercise, although doubtless the result of such quickening by unloading the heart is the retardation usually observed. Incidental reference is made to Oertel's system of graduated mountain climbing, which is very properly considered advisable only after cardiac force has in great measure been regained. The author, however, omits to state that Oertel expressly advises flat walking—that is, gentle exercise—as a preliminary to carefully ascending heights. As is well known, Stokes of Dublin was the first to recommend this method of treatment in appropriate cases. All cases are said to be suitable for the Nauheim Kur except those in which there is advanced degeneration of the myocardium or considerable sclerosis of the vessels. In the sixth chapter Dr. Besly Thorne relates ten cases which

were successfully treated. The majority of these were cases of cardiac dilatation, and a minority presented evidence, not quite conclusive in our opinion, of organic valvular disease. We make no doubt, however, that many cases of organic valvular disease benefit under the carefully regulated exercises described. If we have avoided the language of enthusiasm in our remarks it is because of our conviction that in no sphere is such less appropriate than in that of therapeutics, a subject which scientific medicine must ever approach with the calm and judicial mind which regards with a healthy scepticism the panacea. The chronicle of failure is always an important adjunct to therapeutic works, for such unfortunately must occur under any system.

LIBRARY TABLE.

Diättherapie für Aerzte und Studierende. Von Dr. FRIEDRICH SCHILLING. Wiesbaden: Verlag von J. F. Bergmann. 1895. (*Dietetic Therapeutics for Practitioners and Students.* By Dr. FRIEDRICH SCHILLING. Wiesbaden: J. F. Bergmann. 1895.) — Dr. Schilling's little manual of Dietetic Therapeutics is likely to be useful to medical men and students, though it contains little that is not to be found in ordinary books on the practice of medicine. He does not advance any startling novelties, and although a few of the dishes and meals mentioned are more suited to German customs than to those prevalent in this country the general principles which guide the rules as to diet are those commonly acted upon by English medical men. Thus, after a confinement the patient is recommended to be kept on the diet suited for acute febrile cases until the fourth day, when meat may be allowed. The old custom of starving the woman for a week with the mistaken object of preventing "milk fever" is only mentioned to be condemned. In diabetes moderation is recommended in enforcing a purely proteid diet. Several pages are occupied in discussing the many forms of treatment that have been recommended for corpulency, and the author's remarks on this subject will well repay perusal.

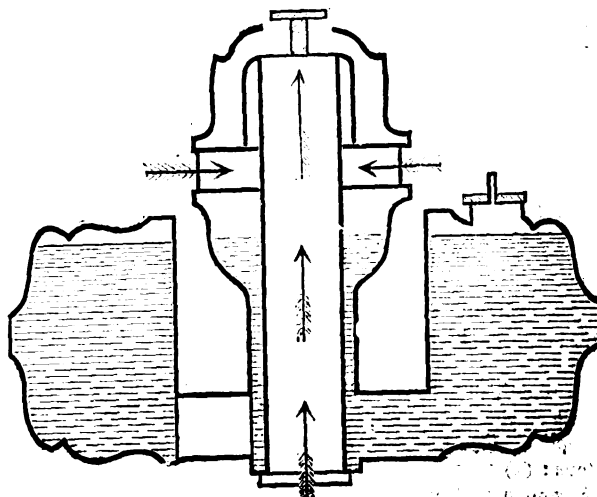
The Disorders of Speech. By JOHN WYLLIE, M.D., F.R.C.P. Edin. Edinburgh: Oliver and Boyd. 1894.—It is not easy to speak of this book in terms which would do it justice. It is, in the first place, one of the most complete treatises on disorders of speech in any language, and it is characterised by admirable arrangement and lucidity of expression. It is divided into three parts, the first dealing with functional disorders of the vocal mechanism, of which stammering is the most important and also the most interesting; the second with the development of speech and the developmental derangements; and the third with speech in its relation to the diseases of the nervous system. Such a plan is obviously comprehensive, and it may be said at once that the details of the plan are carried out in a manner which cannot fail to impress and to satisfy the most exacting critic. In the first part the view is definitely expressed—and, in our opinion, abundantly justified—that whispering is not purely an oral and lingual matter, but that the laryngeal mechanism is necessary for its production. Anyone who carefully considers what Dr. Wyllie has written on this subject can scarcely fail to be convinced of the correctness of his view. In this section the statement is made that abductor paralysis is exceedingly rare, much rarer than adductor, but this we would venture to call in question. No doubt abductor paralysis is not very common, but we cannot help thinking that the author must have overlooked the considerable frequency with which it is met with in cases of tabes dorsalis, especially in those cases in which laryngeal crises occur. The second part is very interesting, and the third is full of practical interest, perhaps erring a little on the side of being rather too definite in regard to the different forms of aphasia. But the book as a whole is, as we have

already said, admirable, and Dr. Wyllie is to be congratulated on the interest—the outcome evidently of intimate knowledge—which he has infused into the work, and the medical profession of this country on a most valuable scientific addition to its means of grappling with a very difficult, if most interesting, class of disorders.

New Inventions.

THE "ARIA" PATENT SAFETY LAMP.

WHETHER or no it is desirable that the flashing point of burning oils should be altered, so as to secure greater safety in their use, is a question which will shortly be decided probably by a Select Committee. The increasing number of accidents, accompanied in many instances by more than one fatality, points at any rate to the necessity of some increased precautions being enforced by the Legislature either in the direction of providing the public with safe oils or else by insisting upon the use of safe lamps. At the present time the heavy oils which might serve for lighting purposes are not very easy to procure, while there is some difficulty in getting them to burn as satisfactorily as the lighter petroleum. It is obvious, however, that provided the lamp can be obtained which will burn the heavier oils—that is, those oils from which the highly inflammable and highly volatile oils have been removed—with as good results as the lighter kinds at present supplied, the first difficulty, namely, that of procuring "mineral colza oil" easily and at a cheap rate, will soon disappear. The "Aria" lamp is constructed to burn both oils, but security is made doubly secure by employing an oil of as high a flashing point as 250° F. and of specific gravity 0.827, which it burns perfectly well and freely, giving a brilliant steady flame of high candle power. As will be seen in the accompanying illustration, it consists of two reservoirs—a large one like a hollow collar round the



centre of the lamp holding the bulk of the oil to be consumed, and a smaller or secondary open reservoir containing the wick. The advantages of this arrangement are that the air is constantly playing around the secondary reservoir, which keeps it quite cool, so that there is no heat conducted to the large reservoir at all; charring of the wick is avoided, because, although it is immersed in a small quantity of oil, yet obviously the level of the oil is maintained in the wick tube by the pressure of the oil in the large reservoir outside; and lastly, if the lamp is by any chance upset the flame is immediately extinguished. In the latter case the bulk of the oil is retained in the larger reservoir, which being anchor-shaped only in

the reversed position, contains and traps the oil, so to speak, in each limb. Besides this the air is free to rush in so rapidly as to put out the flame. Several experiments which we made convinced us of the safety of this lamp. Even the ordinary petroleum oil of comparatively low flash-point, such as that at present supplied for ordinary use, may be safely burned in this lamp, as the reservoir is kept remarkably cool by being freely surrounded with air. We also found that the flame is extinguished by the upsetting of the lamp. Thus on turning the lamp smartly upside down when fully alight the flame was instantly extinguished by the inrush of air with the production of a trifling volume of smoke and vapour. A feature of additional importance in this lamp is that a flame of full size may be obtained without raising the upper surface of the wick more than one-sixteenth of an inch above the top of the wick tube, the depth of charring consequently being very slight. The most important advantage, however, of the "Aria" lamp is that it will burn oils from which the inflammable or volatile portions have been removed, giving a steady, brilliant flame, emitting no smell, and absolutely free from any liability to explode or ignite even when upset. Under these circumstances the use of this lamp would amply compensate for any difficulty experienced in procuring those oils which at present are not in great demand, on account of the want, hitherto, of a lamp which would burn them with good results. This want, we venture to think, has now been satisfactorily supplied. The "Aria" lamp may be seen in operation at the offices of the Cheap Wood Company, 72, Bishopsgate-street, E.C.

A NEW ACCOUCHEMENT SHEET.

UNDER the name of "cusheet," Mr. John Milne, the Antiseptic Dressings Factory, Ladywell, London, S.E., has designed a new accouchement and operation sheet, which is well adapted to the purposes it is intended to serve. The sheet or pad is composed of cellulose, which is sterilised before being placed in an outer covering rendered antiseptic by treatment with corrosive sublimate. The cellulose is a powerful absorbent, is very soft, and the "cusheet" can be put to other uses besides those mentioned. Any size and thickness can be made to order, but the two feet square size is a convenient one, and the price—1s. 6d. each—is not too high to permit of the sheets being burnt, as they should be, after use.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary meeting of the Council was held on the 9th inst., the President, Mr. Christopher Heath, being in the chair.

A report, dated June 10th, from the Committee of Management of the Examining Board in England was approved and adopted. The committee made the following recommendations: (1) that the course of clinical instruction on diseases of women at the Southern Hospital, Manchester, given by Dr. W. J. Sinclair, be recognised as fulfilling the requirements of clause (d), paragraph 7, section I. of the regulations, so long as he shall hold the Professorship of Obstetrics and Gynaecology at Owens College, Manchester; and (2) that on the application of the Dean of Charing-cross Hospital Medical School the course of clinical demonstrations in lunacy, given by Dr. Percy Smith at Bethlem Hospital, be recognised so long as he shall hold the Lectureship in Psychological Medicine at Charing-cross Hospital Medical School.

A report, dated June 7th, from the Laboratories Committee was approved and adopted. The report dealt with the work in diphtheria for the Metropolitan Asylums Board,

and was as follows: "Examination of material for diagnosis.—Since March 11th 2180 specimens have been examined and reported upon. The Metropolitan Asylums Board have requested the committee to continue the work for the further period of six months, and the committee have agreed to do so subject to a slightly increased payment by the Asylums Board for the extra work involved by the number of cases per day being in excess of the estimate. It was anticipated that the daily average number of cases would not exceed twenty, whereas the cases examined are rarely below, and very frequently greatly in excess of, that number."

The director has undertaken, in conjunction with the medical superintendents of the hospitals, to report fully to the Metropolitan Asylums Board on the cases examined.

The Council decided that the bust of the late Sir Richard Owen, K.C.B., to be executed by Mr. Alfred Gilbert, R.A., should be of bronze.

A report dated May 17th from the President and Vice-Presidents on section 16 of the by-laws was approved and adopted; the Secretary of State had suggested that the first three clauses of this section should be condensed into a single paragraph as follows: 1. If any Fellow or Member of the College shall after due inquiry be judged by the Council to have been guilty of disgraceful conduct in any professional respect, he shall be liable to removal by resolution of the Council from being a Fellow and Member or Member of the College.

The Council abrogated and annulled the old by-laws and ordained the new by-laws and signed them. It was moved and adopted that section 16 of the by-laws as approved by the Home Secretary be read to the meeting of Fellows on the 4th prox., and that, inasmuch as the by-laws have now been sanctioned, the correspondence of the Society of Members and of the Council with the Home Secretary on the subject be not now reported to the meeting.

A letter was read from Mr. Charles S. Tomes resigning his appointment as a member of the Board of Examiners in Dental Surgery. The resignation was accepted, and the President stated that the vacancy thus occasioned, and also the vacancy caused by the expiration of the period of office of Mr. Ashley Wm. Barrett, would be filled at the quarterly meeting of the Council on July 11th. A letter of the 10th inst. was read from Mr. Thomas Bryant, reporting the proceedings of the General Medical Council. The thanks of the Council were accorded to Mr. Bryant for his services as representative of the College on the General Medical Council.

A letter of May 10th was read from Dr. Liveing, reporting the following proceedings of the Royal College of Physicians of London on May 9th—viz.: 1. The adoption of the report, dated April 22nd, 1895, of the Committee of Management. 2. The adoption of a resolution inviting the Royal College of Surgeons to appoint delegates to confer with a like number from the Royal College of Physicians as to what points should be urged or suggestions made before the proposed Statutory Commission for giving effect to the report of the Gresham University Commission, and to prepare a joint report to the two Colleges. 3. The appointment of the President, the Registrar, Dr. Norman Moore, and Dr. Allchin as delegates.

The Council, in pursuance of the invitation of the Royal College of Physicians, proceeded to appoint as the four delegates of the Royal College of Surgeons the President, Mr. Howse, Mr. Rivington, and Mr. Morris.

WIGAN MEDICAL SOCIETY.—An ordinary meeting of this society was held on June 13th, the President, Mr. Wm. Mitchell Moorcroft, being in the chair.—Mr. Brady showed a case of Compound Fracture of the Lower End of the Femur, which he had treated on a MacIntyre splint in a poor cottage with a very good result.—A paper on Alcoholic Insanity was read by Mr. Street, medical superintendent of Haydock Lodge Retreat. The subject was dealt with in an exhaustive and interesting manner. A discussion followed, when Mr. Jones, Mr. Blair, Mr. Brady, Dr. Rees, Mr. Lowe, Mr. Molyneux, Dr. Benson, and the President took part, the President dealing with the treatment of inebriates in licensed houses, and pointing out that the previous Acts require amending very considerably before the subjects can be efficiently dealt with. A hearty vote of thanks was accorded Mr. Street for his paper.

THE LANCET.

LONDON: SATURDAY, JUNE 22, 1895.

FOR the five vacant seats on the Council of the Royal College of Surgeons of England, to be filled at the election on July 4th, there is an ample supply of excellent candidates with evenly balanced claims and all on their own merits worthy of the suffrages of the electors and of a place on the Council. All may be said to have obtained in their respective spheres more or less distinction as practitioners and authors, and all have reached a position in the profession which justifies them in coming forward on the present occasion. If one may appear more brilliant another may be more solid; if one attracts us by his versatility another commends himself by his modesty and judgment; one may possess the energy and impetuosity of comparative youth, another the light of experience and the stability of age. Hence for many of the Fellows the task of selection must be difficult, and it would be so to ourselves if we had not some definite principles to guide us in our choice. To surgical repute, success in practice, and the pen of a ready writer, great weight is justly attached; but they ought not to be allowed to dominate the election in the present state of the relations of the College to the profession, or to override considerations which vitally affect the interests of the constituency. Old associations, the rivalry of schools, personal friendships and preferences play so considerable a part in every election that there is the more need for the display of that public spirit on the part of independent electors which makes everything subordinate to the welfare of the College and of the profession. From this point of view it is that known liberality of opinions and a determination to support such measures as will bring the Council into nearer touch and more harmonious relations with the constituency assume increased importance as qualifications for a seat on the Council at the present time, and such qualifications some of the candidates are known to possess.

To seniority in the Fellowship some regard should be paid. The election of a junior candidate over the heads of seniors may be necessary and even justifiable where principles are at stake, and in recent years there have been one or two notable instances of this. Under ordinary circumstances, however, and with otherwise equal claims, a senior candidate who would be a desirable addition to the Council is entitled to the preference. The sudden elevation of a junior candidate, whether in the appointment of an examiner or in the election to the Council, is rarely justified by the result and inflicts considerable hardship upon the senior candidate. In the present instance the candidates who are seniors to the others—viz., Mr. WILLETT, Dr. WARD COUSINS, and Mr. A. T. NORTON—happen to be the candidates with whose views the constituency is best acquainted and who are promoters of that policy of progress and reform with which THE LANCET has ever been identified. Without professing a complete agreement with all the details of the changes which the Association of Fellows advocates, and which, of course,

discussion both in the Council and outside it may modify, we gladly recognise once more the claims which the candidates supported by the Association have upon the favourable consideration of the constituency. Mr. ALFRED WILLETT (Fellow, 1862; Member, 1859) has served one full term of eight years on the Council, and is now one of the Vice-Presidents of the College. He has been a loyal supporter of the movement for conferring upon the Fellows a more influential voice in the affairs of the College. His re-election must be practically assured, but his faithful services ought to be acknowledged by his return at the head of the poll. Dr. WARD COUSINS (Fellow, 1860; Member, 1856) is well known as a frequent and original contributor to surgical science, as a picturesque speaker, and as possessing an aptitude for business as well as administrative ability. He would represent especially the southern section of the provinces, at present unrepresented, and would take the place of the late Mr. SIBLEY in his special acquaintance with the needs of the general practitioner. Mr. A. T. NORTON (Fellow, 1867; Member, 1862) we supported in 1893, when he ran so close a race with Mr. HENRY MORRIS and only failed to succeed by two or three votes. He has continued to be a staunch supporter of the cause of the Fellows, and was the chief exponent of the views of the Association of Fellows on the deputation which was received at the College last week by a committee of the Council. His success at the election would be a material assistance to the cause of reform. Mr. ALFRED COOPER (Fellow, 1870; Member, 1861) has attained a recognised position as a specialist, but has not taken any active part of late years in the politics of the profession, so that the constituency has not enjoyed much opportunity of becoming acquainted with his views on current questions. Mr. ANDERSON (Fellow, 1869; Member, 1867), Mr. J. N. C. DAVIES-COLLEY (Fellow, 1870; Member, 1863), and Mr. H. W. PAGE (Fellow, 1871; Member, 1869) are able surgeons and estimable and cultivated members of the profession. All three, however, are on the Court of Examiners, which already possesses four representatives on the Council. There are some who consider that membership of the Court of Examiners is a recommendation for a seat on the Council; but, as may be gathered from our remarks last week, we do not share this view. The duties of members of the Court of Examiners are very exacting, and during the examinations, which are frequent, leave little time for anything else. Moreover, experience has shown that the combination of the two offices of examiner and councillor has not been beneficial to progress at the College. Four members of the Court of Examiners are already members of the Council, and it would certainly be inexpedient to increase the proportion over one-half. There is so little to choose between the three that it is almost invidious to make a selection. Last year, however, when all three stood, we supported Mr. DAVIES-COLLEY on the ground that he was believed to be favourable to a new Charter for the College, and we see no reason to withdraw from this selection. Mr. H. T. BUTLIN (Fellow, 1871; Member, 1867) is an unexceptionable candidate with liberal proclivities. He is an excellent speaker, and his surgical work and attainments are too well known to need recapitulation. The same remark applies to Mr. TENNES (Fellow, 1878; Member,

1875), who, though last, is certainly not least. His capacity for work of an encyclopædic character rivals that of Mr. HUTCHINSON, who probably first inspired him as he has inspired many others at the London Hospital and elsewhere. Mr. TREVES is considerably junior to the other candidates, and it would not be, perhaps, the same hardship if his election were postponed as might be the case with regard to one or two other desirable candidates on the list.

We make these few remarks upon the candidates to show that our sympathies remain, as they ever have been, enlisted in the cause of good government at the College. It is our great desire to see cordial and harmonious relations established between the Council of the College and the Fellows and Members, in order that the status of the profession may be elevated and its organisation perfected. The Fellows will be able to judge for themselves who are the men best qualified to complete the work which has been begun, and we commend the respective claims of the candidates to their careful and earnest consideration. For our own part, we should select the five candidates to be voted for from the following list—viz., Mr. WILLETT, Dr. WARD COUSINS, Mr. NORTON, Mr. DAVIES-COLLEY, Mr. BUTLIN, and Mr. TREVES.

We have already noticed the reports for 1894 of the Statistical Committee of the Metropolitan Asylums Board, but we reserved the reports of the medical superintendents of the several infectious hospitals of the Board for separate notice. We have never failed to regard these reports with interest, and to derive great instruction from them. Never before or elsewhere in the history of the world have members of our profession had the chance of seeing and treating on such a scale the great groups of infectious disease which constitute so large a proportion of the sickness of the people. The number of cases of infectious disease notified last year was 34,203. No less than 62·9 per cent. of the cases of scarlet fever which are notified, 32·8 per cent. of those of diphtheria, and 15·9 per cent. of those of enteric fever find their way into these hospitals. The very least we can do in regard to such a mass of disease, taken, as it were, out of the hands of the profession outside, is to study the lessons taught us by the responsible medical officers who have charge of it. Our readers must anticipate with much interest the report of the medical superintendents on the effects of the antitoxic serum in the treatment of diphtheria, with which the hospitals of the Asylums Board are abundantly supplied through the kindness of the Council of the British Institute of Preventive Medicine. All the officers make allusion to this subject. We cannot too highly praise the caution and reserve with which the medical superintendents speak. While doing so in a tone of hope, they cordially realise the gravity of the question for the answer to which they have almost a monopoly of material. We trust that no pressure will be brought to bear on them to deliver a premature opinion. They will do much more for medical science by deliberation and delay and by applying to this treatment the most keen criticism than by any hasty judgment either for or against the remedy. Dr. GOODALL claims the whole of this year for the inquiries necessary. We do not think

he is unreasonable, though he will understand the anxiety of the public for an answer when he remembers that the disease to be combated is nearly six times more fatal than scarlet fever. It is, indeed, not a little remarkable that as time goes on, and other diseases are brought into comparison with it, scarlet fever seems to become almost a mild disease. The mortality of the different infectious diseases treated in the hospitals in 1894 comes out as follows: that of scarlet fever, 5·92 per cent.; of diphtheria, 29·29 per cent.; of enteric fever, 18·13 per cent.; and of typhus fever, 16·67 per cent.

There seems, indeed, a danger that we should come to think too little of scarlet fever. It still constitutes the great bulk of the material of the work of these hospitals; but its comparatively low mortality and the somewhat sanguine estimate of what our enormous and costly isolation arrangements can do suggest the thought that it is in danger of being too lightly regarded. We may do well to remember that fluctuations in its mortality have always been recognised and that we may be now in the middle of a period of comparative mildness. As to the power of the system of isolation hospitals, one of the most respected medical superintendents, Dr. BIRDWOOD, goes so far as to say that the time has arrived when an attempt to exterminate scarlet fever might be made. It is always, of course, right to be attempting extermination, and every local curtailment of the disease shows how possible is its complete control. Such curtailment is by no means confined to the hospitals of the Asylums Board and is often to be seen in comparatively humble homes. But with such numbers as have strained the accommodation of the hospitals during the last two years, and with many instances of the apparent conveyance of the disease by patients returning home from the hospitals, it does seem a little premature to speak of the extermination of disease. The idea is, perhaps, more reasonable in regard to small-pox in the metropolis, the mortality from which sometimes reaches a vanishing point. Thus in 1838 the annual mortality from small-pox (see table on page 35 in the volume of these Reports) was 2161 per 1,000,000, in 1891 it was 2 per 1,000,000, and in 1894 20. But here we have means of control which we have not in scarlet fever. As examples of the concurrent incidence of two infectious diseases in the small-pox hospital ships no less than 44 cases of scarlet fever occurred in the course of the year. Dr. GOODALL states that 2 fatal cases of scarlet fever were complicated with puerperal fever on admission. Diphtheria still has an unpleasant tendency to occur in convalescents from scarlet fever in these hospitals, and at such a stage of the primary disease as to negative the idea of its having been contracted before admission. But on the whole the cases of this occurrence have been less frequent than in some previous years.

It is right that we should be reminded in these reports of the occurrence of errors of diagnosis. We have had occasion before to observe that the largest number of errors noticed was at the Eastern Hospital. The ascertained errors here were 3·7 per cent. of cases of certified scarlet fever, 17·5 per cent. of certified diphtheria, and 25·8 per cent. of enteric fever. The last is a large proportion of error, but it is touched upon kindly and somewhat apologetically.

by Dr. GOODALL, who remarks on the difficulty of an early diagnosis and the danger of a late removal. Granting that an early removal is desirable when the disease is ascertained, we still think that an error of 25 per cent. is one which should be largely reduced, and that while early diagnosis is an urgent duty there is no excuse for excessive haste. Some illustrations given of errors of diagnosis in small-pox are important. Eleven of these were—rötheln 2, varicella 2, measles 1, acne 1, impetigo 1, erythema 1, syphilide 1, exfoliative dermatitis 1, and no symptom of disease 1. In some cases the disease was not diagnosed. It would be wrong not to emphasise such facts and to impress on all medical men that, though errors of diagnosis are occasionally inevitable, they should be reduced to a minimum for the credit of the profession and the benefit of our patients. We cannot conclude our consideration of these reports without a word of praise for the care with which they are drawn up and a word of sympathy for the medical officers and the staff, who work at no small personal risk, as the reports show. The Chaplain of the South-Eastern Hospital died from scarlet fever, and Dr. MACCOMBIE was laid aside for four and a half months suffering from diphtheria.

THE approaching revision of the British Pharmacopœia and the arrangements connected therewith formed items of considerable interest at the recent meeting of the General Medical Council. Historically, the proceedings are well worth comparing with those of last November; but where so many points have been gracefully conceded it would serve no good purpose to revive recollections of discussions upon which we commented at the time. It is a far more gratifying task to consider the present arrangements for the performance of the onerous task of revision, and to pass briefly under review the various directions in which revision appears to be most needed.

At the outset it must be frankly admitted that the present Pharmacopœia was, at the time of its production, one of the most satisfactory works of its kind that has ever been issued in this country. Those who are prone to destructive criticism seem never to weary of pointing out errors, inconsistencies, or redundancies in the Pharmacopœia, but we imagine that there are few books—and certainly no scientific books—which could endure the close criticism of daily reference for ten years without possibilities of improvement or alteration being suggested in numerous directions. In these days every branch of science moves quickly; what was true or relatively true ten years ago is probably at variance with accepted theories of the present day, and therefore change is to be desired, and, indeed, welcomed, though the changes must be made with caution, and even with reverence. Wholesale changes, which would produce a new volume with no likeness to the existing Pharmacopœia, are to be deprecated, and are, indeed, impossible unless the whole object and scope of the book are to be altered—and this would manifestly be contrary to the Act which provides for the publication of the Pharmacopœia by the General Medical Council. It would be easy to carry the desire for change too far, and to spoil a book whose main faults are that it is ten years old and that it stands in need of revision. Many

chemical tests and some of the formulæ and nomenclature require to be brought up to date, while the botany, with which, in the medical profession, we have less concern, needs many changes. Some of the official preparations, even some of those included in the Addendum, appear not to have found favour with prescribers and dispensers, while numerous drugs which are still employed to some extent are generally believed to be wholly inert, and would scarcely be missed if they were silently dropped out.

The present arrangements for the revision do not indicate the probability of any revolutionary changes, while they seem eminently calculated to ensure accuracy, or at least to render the book representative of the most modern teaching and experience. We are glad to see that, as before, the President of the General Medical Council, Sir RICHARD QUAIN, is Chairman of the Pharmacopœia Committee; the committee now, however, comprises four English members, two Scotch, and two Irish. This extension of numbers is a satisfactory improvement on the formerly proposed smaller consultative subcommittee; the addition of new names will be pleasing to the respective divisions of the United Kingdom concerned, and should lead to due consideration of the divergencies of practice which are believed to exist. This committee is to have charge of all matters relating to the preparation and publication of the Pharmacopœia, and the appointment of Dr. TIBARD as secretary will, it is to be hoped, tend to ensure a due recognition of the requisite changes in the Pharmacopœia from the student's and from the examiner's point of view. It has often been urged that teaching does not form one of the objects of a pharmacopœia, but it is none the less true that the book in question constitutes the framework of all English books of materia medica; hence it is of much importance to consider how far changes may affect the teaching of the future. The appointment of Professor ATTFIELD as editor guarantees that the present general scope and arrangement will be retained; we have often commented favourably upon his work, especially in connexion with his annual reports upon the progress of pharmacy, which present one at least of the aspects under which the work of revision must necessarily be considered; these reports have indicated that no pharmaceutical criticisms have escaped his observation, and augur well for the accuracy of the volume in this respect. The chief change, however, in connexion with the revision is the intention to submit certain points to well-recognised authorities in their respective branches, who are to be asked to act as referees and to advise the committee upon numerous questions in which special knowledge of the highest kind seems essential. The names of Mr. THISELTON DYER and Mr. HOLMES as referees in botany, of Dr. THORPE or Dr. RUSSELL as referee in chemistry, and of Dr. LAUDER BRUNTON, Professor FRASER, and Professor WALTER SMITH as referees in pharmacology and therapeutics will sufficiently indicate the desire of the Pharmacopœia Committee to leave no stone unturned in the endeavour to render the revision as perfect as possible; and, at the same time, their position as referees shows that while there is every desire for accuracy there is equally no intention to arrange for the production of a volume in which any special branch of study should be

allowed an undue predominance. The amount of labour that must be expended is sufficiently shown by the report of the Pharmacopœia Committee.¹ As on a former occasion, the various medical authorities have been appealed to for information, and many have responded with "communications of great value." Evidence as to the relative frequency of employment of certain drugs and preparations has been furnished from two points of view, from a careful inquiry addressed to medical men and from a similar inquiry obtained from the Pharmaceutical Society. Communications have also been sent from the Colonies and from India. The committee of revision, therefore, has an enormous amount of material to deal with, and it is to be hoped that it will see its way clearly to winnowing the wheat from the chaff, and to utilising only those suggestions which appear to come with sufficient practical authority. In 1895 an independent spirit was maintained, and the committee did not follow implicitly all the suggestions which were made, whether for additions or for omissions, and we fully anticipate that a similar course will be now pursued, and that ultimately the bulk of the book will be found to have undergone no very great alteration. Rearrangement and condensation will probably suffice to afford space for the limited number of new drugs which have come into general use during the last ten years; hence it may be anticipated that the new Pharmacopœia will be found to be diminished rather than increased in size. The arrangements for revision and the amount of material already contributed and collected afford ample grounds for believing that Sir RICHARD QUAIN, in his presidential address, was not unduly sanguine in expressing his conviction that the forthcoming edition of the British Pharmacopœia would be "one worthy of the Council under whose direction it is issued."

Annotations.

"Ne quid nimis."

THE CASE OF SURGEON LEA, R.N.

SURGEON LEA of H.M.S. *Ringarooma* was on April 30th last tried by court-martial at Sydney on charges of insubordination and contempt in regard to his superior officer, Captain S. A. Johnson, in command of that vessel. The trial lasted three days and resulted in the following sentence: "The court, having unanimously found the charges against the prisoner proved, commands him to be dismissed from Her Majesty's service." The sentence was subsequently confirmed by the admiral. But the matter cannot be allowed to end here. We have carefully read the evidence and proceedings as reported in the *Naval and Military Record* of the 13th inst. Surgeon Lea represented that it was essential to his case, and for the justification of his conduct in the matter, that the state of health of Captain Johnson should be made the subject of evidence and investigation, but the court held that the question of the health of the captain was immaterial and had nothing to do with the charges on which Surgeon Lea was being tried, and refused to go into the subject. Surgeon Lea was told, however, that he could, in the course of any statement he might make, bring the question of the

captain's health before the notice of the court. It is stated that he had over fifty witnesses, including many medical men, but as much of their evidence bore upon the mental condition of Captain Johnson it was refused by the Court. In the course of his statement in his defence, Surgeon Lea urged that at the time of the occurrence out of which the charges arose the captain was mentally deranged and unfit for duty, and in corroboration of the correctness of this opinion he entered very fully into what may be termed the previous medical history of this officer. Moreover Surgeon Lea urged, and was able to prove, that he was himself subsequently transferred to the *Dart* and unconditionally released from arrest by the commander of that vessel. The evidence and proceedings of the court-martial as recorded by our Service contemporary are presumably incomplete. Under all the circumstances of the case, and considering the unsatisfactory nature of the evidence, and that Surgeon Lea has served nearly twelve years in Her Majesty's Navy with an unblemished record and is very heavily punished by the sentence of the Court, we are decidedly of opinion that the matter calls for further careful investigation by the Admiralty authorities in this country.

EYESIGHT AT SEA.

WE should much like to know what action has been taken by the President of the Board of Trade in regard to the testing by an expert of the vision of sailors both as to acuteness and to colour. It will be remembered that on Feb. 1st last a deputation of nearly all the most distinguished ophthalmic surgeons in Great Britain waited upon the President of the Board of Trade and strongly urged him to take immediate steps to subject everyone whose avocation is to conduct or control traffic, whether at sea or on land, to tests which should be at least sufficient to protect travellers from preventable causes of disaster. It cannot be too strongly insisted on that the great ocean steamers move at the rate of from fifteen to twenty miles an hour, and that consequently when two are steaming in opposite directions they approximate at the rate of a mile in two minutes or less, so that a look-out whose vision is six-twelfths—a defect that is by no means uncommon—would have very few minutes to distinguish and avoid a vessel steering stem on in the opposite direction. Mr. Caldwell's letter in our issue of last week is sufficient, even if it stood entirely alone, to show the imminence of the danger to which all passengers are constantly exposed. In that letter Mr. Caldwell states that on a trial trip he discovered a fresh hand who was the possessor of a glass eye. This circumstance led him to examine all the men on duty for that night, with the result of finding that the man on the opposite side of the bridge also had imperfect vision. These men were excused from night duty; but the very next night, whilst running down the Channel, the Cunard liner on which Mr. Caldwell served missed almost by a hair's breadth a collision with an East Indiaman. Mr. Caldwell justly remarks that it is impossible to say what would have been the result if these two men with imperfect vision had been on the look-out that night. But if short shrift is allowed to those with imperfect sight at sea to determine the course and position of an opposing vessel, how much more necessary is quick and accurate vision and correct perception of colour in those who drive our modern railway engines when running at from fifty to sixty miles an hour. Instead of minutes, a few seconds may here lead to vast loss of life and property. Every engine-driver and every stoker, for if the engine-driver breaks down the stoker must act, should have perfect distance and perfect colour vision. Sooner or later this must be ascertained. Sooner or later an expert must be appointed, and if this is to be done why then should it not be done before rather than after the

¹ THE LANCET, June 15th, 1895.

accident which, without such supervision, is sure to come? From Mr. Stuart Brooke's letter in our last week's issue the East Indian Railway, the largest undertaking of the kind in India, has made its medical officers responsible for the sight and colour vision of its employes, and has thus made every endeavour to protect the travelling public from accidents attributable to this cause. If it can be done in India why cannot it be done in England? We travel more than any other nation in the world, and it is only right and fitting that our risks should be reduced to a minimum.

THE ABUSE OF STREET COLLECTIONS.

It may seem ungracious to check the kindly impulses of the charitable, but we must enter a grave protest against the growing practice of street collections, which, if permitted to continue uncontrolled, can only have one effect, and that a disastrous one, upon the cause of charity itself. It would almost seem as if the promoters of charities of all kinds, good, bad, and indifferent, had found it to be more profitable for the cause they champion to sit at the street corners or perambulate the footways with money-boxes than to deluge the householder with circulars and appeals. Doubtless they are justified from their standpoint in this change in their mode of attack upon the purse, but its very aggressiveness will in time do much harm to collective charity. The "man in the street" will not discriminate between the different objects for which he is importuned in this fashion, and, following the wholesome rule he applies to the vagrant beggar, he will resolutely abstain from responding to any such appeal in person. We fear, too, that the abuse of this practice will react injuriously on causes which really deserve recognition, and that the apathy of the Londoner, which has been so strikingly evinced in respect to Hospital Sunday, will be confirmed and extended by reason of this importunity.

THE ORIGIN OF MASSAGE.

DR. FORESTIER of Aix-les-Bains has an interesting paper in *Le Progrès Médical* of May 25th last on the Origin and Terminology of Massage. The physician of l'Hospice Evangélique is of opinion that the method of treatment now known as massage was first introduced into Europe by some of the returning members of Bonaparte's Egyptian expedition of 1799, and relies for his information upon a book entitled "*Des Eaux Thermales d'Aix en Savoie*," published at Chambéry in 1808. Dr. Daquin, the author of the work in question, after a passage *à propos* of the douche, speaks of the manipulations and frictions which were observed by Captain Wallis amongst the aborigines of Otaheite, and then proceeds as follows: "Those who followed the Emperor Napoleon in Egypt inform us that this method was also in existence amongst the people of that country, and that it was employed after the bath; the name of *massement* has been given to it, and it is administered to the person whom they want to *masser* by rubbing successively the entire surface of his body. According to this account I think that this operation, which strikes me as a very salutary procedure, might with great advantage be put in practice, after their bath or douche, upon those who make use of our thermal waters." Dr. Forestier is satisfied that this evidence is conclusive; but if confirmation of the antiquity of the term massage be needed it is forthcoming. In 1838 Dr. Despine produced a work under the title, "*Observations de Médecine Pratique faites aux Bains d'Aix en Savoie*" (Annecy, 1838), and in it the following passage is to be found: "Since the renaissance of our Thermes in 1816 we bathe and we douche we scrub, we *masse*, we *stew*." As regards the etymology of the words *massage*, *masseur*, &c., Dr. Forestier believes that they are derived from the

Arabic by a species of transliteration. He has been told by a native of Egypt that at the present time the word "*matz*" is used to indicate the operation of massage, and seems to pin his faith to the assertion. We are not aware that there is such a term current in modern Arabic, but there is another way of accounting for the origin of the name "*masseur*" which we have much pleasure in bringing to Dr. Forestier's notice. The country which we call Egypt is, in reality, Masr, which is commonly pronounced *Musser*. If the process of massage was really introduced by one of Napoleon's Savoisien medical men, what more natural than the bestowal upon its professor of the name of the country whence he brought it: the new art hailed from Musser, and hence the person who practised it came to be called a *masseur*?

THE NEW LOWER SCHOOL AT THE ROYAL MEDICAL BENEVOLENT COLLEGE.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, whose interest in medical politics has before now been prominently manifested, has consented to lay the foundation stone of the new lower school buildings at the Royal Medical Benevolent College, Epsom. The day fixed for the ceremony is Tuesday, July 9th, and full details will shortly be issued. It is an interesting coincidence that about forty years ago His Royal Highness was present upon the occasion when his father, the Prince Consort, opened the buildings of the original Royal Benevolent College. The Prince Consort had by previous promise arranged to lay the foundation stone of the building, but was prevented from doing so by an attack of measles.

THE EVICTION OF MR. T. M. WATT.

THE eviction of a medical man from his home may be the greatest hardship that can be inflicted upon him, and from the case of Mr. T. M. Watt no single element of hardship would seem to be absent. He has resided at Hovingham for twenty-four years, and has now been turned out of his house by his landlord, Sir William Worsley, whose opponent he has been in rural politics. He had invested all his capital in his practice, and the action of Sir William Worsley must go far to deprive him of his livelihood, for on geographical and other counts no chance remains for him in an attempt to hold his own against a rival established in his old headquarters. With regard to Sir William Worsley's perfect legal right to treat his own property as he chooses and to re-enter into its possession at any time that his legal covenants permit him to do so, there can be no question. On a minor point as to the correctness of the wording of the notice to quit, the legality of his action was unsuccessfully disputed by Mr. Watt; but on the broad case there can be but one opinion—Sir William Worsley has acted within his legal rights. We propose to consider his conduct, however, on the lines of his duty towards his neighbour, and viewed in the light of the written words of the Book of Common Prayer and the unwritten code of common sense we find Sir William Worsley, wanting in charity and reason. It has been Mr. Watt's duty, as he conceived it, to oppose the head of the village in questions of rural policy. Therefore he must go. We cannot conceive a step more damaging to the order to which Sir William Worsley belongs—the English squirearchy of which it was an English fashion to be proud—than such arbitrary exercise of authority, albeit legal. Why should Sir William Worsley judge for the villagers of Hovingham and district what medical man they should employ? But by driving out Mr. Watt and supporting a successor to him that is precisely what he will do. And in questions of public health, why should not the medical man, who knows the technical

ins-and-outs of hygienic questions, attempt to secure for his patients the most sanitary environments in his power? He would be wanting in his duty to those under his charge if he did otherwise. The indignation of the neighbourhood has been gravely roused at Sir William Worsley's behaviour, and we are not surprised to learn it, for a more high-handed course of action than that pursued by him has never come under our notice. We speak from the statement laid before us by Mr. Watt, which, we may add, has been widely disseminated for some days in a very important local paper—the *Leeds Mercury*. The statement has, we believe, never been denied, and we are compelled, in registering our heartiest sympathy with Mr. Watt, to believe that no denial is possible.

THE DWELLINGS OF THE POOR.

THE need of comfortable and home-like dwellings for the poor has been so often and so urgently insisted on that it seems a work of supererogation to refer to it again. Despite all the efforts that have been made, the money that has been spent, and the labour that has been ungrudgingly given, an enormous amount still remains to be done, and one of the agencies for lessening this amount is the body whose report for 1894 lies before us—namely, the Mansion House Council on the Dwellings of the Poor. This council takes note of insanitary houses and arrangements and calls the attention of the local authority to the same. If no good result follows this step the members of the Council take the matter into their own hands. One important point upon which the report lays stress is the need of one uniform standard of sanitation for London so that the present diversity of opinion, by which one magistrate upholds what another will condemn, may be done away with. The report mentions with righteous praise the "cottage homes" projected and worked by Miss Octavia Hill. These homes are artistic, comfortable, and infinitely more homely than the barrack-like "models" which exist in so many parts of London, and, we are sure, exert a far greater influence for good on those who live in them.

HOUSE SURGEONS AND CORONERS' INQUESTS.

THE question of the payment of members of the resident staff of a hospital for evidence at inquests is always arising. Last week the house surgeon of the Metropolitan Hospital, having been required to make a post-mortem examination on a patient who died in that institution, and to give evidence at the inquest, complained to the coroner that he received no fee, and mentioned that the necropsy alone had kept him for three hours from his ordinary duties. The coroner, Dr. Wynn Westcott, expressed his regret, but declared that he had no power to allow the witness a fee. The law on the subject is contained in the Coroners' Act of 1887 (50 & 51 Vict., cap. 71), which, after mentioning the fees which may be paid to medical witnesses at inquests, has the following paragraph: "Where an inquest is held on the body of a person who has died in a county or other lunatic asylum or in a public hospital, infirmary, or other medical institution, or in a building or place belonging thereto or used for the reception of the patients thereof, whether the same be supported by endowment or by voluntary contributions, the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid shall not be entitled to such fee or remuneration." The injustice of such a practice is obvious, for not only has the house surgeon often to go some distance to attend the inquest, but he is liable to a fine of £5 (as the very next paragraph declares) should he not obey the summons. If the death occurs just outside the hospital the house surgeon, if called as a witness,

does receive a fee, but if the patient dies five minutes later no fee can be demanded. The resident medical officers of hospitals, like the majority of medical men, do a great deal of work for which they do not receive any remuneration, so that it is unreasonable to ask them even to give evidence without a fee; but it is still more unjust to expect them to perform post-mortem examinations without any remuneration.

"THE HOMŒOPATHIC TREATMENT OF DISEASE."

UNDER this title there appeared in the *Echo* of May 29th a letter signed "Arthur de Noé Walker, M.D.," announcing on "reliable" authority "from Italy that Professor Baccelli, teacher and lecturer of (*sic*) clinical medicine at Rome and Minister of Public Instruction, has instituted a 'Cathedra (*sic*) Omeopatica,' aggregated to the University of Naples and already frequented by about 200 students." Inquiry at headquarters—"Il Direttore della Segreteria della Regia Università di Napoli"—has elicited the brief but conclusive statement "che in questa Università non c'è insegnamento di medicina omeopatica" (that in this university there is no instruction in homœopathic medicine). From all that we know of his Excellency Dr. Baccelli, a homœopathic chair is about the last adjunct to medical teaching that he would institute. As President of the Accademia Medica di Roma and as sometime Professor of Clinical Medicine in the Roman school his precept and practice are as diametrically opposed to the "homœopathic heresy" as the most rigid allopath could desire. The announcement, indeed, that he had affiliated to the Neapolitan school a chair of homœopathy is about as credible as would have been the statement that to the nineteen sections into which the work of last year's International Congress of Medicine and Surgery was distributed he had added a twentieth in honour of the disciples of Hahnemann.

MUSIC IN MEDICINE.

OUR genial and inimitable contemporary *Mr. Punch*, amongst whose warm admirers we are glad to rank ourselves, makes the suggestion that music may have some therapeutic virtue the subject of a most amusing sketch in his issue of June 8th. It takes the form of "Notes from a Patient's Diary." On Monday "feel rather out of sorts to-day; send round for the doctor. He shakes his head gravely and produces stethoscope. I protest that there is nothing wrong with my lungs, but he explains that he treats all his patients by music nowadays; supposed stethoscope turns out to be a cornet on which he performs selections from 'Il Trovatore' for my benefit. Later on in the day a small musical-box arrives, labeled 'to be taken twice a day.' Find it only plays one tune out of 'Rigoletto.' Pitch it out of the window." Tuesday and Wednesday witness various adventures in the pursuit of music as a remedy. On Thursday the patient "is aroused by five barrel-organs performing simultaneously under my next-door neighbour's window. Send a note round suggesting that they should be dispersed. Answer, 'Sorry to cause annoyance, but our youngest child is suffering from chicken-pox and has been ordered street music every three hours.' Go out to buy an air-gun. Later in the day, happening to take up THE LANCET at the club, I find a long article on 'The Treatment of Pleurisy by Beethoven's Fifth Symphony in C Minor.'" Friday's adventures are not less diverting, and our only regret is that our contemporary did not pursue the subject further. The sketch is a good example of the admirable humour in which *Mr. Punch* is unrivalled. To reply seriously to such genial satire would argue unusual obtuseness on our part. The rôle of music as a therapeutic agent is, no doubt, a very limited one, and its application to, say, pleurisy had not occurred to us until we read our contemporary's article! The medical

profession is accustomed to suggestions from outsiders, and can only regret that such suggestions so seldom add to the resources at its command. If on some future occasion we should recur to the subject of the less familiar *armamenta medicinae* we might do worse than give honourable mention to the perennial stream of pure and never vulgar wit which flows from the columns of our leading comic journal. We know of no better remedy for the fatigue that comes of incessant literary work than to dawdle over an old volume of *Mr. Punch*—and is he not seen in the waiting-room of every consultant?

THE YORKSHIRE BOILER EXPLOSION.

THE village of Warrenby, some two miles from Redcar, has been the scene of a most appalling and probably the most destructive boiler explosion that has ever occurred in the North of England. On Friday, the 14th inst., at about half-past nine o'clock in the evening, twelve of the fourteen boilers attached to four furnaces in full blast at the Redcar Iron Works suddenly burst, with the result that nine men have lost their lives and others have been terribly injured. The boilers were of the "egg-end" type, 60 feet long and 4½ feet in diameter, placed close together side by side. The pressure per square inch has ordinarily been 60 lb., and the boilers have, it is stated, been officially inspected regularly once a month. So great was the explosion that five of the boilers were lifted from their beds and forced backwards to a considerable distance, while brickwork and pieces of iron were hurled for distances of 200 yards or more. This very great violence, however, singularly enough, probably lessened the number of casualties, for many of the missiles were carried far above the heads of the workmen, and had it not been for the flood of boiling water in which the men standing near were caught the damage to life would no doubt have been surprisingly small. About 400 hands were employed at the works, and as it will be some months before the damage can be fully repaired the distress in the little village of Warrenby, which practically owes its existence to the ironworks, is likely to be great. Until the Board of Trade's report is announced it is impossible to state the cause of the catastrophe, but the terrible disaster furnishes a lesson which should not be passed unheeded. Soon after the accident a large staff of medical men were on the spot, but the injured who could not be taken to their homes had to be carried on stretchers through Redcar to the North Ormesby Cottage Hospital. Surely near all large works where a number of workmen are employed some better provisions might be made for cases of this kind, and we trust that workmen will move in the matter in their own interests.

THE DUTY OF ATTENDANTS ON THE INSANE.

WE have received from Messrs. Potter, Batten, and Davis, of Clapham Common, a copy of an address to asylum attendants by the Rev. Henry Hawkins, Chaplain of the London County Asylum, Colney Hatch. This address, dedicated by the well-known Chaplain of Colney Hatch to his fellow workers among the infirm in mind, is well worthy of consideration by all attendants upon the insane, though it is more particularly directed by title to those who are off duty or invalided. Without taking a formal text he recalls how it was once said to men who were over-wrought, "Come ye yourselves apart into a desert place and rest awhile," and to those asylum attendants who are laid up by illness he gives useful words of advice. We may be allowed to differ from him as to an attack of illness being always a suitable time for the individual to minutely cross-examine himself as to the conduct of his life from the earliest years, such introspection being apt to pass into morbidity;

but we quite agree with him that a temporary retirement from a person's usual occupation may have its profits and advantages. The asylum attendant has not always been, and is not always, strictly mindful of the necessity of conscientiously keeping the rules of the institution he belongs to when his superior officers are out of sight; he may not be considerate to his fellow workers if they are ill; he may be tyrannical to younger attendants or may connive at negligence; and, more important than all, he may not have done his duty to patients in the matter of kindly speaking and in avoiding roughness in handling them, and to all these points the Chaplain of Colney Hatch draws attention. He speaks, further, of the advantage of a season of illness in affording a much-needed rest to mind and body. Asylum attendants are exposed to much wear and tear of mind and body and are in need of frequent opportunities for rest, quite independently of illness. The ordinary hospital nurse has long hours, but is not usually exposed to most irritating abuse, or even personal violence with possibly permanent injury, and has not a constant legal responsibility hanging over her. Mr. Hawkins urges on attendants—and the lesson needs to be impressed upon them not only in sickness but in health—the duties of sympathy with suffering, sympathy with fellow workers, patience, and conscientious work. We are sure that among asylum attendants are to be found many who carry out their duties without the slightest reproach, and the system of training attendants and examining them as to their suitability for nursing the insane which is now carried on by the Medico-Psychological Association tends to add to their number; but there are others for whom the same cannot be said and who would be greatly benefited by a perusal of the address we have been considering, and therefore its circulation among attendants upon the insane would, we think, be productive of good results.

A YEAR OF SUCCESS IN THE PREVENTION OF CRUELTY TO CHILDREN.

NEVER probably during the whole period of its existence has the National Society for the Prevention of Cruelty to Children delivered its annual report in a tone of such exultant gratitude as at its meeting in the Mansion House on May 14th. Nor is it in this without justification, either as regards its social and financial position or the extent and success of its operations. Its income shows an increase of £14,400 on that of last year, and against this there is a relatively marked decrease in expenditure. The number of cases investigated during the year is greater by 3477 than that of the previous year; and it is significant of the judgment exercised by the society's agents that only 4 per cent. of the cases brought into court have been dismissed. Finally, the society has not been forgotten by our Sovereign in the year's distribution of honours, and is to be congratulated on the acquisition of a Royal Charter of incorporation. There need be no surprise, therefore, that so great a measure of success, well-earned as it has been, should have called forth the warmest expressions of satisfaction at the meeting referred to. Lord Iddesleigh and Mr. Rider Haggard both spoke in support of a motion which "would respectfully impress upon magistrates the importance of supporting the society's endeavour to enforce the discharge of parental duty." There is without doubt some ground of necessity for this very moderately worded protest. Some members of the judicial bench, it is to be feared, are still unduly impressed with the sentiment which holds that home is a castle hardly to be entered, even though it be misgoverned by an unnatural parent. It is to be hoped that this fallacy will not long be maintained in the face of both justice and domestic happiness, and that Mr. Haggard's counter maxim, which makes

the child's home to be "much more his castle," will become a part of our national creed. The reluctance of magistrates to convict in cases of cruelty is in all probability due in no small degree to the fact that the children brought before them do not always show the obvious marks of violent ill-usage. Cruelty is capable of many subtle modifications, and the starved, neglected, probably beaten but not disfigured child cannot always express the bitterness of his hard lot so as to secure more than very partial remission of his daily torture or entail any but the lightest sentence on his tyrant. The agents of the society have facilities far exceeding those of the police for arriving at the truth in such matters, and it is due chiefly to their exertions that the majority of cases taken to court, some of them diabolical in their cruelty, have resulted in conviction. We feel assured, therefore, that no true lover of order and justice, or of his fellow creatures will withhold his support from the efforts put forth with tact and discrimination, and happily with much success, by this young but vigorous and deserving society.

THE DIFFUSION OF SMALL-POX.

DURING the week ended June 1st there was only a single case of small-pox in London, and during the whole of the five weeks of May there were only 31 attacks in the metropolis, with but one registered death; the four weeks of April had contributed 37 cases, but no death. The notified cases in the four weeks ended May 18th numbered 40, but half of these were in the two sanitary areas of Holborn and Lambeth. In the first week of June the attacks rose to 5, but still no death occurred, and there was apparently no small-pox in the suburban districts. Last week there were half-a-dozen cases in London and a single registered death from the disease—namely, in a person aged between twenty and forty years and stated to have been vaccinated, the individual belonging to the Hammersmith sanitary area. In the southern midlands there was but little small-pox last week or in recent previous weeks, and Bedford seems to have all but got rid of the outbreak that threatened for some time to become serious. But at Derby matters have not very materially improved, there having been upwards of 60 cases in the last six weeks; a few days since there were 42 patients in hospital, although the building is, it is said, intended only for 40 cases at one time. In these circumstances the town council decided to purchase one of the wooden wards recently used at the infirmary and to remove it to the hospital site. The original case is now stated to have given rise to thirty-seven other cases in a more or less direct manner, one of the last of these being a barmaid at the public-house in the centre of the town which the first patient had visited. Three fresh cases were isolated last week in the borough, and three deaths were registered, the deaths having occurred on three successive days. At Ripley, near at hand, a further case having developed, the district council decided to take proceedings against persons who had exposed themselves under circumstances which seemed to justify action of a penal character, after payment made by the council with the view of curtailing the chances of spread of infection by the movements of the persons in question. At Belper last week a case of small-pox occurred in a man who had held office in a lodging-house at Ripley. He was admitted to the casual ward, but later the council decided to rent a cottage near the town and therein isolate the patient, the medical officer fearing lest some epidemicity of the disease should ensue by reason of its appearance among the vagrant class in the neighbourhood. Small-pox has also recently been introduced into the Hayfield Workhouse in the person of a vagrant on the same day that two inmates were buried after succumbing to the malady, other inmates still being sufferers from the disease. A

case has been notified at Rawmarsh recently, the victim being a professional singer who had in the preceding few weeks fulfilled engagements at Derby, Ripley, Ashton-under-Lyne, and Barnsley, in addition to visiting other places, while the eruption was out. The family with whom she stayed in Rawmarsh just prior to her case being diagnosed have been placed in quarantine. In Lancashire several places have had experience in small amount of the disease during recent weeks, including Manchester with two cases last week, and one in each of the two preceding weeks, all removed to Clayton Hospital; and Salford, Wigan, Bolton, and Oldham, a death being registered in each of the latter two places a fortnight ago, and a further death in Oldham last week. In the large towns of Scotland there were 3 deaths from the disease in May, 2 of them in Glasgow and 1 in Edinburgh. In Dublin in the two latter weeks of May the admissions of small-pox patients to hospital showed some fluctuation, the number in the first of the weeks having been 16 in excess of that immediately prior, while in the week ended June 1st the admissions fell again from 28 to 10, the patients discharged numbering 21 and one death occurring, and the cases remaining in hospital being 41 acute, with other 34 convalescent patients at Kilmainham. Later records show still further improvement.

ACCIDENTS CAUSED BY CURETTING THE UTERUS.

THERE is an interesting paper on this subject by Dr. R. Pichevin in the May number of the *Annales de Gynécologie et d'Obstétrique*. Among the ill consequences that have resulted from curetting he enumerates: 1. The production of abortion from the untimely introduction of the curette into the pregnant uterus. 2. Serious after-effects, and even death, from want of observance of strict antiseptic principles. 3. The rupture of a collection of purulent matter encysted in the immediate neighbourhood of the uterus,—pyo-salpinx, for instance. Should such an accident be thought to have occurred he advises either immediate laparotomy or vaginal hysterectomy. 4. In very rare cases uterine atresia has been produced by, or has followed curetting. 5. The most frequent accident has been perforation of the uterus by the curette. The consequences of this accident have generally been insignificant; indeed, according to Dr. Pichevin, a Vienna gynaecologist was in the habit of pushing the sound through the uterus into the peritoneal cavity with the object of demonstrating the harmlessness of the proceeding. No doubt it is harmless in a large proportion of cases; but Raffay in a recent thesis, while reporting three cases that recovered, records one also where death occurred. It seems clear that perforation by the curette is more likely to take place when curetting is done after a confinement at term, or after premature delivery, than when performed after an abortion in the earlier months. As regards the causes of perforation, sometimes it may be due to want of skill or care on the part of the operator; in some cases it may be due, as Auvard has insisted, not to the curette, but to the method of dilatation employed prior to the curetting. Metal dilators with expanding blades are very likely to cause such an accident, but it has been known to occur when the dilatation was effected by Hegar's dilators. Auvard, it will be seen, thinks the curette merely discovers a perforation that has been already made. We referred to his views in THE LANCET not long since. Finally, it seems that there are certain very rare cases where the wall of the uterus is so thin at some point that perforation may be inevitable, no matter how gently the curette be used. The diagnosis of perforation may sometimes be made erroneously. Several authorities have noticed a sudden enlargement of the uterine cavity to occur during curetting. This, of course, allows the

curette to pass in much further than before, and might easily lead a nervous operator to think he had perforated the uterus. A correct opinion may be formed by ascertaining the length of the cavity with the sound at two or three different points.

THE HEALTH OF PROFESSOR HUXLEY.

It is with great regret that we learn as we are going to press that the health of Professor Huxley gives ground for anxiety. It is true that the pulmonary troubles upon which we commented when referring to his illness some six weeks ago have not returned, but the evidence of renal insufficiency is very clear, and the condition is accompanied by anasarca and marked failure of physical strength. Professor Huxley's mind remains perfectly clear.

URTICARIA AND URIC ACID.

THE *New York Medical Record* of June 1st contains a paper by Dr. Elgar J. Spratling of Matteawan State Hospital, Fishkill Landing, New York, suggesting a connexion between urticaria and an undue amount of uric acid in the system. A female patient aged twenty-four, suffering from dementia, was noticed at nine o'clock to be sitting quiet, inattentive, and immobile. At eleven urticarial wheals, raised thickly over the whole face, not previously present, were observed. Such wheals were easily produced in other parts of the body by slight friction. Inquiries as to the personal case of the patient gave no light. She was immediately placed in bed and ten ounces of urine drawn off, having a specific gravity of 1031, highly acid, and containing many crystals of uric acid. Warm water used afterwards for washing out the bladder was found to have a specific gravity of 1003 and to contain uric acid crystals. The bowels were cleared and the patient allowed to remain quiet for twenty-four hours, when the wheals still persisted about the legs and thighs, though not in the face. The urine had now a specific gravity of 1029, and many uric acid crystals. The blood, too, was shown to contain crystals of uric acid. The bladder since the second day was washed out twice daily. On the third day the specific gravity of the urine had fallen to normal, and neither it nor the blood was found to contain any crystals of uric acid. The wheals had disappeared and could not be produced by any amount of friction. The case is interesting as throwing light on some cases of urticaria. But the mode of treatment is not applicable in most cases, even if the causation of all cases were the same, which is doubtful. It is found in practice in many cases that after the failure of what may be called an anti-gout treatment tonics promote the removal of the wheals.

THE DANGERS OF EAR-PIERCING.

THERE is nothing more necessary to our physical well-being than cleanliness. The saying is trite, for we all admit its truth in general terms. Experience is likewise a well-worn authority, and it is somewhat a matter for regret that we should even at this late day have so much to learn from trite experience about the primary duty of being clean. Yet the course of human life is constantly interrupted by incidents and accidents which prove the neglect of this duty. Such, for instance, was the case of an infant who recently died in Hackney from septic or some allied form of poisoning after having her ears pierced for ear-rings. A pawnbroker from whom the earrings were purchased was the operator. A day or two later—that is, about the time when septic mischief if present would show itself—the ear became swollen and ulcerated, and the case, as said, ended fatally. In commenting upon this unfortunate occurrence the coroner's jury held that it was not proper for a pawnbroker or for anyone but a medical man to perform this operation. There is a certain

theoretical correctness in this argument, but it is open to the accusation that in its devotion to pure logic it ignores the reasonable claims of practical convenience and even of possibility. More serious operations than that of ear-piercing, such as circumcision among others, are performed by careful and intelligent laymen duly skilled in their particular office with notable success. Ears have been pierced by jewellers and others for generations, and an accident in its performance must be relatively rare. We cannot, therefore, agree with the jury that medical men are alone capable of this office, which indeed would not be hailed by most of them as a work worthy of high professional intelligence or skill; but, on the other hand, there is not the less, but rather more, need that the person performing it should be careful and capable. Local authorities ought to see to it that they are so, and an offence such as that which proved fatal in the case quoted above should be made legally punishable if it is not such already. A wound—cleanliness; this is the only safe combination, the only safe rule. Its recognition is not for the surgeon only, but belongs to the stock of elementary knowledge which is the common property of all mankind. A dirty wire in the ear, a dirty pin or needle breaking the skin surface may lead to consequences preventable always, but well-nigh irreparable if neglected in their beginnings.

SERUM THERAPY IN PULMONARY TUBERCULOSIS.

WRITING in the *Journal of the American Medical Association* of May 4th, Dr. C. H. Ingraham draws some interesting conclusions from results of his observations on injections of the simple primary serum from the blood of the mule in patients suffering from pulmonary tuberculosis. Although the injections were administered for a sufficient length of time for them to manifest any curative properties, Dr. Ingraham states that he is obliged to record that he did not in any individual case see an improvement that would warrant a continuation of the treatment. The effects produced were as follows: 1. A fine rash producing intense burning or itching, which appeared usually from three to ten days following the first administration, and continued for from three to seven days, when it disappeared permanently. Rubbing or irritation of the rash produced large eruptions having the appearance of "water-blisters," which soon disappeared. The intensity of the eruption bore no proportion to the amount of serum injected. 2. Severe pains of a neuralgic character, which only followed the administration of a large amount of serum. These pains appeared with no regularity whatever, neither were they manifested for any certain length of time. In most cases their severity was governed by the quantity of serum injected. These pains did not yield readily to the influence of opiates or any other treatment. They usually appeared near the site of the injection, but occasionally in a remote region. 3. The typical eruption was accompanied by a pronounced rise of temperature. This rise was also present some hours before the eruption made its appearance. The temperature sometimes reached 104° F., or even higher. It remained at its full height, with little or no fluctuation, until the eruption became less intense. 4. Following the disappearance of the eruption the temperature dropped to normal, or even below. If the case was one of acute tuberculosis and had a high temperature, the diminution of fever was as pronounced as in the milder form. The temperature remained low for two or three days, after which it gradually resumed its former stage. In one or two cases the temperature remained low for nearly a week, but eventually it resumed its former height. 5. Swelling of the extremities, lips, and eyelids sometimes accompanied the eruption, but usually subsided as the eruption disappeared. 6. Subsequent injections of serum did

not cause a second eruption, though the pain was liable to return if too much serum was given.

THE grand bazaar in aid of the funds of St. Mary's Hospital will be opened in the Portman-rooms at 1 P.M. on Thursday, June 27th, by the Princess of Wales, and the programme promises an excellent series of entertainments. Among the lady artistes are Mrs. Clement Scott (who will recite an ode specially written for the occasion by Mr. Clement Scott), Mrs. Bernard Beere, Miss Irene Vanbrugh, Miss Fanny Brough, Miss Geneviève Ward, and Miss Kate Rorke. The dramatic entertainments of Mr. George Alexander and Mr. Yorke Stephens will be given on the opening and following day, and Mr. Wilhelm Granz's grand afternoon concert will take place on Saturday, June 29th. Many other attractions will be provided, and we wish the charity every success.

A SMOKING concert will be given on Thursday, Aug. 1st, at the Portman-rooms, Baker-street, W., under the auspices of the Esculapius Lodge and Chapter in honour of medical Freemasons who may attend the meeting of the British Medical Association. Tickets can be obtained from the Honorary Secretary, Dr. T. Dutton, 7, Portland-place, London, W. Members of the profession applying for tickets should state the name and the number of their lodge and their masonic rank. Masonic clothing will not be worn. Foreign medical masons are especially invited.

DR. VALENTINE BALL, C.B., F.R.S., director of the Museum of Science and Art, Dublin, who died on Saturday last in his fifty-second year, was the son of Dr. Robert Ball, the naturalist, and the brother of Sir Robert Ball, F.R.S., Lowndean Professor of Astronomy at Cambridge, and of Dr. Charles Ball, the well-known Dublin surgeon. He made many important contributions to the science of geology, and his ability as a lecturer on this and cognate subjects was well known.

THE next social meeting of the Hampstead Medical Society will be held at the Conservatoire, Eaton-avenue (near Swiss Cottage), on Tuesday next, June 25th. At 8.30 P.M. an address will be delivered by Mr. Edmund Owen, M.B., F.R.C.S., on "Inflammation of the Shafts of the Bones in Children and Young People," and a discussion will afterwards take place on the subject. The honorary secretaries, Dr. W. Barter and Dr. A. H. Cook, cordially invite the attendance of members and their medical friends.

THE annual dinner of the Epidemiological Society will take place at the Grand Hotel, Trafalgar-square, on Friday, June 28th, at 7.15 P.M. The chair will be taken by the President, Mr. Shirley F. Murphy, and tickets, half a guinea each, may be obtained for members and their guests from Dr. Bulstrode, 4, The Mansions, Earl's-court, S.W.

MR. T. GRIGOR BRODIE, M.D., Lond., has been appointed Lecturer on Physiology at St. Thomas's Hospital, in the vacancy caused by the resignation of Professor Sherrington, F.R.S. The school is to be congratulated on having secured the services of such an excellent teacher.

THE Master of the Salters' Company will distribute the medals and prizes to the students at Guy's Hospital on Wednesday, July 3rd, at 3 P.M. The wards, museums, college, and new laboratories will be open from 3 to 5.30 P.M.

WE are asked to state that Dr. Pringle is resigning his appointment as assistant physician to the Middlesex Hospital, and not that of physician-in-charge of the Skin Department.

THE President, Council, and members of the teaching staff of University College, London, will hold a conversazione on Thursday evening, June 27th.

DR. R. THOBNE THORNE, C.B., F.R.S., has been elected a Foreign member of the Société Française d'Hygiène.

Pharmacology and Therapeutics.

THE QUALIFICATIONS FOR DISPENSING IN UNION AND PARISH DISPENSARIES.

THE President of the Local Government Board has issued to the guardians of the poor of the unions of Birkenhead, Cardiff, London (City), Derby, Fulham, Gloucester, Greenwich, Hackney, Holborn, Nottingham, Plymouth (Incorporation), Poplar, Portsea Island, Reading, St. George's, St. Olave's, St. Saviour's, Stepney, Strand, Walsall, Wandsworth and Clapham, Westminster, Whitechapel, Wolverhampton, and Woolwich; and to the guardians of the poor of the separate parishes of Birmingham, Mile-end Old Town (Hamlet), Paddington, St. George-in-the-East, St. Giles (Camberwell), St. Giles-in-the-Fields and St. George (Bloomsbury), St. Leonard (Shoreditch), St. Luke (Chelsea), St. Mary Abbots (Kensington), St. Mary (Islington), St. Mary (Lambeth), St. Marylebone, St. Matthew (Bethnal-green), and St. Pancras, the following general order, altering the regulations as to the qualifications of dispensers:—

No person shall be qualified to be appointed a dispenser unless he shall be a Licentiate of the Society of Apothecaries of London, or shall hold a certificate of that society as to his qualification to act as an assistant in compounding and dispensing medicines, or shall be a compounder of medicines duly qualified in accordance with the Regulations for the Army Medical Staff Corps, or shall have been duly registered under the Pharmacy Act, 1868, or shall have been duly registered under the Pharmacy Act (Ireland), 1875, and the Pharmacy Act (Ireland), 1875, Amendment Act, 1890, as qualified to compound medical prescriptions.

We think that the expediency of this provision as regards the qualification of future dispensers will be obvious to all our readers, as it is to us.

AIROL.

When one of the groups of hydroxyl in subgallate of bismuth—the so-called dermatol—is replaced by iodine a greenish-grey, inodorous, and tasteless powder is obtained which possesses antiseptic properties and has a great capacity for combining with water, and therefore for drying up moisture. It has been named airol and has recently been employed by Dr. Fahm of Basle as a dressing for wounds, especially for burns and varicose ulcers of the leg, with considerable success. He also gave it internally to a child aged twelve who was suffering from tuberculous enteritis. Three grains twice daily rapidly produced a marked improvement in the diarrhoea and colic-like pains.

GLYCOLYTIC FERMENT IN THE TREATMENT OF DIABETES.

The glycolytic ferment, which was obtained a few months ago by Professor R. Lépine of Lyons by hydrating malt diastase, has recently been employed by him in the treatment of diabetes, the results being sufficiently marked to justify the hope that with more study and greater experience this ferment may prove to be of real value in some forms of this disease. In the four cases which Professor Lépine published in *La Semaine Médicale* of April 24th the diet was first restricted, and when the glycosuria had diminished as much as it appeared likely to do the effect of the ferment was tried. In each case the amount of sugar passed per diem was further diminished, and at the same time the ratio of sugar to urea was reduced. When later the ferment was stopped the patients all passed more sugar than during the treatment. Perhaps the most remarkable case was that of a man aged forty-four years who had been discovered to be diabetic in April, 1894, when he was passing 6 litres of urine per diem. He was put upon a restricted diet, which had the effect of stopping the polyuria

and of bringing the sugar below 50 grammes in the twenty-four hours. In March last he again came into hospital and was found to be passing about 2 litres of urine containing from 40 to 84 grammes of urea and from 29 to 47 grammes of sugar, there being a distinct parallelism between the urea and the sugar, even when as a test 100 grammes of glucose were given, this not increasing the quantity excreted to any great extent, so that the case was pretty certainly one not depending on mere consumption of sugar, but on something connected with the azoturia. Though the man was very stout—weighing 200 kilogrammes—the ferment had a marked effect, reducing the average sugar from 41 to 11 grammes and the percentage of sugar in terms of the urea from 64 to 30. Further, after the treatment was stopped the sugar only rose to 14 grammes, and the percentage of it in terms of the urea to 39. Professor Lépine remarked that the effect of the ferment was less after it had been taken for some days; also that attempts to obviate this by increasing the dose were not successful, so that whatever the action of the ferment might be in the chemical laboratory it could by no means be said that in the system of a diabetic patient the effects were at all proportional to the quantity. Not only, however, were the patients made to pass less sugar by a very small quantity of the ferment, the daily dose being 1 litre of liquid containing 3 grammes of ferment, but at the same time there was a marked improvement in their general condition. It is worthy of remark that no diuresis was produced and no unpleasant effect whatever, so that the remedy is one which may be tried without any misgiving on the part of medical men. The difficulty is to obtain the ferment, which does not keep more than a few hours, and which must be used immediately it is neutralised. If, however, the directions given in Professor Lépine's original paper¹ are closely followed there will be no serious difficulty.

GALEGA AND OTHER GALACTOGOGUES.

Galactogogues are a somewhat unsatisfactory class of drugs, and any light that can be thrown upon them is welcome. Dr. Grinewitch, who has been making a series of experiments upon them, has found that there are a few vegetable drugs which really increase the quantity of milk secreted without in any way acting detrimentally upon it, the specific gravity not being altered and the fat being even somewhat increased. The most efficient of all is a plant which, though it is said to have sudorific properties, is practically unknown in medicine, the common goat's rue (*galega officinalis*). An extract is prepared, and from this a tincture is made containing 65 per cent. of the extract. The dose of this tincture is from 50 to 100 drops repeated five times a day. If preferred, the extract may be prescribed in 4-grain pills, which may be taken from one to four times a day. A syrup may also be made containing 5 per cent. of the extract. The next drug in the scale is the common stinging nettle—*urtica urens*; a tincture containing 20 per cent. of the extract is prescribed in divided doses amounting to from 250 to 500 drops during the day, or a syrup may be employed. Cumin, anise, and fennel are also in the category, and these can be prescribed in powder—15 grains from once to five times daily.

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE ADMINISTRATIVE COUNTY OF LONDON.

I.

EARLY in the autumn of last year Mr. Shirley Murphy presented to the London County Council his first annual report as medical officer of health for the administrative county of London—namely, that for the year 1892. In noticing that report shortly after publication, we took occasion to congratulate its author on the eminently successful manner in which the several branches of science ancillary to what is included under the term "sanitation" have

been applied by him to the elucidation of the many complex problems which still encumber the path of sanitary progress. We therefore hailed the appearance of Mr. Shirley Murphy's inaugural report as of the happiest omen for the future of public health administration in Greater London. We have recently received the second of Mr. Shirley Murphy's annual reports, which deals with the events of the year 1893. As regards its general scope, and the arrangement of its subject matter, this report closely resembles its predecessor, and in common therewith bears abundant evidence of the patience, diligence, and skill with which it has been prepared. The tables, charts, and other illustrative devices are so arranged as to be really helpful to those readers, whether sanitarially expert or not, who seek instruction respecting the important details which are to be found on every page of the text. It is, further, encouraging to notice, as showing his special fitness for the task of conserving the health of the metropolis, that Mr. Shirley Murphy has throughout appreciated and kept steadily in view the two-fold purpose which reports of this kind should always be made to serve. The prevailing notion, which is probably also that of sanitary authorities generally, would seem to be that the object for which such reports were designed by the Legislature is mainly that of placing on record the useful and praiseworthy official acts of the administrative sanitary authority. But for us, as a profession, it is far more important to remember, and to act upon the knowledge, that in providing for the systematic publication of these periodical reports, and prescribing their general character, it was obviously the paramount intention of the Legislature to secure that the medical officer of health should be encouraged and required to utilise to the uttermost the opportunities thus periodically afforded him of formally and publicly advising his authority, and of imbuing them with scientifically correct notions concerning the direction which sanitary progress should take.

We may truthfully repeat with regard to this report what we said of its predecessor last year—namely, that it appears to us in every way excellent and worthy of the important subjects of which it treats. In accounting for the somewhat late appearance of this second report, Mr. Shirley Murphy pertinently remarks that "the time at which his own annual report can be prepared depends on the date at which the several district reports are received by the Council." It appears that in several instances these necessary contributions are but tardily sent in, and, as a consequence, the appearance of the chief medical officer's report is correspondingly delayed. We therefore agree with Mr. Shirley Murphy in expressing the hope that in future years the earlier receipt by him of the reports of district medical officers of health will enable a report for the entire area of London to be presented with less delay. We are glad to note that the County Council have seen fit to place on sale both these valuable contributions to sanitary literature. The successive health reports may, therefore, be studied with both pleasure and profit by all who take an interest in the health and consequently the prosperity and general well-being of the vast and rapidly increasing population of the English metropolis. In our review of Mr. Shirley Murphy's first report we published in these columns certain extracts and tables from that document with the object of giving some idea of its scope and general character. As we have before remarked, the general plan of the first report has been adhered to in the second; we shall not, therefore, again discuss those points which are common to both reports, and which were dealt with at length in our previous notice. There are, however, certain features in the report for 1893 which appear there for the first time, and which for many reasons are deserving of special consideration. We shall accordingly proceed to notice briefly the more important of these features in ensuing issues.

¹ Archives de Médecine Expérimentale, 1er Mars, 1895.

LOCAL GOVERNMENT (SCOTLAND) BILL.

Now that the Scotch Grand Committee has been appointed the sanitary provisions of the Local Government (Scotland) Bill are likely to come under immediate discussion. It may be recollected that last year's Bill had to be shorn of some of its most useful public health clauses to facilitate its progress towards the statute book. Most of these have now been revived, and a new clause has been added. The Government acted wisely in passing as much as they could of their Bill in 1894, and they are quite right this year to endeavour to bestow on Scotch local authorities certain other powers universally acknowledged to be valuable. Of course it would be much better if, instead of all this piecemeal legislation, a new and complete Public Health (Scotland) Act could be passed, but at present this is not to be looked for, and in the domain of State medicine small mercies in the way of legislation have often to be accepted.

The procedure necessary for the compulsory acquirement of land by local bodies has hitherto been so cumbersome and so costly as to cause it to be comparatively seldom taken advantage of. In particular, the provision of hospital accommodation for infectious diseases has been greatly retarded in this way. The present Bill provides the necessary remedy. Under it there would no longer be need for going to Parliament for a Provisional Order. The court of appeal would be the Local Government Board. In the event of a public inquiry being demanded, the person holding such inquiry would be paid at no higher rate than three guineas a day, no expert witnesses would be heard, and in determining the amount of compensation no allowance would be made in respect of the purchase being compulsory. This last proviso would not, we presume, exclude from consideration the question of the purpose for which the land was to be required, and of possible depreciation in the value of immediately adjoining land belonging to the seller—say, by the erection of a fever hospital.

Section 9 proposes to give to county councils the long-demanded right to make by-laws regarding new buildings; but the powers specified are very defective. There is not a word about such absolutely essential matters as the prevention of damp, or ventilation underneath floors. This being so, it would be too much to look for provision as to building materials, thickness of walls, or prevention of fires. No doubt such omissions are intended to conciliate possible opposition, but the sacrifice at the shrine of compromise is here far too great to be justified by the value of all that is left in the clause. It is hardly conceivable that this part of the Bill will not be greatly strengthened in Committee, especially as county councils are intended to have the power to restrict their regulations to particular districts. The whole section should form a complement to the Housing of the Working Classes Act, and should in all respects be framed so as to operate in entire harmony with that Act.

It is a standing grievance of the medical officers of the northern kingdom that whether or not they are to be furnished with regular returns of births and deaths depends wholly on the goodwill of the local registrars, and that, as a matter of fact, many registrars refuse to make such returns on such terms as are fixed by law in England. This also will be remedied if the new Bill becomes law; but might we be allowed to say a word for the registrars of small rural districts whose fees under the terms as laid down in the Bill might only amount to four or five shillings a year? Surely a monthly or annual minimum could be fixed which would make it worth the registrar's while to keep in mind his monthly or quarterly duty of sending perhaps a blank sheet to the health officer.

Clause 11 deals with dairies, and is of much importance. The control which local authorities have over milk-supply is at present indefinite and unsatisfactory. Under the Dairies Orders various sets of by-laws, more or less stringent, have been agreed to and issued by sanitary boards all over the country. In connexion, however, with an action raised by the town council of Edinburgh it was lately shown that such by-laws may readily be *ultra vires* of the bodies enacting them, and if the Orders under which by-laws are made were themselves extended in their scope they in their turn might be held to be *ultra vires* of the Acts of Parliament under

which they are made. It is, therefore, highly desirable that such powers as sanitary authorities are intended to possess should be placed at their disposal in clear and unambiguous fashion. Clause 11 of the Bill is, with some modification, similar to Clause 71 of the Public Health (London) Act of 1891. It provides that where a medical officer has evidence of infectious disease in his district attributable to milk supplied from a dairy *within or without the district* he shall have the right of inspection, and that if as a result of inspection he forms the opinion that infectious disease is caused by, or is likely to arise from, consumption of the milk he shall report to his local authority, who may then call on the dairyman to show cause why an order should not be made requiring him temporarily to cease supplying milk within the district of the local authority. There is no doubt that small rural authorities tend to be negligent of dairy supervision, and that the consequences of their negligence are often primarily felt, not in the district in which a dairy is situated, but in the district in which the milk is sold. In these circumstances it is probably right that London sanitary authorities should have power to go outside London to examine country dairies from which milk is sent to them and where suspicion of disease-conveyance exists. It seems likely, however, that very many of such dairymen will be in the habit of sending milk only to the district of a single metropolitan authority, so that this right of supervision will fall to be exercised by only one body outside the dairyman's own district. But in Scotland we can understand that the case may often be different. There the districts in which the dairies are situated are those under the charge of the district committees of county councils, and, as a rule, consist of large areas with active local authorities and a proper staff of officials. On the other hand, the districts within which the milk is sold may be small burghs, scattered throughout the country districts, but having local authorities of their own entirely independent of the county council. Milk from one large dairy farm may be sent to several of these burghs, and, in this way, it seems possible that a dairyman might be put under the control of a variety of public bodies, perhaps with divergent views and different dairy regulations, and perhaps also ill qualified to look after their own sanitary affairs, let alone the sanitary affairs of the district committees of county councils. There is not much fear that the health departments of large cities like Glasgow, Edinburgh, Aberdeen, &c. would act unreasonably regarding dairy farms outside their own districts, though, no doubt, they would insist on proper precautions against risk of disease-conveyance. But as to small burghs there could be no such certainty. After all, a dairyman has rights as well as obligations in this world, and it does seem as if hardship might arise from his being called on to fulfil the various demands of various authorities, who might be led by the deficiencies of their preventive arrangements to make altogether unjustifiable demands on outsiders. Perhaps Clause 11 might work well enough in practice, and such contingencies as are here indicated might seldom become actualities. But the fact that such a clause is proposed points to two conclusions—one that county committees, if they wish to retain full control over their own districts, must see that the dairies under their charge are thoroughly in accordance with the requirements of modern sanitary knowledge; and the other that small burghs should for health purposes be incorporated with the county district in which they are situated. In this connexion it is satisfactory that the present Bill does not include Section 63 of last year's Bill, which was among those not then passed into law. Section 63 tended to the total administrative dissociation of small burghs from the country districts. No doubt at present the relationship is unsatisfactory; but the remedy is to be found, not in separation, but in combination, more or less complete, for all public health purposes.

On the whole, the present Bill is a good one and ought to become law, but it ought not to pass through the Grand Committee without such questions as are here raised being well and carefully considered.

MR. GERALD BALFOUR, M.P., will preside at a meeting to consider the work of the Metropolitan Provident Medical Association at 12, Portman-square, London, to-day (Friday), at 4.30 P.M. He will be supported by Lord Battersea, the Rev. Canon Ainger, Sir J. Russell Reynolds, Mr. Lewis McIver, M.P., and others.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts received at the Mansion House, the lists of which have been received at THE LANCET Office, up to the time of our going to press on Thursday, when the total amounted to nearly £15,000. The total sum recorded at the corresponding period last year was £14,000:—

	£	s.	d.		£	s.	d.
St. Michael's, Chester-square (Archdeacon Fleming) ..	1174	9	0	Christ Church, Beckenham (Rev. J. Harding)...	37	8	6
Westminster Abbey (Dean of Westminster) ...	224	0	0	Mitcham Church (Rev. D. F. Wilson) ...	72	19	0
St. Paul's Cathedral ...	253	17	8	The Oratory, South Kensington (Rev. W. Gordon) ...	54	6	0
Chapel Royal Savoy ...	16	0	0	The Vicarage, Hford (Rev. H. W. E. Molony) ...	28	7	11
St. Margaret's, Westminster (Ven. Archdeacon Farrar) ...	161	11	11	Morden College, Blackheath (Rev. H. Lansdell) ...	7	10	6
Spurgeon's Tabernacle ...	80	0	0	Christ Church, Southgate (Rev. Cyril F. Wilson) ...	43	3	3
Metropolitan Tabernacle (Rev. Thos. Spurgeon) ...	130	0	0	Harrow Weald Church (Rev. W. H. Peers) ...	18	3	3
St. George's, Bickley (Rev. R. Wood) ...	70	3	3	All Saints', Friern Barnet (Rev. H. S. Miles) ...	43	4	5
Christian Evidence Society, East London Branch ...	44	0	0	St. Peter-al-Vincula, Tower, E.C. (Rev. C. A. Solbe) ...	15	0	0
St. Saviour's, Clapham (Rev. C. P. Green) ...	27	17	3	Christ Church, Rotherhithe (Rev. St. Martyn Bardsley) ...	15	9	1
St. Saviour's, Southwark (Rev. W. Thompson) ...	24	8	4	Church of Our Lady, Sydenham-road (Rev. F. Minnett) ...	7	11	9
All Saints, North Peckham (Rev. W. R. Finlay) ...	45	4	6	Dulwich College Chapel (Rev. G. W. Daniell) ...	56	19	0
St. George's, Beckenham (Rev. H. Arnott) ...	71	2	1	Holy Trinity, St. Marylebone (Rev. R. F. Hungen) ...	78	15	0
St. Mary's, Shortlands (Rev. H. F. Wolley) ...	42	7	7	St. Crispin's Vicarage, Bermondsey (Rev. J. Wallace) ...	7	2	0
St. Philip's, Sydenham (Rev. A. E. King) ...	35	0	0	St. Mary's and St. Andrew's, Acton (Rev. F. D. Stungess) ...	38	17	3
Mr. H. Trower ...	21	0	0	All Saints, Westbrook, Margate (J. H. G. Randolph) ...	8	7	3
St. John Baptist, Eltham (Rev. W. J. Sowerby) ...	31	11	3	St. Dunstan-in-the-East (Rev. F. A. P. Shirreff) ...	6	11	10
Trinity Presbyterian Church, Notting-hill ...	35	12	7	Devonshire-road Strict Baptist Chapel, Greenwich (Rev. S. Boorne) ...	7	4	2
Mr. J. J. Randolph (further) ...	25	0	0	Northwood Church, Middlesex (Rev. J. R. Garrett) ...	10	12	9
Major Jones (further) ...	20	0	0	Christ Church, Lower Sydenham (E. H. Francis) ...	16	4	7
Miss Edith Wright ...	35	0	0	St. Michael's, Lower Sydenham (E. H. Francis) ...	5	5	10
Christ Church, Lancaster-gate (Rev. C. J. Ridgeway) ...	1150	16	11	Christ Church, Oxford, Mission, Poplar (Rev. W. A. Carroll) ...	7	5	9
St. John's Presbyterian Church, Kensington ...	120	0	0	West Wickham Church (Rev. H. B. Roberts) ...	31	16	1
St. Luke's, Redcliffe-square (Rev. Evan Hopkins) ...	50	0	0	Alldham Church, Walford, Herts (Rev. Kenneth F. Gibbs) ...	50	0	0
St. Anne's, Wandsworth (Rev. N. Campbell) ...	27	12	5	Hampstead Parish Church (Rev. S. B. Burnaby) ...	58	13	1
St. Thomas's, Regent-street ...	44	0	10	Nutley Lane Church, Reigate (Rev. Ed. J. Baber) ...	16	15	9
New Court Chapel, Tollington-park ...	25	5	9	St. Jude's Vicarage, Bethnal-green (Rev. W. H. Davies) ...	5	17	0
Betchworth Parish Church (Rev. C. E. Sanders) ...	21	14	3	St. Thomas's, Northaw, Herts (Rev. E. B. B. Kitson) ...	11	6	0
Messrs. Marks, Bulcock, Mills, and Co. ...	31	10	10	Hillingdon Parish Church (Rev. E. S. Smith) ...	16	15	5
Merton Parish Church (Rev. E. A. Kempson) ...	34	18	3	Christ Church, Enfield (Rev. W. Warren) ...	7	13	0
St. John Evangelist, Stanmore ...	43	15	0	All Saints, Clapham-park (Rev. A. G. Girdlestone) ...	68	8	9
Finchley Parish Church (Rev. W. E. Batty) ...	34	11	10	All Saints, Child's-hill, N.W. (Rev. W. D. H. Petter) ...	20	1	1
Emmanuel Church, Wimbledon ...	61	3	10	St. Stephen's, Spitalfields (Rev. A. Allen) ...	7	14	0
St. James, Marylebone (Rev. H. R. Hawses) ...	25	0	0	Christ Church, Warley, Essex (Rev. H. A. Banes) ...	7	4	0
Christ Church, Wanstead (Rev. M. Drummond) ...	25	8	9	Christ Church, Stepney (Rev. G. B. O. Rich) ...	7	14	0
Mr. W. T. Blandford (further) ...	20	0	0	St. Stephen's, Hounslow (G. H. Layton) ...	16	0	2
All Saints, Kingston-on-Thames (Rev. A. S. W. Young) ...	25	0	0	Parish Church, Ewell (Rev. J. Thurston) ...	21	0	11
Hendon Parish Church (Rev. N. Mant) ...	41	6	1	All Saints, Ewell (Rev. J. Thurston) ...	7	3	1
Bromley (Kent) Parish Church (Rev. A. G. Hildicar) ...	66	0	0	North Cray Church (Rev. H. W. J. Johnston) ...	8	8	0
Archway-road Wesleyan Chapel (Rev. J. Banham) ...	38	6	3	St. Mary's, Paddington (Rev. A. Scott) ...	13	12	4
St. Peter's, Norbiton, Surrey (Rev. J. Rooker) ...	19	1	8	Merton Parish Church (Rev. E. A. Kempson) ...	33	18	3
St. Mary of Eton, Hackney Wick ...	8	18	9	St. Mary's Mission Hall (Rev. E. A. Kempson) ...	3	10	1
West Drayton Parish Church (Rev. A. W. S. A. Ross) ...	4	11	7	St. Paul's, Covent-garden (Rev. S. T. Cumberlege) ...	10	16	0
St. Stephen's, North Bow (Rev. H. A. Mason) ...	14	5	3	Lion Brewery Company ...	105	0	0
The Magdalen Hospital, Streatham, S.W. (Rev. W. Watkins) ...	40	0	0	Delta (a further) ...	200	0	0
Emmanuel Church, Camberwell (Rev. A. C. Lacey) ...	5	15	0	Mr. J. B. Lubbock ...	20	0	0
St. John the Evangelist, Brixton (Rev. H. G. Dukinfield) ...	26	15	5	Mr. Fred. Druce (a further) ...	25	0	0
Astley ...	23	14	4	Mr. C. W. Rudd ...	100	0	0
St. John's, Sideup (Rev. Shirley Woolmer) ...	46	0	0	Mr. Arthur James ...	100	0	0
All Saints, Hatcham park (Rev. E. S. Fardell) ...	7	7	0	Mr. James Johnston (a further) ...	5	0	0
Merstham, Surrey (Rev. R. Woodhouse) ...	16	15	6	Lord Hindlip ...	20	0	0
St. Dominic's Priory, Haverstock-hill (Rev. Fr. Austin M. Rooke) ...	7	0	5	Miss Emily Old (a further) ...	25	0	0
North Oxendon Church (Rev. R. T. Crawley) ...	16	19	11	F. G. D. (a further) ...	50	0	0
All Saints, Woolwich (Rev. J. W. Morris) ...	12	17	10	Holy Trinity, Bromley (Rev. F. W. Haines) ...	8	0	0
Christ Church, Coldharbour, Dorking (Rev. J. Rooker) ...	9	4	9	St. Philip's, Regent-street (Rev. H. Jones) ...	40	10	9
Gonville and Caius College (Cams.) Mission, Battersea (Rev. W. B. L. Hopkins) ...	36	7	6	Christ Church, Mayfair ...	135	8	7
St. Mary Magdalene, Peckham (Rev. T. Goss) ...	12	0	0	Curzon Chapel, Mayfair (Rev. J. F. Bennett) ...	159	0	0
St. Mary of the Angels, Bayswater (Rev. F. M. Wyndham) ...	15	0	0	St. James's, Paddington (Rev. W. Abbott) ...	131	1	0
Wesley's Chapel, City-road (Rev. J. Brown) ...	125	6	3	St. Peter's, Brockley ...	114	0	0
The Theistic Church, Swallow-street (Rev. Chas. Voysey) ...	6	4	8	St. Peter's, Vere-street (Rev. W. Page Roberts) ...	332	1	6
Greenwich Hospital Chapel ...	12	1	0	St. Saviour's, Paddington ...	107	2	8
Stepney Meeting House ...	1	12	9	St. Saviour's, Paddington ...	112	0	0
M.S.U. ...	7	18	0	St. James's, Piccadilly ...	100	13	1
All Saints, Chigwell row (Rev. G. H. Hopkins) ...	10	4	0	St. James's, West Hampstead ...	255	2	10
St. Faith's, Wandsworth (Rev. R. Taylor) ...	19	19	2	St. Mary's, Bryanston-square ...	220	5	9
Temple Congregational Church, St. Mary's Cray (Ed. Grimes) ...	7	10	0	St. Paul's, Knightsbridge (Rev. H. M. Villiers) ...	317	13	6
Christ Church, Battersea (Rev. E. A. Cartwright) ...	27	13	0	St. James's, Kidbrook ...	100	16	2
Holly-park Wesleyan Church, Crouch-hill (F. B. Cowl) ...	24	6	1	St. James's, Clapham Park ...	111	4	11
St. John's, Highbury-vale (Rev. A. W. Gough) ...	12	0	0	St. Stephen's, Wandsworth ...	71	16	0
Mercers' Chapel, Cheapside (Rev. A. Veysey) ...	5	17	6	St. James's, Muswell Hill ...	51	12	2
St. Paul's, Tottenham (Rev. A. O'B. Brandon) ...	56	18	11	St. Gabriel's, Finsbury ...	69	16	8
St. Margaret's, Lothbury (Rev. E. V. Hoare) ...	20	1	0	Hampstead Parish Church ...	68	13	1
St. Paul's, Upper Holloway (Rev. J. Piper) ...	14	9	4	St. Luke's, Chelsea ...	73	13	0
Harley-street Congregational Church, Bow (Rev. G. B. Ryley) ...	139	18	4	Church of the Annunciation, Chislehurst (Canon Murray) ...	88	6	6
Holy Trinity, Tulse-hill (Rev. E. L. Roxby) ...	21	2	0	St. Thomas's, Portman-square ...	89	0	5
Presbyterian Mission, Granville-road, N.W. (Rev. T. Finlayson Durroch) ...	40	0	8	St. Paul's, Onslow-square (Rev. H. Webb Peelo) ...	300	0	0
St. John the Evangelist, Westminster (Rev. C. Aires) ...	7	15	4	Upper Tooting Wesleyan Chapel ...	21	17	1
St. Saviour's, Battersea (Rev. Dr. Rice) ...	9	4	8	St. Luke's, Homerton ...	22	16	2
St. Catherine's, Leytonstone (Rev. J. Kennedy) ...	11	5	0	St. Jude's, East Brixton ...	33	2	8
St. George's Cathedral, Southwark (Rev. James Keatinge) ...	7	9	0	Trinity Presbyterian Church, Hampstead ...	33	0	0
St. Silas, Penton-street, N. (Rev. R. Leach) ...	44	1	8	Christ Church, Westminster Bridge-road ...	53	13	0
St. Matthews, Upper Clapton (Rev. J. Byron) ...	5	3	9	Keston Parish Church ...	22	18	8
St. Nicolas, Brockley (Rev. Embleton Thomas) ...	55	1	1	Finsbury-park Wesleyan Chapel ...	20	19	0
Christ Church, Hornsey (Rev. J. Brand) ...	30	0	0	St. John Evangelist, Brixton ...	26	15	5
St. Saviour's, Champion-hill ...	15	16	7	Mitcham Parish Church ...	35	3	8
St. Chrysostom's, Peckham (Rev. H. E. Bickwell) ...	6	5	8	Holy Trinity, Lee ...	26	19	0
St. Peter's, De Beauvoir Town (Rev. C. J. Finch) ...	8	18	11	St. Augustine's, Honor Oak ...	40	2	11
Clifton Congregational Church, Peckham (W. H. Elliott) ...	19	0	0	Thames Ditton Parish Church ...	21	10	3
St. Paul's, Charlton (Rev. H. R. Gabbett) ...	10	12	4	St. Mary's, Brookfield, Highgate ...	27	14	3
St. John's Isleworth (Rev. S. B. Gordon Stokes) ...	16	3	6	St. Mary's, Spring-grove ...	34	4	6
St. Saviour's, Tollington-park (Rev. A. J. Ard) ...				Holy Trinity, Blackheath Hill ...	37	0	8
				Box outside the Mansion House ...	38	2	4

Other amounts have been received and will be published in our next issue.

THE AFFILIATED BENEFIT NURSING ASSOCIATIONS.

THESE associations held their second annual conference on Thursday, June 6th, at the residence of Lord Egerton of Tatton, St. James's-square, Dr. Holman being in the chair. Miss Broadwood reported the year's work done through their Office and Registry, 12, Buckingham Palace-road: 68 cottage nurses had been trained, 31 of them at Plaistow; 10 nurses not specially trained for cottage work were permanently placed, and 42 others on job, those specially trained being the most satisfactory. Nine addresses had been delivered, 2771 letters received, and 2925 letters and pamphlets despatched. A year ago 58 associations were working on the Holt-Ockley system started in 1883; now there were 70 stretching from Land's End to John-o'-Groat's House, and others were forming; 53 had affiliated. The question of how far their cottage nurses did, and might, act in maternity cases without the aid of medical men had been raised and investigated. Their medical advisory committee were satisfied that it was not a common practice. While averse to supplying midwives except with the assent of local practitioners, they must aim at, as heretofore, their cottage nurses knowing how to act if the medical man failed to arrive in time.

Dr. Holman congratulated them on the flourishing state of their associations. The object was backed up by political economy, by common humanity, and by Christianity; and because its principles were sound it must prosper, grow, and spread, as the other association with which he was connected had spread beyond the United Kingdom into the Colonies. A central office in London where all could meet was absolutely necessary. He rejoiced that the question of monthly nurses had been discussed. Dr. Buxall and himself had been in the forefront of the fight about midwives. The original opinion was to punish any nurse who attended a labourer without a medical practitioner. He had known countrywomen to suffer terribly from neglect during the hours that it took the husbands to hunt up the relieving officer and then the parish medical practitioner. Was it not better to train cottage nurses to be useful in such cases? Midwifery was a burning question at this moment, and he hoped they would do their best to get the Midwives Registration Bill passed in the House of Lords.

Dr. Robert Buxall said the benefit which these associations confer upon the poorer classes in country districts was immense, and it was with the greatest pleasure that he acted upon their advisory committee. Midwifery and midwives involved a difficult matter to deal with. They might all have ideals as to what should or should not be done, but they must look upon cases from a practical point. Considering the number of lying-in cases throughout the kingdom, the difficulty of obtaining sufficient attendance was very great. There was a very great difference between the duties of a nurse and of a midwife. The nurse was engaged, as a rule, to attend a case under the control of a medical man, but a midwife attends without such direct control. It is much easier for a midwife to recognise difficulties and dangers than for a nurse to do so; midwives are taught to make certain examinations which the nurse is not trained to make. In making such examinations it is possible, quite unwittingly, to do an infinity of mischief; the nurse is not given training to enable her to distinguish, and for that reason it seemed to him scarcely fair to impose upon a nurse these duties. These benefit associations would be in a false position if they allowed nurses to attend cases where neither a midwife nor a medical man was engaged. The medical man may know from experience what some individual nurse is capable of doing, and may leave her to act alone; but *then* he takes the responsibility upon himself. On the other hand, many cases of emergency might arise in which it would be absolutely essential that the nurse should have sufficient knowledge to act alone without competing with the medical practitioner or midwife; and unless the nurse had been taught to deal with such cases grave injury to mother and child might ensue. What would they say if the captain of a ship were incapacitated and no petty officer or seaman were ready to take his place and to do his best to navigate the ship into port?

Mr. J. Bokersteth explained how well the benefit system worked in the Wilton Beacon District of Yorkshire, where they had 23 agricultural parishes and only 3 resident

gentlemen. Their cottage nurses were drawn from the general-servant class of the neighbourhood and were trained at Plaistow, or the City of London Lying-in Hospital, and were prepared to do the work of the cottage when the mother was ill.

The Viscountess Galway and Miss Whitmore-Jones, organising secretary for the south-west of England, bore testimony to the equally satisfactory working of the associations in Oxfordshire, Gloucestershire, and Nottinghamshire.

THE ANNUAL DINNER OF THE ARMY MEDICAL STAFF.

THE annual dinner of the Army Medical Staff was held at the Whitehall Rooms of the Hôtel Métropole, on June 17th, and was in every way a successful function.

The company numbered seventy-five, and included the—
Director-General: Surgeon-Major-General Sir W. A. Mackinnon, K.C.B. (who presided).

Surgeon-Major-Generals: Sir Joseph Fayrer, K.C.S.I., C. H. Giraud, R. Harvey, D.S.O., J. Jameson, E. C. Markey, C.B., H. F. Paterson, J. B. C. Reade, C.B., J. J. Thompson, and J. Warren.

Surgeon-Colonels: O. Codrington, W. G. Don, E. McGrath, W. S. Price, F. B. Scott, C.M.G., W. Sly, H. Veale, and J. Watts.

Brigade-Surgeon-Lieutenant-Colonels: J. A. Anderson, A. L. Browne, J. D. Edge, E. Fairland, W. J. Fawcett, J. Hector, J. G. Leask, C. Mackinnon, W. McWatters, T. R. Mould, J. L. Nutter, W. S. Pratt, A. B. Robinson, W. G. Ross, W. F. Rutledge, W. F. Stevenson, W. Temple, V.C., E. D. Tomlinson, W. J. Wilson, and T. Wright.

Surgeon-Lieutenant-Colonels: J. Costa, J. J. Crean, P. R. Gabbett, W. C. Gasteen, J. J. Greene, E. H. Joynt, G. D. N. Leake, G. H. Le Motte, T. Ligertwood, and K. Smith.

Surgeon-Majors: W. G. A. Bedford, W. A. Carte, H. Grier, R. J. D. Hackett, R. P. Hetherington, A. A. Lyle, W. G. Macpherson, R. Porter, M. R. Ryan, R. J. S. Simpson, C. K. Tyrrell, and G. E. Twiss.

Surgeon-Captains: J. G. Deacon, J. S. Edye, H. P. Elkington, C. E. Fauce, J. Fayrer, H. Hore, J. Moir, M. W. Russell, and M. T. Yarr.

The following guests were present: Mr. Christopher Heath, the President of the Royal College of Surgeons of England; Brigade-Surgeon-Lieutenant-Colonel Hooper, the President of the Indian Medical Board; Mr. E. Hart, Mr. Vesey Holt, and Dr. S. Squire Sprigge.

Sir J. Russell Reynolds, the President of the Royal College of Physicians of London, and Sir J. N. Dick, K.C.B., the Director-General of the Medical Department of the Royal Navy, were unavoidably prevented from attending.

The arrangements for the dinner, which were made by Brigade-Surgeon-Lieutenant-Colonel J. Hector, honorary secretary, A.M.S. Annual Dinner Committee, left nothing to be desired. But more than seventy-five persons should muster on such an occasion, and in particular more of the younger members of the department. Such meetings do much good by cementing cordial relations already existent, leading to the formation of friendships, and displaying the strength of the department; and we would urge upon the younger members of the Army Medical Staff, many of whom must be stationed in immediate proximity to London, the advisability upon future occasions of devoting an evening to enjoying themselves in the company of their fellow officers.

UNITED HOSPITAL SPORTS.

PROBABLY the threatening aspect of the weather in the early part of the day was answerable in a great measure for the smallness of the gathering on Wednesday last, when the twenty-ninth annual meeting of the United Hospitals Athletic Club was held on the London Athletic Club grounds at Stamford Bridge. When the contests commenced, however, at three o'clock the weather looked more hopeful, and the sun shone brightly throughout the progress of the sports. The track was in fine condition.

Mr. H. T. Bell of Guy's, who last year carried off the 100 yards challenge cup for the third time in succession, passed

his laurels to Mr. H. C. Woodyatt, but almost succeeded in regaining them for the High Jump (which he lost last year after two previous victories) by making a dead heat with C. B. Adams of Middlesex. The one-mile and three-mile challenge cups were for the fifth time in succession carried off by Mr. H. A. Munro of Guy's, and Mr. E. N. Scott of the same school was successful in the hammer-throwing contest for the third time. Mr. W. F. Bennett, who represents St. Bartholomew's, succeeded in outdoing his last year's performance with the shot, and in the 120 yards hurdle race Mr. J. Johnston, who held the cup last year for St. Bartholomew's with a record, came in level with Mr. H. N. Coltart of St. George's. The long jump went to St. Mary's after being held for two years by Guy's. Mr. C. E. H. Leggatt succeeded in beating Mr. H. T. Bell. The 220 yards went to University College Hospital, and the quarter mile to St. Mary's, as did also the half-mile, both being won by the same competitor.

100 Yards: H. C. Woodyatt (University), 10 $\frac{1}{2}$ sec. Half Mile: A. G. Butler (St. Mary's), 2 min. 0 $\frac{1}{2}$ sec. Putting the Shot: W. F. Bennett (St. Bartholomew's), 35 ft. 10 in. 120 Yards Hurdle Race: J. Johnston (St. Bartholomew's) and H. N. Coltart (St. George's), dead heat, 16 $\frac{1}{2}$ sec. 220 Yards: H. C. Woodyatt (University), 23 sec. High Jump: H. T. Bell (Guy's) and C. B. Adams (Middlesex), tie, 5 ft. 7 $\frac{1}{2}$ in. Throwing the Hammer: E. N. Scott (Guy's), 85 ft. 11 in. One Mile: H. A. Munro (Guy's), 4 min. 31 $\frac{1}{2}$ sec. Long Jump: C. E. H. Leggatt (St. Mary's), 20 ft. 11 $\frac{1}{2}$ in. Quarter Mile: A. G. Butler (St. Mary's), 59 $\frac{1}{2}$ sec. Three Miles: H. A. Munro (Guy's), 15 min. 29 $\frac{1}{2}$ sec.

A three-mile bicycle race, not included in the contest for the shield, was won by Mr. J. Burke of St. George's, and a 1000 yards handicap, in which Mr. E. C. Bredin made an attempt, though unsuccessfully, to break the record, was won by Mr. E. J. Wilkins with twenty-four yards start.

The championship therefore goes to Guy's Hospital.

The prizes were distributed by the Countess of Egmont, and during the afternoon the London Victoria Military Band gave a selection of music.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Long Benton, near Tynemouth, by Dr. R. D. SWEETING.—This report raises a number of interesting considerations in connexion with the etiology of diphtheria, although it does not succeed in elucidating many of the problems which the actual outbreak involved. It deals with 77 attacks of diphtheria and 22 deaths on a population of some 10 000; but, as so often happens, there were a number of minor manifestations of throat disease, a number of which probably had the infective qualities of diphtheria. Two attacks, including the first one recognised, were apparently associated with manure nuisances. The first one was rather typical of occurrences such as have been reported by Dr. Thresh and others. A boy who is stated to have been peculiarly liable to sore-throat was in the habit of riding on a manure cart conveying very offensive refuse from Byker, near Newcastle, and locally his illness was attributed to the manurial emanations. As has happened again and again, it was difficult to eliminate all other sources of infection, and the matter must still remain in doubt. One thing, however, was certain—namely, that school operations tended to the spread of the disease. The clerk to the School Board maintained the contrary, and declared that it was the local insanitary conditions that had produced the evil, and he objected to the attitude of the sanitary authority in requiring school closure. But Dr. Sweeting could find no support for his view; no sanitary circumstances could be found to account for the incidence of the disease; on the contrary, modern well-constructed hamlets &c. suffered as much as others, and elsewhere houses that were attacked and houses that remained free from attack in no way differed from a sanitary point of view. And when the influence of school closure and the consequent arrest of aggregations of school children came to be worked out it was found that in two periods of school operations, extending over 191 days, there had been 67 attacks, whereas in two immediately following periods of 61 days of school closure there were only 8 cases; indeed, in one period of 32 days directly after the school had been closed there was only one solitary case, but instantly on reopening 41 cases occurred in the next ensuing 69 days.

Naturally Dr. Sweeting supports the school restrictions imposed by the sanitary authority.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Marylebone Urban Sanitary District.—Mr. Wynter Blyth, in giving in his current annual report a brief *résumé* of the two outbreaks of small-pox which occurred in his district, speaks highly of the value of establishing a local administrative centre during the periods of the outbreaks. The great lesson, however, which these outbreaks have impressed upon him is the necessity for prompt removal to hospital. If, he observes, every case of small-pox were early diagnosed and removed, no spread of the disease would be possible. Unfortunately the first condition is a difficult one to realise, though we imagine that the opportunity of studying small-pox, which the prevalence of the disease in recent years has afforded, will do something to improve matters, as also will the excellent clinical teaching provided at the hospitals of the Metropolitan Asylums Board. Mr. Wynter Blyth also reports that the good influence of vaccination and revaccination was well illustrated in the outbreaks, and the guardians, he tells us, rendered most efficient help in affording facilities for revaccination. The outbreak, he states, was never satisfactorily stamped out, and he thinks that the failure to effect this was due in part to the non-disinfection of certain articles of apparel. Persons with only one suit of clothing were, it appears, in constant attendance upon patients for from twenty-four to forty-eight hours, and owing to their having no change of clothing, and there being no shelter in the district, disinfection &c. could not be performed. Apparently, however, this defect in the St. Marylebone sanitary equipment has now been remedied. Out of 141 cases of enteric fever notified during 1894, 27 were imported, 17 coming from other metropolitan districts, 6 from the provinces, and the remainder from abroad—i.e., from Paris, New York, and even Buenos Ayres. Commenting upon the several agents likely to convey typhoid fever, Mr. Wynter Blyth remarks that, notwithstanding the report of the Royal Commission, the possibility of the Thames water being at times insufficiently filtered, and of the specific organisms being distributed by the water, cannot be denied. On working out, however, the incidence-rate of typhoid fever per 1000 of the population in each metropolitan district during 1894, and apportioning to each district its own water-supply, he observes that the list shows too many anomalies to suggest that any one of the companies was supplying grossly polluted water. The rates, it may be observed, varied from 1.33 in Poplar and St. George-in-the-East, both supplied by the East London Water Company, to 0.47 in Fulham, which is supplied by the West Middlesex and Chelsea Companies. The rates in Lewisham and Greenwich, supplied by the Kent Company, were 0.65 and 1.01 respectively. We trust that Mr. Wynter Blyth will continue these analyses in his future reports, and we would suggest that the monthly rates would be interesting.

Shoreditch Urban Sanitary District.—As we have occasionally drawn attention to "return" cases of scarlet fever, it is only fair that the negative side of the question should be recorded. Dr. Fraser Bryett relates that although there were 487 cases of scarlet fever notified in his district during 1894, and 65 per cent. were treated in fever hospitals, no "return" cases were brought to his notice. This speaks well, Dr. Bryett observes, for the care exercised by the fever hospital authorities. The shelter provided in Branch-place was utilised during the year on sixteen occasions, and fifty persons took advantage of its existence. The public, Dr. Bryett states, show some disinclination to make use of the shelter, but he has not found it impossible, by the exercise of tact, to overcome their objections. Frequent complaints were made during the summer months of 1894 as to the deficiency in the water-supply and the cessation of the constant service, and the Sanitary Committee finally determined to communicate with the County Council with a view of obtaining, under the Metropolitan Water Act, 1871, a constant supply of water. In reporting as to bakehouses Dr. Bryett tells us that out of ninety-three bakehouses in his district fifty-six are underground, twenty-nine above ground, and the remaining eight partly underground. Of those underground 62.5 per cent. were efficiently lighted and ventilated. Insufficient watercloset accommodation is frequently met with in the factories and workshops of Shoreditch. In discussing the question of smoke prevention Dr. Bryett states that the services of a practical engineer have at times been employed

with good results, and he advises that some such person be engaged permanently by the sanitary authority to deal with smoke nuisance. It is certainly true that many sanitary inspectors are not so well versed in the matter of smoke prevention as they might be.

Lerden and Winstree Rural Sanitary District—Dr. J. W. Cook has (as pointed out by him in a letter published in our columns on June 1st) been instrumental in providing this district with a portable fever hospital, designed by himself. It consists of two Radcliffe double tents with boarded floors, each tent containing four beds. There is in addition a bell tent with beds for two nurses, and a large van on four wheels. The van is fitted up as a kitchen and has provision for a hot-water supply. The floor-boards for the tent are carried in a separate waggon, but apart from these everything appertaining to the hospital is stored in the van. The whole hospital can be transferred to any part of the district and in less than two hours can be erected and made ready for the reception of patients.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6861 births and 3130 deaths were registered during the week ending June 15th. The annual rate of mortality in these towns, which had declined in the five preceding weeks from 17.7 to 15.5 per 1000, further fell last week to 15.4. The lowest rates in these towns were 10.5 in Burnley, 10.7 in Portsmouth, 10.9 in Croydon, 11.4 in Sunderland, and 11.7 in Cardiff; the highest rates were 19.2 in Blackburn, 20.5 in Plymouth and in Salford, 21.3 in Manchester, 23.6 in Bolton, and 23.8 in Liverpool. The 3130 deaths included 399 which were referred to the principal zymotic diseases, against 349 and 294 in the two preceding weeks; of these, 133 resulted from measles, 77 from diarrhoea, 73 from diphtheria, 60 from whooping-cough, 28 from scarlet fever, 23 from "fever" (principally enteric), and 5 from small-pox. No fatal case of any of these diseases occurred last week in Sunderland; in the other towns they caused the lowest death-rates in Bradford, Portsmouth, Croydon, and Gateshead, and the highest rates in Cardiff, Liverpool, Manchester, West Ham, and Plymouth. The greatest mortality from measles occurred in Liverpool, Bolton, Manchester, Plymouth, and West Ham; from whooping-cough in Birkenhead and in Huddersfield; from "fever" in Norwich; and from diarrhoea in Plymouth and Blackburn. The mortality from scarlet fever showed no marked excess in any of the thirty-three large towns. The 73 deaths from diphtheria included 45 in London, 6 in Liverpool, 4 in Birmingham, and 3 each in West Ham, Manchester, and Hull. Three fatal cases of small-pox were registered in Derby, 1 in London, and 1 in Oldham, but not one in any other of the thirty-three towns. There were 19 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 15th inst., against 29, 22, and 23 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 7, 1, and 5 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1637, against 1503, 1524, and 1589 on the three preceding Saturdays; 199 new cases were admitted during the week, against 214, 187, and 179 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 193 and 163 in the two preceding weeks, further declined to 152 last week, and were 88 below the corrected average. The causes of 54, or 1.7 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Leeds, Oldham, and in twelve other smaller towns; the largest proportions of uncertified deaths were recorded in Bristol, Birmingham, Leicester, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21.4 and 19.7 per 1000 in the two preceding weeks, further declined to 17.1 during the week ending June 15th, but was 1.7 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14.2 in

Leith and 15.5 in Aberdeen to 18.4 in Greenock and 30.9 in Perth. The 492 deaths in these towns included 25 which were referred to diarrhoea, 14 to measles, 12 to whooping-cough, 3 to scarlet fever, 3 to diphtheria, 1 to "fever," and not one to small-pox. In all, 58 deaths resulted from these principal zymotic diseases, against 60 and 57 in the two preceding weeks. These 58 deaths were equal to an annual rate of 2.0 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The 25 fatal cases of diarrhoea corresponded with the number recorded in the preceding week, and included 11 in Glasgow and 6 in Dundee. The deaths referred to measles, which had been 12 in each of the two preceding weeks, were 14 last week, of which 5 occurred in Glasgow and 4 in Edinburgh. The fatal cases of whooping-cough, which had been 17 and 11 in the two preceding weeks, were 12 last week, and included 6 in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The 3 deaths from scarlet fever were within one of the number in the preceding week, and included 2 in Glasgow. The fatal cases of diphtheria, which had been 3, 8, and 1 in the three preceding weeks, rose again to 3 last week, of which 2 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 118 and 112 in the two preceding weeks, further declined to 87 last week, and were slightly below the number in the corresponding week of last year. The causes of 39, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 28.5 to 22.1 per 1000, rose again to 23.1 during the week ending June 15th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 28.4 per 1000, the rate during the same period being 16.9 in London and 18.9 in Edinburgh. The 155 deaths registered in Dublin during the week under notice showed an increase of 7 upon the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against numbers increasing from 5 to 11 in the four preceding weeks; of these, 4 resulted from "fever," 3 from whooping-cough, 1 from diphtheria, and not one either from small-pox, measles, scarlet fever, or diarrhoea. These 8 deaths were equal to an annual rate of 1.2 per 1000, the zymotic death-rate during the same period being 2.1 in London and 1.9 in Edinburgh. The deaths referred to different forms of "fever," which had been 1 and 2 in the two preceding weeks, further rose to 4 last week, a higher number than in any week since the end of March last. The 3 fatal cases of whooping-cough also showed a further increase upon the numbers recorded in recent weeks. The 155 deaths registered in Dublin last week included 19 of infants under one year of age, and 26 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from the numbers recorded in recent weeks. Five inquest cases and 3 deaths from violence were registered; and 55, or more than a third, of the deaths occurred in public institutions. The causes of 10, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN DODD has been transferred from Woolwich to Aldershot and appointed Assistant Instructor at the Depot of the Medical Staff Corps. Surgeon-Captain Gray has been posted to Dublin on return from foreign service. The following officers have arrived in England on leave of absence: Surgeon-Lieutenant-Colonel Edge and Surgeon-Captain Copeland from India, and Surgeon-Captain Rowan from Malta.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Major H. C. Hudson, Bengal Establishment, to officiate as Medical Storekeeper, Meer Meer, until further orders; Surgeon-Lieutenant-Colonel W. O'Hara to be District Medical and Sanitary Officer, Trichinopoly; Surgeon-Lieutenant-Colonel J. A. Laing, to be District Medical and Sanitary Officer and Superintendent of Gaol, Bellary; Surgeon-Lieutenant-

Colonel W. G. King to be Sanitary Commissioner, Madras; Surgeon-Lieutenant W. Young (Bengal), whose services have been placed temporarily at the disposal of this Government by the Government of India, Home Department, to officiate as Civil Surgeon, 2nd class, and to be posted to the Budaun District; the services of Surgeon-Captain H. W. Elphick (Bengal) are placed permanently at the disposal of the Government of the North-West Provinces and Oudh; the services of Surgeon-Major R. R. H. Whitwell are placed at the disposal of the Government of Bengal; Surgeon-Lieutenant Evans has been transferred from general duty, Deesa, to general duty, Mhow District; Brigade-Surgeon-Lieutenant-Colonel Patrick Richard Martin, Madras, retires from the service.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Deputy Inspector General Alexander Turnbull to Chatham Hospital. Surgeons: Morris C. Langford to the *Orlando*; Alexander Maclean to the *Pembroke*; John A. L. Campbell to the *Sharpshooter*; E. C. Cridland to the *Vivid* (additional); Edward Cuffey to the *Victory*; and Alfred H. Jeremy to the *Itambler*.

VOLUNTEER CORPS.

Artillery: 1st Banff: Surgeon-Lieutenant W. L. Stewart, M.D., to be Surgeon-Captain. *Rifle*: 2nd Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Captain H. Stone resigns his commission. 2nd Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry): Surgeon-Lieutenant-Colonel E. Liddon, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 3rd Glamorgan: The under-mentioned gentlemen to be Surgeon-Lieutenants: Joseph Edward James Soden and Arthur Lloyd Jones. 1st Nottinghamshire (Robin Hood): Surgeon-Major J. O'Connell Hynes to be Surgeon-Lieutenant-Colonel.

GENERAL SIR E. B. HAMLEY'S LIFE.

The second volume of the "Life of General Sir E. B. Hamley" contains much information which—altogether apart from the unhappy circumstances that led to his sense of grievance and disappointment—will be read with interest by those who took part in the Egyptian campaign of 1882. General Hamley, in his official report to the chief of the staff on the second division at the battle of Tel-el-Kebir, specially notes, for example, the gallantry of Brigade-Surgeon Manley, V.C., who, he says, remained always in the hottest fire, led on stray parties of men, and was of the greatest service to his general at a moment when his staff was dismounted or dispersed, in helping to get his horse over the ditch and parapet of the main entrenchment under a heavy fire. The references, moreover, to the extremely dirty and insanitary condition of the buildings and camping grounds which the troops were, for military reasons, compelled to occupy, to their exposure and to the prevalence of heavy dews at night, bear out the correctness of the views that were expressed at the inquiry which subsequently took place in this country, and go a long way to account for the sickness that prevailed in Egypt in the expeditionary army of occupation after the fighting was over.

THE VOLUNTEER AMBULANCE CHALLENGE SHIELD.

The Volunteer Ambulance Challenge Shield was competed for on Saturday last at Wellington Barracks. Surgeon-Major Grier, A.M.S., Surgeon-Major Carte, A.M.S., Surgeon-Captain Jackson, A.M.S., Surgeon-Major Collingridge (Militia Medical Service), Surgeon-Major Hurst (Northumberland Volunteers), and Surgeon-Captains Squires and O'Callaghan (Volunteer Medical Staff Corps) were the judges who awarded the shield to the 1st Volunteer Battalion Highland Light Infantry, a Glasgow corps, with 274 marks out of the possible 300. Badges were given to the four men composing the team, and also to those of the 2nd Volunteer Battalion Royal Fusiliers, 252 marks; and the Civil Service, 240. The 1st Wilts, 1st Bucks, and 2nd Volunteer Battalion Liverpool followed next in order of merit. At the conclusion of the proceedings Surgeon-Major Grier complimented the teams on the excellence of their work.

MEDICAL MEN AND SERVICE CLUBS.

The *Court Journal* makes the following comment, which we think worthy of quotation, in reference to the recent elections at a popular Service club:—"If it is true that Service clubs are just now showing a feeling against electing

candidates belonging to the medical branch of the Service, it is a fact to be regretted. Combatant officers, if they can dispense with the presence of medical men at their clubs, cannot do so in action, when they themselves may be black-balled in a more deadly manner; this they might remember."

DEATHS IN THE SERVICES.

We regret to have to announce the deaths of the following officers:—

Surgeon-Major Horatio Scott (retired), A.M.S., at Basingstoke, Hants, in his sixty-second year. The deceased officer entered the Army in 1858 and retired in 1888.

Surgeon-Captain George Nelis, A.M.S., at Bombay, on the 9th inst., in his thirty-ninth year.

Surgeon-General R. Bowen (retired), A.M.S., at Eastfield, Weston-super-Mare, on the 7th inst. aged seventy-seven years.

On the 17th inst. fifty-five patients were admitted at the Royal Victoria Hospital, Netley, having arrived at Portsmouth by s.s. *Marcotus*, which left Malta on June 7th.

Correspondence.

"Audi alteram partem."

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—As master of the Rotunda Hospital, which is one of the largest training schools for midwives in this country, I have been so often asked for my opinion upon the Midwives Act that I think it advisable to publish my views through your influential journal. I consider that it is a matter of urgent importance that midwives should be registered; but I consider the definition of a midwife as "a woman who undertakes to attend cases of natural labour without the direct supervision of a medical practitioner" as most objectionable. It places those women who prefer to attend without medical supervision in a superior position to those, often better informed, who prefer to attend if possible with a practitioner, and throws the midwife into antagonism with the medical profession, which cannot fail to do harm; and in this the Midwives Institute are in the wrong; since they wish to accentuate the difference between a midwife and a monthly nurse. In a large proportion of cases a monthly nurse must act as a midwife, and should therefore be a trained midwife. In abnormal cases, on the other hand, a midwife should send for a practitioner and should, acting as a nurse, give him assistance. Many midwives, however, will not do this, but, on the contrary, when the practitioner arrives the midwife departs. In Ireland a midwife is also a nurse; our certificates state that "— has been trained as a nurse-tender" (or midwife), and the result is that in this country there is little or no friction between medical practitioners and midwives. I object, therefore, to this Bill as giving a legal position and prestige to women who prefer to act without medical supervision and does not sufficiently provide against their treating cases other than normal; because it centralises all authority in London, which is unfair to other teaching centres; and because, being limited to England and Wales, it would prevent our midwives practising in those countries, which would practically extinguish Dublin as a training school for English midwives.

I am, Sirs, yours faithfully,

W. J. SMYLY, M.D.

Rotunda Hospital, Dublin, June 18th, 1895.

To the Editors of THE LANCET.

SIRS,—May I in a few words point out one or two of the impossible conditions embraced in the Draught Scheme published in your issue of June 8th by Dr. Lovell Drage. It is all based on the second clause: "If the women are unable to obtain proper assistance," &c. With a Poor-law system which embraces all parts of the country, it is difficult to see how the District Board, composed as it is of the guardians of the poor who have the carrying out of the Poor-law, could be got to declare that the women in a part of their district were unable to obtain proper assistance, as it would be tantamount to passing a vote of censure against themselves. Even if this difficulty were got over, the remedy proposed is neither more nor less than the wholesale pauperisation of the district.

From the amount of officialism to be expended on each stage of the inquiry, it is evident that Dr. Drage's scheme would defeat rather than assist the end it appears to have in view.

I am, Sirs, yours faithfully,

F. ROWLAND HUMPHREYS.

Fellows-road, South Hampstead, N.W., June 11th, 1895.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE APOTHECARIES' HALL OF IRELAND.

To the Editors of THE LANCET.

SIRS,—As some misapprehension seems to exist regarding the report of the visitors to the examinations of the Conjoint Board of the Royal College of Surgeons and the Apothecaries' Hall of Ireland, it is necessary shortly to state the facts. Under the Medical Act of 1836 it became necessary to form a union between various licensing bodies for the purposes of examination. Such a junction was effected and still exists between the Royal College of Surgeons in Ireland and the Royal College of Physicians. The Apothecaries' Hall then established its right to give a diploma which could be registered, and to do this it was necessary that there should be an examination in surgery. That body had been left out of the combination of the College of Physicians and the College of Surgeons, and in accordance with its right it applied to the General Medical Council for leave to appoint examiners in surgery, and permission was granted in May, 1837. It was, however, deemed inadvisable that an independent licensing body of this kind should continue in Ireland, and after negotiations the College of Surgeons entered into a conjunction with the Apothecaries' Hall to examine candidates apart from the union with the College of Physicians. Examiners were appointed, partly by the College of Surgeons and partly by the Apothecaries' Hall; but upon reports made by the visitors of the General Medical Council the Council of the College of Surgeons decided by vote on June 22nd, 1894, to terminate the arrangement at the close of one year. It was, however, agreed that all candidates who had passed part of the examinations should have their rights preserved and should be examined so long as they presented themselves.

The examinations have been very closely inspected and freely reported upon. The last report of the visitors (April and May, 1895) describes the first professional examination as "a good and satisfactory test"; in the second the examination in anatomy and materia medica and pharmacy as "commendable"; and of the third it declares that "no exception could be taken to any part of this examination." Of the final examination the visitor and inspector report an "improvement generally." At this examination the examiners in medicine are appointed by the Apothecaries' Hall, and in surgery by the College of Surgeons. In all the other subjects, save medicine, the visitors state that the examination was "sufficient," and of the examination in medicine it is right to say that the visitors differ from the examiners in one point only, and that they declare that the "examination was a most careful one, and, we believe, was conscientiously conducted." It was upon this report that the Medical Council agreed to bring this conjoint scheme before the Privy Council as insufficient. What we desire to show is that the work of the College of Surgeons in this connexion has been properly carried out and to make it known that the partnership is on the eve of dissolution. There is no examination in the world with which faults of different kinds may not be found by so many different visitors. For many years the examinations of this College, as of all others in the United Kingdom, have been reported on, and we have received frequent commendation. The College endeavours to maintain a high standard; in certain senses its examinations are in advance of those of other countries, and in this last report we have again obtained the approval of the visitors.

We ought, perhaps, again to point out that the union between the College of Physicians and the College of Surgeons continues as before, and that the examinations have been declared to be, in the words of the Act, "sufficient."

W. THORNLEY STOKER President.

WILLIAM THOMSON, Vice-President.

ROBERT H. WOODS, Sec. of Council.

Royal College of Surgeons in Ireland, Dublin,
June 11th, 1895.

VISION IN ELEMENTARY SCHOOLS: A REQUEST.

To the Editors of THE LANCET.

SIRS—Will you permit me to say through your columns that I have undertaken, in conjunction with a committee of the Education Department, to investigate the state of vision among the children in elementary schools, and that I shall be very glad to obtain the help of competent volunteers in carrying out this undertaking? Any gentlemen accustomed to estimate refraction, and able to spare a couple of afternoon hours on stated days, will much oblige by communicating with me at 31, Harley-street, W. I propose to ascertain the percentage of children with subnormal vision and the cause to which in each case the subnormality is to be ascribed. I should, perhaps, add that my own work in the matter will be unpaid, and that I am consequently unable to offer payment to those who may be good enough to assist me.

I am, Sirs, your obedient servant,

Harley-street, W., June 18th, 1895. R. BRUDENELL CARTER.

THE REMUNERATION OF MEDICAL OFFICERS TO PROVIDENT ASSOCIATIONS, CLUBS, ETC.

To the Editors of THE LANCET.

SIRS—The paper of Mr. F. R. Humphreys, read before the Hunterian Society, on the Necessity for a Central Organisation in the Medical Profession, and the publication in THE LANCET of June 8th of the Hospital Sunday Committee, render the above subject peculiarly interesting just now. I hope, therefore, you can find room for what must, from the nature of the subject, be a long letter. Some years ago you did me the honour to publish a letter regarding the general income of the profession, which led to such a long discussion as proved this to be a burning question. For years past the number of qualifications granted has exceeded the retirements from the medical profession by some 600 a year. This means in a single generation an increase of 18,000 in the number of medical men. It is no wonder, therefore, that medical practitioners are tempted to undersell one another. According to Mr. Neison's statistics of the sickness experienced in the Manchester Unity of Oddfellows, one may expect in patients between the ages of twenty-one and sixty-five an average of one month's sickness per head per annum, which, I think, may be taken as equivalent to fifteen visits. As the present payments range from 3s. 6d. to 6s. a year (most usually 4s. or 4s. 4d.) we may consider the scale of payment to medical officers of provident dispensaries, friendly societies, &c., as about 3d. a visit, including medicine. I think parochial medical men get less even than this, but it is difficult to compute. It seems to me that no contribution is worthy of the name of "provident," in which the scale of pay is so inadequate that it would be impossible for a man devoting his whole time to the work to make the poorest living commensurate with his class of life. Let us see how 3d. a visit works out. We will even assume that the present scale of payments would allow of 1d. for each consultation at the surgery as well as 3d. for each visit at the patient's house. We will assume that poor people live close together and can be seen at the rate four visits (or twelve consultations) an hour. It is only in towns that such an assumption would hold good. As eight hours is considered a working man's day, we will take eight hours as a just day's work for a medical man of which six are spent in visiting and midwifery and two in home consultations and dispensing. Thus we have—

Six hours, at four visits per hour at 3d. each	6 0
Two hours, at twelve consultations per hour at 1d. each	2 0—8 0
Deduct for expenses—	
Use of furnished waiting-room and surgery, with fires, lights, and attendance, say	1 6
Thirty bottles of medicine at 1d. each (cost price)...	2 6—4 0
Nett cash	4 0 a day.
Equal to...	24 0 per week.

Twenty-four shillings a week is not the pay of a skilled mechanic, and you will grant that I have estimated the working expenses at too low a figure. Nor have I reckoned anything for interest on or recovery of capital sunk in obtaining

a qualification. Nor do I believe that any man could long stand the strain of six hours visiting a day on foot besides the other work; anyway, no skilled mechanic has anything like it. Even at 1s. a visit and 6d. a consultation, if a medical man drove on his rounds you will find that at eight hours a day it would not be likely that he would make £200 a year. Even the clergy, admittedly badly paid, do better than this. No, Sirs, if the poor cannot pay more than 4s. a year let it be called *charity* and not *providence*. Add the work done gratis at the hospitals and elsewhere, and how many millions a year do the medical profession contribute to the charities of England?

Would it not be possible for the profession to form an association among themselves that really would charge "provident" rates? Let us suppose that a shilling a month was the minimum. Let any medical man or chemist belong to the association who was on the Register. Let there be a fixed tariff for dispensing, and let that be done by chemists, as it should, and let the balance be divided amongst the medical men according to the number of patients entered on their list. Let there be one simple rule, that no medical man was eligible to belong to this association who accepted less payment from any club or provident society that did not publicly profess to be a charity. At present the holders of these appointments are often the best men in the neighbourhood, but let them once occupy the invidious position of underselling their brethren and they would either resign or insist on the public announcement that the Association they served was a charity entitled to demand a rigid scrutiny of the means of all applicants. The present tests are usually farces. Poor people have little or no idea that they are getting the services of medical men for anything less than the market value and would be indignant if charged with the "sweating" practices so loudly denounced by their own champions in Parliament and elsewhere. No government dare give out a contract without stringent regulations to protect the workman against sweating middlemen, and yet there is not a medical parochial appointment in England which could not justly be described as "sweated."

I am, Sirs, yours faithfully,
E. PAGET TRUBSTAN, M.D.

THE VAPOUR OF OPIUM AND OTHER VAPOURS OF THE PHARMACOPŒIA.

To the Editors of THE LANCET.

SIRS,—In treating a case of the ordinary insomnia of influenza I found recently some good results from the inhalation of the vapour of opium. In one case especially, after four nights of sleeplessness, twelve hours followed the inhalation of the vapour obtained by the combustion of one and a half grains of opium. It seems, according to the valuable papers of Dr. Reginald Thompson in the *Practitioner* (1878 1879), that the inhalation of opium is of great value in the relief of such cases as are admitted into the Brompton Hospital; and if this be so, there are other classes of cases which might receive benefit from the administration of opium in the form of vapour. It would seem possible to make a more rational use of opium as vapour than is done by the Chinese, and the question, I think, is worth our consideration.

It is desirable that some great improvements should be made in the "vapores" of the Pharmacopœia. There is no doubt but that the use of some medicinal agents in the form of "vapores" may be of great benefit in a certain class of cases; but to effect good it is necessary to study carefully the scientific principles on which evaporation depends and how they are to be put into practice. The "vapores" are the most curious evidence of ignorance that can be quoted from the Pharmacopœia.

I am, Sirs, yours faithfully,
West Kensington, June 14th, 1895. ROBERT LEE.

"ENTERIC FEVER AMONG EUROPEAN TROOPS SERVING IN INDIA."

To the Editors of THE LANCET.

SIRS,—In your issue of May 18th Brigade-Surgeon-Lieutenant-Colonel Climo, in his article on "Enteric Fever among European Troops Serving in India," states: "The explanation of the comparative immunity of native troops is that in childhood natives have passed through conditions arising from exposure to the enteric poison which, in after-life, render them exempt from the disease." In this state-

ment appears to me to lie the explanation of the entire matter. As in India the insanitary environments procure immunity for the race born and bred therein, so some few decades ago the insanitary condition of England likewise procured immunity for her sons and consequent freedom from enteric fever when they were called upon to serve abroad. The vast strides in sanitation made in England within the last twenty or thirty years have resulted in the production of a race that, unless possessed of natural immunity, as many individuals no doubt are, is certain to suffer severely on arrival in insanitary countries such as India or Egypt, where enteric fever is endemic.

Further, the more perfect sanitation becomes at home, the greater the prevalence of enteric fever we must anticipate abroad, until such time as the sanitary conditions abroad equal those at home. The above appears to me to be a more reasonable explanation of the "Scourge of India" than the abolition of the regimental surgeon, advanced by Dr. Climo; or the youth and short service of the soldier of the present day, generally accepted by other writers.

I am, Sirs, yours faithfully,

W. L. CHESTER, M.B.,
Cairo, May 22th, 1895. Surgeon-Lieutenant-Colonel, A.M.S.

"ADENOID GROWTHS IN CHILDREN."

To the Editors of THE LANCET.

SIRS,—The interesting communication of Dr. Eustace Smith on laryngeal spasm associated with post-nasal growths in infants, and the subsequent correspondence, encourage me to send you the outlines of a case which came under my notice about two years ago. The patient was a well-developed boy aged seven months. The peculiar loud crowing noise had been first observed soon after birth, and was most marked during sleep. It seemed to increase up to the time at which I was asked to see the patient. I found adenoid vegetations were present and caused incomplete nasal obstruction. I removed the adenoids with a Gottstein's curette. The operation removed what nasal obstruction was present before the operation, but it appeared to have no effect on the laryngeal spasm, which continued for eight months longer; at the end of this time the crowing gradually disappeared.—I am, Sirs, yours truly,

J. JACKSON CLARKE.

Old Cavendish-street, W., June 17th, 1895.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to an article by Dr. Eustace Smith on "Adenoid Growths in Children" as a cause of, amongst other conditions, laryngismus and other spasmodic laryngeal affections, and he has stated that such cases used to puzzle him greatly. Permit me to remark that in the first edition of "The Throat and its Diseases," published in May, 1878 I drew attention to the subject of adenoids, with pictorial illustration of a case operated on in October, 1877, and also to the importance of enlarged tonsils as a cause of nervous laryngeal cough.

In the third edition, dated May, 1890, p. 518 (and previously in the *British Medical Journal*, Feb. 15th, 1890), I insisted on "the primary importance of naso-pharyngeal glandular hypertrophy, in other words, adenoid growths in the vault of the pharynx," as a factor "not only of laryngismus, but also of tetany and convulsions, which are both exaggerated examples of the same disease." I have gone even further, and in fact, *pace* Dr. McBride, have long held that it would be difficult to name any inflammatory or reflex disease of the respiratory passages in children in which recognition of nasal obstruction was not a necessary step to a complete diagnosis, and removal of the same the most rational and effectual method of treatment. These views, not only with regard to laryngismus, but almost every other disease mentioned by Dr. Eustace Smith, have been urged by me with enthusiasm and persistence for so many years, both in my systematic works and at medical societies and in current medical literature, that I may be pardoned for expressing surprise that they only first attracted Dr. Eustace Smith's attention so recently as October, 1891.

I am, Sirs, yours faithfully,

Mansfield-street, W., June 11th, 1895. LENNOX BROWNE.

"* We are strongly of opinion that, as a general rule, claims to priority in the detection of diseases or their

symptoms are to be deprecated among members of the profession, if only for the reason that to draw attention to a subject is not necessarily to recognise its importance. We recommend, however, to the perusal of Mr. Lennox Browne our obituary notice of Dr. Hans Wilhelm Meyer (p. 1613), and the substantial claims that it contains for the recognition of the services of that learned physician and certain of his *confrères*.—ED. L.

"THE SECRETARY OF STATE, THE SOCIETY OF MEMBERS, AND THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—In your otherwise correct annotation on the subject of the intervention of this society in connexion with the amendment of By-law 16, you have omitted to mention that the Secretary of State agreed with our main contention, which was that the Council (as at present constituted) is not fitted to be the sole and uncontrolled judge as to what is "infamous conduct" on the part of a member. Under the by-law as proposed, it was pointed out by Mr. Asquith that "the only question which could be decided by a court of law would be whether, in 'the opinion of the Council,' a member had offended against the terms of the by-law, thus leaving the action of the Council wholly uncontrolled." Under the by-law, as amended by the Secretary of State, the Council has full powers to deal with offenders, subject to the salutary control of the law-courts.

I am, Sirs, yours faithfully,

Southfields, S.W., June 17th, 1895.

W. G. DICKINSON.

THE SUPPORT OF HOSPITALS AND THE ABUSE OF THEIR SERVICES.

To the Editors of THE LANCET.

SIRS,—As a medical man having some knowledge of the immense abuse of the out-patient department of hospitals and of the disastrous effect this has upon my own profession, I felt great difficulty in my capacity of churchwarden in giving my sanction to devoting the offertories on "Hospital Sunday" to the fund which goes by that name. It does not appear to me to be right to give money dedicated to God's service to a fund which is divided up amongst a number of institutions who admittedly make little or no attempt to confine the expenditure of the donations to the purpose for which they were given; while, on the other hand, the money is partly expended in carrying on a grossly unfair competition with a profession which is noted for its charitable acts. My vicar had, I found, made arrangements long since, in accordance with the custom of previous years, by which the offertories of Hospital Sunday were to be given to the Fund, so that I did not interfere with them on this occasion; but I do feel that since you issue a Supplement showing the needs of the hospitals, it is not unreasonable to ask you also to publish a statement showing the attempts which are being made by the hospitals and dispensaries benefited by this Fund to devote money given to them to charitable purposes—i.e., entirely to the objects for which the money is given—and so defending it from abuse.

I am, Sirs, yours faithfully,

June 10th, 1895.

PEOPLE'S WARDEN.

THE ELECTION OF MEDICAL OFFICER TO THE LAMBETH INFIRMARY.

To the Editors of THE LANCET.

SIRS,—In your issue of June 1st there was an advertisement for the post of medical officer to the Lambeth Infirmary. The chief points in it were—the candidate "must possess the medical and surgical qualifications prescribed by the orders of the Local Government Board"; "he will be required during term to give lectures to the probationers under training at the infirmary"; and "the entire management of the infirmary, whether medical or otherwise, is placed under the control of the medical officer, rendering it essential that he should be possessed of good administrative capacity as

well as professional skill and experience." These are over fifty candidates, myself amongst the number. I have just heard that the finance committee, in whose hands is placed the selection of four or five candidates to go before the full board, last night passed a resolution, with one or two dissentients, that all those candidates who did not possess an M.B., M.D., or F.R.C.S. degree be struck out. Now, Sirs, I think a proceeding of this kind ought not to be kept a secret. It is most unfair to all those candidates who have not got these degrees, and who thus wasted their time and money in sending in their applications. It may act (and probably will) in a manner most prejudicial to the interests of the board itself, and also the ratepayers, because the man most fitted for the post may be amongst those struck out, for it by no means follows that because a medical man has an M.D. degree therefore he is capable of taking charge of the Lambeth Infirmary, which is really a hospital with over 600 beds. It is also most stultifying to the board itself, for if the members had originally intended to limit the candidates in this particular way they would have said so in their advertisement. Why, then, should this committee override the board? The committee also fixed the minimum age at twenty-eight. I hope you will not think that I write this as a disappointed candidate. Personally, it makes very little difference to me; but I think that such peculiar methods of selection ought to be exposed, for if this is taken as a precedent it must of necessity debar many efficient men from applying.—I enclose my card and am, Sirs, yours obediently,

June 18th, 1895.

M.R.C.S., &c.

P.S.—The election is fixed for the 26th inst.

"THE BOYLE LECTURE AT OXFORD."

To the Editors of THE LANCET.

SIRS,—I am very much obliged to you for indicating where I could find Professor Crum Brown's lecture fully reported. I have now read it more than once with considerable interest, but also, I am bound to add, with some perplexity. If the distinguished lecturer will pardon my saying so, his diction is not always perfectly lucid. Here, for example, is a passage which for the life of me I cannot construe into either rhyme or reason. "If we call the line along which we look during the pause between two jerks a glance-line, we may describe the whole phenomenon by saying that the glance-lines are fixed relatively to fixed external objects, whether the head is rotated or not. This, of course, means that during a pause the eyes are rotated relatively to the head about the axis on which the head is really rotated, in the opposite sense and through the same angle as the head." Now what on earth do these words mean? They are all simple, commonplace expressions, employed apparently in consonance with the ordinary rules of grammar, but the more I pore over the passage the greater grows my bewilderment. To the Professor, with the context in his mind, the meaning doubtless is as plain as a pikestaff, but I freely confess I am quite unable to fathom it. After such an admission of incompetence I am almost afraid to insist on the two objections raised in my former letter, and yet one of them, at all events, seems to me in my ignorance to be well founded. If, however, I am to be hung (as seems probable) I may as well have my sheep—provided, of course, I am not thereby seeking to trespass too far upon your kindness and space.

As regards my first objection I find that Professor Crum Brown does not assert that "when the head is moved rapidly in one direction the eyes have to move to a corresponding extent." On the contrary, he talks of fixing the eyes on a point and keeping them so fixed while rotating the head. He is well aware of the power we all possess of moving our heads while steadfastly regarding a fixed object, and yet he commits himself without limitations to the following statement: "What has been said seems to show that our immediate sense that the earth and what we call fixed objects on it are fixed is a consequence of the way in which we move our eyes, and, in particular, of the way in which, by a suitable movement of the eyeballs, we involuntarily and unconsciously compensate movements of the head, voluntary or involuntary, conscious or unconscious."

As regards my second objection I have only to add that in my humble opinion there is nothing in the lecture to diminish its validity. According to Professor Crum Brown the force controlling the compensatory movements of the eyes is

purely mechanical; it is consequently impossible to reconcile his theory with obvious facts.

I am, Sirs, yours faithfully,

June 17th, 1895.

SURDUS.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Shahzada's Visit to the City.

THE visit of the Afghan Prince was in all respects most successful. It comprised part of the afternoon of Tuesday, the 11th, the whole of Wednesday, the 12th, and a great part of Thursday, the 13th inst. On the Wednesday he had an admirable opportunity of seeing the better and the worse side of Liverpool, the procession being through a principal thoroughfare of Toxteth Park which was thronged with the inhabitants of the worst streets in Liverpool. A short drive took the Prince to a sight much more agreeable, Sefton and Prince's Park, with their many noble mansions. The Prince had previously travelled by the Over-head Railway, so called because it passes at a high level along the line of docks over the street traffic, the motor power being electricity. The Prince was so much interested in it that he repeated his visit to this railway next day. In addition to an address at St. George's Hall and a luncheon at the town hall, he had an opportunity of seeing the river Mersey to great advantage, and also of witnessing the novel sight of an Atlantic liner moored by the landing stage. Liverpool is determined not to be surpassed in facilities of transit by Southampton or any other port, and it may interest all American visitors professional and lay, as well as all visitors from England to America, to learn that they can now pass through Liverpool with every comfort and without delay by means of the new riverside railway station, all the discomforts of tenders, porters, cabs, &c. having been relegated to the past. The Mersey is remarkably free from stench, though at a certain state of the tide and in certain parts of the river one is occasionally reminded that it is made a deposit for sewage. Perhaps the day is not very far distant when the deposit of sewage in a tidal river will be regarded as even more dangerous than intra-mural burial.

Deaths of Prominent Citizens.

Within the last few days several prominent citizens have passed away, among others being Mr. R. Ellis, clerk to the city magistrates, and Mr. G. J. Atkinson, the town clerk. Both these gentlemen had been brought in contact with many members of the medical profession, each and all of whom could testify to the value of these two public servants. Each in his capacity was a model of what a public official should be, always at hands, always ready to give information in his department, and always respectful, courteous, and obliging.

June 18th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Site for a New Infirmary, Newcastle-upon-Tyne.

THE governors of the Royal Infirmary, having failed to induce the corporation to grant them a site on the Leazes, sent a few days ago a deputation to the town council asking for an extension of the present site. The ground upon which the infirmary was originally built was given by the corporation, and it is felt that what the corporation did some hundred and fifty years ago they should be able and willing to do again. If a portion of the ground now occupied as a market could be handed over to the infirmary little doubt is felt that the money would be forthcoming to place upon it a building as capable of meeting the requirements of the district as was that the foundation stone of which was laid in the year 1751 by Butler, the famous Bishop of Durham. Newcastle was then a small town. Now it is a stately and a wealthy city, a great centre of industrial and intellectual activity, she should not lag behind other towns in providing adequate accommodation for the sick poor. It will be some weeks at least before an answer can be given by the finance committee, to whom the council has referred the question of the possibility of granting the infirmary an extension of the present site.

A Good Example.

The foundation stone of a fine Presbyterian church has been laid by Sir Donald Currie, M.P., on a plot of ground adjoining that on which the College of Medicine is built, and to commemorate his visit to Newcastle Sir Donald Currie generously handed the mayor a cheque for £100 as a contribution to the funds of the Royal Infirmary.

Rabies at Tynemouth.

A spaniel suffering from dumb rabies was a few days ago destroyed at Tynemouth after having been kept under observation by a veterinary surgeon for a sufficiently long period to make the nature of the disease a matter of certainty. For some time there has been a scare of rabies in the Haltwhistle district. It is believed the Tynemouth dog had not bitten any other animal. An order to muzzle all dogs in the borough of Tynemouth has been issued by the magistrates.

Destruction of Fifteen Boilers with great Loss of Life near Redcar.

On Friday night a terrible boiler explosion occurred at Warrenby, near Redcar, the explanation of which is not at present known. The furnaces were being tapped when the explosion took place. Four men were killed instantly, five others have since died, and others are seriously injured. More would have suffered had the explosion taken place a little earlier. Two hundred men are by this dreadful accident thrown out of work. The damage is estimated as amounting to £20,000. Fifteen boilers are destroyed. An inquiry by the Board of Trade is being held.

Another Fatal Accident to a Cyclist.

A young man named Jameson, while riding down a hill on Sunday last in the neighbourhood of Hexham, lost command of his cycle, and with his machine bounded over the wall of a bridge into a stream, where he was found quite dead. This is the third fatal accident in this neighbourhood within a few days, and there is a patient in the Royal Infirmary suffering from rupture of the urethra, brought about by his missing the saddle in mounting and striking his perineum on some other part of the machine.

The Visit of the Shahzada.

The Ameer's son arrived at Cragside, the seat of Lord Armstrong, with a large retinue, on Saturday from Carlisle. At Silloth he visited the range belonging to the firm of Messrs. Armstrong, Mitchell, and Co., where some cannon and other guns were fired for his edification. On Monday he came to Newcastle. An address was presented to him by the civic authorities, after which he inspected the celebrated Armstrong factory, lunched, and was shown something of the town. He told the deputy mayor he enjoyed himself; at any rate, he took an intelligent interest in everything he saw. It was noticed that one or two of his suite on the way to inspect the works, before luncheon, were asleep, but no doubt they, too, enjoyed themselves after their fashion.

Newcastle-upon-Tyne, June 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Cost of Hospital Extension.

THE expenditure on the additions (including furnishings) to the City Hospital, Aberdeen, up to date is £18,428 19s. 7d. This is exclusive of the cost of erecting a dwelling-house for the employes, a scheme which is at present under consideration by a committee.

An Economic Convalescent Home.

The annual gathering in connexion with the Newhills Convalescent Home, near Aberdeen, took place on Saturday last. In the cottage there and in the branch at Stonehaven 241 patients were treated last year. The Rev. Dr. Smith stated that thirty (female) patients were admitted at the little home at Stonehaven last season and that the whole cost was about £52.

Glasgow University.

At a meeting of the University Court on the 13th inst. Mr. R. Adamson, LL.D., was appointed Professor of Logic in place of the late Dr. Veitch. Mr. Adamson has for three years occupied the chair of Logic in the University of Aberdeen.—Two new lectureships have been recently instituted, one in French and the other in English Literature,

at Queen Margaret College. M. Mercier of the University of Geneva has been appointed to the former, and the latter is to be filled by Mr. A. A. Jack, B.A. Mr. Jack is a son of Dr. Jack, the Professor of Mathematics in the University.

Coöperative Seaside Home.

The foundation stone of the new home at West Kilbride was laid on the 15th inst. in the presence of a large number of representatives of the various coöperative societies in the west of Scotland. The estimated cost of the home when completed is £9000, towards which sum Mr. Wm. Barclay, Glasgow, has generously contributed £2000 to be devoted to the erection and furnishing of one of the wings of the new building.

Volunteer Ambulance Training.

The annual inspection of the Glasgow companies of the Volunteer Medical Staff Corps took place on York-hill on the 14th inst. The inspecting officer was Surgeon-Colonel Grose, Principal Medical Officer for Scotland, and Surgeon-Captain Beatson was in command. After the march past "A" Company were told off to represent an ambulance section in active service in the field, and formed dressing and collecting stations for the reception of the "wounded" brought in by the stretcher detachments. At the same time "B" Company were put through the movements of bearer company drill. The companies were then formed up, and in addressing them Surgeon-Colonel Grose expressed his gratification at the work he had seen, and said he would have pleasure in making a good report on the efficiency of the companies. Satisfaction is naturally felt in local volunteer circles that at the recent ambulance competition held at the Wellington Barracks for the challenge shield and badge the team representing the 5th Lanark took the first place, and so bring the shield north of the Border. The Lanarkshire regiment was the only Scottish corps represented in the competition.

Glasgow Royal Infirmary.

The recent changes in the staff have created a vacancy both in the position of visiting physician and visiting surgeon; and the managers have decided to return to former arrangements and to appoint two extra-dispensary physicians. For these appointments there are a number of applicants, and an energetic canvass has been in progress during the past ten days. I offer my condolences to certain of the candidates who have been so unfortunate as to suffer from an attempt to press their claims in the columns of a local weekly journal.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The late Dr. Valentine Ball, C.B., F.R.S.

THE two events in Dublin this week of the greatest scientific importance are sadly and undoubtedly the deaths of Sir George Hornidge Porter and Dr. Valentine Ball. Of Sir George Porter I shall not attempt to speak in the space at my disposal. Dr. Ball, whose death took place on the 15th inst., although a doctor, not of medicine, but of law, was very widely known and esteemed by the medical profession in Dublin, and was brother not only of Professor Ball of Cambridge, but also of Dr. Charles Ball, our well known surgeon. After occupying for some short time the position of Professor of Geology at Trinity College, he became Director of the Science and Art Museum, Dublin, a post which he filled as successor to the late Dr. William Steele during the past twelve years. His large experience on the Geological Survey of India and his remarkable attainments in natural science rendered him highly fitted for the position which he filled with such ability, and for which it will be difficult to find a successor so highly cultured and so capable.

The New Assistant Under-Secretary for Ireland.

Professor J. B. Dougherty, M.A., has been appointed Assistant Under-Secretary for Ireland, in place of Sir W. S. B. Kaye, C.B., Q.C. Professor Dougherty is son of the late Dr. Archibald Dougherty, a well-known member of the medical profession. He was educated at Queen's College, Belfast, where he was senior scholar, and he was a gold medallist in the Queen's University. He was Professor of English Literature and Logic in Magee College, Londonderry, and for a time he was a member of the Educational Endowments (Ireland) Commission.

The Belfast Board of Guardians and the Public Health Committee.

The Belfast board of guardians having reported to the Public Health Committee of the Belfast corporation, on the authority of their dairy inspector, that there were no fewer than forty-seven cows grazing inside the city boundary which had no supply of pure water, a reply has been received to the effect that Dr. Whitaker, the superintendent medical officer of health, says that there is no nuisance injurious to health, and that the Public Health Committee were not aware of any Act of Parliament showing what water animals should be allowed to drink; but if the guardians could point out any authority by which they could act the committee would be happy to move in the matter. To this the guardians reply that, having pointed out the danger to the Public Health Committee, they do not feel called on to suggest the remedies to be applied. So the matter rests at present.

Monaghan and Cavan Asylum.

At the monthly meeting of the governors of the Monaghan and Cavan District Lunatic Asylum, held on June 14th, it was decided, with the view of applying the speediest and most economic remedy to the present overcrowding in the asylum, to recommend the purchase by the board of control of the County Monaghan Infirmary. This infirmary adjoins the asylum grounds, has an excellent supply of water and can accommodate sixty or seventy patients; and it seems that possession can be immediately acquired.

The Water-supply of Portstewart.

I understand that the Coteraine board of guardians have agreed to apply to the Board of Commissioners of Public Works in Ireland for £1000, the first instalment of the loan of £3000 granted for the construction of waterworks and sewerage works for the town of Portstewart, which is one of the most popular of the northern Irish seaside resorts.

The Belfast Royal Hospital.

On June 15th the working men's committee of the Belfast Royal Hospital paid their annual visit to the "Throne" Convalescent Home, and having made a thorough inspection of the place passed a resolution approving very cordially of the condition of the institution and strongly recommending its claims, as well as those of the Royal Hospital, to their fellow working men and women in the city of Belfast. Dr. W. Calwell, registrar of the Royal Hospital, has been appointed physician to the Throne Consumptive Hospital in place of Dr. Strafford Smith, resigned.

The Weather in the North of Ireland.

The present extraordinary weather, characterised by hot, scorching days, cold frosty nights, and with the wind blowing from the north or north-east, is doing incalculable harm in the North of Ireland. For two months we have had practically no rain, and the country at present has a burned, arid appearance very rarely seen. The hay crop is very light, turnips are a complete failure, and flax and corn are short and stunted and beginning to ripen. The only crop doing at all well is that of potatoes, but they, too, have been much injured by the frosts. In several of the northern seaside resorts, unless rain falls soon, there will be great difficulty in procuring fresh water. The general health in Belfast is good, the dry weather apparently not having any effect in increasing the death-rate.

The Londonderry Workhouse.

At the weekly meeting of the Londonderry board of guardians, held on June 15th Mr. Browne, medical officer of the workhouse, reported that the nurse's apartment was quite too small, being only 12 feet by 9 feet, and was used as a sitting-room and bedroom. The present nurse was doing as well as she could with the large number of patients (57) under her charge. He heartily approved of the proposal of the board to appoint an additional and thoroughly trained nurse. There were no proper sanitary arrangements, baths, or even proper ventilation for either nurse or patients, and he recommended the board to take this matter into their consideration. It was decided to appoint a properly trained and qualified nurse, at a salary of £30 a year with rations and apartments, to take charge of the infirmary and be assisted by the present one. It was also arranged to employ an architect to make out a specification for the improvement of the nurse's quarters, the enlargement of the surgery, and the improvement of the sanitary condition of the infirmary.

An Admiral's Brave Attempt to Rescue a Drowning Man.

On Saturday morning a foreman labourer named Kenny was showing Rear-Admiral Buckle through the tank buildings at Haulbowline, and when walking on a narrow wall separating the tanks Kenny struck his head against one of the beams overhead and fell into the water. He sank and did not even once rise to the surface. The Admiral, without waiting to divest himself of any of his clothes, hurriedly tied a rope round his waist and called on some men who were present to lower him into the tank. He quickly discovered the body, hitched a rope round it, and had it promptly drawn up. Poor Kenny was then conveyed to the Naval Hospital, where the naval surgeon, assisted by the Admiral and others, did everything possible to procure resuscitation, but all to no avail. The Admiral's pluck and presence of mind are most highly commended and have produced a favourable impression.

Important Lecture on the Housing of the Poor in Cork.

The Rev. Father Roche has been lecturing to the Cork Young Men's Society on the Plague Spots of our City. He explained that his parochial duties gave him unusual facilities for becoming disagreeably acquainted with the tenement houses of some of the slums of the city. He referred to the defective sanitary arrangements, the noisome atmosphere, the overcrowding, and the general wretchedness of some of those homes of the poor. He pointed out how such a state of things is well calculated to lower morally and physically the unfortunate beings who are obliged to drag out a miserable existence amidst such wretched surroundings. He forcibly pointed out what a strong temptation it is to such people to resort to the well-kept, comfortable tap-room of the public-house, where in winter the bright fire cheers and comforts, and where at all seasons are to be had the alcoholic potions which unfortunately are regarded by many as the panacea for driving away care and sadness. He urged that the corporation should build suitable houses and pointed out that in other cities where that had been done the municipal authorities had sustained no loss financially and incalculable benefits had been conferred on the poor. Several rows of labourers' cottages have been built in Cork from time to time, and there is every hope that the corporation, influenced by the strong representations made by the reverend gentleman, will soon make a further move in the direction he has indicated.

The Fermoy Workhouse and the Circular of the Irish Medical Association.

The report of the Irish Medical Association with regard to the treatment of the inmates of some of the Irish workhouses has already been discussed by several of the southern boards of guardians. The Fermoy board called for a report from the master, and, in reply, he states that the hospital patients are at all times under the supervision of paid officials, that the food given to them is wholesome and the best obtainable in the market, and that every attention is paid to ventilation and sanitation generally. The medical officer of the union endorsed the master's report, which was considered satisfactory by the guardians.

June 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The late Professor Verneuil.

IN the late Professor Verneuil, who died on the evening of Tuesday, June 11th, at Maisons-Laffitte, near Paris, from broncho-pneumonia, and whose death was announced in the last issue of THE LANCET, French surgery has lost a notable figure. For some months past his health had been far from satisfactory, and I remember how last summer, during professional visits I had occasion to pay at a house at Maisons-Laffitte separated only by a wall from his villa, a loud, convulsive, almost pertussive cough used to attack him for several minutes at a time. Like the late Professor Peter, Aristide Auguste Stanislas Verneuil was a Parisian, having first seen the light in this city on Sept. 29th, 1823. Pursuing his medical studies at the Paris Faculty, he was, at twenty years of age, an *externe des hôpitaux*, and from the following year, 1844, until 1848 an *interne lauréat des hôpitaux*; then successively *aide d'anatomie* and *prosecteur* (demonstrator). He was in 1852 "received" as M.D., his inaugural thesis being entitled "*Recherches sur la Locomotion du Cœur*." In August, 1853, he successfully competed for the post of *professeur-agrégé*,

his thesis being a brochure of 175 pages on the Venous System. It was, however, only three years later that he became a hospital surgeon. In 1862 we find him surgeon of the Lourcine Hospital (now rechristened Hôpital Broca), in 1865 of the Midi (now Hôpital Ricord), and then of the Lariboisière; in 1872 he passed to the Pitié; and finally, in 1889, he migrated to the Hôtel-Dieu. The lucidity of his clinical lectures procured him in 1868 his election as Professor of Surgery. His contributions to surgery were already numerous and important, his writings bearing upon diatheses and traumatism, anatomy, history of medicine, tuberculosis, cancer, &c. Amongst his later works we may specially mention his "*Chirurgie Réparatrice*" (1877), which constituted the first of the five volumes comprising his "*Mémoires de Chirurgie*." In 1877 he founded the *Revue de Médecine et de Chirurgie*, which was in 1880 split up into two journals. From 1887 to 1890 he published, in conjunction with collaborators, the "*Études Expérimentales et Cliniques sur la Tuberculose*." To the two chief plagues of suffering humanity—cancer and tuberculosis—he swore a deadly enmity, and he founded leagues against cancer and tuberculosis which were for some time productive of some good. Member of the Academy of Medicine in 1869, then President of the Surgical Society, he was in 1887 elected to fill the *fauteuil* of the late Professor Gosselin at the Académie des Sciences (surgical section). In 1889 he was promoted to a Commandership of the Legion of Honour and appointed Life-President of the Congrès de Chirurgie. In 1892 he voluntarily resigned his chair of Clinical Surgery, although he had not yet reached the limit of age necessitating such a step. When he delivered his farewell lecture at the Faculty the students and his old pupils who filled the theatre gave him an immense ovation. It is doubtful if the deceased professor will leave any marked trace of his surgical existence. Like many French surgeons of the old school, he was somewhat slow in adopting new ideas, and did not easily adapt himself to the new order of things. I well remember how opposed he was to the excision of tuberculous lymphatic glands, maintaining that the operation opened the way for fresh infection. But that he was an *esprit d'élite* is certain, and his qualities as a teacher were of a superior order. His oratorical powers were great, and he could manipulate the French language in a manner most conducive to the clear exposition of any given case. His appearance was distinctly in his favour, and his manners were most pleasant. He leaves behind him a crowd of devoted pupils, many of whom are now professors themselves.

June 18th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Political Mania.

I LITTLE thought when penning the few words which appeared in THE LANCET of June 8th on the inhibitory paresis occasioned by the high-pitched excitement of the late elections that another example of it, in its homicidal phase, would so soon be forthcoming. The lay journals have already announced the fact that Signor Ferrari, an eminent statesman, returned for Rimini by a triumphant majority against the candidate of the Opposition, was fired at by a group of Socialists as he was entering his house. The wound, in the upper region of the thorax, at first thought fatal, seemed for a few days to have taken a favourable turn. Later symptoms, however, put an end to all hope, and, though every assistance that the ablest consultants could give—prominent among them being Professor Murri of Bologna—was unremittingly bestowed, the elevation of the temperature, with the rapid pulse and the bronchopulmonary distress, too surely foreshadowed the end, which took place on June 10th.

The Policlinico.

Those of your readers who took part in the proceedings of the International Congress of Medicine and Surgery held in Rome in the Easter of 1894 will remember the "*Policlinico*" in which the nineteen sections were accommodated. Scarcely half finished at that time, the vast institution has made notable progress in the fifteen months that have since elapsed. On Friday, the 7th inst., their Majesties the King and Queen, accompanied by distinguished representatives of the Royal household, were conducted over the newly completed portions by his Excellency the Minister of Public Instruction, Dr. Bacelli. The visit was a highly gratifying

one, not only to King Humbert and Queen Margaret, but also to their host, who received from their Majesties the warmest congratulations on the satisfactorily forward state of an institution which owes to him, and to him alone, its inception and its place, already assured, among the best-equipped hospitals of Southern Europe.

Regional Congresses of Medicine.

THE LANCET of May 27th, 1893 contained an obituary notice of Dr. Giacinto Pacciotti, Professor of Surgery at Turin, one of whose chief merits was the impulse he gave to periodical meetings, regional and provincial, national and international, for the promotion of Italian medicine. His efforts were made on British lines; indeed, he was one of the most familiar figures at the annual meetings of the British Medical Association, from which he seldom failed to bring back suggestions for the still further improvement of the organisations he had so much at heart. Year by year these efforts are bearing richer and riper fruit, till the healing art, in its *ensemble*, can point to not a few memorable monographs and instructive treatises contributed on some of its obscurer departments at Italian medical congresses. One of the best organised of these has just met at Spezia. The Genoese school was ably represented, its Professor of Psychiatry, Dr. Morselli, opening the proceedings with a brilliant survey of the medical field since "evolution" became a working hypothesis in the hands of Darwin. Concentrating his observations on the "patologia cellulare" of Italian classification and on heredity in disease, he developed what he called the "endogenous" and "exogenous" conception of cellular maladies, deducing from it the double office of scientific medicine, that of "correcting and transforming" as far as possible the affected cell, and that of combating the infinitesimal yet formidable microbes which insidiously attack the defectively nourished organisms—combating these by rigid hygiene and sound alimentation. The address was a highly suggestive one, and, officially revised in the proceedings, will form a feature in their publication which will endeavour by classification and method to attain what Professor Michael Foster so much desiderated at the last great international congress—a periodical digest of the ground covered by biological, medical, and clinical research. Properly edited, indeed, the transactions and proceedings of the annual, biennial, or triennial congresses of the healing art should signally facilitate contemporary work by saving it from retraversing what is already beaten ground and economising its energies for fields untilled or but partially cultivated.

The Circolo dei Naturalisti.

I have from time to time noticed the lectures delivered at this specially Roman association as peculiarly interesting to the profession, combining as they do the pursuit of medicine with biological research, and riveting the bonds of attachment between what Hippocrates himself saw to be but two branches of the same stem—natural history and disease. The other evening the "Circolo" met in genial symposium to give a farewell banquet to one of its most prominent members, Dr. Maurizio Sacchi, who sets out in a few days for Central Africa to direct the biological side of the expedition shortly to start thither under the intrepid explorer Captain Bótego. The company included distinguished geologists like Professors De Stefani and Bucca, who hold the chairs of Geology in the schools of Florence and Catania respectively; Professor Decio Vinciguerra, lecturer on the vertebrata in the University of Genoa, who represented the Marchese Doria, President of the Geographical Society, under whose auspices the expedition has been equipped; and a large proportion of physicians and surgeons. Incidental to the occasion, it was remarked how many among the tropical explorers of all nationalities are of medical training and even graduation—equatorial Africa literally teeming with them, from the medical missionaries sent out by the Edinburgh school (the parent of that field of humanitarian enterprise) to those of Germany and France, Italy herself numbering, particularly in the regions south and west of Abyssinia, not a few young graduates in the healing art whose ambition has drawn them to those wilds in the interest of climatology and natural history in its largest sense. Indeed, the extent to which biological study, with a view to its further prosecution in the tropics, has fascinated the Roman medical school may be inferred from the Società Romana per gli Studi Zoologici, which was holding its general meeting almost contemporaneously with the symposium of the Circolo dei

Naturalisti. At the former gathering a series of original papers, short, indeed, but full of interesting observation, was read on such themes as the Zoological and Anatomohistological Characteristics of the Filaria Labiata, by Dr. Cardorelli; on the different Bryozoa Italiana, by Professor Neviana; on the New Italian Lakes (due to seismic convulsion), by Professors De Vescovi and Meli of the Roman school; and on a rare Crustacean found near Terracina by the Commendatore Luigi Ravani.

Death by Lightning.

The "apocalyptic weather" we have been having, more or less all through the spring, has latterly been characterised by peculiarly violent thunderstorms, accompanied by fatal injuries from lightning stroke quite worthy of being classed with those very remarkable cases recorded in THE LANCET of May 26th, 1894, and of Nov. 24th of the same year, the latter from the pen of Mr. R. H. E. Knaggs, M.R.C.S. Eng., Government medical officer, Trinidad, West Indies. Death from this cause may, as Mr. Knaggs observes, be rare, but that is when prompt and effective medical aid happens to be near. Unfortunately those cases just reported from the Roman and other provinces of Italy occurred at a distance from the local "dispense" and even from human habitation, excluding the sufferer from all chance of relief under the shock.

"Suicide from Overpressure."

I hear from Padua that a student of medicine in the fifth year of his curriculum has committed suicide with a revolver discharged through his temple, because he was unable to satisfy his examiners in pathological anatomy. On the evening of the tragic occurrence a mass meeting of undergraduates, after a stormy discussion, passed an "ordine del giorno" protesting against the "eccessivo rigore" of the Professor of Anatomy, openly accusing him of having driven the unfortunate student to put an end to his life. This opinion, I need hardly say, is not shared by those best qualified to judge—it being a notorious fact that the Italian schools do not repel by their "eccessivo rigore," but that their teaching and examining staff are laudably anxious to improve the standard of professional qualification and regret the time consumed by so many of the undergraduates in demonstrations by no means academic in their nature.

June 15th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Blindness caused by a Vermifuge.

IN the issue of THE LANCET of April 13th I mentioned a case of blindness caused by a vermifuge. A man aged forty-four years, suffering from abdominal pain, happened to read an advertisement of an apothecary in Budapest, who recommended a remedy against *tenia solium* and described all the symptoms in popular language. After a dose of castor oil the patient took thirty-two capsules of the vermifuge, each of which contained 0.25 gramme (= 4 grains) ethereal extract of malefern and a like amount of pomegranate root bark. In the evening he fainted, and when admitted to hospital was found to be suffering from mydriasis and total want of perception of light. Some six weeks ago he left the hospital and has not recovered his eyesight. This case has become a political event at Budapest. The blind man claimed damages, and was supported by the Socialist party, which convoked meetings for the purpose of giving publicity to the circumstances. The meetings were broken up by the police, but it is to be expected that the courts will uphold the claim of the sufferer, particularly as the pharmaceutical profession is privileged and limited by the Government, and the Austria-Hungarian Pharmacopœia expressly forbids apothecaries to sell remedies such as the above mentioned without medical prescription.

Atony of the Intestine.

At the last meeting of the Vienna Medical Club Dr. Federn delivered a lecture on the above subject. He recognises three forms of atony: (1) insufficient action of the intestine, where the faeces accumulated in the large intestine are not discharged within twenty-four hours; (2) indolence of the intestine, where the patient is suffering from inveterate constipation; and (3) partial atony, where a portion of the intestine never discharges its contents. Atony is to be diagnosed only by percussion of the large intestine, the

patient lying on his back with his knees flexed; the percussion note is dull. After a laxative the general area of dullness is increased in consequence of the coalescence of the smaller patches of dullness. The treatment consists of faradisation of the intestine and massage; laxatives are to be prescribed only when these methods have proved unsuccessful.

Vienna Medical Society.

At a recent meeting of this society Dr. Hammerschlag spoke on the subject of Cancer of the Stomach. His conclusions were based on thirty-seven cases of carcinoma and three hundred cases of other disorders. In cases of contraction of the stomach carcinoma may be certainly diagnosed without any clinical symptoms by examination of the gastric contents, which show a constant deficiency of free hydrochloric acid, and an excess of lactic acid with a diminution of pepsin. Histological examinations may show atrophy of the peptic glands.—Dr. Pal read a paper on the Innervation of the Intestines. Experiments give discordant results, especially with respect to the effect of the irritation of the vagus nerve. Besides the retarding centre in the lower cervical and the upper thoracic spinal cord, he has, he said, proved the existence of another retarding centre. He has observed the condition of the intestine before and after section of the lower cervical and upper thoracic spinal cord, and then combined this section with that of the splanchnic nerve. Peculiar spontaneous movements of the intestine resulted, and by irritation of the vagus this was increased.—Dr. Rille showed a patient affected with Alopecia and Scleroderma who had completely lost the hair from all parts of his body. In addition to absolute baldness of the scalp he had neither eyebrows, eyelashes, nor hairs in the external auditory canal. Formerly he had a well-developed beard, but at present he possesses only a few hairs on the upper lip and at the angle of the lower jaw; the extremities even show absence of the minute hairs, and on the affected places atrophy of the pigment may also be observed. The scleroderma is distributed as follows: on the right lower extremity from the crest of the ilium to the edge of the sole of the foot the skin is diffusely and symmetrically thickened and permeated by numerous yellow pigmented spots. Round the knee the skin is thinned and without pigment, being also in an atrophic stage. A central trophic disturbance is supposed to have caused these conditions. The alopecia has existed for four years and began with the form of area (Celsi); the scleroderma has existed for three years. Recovery is doubtful, though Michelson has known it to occur even after sixteen years.

June 17th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Approaching Centenary of the St. Petersburg Army Medical Academy.

It is officially announced that the centenary of the St. Petersburg Academy of Military Medicine will be celebrated on Dec. 18th, 1898. The exact date of its foundation is not known, but the day selected is the anniversary of the signing of the imperial ukaz permitting the building of the academy. The Emperor Paul was then on the throne. The original name of the institution was the St. Petersburg Medico-Chirurgical Academy, which was subsequently changed to its present name. The first year in which its diploma was granted was the year 1800, and from the year 1801 begin the regular protocols of the conferences of the academy, which are now preserved in its archives. Its present professors will issue two historical works to commemorate the centenary. One will be a "Historical and Statistical Account of all the Separate Foundations and Chairs of the Academy"; the second will be a "History of the Academy during the Hundred Years of its Existence." The last is to be the work of Professors Ivanofski and Kosorotof. A medal will be cast to mark the occasion and a *jeton* will be given to all who are present at the centenary commemoration.

A Diagnostic Sign in Death from Cold.

Dr. Vishnevski¹ points out that an almost infallible indication that cold has been the sole cause of death is found in

¹ In the Journal of General Hygiene and Legal and Practical Medicine.

the occurrence of numerous hæmorrhages in the mucous membrane of the stomach. He found them in forty cases out of forty-four (91 per cent.). The hæmorrhages varied in number from 5 to 100, and in size from that of a grain of corn to that of a pea; they were round or oval; the distance between them was from one to two inches; the hæmorrhages were immediately under the surface; they could be easily scraped away, leaving the membrane almost normal in appearance. The mucous membrane of the stomach was congested and generally thickened and in folds. Dr. Vishnevski, in the course of 900 necropsies, had found these appearances only in the forty cases mentioned. They never occur in death from other causes, though the body be exposed to cold at the time of, or after, death. He has been able to produce the same appearances artificially in seven mice and four guinea-pigs.

Death of Dr. Eliseief.

The death occurred last week of Dr. Alexander Eliseief at the early age of thirty six. He was best known as a traveller and anthropologist. His travels led him to most parts of Russia, to Asia Minor, Japan and the East, and to Africa, where he endeavoured in 1893 to explore Abyssinia and the Soudan. This expedition was unsuccessful; his caravan was attacked and he barely escaped with his life. On his flight through the desert he suffered from heat-stroke, which affected his health for some time. He contemplated a second visit to Abyssinia this year. At the last meeting of the Anthropological Society in St. Petersburg Dr. Eliseief exhibited a Somali boy whom he had brought back with him from Africa.

The Buriats.

At the same meeting Dr. Shendrikofski communicated a very interesting account of the Buriats, a race inhabiting from time immemorial the regions round Lake Baikal in Siberia. They are an entirely pastoral race. They all, men and women, practically live in the saddle. In summer they dwell on the plains; in winter, when the snows come, they retire to the hills and live in *yurts*, huts built of wood or felt, small, rickety, and dirty. They drink sour milk and "brick" tea. They seldom eat meat, but when they do they eat it in enormous quantities, 6 lb. or 7 lb. at a time, without salt or bread. They are insatiable smokers, men and women, even children indulging inordinately. There is scarcely any social life among them. Each *ulus*, of five or six families, generally related, lives its own separate existence. Their religion was formerly Shamanism, but about a century and a half ago the Mongol Lamas were permitted to preach Buddhism among them, and Shamanism has now but few followers. The Buddhists have a Lama of their own, appointed by the Dalai Lama of Tibet, in a monastery near Selenginsk. In this monastery is a school of divinity and one of medicine. According to the medical teaching of the Lamas most diseases arise from disorders of the liver, which is looked upon as the most important organ in the body. Diagnosis, however, depends solely upon the condition of the pulse. The Buriats suffer mostly from scrofula and scurvy. Skin diseases are rare, notwithstanding their want of cleanliness. Idiotism, cretinism, malformations, and mental disorders are not uncommon, possibly on account of frequent intermarriages; but the race is not dying out, as is shown by the fact that between 1863 and 1893 their numbers increased by 20·4 per cent.

The International Monument to Lavoisier.

The proposal of the French Academy to start an international subscription to erect a monument to Lavoisier has found a warm advocate in Professor Mendileief, so far as Russia is concerned. The Emperor has appointed a committee to organise the collection of subscriptions from all parts of the country.

St. Petersburg, June 2nd (14th).

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Vaccine Institute and Small-pox.

SMALL-POX in Egypt and the Soudan is called "gadriy," an Arabic word coming from the root "to sprout," and evidently referring to the eruption. Vaccination is called "tilkyha," or fecundation, the same word being used for the artificial conception of the date tree by introducing the pollen of the male into the female. Happily in these countries

there is no anti-vaccination party, for the disease has been too recently rife for the adult population to have forgotten what a scourge it is. Twenty years ago the Circassian slaves in harems were mostly marked by small-pox, but now this is very rare, and since the English occupation there have been many instances of the disease entering harems and killing unvaccinated blacks while the vaccinated Circassians live. The natives have great faith in vaccination, though many parents would like the operation postponed until the child is not of tender years. This is only too natural in a country where infant mortality is dangerously high, especially during the summer heat. Revaccination of adults is not yet practised, except in the army, Government schools, &c. Curiously enough, the Bedouins, who are beyond the reach of practical vaccination by Government medical officers, are still in a state of evolution and practise sometimes inoculation from the small-pox patient, and sometimes vaccination from a cow. The operator uses a sharpened ostrich feather and performs upon the patient's arm. The Nubians are beginning now to appreciate vaccination, but until the last few years they knew nothing of it and practised inoculation, which they perhaps learnt from their Turkish ancestors. In Cairo itself vaccination is performed gratis by Government medical officers in the twelve districts of the city, and to avoid some of the horrors of the past, among which syphilis was not unknown, a vaccine establishment for the supply of animal lymph for all Egypt was opened in the grounds of the Sanitary Department last March. The little institute is under the control of Mr. Littlewood and Mr. Branch, the veterinary advisers to the Government. £600 only was spent on the building of a stable with four stalls, operating-room, well-furnished laboratory, &c. Already 5000 vaccinations and revaccinations have taken place, with great success, and it is intended to sell lymph to private practitioners, who at present have to procure their animal vaccine from Europe. Anyone who has vaccinated much in hot countries knows the importance of using fresh lymph; and it is difficult to praise too highly this recent development of English energy and perseverance.

Infectious Diseases.

By glancing at the weekly statistics published by the Sanitary Department it can easily be seen that the battle against small-pox is by no means concluded. During the last seven weeks there have been 379 entries into hospital tents in twenty-one different villages, mostly in Lower Egypt, and of these patients 46 have died. From one of these villages in the Delta there were 72 entries in one week, 7 in the next, and 73 entries in the third week. During the same period there have been 41 cases reported in Cairo, including three or four in the army & occupation. Typhus and relapsing fever are present every spring in Egypt, and the same seven weeks show a record of 305 cases with 51 deaths occurring in some nine villages and in Cairo, which furnished 19 cases. One of the prisons in Upper Egypt also contributed a few cases. Measles is reported from one village only; but 185 cases of influenza, none of them fatal, occurred during the first fortnight of May among the Egyptian troops at Assuan, Korosko, and Wady Halfa. The last time this disease was there in force was in the spring of 1892 when the contemplated manoeuvres had to be abandoned in consequence of the hundreds of soldiers laid low.

Pilgrimage to Mecca.

Anything in the direction of State regulation of the annual visit to the Holy Places must be welcomed. This year cholera for several weeks has been threatening the pilgrims at Mecca, and as to-day is the anniversary of the sacrificial feast, when perhaps some 80,000 Moslems will kill about the same number of sheep, buffaloes, and camels in a reeking valley where the burning sun by day and the vultures and dogs by night are the only sanitary agents, we may expect at any time to hear of the "explosion" to which we are becoming sadly accustomed. Egypt has this year made a move for the first time in the right direction and has tried to discountenance the indiscriminate "Haj" of paupers by issuing a circular in April last to all the mudirs and governors inviting them to remind intending pilgrims of a verse in the Koran: "Do not run ahead of danger." Whether it was the effect of the influence of provincial magnates, or whether it was the recollection of the 1893 cholera at Mecca, which put many Egyptian families into mourning, it is certain that hundreds of the faithful hastened to cancel their passages and remitted the sacred duty to a more convenient season. Another improvement this year is that the quarantine station at El Tor has just been inspected for the first time by English

officials. Many adverse criticisms on El Tor have been written of late years, and it is not to the credit of the quarantine department that the abuses have so long been allowed to continue. Nothing can be better than to compulsorily wash the returning pilgrims and sterilise their effects and isolate their sick; but this must be done systematically, rapidly, and thoroughly if it is not to be a ridiculous farce. We must hear no more of pilgrims being detained for several weeks to be purified in the desert, and eventually being allowed to reach Cairo with bottles of Zem-zem water and its contained sewage, perhaps reeking with cholera bacilli. It is believed that this year the absurd custom of lining the banks of the Suez Canal with Egyptian camels will be dispensed with. These troops were employed to watch ships containing pilgrims in spite of their having undergone the prescribed quarantine in two camps.

Cairo, June 3rd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

College Items.

THE third annual meeting of Trinity Medical Alumni Association was recently held in the Convocation Hall. A most interesting programme was presented. Among those present, and from whom the association heard valuable papers, were Professor Joseph Price, Philadelphia, the Philocopy of Abdominal and Pelvic Surgery; Professor Ferguson, Chicago, Radical Cure of Hernia; and Professor Roswell Park, Buffalo, Infection within the Cranium. Professor Peterson, M.A., LL.D., Principal of University College, Dundee, Scotland, has accepted the position of Principal of McGill University, Montreal, in succession to Sir J. W. Dawson. I think the University is to be congratulated upon the choice of so learned and able a person as Professor Peterson. The total number of students registered in the medical faculty of McGill University during the past session was 401, each province in the Dominion having representatives; twenty-four were from the United States.

Report of the Royal Commission on Prohibition.

During the past three years this commission has been prosecuting its work, and the findings and report have recently been presented to Parliament. The majority report is adverse to prohibitory law, as being prejudicial to the business, industrial, and commercial interests. The system of licence and regulation should not be departed from. A prohibitory law partakes too much of the character of coercive legislation on a matter in regard to which a very large portion of the people consider they are qualified and entitled to judge for themselves. As regards compensation, the commissioners consider it could not be avoided under prohibition. The treatment of habitual drunkards requires the most anxious and careful attention. No merely financial considerations should, in their opinion, prevent the best remedial measures being adopted to reclaim the victims of intemperance. That the methods at present in vogue are not only inefficient but, as a rule, demoralising, is the almost unanimous opinion of those who have to administer the law. The licensing of saloons should stop, there being no justification for their existence founded upon necessity, and it is certain that most of the evils which arise out of the immoderate use of intoxicants have their origin or are encouraged by the existence of saloons. The licensing of the compounding or mixing various kinds of liquors to produce new brands should be discontinued. Adulteration is largely carried on by the retailers. The minority report of the Rev. Mr. McLeod recommends the immediate passage of a prohibitory law. Clause 2 states that the evidence makes it clear to him that the effect of the liquor traffic has been, and is, seriously detrimental to all the moral, social, and national interests of the nation; that the measures employed to lessen, regulate, or prohibit the traffic have been of value only in proportion as they have approximated in their operation to the absolute prohibition of the traffic. I fear that the reverend commissioner has prejudged a great question which he has been delegated to inquire into first and then to deliver his judgment. Taking the report as a whole, I feel that the commissioners are to be congratulated upon the thoroughness of their inquiries, and that as a result of the commission improvements will follow in legislation on this important question.

Toronto, June 10th.

Obituary.

SIR GEORGE HORNIDGE PORTER, BART., M.D. T.C.D.,
F.R.C.S. IREL., LL.D. GLASG.,

SURGEON-IN-ORDINARY TO THE QUEEN IN IRELAND; REGIUS PROFESSOR
OF SURGERY IN THE UNIVERSITY OF DUBLIN.

THE surgical profession, not only in Ireland, but in the whole of Great Britain, has sustained a severe loss by the death of Sir George Hornidge Porter, who died last Sunday, June 16th, at his residence in Merrion-square, Dublin.

Sir George Hornidge Porter was the only son of the late Mr. William Henry Porter, Professor of Surgery in the Royal College of Surgeons, Ireland, was born in 1822 and was educated in the school of the Royal College of Surgeons and in the University of Dublin, where he graduated in Arts and Medicine, receiving the degrees of Bachelor of Arts and Bachelor of Medicine in 1845. In

1849 he was elected surgeon to the Meath Hospital, where he was engaged in active operative practice for nearly half a century. In 1860 he was appointed Examiner in Surgery in the Royal College of Surgeons in Ireland, of which body he was President in 1868 the year after the termination of his examinership. During this period also he was elected consulting surgeon to the Coombe Lying-in Hospital (1861) and surgeon to Simpson's Hospital, in the room of Mr. Hutton, in 1866. In the year 1869 Sir George Porter was appointed Surgeon-in-Ordinary to the Queen in Ireland. In 1876 he received the appointment of consulting surgeon to St. Mark's Ophthalmic Hospital, and in 1881 to Dr. Stevens' Hospital. The honour of knighthood was conferred upon him by the Queen in the year 1883 "to mark his high position among the surgeons of the United Kingdom."

In 1888 the University of Glasgow gave him the degree of LL.D. (*honoris causa*), and in 1889 he was created a baronet "in recognition of his distinguished position in the surgical profession." Between the years 1857 and 1878 Sir George Porter made many contributions to the literature of his profession. These were chiefly accounts of operations published in the *Dublin Quarterly Journal of Medical Science*, and dealt with diseases and injuries of the upper and lower limbs, the jaw, and especially the bladder. Sir George Porter was consulting surgeon to six different hospitals—Dr. Stevens', Sir Patrick Dun's, The Rotunda, St. Mark's Ophthalmic, The Coombe Lying-in, and the National Children's.

This record of work sufficiently shows that in Sir George Porter we have lost a man of the highest rank in his profession, and one, moreover, who looked only to his profession, its practise and its literature, to exalt him among his fellow-citizens. By heredity and by profession a surgeon, his single-minded devotion was rewarded by unqualified success. He was, indeed, a member of a distinguished roll of surgeons, and his life formed a connecting link between the past and present, his career serving alike as an

incitement to the younger members of the profession and a useful and pleasant source of reminiscence to the older. Very few surgeons have won more solid honours in their profession or held more honourable and numerous appointments with greater satisfaction to those who thereby benefited by the services they obtained—the bare list we give above proves this to demonstration—and none have been more beloved by his friends, his patients, and his pupils. And this means a great deal, for we are proud to know that most of the distinguished leaders of the medical profession have been regarded by their disciples and their patients with the highest affection, so that in saying that Sir George Porter was so regarded to an extent that we believe unsurpassed we are speaking no light eulogy of him. His advice and skill—and, for that matter, his purse—were ever at the disposal of those of his poorer brethren who required any or all of them; and while his geniality and kindness of heart appealed more particularly to some, to others his wide range of surgical learning and his practical ability with knife or pen may remain his memorable traits. One small episode in his surgical career is worth mentioning, because through it his name will

always be associated with one of the most lurid passages in his country's history. In conjunction with Dr. Edward Hamilton and Dr. Lambert Hepenstal Ormsby, he made the official examination of the murdered bodies of Lord Frederick Cavendish and Mr. Burke after the Phoenix-park atrocities.

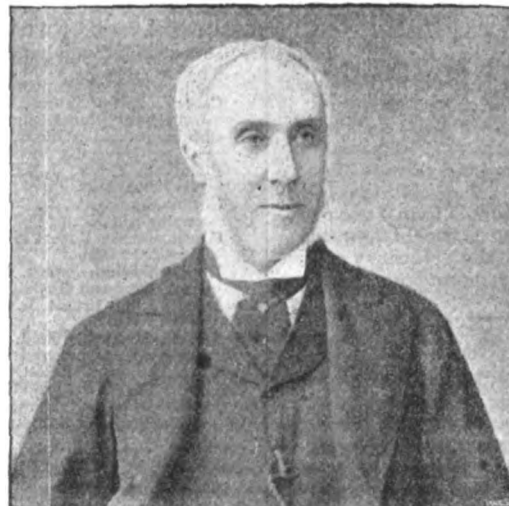
In his private life Sir George Porter was also an important citizen. He was a justice of the peace and a deputy-lieutenant for the county of Wexford, where he had a large landed estate, and served the office of high sheriff some fifteen years ago. He married Julia, second daughter of a Mr. Isaac Bond of Flimby, Cumberland, by whom he had one child, Mr. William Henry Porter, the present baronet, a barrister-at-law and an accepted candidate for the Tower Hamlets. Although, as our present estimate of old age goes, Sir George

Porter was not a very

old man, his death cannot have been unexpected among his friends. He had during several winters suffered severely from bronchitis, and during the past six months had been in very indifferent health, although he could not be persuaded to take due rest and care of himself. But distressing attacks of dyspnoea at last became so frequent that he consented to go to Torquay with a view to the improvement of his pulmonary condition. While there he did not improve, and on being removed back to his home made but a short rally, dying of cardiac failure supervening upon his respiratory troubles. The funeral took place on Thursday last at Whitechurch, Rathfarnham.

HANS WILHELM MEYER, M.D.

We greatly regret to announce the death of Etatsraad Dr. Hans Wilhelm Meyer of Copenhagen in his seventy-second year, which occurred from typhoid fever at Venice on June 3rd last. Although, perhaps, not one of the greatest of the medical lights of the age, it must yet be accorded that



SIR GEORGE HORNIDGE PORTER, BART.

he was one of the greatest benefactors of his day, in that he was the first to ascribe full importance to that hypertrophy of the lymphoid tissue in the post-nasal space for which his nomenclature of adenoid vegetations is now almost universally adopted. Probably Czermak in 1860 was the first who actually saw and described the condition, while in 1865 Voitolini reported a case in an adult, where he associated deafness with the growths on the posterior naso-pharyngeal wall; and in the same year Loewenberg described three such instances, also associated with deafness, and assumed that the neoplasms were probably identical in structure with the so-called granulations of granular pharyngitis. But it was reserved to Meyer to emphasize the immense importance such hypertrophies assume in childhood, and to describe fully the proper methods of operation, the elements of prognosis, and the essential points for the prevention of recurrence—points only too often forgotten even in this day, when the number of post-nasal operations performed daily in London is enormous. In 1868 Meyer contributed his first complete statement of the subject,¹ and in 1870 this paper was communicated to the Royal Medical and Chirurgical Society by the late Professor John Marshall, F.R.S., and is published in Vol. LII. of the society's Transactions. But it was perhaps only after reading his paper at the International Medical Congress, held in London in 1882, that the profession in this country fully awoke to the importance of the subject, and now, twenty-seven years since the publication of Meyer's first paper, although the opposition to the new discovery has been as strong as would be expected in certain quarters, there are probably not many who have not seen sufficient results of operation to be compelled to accept those growths as one of the most important factors with which we have to deal in considering the diseases of children. Many are now going through life handicapped with incurable ear disease from which they would have been saved had Meyer's work been done earlier; and it is to be hoped that many more will realise that their whole lives have been changed for them, thanks to the patient work of Wilhelm Meyer. It is, however, curious to note that he himself, after the examination of 2000 school children, calculated the growths to be present in not more than 1 per cent., although we believe that most specialists would now affirm either that he had greatly underrated the frequency or that the disease has become extraordinarily more prevalent since his time.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen were elected examiners in the subjects indicated for the ensuing collegiate year at the ordinary meeting of the Council on Thursday, the 13th inst. :—

FIRST EXAMINATION.

ELEMENTARY ANATOMY.

Hutchinson, Jonathan, jun., F.R.C.S. Eng., London Hospital.
Jessop, Walter H. H., F.R.C.S. Eng., M.A., M.B. Camb., St. Bartholomew's Hospital.
Roughton, Edmund W., F.R.C.S. Eng., St. Mary's Hospital.
Waterhouse, Herbert F., F.R.C.S. Eng., M.D., C.M. Edin., Charing-cross Hospital.

ELEMENTARY PHYSIOLOGY.

Bradford, John Rose, M.R.C.S. Eng., M.D., D.Sc. Lond., F.R.S. University College, London.

ELEMENTARY BIOLOGY.

Buckmaster, George A., M.R.C.S. Eng., M.A., M.D. and D.P.H. Oxon., St. George's Hospital.
Dean, Henry Percy, F.R.C.S. Eng., B.Sc., M.B. and B.S. Lond., London Hospital.

SECOND EXAMINATION.

ANATOMY.

Lucas, Richard Clement, F.R.C.S. Eng., M.B. and B.S. Lond., Guy's Hospital.
Makins, George Henry, F.R.C.S. Eng., St. Thomas's Hospital.
Walsham, William Johnson, F.R.C.S. Eng., St. Bartholomew's Hospital.
Young, Alfred Henry, F.R.C.S. Eng., M.B. and C.M. Edin., Owens College, Manchester.

PHYSIOLOGY.

Halliburton, Wm. Dobinson, M.R.C.S. Eng., M.D. and B.Sc. Lond., M.R.C.P. Lond., F.R.S., King's College Hospital.
Power, D'Arcy, F.R.C.S. Eng., M.A. and M.B. Oxon., St. Bartholomew's Hospital.
Spencer, Walter George, F.R.C.S. Eng., M.B. and M.S. Lond., Westminster Hospital.

¹ Hospitals Tidende, Nov. 4th and 11th.

THIRD AND FINAL EXAMINATION.

MIDWIFERY.

Duncan, William, F.R.C.S. Eng., M.R.C.P. Lond., M.D. Brussels, Middlesex Hospital.
Handfield-Jones, Montagu, M.R.C.S. Eng., M.D. Lond., M.R.C.P. Lond., St. Mary's Hospital.
Herman, George Ernest, F.R.C.S. Eng., F.R.C.P. Lond., M.B. Lond., London Hospital.
Routh, Amand, J. M.C., M.R.C.S. Eng., M.D. and B.S. Lond., M.R.C.P. Lond., Charing-cross Hospital.

FIRST PROFESSIONAL EXAMINATION FOR THE FELLOWSHIP.

ANATOMY.

Haslam, William Frederick, F.R.C.S. Eng., Mason College, Birmingham.
Jacobson, Walter H. A., F.R.C.S. Eng., M.A., M.B. and M.Ch. Oxon., Guy's Hospital.
Lockwood, Charles Barrett, F.R.C.S. Eng., St. Bartholomew's Hospital.
Sutton, John Bland, F.R.C.S. Eng., Middlesex Hospital.

PHYSIOLOGY.

Lowne, Benjamin Thompson, F.R.C.S. Eng., Middlesex Hospital.
Schafer, Edward Albert, M.R.C.S. Eng., F.R.S., University College, London.
Starling, Ernest Herbert, M.R.C.S. Eng., M.D. and B.S. Lond., Guy's Hospital.
Stirling, William, M.D., C.M. and B.Sc. Edin., F.R.S. Edin., Owens College, Manchester.

DIPLOMA IN PUBLIC HEALTH.

PART I.

Turner, George, M.R.C.S. Eng., L.R.C.P. Lond., M.B. and D.P.H. Cantab., Guy's Hospital.

PART II.

Seaton, Edward, M.R.C.S. Eng., M.D. Lond., F.R.C.P. Lond., St. Thomas's Hospital.

The following gentlemen, having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted "Fellows" of the College :—

Bennett, William Edward, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham, and St. Bartholomew's Hospital; date of Membership, July 28th, 1890.
Cooper, Percy Robert, M.B., Ch. B. Vict., L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester; July 27th, 1893.
Cuff, Archibald William, M.B., B.C. Cantab., L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital; July 27th, 1893.
Furnivall, Percy, L.R.C.P. Lond., St. Bartholomew's Hospital; Nov. 10th, 1892.
Gordon, James, M.B., B.S. Melb., L.R.C.P. Lond., Melbourne University and King's College Hospital; May 10th, 1894.
Green, Charles Robert Mortimer, L.R.C.P. Lond., London Hospital; May 27th, 1885.
Harris, William James, M.B. Cantab., L.R.C.P. Lond., Cambridge University and Guy's Hospital; May 11th, 1893.
Ingall, Frank Ernest, L.R.C.P. Lond., London Hospital; July 30th, 1891.
Levieck, Harry Driffild, M.B. Lond., L.R.C.P. Lond., Anderson's College, Glasgow, and St. Thomas's Hospital; Feb. 12th, 1891.
Lister, William Tindall, M.B., B.C. Cantab., L.R.C.P. Lond., Cambridge University and University College Hospital; May 9th, 1893.
Lockett, George Vernon, M.B. Edin., L.R.C.P. Lond., Royal College of Surgeons of Edinburgh and Edinburgh University; May 9th, 1896.
MacLeod, Charles Edward Alexander, L.R.C.P. Lond., Westminster Hospital; July 30th, 1891.
Marson, Francis Herbert, M.B. Durh., L.R.C.P. Lond., St. Bartholomew's Hospital, Mason College, Queen's and General Hospitals, Birmingham, Durham University and Royal Infirmary, Newcastle-on-Tyne; Nov. 10th, 1892.
Michell, Robert Williams, M.B., B.C. Cantab., Cambridge University and St. Bartholomew's Hospital; not a member.
Rowell, George, M.D. Durh., Durham University, Royal Infirmary, Newcastle-on-Tyne, St. Bartholomew's and University College Hospitals; Jan. 27th, 1870.
Shillitoe, Arthur, M.B., B.C. Cantab., L.R.C.P. Lond., Cambridge University and Guy's Hospital; Nov. 9th, 1893.
Sloane, John Stretton, M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital; May 11th, 1893.
Spencer, Charles George, Surgeon-Lieutenant A.M.S., M.B. Lond., L.R.C.P. Lond., University College Hospital; Aug. 1st, 1892.
Stevens, Thomas George, M.D. Lond., L.R.C.P. Lond., Guy's Hospital; July 28th, 1890.
Walton, Herbert James, L.R.C.P. Lond., St. Bartholomew's Hospital; May 11th, 1893.
Warner, Thomas, L.R.C.P. Lond., King's College Hospital; Feb. 11th, 1892.
Webb, James Ramsay, M.B., B.S. Melb., Melbourne University and London Hospital; Nov. 10th, 1892.
Wightman, Cecil Frank, L.R.C.P. Lond., St. Bartholomew's Hospital; Feb. 9th, 1893.

Three other gentlemen passed the Examination, and will be admitted Fellows at future meetings of the Council on attaining the legal age of twenty-five years. Sixteen were referred for six months and four for one year.

The following gentlemen, having passed the necessary examinations, were admitted Licentiates in Dental Surgery :—

Atkinson, Frederick George, Charing-cross Hospital and the Dental Hospital of London.
Bateman, Julius Barthroppe, Charing-cross Hospital and the Dental Hospital of London.
Bates, George Llewellyn, Charing-cross Hospital and the Dental Hospital of London.
Bellaby, Francis Montagu FitzWalter, Owens College Dental Department and Victoria Dental Hospital, Manchester.

Bennett, John Henry, Charing-cross Hospital and the Dental Hospital of London.
 Bettridge, Albert Edward, Charing-cross Hospital and the Dental Hospital of London.
 Booth, George Henry, Owens College Dental Department and Victoria Dental Hospital, Manchester.
 Bowtell, Stewart Ross, Charing-cross Hospital and the Dental Hospital of London.
 Bowden, George Henry, Guy's Hospital.
 Burton, Percy, Middlesex Hospital and the Dental Hospital of London.
 Cahill, Alfred, Guy's Hospital.
 Cannell, Edward Kemp, Charing-cross Hospital and the Dental Hospital of London.
 Cardwell, Ernest Edward, Charing-cross Hospital and the Dental Hospital of London.
 Collett, Albert James, Guy's Hospital.
 Cook, Horace, Guy's Hospital.
 Dalton, John Willie, Charing-cross Hospital and the Dental Hospital of London.
 Day, Ernest Frank, Charing-cross Hospital and the Dental Hospital of London.
 Goeschalk, Meyer, Charing-cross Hospital and the Dental Hospital of London.
 Jenkins, Thomas George, Middlesex Hospital and the National Dental Hospital.
 Johnston, William, Charing-cross Hospital and the Dental Hospital of London.
 Keall, Clarence Albert Harry, Guy's Hospital.
 Little, Frederick, University College and Dental Department, Royal Infirmary, Bristol.
 Lean, Norman Henry, Middlesex Hospital and the Dental Hospital of London.
 Mackley, Herbert Edwin, Middlesex Hospital and the Dental Hospital of London.
 Masters, Edwin Clarence Platt, Middlesex Hospital and the National Dental Hospital.
 Mathews, John Hilditch, Charing-cross Hospital and the Dental Hospital of London.
 Morgan, Edwin, Guy's Hospital.
 Mountford, Edwin Henry, Charing-cross Hospital and the Dental Hospital of London.
 Muhlenkamp, Fritz Heinrich Arthur, Guy's Hospital.
 Nowell, Walter Salmon, Middlesex Hospital and the Dental Hospital of London.
 Pearse, Cecil Gilbert, Charing-cross Hospital and the Dental Hospital of London.
 Pottler, William Frederick, M.R.C.S. Eng., St. Bartholomew's Hospital and the National Dental Hospital.
 Price, George Herbert, Charing-cross Hospital and the Dental Hospital of London.
 Quinby, Arthur Henry, Liverpool Dental Hospital and Liverpool Royal Infirmary School of Medicine Dental Department.
 Shields, John Lewis, Liverpool Dental Hospital and Liverpool Royal Infirmary School of Medicine Dental Department.
 Stevens, David Sydney, Guy's Hospital.
 Strand, Alick Condell, M.R.C.S. Eng., Middlesex Hospital and the Dental Hospital of London.
 Sugden, Thomas Edward, Middlesex Hospital and the National Dental Hospital.
 Taylor, Harry Percy, Guy's Hospital.
 Theakstone, Joseph, Owens College Dental Department and Victoria Hospital, Manchester.
 Tice, Henry William, Middlesex Hospital and the National Dental Hospital.
 Tindal, John, Charing-cross Hospital and the Dental Hospital of London.
 Trick, Walter Henry, Guy's Hospital.
 Wallace, James Sims, B.Sc., M.D., C.M. Edin., Glasgow Dental Hospital, the Dental Hospital of London, and the National Dental Hospital.
 Wallis, Herbert, Guy's Hospital.
 Williams, Charles Henry Hughes, Charing-cross Hospital and the Dental Hospital of London.

Fifteen gentlemen were referred back to their professional studies. All candidates referred at this examination will be required to produce, before admission to re-examination, a certificate of three months' additional study at a general hospital and a special dental hospital, the precise attendances required at each hospital being left to the discretion of the respective hospital authorities.

UNIVERSITY COLLEGE HOSPITAL.—Sixty sisters and nurses from this hospital enjoyed a day's holiday at Richmond on Saturday last. We strongly commend this excellent plan for ensuring a pleasant day's recreation for nurses to the secretaries of those institutions where a summer excursion is not in the annual programme.

CONSECRATION OF THE RAHRE LODGE OF FREEMASONS—H.R.H. the Prince of Wales, Most Worshipful Grand Master (president of St. Bartholomew's Hospital), has been graciously pleased to signify his intention of being present at the consecration of the Rahere Lodge, No. 2546 at St. Bartholomew's Hospital on the afternoon of Saturday, 29th inst. Freemasons who are, or who have been, connected with the hospital, and who desire to be present at the ceremony, are requested to communicate at once with Mr. T. G. A. Burns, the secretary, 25, Welbeck-street, W., or with Mr. D'Arcy Power, the treasurer-designate, 26, Bloomsbury-square, W.C. Every application should state the name and number of the member's lodge as well as his standing in the craft. The number of tickets is necessarily limited to the accommodation of the great hall of the hospital.

MEDICAL MAGISTRATE.—Dr. James Mullin of Cardiff has been placed on the Commission of the Peace for that borough.

AN ENTERPRISING DENTIST.—A registered dentist practising in North London (Mr. J. S. Armitage, 1, Colva-street, Dartmouth-park) was on May 23rd mulcted in two penalties of £5 each at the Bloomsbury county court, at the instance of the Pharmaceutical Society, for the sale of poisons, information having been given to the Pharmaceutical Society by the London and Counties Medical Protection Society.

At the annual general meeting of the members of the South-Eastern Branch of the British Medical Association held at Hastings on Wednesday, June 12th, donations of twenty guineas each were voted to the Royal Medical Benevolent College and to the British Medical Benevolent Fund. We are glad to observe that these branch organisations are beginning to recognise the work of these two great charities, which do so much for the medical profession.

SUMMER MEETING OF UNIVERSITY EXTENSION STUDENTS AT OXFORD.—The seventh summer meeting of university extension and other students will be held this year at Oxford, and will be divided into two parts, the first lasting from Aug. 1st to Aug. 12th, and the second from Aug. 12th to Aug. 26th. Included in the varied course there will be lectures on natural science during both parts of the meeting, and classes will be formed for practical work in the different divisions. Among those who have promised to lecture are Professors Green and Odling; Drs. Fison and Wade; Messrs. Carus Wilson, Marsh, Groom, and Bourne.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Ferdinand W. Arkwright, of Ryder-street, St. James's, London, has bequeathed £200 each to the Warneford and Warwickshire Hospital, the Warwick Dispensary and Cottage Hospital, and the Derby Infirmary Building Fund.—Mr. H. H. Sharland, late of Thavies-inn, London, has bequeathed £1000 each to St. Thomas's Hospital, Guy's Hospital, the Royal Free Hospital, St. Luke's Hospital, and the Hospital for Sick Children, Great Ormond-street, London.—The late Miss Phipps, of Ross, has left by her will £100 towards the funds of the Cottage Hospital, Ross.—Miss Elizabeth Frances Heaven, late of Victoria-park, Manchester, has bequeathed £1000 each to the Children's Hospital, Pendlebury, Manchester; the Royal Infirmary, Manchester; the Southern Hospital, Clifford-street, Manchester; the Ardwick and Ancoats Hospital and Dispensary, Manchester; the Hospital for Incurables, Manchester; the Salford Royal Hospital and the Convalescent Home, West-hill, Southport; and £500 to the Eye Hospital, Oxford-street, Manchester.—Mr. William Stones, late of Ash-grove, Sheffield, has bequeathed £250 each to the Sheffield General Infirmary and the Sheffield Public Hospital and Dispensary, £200 to the Chesterfield and North Derbyshire Hospital, and £100 to the Jeesop Hospital for Women, Sheffield.—Dr. Francis B. Hawkins, late of West Knighton, Dorsetshire, has bequeathed £300 of two and three-quarter per cent. Consols to the Dorset County Hospital, and £300 of the like Consols to King's College Hospital, to be applied in instituting, or assisting, a lying-in or maternity hospital in connexion with the said hospital.—The late Mr. W. H. Daubney, of Grimsby, has bequeathed £500 to the Endowment Fund of the Grimsby and District Hospital.—Mr. E. T. Parry, late of Liverpool, has bequeathed £1000 each to the Convalescent Fund respectively of the Royal Infirmary, Liverpool, the Northern Hospital, Liverpool, the Royal Southern Hospital, Liverpool, and the Infirmary for Children, Liverpool.—The late Mr. W. F. Phillips, of Westcliff, Weston-super-Mare, has bequeathed £100 each to the Bristol Infirmary, the Bristol Hospital, the Bristol Children's Hospital, and the Weston-super-Mare Hospital.—Mrs. Catherine Murton, of Bolton, Lancashire, has bequeathed to the Bolton Infirmary securities which will yield £3329.—The late Mr. J. C. Wannop, of Carlisle, has bequeathed £100 each to the Silloth Convalescent Institution and the Carlisle Dispensary.—The late Very Reverend W. R. Freemantle, Dean of Ripon, has bequeathed £1000 in trust to apply the income towards the maintenance of a cottage hospital for the parishes of Middle Claydon, East Claydon, or Steeple Claydon, and also bequeaths £100 each to the Bucks Infirmary at Aylesbury, and Jepson's Hospital at Ripon.—Mr. Chas. G. Holdforth, late of Cookridge, Horsforth, near Leeds, has bequeathed £100 to the Women and Children's Hospital at Leeds.

FOOTBALL FATALITY.—At Paisley, in a match between the St. Mirren Victoria and Fergallie teams, a member of the former team collided with an opponent, was rendered unconscious and removed to the Infirmary, where he died on Tuesday evening last.

BATHING FATALITIES.—We referred in our last week's issue to the somewhat unusual number of fatalities which had occurred in the present bathing season. Since then three from drowning while bathing are reported. A youth aged seventeen years was drowned in the Thames near Long Wittenham, and another youth, also aged seventeen, at a bathing-place known as Tumbling Bay, Oxford; their bodies were subsequently recovered. Inquests were held on them, and the evidence adduced was that neither could swim. The third case was that of a Revenue officer who, while bathing at the North Wall, Dublin, on Tuesday last, met with a similar sad fate.

BRITISH ORTHOPEDIC SOCIETY.—The first provincial meeting of this society took place at Liverpool on May 24th. After lunching together at the Adelphi Hotel the members visited the new Royal Infirmary, the Children's Infirmary, and the Southern Hospital, at the invitation of the several staffs. They were then entertained at dinner by Mr. Robert Jones, after which they adjourned to the Medical Institution, where the ordinary meeting was held. A large number of living cases were exhibited, representing torticollis, talipes treated by tarsectomy, wrenching, tenotomy, &c.; also numerous cases of knee, hip, and other joint diseases; several casts and stereoscopic slides were on view, the latter, shown by Messrs. Robert Jones and Thelwall Thomas, being most instructive as showing the advantage of stereoscopic photography in the demonstration of orthopedic measures. Mr. Robert Jones was voted to the chair and several candidates were balloted for and elected. Mr. Tubby (London) read notes of a case of talipes equino-varus, drawing attention to the rotation inwards of the lower end of the tibia and fibula which complicated these cases. He had performed osteotomy of the lower end of the tibia, the limb being afterwards put up in plaster with a satisfactory result. An interesting discussion on the treatment of intractable talipes, equino-varus, opened by Mr. Robert Jones, followed, and the meeting was brought to a close with a hearty vote of thanks to the chairman. The next meeting will be held during the British Medical Association week in London in July next.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Midwives Registration Bill.

THE Committee stage of this measure, which was set down in the House of Lords for Tuesday, June 18th, has been postponed until Friday, June 28th. When the Bill was mentioned in the House Lord Balfour of Burleigh informed their lordships that there are a number of amendments which the Privy Council desire to see in the Bill.—Lord Playfair, on behalf of the Government, assented to the postponement of the stage. It was, as a matter of fact, found that while there are a few points of really substantive difference which must be discussed in Committee of the whole House, there were, in addition, a large number of amendments in matters of form which the Privy Council desire. Many of these are little more than drafting, but others amount to a re-casting of one or two of the clauses of the Bill. The amendments, being points on where there was no likelihood of controversy, it was agreed that a form of procedure quite well-known in the House of Lords to meet such cases should be adopted. The Bill will be reprinted as amended, and at the next stage, which will be in Committee on re-commitment, and which will be taken on Friday, the 28th, the substantive amendments can be discussed without being hampered by a mass of detail on which there is no controversy.

Factories and Workshops Bill.

The Grand Committee, at their meeting on Tuesday, June 18th, struck out of this Bill the proposal of the Government to apply to laundries the provisions of the Factory Acts. This was done on the motion of Mr. Matthews, who afterwards put before the Committee a series of special restrictions and regulations for laundries.

HOUSE OF LORDS.

MONDAY, JUNE 17TH.

Dogs Bill.

Lord Carrington, in moving the second reading of this Bill, said it was necessary on account of the increase of rabies in some portions of England. The reason for this increase was to be found to a great

extent in the number of stray dogs wandering about the country without any sort of control and the difficulty of dealing with them. If a police officer had any reason to believe that a dog found on a highway was a stray dog he might seize it; and if no application was made for it in the course of three days it might be either sold or destroyed. The Bill also gave a police officer power to destroy any dog found on a highway which he had reasonable ground for believing was affected with rabies. It therefore gave all over the country a power at present only in the hands of the Metropolitan Police. After a short debate the Bill was read a second time.

HOUSE OF COMMONS.

THURSDAY, JUNE 13TH.

Unsound Meat in London.

Mr. Hazell asked the President of the Local Government Board whether his attention has been called to the systematic sale of large quantities of unwholesome meat just beyond the area supervised by the Commissioners of Sewers of the City of London; whether he has considered the letter of Dr. Sedgwick Saunders, food analyst to the Commissioners, written in March of this year, in which he states that the sale of meat which would be at once condemned as unfit for food by any competent meat inspector goes on openly in the shops referred to, that this outside market is in the area of the Holborn Board of Works, who have not sufficient trained inspectors to examine the meat or any apparatus for dealing with it when it is condemned, and that although the Commissioners of Sewers have made proposals to the Holborn District Board of Works to take over for a time the inspection of meat in the implicated area, the Holborn board has neither accepted the offer nor dealt with the evil in any other way; and whether, in view of the fact that this meat is distributed over the metropolis, involving great risk to the people who buy the worst of it in the street markets where it is sold as cheap meat, he will use his influence with the Holborn Board of Works to ensure efficient inspection of all the meat sold within their area, either in the way proposed by the Commissioners of Sewers or in some other way.—Mr. Shaw-Lefevre replied that the Local Government Board have no information as to there being a systematic sale of large quantities of unwholesome meat in the area in question, neither has the letter of Dr. Sedgwick Saunders been communicated to them. He then said: "Since my hon. friend gave notice of this question I have communicated with the Holborn District Board of Works and I am informed that complaints have been made by inspectors under the Commissioners of Sewers for the City of London and by the officials of some other authorities that meat which is unsound is allowed to be sold in the places referred to, that on every occasion when such a charge has been made the district board have done their best to investigate the circumstances and have called for evidence to substantiate the charge, but that on no one occasion has evidence worthy of the name been put forward. I attach great importance to the enforcement of the provisions of the law as regards unsound food, and I am informed that the inspectors of the district are constantly on the alert watching for unwholesome meat, and that whenever there is adequate evidence the district board would prosecute. The consideration of the proposal of Dr. Saunders has, I am told, been delayed pending the appointment of a medical officer of health for the district, that office having recently become vacant."

A Vaccination Question.

Mr. Hopwood asked the President of the Local Government Board whether his attention had been drawn to the case of Rose Hannah Loach, of 85, Park-street, Oldbury, who recently entered the Oldbury Small-pox Hospital, Portway-road, with her child Martha, aged five months, who was suffering from confluent small-pox; whether he was aware that Mrs. Loach, having never been vaccinated or had small-pox, resisted the importunities of the sanitary inspector and medical man at the hospital, who urged her to be vaccinated, stating that she had seen her husband and children take small-pox after vaccination, and that Mrs. Loach was discharged from the hospital on the death of her infant, after close association with the worst forms of small-pox, unvaccinated and free from small-pox; and whether it was the duty of officials at small-pox hospitals to put such pressure on persons who might object to vaccination as useless and dangerous.—Mr. Shaw-Lefevre said: "I am informed that the child referred to, who was about four months old, was suffering from small-pox in a small house where arrangements for isolation were impracticable and where three cases of small-pox had previously occurred. The mother refused to allow the child to be sent to the small-pox hospital unless she was received in the hospital with the child. The sanitary inspector endeavoured to persuade her to be vaccinated before being taken to the hospital, but she refused, and the mother with her child was then admitted to the hospital. She was, it is stated, provided with a cottage which was some distance from the main buildings where the chief of the cases were. The utmost was done to prevent her from mixing with the other cases in the hospital, and after the death of the child the mother, after a bath, and her clothing having been properly disinfected, returned to her home. I see no ground for thinking that the officers did more than it was their duty to do in the case."

FRIDAY, JUNE 14TH.

Nursing in Irish Workhouses.

Mr. McCartan asked the Chief Secretary for Ireland whether his attention had been called to a letter which appeared in the Irish papers, headed "Misery in Workhouses," signed by Sir Philip C. Smyly, M.D., chairman of the Irish Medical Association, stating that a circular letter, asking for information, had been sent to the medical officers of the workhouses and workhouse infirmaries in Ireland; whether he was aware that it was publicly declared that the replies of the medical officers showed that in forty-three infirmaries the nursing was entirely in the hands of pauper women mostly burthened with children, that these women had to take charge of serious medical and surgical cases as well as of the lunatic patients, that in sixty-one infirmaries they had charge of paupers both night and day, that in sixty-five the sanitary arrangements were of the most disgusting character imaginable, and that in forty-three of them there were neither plates, knives, nor forks for the poor inmates to eat their food with; and whether, under the circumstances, he would consider the desirability of having a public inquiry into the condition, working, and the general system of workhouses in Ireland.—Mr. Morley replied that he had read the letter. The Local Government Board informed him that they did

not consider that the letter fairly represented the actual condition of workhouses in Ireland. The statement that there were forty-three workhouses in which the nursing was entirely in the hands of pauper women was, the Board pointed out, absolutely without foundation, as there was no workhouse infirmary which was not in charge of a responsible paid officer. There were 641 paid nurses in the 159 unions in Ireland, who had no duties to perform other than the nursing of the sick. Nor did the Board think that in any case patients suffered from want of proper food, as a medical officer was entitled to order any description of food he thought fit for patients under his care. With regard to sanitation, ventilation, &c., medical officers were bound by the regulations to report any defects in such matters to the guardians, and when they did this it was the Board's invariable practice to support their recommendations. Much had been done in recent years in this direction, and doubtless much still remained to be done. The Local Government Board would welcome the efforts of any organisation working with the same objects, and they only regretted that the Irish Medical Association had not seen their way to supply them with specific information upon this subject. The Board, however, had brought under the notice of their inspectors the alleged defects, which would be made the subject of detailed inquiry by them.—Mr. T. W. Russell pressed the Government to appoint a Royal Commission or a departmental committee.—Mr. Morley said he admitted there was great cause for dissatisfaction in regard to this matter, and the Local Government Board was constantly calling the attention of boards of guardians to it.—Mr. T. W. Russell intimated that when the vote for the Local Government Board was reached he would call attention to Sir Philip Smyly's letter and raise the whole question.

Imported Milk.

Mr. Herbert Gardner, in reply to a question, said that 67,580 gallons of fresh milk and cream were imported from Holland during the year 1894, and 12,210 gallons had been received from the same source during the first five months of the present year. He might add that the value of these imports was £2835 and £451 respectively, so that competition from this quarter was really of very trifling dimensions.

TUESDAY, JUNE 18TH.

Boiler Explosions.

Mr. Holland asked the President of the Board of Trade whether, in view of the large number of boiler explosions which have occurred lately, causing great loss of life and destruction of property, he would consider the desirability of introducing a Bill making it compulsory on steam users to have their boilers duly inspected from time to time.—Mr. Bryce, in reply, said he had no certain information as to the number of boilers in use in the United Kingdom; but assuming it to be between 150,000 and 200,000, the proportion of explosions is now, as it was in 1871, about 1 in 2000 per annum. In 1871 the Select Committee on Boiler Explosions reported against the introduction of any system of compulsory inspection, one of their reasons being that a great number of these explosions arise from causes independent of and apart from anything that could be prevented by periodical inspection. Having regard to this opinion and the enormous magnitude of the task which would be thrown upon the State were it to undertake the duty of periodically inspecting all boilers, much consideration would be needed before introducing such a Bill as the hon. member appeared to contemplate.

IN COMMITTEE.

Food Products Adulteration.

Sir Walter Foster's committee met again on Tuesday, June 18th, and proceeded with the examination of witnesses. At the commencement Sir Walter Foster intimated that the committee are now prepared to examine witnesses who can tell the experience of local authorities in the administration of the Adulteration Acts.

Mr. Robinson, a member of the Kensington Vestry, said that the Food and Drugs Act had worked with good effect in his district, and would work with still better effect if the local authority could reach the wholesale dealer as well as the retailer.

Mr. Hartley Wilson, President of the Liverpool and District Grocers' Association, said that very little if any adulteration was practised by the retail grocers of Liverpool and district. In his view the invoice of the wholesale merchant should be regarded as a warranty, because he did not see why the retailer should be made the innocent victim of his fraud or that of the manufacturer. Where the law was persistently infringed he would not hesitate to inflict the penalty of imprisonment, although he thought the fines now within the power of magistrates were a sufficient deterrent in ordinary circumstances. In the case of goods known to be adulterated or believed to be injurious to public health he would have an examination at the port of entry and their sale stopped. He included preserved peas and filled cheese among these goods. As to filled cheese, he thought a distinctive name should be applied to it—such, for instance, as *oleine*—so that the purchaser might be protected against fraud. The trade in this cheese was increasing in Liverpool, and, in his opinion, there was a strong public case for dealing with it. He objected to the name *cheese* because he did not think it sufficiently distinctive. It would lead to confusion and facilitate the very fraud they were anxious to stop. Wherever there was a difference of opinion between the analyst for the prosecution and the analyst for the defence, he would make it obligatory upon the magistrates to refer the sample to Somerset House. The analyses of Somerset House were regarded by the trade as very satisfactory. In his opinion prosecutions in connexion with margarine should be taken under the Margarine Acts and not under the Food and Drugs Act. To his knowledge customers objected to ask for margarine, although they knew perfectly well from the price they paid that they were being supplied with that article. It was impossible to make a verbal declaration with regard to the sale of margarine in a crowded shop. The repetition became wearisome and objectionable. There was a sentimental objection on the part of the poor to being heard asking for margarine. It was a false sentiment, and he saw no reason why the shopkeeper should be made the victim of it, as well as the victim of the traps laid for him by the inspectors. His association was of opinion that a larger percentage of water than 16 per cent. should not be allowed in butter. They based that opinion upon the report of Mr. Faber, the Commissioner of the Danish Government. In many butters the water was introduced to increase its weight. He was strongly in favour of the establishment of a board of referees to

deal with matters arising out of the Food and Drugs Act and the Margarine Acts.

Mr. Neville Lubbock, chairman of the West India Committee, gave evidence with regard to Demarara and Trinidad sugars and the methods of imitating and adulterating them which are practised. He showed to the Committee a number of samples.

The Committee then adjourned.

The Committee met again on the following day.

Mr. Tatton Egerton, M.P., said he had acted as chairman of a conference of the London Vestries, summoned on the initiative of the St. George's Vestry, to consider the administration of the Adulteration Acts and the question of their amendment. Great difficulty was experienced in checking the adulteration of milk. At the present moment, when they had no fixed legal standard, rich milk was lowered to a standard which was likely to escape a penalty if brought before a magistrate. Milk dealers knew exactly what they could do in the way of adulteration, and he believed that at the present moment in London there was practically no unsophisticated milk sold. All the great milk companies "prepared" the milk for the market to the detriment of the farmer who supplied it. Cream in milk was not of the same value as cream outside milk, and consequently it paid to extract it. He did not think that Parliament should fix a standard. This was a matter entirely for experts, who would have no difficulty in arriving at a fair average standard. His proposal in this connexion was to have a committee of analysts and others appointed under the Local Government Board, who would take steps to find out what should be the standard for milk and other commodities, and frame rules for the guidance of local authorities in the administration of the Adulteration Acts. It was a difficulty in the present state of things that members of local authorities were frequently tradesmen, who were themselves liable to prosecution under the Acts. This might account for a slackness in the administration of the Acts. He would have imported food and drugs inspected at the port of entry, so as to prevent spurious articles coming into the country. A case occurred two or three years ago in the experience of the St. George's Vestry, where butter was proved to be adulterated and sold by a very respectable tradesman, and where the action they took had a most deterrent effect, because 270 tons of butter were returned to Holland. If this butter had been examined at the port of entry it would never have got into the country. As to what he had said about unsophisticated milk, he might tell the Committee that he saw himself in the country an iron building with a small boiler and machinery driving cylinders, and farmers all sending their milk to this place, which was within 200 yards of a railway station from which a large town was being supplied with milk. He looked in and saw the separating going on, and the only conclusion he could come to was that the milk was being whittled down exactly to pass the standards which the public analyst of this large town held to be sufficient. In taking samples the vestry of St. George's sometimes employed women, but he could not say whether they were made successful in detecting adulteration than men. With regard to itinerant vendors of milk, the Conference recommended that all itinerant vendors of food or drugs should only sell from vehicles or vessels or other receptacles having printed thereon the name and address of the person who should be responsible as master for such sale, and that all itinerant vendors of milk should be registered. The Vestry of St. George's had experienced great difficulty with these itinerant vendors of milk, who, especially on Sunday mornings, did a very large business among the poorer classes. In one case when they got to the owner of the business it was found to be a child of thirteen years. They shifted their ground, frequently gave false names, and made a great deal of trouble for the Vestry.

Mr. Wynter Blyth, medical officer of health and public analyst for Marylebone, gave some account of the methods adopted in that parish in the administration of the Adulteration Acts and the results obtained. Samples of milk, he said, were regularly taken on Sunday morning, when there was special need for supervision. As to the drugs sold in the chemists' shops of the parish, he believed they were fairly up to the standards of the Pharmacopœia. He was strongly of opinion that limits of standards should be laid down for such articles as milk, butter, cream, and vinegar. At present analysts had to work on standards which were the result of appeals to Somerset House standards, not published or acknowledged, but perfectly well understood by analysts and by the trade. He did not object to the references to Somerset House if there were a little modification of the procedure. He thought, for instance, that the local analysts should be allowed to apply preservatives to the samples and to send the results and details of their analyses to be criticised. In the case of new forms of adulteration and in doubtful cases it would, in his opinion, be of great service if before a prosecution was taken Somerset House was consulted.

Mr. Stokes, Public Analyst for Paddington and Hampstead, was also examined by the committee.

BOOKS ETC. RECEIVED.

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Manuel du Médecin Practicien. La Pratique des Maladies des Yeux dans les Hôpitaux de Paris. Par le Professeur P. Lefert. 1895. pp. 324.

BUSH, R. S., Fleet-street, London.

Mercantile Speller. Spelling words used in Correspondence and their Prefixes and Suffixes. 1895. pp. 468. Price 3s. net.

CADBURY, JONES, & Co., Haymarket, London, S.W.

St. John's, Clerkenwell: with historical notes and letterpress description of the Grand Priory of the Order of the Hospital St. John of Jerusalem in England. By John Underhill. With plates and other illustrations. 1895. Price 2 guineas net.

COX, HORACE, Bream's-buildings, London, E.C.

An Australian in China. Being the Narrative of a Quiet Journey across China to British Burma. By G. R. Morrison, M.B., C.M. Edin., F.R.G.S. 1895. pp. 299.

FISCHER, GUTTA, Jena.

Leitfaden für Histologische Untersuchungen. Von Dr. B. Sawitz. 1895. pp. 143.

- Die Protozoen als Krankheitserreger. Von Dr. L. Pfeiffer. 1895. pp. 122.
- Suggestion und Reflex. Eine kritisch-experimentelle Studie über die Reflexphänomene des Hypnotismus. Von Dr. K. Schaffer. 1895. pp. 113.
- HIRSCHWALD, AUGUST, Berlin.
- Die mikroskopische Technik und Diagnostik in der Gynäkologischen Praxis; für Studierende und Aerzte. Von Dr. Karl Abel. 1895. pp. 108.
- KIMPTON, H., High Holborn, London, and HIRSCHFELD BROS., Fetter Lane, London.
- Diseases of the Eye. By E. B. Dench, Ph.B., M.D. With plates and illustrations. 1895. pp. 645. Price 21s.
- LONGMANS & Co., Paternoster-row, London.
- The Value of Electrical Treatment. By Julius Althaus, M.D., M.R.C.P. 1895. pp. 99. Price 2s.
- MASSON, G., Paris.
- Diagnostic et Traitement des Tumeurs de l'Abdomen et du Bassin. Par J. Péan. Tome troisième. 1895. pp. 1093.
- PERTLAND, YOUNG J., Edinburgh.
- Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. Fasciculus X. Price 1 guinea net.
- System of Surgery. Edited by F. S. Dennis, M.D., assisted by John S. Billings, M.D. Vol. I. Illustrated. 1895. pp. 880.
- SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.
- De la Mort apparente du Nouveau-Né. Par le Dr. Demelin. 1895. pp. 174.
- Maladies Internes et Maladies des Enfants. Par C. J. Smith. Deuxième édition. 1895. pp. 204.
- SPINGER, JULIUS, Berlin.
- Mikroskopie und Chemie am Krankenbett. Von Dr. H. Lenhartz. Zweite vermehrte Auflage. 1895. pp. 331.
- THE SCIENTIFIC PRESS, Strand, London.
- Burdett's Hospital and Charities Annual, 1895. By H. C. Burdett. pp. 914. Price 5s.

Experimental Observations on Tuberculous Meat, with special reference to the Report of the Royal Commission on Tuberculosis and the Seizure of Meat so Affected; by R. S. Marsden, M.B., D.Sc., D.P.H. Edin. (Wilson and Jones, Birkenhead).—King's College, London: Physiological Laboratory; Collected Papers, No. 2; edited by W. D. Halliburton, M.D., F.R.S., and T. G. Brodie, M.D.; 1895.—The Moonstone; by Wilkie Collins (Chatto and Windus, Piccadilly London, 1895); price 6d.—The Children's League of Pity Paper (W. H. & L. Collingridge, Harpur-street, Bloomsbury, London, W. 1895).—Manuel de Sérothérapie antidiptérique; par Dr. M. Funck (H. Lamartin, Bruxelles, 1895).—Sweden: Some Hints for Visitors second edition (The Swedish Tourists' Union, Stockholm, 1895).—How to Take the Waters, Strathpeffer Spa, N.B.; Notes for Drinkers at the Wells; by J. T. Fox, M.R.C.S. Eng. (Lewis Munro, Dingwall, Strathpeffer Spa, N.B., 1895); price 6d.—The Royal Natural History; vol. iv., part 20 (F. Warne & Co., Bedford-street, Strand, London) price 1s. net.—A Strange, True Story of To-day: Wanted, a Sherlock Holmes; a chance for Amateur Detectives; by Wm. T. Stead (Review of Reviews Offices, London, 1895); price 6d.—The Hunterian Oration, Royal College of Surgeons of England, February 14th, 1895; by J. W. Hulke, F.R.S. (Taylor and Francis, Red Lion-court, Fleet-street, London, 1895).—Cæliotomy for Puerperal Septicæmia and Peritonitis; by C. P. Noble, M.D. (reprint from the American Gynecological and Obstetrical Journal).—The Diagnosis of Pregnancy during the First Three Months; by C. P. Noble, M.D. (reprint from the Transactions of the Philadelphia County Medical Society, 1894).—Remarks on the Treatment of Inevitable Abortion; by C. P. Noble, M.D. (reprint from Codex Medicus, Philadelphia, October, 1894).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

- BORD, W. A., M.D., B.C. Camb., D.P.H., M.R.C.P. Lond., has been appointed Medical Officer of Health for the Holborn Sanitary District.
- BROWN, R. C., B.A., M.B., B.C. Cantab., has been appointed Junior House Surgeon to the Blackburn and East Lancashire Infirmary.
- COOPER, A. J. S., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Assistant Medical Officer for the Workhouse, Aston Union, vice Reith, resigned.
- EDWARDS, WM. L., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer to the employés of the Barry Graving Dock and Engineering Works.
- BOLINTON, G. W., L.R.C.P., L.M. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Street District Council.
- FAGGE, ROBERT HILTON, M.R.C.S., L.R.C.P., has been appointed House Physician to the Leicester Infirmary.
- FLETCHER, H. M., M.D., B.C. Camb., M.R.C.P. Lond., has been appointed Physician to Out-patients at the Shadwell Hospital for Children.
- FOSTER, MICHAEL B., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Leicester Infirmary, vice G. Winfield, resigned.

- HAMILTON, W. CROSBIE, M.B., C.M. Edin., has been appointed Senior House Surgeon to the Blackburn and East Lancashire Infirmary, vice C. E. Maude, resigned.
- HARLAND, R. H., F.C.S., F.I.C., has been appointed Public Analyst by the Greenwich District Board of Works.
- HAYWARD, JOHN W., M.R.C.S., has been appointed Medical Officer for the Borough of Whitstable-on-Sea.
- HOWARD, M., M.B., B.C. Cantab., has been appointed Assistant House Surgeon to the Nottingham General Hospital.
- IRVING, WM., M.D., M.Ch. Irel., has been appointed Physician to the Liverpool Hospital for Consumption and Diseases of the Chest, vice Williams, resigned.
- JACOBSEN, G. OSCAR, M.R.C.S., L.R.C.P., has been appointed Medical Officer of Health for Kingston, Herefordshire, vice J. Chute, resigned.
- LAKE, W. W., M.R.C.S. Eng., D.P.H. Camb., has been reappointed Medical Officer of Health for Guildford.
- LAZENBY, F. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Whitley Memorial Convalescent Home and also to the Village Homes at Whitley, vice Bramwell, resigned.
- MCDONNELL, THOS. F., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Fifth Sanitary District and the Workhouse of the Hailsham Union, vice Billing.
- MAXWELL, J. C., M.A., M.B., C.M. Edin., has been appointed Senior House Surgeon to the Halifax Infirmary.
- RAY, M. B., M.B. Edin., has been appointed Fifth Assistant Medical Officer to the South Yorkshire Asylum, Wadley, Sheffield.
- ROBERTS, F. T., M.R.C.S. Eng., L.R.C.P., M.R.C.S., has been appointed to the Chair of Principles and Practice of Medicine, University College, London.
- SENIOR, A., M.B., B.C. Camb., has been appointed Medical Officer to the Bsher and the Dittons Urban District Council.
- STORR, F. A., B.A. Oxford, L.S.A., has been appointed Junior House Surgeon to the Halifax Infirmary.
- WARD, GEO. S., L.R.C.P., L.M., L.R.C.S. Edin., has been reappointed Medical Officer for the Fifth Sanitary District of the Hertford Union.
- WILLIAMS, D. M., L.R.C.P. Irel., M.R.C.S., has been appointed Consulting Physician to the Liverpool Hospital for Consumption and Diseases of the Chest.

Vacancies.

For further information regarding each vacancy references should be made to the advertisement (see Index).

- BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum, with an allowance of £30 per annum for cab hire, and furnished rooms, fire, lights, and attendance.
- BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician.
- CITY OF LONDON UNION INFIRMARY, Bow-road, E.—Resident Officer. Salary £450 per annum and unfurnished residence. Applications to the Clerk, Guardians' Offices, 61, Bartholomew's-close, E.C.
- COUNTY LUNATIC ASYLUM, Lancaster.—Assistant Medical Officer. Commencing salary £100 per annum, with board, &c.
- DENTAL HOSPITAL OF LONDON, Leicester-square.—Two Assistant Dental Surgeons.
- DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £90 a year and board and lodging.
- FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house; rent and taxes free; also coal, light, water, and cleaning; or in lieu thereof the sum of £20 per annum. Applications to the Secretary, Board-room, Bagillt-street, Holywell, N. Wales.
- HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £200 per annum, with board and residence.
- LONDON HOSPITAL, Mile End, E.—Medical Electrician.
- LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Senior Demonstrator of Physiology. Salary £100 a year and a proportion of the fees paid for classes. Also Assistant Demonstrator of Physiology. Salary £50 a year.
- LONDON SKIN HOSPITAL, 40, Fitzroy-square, W.—Assistant Dispenser.
- LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Board, washing, and residence in the hospital is provided, and an honorarium of five guineas at the expiration of that term.
- MIDDLESEX HOSPITAL, W.—Assistant Physician.
- NEWPORT AND MONMOUTHSHIRE INFIRMARY, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence. No stimulants provided.
- NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartill, Stoke on-Trent.—Assistant House Surgeon for six months.
- NORTHAMPTON GENERAL INFIRMARY.—Resident Dresser. Board, lodging, and washing, provided.
- PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Assistant House Surgeon. Board and residence provided.
- ROYAL CORNWALL INFIRMARY, Truro.—House Surgeon; unmarried. Salary for first year £120, increasing by £10 a year to £150, with furnished apartments, fire, light, and attendance.
- ROYAL GENERAL DISPENSARY, 25, Bartholomew's-close, London, E.C.—Physician.
- ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Clinical Assistant and Anæsthetist for six months. Salary at the rate of £30 per annum.
- ROYAL VICTORIA HOSPITAL, Bournemouth.—House Surgeon and Secretary for two years. Salary £100 per annum, with board.
- SHEFFIELD GENERAL INFIRMARY.—House Surgeon and Assistant House Surgeon.
- SHEFFIELD UNION.—Junior Assistant Medical Officer, unmarried, for the Workhouse Infirmary, Fir Vale, Sheffield, for six months. Furnished apartments in the Infirmary and board and washing provided.
- STOKE NEWINGTON, CLAPTON, WEST HACKNEY, AND DALSTON DISPENSARY, 189, High-street, Stoke Newington, N.—Junior Resident Medical Officer. Salary £50 per annum, with board and lodging.

STIRLING DISTRICT ASYLUM, Larbert.—Second Assistant Medical Officer. Salary £80 per annum, with board, &c.
VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—House Physician to the in-patients of this hospital. Honorarium of £50 per annum, and will be provided with board and lodging in the hospital.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant, for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

KEEGAN.—On June 13th, at 178, Cromwell-road, South Kensington, the wife of Brigade-Surgeon-Lieutenant-Colonel Keegan, F.R.C.S., of a daughter.
LAZARUS-BARLOW.—On June 16th, at The Acacias, Old Chesterton, Cambridge, the wife of Walter S. Lazarus-Barlow, M.D., M.R.C.P., of a son.
MCBRIDE.—On June 16th, at the White House, Berkhamsted, the wife of J. Best McBride, K.Q.C.P., L.R.C.S. Irel., of a son.
SIMPSON.—On June 11th, at The Boltons, Farnborough, Hants, the wife of J. Tracy Simpson, M.R.C.S., of a son.
WHITE.—On June 12th, at Harley-street, W., the wife of William Hale White, M.D., of a son.

MARRIAGES.

ASHDOWN-THOROLD.—On June 12th, at Christ Church, Bath, by the Rev. E. P. Cole. G. W. W. Ashdown, M.D., of Tetbury, Glos., to Gertrude Beaujolis Thorold, daughter of General Thorold, late Royal Engineers.
BOGLE-MOORE.—On June 12th, at Hampstead Parish Church, James Linton Bogle, M.D., of New Ferry Park, Cheshire, to Agnes Elizabeth Collingham, elder daughter of Henry Moore, Esq., R.A., R.W.S., of Collingham, Maresfield-gardens, Hampstead, N.W.
DENNING-LIDDLE.—On June 12th, at St. Andrew's Church, Aston, Newport, Salop, Charles Ernest Denning, L.R.C.P., of The Grange, Grinshill, Salop, to Alice Maud, eldest daughter of Charles Rowland Liddle, of Newport, Salop.
ENRAGHT-GORDON.—On June 12th, at Holy Trinity Church, Anerley, S.E., William Enraght, L.R.C.P., M.R.C.S., of Curraghmore, Anerley, to Rosa Mercedes, youngest daughter of Lieutenant-General Charles Edward Parke Gordon, C.B., of Roslyn, Weighton-road, S.E.
HILLABY-CROWTHER.—On June 12th, at the Parish Church, Castleford, by the Rev. Gardner Smith, Rector of Castleford, assisted by the Rev. J. J. Christie, M.A., Rural Dean and Vicar of Pontefract, Arthur Hillaby, M.R.C.S. Eng., L.R.C.P. Lond., son of John Hillaby, J.P., of Pontefract, to Mary, youngest daughter of the late Joseph Crowther, of Weetworth, Glass Houghton. No cards. At home July 23rd, 24th, and 25th.
PAYNE-WARMINGTON.—On June 13th, at the Church of Our Blessed Lady and St. Thomas of Canterbury, Dudley, Edward Marten Payne, M.B., C.M. Aberd., of Chichele-road, Cricklewood, N.W., to Katherine Louisa, second daughter of Edward Marcus Warmington, Solicitor, Town Clerk of Dudley.
POLLARD-GRAHAM.—On Wednesday, June 12th, at the Oratory, South Kensington, by the Rev. Sebastian Bowden, Reginald Pollard, M.B., M.R.C.S., of Southlands, Torquay, to Beatrix Lucy Steuart Graham, second daughter of Major-General G. F. J. Graham, of 4, Buckingham Palace-mansions, London.
POTT-KILBURN.—On June 12th, at St. Paul's, Rushall, Tunbridge Wells, Francis Henry Pott, M.D., of Bournemouth, to Kate Angela, eldest daughter of E. Dunbar Kilburn, of Chancellor House, Tunbridge Wells.
RAMSAY-HOPWOOD.—On June 6th, at St. George's, Hanover-square, Herbert Murray Ramsay, Surgeon-Captain Scots Guards, to Eleanor, youngest daughter of Mr. Hopwood, of Ketton Hall, Stamford.
REDMOND-BLUMFELD.—On June 12th, at St. Mary's Church, Holly-place, Hampstead, John Johnstone Redmond, L.R.C.P., L.R.C.S. I., L.M., youngest son of the late Captain Redmond, R.M., of Queens-town, to Frieda, third daughter of Louis Blumfeld, of Braueck, Hampstead.
WHITE-FITZGERALD.—On June 18th, at Framingham Pigot, by the Rev. E. Kinder, assisted by the Rev. R. H. Prowse, Rector of the Parish, Richard Wentworth White, M.R.C.S. &c., 26, St. Giles-street and Chester House, Norwich, eldest son of the late Richard White of that city, to Ethel, daughter of Major FitzGerald, of Framingham Hall.
WILMOT-BATE.—On June 12th, at Toft Church, Cheshire, Claude E. W. Wilmot, M.D., of Alrewas, to Gertrude Isabelle, second daughter of W. Alfred Bate, Esq., of Beechwood, Knutsford.

DEATHS.

GREWCOCK.—On May 26th, at Brook House, Clapton, George Grewcock, M.R.C.S., aged 53.
MALCOLM.—On June 16th, at Gainford, John Malcolm, F.R.C.S., aged 81.
PORTER.—On June 16th, at Merrion-square, Dublin, Sir George Hornidge Porter, Bart., Surgeon-in-Ordinary to the Queen in Ireland, and Regius Professor of Surgery in the University of Dublin.
WALLER.—On June 12th, at Sydenham, Charles Beaumont Waller, M.R.C.S., aged 54.
WYATT.—On April 17th, George Robert Wyatt, M.D., F.R.C.S., late of Oxford and of Naples, in his 81st year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).
TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).
WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).
THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).
FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).
SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).
 At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—5 P.M. Dr. Shephard T. Taylor: Notes of a case of Abnormal Growth of Finger Nail. Cases to be shown by Mr. Bidwell (Rodent Ulcer of Thigh), Dr. Stowers (Disease of Nails), and others.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. A. S. Morton: Ocular Injuries.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Impaired Movements of the Vocal Cords.
TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Impulsive, Homicidal, and Moral Insanity. ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. Marcet: Contribution to the History of the Respiration of Man. (Croonian Lecture).
WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.
 FUNERAL REFORM ASSOCIATION (Stafford House).—3 P.M. Annual Meeting.
 ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.O.).—5 to 6 P.M. Dr. Morgan Dockrell: Mycosis Fungoides.
 LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. W. Lang: Iritis.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Affections of the Skin produced by Animal Parasites.
THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. Edmund Owen: Cases from the Surgical Wards.—National Hospital for the Paralyzed, Bloomsbury, 2 P.M., Mr. O. A. Ballance: Diagnosis of Brain Abscess following Ear Disease.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.
 ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. Marcet: Contribution to the History of the Respiration of Man. (Croonian Lecture).
FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.
SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Lunacy Law.
 ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.O.).—5 P.M. Dr. Morgan Dockrell: Psoriasis and Seborrhoeic Dermatitis.

During the week marked copies of the following newspapers have been received:—Sunderland Herald, Newcastle Daily Journal, Celestial Empire (Shanghai), Belfast Evening Telegraph, Pioneer Mail, Architect, West Kent Advertiser, Oldham Standard, Citizen, Times of India, Builder, Leicester Post, Liverpool Courier, Bedford Standard, Derbyshire Advertiser, Walsall Observer, Birmingham Post, Huddersfield Chronicle, Brighton Argus, Sussex Daily News, Ayrshire Weekly News, Liverpool Daily Post, Sheffield Telegraph, Somerset City Herald, Lowestoft Standard, Sanitary Record, Leeds Mercury, Weekly Colonist (British Columbia), Yorkshire Post, The Weekly Budget, Answers, Bristol Mercury, Sleaford Journal, The London, Yorkshire Gazette, North Herts Journal, Courrier de la Presse, Local Government Chronicle, Mining Journal, City Press, Reading Mercury, Folkestone Express, West Middlesex Standard, Widnes Weekly News, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Bucks Advertiser, St. Bartholomew's Hospital Journal, Surrey Advertiser, Invergornton Times, Berkshire News, Blackpool Times, Midhurst Times, Sligo Champion, Jewish Chronicle, Oldham Evening Chronicle, Herne Bay Argus, Isle of Man Times, South Wales Daily News, Scotsman, Naval and Military Record, Perthshire Constitutional, &c., &c.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 20th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
June 14	30.08	W.	56	49	114	69	52	...	Overcast
" 15	30.21	N.E.	54	47	112	67	46	...	Bright
" 16	30.21	S.W.	62	52	114	75	49	...	Hazy
" 17	29.93	W.	58	52	105	71	48	...	Bright
" 18	29.74	W.	59	54	111	76	51	...	Hazy
" 19	29.69	E.	54	53	96	68	53	0.16	Raining
" 20	29.95	W.	57	53	110	70	52	0.02	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular in question.

TREATMENT OF CANCER BY SERUM INOCULATION.

Hopeful.—We are not aware that this treatment has been tried in this country, and the trials in France mentioned by our correspondent are, we believe, almost the first of their kind. In Germany inoculation of the virus of erysipelas has been advocated on the ground that erysipelas has an adverse influence on the growth of tumours.

"STAMMERING."

To the Editors of THE LANCET.

SIRS,—My attention has been called to a letter in your last issue referring to Dr. Colman's post-graduate lecture on Stammering &c., in which the writer, Mrs. Behnke, refers to the method he quotes regarding the vocalising of sounds. This excellent method we owe neither to Dr. Wyllie nor to the late Mr. Behnke. Mrs. Behnke, instead of saying "The late Emil Behnke originated this method as far back as May, 1882," ought to have said "applied this method," as it originated on the Continent, where it has been advocated and put into practice for many years. I have myself applied it in many cases since 1865. I refer your readers, amongst others, to the works of Drs. Klencke (1862), Lehmann (1868), Guilleaume (1868), Günther (1873), and Gutzmann (1879).

I am, Sirs, yours obediently,

Fitzroy-square, W., June 17th, 1895.

WILLIAM VAN PRAAGH.

WANTED A PHILOLOGIST.

A MAN is reported to have said, in applying for a summons at a London police-court recently against a boy who had kicked his leg, that the leg was a "very serious one"—in fact, it was a "haricot leg." Noticing that his worship looked somewhat mystified, the applicant then explained that his leg had "haricot veins" in it. It would be interesting to know by what process of thought this derangement of epithets was arrived at; for, so far from being the single instance on which the phrase has come under our attention, we are aware that it is quite a usual colloquialism amongst the lower orders for varicosity of the lower extremity. But why?

WHOOPIING-COUGH.

To the Editors of THE LANCET.

SIRS,—Whooping-cough being one of the most distressing and fatal maladies peculiar to children, the excellent paper produced by Dr. Wells and Dr. Carré, and published in THE LANCET of June 8th, ought to receive every consideration at the hands of the medical profession. The subject is wide and somewhat involved in mystery; yet few medical discussions could possibly be more fruitful and productive than one upon whooping-cough. I have always looked upon this disease as one primarily affecting the peripheral terminations of the trifacial nerves, and secondarily affecting the pneumogastric. We have a disease of childhood—mumps—which chiefly affects the parotid and sometimes also the sub-maxillary glands. Is it not likely that some microbe may have an affinity for the sublingual glands, and possibly also the sub-maxillary, specially affecting their epithelial or secreting structures, and causing to be poured into the mouth a quantity of vitiated saliva swarming with morbid products? The mouth, the fauces, and the stomach become immediately infected with the saliva, and irritation is set up in the terminal filaments of the fifth nerve. This nerve supplies the four glands just mentioned, as well as the papillae at the base of the tongue and other sensitive parts that would be likely to become affected. The irritation passing up the nerve trunk would involve the other parts—the ophthalmic and superior maxillary. This would account for the redness and suffusion of the eyes and the nasal catarrh. The seat of origin in the brain of the trifacial and vagus nerves are closely approximate; so that it is not difficult to understand that an irritation might be communicated, and that the vagus, stimulated in this manner, would set up all the secondary phenomena peculiar to whooping cough. It has been proved that the saliva of man will inoculate the rabbit, and yet no change appears to take place in the blood. There is no metastatic poisoning—in fact, if it were not for the "whoop" the whole train of symptoms could be easily explained as the product of poisoned saliva causing irritation and ulceration at the mouths of the ducts of the frenum linguae—which is generally attributed to the forcible rubbing against the teeth during cough,—causing heat and pain in the mouth and fauces, producing cough, and causing indigestion and sickness owing to the presence of the starch and perverted secretion in the stomach. It is noted that the taking of food excites the cough; and, of course, the process of eating excites the gustatory, and mastication affects the buccal, nerves.

I cannot see any semblance between whooping-cough and diphtheria, and the foregoing remarks amply explain this. As for the treatment, there is little doubt but that cocaine is the most effective remedy we possess, and Dr. Wells and Dr. Carré have done a great service in bringing this treatment so prominently forward. I have recently tried the local application of cocaine to the under surface of the tongue, with excellent effect. The last case was one of the worst I have ever seen, but when the cocaine was applied the patient began to improve at once. I think that this treatment—viz., swabbing the orifices of the salivary ducts after each fit of coughing with a 5 per cent. solution of cocaine—will be found effective. Possibly, injecting by the tubes would be more effective still.

I am, Sirs, yours faithfully,

Holbeach.

THOMAS JACKSON, L.R.C.S. Edin., &c.

THE PERILS OF HOLIDAY MAKING.

To the Editors of THE LANCET.

SIRS,—Now that the holiday season is commencing it appears to me an opportune time to utter a word of warning. In company with a friend I have been making a tour in Wales where we visited most of the fashionable resorts, and in each instance established ourselves in the chief hotel—so far as we were able to ascertain. With the general attention and catering I have no fault to find, but the sanitary arrangements are mostly of such a nature as to render it dangerous to reside within the buildings. It is unnecessary for me to enter upon the structural faults, but anyone should be aware that lavatories, urinals, and w.c.'s communicating with billiard-rooms, smoke-rooms, &c. are highly suspicious, and often the source of dangerous contamination, especially if ill-constructed. The sickening odour in one instance was apparent upon entering the front door, and pervaded the whole establishment; in others it was only appreciable in the billiard or other rooms, often disguised by the pungent odour of some strong disinfectant, which we were informed was "to kill the smell." It would be obviously unfair for me to mention names, and I may further say that I have no desire to injure the business of these houses, but I do feel that those who require their bodily health improved by a pure and invigorating atmosphere should be on their guard lest in their search for better health they fall into a death-trap. If the State will not adopt some measure for their protection it would be well for the general public to take the matter into their own hands.

Through the technical instruction movement surely sufficient knowledge of the graver faults could easily be acquired, and every individual made capable of avoiding insanitary dwellings.

I may add that I also inspected boarding and lodging-houses, and often found similar defects, and I would especially urge that the assurance of managers, which is as general as it is emphatic, that "the sanitary system is perfect," is quite valueless. If they desire to assist the public I should advise them to anticipate legislation by procuring a certificate from a duly qualified expert, which should be renewed each season. The cost would be nominal, and they would not only earn the gratitude of the public but also increase their incomes. It is little satisfaction to bring an action at law for an attack of enteric fever which has ruined a constitution, and I feel confident that the "change of air," now so commonly regarded as a necessity, is often fraught with danger, and that the large majority of people would be safer in healthy homes so long as they have no means of ensuring a sanitary residence at the place of their selection.

I am, Sirs, yours faithfully,
Kidderminster, June 11th, 1895. J. LIONEL STRETTON.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of the 15th inst. another question as to practitioners styling themselves "Dr." or "Physician" &c. Such questions are being continually asked in your journal. Why do not the General Medical Council issue definite rules as to such matters, and insist upon every medical man describing his full and exact registrable title on his door-plate and elsewhere? In the city in which I reside numerous non-graduate medical men call themselves "Dr." on their door-plates, and an L.S.A., I observe, styles himself "Physician." If all this is wrong, why do not the aforesaid Council exercise what I presume is their undoubted right, or possibly, as some would suppose, their undoubted duty? I am, Sirs, your obedient servant,

June 17th, 1895. OBSERVER.

To the Editors of THE LANCET.

SIRS,—Very much of sense and nonsense has of late appeared in the correspondence columns of THE LANCET on the subject of titles of medical men. Without expressing an opinion further than that mentioned above, let me ask you how, in the face of your oft-repeated assertion to inquiring correspondents that none but those possessing the degree "M.D." should be styled "Dr.," you can explain the fact that M.B.'s are constantly spoken of in THE LANCET as "Doctors"? When you state the logical reason that only M.D.'s are Doctors, why do you not adhere to your statement? Even in your current issue I observe another of your answers to a correspondent whom you advise very emphatically to "describe himself as 'physician,' that he has not the right to prefix 'Dr.' to his name, because he is not a Doctor of Medicine"; and yet in the very same issue there appear several instances in which you boldly violate this very simple rule. As far as mere title is concerned, according to your own words and according to all logical reasoning, surely Bachelors are not Doctors any more than are Licentiates, and any amount of party argument cannot alter the fact. I am, Sirs, yours faithfully,

June 17th, 1895. ANTI-HUMBUG.

. We cannot find the examples of bold violation of logic that are so apparent to our correspondent. The fact that "M.B.'s" of certain universities are by courtesy styled "Dr." exists, and it would be, therefore, discourteous to withhold the title from them. We agree that the practice—one of courtesy, we may again remind "Anti-Humbug"—may be inconsistent, but it has obvious reasons. M.B.'s are graduates of universities, which alone can confer the academic title of "Doctor." How would our correspondent address the Professor of Principles and Practice of Medicine in King's College, who is an M.B., not an M.D.? It has been, rather wildly perhaps, suggested that if the universities could be induced to surrender the title of "Doctor" to the medical profession and substitute the equivalent title of "Master" in every other faculty, many people would be spared an endless source of worry.—ED. L.

Nemo.—We do not give medical advice or recommend treatment. Our correspondent had better consult a medical man, who would advise him if the condition is one that need cause any anxiety. As a rule the symptoms mentioned are of absolutely no importance.

"THE OXYBROMIDES OF MERCURY."

To the Editors of THE LANCET.

SIRS,—In reply to "S. H.," in THE LANCET of the 15th inst., p. 1559, regarding oxybromides of mercury, arsenic &c., I beg to refer him to the Extra Pharmacopœia, eighth edition, p. 83.

I am, Sirs, yours faithfully,
New Cavendish-street, W., June 17th, 1895. WM. MARTINDALE.

To the Editors of THE LANCET.

SIRS,—If your correspondent "S. H." will be good enough to send us particulars concerning the strength of the preparations he requires, we shall be pleased to make them for him.

We are, Sirs, yours faithfully,
Berners-street, W., June 17th, 1895. ARTHUR AND CO.

THE MODIFICATION OF GERMS BY CULTURE AND THE ORIGIN OF DISEASE.

WE have received the following speculations from a physician on the ever interesting question of the development of disease. Can zymotic disease, he asks, originate *de novo*? And are disease germs capable of modification in accordance with their appropriate epochs? The questions take us into somewhat transcendental regions, but are interesting, and may prove stimulative of ideas to some of our readers.

In the student days of those of us who can look back somewhat over twenty years bacteria, bacilli, and cocci were mythical beings. Their existence was inferred by such acute reasoners as the late Dr. Murchison, but was "not proven." Now, bacteriology is a science more or less exact. It is a thing in the realm of fact that cultures of germs can be made, and that by successive cultures their virulence may be subdued. With germs of disease as with their culture, "Emollit mores, nec sinit esse feros." That the converse may also be true, and that by suitable conditions germs of disease may become more virulent appears probable, and, taken together, the fact and the theory may possibly throw some light on that vexed question, the origin of disease.

Can zymotic disease originate *de novo*? Surely, it must have done so in the past, and what has been may be again. The temperature of the incandescent mass which once represented our planet was certainly too high for any disease germs to live in—*ergo*, they must at some time have originated on the earth, either before, contemporaneously with, or after the advent of man. That they can have travelled through the ether in meteoric form seems to be an absolute impossibility, and we must regard them as earth-born atoms.

The modern theory of evolution places man late in the scheme of organic life, and, if it be correct, the lower animals may have had germs of disease ready developed to make him their prey. Looking backward along the evolutionary line, the question that suggests itself is this: Man is for the most part the outcome of heredity and environment; may not a disease germ also be the result of heredity and environment, and be modified equally with its host by these factors? Into the "will" or "spirit" force, which is behind and pervades all phenomena, we are not inquiring. We must try to answer our question in the light of the physical, not the psychic. We take it for granted that a scarlet fever germ will invariably produce scarlet fever, a typhoid fever germ typhoid fever, just as man procreates man. But, granting that man is a being slowly evolved, capable of infinite modification or infinite epochs, so may disease germs be capable of modification in their appropriate epochs. Experiments in attenuation of virus go to prove that in the laboratory such modification may be comparatively rapid. It is, then, possible that the first bacillus or coccus may have been a good cell gone wrong, begetting a progeny of still more errant children. If the germs of such diseases as scarlet fever and diphtheria, typhoid fever and cholera, measles and röteln, variella and variola, be not really distinct species, but at least first cousins, produced by a series of evolutionary changes from similar or identical parents, the occurrence of new diseases in different eras ceases to be a mystery, and comes under the law of development by evolution, which appears to be the universal order.

If we take as one illustration syphilis, which is essentially a germ disease, we find that it never originates in the conventional connexion of a healthy male and female, and we have good reason for the inference that it can only be produced by promiscuous intercourse. That being so, where does the germ of syphilis originate but in the perverted cells of incontinent animals? Again, how can sporadic cases of cholera of the Asiatic type be accounted for? A person dies in twenty-four hours with collapse, cramps, and rice-water evacuations; yet there is no epidemic of cholera, though diarrhoea and typhoid fever may be prevalent in the district. Does not such a case point to an increased virulence, or a development under suitable conditions of some less malignant germ? Supposing this hypothesis to be correct, what is the practical lesson it teaches? It is simply this—that disease germs should be attacked in their simpler forms, and the conditions for their further development denied them. Pure air, pure water, healthy life both of mind and body, and a large reserve of vital energy are the chief antagonists to the evolution of the zymotic germ.

Regis.—What our correspondent desires to do seems to us ethically permissible; but he must recognise his risk—though it is a small and unimportant one. Our advice would certainly be to wait six weeks, and so do everything in order.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—Will you or any of the readers of THE LANCET very kindly inform me of a home or an institution wherein a lady (aged sixty-eight) in reduced circumstances could be taken care of upon payment of £50 per annum? She is suffering from paralysis, with loss of control of the sphincters. I am, Sirs, yours obediently,
Putney, June 18th, 1895. J. FRENCH BLAKE.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Communications, Letters &c. have been received from—

- A**—Dr. J. P. Arnold, Philadelphia, U.S.A.; Miss E. G. Arnott, Sunderland.
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Letters, each with enclosure, are also acknowledged from—

- A**—Mr. J. P. Atkinson, Yealand Conyers; Mrs. G. Ashdown, Bowness-in-Windermere.
- B**—Mr. G. Bellamy, Runcorn; Mr. H. J. Bromley, Lond.; Messrs. Burgoyne, Burldiges, and Co., Lond.; Blenheim, Lond.; Buxton, Hardwicke Mount; Banks, Lond.
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The Croonian Lectures,

BEING A

CONTRIBUTION TO THE HISTORY OF
THE RESPIRATION OF MAN.*Delivered before the Royal College of Physicians of London on
June 18th, 20th, 25th, and 27th.*By W. MARCET, M.D. EDIN., F.R.C.P. LOND.,
F.R.S.LECTURE II.¹*Delivered on June 20th.*

MR. PRESIDENT AND GENTLEMEN,—Before entering on the subject proper of this lecture I must beg leave to glance at a few of the prominent contributions to our knowledge of the phenomena of human respiration. In 1849 Regnault and Reiset, from experiments on animals, observed that a marked volume of oxygen was taken in at the lungs which failed to reappear as carbonic acid in the expired air, and they established a relation between the oxygen consumed and the carbonic acid produced. These experiments were confirmed in 1891 by Messrs. Chapman and Brubecker of Philadelphia. Dr. Edward Smith, in a paper published in 1853, divides foods into two classes, according to their action on respiration—the excitatory-respiratory, which increase the production of carbonic acid, and the non-excitants, which have a contrary effect. In the former class he includes tea, sugar, coffee, rum, milk, cocoa, &c.; also gelatine and albumen, though their effect is less marked. Rum and milk have a very pronounced and persistent action. Two results are prominent in this paper: first, that fats, oils (cod-liver oil), and starch diminish the carbonic acid expired; and, secondly, that, although the ingestion of pure alcohol and rum act as respiratory excitants, still drinking brandy, whisky, and gin is attended with a diminution of the carbonic acid expired. The elaborate chamber constructed by Pettenkofer of Munich in 1863, and his important inquiries with Professor Voit into the respiration of man should be placed here on record. In 1874 C. Speck published important papers on Respiration. He observed, as will be confirmed in the present lecture, that on returning to natural respiration after forced breathing, and therefore in consequence of increased ventilation of the blood, much less air is expired for a short time than in ordinary breathing in repose; and also that the amount of carbonic acid expired in the after-effect of forced breathing falls considerably below the normal. The oxygen taken from the air is also momentarily reduced.

In 1878 Paul Bert's remarkable book on "The Effects of Barometric Pressure on Respiration" was published, and in it he states that animals dying in closed vessels, and consequently in their own carbonic acid, exhibit precisely the same symptoms as if they had perished under diminished atmospheric pressure, from which he concludes that carbonic acid is absolutely innocuous and that in such cases death is due to want of oxygen. In more recent years Dr. George von Liebig of Munich, Messrs. Jolyet Bergonié and Sigalas, and MM. Henriod and Richet have contributed a number of important and elaborate papers on Respiration. Finally, Dr. Haldane of Oxford, who has been engaged for some years with inquiries on the respiration of man and animals, has shown that while 5 per cent. of carbonic oxide in atmospheric air is fatal to mice, in an atmosphere of oxygen the proportion of carbonic oxide can be increased to 5 or 10 per cent. without fatal results; and if the pressure of the oxygen be raised by one atmosphere the two atmospheres of oxygen may be mixed with an additional atmosphere of carbonic oxide without harming the animal.

The phenomena of respiration, simple as they appear at first sight, lead on a closer inspection into details many in number and increasing in complexity the further the study is carried. In addition, these phenomena are not precisely the same for everybody; I have, therefore, repeated the experiments on as many different persons as possible. The methods adopted in the above-mentioned investigations were very various. Edward Smith inspired through one gas meter and

expired through another; while C. Speck inhaled air under atmospheric pressure from a bell jar suspended over water, and collected the air he expired in a similar receiver, the change of direction in the respiratory current being effected by delicate valves. Dr. G. von Liebig, in his experiments, instead of directly measuring the volume of air inspired, obtained it by calculation from the nitrogen found in the air expired, assuming that nitrogen was neither absorbed in the body nor given out of it in the process of respiration. After the expenditure of much time and labour in the endeavour to obtain the most accurate results by means as simple as possible, and objecting to the use of gas meters on the ground that none could be found sufficiently delicate to allow of the passage of air to and from the lungs without offering any resistance, while valves and absorbing media were open to the same objection, I finally adopted the following method: a cylindrical bell jar of sheet iron, holding about 40 litres, or 1·4 cubic foot, furnished with a scale divided into litres and fractions of a litre, was suspended in water over a pulley working on friction wheels and accurately balanced by a counterpoise. To the pulley was fixed a cycloid or lever carrying a weight, the cycloid being so constructed that the effective arm lengthened as the bell jar rose, this arrangement maintaining the receiver under atmospheric pressure at every position in its course. A thermometer and pressure gauge showed the tension of the air inside the receiver. The person under experiment inspired fresh air through the nose and expired through the mouth into a tube connected with the bell jar—a process which, with a little practice, soon became quite natural. In the later experiments a small additional weight was added to the counterpoise, which gave a very slight ascending motion to the bell jar, and thus did away with the feeble effort necessary to raise it when under atmospheric pressure only. By means of an uniformly rotating drum and a horizontal style fixed to the top of one of the three bell jars employed expiratory tracings were obtained on skeleton charts; the abscissæ engraved on the chart measured the number of litres expired, and the ordinates recorded the minutes through which the experiment was continued. The air collected in the bell jar was analysed for the determination of its carbonic acid or carbonic acid and oxygen, the amount of the former being determined by Pettenkofer's method, and the oxygen in an eudiometer of my own construction. As already stated, the volume of air inspired can be determined by calculation from the volume of nitrogen expired, assuming that the nitrogen in the expired air represents exactly the nitrogen inhaled. To find out experimentally if this assumption was correct, a measured volume of air saturated with moisture was inhaled from one bell jar and exhaled into another, thus showing in a direct manner the volumes of air inspired and expired; at the same time the volume of nitrogen in the expired air was obtained by analysis, and from it the volume of air inspired was calculated. The mean of ten experiments gave a volume of air inspired, as determined by direct observation, almost identical with that obtained by calculation from the volume of nitrogen in the expired air, thus showing conclusively that no appreciable amount of nitrogen is either absorbed or given out from the blood in the phenomenon of respiration, and also justifying the method employed. If a person, while resting in a recumbent posture in an armchair and breathing quite naturally, should measure the volume of air he expires, this volume will be found invariably smaller than the corresponding volume of air inspired. A certain volume of oxygen has remained in the body. What has become of it? Formerly this absorbed oxygen was looked upon by some authors as combining with hydrogen to form water, but of this there is no proof. Its amount is subject to great variations even in the same person, while these oscillations appear greater in young people with active tissue change than in elderly persons with a slow and regular metabolism, young people as a rule absorbing more oxygen in a given time than persons of mature age. I have also observed, as will be shown in my next lecture, that absorbed oxygen is intimately connected with the mental process of volition. The period of the maximum absorption of oxygen is undoubtedly within the first hour after a midday meal; this is a time when the carbonic acid expired is low, but the body has to prepare for the forthcoming increased assimilation and tissue-change under the influence of digestion, hence, apparently, there is a demand of oxygen by the tissues to be stored up towards these phenomena.

From the following table, giving results of experiments
C C

¹ Lecture I. was published in THE LANCET of June 22nd, 1895.
No. 3748.

on myself, it will be seen that for a person aged sixty-three the mean volume of oxygen he absorbed per minute while fasting was practically the same as under the influence of food, being 35.3 c.cm. fasting and 34.6 c.cm. while under the influence of food:—

Oxygen absorbed per Minute (Author under Experiment).

Fasting:—

Year 1891 (6 experiments), from 25.7 c.cm. to 42.8 c.cm.; mean, 35.3 c.cm.

Mean time of two and a half hours after full meal:—

Year 1891 (6 experiments), from 21.3 c.cm. to 36.7 c.cm.; mean, 30.2 c.cm.

Year 1892 (10 experiments), from 20.4 c.cm. to 46.1 c.cm.; mean, 36.7 c.cm.

Year 1894 (21 experiments), from 27.7 c.cm. to 45.0 c.cm.; mean, 37.0 c.cm.

In the case of three young men who submitted to experiment—all of them from twenty-one to twenty-three years of age, strong and in good health—the following results were obtained:—

Oxygen absorbed per Minute.

Fasting.	Nearly two hours after lunch.	Increase after lunch.
c.cm.	c.cm.	
No. 1 (6 experiments), 33.3	(6 experiments) ... 37.5	12.6 per cent.
No. 2 (3 ..), 34.1	(7 ..) ... 50.0	46.6 ..
No. 3 (6 ..), 34.4	(12 ..) ... 40.5	17.4 ..

It will be seen from this table that distinctly more oxygen was absorbed about two hours after a full meal than when fasting; hence it appears that in the case of young people there is a decided increase of the oxygen absorbed at a time when the carbonic acid produced is not far from its maximum. This is, however, not the occasion of the maximum absorption of oxygen which, as stated above, occurs in the course of the first hour after a full midday meal; this is shown by the following figures for that period:—

The author (4 experiments), 47.9 c.cm. to 58.3 c.cm.; general mean, 34.0 c.cm.

Assistant (7 experiments), 56.4 c.cm. to 81.6 c.cm.; general mean, 37.4 c.cm.

The oxygen absorbed added to the carbonic acid produced will indicate the total amount of oxygen taken from the atmosphere, or oxygen consumed. The relation between the oxygen consumed and the carbonic acid produced has been called by Regnault and Reiset "the respiratory ratio,"

and is expressed by the ratio $\frac{\text{CO}_2 \text{ produced}}{\text{oxygen consumed}}$. Now, the

value of this fraction varies considerably at all times of the day, under the influence of food and from other causes; but when calculated for the mean volumes of oxygen consumed and carbonic acid produced in the day-time in a state of rest it appears to be nearly the same for different people. Thus the mean obtained by Messrs. Jolyet, Bergeon, and Sigalas was 0.864; that obtained on myself was the same, 0.864; the corresponding figure as a mean of 27 experiments was 0.862 for one of my assistants, and 0.878 for another from 20 experiments. The subject, however, requires further investigation on account of the number of circumstances controlling this ratio, and I have found exceptions to this mean figure into which I am not yet prepared to enter.

There is no direct connexion between the CO_2 produced and oxygen consumed, and there is no meaning in the respiratory ratio unless given as a mean for the whole day in the state of rest, and even this mean is subject to exceptions. I am anxious to make this statement lest I should be misunderstood. It is impossible to trace the history of the oxygen taken from the atmosphere at the lungs by the blood corpuscles. This oxygen is carried into the tissues and there detained and stored up according to their requirements. The great increase of oxygen taken in, and the low volume of carbonic acid expired within an hour after a meal, certainly appears to show that on this occasion the tissues store up within themselves a considerable amount of oxygen in readiness to take part in the increased assimilation and tissue change resulting from the digestion of food. The reverse would take place from a sudden accession of cold, when the carbonic acid expired has been found—at all events, in my case—greatly in excess of the ordinary proportion of oxygen absorbed. On this occasion it appears as if carbonic acid is

formed at the expense of the oxygen stored up in the tissues. This view, arrived at after mature consideration of Hermann's results, does not, I am afraid, agree with that I expressed on a former occasion.

THE DIFFERENT FORMS OF RESPIRATION.

On taking a general view of human respiration it is found that this function may assume four distinctly different forms, which include the endless varieties of breathing. The first is automatic breathing in a state of repose; the second is forced or laboured breathing while the body is in a state of rest; the third is breathing while under muscular exercise; and the fourth is breathing while the body is in a perfect state of repose, with the mind or imagination actively at work towards the exercise of volition. I shall make no further remark on the first form, but pass on at once to forced respiration. If a person, while sitting with his muscles fully supported, should take a series of gasps or forced inspirations, he not only exercises his ordinary muscles of respiration, but brings into play other muscles not usually concerned in breathing in a state of repose, thus increasing the muscular labour, for which an extra amount of heat is required. The increase of labour is obvious from the fatigue experienced if the forced breathing be continued for three or four minutes in succession, and when lasting for twelve or fifteen minutes the impression is very marked. Now, although as large a volume of air is often breathed under muscular exercise as in forced breathing no fatigue whatever of the muscles of respiration is produced. The muscles directly concerned in the exercise may show signs of fatigue, but not the muscles of respiration, which have acted a secondary part in conjunction and harmony with the exercise. The experiment for forced breathing is conducted as follows. The person under experiment breathes automatically into the bell jar connected with the recording drum, and obtains a tracing of his normal breathing in repose; he then takes a succession of deep gasps for one, two, or three minutes, the recording apparatus being kept at work; after that time he relapses into normal automatic breathing while the tracing is continued on the chart for two or three minutes longer. This tracing of forced breathing is characteristic. First, the inclination of the line is considerably steeper than for normal breathing, corresponding to the expiration of a much greater volume of air in a given time; next, on relapsing into ordinary automatic breathing, the line will exhibit a tendency towards the horizontal direction for a few seconds, showing a pause in the respiration, a state of apnoea, after which the inclination of the line again rises somewhat beyond the normal, owing to another increase in the volume of air breathed. This second increased expiration, though always present, is, however, but slight; the tracing then returns parallel to that for normal respiration, the physical effects of forced breathing being now over.

[*Breathing Chart, 1.*—The lecturer here exhibited a chart which showed a tracing of normal breathing, rising at an angle of about 45° for four minutes with an expiration of eighteen litres of air. The tracing of forced breathing rose at an angle of 70° for one minute and a half with an expiration of seventeen litres of air. Upon the forced breathing ceasing a short pause appeared and then the tracing returned to nearly the normal, but the line of ascent was slightly more steep.]

A consideration of this curve shows that first of all an increased volume of air is taken into the lungs; this process is laborious and attended on that account with increased combustion, resulting in the production of a slight excess of carbonic acid; this is found experimentally to be actually the case. Next, a certain proportion of the carbonic acid stored up in the blood is displaced by the increased volume of air breathed. This phenomenon is also demonstrated by analysis. On returning to natural automatic breathing there is, as stated above, a pause or state of apnoea, due either to an accumulation of oxygen in the muscles of respiration or to the fact that, some of the carbonic acid stored up in the blood having been given out, a quiescent state of the breathing is necessary to allow the blood to charge itself afresh with that gas, and, the body containing at the same time, an excess of oxygen absorbed, there is no feeling of want of air. The next phenomenon observed after the pause is a slight increase in the air breathed beyond the normal. This increased ventilation of the lungs is clearly due to a want of oxygen in the blood, the oxygen present having been to a great extent used up during the pause; a fact showing that such is the case is that this increased breathing is more or

less marked according as the pause has been long or short. Thus far the physical character of forced breathing has been described; a few remarks have to be added on its chemistry.

During the forced respiration a certain amount of carbonic acid in excess of normal is exhaled from the blood, and at the same time the quantity of oxygen absorbed is increased. A very small portion of this excess of carbonic acid is the result of combustion due to the extra muscular work, the greater part being displaced from the blood. Obviously if such is the case, on filling several bell jars in succession with air expired in forced breathing, the second bell jar will contain a smaller excess of carbonic acid than the first, and the third smaller than the second, less and less carbonic acid being left in the blood as the experiment proceeds. The analyses in four experiments on myself and three on my assistant confirmed this view. The figures obtained in one experiment for carbonic acid emitted from the blood when disposed on a chart yielded a curve of a parabolic form. Sneezing, sighing, yawning, and sobbing come under the head of forced breathing. In sneezing, for instance, a deep inspiration is first taken, followed by a sudden expiration, which carries out with it a certain volume of carbonic acid from the blood. Immediately afterwards a pause is observed because there is in the blood an excess of oxygen and a deficiency of carbonic acid. From the pause time is given for the excess of oxygen to be used up and for the carbonic acid in the blood to be increased to the normal.

The third form of breathing is that of breathing under muscular exercise. In both its physical and chemical aspects it differs greatly from the first and second form. The moment muscular exercise of any kind is taken the volume of tidal air breathed in a given time is increased; this phenomenon is absolutely automatic and unattended with fatigue. In my experiments the exercise taken consisted of stepping sixty-six or sixty-seven times per minute, the heels being raised to a height of about four inches, when the direction of the line of breathing on the chart gave a fairly straight diagonal, with a much steeper rise than in ordinary breathing in repose. After the exercise had lasted for two or three minutes the person under experiment assumed the recumbent posture in an armchair, breathing perfectly automatically. The tracing on the chart was now observed to continue in the same direction for a length of time in a great measure proportional to that during which the exercise had been taken; then the inclination of the line became less and less steep, till it gradually returned parallel to the normal. The tracing, therefore, exhibited no pause as occurred in forced respiration.

[*Breathing Chart, 2.*—The chart here exhibited tracing of normal breathing, as in breathing chart 1; tracing of forced breathing, pause, and after-stage, also as in chart 1. The tracing of breathing under exercise showed a line rising at an angle of 60°, with an expiration of ten litres in one minute. After this, the exercise ceasing and the recumbent position being assumed, the tracing returned exceedingly gradually to the normal, there being no such marked difference as was evident on the cessation of forced breathing.]

Forced breathing, immediately following exercise, shortens the period of breathlessness on resuming the state of repose, and it is possible to regulate forced breathing in such a way that after two or three gasps normal respiration follows immediately. These remarks have a practical bearing; they show that a person much out of breath from muscular exercise, on assuming the state of repose, would experience immediate relief from a few deep gasps, and also that a long breath now and then, with a short rest, in the course of protracted exercise, would be of help to respiration.

Let us now inquire into the different stages of respiration under exercise. First of all more oxygen is wanted from the air for the heat required for the muscular work, hence a larger volume of air is breathed; at the same time an increased amount of carbonic acid is expired, but this emission of carbonic acid cannot take place at a speed proportional to the rate of its production, and it therefore accumulates in the blood. On arresting the exercise and assuming the state of repose the excess carbonic acid is given out, and with that object the lungs have to be freely ventilated; hence the state of breathlessness or dyspnoea after such exercise as running or walking. Chemical analysis shows that a large excess of carbonic acid is given out on sitting down after exercise, which carbonic acid must have been produced by muscular contraction, as there can be no excess of combustion in a state of repose, for, if there were, the temperature of the body would be raised, as the heat produced

could not be disposed of in any other way but by radiation, a consideration which led to the following experiment. Two clinical thermometers were maintained under the tongue while stepping, and left there long enough to be certain of the sublingual temperature; then one of the thermometers was removed, while at the same time the person under experiment assumed the state of repose. After about ten minutes the second thermometer was withdrawn, when both were found to give the same reading; hence there is no excess of carbonic acid formed on resting after exercise beyond a small quantity corresponding to the work done to rid the blood of the carbonic acid with which it is charged. The dyspnoea after exercise recalls an interesting experiment of Claude Bernard, who injected sulphuretted hydrogen into the circulation of a dog, and after each injection the animal drew a succession of deep breaths, thus getting rid of the gas injected by an increased pulmonary ventilation. The sulphuretted hydrogen could be clearly detected by the odour of the animal's breath and its action on paper moistened with lead acetate. Reading, talking, singing, screaming, coughing, all belong to the form of respiration under exercise. Screaming shows from its tracings that in some cases it is breathing under exercise, in others forced breathing. In the case of singing the records point out that on singing in the sitting posture there may be forced breathing, though not in the standing position; hence the importance of singing standing. In reading, talking, and singing the tracing of the "after stage" is at once parallel with the normal, showing that in these instances there is no breathlessness produced, and no excess of carbonic acid retained in the blood.

I shall beg to conclude this lecture with a few remarks on the exhalation of water from the lungs at different altitudes. The amount of this evaporation must be controlled by three different causes—the atmospheric temperature, humidity, and pressure. Given temperatures and humidity approximately equal, an elevation above the sea level will increase the evaporation together with the lowering of pressure. When on the Peak of Teneriffe in 1878 I selected four stations for experiment—one at the seaside, another at an altitude of 7090 feet, the next at 10,700 feet, and the fourth inside the shallow crater, at the very summit of the peak, at an altitude of nearly 12,200 feet. The weather was very fine, and the atmospheric humidity exhibited no great variations at the different stations, except at the seaside, where it was decidedly higher. The air expired was breathed through absorption tubes filled with calcium chloride into a bag of known capacity, the time of breathing being also observed. The humidity of the atmosphere was determined with wet and dry bulb thermometers, and the weight of moisture contained in the volume of air inspired was subtracted from the total moisture expired; thus the weight of the water evaporated from the lungs was obtained. It was found that as the altitude increased more and more water was evaporated from the lungs within a given time, although the amount of this increase was not quite proportional to the increase of altitude, clearly because the loss of water from the blood at increasing altitudes left less to be evaporated, the blood retaining necessarily a minimum quantity of water. We shall return to the subject of respiration at high altitudes in the fourth lecture.

The Bowman Lecture

ON

SUBJECTIVE VISUAL SENSATIONS.

*Delivered before the Ophthalmological Society on
June 14th, 1895.*

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(Concluded from p. 1595.)

SIGHT AND MOVEMENT.

THE relation of sight to movement of the body is one of the obtrusive facts of animal life. I remember once watching a flock of wild swans on the river Axe, slowly moving on the stream in uniform position. Suddenly a small dog appeared on the bank a hundred yards away. Instantly every head was turned at the same angle, every neck wa

curved and inclined in the same manner. The uniformity was an instance in which the mechanism of life is a machinery such as man's invention may produce. The same visual impulse caused the same movement in every swan. In man the relation is familiar enough, but disordered action makes it more conspicuous, because the same process occurs in a different form. The relation is presented to us in some cases of epilepsy, in which the visual sensation precedes the motion which constitutes the fit. Instead of the motion that is seen, there may be a tendency to motion only slight enough to be felt. The motion is that of turning; the sense of motion is that of vertigo. The visual aura of epilepsy may teach us something of vertigo. There are two primary movements of the body—progression forwards and rotation, walking and turning. The latter is the result of unequal activity of the centres in the two sides of the brain. If both sides act equally there is no turning; if one side acts more, or only, there is turning from that side, first of the eyes and then of the head, and lastly of the whole body. In epilepsy there is generally greater action on one side, and therefore there is this rotation, seldom of the whole body, commonly of the head and eyes.

Under normal circumstances, in ordinary life, the great cause of such rotation is the appearance of some object at one side of the field of vision. An object comes into view on the left side because it is moving towards the right. It is seen first chiefly through the right hemisphere. The visual impulse rouses the motor centres; the eyes and head turn towards the left to "fix" the object. But the object is moving towards the right, and the first movement to the left is followed by a movement towards the right, to follow it, until it disappears at the right edge of the field of vision. Then this long movement to the right is followed by a return to the mid-position by the action of the right centres. Note this alternation, and its necessary relation to the stimulation of the visual centres of one hemisphere from the opposite eye,—motor action first in that hemisphere, then in the opposite one, and lastly again in the one first active. Note that the second, opposite, activity is the longer, more extensive in its range.

Almost the first medical observation I published was that of a man with traumatic meningeal hæmorrhage over the left hemisphere. He had repeated convulsions, right-sided, which I watched for hours. In each the head and eyes turned strongly to the right as the fit came on. But this was preceded by a movement to the left, and this again by an initial slight deviation to the right. We have here, from irritation of one hemisphere, precisely the sequences just described. But compare with that active irritation the following case. A boy, at the age of five, had sudden left hemiplegia during a severe general illness. Partial recovery was followed by recurring convulsions of the left, hemiplegic, side. Each fit began thus: a slight movement of the head to the left, a much stronger and longer movement of the head towards the right, then a deviation again to the left, intense, as the boy passed into the convulsions. Here we have again the same sequence, but here we have an opportunity of discerning more of the process. The patient came under observation as a most intelligent boy of eleven years of age, and described the following warning. The figure of a man suddenly made its appearance at the extreme left of the field, slowly moving towards the right. He felt compelled to try to look at it and to follow it, and did so until it disappeared at the right edge of the field. Then he lost consciousness, and knew nothing of the subsequent strong deviation to the left in the fit. The movement to the right impressed his consciousness, and was felt as conscious turning to the right, as vertigo. Here, then, we have these sequences distinctly associated with the action of the visual centre, and, apparently, the influence of this on the motor centre. Yet one other case. In this, each fit was preceded by the sudden appearance of a blue light on the left side, sometimes of two or three near together. These always moved slowly towards the right and a little upwards, and the patient felt compelled to follow them. The head and eyes were moved towards the right in this effort, as far as they could be, by strong tonic spasm in the muscles of the neck. This occupied about thirty seconds, and then suddenly ceased on the disappearance of the visual spectrum. The eyes and head, thus released, could be moved from the right, but this movement was continued towards the left as an involuntary movement, which was, however, far greater in the eyes than in the head. For

nearly a minute the eyes were turned extremely towards the left, and the head only half-way from the mid-position. During this time he could move the head towards the right, but was absolutely unable to move the eyes from their extreme deviation to the left. Then he lost consciousness and the general convulsion of the fit came on. We have here again the same sequence, but the convulsion was not left-sided, it was general, and the final left-sided spasm had not the intensity which accompanies a left-sided fit. I could give other similar instances, but these may suffice to indicate the close relation of the head and eyes to activity of the visual centres. I may point out how indispensable, for understanding them, is the theory of the representation of both fields in the higher visual centres and of their mutual action. We must conceive that the activity of the motor centre caused by a sensation connected with the opposite edge of the field has the stronger action on the motor centre of the same hemisphere, and that the sensation connected with the side of the field which corresponds to this hemisphere has the least action. Yet the absolute gradation and intergradation of the sensation and result is compatible only with visual centres functionally one.

MICROPSY AND MACROPSY.

The visual spectra, especially spherical lights, may seem to approach nearer and nearer, or to recede. In the same way, objects that are actually seen may seem to approach or become more distant. The increased distance is associated with diminished size and sometimes with dimness of sight, but a few patients whom I have closely questioned have been clear that the apparent increase of distance was not the result of any indistinctness of vision. It may be that there is an associated change in the position of the eyeballs such as occurs when the object becomes more distant. The apparent approximation generally goes on until the object seems so near as to overwhelm the patient, and then consciousness is lost, while the apparent recession of objects passes by dimness to the same result. It would seem as though the processes of discharge and inhibition may each have a peculiar form in which objects that are seen are perceived as nearer or further, with augmentation or diminution of size. This condition is of interest as comparable possibly to the sensation of movement which results from an activity of the motor centres too slight to cause actual movement.

MIGRAINE.

From the visual spectra of epilepsy we may pass to those of migraine, those which occur as the premonition of the headache which, from vomiting so often accompanying it, is called "sick headache," and is also known, from the affection of sight by the suggestive popular name of "blind headache." These constitute the second group of subjective sensations. The two groups present a marked contrast in most of their features, and yet are not without intermediate connecting forms. The epileptic sensation is extremely brief, and precedes loss of consciousness or convulsion; the migrainous sensation is deliberate, slow in evolution, occupying more minutes than the seconds during which the epileptic sensation exists. It is followed, not by a convulsion lasting minutes, but by a headache lasting hours. Yet, just as the epileptic sensation may occur alone as the slightest form of attack, so the spectrum of migraine may occur alone without succeeding headache.

Not only are these sensations longer in duration, but they present peculiar forms. The elementary features of the migrainous spectra are very few, although their combinations are most varied. They are always simple, in the sense that they are low in the scale of sensation in its relation to mind. No visions of faces, or objects, or persons, or places ever precede the headache. Yet the sensation, simple in character, is elaborate in form, the simple elements being developed in the most complex combinations, giving rise to spectra that are extremely curious, and will one day, I doubt not, be most instructive. But that day is not yet come. All I can hope to do is to stimulate others to the minute observation and description through which alone, at some time, it may be possible to discern the meaning which the phenomena must have, a meaning as profound and important as it is now mysterious. Our knowledge of these spectra dates chiefly from the careful description of his own sensations by Dr. Hubert Aitry, which appeared in the *Philosophical Transactions of the Royal Society* for 1868, of which the plates have been reproduced in Dr. Living's admirable treatise on

Megrim, a book which will be regarded ultimately as one of the classics of the century. I am very fortunate in being able to show you to-night a series of other drawings, unpublished, which Dr. Airy has made of his sensations, accompanied by notes taken at the time. Another series of drawings of great value has been kindly made for me from his own sensations by a distinguished water-colour artist, Mr. B—. The peculiarity of the type of sensation and their manifest accuracy render these very important. Besides some other miscellaneous sources of information I must mention especially the illustrations from which one of the series of diagrams is made. In the year 1879 a man aged sixty years came under my care as an out-patient at the National Hospital for the Paralyzed and Epileptic and remained so until his death, about five years later. During those years he was subject to the frequent appearance of visual spectra, very like those of migraine, but never attended with headache. He was not an educated man, but was a mechanical engineer and mechanical draughtsman. He was an inventor; his great inventive subject was new kinds of tape, but so far as I could learn the taps could only be turned on so as to empty his own pockets, and could not be turned off. Beck was possessed with the idea that these spectra were objective things, and he delighted in depicting them in the fashion of an engineering draughtsman. The result was the book which I hold in my hand. It contains a number of illustrations of these various appearances, manifestly far too mechanical, and yet executed with a precision which makes them in some points trustworthy. They are accompanied with some rather quaint descriptions, in which it is easy to discern a definite degree of aphasia. I could not very well read them to you, even if I had time, on account of the epithets applied to myself. Perhaps the least objectionable of these, written seventeen years ago, is "the venerable Dr. Gowers." The great desire of poor Beck's last years was that the book should be brought under the notice of the Queen. Perhaps, if he had been conscious of the due relations of things, he would have recognised that the next best thing would be for his book to be brought under the notice of this Society. I have gained permission from Dr. Airy to present his drawings to the Society, provided they can be so displayed as to be available for study, and I propose also on the same condition to ask the society to retain the drawings of Mr. B— and the curious record which John Beck has left of his experiences. These constitute alone a collection of facts unique in their character, and it may be reasonably hoped that this collection may attract other representations which will constitute a source of information the importance of which cannot but increase with increasing knowledge.

SPECIAL FEATURES OF THE SPECTRA OF MIGRAINE.

The spectra of migraine present as their most important feature the zigzag or angled character, which is well known, in its curved form, as the "fortification spectrum." Its projecting and re-entrant angles bear a resemblance to the plan which the French engineer Vauban first devised as the most effective for the defence of a fortress. The second peculiar feature is the combination of this angled spectrum with loss of sight, generally bounded by the luminous zigzag, or definitely related to it. The spectral appearances perceived by Beck form a curious explanation of this rule. They were never accompanied by any dimness of sight. The angled line of light is seldom straight in its direction. It may form an angled sphere or an expanding circle or oval, which becomes incomplete, or a curved line. It is seldom a single line; usually the chief line is repeated within its concavity, never on its convexity, by lessening lines, which seem to be fading reflections, approximating so as to blend as they fade into the darkness of the loss within. But in this reflection, as it were, the lines which constitute the angles are reproduced in a peculiar manner—very beautifully shown in Dr. Airy's drawings. The angles are always regular in size, and often become progressively less towards the end of the curved zigzag line which is nearest the central point of the field. But their junction is not always exact. They may even so meet as to intersect, and form a complex sort of *chevaux de frise* very strikingly depicted in some of Mr. B—'s drawings. The double or multiple rows give rise to a peculiar appearance. This will, I think, be found important whenever the time comes for the mystery of this angled form to be unravelled. I can offer no explanation for these angled lines, nor do I think that any explana-

tion has ever been given. The conjecture has, indeed, occurred to me, but it is no more, that the form may be due to some struggle or, if the expression may be pardoned, harmonious discord, between the higher visual centres in the two hemispheres, for it seems to me difficult to doubt that in these spectra both higher centres are concerned. One strange feature which Mr. B—'s exact observation has noted as frequently observed by him, is that, at the place where the intersecting lines reach their chief development, small circles of light occupy the interspaces between the crossing lines. They are not coloured.

COLOUR IN MIGRAINOUS SPECTRA.

The frequency with which colour is seen in the angled spectrum varies. It may be transient or constant; it may be occasional only, and then is slight, and confined, as in Mr. B—'s experience, to trilling gleams where the angled element is most developed. It is most unusual for it to attain the extent and degree depicted in the diagrammatic drawings of Beck, and yet the care with which he has indicated its variations and also the unusual isolation of his spectra prevent us from dismissing his representations as too formal to be devoid of weight. Yet its presence and extent have more weight than its character. The trustworthy drawings of Dr. Airy show, however, that not only is colour, as in Mr. B—'s figures, perceived chiefly in the part of the spectrum in which the angled character is most elaborate, but that it is chiefly confined to the part of the angled spectrum in which the most intense luminosity is apparent, to the outer edge. It must be noted that here we have a very strong bounding luminous line, while in Mr. B—'s spectrum the chief development is by multiplicity of intersecting lines. Another feature is shown in Dr. Airy's figures: the colours always differ in the adjacent slopes of the lines. The contrasted direction of the lines is associated with a contrasted colour. We have, however, only four—red, blue, green, and orange; but we have four, and not the three or the six colours to which they are ultimately reduced in current theory. We must not, indeed, push too far such evidence, which can only rest upon memory. Still, the elaborateness and precision of Dr. Airy's drawings and the fact that the notes were made at the time, and the observations with purposed care, give them, I think, absolute weight. We must remember that we have here to do with the "spontaneous" action of the brain such as may result from the influence of light on the retina. Every colour—that is, every varying rapidity of the waves of light—induces the impulses in the nerve structures which pass along the optic nerves; these impulses and the processes in the centres must present a close correspondence. All we know of colour is due to these impulses, is due to the activity of the centre, and it is possible that the study of the phenomena of colour perception from the centre may serve to decide some of the many uncertain questions presented by the study of the process in the retina, which alone has hitherto engaged attention.

FORMS OF ANGLED SPECTRA.

To reduce the various forms which the angled spectra assume into any instructive order, I have found to be impossible. All I can do is to group them into what seem the chief classes into which they may be provisionally arranged for the convenience of study, and to point out the manner in which the leading elements are presented by each. Some general facts may be noted in the course of the description. The central region seems that in which there is least tendency to the discharge which causes a luminous appearance. The luminous discharge becomes gradually less as it extends into the central region. Inhibition involves this part, but not discharge. This is the opposite to that which we should expect. We should anticipate that where function is most acute and intense, spontaneous over-action would be most readily produced. It is outside the centre that the chief displays occur. They may also develop at the periphery, but if we divide the field into the three zones mentioned at the beginning of this lecture we shall find that the middle zone and inner part of the peripheral zone are the regions in which the phenomena occur in greatest development. But there is no limitation. Various forms invade all regions, with the exception of the central region. The chief forms seem to me to fall into the following classes—all, it must be understood, presenting the angled form: (1) the Angled Sphere, mobile or transient; (2) the Expanding Sphere; (3) the Progressive Curve;

(4) the Lateral Spectrum; (5) the Secondary Limiting Spectrum; and (6) a Concentric Spectrum, with, as its variety, the Arched Spectrum. I will begin with the first.

THE ANGLED SPHERE.

This is a nearly round spectrum composed of a series of projecting angles, plain or coloured. It commonly has a dark background, not much larger than itself. In every form the luminous spectrum seems to be composed of minute, brilliant points in rapid movement. This angled sphere does not change its size, but disappears as it appears. It is met with in three associations: (1) as an object which moves to and fro; (2) as an isolated initial spectrum before some other; and (3) as a terminal spectrum, thrown off, as it were, by that which has developed before. As a mobile object it was the feature of a curious case in which migraine passed into epilepsy, by no means a rare event. First, a round object appeared in the right half of the field below the horizontal line. It was composed of about six pointed projections which had the unusual feature (at least, as ascertained by careful questioning) of being pointed towards the centre. These were alternately dull red and dull blue. They appeared on a black background. This moved slowly towards the left, inclining upwards, so as to pass above the fixing point, to a little beyond the middle line, then returned to its starting point, retraced this path once or twice, and then passed to the right edge of the field, keeping the same direction, so as to come near the edge of the field at the lower outer part. Then it passed back again, only to a little beyond the spot at which it appeared, and then returned to the edge; after two or three repetitions of the last course it suddenly disappeared at the spot at which it commenced. The patient kept the eyes shut during its appearance, but on opening them when it had gone, always found she could only see in the part of the field through which the spectrum had not passed. If she looked at a face a couple of feet from her she could only see the person's ear on her left side, and all that was to the right of the ear could not be seen; in only the third of the field to the left was there vision. The loss of sight lasted about a quarter of an hour, and gradually passed away. It is an instructive instance of the relation of the inhibitory loss to the region of the field in which the spectrum appears. The case shows how the central disturbance, though primarily unilateral, ignores the medial hemiopic line. The initial and terminal angled spheres will be mentioned with the spectra to which they are related.

THE EXPANDING SPHERE.

The most frequent form of migrainous spectrum, that which is commonly regarded as the typical one, is an angled sphere which expands into an oval, and, breaking, may enlarge into a curve. The stellate sphere appears on one side of the field, nearer the centre than the periphery. Its boundary outline retains the angled form, and this extends and increases in the size of its angles, most towards the periphery. Within it vision is dimmed or lost. Yet within the boundary zigzag the outer lines may be repeated, sometimes many times, with the semblance of reflection admirably depicted in Dr. Airy's drawings, in whom this spectrum was the common form. Colours are common in the outer line, and present the features mentioned. This form is accurately depicted by Beck as a faint spectrum, usually colourless, though colours were so conspicuous in most of his visions.

The expanding oval never reaches the centre. It breaks, and either the lower limb passes far away from the fixing point, while the other is directed towards it, or both pass beyond the fixing point. In either case the zigzag becomes narrower and its angles smaller in the limbs formed by the rupture. When one is directed towards the fixing point they cease to be recognisable, and the narrowing line always ceases before the fixing point is reached—a curious illustration of the resistance to discharge in this region. It is when such an expanding spectrum passes beyond the fixing point, dividing, as it were, for the purpose, that the terminal angled sphere may develop. Just beyond the ends of the broken oval, towards the termination of the period of discharge, a stellate spectrum may appear, like that from which the expanding zigzag arose. It remains, however, unchanged until the spectrum fades. It is, as it were, an abortive attempt at a repetition of the process, as if on the other hemisphere, but it is too curious to justify even speculation.

THE PROGRESSIVE SPECTRUM.

An angled spectrum, like that which results from the

rapid separation of the limbs of the expanding form last mentioned, may arise by progressive extension through a curve in one half of the field, at the outer part of the middle or inner part of the peripheral zone. It presents features remarkably different from the expanding sphere, which it resembles in general form. A typical example is given in the careful drawings of Mr. B—, in whom it occurred in the same way, sometimes in one and sometimes in the other half of the field. There is no inhibition within the curve, as in the form last described. The first thing is a zone of darkness in the periphery of the lower quadrant. Then, above the inner part of this, a small, colourless star or angled sphere appears, to vanish when, from its neighbourhood, there develops a curved line of angles, small, and often intersecting lines. Their progress is upwards in a path concentric with the edge of the field, and may pass for a space as a sudden, straight, flash-like line, to resume the more deliberate zigzag form. It may pass beyond the middle line, in slight degree, in the upper part of the field, but attains its chief development in the upper quadrant of the side on which it commenced. There it presents the intersecting lines and small circles already mentioned, with slight tints of colour, chiefly red and blue.

THE LIMITING SPECTRUM.

The central region, as I have said, seems to possess peculiar resistance to discharge, although prone to inhibition. In the forms we have considered, in which inhibition is in direct relation to a primary spectrum, it is secondary. In one instance, carefully observed on himself by a member of our own profession, pure central inhibition was sometimes experienced, and was often limited by a spectrum in a very instructive manner. At the fixing point, a small, round or oval spot of darkness would suddenly appear, enlarging and becoming more intense at the centre. Its increase extended the loss of sight into the medial third of the field, from top to bottom, as simple loss. On each side it was then bounded by a soft edge which had the shape of a double curve, and in this form it remained, until with the onset of the headache it passed away. (You can scarcely fail to note how such a peculiar symmetrical medial loss of sight illustrates the essential unity of function of the higher visual centres.) But on many occasions the development of this spot of darkness was soon arrested on one side or the other, but always on one side only, by discharge. When the spot had extended to about half the vertical dimension of the field, a bright angled line appeared on one side, without colour, but limited by a narrow, black line on each side of the bright line. The zigzags which composed this were few and not regular. The central cloud increased and reached from top to bottom of the field; as it increased, the zigzag became more extensive, but did not move much from its first distance from the medial line, as if it interposed an obstacle to the development of the loss which it limited. On the other side, however, the loss spread more rapidly, and further than when there was no discharge, so that the ultimate result was extensive loss, bounded by a luminous line on one side, not far from the medial line, but on the other passing almost to the edge of the field. It was as if the resistance of the discharge had caused the inhibition to spread and diffuse itself over a much wider area. Symbolical as the words may seem, it is possible that they may be not far from the truth. Whenever this angled line of light appeared, the severe headache which followed was always on the opposite side to the spectrum, whichever that might be.

PERICENTRAL AND ARCH SPECTRA.

Although spectra scarcely ever develop at the fixing point itself, a spectrum around an object which occupies the fixing point is occasionally seen. A good illustration of this is presented in one of Beck's drawings, which is, I do not doubt, in this point quite trustworthy. A zigzag coloured spectrum suddenly surrounded a plate on the dinner-table before him. The quaint description he gives of it is this: "I remember well the phenomena appearing on the plate when I sat down to dinner with two friends. As I looked curious and nervous Mrs. B— said, 'Why do you not carve?' On taking my eyes off the plate I said to them, 'The zigzag rainbow colours are gone out of the window.' This was the first time my wife and friends believed I saw something very extraordinary." The drawing shows that the spectrum surrounded the edge of the plate, and the same circular spectrum in a pane of the window at which he looked up. Concentric with the plate as first seen, it maintained the same form when he raised his eyes to the window, and then disappeared. This is

Instructive, because the spectrum was evidently determined by the actual stimulation of the visual centres.

A spectrum in the form of an arch, in the mid position, above the centre, was also a frequent experience of Bäck, and may be regarded as a segment of a pericentral spectrum. It is shown in one of his drawings as becoming divided in the middle, and there is a curious symmetry in the form on each side, by which the spectrum ceases. In both these forms we are compelled to think of the perfect conjunction in action of the two higher centres. Another form of this arched spectrum is shown in one of the diagrams as a sort of angled crown above the eye. It is a curious illustration of the tendency to regard these spectra objectively. The patient was a member of our own profession, and, in response to my request for a drawing of the aspect the spectra presented to him, he sent me an objective representation of his eye with the spectrum above it, in the position in which it could only be seen by another person. This involuntary sense of objectivity is a very curious feature.

THE LATERAL SPECTRUM.

One of the simplest forms of angled spectrum is that which appears at the true periphery of the field. It may be a short series of angles at the edge of the horizontal axis of the field or inclined. Moreover, it may extend in the manner described as that of the progressive spectrum, but, instead of progressing in the upward curve, as does that described in the middle zone, this peripheral spectrum, if it extends, curves downwards, as in Bäck's curious figures. These also illustrate the tendency for such spectra to occur, in a similar manner, sometimes at one and sometimes on the other side, in corresponding form. His figures also show the strong tendency to regard a spectrum which appears in the periphery of the field to be at the extreme edge, even when it is so far from the edge as to permit of some further extension. You will also observe in Bäck's drawing of what he regarded as the elementary forms of his "phenomenon," he represents a small lateral spectrum as attached to the outer junction of the eyelids. In one case an oblique lateral angled spectrum was drawn by the patient as commencing just within and extending beyond the limit of the field. It is clear that, even at the inner part of the peripheral zone, the spectrum seen seems as if it were quite at the margin of the field.

I have only touched upon the margin of the subject of this lecture. My hope is that this may serve as a beginning, that it may serve as a nucleus around which facts may gather, carefully recorded, carefully scrutinised, carefully sifted, and carefully classified. Only by such a collection of facts and observations, with discernment of the weight of correspondence, can come, in time, any real knowledge regarding them. Alas, I must end, as I began, in ignorance, content if I have made you share my own perception of it. The knowledge of the way in which these spectra are produced, if time shall bring it, may bring us increased power to control not only them, but all of which they are the prelude. If I have opened the path for their systematic study I shall be more than content.

THE SOCIETY OF MEDICAL PHONOGRAPHERS.—

Dr. Gowers has been elected President of the Society of Medical Phonographers, and will give an address on Writing and Short Writing in relation to Medical Work at an inaugural meeting of the society, to be held at 20 Hanover-square, London, on Tuesday, July 30th, at 4 p.m. The meeting will be open to any member of the profession who desires to attend. The society now numbers 160 persons.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual general meeting and congress was held on May 30th at 20, Hanover-square, W., Dr. Pye-Smith, F.R.S., President, being in the chair. After the presidential address, the secretary (Dr. Stowers) and the treasurer (Mr. Alfred Cooper) read their reports, indicating the increasing prosperity of the society and its satisfactory financial condition respectively. It was unanimously resolved that in future the meetings should be held on the fourth Wednesday in the month instead of the second Thursday as heretofore. Dr. H. Radcliffe Crocker read a paper entitled "The Internal Therapeutics of Psoriasis and some other Diseases of the Skin," followed by a discussion, in which the President, Dr. Liveing, Dr. Stephen Mackenzie, Dr. Bowles, Dr. Payne, Mr. William Anderson, Dr. Brooke (Manchester), Dr. Abraham, Dr. Walsh, Dr. Harrison Cuffton, and Dr. Mackey (Brighton) took part.

THE DIET OF TOIL.¹

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In a paper which deals with the alimentation of the labouring classes perfect accuracy is scarcely possible. Great difficulty is experienced in obtaining reliable facts; working men do not readily impart the information asked for. To medical friends in various parts of the country I sent schedules with a series of queries tabulated—e.g., nature of employment, hours of labour, wages, how many children to support, enumeration of articles of diet at each meal, and the quantity of each approximately stated. Most of the schedules have been returned. Upon this point I have to complain less of the hesitancy of the labouring classes than have the writers of the Memorandum in the Blue-book "Returns of Expenditure of Working Men, 1889," who only received thirty-six answers to 750 circulars distributed amongst members of coöperative boards. Perfect accuracy of the weight of articles partaken of at each meal is scarcely obtainable, and to that extent, therefore, the subject of the alimentation of labour cannot, in the following pages, be regarded as settled from the scientific point of view. The physiology of alimentation is fully dealt with in the various textbooks. I am not dealing at present with the weight of the individuals concerned, nor with their food incomes and expenditure. In most cases only an approximate estimate of the quantities of the articles of food has been gained, but, taking the large number of dietetic returns that have been made, a fair average can be struck and a fairly accurate opinion formed. The facts thus obtained are not only useful, but interesting. Taking "standard diets" that have been worked out by physiologists for people in health during rest, also during medium and active work, I will compare the results. For a man weighing 70 kilogrammes—i.e., 11 st.—it is necessary that 700 grammes, or nearly 25 oz. avoirdupois, of solid food should be taken daily. This is distributed by physiologists² amongst (1) proteids or albuminous substances such as animal food, eggs, and milk; (2) fats; (3) carbohydrates—e.g., potatoes and starchy foods; and (4) salts, thus:—

Proteid.	Fat.	Carbohydrate.	Salts.
140	105	420	35

This is a liberal diet, especially as regards proteid.

During medium work the following are the standard diets:—

	Proteid.	Fat.	Carbohydrate.	Salts.
Moleschott	138	84	404	30
Pettenkofer and Voit	137	117	382	30

During severe work:—

	Proteid.	Fat.	Carbohydrate.	Salts.
Moleschott	140	90	434	32
Banke	100	100	240	25

And during very laborious work:—

	Proteid.	Fat.	Carbohydrate.	Salts.
Smith and Playfair	184	71	570	40

A glance at the above shows that there is a considerable discrepancy between physiologists as regards the qualitative and quantitative composition of diet in health. Into the question of a "subsistence diet" I need hardly enter. Calculated as it is upon the internal needs of the organism, it has only a physiological interest. It is reproduced in the following table simply for the sake of comparison. It is insufficient for a man in health. Under its use emaciation would be quickly progressive. In considering the diet of rest it must be remembered that no active exercise is taken.

A subsistence diet:—

	Proteid.	Fat.	Carbohydrate.
Smith and Playfair	66	24	330

Diet of rest:—

	Proteid.	Fat.	Carbohydrate.
Smith and Playfair	100	50	400
Voit and Pettenkofer	137	72	352

Of all the diets thus enumerated, that of Moleschott, for medium work, is generally regarded as the best average diet for an adult man. It is necessary to remember that for every kilogramme of body weight there should be 2 grammes of proteid, 1.5 grammes of fat, 6 grammes of carbohydrate, and 0.5 gramme of salts—in all, about

¹ Part of this paper appeared in the *Fortnightly Review*, October, 1894, and is reproduced by permission.

² Waller's Physiology, p. 263.

10 grammes, or 1 per cent. of solid food. It is the carbon and nitrogenous elements in our food that undergo metabolism in the body. The materials ingested may therefore be regarded as so much carbon, nitrogen, hydrogen, and salts. In 100 grammes of proteid there are 53 of carbon, 16.1 of nitrogen, and 7.1 of hydrogen; in the same quantity of fat there are 76.5 of carbon and 10.9 of hydrogen; whilst in carbohydrate there are 44 of carbon.³ Converting Moleschott's diet into terms of carbon and nitrogen, we get of nitrogen 20.9 grammes, carbon 307, and hydrogen 11.6. Roughly speaking, an average diet ought to contain in the form of food stuffs 20 grammes of nitrogen and 300 of carbon. One of nitrogen to 15 of carbon is regarded as the desirable proportion.⁴ Hence, in combining meat (1-5) with bread (1-22) we get what forms the foundation of a good prosperity diet for all. In order to complete the diet fat should be added. A foundation day's diet, according to Waller, is—

	C.	N.
	Grammes.	Grammes.
Bread, 1 lb. (450 grammes) ...	117	5.5
Meat, $\frac{1}{2}$ lb. (225 grammes) ...	34	7.5
Total ...	151	13.0
And if fat is added—say, $\frac{1}{2}$ lb. (bacon, butter), viz. ...	84	—
We have a total for the day of ...	235	13.0

As an illustration of a fundamental English diet we may take the following:—

	C.	N.
	Grammes.	Grammes.
Foundation—1 lb. bread ...	117	5.5
$\frac{1}{2}$ lb. meat ...	34	7.5
$\frac{1}{2}$ lb. fat ...	84	—
Accessories—1 lb. potatoes ...	45	1.3
$\frac{1}{2}$ pint milk ...	20	1.7
$\frac{1}{2}$ lb. eggs ...	15	2.0
$\frac{1}{2}$ lb. cheese ...	20	3.0
	335	21.0

A liberal diet, and the cost of which is about a shilling.

In order to obtain a general idea of the quantity of the various articles presented to an adult man at his meals I got one of the nurses in the medical ward of the Newcastle Infirmary to weigh the contents of a few of the platefuls given to convalescent patients, and this is her average: a slice of a 4-lb loaf, $\frac{1}{2}$ to 1 in. in thickness, weighs 2½ oz., or 70.87 grammes; an ordinary plateful of meat without bone weighs 4½ oz., or 127.54 grammes; and an ordinary plateful, or three medium-sized potatoes, weighs 8 oz., or 225 grammes. One ounce of butter was sufficient to cover three to four slices of bread. In contrasting the dietaries of those engaged in the various industries, we shall begin with the agricultural labourer. The agricultural labourers of Scotland are, as a class, healthy and temperate; they receive small wages. The wages of the Irish agricultural labourer are smaller than those of the English or Scotch, and his dietary is altogether poorer. Living, as many of them do, upon Indian meal mixed with white flour, potatoes, and tea, and seldom partaking of animal food, we have an explanation of their inability to compete in muscular effort with the Englishman and of their liability to contract low fever. Potatoes still form the staple diet of the Irish peasant, and whilst, to a certain extent, these are capable of replacing bread and butter, and are rich in carbon, they are extremely poor in nitrogen. In the 10 lb. of potatoes consumed daily by an Irish labourer there would be 450 grammes of carbon and 17 of nitrogen; but notwithstanding this he would be ill-fed and would require fat. I will give illustrations of the dietaries supplied to me in every instance from authentic sources.

TABLE I.—*English Agricultural Labourers.*
(Data supplied by Mr. Theodore Cookson, J.P., Sturford Mead, Warminster.)

No. 1, aged thirty-three years; wages, 13s. 9d. per week; no children; house rent, £4 10s. a year; works ten hours a day.

No. 2, aged forty-two years; has six children, three of

³ According to Ranke fat contains 79 per cent. of carbon and carbohydrate—e.g., starch—37 of carbon.

⁴ Where an analysis of food is supplied, but only nitrogen is mentioned, then, in order to express this in terms of proteid, it is necessary to multiply the amount of nitrogen by 6.5.

whom are working; wages, 14s. per week; works ten hours a day.

(No. 1.)	C.	N.
BREAKFAST—	Grammes.	Grammes.
1 pint tea (with sugar) ...	12.0	—
6 oz. bread ...	43.8	2.1
$\frac{1}{2}$ lb. bacon ...	82.0	0.4
1 egg ...	7.5	1.0
DINNER—		
$\frac{1}{2}$ lb. potatoes ...	22.5	0.6
$\frac{1}{2}$ lb. bacon ...	82.0	0.4
Very occasionally meat ...	—	—
2 oz. cheese ...	2.0	3.0
4 oz. bread ...	29.2	1.3
TEA—		
1 pint tea ...	12.0	—
4 oz. bread ...	29.2	1.3
SUPPER—		
2 oz. cheese ...	20.0	3.0
2 oz. bread ...	14.7	0.6
	374.9	13.7

A fairly good diet, but deficient in nitrogenous material.

(No. 2.)	C.	N.
BREAKFAST—	Grammes.	Grammes.
1 pint of tea ...	12.0	—
8 oz. bread ...	58.4	2.6
6 oz. bacon ...	123.0	0.6
DINNER—		
12 oz. potatoes ...	32.7	0.9
1 pint tea ...	12.0	—
4 oz. bread ...	29.2	1.3
TEA—		
8 oz. bread ...	58.4	2.6
Tea ...	12.0	—
$\frac{1}{2}$ oz. butter ...	10.0	—
	348.7	8.0

Very poor in nitrogenous material.

When the English agricultural labourer has no children he is apparently able to feed pretty well. He consumes large quantities of carbon, principally in the form of fat. He eats largely of bread and cheese. In his garden or allotment he raises a sufficient supply of potatoes and vegetables for his family. On the necessities of life and house rent he spends 67 per cent. of his wages. The diet of an Ayrshire ploughman (facts per Dr. Wylie) is as follows:—

TABLE II.—*Ayrshire Ploughman (No. 3).*

Aged fifty, has five children, none working; wages, 15s. a week, free house; hours of labour, twelve.

	C.	N.
BREAKFAST—	Grammes.	Grammes.
Porridge ($\frac{1}{2}$ lb. oatmeal) ...	99.6	4.4
$\frac{1}{2}$ pint milk ...	20.0	1.7
DINNER—		
Broth ...	(?) 10.0	0.6
$\frac{1}{2}$ lb. meat ...	34.0	7.5
$\frac{1}{2}$ lb. potatoes ...	33.7	0.9
TEA—		
Porridge ...	99.6	4.4
$\frac{1}{2}$ pint milk ...	20.0	1.7
$\frac{1}{2}$ pint tea ...	6.0	—
4 oz. bread ...	29.2	1.3
$\frac{1}{2}$ oz. butter ...	10.0	—
	362.1	22.5

An excellent diet for a man who is doing hard work and spending most of his time in the open air. According to his wife's statement 80 per cent. of the wages is spent upon food.

Agricultural Labourer, Island of Coll, N.B. (No. 4).

Wages, 12s. Has seven children; two at farm service. Rent of house £3 a year. Works ten to eleven hours a day. Data supplied by Mr. Smith, Coll.

	C.	N.
BREAKFAST—	Grammes.	Grammes.
Tea ...	12.0	—
Scones (or $\frac{1}{2}$ lb. bread) ...	58.5	2.7
$\frac{1}{2}$ oz. butter ...	10.0	—
2 eggs ...	15.0	2.0
Jam ...	—	—

	C.	N.
	Grammes.	Grammes.
DINNER—		
Tea	6.0	—
8 oz. potatoes	22.5	0.6
$\frac{1}{2}$ lb. fish (white)	11.5	7.6
$\frac{1}{2}$ pint milk	20.0	1.7
TEA—		
1 pint tea	12.0	—
8 oz. bread	58.5	2.7
$\frac{1}{2}$ oz. butter	10.0	—
	236.0	17.3
Add for jam?	20.0	—
	256.0	17.3

Opposed to these we shall take the diet tables of an Ayrshire shepherd, whose life is spent on the hills, far removed from either town or village.

TABLE III.—*Ayrshire Shepherd (No. 5).*

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
1 pint tea	12.0	—
$\frac{1}{2}$ lb. bread (scones)	58.5	2.7
Oatcake, 1 oz. meal, &c.	11.5	0.5
$\frac{1}{2}$ oz. butter	10.0	—
4 oz. cheese or meat	40.0	6.0
DINNER (in winter and spring)—		
12 oz. potatoes	33.7	0.9
$\frac{1}{2}$ lb. meat	51.0	8.2
(At other seasons tea, scones, and butter.)		
TEA—		
Tea	12.0	—
$\frac{1}{2}$ lb. scones	29.2	1.3
Oatcake	11.5	0.5
$\frac{1}{2}$ oz. butter	10.0	—
Cheese, jam	20.0	3.0
SUPPER—		
Tea	12.0	—
Scones	29.2	1.3
Butter	10.0	—
	350.6	24.4

Northumbrian Hind (No. 6).

	C.	N.
	Grammes.	Grammes.
FIRST BREAKFAST (5 A.M.)—		
Porridge ($\frac{1}{4}$ meal)	50.0	2.2
Milk	20.0	1.7
SECOND BREAKFAST (8 A.M.)—		
Tea	12.0	—
Bread (2 slices = $\frac{1}{4}$ lb.)	29.2	1.3
$\frac{1}{2}$ oz. butter	6.6	—
DINNER—		
6 oz. potatoes	16.5	0.5
6 oz. bacon	123.0	0.6
TEA—		
Tea	12.0	—
Bread	29.2	1.3
$\frac{1}{2}$ oz. butter	6.6	—
SUPPER—		
Bread and milk	24.6	0.8
	329.7	8.4

The following note on the Irish peasantry is supplied by the Rev. Father Lawton, Killorglin: "The dietary of the labouring classes has greatly improved these latter years. Flour is exceedingly cheap, and the poorest have mixed bread—i.e., half flour and Indian meal^{*}—for breakfast and supper; potatoes and milk for dinner, with salt fish occasionally, and American pork at least once a month. Tea is used by all classes for breakfast, and the old people use it also for supper. Farmers give their servants a better scale of dietary: flour bread for breakfast, and meat with cabbage twice a week for dinner." In another private letter from Mr. Walker of Glenbigh I am told: "Their food is principally milk and bread made of Indian meal and flour morning and evening, and milk and potatoes in the middle of the day. The very poorest of the people somehow manage to keep a Kerry cow or two, and have sufficient

^{*} Indian meal contains a smaller percentage of nitrogen and carbon than wheaten flour, but the difference is only 3 per cent.

land, such as it is, to grow a sufficient supply of potatoes and cabbages."

TABLE IV.—*Irish Peasantry (No. 7).*

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
8 oz. bread (flour and Indian meal)	55.0	2.4
Tea	12.0	—
DINNER—		
1 lb. potatoes	45.0	1.3
$\frac{1}{2}$ pint milk	30.0	2.5
$\frac{1}{2}$ lb. white fish	11.5	7.6
TEA—		
Tea	12.0	—
Bread	55.4	2.4
	220.9	16.2

In winter, when living on salted fish, there would be a reduction of 10 grammes of carbon and 2 of nitrogen.

(No. 8)

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
1 lb. potatoes	45.0	1.3
$\frac{1}{2}$ pint milk	30.0	2.5
Melted lard	10.0	—
DINNER—		
1 lb. potatoes	45.0	1.3
1 pint milk	40.0	3.4
Lard	10.0	—
TEA—		
1 lb. potatoes	45.0	1.3
Tea	12.0	—
4 oz. bread (Indian meal or flour)	27.5	1.2
	264.5	11.0

Deficient in nitrogen.

As it is upon the proteid or nitrogenous elements in food that the greatest value is placed as an article of diet, I observe that the Scotch farm labourer and the shepherd are the best fed of all the agricultural labourers, and, so far as the consumption of bread, oatmeal, and potatoes is concerned, the Scotchman gets most for his money, the Irishman the least. Of all the agricultural labourers, the Scotch are the best fed.

In dealing with the feeding of coal miners I have deemed it advisable to obtain statistics from different collieries in Northumberland and Durham.

TABLE V.—*Coal Miners.*

(Facts supplied by Dr. Messer, Lemington-on-Tyne, Dr. Blair, Ashington, and Mr. Colquhoun, Spen.)

A hewer, earning 55s. a week; one child not working; rent of house, £10 a year; six hours' labour; can save money; is temperate.

	C.	N.
	Grammes.	Grammes.
(No 9.)		
BREAKFAST—		
Tea	12.0	—
$\frac{1}{2}$ lb. bread	58.5	2.7
$\frac{1}{4}$ lb. bacon	82.0	0.4
2 eggs	15.0	2.0
DINNER—		
Broth	(?) 7.0	0.6
$\frac{1}{2}$ lb. beef	34.0	7.5
$\frac{1}{2}$ lb. potatoes	22.5	0.6
Suet pudding	25.0	1.3
TEA—		
Tea	12.0	—
6 oz. bread	43.8	2.2
Preserves	(?) 20.0	—
SUPPER—		
4 oz. bread	29.2	1.3
$\frac{1}{2}$ pint milk	10.0	0.8
2 oz. cheese	20.0	3.0
	391.0	22.4

Coal hewer; wages, 40s.; no children; rent £15 a year; six hours' work a day; can save; is temperate.

	C.	N.
	Grammes.	Grammes.
(No. 10)		
BREAKFAST—		
Coffee	12.0	—
6 oz. bread	43.8	2.2
$\frac{1}{2}$ oz. butter	10.0	—
$\frac{1}{4}$ lb. bacon	82.0	0.4

	C.	N.
	Grammes.	Grammes.
DINNER—		
½ lb. meat	34 0	7 5
6 oz. potatoes	17 0	0 5
Suet pudding	25 0	1 3
TEA—		
Tea	12 0	—
½ lb. bread	29 2	1 3
½ oz. butter	10 0	—
2 eggs	15 0	2 0
SUPPER—		
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
Coffee	12 0	—
Cold meat	(?) 25 5	5 6
	366 7	22 1

TABLE VI.—*Coal Miner's Labourer (No. 11).*

Labourer at a coal mine, earning 28s. a week; paying £12 a year rent; ten hours' labour; seven children, one working; cannot save, is intemperate, and given to gambling.

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
Tea	12 0	—
10 oz. bread (no butter)	73 0	3 4
DINNER—		
½ lb. meat	8 5	1 8
½ lb. potatoes	34 0	1 0
Suet pudding	25 0	1 3
TEA—		
Tea	12 0	—
8 oz. bread	58 5	2 7
Butter	(?) 10 0	—
No supper	—	—
	233 0	10 2

Is underfed; diet is deficient in both carbon and nitrogen.

It may be said of coal miners, as a class, that they feed well, and that they believe in the necessity of taking every day a fairly large quantity of animal food, particularly beef.

Compared to the dietary of the collier, that of the English navy stands out remarkably well. At present, the North-Eastern Railway Company is widening its line a few miles from Newcastle. Many of the navvies live in Felling-on-Tyne, and thus I have been able to obtain, through Mr. Thomson of Felling, an authentic statement as to the character and quantity of their food.

TABLE VII.—*English Navy (No. 12).*

	C.	N.
	Grammes.	Grammes.
FIRST BREAKFAST (5 30 A.M.)—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
SECOND BREAKFAST (8 30 A.M.)—		
Tea	12 0	—
6 oz. bread	43 8	2 2
½ oz. butter	10 0	—
6 oz. ham	46 0	3 8
DINNER (12 noon)—		
Tea	12 0	—
8 oz. bread	58 5	2 7
½ lb. meat	34 0	7 5
SUPPER (6 P.M.)—		
½ lb. meat	34 0	7 5
1 lb. potatoes	45 0	1 3
Vegetables—cabbage	(?) 6 4	0 5
2 pints beer per diem	28 0	0 8
	380 9	27 6

His average purchases for the week are 6½ lb. beef, 4 small loaves, 1½ lb. sugar, 1 quart milk, 12 eggs, ½ lb. butter, 1 lb. cheese, 2 or 3 lb. ham, and ½ stone potatoes. As potato-eaters navvies vary; some consume as much as a stone of potatoes in the week.

In the case of iron and steel workers we have a body of men whose work is hard and whose wages are good. By this means they are able to procure substantial food, and when temperate can save out of their wages. The facts as to dietary have been supplied to me by Dr. Messer of Lemington-on-Tyne.

TABLE VIII.—*Iron and Steel Workers (No. 13).*
A forgerman; wages, 35s.; has three children; works twelve hours a day; rent 4s. a week; is steady; can save.

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
Tea	12 0	—
4 oz. bread	29 2	1 3
4 oz. bacon	82 0	0 4
DINNER—		
½ lb. meat	51 0	11 2
6 oz. potatoes	17 0	0 5
½ lb. rice pudding	30 0	0 9
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
SUPPER—		
½ pint coffee	6 0	—
2 oz. bread	14 6	0 6
Cold meat	(?) 8 5	1 8
	301 5	18 0

A Steel Smelter (No. 14).

A steel smelter; wages 50s. a week; no children; rent 4s.; works twelve hours a day; is very temperate; can save.

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
Coffee	12 0	—
4 oz. bread	29 2	1 3
4 oz. bacon	82 0	0 4
DINNER—		
½ lb. meat	34 0	7 5
Broth	10 0	0 5
6 oz. potatoes	17 0	0 5
Rice pudding	30 0	0 9
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
SUPPER—		
Cold meat	8 5	1 8
2 oz. bread	14 6	0 6
Coffee	6 0	—
	294 5	14 8

As a contrast to these, take the dietary of an engineer's assistant, an inmate of the Newcastle Infirmary, aged seventeen, a fitter's apprentice; father earns 34s., but the youth only receives 8s.; works nine hours a day; takes no food before commencing work.

TABLE IX.—*Engineer's Assistant (No. 15).*

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
Tea	12 0	—
4 oz. bread	29 3	1 3
½ oz. butter	10 0	—
Preserves	15 0	—
DINNER—		
½ lb. meat	17 0	3 7
6 oz. potatoes	17 0	0 5
½ lb. rice pudding	20 0	0 7
TEA—		
Tea	12 0	—
6 oz. bread	43 8	2 1
½ oz. butter	10 0	—
Preserves	15 0	—
	201 1	8 3

This lad is underfed, but it is owing to inability to take food. For months his health has been delicate. He has lately developed tuberculous disease.

TABLE X.—*Glass Worker (No. 16).*

Glass worker (per Dr. Messer), wages 40s.; rent of house, 4s.; has four children; seven hours' labour; is unsteady; does not save.

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
Tea	12 0	—
6 oz. bread	43 8	2 1
½ oz. butter	10 0	—

	C. Grammes.	N. Grammes.
DINNER—		
½ lb. meat	34 0	7 5
6 oz. potatoes	17 0	0 5
TEA—		
Tea	12 0	—
6 oz. bread	43 8	2 1
Butter	10 0	—
SUPPER—		
Coffee	12 0	—
4 oz. bread	29 2	1 3
Butter	5 0	—
	228 8	13 5

From a young brickyard labourer, who was admitted into the Newcastle Infirmary, having fallen from a scaffolding, I obtained the following.

TABLE XI.—*A Young Bricklayer (No. 17).*

His work consists in filling wagons with clay; wages 13s.; lives at home with his parents. Hours, 8 A.M. to 5 P.M., with intervals for meals.

	C. Grammes.	N. Grammes.
BREAKFAST—		
Tea	12 0	—
½ lb. bacon	82 0	0 4
6 oz. bread (no butter)	43 8	2 1
DINNER—		
½ lb. meat	17 0	3 7
8 oz. potatoes	22 0	0 7
TEA—		
Tea	12 0	—
6 oz. bread	43 8	2 1
½ oz. butter (occasionally cheese)	10 0	—
SUPPER—		
Coffee	6 0	—
2 oz. bread	14 6	0 6
½ lb. butter	5 0	—
	268 2	9 6

Deficient in nitrogen for a growing youth.

For the following diet tables of the steel grinders I am indebted to Dr. Porter of Sheffield.

TABLE XII.—*Steel Grinders, Sheffield.*

A dry grinder; wages 30s.; nine hours' labour; rent 6s. 2d.; has two children; is a moderate drinker.

A Dry Grinder (No. 18).

	C. Grammes.	N. Grammes.
BREAKFAST—		
Tea	12 0	—
6 oz. bread	43 8	2 1
½ oz. butter	10 0	—
½ lb. bacon	82 0	0 4
DINNER—		
6 oz. meat	25 5	5 5
4 oz. potatoes	11 2	0 3
½ lb. rice pudding	20 0	0 7
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
1 egg	7 5	1 0
SUPPER—		
2 oz. bread	14 6	0 6
2 oz. cheese	20 0	3 0
Milk or beer	10 0	0 8
	307 8	13 0

A table blade grinder (wet process); wages 30s., sometimes more; nine hours' work; rent 3s. 6d.; is very intemperate; has three daughters to support.

A Wet Grinder (No. 19).

	C. Grammes.	N. Grammes.
BREAKFAST—		
Seldom takes any breakfast, but when he does it is tea	12 0	—
2 oz. bread	14 6	0 7
½ oz. butter	5 0	—
DINNER—		
½ lb. meat	34 0	7 5
½ lb. potatoes	11 2	0 3
1 pint beer	14 0	0 4

	C. Grammes.	N. Grammes.
TEA—		
Tea	12 0	—
6 oz. bread	43 8	2 1
½ oz. butter	10 0	—
SUPPER—		
2 oz. bread	14 6	0 6
2 oz. cheese	20 0	3 0
1 pint beer	14 0	0 4
	205 2	12 3

A scissor grinder (wet and dry); wages, 30s.; nine hours' work; rent, 5s. 3d.; has two daughters to support.

A Scissor Grinder (No. 20).

	C. Grammes.	N. Grammes.
BREAKFAST—		
Tea	12 0	—
6 oz. bread	43 8	2 1
½ lb. bacon	82 0	0 4
DINNER—		
½ lb. meat	34 0	7 5
6 oz. potatoes	17 0	0 5
Rice pudding	20 0	0 7
TEA—		
Tea	12 0	—
4 oz. bread	29 3	1 3
½ oz. butter	10 0	—
SUPPER—		
Boiled milk	40 0	3 4
	300 1	15 9

The steel grinders, as a class, are apparently small nitrogen consumers. Their work is not hard.

It is amongst female lead workers that we find the dietary reduced to almost a starvation level; not so much on account of the wages they receive, but due to the fact that they are generally the breadwinners of the family. Many of them are widows, with a family to support; others are married, and their husbands are either out of work or indolent.

TABLE XIII.—*Lead Workers (No. 21).*

	C. Grammes.	N. Grammes.
BREAKFAST (supplied by employer)—		
Tea	12 0	—
4 oz. bread	29 2	1 3
(1) ½ oz. butter	5 0	—
DINNER—		
4 oz. bread	29 2	1 3
12 oz. potatoes	34 0	1 0
Tea	12 0	—
Very occasionally, 4 oz. meat, or cheese	17 0	3 7
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
	189 6	8 6

CASE 1.—A woman aged thirty-three years, at present under my care for double "wrist-drop" or paralysis, a widow; she has no children; wages, 2s. 6d. per day; generally works three days a week; pays 2s. for her room, and has, therefore, 5s. 6d. left to feed and clothe herself.

(No. 22.)

	C. Grammes.	N. Grammes.
BREAKFAST—		
Tea	12 0	—
1 oz. bread	7 3	0 4
DINNER—		
Tea	12 0	—
4 oz. bread	29 2	1 3
No butter	—	—
2 oz. bacon	41 0	0 2
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
Could not afford supper.		
	152 7	3 2

CASE 2.—A woman aged twenty-five years, suffering from lead colic and headache; married; has two children, a baby at the breast; worked four days a week, at 2s. 3d. = 9s. per

week; husband out of work for the last nine months; rent of room, 1s. 6d. per week; paid 8d. a day to woman to look after her baby, but not for the feeding of it. Her expenses, therefore, were 4s. 2d. a week, leaving 4s. 10d. to provide food &c. for herself, husband, and two children. Is a small eater; could scarcely take breakfast owing to a metallic taste in mouth in the morning.

(No. 23)	C.	N.
BREAKFAST—	Grammes.	Grammes.
Tea	12 0	—
4 oz. bread (no butter)...	29 2	1 3
DINNER—		
Tea	12 0	—
6 oz. bread	43 8	2 1
Very occasionally meat or bacon, sometimes a little fat	21 0	—
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
	169 2	4 7

CASE 3.—A woman aged thirty-one years, married, three children; suffered from lead "colic" after drawing eight stoves, and was obliged to desist. The husband, a labourer, is out of employment. The patient got 2s. 3d. a stove; worked two days a week—i.e., wages 4s. 6d., but had only earned 18s. in the month when taken ill.

(No. 24.)	C.	N.
BREAKFAST (taken at factory)—	Grammes.	Grammes.
Tea	12 0	—
4 oz. bread	29 2	1 3
Butter	(?) 5 0	—
DINNER—		
6 oz. bread	43 8	2 1
Tea	12 0	—
2 oz. meat (occasionally)	8 5	1 0
TEA—		
4 oz. bread	29 2	1 3
Tea	12 0	—
Butter	(?) 5 0	—
	157 7	5 7

CASE 4.—A woman aged eighteen years, suffering from lead colic; the father generally was out of employment; the mother sells fish, and makes about 5s. 6d. a week. The patient's own earnings are from 9s. to 10s. a week.

If it is necessary that an adequate food allowance should contain 300 grammes of carbon and 20 grammes of nitrogen, the dietary of the female lead worker contrasts badly. If the diet of needlewomen in the East-end of London be spoken of as a "starvation diet" when it contains 200 grammes of carbon, and 9 of nitrogen, the bill of fare of a female lead worker is a sad illustration of how body and soul have to be kept together on the lowest amount of food possible. In the scanty feeding of these women and their inability to take food lies one of the principal reasons why they so soon become a prey to the metallic poison. It has been demonstrated that if a proper supply of food be taken, and particularly before commencing work in the morning, the chances of plumbism developing are diminished. Dangerous as working in a white-lead factory may be, it is doubtless poverty and bad feeding that predispose the operative to succumb to the effects of lead, and if there is one thing that may be regarded as the best preventive it is employers of labour giving to their "hands," before commencing work, breakfast consisting of either warm milk and bread, or coffee with milk and bread and butter.

The textile industries resemble each other in so far as the labour is nearly all done by machinery, and the work of the operative, therefore, is simply to tend two or three machines. The work is carried on in large rooms, frequently overheated, and at times not too well ventilated. In some of the factories, where very fine spinning is done, the atmosphere is not only too warm, but it is too moist. The cotton-spinners of Lancashire are, as a class, well paid and well fed. Both the men and women are pale through working in the overheated rooms. Take, as a typical case, the following dietary of an unmarried female cotton weaver, supplied by Dr. Garner, Preston, to whom I am indebted for much of the above information:—

TABLE XIV.—Workers in the Cotton Factories.—A Female Weaver (No. 25).

This is one of the best samples of a cotton weaver's diet. The operative in question has an exceedingly comfortable home, being one of three daughters, all working; goes home for dinner.

"Morning bite," eaten generally on way to factory.	C.	N.
Grammes.	Grammes.	Grammes.
1 slice bread...	14 6	0 6
¼ oz. butter	5 0	—
BREAKFAST—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
DINNER—		
6 oz. meat	25 5	5 5
8 oz. potatoes	22 5	0 6
Rice pudding	20 0	0 7
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
Less than ½ lb. herrings or other fish	(?) 14 0	4 0
SUPPER—		
1 pint beer	14 0	0 4
1 slice bread	14 6	0 6
Cheese	13 0	2 0
	245 6	17 0

This is slightly above the average female dietary, and if we add to it one-fourth of total diet for the day we get the average for male cotton-spinners—viz., 333 grammes of carbon and 24 of nitrogen; but as fish would not be taken every night for tea the dietaries would stand thus: 252 6 grammes of carbon and 15 2 nitrogen for the female; 315 carbon and 19 grammes of nitrogen for the male.

As opposed to this, take the case of a single woman aged twenty-six years, who is suffering from incipient phthisis, but is yet following her occupation. Her wages are 14s. to 18s. a week, and the rent of her house is 4s. 6d.

(No. 26.)	C.	N.
"Morning bite," a drink of tea or milk, taking nothing to eat	Grammes.	Grammes.
...	12 0	—
BREAKFAST—		
Tea	12 0	—
2 oz. bread	15 0	0 7
½ oz. butter	10 0	—
Occasionally one egg	7 5	1 0
At 11 A.M. thin slice of bread and butter	12 5	0 4
DINNER (taken at the mill)—		
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
Tea	12 0	—
Very occasionally ¼ lb. meat	17 0	3 7
TEA—		
Tea	12 0	—
4 oz. bread	29 2	1 3
½ oz. butter	10 0	—
	188 4	8 4

For the dietaries of lace workers I am indebted to Dr. Hunter of Nottingham. They work ten hours a day; the wages of the men are about 40s. a week; girls earn from 6s. to 15s.; rent of house, 4s. 9d. to 6s. The men do not save money unless in those cases where the daughters are also working.

TABLE XV.—Lace Workers (No. 27).

	C.	N.
BREAKFAST—	Grammes.	Grammes.
Tea	12 0	—
8 oz. bread	58 5	2 7
½ oz. butter	10 0	—
Occasionally one egg	7 5	1 0
DINNER—		
½ lb. meat	34 0	7 5
½ lb. potatoes	22 5	0 6
Pudding	20 0	0 7

	C.	N.
	Grammes.	Grammes.
TEA—		
Tea	12.0	—
4 oz. bread	29.2	1.3
½ oz. butter	10.0	—
SUPPER—		
2 oz. bread	14.6	0.6
1 pint beer	14.0	0.4
Cheese	(?) 10.0	1.6
	254.3	16.4

The men engaged in the woollen industries in and around Bradford apparently feed well. Their hours of labour vary from ten to ten and a half a day, their wages from 18s. to 32s. a week, and their house rent from 3s. to 4s. 6d. Dr. Hunter of Pudsey tells me that "as a class the spinners and weavers are exceedingly temperate and save a fair amount of their wages, which they either deposit in the bank, spend on fine clothes, or in frequent excursions and holiday-making."

TABLE XVI.—*Workers in Wool Factories (No. 28).*

A cloth miller aged forty years; wages 18s.; rent of house (including rates), 4s. 6d.; has two children, not working.

	C.	N.
	Grammes.	Grammes.
BREAKFAST—		
Tea	12.0	—
6 oz. bread	43.8	2.1
½ oz. butter	10.0	—
DINNER—		
½ lb. meat	34.0	7.5
Yorkshire pudding	18.8	1.2
8 oz. potatoes	22.5	0.6
TEA—		
Tea	12.0	—
4 oz. bread	29.2	1.3
½ oz. butter	10.0	—
SUPPER—		
Oatmeal porridge and milk	28.9	1.5
	221.2	14.2

A spinner aged forty-six years; wages 32s. per week; working ten hours a day; has seven children; two are working, earning between them 38s. a week; rent of house, 4s. 6d., including rates:—

	C.	N.
	Grammes.	Grammes.
(No. 29.)		
BREAKFAST—		
Tea	12.0	—
6 oz. bread	43.8	2.1
½ oz. butter	10.0	—
½ lb. bacon	82.0	0.4
DINNER—		
½ lb. meat	34.0	7.5
½ lb. potatoes	22.5	0.6
Yorkshire pudding	18.8	1.2
TEA—		
Tea	12.0	—
4 oz. bread	29.2	1.3
½ oz. butter	10.0	—
SUPPER—		
½ pint milk	20.0	1.7
2 oz. bread	14.6	0.6
½ oz. butter	5.0	—
1 oz. treacle	20.0	—
	333.9	15.4

Treacle is largely used by the woollen spinners, also by the cotton operatives. As it contains a good deal of saccharine matter it is extremely nutritious.

From the Bradford Infirmary Reports I observe that the diseases which affect the woollen industries are similar to those met with amongst the cotton operatives. Of the general diseases, the most frequent is anemia affecting women, and next to this pulmonary complaints and nervous diseases. Opposed to these various tables of the diet of toil I shall place two starvation diets which have come under my own observation.

TABLE XVII.—*Starvation Diets.*

CASE 1.—A man was admitted into the Newcastle Infirmary, under my care, suffering from a purpuric rash on the skin

and commencing phthisis. His wages had been 9d. a day, or 5s. 3d. a week; he paid for his room 4d. a day, or 2s. 4d. a week, leaving him, therefore, with only 2s. 11d. a week to live upon. He took two meals daily, but had no great appetite; was temperate. From January to June, 1894, he only once ate potatoes and green vegetables.

	C.	N.
	Grammes.	Grammes.
(No. 30.)		
BREAKFAST (8 P.M.)—		
Tea	12.0	—
4 oz. bread	29.2	1.3
TEA (5 P.M.)—		
Tea	12.0	—
½ lb. meat	17.0	3.7
6 oz. bread	43.8	2.1
	114.0	7.1

CASE 2.—This was that of a widow aged twenty-nine, who lost her husband nine months previously. She has three children; is a dressmaker; wages 8s. to 9s. a week; hours 8.30 A.M. to 6 P.M.; rent 4s. 3d. She has, therefore, only 4s. 9d. a week to support herself and three children, and were it not for the occasional gift of a loaf of bread from a friend for whom she does a little dressmaking in her spare hours, and a little help from a grandparent, she would find it very difficult to make ends meet. She is pale, but on the whole well nourished; is a small eater, and has very little appetite.

	C.	N.
	Grammes.	Grammes.
(No. 31.)		
BREAKFAST—		
Tea	12.0	—
1 slice bread, toasted (no butter)	14.6	0.6
DINNER—		
1 oz. bacon	21.0	0.1
3 oz. bread	22.2	0.9
½ pint milk	5.0	0.4
TEA—		
Tea	12.0	—
2 oz. bread	14.6	0.6
½ oz. butter	5.0	—
SUPPER (seldom)—		
A saucerful of porridge and milk	8.0	0.4
	114.4	3.0

As the average daily output of a man weighing 70 kilogrammes or 11 st. is 230 grammes of carbon and 15 of nitrogen, it is clear that if his health and bodily weight are to be maintained his daily diet must contain these elements in the proportion mentioned. But for the maintenance of nitrogenous equilibrium it is not required that the loss of nitrogen from the system should just be balanced. If nitrogen is not sufficiently supplied in the food it will still continue to be eliminated, its source being the metabolism of the tissues that contain it. The nitrogen import has to be considerable in order that the equilibrium may be maintained—viz., three times the amount of nitrogen excreted when no food is taken. The channels by which this element leaves our body are the kidneys, intestine, lungs, and skin; nearly the whole of it comes away by the kidneys in the form of urea, so that the quantity of urea eliminated is taken as the measure of nitrogenous dissimilation of the system. Thirty grammes or 500 grains of urea are regarded as the normal daily amount, and in 30 grammes of urea there are 14 of nitrogen. Add to this the quantity that leaves by the intestine—viz., 10 per cent. of the total nitrogen eliminated—and we have an accurate statement as to the daily nitrogen export, for the amount discharged by the lung in the form of ammonia in the expired air is infinitesimal, and the same remark applies to escape by the skin. What we recognise as a result of examination of the diet tables of the industries is that, with few exceptions, the individuals are not taking in their food that excess of proteid or animal food necessary to maintain their nitrogenous equilibrium; also, that poor people when long underfed become accommodated to a low minimum, and that health seems even for a time to be thus well maintained, although, in many of the cases tabulated, where the nitrogen import was for a lengthened period at a minimum the individuals, to my knowledge, subsequently became the subjects of tuberculous disease.

Ellison-place, Newcastle-upon-Tyne.
C C 2

ON THE MICRO-ORGANISM OF CANCER.

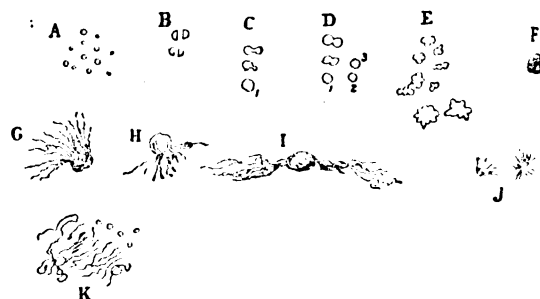
By JAMES BRAITHWAITE, M.D. LOND.,

OBSTETRIC PHYSICIAN AND SURGEON TO THE LEEDS GENERAL INFIRMARY; EDITOR OF THE "RETROSPECT OF MEDICINE," ETC.

ALTHOUGH I have left my mind open on the question I have never believed in the existence of a micro-organism as the cause of cancer until I recently had the opportunity of watching the rapid spread at its edge of a very superficial epithelioma on the vulvar mucous membrane. The activity seemed to be chiefly at the margin of the disease, and its appearance and almost daily invasion of fresh territory convinced me that some infective agency must be at work. The border of the disease was not only brighter in colour than the centre, but it was more raised and appreciable to the touch; the disease, moreover, increased not by the old part growing, but by the invasion of apparently healthy epithelium, which by mere contact became diseased; in fact, it somewhat resembled a ringworm, but was undoubtedly malignant. A second case also confirmed me in the idea of the active operation of a micro-organism; this was a minute rodent ulcer on the cheek with a circular depressed surface, having clear-cut edges or walls. The depressed surface was carefully watched by the patient, a highly intelligent woman, and a powerful hand lens showed that some volcanic action was going on in the little crater. A small cone would rise on the surface and apparently open at the summit by a minute pore, and discharge something (so she thought), and then subside, the whole cone formation and subsidence occupying one or two days. That this was a small rodent cancer was proved by its microscopic examination after removal. Reflecting upon these cases, and also upon the remarkable discovery by Mr. Haviland that cancer exists endemically in populations living upon low-lying moist soils and in certain "cancer-houses," the conclusion seemed highly probable that the micro-organism must be a fungus, and not, as supposed, a bacterium, coccidium, or protozoon. There is a very large Jewish population in Leeds, probably about 10,000, the female portion of which is constantly seen at the out-patient department of the Leeds Infirmary. In not one Jewess have I ever met with cancer of the genital organs, whereas it is extremely common amongst the Christian women, the inference being (assuming it to be a micro-organism) that it is introduced or not introduced by the husband, according to his faith. Microscopic examination of the secretion frequently contained within the prepuce was the next step, with a very suspicious, but not absolutely certain, result. Some spores were found and two minute loops of mycelium identical in appearance with that to be described. I have since this examined epitheliomata taken from the ear, the uterus, the breast, the lip, and the penis, and in all five I have without any difficulty demonstrated the existence of a fungus, the same in all cases. (I have also examined a melanotic sarcoma, but the description of this I will leave until later.) The fungus has been seen and examined by a large number of students, qualified residents at the Leeds General Infirmary, medical men in practice, and by some of my own colleagues, and none have had any hesitation in admitting its existence. The mode of preparation is as follows. Whether the preparation is an old one in spirit, or whether it is quite fresh, cut out a very small block from the centre, but in the case of cancer of the lip the free margin should be included. If fresh and not convenient to examine at once place in dilute spirit for the night. Next day make as fine sections as possible in the usual way and place them in water. Float off two or three of the best on to slides and drain off as much water as possible. Place upon each three or four drops of liquor potassæ and put them aside protected from dust, to stand for from twenty minutes to four hours, according to the opacity or thickness of the section. When the section appears pretty transparent wash away the liquor potassæ with water without displacing the section. This must be thoroughly done. Then mount in Farrant. If it is merely wished to examine quickly without preservation of the section put on a drop of liquor potassæ and then the cover-glass. The section will improve for two hours, or if a fresh growth for even four hours, and will then slowly fade. This plan, however, is the best at first, for the idea derived is clearer, as

the mycelium comes out gradually and more distinctly and at last but little else is seen. This plan is founded upon the fact that the fungus, with its mycelium, spores, and spore bags, resists the potash longer than the tissues proper. If the action of the potash is not sufficient, the yellow elastic tissue presents a similar appearance to the mycelium. It is, however, larger, coarser, and straighter, and is also sometimes branched, which the mycelium never is. In cancer on the lip it is very important to use the potash long enough. If now the section is held up to the light it will be seen to be very transparent and almost invisible, but here and there small whitish portions are seen. These contain the fungus in the greatest amount. Under a $\frac{1}{2}$ in. objective larger or smaller quantities of extremely fine colourless mycelium are seen. The delicate fibres are rounded, not flat or jointed. They are often contorted and curved so as to form masses of loops. In the epithelioma of the lip the mycelium was especially abundant at the free surface of the sore. It will take no dye, and, indeed, none is required, its great refracting power making it stand out clear and distinct in outline. Any attempt at dyeing makes it all but invisible. Numerous solitary spores and also the mycelium was found in all the five specimens. In the epithelioma from the auditory meatus (papilloma?) there were also spore masses not contained in an envelope or wall; these were of irregular shape. In the uterine cancer was seen a spore mass emitting mycelium (see H in drawing).

FIG. 1.



A, Primary spores. B, Two spores approach and contiguous sides flatten. C, A tube is projected from one which sucks in the other. D, The commoner mode of conjunction, ending, as does C, in the formation of zygosporangia (c 1; d 1, 2, 3). E, Conjugation of more than two spores to form spore masses. F, Complete spore mass in envelope or cell membrane; I have called these "spore bags." G, Splitting of spore bag and exit of mycelium. H, Same from the uterine cancer. I, One (the only one seen) emitting mycelium from both ends. J, Spent spore bags. K, Mycelium from the lip cancer at edge of sore.

In the breast cancer the greater part of the life of the fungus could be studied. This breast had been amputated on May 24th and had been placed in a bowl of water with the tap gently running over it for four days. The disease had not penetrated the skin, which up to the time of operation was intact. One deep incision had been made three-quarters through the large mass. A small block was cut from a part of the tumour about two inches deep. One of the sections happened to contain the fungus alive, and it went through most of its life on the slide (in the Farrant), the hour's immersion in potash not having killed it. Its life in the four or five stages of its existence is as follows. To begin with, it is a spore mass. This when perfect has a delicate envelope and contains not a number of separate spores, but a fused mass of spores having a granular appearance externally (see F). This spore mass opens or splits at one side and becomes the shape of a shallow tea cup with a wide mouth. From this grows the mycelium, which penetrates in every direction (see G and H). One spore mass only was seen emitting mycelium from both ends (see I); the growth of mycelium could be noted by the eye, but seemed to have ceased on the evening of May 30th. The slide was then placed in the cabinet for the night, and next day not a trace of mycelium could be found, but the slide was one mass of spores, which certainly were not there the day before. These were evenly distributed over the slide. I have spent much time in watching these no doubt living spores with intense interest. The process of what is called conjugation had been and was to some extent still going on, until it was stopped by the density of the Farrant's jelly, but the whole process

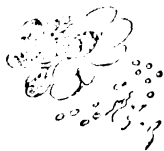
could be seen, and can still, for the slide is yet in good condition. The process appears to be as follows. Two spores approach each other and become flattened at the contiguous sides (see B). From one of these a minute tube soon joins them (see C), and the contents of one spore are sucked into the other, which consequently becomes larger. This would be what is known as a zygospore (see C, 1; D, 1, 2, 3); it is probable that this mode of conjugation only occurs when from some reason the spores cannot actually touch. A commoner mode of conjugation is for two spores actually in contact to become fused into one, all trace of their dual origin vanishing. Similarly, three or four may be so fused, some traces of their compound origin in this case remaining. Not infrequently a considerable number (such as ten or twenty) become fused into one large spore mass (see E). The next step (but this has not been actually seen) is for such a mass to be enclosed in a fine enveloping membrane forming the complete spore bag, with which this description of the life of the fungus began. When the spore bag is exhausted it presents the appearance as seen at J. The life of the fungus, therefore, seems to consist of four stages—namely, (1) spores; (2) zygospores; (3) spore masses and spore bags; and (4) mycelium which is emitted from the ruptured spore bags. This mycelium gives origin to the spores. This must be the case, but it has not been actually seen.

FIG. 2.



Section of melanotic sarcoma, with very low power, showing the spore bags, most of them empty, visible to the naked eye.

FIG. 3.



A few spore bags highly magnified, some empty, with mycelium and spores.

To recapitulate, the only parts of the process which have not been actually seen are the formation of the membranous covering of the spore bag, and the formation of the spores in the mycelium. It may be asked, "Have you introduced the fungus by means of the instruments used?" This cannot be so, for the fungus in the uterine cancer was found within half an hour of its removal in my own house, and it permeated the whole mass. The epithelioma of the lip was removed by Mr. Mayo Robson at the Leeds General Infirmary on May 30th, and was examined next morning. The papilloma of the external auditory meatus was removed by Mr. Secker Walker while I was present at a house within a hundred yards of my own, and was placed in Muller's solution immediately. The epithelioma of the penis was removed at the infirmary by Mr. Walter Brown on May 20th, and had been kept from that time in spirit, and was never placed in Muller's solution, so that in all the cases there were different operators and different instruments and different localities, with the exception that two of the specimens came from the infirmary. Examination was made either immediately or next day. The cancer in the breast, however, had been removed four days, and its treatment has been already described. I may now describe the sixth specimen, which had been kept in spirits nineteen months in the pathological room of the infirmary and was labeled "Melanotic Sarcoma." Microscopic examination of this proved the correctness of the title. This was found to be full

of mycelium and spores. The mycelium precisely resembled that met with in the epithelioma. Here, however, the resemblance ceased, for there were large masses of spore bags containing as many as 50 to 200 bags each, at least twice the size of the spore bags of epithelioma, and they were egg-shaped instead of round. They readily ruptured, giving exit to the spores, which were of a blackish colour and leaving the empty bags *in situ*. These masses were so large and numerous that they could be seen with the naked eye. It is not likely that this fungus is the same as that of epithelioma assuming another form, as the spores are blackish in colour, and it must be noted that this was not true sarcoma but melanotic sarcoma. No doubt it will be asked whether I assert that this or these micro-organisms are the causes of cancer and sarcoma. No; I do not positively assert this, but I believe it to be the case, for it cannot be a mere accident or coincidence that a fungus was present in every one of the six specimens and in considerable amount. There can be no question whatever as to its existence, and if anyone doubting it could see the sections in my possession he would be convinced immediately. If anyone would care to refer to the Transactions of the Obstetrical Society of London for 1882¹ he will find the report of a case of non-capsulated fibroid within the uterus, in which a fungus was found by me in a large amount, but it was not the same fungus as that of epithelioma or that of melanotic sarcoma, so that this discovery to a certain extent naturally sprang out of that. I have also lately found a few spores, but no mycelium in the growing base of a mucous polypus of the cervix uteri, also in that of a fibroid polypus, and in a uterine fibroid weighing ten pounds, which I removed a short time ago by abdominal section. These may have been accidentally introduced, but in the mucous polypus they seemed to be regularly arranged in the tissues. I will therefore hazard the conjecture, but it is a mere guess, that many other forms of tumour will be found to have a fungoid origin. In this case the theory which I published a few years ago in THE LANCET² will explain why some of them are malignant and some are not, and just as it appears probable that one fungus affects only epithelium and causes true cancer, and that another affects only mesoplastic tissues and produces sarcoma, so it will be found that each form of tumour has its own fungus. It is probable that the fungus of ordinary sarcoma is not exactly identical with that described in the account of the specimen of melanotic sarcoma. Much, of course, is yet wanting to prove the case absolutely, but the cultivation of the fungus under direct observation in Farrant is very easy, and probably it would be easier still in some form of jelly containing no antiseptic and of more fluid consistence, so as to allow of movement of the spores. It is almost evident that the primary spores are sterile, also no mycelium has been seen to emanate from zygospores, but they are presumably fertile under some condition or other. The spore bags are undoubtedly very fertile, and must be present so far as can be seen at present for any successful cultivation. It is also not unlikely that mycelium in order to produce spores must maintain its connexion with its nourishing spore bag, and if so mycelium alone would be sterile.

Next arises the natural question, Is any practical result likely to result from this discovery if it should prove after the careful investigation it will doubtless receive that it is the real explanation of the cause of malignant growth? So far as I can see at present the answer may be given as follows: 1. The cure of a cancerous growth actually in existence does not seem more probable but less probable, because the enemy is so subtle, so penetrating, and so indestructible (proved by immersion in liquor potassæ for an hour not killing it) that it almost seems impossible to eradicate it; it is, however, better to have an enemy exposed to view than one invisible. But it seems likely that after removal of a growth by operation it would be better not to close the wound absolutely, but to keep the surface in contact with dressings soaked in glycerine containing liquefied carbolic acid and also perchloride of mercury (the carbolic acid partly to relieve pain). Glycerine penetrates tissues and carries with it any substance in solution. It seems not improbable that cancer of the breast may be altogether prevented in women past the child-bearing period by merely closing the orifices of the milk ducts in the nipple by a small surgical operation or by the use of a fine electric cauter, for the fungus must enter the breast *via* the milk

¹ Vol. xxii., p. 182.

² THE LANCET, JUN. 30th, 1888.

duct orifices. 3. It is possible that we may have to return to a certain Mosaic rite in order to save our wives from uterine cancer, unless the daily use of soap will do away with this necessity. 4. In order to prevent the fearful mortality from cancer in low-lying wet soil districts the bodies of persons dying from cancer must be specially buried at a great depth or they must be cremated. It will be seen that moisture is absolutely necessary for the formation of zygospores, spore masses, and spore-bearing mycelium. It does not seem probable that the fungus necessarily spends part of its life in the earth, but no doubt when the interment is at no great depth the earth will become infiltrated, if it is constantly wet, and floods will carry the spore masses all over the country. 5. A fungus can only attack effete tissues. We are ourselves only tools of nature; we must keep ourselves bright by constant use; we must not rust from luxury and idleness. Business men must be careful how they retire, for, just as tuberculosis is favoured by excessive work and poor food, so the growth of a fungus is likely to be favoured by the effete materials present in the system engendered by the opposite conditions. We cannot, however, foretell what may be the result of this discovery, if discovery it is. Some remedy may be found which will destroy the fungus. I will now leave the matter to the judgment of my professional brethren. It is certain to excite great interest and many divergent opinions, for is not cancer the most terrible scourge to the human race which exists? The mere dread of it has been known to unhinge the mind, increasing as it is in frequency, and producing an amount of misery which no pen can describe.

Addendum.—Since this paper was written I have, by means of an able working pathologist who has been engaged for several years in a small pathological laboratory in my own house, made over 150 slide preparations of malignant and other healthy(?) and diseased tissue, and have come upon unexpected and startling results, which not only confirm most of what is already published in this paper—for in not one primary malignant case was the fungus absent—but render it highly probable that other diseases, and amongst them diabetes, are caused by fungi. I have also worked out rather more completely the life-history of the fungi of epithelioma and of sarcoma, and propose, with the kind permission of the Editors of THE LANCET, to describe these further results in a subsequent paper. Meanwhile, and until this is done, I shall be grateful if criticism is withheld. It is extremely easy for anyone to satisfy himself as to the existence of the fungi, and it would be better for actual investigation to precede criticism.

Leeds.

THE TEACHINGS OF PROFESSOR E. FRANK- LAND'S REPORT ON METROPOLITAN WATER-SUPPLY, 1894.

By CHARLES PORTER, M.D. IREL., D.P.H. CAMB.,
M.R.C.S. ENG.,

MEDICAL OFFICER OF HEALTH FOR STOCKPORT.

THE latest addition to Professor E. Frankland's familiar series of annual reports to the Registrar-General on the quality of the water supplied by the metropolitan water companies presents features of special interest and suggestiveness.

By graphic representations of the monthly fluctuations of contained organic matter Professor Frankland demonstrates the marked inferiority in regard to chemical purity of the raw river waters utilised in 1894 as compared with those used in 1893, and once more alludes to (a) the chemical superiority of the water of the Lea over that of the Thames as a raw material, especially in times of flood; and (b) the greater chemical purity of the water of the Lea in its upper as compared with its lower reaches. A second diagram contrasts the organic purity of the raw Thames water at Hampton with that of the average filtered water as delivered in London, and in this connexion attention is again directed to the fact that water impounded in times of severe floods may most seriously affect the quality of the "supply as delivered" in the following month, even to the extent of making it

during that month of a worse quality from a chemical point of view than the raw river water passing the companies' works at the same time. Commenting upon this remarkable state of things, Professor Frankland in his 1893 report recommended the provision either of (a) some means of substituting the river for stored water whenever the chemical quality of the former is better than that of the latter, as roughly estimated by observations of the colour in a two-foot tube; or of (b) sufficient storage to tide over the longest floods. This, it will be remembered, was one of the two conditions (the other being efficient filtration) with which the late Royal Commission safeguarded their opinion that no danger exists of the spread of disease by the use of drinking water derived from the Thames and Lea. Large, though insufficient, storage capacity appears, however, in this particular (chemical) respect, to be distinctly more disadvantageous than a relatively small amount, for certain companies who possessed comparatively little provision of this kind were actually enabled, just after the floods of June and December, 1894, to deliver water of better quality than that supplied by the Chelsea Company, who, notwithstanding their much greater storage capacity, had obviously been unable to entirely exclude flood water and had been compelled to use it afterwards. On the other hand, as regards bacterial purity, the deliveries of the companies possessing least storage were, as might be expected, amongst the least satisfactory.

Judged by the relatively low proportion of carbon to nitrogen, the organic matter present in the waters was, as usual, found to be chiefly, if not entirely, of vegetable origin, the directly conflicting results in this respect formerly obtained by the water companies' chemists having proved to be due to an error in the method of analysis adopted by the latter. A further discrepancy in regard to the Chelsea Company's water is explained by the fact that the supposed samples of this water collected for the companies' chemists were really taken, inadvertently, from the New River Company's main. In regard to the softening of metropolitan water (both river and well), treatment with lime is regarded as the most economical method, unless it can be shown that less than one-eightieth of the total supply is used for washing, for it entails only about one-eightieth of the expense incurred by the private consumer in the shape of additional soap.

Believing with Professor Koch and with American observers at Lawrence, Mass., that efficient sand filtration is practically a perfect safeguard against the introduction of cholera and typhoid fever bacilli into drinking water, Professor Frankland attaches the highest hygienic importance to the bacterioscopic examination of river-derived drinking waters as the only trustworthy method by which their efficient filtration and bacterial purity can be ascertained. To facilitate such examination in the metropolis he advocates the establishment of small bacteriological laboratories at the various river-water intakes. It is to be hoped that the time is not far distant when such provision will form part of the equipment of all filtering works, so that (as is now the case in the metropolis) the engineer in charge may at once be informed when any filter is working unsatisfactorily, for, to quote Professor Koch, "it is the business of those in charge of the works to take care that the filtered water always satisfies bacteriological requirements."

The results of bacterioscopic examination of the unfiltered river waters used by the metropolitan companies in 1894 once more demonstrate (1) the immense destruction of bacteria which is effected by storage in subsidence reservoirs, and (2) that the bacterial quality of these waters may differ widely from their chemical qualities. Thus, the water pumped from the natural gravel-beds near the Thames is nearly identical chemically with the Thames water itself, but the bacterial purity of the gravel water far exceeds that of the Thames water, and, indeed, not infrequently that of the filtered Thames water sent into London. Again, although the water of the Lea was found during the year to be chemically purer than that of the Thames, and also in its higher as compared with its lower reaches, yet the determinations of 1894 have demonstrated that bacterially the higher portion of the Lea is enormously inferior to the lower portion and also to the Thames at Hampton. Professor Frankland specially draws the attention of the Lea Conservancy Board to this unexpected condition, and one naturally recalls the strictures of the late Royal Commission on the large heaps of gas-lime, manure, and town refuse which, as far as any rate as Hertford, "are placed on the edges of the banks [of the

Lea] and within a few feet of the stream itself," and which obviously in times of rain and flood become a serious source of pollution.

No part of this report will be read with greater interest than the observations recorded on the causes of the great variations in the amount of microbial life in river waters during the course of the year. Changes of temperature or exposure to varied amounts of direct sunshine have hitherto been regarded as responsible for these variations, the Royal Commissioners stating in their recent report that bacterial life is injuriously affected by "even such a tempered amount of light as is present under ordinary conditions in Thames water." Professor Frankland now, however, demonstrates that the amount of rainfall—or, in other words, the volume of water flowing in the river—is the chief cause of these variations. In a series of most interesting tables and diagrams he brings the number of microbes in raw Thames water into contrast with each of these alleged causes, and his conclusion is as follows: "That the number of microbes in Thames water is determined mainly by the rate of the flow of the river—or, in other words, by the rainfall—and but slightly, if at all, by either the presence or absence of sunshine, or a high or low temperature. With regard to the effect of sunshine, the interesting researches of Dr. Marshall Ward leave no doubt that this agent is a powerful germicide, but it is probable that the germicidal effect is greatly diminished, if not entirely prevented, when the solar rays have to pass through a comparatively thin stratum of water before they reach the living organisms. If this be so, however, it can be no matter of surprise that the effect of sunshine upon bacterial life in the great mass of Thames water should be nearly, if not quite, imperceptible." In regard to *filtered water*, if 100 microbes or their spores per c.c. be taken as the permissible limit of bacterial life, the effluents of the Chelsea, the West Middlesex, the Lambeth, and the New River Companies were almost uniformly of great bacterial purity. Never once throughout the entire year did the Chelsea filtered water exceed the above limit. The West Middlesex and the Lambeth both transgressed once (in January) and the New River Company twice (January and June). Ten samples of the Grand Junction Company's effluent (four from the Kew and six from the Hampton filters) exceeded the limit, the worst results (464 and 278 per c.c.) being in January and June. Four samples of the Southwark and Vauxhall Company's effluents, taken respectively in January, February, July, and December, were also unsatisfactory. The very small storage possessed by both of the two last-named companies is considered mainly responsible for these results. The East London Company's filters worked very irregularly up to, but not after, the end of July, and up to that time (except during May) there was always at least one unsatisfactory sample. Most of the foregoing abnormal results occurred when the raw river water was bacterially very impure.

The closing pages of the report are devoted to a *résumé* of the results hitherto obtained at the Lawrence (Mass.) Experimental Filtration Station, which are briefly: (1) that within the limits of 300,000 gallons to 3,000,000 gallons per acre per day, variations in the rate of filtration have practically no effect on the purity of the effluent, and that filters may be satisfactorily worked even at the rate of 5,000,000 gallons per acre per day, provided the uniform rate is maintained; (2) that, the finer the size of the sand grains between the limits 0.2 mm. and 0.9 mm. diameter, the higher the percentage of bacteria removed; (3) that with any moderate rate of filtration the depth of the sand within the limits of 1 ft. and 5 ft. exerts but little influence upon the percentage of bacteria removed; and (4) that scraping the surface of a sand filter does not interfere with bacterial efficiency, provided there is no mechanical disturbance of the main body of the sand. It is well known that Professor Koch has pointed out certain difficulties attending efficient filtration during times of frost, which he ascribes to (1) freezing of the superficial sand layer, causing at first total arrest of filtration and later excessively rapid filtration through the portions of the surface which are the first to thaw and become permeable, and (2) the impossibility of cleansing the sand surface of open filtering basins which have become thickly covered with ice. Professor Frankland, however, refers to, and reserves for future report, some entirely novel phenomena affecting filtration which the recent severe weather in England has brought to light, and the publication of his observations will be awaited with much interest.

Stockport, Cheshire.

A NOTE ON TWO CASES OF PUERPERAL ECLAMPSIA.

By ROBERT CRAIK, M.D. GLASG.

CASE 1.—A married woman, aged twenty-seven years had her first child in October, 1893. Labour was normal, delivery easy, and it was noticed that very little blood was lost with the placenta. Twenty-four hours after delivery she became strange, complained that she could not see, and had twitchings of the face and arms. When I arrived soon afterwards she had a convulsion lasting a few minutes, which left her unconscious, with noisy breathing. After a brief interval there was a second convulsion, general and very violent. Six ounces of blood were at once taken from the arm, and as the third convulsion came on (before the arm was tied up) chloroform was administered till she was fully under. A specimen of urine was drawn off and found to be highly albuminous; the ankles and face were seen to be distinctly oedematous. She was packed with hot bottles to encourage sweating, and one drachm of chloral was given per rectum. Although the patient was unconscious there was not another convulsion for about an hour. It was much less violent and lasted only a few minutes, during which a little chloroform was used. Five hours from the beginning of the attack there was still a slight convulsion from time to time, and another drachm of chloral was given as before, and one-third of a grain of morphia hypodermically. There was no convulsion after this, and, although the patient remained unconscious for six hours longer—about twelve hours in all—it was plain that she was improving. She perspired very profusely nearly all the time. She seemed to go on well for three days; then she had shiverings, her temperature went up to 105° F., and the vaginal discharge was found to be highly offensive. The uterus was scraped and douched with warm perchloride of mercury solution, and an iodoform bougie was left in. The douche was used night and morning till the temperature became normal, about thirty hours after the first douching. There was a good recovery in every respect, except that when I last saw her, a month after the commencement of the illness, there was still a trace of albumen in the urine.

CASE 2.—A married woman twenty-one years of age, robust and rather stout, who was in the eighth month of her first pregnancy, was suddenly seized with convulsions just as she was about to rise one morning. Very soon afterwards I found her semi-conscious and breathing noisily, and in a few minutes a very violent convulsion set in and lasted a considerable time. As soon as the convulsion began to pass off rather more than six ounces of blood were taken from the arm. Chloroform was then administered and delivery attempted. The os soon yielded sufficiently to the fingers to allow of turning. Delivery was easy, as the child was small. An average amount of blood was lost with the placenta, which came away without much trouble on compressing the uterus. The manipulations occupied an hour (during which she was under chloroform), and delivery was completed about an hour and a half after the patient was first seen. An intra-uterine douche of perchloride of mercury was given. Some urine was drawn off and found to be blood-coloured and highly albuminous. She was packed with hot bottles to encourage sweating, one drachm of chloral was given per rectum, and one-third of a grain of morphia hypodermically. There were no convulsions for two hours after delivery, but they then set in and continued to recur at intervals of about half an hour for the following twelve hours, with varying degrees of violence. Chloral was given (one drachm every two hours) per rectum till she had had rather more than half an ounce in all. After that, chloroform was used from time to time when the convulsions were very severe, but it was not pushed. Eighteen hours from the first onset of the convulsions the patient was lying quite unconscious, breathing rapidly, with a very weak and rapid pulse. Her feet and legs were much swollen, and her face was markedly oedematous. Not more than three or four ounces of urine had been drawn off in twelve hours, and she was not perspiring freely. She seemed to be in a dying state. An enema of beef-tea and brandy was given, one-third of a grain of pilocarpin in solution was dropped on the tongue, and the hot bottles were continued. After lying for three hours in a seemingly hopeless condition,

bathed in perspiration, the pulse began to improve. It now became possible to give hot strong tea by the mouth in tea-spoonfuls, and in this way half a pint was given in an hour. There was gradual improvement in the pulse, which became stronger and fell from nearly 200 to 120. Consciousness returned about thirty hours from the onset of the seizure, but there had been no convulsions during the last ten hours. Improvement was now all that could be desired for two days, and then she was found to have a temperature of 104° F. The vaginal discharge was very offensive, but there was not any marked tenderness of the abdomen. The uterus was scraped out, pure carbolic was applied to its inner surface, and then it was thoroughly irrigated with hot perchloride of mercury solution, and an iodoform bungle left in. Irrigation with hot perchloride was repeated night and morning, the temperature remaining above 103° for two days, and not reaching the normal for a week. There was a good recovery, and the albumen disappeared from the urine in a much shorter time than in the first, and less severe, case. At one time or another there were seen in this urine blood corpuscles, blood casts, and hyaline casts, yet it was apparently normal in a fortnight.

Remarks.—In these two cases, which called for treatment on the same day within a few hours of each other, a similar course was pursued, with similar results. The only difference, indeed, was that one-third of a grain of pilocarpin was given in the second and more severe case when it was at the worst, whereas no pilocarpin was given in the first case. In both cases septic poisoning occurred, and the use of the catheter, the hot packing, and perhaps some neglect of the discharge during the period of unconsciousness may have led to this. Each case had its own catheter, syringe, &c., and reasonable precautions were taken to avoid sepsis. As the high temperature lasted so long in the second case, there probably was septic metritis. Four other confinements attended during the same week had a normal recovery.

Conisborough, Yorks.

ABSCESS OF LUNG TREATED BY DRAINAGE AND IODOFORM; RECOVERY.

BY J. EUSTACE WEBB, M.B. ABERD.

A WOMAN aged twenty-seven years came under the care of my partner, Mr. Wm. Hammond, and myself on Aug. 1st, 1894. She had given up all hope of recovery, as she had been told by two medical men that she could not live many weeks. Her mother died of lung disease at the age of thirty-two, and on the maternal side there was a decided history of phthisis. Her father was aged fifty-eight; he suffered from rheumatic gout. She had no brothers or sisters. She had inflammation of the lungs in early childhood, since which time she had been perfectly well. In the latter part of June, 1894, she was suddenly attacked, at the time of her menstrual period, with pain in the right side of the chest, which was followed by cough and expectoration. When examined on Aug. 1st the right chest gave the following physical signs: Great dullness, extending all over the base of the lung posteriorly to a line well above the angle of the scapula, and at the side and anterior part of the chest below a line continued horizontally round from the ensiform cartilage; vocal resonance and fremitus were present, but not markedly increased; the breath sounds were distant, but heard to the extreme base. The tape at the level of the ensiform cartilage showed an increase of one inch on the right side. The breath was fetid, had the characteristic odour of pus, and the air of the whole cottage was pervaded with the same sickly odour. The expectoration was purulent and nummular. The body was fairly well nourished, but she stated that she was losing flesh rapidly. Her pulse was 120, her temperature 102° F., and her respiration 30. Her appetite was very bad, and the tongue was red and glazed. As she lived six miles from my house a record of her temperature &c. could only be taken once daily. On Aug. 9th the chest was aspirated in the axillary line in the sixth intercostal space; the needle penetrated to a depth of two and a half inches, and twelve ounces of pus, slightly mixed with froth, were drawn off. For some days after the operation she appeared greatly relieved, the fever of the breath was very much diminished, and she was able to relish her food. No marked improvement, however, was noted in

her pulse, temperature, or respiration; the breath sounds could be heard more distinctly at the base, but there was no appreciable diminution in the dullness. On Aug. 25th she vomited about half a pint of pus, and again the fever of the breath became less. The physical signs suggesting an increased collection of pus then became more marked, the dullness extending to above the middle of the scapula, behind and to a corresponding level in the side and anterior part of the chest. She was losing flesh rapidly. Her respiration was 40, the pulse was 120 and very soft, and she was passing loose evacuations many times in the day. On Sept. 2nd a large trocar and canula, the size of a No. 14 English catheter, was passed through the chest-wall into the lung just above the angle of the scapula, and between it and the vertebral column it was directed forwards and outwards. This spot was chosen because it seemed to be that of the maximum density. When the trocar was withdrawn a flow of pus through the canula continued until fourteen ounces were collected. A drainage-tube six inches long was then passed through the canula into the abscess cavity, the canula was withdrawn, the drainage-tube was secured to the skin with thread and sticking plaster, and covered with a thick absorbent dressing. Each day the dressings were changed, and at first they were always found saturated with discharge. During the dressings the patient was brought to the edge of the bed in the dorsal recumbent position and directed to cough; by this means many ounces of pus were discharged. After the fourth day the drainage-tube was replaced by one considerably larger in calibre; this was removed daily, and after cleansing was filled with powdered iodoform, reintroduced, and blown clear into the abscess cavity. On Sept. 17th an ethereal solution of iodoform was injected through the tube into the cavity, a proceeding which almost caused death, for the glottis was thrown into spasm, and the odour of ether was very strongly perceptible in the breath. From this date she improved in a marked manner and on Sept. 24th the discharge had practically ceased. From Sept. 2nd she took one grain of iodoform in pill every four hours, and continued to do so until her removal to the convalescent home. On Sept. 24th the measurement of the chest showed a decrease of two inches on the right side at the level of the ensiform cartilage. On Oct. 6th she complained of pain in the front of the chest, and a tender spot was exhibited in the fifth interspace immediately below the nipple. On the 9th, as there was evidence of fluctuation at this point, an incision was made through which dressing forceps were passed and opened, when a large quantity of pus came away. A drainage-tube was then introduced, filled with iodoform, as before described. In a few days the sinus closed. On Dec. 1st there was a difference of three and a half inches in the measurements of the two sides. The temperature was then 99°, the pulse 100, and the respiration 40 a minute. She was removed to St. Michael's Home near Brent on Dec. 6th, 1894, and there made an uninterrupted recovery. On March 8th the right side of the chest measured three inches and three quarters less than the left at the level of the ensiform cartilage. The whole of the lower lobe of the right lung appeared to be solid, the percussion note was absolutely dull, and no breath sounds could be detected. On March 19, 1895, she returned to her old situation, having gained over two stone in weight since Dec. 1st. She said she felt perfectly well.

Liskeard, Cornwall.

Clinical Notes: MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

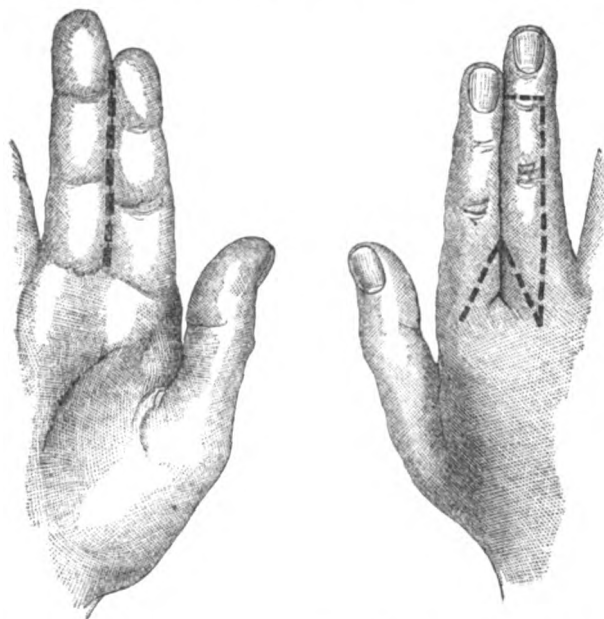
AN OPERATION FOR WEBBED FINGERS.

BY LEONARD A. BIDWELL, F.R.C.S. ENG.,

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THE deformity of webbed fingers, although not a very serious one, is often very difficult to treat. In my opinion, all the older methods of treatment are unsatisfactory in their results. The main objects to be aimed at in an operation for such a deformity are the avoidance of cicatricial contraction and the least possible interference with the palmar surfaces of the fingers. Simple division of the web produces so much

subsequent cicatricial contraction that the fingers become more useless than before the operation. The only old operation which aimed at avoiding cicatricial contraction was that devised by Didot, in which flaps are cut from the dorsal surface of one finger and from the palmar surface of the other. In a tight web the flaps will not be sufficient to completely cover in the divided fingers, and the interference with the palmar surface of the fingers is undesirable. I have therefore devised the following operation. In the case of a web between the index and middle fingers an incision is made down the palmar surface of the web immediately between the two fingers; a triangular flap is then cut on the dorsal surface of the web, the apex of which reaches about midway between the knuckle and the first inter-phalangeal joint. This is dissected up; a third incision is made along the inner margin of the dorsal surface of the middle finger and continued down to the knuckle, as shown in the diagram. This flap is dissected up as far as the web, the fibrous tissue of which is divided, and then united to the inner margin of the palmar surface of the index finger. The triangular flap is also united at its apex to the angle between the palmar surfaces of the two fingers. The index finger is then completely and loosely covered with skin, while the middle finger is uncovered on its outer and on the greater part of its dorsal surfaces; these raw surfaces are then completely covered with Thiersch's grafts cut from the forearm. An



antiseptic dressing is applied and the hand kept on a splint for fourteen days; the wound is dressed at the end of a week and the stitches are removed, the whole surface being then healed. I have recently operated on a child aged two and a half years by this method. There was an extremely tight web between the middle and ring fingers, together with a loose one between the ring and little fingers (the latter extended only as far as the first interphalangeal joint). The web between the middle and ring fingers was treated in the way just described; the web between the ring and little fingers was simply divided after the formation of a triangular dorsal flap; the dorsal and plantar edges of each side of the web were then united with horsehair sutures. All the grafts took, so there was no cicatricial contraction; the movements of the fingers are perfect, and the result is in every way satisfactory.

In all plastic operations I think that it is most essential to leave no raw surface to heal by granulation, since, if this is done, cicatricial contraction is very likely to ensue, and will mar the result of such an operation. As I have pointed out before,¹ the new skin formed from Thiersch's grafts contains a cutis and papillae, and does not show any tendency to contract; in children, at least, it quickly becomes indistinguishable from the other skin. Another point in my operation which I consider of importance is that the

palmar surface of the fingers is not interfered with at all, and instead of making two indifferent fingers, as in Didot's operation, we can be certain of having at least one perfect one even in the untoward event of grafts falling. The triangular flap, which is dissected up from the dorsal surface and fixed into the angle between the fingers in front, makes it impossible for the web to reappear, and the resulting cleft is quite natural in appearance. In many of the textbooks it is recommended that no operation should be performed at an early age, but I consider that my operation should be performed at about the age of two. I feel inclined to recommend this early age since I have found that the skin formed from Thiersch's grafts is more perfect in early childhood than at any other age.

Wimpole-street, W.

A CASE OF POISONING BY STRAMONIUM SEEDS.

By RICHARD CATON, M.D. EDIN., F.R.C.P. LOND.,

PHYSICIAN TO THE LIVERPOOL ROYAL INFIRMARY.

THE following case was under the care of Dr. T. R. Bradshaw, assistant physician to the Liverpool Royal Infirmary, and the notes were taken by Dr. S. Ross, house physician to the infirmary.

The patient, a man of weak intellect aged twenty-nine, was brought to the out-patient department of the Liverpool Royal Infirmary at 11.45 P.M. on March 24th, 1895. He was comatose, with stertorous breathing. The pupils were very dilated and fixed. A bottle was produced containing stramonium seeds and whisky (the seeds were reniform, the surface being pitted and the taste bitter), which mixture he had been drinking. He had convulsive twitching of the arms and legs and lateral oscillations of both eyeballs. His skin was very dry. The pulse was 130, very frequent and small; the respiration was 30. A stomach-tube was passed, and a small quantity of the contents was obtained, including fifteen stramonium seeds. One-tenth of a grain of apomorphine was given hypodermically, and fifteen minutes afterwards he was removed to Ward 11 and placed in bed, hot bottles being placed around him. One-tenth of a grain of pilocarpine was injected subcutaneously, and one minim of croton oil was given. After waiting an hour for the apomorphine to take effect a hypodermic injection of one-sixtieth of a grain of strychnine was given. All this time he was delirious and having ice applied to his head. In half an hour he vomited freely, and henceforward began to improve. On the morning of the 26th he was quite rational. He suffered from retention of urine, and this was relieved by a soft rubber catheter. The urine was of sp. gr. 1020 and contained no albumen, but phosphates were present. The pupils were still widely dilated; there was a small amount of reaction to accommodation. The knee-jerks had been absent from the very first. Cutaneous sensibility was normal. On the 27th the pupils were contracting and reacted to light and accommodation; the knee-jerks were present.

Liverpool.

A BRIEF ACCOUNT OF THREE CASES OF PLACENTA PRÆVIA.

By W. F. GRANT, M.D. EDIN.

I HAVE within the last four months had three cases of placenta prævia, and, as the frequency of occurrence of such cases is estimated at one in 573 labours, I have thought that a note of them might be of some interest. My first case came under treatment on Feb. 18th last. It was the third pregnancy, the others having been normal. Hæmorrhage first began at the end of the fourth month, and there were slight losses at long intervals. At seven months and a half very serious hæmorrhage set in, necessitating interference. The child was stillborn. The mother recovered. The second case occurred on April 30th. Hæmorrhage first started at four months and a half, and there were four or five "shows" during the month following. There was then no recurrence of the hæmorrhage till the seventh month, when so severe a flooding set in, with threatened collapse of the mother, that the case had to be terminated without delay. The child made some very slight attempts at respiration. The mother made a good recovery. It was her eighth confinement, the other labours having

¹ THE LANCET, July 21st, 1894.

been normal. I was called to my third case on June 14th. Hæmorrhage had set in at six months. It had been going on slightly for a week, when some severe gushes rendered interference necessary, although the child had not reached a viable age. The mother made a good recovery. It is a fact of some interest that I had ten months previously confined the same woman with a placenta prævia, and at the same period of her pregnancy. She had had eleven previous confinements, several of them being premature births. In all my cases the head presented. Under chloroform the os was gradually dilated by the fingers, the placenta detached, the hand inserted between the placenta and uterine wall, and a foot brought down. In my last case a small piece of the placenta was found to be detached from the main body, and this piece had been engrafted over the os.

Mile-end-road, E.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

A CASE OF DISEASE OF THE MIDDLE EAR IN WHICH A RESULTING TEMPORO-SPHENOIDAL ABSCESS DISCHARGED THROUGH THE NOSE; NECROPSY.

(Under the care of Mr. BOYCE BARROW.)

THE mode of termination of a cerebral abscess in the manner described in this case is of sufficient rarity to render the account of considerable interest. Writing on the subject of cerebral abscess due to otitis media, Dr. Bristowe¹ says: "An occasional result of abscess is its extension by bursting or by gradual erosion into the cavity of the arachnoid or into one of the ventricles, or its discharge externally through the ear or nose." The presence of the temporo-sphenoidal abscess was diagnosed in this case, and an operation for the evacuation of the pus commenced, when the unexpected and somewhat copious discharge from the mouth made it probable that some of the symptoms might be due to another and less serious condition. For the notes of this case we are indebted to Mr. Willmott H. Evans, registrar.

A woman aged thirty-eight years was admitted into the Royal Free Hospital under the care of Mr. Barrow on Feb. 1st, 1895. In 1882 she fell, striking her head. This accident was soon followed by a discharge from her right ear, accompanied by a good deal of pain and by complete deafness on that side. In April, 1890, she became an in-patient at the Royal Free Hospital, complaining of an intensely fetid discharge from the right ear. Her temperature was very irregular, and she had occasional rigors; there was also some weakness of the muscles on the right side of the face. The mastoid was explored and no pus was found at the first operation, but about a fortnight later at a second operation, a small quantity of pus was evacuated. Her condition improved, and she was discharged five weeks after admission; but three weeks later she was readmitted, suffering from severe headache. The discharge from the ear was still somewhat offensive. The mastoid cells were carefully cleared out, the dura mater was exposed, and an irregular pus-containing cavity was opened, lying between the dura mater and the bone. This was cleansed as completely as possible. After this operation her condition greatly improved, and she left the hospital a fortnight later with a slight discharge from the ear, but otherwise well. From that time she had been in fairly good health, but had suffered occasionally from pain in the right ear, but no discharge. Last Christmas she caught a severe cold, she became completely deaf on the right side, and there was sharp pain in the right ear. About a week before readmission she noticed a swelling behind the same ear, which after being poulticed for two days broke and discharged a great deal of thick fetid pus through the old scar. On Feb. 1st she

came back to the hospital and was readmitted. The patient had had scarlet fever when a child, but it was not followed by any discharge from the ear. There was nothing noteworthy in her family history. On admission her general condition was good. She complained of great pain in the head, and of tenderness over the right mastoid and down the course of the internal jugular vein. Behind the ear there was a scar which had in part given way, and from the opening so formed pus was oozing. Behind the angle of the jaw on the right side there was a rounded swelling about an inch and a half in diameter; it was tender and hard. On examining her eyes no optic neuritis was to be seen. Her temperature varied somewhat, but was fairly constant at about 102° F. Soon after admission she became very drowsy, and as her temperature still continued raised it was decided to operate, so on Feb. 3rd the scar, from which pus was coming, was opened up, and some extremely fetid granulation tissue was scraped away from the opening into the mastoid. The bone surrounding the opening was found to be intensely hard. The wound and the external auditory meatus, from which also fetid granulation tissue had been scraped, were syringed out with a lotion of carbolic acid (1 in 20) and dressed with glycerine and iodoform gauze. During the operation slight twitchings of the muscles of the right side of the face were noticed. On Feb. 4th, after the operation, the temperature fell to normal, but soon rose again to 101.2°. The facial palsy was still evident, the right eye not being closed so completely as the left. The swelling in the neck had extended further down, and was redder. The temperature continued to be very irregular and on the 6th reached 104°. The drowsiness was more marked, and the patient complained that she could not swallow; for this no cause could be discovered in the throat. Incontinence of urine and fæces was present. On the 7th the dysphagia was so great that nutrient enemata were employed. Early on the morning of the 8th the patient had an attack of dyspnoea, becoming very blue; finally she coughed up about two ounces of very fetid pus, and then she seemed much better. The drowsiness became more marked, and at midday on the 8th Mr. Barrow decided to operate. The patient was anaesthetised with the A.C.E. mixture, and Mr. Barrow with chisel and mallet cut away the skull wall behind and above the mastoid process, laying bare the lateral sinus. The bony walls of the mastoid cells were found to be necrosed and filled with caseous pus, which was scraped away. At this moment some pus was seen to be running from the mouth, which seemed to be almost filled with it. The wound was syringed out with carbolic acid lotion and dressed with glycerine and iodoform gauze. Soon after the operation the temperature fell somewhat, but rapidly regained a point over 103°; it varied greatly, sometimes even reaching normal. Pus continued to flow from the mouth, but the amount could not be estimated. The facial paralysis became more marked after the operation. On Feb. 9th the patient's condition had much improved. She was quite sensible and complained of no pain, and her temperature had reached normal. On Feb. 11th her condition was possibly a little better. The pus continued to be discharged from the mouth, but its source could not be discovered. The urine contained much albumen. Attacks of cyanosis came on at irregular intervals. On Feb. 12th the pus had ceased to flow from the mouth, and several attacks of cyanosis had occurred. The respiration was very rapid and shallow. The facial palsy was well marked. The drowsiness was increasing. At 12 noon a severe attack of cyanosis occurred, and in spite of the administration of restoratives the patient gradually sank, dying at 3 P.M.

Necropsy.—At the necropsy, on Feb. 13th, the body was found to be well nourished; rigor mortis was little marked. On removing the dura mater from the right side of the brain pus was seen on the upper surface of the right frontal lobe, and a collection of pus (about one ounce) was found on the under surface of the right frontal lobe, which had been greatly compressed by it. The pus extended to the cribriform plate of the ethmoid, which was apparently abnormally perforated at the side of the crista galli. A track of pus led back from the large collection along the under surface of the brain to the outer surface of the right temporal lobe, where a small aperture communicated with an abscess cavity, containing about a drachm of pus, in the temporal lobe. A small scale of separated bone was found on the petrous portion of the temporal; it had no pus round it, and was probably the result of the operation. The superior longitudinal sinus was thrombosed, but not the lateral sinus.

¹ Theory and Practice of Medicine.

NORWOOD COTTAGE HOSPITAL.

ABDOMINAL SECTION; ENUCLEATION OF PELVIC UTERINE
FIBROID; SUTURING POSTERIOR UTERINE WALL;
RECOVERY; REMARKS.

(Under the care of Dr. J. H. GALTON.)

THE operations for uterine myoma are briefly described as follows: (1) simple myomectomy or removal of the tumour without any of the uterine tissue, by excision or by enucleation and without entering the uterine cavity; (2) hysterectomy, total or partial, or removal with the tumour of more or less, or all, of the uterine tissue proper, usually with entrance of the cavity. The exact operative measures which may be required in the case of an abdominal tumour cannot be always given before the abdominal cavity has been opened, and this statement applies even more strongly to uterine fibromyoma. The surgeon will obtain the best results who is best prepared to adapt himself to the circumstances of the individual case.

A woman aged forty-two years was admitted to hospital on Nov. 4th, 1894. Her paternal aunt died of cancer of the breast. Menstruation had always been regular, painless, and moderate in quantity. Ten months ago the patient first felt a heavy feeling at the lower part of the abdomen; she had twice been unable to pass urine, and the bowels were confined. Dr. Galton then saw her, and examined externally the lower part of the abdomen, finding only slight fullness of the right iliac region, for which an aperient was prescribed. Two months ago she first felt a lump in the lower part of the right side of the abdomen. She had had no pain. On Oct. 15th Dr. Galton saw her again and found a tumour above and to the right side of the pelvis, occupying the right iliac and hypogastric regions, and dull on percussion. On vaginal examination the os was found high up, tilted above the pubic arch, and behind it a well-defined tumour occupying the position of Douglas's pouch and almost filling the pelvis. It was rounded and hard to feel per rectum, and could not be lifted out of the pelvis. Dr. Horrocks saw the case and recommended abdominal section with removal of the tumour if possible. The operation was performed on Nov. 5th, at 11.30 A.M. Chloroform was administered by Junker's inhaler, and Mr. Sidney Turner, Dr. Shearer, and Mr. Arthur Turner assisted. A three-inch incision was made in the middle line of the abdomen below the umbilicus. The uterus and ovaries were found in front of the tumour; the uterus was movable upon it, but connected with it by a band of uterine tissue. It was impossible to raise the tumour or to encircle it owing to the broad base of reflexion of the peritoneum above it. A double ligature was passed through the broad ligament on either side and tied on each side of the ovary and the ovaries removed. As the tumour gave a sensation of fluctuation a small Simpson's trocar was passed into it, and the wound bled so freely as to leave no option but to proceed with the removal. The abdominal incision was extended one inch downwards. The opening of the trocar was enlarged by incision through the peritoneum and the tumour gradually enucleated by the fingers, leaving it attached by a muscular band to the back of the uterus. This was tied in two places and divided between, but the uterine ligature was divided in separating the tumour and disclosed a wound of the posterior wall, through which a uterine sound passed into the peritoneum. This wound was united with four silk sutures. The broad ligament pedicles were dropped in (no washing out of the pelvis or drainage was employed) and the abdominal incision closed by five deep silver wire sutures and four superficial ones. Boracic acid was sprinkled over the wound and green protective placed over the suture ends; then gauze pads and a flannel bandage were applied. The tumour weighed 1 lb. 10 oz. The operation lasted one hour and twenty minutes. The patient was a good deal collapsed during it. After putting her to bed the pulse was 58, feeble, and the temperature 97.8° F. At 6 P.M. the temperature was 100°, the pulse 80, and the respiration 24. At 8 P.M. half an ounce of urine was drawn by catheter. There was a slight vaginal discharge. On Nov. 6th the pulse was 84, the temperature 99.5°, and the respiration 24. At 2 A.M. nine ounces of urine were drawn off, and at 8 A.M. eight ounces. Milk and barley water, one ounce of each, were given every hour. At 7 P.M. the patient passed naturally eight ounces of urine. The vaginal discharge had ceased. On Nov. 7th the pulse was 80, the

temperature 100.2°, and the respiration 20. She passed flatus. On Nov. 8th the patient had beef-tea and meat juice, alternated with the milk and barley water. The pulse and temperature remained about the same, the latter ranging up to 100°. The patient was excitable and easily disturbed by sounds. On Nov. 9th she had chicken with half a wine-glassful of Burgundy. Six ounces of warm water as enema had no effect. On Nov. 10th two cascara sagrada tablets, followed by soap-and-water enema, in fourteen hours caused free action. On Nov. 12th the wound was dressed, all the sutures were removed, and it was healed throughout. On Nov. 18th and 19th the temperature rose to 101°; on the latter day to 102°, and there was a slight discharge from the lower part of the wound. This was entirely superficial, and ceased after a few days' use of the drainage-tube. On Nov. 20th and 21st the temperature was still 101.8°. On Nov. 22nd she had a copious watery motion, mixed with blood and mucus, and very offensive, after which the temperature sank to normal, and the patient gradually improved till Dec. 8th, when she returned home.

Remarks by Dr. GALTON.—I saw her after her return and found the pelvis free from swelling internally, and during my absence owing to severe illness she was seen by Mr. Sidney Turner, who reported that the pelvis was free and the uterus slightly movable.

GRIMSBY HOSPITAL.

CASE OF PERFORATING WOUND OF THE RIGHT PLEURA;
RECOVERY; REMARKS.

(Under the care of Dr. S. HERBERT HOUSE, house surgeon.)

By the modern methods of treatment of wounds of the chest involving penetration of the pleura it is well known that most excellent results are obtained. Even in the case of gunshot injuries, Dr. Charles Adams considers that we have now forty-five fewer deaths in every hundred than obtained formerly. There is a general opinion at the present day that, with careful cleansing, all penetrating wounds of the chest may be entirely closed after any accumulation of blood has been allowed to come away. The rapid recovery from the effects of the injury in this case, as evidenced by the patient's condition on the third day, is remarkable.

On April 25th, 1895, a boy aged four years was brought to the Grimsby Hospital with a history of having fallen down a flight of stairs on to some broken crockery, cutting his back. The accident had happened at 7.30 P.M.; he was brought to the hospital after 10 P.M. When seen he was collapsed, breathing rapidly in a jerky way. The pulse was very feeble, 152. Across the back there was a large lacerated wound seven inches long, extending through the muscles to the spine at the level of the ninth dorsal vertebra, and on the right side reaching to the seventh intercostal space, in which there was a wound through the pleura parallel to the ribs an inch and a half long, through which air was whistling in and out of the pleural cavity; the lung was entirely collapsed. The only covering was a dirty blanket. As quickly as possible all parts of the wound were thoroughly cleansed with 1 in 40 carbolic lotion, care being taken to prevent any entering the pleural cavity. There being very little hæmorrhage the wound was sewed up at once with silk-worm gut sutures, drawing the skin over the wound in the pleura, and finishing with a firm dressing of cyanide gauze and alembroth wool. During that night the child was restless, but had some snatches of sleep. Respiration varied from 40 to 50. The temperature was 99° F. and the pulse 130 to 150 and over. The next day the child was less restless; he was propped up in bed and in the afternoon he joined in some singing which he could hear from another ward. The pulse was 130 and the respiration 38. That night the temperature was 100°, the only time in the progress of the case it was above the normal; the patient slept quietly all night. The child made an uninterrupted recovery. Respiration on the third day was 30 and the pulse 120. He ate and slept well. The wound healed by first intention, and the stitches were removed on May 1st, when the breath sounds could be heard at the base (right). On May 20th breath sounds could be heard all over the right side. The child was up and running about.

Remarks by Dr. HOUSE.—The points of interest, I think, are that for nearly three hours air passing through a dirty blanket, which was all that covered the wound, was entering the pleural cavity, and the singularly rapid recovery, as on the afternoon of the third day he was singing vigorously as though nothing was the matter with him.

¹ Greig Smith: Abdominal Surgery, p. 241.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Ophthalmia Nodosa.—Nine cases of Chancre of the Con-junctiva.—Exhibition of Specimens.

AN ordinary meeting of this society was held on June 13th, Dr. ARGYLL-ROBERTSON, President, being in the chair.

Mr. J. B. LAWFORD described cases of *Ophthalmia Nodosa*, which he described as an affection produced by the penetration into the eye of the hairs of certain varieties of caterpillars; and he related the case of a lad aged sixteen who in September, 1894, came to him with a history of having been struck in the right eye by a caterpillar which had been thrown at him. The skin of the hand with which the lad had touched the caterpillar became irritable and sore, and a number of small white spots developed. The eye became inflamed in the course of a day or two, and when he presented himself there was marked oedema of the lids, with photophobia and lacrymation. The pupil was contracted, the lids could not be everted, and no foreign body could be detected. There was no pain except on exposure to light. He was ordered instillations of cocaine and atropine, and two days later there was less photophobia and the pupil was well dilated and quite round. The upper eyelid was everted, but nothing abnormal could be seen. The lower palpebral conjunctiva was much congested and a few pale papular elevations were visible on its surface. The cornea was clear and there were no synechiae. A few days later two or three black spots corresponding to the centres of the elevations just referred to were made out with the aid of a lens. On Oct. 4th the eye was rather better, but the lower palpebral conjunctiva was still much thickened, and a number of soft smooth elevations were seen in addition to the white papules. Two small hairs were removed from the lower eyelid, the ends of which constituted the black points alluded to above. No others could be seen. The eye slowly improved, and on Oct. 12th the patient was sent home. Two months later he returned, and the eye was still improving. He was not seen again till Jan. 25th of this year. There had been recurrence of all the symptoms a few days after the last visit. The iris was discoloured, but there were no nodules, and the cornea was clear as far as could be seen. Mr. Nettleship saw the boy in consultation, but it was impossible to make an ophthalmoscopic examination of the fundus. He remained in hospital till March 15th. For four weeks there was very little change in the condition of the eye, which improved for a while and then relapsed. Tension was variable, but about normal. Mr. Lawford mentioned twelve cases which had been reported under different names. In all the diagnosis was ultimately established by the discovery of hairs and their identification as the hairs of caterpillars. In all the cases the inflammation was more or less patchy and the signs were those of iritis or irido-cyclitis, occasionally with diminished tension. In one, a doubtful case, there was detachment of the retina. The nodules were said not to develop for two or three weeks after the injury, but the period was very variable. The malady was specially characterised by repeated exacerbations and remissions. The pupil might become blocked wholly or partially by exudation, as in iritis from any cause. The nodules which constituted the characteristic feature of this affection, had been removed and examined, and they closely resembled tubercles—in fact, only microscopical examination and the discovery of the hair enabled the distinction to be made. One notable fact was the large quantity of atropine required to maintain the dilatation of the pupil. The prognosis must be guarded, dependent as it was on the date at which the patient was first seen and on the intensity of the symptoms. In conclusion, Mr. Lawford pointed out that the affection might very easily be mistaken for tuberculous iritis. All the patients came from the country, and the disease only occurred during the months in which caterpillars were active. In this country there was ground for believing that the insect was *bombyx rubi*, which did not appear till the month of August. The irritation might be caused by some poison on or in the hairs.—Mr. HARTIDGE thought that if the symptoms were due to the effects of a poison conveyed by the hairs one would expect them to pass off after a time, and this would not account for the exacerbations; there, he thought, would be more easily explained by assuming that

the hairs themselves travelled about from time to time.—Mr. DONALD GUNN said it was commonly believed that severe ophthalmia occurred among soldiers in India in consequence of a certain kind of caterpillar crawling over their eyes while asleep. It was, however, not one of the hairy kind, but had a smooth, green body. He was not prepared to say whether this was anything more than a story.—Mr. LAWFORD, in reply, said the migration of the hairs only appeared to take place for a short time after their entrance into the eye. They then became embedded in collections of cells, the accumulations giving rise to the characteristic nodules. They remained there till they underwent disintegration. There was the fact also that even when there was no evidence of the hairs having reached the iris, this and the ciliary body were both affected. The disease alluded to by Mr. Gunn, if it actually existed, must be essentially different to that under discussion.

Mr. SIMMONS SNELL stated that he had collected notes of nine cases of Chancre of the Conjunctiva, and he related some of the more typical seeing that very few had been reported, though they could be by no means uncommon. The first case was that of a woman aged twenty-one with a chancre at the internal canthus involving both eyelids, but the lower in greater degree. The caruncle was also implicated. The ulcer was the size of a shilling and there was much induration. The gland in front of the ear and the submaxillary gland were enlarged. She was a nurse and had probably contracted the disease from an infant, the offspring of syphilitic parents. She was engaged to be married at the time, but the marriage was postponed until nine months later. She had since been pregnant six times, but had never gone to full time. The sixth child, the only one living, was now three and a half years of age. It appeared to be healthy until ten months of age, when it developed signs of congenital syphilis and had since had its followed by paralysis. The patient herself was well and looked healthy, but there was epiphora as a result of the local lesion. There was no history of the husband having suffered from the disease. The second case was that of a man aged thirty who was first seen on Sept. 20th, 1887. He was married and was the father of five healthy children. He said he had cut his head open and had washed the wound with some blood-stained fluid, the accident having occurred in a slaughter-house. A month later a small spot appeared, and when he presented himself there was an ulcerated surface with indurated base and raised edges involving the entire outer surface of the right upper eyelid. The pre-auricular and cervical glands were enlarged. The patient suffered among other things from an eczematous condition of the penis and scrotum. His wife was seen in June, 1888 having had lumps in the groin with ulceration of the tongue &c. The third case was that of a man aged fifty-five with a chancre on the right inner canthus involving both eyelids at the junction. The pre-auricular gland was indurated. The ulceration healed in six weeks. Nothing was made out with respect to the mode of infection, but he lived in a model dwelling-house in which there were only four towels for eighty persons. The other cases resembled those related; the ages ranged from childhood to adult life, and the cases comprised four males and five females.—Mr. MARSHALL recalled one case in a man aged twenty who presented a small ulcer at the margin of the cornea; the adjoining glands speedily enlarged, and the usual manifestations followed.—Mr. HILL GRIFFITH said the interest of these cases lay entirely in the diagnosis. He saw two or three every year, but he never made the diagnosis unless there was an eruption. The ulcers resembled those due to tubercle, but the induration of the glands was never absent in syphilis. He pointed out that a vaccine pustule presented very marked resemblance to a chancre, and he had collected half a dozen cases which were not yet published. In these there were more infiltration and discharge and the process of development was much more acute.—Dr. BRONNER (Leeds) said such cases were not very rare, but the subjective symptoms might be very slight and patients might recover from the disease without ever coming to a hospital.—Mr. SNELL, in reply, contended that with an indurated sore and enlarged glands there was no need to await an eruption before commencing treatment. If the induration cleared up under mercurial treatment that settled the matter.

The following card specimens were shown:—

Mr. H. SECKER WALKER: (1) Sarcoma of the Iris; (2) Epithelioma of the Cornea and Conjunctiva; (3) Coloboma of the Iris and Choroid.

Mr. DEVEREUX MARSHALL: Cystic Sarcoma of the Ciliary Body.

Mr. MORTON: Microscopical Sections of Tumour of the Face.

Mr. J. B. LAWFORD: Peculiar Coloured Deposits in Crystal-line Lenses.

Mr. H. WORK DODD: Congenital Pigmentation of Retina.

Mr. SILCOCK: (1) Congenital Anterior Synechia; (2) Tuberculosis of Eyeball Recovering.

Mr. NETTLESHIP: Case of Retinitis Proliferans.

Mr. DOYNE: (1) Case of Acromegaly; (2) Degeneration of Retinal Arteries.

Dr. BEVOR: Case of Ophthalmoplegia Externa.

Reviews and Notices of Books.

Das Fieber. Von Dr. G. B. UGHETTI. Aus dem Italienischen übersetzt von Dr. R. TEUSCHER. Jena: Verlag von Gustav Fischer. 1895. (*On Fever.* By Dr. G. B. UGHETTI. Translated from the Italian by Dr. TEUSCHER. Jena: G. Fischer. 1895.)

"FEBRIS est quid neque tu scis, neque ego, neque quisquam medicorum." This quotation from the writings of Stoerk a century ago is given by the author at the close of his introductory chapter to a monograph which, for freshness of style and acuteness of criticism, has well merited the honour of being translated into German. The phrase might have stood as the motto of the work, the whole tendency of which is to demonstrate that, in spite of increasing pathological knowledge and abundant inquiry into this special subject, there is really still profound ignorance upon the essential nature of the febrile process. Dr. Ughetti, who is Professor of General Pathology at the University of Catania, in arriving at a conclusion so humiliating to our scientific pride, has not done so without having fully studied the subject, and his book is one which deserves the most attentive consideration. The subject in itself is one of the most fascinating in pathology, but it must be obvious that we can hardly expect to arrive at the truth of the febrile state until we have cleared up all the problems of animal heat. Crudely stated, the modern conception of the regulation of the heat of the body and its maintenance at a fixed level, which varies with the species of animal concerned, is supposed to be due to the thermotaxis of the nervous system, which controls and balances thermolysis and thermogenesis. This theory, for it is nothing more, also affords scope for the explanation of the febrile process, by referring it in the main to derangement of one or other factor, especially that of thermogenesis. Yet that does not answer the question as to what fever really is, and when we study the antecedents of fever we seem no nearer to a solution. Thus we seem to see in the fever that ensues on inflammation the effect of the absorption of toxins acting injuriously on the thermogenic centres, and similarly with the fever following on specific infection. Yet it may equally be held that the febrile, like the inflammatory, process is nature's effort to antagonise the noxious influence. But it is said that fever may be excited by traumatism apart from any septic or toxic agency, and again that there is no necessary relation between the latter and the amount of fever exhibited. These and cognate problems are discussed with marked ability in chapters on the Causes of Fever and the Theories of Fever. Thermometry, the symptoms of the febrile state, the types of fever, diagnosis and prognosis, and the anatomical changes ascribed to it are treated in turn with lucidity and knowledge. The whole leads up to the moot question of treatment. As stated, it would seem that the antipyretic phase on which therapeutics has entered within the past twenty years, owing much to the powerful advocacy of Liebermeister, is not an unmixed gain, for it all turns on the point whether fever *per se* is of advantage to the organism or

not. With not unnatural sarcasm the author shows how venesection, once the routine, gave place to a treatment consisting of covering the body with warm clothing and the administration of hot fluids, which by a violent reaction was replaced by a resort to cold, and this again by the introduction of drugs more or less active in reducing abnormal temperature. He thinks that we have now reached a period of transition, one of indecision, wavering between faith and scepticism, sometimes thinking that the best we can do is to leave the fever alone. Whilst so far agreeing with him that indiscriminate antipyresis, especially in the use of antipyretic drugs, is to be deprecated, and also that too much stress has been laid upon rise of temperature as in all cases justifying a resort to these measures, we are quite unable to agree with him in the inevitable adoption of an expectant attitude. He is right of course in saying that when the cause is ascertainable its removal is the only rational line to pursue; but it is impossible to have lived through the experiences of the past twenty years without confessing that, blind as it may be, erroneous as it probably sometimes is, the introduction of antipyresis in its widest sense has effected a marked result on the mortality from fever. Dr. Ughetti says that the action of cold physiologically is to increase the tissue changes that are increased by fever already; but, even admitting this, it must be confessed that the general result is to place the patient in a better condition than he would be were the fever uncontrolled. Moreover, he seems to us to have minimised the results of this treatment, which have been accruing from all quarters since its introduction. Nevertheless his monograph is not to be neglected; it is manifestly the product of a thoughtful mind, and its perusal should not be abandoned because its criticism is keen and its conclusions are novel.

Rapport et Mémoires sur l'Éducation des Enfants normaux et anormaux. Par E. SÉGUIN. Paris: Bureau du Progrès Médical. 1895.

THIS work forms the third volume of the *Bibliothèque d'Éducation Spéciale*, edited and prefaced by Dr. Bourneville, physician to the children's department of the Bicêtre. Although Séguin was a Frenchman by birth and education, and some of his earlier work was done in France, political troubles induced him to leave his native land for the United States shortly before the commencement of the second empire, and his life was from that time till his death mainly spent in America. The editor says of him in the preface: "Séguin français est un inconnu en France"—hence the translation into French of works written originally in English by a Frenchman. In the preface is given a review of his life and work. Concerning himself throughout his life with the education not only of idiots and feeble-minded children, but with the principles upon which the education of normal children should be conducted, he was sent as United States Commissioner to the Vienna Exhibition of 1877 to report on the Educational Section. The bulk of this work consists of a translation into French of this report, the second edition of which was revised by the author just before his death in 1880. In Part I. is considered the Education of the Child from the cradle upwards, and in Part II. Education of the Deaf and Dumb. Part III. contains a description of the Methods of Educating Idiots and Weak-minded Children in various countries, and Part IV. is a dissertation on Popular Education as it is and as it ought to be. The author's main contention was for the necessity of educating upon physiological principles; he was opposed to ecclesiastical interference, and was in favour of the co-education of the sexes and of increasing the number of female instructors. In addition to the above-mentioned report there are also included translations into French of two papers by Séguin

which appeared in the *Archives of Medicine* in 1879 and 1880 on the Psycho-physiological Education of an Idiot Hand and the Psycho-physiological Education of an Idiot Eye, both referring to the same patient. The first was translated into French in the *Revue de Médecine* in 1880, and the second is now translated by Dr. Bourneville. The present volume is of value not only to those engaged in the care and treatment of idiots, but also to those who are concerned with the education of normal children.

The Medical Annual and Practitioner's Index: a Work of Reference for Medical Practitioners. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1895.

YEARLY summaries such as this are naturally welcomed by the majority of the medical profession, and are to many of us practically indispensable. Even the most favourably circumstanced and industrious readers find it a hard task merely to peruse the mass of new observations and suggestions ever accumulating in periodical literature and standard works. To this congestion of information the skill of the practised abbreviator comes as a much needed relief, and the utility of the present work is evidenced by the appearance of the thirteenth annual volume. About two-thirds of the book is taken up with an account of the principal advances in medical and surgical practice recorded during 1894. Under the former of these two headings the treatment of diphtheria by antitoxin serum perhaps claims most attention, and is dealt with in a special article by Dr. Armand Ruffer, honorary secretary of the British Institute of Preventive Medicine. After some details as to the history of the discovery he describes the immunisation of the horses which yield the serum, and quotes statistics showing that the hospital mortality of diphtheria has been reduced by about one-half since the employment of the new remedy. There is also a copious list of pharmacopœial remedies against diphtheria, recommended by various authors. Dr. Colcott Fox reviews Dr. Byrom Bramwell's treatment of psoriasis by thyroid extract, and adds as the result of his own experience that the extract is useful in such cases, though probably not more efficacious than some of the older remedies. The most satisfactory application, apart from its staining effect, is chrysarobin, made up with zinc oxide, lanoline, and vaseline. The thyroid treatment of sporadic cretinism is the subject of an article by Dr. Shuttleworth, late medical superintendent of the Royal Albert Asylum for Idiots, Lancaster. His conclusions are very favourable to the treatment, and its results are depicted in engravings of patients before and after the use of the remedy. The important question of the dietetic treatment of phthisis is discussed by Dr. Loomis of New York in a comprehensive and minutely detailed article of several pages. Meat and milk are the alimentary substances on which he mainly relies. He has known phthisical persons to live for months on nothing else, gaining speedily in flesh and strength. The patient should take six meals a day, with meat in some form at each of them. During the first stage of the disease two pounds of beef at least should be consumed in the twenty-four hours, or its equivalent in the juice squeezed from a lightly-broiled thick steak. The author directs that in all cases the meat should be "rare," a word which in this connexion is the American equivalent for "underdone." Cod-liver oil or one of its preparations is to be taken freely, but cough mixtures are to be avoided as much as possible. Dr. Saundby of Birmingham writes on diet in diseases of the stomach. He recommends that in dilatation, so often associated with catarrh, at least five meals should be taken daily, each not exceeding five or six ounces, care being taken to avoid lumps of solid food. Milk and meat powder, made into gruel, are very useful in these cases. In hæmatemesis from gastric ulcer he gives nothing

but nutrient enemata, repeated every four hours, and consisting of an egg beaten up with sufficient milk to make four ounces, with the addition of a drachm of brandy if required. Habitual dyspeptics should use tea and alcohol in moderation only. In another part of the volume there is a notice of the treatment of gastric ulcer by small doses of potassium bichromate as advocated by Professor Frazer of Edinburgh. Among the references to lately recognised and infrequent morbid conditions may be mentioned the memoirs on various forms of Angio-neurosis by Dr. Ramsay Smith, and on Friedreich's disease (general ataxia associated with club-foot) by Dr. Hector Mackenzie of St. Thomas's Hospital. Each of these articles is illustrated by plates. Mr. Simeon Snell of Sheffield contributes a valuable essay on Eye-sight and School-life, accompanied by no fewer than eight plates. This subject, of such importance to the rising generation, deserves the attention of parents and teachers everywhere, and is very competently handled by the author. Briefly, his recommendations are—the avoidance of small print, fine sewing, and unsteady artificial illumination; the necessity of school-rooms which admit plenty of light either from above or on the left-hand side of the desks; the selection of seats provided with backs and of desks of a suitable height. Dr. Smyly, master of the Rotunda Hospital, Dublin, writing on the Prevention of Puerperal Fever, deprecates the usual vaginal examination during labour, and recommends instead of it the external palpation of the abdomen. Having for many years practised the vaginal method exclusively, he at first had a difficulty in believing that external examination could be easier and more reliable; but experience has satisfied him that it really is so, and he remarks that obstetric students trained according to this system make fewer mistakes than those who follow the ordinary procedure. Among the gynæcological operations Dr. Smyly describes vaginal hysterectomy according to the method of Doyen of Reims, and abdominal hysterectomy as practised by Martin of Berlin. He has performed each operation five times; the vaginal hysterectomies were all of them quite satisfactory, but one of the abdominal cases was unfortunately fatal. Abdominal surgery is dealt with under various headings by Mr. Mayo Robson. Under Spleen (surgery of) he makes reference to many cases of successful removal of this organ on account of rupture, "movable spleen," and simple hypertrophy, quoting from our columns¹ the observation that splenectomy in leukaemia has been almost invariably fatal. It is, however, in connexion with lesions of the gastro-intestinal tract that the recent advances of operative surgery have been most apparent. Of these procedures a tolerably full account is given by Mr. Robson, together with references to an ample bibliography. After mentioning his preference for the decalcified bone bobbin in operations for producing entero-anastomosis, he goes on to describe the operations for this purpose devised by Dr. Cozens Bailey and Dr. J. B. Murphy, the former of whom uses a decalcified bone tube, and the latter a two-part button. Several engravings make these explanations quite clear. Mr. Allingham's treatment of intestinal stricture by making a longitudinal incision and transforming it by stitches into an apparently transverse one is explained and illustrated by engravings. Several pages are devoted to operations on the stomach, such as gastrotomy, pyloroplasty, and gastro-enterostomy. The section on the surgery of the gall-bladder is longer, and contains two illustrations showing the method of making an anastomosis between the gall-bladder and intestine in cases of stricture of the bile-duct. Mr. Mayo Robson has performed this operation thrice, each time with success. In recurrent appendicitis the quiescent period is the most favourable time for surgical interference, an instance of

¹ THE LANCET, May 5th, 1894

which was afforded by the series of nine cases successfully operated on by him and published in our pages.² Mr. Arbuthnot Lane describes his method of treating oblique simple fractures of the tibia and fibula. He employs a sheet-iron splint provided with a foot-piece movable round the axis of the limb and capable of being fixed at an angle corresponding to the natural position of the foot. Recognising the difficulty according to ordinary methods of restoring the obliquely fractured tibia and fibula to their normal outline, he exposes the ends of the bones and brings them into accurate apposition by means of steel screws. Dr. Robert L. Watkins of New York contributes an illustrated description of the Granular Masses in the Blood, or so-called third blood corpuscles, considered to be pathognomonic of tuberculosis. He quotes cases occurring in his own practice which exemplified the value of this symptom as an aid to diagnosis. Sections devoted to New Remedies. Electro-therapeutics, Sanitation, Surgical Appliances, &c., make up the remainder of the volume, which is unquestionably a useful work of reference, well deserving its popularity.

A Medico-Topographical Account of Jeypore. By Brigade-Surgeon-Lieutenant-Colonel HENDLEY, C.I.E., Bengal Medical Department, Hon. Vice-President of the International Congress of Hygiene at Budapest, 1894, and Delegate for Rajputana at the Congress of 1891, &c. Calcutta: Printed by the Calcutta Central Press Company, Limited. 1895.

THIS volume is a record of what has been done in the past as regards health and allied subjects in the city and districts of Jeypore, and is based on the author's experience of twenty years as residency surgeon and thirteen as superintendent of dispensaries at Jeypore, Rajputana. It has been written in the hope that the information may prove useful—as it certainly will, we may add—to the author's successors in the post he now occupies, and in the belief that money will be saved to the State in the future by the prevention of an unnecessary repetition of experiments. The idea is an excellent one, and we concur in thinking that if a somewhat similar account were drawn up for every station in India—as has now been ordered by the German Government to be done for each military cantonment in the German empire—it would prove of real value. The work is full of pertinent facts and details and is copiously illustrated by maps, diagrams, and charts, the preparation and arrangement of which must have cost its author a large amount of time and labour. The topography, meteorology, water-supply, sanitary arrangements, vital statistics, and diseases of the city and districts of Jeypore and various other useful points are set forth and discussed with the local knowledge and experience which Brigade-Surgeon-Lieutenant-Colonel Hendley's long and valuable service in that part have given him. He has every claim to speak with authority on such matters. It should be added that the Jeypore Durbar, with its usual liberality, has borne the expense of publishing the work.

Transactions of the American Gynecological Society for the year 1894. Vol. XIX. Philadelphia: W. J. Dorman. 1894.

THE nineteenth volume of the Transactions of the American Gynecological Society, though somewhat smaller than its immediate predecessors, contains several papers of interest. The President, Dr. Lusk, in his address dealt with the Relative Value of the Various Surgical Methods of Treating Uterine Fibroids. He said there was nothing in gynecology which in an equal degree marked the boundary line between the old order of things and the new as the recent discussions upon the surgical treatment of uterine myomata. He considered that no achievement in surgery had ever borne witness

so completely to the triumph of human ingenuity over anatomical difficulties as the safe extirpation of the enlarged uterus, and he referred with pardonable pride to the leading part taken by the members of the society he was addressing in bringing his operation to its present position. At the same time, Dr. Lusk uttered a note of warning against the adoption of radical treatment in every case of uterine fibroids. The argument derived from the supposed liability of myomata to undergo malignant changes seemed to him clinically of little value. Among palliative measures he considered that curetting furnished the largest number of disappointing results. Removal of the uterine appendages for fibroids, which is scarcely to be classed either as a palliative or as a radical measure, had given him satisfaction in five cases that had been under his observation recently. He thought this operation unsuitable for large tumours or cystic tumours, and suggested also that it was probably of questionable value in cases where the fibroids, being situated low down, are nourished more especially by the uterine arteries.

Year-Book of the Scientific and Learned Societies of Great Britain and Ireland: comprising Lists of the Papers read during 1894. Compiled from Official Sources. Twelfth Annual Issue. London: Charles Griffin and Co., Limited. 1895.

ABOUT one-fifth of this useful and convenient work of reference is devoted to the medical societies of England, Scotland, and Ireland, the names of the presidents and secretaries and place of meeting being given in each instance, together with the titles of all the papers read during 1894, and their authors' names. A list of the publications of the Medical Department of the Local Government Board is also included in this section. Under the headings "General Science," "Chemistry and Photography," and "Biology, including Microscopy and Anthropology," there are also to be found the titles of many papers on medical subjects and on cognate branches of science. The compiler has succeeded admirably in presenting within moderate limits a summary of a year's work in all departments of knowledge, whether mental or mechanical, scientific or transcendental.

Analytical Records

FROM

THE LANCET LABORATORY.

DISINFECTANT FLUID AND POWDER.

(LAWES' CHEMICAL COMPANY, LIMITED, 59, MARK-LANE, E.C.)

BOTH this fluid and powder proved of standard and reliable strength in regard to the antiseptic and disinfectant contained in them. Thus the brick-coloured powder yielded at least 16 per cent. of active phenols, whilst over one-fourth of the liquid, which is an excellent type of this class of preparation—i.e., an alkaline mixture of resin and tar acid, which on dilution with water gives a uniform milk-like emulsion—consists of true phenols. Inert tar oils are so often contained in preparations vaunted as disinfecting fluids and powders that it is satisfactory to report in regard to the above preparations their freedom from such useless components. In the light of these results we were not unprepared to find that experimental evidence had demonstrated the powerful bactericidal properties of both products, more especially of the fluid.

FOODS FOR THE DIABETIC.

(E. BLATCHLEY, 167, OXFORD-STREET, W.)

As is well known, there is now made a large and excellent assortment of foods which are well adapted to the requirements of patients suffering from diabetes, but amongst the

² THE LANCET, June 30th, 1894.

most satisfactory farinaceous substitutes which have recently been proposed is probably soya flour, and still later aleuronat, which is a flour containing from 80 to 90 per cent. of vegetable albumen and but 7 per cent. of carbohydrate. The care and attention which Messrs. Blatchley have given to these special requirements, especially in regard to palatability, has already been exemplified in the excellent preparations which they have from time to time placed at the physician's disposal, while further examples are afforded in some recent preparations which they have submitted to us, which have for their basis either the comparatively recently isolated albumen (aleuronat) or soya flour, saccharin being added where sweetness is preferred. No. 1 biscuit is prepared from aleuronat, soya, bran, and eggs; No. 2 from soya, coker nut, and eggs; and No. 3 from almond, soya, and coker nut and eggs sweetened with saccharin. They are all quite free from starch, and the taste of each is satisfactory and such as would not lead to the slightest suspicion that the starchy materials which largely compose the ordinary farinaceous articles of diet are entirely absent.

BOISSELIER'S COCOAGENE.

(C. BARRY & Co., 30, ROPEMAKER-STREET, E.C.)

"Cocoagene" consists of round compressed tablets, thicker than, but about the dimensions of, a two-shilling piece, which are composed (according to our analysis) of perfectly pure cocoa, with a large proportion of the indigestible fat removed. They contain no foreign addition, the alkalinity of the ash (4.49 per cent.) being only equal to 0.52 per cent. of potash. The form in which cocoagene is made renders it most convenient for preparing the excellent and nourishing beverage which pure cocoa affords.

BORINE ANTISEPTIC AND PROPHYLACTIC.

(MEDICAL NOVELTY COMPANY, 21, WEST TWENTY-THIRD-STREET, NEW YORK.)

Borine is a pale-yellow, spirituous fluid, and is described as "composed of the active constituents of benzoin, winter-green, meadowsweet, golden rod, and witch hazel, combined with the stearoptenes of wild thyme, eucalyptus, peppermint, and boracic acid." As an agreeable antiseptic for general purposes it possesses many advantages, not the least of which are its pleasant, fragrant odour and its harmlessness. It is well adapted as an effective and pleasant mouth wash, while it has also been advocated as a useful application in obstetric and surgical use.

CORROSIVE SUBLIMATE PELLETS.

(THE SANTAS CO., LTD., THREE-COLT-LANE, BETHNAL-GREEN, E.)

Each of these pellets contains corrosive sublimate in such proportion as to yield pint of disinfectant of the strength recommended by the Local Government Board. For this purpose they are, of course, extremely useful and convenient, but on account of their highly poisonous nature great care should be exercised in regard to their sale. In order to afford some precaution in this direction the pellets are coloured a deep indigo-blue.

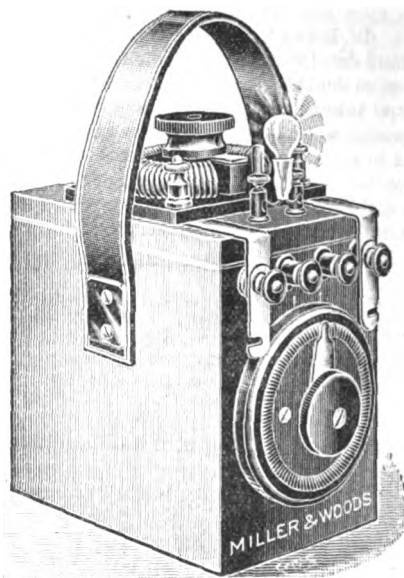
New Inventions.

A NEW PORTABLE SECONDARY BATTERY.

THE use of electricity as an adjunct to diagnosis as well as a therapeutic agent when properly administered is now universally acknowledged, but heretofore the clumsiness and weight of batteries, both primary and secondary, have stood greatly in the way of its adoption by general practitioners. The secondary battery which Messrs. Miller and Woods of 2, Gray's-inn-road, have submitted to us is extremely handy and compact. It will either heat a cautery or

light a lamp; in the former case the cells are connected in parallel, in the latter in series. There is a separate rheostat for each purpose, so that the degree of light or heat can be accurately regulated.

When exhausted the battery can be easily recharged from the street main, if the supply is continuous and not alternating, by connecting the battery up from its lamp terminals to the light-supply, by taking the lead fuse out of a safety cut-out which controls an eight or sixteen candle power lamp and



bridging the gap with the battery instead of the fuse. The battery must be connected so that it works against the street current. This can be easily ascertained by noting the brightness of the interposed lamp. Connect the battery up one way, then reverse by changing the wires; whichever way the lamp burns most dimly will be right. The battery can be seen at any time at the establishment of Mr. T. H. Montague, 101, New Bond-street, and we can conscientiously recommend it to the profession as a very useful piece of apparatus.

THE SOCIETY OF APOTHECARIES.—The following changes have taken place in the staff of examiners of the Society of Apothecaries of London:—Mr. Bilton Pollard has been appointed one of the council examiners in surgery, vice Mr. A. Clark, who retires by rotation. Mr. C. B. Lockwood has been appointed one of the society's examiners in surgery, vice Mr. Bilton Pollard. Dr. T. D. Savill has been appointed an examiner in medicine, vice Dr. F. Warner, who retires by rotation; and Dr. Leith Napier has been appointed an examiner in midwifery, vice Dr. Lewers, who retires by rotation. Mr. Stonham has been appointed an examiner in anatomy, vice Mr. C. B. Lockwood.

On Tuesday evening, June 11th, a complimentary dinner was given by the members of the medical profession in Leamington and the neighbourhood to Dr. F. H. Haynes at the Regent Hotel, upon the occasion of his election as a Fellow of the Royal College of Physicians of London. Mr. J. R. Jeaffreson presided, and there were also present Drs. Thursfield, Thorne, Wyer, Douglas, Smith, Rankin (Warwick), Crowe (Worcester), S. W. Haynes (Birmingham), Tomkins, S. Browne, A. Bullock, B. Rice, Mason, and Olive, Surgeon-Major Hutton, Messrs. Fenn Clark, Morris, T. W. Bullock (Warwick), D. Rice (Southam), A. E. Haynes (Evesham), Growse (Kenilworth), Dickinson, Bradburn, Cowley Atkinson, and R. J. Pitt (Wellesbourne).

THE LANCET.

LONDON: SATURDAY, JUNE 29, 1895.

THOUGH the political crisis and the change of Ministry have put an end to all legislation on controversial subjects for the present Session, they do not affect the interest of the debate on the second reading of the Inebriates Bill. The interest of the motion for the second reading was in the fact that it was carried, and carried in spite of very serious speeches against such legislation by Lord HALSBURY, the Marquis of SALISBURY, and others. The jealousy of any interference with individual liberty is so great in this free country that it is only with the utmost difficulty that it can be in any degree overcome. The habitual drunkard has often his lucid intervals, in which alone he is seen by the world, and in which, too, he often appears to great advantage compared with other men. So that there is something in the proposal to interfere with his liberty which excites, and justly excites, the suspicion and the criticism of men of the world. Other insane people are seen to be so; he rarely. Yet his insanity may be as complete and as destructive of his own interests and those of his family as theirs. The habit may be so continuous, or the paroxysms so frequent and so overpowering; he may be so reckless of his own health, may show so utter a disregard for all decency, and so complete a want of consideration for all those whom he had formerly loved, as to make the word "liberty" in its application to him an absurd misnomer. In the case of the habitual drunkard liberty does not exist. As we have said, these cases are known only partially to the public. They are kept out of view, partly by kind friends and partly by their own glimmering of sense that they are not in a state to be abroad. But they are constantly seen by the medical man. Either the patient himself or his friends appeal, often pitifully, to him for something to be done to arrest a process of steady and often rapid degeneration in character and in health, leading, of course, often to an equally rapid degeneration in circumstances. The medical man is helpless. He tides the patient over an illness and explains to him or to her—for with painful frequency the patient is a woman—the nature of the disease which is assailing him or her. Very often he is rewarded for his faithful warning; but oftener he is not. The prescription of abstinence and self-control is received with apparent conviction and resolution, but he knows only too well that it will soon be forgotten, and that the paroxysms of alcoholic craving will recur till delirium tremens, or hæmatemesia, or other grave disease makes the patient cry a halt, but probably only when it is too late to save health, or character, or fortune. This is a sequence of events that is witnessed constantly by medical men, and it can only be accepted on their evidence.

There is, of course, a large number of cases among the poorer classes very pitiable in their nature which cannot be concealed, and the treatment of which constitutes a large part of the duty of the police magistrate. The cases mentioned by the Lord Chancellor are in point. Out of 33,000 women

sent to prison every year for drunkenness 11,000 had not less than ten convictions recorded against them, and of the men not less than 16,000 had each undergone not less than the same number of imprisonments. In one of the London prisons there were at the time of the return quoted 105 women who had been committed from 40 to 133 times in the course of a year. The number of convictions under the same name is not always a guide to the real number. The Lord Chancellor mentioned the case of a woman who had 400 convictions against her, but as her husband had paid £200 in her behalf she must have been 600 times for drunkenness at the police-court.

All medical men are agreed with the view of the late Sir ANDREW CLARK that in such cases short periods of confinement are almost worse than useless and that larger legal powers should be given for controlling and curing them. The severe opposition encountered in the House of Lords the other day was due rather to the fact that the Bill of the Lord Chancellor proposed to give powers of compulsorily detaining for a lengthened period—from one to three years—not only persons who had brought themselves frequently into the police-courts by their drunkenness, but persons who had not done so. Some of the saddest of these cases never appear in connexion with the police. And it is the proposal to give powers for their compulsory detention to a Judge, without the concurrence of a jury, that filled many noble lords—notably Lord SALISBURY—with alarm and led him to make what Lord KIMBERLEY called "too savage an attack" on the Bill. We should concede to the objecting lords any reasonable securities against the hasty action of friends, either from impatience or from more selfish motives. By all means let the judge—perhaps, as Lord SALISBURY said, "with a crank"—have a jury to check him. But, surely, it should be possible to devise some legal provision for the care and control of well-ascertained cases, which would, at the same time, protect cases of a more doubtful or less serious order from interference. The medical profession is not an exacting one. It takes a lenient view of human errors and infirmities, but it has long demanded that the existing Acts for dealing with habitual drunkards should be strengthened. It has no pleasure in mere incarceration or in unnecessary detention; but it aims at curing such persons, and it has a right to expect from the Legislature some help. Law is for the benefit of those who cannot save themselves, and if there is any such class it is that of the habitual drunkard.

In the *Edinburgh Review* an able writer discusses the question, Is meteorology really a science? "The answer," says the reviewer, "must depend very much on what we mean by the words. If meteorology consists merely in observing and recording temperatures and barometric pressures, it certainly is not a science; if it pretends—as it is not uncommonly supposed to pretend—to foretell the weather of the coming season, again most certainly it is not a science. But, if under the name of science we include the careful and systematic study of the meaning and import of natural phenomena, then assuredly the painstaking attempt to reduce

to some standard of comparison accurate observations of temperature, of atmospheric pressure, of wind force or direction, and the countless changes incidental to these, the endeavour to coördinate them, to discover their relation to each other, their interdependence on each other, which is what is properly understood as meteorology, is as much a science as astronomy, geology, chemistry, or magnetism, in every one of which there is still a great deal of uncertainty, a great deal of groping in the dark." We believe the distinction here drawn and the view expressed to be sound and just, and we have only one exception to take to the above passage. We imagine that no one above the vulgar level conceives that meteorology professes to foretell in advance the weather of any coming season. Every meteorologist will admit that this is impossible, and, so far as we can see, is likely to remain for ever impossible. What is practicable, what is year by year being achieved with constantly increasing accuracy and success, is by a careful survey of all the meteorological conditions present at any given moment to forecast the probable course of the weather during the ensuing day or two. Meteorology may, indeed, go a little further. During a period of prolonged drought or continuous rainy weather it may be possible by a comparison of the barometric pressures over a given large area—say that of Western Europe—for the meteorologist to say that his observations enable him to assert that the general conditions are tending towards a change either in the direction of settled fine weather or the contrary. But the limits of such prevision are very narrow, and nothing in the present state of our knowledge affords the smallest foundation for the hope that we shall ever be able to predict the probable state of the weather—say a month ahead. Those *soi-disant* weather prophets who announce long beforehand with so much assurance that we are going to have a very hot or cold, dry or wet, season are simply audacious pretenders. The writer in the *Edinburgh Review*, while expressing himself with due philosophic caution, indulges in an anticipation for which it seems to us there is but slender foundation. "There is," he says, "underlying all study of meteorological phenomena a hope that it may eventually lead to the calculation of future weather in the same way as—if things so unlike may be compared—the study of astronomy leads to the calculation of the rising or setting of the heavenly bodies, of their eclipses or occultations. But thousands of years had passed in patient observation before the motion of the heavenly bodies was understood, before the problem was solved by the intuition of COPERNICUS or KEPLER, and by the genius of NEWTON. When we reflect on the history of astronomy we may well be hopeful as to the future of meteorology, though the full knowledge may not come in the time of us, or our sons, or our sons' sons, and all that we individually can do is to go on slowly and laboriously accumulating observations of every conceivable kind, not knowing when or how any one set of observations may contain the key to the problem; even as in astronomy the observation of certain small, apparently trivial irregularities in the orbit of Uranus led to the discovery of Neptune." That meteorology will ever be found to obey laws comparable in mathematical exactness to those that

characterise astronomy seems to us, we confess, in a high degree improbable. On the other hand, it is impossible to doubt that meteorology does obey definite and invariable laws, and that our knowledge of these laws is only in its infancy. A shower of rain seems the most capricious of things, but we regard it very differently when we come to understand that the annual rainfall at any given spot on the earth's surface is practically invariable. The number of fine, hot days varies much from season to season, but the amount of heat received from the sun by any given locality in the year is a practically fixed quantity.

The leading features of the weather in the British Islands are determined by the prevalence of cyclones or anti-cyclones. Cyclones, we need hardly say, are rotatory movements of the atmosphere—the rotation in the northern hemisphere being against the hands of the clock—around a centre of low pressure, and are characterised by violent winds and heavy rain. They come to us from the Atlantic, travelling from west-south-west to east-north-east, and usually pass over Great Britain somewhere between Aberdeen and the Humber. The force of the cyclone, however, extends far beyond these limits and may be felt over the entire area of these islands. Anti-cyclones, on the other hand, are areas in which the wind rotates in the same direction as the hands of a clock around a high-pressure area, and are accompanied by light winds and fine, clear weather. Unlike cyclones, the anti-cyclones tend to be stationary. Two of the most common centres for anti-cyclones are northern Sweden and south-western Russia. "The normal weather system," says the reviewer, "of this part of the world in winter is a barometric pressure of about 29.9 inches, slowly becoming less towards the north and greater towards the south, with a gentle west or south-west wind and soft blue sky, with scattered flocculent clouds; any variation from this at once speaks of disturbance and calls for examination. The first symptom of an approaching cyclone is a rise—possibly a very considerable rise—of the barometer. This, if it comes from the westward, advancing eastward, is an almost certain prognostic, which is confirmed if the barometer, after its sudden rise, begins to fall as quickly as it rose." Of the causes of these cyclones, why they pursue a tolerably uniform course, why they always move round a centre of low pressure, nothing is definitely known. Of the many hypotheses framed to account for them we may quote the reviewer's statement of one. It is "that cyclones are formed in the great atmospheric currents like whirls in a mill-race; that the cyclones of the North Atlantic which reach our shores are formed off the banks of Newfoundland, where the cold wind from the north drives into the warm, moist wind from the south-west overlying the Gulf Stream. That such a clashing of currents will form a series of whirls is open to observation wherever one stream discharges itself into another, and that they will turn in the direction in which this other stream is going. It is equally open to observation that in such whirls there is a deep hole in the centre, and that the water is heaped up round the outer circumference. It may thus be possible that the cyclones are due primarily to the clashing of two currents, and secondarily to the profuse condensation and

precipitation so occasioned, each cause assisting and intensifying the effect of the other."

We cannot pursue the subject further at present, but our contemporary's article is noteworthy as proving that meteorology has at length made good its claim for recognition among the sciences.

SINCE MOLESCHOTT'S beautiful monograph on DONDER'S the medical world has not seen a worthier *immortelle* laid on the tomb of a professional brother than Professor MOSSO'S biographical sketch of KARL LUDWIG. Writing for an Italian public, the Turin physiologist has something to say of the condition of his science when forty-five years ago LUDWIG began his professorial career in the University of Marburg. Vitalism was then the accepted creed, entrenching itself behind the authoritative names of ALEXANDER HUMBOLDT, JOHANN MÜLLER, and JUSTUS LIEBIG; but LUDWIG, reinforced by DU BOIS-REYMOND, HELMHOLTZ, and BRÜCKE, began the steady mining operations by which that hypothesis has had to evacuate one stronghold after another, until, recalling science from the "high *priori* road," he placed it on the sure, if slow, track of observation and experiment by which alone the mysteries of life and death can be reached.

We need not recapitulate, even under Professor MOSSO'S brilliant guidance, the achievements of LUDWIG in research. These were sufficiently touched upon in our obituary notice of the master, when special importance was attached to the weapons he added to the physiologist's armoury—weapons by which nature, in disease as in health, is made the registrar of her own movements, particularly of the blood stream and of respiration. It is his testimony as a pupil, assistant, and eye-witness of LUDWIG and his work that gives Professor MOSSO'S reminiscences their present interest—testimony which, coming from an Italian, our readers will at once appreciate when he says that of all the nationalities by which LUDWIG'S laboratory was frequented, England supplied the largest number, "several of whom form around Professor FOSTER in Cambridge one of the prolific centres of activity in the study of life, and the chief glory of the great master." From this, by a natural transition, Professor MOSSO proceeds to note the services drawn from the same school by other foreigners and reviews the long list of Italians who owe to it their best inspiration and their soundest as well as most striking products. In this connexion he gives some interesting details as to his own work and that of his compatriot Professor LUCIANI of Rome (also a distinguished pupil of LUDWIG) on the prolongation of vital processes in the thoracic and abdominal viscera after life has "officially" been pronounced extinct. "I well remember the emotion that thrilled me when, experimenting along with LUDWIG, we found that twenty-four hours after death the life of the kidneys was not extinguished, that the sanguineous vessels could yet move, and that they reacted under the application of medicaments. The poetic dream of the resurrection has therefore a reality of its own in the mysterious complexity of the organs. Only the brain has yet defied physiological effort to wake it from

the sleep of death!" But, on passing from LUDWIG the experimental philosopher to LUDWIG the man and the citizen, Professor MOSSO has much to tell the world of the deepest interest. "LUDWIG," he says, "the greatest of vivisectioners, was president of the Leipzig Society for the Protection of Animals, and remained to the last one of its most active members." Germany owes it to him that her horses and beasts of burden are now humanely treated. To him is due that awakening of the true humanitarian spirit towards the brute creation that culminated in the "Verband der Thierschutz-Vereine des Deutschen Reichs" (Union of German Societies for the Protection of Animals). It was mainly from her sense of the gentler attitude to be encouraged towards animals on the part of the rising generation that Leipzig made him an honorary citizen on the fiftieth anniversary of his graduation in medicine. "No physiologist," continues Professor MOSSO, "has ever sought with greater frankness than he to impose just limits on vivisection. The gates of his institute were ever open to all who wished to assure themselves that he, in the midst of his experiments, knew how to spare suffering. The vivisectioner's art attained such perfection in his hands that, having to sacrifice an animal, he did not let it feel that it was even being tied. He would apply the muzzle and instantly proceed to the exhibition of ether or chloroform, which, in a few seconds, in a dog, for example, made it insensible. It is an error," adds Professor MOSSO wisely—"it is an error to believe that experiments can be performed on an animal which feels. The perturbation induced by pain in the functions of the organism is so profound as to render useless the experimenter's study. It was LUDWIG who uttered the celebrated *mot* that some physiologists, to study the nervous system, act like him who fires a pistol into a watch to see how the chronometer works. Suffering ought to be entirely eliminated from physiological experiment, because the instruments we employ to-day are so delicate that they become unserviceable the moment the animal is agitated or moves."

Illustrative anecdotes without number might be multiplied to prove the real humanity of LUDWIG—of the man who was denounced on anti-vivisection platforms as the "arch-fiend" of the "Nine Circles" and as the keeper of the worst "torture den" in Europe. Well may the physiologist and the physician call aloud, "Humanity! what offences are perpetrated in thy name." Professor MOSSO'S masterly "full-length" of a biologist, a teacher, and a philanthropic citizen, surpassed by none of his generation, ought to send a thrill of shame through the promoters of a mischievous propaganda which, mistaking sentimentality for sentiment, and morbid hyperæsthesia for sound feeling, would have tied the hands of one of the most beneficent students of nature who ever devoted his life to the healing art.

ROYAL STATISTICAL SOCIETY.—The sixty-first annual general meeting of this society was held on Tuesday, June 25th, at the society's rooms, 9, Adelphi-terrace, the Right Honourable Lord Farrer, President, in the chair. It was announced that the subject of the essays for the Howard Medal, which would be awarded in 1896, with £20 as heretofore, was as follows: "School Hygiene, in its Mental, Moral, and Physical Aspects." The essays should be sent in on or before June 30th, 1896.

Annotations.

"No quid nimis."

H.R.H. THE DUKE OF CAMBRIDGE.

THE announcement by Mr. Campbell-Bannerman in the House of Commons of the Duke of Cambridge's retirement from the position he has held for nearly forty years as Commander-in-Chief of the Army was in itself an incident of national interest and importance, but coupled with the fact that this announcement was directly followed by what practically amounted to a vote of censure of the War Minister himself, on a side issue relative to the reserve supply of small arms ammunition, and the subsequent fall of the Rosebery Government the circumstance was indeed a startling surprise. The intended resignation of his Royal Highness left the Government open to carry out a reorganisation of the War Office and army on the principles embodied in the Hartington Commission, and Mr. Campbell-Bannerman no doubt felt in going to the House that he held a trump card in his hand which he could play with most favourable effect as regarded his party; but the unforeseen is that which happens, as it did in the present instance. We cannot allow the announcement of the Commander-in-Chief's intention to resign his post to pass without a word from us on the subject. The Duke's services were spoken of in very eulogistic terms, and in many respects most deservedly so. An official after occupying a commanding public post for so long cannot sever his connexion with it without general manifestations of sympathy and many genuine expressions of regret. That the Duke is a kindly dispositioned man, that he had the welfare of the army, and especially that of the private soldier, at heart, that he honestly did his best, and that he possessed a wonderful knowledge of all military detail and strong common sense we have no doubt. But it cannot be denied, on the other hand, that he has reached an advanced age, that he has been younger—we will not say abler—men compulsorily retired, who had done the State good service in different fields and various climates, and that he has enjoyed the fruits and advantages of his office for a very long time. It is impossible that the physical and mental energies, the receptive faculties for new ideas and modern lines of thought and action, and the promptitude of judgment should remain the same in old as in middle age, and the Commander-in-Chief has, therefore, in our opinion, as a Royal Duke, consulted the interests of the Queen and his own dignity, as well as the interests of the public, in acting as he has done. Whether any changes will be brought about affecting the medical service by the creation of a new office and the appointment of a successor is more than we can tell. The Commander-in-Chief has not been invariably credited in his relations with army medical officers with full comprehension of what the department needs, but we are quite sure that he nevertheless carries their best wishes for his health and happiness.

THE ABOLITION OF THE CONTAGIOUS DISEASES ACTS.

IF it be desirable to know how the action of our Government with regard to the Contagious Diseases Acts is looked upon in France, we have an excellent opportunity for enlightenment in a communication which was read at a meeting of the Académie de Médecine in Paris on May 21st last by Dr. Commenge. The documents furnished in England by the Minister of War, said the speaker, have brought the gravity of the case into prominent relief. In 1892, out of 196,336 soldiers 52,155—that is to say, upwards of a quarter of the entire British army—were admitted to hospital on

account of venereal disease. In the opinion of the majority of army medical men this extraordinary development of the venereal diseases is with justice to be ascribed to the abolition of the Contagious Diseases Acts; and even the late Dr. Graham Balfour, who was for a time opposed to the regulation of prostitution, changed his views on this point. It will be interesting to draw a comparison, continued Dr. Commenge, between the existing state of affairs in England, where prostitution is free, and that obtaining in France, where, happily, some proscriptive measures still remain in force. In 1875, the year that venereal diseases were most prevalent in the French army, the number of cases was equal to 74.5 per 1000 of strength; during the same year in England the proportion was 139.4 per 1000. The highest rate in the British army is referable to the year 1885 and amounts to 274.4 per 1000; in the French army that year the numbers yield 52.1 per 1000 only. When we examine the returns in order to ascertain the prevalence of syphilis, the following are the results. In the French army the worst year for syphilis was 1875, when the proportion of cases was 11.3 per 1000 of strength. In the British army during the same year it was 28.8 per 1000, and in 1887, when the highest ratio was reached, it was 46.6 per 1000. In France during the latter year the syphilitic rate was only 8.9 per 1000. Dr. Commenge has, moreover, made a study of the sanitary condition of the Russian army, where venereal affections maintain about the same level that they do in the French army, save that syphilis is slightly more prevalent. Needless to say, prostitution in Russia is under the control of the authorities. The relative prevalence of venereal disease in the three armies is shown in the subjoined table, the figures giving the cases per 1000 of strength:—

	England.	France.	Russia.
1889	217.1	45.8	40.7
1890	212.4	43.8	43.0
1891	197.1	43.7	41.5
1892	201.1	44.0	44.6

The following table shows the comparative prevalence of syphilis alone:—

	England.	France.	Russia.
1889	35.7	9.1	12.9
1890	37.3	9.1	13.4
1891	32.2	8.9	12.2
1892	33.8	9.2	13.7

Dr. Commenge next extended his investigations in order to determine the sick rate in the several divisions of the French army, and found that the incidence of venereal disease was largely influenced by the presence or absence of clandestine prostitution in the various garrison towns. Paris, Algeria, and "the Midi" were notorious centres of illicit intercourse, and it was in these districts that the venereal rate invariably attained its maximum. Dr. Commenge brought forward a formidable array of facts and figures in support of his thesis, which was pronounced to be an eminently interesting and instructive work. His conclusions are three in number: 1. Venereal diseases are always far more numerous in countries where there is free trade in prostitution than in those where regulations are in force. 2. The regulation of prostitution serves to attenuate the virulence of the venereal diseases and to hinder their progress. 3. The results now adduced are in accordance with the resolutions of the Académie de Médecine voted in 1888, when the attention of the authorities was drawn to the dangers of prostitution and to the necessity for safeguarding the public health.

A MEDICAL TARIFF FIXED BY LAW.

THERE is a Bill before the Legislative Council of the Cape of Good Hope, a short Bill to amend the Medical and Pharmacy Act of 1891, which provides a tariff of fees for

medical practitioners. No practitioner will be entitled to recover any charges exceeding those in the tariff, "save in pursuance of any special agreement between the parties."

SCHEDULE.

TARIFF OF FEES FOR MEDICAL PRACTITIONERS.

Examination of any person, and certificate	... ..	£1	1	0
Every visit within the limits of any town or village—				
By day	... ..	0	5	0
By night	... ..	0	10	0
Every visit outside such limits, besides the charges allowed by the tariff—				
If travelling at own cost: per hour	... ..	0	10	0
If travelling at cost of patient: per hour	... ..	0	7	6
Any confinement	... ..	3	0	0
Any certificate of cause of death not involving post-mortem	... ..	0	10	0
Any surgical operation involving the loss of any limb	... ..	10	0	0
Any ordinary surgical operation	... ..	0	10	0

It cannot be said that this tariff errs on the side of excess. It is very vague. "Any ordinary surgical operation, 10s."! It is very doubtful, too, whether the Legislature is acting wisely in fixing fees. Practitioners who most respect themselves will make their own terms. We shall be curious to know whether such a Bill becomes law.

THE SEARCH FOR A CANCER PARASITE.

THE contribution which Dr. Braithwaite makes to our columns this week adds one more to the list of investigations in the quest for the parasite which is assumed to be at the root of the most formidable class of diseases to which mankind is subject. The labours of histologists have shown that in their structure malignant growths are capable of being classified under certain well-defined groups, according to the type of tissue or organ in which they arise. But histology is silent as to the initial stimulus which gives rise to these aberrant cell masses, as well as to the remarkable potentialities with which they seem to be endowed, so that recurrence *in loco* and general dissemination by the circulating fluids constitute a peculiar characteristic of malignancy. If in these respects malignant disease bears some resemblance to the characters of tubercle, syphilis, and like infective disorders the analogy is purely superficial. For in every member of the class of infective disease the anatomical lesion is limited to the type of inflammatory or granulation tissue, and in none does it partake of the character of the more highly differentiated cells which are to be found in cancers and sarcomas. In the one case the influence of the microbe is confined to exciting changes, which we term "inflammatory," and the dissemination of the foci of disease is restricted to the territories in which the parasite finds a lodgment. If, then, "cancer" (using the term in its widest sense) be also caused by a parasite it must of necessity be an organism which is endowed with quite special powers, for no histologist could declare that there was any real analogy between the processes of aberrant cell-growth in a malignant tumour and those of the small indifferent cells that constitute a tubercle or a gumma. Hence the failure of attempts to extract from malignant tumours by bacteriological methods any organisms of the bacterial class is hardly a matter for surprise. More hopeful of satisfactory result in this search would seem to have been the alleged discovery of cell parasites of protozoic nature; but here, unfortunately, so far the only test that could be applied has been the morphological one, and in spite of the numerous and painstaking researches and the beautiful demonstrations of intra-cellular bodies which have been made it behoves us to be extremely cautious in accepting these bodies as the parasites in question. Similar caution is also needed in regard to the fungi which Dr. Braithwaite has found, and which apparently belong to the class of hyphomycetes. The spores of such fungi abound in atmospheric dust, the readiness with which they germinate is notorious, and although Dr. Braithwaite assures us that he has found their mycelial threads penetrating the substance of neoplasms (recent and preserved) there is room for scepticism when it

is remembered that mould fungi are not infrequently found mingling with tissues on the microscopic slide. Apart from any fallacy of this kind, however, it is well to recall that similar fungi have been found in the body—e.g., in the lungs—and have been introduced into it experimentally, with the result that they have either been quite innocuous or have merely excited some local inflammation. If Dr. Braithwaite's inferences are correct, then the fungi he describes should show some peculiarities, according to the kind of malignant growth in which they occur, since it is not to be supposed that one and the same organism could excite the formation of a uterine myo-fibroma, an epithelioma, and a sarcoma. It would be interesting to learn the opinion of a botanist upon the fungus, for if this discovery be confirmed—and the research, as compared with that for the protozoal parasite, is simplicity itself—quite a new light will have been thrown on the *role* of parasitic fungi.

SWALLOWING A DENTURE.

THE dangers of the custom prevalent with some people of going to sleep without removing artificial teeth have been illustrated in a striking manner by a case reported by Mr. J. Maxwell Wood in the *British Journal of Dental Science*. A servant girl aged eighteen went to sleep wearing a plate measuring 1½ in. by 1½ in., the attachments being two short gold bands. In the morning the plate was nowhere to be found, and later in the day the advent of a pain in the stomach convinced the owner of the plate that she had swallowed it. On confiding her case to her mistress that lady at once sent for the family medical man, and also, with more zeal than judgment, gave the girl a large dose of castor oil. On the medical man arriving he found that the plate had been passed within an hour of the taking of the oil. That the patient had a very narrow escape both from her accident and its treatment is obvious. Probably she suffered from the usual complaint of her class, chronic constipation, and thus the purgative effects of the oil would do far less mischief than in a case where it would have brought about liquefaction of the feces.

LIFE INSURANCE OF CHILDREN.

THE withdrawal of Sir Richard Webster's Bill for the regulation of children's insurances does not of course imply either its abandonment or any distrust of the principles upon which it is founded. It is evidence merely of a laudable desire on the part of its author to ensure the permanent utility of his measure by allowing further time for the full consideration of all trade interests which might be affected by it. Despatch in this kind of business is best ensured by careful slowness at its beginning, even though the main features of the Bill may not call for material alteration. Some modification of its terms may, however, be desirable. In its present form it might in the minds of some not too friendly critics appear to suggest an unintended preference for workmen's benefit societies as compared with other more purely commercial companies. However this presentation of the case may express the practical result of inquiries into the use and abuse of this class of insurances, we are certain that no such direct espousal of a party interest was ever contemplated. What is intended is to so guard the method of insurance against possible abuses that it shall best fulfil the purpose for which it was instituted. We are aware that a distinction must in all cases be drawn between real and supposed causes and effects, and we will not deny that an understood connexion between infant mortality and loosely regulated systems of insurance may not constitute proof in a legal sense. After making every allowance, however, it is impossible to regard otherwise than with strong suspicion the fact that in many cases fatal neglect of children by drunken or vicious

parents in respect of food, medical treatment, and every ordinary rule of decency has gone hand in hand with an exact and careful payment of insurance premiums. Nor is it to be forgotten in criticising the terms of Sir Richard Webster's Bill that the sum assured is often much in excess of ordinary funeral expenses, nor that this excess, as also the association of neglect with mortality, has been observed more particularly in connexion with the non-mutual system. In an earlier issue of *THE LANCET*¹ we directed attention to certain safeguards which were, in our opinion, essential to the proper management of children's insurances. These included a strict limitation of the sum insured to funeral requirements, disqualification of the insured in any case of neglect or other culpable cause of death, and the observance of particular care in death certification. Any measure which would secure the interest of the insured children cannot, in our view, divest itself of these needful conditions. In the proposed Bill they are each provided for. There is a form of insurance which deserves to be more widely known and utilised than it is at the present time. We refer to that which makes provision for some period during the life of the assured, commonly fourteen years of age or later, with the option of a reduced payment in the event of death at an earlier date. It is to be hoped that this scheme of endowment will become increasingly popular. In it we find the true resource of thrifty parents, anxious not so much to meet the pecuniary difficulties entailed by death and burial, as to employ creditably the greater probabilities of life, health, and work.

DIAGNOSIS FOR NOTIFICATION PURPOSES.

A VERY interesting case has been tried at Oldham under the Notification Section of the Oldham Improvement Act, 1880. Dr. George Thomson was summoned before the Oldham Borough Police-court for having neglected to report the existence of typhoid fever at the house of Mr. John Edward Newton, J.P., Lynwood, Greenacres. The information of Mr. Tattersall, medical officer of health, stated that Dr. George Thomson, on May 14th and each succeeding day up to and including May 21st, wilfully and without reasonable cause, he being a medical practitioner called in to visit Lees, Arnold, and Doris Newton, and becoming aware that they were suffering from a certain infectious disease, typhoid fever, did not fill up, sign, and send to the medical officer of health a certificate or declaration of the same according to forms supplied by the corporation. Our readers will recognise at once the nature of the case against Dr. Thomson and the nature of his reply. It is necessary to state that at the time of these cases (May, 1895) influenza was prevailing, and that in one of them at least it appeared to have existed before the typhoid fever. In all it complicated the question of diagnosis and led to delay in notification. Dr. Thomson was called in on May 8th. On the 14th he began to think that he had typhoid fever to deal with and gave intimation of his suspicions to the parent, which seem to have become known to Mr. Tattersall, who visited the house on the 21st and accidentally met Dr. Thomson, who told him quite frankly of the facts and of his views, but added that in the early stages the cases had been difficult of diagnosis and had simulated influenza. The whole unseemly and unnecessary controversy arose from a remark of Dr. Thomson to the effect that on the 14th he had "diagnosed" typhoid fever, but had delayed notifying till he should be sure of his ground. The exact words used were a matter of dispute. But there is no dispute as to the general position which he took up, in which he was supported strongly by the parent, by Dr. Dreschfeld of Manchester, by Dr. Robertson of Oldham, and by Dr. John Hodgson, and which is simply that on the 14th he made

what Dr. Dreschfeld happily called a "provisional" diagnosis (what we should call a "working" diagnosis), on which all necessary precautions were taken, and then waited a few days for the confirmation of that. A diagnosis for working purposes is one thing in such cases, and an absolute diagnosis is another. In the Metropolitan Asylums Board hospitals 25 per cent. of cases certified as enteric fever turn out to be otherwise, and in the course of this case at Oldham it transpired that in the Monsall Hospital during the last epidemic of influenza more than one half of the cases sent as typhoid fever turned out not to be such. Of course with such evidence the magistrates came unanimously to the conclusion that Dr. Thomson had not wilfully and without reasonable cause offended against the Act. They dismissed the case, but only allowed £5 as costs, which we think was scarcely fair to Dr. Thomson. However, he and the medical witnesses will have the satisfaction of having vindicated the rights of medical men to be masters of their own minds, and to determine the time when they shall make such a diagnosis as they will not have to regret. We are not apologists for any disloyalty to the Notification Acts or any unfaithfulness in the discharge of duties under them; but these duties are difficult and highly responsible, and they involve on the part of sanitary authorities, and especially of their medical officers, sympathy with medical men and consideration for their difficulties.

SIR JAMES REID, K.C.B.

THE consciousness of having done one's duty, of having relieved, if only in an infinitesimal degree, some of the vast amount of sorrow and suffering, is popularly supposed to be the medical man's reward, and this ideal is frequently held out in introductory addresses at the opening of medical school sessions. These rewards, however, appeal only to the recipient, and it is always satisfactory to be able to chronicle a more worldly remuneration as well. Therefore we have pleasure in congratulating Sir James Reid upon the honour which has been conferred upon him in the shape of a Knight Commandership of the Bath, an honour received at the hands of Her Majesty on June 21st. Sir James Reid was appointed to the office of Resident Physician in 1881, and on the death of Sir William Gull in 1889 was appointed Physician in Ordinary to the Queen.

"CLERICAL BREAKDOWN."

At a recent meeting of the Clergy Home Mission Union Sir Dyce Duckworth read an admirable paper on Clerical Breakdown, of which an abstract will be found in another column. His idea of a diocesan medical officer to report on all candidates for ordination and to certify to their physical fitness for clerical duty is, we think, a most sensible suggestion. "None with any defects or tendencies to disease should be passed unless they were possessed of independent means." These, of course, could devote themselves to doing good work for the Church by literary work or studying and improving ecclesiastical music. "Weakness and inability," said Sir Dyce Duckworth, "heavily handicap any clergyman. He misses his full training, and from the almost inevitable mawkish sympathy on the part of parishioners is only too likely to degenerate into a valetudinarian." We are glad to think, however, that the race of Honeymans, with their "devoteapots"; of the pale young curate who could say—

"Had I a headache, sighed the maid assembled;
Had I a cold, welled forth the silent tear;
Did I look pale, then half the parish trembled;
And when I coughed, all thought the end was near."

has almost completely passed away. The parish priest of to-day is a real worker, and the butterfly of the proprietary chapel has vanished together with the lavender kid gloves, the glass of water, the cambric handkerchief, the large Bible,

¹ THE LANCET, JAN. 19th, 1895.

and the gold watch, which used to be thought necessary for the delivery of a sermon. Sir Dyce Duckworth asked his hearers why they did not sometimes, if pressed, read another's sermon, acknowledging the source. Why, indeed? we may ask; and we might add, Why should there be more than one sermon on a Sunday? To expect a man to compose about two hundred carefully thought out and well-expressed discourses in a year is ridiculous, and yet it is what the average parish priest is expected to do if we include all holy days. Neither should the clergy be worked to death by being made a sort of relieving officer. "Alms," it is true, "do purge away sin," but the distribution of them should be handed over to a church council, of which the parish priest should be the *ex-officio* head.

"BOARDS OF GUARDIANS AND NURSING."

WITH reference to an annotation which appeared in our columns a few weeks ago¹ under the above heading, and which had reference to a very undesirable state of things in a workhouse in South-west Sussex, the board of guardians at their last meeting adopted the recommendations of the visiting committee without any discussion whatever. An epitome of the committee's recommendations was given in the annotation, and, bearing in mind the great importance of the majority of them, entailing as they do a considerable outlay, it certainly reflects the greatest compliment possible upon every member of the committee that their report should be confirmed absolutely without a word; and apparently, as a further compliment, the board gave the committee full power to carry out their recommendations. No time is being lost in removing all the defects, and this particular workhouse should soon be in a position to afford an example for the whole country as regards the nursing of the sick—at any rate, it will give a very good idea of the immense value of the Local Government Board circular issued at the beginning of the year.

LIGHTNING STROKE.

THE indifference with which the inhabitants of large cities pursue their business during the most "terrific" thunderstorms, unmoved by any feeling of danger and inconvenienced only by the rain, contrasts strongly with the awe with which the countryman contemplates the passing storm, and the precautions, almost superstitious in mountainous and moorland districts, which he takes with the view of avoiding a thunderstroke. But the different attitudes are fully justified by facts, the deaths from lightning among the urban populations being far fewer than those caused by runaway horses; for chimneys, church towers, telegraph posts and wires all serve to divert and divide the currents, so that even when one or other is struck the accident is rarely attended by any loss of life, and the streets are among the safest places in a storm. In the country it is quite otherwise; the chimneys of isolated houses, the trees surrounding a homestead, the hedgerow, the barn, the stack under which a man takes shelter, or his own person if he be overtaken in the open, act as so many conductors to attract and concentrate the spark—indeed, the solitary traveller or field labourer is less exposed to danger under trees than when he presents the only "point" in a wide "plane." Dr. Brämer, who has endeavoured to collect and tabulate the circumstances of all deaths from lightning in Germany during the last fifty years, finds that they have been nearly trebled in that period, a phenomenon which he attributes to the increased activity as well as numbers of the rural population. Village churches and schools contribute a remarkable excess of accidents during the hours of service or

instruction, as if the aggregation of a number of human beings intensified the danger, possibly by the internal air currents set up. The metal bells might also attract, and the old practice of ringing the church bells during storms has of late years been discontinued; while both causes, the massing of men and of steel, concur to render military encampments peculiarly liable. One-third of the annual average of accidents occurs in July, and the afternoon, or 3 to 9 P.M., gives the highest, and the corresponding period of 3 to 9 A.M. the lowest, number, the actual maximum being reached between 3 and 4 P.M., although the six hours immediately preceding—viz., 9 A.M. to 3 P.M.—contribute fewer than the midnight watches of 9 P.M. to 3 A.M. The popular fear of causing movements or currents of air by driving or running is not unreasonable, but the continuous series of telegraph posts and wires, and of metal rails, render a railway train about the safest possible refuge in a storm.

THE LATE MR. GEORGE SMITH OF COALVILLE.

REGRET for the death of Mr. George Smith "of Coalville" will not be limited to the circle of his intimate friends. Mr. Smith was the natural representative of a class of men whose value is understood wherever forethought, sincerity, and disinterested effort are duly recognised. Labouring in the midst of much difficulty, misinterpreted by those whom he sought to benefit, opposed by hostile interests, uninfluential save in his humane resolution, he was able to bring under the wholesome sway of education, and within the range of the other benefits which civilisation offers, a race of nomad children of whose existence society before was hardly conscious; in the Canal Boats Act we possess a monument of his beneficent energy.

CATTLE TROUGHS AND CONTAGION.

It has repeatedly been asserted that the sanitary reputation of street cattle troughs is not above suspicion. The St. Pancras Works Committee have gone a step further than mere assertion, and have ordered the removal of all such troughs within the parish and the erection of stand-posts in their stead. This action, we are told, has been taken in consequence of the representations of the Master Carmen's Association and others, who maintain that the present arrangement encourages the spread among horses of contagious disease. It is impossible to state with precision how far this view is supported by observed facts. The question is, nevertheless, a very important one and well worthy of becoming a subject of careful investigation by local authorities. In speaking of contagious disease in this connexion the mischievous influence of glanders is at once forced upon our attention. Its prevalence, especially in large stables, its highly infectious properties, the susceptibility of the human subject, and the strange fact that notification of this deadly disease has been entrusted to the horse owner's uncertain intelligence, will suffice to explain the energy shown by the St. Pancras Committee. It must be admitted that their zeal is in this instance not without excuse. On any warm day several equine heads may be witnessed absorbing simultaneously the contents of one and the same trough wherever these are found, and the spectacle is, to say the least, suggestive. Cab horses are largely indebted to the Metropolitan Drinking Fountain Association. They are like wise more particularly susceptible to glanders from the fact that many of them are usually stabled together. Such facts as these cannot be overlooked in dealing with the question before us. If they teach anything it is the relative advantage of providing each animal with a separate water-supply. An extensive change of plan such as would be required to effect this object must necessarily be carried out with due

¹ THE LANCET, May 25th, 1895.

deliberation. It would also be rendered more thorough by the knowledge derived from a preliminary inquiry into the proof of statements adduced in its support. While admitting all this, however, there can be no doubt, we feel assured, that a new arrangement of stand-posts, with stop-cocks, pails, and gully-holes for the removal of refuse water, would serve every useful purpose cheaply, effectually, and with a nearer approach to sanitary success than the trough system.

PHYSICIANS IN THE OLDEN DAYS.

IN the *Gentleman's Magazine* for July Mrs. J. E. Sinclair contributes an interesting paper embodying a good deal of research upon Old-time Physicians. She quotes, amongst other things, the following treatment that used to be meted out to quacks. "A counterfeit doctor was set on horseback, his face to the horse's tail, the same tail in his hand as a bridle, a collar of jordans about his neck and so led through the City of London with ringing of basins and banished." If only the same thing could be done now the traffic of Cheapside would have to be stopped in order to let the procession pass, but the latter-day quack flourishes exceedingly, and advertises at large in the public press.

THE "INDEX MEDICUS."

IN another column will be found a letter from the Resident Librarian of the Royal Medical and Chirurgical Society concerning the imminent decease of that invaluable publication, the "Index Medicus." When it is remembered that this work is a carefully classified index of the whole of medical literature, not only books but pamphlets and original articles in the medical journals, and that on a reference to it any articles which have been written on medical subjects can be easily found, it will be seen that the cessation of this work would be an incalculable loss. Our correspondent's suggestion that £400 a year should be subscribed by this country is well worth the consideration of the profession and the medical societies, and as such we commend it to them.

THE CAIRO LUNATIC ASYLUM.

"EVERYTHING comes to him who knows how to wait" is a motto of very necessary application for English reformers in Egypt. Difficulties which have existed for the last ten years have now been brushed away, and Dr. Warnock has been installed as the pioneer psychologist of Egypt, although it is true that the native heads of the Government have stipulated that Dr. Warnock's appointment is to be only for two years. Though it is only three months since he arrived, he has already mastered some colloquial Arabic and has set about a number of changes which were of obvious need. Previously some 300 men and 150 women were allowed to sit idly on their beds all day without any means of occupation. Now there may be seen some of the patients engaged in the garden, laundry, and kitchen, while a few work as tailors, carpenters, and basket-makers. The paid gardener has been dismissed as a needless luxury, and his place is supplied by a monomaniac who has believed for years that he is the true Mahdi and now willingly works for the daily wage of a few lumps of sugar. The asylum has been kept very clean for some years, but efforts are now being made to improve its ventilation—efforts which are the more necessary because it must remain overcrowded until some outflow for incurable cases be provided. A post-mortem room has been fitted up, and necropsies are now regularly held by the four native medical men who have been appointed as assistants. There are a few paying patients, and their number will probably increase as the fame of the medical superintendent spreads. Criminal lunatics are not unknown, there being generally four or five

homicides among the inmates, who have, as a rule, killed their mothers or other near relatives. Acute melancholia and suicides are very rare, and so also is general paralysis.

IN THE MATTER OF MR. T. R. ALLINSON.

MR. THOMAS RICHARD ALLINSON, of Spanish-place, Manchester-square, appeared at the Marylebone Police-court on Tuesday last, before Mr. Curtis Bennett, to answer a summons issued at the instance of the General Council of Medical Education and Registration for describing himself as a licentiate in medicine. Mr. Muir Mackenzie conducted the prosecution. Mr. Allinson's name, it will be remembered, was removed from the Medical Register in 1892, on substantiation before the Council of the charge that, being a registered medical practitioner, he systematically sought to attract practice by a system of extensive public advertisements of a character discreditable to a professional medical man, containing his name, address and qualifications, and invitations to persons in need of medical aid to consult him professionally. The action of the General Medical Council was later upheld in the High Court of Justice and in the Court of Appeal; and, if the twenty-ninth clause of the Medical Act (1858) has any force and meaning, it was a foregone conclusion that the disciplinary tribunal of the profession would be found to have taken the only proper legal course. Mr. Allinson, however, has continued to use the affix giving him a legal title to practise, and for this he was summoned by the Council, with the result that he has been fined £20 and £10 10s. costs or a month's imprisonment in default, Mr. Bennett considering the case a bad one and refusing to entertain an application to state a case. The profession will be glad to recognise by the issue of this case that the General Medical Council is watchful not to allow its decisions to be ignored with impunity.

THE INFLUENCE OF TROPICAL CLIMATES ON MENSTRUATION.

WE have received a copy of a paper dealing with this subject by Dr. Joubert, Professor of Midwifery at the Eden Hospital, Calcutta. It is well known that menstruation appears at an earlier age among the natives of tropical climates than in England, and the impression has been that this was due to the influence of the climate. Dr. Joubert has collected statistics on the subject and he finds that there is very little difference as regards the age at which menstruation appears between Europeans and Europeans born in India who have lived all their lives in that country. Among the natives, however, menstruation does appear at an earlier age than among Europeans; for instance, of the cases referred to in Dr. Joubert's paper menstruation appeared in girls between twelve and thirteen years of age in 36.4 per cent. of the natives, while it only appeared at this age in 13.4 per cent. of Europeans, and in only 10.8 per cent. of Europeans born and reared in India. According to Dr. Joubert the cause of this difference is not to be ascribed to the climate, but to the different social customs prevailing among the natives, and especially to the absence of all privacy in the domestic life of an Indian household, which allows children to become acquainted with sexual matters. Thus, he says, when attending a pregnant or lying-in woman he has often had to ask that the children of both sexes who were present should be sent away. Indeed, from his knowledge of the country Dr. Joubert says he doubts whether there are any little girls or boys who have reached the age of ten years without having a pretty accurate knowledge of what the sexual relations and child-bearing really mean. We think that Dr. Joubert has made out a very probable case for thinking that

climate has comparatively little to do with the early appearance of menstruation among the natives in India. It would be interesting to know, however, whether among races living in colder climates, but under similar social conditions as regards want of privacy, &c., a similar precocity as regards the age at which menstruation appears has been observed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the meeting of Fellows on the 4th prox. the President will report that the alterations to By-laws, Section 4, 18, and 25, have been approved by the Secretary of State. He will further report that the Council, in accordance with the opinion of the legal advisers of the College, do not deem it expedient to accede to the resolution passed at the meeting of Fellows in January, requesting the Council to appoint a joint committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new Charter. No notice of any private motion has, we understand, been given.

THE LONDON COUNTY COUNCIL AND INSANITARY PROPERTY.

An inquest was held this week concerning the death of a woman who resided in a house in Bethnal-green which was described as being in a filthy and insanitary condition, and which, it was stated, was in the ownership of the London County Council. The chairman of the Public Health Committee of the Council was, at the usual Tuesday meeting of the Council, questioned on the subject, and promised that a report by the Council's medical officer as to the condition of the premises should be presented to the Council at its next meeting. The house, it appears, is one of a number of houses still remaining on the Boundary-street area now being cleared by the Council, houses which have in effect been condemned and are waiting their turn for demolition. Efforts have been made to displace the population gradually and to provide new buildings in substitution for those demolished. Whether there is justification for the continued occupation of the house in question after its acquisition by the Council remains to be seen. Probably it will turn out that the Council, like other landowners, have been quite unable to get the poor creatures inhabiting the hovels which have just come under their control to leave the property.

DIPHTHERIA IN LONDON.

MATTERS do not tend to show much improvement in respect of the prevalence of diphtheria in the metropolis, the records of the fortnight ended June 22nd displaying a succession of deaths greatly in excess of the preceding like periods for some time past. Taking the four-weekly periods since the beginning of April of the present year we find that the respective numbers have been 107, 145, and 156 deaths from diphtheria in London county. These data are therefore exclusive of the numerous deaths which took place in the three months in Greater London. In the three weeks ended June 8th the deaths had been 37, 41, and 33 respectively, but in the succeeding week they rose to 45, being thus 15 above the corrected average for the like week of the preceding decennium. Of these deaths, which were some 25 per cent. of known cases in the week, all were in young persons aged under twenty years, and 31 were in children aged between one and five years. The parishes of Fulham and Lambeth had each 5 deaths credited to them, and the areas of Poplar and Camberwell had each 4 deaths, Rotherhithe having 3. Last week the fatal cases dropped somewhat—namely, to 37—but they were still above the corrected average by 6, and with the exception of one

were in persons aged under twenty years, the period one to five years supplying 26 deaths. There were 4 deaths in Mile-end Old Town, and 3 each in Fulham, Shoreditch, Battersea, Greenwich, and Bermondsey. The admissions to the hospitals of the Metropolitan Asylums Board have been gradually increasing in recent weeks, the removals having been 88, 86, 107, and last week 128. In like manner the cases remaining in hospital have shown continual increase in the last eight weeks, having in that period grown from 432 on April 27th to 492 on May 25th, and further to 593 last Saturday. In Greater London the deaths in the last fortnight have been as many as 17 and 15, and those occurring in West Ham district have been respectively 9, and for last week 8, in Canning Town, and 7 in Leyton subdistricts of West Ham registration district.

A COMPLIMENTARY dinner was given to Mr. Christopher Heath at the Langham Hotel on Tuesday, June 25th, by his old house surgeons in recognition of his position as President of the Royal College of Surgeons of England. The guest of the evening was presented with a handsome silver tray as a token of esteem and affection.

A PATHOLOGICAL meeting of the Neurological Society of London will be held on July 11th. Members wishing to contribute are requested to communicate with the honorary secretaries (Dr. Howard Tooth and Dr. Fredk. W. Mott) as soon as possible.

At the Oxford Commemoration held on June 26th Professor Michael Foster and Sir W. H. Flower, K.C.B., received the honorary degree of D.C.L.

ON CLERICAL BREAKDOWN.¹

BY SIR DYCE DUCKWORTH, M.D., LL.D. EDIN., F.R.C.P.,
PHYSICIAN AND LECTURER ON MEDICINE, ST. BARTHOLOMEW'S
HOSPITAL; HONORARY PHYSICIAN TO HIS ROYAL HIGHNESS
THE PRINCE OF WALES.

LET me say at the outset of my remarks that I am deeply sensible of the responsibility I undertake at this moment. To address a body of clergy under the shadow of this majestic Christian temple on the subject of their health requires that I should so speak as to justify my words before a doubly searching criticism, one from your body and one from my own profession. I propose to say nothing of the truth of which I am not convinced, and I will, in advance, crave indulgence for any expressions that may not entirely commend themselves to you or to the general body of the clergy. The subject of my address is one which may well enlist the interest of those I now see before me. I may tell you that the words of my text—Clerical Breakdown—were not chosen by myself, but were given to me as the subject allotted for consideration at this particular meeting of the Clergy Home Mission Union. I therefore venture to believe that you are familiar with the term. Yet it appears to convey something like a stigma upon the clerical profession. We have not yet adopted this term in medical nosology, and it is possible that when we do we may have to add legal, medical, mercantile, and other varieties of breakdown. In truth, we well know what the term means, but you may be sure that your profession has no monopoly of the troubles indicated by it.

It may be affirmed that each profession or vocation has, as might be supposed, its own peculiar line or lines of breakdown; or, in other words, we find men submitting to the inevitable laws of nature and suffering various penalties as the result of a vain endeavour to discard or supersede them, for that is too often the source of breakdown. To maintain health is to conform to the laws of nature, which are the laws of God, and it is as much an article of religion to observe these as it is to obey any other Divine injunction.

¹ Being a paper read at the meeting of the Clergy Home Mission Union, in the Chapter House of St. Paul's Cathedral, on June 12th.

My profession assents to this, and in its name I will here and now repudiate the dictum that was once uttered against it, never true at any time, as I believe, and certainly not true now, *Ubi tres medici, ibi duo atheni*. The temptations that beset you, as they do all men who are earnestly engaged in good work, are to neglect self and to spend and be spent for others, and thus to go beyond the bodily and mental power which the organism is capable of producing and maintaining. This over-expenditure may be tolerated for a time, but it will not fail to leave its mark on the constitution. I think it is probable that the clergy break down nowadays in larger numbers than formerly. The Church has awakened in the last forty years to a fuller sense of the claims that are rightly made upon her, and the clergy, as a body, work far harder than they were wont to do. The activities of the modern parish priest were little witnessed when I was a boy, and the days of sinecures are well-nigh over. The old fox-hunting and port-wine-drinking parson is almost as extinct as the dodo, and even the higher dignitaries of the Church are, if anything, nowadays over-active and distracted with petty details. The modern bishop is nearly on a par with a railway guard as to the mileage he covers, and any sedentary life now possible in the Church is very properly left for such decanal authorities as have literary tastes. Such an increase in activity, however, is but commensurate with a like increase in other activities, and forms part of the modern phase of intense life which is characteristic of this end of the century. The physician takes note of it and observes its results in his daily work. Robustness of mind not uncommonly goes together with the same quality of body, and the Church has sore need of both. I am far from declaring that a *mens sana* is only to be found in a hardy and robust body, but I will venture to affirm that we more commonly meet with mental twists, eccentricities, and "fads"—all of which are to the physician indications of mental debility—in the possessors of feeble bodies and poorly developed nervous systems. I do not know that it would be a bad plan for each bishop to appoint a diocesan medical officer to report on all candidates for ordination, and to certify to the physical fitness of each for clerical duty. None with any defects or tendencies to disease should be passed unless they were possessed of independent means. The Church and her work would gain more than she would lose by such a course. Without doubt many men are now ordained who are only fit for light duty, for a life in a healthy country parish, or to officiate in small churches. If such men can find their appropriate places and their necessary environment there is no harm done. Weakness and inability are not qualities to be commended in any person, and any clergyman thus constitutionally disposed at the outset of his career is heavily handicapped. He seldom acquires the full training requisite for an active parish priest, and by mawkish sympathy on the part of some parishioners—which is almost inevitable—he is only too likely to degenerate more and more into a valetudinarian. At this stage he perhaps marries. His wife becomes by degrees a badly trained sick-nurse for him, and troubles grow thicker. The poor man is coddled and petted, stuffed with food, and developed into an object of parochial solicitude. As I shall presently show, this pitiable condition may be reached by men who are not naturally delicate. What is to be done with the younger clergy who start on their career with indifferent health or a feeble constitution? In many cases a career in a salubrious colony may be advantageous, and even life-saving in the case of those with a phthisical tendency. Certain foreign chaplaincies are available for a few, though it is not fair that our expatriated invalids should only command the clerical services of persons little stronger than themselves, for not seldom in such spheres there is need of strong and active men to represent Anglicanism as a robust and wholesome branch of Christendom.

We have now to consider the cases of those who, starting with an adequately vigorous constitution, sooner or later begin to fail in health as a result of their mode of clerical life. There are several varieties of break-down to which the clergy are more particularly prone. First, I will mention sore-throat. Clerical sore-throat can be little benefited save by attention to general health, by diminished amount of speaking, and by instruction as to the right methods of producing the voice. The weak part will be helped by attention paid to the whole body, and exercise and other means of securing vigour must be had recourse to. One line of break-down all too common amongst the clergy is that of the

digestive system. A fertile source of this is irregularity in the hours of meals, especially in the later part of the day. The calls and claims of parish duties often appear to necessitate these irregularities. The clergy sometimes make themselves not the servants but the slaves of their parishioners, and are at home to them at all hours on the most trifling pretexts. I note next a cause of breakdown with which I am not unfamiliar, and which must be enumerated in a survey of this subject. I allude to the weakness and disability induced in some of the clergy by an unwarrantable degree of abstinence in the season of Lent. I am not here to touch upon any questions of conscience or of Church discipline. I am too loyal to the width and comprehensiveness of the Anglican Branch of the Catholic Church to presume to commend or to condemn such practices as are ordered with Scriptural warranty by the Church, which practices may be either shibboleths or stones of stumbling to this man or to that. But with a full appreciation of the motives which lead to a Lenten asceticism, it is my duty to say that I can sanction no humiliation arrived at by a positive injury to the bodily organism. I do not believe that a chastened and ill-nourished body commends itself or its works to its Creator, and I conceive it to be the first duty of everyone to keep his health at all times at the highest level. An ill-fed brain is sure to go wrong. Abstinence is sometimes overdone and harm comes of it. This leads me to allude to the custom of receiving the Holy Eucharist fasting. This may be done without harm to health by many, but as the circumstances of the fast must vary very much it is not a practice that can be urged or enforced on all. As a beginning of a day of heavy work I think the practice, for most of the clergy, unwise. I recommend them and the laity to take a cup of good cocoa or tea before leaving home, and I am sorry for the scruples of conscience that anyone may have who objects to this. In any case, as a physician I give this advice in the matter and leave the theologians to do as they like.

After prolonged and monotonous spells of work, and often after irregular and unmethodical work, with inadequate holiday and change of scene, a low state of health may gradually supervene, indicated by listlessness, mental depression, want of zest for work, and feelings of exhaustion. It is always undesirable to fall into this condition. Relief is at first commonly sought by way of domestic remedies, and it is believed that strength may be gained by extra feeding and supplies of stimulants. Sir Andrew Clark used to say that many of the clergy were simply poisoned by their wives with repeated doses of beef-tea and wine given between meals, always with the best intentions. It is certain that no course can be more harmful than this. A thorough holiday and a change of environment, together with a proper dietary, will set all to rights, and the sooner full work is resumed afterwards the better. Improper use of stimulants may be made in conditions such as I have just mentioned, and unwholesome habits may thus be begun. There is, and can be, no rule of universal applicability in respect of the use of stimulants. Here and now I will only say that a little good wine is, in my opinion, very useful for men who are working hard in cities and towns, taken only with one or perhaps two meals in the day. I lay stress on the words *little* and *good*, because I know that harm comes from inattention to either word. Men working in the country may often do without any stimulant, but there is no fixed rule to be laid down. I add, further, that I have known it to be unwise for men who have reached the age of forty to change their simple habits in regard to stimulants and to take to water or temperance drinks, and I confidently affirm that most of the latter are as unwholesome and undesirable as can well be. For those who elect to set the example of abstinence—and all honour to them—I would say, begin early in life if you have any change to make in your habits. The medical, like the apostolic, precept, however, in this matter, the precept of good sense for the great majority of mankind, is to "let our moderation be known unto all men." In this injunction St. Paul, of course, makes no allusion to moderation either in food or drink. The original word used may nevertheless be fittingly applied to the temper of mind in which the great alcoholic question should be approached and considered: *eruentis* may for this purpose be translated fair-mindedness, or, in Matthew Arnold's words, "sweet reasonableness." With this principle to guide them the clergy and others may, I think, turn a deaf ear both to the nonsense so constantly declaimed from

so-called temperance platforms and to the vulgarities and impertinences of Sir Wilfrid Lawson. I have known excessive tobacco-smoking to lead to dyspepsia and bad health in certain of the clergy. Here, again, it is only necessary to commend moderation. The habit grows by indulgence, and I have met with the worst cases in men who have been lazy in their parishes, men who wear their slippers all day, live in their studies, and grow into indolence and grooviness. A robust parish priest is not likely to over-smoke. Grooviness is to be avoided, and times for due relaxation are to be set apart. I much approve the Bishop of Winchester's advice to his clergy on this point. He recommends as much of one day in the week as possible to be devoted to relaxation and change of scene, and one evening in the week at least to be allotted to the social side of parochial life. In this way a clergyman comes to know and influence his flock more effectually than by constantly appearing amongst them officially. His presence is to brighten and purify the occasions of family gatherings and festivities, and to set the lesson how best to be in the world, and yet not be of the world.

I have long thought that shorter and more varied services would meet many of the difficulties you have often to encounter, and why some of you do not, when hard pressed, read the sermons of others, and tell the congregation whose words you are uttering, I do not know. Many evening services are too long after a hard Sunday's work. You and your people are all tired, and, once fatigue sets in, no good is to be done. For the clergy, as for other busy professional men, the key-note of life must be robustness both of brain and stomach, and robustness of muscle; and with these come wholesomeness of mind and a clear, right judgment. All this is very English, and if Anglicanism is to commend itself and win the day, as it surely will if we be true to it, the work will be done on the lines I have indicated, and "fads" and feebleness will fall away and leave us the victors—victors because we have obeyed the laws of nature, which are for us the laws of God. Remember, lastly, that in honouring your bodies you do honour to the shrine of God the Holy Ghost, Who dwells in them.

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE ADMINISTRATIVE COUNTY OF LONDON.

II.¹

As an officer of the London County Council Mr. Shirley Murphy enjoys the privilege, that, inasmuch as the authority he serves is an entirely new creation, it is not, or should not be as yet, so hopelessly fettered by precedent as is unfortunately the case with some of our more venerable institutions. Mr. Shirley Murphy has, therefore, had the advantage of a free hand, not only in determining the form and general character which the important series of reports of which the second number is now before us should take, but also in devising such a comprehensive set of table charts and diagrams as shall most clearly and graphically illustrate the statistical details of the series. We are pleased to note that he has taken care to avail himself of certain of the more useful statistical devices which of late years have come into vogue for the elucidation of health problems. Thus, for example, we find that in deciding upon the age-grouping to be adopted in these reports he has found it expedient to abstain from deviating materially from the general usage of the Registrar-General, many of whose well-known tabular forms, charts, &c. have been introduced in this new series. In the supplement to the Registrar-General's report for the decennium 1861-70 Dr. Farr published the first life table ever constructed for London. Twenty years later the medical officer of health of the London County Council has constructed another life table for London, the basis being the

statistics of the decennium 1881-90. It should be borne in mind, however, that these statistics do not distinguish between the inhabitants of London who were born within the county and those who, having been born elsewhere, have migrated into London. Mr. Shirley Murphy's life table, therefore, deals with a population of avowedly mixed constitution living in London in the decennium 1881-90. As both of these life tables have been constructed on the same plan—namely, the "short method" of Dr. Farr—they are of course strictly comparable. The earlier table, however, does not show the expectation of life at the various ages; but, as these are important for purposes of comparison, Mr. Shirley Murphy has computed the expectations for the whole of the ages from five years and upwards. Before proceeding to compare the two life tables we may remark that by publishing his recent table Mr. Shirley Murphy has set an example to other health officers, which we hope they will not omit to follow. He has definitely shown that it is unsafe and absurd to compare the mortality of different areas, even in the same city, on the basis of the crude death-rates merely, without making allowance for the varying age constitution of the populations compared. It will be remembered that in the first annual report a table was given showing how the district death-rates may be approximately corrected for difference in age and sex composition of population. That table has, we are glad to find, been continued in the report for 1893. It is one of the best and most useful in the report. Mr. Shirley Murphy's new life table is given in two parts, Tables C and D. In Table C the survivors of 1,000,000 born, of each sex, are traced through life at each separate year up to five years of age and afterwards in quinquennial and decennial intervals up to eighty-five, the mean probability of living, and the deaths occurring in each age period being shown in separate columns. In Table D the survivors of 509,078 males and 490,922 females born are separately shown, and to these figures are added the future years of life which will be lived by the survivors at each age in the table; the expectation of life or average future lifetime at each age is also given. In Table E the survivors out of a million persons born, according to the two life tables, are instructively compared. It is surprising to find that, whilst in 1861-70 out of a million children born 305,518 died within the first five years of life, in 1881-90 only 309,495 deaths occurred within the first twenty years of life; the survivors at twenty years of age in the later decennium being, therefore, almost as numerous as the survivors at five years of age in the earlier. Table F shows that the expectation of life of males at five years of age has improved from 47.5 years to 50.8 years, and that of females at the same age from 50.9 years to 54.4. At subsequent ages there is in all cases an improvement, though relatively less than at age five, showing that the greater part of the life-saving takes place in the periods of youth and early maturity. Now that the initial labour of constructing a life table for the metropolis has been accomplished it will be easy to use the table in future as a means of comparing the mortality of each successive year with what we may term the standard rate of the London life table of 1881-90. In this way a useful record of progress or of regress will be available, which must prove of real and permanent value as a measure of the efficiency or otherwise of local sanitary administration.

Coming now to that very interesting section of the report which deals with the causes of death severally, we regret that considerations of space forbid our doing more than notice very briefly one or two of the points which Mr. Shirley Murphy has thought worthy of special treatment in his report. Statistical material of this kind lends itself but imperfectly to the condensing process, and we accordingly have no choice but to refer our readers to the report itself for

¹ Part I. was published in THE LANCET of June 22nd, 1895.

further information on what must be considered, from a medical point of view, the most important section of the work, treating as it does of the causes of the deaths of not fewer than 90,000 of our fellow citizens in the course of a single year. We have no difficulty, however, in selecting for exceptional comment Mr. Shirley Murphy's remarks regarding the part played by school attendance in relation to the spread of diphtheria and scarlet fever, two diseases which have in recent years shown increased prevalence in London, and therefore caused much trouble both to the school managers and to the hospital authorities of the metropolis.

Mr. Shirley Murphy gives tables showing the notified cases of diphtheria and scarlet fever in London, together with the mortality incidental thereto in recent years. The London death-rate from diphtheria in 1893 was more than double the rate in any of the largest English towns, except West Ham; it was ten times as great as the death-rate in Nottingham, and six times as great as that in Liverpool. But it is not until the age incidence of fatal diphtheria in London comes to be studied that a clue is afforded to the probable cause of the recent increase in the fatality of this disease. Statistics, the preparation of which must have cost much labour, have been compiled for the purposes of this report, and from a careful examination of these Mr. Shirley Murphy draws the following conclusions. 1. That antecedently to 1871-80, when the diphtheria death-rate at all ages was rising, the rate at school ages (*three to ten years*) rose in less degree than the all-age rate; and when the all-age rate was falling the rate at ages three to ten years fell in even greater degree than the all-age rate. 2. That in the decade 1871-80, with a general decline of the diphtheria mortality at all ages, there occurred at ages three to ten years a relatively higher diphtheria death-rate than before—that is to say, the diphtheria mortality at ages three to ten years did not fall in 1871-80 in anything like the same degree as did the diphtheria mortality at all ages. This new departure is most conspicuous in London, but it is also noticeable in a less degree in other parts of the country with which London has been compared. If the metropolitan rates of 1891-93 are contrasted with those of 1855-60, it is found that in 1891-93, while the all-age death-rate had increased 313 per cent., that at the ages three to ten years had increased 457 per cent.; and again, if compared with the rates of 1861-70, it is found that the all-age death-rates in 1891-93 had increased 196 per cent., whilst that at the ages three to ten years had increased 309 per cent. Now it is important here to note that in 1871, the year immediately following that in which the Elementary Education Act first came into operation, there was in London a noticeably increased incidence of diphtheria mortality at school ages, which increase has been maintained ever since and has in later years been much accentuated. With the object of ascertaining, if possible, how far school attendance is influencing the spread both of diphtheria and scarlet fever in London, Mr. Shirley Murphy has constructed diagrams showing the registered weekly number of cases of diphtheria and scarlet fever respectively in relation to the mean weekly number for the entire year. For this purpose the cases of both diseases notified in 1893 have been divided into three classes: (a) those occurring in children under three years of age, (b) those in children from three to thirteen years of age, and (c) those in persons above thirteen years old. The sick cases may therefore be considered in relation to school operations, these three groups representing practically (a) those who are too young to attend school, (b) those at the school period of life, and (c) those who have for the most part left school. Accordingly, curves have been constructed showing the number of cases occurring in each of these groups; and in respect of both diphtheria and scarlet fever practically the same important fact at once

becomes apparent—namely, that in the four weeks of August, 1893, there was a most remarkable depression in the curve for all ages, the depression being much more strongly accentuated in the curve relating to children of school age. These diagrams show clearly that, whatever the cause, there was in 1893 a sudden and noteworthy diminution in the prevalence of diphtheria and scarlet fever in London during the period which corresponds generally with the closure of the London Board schools, and that very shortly after their reopening early in September an almost equally serious increase in the prevalence of both diseases took place.

Having regard to the limited period for which returns of notifiable infectious diseases are as yet available in London, we are not surprised that the county medical officer of health contents himself for the present with placing before the Council the facts bearing upon the important subject of school attendance in relation to the spread of certain communicable diseases. When, however, the facts for a few more years are forthcoming, we shall hope to hear more on a subject which is of transcendent importance, whether viewed in relation to public health or to elementary education.

THE EXHIBITION OF HYGIENE AND CONGRESS ON PRACTICAL SANITATION AT PARIS.

THE Exhibition of Hygiene¹ will be inaugurated at Paris by M. Félix Faure, President of the Republic, on the 27th of this month. We have already explained that this Exhibition was organised in view of the new law which compels all houses in Paris to drain directly into the sewers, for as yet only 5447 blocks of buildings out of about 80,000 are drained in this manner. In view of this great reform, a reform which will be extended as rapidly as possible to provincial towns, a new sanitary society has been formed in France. It is called the Society of Sanitary Architects and Engineers of France. Its headquarters are at 10, Cité Rougemont (Hôtel des Ingénieurs Civils), and its object is to group together those architects and engineers who have studied questions relating to practical hygiene, to encourage such studies, to spread knowledge of hygiene among the artisans engaged in these professions, and to bestow such honours and recompenses as may stimulate the knowledge of sanitation among those concerned in the practical realisation of sanitary reform. In the execution of this programme the society in question has determined to hold a "Congrès d'Assainissement et de Salubrité" at the Exhibition of Hygiene. The opening of this Congress will coincide with the inauguration, at which the members of the Congress will assist, of the vast irrigation grounds and sewage farm of Achère on Sunday, July 7th. The sittings of the Congress will be held in the *locale* of the Exhibition—namely, the Palace of the Liberal Arts at the Champs de Mars. Though not, strictly speaking, an international congress, foreign adherents will be heartily welcome, and members from Belgium, Denmark, England, and Spain have already been enrolled. The admission fee is twenty francs, to cover the cost of printing the report of the Congress and its free distribution to members. All communications should be addressed to the Secrétariat Général du Congrès, Palais des Arts Libéraux, au Champs de Mars, Paris. Anyone taking an active part in sanitary reform can become a member of the Congress. It is needless to say that this Congress is patronised and encouraged by the French Government, and that its members will have a unique opportunity of studying and visiting all the sanitary services in Paris, as also the Exhibition, to which they will be admitted free of charge. One of the principal subjects of discussion will be the drainage of small towns or large villages. This is a phase of sanitation which has been, comparatively speaking, neglected. The other subjects are the treatment and utilization of domestic slops; the rules that should govern private

thoroughfares; public baths; the conditions governing the application of syphon traps to the interior of inhabited dwellings; the disposition of rooms in dwellings; the necessity of an effective control of the sanitary services in private dwellings; the rational warming of dwellings; the professional teaching of hygiene; and the unification of methods employed in drawing up sanitary statistics. The latter subject will be treated by Dr. J. Bertillon, Chief of the Paris Statistical Department. On most of these questions printed reports will be distributed to the members before the Congress meets, and these reports will be discussed at the morning sittings. In the afternoons private members may introduce other questions for discussion. This Congress will, in conjunction with the Exhibition, have the advantage of lifting sanitary questions out of the domain of mere theory, and of compelling everyone to face and study the difficulties of practical application. As an ounce of practice is worth a pound of theory the Exhibition and Congress should be well supported.

A MATTER OF ETIQUETTE.

WE publish below what we may hope is the final correspondence in a matter to which we have previously referred upon several occasions—namely, the relations between the Vestry of St. George's, Southwark, and Dr. Waldo, their medical officer of health. To recapitulate shortly, the Vestry demanded of Dr. Waldo that he should revise other medical men's certificates, unknown to them, for they were not always satisfied with the certificates submitted. Dr. Waldo refused absolutely to commit such a breach of medical etiquette. He appealed to the Local Government Board, and the Board has decided that he is right. We congratulate Dr. Waldo on the stand he has made for courtesy and righteous dealing. Now the case of the School Board and its discourteous resolution of May 30th stands on exactly the same footing. The School Board has appointed medical men to revise other medical men's certificates, presumably unknown to the original authors of the certificates, and at the bidding, moreover, of the divisional superintendent, a layman. It is to be hoped that the Education Department will convey to the Board an opinion that the Board have acted in, to say the least of it, an impolitic manner. The question, we suppose, will come up at the forthcoming meeting of the Board, and if the Board is wise it will rescind a resolution which ought never even to have been submitted. The following is the correspondence alluded to above:—

St. George-the-Martyr, Southwark.

Vestry Hall, Borough-road,

May 23rd, 1895.

To the Secretary,
Local Government Board.

DEAR SIR,—I am desired by the Vestry of St. George-the-Martyr, Southwark, to ask the advice and guidance of your Board in the following difficulty:—

When Dr. Waldo was appointed medical officer in the year 1892 he signed the enclosed list of regulations, and in accordance with Regulation No. 19 he bound himself to visit professionally the employes of the Vestry when sick, as the Vestry allow sick pay, and they are not always satisfied with the medical certificates submitted, for they fear that malingering is not unknown. In carrying out this regulation, Dr. Waldo finds himself in a position of difficulty. If he calls on any employé without communication with the medical attendant who gave the certificate, he informs the Vestry that he will be guilty of a serious breach of medical etiquette, and if he gives notice to the employé's medical attendant and arranges a formal consultation the Vestry feel that the value of such visit will be lost, and they will be involved in considerable expense.

If Dr. Waldo finds himself obliged to report to the Vestry that the certificate of the medical attendant was not justified by the patient's condition, his relations with the local medical men will become strained and his work as medical officer of health suffer. Some members of this Vestry, on the other hand, are of opinion that the Post Office, the large supply associations, and some large friendly societies, require that visits (with the object of detecting malingering) should be paid by their own officers. They see no reason why Dr. Waldo should not accordingly fulfil the terms of his

engagement, without prejudice to his status in the medical world and without offence to medical etiquette.

Yours faithfully,

(Signed) A. MILLAR, Vestry Clerk.

Local Government Board, Whitehall, S.W.,

June 12th, 1895.

SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 23rd ult., relative to the duty undertaken by Dr. F. J. Waldo, the medical officer of health for the parish of St. George-the-Martyr, Southwark, "to attend, if required, the flushers and sewers men and other employes of the Vestry during illness," and requesting the Board's advice and guidance in the difficulty which has arisen in regard thereto. The Board have carefully considered the representations on the subject submitted in your letter and in the report of Dr. Waldo which accompanied it.

On the general question the Board would observe that as regards duties of a somewhat analogous character which at times devolve on the medical officer of health under the Infectious Disease (Notification) Act, they have laid it down that even when question arises as to the good faith of a certifying medical practitioner the medical officer of health should, if it becomes necessary to revise a certificate, not only seek the co-operation of the medical practitioner concerned, but should also observe, as far as possible, the customs that usually govern the relations of medical practitioners to each other. On the particular case submitted in your letter of the 23rd ult. the Board do not gather that the undertaking entered into by Dr. Waldo "to attend if required" on certain employes "during illness" involves any obligation on his part to revise either the diagnosis or the certificates granted by other medical practitioners who have been called in to attend on such persons. I am, Sir, your obedient servant,

(Signed) W. E. KNOLLYS,

Assistant Secretary.

A Millar, Esq., Vestry Clerk, Borough-road, S.E.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 101, Harley-street, at 5.30 P.M., on June 26th. Mr. T. Holmes, one of the Vice-Presidents, occupied the chair, in the unavoidable absence of the President, Mr. George Pollock, and there was a large attendance of members of the committee. The minutes of the last meeting of the committee were read and confirmed. The honorary secretary, Mr. Percy Dunn, reported that he had duly issued the circular-letter addressed to the Fellows adopted at the previous meeting of the committee. He then read letters from five Fellows of the College desirous of being elected as Members of the Association. These were proposed and seconded by members of the committee and unanimously elected.

The honorary secretary reported the proceedings at the deputation to the committee of the Council which took place on the 10th inst., as already reported in THE LANCET of June 15th. In reference to this matter the honorary secretary reported that the deputation had been asked by the committee of Council to draw up a *précis* of the arguments adduced in favour of their propositions for amending the charters and by-laws, and that the subcommittee appointed by the committee of the Association at a recent meeting had already commenced this *précis* and now submitted it to the committee. After some discussion, the committee approved generally of the work of the subcommittee, and requested them to complete it as soon as possible.

A resolution was proposed, seconded, and unanimously passed, expressing the hope that all the members of the Association would record their votes in favour of Mr. Willett, Mr. Norton, and Dr. Ward Cousins.

With respect to the annual general meeting of the Association it was decided that the date should be fixed by the committee after the election at the College on the 4th prox.

This concluded the business of the meeting, and the committee adjourned.

METROPOLITAN HOSPITAL SUNDAY FUND.

WE continue below our record of some of the principal amounts received at the Mansion House, the lists of which have been received at THE LANCET Office, up to the time of our going to press on Thursday, when the total sum received amounted to nearly £31,000. At the corresponding period last year the total was £26,500.—

	£	s.	d.		£	s.	d.
St. Michael's, Chester-square (Canon Fleming), with additions	1175	9	0	Highgate Parish Church (Rev. J. M. Andrews)	72	0	6
Christ Church, Lancaster-gate (Rev. C. J. Ridgeway), with additions	1171	0	11	St. Paul's, Hamlet-road, S.E.	70	11	4
Theistic Church (Rev. C. Voysey), with additions	156	0	0	St. Paul's, Avenue-road	94	12	10
St. Jude's, South Kensington (Rev. E. A. Eardley-Wilmot)	874	5	9	St. Saviour's, Upper Chelsea (Rev. L. C. Walford)	93	14	3
Earl of Feversham (a further)	100	0	0	St. Mary's, Balham (Rev. T. Bates)	80	0	0
St. Paul's, Beckenham (Rev. C. Green)	140	0	0	St. Paul's, Wimbledon-park (Rev. E. C. Brace)	56	10	6
St. Bartholomew's, Sydenham (Rev. W. A. Moberley)	152	8	2	Hornsey Parish Church (Rev. J. Jakes)	67	8	10
Holy Trinity, Tulse-hill (Rev. E. L. Roxby), with additions	143	18	4	Regent-square Presbyterian Church	80	18	7
St. George's, Hanover-square (Rev. D. Anderson)	208	14	1	Dulwich College Chapel (Canon Daniell), with additions	60	0	0
St. Saviour's, Paddington (Rev. M. Tweddell), with additions	109	3	2	Park Presbyterian Church, Highbury	30	0	0
St. Peter's, Kensington-park-road (Rev. H. G. Rosedale)	114	13	9	St. Paul's, Kilburn (Rev. H. G. B. Hunt)	37	3	2
All Saints', Ennismore gardens (Rev. R. Stewart)	480	3	1	Crouch Hill Presbyterian Church	30	0	2
St. Peter's, West Dulwich	160	7	10	Regent's Park Baptist Chapel	37	8	9
Mrs. G. Palmer (a further)	105	0	0	Hammersmith Parish Church (Rev. J. H. Snowden)	33	2	2
Holy Trinity, Sydenham (Rev. H. Stevens)	128	8	10	Highgate Presbyterian Church	33	6	6
St. Mary's, Kilburn (Rev. J. Robertson)	104	12	8	Dartford Parish Church (Rev. P. E. Smith)	33	9	4
Christ Church, Hampstead (Rev. G. F. Head)	205	19	5	St. Peter Arkley, Barnet (Rev. D. W. Barrett)	34	7	2
Roslyn Hill Unitarian Chapel, Hampstead	155	1	8	St. John's, Upper Norwood (Rev. W. F. La Trobe Bateman)	34	19	3
St. Barnabas, Kensington (Rev. G. R. Thornton)	93	14	7	Holy Trinity, Eltham (Rev. T. N. Rowsell)	32	11	1
St. Philip's, Earl's-court (Rev. W. Smale)	110	7	3	St. Andrew's, Stoke Newington (Rev. H. E. J. Bevan)	32	1	8
St. Augustine's, Queen's-gate (Rev. R. R. Chope)	100	0	0	Monken Hadley Parish Church (Rev. F. C. Cass)	33	2	6
Immanuel, Stratham-common (Rev. G. S. Streetfield)	108	16	10	All Saints', Notting-hill (Rev. W. R. Trench)	32	14	11
"F." (a further)	50	0	0	St. John-at-Hackney (Rev. F. E. Gardiner)	37	14	3
St. Augustine's, Highbury (Rev. J. McCormick)	73	0	9	St. Mary's, Graham-street	34	0	0
Grosvenor Chapel, South Audley-street (Rev. W. F. Elliott)	65	11	2	St. Thomas', Upper Clapton (Rev. F. W. Kingston)	33	5	10
St. Luke's, West Holloway (Rev. H. Pitt)	42	0	8	St. Olave, Woodbury Down (Rev. W. Healey)	31	1	8
St. Mary Abbot's, Kensington, Parish Church and Missions (Rev. The Hon. E. Carr Glyn)	514	14	9	Brixton-hill Wesleyan Chapel	41	6	11
St. Martin-in-the-Fields (Rev. J. F. Kitto)	119	15	10	Chislehurst Wesleyan Chapel	31	3	0
St. Matthew's, Bayswater (Rev. E. A. Stuart)	217	0	11	St. Andrew's, South Streatham (Rev. W. G. C. Cubison)	34	2	1
St. Andrew's, Wells-street (Rev. W. T. Houldsworth)	108	12	11	Chislehurst Parish Church (Canon Murray), with additions	354	13	7
Holy Trinity, Upper Chelsea (Canon Exton)	281	7	6	Christ Church, Westminster (Rev. F. N. Agliouby)	30	0	0
St. Stephen's, South Kensington (Rev. G. S. Slack)	177	5	1	Camden Church, Camberwell	51	13	4
St. Margaret's, Westminster (Archdeacon Farrar), with additions	186	11	11	St. Mary's, Boltons (Rev. W. T. Du Boulay)	57	7	0
Clapham Congregational Church	49	12	0	Highbury Quadrant Congregational Church	66	19	7
All Saints', St. John's-wood (Rev. J. Richardson-Eyre)	42	18	6	Trinity Presbyterian Church, Streatham	51	0	6
St. Mary's, Hornsey-rise (Rev. W. S. Lewis)	50	0	8	St. Paul's, Finchley (Rev. S. B. Mazall)	44	1	8
Lewisham Parish Church (Rev. S. Bickersteth)	45	0	0	St. Luke's, Battersea (Rev. F. N. C. Bell)	41	8	10
Holy Trinity, Knightsbridge (Rev. C. C. Scholefield)	58	18	8	St. Peter's, Eltham-road	35	3	7
St. Paul's, Clapham (Rev. H. Hughes)	42	13	10	St. Matthew's, West Kensington (Rev. Dr. Shields)	32	4	1
Christ Church, Chislehurst (Rev. W. Fleming)	50	6	8	St. Stephen's, Westminster (Rev. W. H. G. Twining)	54	0	0
St. Andrew's, Fulham, and Mission (Rev. E. S. Hilliard)	59	10	4	St. Anne's, Soho (Rev. J. H. Cardwell)	50	6	6
St. Augustine's, Kilburn (Rev. R. C. Kirkpatrick)	50	0	4	Holy Trinity, Rochampton	45	7	0
St. Paul's, Canonbury (Rev. J. Fox)	42	19	2	St. Mark's, Regate	28	16	6
Barnes Parish Church (Rev. B. M. Kitson)	50	10	8	Upper Holloway Baptist Chapel	25	1	7
St. Mildred's, Lee (Rev. F. W. Helder)	42	1	5	Holy Trinity, Lyonsdown, and St. James's, New Barnet	27	14	6
Chipping Barnet Parish Church (Rev. D. W. Barrett)	42	17	1	St. Mary Magdalen, Enfield (Rev. G. P. Turner)	22	6	10
Heath-street Baptist Chapel, Hampstead	48	10	2	Kilburn Presbyterian Mission	22	13	1
Aldham Parish Church	51	0	6	Streatham Wesleyan Chapel	21	10	7
St. Paul's, Camden-square (Rev. G. Tiley)	38	0	7	Old Malden Parish Church	28	3	0
Christ Church, Marylebone (Rev. O. P. Wardell-Yerburgh)	44	16	9	Camden-road Presbyterian Church	26	1	7
St. Paul's, Forest-hill (Rev. W. Klein)	57	13	9	St. Paul's, Mill Hill (Rev. E. C. Lethbridge)	24	9	0
St. Peter's, Dulwich-common (Rev. H. J. Pulley)	47	14	9	St. James the Less, Westminster (Rev. W. H. Blackley)	21	0	0
Holy Trinity, Anerley	47	3	9	St. George's Presbyterian Church, Bromsbury	23	6	11
St. Mary Magdalen's, Paddington (Rev. W. H. Bleden)	50	19	0	Holy Trinity, Stroud-green (Rev. H. Linklater)	22	2	0
St. John's, Down-hill-hill (Rev. R. B. Girdlestone)	45	10	10	Woodford Parish Church and Mission	26	17	8
Upper Norwood Presbyterian Church	52	0	0	St. Saviour's, Highbury	28	8	3
St. German's, Blackheath	49	11	0	St. Anne's, Highgate-rise (Rev. C. T. Ackland)	28	16	0
St. Stephen's, Hampstead (Rev. J. Kirkman)	41	0	0	St. Mark's, Bromley, Kent	25	0	0
Church of the Immaculate Conception, Farm-street	42	0	0	St. Giles-in-the-Fields (Rev. H. W. P. Richards)	25	0	0
Carmelite Church	31	7	9	Clapton Park Congregational Church	22	7	0
Church of the Ascension, Blackheath (Rev. A. L. Lambert)	30	0	0	St. Paul's, Greenwich	26	14	8
St. John's, Bromley, Kent (Rev. P. Barker)	31	2	0	Hayes Parish Church, Kent	20	11	4
St. Stephen's, Clapham-park (Rev. S. Wainwright)	30	5	8	St. Mark's, Regent's Park (Rev. W. J. Sparrow Simpson)	20	1	0
Chapel Royal, St. James's Palace (Rev. E. Sheppard)	145	12	0	St. Paul's, Upper Holloway (Rev. J. Piper)	25	15	1
All Saints', Margaret-street (Rev. W. Allen Whitworth)	24	1	3	St. Saviour's, Denmark Park	23	4	10
St. Sophia's, Bayswater (Greek Church)	96	3	0	Bloomsbury Baptist Chapel	21	0	0
St. John's, Presbyterian Church, Forest-hill	77	0	0	All Saints', West Dulwich	21	0	0
St. Marylebone Presbyterian Church	60	14	5	Mr. W. M. Cross, C.C.	20	0	1
Royal Military Chapel, Wellington Barracks	61	5	2	All Saints', Child's Hill (Rev. W. D. H. Petter)	20	0	0
St. Paul's, Great Portland-street (Rev. C. G. Williamson)	62	16	0	Mr. C. H. T. Hawkins (a further)	28	5	3
St. Stephen's, Faling (Rev. B. S. Topholme)	62	0	0	Christ Church, Woburn-square (Rev. J. J. G. Nash)	23	1	9
St. John's, Blackheath (Rev. J. W. Marshall)	80	5	10	St. Anne's, Limehouse	25	11	7
St. John Evangelist, Penge (Rev. W. Smyly)	81	5	0	St. Dunstan's, East Acton (Rev. T. M. Hayter)	22	3	11
St. George's, Tufnell-park-road (Rev. W. T. Hollins)	61	4	6	St. Mark's, Battersea-rise	20	0	0
St. Peter's, Streatham (Rev. H. B. Dickinson)	67	15	6	"H. S."	27	11	10
St. Michael and All Angels', Blackheath-hill (Rev. A. E. Barnes-Lawrence)	69	12	3	Holly-park Wesleyan Chapel, Crouch-hill	23	14	10
Rochampton Parish Church (Rev. R. Carrington)	85	0	3	St. John's, Sidcup	20	3	0
St. James's, Holloway (Rev. E. G. Hodge)	69	10	3	Willesden Parish Church (Rev. B. S. Atlay)	21	11	6
St. Mark's, North Audley-street (Rev. J. W. Ayre)	94	9	5	St. Cuthbert's, West Hampstead (Rev. W. J. Watkins)	20	17	4
St. Saviour's, Pimlico (Rev. H. Washington)	68	4	3	St. Lawrence, Catford	21	3	10
St. Andrew's, Westminster (Rev. The Hon. J. S. Northcote)	77	10	10	St. Saviour's, South Hampstead (Rev. G. A. Herklote)	25	1	9
Christ Church, Highbury (Rev. C. H. Banning)	90	3	3	St. Paul's, Paddington (Rev. R. Jamblin)	24	8	6
St. Mark's, Hamilton-terrace (Canon Duckworth)	173	18	9	Downs Baptist Chapel, Clapton	23	5	5
Putney Parish Church and St. John's (Rev. the Hon. R. Henley)	76	10	0	St. Saviour's, Brixton-hill	29	10	4
Clapham Parish Church (Rev. C. P. Greene)	73	0	2	St. Paul's, Walworth, and Mission	28	16	4
St. Matthew's, Champion-hill (Rev. J. R. Forte)	95	17	9	Christ Church, Harlesden, Reformed Episcopal	20	17	2
				St. Barnabas, Pimlico (Rev. A. Gunney)	25	12	9
				St. Andrew's, Stockwell	33	0	6
				St. John's, Clapham-rise (Rev. C. H. Bowby)	30	3	6
				St. Mark's, Notting-hill (Rev. W. E. Emmet)	30	3	6

Other amounts have been received and will be published in our next issue.

MOKATTAM: A SANATORIUM FOR CAIRO.

By GREENE PASHA.

SOJOURNERS in Egypt—and in these days, whether as seekers after health or merely on pleasure bent, their name is legion—must know the Mokattam heights, must be familiar, by sight, at all events, and by name, if not from actual excursion, with the flat-topped range of nummulitic limestone hills that overlook the city of Cairo to the south-east, forming an effective background for the picturesque cluster of battlemented buildings known as the Citadel. Elevated some 400 or 500 feet above the plain, the summit of Mokattam consists of a plateau in three tiers, so to speak, each tier being fairly level, and the three collectively constituting a superficies sufficiently extensive for the accommodation of a large suburb, but arid and desolate to the last degree for lack of water. Not many visitors ever take the trouble to scale the breezy heights, because there is "nothing to be seen" as a recompense for the climb except an obsolete fort and a second-rate ruin or two. In a land where objects of interest exist in such profusion on every side, and are withal so readily accessible, it is not considered worth while to encounter a somewhat tiresome ascent, but the few who do expend a portion of their superfluous energy to this end are amply rewarded by the view, which, beyond all comparison, is the most magnificent in Egypt.

The usual route to Mokattam is along a causeway that was originally constructed for military purposes in connexion with the above-mentioned fort, and although this pathway, which opens out directly behind the citadel, is both precipitous and dilapidated, it is nevertheless accessible to that wonderful and long-suffering animal, the Egyptian donkey. There is also a more circuitous and considerably longer road, with an easy gradient, which a small outlay would render practicable to the ordinary Cairo Arabiyeh; and should the requisite enterprise be forthcoming a funicular elevator could with the greatest facility be constructed in connexion with an existing railway that traverses a deep cutting at the foot of the hill. In India wherever there is raised ground in the neighbourhood of a town or cantonment it is promptly taken advantage of for the erection of hot-weather bungalows, but the idea of so utilising the Mokattam plateau seems never to have seriously occurred to the European community of Cairo. That such neglect of a great natural advantage should have prevailed under the old régime is perhaps comprehensible; but it certainly does seem a strange thing that the Anglo-Indians, who are now so comparatively numerous in Egypt, should have taken no steps in the matter. When our countrymen feel that they require change of air—a respite, as it were, from the foul smells and coprophagous microbes of the undrained city—they betake themselves to Helouan or Matarieh and even make little of the nine miles to and from Mena at the foot of the Great Pyramids; but the notion of a sanatorium close at hand, in the pure atmosphere up above their heads, and within easy reach of the various Ministries and public offices, has altogether escaped their ken; and, yet, as has been suggested, the scheme could be so readily carried out—there are absolutely no difficulties in the way, and the boon to the whole population would be enormous. The aerial project could be made an actual reality with the utmost ease. A little energy, a little money, and the thing is done. A haven of refuge in sickness would be opened out for all, numberless lives would be saved, and European parents would be enabled to keep their children with them throughout the entire year, instead of having to send them home from the summer heats, as at present. A sufficiency of water could be raised by pumping, or possibly a supply might be conveyed in pipes by means of gravitation alone, if the intake were to be carried far enough up the Nile. Given an adequate water-supply and a ready means of access, there seems to be no reason why a Mokattam sanatorium should be condemned as utopian or impracticable. During the cholera epidemic in 1883 some of our troops were encamped on the hill, with excellent results; and I have heard of at least one English official¹ who had a tent pitched there in order to be able to sleep in a purer

atmosphere than the town itself affords. It would unquestionably be a great boon to the European inhabitants of Cairo in general if a healthy and easily reached suburb could be added to this city.

The following description of the view from the site of the proposed sanatorium is from the pen of an eye witness. As just said, there is "nothing to see" on Mokattam, but where in the wide, wide world can the view from its summit be surpassed? Let the spectator, provided with a good field-glass, take his seat near the edge of the well-nigh perpendicular cliff, in the shade of the ruinous old tomb that stands at the brink of the first terrace. Immediately beneath his feet is the citadel; he obtains a veritable bird's-eye view of the famous fortress, with its palaces and mosques, parade grounds, and umbrageous gardens. At the western verge of the parapet, the reputed site of the Mameluke's leap, stands the venerated temple erected by a solid enough man, Mohamed Ali, and called by his name—a hideous and incongruous edifice, redeemed from utter reprehensibility by its twin minarets, a pair of slenderest arrow-like pillars that seem about to wing their way into the blue sky above them. Many as are the minarets of the land of Egypt, there is none can compare with these for grace and symmetry. As delicate examples of lapidarian skill, or rather genius, their super-excellence is unapproachable. They may, as many say, be totally out of keeping with the remainder of the structure; they may, in the jargon of the day, be devoid of all *motif* and congruency, but in the humble estimation of one uncultured Philistine at least they remain things of beauty and a joy for ever. On the level ground, at the base of the old-world ramparts, stands the celebrated pile called the Mosque of Hassan, over which the dilettanti are wont to rave, though why the prison-like mass of masonry, with its huge up-and-down walls crowned by gigantic and minatory cornices, should evoke such unlimited enthusiasm is an insoluble mystery, more especially when I call to mind the damning fact that every stone in those walls was reft by shameless iconoclasts from the mighty monuments at Gizeh. To the right extends a labyrinthine mass of neutral tint constituting the native town—grimy and unlovely, it is true, on close acquaintance, but here happily embellished by the enchantment of distance. The swarming multitudes throng in and out and to and fro—as it were, a congeries of manikins. Backwards and forwards they glide in ceaseless motion, while, harmonised by space, arises the not unpleasant murmur of the restless tongues that at close quarters would be deafening. Here and there, in a more open space, a parti-coloured conglomeration of humanity seems to squirm and oscillate, being swollen or depleted the while by continually arriving or departing units; but should the eye select one of the latter to track to its destination—hey, presto! in a moment it has vanished from view, swallowed up in some narrow alley or dim arcade. On the left the modern division of the town expands in more gorgeous array, separated from the older part by the mighty artery which Mohamed Ali, with a characteristic mixture of despotism and enlightenment, drove straight through the heart of the labyrinth. The great avenue thus created is indeed an artery in the literal meaning of the word, and has rendered yeoman service to the city from a hygienic point of view, whatever may be said of it æsthetically. The autocrat to whom Egypt may be said to owe her existence simply issued an order, and lo! in the twinkling of an eye a thousand and one obstructions vanished; the destructive creator, if such a compound term be permissible, said the word, and a broad, straight, airy boulevard took the place of squalor and unmitigated crookedness. Further still to the westward are the modern habitations of the Ismailiyeh quarter, palatial in appearance, and for the most part standing in the midst of spacious gardens, where trees, shrubs, and creepers unite in producing a gorgeous display of floral treasure—of a truth ideal dwelling-places, save for the latticed windows and the lofty walls, the secluded harem, and the ostentatious Salamluk. On the extreme right is Abbasiyeh, the military quarter, with its extensive drill grounds, bounded on one side by the picturesque ruins known as the Tombs of the Kings, and on the other by the fertile fields of Matarieh. Across the entire picture, in the middle distance, flows the majestic Nile, his broad breast covered with the graceful sails of countless dahabiyehs, and spanned by a noble bridge at Kasr-el-Nil—sole relic of French predominance, in spite of the leonine effigies, so emblematic of

¹ Colonel Fenwick of the Police.

Britain's power, that guard the entrances. Beyond the bridge appears the playground of Ghezreh, sacred to polo, golf, cricket, tennis, racing; while further on is many-palaced Ghizeh, amidst acacia-shaded avenues and lovely pleasaunces. In the distance, to the north-west, the meandering river may be traced for miles through meadows of the most vivid green; and, to crown all, on the horizon the Pyramids stand out against the sky, completing the picture and imparting to it a distinctive character that elsewhere does not exist. The island of Rodah, too, in the left foreground, must not be omitted, with its quaint buildings and bountiful foliage; nor must the general effect and local colouring, due to the countless mosques and glittering pinnacles, remain unmentioned in this imperfect list.

It is easy to give a catalogue of details, but when it comes to a *tout ensemble* the difficulties grow well-nigh insuperable. How is it possible to convey an adequate idea of the glorious translucency, the exquisite clearness, of the atmosphere? What master of language could describe the blending of colours, the effects of light and shade, the thousand and one minutiae that at once appeal to the eye? The words of Byron express the scene better than any words of mine can do:

"The blue sky,
So cloudless, clear, and purely beautiful,
That God alone was to be seen in Heaven."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool Urban Sanitary District.—The population of Liverpool, calculated on the assumption that the annual decrease observed between 1881-91 has continued, is estimated at 507,203. As, however, there has been a natural increase of 13,419 since 1891, it seems probable that the above inference is fallacious, and there are, Dr. E. W. Hope observes, strong indications for estimating the population at 531,397. Liverpool holds, Dr. Hope points out, a unique position as a purely urban municipality—i.e., one from which the natural suburban outgrowths are excluded, and which does not embrace within its registration area any semi-rural districts such as form part of other large towns. This fact is well shown by the density of population in Liverpool, which is twice as great as that of London, seven times that of Leeds, nine times that of Norwich, and fourteen times that of Huddersfield. The general death-rate of Liverpool was, for 1894, 23·8 per 1000, a rate lower than any yet recorded, save in 1888, when it was 23·1. The ward death-rates ranged during 1894 from 16·4 to 41·3. As instancing the effect which the age distribution of a population has upon its death-rate, Dr. Hope shows that if the population of Liverpool consisted entirely of persons between twenty and thirty the death-rate would be 7·8 per 1000; while if, on the other hand, it consisted entirely of children under one year it would amount to about 223·5 per 1000, and if above sixty years to 67·1 per 1000; and these rates would obtain quite apart from any change either way in the sanitary condition of the city. Comparing the number of cattle killed in the city slaughterhouse with the number of dead carcasses imported, it appears that during 1894 the number of cattle slaughtered was 6000 less than in 1893, a deficit which was made up for by the importation of 6000 dead carcasses. As regards sheep, too, we are told that during 1894 there was a decrease, as compared with 1893, of 51,000 in the number killed in Liverpool, while there was an increase of some 40,000 in the number of carcasses imported. These figures are certainly extremely interesting, and they raise some important questions in regard to the inspection of meat-supplies. *A propos* of this, we notice that in 1894 there were 1087 carcasses seized by the medical officer of health and the inspectors, and of these 214 were condemned in consequence of the animals having suffered from tuberculosis. In view of the recent report by the Royal Commission on Tuberculosis some observations as to the extent of the tubercle would have been of much interest; but doubtless Dr. Hope's very instructive report was in type before the Commission's report appeared.

"Charitable shelters" are, it appears, not unknown in Liverpool, and some difficulty has arisen as to their sanitary condition. Liverpool is, we are pleased to see, continuing her crusade against insanitary property, and Dr. Hope has recently reported on two circumscribed areas—one on the north and the other on the south side of the city. There are altogether 577 houses concerned, and it has been ascertained by careful inquiry that in three contiguous streets the death-rate is respectively 63·1, 67·0, and 71·4 per 1000. The houses, as a rule, consist of three rooms one above the other and connected by a staircase leading directly from one room into another. The houses are back-to-back and side-to-side, so that back or side windows are impossible. The property is, Dr. Hope states, in a general condition of dilapidation and ruin; "the outer walls and ceilings are stained by saturation with vapour of breath and are foul-smelling." There were fifty deaths from typhus fever in Liverpool last year.

Poplar Urban Sanitary District.—The Bow portion of this district has for the last twenty-one years been under the medical officership of Mr. R. M. Talbot, who in his current annual report furnishes an interesting contrast to the sanitary condition of the district in 1874 and 1894. The general sanitary condition of Bow will, Mr. Talbot states, "to-day bear the strictest investigation and compare favourably with any similarly constituted area in the world." Mr. Talbot has had considerable experience of the physical conditions of bakers, and he states that they are especially subject to chronic bronchitis, rheumatic gout, and cardiac weakness, all of which, he thinks, are in a great measure due to the nature of their occupation and the conditions under which their work is performed. The Poplar and Bromley portions of the Poplar district are reported upon by Mr. F. W. Alexander. He states that the condition of the Thames continues to improve, and as bearing upon this he refers to the capture of whitebait, jelly-fish, and shrimps off Erith, and the discovery of dace off Greenwich and Westminster. Mr. Alexander thinks that the Thames would quickly regain the name of "silvery" if the "West Ham sewage ceased to be discharged into the Lea and Thames, and increased sewer accommodation were afforded by the London County Council, so as to obviate the necessity of the numerous storm outlets, and if all other great sources of pollution were prevented." Unfortunately some of the "great sources of pollution" are made up of an aggregation of small pollutions which it is by no means easy to control while London maintains her position as the commercial centre of the world.

Portsmouth Urban Sanitary District.—Dr. B. H. Mumby records in his current annual report that during 1894 twenty-two cases of small-pox were notified. Eighteen of these showed good vaccination marks, and all recovered. The remaining four died, and of these three had never been vaccinated, while the fourth, if ever vaccinated, showed no signs of the operation. Truly, as Dr. Mumby remarks, in the face of such facts there should be no difficulty in getting children vaccinated. Unfortunately, however, the vaccination officer reports that he has every year an increasing difficulty in enforcing the Vaccination Acts. Diphtheria, we are glad to note, shows no signs of increasing in Portsmouth, and Dr. Mumby has observed that the greatest incidence of the disease is in those parts of the town situated on the London clay. Notification has now been in force in Portsmouth for eleven years, and during this period the death-rate for the four notifiable diseases has been reduced from 1·54 per 1000—the mean of the eleven pre-notification years—to 0·69, the mean of the eleven notification years.

Plumstead Urban Sanitary District.—With a view of impressing upon the public of Plumstead the fact that measles is a dangerous infectious disease, cards have been drawn up and distributed setting forth the necessity of taking proper precautions. Dr. Sidney Davies does not, however, consider that much good would result from adding measles to the notifiable diseases. Arrangements have also been made for disinfecting rooms which have been occupied by patients suffering from phthisis; but, although Dr. Davies informed all the local medical practitioners of the provisions which had been made, only three applications for disinfection were received up to the time of sending the annual report to press. An outbreak of scarlet fever occurred during 1894 among the scholars attending a certain Board school, and Dr. Davies's locum-tenent detected several previously unrecognized cases.

Croydon Rural Sanitary District.—Dr. Darra Mair's report

on the sanitary condition of this district is a very thorough one and bears evidence of much hard work. The statistical side of the report is especially well developed and should be of considerable local value. A remarkably mild epidemic of measles occurred during 1894 in the parish of Wallington, and although there were 336 cases notified but one death resulted. Unfortunately the initial cases were unnotified and were not discovered until the schools became implicated and the outburst occurred. The schools were closed on Oct. 3rd, and after the 20th of the same month no further cases were notified from houses occupied by the school children; school closure would therefore appear to have been of value in this instance. Measles, as will already have been gathered, is notifiable in the district now referred to, and Dr. Mair, as the result of the very considerable experience he has gained from the epidemic, thinks that any advantage gained from notification would accrue equally if the provision applied to infected houses only. He thinks that the saving in expenditure might be applied to the notification of diarrhoea and phthisis.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6604 births and 3284 deaths were registered during the week ending June 22nd. The annual rate of mortality in these towns, which had declined in the six preceding weeks from 17.7 to 15.4 per 1000, rose again last week to 16.2. In London the rate was equal to 15.1 per 1000, while it averaged 16.9 in the thirty-two provincial towns. The lowest rates in these towns were 6.8 in Croydon, 12.3 in Blackburn, 12.6 in Brighton, 12.7 in Norwich, and 12.8 in Newcastle-upon-Tyne; the highest rates were 18.9 in Halifax, 19.3 in Plymouth, 20.4 in Manchester, 21.4 in Oldham, and 25.1 in Liverpool. The 3284 deaths included 400 which were referred to the principal zymotic diseases, against 294 and 399 in the two preceding weeks; of these, 124 resulted from measles, 111 from diarrhoea, 67 from diphtheria, 49 from whooping-cough, 24 from "fever" (principally enteric), 23 from scarlet fever, and 2 from small-pox. No fatal case of any of these diseases occurred last week in Croydon, Norwich, or Burnley; in the other towns they caused the lowest death-rates in Sheffield, Halifax, and Salford, and the highest rates in Wolverhampton, Preston, West Ham, Liverpool, and Cardiff. The greatest mortality from measles occurred in West Ham, Plymouth, Cardiff, Liverpool, and Manchester; from whooping-cough in Gateshead; and from diarrhoea in Cardiff, Leicester, Preston, and Bradford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 67 deaths from diphtheria included 37 in London, 5 in Liverpool, 4 in Wolverhampton, and 4 in Birmingham. One fatal case of small-pox was registered in Liverpool and 1 in Oldham, but not one in London or in any other of the thirty-three large towns. There were 22 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, June 22nd, against 22, 23, and 19 at the end of the three preceding weeks; 8 new cases were admitted during the week, against 1, 5, and 2 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1732 against 1524, 1589, and 1637 on the three preceding Saturdays; 251 new cases were admitted during the week, against 187, 179, and 199 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 163 and 152 in the two preceding weeks, rose again to 186 last week, but were 31 below the corrected average. The causes of 51, or 1.6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Oldham, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Burnley, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 21.4 to 17.1 per 1000, rose again to 19.4 during the week ending

June 22nd, and exceeded by 3.2 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16.0 in Paisley and 17.5 in Dundee to 24.0 in Perth and 24.3 in Greenock. The 560 deaths in these towns included 26 which were referred to diarrhoea, 20 to whooping-cough, 14 to measles, 7 to scarlet fever, 4 to diphtheria, 4 to "fever," and 1 to small-pox. In all, 76 deaths resulted from these principal zymotic diseases, against 57 and 58 in the two preceding weeks. These 76 deaths were equal to an annual rate of 2.6 per 1000, which was 0.6 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhoea, which had been 25 in each of the two preceding weeks, were 26 last week, of which 14 occurred in Glasgow and 4 in Dundee. The fatal cases of whooping-cough, which had been 11 and 12 in the two preceding weeks, further rose to 20 last week, and included 14 in Glasgow. The 14 deaths referred to measles corresponded with the number recorded in the preceding week; 4 occurred in Glasgow and 4 in Greenock. The fatal cases of scarlet fever, which had been 4 and 3 in the two preceding weeks, rose again to 7 last week, and included 4 in Glasgow and 2 in Edinburgh. The 4 deaths referred to diphtheria showed a slight further increase upon those recorded in recent weeks; 2 occurred in Glasgow and 2 in Edinburgh. The fatal case of small-pox was registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 112 and 87 in the two preceding weeks, rose again to 94 last week, and exceeded by 28 the number in the corresponding week of last year. The causes of 41, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22.1 and 23.1 per 1000 in the two preceding weeks, declined again to 20.1 during the week ending June 22nd. During the past twelve weeks of the current quarter the death-rate in the city has averaged 27.7 per 1000, the rate during the same period being 16.7 in London and 18.9 in Edinburgh. The 135 deaths registered in Dublin during the week under notice showed a decline of 20 from the number in the previous week, and included 16 which were referred to the principal zymotic diseases, against 11 and 8 in the two preceding weeks; of these, 6 resulted from small-pox, 3 from scarlet fever, 3 from diarrhoea, 1 from measles, 1 from diphtheria, 1 from whooping-cough, and 1 from "fever." These 16 deaths were equal to an annual rate of 2.4 per 1000, the zymotic death-rate during the same period being 2.2 in London and 1.9 in Edinburgh. The 6 fatal cases of small-pox registered in Dublin last week exceeded the number in any week since February last. The mortality from whooping-cough and from "fever" showed a decline from that recorded in recent weeks, while the 3 fatal cases of scarlet fever exceeded the number in any week since September last. The death referred to measles was the first recorded within the city during the current year. The 135 deaths registered in Dublin last week included 26 of infants under one year of age, and 29 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers in the preceding week. Seven inquest cases and 6 deaths from violence were registered; and 50, or more than a third, of the deaths occurred in public institutions. The causes of 11, or more than 8 per cent., of the deaths in the city last week were not certified.

THE REPORT OF THE REGISTRAR-GENERAL FOR ONTARIO FOR 1893.

The report of the births, deaths, and marriages in the province for the year ending Dec. 31st, 1893, furnishes the usual amount of interesting statistics. The following are taken therefrom as showing the effect of these three factors upon our population. The following summary will show the increase and decrease of population by municipalities for the ten years from 1882 to 1892.

TOWNSHIPS.	
Increase in ten counties	29,672
Decrease in thirty counties	92,197
Total decrease	62,427

TOWNS AND VILLAGES.	
Increase in thirty-two counties	114,962
Decrease in seven counties	5,689
Total increase	109,873
CITIES.	
Increase in eleven cities	126,788
Decrease in one city	462
Total increase	126,326

That a decrease should have occurred in the rural districts of the province is a fact calling for serious attention on the part of the authorities. A total decrease of 62,000 in a rural population of 1,120,000 in 1882 does not speak well for a young country like Canada, and this to occur in the most populous province, where the pursuit of agriculture in some form or another is essential to our development and material progress, would seem to indicate a condition of affairs worthy of more than passing notice. It would seem that population in this new world is following the example set in the old—viz., a tendency to concentration of population in villages, towns, and cities, a fact with us greatly to be deplored. The birth-rate per 1000 is 19·8, the same as in 1892. The ratio of males to females is 1065 to 1000, the ratio being a slightly increasing one. The total number of deaths for the year was 22,903, being a death-rate of 10·6 per 1000. In this connexion the report adds: "While its urban populations have notably increased during the decade, it has been in only a few instances that this growth has been too fast for the ability of municipal authority to deal with the sanitary problems developed by their new conditions." The increase of deaths has been great in the class "developmental diseases," then following those classed as "local diseases;" whilst the classes zymotic and constitutional show a decrease. Amongst individual diseases the decrease in the cities is marked in diphtheria, being from 0·87 per 1000 in 1892 to 0·60 in 1893. I notice that the rate, too, in influenza has fallen from 0·50 in 1892 to 0·30 per 1000 in 1893, whilst phthisis shows the same rate—1·8 per 1000.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN MICHAEL THOMAS YARR, F.R.C.S., is seconded for service under the Siamese Government.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions among the officers of the Staff Corps and Indian Medical Service made by the Government of India:—*Bengal Medical Establishment*: To be Surgeon-Major-General: Surgeon-Colonel Robert Harvey, M.D., D.S.O. Surgeon-Majors to be Surgeon-Lieutenant-Colonels: George Speirs Alexander Ranking, M.D.; Robert Davidson Murray; Dennis Wood Deane Comins; Patrick Fenelon O'Connor; James Moran, M.D.; William Allason Simmonds; Roderick Macrae; Thomas Elwood Lindesay Bate; Shibram Borah. To be Surgeon-Major: Surgeon-Captain Granville Jameson. *Madras Medical Establishment*: To be Surgeon-Major-General: Surgeon-Colonel Charles Edwin McVittie. Her Majesty has also approved of the retirement from the service of Surgeon-Colonel Jesse Griggs Pilcher, Bengal Medical Establishment. The services of Surgeon-Captain H. E. Drake-Brockman, F.R.C.S. (Bengal), are replaced at the disposal of the Government of the North-West Provinces and Oudh. The services of Surgeon-Captain H. B. Melville are placed at the disposal of the Government of India in the Home Department. Surgeon-Captain H. W. Elphick, Officiating Civil Surgeon, is appointed to be Civil Surgeon, 2nd class, with grade station Sharampur, vice Surgeon-Major P. J. Freyer, promoted, and to continue to officiate as Superintendent, Central Prison, Allahabad.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon Henry Charles Woods, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet.

Surgeon R. T. Gilmour is appointed to the *Tamar*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major Henry F. Holland, M.D., to be Surgeon-Lieutenant-Colonel.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Royal Sussex Regiment: Charles John Jacob-Hood, Gent., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Oxfordshire Light Infantry: Charles Dorrington Batt, M.B., to be Surgeon-Lieutenant. 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders: Surgeon-Lieutenant A. C. Miller, M.D., to be Surgeon-Captain.

ENTRANCE EXAMINATIONS TO THE ARMY.

We are living in very stirring times as regards the organization and administration of the army. The retirement of the Duke of Cambridge from the post of Commander-in-chief, which he has held for nearly forty years, and the introduction of a new *régime* mainly based on the recommendations of the Hartington Commission are, it is needless to say, measures of a very radical and important character which will probably more or less affect all branches of the service. Among the minor reforms in contemplation are the changes about to take place in the entry examinations for the Royal Military Academy, Woolwich, and the Royal Military College, Sandhurst. The regulations for the medical examination of candidates are understood to be undergoing complete revision and will affect the programme of examination. The War Minister has promised that due and sufficient notice shall be given of these. As regards the character of the literary and scientific examination of candidates the changes will mainly affect the entrance examination for Woolwich. Latin is to be voluntary, chemistry and heat obligatory subjects, and higher mathematics will be divided into two branches and include the calculus, while the number of marks given for colloquial knowledge of French and German will be increased. As regards the examination for Sandhurst, the only change proposed is to increase the number of marks given for a colloquial knowledge of modern languages. These changes will not be regarded in a favourable light by the headmasters of our public schools, but we nevertheless think they are wise. We hold that a course of study and an examination should be adjusted to the end in view. Classics have hitherto usurped such an exclusive and dominating position in this country that they are to some men like counters placed before the eyes, blotting out everything else from view. A good physique, integrity of the sense organs, and perfect health are the necessary physical qualities for a soldier, and a knowledge of mathematics, modern languages, and modern science is nowadays an essential qualification for an officer. The knowledge of Greek and Latin acquired at school by a candidate for the army is, after all, not very considerable. To obtain a grasp of them is hard, and to hold on to them is still harder. An acquaintance with French and German is essential to officers in the present day, and the requirements and pleasures of daily life and Continental travel afford inducements and opportunities for keeping them up. Military education has greatly developed and is still developing, and for the two scientific corps of the service specially trained at Woolwich a sound education in physical science is absolutely necessary to the proper fulfilment of the officers' military duties. A training in these subjects develops the powers of observation and those of the understanding alike. We think that probably just as many boys intended for Woolwich will go to public schools for their education as hitherto and learn Latin there; however, they will not devote the same amount of time to its acquisition, but more to modern languages and science.

THE FRENCH EXPEDITION TO MADAGASCAR.

It looks very much as if the French military expedition to Madagascar would suffer far more from the diseases incidental to a campaign in that country than from the military obstacles and opposition they will encounter there. The sanitary condition of the French troops at Tamatave is described as very unsatisfactory. Out of some 800 men composing the garrison not more than 200 are in good health, according to a special correspondent of the *Standard*. More than twenty soldiers had died from fever in the four weeks ending May 17th, when the mail left. The number of men falling out during the marches of the French troops is large, and the daily increase of sick in the force has subjected the hospital service to a great strain. At Majunga the field hospitals and ambulances are said to be crowded. A troop transport service has been organised for the regular conveyance of the sick from Madagascar to France. It is understood that General Ducloux has sent a dispatch to the French War Minister in which, although he

states the military situation is good, he has demanded many additions to the expeditionary force in the way of administrative officers, nurses, sappers, and workmen, with the view of facilitating the transport of provisions and war material.

CHANGES AT THE WAR OFFICE.

Notwithstanding the apparently general desire that Mr. Chamberlain should be the new Minister for War in the Salisbury Government it seems that his predilections in favour of the Colonies have prevailed, and Mr. Chamberlain has been nominated as Secretary for the Colonies. This appointment will give him an opportunity for developing his policy in regard to our Colonial possessions and probably afford him sufficient leisure for taking an active part in the debates of the House of Commons. Sir Arthur Halliburton, K.C.B., has been appointed Permanent Under Secretary for War in succession to Sir Ralph Thompson, whose departure from the War Office will be unanimously regretted. Sir Ralph Thompson rendered a most important service to the Army Medical Department as a member of a committee at the time the late Sir William Muir was Director-General in helping to obtain for that service the Royal Warrant of that date. Mr. George Lawson, C.B., becomes Assistant Under Secretary in place of Sir Arthur Halliburton. Sir Ralph Knox will be Assistant Financial Secretary as well as Accountant-General.

THE CHITRAL EXPEDITION.

Surgeon-Colonel T. Maunsell, the principal medical officer of the Chitral force, had, according to the latest accounts, proceeded to Chitral. The troops continue to be healthy and to be free from any epidemic disease, but there has been an increase of sickness in General Low's force, owing probably to the great heat in the Swat and Panjkora and Bajour Valleys. According to the *Pioneer Mail*, Surgeon-Captain Whitchurch arrived at Gilgit from Chitral on May 28th in charge of Captain Colin Campbell and a convoy of sick and wounded. He left Chitral with twenty-four sick and sixty convalescents, but on arrival at Gilgit had only four sick, the remainder being convalescent. The wounded, with two exceptions, who are fast recovering, are quite well. Captain Campbell's knee has quite healed, all inflammatory symptoms have subsided, there is but very little deformity and a good amount of movement, and he is able to walk and ride.

SURGEON LEA, R.N.

The *Broad Arrow* states, with reference to "the extraordinary circumstances attending the court-martial held at Sydney for the trial of Surgeon Lea, R.N.," who was charged with insubordination towards the captain of the *Ringarooma*, and was dismissed from the service, "the case is clearly one that necessitates most careful inquiry by the law officers of the Admiralty, and it is probable that the public will hear more of Surgeon Lea. Mr. Henniker-Heaton, M.P., asked a question on the subject on Tuesday, and was assured that the minutes of the trial were being examined at Whitehall. A report is gaining ground at the naval ports that there has been a failure of justice in this peculiar case; but we repeat that it is necessary to suspend judgment for the present. The minutes of the trial only reached the Admiralty on Tuesday last, and on that ground Mr. Henniker-Heaton consented to postpone his question."

INDIAN MEDICAL SERVICE.

An examination for sixteen appointments to Her Majesty's Indian Medical Service will be held in London on Aug. 2nd, 1895, and following days. Copies of the regulations for the examination, with information regarding the pay and retiring allowances, &c., of Indian medical officers, may be obtained from the Military Secretary, India Office, London, S.W., to whom the necessary certificates must be sent so as to reach him not later than July 19th next.

THE INSTRUCTION OF OFFICERS OF THE AMERICAN ARMY IN HYGIENE AND FIRST AID TO WOUNDED.

The annual report of the Board of Visitors to the United States Military Academy at West Point contains, according to the *Army and Navy Gazette*, a recommendation for the establishment of a chair of anatomy, physiology, and hygiene, and first aid to injured, at West Point, to be filled by a senior surgeon, who is to deliver a course of lectures and demonstrations on these subjects.

Correspondence.

"Audi alteram partem."

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—Though the political events of the past few days have made it highly improbable that anything more will be heard of the Midwives Bill during the present Parliamentary session, I trust you will allow me to reply to the important letter in THE LANCET of last week from the Master of the Rotunda Hospital. Dr. Smyly is in favour of the main objects that the promoters of the Bill had in view—namely, the proper training and registration of midwives,—so that his objections are those not of an opponent, but of a friendly critic. He first of all finds fault with the words "without the direct supervision of a medical practitioner." Midwives in this country, however, do attend cases without direct supervision. The aim of legislation is not to make such attendance illegal, but (1) to restrict it to cases of natural labour, and (2) to ensure that the midwife is competent—i.e., that she is capable of managing a case of natural labour, and (what is of equal importance) of recognising complications and abnormal conditions so as to know when a medical man should be sent for. The more highly a midwife is trained, the more ready will she be, in my opinion, to seek assistance in case of difficulty. Dr. Smyly is surely mistaken when he says that many midwives depart on the arrival of the medical practitioner. I, at least, have never heard of such an occurrence. It is the aim of the supporters of the Bill to promote coöperation and not antagonism between the midwife and the medical practitioner. There seems to me no reason to fear that it would fail to have the intended effect. At the same time, any alteration in phraseology that can be shown to tend to more harmonious working would be readily accepted.

Dr. Smyly's second objection is that the Bill does not sufficiently provide against midwives undertaking cases other than normal. In the Bill, "as amended on report" and reprinted on June 20th, any doubt upon this point is set at rest by the following paragraph (Section 5 of Clause 12, referring to removal of name from register): "For the purposes of this section professional misconduct shall, in addition to any other form of misconduct, include any omission to send for a medical practitioner where the case is not one of natural labour." The third objection is the centralisation of all authority in London. In the scheme upon which the Bill was based it was suggested that the carrying out of the provisions of the Bill should be entrusted to local midwives boards established in every centre where it is decided to conduct examinations; that these local boards should consist of the examiners; and that the central board should consist principally of members of the various local boards. It would have loaded the Bill with detail to have included in it all these suggestions, but there is nothing in it to prevent their ultimate adoption or, at any rate, to prevent the adoption of the principle of decentralisation on which they were founded and of which the supporters of the Bill are strongly in favour. The last objection is that the provisions of the Bill do not extend to Ireland. The promoters were certainly not aware that Ireland desired to be included. They will put no difficulty in the way if the Irish really desire to be brought within the scope of the measure. I trust Dr. Smyly will see that his objections are not of an insurmountable kind, and that they are scarcely such as to render necessary his opposition to the Bill as a whole. Some of them are due to misapprehension, and the rest can be most suitably dealt with by friendly conference.

I am, Sirs, yours truly,

CHAS. J. CULLINGWORTH.

Brook-street, W., June 26th, 1895.

To the Editors of THE LANCET.

SIRS,—In your issue of the present date you publish a letter from Dr. Smyly, Master of the Rotunda, which indicates that he has fallen into some errors in respect to the Bill. He regards the definition of the term "midwife" as given therein as indicating the intentions of the Midwives Institute to obtain for midwives entire freedom from supervision by medical men. As a matter of fact, the definition

was drawn up at the first meeting of the Provisional Committee which preceded and led up to the formation of the Midwives Registration Association, and it was adopted at the first general meeting of the association, on July 3rd, 1893, as a part of its working basis. No midwife had any hand in it. Dr. Smyly, as a member of the Midwives Registration Association, should be aware of these facts. The definition *was* and *is* intended to define the present status of a midwife, the object of the Bill being to place midwives under the formal control they so greatly require, not to free them from that which, indeed, does not exist. In the Bill "as amended on report" the definition has been omitted. Dr. Smyly's objection that the Bill does not sufficiently provide against midwives treating cases which are not normal, is due to a misreading of the Bill. In the amended measure a special clause prevents any further misconception on this matter, as it specially makes it a form of professional misconduct to omit to send for a medical practitioner in abnormal cases. He complains that the authority under the Bill is centralised in London, but this town is only mentioned once in the Bill, in connexion with the Royal College of Physicians of London, and it was certainly not intended to centralise all authority in that town, as it would make the Bill unworkable. If he will refer to his copy of the "Suggested Scheme" of the Midwives Registration Association he will see that provincial rights were then carefully considered, but it is, of course, impossible to put any but general expressions and powers in a Bill of this nature. The wording of the clause which names the authorities who nominate the members of the central board was suggested by the President of the General Medical Council. As to Rotunda midwives being prevented from practising in England and Wales, Dr. Smyly is wrong in two respects: any woman can practise in either country after the passing of the Bill just as she can now; and while it is especially provided that the conducting of the examinations should be in the hands of the central board, so that a minimum standard should be made obligatory, it is evident that Irish or any other midwives who had passed a higher standard than that required by the board would be admitted to the Register. At the worst it would but be for the midwives who had been trained in Ireland to pass their examination in England, as is so often done by medical students. Perhaps Dr. Smyly would kindly state exactly the amendments he would like to see in the Bill (and give a definition of "midwife"), and I will take care that they come forward for discussion and will guarantee a fair and full hearing.

I am, Sirs, yours faithfully,

F. ROWLAND HUMPHREYS.

Fellows-road, N.W., June 22nd, 1895.

To the Editors of THE LANCET.

SIRS,—The article by Dr. Boxall and Mr. Humphreys' letter will, I think, afford some food for reflection. There can be little doubt of the truth of the conclusions drawn by Dr. Boxall as to the nature of the disease from which his patients suffered, but I wish to refer to the fact that it is very much more difficult to arrive at correct conclusions in private practice, where all the conditions are not so much under the control of the medical man as they are in hospital. It has, on more than one occasion in my own practice, been a matter of extreme difficulty to worry out the facts necessary to be obtained before coming to any conclusion, and it seems to me to be unsound policy to encourage uneducated practice when the difficulties to be overcome are quite great enough already. Look at the difficulties in the path of the medical man summoned by a midwife to such cases as described by Dr. Boxall, and probably not until there was mischief in the region of the puerperium, and consider how much injustice might be done to the midwife and perhaps, also, to the patient. Mr. Humphreys' letter also goes to show that this insane legislation has been forced upon the country by those who have never even taken the pains to arrive at the facts connected with the question. I will just state the fact that the guardians have nothing whatever to do with providing nursing assistance to the out-door poor; they can admit a parturient woman to the infirmary for her confinement, and they can give an order for medical attention in case there is any difficulty connected with delivery occurring in people outside the infirmary. The relieving officer, however, can require the person to whom the order is given to pay, by weekly instalments, either the whole or a portion of

the fee for attendance if he knows that there is sufficient money coming into the family to justify his action. Mr. Humphreys, too, shows his ignorance, not only of the work done by the district and county councils, but also of the way in which they do it. The proposal I have made does not imply the wholesale pauperisation of the districts reported upon. Payment would be made in proper cases commensurate with the money earned by the family. With some experience I can assert that it is not the Poor-law which is pauperising the country, but it is the abuse of the hospital system and wholesale indiscriminate dole-giving. The reason the Poor-law is unpopular is because it is the duty of the relieving officer to ascertain the position of the people to whom relief, either medical or other, is given; and, given a good relieving officer, and many such are to be found throughout the country, with good local knowledge, the system works excellently well. It is a fact that no Continental country has a system of relief in any way comparable to our own for efficiency.

I am, Sirs, yours obediently,

Hatfield, Herts, June 23rd, 1895. LOVELL DRAGE, M.D. Oxon.

To the Editors of THE LANCET.

SIRS,—At the annual meeting of the Lancashire and Cheshire Branch of the British Medical Association, held in Liverpool on the 19th inst., a member asked "for information regarding the 'protest' forwarded to the General Medical Council by certain persons assuming to represent a number of the members of this branch." The "protest" was sent in on the occasion of the committee of the branch petitioning and sending a deputation to the General Medical Council in May last. Information was requested under three headings: 1. Whether authority had been obtained to use the signatures appended to a "protest" in June, 1894, and in which it is stated, "As there is no Bill at present in existence, a fact which was again and again impressed upon witnesses by the select committee, it is impossible to tell what statutory penalties may be provided for cases in which the limits of practice shall have been exceeded," in order to promote the present Midwives Bill by damaging the effect or weight of the petition and deputation of the branch. 2. The signature of a member of the General Medical Council was appended to a document forwarded to that body in order to influence its action. The signatures of two of the members of the deputation against registration to the General Medical Council were appended to the document, thus making these gentlemen protest against their own action. 3. The person forwarding the "protest" says in his letter to the General Medical Council, "the deputation would not represent the branch officially." The statement had also been made that the petition was not an official one, and that the committee does not represent the branch.

Dr. James Barr hereupon explained to the meeting that the petition of, and deputation from, the branch were "official" and represented the branch, and quoted from his minutes of March 9th and May 11th, 1894, in support of his statement. One of the members of the deputation alluded to now rose and formally complained that his name had been placed on this list of "protestators" without his knowledge or consent. Dr. W. Macfie Campbell then stated in explanation of Question No. 1: "That the signatures had been obtained by means of reply postcards twelve months ago, and that he had not deemed it necessary to again circularise the members on the subject." "In reply to Question No. 2, all he had to say was that if Dr. Leech chose to sign the protest it was his own affair, and that he (Dr. Macfie Campbell) was not going to prevent him." But Dr. Macfie Campbell had not even a lame explanation to offer the meeting as to how the name of a member of the deputation came to figure on his "protest list."

I am, Sirs, yours faithfully,

H. HORBURY PRESTON.

Assistant Hon. Sec., Lancashire and Cheshire Branch Committee of British Medical Association.

Pendleton, June 22nd, 1895.

THE MISUSE OF HOSPITALS.

To the Editors of THE LANCET.

SIRS,—One would fain believe that the numerous preachers whose pulpit utterances on Hospital Sunday were to the

effect that nearly half of the people of London sought (and obtained) medical and surgical aid at some one or other of the metropolitan hospitals and dispensaries in a single year had made a considerable call upon their imaginations; but there was a remarkable unanimity amongst them, and the higher critics would have no difficulty in tracing their accounts to a single source—namely, *The Hospital Sunday Supplement*. To this are appended tables for 1894 which, although St. Bartholomew's and St. Thomas's Hospitals and one or two other places are excluded, make it appear that 1,383,634 distinct patients were treated in that year at those institutions whose names are given. In the earlier part of the document, which refers to 1893, special mention is made that one out of every two men was treated thus in London, but in this case the endowed hospitals are included. And we are to believe this, knowing all the time that the pauper population is otherwise provided for, that our soldiers and policemen have their own staffs of medical men &c., and that many other bodies are similarly situated. These rarely figure in our hospital returns. Of course, one cause (easy to detect) of the apparent exaggeration is the author's restriction to London of the population from which the patients are drawn. But the great majority come from this restricted area, and the only other explanation at all feasible is that in many instances the daily returns of out-patients were added together for the year.

There is no doubt, however, that throughout England there has been a growing tendency on the part of the population to betake itself to hospitals in case of sickness or injury. There is an instructive passage in the Registrar-General's Census Report for 1891, vol. iv., p. 77: "The patients enumerated in hospitals were 7619 in 1851, 10,414 in 1861, 19,585 in 1871, 24,087 in 1881, and 27,579 in 1891. The proportion of these patients to 100,000 of the population was 42 in 1851, 52 in 1861, 86 in 1871, 93 in 1881, and finally 95 in 1891. It must not be supposed that this continuous increase implies a corresponding increase of sickness. The proportion of hospital patients to population is a measure rather of the amount of hospital accommodation than of the amount of sickness." In fact, hospital accommodation is at present (and will be for some time to come) quite equal to the needs of those who are the proper recipients of it. But its recent enormous extension has had a pauperising effect upon the community, and in these days many obtain aid at hospitals who ought to be heartily ashamed of so doing.

I am, Sirs, yours faithfully,

Kingston-on-Thames, June 26th, 1895.

D. BIDDLE.

* * Mr. Biddle refers to the supplement issued by a contemporary. *THE LANCET* Hospital Sunday Fund Supplement (June 8th, 1895) shows in a statistical table of the hospital work in London during the year 1894 that 1,565,978 out-patients paid visits to twenty-seven "general hospitals" (using the term as employed by the Council of the Metropolitan Hospital Sunday Fund). A further number of visits—118,470—to cover possible omissions were estimated to have taken place, making in all 1,684,448. It is distinctly stated in a note to this table, with a view to obviating a source of serious error, that "the figures referring to out-patients in these tables represent the number of VISITS paid by out-patients—not the NUMBER of out-patients."—ED. L.

THE "INDEX MEDICUS."

To the Editors of *THE LANCET*.

SIRS.—Mr. George S. Davis, the enterprising enthusiast who, since January, 1885, has at very heavy loss maintained that most valuable aid to all working medical men, the "Index Medicus," announces that he does not see his way any longer to continue losing 2000 dollars a year for the sake of the profession. It will be remembered by many that in 1893 Mr. Davies intimated that unless more subscriptions came in he would be obliged to discontinue the publication; and it was hoped that the many members of the profession in this country who have obtained invaluable help from the Index would have felt it their duty as well as their interest to have subscribed liberally enough to have enabled Mr. Davis to persevere with his great public service. This hope has not been realised. The Index has become absolutely indispensable, and the loss of it means that in reference-hunting we shall

have to remember twenty or thirty different sources of information and search through all of them, instead of, as hitherto, finding everything in the clearly printed pages of the monthly Index.

I have written to Dr. Billings, whose marvellous power for organising Index work is well known, urging him to take steps to have the Index carried on on a non-commercial footing, and to endeavour to obtain subscriptions from scientific societies and scientific workers for its maintenance; and I should be glad to know what measure of support might be expected in this country for such a scheme. If £400 a year could be guaranteed from this country the Index could be continued; and I think it will be a shame to English medicine, which has derived so much benefit for the last fifteen years from this great American enterprise, if such a small sum should not be forthcoming. Every medical society should regard it as a duty to subscribe at least two guineas to maintain the Index, and the rest should be easily made up by the subscriptions of medical men who would be glad to have this important aid at their elbow. I should be grateful to hear from those willing to support the Index by an annual subscription, and will forward their offers to Dr. Billings, who, I feel sure, will not allow the Index to be lost without a struggle.—I am, Sirs, very faithfully yours,

J. Y. W. MACALISTER,

Resident Librarian of the Royal Medical and Chirurgical Society, Hanover-square, W., June 25th, 1895.

"DEFECTS OF VISION AND ACCIDENTS."

To the Editors of *THE LANCET*.

SIRS.—The able letter of your Indian correspondent, Mr. J. Stuart Brooke, is interesting and timely, and it is to be hoped will receive the attention here it merits. The detection of the man with the artificial eye on board of the *Canarder* in the early seventies led to the examination of all men detailed for look-out duty with reference to short sight, colour and night blindness; and I know that to-day, in the same service across the Atlantic, this testing is still continued with the addition of taking notice of the competency of hearing, a keen sense of which is most important in fog. There is no railroad track across the ocean, hence the more need that these floating villages should have sentinels wide-awake and effective. It may seem somewhat a large order to say that the only uniform and practical remedy for the prevention of these disasters at sea consists in the appointment under the President of the Board of Trade of a principal medical adviser. This official, who should be a man of practical knowledge and of administrative ability, would relieve the President of all technical work and guarantee to the public that, so far as he was concerned, efficiency was the rule of the road afloat as well as ashore. Nor would his office end here. He would be the recipient of the medical logs of the different steamers. Here facts could be sifted and tabulated, to the utilisation of the field of marine hygiene that has long lain waste; and, *per contra*, the fads and fancies of enthusiasts with regard to medical matters at sea, remedies, and what not would receive their just estimate and be utilised for what they were worth. Some of your readers will recognise the necessity of these remarks. Sirs, it is needless to trouble your space further than to say simply that the public and the profession look to you that the suggestions of the expert deputations of Feb. 1st last will not pass away without some practical results.

I am, Sirs, yours faithfully,

Sussex-place, Southampton, June 24th, 1895. R. A. CALDWELL.

"RAPID DILATATION OF THE UTERUS."

To the Editors of *THE LANCET*.

SIRS.—In his Note on Some Aids to Rapid Dilatation of the Uterus Dr. Amand Routh recommends, in certain cases, the preliminary use of a glycerine tampon. It may be interesting to some of your readers to hear that during the last two years I have found the use of a glycerine tampon very serviceable in midwifery practice when the pains are inefficient, the vagina "dry," or the cervix "rigid." It seems to me that such a tampon is needed in cases in which it has been thought necessary to use an astringent antiseptic before delivery, and it is much more convenient than iodoform.

Two ounces of glycerine containing one drachm of borax and one drachm of boracic acid are easily carried, with sufficient perchloride wool to make a few tampons; and I believe it is worth its place in any midwifery bag. It usually acts in half an hour or less.

I am, Sirs, yours truly,

Conisborough, June 22nd, 1895.

ROBERT CRAIK.

"EPSOM COLLEGE."

To the Editors of THE LANCET.

SIRS,—May I, as an old Epsomian, be allowed to protest against the frequency of the appearance in your columns of the title "Royal Medical Benevolent College" with reference to the above public school? A few weeks ago in a leading article in the *Standard* it appeared that "the Royal Medical Benevolent College was not one of the best-known public schools," and the writer goes on to suggest that this may partly be accounted for by the use of the above-named title. It altogether deceives the general public with regard to the main object of the College—that of giving a good general education to all irrespectively of class distinctions. That it does refer to the system whereby a bare 20 per cent. of the scholars receive a free education no one will venture to deny, but that it should have the power to conceal from the public the fact that 80 per cent. of the scholars are treated and educated identically as at any other public school seems a pity—not to say a mistake. Further, I believe that the title no longer *legally* exists. A little more than a year ago the title (which for the school in its early days was well suited, but for which in its present circumstances it is entirely unfit) was annulled by Act of Parliament. It is, in fact, the old cry, *Tempora mutantur, nos et mutamur in illis*.

Amongst the other public schools we have ranked as Epsom College for many years, and it is this title which will always appeal most lovingly to her sons, both past and present, and whose honour it will be their care to uphold. Some twenty years ago an old boy of distinction, in a long letter to the school magazine, pointed out the harm that was likely to arise from the retention of the old misleading title, and urged the then present members to do their utmost to secure the sole recognition of the other title, "Epsom College." As far as the school itself is concerned their efforts have been crowned with success, but unless we are able to enlist THE LANCET on our side (and after that the daily papers are bound to follow) that success, we fear, must to a great extent be stultified. It is with no desire to belittle or decry the charitable work which the school so magnificently performs that this letter has been written, but rather that it may be further aided in its work by being known in its true colours. There is a strong feeling in the school on this point, and therefore I trust that this letter may not be considered as encroaching too much upon your available space.

I am, Sirs, yours faithfully,

O. E.

June 25th, 1895.

* * The council of the Royal Medical Benevolent College at Epsom are, we know, more than willing to omit the word "benevolent" from the title of the College; but as long as they are compelled to solicit subscriptions and donations to carry on the benevolent side of their work, so long must the epithet remain. The points our correspondent raises are all well appreciated by the governing body, and they have obtained powers under their new Act to alter the name *when they are in a position to do so*; but at present the correct designation of "Epsom College" is the one to which our correspondent takes exception. We, like the council of the College, are sincerely desirous of seeing the necessity for the epithet removed and jealous for the position of the school as one of the great schools of England, so that we are happy to print our correspondent's views.—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Extension of the Royal Infirmary.

THIS question is still under discussion. In March last a special or grand committee was formed composed of an equal

number of members of the board and of trustees who were not members. Several meetings have been held, and the last, at which there was a full attendance, occurred on the 17th inst. A long discussion took place on the proposals for rebuilding on the present site, for altering and enlarging the present building, and for the erection of a new hospital in the suburbs. As to adapting the present building, it was pointed out that considerable space is devoted to the nurses, who, about 100 in number, live and sleep on the premises. It was urged that if they were accommodated outside, this space would be gained and it would be better for the nurses. Another suggestion was that the washing might be done outside and the space now occupied by the laundry be utilised for patients. It was also recommended that the out-patient department should be removed to premises to be taken for the purpose near at hand. All these suggestions have been before the board at various times since 1890. They were received with some favour, but doubts were expressed as to whether they would, if carried out, meet the requirements of the case. In the end, on the motion of Sir W. Houldsworth, M.P., a subcommittee was appointed to take these proposals and all the other schemes for achieving the object in view into consideration and report to the general committee. It is said that the subcommittee "will thrash out all the details, and it is hoped that when they present their report the general committee may be able to come to a unanimous decision." The difficulty is to increase the accommodation of the infirmary without further encroachment on the open space in which it stands, but it can no doubt be done if the present building is pulled down—which is the best thing to do—and the nurses, the out-patient department, and the laundry are taken outside the infirmary grounds. It would be a great pity to patch up and attempt to modernise the present building, and would only lead to disappointment.

Death of Professor W. C. Williamson, M.B.C.S., LL.D., F.R.S.

Professor Williamson's death, which took place recently at Clapham Common, will be regretted by many here as well as by a large circle of scientific friends. Though his association with Manchester was much broken when he gave up active work at Owens College in 1892—receiving on his retirement the title of Emeritus Professor of Botany—he may be claimed as one of those who by their scientific eminence have shed lustre on this city of manufacturers. His father had for many years been greatly interested in zoology, botany, and geology, and in 1838, when young Williamson was about two-and-twenty, became curator of the Scarborough Museum. In his own home, therefore, as it has been said, he "breathed an atmosphere of scientific research." He was apprenticed to a medical man in his native town and began the study of medicine, but kept up his geological pursuits, as shown by three early memoirs on "The Vertical Distribution of the Organic Remains of the Yorkshire Coast." In 1835 he became the curator of the Manchester Natural History Museum, but must have continued his medical work, since his qualifications of M.R.C.S. Eng. and L.S.A. date from 1840. He was long known in Manchester as a general practitioner, though never giving up his scientific pursuits, and devoted special attention to diseases of the ear, which he had studied on the Continent. The Manchester Ear Institution owes its origin to his energy and enthusiasm, and for ten years he was an active member of the staff. On the foundation of Owens College Mr. Williamson was appointed its first Professor of Biology and Geology. Such a field of work was too much for any one man to cover, and first the teaching of geology, and then of zoology, fell into other hands, the former being now taught by Professor Boyd Dawkins and the latter by Professor Hickson, Mr. Williamson retaining the chair of Botany. Papers on the Scales and Bones of Fossil Fishes led to his election as a Fellow of the Royal Society, and a series of memoirs on the Carboniferous Plants of Lancashire and Yorkshire gained him the Royal Medal of the Society, whilst the Wollaston Gold Medal was awarded him by the Geological Society in 1890. He was specially skilled in the patient grinding of coal sections, so as to become beautifully transparent and instructive objects for the microscope. The University of Edinburgh conferred on him the degree of LL.D., and he was an honorary member of the Swedish Academy of Science, as well as of those of Göttingen and Geneva. He took an active interest in the Manchester Literary and Philosophical Society, and was President for the year 1884-5. After retiring to Clapham he began a new series of memoirs for the Royal Society in

conjunction with Dr. Scott, and continued his investigations in his favourite subject—the plants of the carboniferous strata. He was an ardent and enthusiastic student of science through his life of seventy-eight years, but his active mind was interested in many subjects—literary, archaeological, and social; and it may be added that among his lighter pursuits he was a skilful and successful horticulturist.

Suicidal Poisoning by Carbolic Acid.

On Tuesday, the 18th inst., Mr. Sidney Smelt, the deputy coroner, held an inquest on the body of a man forty-six years of age, who was found dead in bed. It was evident that he had taken carbolic acid from a glass which was on the dressing-table, and which still contained a little of the acid. The deceased had been much troubled about some trust money, and had probably contemplated suicide for some time, for "when he heard of people committing suicide he had a way of saying that they were better off." The verdict was "Suicide while insane." Some people consider suicide a proof of insanity, but whatever view is taken of the mental condition, the fact is that this man, who contemplated suicide, had no difficulty in obtaining the poison. The *Manchester Courier* says: "It is noteworthy that during the last fortnight the deputy city coroner has held inquests on seven persons who had died from taking carbolic acid, and that there have been about twenty such suicides in the city during the present year." In the same paper for the 20th inst. is the report of a suicide in Warrington, where the druggist "deposed to deceased purchasing three pennyworth of carbolic acid for disinfecting purposes." These instances show how easily and cheaply a deadly irritant poison, one of the chief favourites with the suicidal, can be obtained by anyone. In one of the evening papers for the 21st inst. there is an additional inquest reported, with the heading "Supposed Suicide of a Young Woman—Carbolic Acid Again," where the cause of death was certified by the police surgeon as due to this poison. Another suicide (of a Manchester merchant) from the same poison took place recently in Sale, a residential suburb of Manchester, though just on the Cheshire side of the Mersey. It is surely desirable to place some restrictions on the sale of this poison, more frequently used for suicide than perhaps any other, presumably from its cheapness and the ease with which it is obtained. No doubt what is so common an occurrence in this district takes place frequently in most parts of the country, and if the figures could be obtained the total would be startling.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Tyneside Carnival.

THE rival attractions of the races and the Temperance Festival are this week in full operation in Newcastle-upon-Tyne. Formerly the races were held on the Town Moor, and were for many years looked forward to in the north of England as the holiday of the year. The pitmen came in thousands, with their wives and children, and enjoyed a picnic on the Moor the day the Plate (the Pitmen's Derby) was run for. The Moor was free to all, and the scene upon it during race week was thoroughly representative of North-country popular enjoyment. Now the races are held at Gosforth Park and the character of the gathering is altogether altered. It is racing pure and simple; the sporting publican element predominates, gate money is exacted, and the family holiday element of the humbler classes is altogether absent. The Moor now during race week is occupied by perhaps quite as many people as formerly, bent on pleasures of a character supposed to be less harmful than horse racing—military sports, foot races, kite-flying, shows (not always above suspicion), Aunt Sally, dancing in saloons, &c. Whatever view may be entertained as to the comparative merits of the amusements provided now by the Temperance Festival, and formerly by the races, every Newcastle man must rejoice that within easy access of the centre of the town there is such a splendid open space for the recreation of the people as the 1200 acres of moor afford.

The Milk-supply of Newcastle-upon-Tyne.

Dr. H. Armstrong, the medical officer of health for the city and county of Newcastle-upon-Tyne, has just issued a special

report on the milk-supply of the city. Dr. Armstrong suggests that every cow proved or reasonably suspected to be suffering from tuberculosis on a dairy farm should be slaughtered, that all milk capable of spreading any infectious disease should be destroyed, and that sanitary authorities should have the power of controlling the sale of milk in their districts and to license sellers. The report, like all Dr. Armstrong's reports, is an exhaustive and valuable one.

Durham University.

At a Convocation of Durham University held on Tuesday, June 25th, the Sub-Warden (Rev. Dr. Pearce) presided, and announced that the new charter had been received, by which power is given to confer degrees on women in all faculties except divinity. The following degrees were conferred:—Hon. D.C.L., Sir John Stainer, Prebendary William Rogers (*in absentia*); Hon. D. Litt, John Bagnale Bary, Ingram Bywater, William John Courthope, Frank Byron Jevons, Frederick Geo. Kenyon; Hon. M.A., James Francis Hodgson. Then followed a large number of ordinary degrees, among them that of B.Sc., conferred on Miss Ella Mary Bryant, Durham College of Science, Newcastle-upon-Tyne.

Newcastle-upon-Tyne, June 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Royal Infirmary.

DR. J. LINDSAY STEVEN and Dr. J. H. Pringle have been appointed physician and surgeon respectively to the infirmary. Dr. Steven's appointment renders vacant the position of pathologist to the hospital and curator of the museum.

Ashgrove Home for City Children.

This is a new institution, which is to be worked in connexion with the movement for giving to the children of the poor a summer holiday in the fresh air. This movement was inaugurated in 1885, and has now reached very wide limits, no less than 7000 children being sent out of Glasgow last year for a fortnight's residence at the coast or in the country. The children to be eligible for such a treat must be between the ages of five and fourteen, and careful inquiry is made into the circumstances of the parents in order to prevent the charity being abused. The new home is to be more especially used for the reception of weakly and delicate children, and the appointment of Dr. Alice L. Cumming as matron of the home will therefore be recognised as a peculiarly appropriate one. The building has been hitherto a private residence and has been adapted to its present purpose with comparatively little alteration. It stands in its own grounds, which extend to fully five acres. The home is the gift of two Glasgow ladies who desire that their names shall not be made public.

Inspector of Alkali Works in Scotland.

Mr. R. Forbes Carpenter, F.I.C., has been appointed by the Local Government Board and the Secretary for Scotland as chief inspector. Mr. Carpenter joined the staff in 1882, and has been in charge of the East Lancashire and Yorkshire district.

Aberdeen University.

The Duke of Richmond and Gordon, Chancellor of the University of Aberdeen, has appointed Mr. Alex. M. Gordon of Newton to be his assessor in the University Court in place of the late Mr. Ramsay of Barra and Straloch.—The committee appointed to make arrangements for the opening of the new Students' Union and the inauguration of the Graduation Halls have drawn up a programme of the proposed ceremonies. These are to extend from Tuesday, Oct. 22nd, to Friday, Oct. 25th. According to the programme the celebration will commence on the Tuesday with a grand reception by Dr. Mitchell from 8 to 11 P.M. in Marischal College. On the following day the inauguration of the Mitchell Tower will take place at 11 A.M. by the new clock being allowed to strike for the first time, and Dr. Mitchell will then proceed to the Students' Union and formally hand it over to the students. He will be presented by the Students' Representative Council with an address thanking him for his magnificent gift, and then the ceremony of inaugurating the Graduation Hall will be performed by the Chancellor of the University, the Duke of Richmond and Gordon, who is expected to be present. The present upper

hall will be converted into the picture gallery of the university and will serve as the vestibule to the great Mitchell Hall. The Chancellor, standing in the picture gallery, will declare the Graduation Hall open, and the company of over 300 guests will then pass in to a luncheon given by Dr. Mitchell in the hall. On the following day the festivities will commence at noon by the presentation of the freedom of the city to Dr. Mitchell, and at one o'clock there will be a luncheon given by the Lord Provost. At four o'clock in the afternoon that day Lord Huntly will deliver his rectorial address in the new Graduation Hall, and the day's proceedings will be terminated by a grand torchlight procession in the evening. Friday, the last day of the celebrations, will be marked by the formal acknowledgment by the University of Dr. Mitchell's munificence. A gold medal will be struck and presented together with an address by the University Court to Dr. Mitchell, and medals in silver will probably be given to the principal guests. This presentation will take place at 11 A.M. on Friday and will be followed by the conferring of the honorary degrees of D.D. and LL.D. by the Chancellor of the University. There will be a service in King's College Chapel at three o'clock on the Friday afternoon.—The mason work of the Mitchell Tower was completed yesterday.

The Aberdeen City Fever Hospital: Action against the Town Council.

Some time ago a parent raised an action for damages against the town council for the death of his child in the City Hospital. The father alleged that the death was the result of unnecessary exposure of the child in removal to the hospital. The pursuer lost his case. Dr. Littlejohn, medical officer of health, Edinburgh, and Dr. Watt, senior assistant to the medical officer of health, Glasgow, were called as witnesses for the defence, and it is now reported that in consequence of the public importance of the question raised they asked for no fee for their appearance in court. The Bills and Laws Committee of the town council, however, are to send to each an honorarium of five guineas.

June 25th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Local Government Board Inquiry.

AN inquiry was held in Belfast by Mr. Agnew, Local Government Board inspector, on June 19th in reference to the death of a man which took place in the lunatic department of the Belfast workhouse on April 25th. This investigation arose through a communication forwarded to the Local Government Board by the city coroner. It appeared from the evidence that Dr. Barron, a dispensary medical officer, attended the man before his admission for congestion of the brain. It is stated on his certificate that the man was suffering from "apoplexy," but he was admitted to the workhouse. He did not consider he was a lunatic. When the man was brought on a car to the workhouse, on April 23rd, he was examined by two of the resident medical staff, Dr. Beatty and Dr. McLiesh, who came to the conclusion that he was suffering from epilepsy and deterioration of mind, and sent him to the epileptic ward, where he was in charge of Dr. Patrick as resident medical officer, who believed that the man was suffering from epilepsy, slight pleurisy and congestion of one lung, and bronchitis. He had no signs of congestion of the brain, but he did not consider him of sound mind. The real point at issue was whether epileptics could not be treated in a portion of the infirmary without sending them to the lunatic department. The evidence showed that a person with epileptic symptoms would be sent to the epileptic ward even though he was suffering from mental disorder. It is the duty of the resident officers, if they found a patient suffering from epilepsy, to send him to the epileptic ward, whether he is suffering from insanity or not. Mr. McConnell, senior visiting medical officer of the workhouse, in his evidence, said he had come to the conclusion that there was no such thing in the workhouse as patients purely epileptic. There were people of unsound mind in the house, but they did not call them lunatics; only the Local Government Board would call them so. No person was called a lunatic by him until certified to be so, and then he was sent to the asylum. There was only one of the epileptics in the lunatic building now who at all approached insanity. The inquiry has

concluded, but the result will not be known for some time yet.

Belfast Royal Hospital.

The Coulter Exhibition has been awarded to Mr. R. J. Johnston, and the Malcome prizes to Mr. McCully (first) and Mr. McDave (second) at the Belfast Hospital for Sick Children. Mr. Beggs has gained the gold medal.

Bangor (co. Down) Water-supply.

I understand that an arrangement has been made between Lord Dufferin's agent and the Bangor Town Commissioners for supplementing the present water-supply from Clondeboy Lake, and that, as soon as the pipes are laid and the connexion made, the supplementary supply will be turned on.

Dispensary at Ballymoney.

The Ballymoney board of guardians have requested the Local Government Board to sanction the loan of a sum not exceeding £400, to defray the cost of providing a dispensary for Ballymoney Dispensary District.

Death under Chloroform in one of the Cork Hospitals.

A death under chloroform occurred in one of the Cork hospitals on June 19th. The patient had been suffering from empyema for a considerable time, and on two occasions within a fortnight prior to his death large quantities of pus had been removed by aspiration at his own home. Two days after admission to hospital he was put on the table for the purpose of procuring drainage by incision and removal of portion of a rib. The heart was pushed over very considerably to the right side and encroached on the right lung; the face was livid, and the case generally was regarded as a desperate one, in which all risks should be taken. When only partially under the anæsthetic, before a drachm had been administered, the heart ceased to beat and all efforts at resuscitation failed.

The Irish Queen's Colleges and the "65" Rule.

I have already informed you that the Treasury expressed a desire to hear the views of the presidents and professors of the three Queen's Colleges with regard to the desirability or otherwise of applying the "65" rule to the presidents and professors of the colleges. The Treasury appointed a committee consisting of Lord Playfair, Sir Mathew White Ridley, M.P., and Sir J. Moate (direct representative of the Treasury). The committee decided on taking the evidence of the presidents of Cork, Belfast, and Galway, and of one professor from each college. Professor Jack of Cork, Professor Parser of Belfast, and Professor Townsend of Galway were selected to represent their colleagues. At a meeting of the Cork professors, Professor Jack was instructed to inform the committee (1) that the professors disapprove of the application of the "65" rule to the colleges; (2) that if the Government insist on compulsorily retiring professors, though appointed for life in accordance with the statutes of the colleges, then the professors should be called upon to retire at sixty-five, unless the council of the college should certify that the professor is quite capable of discharging his duties, the certificate to be renewable every three years; and (3) that the professors of the faculty of medicine should be entitled to pensions. With regard to the latter recommendation, I may explain that the professors of medicine, surgery, midwifery, and materia medica are not entitled to pensions on the ground that they do not devote their whole time to the college, though for that very reason their salaries are much smaller than those of the arts professors. It seems cruel, then, that after devoting the best energies of their lives to the advancement of their college they should be turned adrift by the Government when falling health or advancing years compel them to vacate their chairs. The committee met in London last week and took the evidence of the three presidents in the absence of the professors, and the evidence of the professors in the absence of the presidents. As the recommendations of the committee will have much influence on the interests of higher education in Ireland they are looked forward to with considerable interest.

Cork Medical Officers' Indemnity Fund.

The following subscriptions have been received: Incorporated Medical Practitioners' Association, London, £5 5s.; South-Eastern Branch, British Medical Association, England, £10; Dundee and District Branch, meeting, £9 4s. 6d.; Worcestershire and Herefordshire Branch, British Medical Association, £5 5s.

June 25th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Consumption of Tobacco in France.

A NON-SMOKER like myself is a *rara avis* in this tobacco-loving community; no wonder, then, if the State exercises a monopoly of the sale of the fragrant and remunerative weed. The net profits accruing to the Government from the sale of tobacco during the last year attained the colossal dimensions of 366 539 875 fr. 46 c. The Nord is a long way ahead of all other departments in the smoking, chewing, and snuff-taking propensities of the inhabitants, each of whom consumes annually 2 kilogrammes 391 grammes. At the opposite end of the scale is the department of La Lozère, where the average annual consumption per head—or rather per mouth and nostrils—does not exceed 310 grammes. The consumption of tobacco for smoking and chewing purposes has increased 35 per cent. during the last twenty years, whereas the habit of snuff-taking has diminished 20 per cent. By the way, it is by no means uncommon to see students smoking in the hospital wards, and anyone who knew the late Professor Tiliat, the distinguished surgeon of the Charité, will recollect how liberal he was with his cigarette case directly the morning visit was over, whilst he was having a final chat before leaving the wards.

The Cause of the Colouration and Coagulation of Milk when Heated.

It is a matter of common observation that milk heated in contact with air for a certain time becomes coagulated and assumes a yellow tint. Heated in a water bath this phenomenon occurs in from ten to fifteen hours. When boiled, coagulation occurs, and the milk assumes a caramel tint. The coagulation takes place as soon as the yellow colouration has attained a certain intensity. Observers have ascribed these curious colour changes to alteration either of the lactose or of the casein (Duciaux), and no satisfactory explanation of the clotting has ever been advanced. MM. Cazeneuve and Haddon¹ have, in consequence of researches on the subject, arrived at the following conclusions: (1) the yellowing by heat is due to the oxidation of the lactose in presence of the alkaline salts of the milk; (2) such oxidation generates acids, amongst others, formic acid, the presence of which determines, as would that of any other acid, the coagulation of the milk; and (3) the coagulated casein is not changed, but simply coloured yellow by the brown bodies developed at the expense of the milk-sugar.

Sudden Death after Fracture of the Patella.

Dr. Cerné reports in the *Normandie Médicale* of May 15th a case in which about twenty-four hours after a *séance* of massage for simple fracture of the knee-cap the patient died quite suddenly. The necropsy revealed as the cause of death an obliteration of the pulmonary artery by large clots detached from the deep femoral vein. Although the long interval between the occurrence of the catastrophe and the final massage would appear to exonerate this form of treatment, it is more than probable that it paved the way for the migration of the clots by breaking them up. It would follow that, whereas massage is indicated very early or very late after the receipt of the fracture, it is contraindicated where, after consolidation, the limb remains œdematous and boggy. Here it is probable that the large veins contain clots which any such manœuvres are liable to displace, to the great danger of the patient.

A Delicate Test for Albumen in Urine.

A 1 in 3 solution of resorcin is strongly recommended by M. Caries² as an infinitely more delicate test of the presence of albumen in urine than nitric acid. The *modus operandi* is so simple that the practitioner can easily apply it at the bedside, the material necessary being only a test-tube, a little pipette of 2 cubic centimetres capacity, and a packet containing 1 gramme of resorcin. The gramme of resorcin is introduced into the test-tube and dissolved, with shaking, in 2 cubic centimetres of ordinary water. The urine (whatever may be its reaction) is then, by means of the pipette, allowed to gently flow on the surface of the solution, when, should albumen be present, a white ring is developed at the line of demarcation, no other colouration ever being observed. Alkaloids (unless, as is never the

case in urine, they be present in very large quantities), urates, and urea do not yield the white ring with resorcin. Peptones, however, when, as is rare, they are present in urine, give the ring, but the albumen ring remains while the peptone ring disappears when the tube is plunged into hot water. It is claimed that resorcin will give a cloudiness of albumen when nitric acid gives no result at all.

June 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The University of Jena.

THE publication of a rumour that the authorities intend to abolish the University of Jena has caused a stir in the scientific world, the university being one of the oldest in Germany and having often occupied a leading position. Financial reasons are said to have induced the authorities to arrive at this decision. The constitution of the University of Jena is somewhat peculiar. It is not under the jurisdiction of a single State, but belongs jointly to four States of Thuringia—viz., Saxe-Weimar, Meiningen, Coburg, and Altenburg. The Governments of those small States entirely control the affairs of the university. If, for instance, a new professor is to be appointed they must all consent to his nomination. To put a stop to the further propagation of this rumour the official journals of the four united Governments declare that the continued existence of this venerable university is assured both by public grants and by large donations recently made by old pupils and others. This communication has been received with general satisfaction, particularly in the town of Jena itself, which is entirely dependent upon the university.

The Resident Medical Officers of the Friedrichshain Hospital.

A conflict has arisen between the resident medical officers of this hospital and their superiors. The chief physicians and surgeons complained that the young medical men used to come home at unusually late hours, that they gave frequent festivities in the hospital, and that they were consequently not always fit for the next day's work. The resident medical men rather bravely retorted that their superiors ought to mind their own business, and declined to modify their manner of living. The matter was accordingly brought before the Municipal Hospital Board, which decreed that all the resident medical officers were to be dismissed from their appointments. Although an arrangement took place afterwards between the chief physicians and surgeons and the resident medical staff, the board nevertheless adhered to its decision, and all the resident staff will accordingly leave the hospital at the end of this month.

The Result of the Mellage Trial.

This sensational case, which I reported to you in my last letter, has led to several important consequences. The visiting physicians of the Mariaberg Asylum resigned their posts before the verdict was published, and the district officer of health has been dismissed from his appointment by the Government. The Mariaberg Asylum will entirely lose its ecclesiastical character. The provincial council intends to lease the premises, and will also undertake the care of the inmates, who for the most part belong to the poorer classes. Physicians have been already sent from other provincial asylums to attend the patients. Two of the brethren have been arrested for perjury, and will be brought before the next assizes. The clerical press, too, is unanimous in blaming the conduct of the brotherhood, and in accusing them of having brought great discredit on all branches of ecclesiastically conducted nursing. Public opinion being very much alarmed by the disclosures made during the trial, it is probable that the lunacy laws will be modified.

The Successors of Professors Thiersch and Ludwig.

Dr. Trendelenberg, Professor of Surgery in Bonn (Rhenish Prussia), will leave that town for Leipzig, where he has been elected successor to the late Professor Thiersch. Professor Trendelenberg is connected with English medicine. He began his studies in Edinburgh, where he attended botanical and zoological lectures; and from that town he went to Glasgow University to study anatomy and physiology. He finished his medical training in Berlin, but as a post-graduate returned to England in order to familiarise himself with the new antiseptic method of Professor Lister. Afterwards he became an

¹ Académie des Sciences, June 10th.² Journal des Sciences Médicales de Lille, March 23rd.

assistant to the late Professor von Langenbeck and chief surgeon of the new Friedrichshain Hospital in Berlin. His first professorial appointment was at the University of Rostock, which town he left for Bonn. His chair at the latter university will be taken by Professor Mikulicz of Breslau, formerly assistant to Professor Billroth in Vienna. The medical faculty has recently elected Professor Hering of Prague as successor to the great physiologist Professor Ludwig.

Colonial Laboratories.

The Imperial Government will bring a Bill before the Reichstag in order to establish medical laboratories in the German colonies. There is already one in Cameroon, West Coast of Africa, under the direction of Dr. Piehn, who has made several valuable researches, especially on the etiology of blackwater fever, as I mentioned in one of my recent letters. This laboratory is his private property, but he receives a subsidy from the colonial Government. Laboratories of this kind are now to be established in all the colonies, their principal purpose being the investigation of tropical diseases and tropical hygiene. The conditions of European acclimatisation in the different colonies will also be carefully examined. In addition a central institute for colonial medicine will be established in Berlin, which will receive communications from the laboratories, and will collect and publish the results of their investigations.

June 24th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italian Hospitals.

THE LANCET has from time to time deplored the backward condition of the Italian hospitals, which (as Professor Luciani of our university has lately testified of the biological laboratories) are quite inadequate to modern requirements, whether from a humanitarian point of view or from that of medicine, scientific as well as clinical. All through the peninsula, and still more in the islands, the monotonous cry is heard from every medical school: "We are not abreast of the times. We are, even in our best-equipped hospitals, almost mediæval in our appointments." The justly distinguished school of Genoa, which, in spite of many and grave disadvantages, has sent forth surgeons and physicians of European reputation, has lately been the subject of a "Commissione d' Inchiesta," specially nominated to report on its hospitals. On that commission of inquiry are found the authoritative names of Dr. Giovanni Garibaldi (Professor of Surgical and Topographical Anatomy in the University), Dr. Canalis (Professor of Hygiene), and such eminent practitioners as Drs. Muzio, Carbone, and Ravano—men whose competence is not greater than their independence and impartiality. Their report, now made public, is a thorough-going and severe indictment of nearly all the departments of the city hospitals, in well-nigh every one of which they lament "la mancanza delle più elementari prescrizioni igieniche" (the want of the most rudimentary prescriptions of hygiene), and the slovenly manner in which the "servizio amministrativo" is carried out. The Italian public, which, as lately shown, can respond so nobly to the appeal of the Central Committee of the Red Cross, has only to become aware (through such reports as the present) of the discreditable state of the city hospitals to bring adequate pressure to bear on the Government and on the local municipalities for the worthy rehabilitation of those all-essential institutions. Relatively to the times the hospitals of Italy are far inferior to those in which her great mediæval surgeons and physicians practised and taught. Is she content to court much longer the humiliating comparison? Her penitentiary prisons are actually better appointed and better administered than her hospitals, as a recent visit to the great "penitenziario" of San Leopoldo (Leghorn) put clearly on evidence. The Commendatore dall' Oglio, the local prefect, concluded a rigorous inspection of the latter, in its sanitary and medical departments, with hearty words of praise for what he had examined and witnessed. Could he have said as much for the hospitals of the greatest city on that seaboard which is also the seat of a historical medical school?

"Death in the Pot."

We have been having a more than usually depressing turn of sirocco weather, well defined as "heat without sun, wind

without air, and rain without freshness"—conditions under which all kinds of food, particularly meat and fish, are apt to decompose. Rome, like most populous Italian cities, abounds in "rivenditori ambulanti" (itinerant retail dealers) in such articles, frequenting the poorer quarters and often eluding the vigilance of the sanitary officers in the sale of unsound comestibles. In consequence, we have from time to time cases of ptomaine poisoning after the consumption of those viands, an exceptionally tragic case of which occurred early this year in Florence, where three out of a family of four died after eating fish in a putrescent state. The other day a well-to-do Roman farmer, with his wife and four children, nearly encountered a similar fate from precisely the same cause. At midday they had partaken of some fish from the Tiber, and by the evening they were all ill—all except the youngest child, who had died of other viands. Severe intestinal pain was followed in each case by violent retching, and by eight o'clock they had to be removed for treatment to the Ospedale di Sant' Antonio. Fortunately, there was still time to evacuate the primæ viæ of their poisonous contents, and the patients, though in a deplorably reduced condition, are now doing well. But the lay press, not unjustifiably, is calling out for a more rigid censorship of these itinerant food-vendors, who buy up the unsaleable stock of the butchers and fishermen and vend it in obscure quarters on the sly. Naturally enough, it asks if it is only when the *forestieri* are in Rome that the sanitary inspectors are on the alert; and if the lives of the lieges must be endangered the moment the "foreign import" (*alias* well-to-do visitor) turns his back?

June 21st.

Obituary.

PATRICK KAVANAGH, M.D. ST. AND.

THE news of the death of Dr. Kavanagh, which took place quite suddenly at his residence in Brighton on the 25th inst., will be received with regret by a large circle of friends. Dr. Kavanagh retired from practice some years ago, having been formerly in practice at Lewisham for thirty years, and much confidence was felt in the neighbourhood to his professional skill and sound judgment. It would be impossible to speak of his benevolence and charity without apparent exaggeration, for his name will be rendered a household word with those among whom he laboured. Many officers now in the Army and Navy who were studying at the Royal Naval School, New-cross, of which he was medical officer, will remember his kindness. He was a classical and scientific scholar, as those who met him can testify. Prior to his death he was preparing an address to his supporters in Ireland, having accepted an invitation to stand as an Irish member. By his sudden decease many will have lost not only a wise adviser, but a true friend.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Wölfler, Imperial Councillor, and for many years director of the Vienna Jewish Hospital.—Dr. F. von Ried, formerly Professor of Surgery in the University of Jena.—Dr. A. Takacs, *privat docent* in Medicine in the University of Budapest.—Dr. J. S. Alleyne, formerly Professor of Materia Medica and Therapeutics in the St. Louis Medical College.

THE OBSTETRICAL CONGRESS IN VIENNA.

The Development of Obstetrics.

THE Congress met on June 5th, and was attended by a great many leading medical men. Professor Chrobak of Vienna presided, and in his opening address gave a short sketch of the Development of Obstetrics, in the course of which he remarked that some questions of the physiology and pathology of pregnancy and labour were as yet imperfectly understood, such as the fetal metabolic processes, the placental nourishment and respiration, the theory of the inferior segment of the uterus, the mechanism of delivery, osteomalacia, and eclampsia. Baichard, Chamberland, and

Blanc have shown that eclampsia is caused by an intermediate metabolic product, and other authors, such as Schmorl, have assigned the formation of this virus to the liver. The researches of Drs. Ludwig and Savory have proved that during eclampsia the blood serum contains a virulent substance which is excreted by the kidney imperfectly, if at all, its composition according to Nencky and Pawhoff being $\text{CO} < \text{ONH}^+$. Professor Chrobak then

pointed out the necessity for clinical teachers of obstetrics keeping in view the interests both of the students and the patients. During 1889-94 there occurred in his clinic 18 263 births, and the puerperal fever rate was 2.2, 1.8, 5.6, 5.1, 4.4, and 4.1 per cent., the mortality being 0.13, 0.15, 0.27, 0.26, 0.16, and 0.09 per cent. He believes that digital exploration per vaginam is the only method of examination which possesses any value for the student; in his clinic every student makes from sixty to one hundred vaginal examinations in a half-year.

Rupture of the Uterus.

Herr Lunger (Leipzig) discussed Bandl's theory of the so-called inferior segment of the uterus. This is that part of the body of the uterus which projects over Douglas's fold and extends to the perimetrium and internal os uteri; during the last stage of pregnancy this narrow segment becomes funnel-shaped. The speaker endeavoured to formulate a system including all cases of rupture of the uterus. The existence of the so-called post mortem ruptures has not been satisfactorily established, as they generally result from ante-mortem spontaneous ruptures. The uterus is never spontaneously ruptured in the third stage of labour, but forcible expression of the placenta at an unsuitable time, when the uterus is relaxed and atonic, may produce laceration and contusion of the uterus, reaching to the peritoneum. In cases of incomplete rupture the peritoneum may eventually give way, and the placenta may escape into the abdominal cavity. The exterior incomplete form is the rarest, and is characterised by multiple laceration of the peritoneum and of a part of the muscular layer of the uterus. As latent rupture is a rupture of the body of the uterus which passes only through the muscular layer, reaching to the peritoneum, it is caused by direct violence. Spontaneous ruptures only affect the body of the uterus, especially the fundus and the part around the internal opening of the oviduct. Contracted pelvis, stricture of the cervix uteri, and ovarian cysts frequently cause ruptures. In the case of contracted pelvis and head presentation the patient is to be placed on that side where the head best dilates the genital canal, and she must not make bearing-down efforts. If rupture has taken place immediate delivery must be effected; but in the case of transverse presentation perforation or cephalotripsy is most favourable for the life of the mother; turning of the living child may be also tried, but when the child is dead it should be dismembered. When rupture has been diagnosed and the child is in the abdominal cavity it is to be removed by laparotomy. Neither plugging nor compression stops the bleeding. Amputation of the body of the uterus must be performed when its interior is thought to be septic or when myoma is present.

Dr. Haberdar (Vienna) showed Preparations of Ruptures caused by the introduction of instruments in criminal cases of abortion. These injuries when healed leave weak places where spontaneous rupture may appear. When dilated the uterus gives way only in places which are fixed and immobile, such as the cervix or, in the case of incarceration, in consequence of contracted pelvis or pathological adhesions.

Dr. Hofmeier (Giessen) had seen cases where rupture occurred without any fixation of the os uteri. The bearing down of the woman and pressure on the abdomen constitute a uniformly distributed force which never can produce rupture of the uterus.

Dr. Veit (Berlin) believes that the fixation of the cervix downwards is caused by the connective tissue of the pelvis.

Dr. Winkel (Munich) said that compression of the abdomen may produce rupture, but only when performed by an unpractised operator or unskilfully.

Dr. Tauffer (Budapest) found among 471 births 25 penetrating and 17 non-penetrating ruptures. He obtained gratifying results by iodoform wool pellets; but laparotomy, which was performed in four cases, was quite unsuccessful.

Professor Chrobak is opposed to plugging, for by it an incomplete rupture may be converted into a complete one. The difficulty of vaginal extirpation consists in stopping the hæmorrhage from the parametrium.

Endometritis.

Professor Winckel (Munich) presented a report on Endometritis, of which he distinguishes two groups: (1) the simple forms resulting from the action of poisonous substances, general infection of the system or abortion, and the so-called endometritis exfoliativa; and (2) the purulent and bacterial forms caused by schizomycetes and protozoa (gonococcus and tuberculous varieties), by streptococci and staphylococci, saprophytes, diphtheria, and syphilis. Simple metritis arises from the return of blood from the uterus being impeded by excessive congestion, which may occur even in childhood in consequence of unsuitable clothing, imperfect ablation of the genitals, obstinate constipation, chlorosis, æræmia, and leucæmia, whereas after the period of puberty menstrual disturbances, ectopia and neoplasmata of the uterus, and diseases of the ovary are to be taken into consideration. Hæmorrhagic endometritis is a not uncommon sequel of burns, probably in consequence of obstruction of the vessels. Poisoning produces fatty degeneration of the small arteries and extravasation of blood into the mucous membrane; portions of the membranes of the ovum left in the uterus give rise to endometritis decidua polyposa, which, when not entirely removed may, in the event of conception taking place, cause habitual abortion. In the purulent form the gonococcus most frequently attacks the urethra, then the cervix and oviducts, and rarely the vagina and vulva. From the cervix it both makes its way through the uterine wall to the peritoneum and ascends to the mucous membrane of the uterus. There is no immunity against this coccus; it occurs at every age and retains its virulence for years. Streptococcus pyogenes causes puerperal endometritis and attacks all parts of the mucous membrane of the womb, puerperal and non-puerperal, migrates through the wall of the uterus and oviducts to the peritoneum, and shows much variation according to the place of the inoculation, the number of the cocci, and the resistance of the organism. Primiparae and women exhausted by hæmorrhage and protracted labour are specially disposed to be infected by this coccus. Syphilitic endometritis is not frequent; a place favourable to the infection is the anterior lip of the os uteri. The colour of the discharge is at first clear, then reddish yellow and green. The slimy, blood-stained, or clear secretion is inodorous, but it may become fetid by putrefaction. The pains resemble labour pains or uterine colic, and local pains also result from the engorgement of the secretion. The pains of exfoliative endometritis are characteristic, beginning before menstruation and being described as burning and itching in character; they are, moreover, associated with pains in the loins and inguinal region and with headache. Sterility as a consequence of endometritis results from swelling of the mucous membrane or retention and purulent charges of the secretion. Endometritis interferes with delivery by causing anomaly of the labour, premature rupture of the fetal membranes, premature loosening of the placenta, and at last stenosis and atresia of the cavity of the uterus. In respect of duration endometritis may be acute, subacute, or chronic. At first the simple and purulent forms show an acute stage with variable fever and a slimy secretion becoming serous and fetid. The greater part pass into the subacute condition, especially those cases which are caused by abortion or premature birth. The endometritis of chlorosis and æræmia is at first acute or subacute, and eventually becomes chronic.

Dr. Wertheim (Vienna) spoke on the subject of Gonorrhœa of the Uterus. This is generally preceded by an inflammation of the mucous membrane of the uterus—endometritis interstitialis. Inflammatory processes of the muscular layer also occur, such as infiltration of the muscular connective tissue, which causes hyperplasia of the connective tissue at the expense of the muscular layer.

Dr. Fehling (Halle) described the Treatment of Endometritis. In puerperal endometritis vaginal injections are to be made with lysol, carbolic acid (0.5 to 2 per cent.) or corrosive sublimate (1 part in 4000), the latter being contraindicated in nephritis or æræmia. The contact of the nozzle of the injection apparatus with the vaginal portion of the uterus produces contraction sufficient to discharge the secretion. But if within twenty-four hours the symptoms do not subside the uterus is to be injected with from 2 to 3 litres of a tepid 0.5 per cent. solution of lysol. Dr. Fehling recommends abrasion of the uterus only in endometritis occurring in the second week of childbed (caused by retained fragments of the membranes and placenta), and in endometritis after abortion. After the abrasion cauterising with a 50 per cent.

solution of carbolic acid in alcohol is to be performed. The treatment of the other acute forms of endometritis consists in repose, the use of ice, laxatives, morphine, or codéine, and brushing of the cervix with a 10 per cent. solution of nitrate of silver. Chronic endometritis is to be treated by tincture of iodine (10 to 20 per cent.), or a 50 per cent. solution of carbolic acid in alcohol. Gratifying results may also be obtained by an electric current of from 20 to 50 milliamperes, the anode being introduced into the cavity of the uterus, and the cathode being laid on the abdomen; this method is specially applicable to climacteric bleedings attended by necrosis and scars of the mucous membrane.

Vomiting of Pregnancy.

Dr. Tuszkai (Budapest) presented a report on the Vomiting of Pregnancy (hyperemesis gravidarum). Vomiting without any complication is caused by a local peritoneal irritation and leads to inanition, decrease of the weight of the body, and diminished secretion of urine. He combats it with small doses of opium, the local application of cold, or the induction of premature labour by means of a double-current apparatus of Hegar's pattern, through which water passes at a temperature of 50° or 60° C.

Other papers.—At the final sitting Dr. Schanta (Vienna) made some observations on adnex operations. The results have not been satisfactory, for only 56 per cent. of the patients were permanently benefited; the remainder complain of leucorrhœa, hæmorrhage, and pains. In these cases there were adhesions of the intestine, urinary bladder, and omentum to the pelvic organs.

Dr. Erlach (Vienna) presented a report on sixty-nine cases operated on for Myoma of the Uterus.

Dr. Sünger discussed Humid Asepsis in the Abdominal Cavity. He has obtained good results by Tavel's solution, which contains 7.5 parts of common salt and 2.5 of soda in 1000 parts of water.

Dr. Winter (Berlin) spoke on the subject of Gastrorrhaphy and Abdominal Hernia. The mortality of hernia treated by laparotomy, which formerly amounted to one-third of all cases operated on, has now fallen to 8 per cent.; an exact suturing of the aponeurosis with catgut is of great importance.

Dr. Klein (Munich) described the Anatomy and Histology of the Urethra. In the vestibulum vaginæ there are three species of glands—Skene's and Bartholin's, and the simple acinous mucous glands. Skene's glands are analogous to the prostatic glands in the male, those of Bartholin to Cowper's glands, and the mucous glands to Littre's. Males and females, therefore, possess analogous glandular structures.

Many other papers were also read before the Congress, but we are compelled by exigencies of space to leave them unrecorded. The reception on behalf of the profession of Vienna was very cordial. The next Congress of the Obstetrical Society will take place in 1897 at Leipzig. The subjects to which special attention will be directed are retroflexion of the uterus and placenta prævia. The following gentlemen were elected officers of the society:—President, Dr. Zweifel; vice-president, Professor Chrobak; manager, Dr. Schatz; and secretaries, Drs. Pfannen-schmied and Sünger.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the undermentioned subjects:—

Surgery.—J. Blackwood, University College; F. H. Blatchford, St. Mary's Hospital; F. E. Bromley, London Hospital; B. L. Duingra, Lahore; A. P. Eldred, St. Mary's Hospital; A. H. Huckle, Guy's Hospital; W. B. Maurice, St. Mary's Hospital; A. H. Palmer, Birmingham and Guy's Hospital; R. G. Worger, Bristol and Guy's Hospital; A. M. St. J. Wright, Masters.
Medicine, Forensic Medicine, and Midwifery.—J. Blackwood, University College; M. A. Cooke, St. Bartholomew's Hospital; R. A. Fegan, St. Bartholomew's Hospital; A. H. Palmer, Birmingham and Guy's Hospital; C. J. Palmer, Birmingham and Liverpool.
Medicine and Midwifery.—J. W. Clegg, Manchester; R. B. Rees, Middlesex Hospital.
Medicine.—E. A. B. Poole, Birmingham.
Forensic Medicine and Midwifery.—W. A. Montgomery, St. Thomas's Hospital; C. Blue, Belfast.
Forensic Medicine.—H. G. C. Hardwick, Cambridge and St. Thomas's Hospital; J. A. Morgan, Charing-cross Hospital; R. G. Worger, Bristol and Guy's Hospital.
Midwifery.—T. H. Wilkins, Charing-cross Hospital.

To Messrs. Blackwood, Cooke, Clegg, Fegan, Hardwick, Huckle, Morgan, A. H. Palmer, Rees, and Worger was granted the diploma of the society entitling them to practise Medicine, Surgery, and Midwifery.

FOREIGN UNIVERSITY INTELLIGENCE.—**Bordeaux:** MM. Binand and Braquahaye have been appointed *professeurs-agrégés* of Surgery.—**Freiburg:** Dr. Schüle has been recognised as *privat-docent* in Medicine and Dr. Keerlinck as *privat-docent* in Surgery.—**Kazan:** Dr. V. Kuzmin of Moscow has been appointed to succeed Professor Levshin in the chair of Surgery.—**Lille:** M. Oui has been appointed *professeur-agrégé* of Midwifery.—**Lyons:** MM. Vallas and Curtillet have been appointed *professeurs-agrégés* of Surgery.—**Montpellier:** M. G. de Rouville has been appointed *professeur-agrégé* of Surgery, and MM. Paech and Vallois *professeurs-agrégés* of Midwifery.—**Montevideo:** Dr. L. Morquio has been appointed to the chair of Internal Pathology, Dr. Pouey to that of Clinical Gynaecology, Dr. Navarro to that of Operative Medicine, and Dr. G. Sinarelli of Sienna to that of Hygiene.—**Paris:** M. Bonnaire has been appointed *professeur-agrégé* of Midwifery, and MM. Broca, Hartmann, and Walther *professeurs-agrégés* of Surgery.—**Nancy:** MM. Schuhl and Froelich have been appointed *professeurs-agrégés* respectively of Midwifery and Surgery.—**St. Petersburg (Military Medico-Chirurgical Academy):** Dr. Ludowski has been appointed to the chair of Histology and Embryology.—**Siragossa:** Dr. Luis Gudea of Barcelona has been appointed to the Chair of Clinical Midwifery.—**Sienna:** Dr. Falaschi has been promoted to be Ordinary Professor of Midwifery.—**Toulouse:** M. Aldibert has been appointed *professeur-agrégé* of Surgery.—**Turin:** Dr. Sansoni has been recognised as *privat-docent* in Medical Pathology, Dr. Roncoroni as *privat-docent* in Psychiatry, and Dr. Vicarelli as *privat-docent* in Midwifery and Gynaecology.

MEDICAL MAGISTRATES.—Dr. Joseph A. Bowen and Dr. John Lonie of Preston, Lancashire, have been placed on the Commission of the Peace for that borough.—Dr. James John Graham of Garstang, Lancashire, has been placed on the Commission of the Peace for the county of Lancaster.

A QUARTERLY MEETING of the Society for the Study of Inebriety will be held in the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., on Thursday, July 4th, 1895, at 4 o'clock p.m., when Dr. Norman Kerr, M.D., F.R.S., will open a discussion on the Government New Inebriates Bill, 1895.

ROYAL METEOROLOGICAL SOCIETY.—The last meeting of this society for the present session was held on the 19th inst. at the Surveyors' Institution, Westminster. Mr. R. Inwards, F.R.A.S., President, being in the chair. Mr. R. H. Curtis, F.R. Met. Soc., read a paper on the Hourly Variation of Sunshine at Seven Stations in the British Isles, which was based upon the records for the ten years 1881-90. Falmouth is decidedly the most sunny station of the seven, having a daily average amount of sunshine of 4½ hours. This amount is half an hour more than that recorded at Valencia and three-quarters of an hour more than at Kew. Of the other four stations, Aberdeen, the most northern but at the same time a coast station, with 36½ hours, has more than either Stonyhurst or Armagh, both inland stations; whilst Glasgow, with only 3 hours, or about a quarter of its possible amount, has the smallest record of the seven, a result to some extent due to the nearness of the observatory to the large manufacturing works with which the city of Glasgow abounds. At Valencia, Kew, Stonyhurst, and Armagh the maximum duration is reached in May, the daily mean amount varying in the order named from 6¼ to 6 hours. At Falmouth and at the Scotch stations the increase goes on to June, when the mean duration at Falmouth reaches 7½ hours, at Aberdeen 6½ hours, and at Glasgow 5½ hours. January and December are the most sunless months of the year. The most prominent feature brought out at all the stations is the rapid increase in the mean hourly amount of sunshine recorded during the first few hours following sunrise and the even more rapid falling off again just before sunset.—Mr. H. Harries, F.R. Met. Soc., read a paper on the Frequency, Size, and Distribution of Hail at Sea. He has examined a large number of ships' logs in the Meteorological Office, and finds that hail has been observed in all latitudes as far as ships go north and south of the equator, and that it seems met with it over wide belts on the Polar side of the 35th parallel.

PROFESSOR HUXLEY.—We regret to learn that Professor Huxley's condition remains one that gives cause for the gravest anxiety. He is very exhausted, and the symptoms directly dependent upon insufficient action of the kidneys are still present. There is constant nausea, and on Thursday signs of pericarditis became manifest. He is, however, not drowsy, and his mind is quite clear. The rally of the early part of the week has proved of a temporary character.

SERVICES APPRECIATED.—Mr. John Ashburton Thompson, M.D. Brux., D.P.H. Camb., L.R.C.P. Lond., M.R.C.S., of Sydney, New South Wales, has been awarded a prize of fifty guineas by the National Leprosy Commission for his researches with regard to leprosy.

PRESENTATION.—Mr. George Watson H. Tawse, M.B. Aberd., house surgeon at the Whitehaven and West Cumberland Infirmary, Whitehaven, was presented, on the 11th inst., by the members of the Whitehaven Police St. John Ambulance Class, with a handsome dressing-case and meerschaum cigar-holder, in appreciation of a course of lectures given to the class on "First Aid."

THE GRAND PRIORY OF THE ORDER OF THE HOSPITAL OF ST. JOHN OF JERUSALEM IN ENGLAND.—On Monday last, being St. John the Baptist's Day, the members and honorary associates of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England, of which Her Majesty the Queen is the sovereign head and patron, and His Royal Highness the Prince of Wales Grand Prior, met together for their annual festival. After the celebration of the Communion at 10.15 A.M. a service was held in St. John's Church, Clerkenwell, built on the site of the Church of the Old Priory of the Order, the original crypt belonging to which still remains and was last year restored and lighted through the munificence of the late Sir Edmund A. H. Lechmere, Bart., M.P., a distinguished member of the Order. The service was conducted by the Rev. Thomas W. Wood, a chaplain of the Order and rector of St. John's, assisted by the Right Rev. the Bishop of Gibraltar, the Rev. Canon Whittington, M.A., the Rev. Paul W. Wyatt, M.A., the Rev. Sir Borodale Savory, Bart., M.A., the Rev. Edgar Sheppard, M.A., and the Rev. Canon Teignmouth Shore, M.A., all chaplains of the Order, the latter of whom preached the sermon, taking as his text St. Matthew, Chapter xi., verse 7. After the commemoration service the members present inspected the crypt, and in the afternoon, by permission of the Rev. Canon Elwyn, Master of the Charterhouse, the general assembly of the Order was held in that historical building, the Earl of Lathom, G.C.B. (Chancellor of the Order), presiding. Reports having been read on the work of the Order and its various departments, including the British Ophthalmic Hospital at Jerusalem and the St. John Ambulance Association, a demonstration of ambulance work was given in the grounds of the Charterhouse by members of the metropolitan corps of the St. John Ambulance Brigade, under the direction of the Commissioner, Colonel E. T. Thackeray, R.E., C.B., V.C., exemplifying in a very marked manner the great utility of the training received by its members. In the evening the confreres and ladies of the Order dined together at the Imperial Institute.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Midwives Registration Bill.

THIS Bill was amended on report on the 20th inst., and is now printed as amended. The changes show a disposition to meet the views of the General Medical Council. One of these, in Subsection 5 under Clause 12, has reference to removal from the Register, and reads as follows:—"For the purpose of this section professional misconduct shall, in addition to any other misconduct, include any omission to send for a medical practitioner where the case is not one of natural labour." The sudden interruption of all legislative work of Parliament makes it hopeless to expect further progress for this measure in the present session. We may, therefore, leave for the present any further notice of the changes introduced into the Bill.

Resignation of the Ministry.

Lord Rosebery in the House of Lords, and Sir William Harcourt in the House of Commons, announced on Monday, June 24th, that the

Ministry had resigned in consequence of the adverse vote in Committee of Supply on the previous Friday evening. The Marquis of Salisbury is now engaged forming a new Ministry.

Fatal Accidents Inquiry (Scotland) Bill.

The Grand Committee of the House of Commons for the consideration of Scotch Bills met on Monday, June 24th, and disposed of the remaining clauses of the Fatal Accidents Inquiry (Scotland) Bill.

HOUSE OF LORDS.

FRIDAY, JUNE 21ST.

Inebriates Bill.

There was a short debate at this sitting on the order for the second reading of the Inebriates Bill. The Lord Chancellor (Lord Herschell), in moving the second reading, said the Bill was free altogether from party aim or party origin. It was founded on the recommendations of the two committees which had dealt with the subject. He doubted whether anyone could be found to say that our present method of dealing with those who were convicted of habitual drunkenness was satisfactory. It appeared that out of 33,000 women who were every year on an average sent to prison for drunkenness 11,000 had not less than ten convictions recorded against them; and of the men 16,000 had each undergone not less than the same number of imprisonments. In one of the London prisons there were at the time the return was prepared 165 women who had been committed from 40 to 133 times in the course of a year. One woman had only a week's liberty during twelve months, although all her sentences had been very short ones. Another woman in the course of a year and eight months was convicted such a great number of times that she spent five separate months and 138 days of that period in prison. It was certain that our present system of dealing with those cases entirely and absolutely failed. It neither cured nor deterred; and if it did not do the one or the other it failed absolutely for the purpose for which imprisonment was designed. Sir Andrew Clark, in his evidence before the Home Office Committee, put the case very truly when he said that short sentences had only the effect of strengthening the organisation to enable such people to indulge in more drunken bouts when they got out; that in nine out of ten cases there was an orgie on the very day of their escape from prison; and that short sentences were useful for no purpose but the purpose of revenge. The present system had therefore failed. The Bill proposed to deal with two classes of habitual drunkards—those who had rendered themselves amenable to the criminal law and those who had not rendered themselves so amenable. The proposal of the Bill was that a habitual drunkard, who had been repeatedly convicted for drunkenness, should be detained in an inebriate reformatory for a period of not less than twelve months. No one would say that twelve months' imprisonment under the ordinary conditions of imprisonment should be imposed even for repeated drunkenness or offences connected with drunkenness. But to deal with habitual drunkards in an inebriate reformatory, in which the object was by a lengthened period of detention to effect a cure, was, it appeared to him, a different matter, and one which would not shock any sense of justice or propriety. The maximum period of five years mentioned in the Bill was a mistake: it should have been three years. This, however, was a detail, and the only principle involved was that the period should be sufficiently long to be useful for the purpose of a cure. With regard to those who had not rendered themselves amenable to the law the Bill contained provisions which no doubt were of a serious and stringent character. At the present time there might be detention in a retreat, but it was a voluntary detention. The Bill proposed to permit detention to be obtained compulsorily by an order of the Court in the case of those who were habitual drunkards. The application might be made either to the county court or to the High Court. If made to the county court an order made might be appealed against to the High Court; therefore it might be said that, except by order of the High Court, no person could, in the last resort, be subjected to detention in a retreat under the provisions of the Bill. The Bill proposed that the minimum of detention should be twelve months and the maximum two years, but there was further provision that during the time of detention the person detained might be allowed to be at large in order to ascertain whether the time had come when he might safely be let at liberty. The Bill also proposed, following the recommendations of the committee, that the Court should have power to appoint a person to take charge of the property of a person in the retreat, if thought fit, during the time of detention. The idea that compulsion was expedient did not rest upon the opinion merely of the two committees. Before the Home Office Committee there were placed the remarks of a number of boards of guardians, all in favour of compulsory detention, and there were many representations of justices of the peace in the same direction. The question really was whether there was any reasonable prospect of a cure in cases of habitual drunkenness by means of detention. On that point it seemed to him the evidence was very strong, although it was necessarily limited in its character. In the first place he would call attention to the memorial of a number of eminent medical men, which was presented to the Home Office Committee, on whose report this Bill was largely founded. That memorial was signed by medical men of the highest eminence, including Sir William Jenner and Sir Henry Acland. A number of the most eminent medical authorities signed a memorandum expressing an earnest desire for the compulsory restraint—with all proper safeguards—of those men and women who could not control themselves in this direction, and expressing the opinion that much good might be done if compulsory detention could be enforced for a sufficient time. These medical authorities must come in contact with a great number of these unfortunate people, being consulted by the friends and relatives, and their opinion was of great weight. He was fully alive to the fact that there were plenty of details in the Bill open to criticism, and perhaps to condemnation, but all that was asked for now was a second reading of the Bill. If the House came to the conclusion that it was not safe to deal with the non-criminal cases, though he hoped that would not be their conclusion, still they could hardly doubt that an effort ought to be made to deal with the criminal cases so as to make the law more rational and productive of good.

Lord Halsbury thought there were portions of the Bill which might

with advantage be passed into law. He was ready to support the Lord Chancellor in some form of legislation (he did not think this Bill was the best form) for those habitual drunkards who had disobeyed the law and therefore forfeited their right to free action. This Bill, however, was a most serious and extraordinary innovation. It was nothing more nor less than a repeal of the Habeas Corpus Act. He would be very glad indeed if there was such an institution in England as the French *conseil de famille*; but to say that anyone who pleased might apply to a county court judge to shut up somebody else appeared to him to be the very extravagance of legislation, and if the Bill had not comprehended what he conceived to be a proper subject for inquiry he should have moved its rejection altogether. He did not, however, propose to take that course, and had only indicated generally what the line of his opposition to the measure was. He had only further to say that he hoped that that part of the Bill to which he had taken exception would be thrown out by their lordships.

Lord Ashbourne, while appreciating the motives that had suggested the Bill, said that in its present shape it was full of dangers and lent itself to grave abuses.

The Lord Chancellor, in some further remarks, said his noble friend (Lord Halsbury) seemed to think that a man had a perfect right to be a habitual drunkard if only he did not go into the streets or some public place and break the law. He differed from that view entirely. There were cases—it was difficult to define them—in which a habitual drunkard, whether husband or wife, seemed to be worse than many criminals. The children neglected, the father or mother having to send them away, clothes pawned, the children often left for a time without food—not to such an extent as to amount to cruelty in the eye of the criminal law, but violating every possible duty a father or mother could owe to children or husband and wife to one another—he regarded that as a most serious and terrible state of things. If they could deal with cases of that description, if they could mitigate such misery, it was worth while making an effort, even running some risk, to do so. They could not have legislation without a certain risk, though by all means let the risk be limited as much as possible.

The Marquis of Salisbury warned their lordships that in this matter they were meddling with edged tools, and hoped that the first three clauses of the Bill would not, at least in their present form, ever appear on the Statute Book.

The Earl of Kimberley appealed to their lordships to give the Bill a second reading in order that an attempt might be made to deal with what was admittedly a difficult question.

The Bill was then read a second time.

HOUSE OF COMMONS.

THURSDAY, JUNE 20TH.

The Rations of the Army.

Mr. Campbell-Bannerman, in reply to Mr. Fuller, said that no complaints as to the quality of rations supplied to the troops at home had reached the War Office, and there was every reason, judging by the ration inspectors' reports, to believe that the rations were of very good quality. Since 1882 there had been a steady progressive improvement in the food of the soldier. This was due partly to a better quality being supplied owing to a system of surprise visits by expert ration inspectors having been adopted, and partly to the instruction which had been given to regimental officers in inspection of meat in the Army Service Corps School of Instruction at Aldershot. Greater care was also now taken in cooking and in utilising all portions of rations according to a system which was begun in Ireland by Colonel Burnett, and afterwards brought to perfection at the Army School of Cookery at Aldershot. It was the duty of the officer in command to prevent food which was not good from being served out to the men. There had certainly been no difference under successive Governments in respect of the food arrangements beyond the steady improvement to which he had referred.

Disinfecting Dairy Produce.

Sir Mark Stewart asked the President of the Board of Agriculture if he could inform the House what precautionary measures, if any, were adopted by Holland, Denmark, Australia, New Zealand, or other foreign or colonial countries for the disinfecting of dairy produce imported into this country, and what security this country had as to immunity from disease when receiving such produce.—Mr. Shaw-Lefevre, replying for Mr. Herbert Gardner, said he had no information as to what precautionary measures of disinfection were applied to dairy produce in the countries referred to, nor was he aware how such measures of disinfection could be applied to the many articles of dairy produce that came to this country. In some of the countries, however, the milk was sterilised.—Sir Mark Stewart asked if the Government proposed to take any measures or make any inquiry with regard to this important matter.—Mr. Shaw-Lefevre said that at present there was no intention of introducing any measure on the subject.—Mr. Hanbury asked if the Government would make inquiries, and see that the same protection was afforded to people of this country as was afforded in most foreign countries.—Mr. Shaw-Lefevre said that was a matter of argument.

FRIDAY, JUNE 21ST.

Vision Tests for Railway Servants.

Mr. Bryce, replying to Sir James Carmichael, said that the Board of Trade had no power to insist upon the adoption by railway companies of any particular system of tests; the companies must use their discretion in the matter. The Board of Trade had, however, felt it their duty to press upon the attention of the companies the recommendations on the subject made by such an authoritative body as a committee of the Royal Society.

Sunstroke at Aldershot.

Mr. Jeffreys asked the Secretary for War whether his attention had been drawn to the deaths from sunstroke of two soldiers at Aldershot; whether, on Saturday, June 8th, companies of Regulars and Volunteers had to march from Weybridge to Bixley, a distance of twelve miles, under a burning sun, in consequence of which several men were invalided; what was the extent and nature of the medical aid obtainable on the ground on June 8th; and what, if any, provision had been made for the relief of any sufferers amongst the 700 or 800 men engaged in the firing competition on that day; and

whether in future these long marches during the heat of the day would be discontinued except in cases of necessity.—Mr. Campbell-Bannerman replied that his attention had been called to this melancholy occurrence. There was a rifle competition at Bixley on Saturday, June 8th, and under the terms of the competition competitors had to march eleven miles, but there was no compulsion to do so beyond emulation. This was not a long march, and there did not appear to be any reason to interfere with the conditions of a voluntary competition on account of this most regrettable incident. Ample medical aid was at hand, and, as a matter of fact, was afforded by the medical officer of the Guards from the adjacent Guards' camp at Pirbright.—Mr. Gibson Bowles suggested that the right honourable gentleman might give his attention to the subject of a more reasonable headgear for the private soldier than the present forage cap.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADAMS, GEORGE, M.R.C.S., has been appointed Medical Officer by the Long Ashton District Council.
BIRD, FRID, D., M.B., Ch.B., Ch.M. Melb., M.R.C.S. Eng., has been appointed Lecturer on Surgery to the Melbourne University, Victoria, Australia.
BRODIE, WILLIAM B., M.B., M.S. Glasg., has been appointed Assistant House Surgeon and Dispenser to the Worcester Infirmary.
CLUBBE, CHAS. P. B., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Honorary Surgeon to the Prince Alfred Hospital and also Lecturer in Clinical Surgery at the Sydney University, New South Wales.
CRAIG, G., M.B., M.S. Edin., has been appointed Assistant Medical Officer to the Lunatic Asylum at Seaciff, near Dunedin, New Zealand.
CRAWFORD, A. D., M.B., C.M. Glasg., has been appointed Medical Officer to the Marston Green Homes.
DAVIS, S.D., M.B., C.M. Edin., has been appointed Resident Medical Officer of the Toodyay district, Western Australia, vice Mayhew, resigned.
FOSTER, WILLIAM, M.B., D.P.H. Camb., M.R.C.S., has been appointed Medical Officer by the Shipley District Council.
GRAHAM, JAMES, M.D., Ch.M. Edin., has been appointed Honorary Assistant Physician to the Prince Alfred Hospital, Sydney, New South Wales.
HALL, G., M.D., C.M. Edin., has been appointed Medical Officer of Health by the Hambleton Rural District Council.
HARRIS, JOHN W., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Frittsenden Sanitary District of the Cranbrook Union.
HART, J. W., M.B., Ch.M. Edin., has been appointed Medical Officer to the Hospital at Barraba, New South Wales.
HASWELL, JOHN F., M.B., C.M. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Penrith Rural Sanitary District, vice Robertson.
HILLARY, ARTHUR, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Pontefract Urban Sanitary District, vice Buncle.
HODGSON, THOS., M.B., Ch.B. Melb., has been appointed Honorary Assistant Demonstrator of Anatomy to the Melbourne University, Victoria, Australia.
HUNTON, FRED, M.D., M.B., B.S. Durh., has been appointed Medical Officer for the Stockton Parochial District.
JONES, HENRY T., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health to the Pembroke Rural District Council.
KING, F. T., M.B., Ch.M. Edin., has been appointed Medical Superintendent to the Lunatic Asylum at Seaciff, near Dunedin, New Zealand.
MACKNIGHT, C. C., M.B., Ch.M. Edin., has been appointed Health Officer for Carisbrook, Victoria, Australia.
MCGEE, WM., L.K.Q.C.P., L.R.C.S., L.M. Irel., has been appointed Officer of Health for the Shire of Poowong and Ietcho, Victoria, Australia.
NEWALL, W. A., M.B., Ch.B. Vict., has been appointed Assistant House Surgeon to the Leicester Infirmary.
ROBINSON, THOS. H., M.D., Ch.M. Edin., has been appointed *pro tem* Acting Resident Medical and Quarantine Officer, at Albany, Western Australia.
SANGSTER, JOHN I., L.R.C.P., L.M. Edin., M.R.C.S. Eng., has been appointed a Public Vaccinator for the district of Burra, South Australia.
SINCLAIR, ROBT. F., M.B., C.M. Edin., has been appointed Government Medical Officer and Vaccinator for the District of Brewarrina, New South Wales.
SMYTH, ERNEST J., M.B., B.S. Lond., B.Sc., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Parish of Birmingham Infirmary, vice Tipping, resigned.
SPICER, R. H. S., M.D. St. And., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Southampton Union.
STRADLING, W. A., M.R.C.S., has been appointed Surgeon to the Walford and Abbot Langley Sections of the Herts Police.
TERRING, EDWARD T., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Assistant Gynaecological Surgeon to the Prince Alfred Hospital, Sydney, New South Wales.
WEBBER, H. W., M.D. Lond., B.S., L.R.C.P., M.R.C.S., has been appointed a Divisional Surgeon to the Herts County Police.
WHITE, A. T., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed *pro tem* Resident Medical Officer at Fremantle, Western Australia.
WOOD, W. A., M.B., Ch.B. Melb., L.R.C.P., D.P.H. Eng., has been appointed Honorary Assistant Demonstrator of Anatomy to the Melbourne University, Victoria, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

- BIRMINGHAM GENERAL DISPENSARY.**—Resident Surgeon. Salary £150 per annum, with an allowance of £30 per annum for cab hire, and furnished rooms, fire, lights, and attendance.
- BRADFORD INFIRMARY AND DISPENSARY.**—Honorary Physician.
- CANCER HOSPITAL (tree), Fulham-road, S.W.**—House Surgeon for six months. Salary at the rate of £30 per annum, with board and residence.
- CHARLOTTE HOSPITAL FOR WOMEN AND CHILDREN, Ludhiana, Punjab, India.**—Fully qualified Woman Doctor. Applications to Dr. Greenfield, 7, Heriot-row, Edinburgh.
- GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY, Cardiff.**—Assistant Resident Medical Officer for six months. Board, washing, and apartments provided.
- GUY'S HOSPITAL MEDICAL SCHOOL, London.**—Lecturer on Public Health.
- HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.**—Resident Medical Officer. Salary £200 per annum, with board and residence.
- LONDON HOSPITAL, Mile End, E.**—Medical Electrician.
- LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.**—Senior Demonstrator of Physiology. Salary £100 a year and a proportion of the fees paid for classes. Also Assistant Demonstrator of Physiology. Salary £20 a year.
- LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.**—Assistant Resident Medical Officer for six months. Board, washing, and residence in the hospital is provided, and an honorarium of five guineas at the expiration of that term will be given.
- MALING RURAL DISTRICT CONSULTANT.**—Medical Officer of Health. Salary £100 per annum, to include all office and traveling expenses. Applications to the Clerk, West Malling.
- MID-LOTHIAN AND PRESTON DISTRICT ASYLUM AT ROSSLYNLEE.**—Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, board, and washing. Applications to the Clerk and Treasurer, 19, Heriot-row, Edinburgh.
- NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, locally situated at Bournemouth.**—Resident Medical Officer. Salary £30 per annum, with board, lodging and washing.
- NEWPORT AND MONMOUTHSHIRE INFIRMARY, Newport, Mon.**—House Surgeon. Salary £100 per annum, with board and residence. No stipendium provided.
- ROYAL VICTORIA HOSPITAL, Bournemouth.**—House Surgeon and Secretary for two years. Salary £100 per annum, with board.
- SHEFFIELD UNION.**—Junior Assistant Medical Officer, unmarried, for the Workhouse Infirmary, Fir Vale, Sheffield, for six months. Furnished apartments in the Infirmary and board and washing provided.
- ST. COLINE MAJOR UNION.**—Medical Officer and Public Vaccinator for the Fifth District of the Union. Salary £20 per annum, with the usual extra medical fees and successful vaccinations. Applications to the Clerk to the Guardians, St. Coline.
- SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.**—House Surgeon. Salary £100 a year, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

- BULLOCK.**—On June 25th, at Eastgate House, Warwick, the wife of Roger Bullock, M.R.C.S., of a son.
- CALVERT.**—On June 18th, at Queen Anne-street, the wife of James Calvert, M.D., of a daughter.
- CARR.**—On May 20th, at Juma, Ispahan, Persia, the wife of D. W. Carr, of a son.
- DOVE.**—On June 20th, at Stapleton-hall-road, Stroud Green, the wife of Percy W. Dove, M.R.C.S., L.R.C.P., prematurely, of a son, which only survived its birth a few hours.

MARRIAGES.

- GRIFFITHS—PAYNE.**—On June 20th, at St. George's, Hanover-square, by the Rev. W. A. Pywell, M.A., Rector of Whitox, assisted by the Rev. A. E. Hermann, M.A., Dr. Joseph Griffiths, King's College, Cambridge, to Ethel Mary, youngest daughter of F. Payne, J.P., Water Hall, Whitox, Suffolk.
- MABERLY—BAM.**—On May 18th, at the Dutch Reformed Church, Petersburg, Transvaal, John Mabery, M.R.C.S., L.R.C.P. Eng., of Bulawayo, Matabeleland, to Maria Johanna, eighth daughter of John H. Bam, of Cape Town, South Africa.
- TROW—HUTCHISON.**—On June 18th, at St. Andrew's Church, Aberdeen, Augustus Vivian Trow, M.B., C.M. Aberd., of Devozes, Wilts, to Katharine Arbutnot, eldest daughter of Thomas Hutchison, Ingleside, Cults.

DEATHS.

- KAVANAGH.**—On June 24th, suddenly, at Brighton, from aortic rupture, Patrick Kavanagh, M.D. St. And.
- SYLVESTER.**—On June 24th, at the Court House, Trowbridge, Wiltshire, George Malet Sylvester, M.R.C.S., in his 75th year.
- WILLIAMSON.**—On June 18th, at Elm-road, Clapham, Surrey, William Crawford Williamson, LL.D., F.R.S., late Professor of Botany in Owens College, Manchester, aged 76.

N.B.—A fee of 6s. 4d. charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 27th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rate-fall.	Remarks at 8.30 a.m.
June 21	30.26	W.	63	55	124	76	53	...	Bright
" 22	30.34	S.W.	62	60	121	78	60	...	Overcast
" 23	30.40	S.W.	69	63	128	85	59	...	Bright
" 24	30.43	N.E.	67	62	115	78	64	...	Overcast
" 25	30.40	N.E.	63	53	119	82	53	...	Bright
" 26	30.18	S.	67	60	116	84	59	...	Hazy
" 27	29.95	W.	70	58	102	75	61	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

- MONDAY.**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Sobro-square (2 P.M.), Royal Orthopaedic (2 P.M.), City Orthopaedic (4 P.M.).
- TUESDAY.**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).
- WEDNESDAY.**—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (5 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopaedic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).
- THURSDAY.**—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Sobro-square (2 P.M.), North West London (2 P.M.).
- FRIDAY.**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).
- SATURDAY.**—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).
- At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

- WEDNESDAY.**—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Moran (for Dr. Lowe and Mr. Bradbury), Mr. Targett, and Dr. Blacker. Adjourned Discussion on Dr. Eden's paper on "The Development and Normal Structure of the Human Placenta." Papers:—Mr. Alban Dunning: Placental Polypus.—Dr. T. G. Stevens: Notes on the Variation in Height of the Fundus Uteri above the Symphysis during the Puerperium; the Conditions which influence this, and the Practical Conclusions which may be drawn from such observations.
- FRIDAY.**—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Card Specimens at 8 P.M.: Dr. E. H. Cartwright: Modification of Thompson's Test for Colour Vision. Papers:—Mr. Walter H. Jessop: Some cases of Graves' Disease with Destruction of Eyes.—Mr. Rayner D. Batten: The Connection between some cases of Myopia and Disease of the Nose and Pharynx. And other papers.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

- WEDNESDAY.**—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.
- ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).**—5 to 6 P.M. Dr. Morgan Dockrell: Neuroses.
- SATURDAY.**—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Exfoliative Dermatitis.

During the week marked copies of the following newspapers have been received:—*Walsal' Advertiser, Times of India, West London Observer, Birmingham Post, Pioneer Mail, Carlisle Patriot, Sussex Daily News, Cambrian, Cambridge Express, Grimsby News, Nottingham Guardian, Liverpool Mercury, Dundee Advertiser, Birmingham Gazette, Manchester Courier, Glasgow Daily, South Wales Daily News, Eastern Morning News, Market Harborough Advertiser, Walsley Mirror, East London Observer, Scotsman, Morning Post, Southampton Times, Builder, Macclesfield Courier, Sanitary Record, Evesham Journal, Worcester Herald, Worcester Daily Times, Galt's Daily News Letter (Jamaica), Brighton Gazette, City Press, Leeds Mercury, Hertfordshire Mercury, Liverpool Daily Post, West Middlesex Standard, Yorkshire Post, Local Government Chronicle, Bristol Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Reading Mercury, Surrey Advertiser, Australasian Medical Gazette, Guy's Hospital Gazette, Local Government Journal, New Zealand Herald, Rangoon Gazette, Ripley Advertiser, Alton Herald, Kerry Sentinel, Athlone News, Daily Chronicle, Norfolk Standard, Isle of Ely Advertiser, Bewickshire News, Falkirk Herald, Harrogate Advertiser, Eastern Daily Press, Southern Echo, Lancington Spa Courier, Lloyd's, Batley News, &c., &c.*

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the current half-year is given in this week's issue, which completes the first volume of the year 1895. The practice of supplying loose copies will be discontinued, the Index now being placed in the centre of the journal for the better convenience of subscribers.

"ALLEGED TOUTING BY A PUBLIC VACCINATOR."

IN our issues of May 18th and June 15th we commented upon statements reflecting on the mode of practice adopted by a public vaccinator, which, as represented, amounted briefly to "touting." This we said, and added that if the alleged touting were the fact then there had been a grave breach of professional etiquette. We have since received from both sides copies of the somewhat voluminous and acrimonious correspondence that has passed between them, upon which we are asked to adjudicate. Having perused these letters we are unable to modify our previous opinion, except to this extent—namely, that the public vaccinator seems to have acted under a mistaken sense of his duties, and therefore is hardly to be charged with intentional violation of ethical laws. The gentleman who complains that his patients were visited by the public vaccinator was perfectly justified in making his complaint. It would be intolerable if the system so complained of were the rule. The public vaccinator is only required to make domiciliary visits on persons residing at a distance of more than two miles from the vaccination station, and it is not his business, but that of the vaccinating officer, to see that those requiring public vaccination shall receive his services within the statutory period.

Dr. Gourley.—Our correspondent is thanked for sending us the letter. He is right in claiming a guinea for all insurance certificates, and whether the life be accepted or not. We demur entirely to the statements in the letter as to the custom of good offices. There should certainly be no difference as to the action of all good practitioners in refusing to do such work for less than a guinea.

WANTED, A MEDICAL HOME.

To the Editors of THE LANCET.

SIRS,—There are several institutions, I believe, in or near London which would give a home to poor gentlemen who can pay or have paid for them a weekly sum of 15s. or £1. Can any of your readers give me the address of one (or more) of these homes, and recommend any one as being a good and well-managed place of the kind?

I am, Sirs, yours very truly,

June 24th, 1895.

A. B. C.

POSTURAL TREATMENT OF INCONTINENCE OF URINE.

ACCORDING to Dr. J. Stumpf of Wernick, incontinence of urine in children may frequently be cured by a very simple mechanical, or rather postural, expedient. The child's pelvis is raised in bed so as to be at an angle of from 130° to 150° with the vertebral column as it rests horizontally, the head being on a thin pillow. By this arrangement the weight of the bladder as it fills is prevented from pressing upon the vesical orifice of the urethra, and so does not cause involuntary micturition. After about three weeks of this treatment the child may generally be allowed to resume the ordinary position in bed without fear of a return of the incontinence.

Rodney is advised to apply to the university at which he graduated. Full particulars of the examination for diplomas in State medicine will be found in our Students' Number, Sept. 1st, 1894, p. 542.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—The plth of the pain on this subject lies in the fact that the title of "Dr." at once removes its possessor from amongst the laity and announces professional rank, whilst the title of "Mr.," as applied to a surgeon and physician, carries no distinctive professional mark, and in this respect announces nothing. This is a profound practical grievance, and how much this distinctive mark is prized the following extraordinary example illustrates. Two "Mr.s" are in opposition in a country practice. The more recently established has "Dr." on his plate; the other, at a disadvantage, adheres to "physician and surgeon." All this disagreeableness we owe to that anomalous institution peculiar to the British Isles—"licensing bodies." In France every layman is "Monsieur," every medical man "Monsieur le Docteur." In France a man obtains a "licence" to keep a dog or to sell gin; but if he aspires to the practice of the healing art he must take the title of "Docteur." In Germany things are carried a step further. All duly qualified medical men are compelled to pass a State examination before being allowed to practise. This system possesses two high merits: it reassures the public as to the competency of the medical man, and it reduces all members of the profession to a grand equality. The introduction of a compulsory State examination, conferring the degree of Doctor of Medicine, would not only solve this bitter question of the title of "Dr.," but would probably also take the place of a second university for London. A body of examiners appointed by the State would hold examinations in three centres—London, Edinburgh, and Dublin. Such an examining body would occupy itself with two matters—a high standard of matriculation and a final examination for the diploma. A respectable standard of matriculation would be an examination corresponding with the B.A. of Oxford or Cambridge, and assuredly this is not too high a standard of liberal education for a professional man. The final examination would include the three great branches of the profession—surgery, medicine, midwifery—including the allied subjects of pathology, anatomy, physiology, materia medica, and diseases of women and children. To this diploma could be devoted that iniquitous extortion, the £5 paid by duly qualified men for mere registration. Any man passed by such a body would be deservedly styled "Doctor of Medicine."

I am, Sirs, your obedient servant,

Ulverston, June 24th, 1895.

M. H. PERRY

To the Editors of THE LANCET.

SIRS,—It is not a little difficult to understand the position which THE LANCET takes up on this vexed question. You accord, you say, the title of "Dr." to the M.B. because it would be discourteous to refuse him a title which is his by courtesy. A very admirable sentiment. But it has been, time out of mind, the custom to ascribe by courtesy the title of "Dr." to all physicians. Is it not, then, discourteous in you to withhold it from those many members of the profession who are physicians by diploma, not by degree? But, further, if it is, as you yourselves say, discourteous to refuse a title of courtesy, what is it to refuse a title of right? Now, the L.S.A. is by right entitled to style himself "Dr." THE LANCET ignores his right and refuses him his title. The attempt to restrict the title to the M.B. and M.D., in, while the humble L.S.A. possesses this inconvenient right, on the face of it, an unfair and disingenuous one, and must necessarily fail. It seems to my humble capacity the merest common-sense to say that if X. is a doctor, not only the most courteous, but also the most accurate, description of him is "Dr. X." If a patient of mine may say to his wife, "Send for the doctor," why in the world is he not to say to me when I arrive, "Good morning, Doctor?" THE LANCET would pass the accusative but not the vocative case.

I am, Sirs, yours faithfully,

June 24th, 1895.

NOR L.S.A.

SOME QUERIES AND THEIR ANSWERS AND THE RESULT.

To the Editors of THE LANCET.

SIRS,—I have only just been favoured with a unique document which has recently been going the rounds here. It purports to be a copy of the correspondence and queries which were submitted by "Dubitator" to the Editors of THE LANCET re medical qualifications, together with the replies of the latter thereto. This correspondence has, I understand, appeared in the issue of THE LANCET of

May 11th, 1895. As the identity of "Dubitator" is well known to me I have inwardly chuckled at the characteristic canny manner in which he has managed to draw the editors. "The gentlemen desirous of entering the profession," in whose behalf "Dubitator" seems so much interested, is of course *non est*. If, however, such an entity exists, I only trust, for the sake of the profession, that he does not belong to "Dubitator's" family, as in my opinion one "genius" of that ilk is quite enough at a time. Dealing with the queries *seriatim*, "Dubitator" lays great stress on the "tone and character" which the possession of a university degree must necessarily confer, but if the "tone and character" of this university gentleman are to be measured by his code of medical ethics, then I blush for his *alma mater*. Fancy, Sirs, this gentleman with the "tone and character" offering his services gratuitously to patients who, to his certain knowledge, were actually at the time under the care of the "mere licentiate." This designation is, I believe, yours. With reference to the second query submitted, "Dubitator" includes the broad domain of Great Britain, as if anybody ever thought of comparing for a moment the "M.D. of Aberdeen" with that obtained at the University of London, &c. It is a notorious fact that the possessors of third- or fourth-rate university degrees give more trouble about their status *rel* "tone and character" than those possessing the higher university degrees. The latter, of course, have no need of tinselling. If "Dubitator" only affixes to his M.D. the name of the northern town from which it emanates the public will be able to gauge the relative value attaching to the doctorate. Is it not an indisputable fact that until quite recently the doctorate could be obtained by those possessing a little money and no brains, by simply purchasing a return ticket and availing themselves of a northern train? It is, moreover, exceedingly strange that the plucked of Dublin almost invariably succeed beyond the border, and this "is heard not alone in Ireland," but the writer has heard it in England, America, and on the Continent. The question at issue is briefly this. You state that a university degree has some advantage over a "mere licence." Will you undertake to say whether the degree of M.D. obtained at Aberdeen some twenty years ago implies a higher standard of medical education or knowledge than that required for the diplomas of the Conjoint Board of the Royal College of Physicians and Surgeons of Ireland? An early insertion will oblige.

I am, Sirs, yours faithfully,

June 16th, 1895.

VERAX.

. We must point out to our correspondent how absolutely impossible it is that we should know the motives which lie behind the numerous written queries with which we are honoured, and which we endeavour to answer to the best of our ability.—ED. L.

A CASE FOR SUGGESTIONS.

To the Editors of THE LANCET.

SIRS,—Would any of your readers offer a few suggestions on the following case? A man thirty-eight years of age had a brawl in a public-house; he was turned out with his opponent, and received from him a blow on the head; he fell and died in from a quarter to half an hour. Post mortem a slight contusion was found over the right eyebrow and a slight abrasion on the left ear; there was no fracture; the bones of the skull, especially in the temporal region, were abnormally thick. The surface of the brain presented a somewhat hyperemic appearance, but there was no sign of contusion of brain surface in the area corresponding to the external marks referred to above. A clot was found on the anterior surface of the medulla, and the clot was found to extend through the fourth, the third, and into the right lateral ventricle. The brain substance in the region of the right nucleus caudatus was torn up, evidently from the rupture of an artery in that situation; neither kidneys nor heart presented any pathological appearances to the naked eye, and the urine contained neither sugar nor albumen; there was no dislocation of the odontoid process or of the cervical vertebrae.—I am, Sirs, yours faithfully,

June 19th, 1895.

M.D.

S. J. M.—There is no way of gauging the comparative prestige of the medical degrees of the different universities in the different divisions of the Kingdom, but the particular degree mentioned by our correspondent is an excellent one, not to be obtained without the passing of examinations of reasonable severity, and entitling its holder to be well thought of by his professional brethren.

B. L.—To our knowledge the case has not been reopened from our correspondent's point of view.

"THE INFLUENCE OF THE ADMINISTRATION OF CHLOROFORM UPON THE COURSE OF PHTHISIS PULMONALIS."

To the Editors of THE LANCET.

SIRS,—In reference to Dr. Lee's communication in THE LANCET of June 15th, I also have noticed good results following chloroform in phthisis and in cases apart from operation, in which, of course, there is room for a fallacy to creep in. In one case the evening rise of temperature disappeared for eight or ten days after each administration. Moreover, I have so often found high fever decline after its use in non-surgical cases that I have resolved to try it in any case of hyperpyrexia that becomes intractable—pulse permitting.

I am, Sirs, yours truly,

Clun, Salop, June 19th.

H. CUTBERT.

THE ANTITOXIN SUPPLY OF THE HOSPITALS OF THE METROPOLITAN ASYLUMS BOARD.

In a leading article last week we alluded to the kindness of the Council of the British Institute of Preventive Medicine in the supply of antitoxin, as mentioned by Dr. Goodall in his interesting report. We should have supplemented this allusion by saying that in December last the managers accepted the offer of the Laboratories Committee of the Royal Colleges of Physicians of London and Surgeons of England to supply the same in sufficient quantities and of pure quality.

H. A. B.—1. There is no ground for the statement that there is any illegality in a medical man undertaking the duty.—2. Much modern brain surgery has been learned from experiments on living animals. For further information apply to the Honorary Secretary of the Association for the Advance of Medicine by Research, 57, Wimpole-street, W.

Fas.—1. Relationship to a student of medicine, however advanced, can give no claim to abatement of medical charges; but the point might be taken into consideration in conjunction with other circumstances.—2. The consultations should be charged for at the full fee.

Rustic.—There is no such institution.

"STAMMERING."

To the Editors of THE LANCET.

SIRS,—May I, in reply to Mr. Van Praagh, state that Mr. Behnke had seen no work on stammering when he devised the exercise termed by your correspondent "vocalising of sounds"? At the frequent earnest entreaty of a well-known Member of Parliament, who was his pupil for voice-use in public speaking, and who stammered, Mr. Behnke tried, and with success, to rid him of his speech trouble. Observing that he never stammered while singing, Mr. Behnke came to the obvious conclusion that this fact furnished the key to a system for training to coordination the various sets of muscles concerned in speech production. Subsequent study, aided by an ever-increasing experience, led him to recognise that there is no universal panacea for the cure of speech disorders, and that while the broad principles remain the same each case presents its own idiosyncrasies, which must be carefully recognised and treated on their merits. As my husband and I studied and worked together for nearly twenty-five years, and as I was also his secretary, I am able to vouch for the accuracy of my statements. In conclusion, it is a well-known fact that the same idea occurs to persons entirely independent of and widely separated from each other, as inventors know to their chagrin; but this does not make the idea any the less original in either case.

I am, Sirs, yours obediently,

June 24th, 1895.

K. BEHNKE.

. This correspondence must now cease.—ED. L.

A QUESTION OF ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—A. is acting as locum tenens for a practitioner, and is called to see a girl one night about 6 o'clock. He saw her and prescribed for her. At 9 o'clock the next morning he received a letter from the patient's father, saying that she had been much worse through the night, and that early in the morning he had fetched B., another practitioner, who saw her by himself. The father says he has no fault to find with A., but "one has more confidence in a doctor one knows," and adds, "B. is coming to see her again to-day at 12 o'clock, and would like to have met A.; but I think I would like B. to take charge of the case. However, I have no objection to A. coming back again."

1. What course should A. follow? 2. Has B. acted professionally?

I am, Sirs, yours faithfully,

June 25th, 1895.

X. Y. Z.

. A. should meet B. and decide with him amicably the course to be pursued. B. showed the proper spirit in desiring to meet A. We cannot comment on the fact that upon the first occasion of being sent for B. saw the patient by himself, because insufficient details are before us. Was the case urgent, for instance? Or was B. told that the patient was already being treated by another practitioner before he reached the house?—ED. L.

A BOOK ON TOBACCO.

To the Editors of THE LANCET.

SIRS,—I should like to get some information as to a certain book on tobacco. I have been told that there exists no book in the world that treats of the effects of nicotine. I am, however, under the impression that I saw in England a book written by an eminent English medical man, in which the effects of the abuse of tobacco and poisoning by nicotine are dealt with. Perhaps some of your readers can give me the name of the author or publisher of this book, or inform me if such a book exists.

I am, Sirs, your obedient servant,

Karlshad, May 7th, 1895.

LUDWIG KOHN.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Communications, Letters &c. have been received from—

- A.**—Dr. McC. Anderson, Glasgow; Miss E. E. Adams, Lond.; Anglo-Swiss Condensed Milk Co., Lond.
- B.**—Sir James Crichton Browne, Lond.; Dr. J. Balfour Brunt, Lond.; Dr. J. Balfour, Dinard, France; Dr. P. Boobyer, Nottingham; Dr. J. W. Black, Inverness; Surg.-Capt. W. J. Buchanan, Bhagpur, India; Mr. Lennox Browne, Lond.; Mr. J. Brown, York; Mr. R. Baker, Lond.; Mons. O. Berthier, Paris; Messrs. Burgoyne, Burdidge, and Co., Lond.; British Castor Co., Lond.; British Antitoxine Manufacturing Co., Lond.
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THE LANCET.

No. 3748.]

LONDON, SATURDAY, JUNE 29, 1895.

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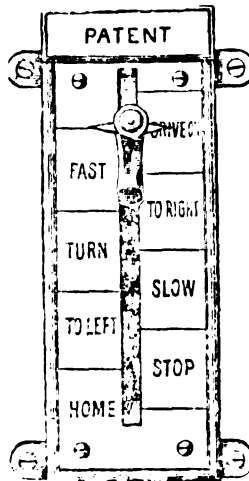
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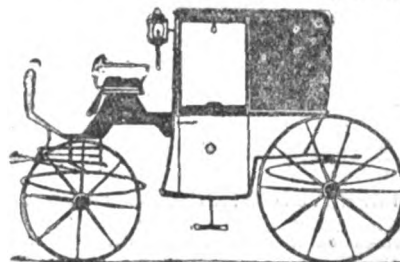
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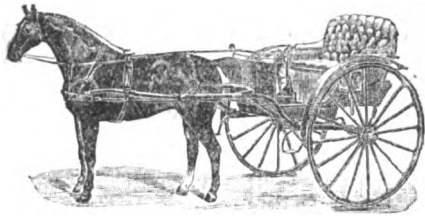
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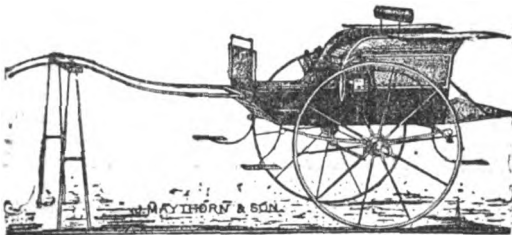
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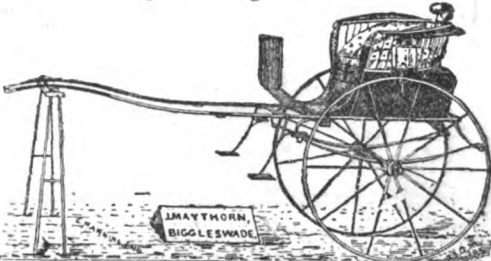
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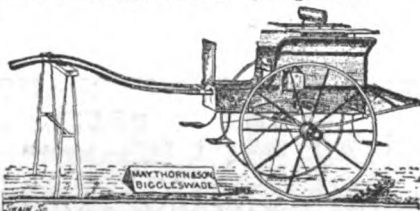
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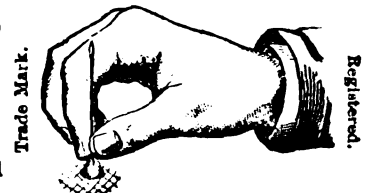
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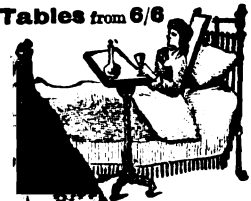
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This condition indicates the use of Celerina (Rio) in teaspoonful doses four times a day, TO INCREASE THE NERVE CAPITAL OF YOUR PATIENT.

DYSPEPSIA.

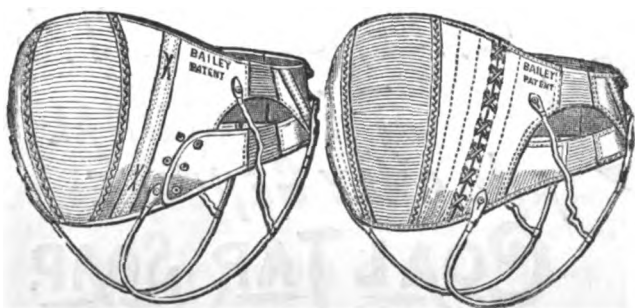
Deranged digestion is the most common of all human ailments. It is a truism that no organ of the body can preserve its normal integrity *when* its supplying nerve is disordered *by lowered tone*, but this fact is largely ignored in these modern pepsin days—the *cause* being lost sight of whilst trying to remedy the effect. It is well known that any unusual worry or anxiety will upset the digestion of the *neurotic* patient. Hence, in treating dyspepsia, particularly atonic dyspepsia, that form met with in persons of low vitality and poor appetite, there are *two distinct* INDICATIONS, one is to subserve the needs of general nutrition, the other is to subserve the needs of the nervous system. This can be done by giving the patient good nutritious food and a good nerve tonic. This explains why such remarkable results follow the daily use of CELERINA in all dyspeptic troubles.

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**Silk Elastic
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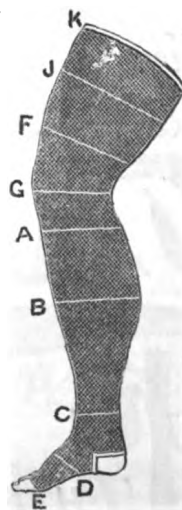
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For Measurement send circumferences at the letters, and the length.



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NOT MADE OF GELATINE.

Being made of MEMBRANE they are free from the objections to all Gelatine Capsules.



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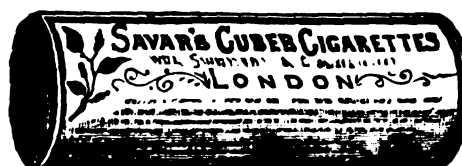
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"ALEXANDER TWEEDIE, M.D., Physician to the London Fever Hospital (admittedly one of the highest practical authorities on the subject of Fever) in his "Lumleian Lecture" on Fever, which appeared in THE LANCET, 1859, stated the term he used when prescribing Dr. James's Powder "Prepared by Newbery."

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"As auxiliaries to bleeding, linseed-meal poultices, or warm fomentations may be applied over the lower belly; and small doses of Plummer's pill, or blue pill, with James's Powder (Newbery's), should be administered."

At page 389 :—

"On the second day she had a rigor, followed by rapid pulse and hot skin, and a dry brown tongue, but no uterine pains or tenderness. She was ordered large doses of James's Powder (Newbery's, what I always prescribe), four ounces of brandy in the day, and the poultices to the belly. On the third day the pulse was 100, and on the fifth day it had fallen to 88. She was quite well, and able to go home on her ninth day."

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A Cocoa of the highest degree
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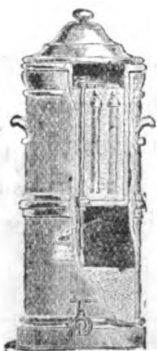
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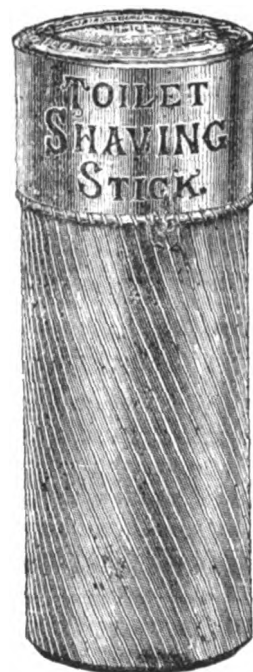
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In this preparation the Cocoa as well as the Milk is peptonized and rendered soluble, and is therefore more readily assimilable than any other preparation of Cocoa extant, and can be digested by even the most confirmed dyspeptic. Besides its extreme digestibility, its perfect palatableness renders it a most delicious as well as wholesome beverage, which can be taken alike by the invalid and by those who, although otherwise healthy and robust, frequently experience a difficulty in digesting any form of Cocoa. For general convenience in use it is unrivalled, as no addition of milk or sugar is needed, but only mixture with hot water.

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N.B.—The milk used in these preparations is secured from farms under our control, and where the sanitary arrangements have been made perfect, and, in addition to this, sterilisation after the most approved modern methods is provided for, thus ensuring complete immunity from communication of the infectious diseases which are unhappily so often spread by means of milk.

OPINIONS OF THE MEDICAL PRESS.

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| Ratio of Albuminoids to carbohydrates. | The ratio of the albuminoids to the carbohydrates is the same as in human milk—viz., 1 to 6·4; the ratio in cow's milk being only 1 to 3·8. |
| Albuminoids easy of digestion, not pre-digested. | The albuminoids are not predigested as in pancreatised foods, but are rendered easy of digestion, leaving (as in human milk) just sufficient work to strengthen and develop the immature digestive powers, instead of weakening and abrogating them by keeping them inactive. Sir WILLIAM ROBERTS' experiments in feeding kittens show that distinct failure of nutrition occurs when the milk is predigested (peptonised), and the same thing has been observed in feeding infants, probably owing, as THE LANCET points out, to atrophy of unemployed glands. |
| Healthy nature of evacuations. | As a consequence of the foregoing the proper peristaltic action of the bowels is maintained, and the healthy nature of the evacuations of infants fed on this food is a satisfactory feature much and favourably commented on by Mothers and Nurses. |
| The curdling of Cow's milk prevented. | When mixed with cow's milk it prevents the troublesome curdling in the stomach which takes place when cow's milk is given alone, and assimilates its composition to that of human milk. |
| Complete conversion of the starch. | The active Malt Diastase present provides for the rapid and complete conversion of the starch at the time of mixing into the soluble assimilable products of maltose and dextrine. The point of the gelatinisation (thickening) of the Food—viz., 140° F.—is just that at which Malt Diastase is most active, and the conversion of the starch is consequently the work of a very few minutes only. |
| Retention of the Phosphates and Fat. | The retention of the fat and of the phosphates of the wheat and malt, which are so essential to bone formation. These exist chiefly in the outer portions of the grain, the very parts which some manufacturers pride themselves upon so successfully rejecting. |
| Absence of Fermentable sugar. | The absence of the fermentable sugar, which in the various malt extracts and milk foods so often gives rise to Diarrhoea and Flatulence. |
| Verdict of Jury as to inferiority of imitations. | It is the <i>only</i> Infants' Malted Food which obtained a Gold Medal at the International Health Exhibition, the Jury being comprised of such authorities as Dr. ATTFIELD, F.R.S.; G. W. WIGNER, F.I.C., the then President of the Society of Public Analysts; Dr. JAMES BELL, F.R.S., the Head of the Government Laboratories; and other distinguished Medical and English and Foreign Experts. This affords significant indication of the value to be attached to the numerous imitations, which, whilst pirating the descriptive notices of the Food, utterly fail to approach its standard of excellence. |

SAVORY & MOORE,
143, NEW BOND STREET, LONDON, W.

CHLOROFORM.

Chloroform (DUNCAN'S S.G. 1490) Non-decomposable.

This contains about 1 per cent. Absolute Alcohol, but in other respects is identical with our ordinary make (S.G. 1497). While this minute proportion of Alcohol in no way affects anæsthetic power, it renders the Chloroform **PRACTICALLY NON-DECOMPOSABLE.**

GELATINE CAPSULES, 1000 Varieties.

**CASCARA CAPSULES. EASTON'S SYRUP CAPSULES.
GREGORY'S POWDER CAPSULES.**

BLAUD'S PILL CAPSULES.

GUARANTEED STRENGTH.

At the request of medical men and others we have analysed a number of **BLAUD'S PILL CAPSULES** similar in size and colour to those of our own make. These capsules were stated to be each equal to three Bland's Pills, but our analyses showed that in no instance were they equal to more than $1\frac{1}{2}$ Bland's Pills. This is neither fair to the medical man nor to his patient.

WE GUARANTEE OUR ONE, TWO, AND THREE PILL CAPSULES TO BE EQUAL RESPECTIVELY IN FERROUS CARBONATE TO ONE, TWO, AND THREE FRESHLY-PREPARED BLAUD'S PILLS. THEY HAVE ALSO THIS DISTINCT ADVANTAGE OVER PILLS, THAT THEY NEITHER OXIDISE NOR HARDEN.

DUNCAN'S SYRUP ^{of the} HYPOPHOSPHITES.

STABLE.

ELEGANT.

RELIABLE.

**DUNCAN, FLOCKHART & CO.,
Manufacturing Chemists, EDINBURGH.**

The above may be ordered through any Wholesale or Retail Druggist. The Capsules and Syrup are sold and dispensed by
Messrs. ROBERTS & CO., 76, New Bond Street, LONDON, W.
Wholesale from WM. EDWARDS & SON, 157, Queen Victoria Street, London, E.C.

CLEANLY, ACTIVE, AND EFFICIENT PREPARATIONS OF THE THYROID GLAND.

Myxœdema.

THE histories of Cretinism and Myxœdema, which have recently received so much attention at the hands of leading specialists, point to the conclusion that the profound changes affecting the whole body are associated with an absence, or atrophy, of the Thyroid Gland.

The continued success attending the new line of treatment in Myxœdema and allied diseases by Extract of Thyroid Gland will doubtless further extend the uses of this valuable therapeutic agent. Since 1891 a sufficient number of patients have been to all appearances so restored to health that it is allowable to believe that they can hardly relapse again.

Sporadic Cretinism.

To illustrate well the vast improvement, both physical and mental, which this form of treatment induces in sporadic cretinism, we cannot do better than refer the reader to an original article which appeared in *THE LANCET*, with Photographs by W. W. O—, M.D.Oxon., M.R.C.P.Lond., Nov. 4th, 1893, p. 1113.

All these cases were treated by Allen & Hanburys' Thyroidin Tabellæ. The results are perhaps more remarkable than those obtained in the allied condition of Myxœdema. The writer observes that these preparations have given entire satisfaction. The Photographs speak for themselves.

Whilst formerly liquid extracts and the raw gland were used, ALLEN & HANBURY'S were the first to offer the active principles of the thyroid gland in the compressed form, which is now the favourite mode of administration, and their preparations of Thyroidin were introduced to the medical profession in the advertising columns of *THE LANCET* on February 25th, 1893. Careful study and subsequent experience in the mode of preparation, under the guidance and direction of some of the leading members

of the medical profession, have enabled them to produce Thyroidin—i.e., the active principles isolated from carefully selected glands. The glands are dissected and carefully examined and separated from all blood, fat, and inert tissue, which readily decompose and produce gastric disturbances, vomiting, &c., and which give to some preparations on the market a most repulsive smell, especially when they have been kept for a short time.



Thyroidin Tabellæ

Readily disintegrate when swallowed, and from their shape and size are taken without difficulty. If preferred, they may be dissolved in a little water before being swallowed.

One Tabellæ equals 5 grs. of gland.
Dose, 1 or 2.

Thyroidin Cachets.



THYROIDIN CACHET.

Each Cachet contains 5 grains of Thyroidin. Dose, 1 or 2. A very suitable and convenient mode of taking Thyroidin.

"A very elegant cachet."—
MEDICAL MAGAZINE.

Elixir Thyroidin

Is a very palatable, slightly sweet preparation, of which one fluid ounce represents one gland (average). It will be found to keep well without change.

Dose, 1 to 4 fluid drachms.

Chronic Psoriasis.

The success attending the use of Thyroid Extract in Myxœdema, shown strikingly in the changes that occur in the skin, has suggested its use in cases usually known as chronic psoriasis, and wonderfully successful results appear to have been obtained with ALLEN & HANBURY'S Thyroidin Tabellæ.

In a recent number of *THE LANCET* three of these cases are reported. After treatment with iodide of potassium and arsenic internally, and chrysophanic acid ointment locally, showed no improvement, but, on the other hand, the disorder was in some cases aggravated, developing a general dermatitis of the face with febrile disturbance.

But on the treatment being changed, and TABLETTS OF THYROID GLAND (ALLEN & HANBURY'S) being administered, the writer observes: Case 1.—"The improvement was very striking the scales were completely gone, and all that was left was a slight discolouration of the skin where the disease had appeared."

Case 2.—"The scalp and limbs were nearly clear. The patient, who has suffered from the disease for nineteen years past, has had no discomfort from the remedy and says that nothing has ever acted so rapidly upon his disease."

Case 3.—"The result was astonishing, for in three days there was a marked improvement, and no further spread of the disease had taken place. No discomfort was experienced from the remedy."

For full details of the above quotations see *THE LANCET*, January 6th, 1894, p. 19.

Medical Opinions on Allen & Hanburys' Thyroidin Preparations.

THE MEDICAL PRESS AND CIRCULAR writes, October 25th, 1893:—"These are manufactured with the care and attractive form for which this firm is celebrated, and the results have answered our most sanguine anticipation."

"Elegant pharmaceutical preparations. Thyroidin contains the active elements of the gland in a very concentrated form, and it is therefore very convenient for administration."
MEDICAL MAGAZINE.

"We can highly recommend them to our readers."—EDINBURGH MEDICAL JOURNAL.

"Active and therapeutically valuable."
PRACTITIONER.

"Typical specimens of elegant pharmacy in its latest developments."
THE CHEMIST AND DRUGGIST.

"Thyroidin Elixir has an agreeable flavour and appears to keep very well."
BRITISH MEDICAL JOURNAL.

The above are put up in 1/-, 2/-, and 4/- packages (retail), or 3/-, 5/-, and 40/- per dozen to the Profession.

SAMPLES SUPPLIED TO THE PROFESSION ON APPLICATION.

Allen & Hanburys, Ltd. Plough Court, Lombard Street, London.

Laboratories & Warehouses: BETHNAL GREEN, LONDON, E. West End Branch: VERE ST., CAVENTISH SQUARE, W.
Cod Liver Oil Factories: LONGVA & KJERSTAD, NORWAY. Australian Agency: 484, COLLINS ST., MELBOURNE.

IMPORTANT NOTICE.

ALLEN & HANBURY'S Ltd. have pleasure in announcing to the Medical Profession that they have opened a branch for the exclusive supply of Surgical Instruments, &c., of their own Manufacture, at 48, Wigmore Street (corner of Welbeck Street), W.

ASEPTIC MIDWIFERY FORCEPS

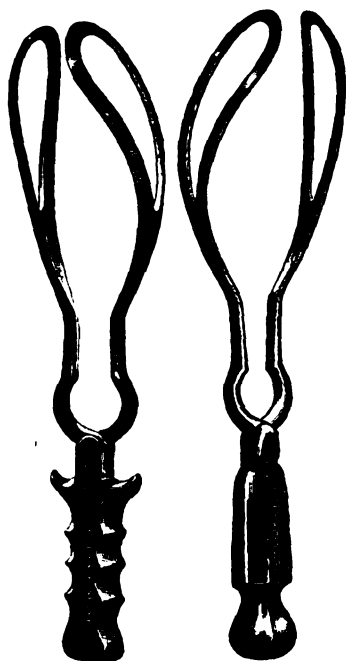
WITH DETACHABLE ALUMINIUM HANDLES,

Manufactured by ALLEN & HANBURY'S Ltd.

ALLEN & HANBURY'S desire to bring before the Medical Profession their new Forceps, which are fitted with detachable aluminium handles. This method presents many advantages over the so-called aseptic handles now in vogue, the great defect in such being due to the fact that it is almost impossible to solder or braze the metal handles on to the Midwifery Forceps shanks without leaving a few small apertures near the seam; these afford an inlet to the acids used in the nickel-plating process or to solutions necessary for antiseptic purposes.

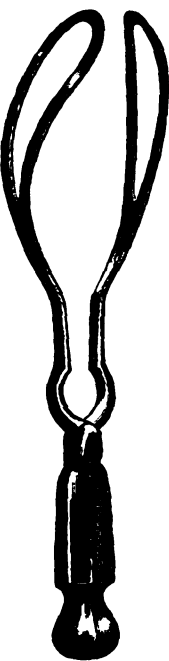
The chemical action of these fluids is sooner or later apparent by the appearance of verdigris or other poisonous and irritating substances on the surface of the forceps at the seam where the handle is brazed to the shaft.

ALLEN & HANBURY'S Midwifery Forceps with Aseptic Detachable Aluminium Handles are therefore free from this source of danger which is associated with instruments having brazed or soldered handles. Whilst these are an improvement on the ordinary forceps in use, the prices are not advanced. (See below.)



ANDERSON'S.

Price 24/- per pair.
Aluminium hds., 24/-.
Do. Spring Catch, 25/-.



BARNES'S.

Price 21/6 per pair.
Aluminium hds., 21/6.
Do. Spring Catch, 22/6.



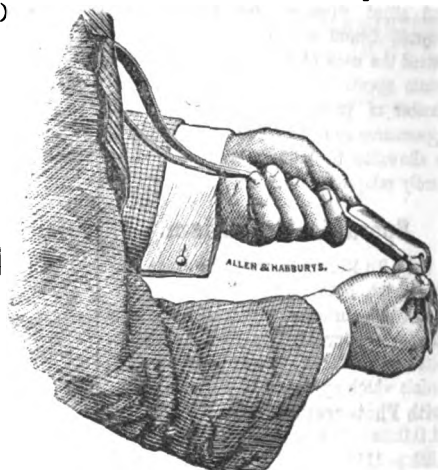
GODSON'S.

Improved Aseptic.
Price 20/- per pair.
Aluminium hds., 21/-.
Do. Spring Catch, 24/-.



LYDD-DAVIS'S.

Price 20/- per pair.
Aluminium hds., 21/-.
Do. Spring Catch, 24/-.



By taking the Forceps in the left hand and pressing, with a pencil, the spring catch (situated at the end of handle) with the right hand, the handle is instantly detached, thus rendering it aseptic and easily sterilised. Emphasis should also be laid upon the fact that the handles are made of aluminium, which gives lightness (an advantage when *in situ*) handles can also be made of nickel-plated gun metal.

ALL NICKEL-PLATED.

ASEPTIC MIDWIFERY BAGS.

With MOVABLE ASEPTIC LININGS, without INSTRUMENTS (by Royal Letters Patent).

The BRITISH MEDICAL JOURNAL writes:—"A Midwifery Bag with movable aseptic lining, which seems to us to combine the advantages of safety to the patient and convenience to the practitioner. The bag is so constructed as to remain open, an advantage which will be appreciated by Practitioners."

Cowhide Bag, 16 in., with loops for bottles, to take full length Midwifery and Craniotomy Forceps, 15/-; including stoppered bottles (without cases), 18/6; in boxwood cases, 21/3.

Morocco Leather Bag, 16 in. long, 7 in. deep, made with loops to fit bottles of any size, 21/6.

This bag is deeper than the ordinary Midwifery bag sold with this size frame, rendering it more useful to practitioners in carrying additions. Full size Morocco Leather, 17 in. long, 7 1/2 in. deep, with pocket and loops for bottles, 22/6; including stoppered bottles in boxwood case, 26/3. The same sized bag in Cowhide, 20/-, with bottles, 26/3.

Any bag can also be fitted with Loops and a row of 1 oz. stoppered or corked Vials at an additional cost of 7/6. These can be filled with Tablets of Compressed Drugs, at once converting it into an emergency bag suitable for Country Practitioners.

Allen & Hanburys Ltd.,

Chief Depot:—48, Wigmore Street, Cavendish Square, W.
City House:—Plough Court, Lombard Street, E.C.
Manufacture:—Bethnal Green, E.

London.

SURGICAL

INSTRUMENT

DEPARTMENT.

Australian Agency:—484, Collins Street, Melbourne.

Byno-Hypophosphites.

“A valuable Alimentary Tonic.”

Medical Press & Circular.

A Nutritive and Digestive Tonic.

A great advance on the ordinary (Sugar) Syrups of the Hypophosphites.

— This combination has been found to be of great value in tuberculous conditions in which gastric irritability is a prominent feature.

The Lancet writes :

“This is an excellent preparation, in which are ingeniously combined the hypophosphites of iron, lime, potash and manganese with the alkaloids of cinchona and nux vomica in combination with the well-known active malt essence—Bynin. We have proved its efficacy as regards digestive powers, while the tonic salts already indicated and the alkaloids of nux vomica were readily detected.”



Medical Magazine writes :

“A distinct pharmacological success.”

The Hospital Gazette writes :

“The value of such a preparation must be obvious.”

The Chemist and Druggist writes :

“May be said to fill a blank in the well-occupied field devoted to hypophosphite remedies.”

The British Medical Journal writes :

“The preparation has an agreeable taste.”

The CONSTITUENTS of BYNO-HYPOPHOSPHITES are:—(1) A neutral solution of the Hypophosphites of Lime, Iron, Potash and Manganese, whose tonic action is well known. (2) The alkaloids of Nux Vomica and Bark—viz., Strychnine, Quinine, etc., the amount of Strychnine present being accurately ascertained; e.g., gr. 1-40 in an ounce. These alkaloids are present in combination with the natural acids as found in the plants from which they are derived, this condition rendering their absorption easier and their action more certain. (3) BYNIN—Liquid Malt—our well-known preparation, which by its pleasant flavour covers the bitter taste of the hypophosphites and alkaloids. Further, it does away with the necessity of using sugar, which, as found in the ordinary syrups of the Hypophosphites, is liable to cause dyspepsia and upset the stomach. Beyond these advantages it yields, of course, all the benefits which are ordinarily to be gained by taking Extract of Malt in aiding nutrition and digestion.

Byno-Hypophosphites is put up in capsuled bottles at 2/6 and 4/6, and sold by Chemists everywhere. Price to the Medical Profession, 24/- and 41/- per dozen. SAMPLES SUPPLIED ON REQUEST.

Allen & Hanburys Ltd. Plough Court, Lombard Street, London.

Laboratories & Warehouse: BETHNAL GREEN, LONDON, E. Cod Liver Oil Factories: LONGVA & KJERSTAD, NORWAY.

West End Branch: VERE ST., CAVENDISH SQUARE, W. Australian Agency: 484, COLLINS ST., MELBOURNE.

NOURRY IODINATED WINE.



The only Preparation of Iodine which is **uninjurious** to the digestion.

The only Preparation of Iodine of agreeable taste and easily given to children.

AN EXCELLENT SUBSTITUTE FOR COD LIVER OIL AND IODIDES.

Prescribed by eminent Physicians to **lymphatic** and **scrofulous** children; to adolescents for **troubles** associated with growth, **amenorrhœa**, &c.; to adults for **asthma**, **emphysema**, **syphilis**, &c., to **convalescents** from infectious diseases, &c.

THE LANCET OF JANUARY 6TH, 1894, SAYS:—

"This interesting preparation demands some attention and consideration since it claims to offer a means of presenting iodine in a form that is devoid of metallic taste, permanent in character, not giving rise to disagreeable effects, and yet yielding the element in a free state when ingested."

After explaining the difficulty of extracting all the iodine, **THE LANCET** analysis proved that the wine contains no free iodine and yielded 2.5 gr. of iodine per 1000 c.c.

"In view of these results we regard this wine as an introduction of distinct importance in therapeutics, since it appears to place the use and administration of a valuable medicament on a more satisfactory basis than heretofore. Iodine has been sparingly employed hitherto, on account of its irritant and other disagreeable properties; the above preparation, therefore, which contains no free iodine, but which yields it in full quantity on the slightest

provocation, is calculated to lead to more extended application. It certainly deserves trial."

NOURRY'S IODINATED WINE is not advertised to the Public; it owes its success entirely to the Medical Profession.

Price 3/6 per Bottle. Special terms for Physicians.

SAMPLE BOTTLE FREE TO MEDICAL MEN ON APPLICATION TO

F. COMAR & SON,
64, HOLBORN VIADUCT, LONDON, E.C.

Hypodermic Medication.

"TABLOIDS" versus READY-MADE SOLUTIONS.

In cases of emergency, when the patient is perhaps in a most critical condition, and when the physician has recourse to the hypodermic method as a *dernier ressort*, it is of supreme importance that he should be able to feel perfect confidence in the agents he uses. Alkaloids are not very stable things at the best, and when in solution they cannot be relied upon to remain constant in composition for even a short space of time. It is stated in the B.P. that two out of the three hypodermic injections contained therein, viz., those of Apomorphine and Ergotine, should be made as required for use. Is this possible in the majority of cases? Can a patient who has been poisoned in the one instance, or

Unreliability of ready-made Solutions.

who is suffering from hæmorrhage in the other, wait whilst the aid of a chemist is being invoked for the preparation of the hypodermic solution? It goes without saying that he cannot, and for this reason the two preparations in question might just as well not be in the Pharmacopœia at all. It is to be expected that products of decomposition will produce serious results when taken into the system, and even supposing that a solution which has "gone wrong" does not do any harm, it is likely to be absolutely without therapeutic effect, and this is in many cases as bad.

The employment of various antiseptics as would-be preservatives was tried, but failed to altogether prevent the formation of micro-organisms, and for a long time the unreliable character of solutions remained one of the obstacles to the more general employment of the hypodermic method.

Hypodermic "Tabloids."

Hypodermic "Tabloids" obviate these difficulties and meet every possible requirement. Since solutions which had been made for some time could not be used without incurring grave risks, we turned our attention to devising a method whereby they could be made with ease and celerity at the time of using, thus doing away with the possibility of deterioration and the consequent production of untoward effects. With these ends in view we introduced Hypodermic "Tabloids," each "Tabloid" containing an absolutely exact quantity of alkaloid or other agent, combined with a perfectly stable and innocuous base. That the active principle must be pure goes without saying, but it is also a *sine quâ non* that the basis used should be completely inert. The presence of an extraneous substance for the



purpose of either hastening disintegration or aiding the dissolution of principles which, though therapeutically powerful, are yet delicate of constitution, is highly objectionable; indeed, an acid salt is likely to be positively injurious to the system when subcutaneously introduced, even if it do not interfere with the action of the drug with which it may be associated. The BRITISH MEDICAL JOURNAL reports on Hypodermic "Tabloids" that they are "free from irritative acid salts," thus recognising this very important characteristic; and THE LANCET also says of them that they are "very soluble and not at all irritating." Further, "Tabloids" obviate the possibility of over-dosage, since each contains one dose and no more.

The *modus operandi* with Hypodermic "Tabloids" is simplicity itself. A very prominent advantage in connection with these "Tabloids" is their extreme portability. A tube, less than two inches long and about the diameter of a goose-quill, holds in most instances twenty doses, and a number of tubes of various agents sufficient to meet a very wide range of requirements may be carried in the waistcoat pocket without their presence being felt. We think, therefore, that we are justified in claiming that no other method for the immediate preparation of solutions offers to medical practitioners the same advantages as the employment of Hypodermic "Tabloids."

LIST OF HYPODERMIC "TABLOIDS."

b Aconitine Nitrate	1-250 gr.	a Morphine Sulphate	1-12 gr.
a Apomorph. Hydroch.	1-10 gr.	a Morphine Sulphate	1-8 gr.
a Apomorph. Hydroch.	1-15 gr.	a Morphine Sulphate	1-6 gr.
a Atropine Sulphate	1-150 gr.	a Morphine Sulphate	1-4 gr.
a Atropine Sulphate	1-100 gr.	a Morphine Sulphate	1-3 gr.
a Atropine Sulphate	1-60 gr.	a Morphine Sulphate	1-2 gr.
b Caffeine Sodio-salicyl.	1-2 gr.	a Morphine Sulphate	1-12 gr.
a Cocaine Hydrochlor.	1-10 gr.	a Morphine Sulphate	1-250 gr.
a Cocaine Hydrochlorate	1-4 gr.	a Morphine Sulphate	1-8 gr.
a Cocaine Hydrochlorate	1-4 gr.	a Morphine Sulphate	1-800 gr.
a Cocaine Hydrochlorate	1-2 gr.	a Morphine Sulphate	1-6 gr.
a Codeine Phosphate	1-4 gr.	a Morphine Sulphate	1-180 gr.
b Colchicin...	1-100 gr.	a Morphine Sulphate	1-4 gr.
b Cornutin Hydroch.	1-60 gr.	a Morphine Sulphate	1-150 gr.
b Curare	1-12 gr.	a Morphine Sulphate	1-3 gr.
a Digitalin Crystalline	1-100 gr.	a Morphine Sulphate	1-120 gr.
b Ergotin Citrate	1-100 gr.	a Morphine Sulphate	1-2 gr.
b Ergotin Citrate	1-200 gr.	a Morphine Sulphate	1-100 gr.
a Eserine Salicylate	1-100 gr.	a Nitro-glycerine	1-250 gr.
b Homatropin Hyd.	1-250 gr.	i Pilocarpine Hydroch.	1-10 gr.
a Hydrarg. Perchlor.	1-60 gr.	i Pilocarpine Hydroch.	1-6 gr.
a Hydrarg. Perchlor.	1-80 gr.	i Pilocarpine Hydroch.	1-3 gr.
b Hydrarg. Szoiodol	1-4 gr.	b Quinine Hydrobrom.	1-3 gr.
a Hyoscine Hydrobrom.	1-200 gr.	b Sclerotinic Acid	1-2 gr.
a Hyoscine Hydrobrom.	1-75 gr.	b Sclerotinic Acid	1 gr.
b Hyoscine Hydrobrom.	1-10 gr.	b Sodium Phosph. Co.	
a Hyoscyamine Sulph.	1-80 gr.	b Sparteine Sulphate	1-2 gr.
b Hyoscyamine Sulph.	1-20 gr.	b Strophanthin	1-500 gr.
b Morphine Bimeconate	1-8 gr.	b Strychnine Nitrate	1-15 gr.
b Morphine Bimeconate	1-6 gr.	b Strychnine Nitrate	1-10 gr.
b Morphine Bimeconate	1-4 gr.	a Strychnine Sulphate	1-150 gr.
b Morphine Bimeconate	1-3 gr.	a Strychnine Sulphate	1-100 gr.
a Morphine Hydrochlor.	1-4 gr.	a Strychnine Sulphate	1-60 gr.
a Morphine Hydrochlor.	1-6 gr.		

Hypodermic "Tabloids" supplied in tubes of non-actinic glass, each containing 20 "Tabloids" (except those marked with asterisks, which contain only 12). Those marked a, -/6 per tube; those marked b, -/8 per tube. The prices of Pilocarpine "Tabloids" 1-10 gr., 1-6 gr., and 1-3 gr., are 1/11, 3/2, and 3/8 per tube respectively.

A NEW SYRINGE.

The Patent Aluminium Syringe (B., W. & Co.) is adapted for use with all solutions for subcutaneous medication, and is not affected by any climatic condition. The Syringe has a



sheath of pure aluminium which renders it incorrodible, and also much less weighty than the usual heavily-cased instruments; it can be quickly and easily taken to pieces, and may be readily and perfectly sterilised with absolute alcohol. Price, with two needles, 7s.

HYPODERMIC POCKET CASES.

We have mentioned the portability of Hypodermic "Tabloids." With a view to providing medical men with complete hypodermic equipments in a compact and convenient form, we supply pocket cases, each arranged to contain a hypodermic syringe, two needles, a selection of alkaloids and other agents in "Tabloid" form, and a small glass mortar and pestle for crushing the "Tabloids." A case of this kind furnishes the medical practitioner with a perfect hypodermic armamentarium.

THE SUBLINGUAL ADMINISTRATION OF "TABLOIDS."

Considerable attention has lately been called to a mode of administering the "Tabloids" which should be much more widely known than it appears to be at present—namely, by placing them under the tongue. Either the "Tabloid" itself may be placed in its entirety beneath the tongue, or a solution of it may be made in the usual way and a few drops allowed to fall under that organ. There are many cases in which this method will be found of infinite service and even preferable to injection subcutaneously, on account of the unfavourable impression often created upon the mind of the patient by the latter method, and the effect such a feeling may have upon the general condition. It is believed that if the efficiency and celerity of effect shown by this method were only made more generally known it would be practised to a very large extent, and would be of considerable use in dealing with a certain class of patients.

BURROUGHS, WELLCOME & Co.

Burroughs Wellcome & Co., Snow Hill Buildings, LONDON.

Cable and Telegraphic Address—"BURCOE, LONDON."

TRADE *Emol-Keelet* : MARK

SINCE our first leaflet dealing with Emol-Keelet was issued we have received many encouraging reports of the beneficial effects of this substance in Surgery and Dermatology. It has been used not only for its absorbent, anti-pruritic, and emollient qualities, but also as a diluent for such antiseptic agents as Loretin, Dermatol, Iodoform, Boric Acid, Chrysophanic Acid, Hydro-Naphthol, &c. Owing to the fact that it is a natural powder containing a large proportion of native silicates, Emol-Keelet is chemically stable, and is therefore freely prescribed as a diluent for potent medicinal agents without



fear of combination taking place. In addition to these chemical advantages, its soft silky texture, soothing influence, and other physical qualities enhance its healing action.

In a paper reported in the March number of the *Glasgow Medical Journal* Dr. G. A. Turner, President of the Glasgow Obstetrical and Gynecological Society, speaks very highly of a mixture of Emol-Keelet with Loretin (meta-iodo-ortho-oxiquinoline-ana-sulphonic acid) in the treatment of the umbilical cord immediately after birth. The proportions originally suggested for an absorbent antiseptic powder were :

Emol-Keelet, nine parts,
Loretin, one part ;

but since then it has been found that 1 or 2 per cent. of the latter body is amply sufficient.

The following paragraph from the paper referred to will show what a wide field exists for the advantageous use of Emol-Keelet with Loretin.

"It has been suggested that Loretin, when mixed with a little magnesia, is well adapted for use as a dusting powder. For such use, undiluted, it would be too expensive, nor is it necessary. It may be used mixed with magnesia, or Fuller's earth, or with the dusting powder, Emol-Keelet, which was recently brought prominently before the profession at the meeting of the British Medical Association at Newcastle-on-Tyne, by a paper read by the president of the Dermatological Section, Dr. Allan Jamieson, of Edinburgh." He concluded that Emol-Keelet as a dusting-powder is a "perfectly innocuous and inoffensive material, therapeutically superior to any previously known."

"A short time ago I wrote Messrs. Burroughs, Wellcome, & Co. of London, making the suggestion that a mixture of Loretin and Emol-Keelet would probably prove a valuable dusting powder for infants. I received a reply, from which the following is an extract : 'The suggestion which was originally made to use magnesia as a diluent of Loretin was made on the grounds that magnesia is so good an absorbent, is comparatively cheap, popular with some continentals in this direction, and very harmless. The suggestion now made by yourself that Emol-Keelet be used as a diluent is, in our judgment, a most admirable one, and one which should have very excellent results.'

"What I have to suggest, then, is that by the use of some such dusting powder as this our treatment of the new-born infant will be brought more into line with present-day antiseptic midwifery and surgery ; the common excoriations of the skin surrounding the genital organs &c. will in great measure be avoided, and all such troublesome complications as excoriations and fungating excrescences of the umbilicus, or ulceration or sloughing of its margin, and erysipelas neonatorum and tetanus neonatorum will be things of the past."

Beth Emol-Keelet and Loretin may be obtained from all first-class pharmacists, so that if practitioners prefer to use higher or lower percentages than those mentioned they can easily obtain them by prescriptions.

We append the testimony of a few eminent authorities on Emol-Keelet :—

THE LANCET says :—

"On account of its remarkable velvety smoothness it should possess a unique value as a dusting powder in the treatment of cutaneous diseases &c., and for allaying irritation. We have not examined a more unctuous earth."

BRAITHWAITE'S RETROSPECT OF MEDICINE, says :—

"Emol-Keelet is the most beautiful impalpable mineral powder with which we are acquainted, and promises to supersede all the older forms of dusting powders. Beyond the purely mechanical effect of covering and protecting from friction or irritation the surface to which it is applied, Emol-Keelet is possessed of distinct emollient and soothing properties, as well as being a most efficient anti-pruritic. We have made use of it for some time past in the treatment of eczema, especially in infants and young children, where dry and soothing agents are most desired, and have found it to be a most excellent application in such cases, while the readiness with which it can be used and its absolute freedom from all risks of decomposition, add largely to its value. It has also proved to be of great use in the removal of epidermal concretions such as are seen in eczematous conditions of the palms and soles. We can most confidently recommend it as an addition of great value to the resources of the dermatologist."

The QUARTERLY MEDICAL JOURNAL says :—

"As a dusting powder it has the advantage that when the part to which it has been applied becomes moist, it forms a kind of natural soap, and is free from the "balling" tendency of many insoluble powders. It forms a pleasant, effective tooth powder, not being liable to scratch the enamel."

The EDINBURGH MEDICAL JOURNAL :—

"Having ourselves extensively tested it, we can most warmly recommend it."

The DUBLIN MEDICAL JOURNAL says :—

"An excellent topical application after vaccination."

The SANITARY RECORD says :—

"Superior to other powders of this kind."

A CORRESPONDENT, PRACTISING IN THE NORTH OF SCOTLAND, writes :—

"Within the last fortnight I came across a very severe case of eczema infantile of the face, head, and other parts of the body. After trying some other remedies with doubtful effect, I bethought me of your Emol-Keelet, and gave some to the mother to use as directed. Its effect has been most gratifying to myself, and highly beneficial to the little sufferer, who is only seven months old."

AS FURTHER EVIDENCE OF THE UTILITY OF THE NEW PRODUCT, WE QUOTE THE FOLLOWING EXTRACT FROM A LETTER FROM AN EMINENT SURGEON :—

"I beg to state that since Aug. 30th, 1894, I used Emol-Keelet to a big and sluggish ulcer on a man's arm with better results than I had previously obtained from dressings. The ulcer closed up rapidly after commencing with Emol-Keelet, and it is now practically healed up. It held on a stubborn course for about four months, but, being due to blood-poisoning, I was not surprised ; yet I firmly believe that if I had had the Emol-Keelet earlier the ulcer would not have been so sluggish in healing."

AN INFIRMARY HOUSE SURGEON writes :—

"I have used Emol-Keelet in the case of acute irritation and rawing of the skin from bilious secretions through a fistulous opening. Everything I could think of having failed I tried the powder, and it has acted splendidly, and has been very comforting to my patient."

BURROUGHS, WELLCOME & CO.

Burroughs Wellcome & Co., Snow Hill Buildings, LONDON.

Cable and Telegraphic Address—"BURCOME, LONDON."

Ascertained

Maltine

Facts.

REGISTERED TRADE MARK.

Value of "Maltine" contains from three to five times as much diastase as any other Extract of Malt in the market."

—Prof. ATTFIELD.

"As to diastase-converting power, 'Maltine' is superior to the best Extracts of Malt I have ever seen."

—Prof. STUTZER, Bonn.

"Repeated experiments show that 'Maltine' converts from 25 to 30 times its own weight of starch into sugar."—Prof. C. MÉHU, Paris.

in Diastase.

"'Maltine' exhibits in an eminent degree the starch dissolving power of diastase; in fact, a teaspoonful is capable of converting instantaneously a surprising amount of stiff starch paste into a thin limpid liquid."—THE LANCET.

Albuminoids.

"Extracts of Malt (i.e., malted barley) are pretty widely known, but in 'Maltine' we find the first example of a combination of the nutritious principles of these three cereals. The greater value of this combination is apparent, as wheat and oats are especially rich in muscle- and fat-producing elements; clinical experience enables us to recommend it as a nutritive agent in virtue of its albuminoid contents."

—BRITISH MEDICAL JOURNAL.

"'Maltine' contains more flesh-forming substance than any other Extract of Malt."

—Prof. DEPAIRE, Brussels.

Phosphates.

"Contains more bone-producing substance than any other Extract of Malt."—Prof. DEPAIRE, Brussels.

Carbo-**Hydrates.**

"'Maltine' contains a large proportion of the digested carbohydrates, dextrine and maltose. The superior diastasic activity of 'Maltine' converts into assimilable form and utilises for the organism a far larger amount of farinaceous food than is the case with other extracts of malt."

International Health Exhibition, London, awarded the only GOLD MEDAL for Malt Extracts to

"MALTINE."

The delicate flavour and convenient consistence of "MALTINE" recommend it to patients who cannot take the dense unpalatable extracts.

In 8-oz. and 16-oz. Bottles and Winchester Quarts. SAMPLES FREE TO MEDICAL MEN.

In prescribing, kindly specify **"MALTINE CO."**

THE MALTINE MANUFACTURING CO., Ltd.,
24 & 25, HART STREET,

CARNRICK'S BEEF PEPTONIDS.

(Concentrated Beef and Milk with Gluten, Sterilised and partially Peptonised.)

In the preparation of Beef Peptonoids, the flesh-forming elements of beef, wheat, and milk are used, constituting a nitrogenous and nutritive food of the highest value. It is not an "extract of beef" as ordinarily understood. We use the entire nutritive product of lean beef, excepting the muscular tissue, from which the water has been previously evaporated. Beef Peptonoids in the form of a powder is not a pure peptone, it being only partially digested.

Beef Peptonoids is very rich in albuminoids. Dr. Stutzer, of Bonn, who examined the various preparations of meat in the market, declares that it is far in advance of any of the others in this respect.

"Carnrick's Beef Peptonoids," states the same authority, "presents another distinguishing mark, as it contains a not inconsiderable quantity of heat-producing and albumen-economising elements, such as fat and dextrine." Comparing Beef Peptonoids with beef-tea, he states: "It would take 80 pints of beef-tea, made from 80 lbs. of steak, to obtain the flesh-forming constituents present in 1 lb. of Beef Peptonoids."

"A most concentrated form of nitrogenous food, easy of digestion and well adapted and convenient for medical use."—THE LANCET.

"The distinguishing character of the preparation is the large proportion of soluble albumen present in combination with the extractives and salts that are valued for their stimulating properties. Carnrick's Beef Peptonoids have won high approval as an excellent dietetic preparation."

—BRITISH MEDICAL JOURNAL.

Being made of the three great varieties of food—beef, wheat, and milk—patients seldom tire of it, while they soon tire of the use of any one of the above.

In 4-oz. and 16-oz. Tins, 3/6 and 12/-. To the Profession, 3/1 and 10/10, carriage paid.

We shall be pleased to send SAMPLES of any of our Preparations FREE OF CHARGE to MEDICAL MEN.

CARNRICK & CO., LTD.,
BLOOMSBURY, LONDON.

* * c c

31

The Value of Saccharin

IN DIABETES MELLITUS, GLYCOSURIA, GOUT,
OBESITY, AND ALL DISEASES IN WHICH
SUGAR IS FORBIDDEN.

SACCHARIN "TABLOIDS."

There are certain illnesses and diseased conditions of the body which can only be effectively treated by a strict observance of a suitable diet, and by a manner of living that operates against the consequences of the diseases, or at least keeps them within such bounds that the general health of the patient remains good for a long while, in spite of his diseased condition. A special diet has to be scheduled for each separate individual, according to his physical state, and since dietetic regimen is almost always a penance, he is sure to be thankful if his food can be made more palatable and more varied by the utilisation of a harmless, indifferent spice.

Saccharin. Diabetic patients, from the very fact that sugar is denied to them, often have such a craving for sweet things that withholding of them exercises a great influence on their mental condition. And this will make manifest the enormous benefit which the introduction of Saccharin has conferred upon all those whose conditions make it necessary that sugar in every form should be avoided. It is not too much to say that monotonous and unpalatable diets do more harm to many patients than the disease from which they suffer.

Its absolute harmlessness. The absolute harmlessness of Saccharin has been conclusively proved by numerous and thorough scientific experiments and researches, and experience has corroborated the results arrived at. It has been shown that Saccharin produces no injurious effects whatever upon the body: that it is discharged after a short stay, unchanged and in its entirety, through the urine and feces; that it is absolutely indifferent as regards the functions of the body; lastly, that it exercises no influence on either assimilation or digestion.

It satisfies the palate. When, therefore, sugar (the ordinary carbo-hydrate) in any form is prohibited as an article of food, or as spice, it may be asserted without fear of contradiction that the administration of Saccharin, whilst satisfying the palate of the patient, cannot possibly aggravate the existent conditions; on the contrary, its antiseptic influence may be for good.

Saccharin "Tabloids." Saccharin "Tabloids" are portable, and of the greatest convenience to those travelling or away from home during the day, as a "Tabloid" or two will sweeten a cup of tea, coffee, &c., as well sugar. A little spoon accompanies each bottle of Soluble Saccharin; this spoon once or twice full is also sufficient to sweeten a cup of tea or other beverage.

Saccharin is supplied to the Medical Profession in 1-oz. bottles at 4/6 each; Soluble Saccharin in 4-oz. and 1-oz. bottles at 1/2 and 3/10 each; Saccharin "Tabloids" in bottles of 100 and 200, at 7d. and 1/1 each.



CASCARA SAGRADA "TABLOIDS."

✓ Cascara Sagrada is one of the most reliable laxatives in constipation due to sluggish liver and atony of the bowels. Probably no drug in *Materia Medica* varies so much as this; frequently barks of allied species of *rhamnus*, or imperfectly matured barks, are used for manufacturing purposes. Preparations from these invariably cause much pain and dis-

comfort to the patient. In making "Tabloids" of Cascara Sagrada, the bark is carefully collected and matured, the extract is then prepared by a special process and made into "Tabloids." This is really why they have become so popular with the Medical Profession, and why such uniformly good results are obtained.

Cascara Sagrada "Tabloids" (plain or sugar-coated) are supplied to the Medical Profession, in bottles of 25 and 100, at 5d. and 1s. each.

"TABLOIDS" OF TINCTURES.

The objections to the spirituous solutions known as Tinctures are so great as to render the introduction of an efficient substitute a necessity. The indefinite and unequal nature of Tinctures has been fully recognised in official quarters. The Pharmacopœia Committee of the General Medical Council some

Objections to Tinctures.

time ago considered and debated the subject, and finally came to the decision that Tinctures ought to be standardised. This undoubtedly renders them reliable when quite fresh, but does not lessen to any appreciable degree the chances of subsequent deterioration. Further, Tinctures, like most liquid preparations, are bulky, cumbrous, and awkward to carry about, and they involve the necessity for measurement with its attendant chances of error in dosage. Physicians and patients alike will hail with satisfaction a reliable, accurate, and convenient method of administration, ensuring freedom from risk of mistakes. How greatly are the miseries of the sick and invalid increased when they are required to take evil-tasting and nauseating compounds!

From all points of view.

More often than not these compounds owe their nastiness to one or more Tinctures, and in such cases to many children and fastidious patients the remedies are very truly worse than the complaints. Whether from the physician's, the pharmacist's, or the patient's point of view, Tinctures are open to grave objections.

It is an easy matter to indicate faults and deficiencies in an existing state of things; it is quite another, and much more difficult, to propose an efficient remedy. It was pointed out to us that it is only in very exceptional cases that the properties of spirit are desired by the prescriber, therefore there was no reason why it should be retained.

We made this fact the basis of our experiments, and as the result of the expenditure of much time and trouble we succeeded in preparing "Tabloids" of Tinctures, containing all the active principles and all the therapeutic activity of the Tinctures themselves, but without the alcoholic body. "Tabloids" of Tinctures are very small, consequently very easy to swallow; being prepared from freshly standardised Tinctures, they are absolutely accurate in dosage, each "Tabloid" representing a given quantity of Tincture, and thereby doing away with the necessity for measurement. One of the most important characteristics of "Tincture" Tabloids, and, for the matter of that, of "Tabloids" generally, is their extreme portability, which offers to business people and to all who are continually moving about such facilities for taking their prescribed doses with regularity as are obtained by no other method.

"Tabloids" a perfect substitute.

LIST OF TINCTURE "TABLOIDS."

Aconite, 1 and 5 min.	Gelsem Semp., 5 min.
Belladonna, 1, 5, and 15 min.	Hyoscyamus, 1 and 10 min.
Campbor Co., 2, 5, and 15 min.	Nux Vomica, 1, 5, and 10 min.
Cannabis Indica, 5 min.	Opium (Laudanum) 2, 5, and 10 min.
Capsicum, 1 min.	Strophanthus, 2 min.
Cinchona, 30 min.	Warburg, 30 min.
Cinchona Co., 30 min.	Zingib. Fort., 5 min.
Digitalis, 1 and 5 min.	



BURROUGHS, WELLCOME & CO.

Burroughs Wellcome & Co., Snow Hill Buildings, LONDON.

Cable and Telegraphic Address—"BURCOME, LONDON."

“Tabloids” of Compressed Drugs.

TRADE MARK.

(Burroughs, Wellcome & Co.)

THE PLACE OF “TABLOIDS” IN MODERN PHARMACY.

Conservatism in Pharmacy is quickly becoming a thing of the past. Mixtures, pills, and other old-fashioned forms of medicine are being universally discarded in favour of “Tabloids” of Compressed Drugs, and seeing the enormous benefits to both physician and patient presented by the latter, this is not a state of things to occasion any surprise. “Tabloids” may fairly claim to be the most scientific form of medication yet devised. To medical men practising in large towns where the pharmacy is handy, and the inconveniences of the old regime are least felt, as well as to those who live in rural districts where a supply of drugs is possibly many miles away, “Tabloids” offer a great saving of time and trouble, and at the same time lessen that risk of error in dosage which is always present when patients themselves or their inexperienced friends weigh or measure out their medicines. Each “Tabloid” contains an exact quantity of pure drug or combination of drugs, as the case may be. “Tabloids” are readily soluble, or when insoluble drugs are implicated, disintegrate immediately on coming into contact with moisture; their shape enables them to be much more easily swallowed than round pills, they are elegant, almost tempting in appearance, they do not excite the feeling of disgust which pills often do, and they never produce nauseating effects.

The last point is undoubtedly one of very special importance. It is a recognised fact that the influence of the mind over the body is such that whims and fastidiousness of patients in respect to nauseous and palate-offending medicines cannot be ignored. Patients often deceive their medical advisers by secretly destroying or throwing away medicines, the taste or appearance of which is repulsive; as a natural result, if the patient die, or derive no benefit, the physician, or the drug, or both bear the blame.

In addition to removing the patients' objections to taking their medicines, “Tabloids” are so compact and portable that patients travelling or attending to business, professional or official duties, can easily carry them in the pocket without the least inconvenience. “Tabloids” are consequently very specially adapted for the fitting of medicine cases and chests.

LIST OF “TABLOIDS” OF COMPRESSED DRUGS.

Corrected up to June 29th, 1896.

* Those marked thus may be had beautifully coated with pure white sugar.

† Those marked thus may be had sugar- or keratin-coated.

Aconite Tinct., 1 and 5 min.
Agathin, 4 gr.
Aloin, 1-10 gr.
*Aloin Compound
Alumol, 4 gr.
Ammon. Bromide, 5 and 10 gr.
Ammon. Carb., 3 gr.
Ammon. Chloride, 3, 5, and 10 gr.
Ammon. Chloride with Borax.
Antacid (Magnesio-Calcic).
Antifebrin, 2 gr.
Antim. Tartate, 1-50 gr.
*Antipyrin, 2½ gr.
Antipyrin, 5 gr.
Apomorphine Mur., 1-50 gr.
Arsenious Acid, 1-100, 1-50, and 1-20 gr.
Atropine Sulph., 1-100 gr.
Belladonna Tinct., 1, 5, and 15 min.
Benzosol, 5 gr.
Bismuth and Soda, 2½ gr. each.

Bismuth Salicylate, 5 gr.
Bismuth Subnitrate, 5 and 10 gr.
*Blaud's Pill, 4 gr.
*Blaud's Pill c. Aloin, 1-20 gr.
*Blaud's Pill c. Arsenic, 1-64 gr.
*Blaud's Pill. Co.
Blue Pill, 3 gr.
Borax, 5 gr.
Caffine Citrate, 2 gr.
Calcium Sulph., 1-10 gr.
Calomel, 1-10, 1-2, and 1 gr.
Camphor Comp. Tinct., 2, 5, and 15 min.
Cannabis Indica Tinct., 5 min.
Capsicum Tinct., 1 min.
*Cascara Sagrada Ext., 2 gr.
*Cascara Comp.
*Cathartic Comp., U.S.P.
Cerebrin, 5 gr.
Charcoal, 5 gr.
Chloralamid, 5 gr.

Chloral Hydrate, 5 and 10 gr.
Cinch. Tr., 30 min.
Cinch. Co. Tr., 30 min.
Cocaine Mur., 1 gr.
Cocaine, with Potash and Borax.
Copper Arsenite, 1-1000 gr.
Cretæ Aromat. cum Opio Pulv., 5 gr.
Cubeb and Belladonna Efferves.
Cubeb. Comp.
Dermatol, 5 gr.
Dialysed Iron, 10 min.
Didymin, 5 gr.
Digitalis Tinct., 1 and 5 min.
Digitatin, 1-100 gr.
Diuretin-“Knoll,” 5 gr.
Dover Powder, 1-4 and 5 gr.
*Eaton's Syrup, ¼ dr.
*Ergotin, 3 gr.
Euonymin Resin, 1-8 gr.
Euxalin, 2 gr.
Ferri Sulph. Rxale., 3 gr.
Gelsem. Semp. Tr., 5 min.
Gold Bromide, 1-100 gr.
Guaiacol Carbonate, 5 gr.
Guaiacum and Sulphur, aa 3 gr.
Hydrarg. Colocynt., c. Hyoscyam.
Hydrarg. cum Cretæ, 1-3, 1-2, and 1 gr.
Hydrarg. cum Cretæ, 1 gr., with Pulv. Ipecac. Co., 1 gr.
Hydrarg. Iod. Rub., 1-16 gr.
Hydrarg. Iod. Vir., 1-8 gr.
Hydrarg. Perchlor., 1-100 gr.
Hydrarg. Subchlor., 1-10, 1-2, and 1 gr.
*Hydrastia Comp.
Hydronaphthol, 3 gr.
Hyoscyam. Tr., 1 and 10 min.
Hypnal, 5 gr.
Ichthyol, 2½ gr.
Ichthyol Co.
Ichthyol Pyoktanin Co.
Iodic Hydrarg., 1-6 gr.
Iodopyrin, 5 gr.
Ipecac. and Opium, 1-4 and 5 gr.
Ipecac. and Squill, 5 gr.
Ipecac. Powder, 1-10 and 5 gr.
Ipecac. Pulv. cum Antim. Tart., aa 1-100 gr.
Ipecac. Vin., 5 min.
*Iron and Arsenic Comp.
*Iron and Quinine Cit., 3 gr.
*Laxative Vegetable
Lead and Opium, 4 gr.
Lithia Carbonate, 2 gr.
*Lithia Co. (Mr. Hugh Lane.)
Magnes. Carb. Comp. (Antacid).
Magnesium Sulphite, 5 gr.
Manganese Dioxide, 2 gr.
Medulla, 1½ gr.
Menthyl Comp.
Morphine Sulph., 1-20 and 1-8 gr.
Nasal (Dr. Carl Seiler).
Nasal (Dr. H. Tilley).
Nasal Alkaline.
Nasal, Antiseptic and Alkaline.
Naso-Pharyngeal (Dr. Macnaughton Jones).
Nitro-Glycerine, 1-100 gr.
Nux Vomica Tinct., 1, 3, and 10 min.
Opium Tinct., 2, 5, and 10 min.
Opium, 1-2 and 1 gr.
Ovarian Tissue, 5 gr.

*Pancreatin (“Zymine”)
Papain, 2 gr. (Dr. Finkler & Co.)
*Pepsin (Fairchild).
Pepsin, Bismuth, and Charcoal.
Pepsin, Saccharated (Wyeth), 5 gr.
*Peptonic, 3 gr.
*Peptonic (new process).
Phenacetin (Bayer), 5 gr.
Pilocarpin Mur., 1-20 gr.
Pituitary Body, 2 gr.
Podophyllin Resin, 1-4 gr.
Podophyllin Co. (Sir William Moore).
Potash Mint.
Potass. Bicarb., 5 gr.
Potass. Bichromate, 1-10 gr.
Potass. Bromide, 5 and 10 gr.
Potass. Chlorate, 5 gr.
Potass. Chlorate with Borax.
Potass. Iodide, 5 gr.
Potass. Nit., 5 gr.
Potass. Permanganate, 1 and 2 gr.
Potass. Salicylate, 5 gr.
Quinine Bisulphate, 1-2 gr.
*Quinine Bisulph., 1, 2, 3, and 5 gr.
Quinine Sulphate, 1, 2, 3, and 5 gr.
Reduced Iron, 2 gr.
Resorcin, 3 gr.
Rhubarb Comp. Pil., 3 gr.
Rhubarb Comp. Pulv. (Gregory Powder), 5 gr.
Rhubarb and Gentian (Stomachic Comp.).
Rhubarb and Soda, 5 gr.
Rhubarb, 3 gr.
Saccharin, 1-2 gr.
Salicin, 5 gr.
Salol, 5 gr.
Santonin, 3 gr.
Soda-Mint.
Sodium Bicarbonate, 5 gr.
Sodium Bromide, 5 and 10 gr.
Sodium Dithio-salicylate, 4 gr.
Sodium Salicylate, 3 and 5 gr.
Spleen Substance, 4 gr.
Strontium Bromide, 5 gr.
Strophanthus Tr., 2 min.
Sulphonal, 5 gr.
Sulphur Comp. (Sir A. Garrod.)
Tannin, 2½ gr.
Tar, 1 gr.
Tar with Codeine.
Test “Tabloids” (for preparing Fehling's Solution).
Thirst.
Thymus Gland, 5 gr.
Thyroid Gland, 1½ and 5 gr.
*Tonic Comp.
Trinitrine (Nitroglycerine), 1-100 and 1-50 gr.
Trinitrine and Amyl Nitrite.
Trinitrine Comp.
Urethane, 5 gr.
Voice (Potash, Borax, and Cocaine).
Warburg Tincture, 30 min.
Zinc Permanganate, 1-8 gr.
Zinc Sulphate, 1 and 10 gr.
Zinc Sulpho-carbolate, 2 gr.
Zingib. Fort. Tinct., 5 min.
†† Zymine (Fairchild).
†† Zymine Comp. (Fairchild).

Official Text of Award conferred upon “Tabloids” at the Chicago Exhibition.

“For purity of the medicines used in compounding; for ready solubility of the coating and ingredients of the “Tabloids”; for the improved method of manufacture, and general appearance of the manufactured article.”

Burroughs Wellcome & Co., Snow Hill Buildings, LONDON.

Cable and Telegraphic Address—“BURCOME, LONDON.”

FURTHER IMPROVEMENTS

IN THE MANUFACTURE OF

HARTMANN'S PATENT WOOD WOOL WADDING

AND

HARTMANN'S PATENT WOOD WOOL TISSUE

We have now succeeded, by the aid of **new machinery**, in turning out these Patent Dressings to a degree of softness and evenness upon which it would be impossible to improve, and we ask **every surgeon** to try our latest make free of charge.

OVER
TWO HUNDRED THOUSAND POUNDS
ARE USED ANNUALLY

By the leading Operating Surgeons of the day. What better proof of their value can be given?

We claim the following Advantages for our Hartmann's Patent Wood Wool Dressings:—
 They absorb all kinds of discharges. They give perfect drainage to wounds, frequent change of dressing is avoided, and therefore the greatest economy attained. They are thoroughly antiseptic, as they consist mostly of Pine Wood. On a wound they will be found to thoroughly suck up and absorb all discharges, and they will not stick to the wound, nor will they heat like cotton wool and other dressings. Invaluable for Suppurating and Cancerous Wounds.

We now put up our Hartmann's Patent Wood Wool Wadding and Tissue in
ANTISEPTIC (Sublimated) and ASEPTIC (Sterilised) FORMS

IN 1-LB. PACKETS.

to meet the views of all Surgeons.

IN ½-LB. PACKETS.

By Hartmann's patent method of packing sterilised Dressings, we have at last overcome a difficulty in obtaining a thoroughly ASEPTIC dressing at a cheap price.

These packets are most portable, cost only a fraction more than ordinary antiseptic dressings, and possess many advantages over the former expensive methods of packing sterilised dressings in glass jars and tins.

THE LANCET says: "We can recommend these sterilised dressings to the medical profession."



USED IN THE FOLLOWING HOSPITALS.

St. Bartholomew's Hospital
 The London Hospital
 Guy's Hospital
 St. Thomas's Hospital
 The German Hospital
 Queen Charlotte's Lying-in Hospital
 The New Hospital for Women,
 Marylebone-road
 St. George's Hospital
 St. Mary's Hospital
 Basilar Hospital [Ormond-street
 The Children's Hospital, Great
 Seamen's Hospital, Greenwich
 The Cancer Hospital
 Charing-cross Hospital
 Shoreditch Infirmary
 Lying-in Hospital, Lambeth
 Chelsea Hospital for Women
 Marylebone Infirmary
 East London Hospital
 North-West London Hospital
 St. George's-in-the-East
 Clapham Maternity Hospital
 Bolingbroke Hospital, Wandsworth
 Common
 Queen's Jubilee Hospital
 Evelina Hospital for Sick Children
 St. Monica's Home Hospital
 Great Northern Central Hospital,
 Holloway
 London Homoeopathic Hospital
 The Edinburgh Royal Infirmary

The Royal Glasgow Infirmary
 The Western Infirmary, Glasgow
 Royal Hospital for Sick Children,
 Edinburgh
 The Children's Hospital, Glasgow
 Dundee Royal Infirmary
 Aberdeen Royal Infirmary [dean
 Hospital for Sick Children, Aber-
 The Hospital for Women, Liverpool
 Children's Infirmary, Liverpool
 The Royal Liverpool Infirmary
 Hahnemann Hospital, Liverpool
 Stanley's Hospital, Liverpool
 The Royal Manchester Infirmary
 Southern Hospital, Manchester
 Ancoats Hospital, Manchester
 Hospital for Women, Manchester
 The Bristol Royal Hospital
 The Birmingham Hospital
 The Nottingham Hospital
 Cumberland Infirmary, Carlisle
 Doncaster Infirmary
 Southport Infirmary
 Portsmouth Hospital
 Belfast Hospital
 The Royal Infirmary, Belfast
 Sunderland Infirmary
 Hull Royal Infirmary
 Nottingham Infirmary
 Worthing Infirmary
 Macclesfield Infirmary

Newcastle Royal Infirmary
 Preston Royal Infirmary
 Sheffield General Infirmary
 Paisley Infirmary
 Arbroath Infirmary
 Leicester Infirmary
 Dewsbury Infirmary
 West Herts Infirmary, Hemel
 Hempstead
 Hospital of St. Cross, Rugby
 Fleming Memorial Hospital
 Warneford Hospital, Leamington
 North Lonsdale Hospital
 Wolverhampton and Staffordshire
 General Hospital [pital
 South Devon & East Cornwall Hos-
 Durham County Hospital
 Stratford-on-Avon Hospital
 Paignton Cottage Hospital
 The Cottage Hospital, Blandford
 Buchanan Cottage Hospital, St.
 Leonards-on-Sea
 Newark-on-Trent Hospital
 East Suffolk Hospital
 Bromsgrove Cottage Hospital
 Hospital of St. John of Jerusalem
 St. Leonard's Hospital, Sudbury
 Norwood Cottage Hospital
 Milton Hospital
 Kent and Canterbury Hospital
 Children's Hospital, Pendlebury
 Hereford General Hospital

Swansea Hospital
 Cardiganshire General Hospital
 Children's Hospital, King'sholm
 Children's Hospital, Sheffield
 Guest Hospital, Dudley
 Clayton Hospital, Wakefield
 Cottage Hospital, High Wycombe
 Beckett Hospital, Rarley
 Taunton and Somerset Hospital
 Hartlepool Hospital, Durham
 Boston Hospital, Lincolnshire
 Royal United Hospital, Bath
 Jenny Lind Infirmary, Norwich
 Alnwick Infirmary
 Salop Infirmary, Shrewsbury
 North Riding Infirmary, Middlesex
 Hereford General Infirmary
 Monaghan County Infirmary
 South Charitable Infirmary, Cork
 General Infirmary, Leeds
 Stamford Infirmary
 North Staffordshire Infirmary
 Halifax Infirmary
 Mayo County Infirmary
 Gloucester Infirmary
 Bolton Infirmary
 Derbyshire General Infirmary
 Blackburn and East Lancashire
 Infirmary [mary
 Carnarvonshire and Angelsey Infir-
 Mater Misericordiae Hosp., Dublin,
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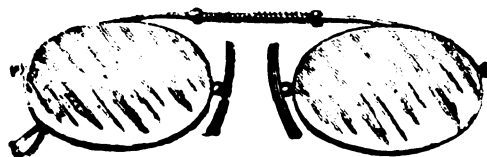
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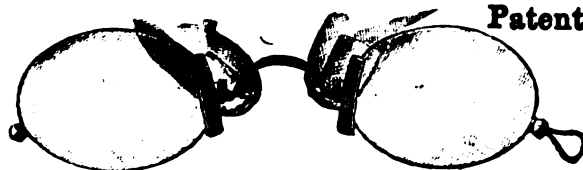
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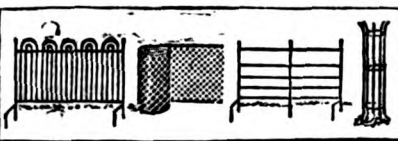
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Royal College of Physicians of

LONDON.—The next PROFESSIONAL EXAMINATION for the MEMBERSHIP will commence on Tuesday, July 16th.

Candidates are required to give fourteen days' notice in writing to the Registrar of the College, with whom all certificates and testimonials required by the by-laws are to be left at the same time.

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Chairman: C. E. FRITTON, Esq., M.P.

Speakers:—ARTHUR LANKESTER, Esq., M.B.Lond., who has just returned from India, will give an account of three years' work in the C.M.S. Medical Mission in Amritsar; JOHN RIGG, Esq., M.B., C.M.Edin., C.M.S. Medical Missionary at Kien-ning; ANDREW JUKES, Esq., M.R.O.S., L.R.C.P., C.M.S. Medical Missionary at Dera Ghazi Khan; Rev. B. BARING-GOULD, M.A., will speak of Medical Missions in China, the need, the openings, the encouragements; Mrs. W. P. MEARS, L.K.Q.C.P.I. (Late of Fuh Chow, China).

A limited number of Seats, reserved and numbered, Tickets 1s. each. Area and Balcony Tickets free. Apply to the Lay Secretary, C.M. House, Salisbury-square, London, E.C.

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THE DIRECTOR.

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The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

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The Foundation Stone of the New Lower School will be laid by His Royal Highness the Prince of Wales, K.G., at 4 p.m., on Tuesday, July 9th.

Tickets of admission to witness the ceremony, which will be issued in priority of application, can be obtained by letter from the Secretary, at the Office, 37, Soho-square; or of the Bursar, at the College, Bpsom.

A Special Train will leave Victoria Station at 2 p.m., calling at Clapham Junction, Mitcham Junction, and Sutton Station, and leaving the Downs Station for the return journey about 5.35. Return Tickets from London, first class, 3s., which must be taken at Victoria.

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June 25th, 1895.

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INDIAN MEDICAL SERVICE.

INDIA OFFICE, 21st June, 1895.

An Examination for 16 Appointments

to Her Majesty's Indian Medical Service will be held in London on 2nd August, 1895, and following days.

It is notified for information that, at this and future examinations, no candidate will be considered eligible unless, in addition to obtaining at least one-third of the marks obtainable in each compulsory subject, he shall obtain one-half the aggregate marks for all the compulsory subjects.

Copies of the Regulations for the Examination, with information regarding the Pay and Retiring Allowances, &c., of Indian Medical Officers, may be obtained from the Military Secretary, India Office, London, S.W., to whom the necessary certificates must be sent so as to reach him not later than 19th July, 1895.

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A programme of proceedings will be issued as soon as the requisite arrangements are made.

Early intimation of attendance is requested to be sent to the Honorary Secretary, from whom further information may be obtained.

JOSEPH GRIFFITHS, M.D., Hon. Sec.

King's College, Cambridge, March 4th, 1895.



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Travelling Route: COLOGNE, BONN, REMAGEN; or COBLENCE, REMAGEN, NEUENAH.

Private Asylum.—Ashwood House, Kingswinford, Staffordshire.—

For the Reception and Medical Treatment of a limited number of Ladies and Gentlemen, nervously or mentally afflicted. The House stands in picturesque grounds of 40 acres in extent; the soil, sand and gravel; climate genial; the locality notoriously healthy. The patients associate with the family, congenial occupation is encouraged, and every possible freedom allowed consistent with safety. Carriage exercise, billiard table, tennis lawns, and a variety of amusements provided. Boarders received without certificates. Friends of patients, if desirous, may reside in the house *pro tem*.—Proprietors, Drs. PEACOCK and PIERCEMAN; late Bodington and Peacock, co-Licencees.

**HOT MINERAL SPRINGS OF BATH.**

THE PROPERTY OF THE CORPORATION.

These Waters, of a uniform temperature of 117°, are highly efficacious in cases of RHEUMATOID ARTHRITIS, RHEUMATISM, GOUT in its various forms, SKIN AFFECTIONS, &c.

THE BATHS ARE AVAILABLE THROUGHOUT THE YEAR.

LETTERS TO THE MANAGER WILL RECEIVE IMMEDIATE ATTENTION.

PYRÉNÉES,**LUCHON.****FRANCE.**

BEAUTIFUL SITUATION—CENTRE OF EXCURSIONS.

SULPHUROUS MINERAL WATERS (48 SPRINGS).

SKIN ILLNESS; MUCOUS AFFECTIONS: ANGINA, LARYNGITIS, &c.; ANÆMIA, LYMPHATICS.

INHALING HALLS FOR THE TREATMENT OF RESPIRATORY AFFECTIONS.*Hot Baths open the whole year. Season from June 1st to October 1st.***CASINO, THEATRE, CONCERTS. LAWN-TENNIS, CROQUET, PIGEON SHOOTING.**

FIFTEEN HOURS FROM PARIS BY ORLEANS RAILWAY.

The sulphur Thermal Springs of
AIX-LA-CHAPELLE
(GERMANY).

The Hot Sulphur Waters of Aix are proved to be very useful in cases of Rheumatism, Rheumatic Gout, and Gout; in exudations of a Scrofulous or Traumatic origin; in effusions, old exudations and thickenings of the tissues arising from wounds and fractures of the bones; in Chronic Skin Diseases, Acne, Furunculosis, Psoriasis, Chronic Eczema; in every form of Syphilitic Affection; in Mercurial Poisoning and Lead Palsy; in Chronic Catarrhal Affections of the Respiratory and the Digestive System; in Paralysis of Brain and Spine in Tabes.

The Baths are established on the newest scientific principles: Ordinary Baths, Douche Baths with the water regulated to the required degree of heat; Douches of Thermal Water, Shower Baths, Natural Vapour Baths, Massage, Calisthenic Exercises by Mechanical means, &c.

The Season goes on and the Baths can be used throughout the year. The hotels at Aix are comfortable, prices moderate, and the country round pretty.

Visitors can arrange at the Hotels and Bath houses, Pension or board and lodging at a moderate fixed sum per day.

Letters can be addressed to the

*Municipal Board of Baths,
 Aix-la-Chapelle.*

FLOWER HOUSE,

CATFORD, S.E.

A Sanatorium of the highest class for the Treatment and Care of Gentlemen of Unsound Mind.

N.B.—Under the New Act voluntary boarders can be received on their own personal application.

Apply to Dr. MARCIER, Resident Medical Superintendent.

NERVOUS AFFECTIONS.

The Oaks, Hythe, Kent.—A quiet

Private HOME for the Special Treatment of Patients suffering from Hysterical and Nervous Affections, under the direct personal supervision of the Resident Physician.—Apply to Dr. ORRILL A. P. OSBURN (late of Grove House, Church Stretton), Resident Physician.

Residence near Park, Common,

Golf Links, and Tennis Courts, for Ladies and Gentlemen requiring change of air. Private rooms, every comfort. Nursing and Massage (under medical supervision) can be had if required.—Address, Proprietress, 17, Spencer-hill, Wimbledon. Trained and experienced Medical, Surgical, Monthly Nurses, and Masseuses sent to any part of the United Kingdom and abroad at short notice.

Telegraphic address, "Sagrada," London.

PRIVATE NURSING HOME.

Springfield Lodge, Ilkley, Yorks.—

Mrs. W. Bell Thomson, Certified Nurse, receives all non-infectious Cases, Convalescents, and Chronics, whom this bracing climate especially suits. South aspect. Fine Moorland views. Home comfort. Skilled nursing. Massage. Maternity cases. Refs.—leading Leeds and other doctors. Patients select their medical man. Terms on application.

"Northlands," 10 and 12, North-

street, Old Wandsworth, Surrey.—HOME for Ladies suffering from Hysteria, Intemperance, Epilepsy, Paralysis, Nervousness, Weak Intellect, &c. Careful supervision. Established twenty-five years. Large garden, situation cheerful and healthy, near several parks and commons; five miles from London on L.S.W.R. Medical references. Terms from £50 a year.—Mrs. Rutley.

WYKE HOUSE,

ISLEWORTH, MIDDLESEX.

A Private Asylum for Ladies and Gentlemen mentally afflicted. Voluntary Boarders are received. The grounds are very extensive and various amusements are provided. For terms apply to

F. MURCHISON, M.A., M.B., Resident Proprietor.

OVERDALE ASYLUM

(Late CLIFTON HALL), WHITEFIRLD, LANCASHIRE.

Licensed for a limited number of PATIENTS of the Upper and Middle Classes. It is beautifully situated in a retired neighbourhood, and has all the comforts of home life.—For terms &c. apply to J. HOLMES, M.D., Resident Medical Superintendent. Dr. HOLMES attends at 8, St. John-street, Manchester, Tuesdays, Thursdays, and Fridays, 12 to 1.30 P.M.

A Medical Man of lengthened and

successful experience in the treatment of Mental Cases and Hysteria has a Vacancy in his family circle. The house is well appointed, and beautifully situated in the Midland Counties. References to former patients and their relatives.—B. F. K., THE LANCET Office, 423, Strand, W.C.

Wye House Asylum, Buxton, Derby-

shire, for the Middle and Upper Classes of BOTH SEXES, is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars, address the Resident Physician and Proprietor, Dr. F. K. DICKSON.

The Women's Temperance Home at

Sydenham receives a limited number of LADIES desirous of overcoming habits of Intemperance. Terms moderate, varying according to requirements.—For particulars, apply The Matron, The Tor, Silverdale, Sydenham.

INEBRIETY.

MELBOURNE HOUSE, DANE HILLS, LEICESTER.

Private HOME for Ladies. Thirty years' experience. Excellent Medical references. Terms 2 to 4 guineas weekly.

Medical Attendant: C. J. Bond, F.R.C.S. Eng., L.R.C.P. Lond.

For further particulars, apply, Mr. H. M. Riley.

Streatham-hill.—Private Medical

HOME.—Accouchement, Surgical, Convalescent, or Chronic Cases received. Well-furnished house, with large flower and fruit garden. Resident hospital-trained nurse. Every home comfort, with kind, skilful treatment and attention. Good medical and other references.—Address, Comfort, THE LANCET Office, 423, Strand, W.C.

Aberystwith, "The Biarritz of

WALES," is highly recommended for INVALIDS. It possesses the most equable temperature, its shore being swept by the Gulf Stream and the S.W. breezes of the Atlantic. The drainage is perfect, and the town is supplied with the purest water from Plynlimmon.

The late Sir James Clarke, M.D., says:—"A fortnight in Aberystwith is equivalent to a month's residence in most watering-places."

ACCOUCHEMENT.

Ladies received in the houses of a

Medical Man—one house in London, the other in a quiet country village, within one hour of Town—whose wife is a qualified Obstetrician.—For terms, &c., address, M. O. S., care of Messrs. Gale & Co., 15, Boulevard-street, London, E.C.

Seaside Home.—Wanted, by a fond

mother, experienced, the CARE of an INFANT. Every comfort, attention, and kindness given. Healthy seaside town near London. Entire charge, or adopt on premium. Strictest investigation given. Medical references.—Address, Mater, THE LANCET Office, 423, Strand, W.C.

Mentally Afflicted.—A Vacancy

has occurred in a large cheerful house, South-west suburb, within twelve miles of London, licensed for the reception of three Lady Patients, hysteria or otherwise. Under the direct supervision of the Resident Physician (M.D., M.R.C.P.).—Address, X. Y., THE LANCET Office, 423, Strand, W.C.

A Medical Man, whose wife is a

Trained Nurse, will receive a RESIDENT PATIENT. A large house in a small town in the most beautiful and bracing part of Westmoreland. Death-rate last year about 9 per 1000. Golf, fishing, &c. Horses kept. Terms according to requirements.—Address, M.B., THE LANCET Office, 423, Strand, W.C.

Board and Residence.—A Medical

Man (bachelor) has a vacancy for a Gentleman, Medical Student preferred.—Address, Phalaux, THE LANCET Office, 423, Strand, W.C.

Medical Man seeks Boarder or

Patient, temporary or permanent. Good house, bath, garden. Splendid climate, summer and winter. Golf, tennis, boating, bathing, casino.—Address, Dr. Balfour, Villa Hamonau, Dinard, France.

A Lady accustomed to the Care of

Mentally Afflicted Children receives young Patients in her healthily situated house near the sea. Individual care. Highest references from medical men and parents.—Address, Home, THE LANCET Office, 423, Strand, W.C.

Manchester Hospital for Consump-

TION and DISEASES of the THROAT and CHEST.—Wanted, a MATRON for the In-patient Department at Bowdon, Cheshire (50 beds). Salary £50 per annum, with board, apartments, and washing.

Applications, stating age and experience, with copies of recent testimonials, to be sent in not later than July 8th to

CHARLES BEHRNS, Hon. Secretary.

To Nurses.—Wanted at once, at the

NORTH-EASTERN FEVER HOSPITAL, St. Ann's-road, Tottenham, CHARGE NURSES, who must be at least twenty-five years of age and have had not less than three years' training in a recognised general hospital or infirmary, and must be certificated, at wages of £36 per annum, rising to £40, with board, lodging, washing, and uniform.

Application should be made to the Matron at the Hospital, either by letter, enclosing copies only of testimonials, or personally between the hours of 10 A.M. and 1 P.M., bringing testimonials.

June 27th, 1895.

Charlotte Hospital for Women and

CHILDREN, Ludhiana, Punjab, India.—Fully qualified LADY DOCTOR wanted immediately for this hospital, which is connected with the Ludhiana Zenana Mission.

Also a trained Lady Nurse as MATRON.

Apply, stating particulars, to Dr. Greenfield, 7, Heriot-row, Edinburgh.

Newport and Monmouthshire In-

FIRMARY, Newport, Mon.—Wanted, Aug. 28th, 1895, a HOUSE SURGEON. Registered Medical and Surgical qualifications. Fifty beds. Mixed accident cases admitted. The infirmary has an out-patient department attached and a home visiting district.

Salary £100 per annum, with board and residence (no stimulants provided).

Candidates must make application in writing, stating age and qualifications, accompanied by copies of recent testimonials, and send same under cover to the Secretary not later than July 13th, 1895.

The appointment will be made on August 6th. Any candidate canvassing will be disqualified.

JOHN K. STONE, Secretary.

Guy's Hospital Medical School.—

Applications are invited for the post of LECTURER on PUBLIC HEALTH, and should, together with copies of not more than three testimonials, be sent to the Treasurer, Counting House, Guy's Hospital, S.E., on or before Saturday, 20th July, 1895. Further particulars may be obtained of the Dean of the Medical School.

London Hospital, Whitechapel, E.—

The House Committee invites applications for the appointment of MEDICAL ELECTRICIAN to the London Hospital. Candidates must be qualified as Medical Practitioners, and duly registered under the Medical Act.

Applications, accompanied by copies of testimonials, to be addressed to the House Governor, and delivered at the hospital not later than 10 A.M. on the 29th June, 1895.

Full particulars of the duties can be obtained from the undersigned. 22th May, 1895. By order, G. Q. ROBERTS, House Governor.

London Temperance Hospital,

Hampstead-road, N.W.—The appointment of ASSISTANT RESIDENT MEDICAL OFFICER is vacant. The appointment will be for a period of six months. Candidates must possess registrable qualifications in medicine and surgery. No salary is attached to the post, but board, washing, and residence in the hospital are provided, and an honorarium of five guineas at the expiration of the term.

Applications, with copies of testimonials, should be forwarded without delay to the undersigned at the hospital. June 17th, 1895. A. W. BODGER, Secretary.

Resident Medical Officer.—The

Committee of Management of the HOSPITAL FOR CONSUMPTION AND DISEASES of the CHEST, Brompton, are about to elect a Resident Medical Officer. Salary £200 per annum, with board and residence.

Applications, with testimonials, to be sent in on or before Wednesday, July 3rd.

Candidates must be registered practitioners and qualified in medicine and surgery; single, and not under twenty-five years of age.

Printed instructions, with particulars of the duties, may be had on application to the Secretary at the Hospital.

Brompton, June 17th, 1895. WILLIAM H. THEOBALD, Secretary.

Senior Demonstrator of Physiology.

LONDON HOSPITAL MEDICAL COLLEGE.—The College Board is prepared to receive applications from Gentlemen desirous of holding this appointment.

The Senior Demonstrator will be required to attend daily and to hold such classes as may be required.

Salary £150 a year and a proportion of the fees paid for classes.

There is also a vacancy for an ASSISTANT DEMONSTRATOR OF PHYSIOLOGY. Salary £50 a year.

Applications, with copies of testimonials, to be sent on or before July 8th to the undersigned, from whom further particulars may be obtained.

MUNRO SCOTT, Warden.

London Hospital Medical College, Mile-end, E.

The Cancer Hospital (Free), Fulham—

road, S.W.—There will shortly be a Vacancy at this hospital for a HOUSE SURGEON, who must be qualified under the Medical Registration Act. The appointment will be for six months. Salary at the rate of £20 per annum, with board and residence.

Applications, with testimonials, to be forwarded to the Secretary on or before July 15th.

Suffolk General Hospital, Bury St.

Edmunds.—HOUSE SURGEON wanted. Salary £100 a year, with board, lodging, and washing.

Applications, stating age and qualifications, and enclosing not more than six recent testimonials, to be sent, on or before Monday, July 15th, to HENRY BONNER, Secretary.

June 25th, 1895.

National Sanatorium for Consump-

TION AND DISEASES of the CHEST, locally situated at Bourne-mouth.—On the 27th of July the Committee of the above Institution will appoint a RESIDENT MEDICAL OFFICER at a salary of £50 per annum, with board, lodging, and washing. His duties are to commence on Sept. 2nd next. Candidates must have a knowledge of bacteriological work.

Applications and testimonials should be sent to Secretary on or before July 20th, 1895.

Any further particulars with regard to the appointment may be obtained by applying to

T. FRANKISH, Resident Medical Officer and Secretary.

Bradford Infirmary and Dispensary.

The Board of Management invite applications for the post of HONORARY PHYSICIAN (preference will be given to a gentleman who will practise as Consulting Physician). Candidates must be duly registered under the Medical Acts, and of not less than five years' standing in their profession. Personally canvassing members of the Board will be considered a disqualification. Applications, together with diplomas and testimonials, must be sent at least ten days (July 22nd) prior to the day of election, addressed to the Secretary. The election will take place on Friday, August 2nd. Further particulars of the appointment may be obtained on application to the undersigned.

Bradford Infirmary, June 7th, 1895. WILLIAM MAW, Secretary.

Sheffield Union.—Workhouse In-

firmiry.—A JUNIOR ASSISTANT MEDICAL OFFICER (unmarried) is required at the Workhouse Infirmary, Fir Vale, Sheffield (366 beds).

Applicants must possess a legal Medical and Surgical qualification from some Licensing University or College in the United Kingdom.

Part of his duty will be to accompany the Medical Officer on his visits to the Infirmary, and he will have every opportunity of studying the great variety of cases therein, taking a share of duty between times.

He will reside in the Infirmary, furnished apartments, board, and washing being provided.

Provision is made for the general dispensing of medicines for the Infirmary by a qualified dispenser.

The appointment will be for six months.

Applications, stating age, qualifications, and experience, together with testimonials as to professional ability and personal character, of recent date, to be sent to me on or before Wednesday, July 3rd next.

By order.

JOSEPH SPENCER, Clerk to the Guardians.

Union Offices, West Bar, Sheffield, June 19th, 1895.

Birmingham General Dispensary.—

A Vacancy has occurred in the Staff of RESIDENT SURGEONS (seven in number).

Candidates must be registered, and possess both a Medical and Surgical qualification.

Applications, together with original testimonials and certificates of registration, must be forwarded to the undersigned on or before Monday, July 15th.

Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

ALEX. FORREST, Secretary.

Royal Victoria Hospital, Bourne-

mouth.—A HOUSE SURGEON and SECRETARY is wanted for the above Institution, to take office on September 1st. Full particulars of the duties may be obtained from the Secretary. Salary £100 per annum, with board. Applications, with copies of recent testimonials, not exceeding four, to be sent to the Chairman of Committee on or before July 17th.

The elected candidate will be expected to hold the post for not less than two years, the engagement being terminable by the Committee by three months' notice.

Personal canvass will be held to disqualify.

June 17th, 1895.

A. W. B. LIVESAY, Secretary.

Malling Rural District Council.**APPOINTMENT OF MEDICAL OFFICER OF HEALTH.**

The above Council require the services of a Medical Gentleman to fill the above office.

Candidates must hold the qualifications required by, and the appointment is subject to the sanction of, the Local Government Board.

Salary £100 per annum, to include all office and travelling expenses.

The person appointed will be required to reside in or near the District of the above Council.

Area, 36,527 acres. Population, 24,728.

Canvassing is prohibited.

Applications, stating age, to be sent to me on or before 4 P.M. the 1st July next.

By order.

HENRY D. WILDES, Clerk.

West Malling, June 14th, 1895.

Glamorganshire and Monmouth-

SHIRE INFIRMARY, Cardiff.—ASSISTANT RESIDENT MEDICAL OFFICER required. Candidates must be registered in Medicine and Surgery under the Medical Act. The appointment will be for six months without salary, but with board, washing and apartments.

Applications, with printed copies of testimonials, to be sent in by Tuesday, July 2nd, to

GEO. T. COLEMAN, Secretary.

St. Columb Major Union.—District

MEDICAL OFFICER AND PUBLIC VACCINATOR.—The Guardians of this Union at their meeting, to be held on Thursday, the 4th day of July next, will proceed to the election of a duly qualified gentleman as Medical Officer and Public Vaccinator of the Fifth District of the above Union, comprising the parishes of St. Columb Minor (urban), St. Columb Minor (rural) Colan and Crandock, containing an area of 9857 acres, with a population according to last census of 3579.

The salary of the Medical Officer will be £20 per annum, with the usual extra medical fees, and successful vaccinations will be paid for at the rate of 1s. 6d. per case in St. Columb Minor (urban), 2s. per case in St. Columb Minor (rural), and 3s. 6d. per case in Colan and Crandock.

Applications, stating age and qualifications, requested to be sent to me on or before the third proximo.

St. Columb, 22nd June, 1895.

GEO. B. COLLINS, Clerk to the Guardians.

Medical Officer.—Assistant Medical

OFFICER wanted for MID-LOTHIAN and PEEBLES DISTRICT ASYLUM at Rosslynree. Salary, £100 per annum, with furnished apartments, board, and washing. Applications, accompanied by testimonials, to be lodged with the Subscriber not later than Monday, 1st July next.

R. ADDISON SMITH, Clerk and Treasurer.

19, Heriot-row, Edinburgh, 15th June, 1895.

THE SCHOLASTIC, CLERICAL, & MEDICAL ASSOCIATION, LTD.

MEDICAL DEPARTMENT.

This Association was established in 1880 as a Limited Liability Company under the direction of professional men, its object being the creation of a RESPONSIBLE and THOROUGHLY TRUSTWORTHY Agency. The Medical Department has met with so great success that it has been found necessary for one of the Managing Directors (Mr. G. B. Stocker) to devote his whole attention thereto; and he has the assistance of an experienced Medical Accountant and a large staff of clerks. Further, a Board composed entirely of gentlemen of high standing in the Medical Profession has been appointed, and to them matters of dispute and complaint are referred.

The Association undertakes the SALE of PRACTICES and PARTNERSHIPS; the introduction of LOCUM TENENS and ASSISTANTS; MEDICAL ACCOUNTANCY (by a duly qualified Medical Accountant); INVESTIGATION and VALUATION of Practices, &c.; POSTING BOOKS and sending out Bills, &c., &c.

A Pamphlet relating to the Medical Department, with the names of the "Directors" and "The Medical Advising Board," and terms, will be sent on application to—MR. G. B. STOCKER, MANAGING DIRECTOR, 8, LANCASTER PLACE, STRAND, W.C.

Telegraphic Address—"Triform, London."

FOR SALE.

- (1) SOUTH-WEST OF ENGLAND.—Good-class PRACTICE in a delightful part of the country. Average cash receipts £1055. Good appointments, £85 per annum. No clubs or Union. Fees 3s. 6d. to £1 1s. Midwifery £1 1s. to £4 4s. Capital house, stable, and land; rent £100. Good society and educational advantages. Excellent sport. Premium £2100.
- (2) YORKS.—GOOD-CLASS PRACTICE of £1450 per annum. No appointments. Very good house in residential neighbourhood. Rent £100. This practice is specially recommended, the figures having been taken out by the Association's accountant. Price 1½ years' purchase.
- (3) PARTNERSHIP.—A ONE-THIRD SHARE in a PRACTICE in a Residential Country District on borders of Surrey and Hants. Average cash receipts £1500 per annum, including appointments worth £265 per annum. Visits 3s. 6d. to £1 1s. Midwifery £1 1s. to £10 10s. Two horses required. Premium £1050. Purchaser must look thirty, be accustomed to good society, and if fond of sport it will be an advantage. A further share would be sold after a short time.
- (4) PARTNERSHIP in unopposed Country Practice in beautiful part of Herefordshire. Average cash receipts £1613 per annum, including appointments worth £330 per annum. Visits 5s. to £2 2s. Midwifery £2 2s. to £5 5s. Good hunting, fishing, and shooting. Very good society. Premium for one-third share £1000, or for half-share £1500. Purchaser must be thirty and able to ride.
- (5) PARTNERSHIP in a Country PRACTICE in South-west of England. Estimated income about £1000 per annum, including Union appointment. Visiting fees 3s. 6d. to 10s. 6d.; Midwifery, £1 1s. upwards. Good house, stabling, and two acres of land; rent only £26 per annum. Hunting, fishing, and shooting. Premium for half-share, half gross bookings for first year of partnership, not to exceed £300.
- (6) PRIVATE HOME HOSPITAL and SANATORIUM, BRIGHTON.—PARTNERSHIP in well-situated house in the West-end of the town. Returns average £1350 per annum, capable of large extension. Expenses under £1000 per annum. Premium for half-share of goodwill £550, and for half-share of furniture £350. A bachelor could have free board and residence.
- (7) NORTH.—LARGE MANUFACTURING TOWN.—Cash receipts for the last three years average £978, including Clubs £140, per annum. Visiting fees 2s. 6d. to 10s. 6d.; medicine extra. One horse required. Assistant kept. Rent of house only £30. Premium £1000, half of which may be paid by instalments if secured.
- (8) LONDON (Purchaser should be able to speak German).—A non-dispensing PRACTICE of about £1500 per annum, nearly all ready money. Visiting fees 5s. to £1 1s., generally 10s. 6d. Midwifery fees £3 3s. to £10 10s. About twenty cases annually. Good house; rent £100 per annum. Premium only £500 cash, but the furniture and fittings, which are very good, must be taken at a valuation.
- (9) LONDON (WEST-END).—Good-class PRACTICE of £440 per annum. Visiting fees average 7s. 6d. Very light work. Excellent house, £160 (stabling let off for £33 per annum). Premium £650.
- (10) LONDON, N.—Good Middle-class PRACTICE of over £1100 per annum. Visiting fees, 2s. 6d. to 7s. 6d. Midwifery, £1 1s. to £3 3s. One horse required. No assistant. Very good house with stabling and garden. Rent £100 per annum. Premium, one and a quarter year's purchase.
- (11) NORTH MIDLANDS.—Old-established COUNTRY PRACTICE of over £1750 per annum cash receipts, including valuable appointments. Large house and stabling; large garden. Premium £2500.
- (12) LONDON, N.E.—OLD-ESTABLISHED MIDDLE-CLASS PRACTICE. Cash receipts for the last three years average £621 per annum, including appointments worth £46 per annum. Visiting fees mostly 2s. 6d. and 3s. 6d. Only ten or twelve cases of Midwifery, chiefly £2 2s. Semi-detached house, with good garden and stabling, rent £80 per annum. Premium £650.
- (13) LONDON, N.E.—OLD-ESTABLISHED PRACTICE. Cash receipts for 1894 were £804. Visiting fees 2s. 6d. to £1 1s. Midwifery £1 1s. to £2 2s.; about fifty cases annually. Rent of house £50 per annum. Premium £360.
- (14) PRACTICE in Residential Suburb in London (Surrey). Cash receipts average £724 per annum. Club appointments, £85 per annum. Fees, 1s. to 5s. Midwifery, mostly £1 1s., sixty to seventy cases annually. Good house in capital position. Rent, £75 on lease. Rent of surgery, £60 per annum (15s. per week let off). Introduction, two months. Premium, £600.
- (15) CHESHIRE.—PRACTICE in a manufacturing town. Cash receipts average £485 per annum. No appointments. Visiting fees 3s. 6d. upwards. Midwifery 15s. to £1 1s. No horse. Good house; rent £30. Premium £475, part of which may be paid by instalments.
- (16) HOME FOR INEBRIATES.—Very pleasantly situated. Excellent investment. Only £1000 required.
- (17) PARTNERSHIP in a well-established Home for Inebriates. Returning a profit of £800 per annum for half share £1500.

FOR SALE (continued).

- (18) SCOTLAND.—Non-dispensing PRACTICE in one of the best watering-places on the Clyde. Cash receipts for the last three years average £352 per annum. Visiting fees 2s. 6d. to £1. Good house; rent £52 (stabling let off for £10 per annum). Premium £300.
- (19) SPECIAL PRACTICE (Eye and Ear) in a provincial town, of £400, with great scope. Good residential place.
- (20) LARGE HOSPITAL TOWN (NORTH).—PRACTICE of about £500 per annum, with gynaecological work. Premium £700. Very good house, rent £80.
- (21) LANCASHIRE.—PRACTICE in a Manufacturing District. Cash receipts for last year £550. Visiting fees 3s. 6d. Midwifery 15s. to 1½ guineas. Good house, rent £40. Premium £500.
- (22) OUTLYING SUBURBS (EAST OF LONDON).—Private and Dispensary PRACTICE. Cash receipts for 1894 were £470, including £70 to £80 from clubs. Visiting fees mostly 1s. 6d. Rent of house and branch surgery £30 and £35 per annum respectively. Premium £350.
- (23) LONDON, N.—Dispensary and Private PRACTICE. Cash receipts for 1894 were £466, including two small clubs worth £25 to £30 per annum. Visiting fees 1s. to 5s. Rent £55. One month's introduction. Premium £350.
- (24) DURHAM.—PRACTICE in a Colliery District. Cash receipts for the year ending April 30, 1895, were over £600, including appointments worth about £90. Visiting fees 2s. 6d. to 5s., medicine extra. One horse. Fair-sized cottage residence with stabling for two horses, small garden, and two acres of grass land; rent £35. Hilly and pretty country. Good sport. Premium £500.
- (25) DISPENSARY PRACTICE.—PARTNERSHIP.—Two-thirds Share of a Practice of about £800 per annum, with attendance only four days a week. Premium £650.
- (26) SOUTH COAST WATERING PLACE.—NUCLEUS of a good-class Non-dispensing PRACTICE. Cash receipts about £200 per annum. Fees 5s., and three visits £1 1s. Very little Midwifery. Capital house, rent £90. Premium only £100.
- (27) SOUTH COAST HEALTH RESORT.—NUCLEUS of £340. Good-class. Working expenses small. Short introduction. Suit a bachelor if experienced. Price £340.
- (28) LONDON, S.W. (north of river).—Cash PRACTICE of nearly £500. Expenses light. Premium £400.

WANTED TO PURCHASE.

- (29) A PRACTICE of £350 to £400 per annum, in South Devon or Cornwall (on the coast preferred). Purchaser is M.R.C.S., L.R.C.P., thirty-two, married, and has ample capital.
- (30) A PRACTICE or PARTNERSHIP in a good town (not manufacturing), by an M.B., C.M. Edin. Married, experienced, and able to invest £1500.
- (31) A Good-class PRACTICE of about £1000 per annum, in or near London (West-end preferred). Purchaser is M.R.C.S., L.R.C.P., married, experienced, and can invest ample capital.
- (32) A PRACTICE or PARTNERSHIP, with view to succession, of £1000 per annum, in a good Country Town Practice. Purchaser is an M.R.C.S., L.R.C.P., aged thirty-one, experienced, and can invest £1500.
- (33) A Good-class PRACTICE or PARTNERSHIP, in the west of London preferred or a good town in the south of England. Purchaser is a Graduate in Arts and Medicine of Cambridge and can invest £5000.
- (34) A COUNTRY PRACTICE of from £800 to £1,000 per annum, with appointments, and where good hunting and shooting can be obtained. Must have good house and garden. Purchaser is a B.A. Cantab., M.R.C.S., L.R.C.P., &c., and has the necessary capital.
- (35) A Good-class PRACTICE of £800 per annum in the Midlands or in the suburbs of a large town. Purchaser is an M.R.C.S., L.R.C.P., experienced, and can invest £900.
- (36) A PARTNERSHIP in a good practice anywhere in the Midlands or South. Purchaser is F.R.C.S., thirty-three, strongly recommended for good-class practice, and can invest £2000 or £3000 if necessary.
- (37) A Good-class Country or Country Town PRACTICE or equal Partnership of £800 per annum upwards in the South Midlands, Kent, or Sussex. Town with cottage hospital preferred. Purchaser is a bachelor, aged twenty-seven. Bart's man, and has ample capital.
- (38) A PARTNERSHIP in a First-class PRACTICE in a town of 50,000 population in the North of England. Purchaser is a Graduate in Arts and Medicine of Cambridge University, and can invest £1000.
- (39) A PRACTICE OF £1200 PER ANNUM, with clubs or parish appointments. Suitable for two men to purchase in partnership. South of England, or a London suburb preferred. Purchaser is M.B., B.S. Durham, M.R.C.S., L.R.C.P., and can invest £1500.

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The SALE of PRACTICES and PARTNERSHIPS NEGOTIATED. Trustworthy LOCUM TENENS and ASSISTANTS can be had at a few hours' notice.

N.B.—No charge made to Purchasers.

Notice.—Mr. J. C. Needes, with an

experience of over a quarter of a century, is in an exceptional position to give intending Purchasers independent information concerning most PRACTICES and PARTNERSHIPS. Those investments in the following List marked with an asterisk are well known to him, having been purchased through his Office by the present Incumbents years ago, and in many other cases an introduction can be given to gentlemen who have taken charge of the Practices during the absence of the Incumbents.

£300 to £1000 A YEAR.—An old-established PRACTICE, averaging the above amount, situated in an attractive locality within twenty miles of London, is for immediate negotiation. Visits 2s. 6d. to £11s. Midwifery 1 to 5 guineas. Appointments yield £200 per annum.

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CHEAP INVESTMENT. The very moderate sum of £600 will be accepted for a PRACTICE worth £750 per annum, situated in a large provincial city. Held by present Incumbent seven years, who is compelled to relinquish through ill health. Light expenses. Convenient residence. Capable of great increase.

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£1300 A YEAR. ONE YEAR'S PURCHASE will be accepted for a very old-established PRACTICE in a wealthy district within a few miles of a manufacturing town. The present Incumbent has held the Practice over twenty years. It is easily worked, and appointments are held worth £100 per annum. Capital residence suitable for a family, with garden, tennis lawn, stabling, and paddock attached.

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Sale or Exchange.—Cash Practice

(£260), S.W., with plenty of scope for increase; or a good man with
a little capital by taking another residence besides, and now obtainable,
could secure a good Practice. Satisfactory reasons.—Address, Beta,
THE LANCET Office, 423, Strand, W.C.

For Disposal, High-class Non-dis-

pensing PRACTICE in one of the best London suburbs. Par-
ticulars will be furnished to well qualified and otherwise suitable
applicants by C. H. Wells, Medical School Office, Guy's Hospital, S.E.

Yorkshire.—For Sale, genuine and

very old-established, all private, Middle- and Working-class PRACTICE, near large town. £400 a year. May be greatly increased. Vendor having for years refused much night work, midwifery, clubs, and parish work. Visits, 1s. 6d.; mixtures, 2s.; 2s. 6d.; Midwifery, 15s.; 21s. Rent (rates and taxes) under £30. No assistant or horse necessary, as trams and rails are handy. Bad payers wasted out every year for thirty years, and Practice very easily worked. Opponents plentiful, but all young and inexperienced. Price two years purchase.—Address, Halifax, THE LANCET Office, 423, Strand, W.C.

Unopposed Practice of £900 a year,

situate within ninety miles of Town. Transferable Union and Club Appointments of £250. Fees good. Capital field sports. Convenient family residence standing in its own grounds, rent £50. Owing to exceptional circumstances a prompt purchaser can secure this Practice at a very moderate premium.—Apply to Mr. Herbert Needes, 168, Euston-road, N.W.

For Sale, for £1250, a Practice,

including good house and two even ground, in small town on line of railway in Cape Colony. Owner going to England. Splendid opportunity for delicate practitioner, or exchange of practices might be arranged. Annual income £700 to £800.—Address, M.D., THE LANCET Office, 423, Strand, W.C.

Australia.—Colony of Victoria.—

For Disposal, unopposed Medical PRACTICE, convenient to Melbourne; township popular sea-side resort; charmingly situated; excellent farming district. Average returns, for a period of four years, are over £700 per annum in book debts and £550 per annum in cash (last year £578 10s.). Appointments £120 per annum. Capable of being increased by at least a third. Work very light. Sult gentleman in delicate health. Climate delightful, no frost or snow.

Price of Practice and furniture of house is £550, or advertiser might possibly exchange for Practice of similar value in England.

Apply, in first instance, D. C. J., 14, Brooke-street, Bradford, Manchester, England.

Assistants and Locum Tenens sup-

plied on the shortest notice. Apply to G. B. Stocker, Esq., Secretary, Medical &c. Assn., Ltd., 8, Lancaster-place, Strand, W.C. The rule of the Association is that no Assistant shall be recommended till direct inquiries have been made as to his antecedents. Names of the Committee of Management and descriptive pamphlet on application.—Telegraphic address, "Trilfrom, London."

Locum Tenens.—Disengaged from

July 4th, M.R.C.S., L.R.C.P.; registered 1883. Age thirty-seven. Married. Terms, three weeks and over, £22s. per week. Under three weeks £2 10s. References from late employers.—X., care of Mr. Shoesmith, Stationer, Crickwood.

A Locum Tenens seeks an Engage-

ment. Free from present work this week. Rides and drives. University College man. Terms 3 guineas and expenses. References &c. forwarded.—Address, Xylol, care of Dr. Evers, Albion House, Faversham, Kent.

Locum Tenency wanted, for any

length of time, by qualified Practitioner (M.B., C.M. Glasg.); married.—Reply, stating terms and full particulars, to Medicus, 182, Langside-road, Glasgow. England preferred.

Wanted, a qualified Married Gentle-

man to act as LOCUM TENENS in a Suburban Practice for two or three weeks in July. Residence for self and wife and 4 guineas a week remuneration offered. No board. Not much work.—Address, Mastoid, THE LANCET Office, 423, Strand, W.C.

Locum Tenens.—A registered M.D.,

M.R.C.S., L.S.A., of middle age, and experienced in Locum Tenens work, is now disengaged. Good and recent references.—Glaucon, THE LANCET Office, 423, Strand, W.C.

M.B., B.S., F.R.C.S. Eng., is open

for Engagement as LOCUM TENENS, or would act as ASSISTANT in good-class Practice where there is a prospect of ultimate Succession to a Share.—W., THE LANCET Office, 423, Strand, W.C.

Locum Tenens.—Wanted, July 8th,

for about four weeks. Must be qualified and registered. Terms, £2 2s. per week. References required.—Address, Medicus, 147, Well-street, South Hackney, N.E.

Locum Tenens.—M.R.C.S., L.R.C.P.

London, in Private Practice, wishing for a change, would take charge for another practitioner for a fortnight. Long experience as Locum Tenens. Usual terms. Age thirty-one.—Address, L., Moel House, Gregory Boulevard, Nottingham.

Locum Tenens and Assistants.—We

have a number of thoroughly reliable men desirous of obtaining appointments as early as possible. Practitioners requiring above may rely upon getting suitable men at once. No charge to principals. Letters or wires promptly attended to.—Crowthor & Goodwin, Medical Transfer Agents, 10, Adam-street, Strand, W.C.

As Locum Tenens.—A doubly

qualified registered Man would be glad to act as above, well up in routine of general practice. Excellent testimonials. Age twenty-eight.—Address, Locum, THE LANCET Office, 423, Strand, W.C.

Locum Tenency wanted at once by

A qualified and registered Gentleman, for two or three weeks. Has acted as such for two seasons. Excellent references from late employers.—Address, Registered, THE LANCET Office, 423, Strand, W.C.

Locum Tenens; fully qualified; 42;

reliable; trustworthy. Usual terms. Practised on own account. Home, abroad. Highest references. No agents.—Bachelor, care of Dr. Tabb, 33, Beak-street, Regent-street, W.

A Gentleman, well qualified and of

considerable experience, desires an ASSISTANCY, Management of a Branch, or post of Locum Tenens for long or short period. Would take a Death Vacancy. Can come at short notice.—Address, Dr. Smith, University College, Gower-street, London, W.C.

Qualified in-door Assistant wanted

at once in Suburban Practice. Work light. Must be a neat dispenser. Night work almost nil. Sult a reading man.—Reply, stating age, qualifications, salary required, and last reference (no testimonials), to P. D., THE LANCET Office, 423, Strand, W.C.

M.B. Edinburgh (Hon.), English-

man and single, desires good permanent ASSISTANTSHIP (preferably out-door) towards next autumn. Advertiser is an ex-House Physician and experienced in Private Practice.—Address, H. P., Tax LANCET Office, 423, Strand, W.C.

Manchester.—Wanted, a qualified

ASSISTANT, in-door. A newly qualified man not objected to, having a fair knowledge of Midwifery. Principal is young and a bachelor, and could offer a most comfortable home. Dispenser kept. Ample time for reading. State Salary and references.—Statim, THE LANCET Office, 423, Strand, W.C.

Medical Gentleman in the North of

London desires to EXCHANGE for a few weeks with one practising in Seaside Town. Very little work. Carriage kept.—Address, M., THE LANCET Office, 423, Strand, W.C.

A doubly qualified Gentleman, prac-

tising in a suburb of London, would like to take charge of a good-class Country or Seaside Practice (where there is good fishing) for two or three weeks in July, in return for board and lodging for himself, wife, and little boy. A personal interview desired.—Sartorius, THE LANCET Office, 423, Strand, W.C.

Qualified Man wanted to assist in

Managing a Branch; one used to Dispensary work preferred. Salary £50 to £100, in-door.—Address, L. L., THE LANCET Office, 423, Strand, W.C.

Cape Colony.—Wanted immediately,

an ASSISTANT, for a three to five years' engagement. Must have acted as Assistant since qualification. Good Dispenser. Ride and drive. Age twenty-five; unmarried. Progressive salary. Passage paid out and home. Splendid climate.—Apply, with references, stating experience, and photo (no agents), Colony, care of Waterlow and Sons, Limited, London-wall, London, E.C.

A qualified Gentleman required for

a few hours in the evening to conduct a Branch Dispensary.—Address, M.D., 56, Portland-street, Walworth, S.E.

Wanted, a fully qualified Assistant

as early as possible, chiefly to take charge of a Branch Practice. One who has done London Dispensary work preferred.—Address, by letter, 18, Cathcart-road, South Kensington, or personally at same address between 2 and 4 p.m.

Assistancy (out-door) wanted, by

L.R.C.P. & S. Edin., 1895, aged twenty-six, in a large Practice. Ride and drive.—Address, The Nook, Runcorn, Cheshire.

Wanted, well qualified Assistant.

about twenty-eight years of age, in-doors, no Dispensing, for a London suburban Practice. Option of purchasing a share in a stated period.—Address, enclosing photo, A. B., THE LANCET Office, 423, Strand, W.C.

Wanted, by July 8th, a qualified

ASSISTANT, single, to Manage a Branch Surgery. Salary at the rate of £100 per annum, with furnished rooms, coals, light, and attendance. One likely to remain twelve months preferred.—Address, stating age, qualifications, and enclosing photo if possible, to C. A., THE LANCET Office, 423, Strand, W.C.

Wanted, in a Country Practice, an

in-door ASSISTANT who can ride, to Visit, Dispense, and attend occasional Midwifery. Duties light; leisure for reading. Part-time preferred.—Address, giving two references, and stating salary required, to Dr. Tylecoote, Great Haywood, Stafford.

Wanted, at once, for Country, a
qualified in-door ASSISTANT. Cyclist. Church of England. Salary commencing at £80. Must have experience in midwifery and dispensing.—Apply, stating age, qualifications, length of experience, and recent reference, and enclose photo, to J. F. Walker, Swallowfield, Reading.

Wanted, by the 18th of July, a fully
qualified and registered ASSISTANT. Must have good references, and be a cyclist and a cricketer. Salary £30 (in-door) a year.—Apply, with photo, F.R.C.S., seawater, Westmersea, near Colchester.

Wanted, qualified Assistant (in-
door), for easily worked Country Practice. Bicyclist preferred. Good references indispensable.—Apply, X., Sampson's Library, 13, Cony-street, York.

Wanted, about the second week in
July, a doubly qualified Man for a month (in a Club and Iron-works Practice; must be experienced and well up in Midwifery) to ASSIST during the absence of the present assistant. Terms, £2 2s. a week and railway fare.—Address, R. Griffith, M.D., Netherton, near Dudley, Worcestershire.

Wanted, a Man with one qualifica-
tion to ASSIST Medical Man looking after a mental case where an attendant is kept. State age and salary expected, which must be nominal, as it is a comfortable home and plenty of time for reading.—Address, Tact, THE LANCET Office, 423, Strand, W.C.

Wanted, qualified Assistant for a
Mixed Practice in a manufacturing town. Good and recent references essential. Must be unmarried and able to ride and drive. Bedroom provided at surgery, otherwise out-door. State salary required.—Address, Dr. Mitchell, The Wyke, Bury, Lancashire.

Usual Bond.—Richardson's Medical
ASSISTANT'S AGREEMENT FOR SERVICES. "This is a form of agreement which principals may find useful in engaging Assistants. It is very explicit."—THE LANCET, February 9th, 1895. It contains all the conditions of the usual bond as well as several useful and necessary clauses. Stamped copies, price 11s. Entered at the Stationers' Hall, and can only be obtained from RICHARDSON BROS. & CO., Medical Agents, Liverpool. ASSISTANTS and LOCUM TENENS supplied.

NOTICE.

WITH regard to advertisements affecting unqualified assistants, the Proprietors of THE LANCET think it right to point out that they obviously cannot guarantee that each individual advertiser offers his services under such conditions as would be approved by the General Medical Council. The Proprietors consider that inconvenience to practitioners and hardship to unqualified assistants may be caused by the entire exclusion of these advertisements from the columns of THE LANCET. The General Medical Council do not, it is understood, object to unqualified assistants being employed by practitioners when resident in or near their employers' houses, but the Council will not allow unqualified persons to conduct branch practices, or dispensaries which are situated at a distance from the principal's house and are not under his immediate supervision.

To Medical Men and Firms.—

Wanted, re-engagement as DISPENSER or Dispenser and Bookkeeper. Thoroughly experienced in all branches of Dispensing, neat, quick, and accurate. Good references and testimonials. Salary moderate; out-door. Disengaged shortly.—Address, H. Brice, 66, Llantrisant-road, Pontypridd.

A young Gentleman of 30, partly
qualified and well read, seeks a good HOME with a Doctor where his services would be taken in part payment.—Address, Alpha, THE LANCET Office, 423, Strand, W.C.

Son of a Surgeon, 28, single, re-
quires unqualified ASSISTANTSHIP or Dispensership, in- or out-door. Can visit and attend Midwifery. Good Dispenser. Ride and drive. Ten years' experience. Steady and reliable. Well received by patients. Good references. Moderate salary.—Fergus Clark, The Lilies, Stathern, Melton Mowbray.

Lady Dispenser and Bookkeeper.—

Wanted, a post as above, either daily or resident (Southport preferred), by a Doctor's sister. Would be willing to give other help in house in spare time. Three years' experience and references.—E. F., THE LANCET Office, 423, Strand, W.C.

Unqualified Assistantship wanted

by Student. Aged twenty-seven, full curriculum, passed all but Final examination for M.B., C.M. Good testimonials.—Address, stating particulars, to Medicus, THE LANCET Office, 423, Strand, W.C.

Six Lady Medicos or Students, de-
siring a Trip through England during the summer months, are invited to communicate or call upon Mr. Smith, 28A, Farringdon-street, London, E.C. Small salary and all expenses paid.

Young Lady desires Situation as

SECRETARY. Eight years' experience. Excellent references.—Address, A. B., 10, Holmdene-avenue, Herne-hill, S.E.



CULLETON'S HERALDIC OFFICE,

25, Cranbourn-st., St. Martin's-lane, London, W.C.

(Established Half a Century.)

For SEARCHES and HERALDIC INFORMATION.

The HERALDIC & GENEALOGICAL LIBRARY contains over a Thousand Volumes of English and Foreign printed Works and MSS., being Indexes of Armorial Bearings and References to Family Descents. Also Indexes and References to Pedigrees and Arms in many of the Public Archives.

PEDIGREES TRACED. Genealogical Searches made, and existing Pedigrees collected. Pedigrees drawn up in Tabulated Form from Family Papers and Engrossed on Parchment.

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HATCHMENTS CORRECTLY PAINTED. Arms painted on Silk.

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ILLUMINATED ADDRESSES

Painted and Engrossed. Designs for Official Seals, for Boroughs, Corporations, Public Companies, &c.

Livery Button-dies, engraved with crest,

42s. the pair. Livery Buttons, plated or gilt. Harness Crests.

BRASS DOOR PLATES

supplied ready for fixing. A Brass Plate engraved with name only on mahogany block, complete, 10s. 6d.; with name and profession, 17s. 6d. MEMORIAL BRASSES. Stencil Plates.

Medical Account Forms (copy of own
handwriting), 16s. for 500.

Stationery.—Culleton's Guinea Box—con-
tains half ream of BEST QUALITY paper and SQUARE ENVELOPES, all stamped in colour with Crest, Monogram, or Address. No charge for engraving steel die.

Seal Engraving.—Crests and Monograms
engraved on Seals, Rings, and on Steel Dies for stamping notepaper.

Gold Seals, from £1 1s. to £6 6s. A large
collection of Genuine old Gold Seals.

Signet Rings, all 18-carat. Large variety
to select from.—£2 2s. to £10 10s. Send size of finger by fitting piece of wire. Rings made to order at same prices.

General Engraving.—Names and Inscrip-
tions engraved on presentation cups, medals, watches, ivory, &c. Crests engraved on spoons and family plate, 8s. per dozen.

Book Plates (ex libris) designed and
engraved in ancient and modern styles.

Visiting Cards.—Fifty, best quality, 2s. 8d.,
Ladies 3s., including the engraving of copper plate. Wedding cards, all the latest styles. Memorial cards, Return Thanks, Invitations.

Embossing Press, for Stamping Crests, &c.
on own paper, 10s. 6d. Die extra.

T. CULLETON, Heraldic Stationer and Engraver, 25, Cranbourn-street, St. Martin's lane, London, W.C. Five minutes from Piccadilly and Charing-cross. (P.O. orders payable at Bedford-street, W.C.)

Dr. Martin's Pure Rubber Bandages

(Registered Trade Mark) for the Radical Cure of Varicose Veins, Ulcers, Eczema, and other Diseases of the Leg (GENUINE) are by far superior to any of the numerous imitations.

No. 3 A, 6 feet by 2½ inches, thin, for ankle,	price 3s. 6d.
" 3 do. by do. stout, do.	" 4s.
" 1 B, 10½ feet by 3 inches, thin, for leg,	" 5s. 6d.
" 1 A, do. by do. stout, do.	" 7s. 6d.
" 8 14 feet by 3 inches, thin, for leg to above knee,	" 7s. 6d.
" 7 " by do. stout, do.	" 8s. 6d.
" 9 B, 21 feet by 3 inches, thin, for leg and thigh,	" 10s. 6d.
" 9 A, do. by do. stout, do.	" 12s. 6d.

CAUTION.—Please order the Genuine
Martin's Bandages, each being stamped with Dr. Henry A. Martin's signature.

All others are spurious imitations.

Complete Price List also Dr. H. A. Martin's Pamphlet describing Method of Treatment post free on application to the Sole Agents—**KROHNE & SEEMANN, Surgical Instrument Makers, 2, John Street, Manchester Square, London.**

BROMIDIA.

“ALTHOUGH opposed to the use of pharmaceutical specialities I was struck with the formula of **BROMIDIA** (Battle), and, knowing the action of its ingredients, could not bring myself to believe in its possessing greater therapeutic power than its component parts. However, I determined to try it in a severe case of Mammary Neuralgia which had proved refractory to an infinitude of other remedies. The result was brilliant, and far beyond my expectations. I then made experiments with a preparation made according to the formula of **BROMIDIA** by an experienced pharmacist, but whether due to the greater purity of your drugs, or special mode of combining, the results were not to be compared with those of **BROMIDIA** (Battle).”

“DR. ORAZIO SATARIANO.

“*Barrafranca, Italy.*”

“1, Ditton Road, Surbiton, England,
“May 26th, 1894.”

“GENTLEMEN,—I have had occasion to use **BROMIDIA** for some years. My object in asking you for a fresh sample recently was to test the persistent purity and efficacy of the preparation. I have much pleasure in assuring you that **BROMIDIA** in my own practice is as efficacious at present as it has been in the past.

“Believe me, Gentlemen, faithfully yours,

“——— L.R.C.P., M.R.C.S.”

CAUTION.

The great reputation of **BROMIDIA** has frequently caused cheap and inefficient imitations to be dispensed as **Bromidia**. Some of these substitutes are not only worthless, but absolutely harmful.

As a precaution, it is not only necessary to specify **BATTLE'S BROMIDIA**, but also to see that the patient obtains the genuine preparation.

A Sample Bottle of BROMIDIA and Pamphlet will be forwarded free of charge to Medical Men on application to

ROBERTS & CO., 76, New Bond Street, London.

GENERAL DEPOT FOR GREAT BRITAIN.

BATTLE & CO., ST. LOUIS, MO., U.S.A.

The PUMP HOUSE, LAKE HOTEL, and BATHS, LLANGAMMARCH WELLS, CENTRAL WALES.

Telegraphic Address—"BARIUM, LLANGAMMARCH WELLS."

[For Terms apply to "MANAGERESS."

(CENTRAL WALES.)

BARIUM WATER.

(ALTITUDE 600 ft.)

LLANGAMMARCH WELLS, noted for its celebrated Barium Spring. This first-class Hotel, standing in its own ornamental grounds, is situated on the slope of the Epynt Hills, and looks down one of the most beautiful valleys of Wales. All the rooms have been furnished with every regard to comfort for visitors. The sanitary drainage and water supply, both of the Hotel, Pump House, and Baths, have been carried out on the most modern principles. Capital boating on a picturesque lake. There is splendid Salmon and Trout Fishing in the River Irfon, a tributary of the Wye. Over two miles of this charming river flows through the hotel grounds and is reserved for visitors. Visitors staying at the Hotel have the privilege of Shooting over several thousand acres of Mountain and Moorland.

RESULT OF ANALYSIS BY DR. DUPRÉ, August, 1883:—

"A Sample contained in two Winchester quart bottles, stoppered, from Llangammarch Springs. The water is clear, slightly saline taste, holds but little Carbonic Acid in solution, and contains per gallon:—

Chloride of Sodium	...	...	...	...	...	...	...	...	189.56
Chloride of Calcium	...	...	...	...	...	...	...	...	84.56
Chloride of Magnesium	...	...	...	...	...	...	...	...	24.31
CHLORIDE OF BARIUM	...	...	...	...	...	...	...	...	6.26
Carbonate of Calcium	...	...	...	...	...	...	...	...	2.80
Silica	...	...	...	...	...	...	...	...	1.40

308.89 grains per gallon.

"A. DUPRÉ.

"Westminster Hospital, August 23rd, 1883."

As a remedial agent **BARIUM** ranks high in cases of Strumous Disease in its protean forms, Glandular Enlargements, Scrofula, Chronic Rheumatism, Epilepsy, and Diseases of the Heart. It is also useful in other Diseases, such as Liver Derangements, &c.

It has been stated in a recently published work on Chronic Diseases of the Heart, as the result of experiment, that the Mineral Waters of Llangammarch, employed as baths as well as taken internally, exercise healing effects similar to those of the celebrated springs of Nauheim in Germany. The Proprietors of the Llangammarch Wells have, therefore, secured the attendance at the Pump Room and Bath House, on and from the 17th June, of a Physician who is practically acquainted with the methods employed by Dr. Schott at Nauheim for the relief of Gout, Rheumatism, and Heart Affections.

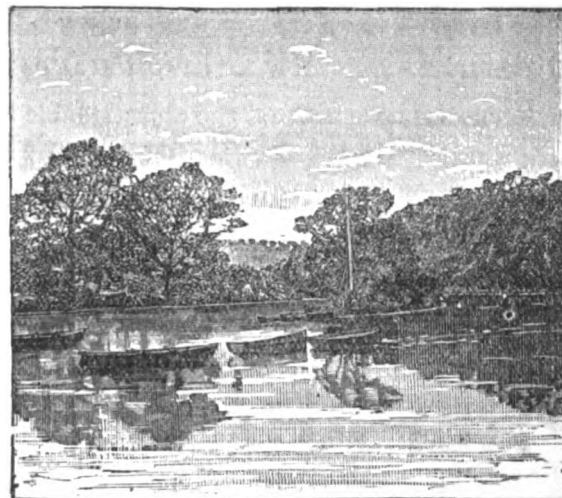
Extract from THE LANCET, Nov. 24th, 1894:—

"A sample of the barium water was obtained, sealed, and despatched to THE LANCET Laboratory for detailed examination, and the results may be compared with the analysis of the sample first submitted. In the following analysis Sample 1 is the sample obtained by ourselves, and Sample 2 the sample first submitted. The results are expressed in grains per gallon (70,000 grains):—

	No. 1.	No. 2.
Chloride of barium	6.749	6.490
Chloride of sodium	186.200	185.900
Chloride of calcium	85.160	85.470
Chloride of magnesium	20.100	20.315
Chloride of lithium	0.847	0.910
Chloride of ammonium	0.262	0.262
Alumina and silica	3.340	3.100
Bromine as bromide	Distinct traces	Distinct traces

Total mineral matters ... 302.658 ... 302.447

"It is important and interesting to observe that the quantity of barium salt has varied only within very small limits during the last ten years, as in 1883 Dr. Dupré made an analysis, in which he found 6.26 grains of barium chloride per gallon. The amount of chloride of barium may therefore be fairly regarded as constant—a fact which is of especial importance in view of the powerful action of barium salts.



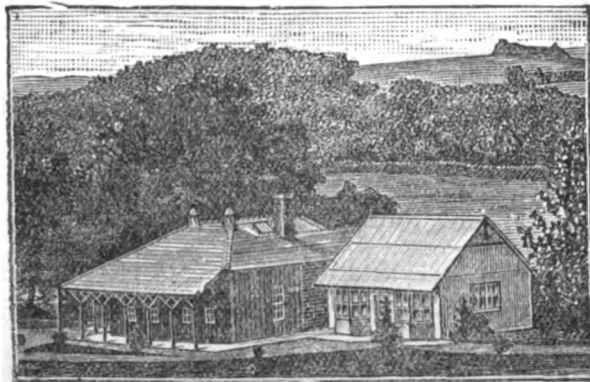
THE LAKE, LLANGAMMARCH WELLS.

"The quantity of barium present renders the internal administration of the Llangammarch waters quite safe, and no harm could result from drinking the water in reasonably large amounts." "One tumblerful is a sufficient dose in most cases, and two tumblerfuls should seldom, if ever, be exceeded, though the dose may be repeated three or four times a day."

Extract from the MEDICAL ANNUAL, 1890:—

"Heart—new treatment.—Continued trial has affirmed the efficacy of **BARIUM CHLORIDE** as a cardiac tonic. It has been found to slacken and regulate the heart-beat and to augment the amplitude of the pulse without producing as much increase in the arterial tension as does digitalis. Da Costa and Hare have both added their experience of the drug to the published statements of Boehm, Kobert, Bacey, Lauder Brunton, and Bartholin on this subject. Da Costa finds that it can be taken for a long time without disordering the stomach, that it has some diuretic action, and that it has the valuable property of lessening cardiac pain—a statement which Hare confirms. The latter has obtained good results from the use of Barium Chloride in both mitral diseases, in acute dilatation of the heart, and in functional derangement of the heart. H. A. Haze (JOURNAL DE MÉDECINE DE PARIS) has obtained good results from its use in all the above diseases, and also in aortic diseases as well.

"Glandular Enlargement.—An eminent London Physician writes:—My experience in the two cases which I sent to Llangammarch has been eminently satisfactory, and the well-recognised efficacy of the Kreuznach waters in glandular enlargement encourages the hope that the waters of Llangammarch may prove to be of signal and widespread benefit in the future."



THE BARIUM SPRINGS.

been eminently satisfactory, and the well-recognised efficacy of the Kreuznach waters in glandular enlargement encourages the hope that the waters of Llangammarch may prove to be of signal and widespread benefit in the future."

BARIUM WATER is supplied, both Still and Aërated, by the London Agents—

INGRAM & ROYLE, Ltd., 52, Farringdon St., E.C. [Telegraphic Address: "Ingram Royle, London."

SQUIRE'S CHEMICAL FOOD.

Known for thirty years as the best preparation of its kind for delicate children.

ALWAYS UNIFORM.

Substitutes, more or less emphatically stated to be made from a published formula, vary enormously in the quantities of Iron and Lime, and also in acidity. (See "*Squire's Companion to the British Pharmacopœia.*")

SQUIRE'S SOLUTION OF BIMECONATE OF MORPHIA.

A PURIFIED SOLUTION OF OPIUM STANDARDISED TO CONTAIN 1 PER CENT. OF MORPHINE.

A valuable sedative without the objectionable after-effects of opium.

The Solution of the British Pharmacopœia is very different from this, and is no substitute for it.

SQUIRE'S PREPARATIONS OF CASCARA

ALL BEAR THE WORD **KASAK** AS A REGISTERED TRADE MARK

"KASAK"

ELIXIR. A reliable and palatable fluid preparation made specially to suit children and delicate persons. *In bottles; retail, 2s. 9d. and 4s. 6d.*

PILULES. A concentrated solid extract made into small pills. *In boxes; retail, 1s. 1½d. and 2s. 9d.*

CAPSULES. A concentrated fluid extract enclosed in a capsule. *In boxes; retail, 2s. 6d.*

SQUIRE & SONS,
413. OXFORD STREET, LONDON, W.
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